NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project White Pine County, Nevada

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Notice to Reader:

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1 Summary

This report was prepared as a National Instrument 43-101 (NI 43-101) Technical Report on Resources and Reserves (Technical Report) for Fiore Gold Ltd. (Fiore) on the Pan Gold Project (Pan or the Project). This report was prepared by SRK Consulting (U.S.), Inc. (SRK), APEX Geoscience Ltd. (APEX, and Pro Solv Consulting, LLC (ProSolv).

The Pan Mine is owned by GRP Pan, LLC d/b/a Fiore Gold Pan Mine (GRP), a Nevada limited liability company and Fiore's wholly owned subsidiary.

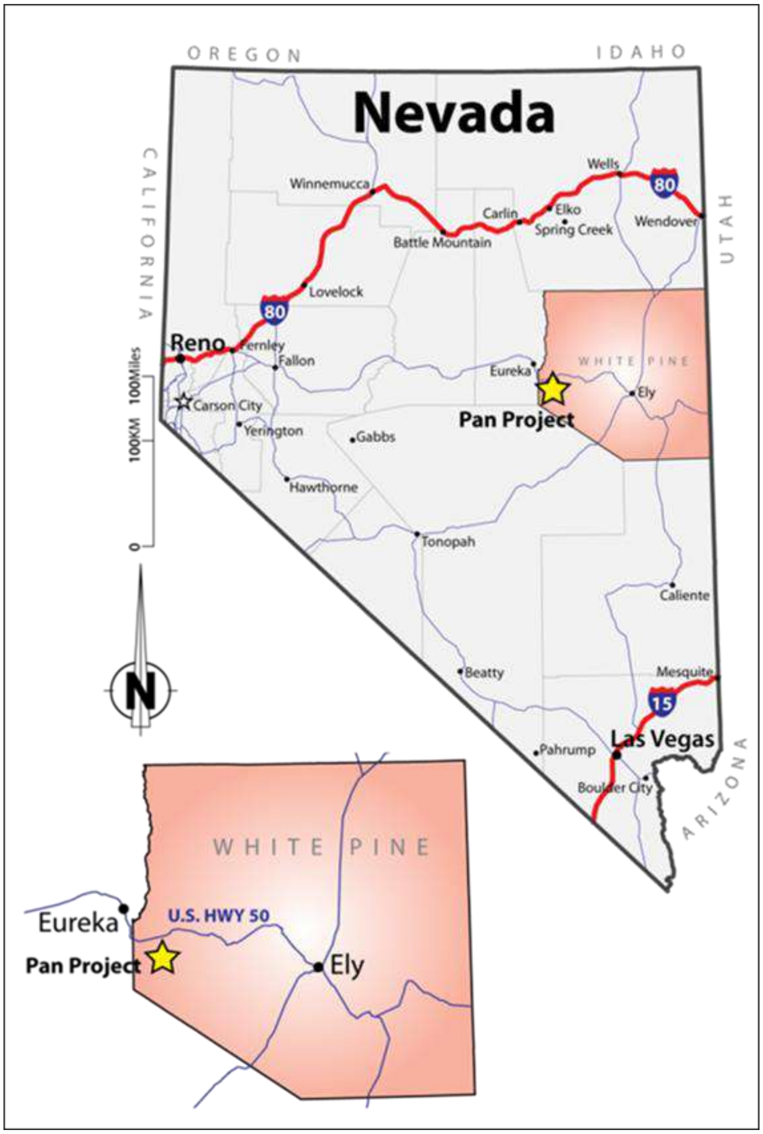
GRP acquired the Pan property as part of the acquisition of various mineral assets from subsidiaries of Midway Gold Corp. (Midway) by way of an asset purchase agreement. The acquisition closed on May 17, 2016, following approval of the asset sale by the United States Bankruptcy Court for the District of Colorado.

GRP returned the Pan property to commercial production on January 1, 2017.

1.1 Property Description and Ownership

The Pan property is located in the northern Pancake Range in White Pine County, Nevada, 22 miles southeast of the town of Eureka and 50 miles west of Ely. Location of the property is shown in Figure 1-1. The Project claim boundary encompasses approximately 10,673 acres, and consists of 563 contiguous, active, unpatented lode mining claims. Unpatented lode mining claims are kept active with annual maintenance fees paid to the Bureau of Land Management (BLM) and White Pine County by September 1st of each year.

Effective May 17, 2016, the Pan Mineral Lease dated January 7, 2003 was assigned and conveyed to GRP Pan, LLC.



Source: GRP, 2017

Figure 1-1: Project Location Map

1.2 Geology and Mineralization

The Pan Project is located in the Pancake Range of central Nevada, in the eastern sector of the Great Basin Physiographic Province. The current Great Basin landscape is shaped by crustal extension, which began in the middle Tertiary resulting in north-south trending mountain ranges and wide intervening valleys with thick sedimentary deposits. Mountain ranges are comprised of folded and tilted, Jurassic to Cambrian-aged marine sedimentary rocks that have been uplifted on steeply dipping normal faults. Precambrian metamorphic rocks are present in some ranges, such as the Ruby Mountains north of the Project, but Paleozoic marine sedimentary rocks comprise the typical bedrock in the region. Tertiary extension has also caused localized volcanism, resulting in mafic to felsic flows, tuffs, and ash units capping sedimentary rocks. Volcanic units occur north and southeast of the Pan deposit areas. Lithologic units in the Pan area are Devonian- to Pennsylvanian-age marine sediments, Cretaceous igneous intrusions, Tertiary volcanic tuffs and debris flows, and minor Tertiary to Quaternary alluvial deposits.

Pan has three main mineralized zones; North, Central, and South. Gold (Au) mineralization spatially follows the Devils Gate Limestone – Pilot Shale contact in all three, and is also controlled by steeply-dipping faults that trend north-south and secondarily by west-northwest (WNW) open fold axes. North Pan is dominated by: 1) near-vertical pipes and bodies of silicified solution breccia localized at the Pilot Shale–Devils Gate Limestone contact adjacent to the Branham Fault Zone (BFZ), and 2) stratiform-like modestly dipping breccia bodies and zones west of the BFZ focused near the locally folded Pilot Shale–Devils Gate Limestone contact. Central and South Pan have more argillic alteration than silicic. North Pan exhibits dominantly silicic alteration. Mineralization in Central Pan is at the Pilot–Devils Gate contact and secondarily controlled by WNW trending open folds, and likely other subtle structures which have not been clearly identified. These open folds were not recognized from exploration drilling and have only become apparent after exposure in the pit walls. Their significance in controlling mineralization is also subtle but has been confirmed by examination of blast hole assays. South Pan mineralization occurs in two zones: 1) a wide, clay-altered, near-vertical solution breccia zone along the west side of the BFZ, and 2) a stratigraphically-controlled zone east of the Branham Fault along the Pilot–Devils Gate contact. This zone dips northeast at about 55°. The newly identified stratiform mineralization in the Banshee area, west of North Pan, is currently interpreted to represent the opposite limb ‘mirror image’ of the South Pan stratigraphically controlled zone.

1.2.1 Status of Exploration and Drilling

Historical drilling at the Pan deposit dates back to 1978 with the initial discovery of gold-bearing jasperoids. Drilling operations have been conducted over the Project area since this discovery.

During 2018 to 2020, Fiore completed a multi-phase, multi-year drilling campaign to replace and add to reserves at Pan. The program focused on infilling gaps in the mine resources, converting inferred resources to measured or indicated, and extending reserves adjacent to the current mine pits. The 2018 to 2020 Fiore drill programs comprised 267 reverse circulation (RC) drill holes totaling 107,460 ft.

The 2018 development drilling focused on expanding the resource at Red Hill and North Pan/Campbell. Forty-six drill holes were completed during this phase of drilling and account for 70% of the total footage drilled during 2018. Only three holes did not contain gold greater than the cutoff of 0.20 grams per metric tonne (g/t) (0.006 troy ounces[oz]/short ton[ton]) Au over a minimum of 10 ft for the development phase of the drill program.

The exploration portion of the 2018 drill program consisted of 25 RC drill holes completed over Breccia Hill, Black Stallion, and Dynamite for a total of 8,865 ft of drilling. Most of the drilling was focused on the Breccia Hill and Black Stallion targets. The exploration portion of the drill program was successful in expanding the known zones of gold mineralization.

Mineralization was extended at all targets drilled during the 2019 drilling program. A new area of mineralization, called Banshee, was discovered southwest of Red Hill and west of North Pan. This area of mineralization follows the Pilot – Devils Gate contact as it rises towards the surface towards the west. The style of mineralization and alteration present is similar to mineralization seen throughout the mine. A total of 10 holes from the 2019 drill program tested the Banshee area and intersected significant gold mineralization in all but two holes.

The 2020 drill program was carried out from January to June 2020 with the primary goals of:

- Expanding known mineralization and geological understanding of the current resource;
- Increasing the known mineralization at the newly discovered Banshee zone;
- Expanding the resource between Red Hill and North Pan in order to merge both pits;
- Identifying mineralization at the exploration target Mustang; and
- Sterilization drilling at the current and proposed waste dump sites.

1.3 Mineral Processing and Metallurgical Testing

The ores to be mined at Pan are typical Carlin style gold ores. Ore types are argillic shale and limestones, argillic solution shale, argillic solution breccia limestone, silicified solution breccia limestones, shales and clays. Major minerals are quartz, mica, illite, kaolinite and alunite with lesser amounts of K-spar, calcite, hematite and barite. The ores contain low parts per million (ppm) quantities of cyanacides such as copper, zinc, lead, manganese and the like.

Metallurgical testing included 60 open circuit 8-inch column tests from drill core samples, 10 large diameter (2- to 4-ft diameter) column tests from trench samples, three large diameter column tests from South Pan blasted rock and 18 static bucket tests from trench and surface samples from the mining faces. The work also included characterization for pregnant solution; barren solution and actual carbon strip solutions as well as carbon assays. The work that was done prior to 2017 has been used in the 2017 feasibility study.

The test work shows the ores are readily amenable to run-of-mine (ROM) heap leaching provided that the clay ores are mixed with sufficient rocky ore to obtain adequate permeability for leach solution percolation through the heap. The work also shows that the ore types low in silica and higher in clay do not exhibit any gold extraction to particle size dependency. Ores with high silica content do exhibit gold extraction to particle size dependency. Operating parameters such as cyanide consumption, lime consumption, cement requirements, agglomerate strength, particle size versus gold extraction, crusher work indices, pregnant solution makeup, carbon loading, carbon analysis, were also determined in numerous tests.

Metallurgical test work completed in 2018 demonstrated that crushing and agglomerating the ore would improve solution percolation, leaching cycle time and recovery. A test heap using crushed ore indicated that the recovery would be improved by approximately 10%.

1.4 Mineral Resource Estimate

This report provides an updated Mineral Resource Estimate (MRE) for the Pan Mine and is based upon historical drilling and drilling conducted from 2018 to 2020 and supersedes all of the prior resource estimates for the Pan Mine. The resource estimate provided by Deiss et al. (2019) and Pennington et al. (2017) are superseded due to mining depletion and new drilling by the MRE herein. Other older resource estimates are now all considered historical.

The updated National Instrument (NI) 43-101 MRE was completed for the Pan Mine by APEX Geoscience Ltd. (APEX) of Edmonton, Alberta, Canada. Mr. Warren Black, M.Sc., P.Geo. and Mr.

Tyler Acorn, M.Sc. contributed to the MRE under the direct supervision of Co-author Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo, a qualified person who takes responsibility for Section 14. Mr. Dufresne, M.Sc., P.Geol., P.Geo., visited the property in September 2020. Mr. Black, M.Sc., P.Geo. visited the property in October and November 2019. Mr. Black, Mr. Acorn, and Mr. Dufresne are independent of the Property and Fiore.

Definitions used in this section are consistent with those adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Council in “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014 and prescribed by the Canadian Securities Administrators' NI 43-101 and Form 43-101F1, Standards of Disclosure for Mineral Projects. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Fiore provided APEX with the Pan Mine drill hole database that consists of analytical, geological, density, collar survey information and downhole survey information. In addition, Fiore provided a geological model for the Pan Mine that contains a stratigraphic and structural three dimensional (3D) interpretation produced by Pennington et al. (2017) and modified and refined by Deiss et al. (2019) during an interval model update completed by SRK. Mr. Dufresne, Mr. Black and Mr. Acorn spot checked the historical validated database provided by Pennington et al. (2017) and later updated by Deiss et al. (2019), which included drill hole data collected by Fiore in 2018. Drilling completed in 2019 and 2020 was validated and compiled on-site by APEX personnel. No significant issues were found with the historical or modern drillhole data. The drill hole database used to calculate the MRE is comprised of 1,452 exploration drill holes completed from 1978 to 2016 by previous operators (1,185 holes totaling 380,081 ft) and 267 holes completed from 2018 to 2020 by Fiore (totaling 107,460 ft), yielding a total of 95,181 sample/interval entries. In the opinion of Mr. Dufresne, the current Pan drill hole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The MRE was calculated using a block model size of 20 ft (X) by 20 ft (Y) by 20 ft (Z). The gold grade was estimated for each block using Ordinary Kriging with locally varying anisotropy to ensure grade continuity in various directions is reproduced in the block model. The block model was partially diluted by estimating a waste grade for the portions of the outer blocks overlapping the edge of the estimation domain boundaries using composites within a transition zone along the outer edge of the mineralized estimation domains. The waste grade was then proportionately combined with the estimated grade for the portion of the block within the mineralized domain to obtain a final grade for each overlapping block. The partially diluted block model was utilized for resource pit optimization studies. The final MRE is reported as undiluted and only includes blocks or portions of blocks within the estimation domains. The Mineral Resources are not Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Modelling was conducted in the North American Datum (NAD) of 1983 (Zone 11) BLM feet projection. The database consists of 1,452 drill holes containing useable downhole data completed at the Pan Mine between 1978 to 2020. Estimation domains were constructed using a combination of gold grade and all available geological information that helped constrain different controls on mineralization. The estimation domains were used to subdivide the deposit into volumes of rock and the measured sample intervals within those volumes for geostatistical analysis. A total of 10 estimations domains for gold mineralization were created. A total of 25,440 sample intervals are contained within the combined

10 domains. The average grade of the raw samples is 0.016 oz/ton (0.54 g/t) Au. Downhole compositing was conducted at 10 ft intervals within the estimation domains. A total of 13,102 composites were created within the estimation domains including orphans, with an average grade of 0.016 oz/ton (0.54 g/t) Au without capping.

A total of 54 3D trend surfaces were modelled and used as input for the implicit modelling process applied to create the estimation domains and by kriging to ensure both honor the observed geological controls on mineralization. The trend surfaces were created using all available subsurface data, including RC and core drill hole assays, geological logs, and blasthole data. Seven of the trend surfaces represent faults associated with the Branham Fault Zone (BFZ). In contrast, the other 47 represent mineralization trends that run parallel or sub-parallel to the Pilot Shale–Devils Gate contact.

Ordinary Kriging (OK) was used to estimate gold grades for the Pan block models. Grade estimates are only calculated for blocks that contain more than 12.5% mineralized material by volume.

Estimation of blocks is completed with locally varying anisotropy (LVA), which uses different rotation angles to define the principal directions of the variogram model and search ellipsoid on a per-block basis. Blocks within the estimation domain are assigned rotation angles using a trend surface wireframe. This method allows structural complexities to be reproduced in the estimated block model. Variogram and search ranges are defined by the variogram model. To ensure that all blocks within the estimation domains are estimated, a three-pass method was used for each domain that utilizes three different variogram model and search ellipsoid configurations. Volume-variance corrections are enforced by restricting the maximum number of conditioning data to 15 and the maximum number of composites from each drill hole by 3.

The 2020 Pan Mine MRE Update is classified as a Measured, Indicated and Inferred Mineral Resource according to the CIM definition standards. The classification of the Pan Mine Measured, Indicated and Inferred Resource was based on geological confidence, data quality and grade continuity. The most relevant factors used in the classification process were:

- density of conditioning data;
- level of confidence in historical drilling results and collar locations;
- level of confidence in the geological interpretation; and,
- continuity of mineralization.

Resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flag each block with the run number of the block when it first meets a set of search restrictions. With each subsequent pass, the search restrictions are decreased, representing a decrease in confidence and classification from the previous run.

In order to demonstrate that the Pan Mine MRE has the potential for future economic extraction, the unconstrained and partially diluted resource block model was subjected to several pit optimization scenarios to look at the prospect for eventual economic extraction. Pit optimization was performed in Micromine using the industry standard Lerchs-Grossman algorithm (LG). The criteria used in the LG pit optimizer were considered reasonable for Nevada heap leach deposits. All Mineral Resources reported below are reported within an optimized pit shell using $US1,700/oz for gold and was defined using blocks classified as Measured, Indicated, or Inferred. A variable lower gold grade cutoff and recovery is used based on the overprinting alteration.

The updated Pan Mine MRE is reported at various cutoffs depending on what type of alteration each block is flagged with. The Measured, Indicated, and Inferred MRE is undiluted, constrained within an optimized pit shell, and includes a Measured Mineral Resource of 11.422 million tons (10.632 million tonnes) at 0.015 oz/ton (0.53 g/t) Au for 175,000 ounces of gold, an Indicated Mineral Resource of 19.719 million tons (17.889 million tonnes) at 0.013 oz/ton (0.44 g/t) Au for 252,400 ounces of gold, and an Inferred Mineral Resource of 3.76 million tons (3.411 million tonnes) at 0.016 oz/ton (0.56 g/t) Au for 61,500 ounces of gold (Table 1-1). The reported MRE utilizes a lower gold cutoff of 0.003 oz/ton Au (0.10 g/t) for blocks flagged as argillic altered or as unaltered and a cutoff of 0.004 oz/ton Au (0.14 g/t) for blocks flagged as silicic altered. The MRE is inclusive of reserves.

Table 1-1: Pan Mine Resource Estimate Constrained within the '$1700/oz' Pit Shell for Gold at Cut-off Grades Specific to Alteration Type and Area

Region	Classification	Au Cut-off (oz/ton)	Au Cut-off (g/t)	Tons (tons)**	Tonnes (t)**	Au Grade (oz/ton)	Au Grade (g/t)	Contained Au (troy ounces)**
North	Measured*	mixed	mixed	5,687,000	5,159,000	0.015	0.53	83,700
	Indicated*	mixed	mixed	7,399,000	6,713,000	0.014	0.49	94,200
	M&I*	mixed	mixed	13,086,000	11,871,000	0.015	0.50	177,900
	Inferred*	mixed	mixed	843,000	764,000	0.023	0.78	11,800
Central	Measured*	mixed	mixed	963,000	874,000	0.016	0.54	17,400
	Indicated*	mixed	mixed	335,000	304,000	0.013	0.45	5,200
	M&I*	mixed	mixed	1,298,000	1,178,000	0.014	0.49	22,600
	Inferred*	mixed	mixed	237,000	215,000	0.015	0.51	5,900
South	Measured*	mixed	mixed	4,772,000	4,329,000	0.014	0.49	73,900
	Indicated*	mixed	mixed	11,985,000	10,873,000	0.012	0.41	153,000
	M&I*	mixed	mixed	16,757,000	15,202,000	0.012	0.43	227,000
	Inferred*	mixed	mixed	2,680,000	2,432,000	0.013	0.44	43,700
Total	Measured*	mixed	mixed	11,422,000	10,362,000	0.015	0.53	175,000
	Indicated*	mixed	mixed	19,719,000	17,889,000	0.013	0.44	252,400
	M&I*	mixed	mixed	31,141,000	28,251,000	0.014	0.47	427,400
	Inferred*	mixed	mixed	3,760,000	3,411,000	0.016	0.56	61,500

Source: APEX, 2020

*Measured, Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).
**May not add due to rounding.

The Pan Mine pit shell constrained MRE represents approximately 66% of the total volume and 73% of the total gold ounces in the entire unconstrained Pan Mine block model that was estimated in 2020. The updated MRE shows a 1% decrease in Measured and Indicated Resources to 427,400 gold ounces versus the 2018 MRE that utilized a September 30, 2018 topographic surface (Deiss et al., 2019). The approximate calculated mining depletion for the period of September 30, 2018 to June 30, 2020 is a little over 9 million tons and about 140,000 oz Au, the vast majority of which were Measured and Indicated Resources from the 2018 MRE. The 2019 to 2020 drilling combined with an increased gold price has effectively resulted in the addition of Measured and Indicated Resources equivalent to what has been mined during the period from September 30, 2018 to June 30, 2020. An additional Inferred Resource of 61,500 gold ounces has been estimated at the Pan Mine, that with continued drilling may provide additional Measured and/or Indicated gold ounces.

1.5 Mineral Reserve Estimate

In accordance with the CIM classification system only measured and indicated resource categories can be converted to reserves (through inclusion within the open-pit mining limits at the Pan Mine). In all mineral reserve statements, inferred mineral resources are reported as waste.

The conversion of mineral resources to mineral reserves required accumulative knowledge achieved through Lerchs-Grossmann (LG) pit optimization, detailed pit design, and associated modifying parameters. Reserve estimation was achieved using Hexagon's MineSight® software and applies to the full Pan Mine resource. Detailed access, haulage, and operational cost criteria were applied in this process for South Pan, North Pan, Banshee, Dynamite, and Black Stallion. The Pan Mine was built and is operated in U.S. units and all metal grades are expressed in troy ounces per short ton (oz/ton.)

The orientation, proximity to the topographic surface, and geological controls of the GRP Pan mineralization support mining of the mineral reserves with open pit mining techniques. To calculate the mineral reserves, pits were designed following an optimized LG pit based on a US$1,575/oz Au sales price. The quantities of material within the designed pits were calculated using a base cut-off grade (CoG) of 0.003 Au oz/ton (0.10 g/t) for the argillized material sitewide and unaltered material in the South and Dynamite pit. A base CoG of 0.004 Au oz/ton (0.14 g/t) was used for the silicified material sitewide and unaltered material in the North, Black Stallion, and Banshee Pits which is based on the static US$1,575/oz Au sales price observed at the time of this study.

The Mineral Reserves for the Pan Mine are presented in Table 1-2.

Table 1-2: Pan Project Mineral Reserve Estimate as of June 30, 2020

Classification	Mass (ton 000's)	Grade (oz/ton Au)	Grade (g/t Au)	Metal Contained (koz Au)
Proven	11,426	0.014	0.47	158.3
Probable (including stockpile)	12,031	0.011	0.38	132.2
Proven and Probable	23,457	0.012	0.42	290.5
Probable Leach Pad Inventory (recoverable)				26
Total Proven and Probable				317

Source: SRK, 2020

- Reserves stated in the table above are contained within an engineered pit design following the US$1,575/oz Au sales price Lerchs-Grossmann pit. Date of topography is June 30, 2020;
- Mineral Reserves are stated in terms of delivered tons and grade, before process recovery. The exception is leach pad inventory, which is stated in terms of recoverable Au ounces;
- Allowances for external dilution are applied;
- Costs used include an ore mining cost of US$2.09/ton, a waste mining cost of $1.97/ton, an ore processing and G&A cost of US$3.13/ton;
- Reserves for Argillic (soft) ore are based upon a minimum 0.003 oz/ton Au (0.10 g/t Au) internal cut-off grade ("CoG"), using a US$1,575/oz Au sales price and an Au recovery of 80%;
- Reserves for Silicic (hard) ore are based upon a minimum 0.004 oz/ton Au (0.14 g/t Au) internal CoG, using a US$1,575/oz Au sales price and an Au recovery of 60%;
- Mineral Reserves stated above are contained within and are not additional to the Mineral Resource, the exception being stockpile and leach pad inventory; and,
- Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

1.6 Mining Methods

Currently, conventional open pit mining methods are implemented at the Pan Mine. A contract miner is conducting the mining activities. Ore and waste are drilled and blasted, then loaded into Caterpillar (CAT) 777 haul trucks with CAT 992 wheel loaders. The loading and haulage fleet is supported by track dozers, motor graders, and water trucks. Waste is hauled to waste rock storage facilities near each pit. Ore is hauled and placed directly at the crusher feed stockpile and overflow ore is placed directly on the heap leach pad. The ore placed at the crusher feed stockpile is rehandled into the crusher with one CAT 988 wheel loader operated by GRP. The crushed ore is then rehandled from the crushed ore stockpile into CAT 777 haul trucks with CAT 992 wheel loaders and placed on the heap leach pad.

The Pan Mine uses a mining contractor for all mining activities with the exception of crushing the ore and placement of ore into the crusher. The Pan Mine owns, operates, and maintains all other equipment on the site.

Ore production is planned at a nominal rate of 14,000 t/d, equivalent to 5.1 Mt/y with an expected 5-year mine life. Mining is planned on a 7 day per week schedule. There are two 12-hour shifts per day Monday through Thursday and one 12-hour day shift Friday through Sunday. The mine is operated 365 days per annum. Peak ore and waste production is estimated at 50,000 t/d. The average life of mine stripping ratio is 1.70:1 waste-to-ore, using a 0.003 oz/ton (0.10 g/t) internal cut-off for the argillic material sitewide and unaltered material in the south and a 0.004 oz/ton (0.14 g/t) internal cut-off on silicic material site wide and unaltered material in the north. The change in CoG from one material to the next is a result of the metallurgical recovery testing, which showed the argillic and unaltered material to have an expected average recovery of 80% with the more silicified material having an expected recovery of 60%.

1.7 Recovery Methods

The previous owner of the Pan Mine encountered permeability issues on the leach pad which resulted from stacking only clayey ore mined from the South Pan Area. Fiore initially improved the ROM ore stacking methodology by blending rock and clay ore derived from the North and South Pan areas respectively and minimizing equipment compaction of the heap leach pad. The process begins with a geologic model that identifies the rock types so the mine plan can better anticipate rock and clay quantities for blending purposes

Metallurgical testing at site using test heaps as well as laboratory testing at RDi indicated improved recovery of 10% to 20% was obtainable by crushing the material as compared to ROM ore. Hence, Fiore management installed a primary crusher (Lippman 36 x 50 Jaw), a cement addition conveyor, several jump conveyors and radial stacking conveyor. The list of equipment installed is given in Table 17-1.

Approximately 14,000 tpd of ore consisting of a 60:40 ratio of hard to soft ore is mined from North and South Pan pits and crushed to nominal 4 inches and combined with 2 to 3 lb/ton of cement on the conveyor. Dry cement mixing takes place through the cascading action of the material at the four belt transfer points between the crusher and the radial stacker before final mixing in the drop from the stacker to the pile. Barren solution is added at a rate of 10 to 25 gpm total to the transfer points. Final moisture from stockpile grab averages 6% to 8%. A partial agglomeration of fines is expected to be produced by this process which in laboratory test work indicates will yield an improvement in solution flows for crushed and blended hard and soft ores.

Crushed material is loaded into trucks from the crusher ore stockpile, dumped on the top surface of the leach pad cell, and pushed over with a dozer.

1.8 Project Infrastructure

The Project is an operational mine with infrastructure constructed by the previous operator and subsequently expanded by Fiore. The existing infrastructure includes electrical power supply and distribution, access roads, security fences and gates, water supply and storage, office buildings, assay laboratory, heap leach pad and mineral processing facilities. In addition to the existing infrastructure, there are plans for a phased expansion of the existing leach pad.

1.9 Environmental Studies and Permitting

The permitting schedule for the Pan Mine Project was originally dictated by the federal National Environmental Policy Act (NEPA) process requirements, which typically include at least one year of baseline studies followed by a scoping process and production of draft and final environmental impact statement (EIS) documents. Public review periods are required at the scoping, draft and final EIS stages. The Pan Mine baseline studies were completed in 2011, and the project went through the scoping process in 2012. The draft EIS was released for public review in March 2013. The final EIS was made available November 22, 2013, and the Record of Decision (ROD) was signed December 23, 2013. Construction began in January 2014. The Nevada Division of Environmental Protection-Bureau of Mining Regulation and Reclamation (NDEP-BMRR) issued Reclamation Permit No. 0350, replacing Exploration Reclamation Permit No. 0228. The NEPA and permitting processes required approximately 36 months from initiation of baseline studies to the receipt of the ROD in late 2013.

Midway Gold acquired the required federal, state, and local permits for construction, operations, and reclamation of the Pan Mine. GRP has successfully transferred the permits to their control and has maintained the required permits.

Environmental issues identified in the final EIS completed for the mine are mitigated by the requirements of the ROD. At the time of reporting, known environmental issues had been addressed and mitigated, as required.

Monitoring of the heap leach drain down may continue for up to 30 years following closure per Nevada Administrative Code 445A.446(3). Concurrent reclamation during active mining has been planned to begin as soon as practicable on areas where no further disturbance will occur, minimizing the need for post-mining reclamation.

1.10 Capital and Operating Costs

Estimation of capital and operating costs is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations. Therefore, changes in these forward-looking assumptions can result in capital and operating costs that deviate materially from the costs forecast herein.

1.10.1 Capital Cost Summary

The Pan Mine is constructed and is currently operating, and historical data is used to estimate future capital requirements. For the purposes of this Technical Report all capital spent to date is considered a sunk cost. Additional capital is required to continue to operate through the remaining life of mine. The largest capital cost is for an additional leach pad phase. Other mine, process and administrative capital includes process equipment replacement, light vehicles, computer software and hardware. Costs are also included for drilling, reclamation and closure. Capital cost estimates are based on Fiore data that included vendor quotes, historical costs for leach pad construction, and drilling. Reclamation and closure cost estimates are also provided by Fiore and include the recovery of US$6.5M in cash collateral for bonds. A 5% contingency is applied to the capital cost to cover unknown events and accuracy of quantity and cost estimates.

The capital cost summary for the Project is presented in Table 1-3. Both Non-sustaining and sustaining capital costs for the life-of-mine (LOM) total US$13.2 million.

Table 1-3: Capital Cost Summary

Capital Cost Item	Cost (US$ 000's)
Mine	359
Process	2,329
Admin	1,022
Leach pad, core logging & storage shed, water tanks	3,596
Reclamation & Closure	4,644
Drilling	381
Total Costs	**12,331**
Contingency	**888**
Total with Contingency	**13,218**

Source: SRK, 2020

1.10.2 Operating Cost Summary

The operating cost summary for the Project is presented in Table 1-4. The mine is presently operating using a contractor for all mining activities. Operating costs are based on historical costs from the period of July 1, 2019 through June 30, 2020. Mining costs are developed based on the current mining contract to estimate hourly equipment rates. Loading and hauling hours for mining and ore rehandle from the crusher to the pad are based on simulation software that generates the truck and loader hours which are applied to contract equipment hourly rates. Hours for support equipment are based on a 24-hour, 6.5 day per week schedule through the year. Historical processing costs are used and split into fixed and variable rate categories. Reagent consumption, power, and crusher equipment variable costs are assumed to be the same through the mine life and are based on a cost per ton of ore placed. General and administrative costs are assumed to remained fixed until mining ends, two additional years of processing are required following mining activities and the process and admin costs are reduced in both years. Administrative costs include the technical and management functions required for the operation.

Table 1-4: Operating Cost Summary

Operating Costs	LOM US$ 000's	US$/ton-ore
Mining	$131,283	$5.60
Processing	$72,047	$3.06
G&A	$18,959	$0.81
Total Operating	**$222,288**	**$9.47**

Source: SRK, 2020

1.11 Economic Analysis

As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations.

Pan is an operating gold project with recent production and cost data which yield a favorable economic projection based on estimated capital and operating costs derived from the mining and processing development plan. Economic results from this study include a Net Present Value (NPV) of the LOM after-tax free cash flow of US$71.2 million, using a discount rate of 5% and an average LOM gold price of US$1,575/oz. The NPV (5%) of the forecast pre- tax cash flow is US$80.8 million. A total of 224 koz of recovered gold are scheduled for production for the life of mine.

The indicative economic results are shown on Table 1-5. The following provide the basis of the LOM plan and economics:

- A mine life of approximately five years;
- An overall average gold recovery rate of approximately 72%;
- An average cash operating cost of US$990 per Au oz-produced;
- Life of mine capital costs of US$13.2 million;
- Life of mine strip ratio of 1.70:1;
- Mine closure cost estimate (after offsetting by bond recovery) of US$5.1 million;
- After Tax NPV of US$71.4 million;
- The analysis does not include any allowance for end of mine salvage value; and,
- No allowance for corporate overhead was included.

Table 1-5: Indicative Economic Results

Description		With Tax (US$)	Without Tax (US$)
Market Prices			
Gold (LOM Avg)	/oz-Au	$1,575	$1,575
Estimate of Cash Flow (all values in US$ 000's)			
Payable Metal			
Gold	koz	224.4	224.4
Gross Revenue			
Gold		$353,346	$353,346
Revenue		**$352,346**	**$353,346**
Freight & Handling		($442)	($442)
Gross Revenue		**$352,904**	**$352,904**
Royalty		($14,134)	($14,134)
Net Revenue		**$338,770**	**$338,770**
Operating Costs	**$/ton-ore**		
Mining	$5.60	$131,283	$131,283
Processing	$3.06	$72,047	$72,047
G&A	$0.81	$18,959	$18,959
Property & Net Proceeds Tax	$0.40	$9,498	$9,498
Total Operating Costs	**$9.87**	**$231,786**	**$231,786**
Operating Margin (EBITDA)		**$106,984**	**$106,984**
LOM Capital		$13,218	$13,218
Income Tax		$11,001	$0
Free Cash Flow		**$82,764**	**$93,766**
NPV 5%		**$71,449**	**$80,806**

Source SRK, 2020

1.12 Conclusions and Recommendations

Based on the assumptions outlined herein, the Pan Mine generates positive free cash flow at current gold prices. The project currently operates with a contract miner who has operated since the inception of the project and the process plant has operated since 2015. Production and cost data are derived from two years of operation which provide accurate cost projections based on current goods and services prices, if current production rates are maintained.

Additionally, there is opportunity to expand the reserve through additional drilling of targets previously identified through surface geological and alteration mapping as well as geochemical sampling of soil and rock. In the QP’s opinion, additional refinement to the mine plan may change the economic projections of the operation.

Further improvements to the project economics may be achieved by a tradeoff study to ascertain if owner mining is cheaper than contract mining. Also, a geotechnical evaluation is recommended to ascertain if slopes can be steepened. In addition, a study to determine if the addition of a secondary crusher improves productivity from 14,000 tpd to 17,000 tpd and if finer crushing improves overall recovery. A conveyor stacking system study may show that there is an overall project economic benefit. The height of the heap may be increased if a geotechnical study concludes that the heap is stable and the liner is not punctured with increased height.

The cost for the exploration drill program, owner mining evaluation, mine plan, geotechnical program, crushing, stacking and heap geotechnical program are shown in Table 1-6.

Table 1-6: Summary of Costs for Recommended Work

Area	Cost Estimate (US$)
Exploration Drill Program	$1,000,000
Owner Mining Evaluation	$200,000
Mine Plan	$100,000
Geotechnical Program (Excluding Drill Program)	$400,000
Crushing, Stacking & Heap Geotechnical Evaluations	$500,000
Total	$2,200,000

Source: SRK, 2020

2 Introduction

2.1 Terms of Reference and Purpose of the Report

This report was prepared as a National Instrument 43-101 (NI 43-101) Technical Report on Resources and Reserves (Technical Report) for Fiore Gold Ltd. (Fiore) on the Pan Gold Project (Pan or the Project). This report was prepared by SRK Consulting (U.S.), Inc. (SRK), APEX Geoscience Ltd. (APEX, and Pro Solv Consulting, LLC (ProSolv).

Fiore Gold Ltd. (Fiore) is a growth-oriented US gold producer and the whole owner of the subsidiary GRP Pan, LLC d/b/a Fiore Gold Pan Mine (GRP), a Nevada limited liability company that is the legal owner of the Pan Mine.

This report provides Mineral Resource and Mineral Reserve estimates, and a classification of resources and reserves prepared in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Reserves: Definitions and Guidelines, May 10, 2014 (CIM, 2014).

2.2 Qualifications of Consultants

The Consultants preparing this technical report are specialists in the fields of geology, exploration, Mineral Resource and Mineral Reserve estimation and classification, open pit mining, geotechnical, environmental, permitting, metallurgical testing, mineral processing, processing design, capital and operating cost estimation, and mineral economics.

None of the Consultants or any associates employed in the preparation of this report has any beneficial interest in GRP. The Consultants are not insiders, associates, or affiliates of GRP. The results of this Technical Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between GRP and the Consultants. The Consultants are being paid a fee for their work in accordance with normal professional consulting practice.

The following individuals, by virtue of their education, experience and professional association, are considered Qualified Persons (QP) as defined in the NI 43-101 standard, for this report, and are members in good standing of appropriate professional institutions. QP certificates of authors are provided in Appendix A. The QP's are responsible for specific sections as follows:

2.3 QP Responsibilities

Each QP listed in this report is responsible for specific sections. The list of QP's and their corresponding sections are listed in Table 2-1.

Table 2-1: QP Responsibilities

Qualified Person	Company	Expertise	Sections Responsible For
Michael Dufresne, M.Sc., P.Geol., P.Geo	APEX	Mineral Resources	1.1, 1.2, 1.4, 6, 7, 8, 9, 10, 11, 12.1, 14, 23, 24.1, 25.1, 25.2, 26.1, Appendices 1 - 4
Valerie Sawyer, RM-SME	SRK	Environmental	1.9, 12.4, 20, 24.2, 25.5
Justin Smith, B.Sc. P.E. RM-SME	SRK	Mining Engineering	1.5, 1.6, 1.8, 2, 3, 4, 5, 12.2, 15, 16 (Except 16.2), 18, 24.3, 25.3, 25.7, 26.2, 27, 28
Fredy Henriquez, M.Sc., RM-SME, ISRM	SRK	Rock Mechanics	12.6, 16.2, 24.4, 26.3
Michael Iannacchione, B.Sc., MBA, P.E.	SRK	Mine Economics	1.10, 1.11, 1.12, 12.5, 19, 21, 22, 24.5, 25.6, 26.5
Deepak Malhotra, PhD, RM-SME	ProSolv	Metallurgy	1.3, 1.7, 12.3, 13, 17, 24.6, 25.4, 26.4

Source: SRK 2020

2.4 Details of Inspection

Site inspections were conducted by all of the QPs and several supporting staff. Details of these visits are provided in Table 2-2.

Table 2-2: Site Visit Participants

Personnel	Company	Expertise	Date(s) of Visit	Details of Inspection
Michael Dufresne	APEX	Mineral Resources	September 1, 2020	Tour of haul roads and the north and south pits, inspection of alteration, structure and mineralization in benches and walls. Inspection and checking of drill collars.
Valerie Sawyer	SRK	Environmental	January 14, 2014	Pre-construction landforms, met with permitting staff
Justin Smith	SRK	Mining Engineering	August 12, 2020	Pit, haul roads, heap leach, waste facilities, processing facilities
Michael Iannacchione	SRK	Mine Economics	September 10, 2020	Pit, haul roads, heap leach, waste facilities, processing facilities
Deepak Malhotra	ProSolv	Metallurgy	September 1-2, 2020	Reviewed all the metallurgical sections of the plant including the crushing circuit
Fredy Henriquez	SRK	Rock Mechanics	September 9 and 10, 2020	Red Hill, Boulders and North pits

Source: SRK, 2020

2.5 Sources of Information

The sources of information include data and reports supplied by GRP personnel as well as documents cited throughout the report and referenced in Section 27.

2.6 Effective Date

The effective date of this report is December 23, 2020.

2.7 Units of Measure

The US System for weights and units has been used throughout this report. Tons are reported in short tons of 2,000 lb. All currency is in U.S. dollars (US$) unless otherwise stated.

3 Reliance on Other Experts

In the course of completing this work scope, the QPs relied on others qualified experts or Fiore for the following items:

- Title opinion provided by Fiore via email which included the documents "Pan Title Report Update 2017.pdf" from Parr Brown Gee and Loveless (Jensen, 2017), and "2018-10-19 Stipulation and Order for Dismissal With Prejudice.pdf." These documents included but were not limited to, details on encumbrances, environmental liabilities, existing permitting, and royalty agreements.
  - This information applies to section 4, "Property Description and Location."
- Tax calculations provided by Fiore via email on January 18th, 2021 in the file "Pan 2020Update_Final_20210118.xlsx".
  - This information applies to section 22. "Economic Analysis."

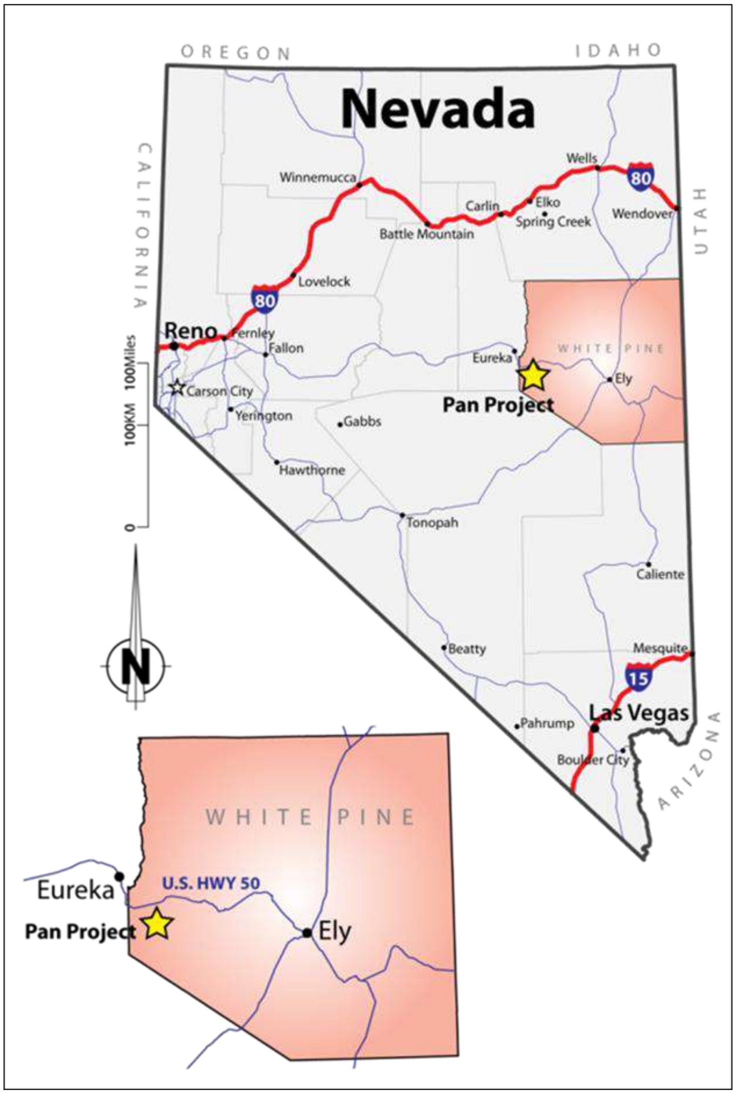
These items have not been independently reviewed by the QP and the QP did not seek an independent legal opinion of these items.

Additionally, the Environmental QP received a reclamation cost estimate provided by Steve Boyce and Richard Frechette of Haley & Aldrich Inc. on December 23, 2020. (Boyce & Frechette 2020). The estimate was checked and deemed appropriate for inclusion in this report. This applies to section 20, "Environmental Studies, Permitting and Social or Community Impact".

4 Property Description and Location

4.1 Property Location

The Pan property is located in the northern Pancake Range in White Pine County, Nevada, 22 miles southeast of the town of Eureka and 50 miles west of Ely, as shown in Figure 4-1. The geographic center of the property is located at 39°17’N latitude and 115°44’W longitude, and the primary zones of mineralization on the property are located in Sections 25 and 36, Township 17 North, Range 55 East (T17N, R55E) and Section 1, T16N, R55E, Mount Diablo Base and Meridian (MDBM).

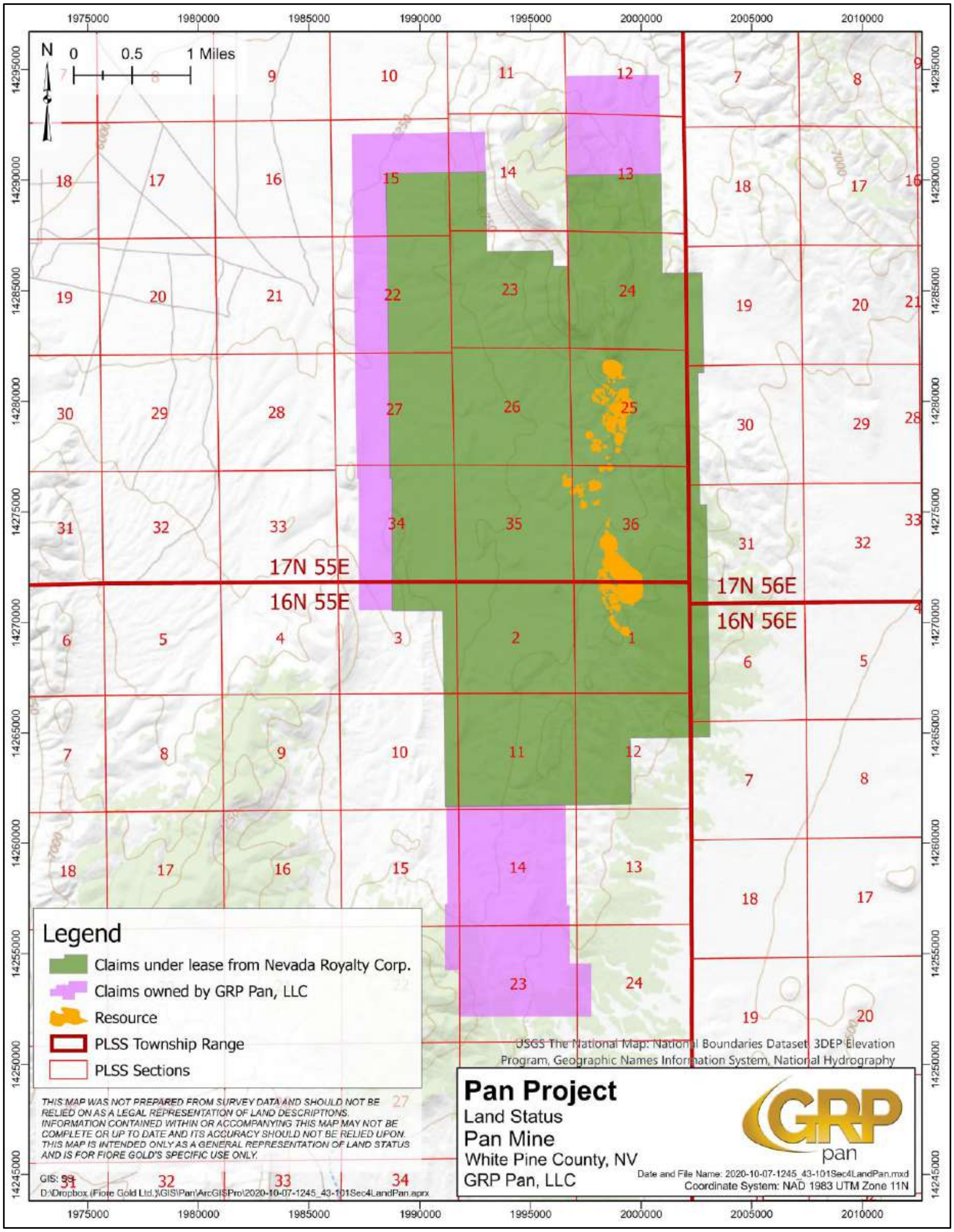


Source: GRP, 2017

Figure 4-1: Project Location Map

4.2 Mineral Titles

The Project claim boundary encompasses approximately 10,673 acres, all located within surveyed townships. The Pan property consists of 563 contiguous, active, unpatented lode mining claims covering portions of Sections 12 through 15, 22 through 27, and 34 through 36, T17N, R55E; portions of Sections 19, 30, and 31, T17N, R56E; portions of Sections 1 through 3, 10, through 12, 14, 15, and 22 through 24, T16N, R55E; and portions of Sections 6 and 7, 16N, R56E, as shown in Figure 4-2. A complete listing of the claims on file with the BLM and White Pine County is included in Appendix B. The U.S. Department of the Interior – BLM, Ely District Office – Bristlecone Field Office administers the federal public lands within the Project boundary. No private, United States Department of Agriculture (USDA) – Forest Service, or state-owned lands are located within the Plan Area or mineral materials sales site.



Source: GRP, 2020

Figure 4-2: Land Status Map

4.2.1 Nature and Extent of Issuer's Interest

The right of way permit #200571 covers the exit off of Highway 50. Permit #200571 is provided in Appendix C. The remainder of the Pan access road is included in the Plan of Operations as part of the mining operation.

Unpatented lode mining claims are kept active with annual maintenance fees paid to the BLM and White Pine County by September 1st of each year.

GRP Pan, LLC must incur a minimum of US$65,000 per year work expenditures during the term of the mining lease from Nevada Royalty Corp (NRC).

4.3 Royalties, Agreements and Encumbrances

GRP Minerals Corp. and its subsidiaries acquired various mineral properties, including the Pan Assets, on May 17, 2016, pursuant to an Asset Purchase Agreement (APA) with subsidiaries of Midway Gold Corp., which was approved and authorized by the United States Bankruptcy Court for the District of Colorado, in Midway Gold US Inc., et al, Case No. 15-16835 MER. On May 13, 2016, the Bankruptcy Court entered the Revised Order under 11 U.S.C §§ 105, 363, and 365 and Fed. Bankr. P. 2002, 6004, 6006, and 9014 (I) Approving (A) the Sale of Substantially All of the Debtor Assets Pursuant to the Asset Purchase Agreement with GRP Minerals, LLC and Related Agreements Free and Clear of Liens, Claims, Encumbrances and Other Interests and (B) the Assumption and Assignment of Certain Executory Contracts and Unexpired Leases in Connection with the Sale; and (II) Granting Related Relief.

Effective May 17, 2016, the Pan Mineral Lease dated January 7, 2003 was assigned and conveyed to GRP Pan, LLC. Nevada Royalty Corp. (NRC), successor in interest to the Lyle F. Campbell Trust, is the Lessor and owner of the claims subject to the Lease. As of November 22, 2013, NRC assigned to Orion Royalty Company, LLC, NRC's right to receive advance minimum and production royalty payments under the Pan Mineral Lease. On or before January 5 of each year, GRP Pan, LLC must pay an advance minimum royalty of the greater of US$60,000 or the US dollar equivalent of 174 oz of gold valued by the average of the London afternoon fixing for the third calendar quarter preceding January 1 of the year in which the payment is due. All minimum advance royalties will be creditable against a sliding scale gross production royalty of between 2.5% and 4% as shown in Table 4-1.

Ten claims are also subject to an overriding 1% NSR payable to Americomm Resources Corporation. They are PA 8A, PA 10, PA 12-18, and PA 49A.

There are 134 additional unpatented claims within the Pan property that are without royalty burden and are not subject to the NRC area of interest. They are the 10 PC, 56 NC, 41 GWEN, 26SP and 1 REE claims.

100% of the advanced minimum royalty paid within a calendar year can be applied to that same year's production royalty due. If the total production royalty due in any calendar year exceeds the advance minimum royalty paid within that year, GRP Pan, LLC can credit all un-credited advance minimum royalties paid in previous years against 50% of the gross production royalty due.

Table 4-1: Pan Royalty Schedule

Price of Gold (US$)	Percentage
To and including $340.00/oz.	2.5%
From $340.00/oz. to $450.00/oz.	3.0%
$450.00/oz. and greater	4.0%

Source: GRP, 2017

4.4 Environmental Liabilities and Permitting

4.4.1 Environmental Liabilities

Mining activity has taken place in the general region since 1876, but mining of the Pan deposit had not occurred prior to 2015. There are no pre-existing environmental liabilities on any portion of the Project land package except those associated with reclamation and the storage of elemental mercury on-site for the liabilities associated with the Pan Mine. At the time of publication, known environmental issues had been addressed and mitigated, if necessary, and operations are compliant with the 2013 Record of Decision. Environmental liabilities are discussed in more detail in Section 20. Operations are in substantial compliance with environmental permits and authorizations. There are no other known significant environmental factors or risks to continued operations and closure.

4.4.2 Required Permits and Status

The majority of the required federal, state, and local permits for construction, operations, and reclamation of the Pan Mine were acquired by Midway Gold. Since 2017, GRP has successfully transferred the permits to their control. GRP has all of the requisite and necessary permits necessary to construct, operate, and reclaim the Pan Mine. Table 4-2 provides a list of the major permits and authorizations and their status as of August 2020. All permits are issued to “GRP” unless otherwise noted in Table 4-2.

Table 4-2: Status of Major Permits, Authorizations, and Licenses as of August 2020

Permit	Agency	Permit Number	Status
Federal Permits and Authorizations			
Notification of Commencement of Operations	Mine Safety and Health Administration	26-02755	Active
Record of Decision and approved Plan of Operation	BLM	NVN-090444	Active
Mineral Materials Negotiated Sale (Borrow)	BLM	NVN-089672	Active
Programmatic Agreement (1)	BLM/State Historic Preservation Office	NVN-090444	Active
Hazardous Waste ID (RCRA)	USEPA/NDEP/Department of Energy	SQG NVR 000 089 227	Active
FCC Radio License	Federal Communications Commission	Reg. #0023652175 Call Sign WQUC703	Active
Explosives Permit	Bureau of Alcohol, Tobacco, Firearms, and Explosives	#9-NV-033-33-1B-00416	Active
CSAT Security Threat	Department of Homeland Security	Midway Gold Corporation (MDW) Pan Facility ID 4133675 Facility survey ID 8022095 (dated Dec. 30, 2014)	Active
State Permits			
Air Quality Operating Permit -Class I	NDEP Bureau of Air Pollution Control	AP1041-3674	Active (Expires 11/28/2022)
Surface Area Disturbance Permit	NDEP Bureau of Air Pollution Control	AP1041-3674	Active
Air Quality Operating Permit – Class II	NDEP Bureau of Air Pollution Control	AP1041-3831	Active (Expires 07/07/2022)
Air Quality Permit – Mercury Operating Permit to Construct	NDEP Bureau of Air Pollution Control	AP1041-3302	Active
Reclamation Permit	NDEP Bureau of Mining Regulation and Reclamation	0350	Active
Water Pollution Control Permit	NDEP Bureau of Mining Regulation and Reclamation	NEV2012107	Active (Expires 04/04/2023)
Dam Safety Permit	Nevada Division of Water Resources	J-679	Active
Water Appropriation	Nevada Division of Water Resources	Permits 81667- 81674	Leased from Kinross
Encroachment Permit	Nevada Department of Transportation	Occupancy Permit No. 200571	Active
Industrial Artificial Pond Permit	Nevada Department of Wildlife	S407100S	Active (Expires 06/20/2022)
Stormwater Permit	NDEP Bureau of Water Pollution Control	MSW-42137	Active
Commercial Septic System Construction Permit	NDEP Bureau of Water Pollution Control	GNEVOSDS09-S-0397	Active
Landfill Permit	NDEP Bureau of Sustainable Materials Management	SW 539 SW1762	Active
Liquid Petroleum Gas (LPG) Licenses	Nevada Board for the Regulation of Liquefied Petroleum Gas	5-5427-01 (Admin) 5-5427-02 (ADR)	Active
Potable Water "non-transient non-community water system"	NDEP Bureau of Safe Drinking Water	WP-1142-NT-NTNC	Active
Occupancy Permit	State of Nevada Fire Marshall	N/A	Active
Mine Safety	Nevada Department of Business and Industry, Division of Industrial Relations	Mine ID 26-02755	Active

Source: SRK, 2020

(1) Also signed by Mt. Wheeler Power Company, Te-Moak Tribe of Western Shoshone Tribe, Duckwater Shoshone Tribe, and the Lincoln Highway Association, Nevada.

4.5 Other Significant Factors and Risks

At the time of publication, no significant factors and risks related to mineral title, royalties, agreements, encumbrances, existing environmental liabilities or permits to construct, operate or close the operation are known.

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

Section 5 is extracted from Gustavson (2015) report, and accepted by the QP. Standardizations have been made to suit the format of this report. Changes to the text are indicated by the use of brackets [ ] or in sentences containing "SRK".

5.1 Topography, Elevation and Vegetation

The Pan property is located within the rolling hills of the northernmost portion of the Pancake Range. The terrain is gentle to moderate throughout most of the project area, with no major stream drainages. Elevation ranges from 6,400 to 7,500 ft above mean sea level (amsl). Local vegetation includes Pinyon-Juniper woodlands broken by open areas of sagebrush and grass. No springs are known to exist on the property.

5.2 Accessibility and Transportation to the Property

Access to the Pan property is via a gravel road that intersects US Highway 50 approximately 17 miles southeast of Eureka, Nevada. It is approximately 5 miles by road from US 50 to the Pan Project site. The road is constructed as a gravel embankment and has been constructed specifically for the Pan Project. The property is accessible year-round, but weather conditions occasionally make access and on-site travel difficult during the winter months.

5.3 Climate and Length of Operating Season

The local climate is typical for the high desert of east-central Nevada and the Basin and Range province. Climate data collected in Eureka, Nevada between 1997 and 2008 reports average annual precipitation of 8.1 inches, and average temperatures ranging from 11°F in the winter to 91°F in the summer (Western Regional Climate Center, 2009). Mining and exploration can be conducted year-round, but snow may cause delays in overland travel during the winter months.

5.4 Sufficiency of Surface Rights

The surface rights as described in Section 4.2 are sufficient to conduct exploration and mining operations as currently planned for the Pan deposit. The Pan Project is wholly located on and operations will be contained within GRP land holdings.

5.5 Infrastructure Availability and Sources

The town nearest to the project site, Eureka, Nevada, hosts a population of 610 according to 2010 US Census data. Greater Eureka County and White Pine County host area populations of 1,987 and 10,030 respectively, though population is centered primarily in Eureka and Ely, Nevada. Elko, Nevada, population of 18,297, is the nearest major city to the project site and is located approximately 110 miles to the north by road.

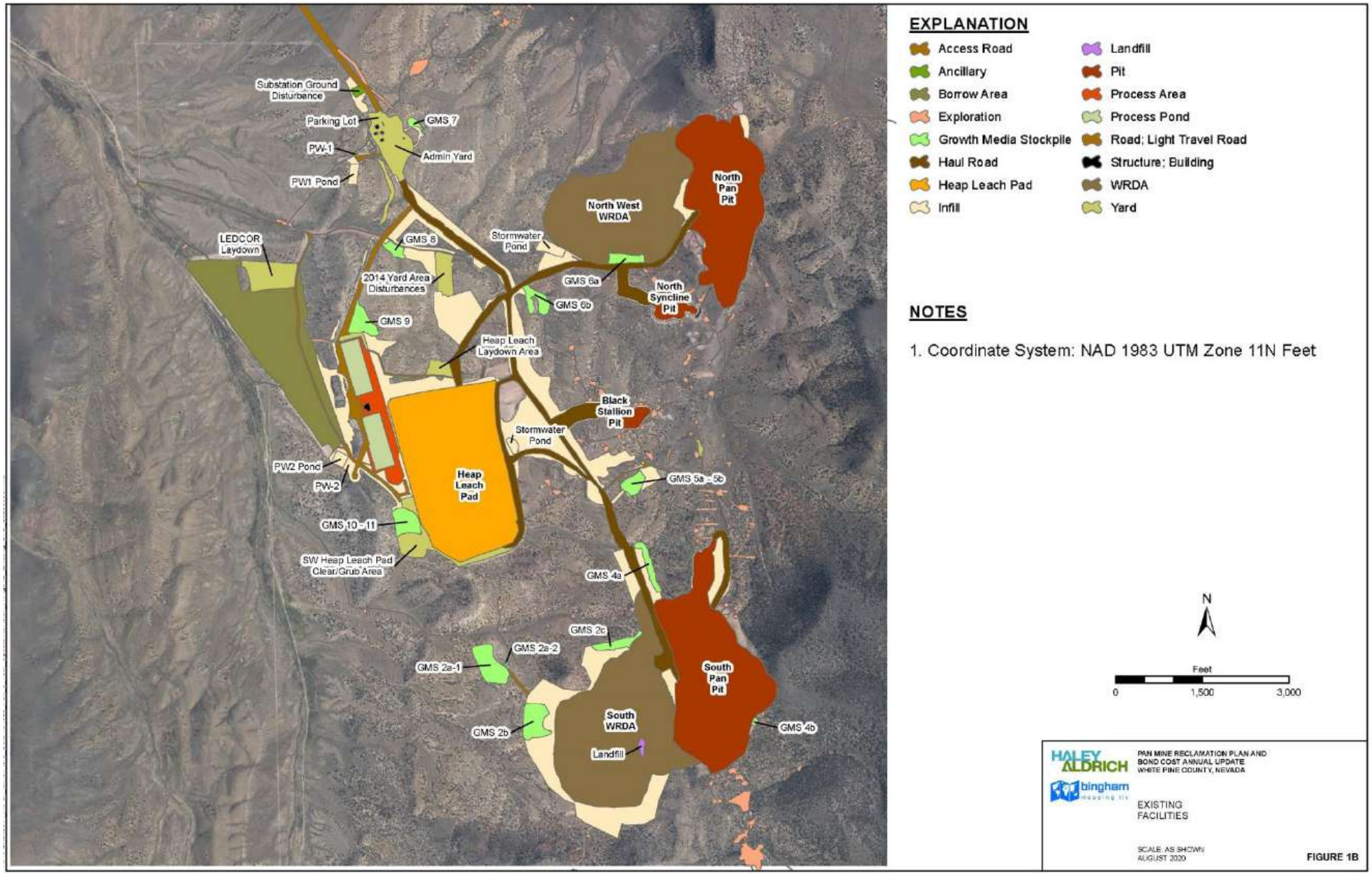
Logistical support is available in Eureka, Ely, and Elko, all of which currently support large open pit mining operations. The Ruby Hill Mine near Eureka has had recent operations (2020) and the Bald Mountain Mine, approximately 50 miles north of Pan, is currently being operated by Kinross.

Robinson Nevada Mining Company operates the Ruth Copper pit near Ely, and large-scale mining by Barrick and Newmont Mining Corporation is ongoing near Elko and Carlin, Nevada to the north. Mining personnel and resources for operations at Pan have commuted from Eureka, White Pine, and Elko Counties.

Demand for skilled and technical labor has increased recently in central Nevada and some short-term operational difficulties could be encountered due to staff shortages.

Mine construction began in January 2014 and continued until operations were ceased in 2015. Figure 5-1 shows the current layout of the facilities at the Pan Mine. Both the north and south pits are completely opened up for mining activities. All required facilities are currently constructed, except for a planned heap leach pad expansion.

Detailed descriptions of existing and planned infrastructure are in Section 18.



Source: GRP, 2020

Figure 5-1: Existing Project Infrastructure

6 History

The Pan property is located in the loosely-defined Pancake District of east-central Nevada. The district was first organized in 1870, when silver ore was discovered approximately 10 miles to the southwest at Pogue's Station (MDA, 2005, Smith, 1976). Occurrences of lignite near Pancake Summit were briefly exploited from 1872-1877, with only minor production (Smith, 1976). During the 1870s, the Chainman Sandstone was also quarried from at least two localities in the District, for furnace lining at the Eureka smelter (Smith, 1976). There is no historic gold or silver mining activity on the Pan property.

6.1 Prior Ownership and Ownership Changes

Mr. Lyle Campbell discovered the Pan deposit while prospecting in 1978, when he encountered gold-bearing jasperoid, now referred to as Campbell Jasperoid. Mr. Campbell staked 147 original unpatented mining claims and transferred ownership of the claims to the LFC Trust in 1986. The LFC Trust was bought out in 2008 by Gold Standard Royalty (Nevada) Inc., which merged with, and is now owned by, Nevada Royalty Corp. Since 1978, numerous claims have been added and released from the Pan claim block. Between 1978 and 1993, several exploration companies leased the Pan claims and completed drilling programs. The Project was dormant from 1994 to 1998. Mr. Campbell passed away in 1998 and the LFC Trust continued to manage the Pan property until 2008. Exploration began again in 1999, starting with Latitude Minerals Corporation, then Castleworth Ventures, which became Pan Nevada Gold Corporation, and was acquired by Midway Gold Corp. in 2007.

Midway added unpatented claims to the land position to assemble the current land package. In 2016, GRP acquired the assets and mineral leases held by Midway in the Asset Purchase Agreement, as described in Section 4.3.

6.2 Exploration and Development Results of Previous Owners

Exploration on the Property has been conducted by several companies since 1978, and is summarized below.

- Mr. Campbell leased his claims to Amselco in 1978. The majority of drilling exploration carried out by Amselco took place in North Pan. Homestake completed several drill holes; three of them, completed in 1980, are verified and included in the current drill hole database.
- In 1986, Hecla conducted an exploration drilling program in the central portion of the Pan property.
- Echo Bay completed an exploration drilling program in 1987 that resulted in the discovery of gold mineralization at South Pan.
- The Alta Gold and Echo Bay joint venture, Alta Bay, conducted drilling in both North and South Pan, in conjunction with geologic mapping, geochemical sampling, and an induced polarization geophysical survey. Alta Bay initiated studies in support of mining development, including an archaeological survey, additional metallurgical test work, and preliminary mineral reserve estimations and mine designs.
- Alta Gold completed exploration drilling in 1992. Drilling results were reported, but the associated holes have not been validated and are not included in the current drill hole database.

- In 1993, Southwestern completed several reverse circulation holes. The associated drill hole collars have been identified in the field, but no other information has been located to validate these holes. These holes are not included in the current database. Drilling completed nearby in 2007 could not confirm the reported results.
- Between 1999 and 2001, the Latitude - Degerstrom joint venture conducted geologic mapping and outcrop and soil sampling, as well as drilling and metallurgical testing. Latitude drilling programs focused primarily on North and South Pan mineralization, but also resulted in the discovery of mineralization in the Syncline and Black Stallion target areas of Central Pan. Latitude terminated the joint venture with Degerstrom in mid-2001, and joint ventured the project with Metallica later that year. From LFC Trust files, it appears that Metallica focused on thermal imagery and lineament study of satellite data over the Pan area. No additional subsurface exploration work was completed by Metallica.
- Castleworth Ventures. Inc. completed exploration drilling and conducted geologic mapping, surface sampling, metallurgical test work, and resource estimation between 2003 and 2006.
- Between 2007 and 2015, Midway completed 287 holes, of which 260 were reverse circulation and 27 diamond core drill holes for a total of 136,507 ft. Drilling efforts focused on expanding known mineralization, but also included confirmation drilling, core drilling for metallurgical samples, and exploration drilling in several potential target areas on the Pan property. Midway drilled seven water supply or monitoring wells in 2012. These were logged for geology, but not assayed and are not included in the drill hole database. In addition to exploration drilling, Midway completed geologic mapping, soil and outcrop sampling, and a gravity survey.
- Midway began construction of the Pan Mine in February 2014. Mining was initiated in October 2014 and heap leaching was initiated in February 2015. The first gold pour was in March 2015. Mining operations were suspended in June 2015 due to poor leach pad permeability and slower metal recovery than anticipated. Midway initiated bankruptcy in June 2015. Leaching and gold recovery continued through bankruptcy proceedings and the sale of the Property to GRP.
- GRP Pan, LLC acquired the Pan assets on May 17, 2016, from subsidiaries of Midway.

Drilling history to date is summarized in Table 6-1. More than 1,200 exploration or resource definition drill holes have been completed at Pan; many of the earliest drill holes cannot be verified and are not included in the database. Most drill holes completed early in the Project history by Alta Gold and Echo Bay are not included in the current database, due to lack of verifiable collar locations, geology and/or assay results. Water wells drilled by Midway in 2012 were logged for geology but not assayed and are excluded from the Table 6-1.

The current Mineral Resource drill hole database includes 1,179 drill holes totaling 377,744 ft, plus 2,324 ft in six water wells logged for geology but not sampled for assay. Of the assayed drill holes in the database, 1,146 holes with 364,839 ft were drilled by RC or rotary methods, and the rest were diamond core holes, totaling 12,905 ft in 33 drill holes.

MDA (2005), and Gustavson (2011, 2015) have reported on validation of the existence of drill hole collar location information, drilling logs and assay records for the drill holes in earlier modeling databases. Data verification and validation for the 2016 drill holes is reported in subsequent sections of this document.

Table 6-1: Project Drilling History

Company	Years	Holes Drilled (RC/ Core)	Footage Drilled (RC/Core)	Drill Type
Amselco	1978 to 1985	84	21,771	RC
Homestake	1980	3	620	RC
Hecla	1986	7	1,415	RC
Echo Bay	1987 to 1988	108/5(1)	19,905/825(1)	RC/Core (Met)
Alta Bay Venture	1988 to 1991	213	66,960	RC
Alta Gold	1991 to 1992	10/7(1)	2,645/958(1)	RC (Twin)/Core (Met)
Latitude/Degerstrom JV	1999 to 2001	54	16,143	RC
Castleworth Ventures	2003 to 2006	290/6	68,005/1,289	RC/Core
Midway Gold(2)	2007 to 2015	260/27	124,355/11,616	RC/Core
GRP Minerals	2016	127	45,665	RC
Totals in Database		**1,146/33**	**364,839/12,905**	**RC/Core**

Source: GRP and SRK, 2017

(1) No Alta Gold drill holes, or core drill holes by Echo Bay, are incorporated into the database for lack of verifiable collar locations, geology and/or assay results.

(2) Midway drilled 8 groundwater supply or monitoring wells in 2012. These were logged for geology, but not assayed; and are not included in this table. Six of these are included in the geological database, but none have assay data.

6.3 Historical Mineral Resource and Reserve Estimates

Many of the historical Resource and Reserves estimates for Pan were completed prior to implementation of NI 43-101 standards. A Qualified Person has not done sufficient work to classify these historical estimates as current resources, and the issuer is not treating these as currently meeting CIM and NI 43-101 standards. The estimates are superseded by new drilling and mining depletion, therefore they are considered historical in nature.

6.3.1 Echo Bay

A qualified person has not done sufficient work to classify the Echo Bay historical estimate as a current resource estimate or Mineral Reserve and the issuer is not treating the historical estimate as a current resource estimate.

Echo Bay completed a cross-sectional polygonal ore reserve estimation in 1988, presented in Table 6-2. These reserve estimates have not been verified, are not considered reliable, are not relevant to the updated mineral resource presented in this report and are mentioned here for historical completeness only.

The estimate was prepared based on grade cut-offs of 0.015 oz/ton Au and 0.020 oz/ton Au over minimum drill lengths of 10 ft. The area of influence allowed per hole was ½ the distance to the adjacent cross-section, up to 100 ft, in the north-south direction, and ½ the distance to the nearest hole, up to 50 ft, in the east-west direction. Tonnage factors used were 15 ft^3/ton at North Pan, and 13 ft^3/ton at South Pan.

Table 6-2: Echo Bay Historical Polygonal Ore Reserve Estimation, 1988

Area	0.015 oz/ton Au Cut-off			0.020 oz/ton Au Cut-off		
	Tons	Gold Grade (oz/ton)	Contained Au Ounces	Tons	Gold Grade (oz/ton)	Contained Au Ounces
North Pan	2,877,822	0.027	76,258	1,869,200	0.032	59,146
South Pan	2,476,340	0.031	76,689	1,958,365	0.035	68,244
Total	**5,354,162**	**0.029**	**152,947**	**3,827,565**	**0.033**	**127,390**

Source: Jeanne, 1988, reported in MDA, 2005

6.3.2 Alta Bay Joint Venture

Documentation of the following Alta Bay resource and reserve estimates is limited to annual reports submitted to LFC Trust that pre-date NI 43-101, and none appear to be modern CIM reporting standards. They should be treated as historical in nature.

Alta Bay calculated a polygonal geologic ore reserve in 1988 from 100 ft spaced cross-sections, presented in Table 6-3. The estimation was completed at 0.020 oz/ton Au cut-off and an area of influence of 100 by 50 ft per drill hole. Tonnage factors used were 15 ft^3/ton at North Pan, and 13 ft^3/ton at South Pan.

Table 6-3: Alta Bay Historical Polygonal Geologic Ore Reserves, 1990

Area	Tons	Gold Grade (oz/ton Au)	Contained Ounces
North Pan	6,744,406	0.021	140,942
South Pan	4,191,765	0.025	106,130
Total	**10,936,171**	**0.023**	**247,072**

Source: Myers, 1990, reported in MDA, 2005

In 1989 Alta Bay reported the results of [electronic] computer generated ore reserves for the Pan Project, summarized in Table 6-4. The annual report to LFC Trust indicates a strip ratio of 1.87 for North Pan and 1.63 for South Pan, but no other details are provided in the report. No original work could be located to further document this estimate.

Table 6-4: Alta Bay Historical Computer Generated Ore Reserves, 1990

Area	Tons	Gold Grade (oz/ton Au)	Contained Ounces
North Pan	5,125,240	0.022	112,509
South Pan	5,874,519	0.020	117,972
Total	**10,999,759**	**0.021**	**230,481**

Source: Myers, 1990, reported in MDA, 2005

In 1991, Alta Bay updated the polygonal “geologic ore reserves” for the project as shown in Table 6-5. This estimate was prepared using tonnage factors of 13 ft^3/ton for all material, except argillaceous material at South Pan, which has a tonnage factor of 14 ft^3/ton. All other parameters are the same as used in the previous estimation.

Table 6-5: Alta Bay Historical Polygonal Geologic Ore Reserves, 1991

Area	Tons	Gold Grade (oz/ton Au)	Contained Ounces
North Pan	6,744,406	0.0209	140,942
South Pan	4,687,126	0.0238	111,641
Total	**11,431,532**	**0.0231**	**252,583**

Source: Myers, 1991, reported in MDA, 2005

Also in 1991, Alta Bay reported "recoverable geologic ore reserves" for the Pan deposit as shown in Table 6-6. This model was completed using a tonnage factor of 13 ft^3/ton for North Pan and South Pan, a gold recovery rate of 65%, and a gold price of US$400/oz (Myers, 1991). No geology was used to constrain the model, and no other details were reported in the annual report to LFC Trust.

Table 6-6: Alta Bay Historical Computer Model Generated Recoverable Ore Reserves, 1991

Area	Contained Ounces(1)	Recoverable Ounces
North Pan	153,762	99,945
South Pan	115,343	74,973
Total	**259,105**	**174,918**

Source: Myers, 1991, reported in MDA, 2005

(1) Contained Ounce values are calculated from Recoverable Ounces and recovery rate.

6.3.3 Latitude Minerals Corporation

Prior to performing any surface work at the Pan Project, Latitude contracted Lynn Canal Geological Services of Juneau, Alaska to compile a digital drilling database, construct a three-dimensional geologic model, and estimate mineral resources on the property. The resource was modeled by performing variography on composited drill data to establish reasonable estimation parameters and estimated gold grades. Faults and lithologic contacts were used as hard boundaries. Tonnage factors applied were 13 ft^3/ton at North Pan and 14 ft^3/ton at South Pan. The resource estimate is summarized in Table 6-7, and according to MDA (2005) it appears to conform to definitions and criteria set out by the CIM. This resource estimate was not reviewed for the current report and is presented for project history only. Increase of the resource from the previous estimate appears to be the result of a lower resource CoG, as the same data was used for both.

Table 6-7: Latitude Historical Resource Estimate, 1999

Indicated Resources									
	North Pan			South Pan			Total Indicated		
Cut-off (oz/ton Au)	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces
0.010	10.41	0.017	172,800	8.46	0.017	144,300	18.86	0.017	317,100
0.015	4.88	0.022	107,900	4.26	0.022	94,900	9.14	0.022	202,800
0.020	2.37	0.028	66,100	2.25	0.027	61,300	4.62	0.028	127,400
Inferred Resources									
	North Pan			South Pan			Total Indicated		
Cut-off (oz/ton Au)	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces
0.010	3.46	0.013	44,500	3.89	0.013	50,600	7.34	0.013	95,100
0.015	0.78	0.017	13,900	0.94	0.018	17,300	1.72	0.018	31,200
0.020	0.14	0.024	3,400	0.31	0.022	6,900	0.45	0.023	10,300

Source: White and Buxton, 1999, reported in MDA, 2005

6.3.4 Castleworth Ventures

After exploration drilling in 2003 and 2004, Castleworth Ventures commissioned MDA to complete a NI 43-101 resource estimate on the Pan Project. Parameters for the estimate are thoroughly discussed in the 2005 MDA report, and the results are summarized in Table 6-8. Using a 0.010 oz/ton Au cut-off, the measured and indicated total resource is 18.97 Mt at 0.019 oz/ton Au, with 361,400 gold oz contained. The inferred total was 8.30 Mt at 0.017 oz/ton Au, with 140,600 gold oz contained. This resource evaluation used an economic cut-off of 0.010 oz/ton Au. Reported resources are total in situ resources unconstrained by an economic pit shell. A significant amount of drilling has been completed since this resource estimate was completed, therefore the resource is considered historical in nature.

Table 6-8: Castleworth Ventures Historical Resource Estimate, 2005

Measured Resources									
	North Pan			South Pan			Total Measured		
Cut-off (oz/ton Au)	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces
0.010	3.09	0.019	59,600	-	-	-	3.09	0.019	59,600
0.015	1.66	0.026	42,700	-	-	-	1.66	0.026	42,700
0.020	1.03	0.031	32,200	-	-	-	1.03	0.031	32,200
0.030	0.40	0.043	17,300	-	-	-	0.40	0.043	17,300
0.040	0.19	0.054	10,300	-	-	-	0.19	0.054	10,300
0.050	0.10	0.064	6,100	-	-	-	0.10	0.064	6,100
Indicated Resources									
	North Pan			South Pan			Total Indicated		
Cut-off (oz/ton Au)	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces
0.010	9.13	0.018	162,600	6.75	0.021	139,200	15.88	0.019	301,800
0.015	4.88	0.023	111,300	4.53	0.025	112,500	9.31	0.024	223,800
0.020	2.50	0.029	73,500	2.84	0.030	84,100	5.34	0.029	157,600
0.030	0.77	0.042	32,600	1.04	0.040	41,800	1.81	0.041	74,300
0.040	0.36	0.052	18,700	0.42	0.050	20,700	0.77	0.051	39,400
0.050	0.20	0.058	11,600	0.15	0.061	9,300	0.35	0.060	21,00
Inferred Resources									
	North Pan			South Pan			Total Inferred		
Cut-off (oz/ton Au)	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces	Tons (Mton)	Gold Grade (oz/ton Au)	Gold Ounces
0.010	2.82	0.017	49,200	5.49	0.017	91,400	8.30	0.017	140,600
0.015	1.46	0.023	32,900	3.17	0.020	62,900	4.62	0.021	95,900
0.020	0.79	0.028	22,000	1.12	0.026	28,800	19.1	0.027	50,800
0.030	0.26	0.036	9,600	0.28	0.036	9,200	0.52	0.036	18,700
0.040	0.08	0.045	3,600	0.04	0.045	2,000	0.12	0.045	5,500
0.050	0.01	0.051	700	0.01	0.053	400	0.2	0.052	1,200

Source: MDA, 2005

6.3.5 Midway 2011

Between 2006 and 2011, Midway completed 209 drill holes, primarily RC holes for exploration and resource delineation, and several core holes for metallurgical studies. Estimated Resources and Reserves from the 2011 Feasibility Study are reported in Table 6-9 and Table 6-10 respectively. A significant amount of drilling has been completed since this resource and reserve estimate was completed, therefore the estimates are considered historical in nature.

Table 6-9: Midway Historical Resource Estimate, 2011

CoG (oz/ton)	Tons	Grade Au (oz/ton)	Ounces
Pan Total Measured Resource			
0.008	30,150,640	0.0173	520,186
0.006	34,013,935	0.0161	546,756
0.004	40,697,193	0.0142	579,238
Pan Total Indicated Resource			
0.008	29,901,186	0.0152	453,351
0.006	35,992,335	0.0138	495,357
0.004	47,529,031	0.0116	550,571
Pan Total Measured Plus Indicated Resource			
0.008	60,051,826	0.0162	973,537
0.006	70,006,270	0.0149	1,042,112
0.004	88,226,224	0.0128	1,129,809
Pan Total Inferred Resource			
0.008	1,952,486	0.0170	33,120
0.006	2,457,481	0.0149	36,581
0.004	4,330,080	0.0105	45,261

Source: Gustavson, 2011

Table 6-10: Midway Historical Reserves Statement, 2011

Total Reserves	Tons (000's)	Gold	
		oz/ton	Ounces (000's)
Proven Reserves	27,827	0.018	487.51
Probable Reserves	25,427	0.015	376.71
Proven & Probable Reserves	53,254	0.016	864.22
Inferred within Designed Pit	695	0.013	9.00
Waste within Designed Pit	94,582		
Total tons within Designed Pit	**148,531**		

Source: Gustavson, 2011

6.3.6 Midway 2015

Midway issued an updated feasibility study (Gustavson, 2015) following a new resource and reserves estimation that incorporated early mine production data. The 2015 updated Mineral Resource and Mineral Reserve statements are presented in Table 6-11 and Table 6-12, respectively. A significant amount of drilling has been completed since this resource and reserve estimate was completed, therefore the estimates are considered historical in nature.

Table 6-11: Midway Historical Resource Estimate, 2015

	Measured			Indicated			M&I			Inferred		
Cut-off (oz/ton)	**Tons (000's)**	**Grade (oz/ton)**	**Contained (000's oz)**	**Tons (000's)**	**Grade (oz/ton)**	**Contained (000's oz)**	**Tons (000's)**	**Grade (oz/ton)**	**Contained (000's oz)**	**Tons (000's)**	**Grade (oz/ton)**	**Contained (000's oz)**
0.008	15,676	0.017	264.7	12,208	0.014	167.4	27,886	0.016	433.3	6,014	0.015	88.4
0.006	18,339	0.015	283.3	15,818	0.012	192.8	34,157	0.014	477.1	9,517	0.012	112.5
0.004	20,430	0.014	293.4	19,185	0.011	210.1	39,614	0.013	503.8	15,400	0.009	141.1

Source: Gustavson, 2015

Note: Open pit optimization was used to determine potentially mineable tonnage. Measured, Indicated and Inferred mineral classification was determined according to CIM Standards. Mineral resources, which are not mineral reserves, do not have demonstrated economic viability. The 2015 Measured, Indicated and Inferred resource is constrained within a US$1,500 LG Pit shell. The base case estimate applies a CoG of 0.004 oz/ton based on the current operating costs, the 2011 Feasibility Study recoveries, and a US$1,200 gold price.

Table 6-12: Midway Historical Reserves Statement, 2015

Total Reserves All Pits	**Tons (000's)**	**Gold**	
		oz/ton	**ounces (000's)**
Proven Reserves	14,004	0.0155	217.4
Probable Reserves	7,192	0.0118	85.1
Proven & Probable Reserves	21,196	0.0143	302.4
Waste within Designed Pits	19,289		
Total Tons within Designed Pits	**40,486**		

Source: Gustavson, 2015

6.4 Historical Production

Application of process solution to the leach pad began at Pan in March of 2015 and by June 2015, Midway initiated bankruptcy proceedings. Production continued from the stacked ore while reorganization was underway. Production did not stop after the sale to GRP Minerals, but by that time the rate of gold production from the stacked ore had diminished greatly. The production record is summarized in Table 6-13.

Table 6-13: Historical Gold Production at Pan

Mine Operator	Years of Production	Gold Ounces
Midway Gold Corp.	March 2015 - May 2016	27,586
GRP Pan, LLC	June 2016 - September 2016	2,162
GRP Pan, LLC	October 2016 - September 2017	10,064
GRP Pan, LLC	October 2017 - September 2018	34,296
GRP Pan, LLC	October 2018 - September 2019	41,491
GRP Pan, LLC	October 2019 - June 2020	33,599
Total		**149,198**

Source: Fiore, 2020

7 Geological Setting and Mineralization

7.1 Regional Geology

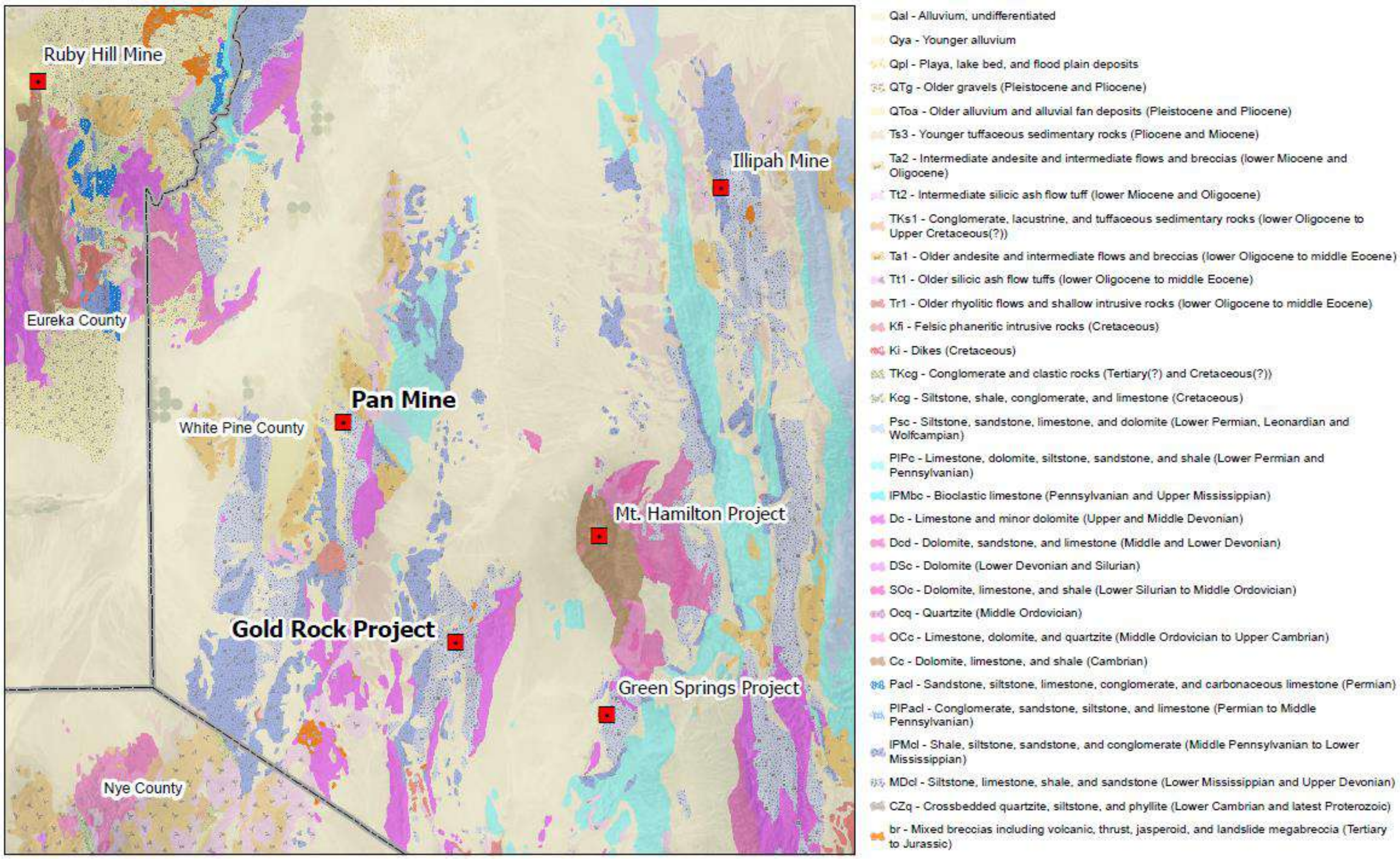
The Pan Project is located in the Pancake Range of central Nevada, in the eastern sector of the Great Basin Physiographic Province. When bedrock sediments were deposited during the middle to late Paleozoic Era, what is now central Nevada was at the margin of the North American plate. Variations in sea level caused facies changes in the sediments, from deep water shale to shallow water sandstone, and calcareous sediments at intermediate depths.

During the Cretaceous and early Tertiary, between 140 to 60 mega-annum (Ma), the Great Basin region was subjected to compression during the Sevier and Laramide orogenies. This compression resulted in the formation of generally north-striking folds and thrust faults. Localized magmatism was common during this period, and metal deposits related to igneous activity of this period are widespread throughout western North America. Examples near Pan include the Mt. Hope porphyry-skarn system and the Mt. Hamilton silver-gold deposit.

The current Great Basin landscape is shaped by crustal extension, which began in the middle Tertiary resulting in north-south trending mountain ranges and wide intervening valleys with thick sedimentary deposits. Mountain ranges are comprised of folded and tilted, Jurassic to Cambrian-aged marine sedimentary rocks that have been uplifted on steeply dipping normal faults. Precambrian metamorphic rocks are present in some ranges, such as the Ruby Mountains north of the Project, but Paleozoic marine sedimentary rocks comprise the typical bedrock in the region.

Tertiary extension has also caused localized volcanism, resulting in mafic to felsic flows, tuffs, and ash units capping sedimentary rocks. Volcanic units occur north and southeast of the Pan deposit areas.

A map of the regional geology is provided in Figure 7-1.



Source: GRP, 2017

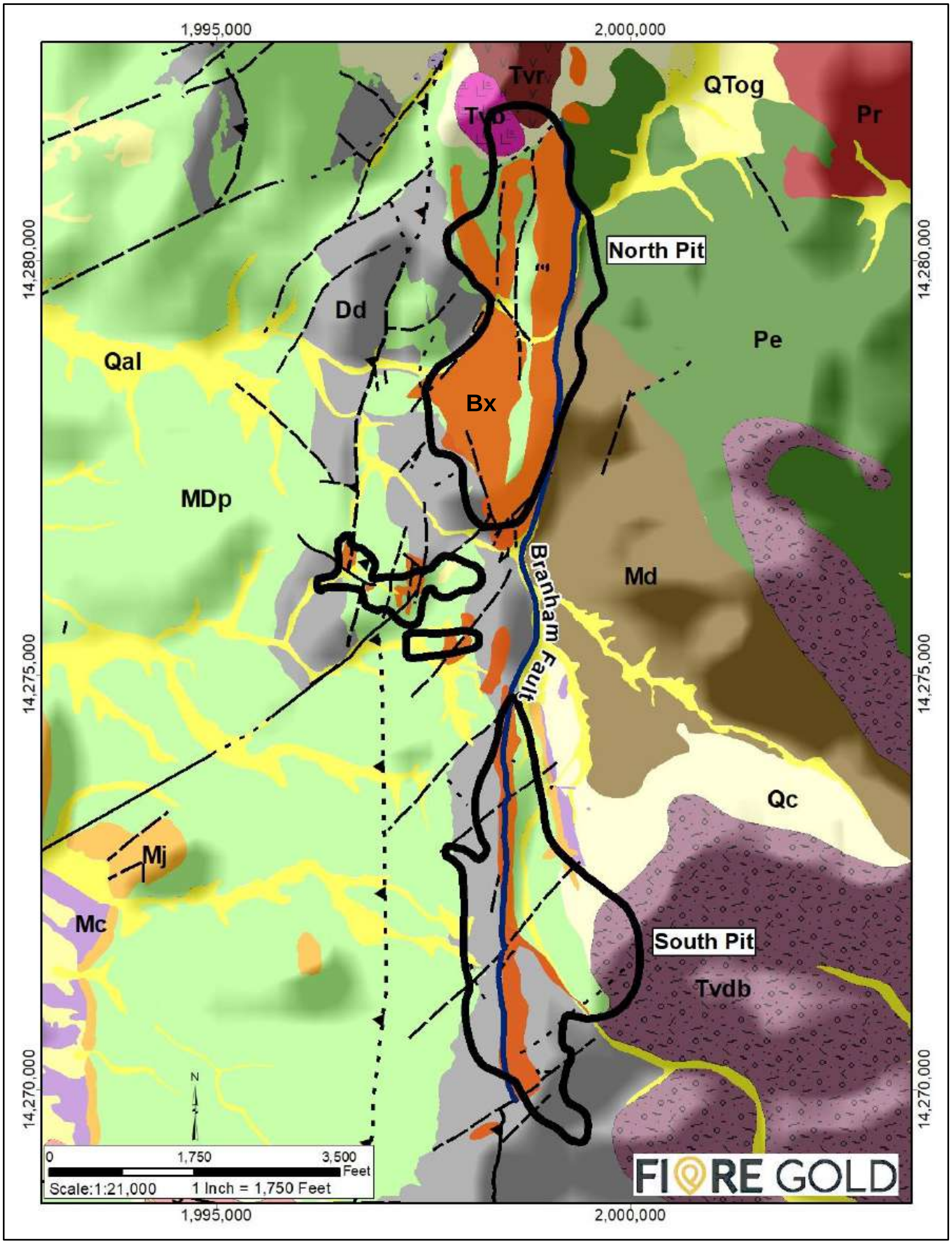
Figure 7-1: Regional Geology Map

7.2 Local and Property Geology

Geology in the Project area is dominated by Middle to Late Paleozoic stratigraphy overlain by minor Tertiary-aged volcanic units. Quaternary-aged detrital deposits are limited to drainage channels. Consequently, there is good bedrock exposure in most of the Project area.

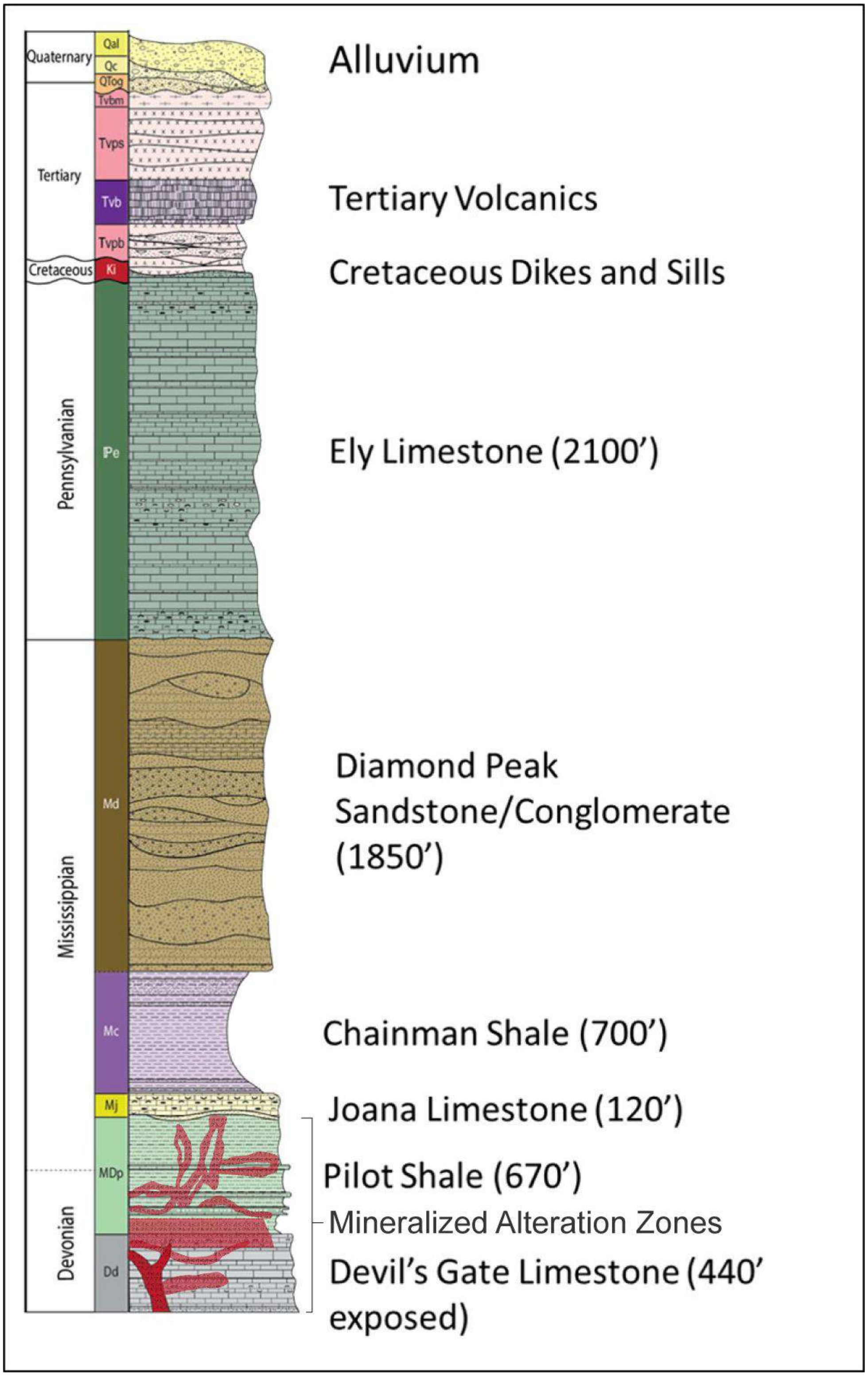
7.2.1 Lithology and Stratigraphy

Lithologic units in the area immediately surrounding Pan are dominantly Devonian- to Pennsylvanian-aged marine sediments, with lesser Cretaceous igneous intrusions, Tertiary volcanic tuffs and debris flows, and minor Tertiary to Quaternary alluvial deposits. In 2013, Midway geologists mapped the surface geology and measured stratigraphic thicknesses of the sedimentary units at Pan. The results are presented below, including a geologic map in Figure 7-2 and a stratigraphic column in Figure 7-3. Lithologic units are presented in order of oldest to youngest.



Source: GRP, 2020

Figure 7-2: Geologic Map of the Pan Mine Area with Conceptual Pit Crests



Source: Midway, 2013

Figure 7-3: Pan Project Stratigraphic Column

Simonson Dolomite (Ds) – Devonian

The Simonson Dolomite is the oldest lithologic unit intersected by drilling, but does not outcrop in the Project area. Thickness ranges from 500 to 1,300 ft thick in White Pine County (Smith, 1976), but only the top portion of the dolomite has been drilled at South Pan. The dolomite is a light gray, massively bedded unit.

Devils Gate Limestone (Dd) - Late Devonian

The Devils Gate Limestone, subdivided into a lower Meister Member and an upper Hayes Canyon Member, is the oldest lithologic unit that outcrops in the northern Pancake Range. Measured thicknesses of the formation range from approximately 1,000 ft to 2,500 ft, but at Pan only the topmost 400 to 500 ft is exposed at the surface.

The Meister Member at Pan is composed of alternating beds of medium-bedded, locally laminated and silty, very dense, medium gray dolomite and dolomitic limestone, interbedded with lesser light brownish-gray limestone. Micro and macrofossils are common throughout, particularly Stromatopora and Cladopora. The unit becomes pinkish and bleached where the amount of silt increases. This unit appears to be closer to the surface in the vicinity of North Pan as it was commonly intersected in the Banshee area.

The Hayes Canyon Member is composed entirely of thick-bedded, bleached to pink-red to light to medium brown-gray limestone that is locally silty or argillaceous. Where enough silt is present, the color becomes bleached, pink to red. Fossils are fairly common, in particular Stromatopora, Cladopora, ostracods, and brachiopods, with occasional gastropods. This unit becomes siltier and sandier upsection, immediately below the Devonian Pilot Formation.

The upper Devils Gate Limestone near the contact with Pilot Shale, is a host for gold mineralization at the Pan Mine.

Pilot Shale (MDp) - Late Devonian to Early Mississippian

Pilot Shale at Pan is 600 to 700 ft thick and has different characteristics in the upper and lower portions of the unit. The Lower Pilot is a calcareous and carbonaceous flaggy siltstone with silty limestone interbeds near the base. It is dark gray on a fresh surface and weathers to buff or tan. Silicified and argillized Lower Pilot Shale is a host of gold mineralization at the Pan property.

The Upper Pilot is dominantly a thinly bedded siltstone with zones of thinly bedded papery siltstone.

Joana Limestone (Mj) - Mississippian

Joana Limestone is 120 ft thick at Pan, and ranges in thickness from 90 to 500 ft in White Pine County (Smith, 1976). It is a gray, medium grained, unevenly bedded limestone with abundant fossil fragments, chert nodules, and detrital limestone interbeds. Reported fossil types include echinoderm, bryozoans, foraminifera, algae, and crinoids. Locally, quartz arenite sandstone is present at the base of the unit.

Chainman Shale (Mc) - Mississippian

The Chainman Shale ranges in thickness from 1,000 to 2,000 ft, and is 700 ft thick at Pan, possibly indicating structural thinning from regional faulting. It consists of dark gray to black shale with thin interbeds of olive gray silty shale and siltstone. The upper most portions contain relatively thin beds of rusty colored sandstones which grade upward into the Diamond Peak Formation.

Diamond Peak Formation (Md) - Mississippian

The Diamond Peak Formation consists of irregular beds of chert pebble orthoconglomerate, paraconglomerate and litharenite sandstone. Thickness of the formation ranges from less than 1,000 to 3,700 ft and was measured at about 1,700 ft thick near Pan.

Ely Limestone (Pe) - Pennsylvanian

The Ely Limestone was measured at 2,070 ft in the Pan area. The lower 700 ft consists of thin to medium bedded micrite to fine sparite with abundant brachiopod beds and tan to grey chert stringers and nodules. The upper 1,370 ft is medium to thin bedded limestone and silty limestone with minor chert nodule horizons. The siliciclastic content increases near the top of the unit.

Igneous Intrusives (Ki) - Cretaceous

Intrusive rocks are not common in the Pan area. Within the deposit area, rocks interpreted as thin dikes have been intercepted in a few drill holes and consist of pinkish monzonite porphyry containing irregular feldspar, hornblende, and biotite phenocrysts in a fine quartz-orthoclase matrix. Texture and composition is similar to that of other intrusive rocks in the White Pine Mountains, and these dikes are thought to be temporally related.

Volcanic Units, General (Tv) - Tertiary

Tertiary volcanic flows and tuffs cover the sedimentary units at the north end of North Pan, and a fairly young volcanic debris flow mantles the sediments southeast of the South Pan pit. At the north end of the North Pan mineralization, drilling has penetrated through these volcanic units and intercepted mineralized sediments. This would indicate that mineralization is older than the volcanic units.

Pinto Basin Tuff (Tvpb)

The Pinto Basin tuff is a light-colored pumice-rich, non-welded air fall tuff. Its thickness has been measured at 285 ft near Pan and has been dated at other locations at 34.6 Ma (Nolan et al., 1974).

Richmond Mountain Andesite (Tvb)

The Richmond Mountain andesite is a dark, aphanitic to glassy flow with flow banding, minor cooling jointing, and a basal layer of scoria. Near Pan the unit is 240 ft thick.

Pancake Summit Tuff (Tvps)

Tan or pink, crystal-rich, moderately welded ash flow tuff with coarse smoky quartz, sanidine, and biotite crystals. It is 400 ft thick near Pan.

Bates Mountain Tuff (Tvbm)

Densely welded, crystal-poor tuff with common spherulitic textures and vapor phase alteration. It is 50 ft thick near Pan.

Debris Flow (Tvdf)

Heterolithic, unconsolidated debris flow consisting of basaltic and siliciclastic cobbles and boulders in finer pumice-rich matrix. Thickness is variable and it is interpreted as a volcanic unit.

Tertiary and Quaternary Sedimentary Deposits

Silt to cobble clast size, unconsolidated material that post-dates the rock units listed above.

QTog: Older gravel commonly cemented by caliche, with incised drainages later filled with alluvium, and overlain by colluvium.

Qc: Colluvium as slope debris of variable composition and thickness, gravel to cobble clast size.

Qal: Alluvium as graded channel deposits, silt to gravel clast size, mostly limited to currently active intermittent stream channels.

7.2.2 Alteration

Alteration associated with the Pan deposits is typical of Carlin-style gold systems, and includes silicification, argillization, decalcification, and oxidation. Breccia bodies may be silicified, as jasperoid, or argillized, and can contain variably altered fragments, including silicified, clay altered, and/or decalcified fragments. The Pilot Shale-Devils Gate Limestone contact is commonly silicified, but may be argillized and/or decalcified. This contact frequently shows evidenced of karsting and solution cavities.

Silicification is characterized by multi-phase brecciation and passive silica flooding along bedding and structures. Silicification occurs in breccia zones and in the Pilot Shale, and small zones have also been identified in the Devils Gate Limestone. Minor quartz veining has been reported in North Pan, particularly in association with the Campbell Jasperoid.

Clay alteration is generally associated with hydrothermal alteration and carbonate destruction. Clay along faults and bedding is common in both the Pilot Shale and Devils Gate Limestone and is a common matrix of solution/collapse breccias. Clay content in some South Pan ores can be upwards of 30% of the rock by weight and is dominantly composed of illite and lesser amounts of kaolinite.

Decalcification of both the Devils Gate Limestone and calcareous siltstones of the Pilot Shale is spatially associated with mineralization encountered at Pan. Decalcification results in a sanded, punky texture, especially in lithologic units with high original carbonate content.

Mineralization at Pan occurs in strongly oxidized rock to a nominal depth of 500 ft and locally as deep as 700 ft. Oxidation is prevalent throughout each of the zones with strong development of goethite and hematite iron oxides. Liesegang banding in the Pilot Shale is associated with oxidation. Sulfide minerals have rarely been described in drill logs at Pan and are not associated with known gold mineralization.

Barite is a typical accessory mineral for gold mineralization and silicification. Most mineralized areas contain elevated barite levels, typically above 0.2% weight percent. Hydrothermal barite veins were briefly exploited in the 1970s at the Cue Ball Barite Mine, in the southeast area of the Property.

7.2.3 Structure

The Branham Fault Zone (BFZ) is a north-south trending, steeply dipping structure that controls the geology at Pan. The fault zone is exposed in both the North and South Pits, and has a slight dip west from vertical. On the west side of the fault, Devonian through Mississippian stratigraphic units strike north-south and dip 10° to 30° westward. On the east side of the fault, Devonian through Permian units strike about 30° to 35° to the northwest and dip 65° to 70° to the northeast.

The stratigraphic units on the east side of the BFZ comprise the southwest limb of a northwest trending syncline which is truncated by the BFZ. The BFZ is recognizable in the field by the juxtaposition of younger sedimentary rocks to the east against older sedimentary rocks to the west, and can be tracked north to Tertiary volcanic units.

The displacement along the BFZ is not completely understood, but given the juxtaposition of broadly folded, northeast dipping units against gently westerly dipping units, it seems difficult to ascribe simple normal displacement to the fault. Fiore geologists believe the BFZ to have a complex and long-lived history of movement, likely related to shifting and adjusting plate margins, and likely different displacement vectors. A recent interpretation by Fiore geologists, aided by accumulated blast hole data and detailed structural observation of exposed high walls suggests that the latest and perhaps most significant movement of the BFZ is as a right-lateral strike-slip fault, with lateral displacement of approximately 8,700 ft. This interpretation suggests that the North and South Pan mineralized zones were likely a single deposit at the time of mineralization but have since been separated by N-S movement along the BFZ. This interpretation is supported by independent structural patterns and by mineralization patterns in blast hole drilling.

To the south of the deposit area, the BFZ may be offset by cross-cutting northeast trending faults and appears to proceed south with Devils Gate Limestone on both sides of the fault, and without the distinctive alteration and mineralization in the Pan deposit area.

The terrain west of the BFZ is cut by a number of northeast trending high angle faults with varying displacement senses. There are also a number of north trending faults, which may include high angle, dip-slip faults, and low angle, easterly-directed thrust faults.

Considerable solution/collapse breccia is present along and in proximity to the BFZ and other associated structures to the west. The breccias host a substantial portion of the gold resource at the Pan Project and are interpreted as solution/collapse breccias and hydrothermal breccias. These formed by the small-scale transport of broken rock bodies in association with hot hydrothermal fluids during the mineralizing event(s). The resultant geometry is one of elongate pods of brecciation and alteration that form along north-south or northeasterly trending faults, along with brecciation and alteration forming along bedding planes of preferential units, most notably along the contact of the Pilot Shale and Devils Gate Limestone. Breccias vary from clast to matrix supported, and contain angular to subrounded sedimentary fragments. Associated crackle breccia, wherein the rock is shattered but fragments remain roughly in place and are not rotated, occurs marginal to or as relicts within the larger breccia bodies, and is altered and mineralized in a manner similar to the more well-developed breccias.

7.3 Significant Mineralized Zones

Pan has three main mineralized zones; North, Central, and South. Gold mineralization spatially follows the Devils Gate Limestone – Pilot Shale contact in all three and is also controlled by steeply-dipping faults that trend north-south and secondarily by west-northwest (WNW) open fold axes. North Pan is dominated by: 1) near-vertical pipes and bodies of silicified solution breccia localized at the Pilot Shale–Devils Gate Limestone contact adjacent to the BFZ, and 2) stratiform-like modestly dipping breccia bodies and zones west of the BFZ focused near the locally folded Pilot Shale–Devils Gate contact. Central and South Pan have more argillic alteration than silicic. Mineralization in Central Pan is at the Pilot–Devils Gate contact and secondarily controlled by WNW trending open folds, and likely other subtle structures which have not been clearly identified. These open folds were not recognized from exploration drilling, and have only become apparent after exposure in the pit walls. Their significance in controlling mineralization is also subtle but has been confirmed by examination of blast hole assays. South Pan mineralization occurs in two zones: 1) a wide, clay-altered, near-vertical solution breccia zone along the west side of the BFZ, and 2) a stratigraphically-controlled zone east of the Branham Fault along the Pilot–Devils Gate contact. This zone dips northeast at about 55°.

The newly identified stratiform mineralization in the Banshee area, west of North Pan, is currently interpreted to represent the opposite limb ‘mirror image’ of the South Pan stratigraphically-controlled zone.

8 Deposit Type

8.1 Mineral Deposit

The Pan gold deposits are Carlin-style, which are epithermal in origin, comprised of disseminated gold hosted in sedimentary rock units. Gold particles occur as micron to submicron size disseminations. Visible or coarse gold is not common in this type of deposit, and has not been observed at Pan. Controls on mineralization in Carlin-style systems and at the Pan Project include both structure and stratigraphy.

8.2 Geological Model

Gold mineralization is generally distributed along high-angle faults, and in a more tabular fashion subparallel to stratigraphy. Solution breccias developed in association with faults at the Pan Project serve as the primary host for gold mineralization, and have internal anisotropy that follows relic bedding orientation. Additional mineralization is hosted in favorable stratigraphy, such as the lower Pilot Shale and the upper siltier portions of the Devils Gate Limestone. More subtle mineralization controls occur as the axial traces of open folds, both anticlines and synclines trending obliquely (most commonly WNW) to the BFZ.

9 Exploration

Exploration activities that were conducted prior to 2018 can be found in the 2017 technical report including near mine targets, and a summary of the historical exploration activities are detailed in Section 6 of this report.

Fiore conducted three drill programs between 2018 and 2020 at the Pan Mine at various targets including the active mine pits and selected near mine exploration targets. A detailed description of the drill programs is included in Section 10. Fiore did not conduct any other exploration activities at the Pan Mine.

10 Drilling

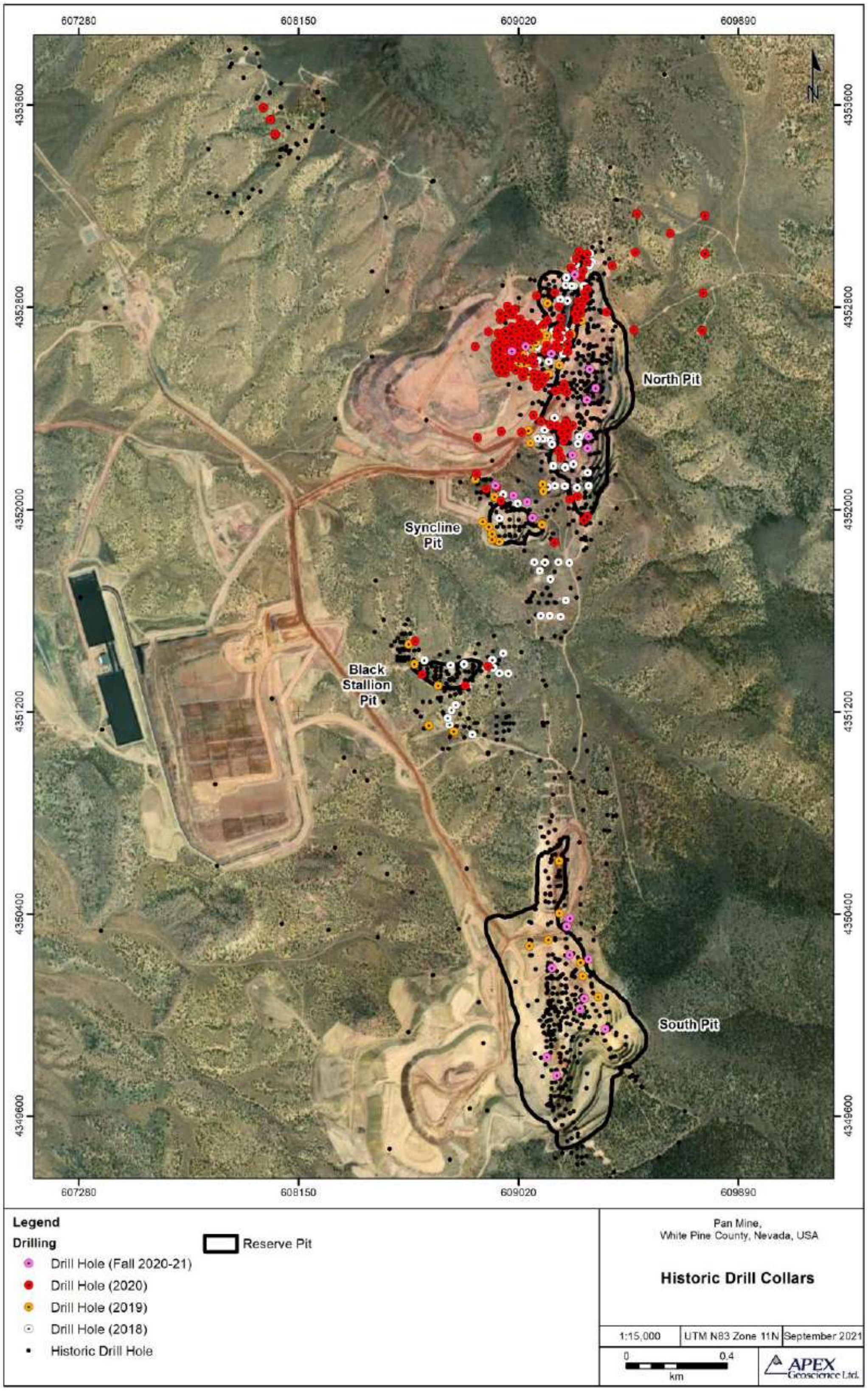
Historical drilling at the Pan deposit dates back to 1978 with the initial discovery of gold-bearing jasperoids. Drilling operations have been conducted over the Project area since this discovery. Historical drilling is discussed in Section 6.

More than 1,200 exploration or resource definition drill holes have been completed at Pan; many of the earliest drill holes cannot be verified and are not included in the database. Most drill holes completed early in the Project history by Alta Gold and Echo Bay are not included in the current database, due to lack of verifiable collar locations, geology and/or assay results.

The current Mineral Resource drill hole database includes 1,179 pre 2018 drill holes totaling 377,744 ft, plus 2,324 ft in six water wells logged for geology but not sampled for assay (Table 6.1). Of the assayed pre-2018 drill holes in the database, 1,146 holes with 364,839 ft were drilled by RC or rotary methods, and the rest were diamond core holes, totaling 12,905 ft in 33 drill holes.

MDA (2005), and Gustavson (2011, 2015) have reported on validation of the existence of drill hole collar location information, drilling logs and assay records for the drill holes in earlier modeling databases. Additional data verification of the pre-2018 drill hole data has been performed by SRK (Pennington et al., 2017; Deiss et al., 2019). APEX personnel and Mr. Dufresne have checked approximately 10% of the pre 2018 drill data and found no significant issues. Mr. Dufresne considers the Pan drillhole database, including the historical pre-2018 data and the 2018 to 2020 data, well validated and suitable for the preparation of the MRE and Minerals Reserves as presented herein.

The following section includes a brief summary discussion of the historical drilling pre-2018 and a more detailed discussion of the drilling programs conducted by Fiore between 2018 and 2020. Figure 10-1 outlines the locations of all drill holes completed by Fiore during the drilling programs over the three years. All three programs used the same procedures for staking proposed drill hole locations, collection of samples, final collar surveying and down hole drill hole deviation surveying. The 2018 to 2020 Fiore drill programs comprised 267 reverse circulation (RC) drill holes totaling 107,460 ft.



Source: APEX, 2021

Figure 10-1: Fiore drill hole locations by drilling campaign

10.1 Historical (Pre-2018) Drilling

The current Mineral Resource drill hole database includes 1,179 pre 2018 drill holes totaling 377,744 ft, plus 2,324 ft in six water wells (Table 6.1). Of the assayed pre-2018 drill holes in the database, the drilling can be divided into pre-2000 drilling involving a number of companies and largely completed by dry RC methods (with minor rotary drilling campaigns), and post-2000 drilling (2003 to 2016) with the vast majority of drilling completed by Castleworth Ventures, Midway and GRP utilizing wet RC methods. Castleworth Ventures and Midway did complete a number of core holes (33) during the period. About 40% of the historical drill holes in the database were completed pre-2000 and 60% of the holes between 2003 to 2016 (Table 6.1).

For the pre-2000 drilling data, holes lacking collar coordinates, geological logs, assay sheets/certificates were not utilized in the database. Approximately two thirds of the holes were drilled as vertical holes with one third drilled as angle holes. Down-hole surveys were either not completed or not documented/recorded for any of the historical pre-2000 drill holes. Collar coordinates were captured in grid coordinates and were entered into the database from copies of the original drill logs and checked against maps, which were then converted into NAD83, Zone 11 UTM coordinates in feet. Survey instrumentation and accuracy for the collar surveys for the pre-2000 drill holes in not known. Historical drill holes by Midway from 2007 onwards were surveyed by either professional licensed surveyors or the Pan mine site surveyors and were collected in NAD83, Zone 11 coordinates directly. Most drill holes from 2007 onwards (with a few exceptions) were down-hole surveyed utilizing a gyroscopic survey instrument by International Directional Services of Elko, Nevada.

Drill spacing for the historical drilling was completed at a nominal spacing of 100 ft centers at North and Central Pan and at 165 ft centers at South Pan. There is little to no documentation of sampling procedures for the historic pre-2000 drill holes. Most if not all the RC and rotary drilling was sampled utilizing 5 ft intervals. MDA (2005) describe the pre-2000 RC sampling as “standard dry RC sampling” whereby dry cuttings were collected in a cyclone, with the sample then passed through a riffle splitter and into a sample bag representing each 5 ft interval. This was standard practice at the time and likely utilized across many of the pre-2000 RC drilling campaigns. MDA (2005) indicates that groundwater was rarely encountered within 1,000 ft of surface. Ideal conditions for dry RC drilling.

The historical 2003 to 2016 drilling completed by Castleworth Ventures, Midway and GRP was conducted as wet RC drilling with water injection between 1 and 2 gallons per minute (Gustavson, 2011 and 2015). Samples were collected at 5 ft intervals with cutting passed through a cyclone and into a rotary vane splitter yielding a constant sample size of about 7 kg. Plastic RC chip trays were prepared for each hole with the hole number and footage. The chip trays were then utilized for later geological logging of the RC drill holes. The RC samples were generally allowed to drain at site and then were either transported to Eureka or Ely each day by Midway personnel. Certified laboratory personnel picked up the samples from either location and transported them to the appropriate assay laboratory in either Elko, Winnemucca or Reno, Nevada.

A total of 27 diamond core holes were completed by Midway from 2010 to 2012. The core holes were completed using HQ sized core from ground surface. Core recovery was generally documented as good with recovery averaging about 92% (Gustavson, 2011 and 2015). However, core recovery did decrease in high fractured, brecciated and altered zones often associated with gold mineralization. The core holes were generally split in half with half sent for assays and the remaining half utilized for metallurgical work or archived in Ely, Nevada.

10.2 2018 Drilling

Fiore carried out a drill program between January and July of 2018 that consisted of the completion of 71 RC drill holes totaling 28,730 ft. The goals of this program were to increase the current resource by adding development drill holes to the current mine pits, and to expand the known mineralization currently not being mined using exploration drill holes outside the current mining area. Appendix D outlines the collar information for all of the 2018 drill holes. Of the 71 RC drill holes, 56 returned significant gold mineralization greater than 0.20 grams per metric tonne (g/t), which is equivalent to 0.006 troy ounce per short ton (oz/ton), with an interval length greater than 10 ft. Table 10-1 summarizes the significant assay intercepts from the entire drill program. Drilling in 2018 was carried out by Layne Christensen.

Proposed drill holes were staked in the field by the Pan Mine survey group using RKT survey equipment. Pads were constructed over the drill hole locations with the appropriate dimensions in order to safely conduct drilling operations. A Fiore geologist confirmed the hole locations and lined up the drill rigs before drilling operations commenced. The drillers were provided with uniquely numbered sample bags assigned to each drill hole. The RC drill rig sampled every 5-foot interval utilizing a cyclone splitter that homogenized the entire interval and split out a 5-10 kg sample into a uniquely numbered sample bag. The drillers were also provided sample sheets indicating which 5-foot interval corresponded to each uniquely numbered sample bag to ensure each interval was properly sampled and tracked. The drillers also collected washed RC chips of each interval for future geological logging and interpretation. Once each hole was completed, International Directional Services (IDS) conducted a downhole survey using a Surface Recording Gyroscope model DG-69, to measure drill hole deviation. The final collar location was surveyed by the Pan Mine survey group and a wooden stake with the drill hole ID was placed in the ground to mark the location.

Each sample bag was placed into a bin containing all the samples for that drill hole. Fiore geologists prepared and inserted random quality assurance/quality control (QA/QC) samples at known intervals. During the 2018 program Fiore utilized 6 QA/QC standards, blank material, and field duplicates. The standards were chosen at random and inserted in regular intervals in the drill sequence. All samples were sent to ALS in Reno, NV for analysis. Fiore geologists described each 5-foot sample interval for lithology, alteration, mineralization, oxidation, structures, and any important geological features. This information is was used to help guide geological interpretations in the subsurface.

The development drilling focused on expanding the resource at Red Hill and North Pan/Campbell. Forty-six drill holes were completed during this phase of drilling and account for 70% of the total footage drilled during 2018. All drill holes except PND18-21, 34, and 53 contained gold greater than the cutoff of 0.20 g/t (0.006 oz/ton) Au with an interval length greater than 10 ft for the development phase of the drill program. These results assisted in significantly expanding the current resource at the Pan Mine.

The exploration portion of the 2018 drill program consisted of 25 RC drill holes completed over Breccia Hill, Black Stallion, and Dynamite for a total of 8,865 ft of drilling. Most of the drilling was focused on the Breccia Hill and Black Stallion targets. The exploration portion of the drill program was successful in expanding the known gold mineralization. The intercepts obtained were smaller than those intersected by the development drilling, however the intercepts from the exploration holes were often closer to surface.

Table 10-1: Pan 2018 RC Drill Hole Assay Highlights

Hole ID	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PN18-09	Breccia Hill	255	265	10	0.582	0.017
PN18-11	Breccia Hill	45	55	10	0.293	0.009
PN18-11	Breccia Hill	105	115	10	0.280	0.008
PN18-12	Breccia Hill	100	130	30	0.326	0.010
PN18-12	Breccia Hill	170	180	10	0.292	0.009
PN18-47	Breccia Hill	55	90	35	0.259	0.008
PN18-49	Breccia Hill	65	100	35	0.263	0.008
PN18-52	Breccia Hill	70	160	90	0.485	0.014
PN18-58	Black Stallion	155	235	80	0.925	0.027
PN18-58	Black Stallion	300	310	10	0.319	0.009
PN18-59	Black Stallion	350	360	10	0.575	0.017
PN18-59	Black Stallion	185	230	45	0.435	0.013
PN18-62	Black Stallion	65	90	25	1.620	0.047
PN18-62	Black Stallion	285	295	10	0.249	0.007
PN18-65	Black Stallion	75	95	20	0.269	0.008
PN18-66	Black Stallion	130	200	70	1.450	0.042
PN18-66	Black Stallion	75	100	25	0.579	0.017
PN18-66	Black Stallion	305	315	10	0.525	0.015
PN18-69	Black Stallion	0	40	40	0.905	0.026
PND18-02	North Pan	0	35	35	0.907	0.026
PND18-03	North Pan	120	130	10	0.830	0.024
PND18-05	Campbell	105	120	15	1.017	0.030
PND18-05	Campbell	55	100	45	0.726	0.021
PND18-06	Campbell	65	320	255	0.569	0.017
PND18-08	North Pan	370	435	65	1.335	0.039
PND18-08	North Pan	0	15	15	1.235	0.036
PND18-13	Syncline	35	60	25	0.754	0.022

Hole ID	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PND18-13	Syncline	95	105	10	0.610	0.018
PND18-19	North Pan	0	45	45	1.574	0.046
PND18-20	Campbell	165	230	65	0.565	0.016
PND18-23	Red Hill	270	330	60	0.707	0.021
PND18-27	Red Hill	140	155	15	2.412	0.070
PND18-27	Red Hill	170	190	20	0.644	0.019
PND18-28	Red Hill	160	280	120	0.873	0.025
PND18-30	Red Hill	325	450	125	0.675	0.020
PND18-37	Red Hill	165	315	150	0.764	0.022
PND18-39	Red Hill	205	355	150	0.804	0.023
PND18-42	Red Hill	145	200	55	0.693	0.020
PND18-43	Red Hill	165	230	65	0.620	0.018

Source: APEX, 2020

*All drill holes were angle holes, with azimuths and inclinations designed to intersect targeted structures as nearly as possible to perpendicular. Consequently, all intercepts reported here are believed to be approximately 'true width'.

10.3 2019 Drilling

Fiore carried out an exploration program in the summer and fall of 2019 that consisted of 42 RC drill holes. The goal of the 2019 drill program was to expand the known resource and explore for new mineralization within the mine area. Appendix D summarizes the collar information for all of the 2019 drill holes. The scope of the program was limited to previously disturbed ground which was already permitted for disturbance. The 42 RC drill holes totaled 21,450 ft and the drilling was carried out by Boart Longyear.

All proposed drill sites were staked in the field by the Pan Mine survey group using RKT survey equipment and captured in UTM NAD 1983, Zone 11 in feet. Pads were constructed over the chosen drill hole locations with the appropriate dimensions in order to safety conduct drilling operations. A Fiore geologist confirmed each hole location and lined up the drill rigs before drilling operations commenced. The drillers were provided with uniquely numbered sample bags assigned to each drill hole. The RC drill rig sampled every 5-foot interval utilizing a cyclone splitter that homogenized the entire interval and split out a 5-10 kg sample into a uniquely numbered sample bag. The drillers were also provided sample sheets indicating which 55-foot interval corresponded to each uniquely numbered sample bag to ensure each interval was properly sampled and tracked. Additionally, the drillers collected washed RC chips of each interval for future geological logging and interpretation. Once each hole was completed, the drill crew conducted a downhole survey using a Reflex EZ-Gyro that measured the drill hole deviation. The final collar location was surveyed by the Pan Mine survey group and a wooden stake with the drill hole ID was placed in the ground to mark the location.

Each sample bag was placed in a bin that contained all the samples from that drill hole. Fiore geologists prepared and inserted QA/QC samples at known intervals. During the 2019 program Fiore utilized 3 QA/QC standards, blank material, and field duplicates. The standards alternated in a regular order between the 3 types. All drill hole samples were shipped in a sealed bin to ALS in Reno, NV for analysis. ALS was provided with a sample list and confirmed receipt of the specified number of samples and correct sample ID's. All chain of custody procedures were followed during shipment from Pan to the ALS facility.

Of the 42 drill holes completed during 2019, 30 intersected significant mineralization above a grade cutoff of 0.20 g/t (0.006 oz/ton) Au, with an interval length greater than 10 ft. Table 10-2 summarizes the key intersections from the 2019 drill program.

Mineralization was extended at all targets drilled during the 2019 exploration program. A new area of mineralization, called Banshee, was discovered southwest of Red Hill and west of North Pan. This area of mineralization follows the Pilot – Devils Gate contact as it rises towards the surface towards the west. The style of mineralization and alteration present is similar to mineralization seen throughout the mine. A total of 10 holes from the 2019 drill program tested the Banshee area and intersected significant mineralization in all but two holes. This indicated that the mineralization at Banshee was open in all direction.

Table 10-2: Pan 2019 RC Drill Hole Assay Highlights

Hole ID	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PR19-002	Banshee	210	240	30	0.409	0.012
PR19-005	Banshee	5	120	115	0.638	0.019
PR19-005	Banshee	140	180	40	0.493	0.014
PR19-006	Banshee	30	70	40	1.162	0.034
includes	Banshee	40	65	25	1.445	0.042
PR19-007	Banshee	55	65	10	0.341	0.010
PR19-007	Banshee	145	195	50	0.768	0.022
includes	Banshee	155	170	15	1.237	0.036
PR19-009	North Pan	105	230	125	0.793	0.023
includes	North Pan	135	185	50	1.198	0.035
PR19-012	Syncline	150	165	15	0.511	0.015
PR19-014	Syncline	90	100	10	0.440	0.013
PR19-014	Syncline	150	160	10	0.569	0.017
PR19-015	Red Hill	105	135	30	0.353	0.010
PR19-015	Red Hill	150	160	10	0.448	0.013
PR19-015	Red Hill	175	205	30	0.350	0.010
PR19-016	Red Hill	170	185	15	2.447	0.071
PR19-017	Red Hill	210	220	10	0.452	0.013
PR19-018	Red Hill	175	205	30	1.409	0.041
PR19-019	South Pan	50	75	25	0.332	0.010
PR19-019	South Pan	100	110	10	0.674	0.020
PR19-019	South Pan	135	255	120	0.498	0.015
PR19-019	South Pan	275	435	160	0.571	0.017
includes	South Pan	320	330	10	1.201	0.035
PR19-019	South Pan	545	575	30	0.385	0.011
PR19-020	South Pan	225	245	20	1.054	0.031

Hole ID	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PR19-020	South Pan	265	440	175	0.409	0.012
PR19-021	South Pan	150	170	20	0.556	0.016
PR19-021	South Pan	260	325	65	0.394	0.011
PR19-021	South Pan	365	405	40	0.443	0.013
PR19-022	South Pan	435	480	45	0.395	0.012
PR19-024	Dynamite	135	205	70	0.632	0.018
includes	Dynamite	145	160	15	1.260	0.037
PR19-025	Dynamite	305	325	20	0.692	0.020
PR19-025	Dynamite	360	425	65	0.448	0.013
PR19-033	Black Stallion	65	85	20	0.965	0.028
PR19-033	Black Stallion	130	140	10	0.336	0.010
PR19-040	Campbell	390	400	10	2.328	0.068
PR19-042	Banshee	0	10	10	0.426	0.012

Source: APEX, 2020

*All drill holes were angle holes, with azimuths and inclinations designed to intersect targeted structures as nearly as possible to perpendicular. Consequently, all intercepts reported here are believed to be approximately 'true width'.

10.4 2020 Drilling

The 2020 drill program was carried out from January to June 2020 with the primary goals of:

1. Expanding known mineralization and geological understanding of the current resource;
2. Increasing the known mineralization at the newly discovered Banshee zone;
3. Expanding the resource between Red Hill and North Pan in order to merge both pits;
4. Identifying mineralization at the exploration target Mustang; and
5. Sterilization drilling at the current and proposed waste dump sites.

The scope of the 2020 program was expanded from 2019 due to the approval of a permit allowing new ground disturbance. A total of 154 RC drill holes were completed throughout the Pan mine site in 2020 totaling 57,280 ft. The drilling was carried out by Boart Longyear.

Appendix D outlines the collar information for the 2020 drill holes.

The same drilling procedures were implemented for the 2020 drill programs as used in 2019. All proposed drill sites were staked using the Pan Mine survey group and captured in UTM NAD 1983, Zone 11 in feet. Once a location was chosen for drilling, a pad was constructed with the proper dimensions for the RC rigs to safety conduct drilling operations. Samples were collected every 5 feet using a cyclone splitter attached to the rig that homogenizes and splits each sample into the appropriate size. Chips of each interval were collected for geological logging. Once the hole was completed, the drill crew conducted a downhole survey using a Reflex EZ-Gyro that measured the drill hole deviation. Once the drill was moved off the hole, the Pan Mine survey group surveyed the final collar location and marked it with the drill hole ID and a wooden stake.

Each sample was collected into a uniquely identified sample bag and placed in a bin that contained all the samples from that drill hole. The same QA/QC procedures were followed from 2019, but only

2 different types of standards were used along with a coarse blank and field duplicates. The results of the QA/QC work is discussed in Section 11. All samples were shipped in a sealed bin to ALS in Reno, NV for analysis. ALS was provided with a sample list and confirmed receipt of the specified number of samples and correct sample ID's before proceeding with sample preparation.

Mineralization was expanded at Red Hill, North Pan, Campbell, Syncline, and Black Stallion near mine targets. Table 10-3 summarizes the important intercepts from the 2020 drill program using a cutoff grade of 0.20 g/t (0.006 oz/ton) Au. Drilling at these targets upgraded a portion of the known resource from Inferred to Indicated and expanded the known resource. A total of 52 drill holes were completed over these target areas during the 2020 drill program.

Table 10-3: Pan 2020 RC Drill Hole Assay Highlights

Hole	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PR20-005	Red Hill	125	135	10	0.911	0.027
PR20-006	Red Hill	90	195	105	0.745	0.022
PR20-007	Red Hill	75	90	15	1.051	0.031
PR20-008	Red Hill	115	215	100	0.761	0.022
includes	Red Hill	175	185	10	1.148	0.034
PR20-011	Banshee	40	70	30	1.459	0.043
PR20-013	Banshee	20	110	90	0.738	0.022
includes	Banshee	45	70	25	1.504	0.044
PR20-014	Banshee	125	160	35	1.147	0.034
includes	Banshee	130	155	25	1.358	0.040
PR20-016	Banshee	115	240	125	0.917	0.027
includes	Banshee	150	205	55	1.425	0.042
PR20-031	Red Hill	265	350	85	0.739	0.022
includes	Red Hill	270	280	10	1.728	0.050
PR20-034	Red Hill	135	145	10	0.790	0.023
PR20-040	Campbell	15	260	245	0.741	0.022
includes	Campbell	115	165	50	1.355	0.040
PR20-046	Banshee	170	190	20	0.787	0.023
PR20-050	Banshee	35	45	10	1.393	0.041
PR20-051	Banshee	20	30	10	1.413	0.041
PR20-052	Red Hill	195	285	90	0.677	0.020
includes	Red Hill	225	235	10	1.313	0.038
PR20-054	Banshee	125	160	35	0.716	0.021
includes	Banshee	135	145	10	1.478	0.043
PR20-055	Red Hill	0	50	50	2.605	0.076
PR20-062	Banshee	0	20	20	0.671	0.020
PR20-064	Red Hill	310	360	50	0.678	0.020
includes	Red Hill	320	335	15	1.283	0.037
PR20-067	Red Hill	260	325	65	0.697	0.020
includes	Red Hill	265	275	10	1.458	0.043

Hole	Target Area	From (ft)	To (ft)	Interval (ft)*	Au (g/t)	Au (oz/ton)
PR20-072	Mustang	150	160	10	1.563	0.046
PR20-074	Mustang	60	65	5	2.090	0.061
PR20-077	Mustang	95	105	10	1.553	0.045
PR20-084	Banshee	85	150	65	0.697	0.020
PR20-092	Red Hill	375	430	55	1.033	0.030
includes	Red Hill	380	410	30	1.478	0.043
PR20-107	Banshee	140	190	50	0.988	0.029
includes	Banshee	145	165	20	1.986	0.058
PR20-120	Red Hill	115	135	20	0.722	0.021
PR20-130	Red Hill	130	140	10	0.694	0.020

Source:

*All drill holes were angle holes, with azimuths and inclinations designed to intersect targeted structures as nearly as possible to perpendicular. Consequently, all intercepts reported here are believed to be approximately 'true width'.

Most of the drilling during the 2020 program focused around expanding and defining the newly discovered Banshee zone. It accounted for 45% (69 drill holes) of the total drill holes for this program. The goal of the Banshee drilling was to identify the extent of mineralization in all directions and provide as much measured and indicated resource as possible. Drilling at Banshee identified a core of high grade drill intercepts that was surrounded by low to zero grade drilling. The mineralization is similar to North Pan which is characterized by silicification and brecciation near the Pilot – Devils Gate contact which is the host for the gold.

A significant amount of gold mineralization was encountered between North Pan and Red Hill in 12 holes drilled during the 2020 program. The mineralization between the two target areas displays the same characteristics: silicification and brecciation near the Pilot-Devils Gate contact with jasperoid alteration.

Eight holes were drilled at the Mustang target northwest of the Pan mine. Six of the eight holes encountered significant gold mineralization ranging from near surface to 265 ft below the surface. The holes drilled were vertical and angled northeast and southwest to understand the trends of the mineralization. The holes at Mustang collar in limestone, with the mineralization hosted in brecciated and silicified limestone. Hematite alteration is present but no real jasperoid alteration is seen. This style of mineralization is distinct from that seen at the Pan Mine.

Thirteen drill holes were designed and completed as condemnation holes to test if mineralization is present below the North Pan waste dump ramp and a potential new waste dump site. Four drill holes were completed on the current North Pan waste dump ramp and encountered only minor mineralization that is considered not significant. The other nine drill holes were completed over a potential new waste dump site northeast of the current North Pan pit. Drill hole PR20-125 at 405-425 ft deep returned 0.266 g/t (0.008 oz/ton) Au, and was the only condemnation hole in this area that intersected any significant gold mineralization.

11 Sample Preparation, Analysis and Security

Historical drilling at the Pan deposit dates back to 1978. More than 1,200 exploration or resource definition drill holes have been completed at Pan; The current Mineral Resource drill hole database includes 1,179 pre 2018 drill holes totaling 377,744 ft, plus 2,324 ft in six water wells logged for geology but not sampled for assay (Table 6.1). Of the assayed pre 2018 drill holes in the database, 1,146 holes with 364,839 ft were drilled by RC or rotary methods, and the rest were diamond core holes, totaling 12,905 ft in 33 drill holes.

There is little information on drilling and sample procedures, sample preparation, analytical methods and Quality Assurance/Quality Control (QA/QC) for the pre-2000 drill hole data.There is no information on drill site sampling protocols and transportation of samples to the various laboratories for the pre-2000 drill holes. Although assay certificates exist for most of the pre-2000 drill holes in hard copy, there is little information on laboratory sample preparation methods and attributes such as assay charge or aliquot size. The assays records do provide basic information on the assay type ie fire assay for total gold or cyanide soluble gold using wet chemical techniques.

Early drill programs by Amselco and Hecla utilized Monitor Geochemical Laboratory (Elko, Nevada), Hunter Mining Laboratory (Sparks, Nevada), Amselco's own laboratory (Sparks, Nevada) and Rocky Mountain Geochemical (Sparks Nevada). Drill programs conducted by Echo Bay, Alta Bay and Alta Gold (pre-2000) utilized a number of mine site laboratories including Alta Gold controlled mine site laboratories at the Robinson, Illipah and Easy Junior mining operations. In general, the mine site laboratories performed cold cyanide digestion followed by AA determination of gold content on 10 or 15 gram sample charges. Follow up fire assay gold analyses were generally performed on samples yielding greater than 0.01 to 0.012 opt Au. Latitude and Degerstrom transported samples to the Degerstrom laboratory in Spokane, Washington, where most of the samples were analysed by 30 gram fire assay with AA finish.

Castleworth Ventures RC samples were transported to and processed at Chemex (the precursor to ALS Chemex) in Elko, Nevada. Standard sample preparation was employed at Chemex with the sample pulps transferred to Vancouver, B.C. where gold assays were performed by fire assay on one assay ton aliquots followed by AA finish. No cyanide gold analyses were performed by Castleworth Ventures. Core samples were collected and prepared for analysis by KCA. Core samples were sawn in half and collected as 5 ft samples. Fire assay gold utilizing a 30 gram aliquot and AA finish was performed on all the core samples. In addition, cold cyanide soluble gold analyses were performed on the core samples.

Midway 2007 to 2015 RC and core samples were either transported daily to secure facilities in Eureka or Ely, Nevada, or were stored on site in locked containers until they were picked up or transported to the appropriate laboratory in Elko, Winnemucca or Elko, Nevada. During Midway's program history from 2007 to 2015, RC samples were transported and processed at ALS Chemex Elko, Winnemucca and Reno, Nevada, American Assay Laboratory of Reno, Nevada and SGS Laboratory of Elko, Nevada. RC samples were analysed by standard 30 gram fire assay with AA finish, Core samples collected in 2010 to 2012 were logged, photographed and cut at Midways Ely facility and then transported to ALS Chemex Elko, Nevada for sample preparation. Sample pulps were analysed by standard fire assay for gold with AA finish and cold cyanide soluble gold with AA finish at either Reno, Nevada or Vancouver, B.C.

There is no information or data available on any QA/QC protocols including the analysis of standard reference materials (SRM's), duplicates or blanks in the historical drill hole database prior to the Midway drilling campaigns in 2007.There is some information available in the database on QA/QC sampling conducted by Midway as part of the historical 2007 to 2015 drilling campaigns. QA/QC samples were inserted by Midway at a rate of about 1 in 20 (5%) versus original samples. Midway also completed a number of twin core holes of RC drill holes. The historical QA/QC data and twin hole data was reviewed by APEX personnel and Mr. Dufresne, the author of this section. No significant issues were identified, therefore the 2007 to 2015 Midway drilling data is deemed to be suitable for resource estimation.

SRK (Pennington *et al*. 2017 and Deiss *et al*. 2019) performed a comprehensive database validation on behalf of Fiore including a review of all documents and information available for the historical pre-2018 drilling. APEX personnel and Mr. Dufresne have reviewed the SRK validation efforts and have also reviewed the historical Pan drill hole data and the 2018 to 2020 drillhole data and found no significant issues. Based upon this review Mr. Dufresne, the author of this section has accepted the data and consider the data, including the historical pre-2018 data, well validated and suitable for the preparation of the MRE and Mineral Reserves as presented herein.

The following sections summarize the sample collection, preparation, analytical and QA/QC methodology employed by Fiore in the 2018 to 2020 drilling programs.

11.1 Sample Collection, Preparation and Security

Sample procedures remained the same throughout the 2018-2020 RC drill programs. Prior to commencing each hole, Fiore geologists provided the drill crews with uniquely numbered sample bags for each 5-foot interval. A subset of bags were removed from the sample sequence and used to randomly insert quality assurance/quality control (QA/QC) samples into the sample sequence after each drill hole was complete. The drillers were also provided sample sheets indicating which 5-foot interval corresponded to each uniquely numbered bag to ensure each interval was properly sampled and tracked. The RC drill rigs used a cyclone splitter that homogenized all the rock chips from a given interval and split out a designated, consistent sample size. The sample size was between 5 and 10 kg. Each sample bag was placed in a bin that contained all the samples for that drill hole. Fiore geologists inserted QA/QC samples at specific intervals in the sample sequence for each drill hole. The type of QA/QC sample was chosen at random for the specific intervals. All samples were stored in a sealed bin and shipped to ALS in Reno, NV. ALS was provided with a sample list and confirmed receipt of the specified number of samples and correct sample ID's.

11.2 Analytical Procedures

All 2018 - 2020 drill chip samples were prepared and analyzed at ALS in Reno, NV, an accredited laboratory that conforms to requirements of CAN-P-1579 and CAN-P-4E (ISO/IEC 17025:2005). Samples were crushed to 70% <2 mm then riffle split and pulverized to better than 85% passing 75 microns (μm). Samples were then analyzed for gold, using ALS analytical method Au-AA23, Au-AA31, and Au-AA31a. Method Au-AA23 involves analyzing for gold using fire assays on a 30 g aliquot with an atomic absorption (AA) finish. Method Au-AA31 is a Gold Preg-Robbing Cyanide Leach utilizing a 10 g aliquot with a Gold Spike. A known quantity of gold is introduced into the sample before analysis. This allows for the amount of Preg-Robbing to be quantified if it is an issue.

Method Au-AA31a is a Gold -Preg-Robbing Cyanide Leach analysis utilizing a 10 g aliquot and was conducted without a spike. Preg-Robbing occurs when natural carbonaceous material absorbs gold from cyanide solution (Miller *et al,* 2016). If natural carbonaceous material is present in a sample, the Au-AA31a assay value will be lower than the Au-AA23 value. Understanding if carbonaceous material is present at Pan is important because the processing and recovery method at Pan is cyanide heap leach.

In 2020, additional analyses completed on select holes included a near total four acid digestion followed by an inductively coupled plasma mass spectrometry (ICP-MS) finish for multi-element analysis (lab code ME-MS61), and ore grade Zn analysis (Zn-OG62) at the ALS Laboratory in Vancouver, BC, Canada.

11.3 Quality Assurance – Quality Control

Fiore's sampling and fire assay QA/QC procedures for the 2018 to 2020 Pan drilling program consisted of the insertion of rig duplicates, coarse blank samples, and pulps of known value (standards or SRM's) inserted into the sample stream.

The rig duplicate samples comprised the collection of a second sample of RC chips representing the same interval, with both the "parent" and the "duplicate" samples submitted for separate assays. The drill rig duplicates are used to assess the quality of homogenization achieved by the cyclone splitter. Significant differences between original and duplicate sample assay results could indicate sample bias during the splitting process or could be due to inhomogeneity inherent to the rock samples.

Coarse blank samples consisted of a commercial variety of decorative stone branded as Vigoro Marble Chips that contains no appreciable quantity of gold. Coarse blank samples provide a means by which the sample preparation procedures at laboratories can be tested for potential issues related to sample-to-sample contamination, usually due to poor procedures related to incomplete clearing/cleaning of crushing and pulverizing machines between samples.

Standard reference material samples (SRMs or Standards) were inserted into the analytical sample stream in order to provide a means by which overall analytical precision and accuracy can be measured. Standard samples were commercially purchased and comprise pulverized and homogenized materials that have been suitably tested, normally by means of a multi-lab round robin analysis, in order to establish an accepted (certified) value for the standard and statistics to define and support the "acceptable range" (i.e. variance), by which subsequent analyses of the material may be judged. Generally, this involves the examination of assay results relative to inter-lab Standard Deviation (SD), resulting from each standard's round-robin testing data, whereby individual assay results may be examined relative to 2SD and 3SD ranges.

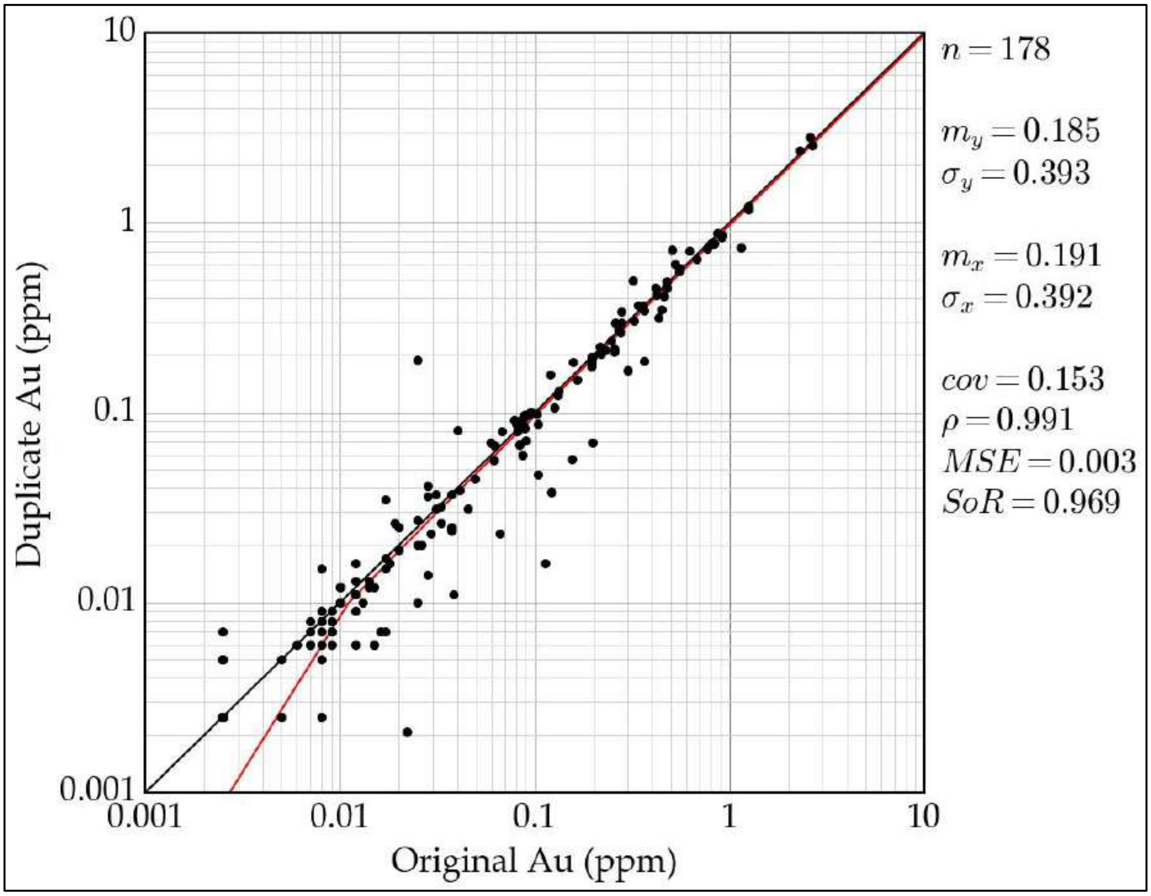
The following is a discussion of the QA/QC samples that were independently inserted into the sample sequence by Fiore.

11.3.1 2018 Drilling QA/QC

In 2018 a total of 5,726 RC samples were sent to ALS for gold analysis, along with 598 randomly inserted (but at specified intervals) QA/QC samples. The QA/QC samples included 178 duplicate samples, 197 blank samples and 223 standards.

Duplicates were inserted into the sample stream randomly for the 2018 RC drill program. A total of 178 duplicates were analyzed via fire assay (Au-AA23) and cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11-1 below. The data show excellent correlation (ρ = 0.991) with no issues to report.

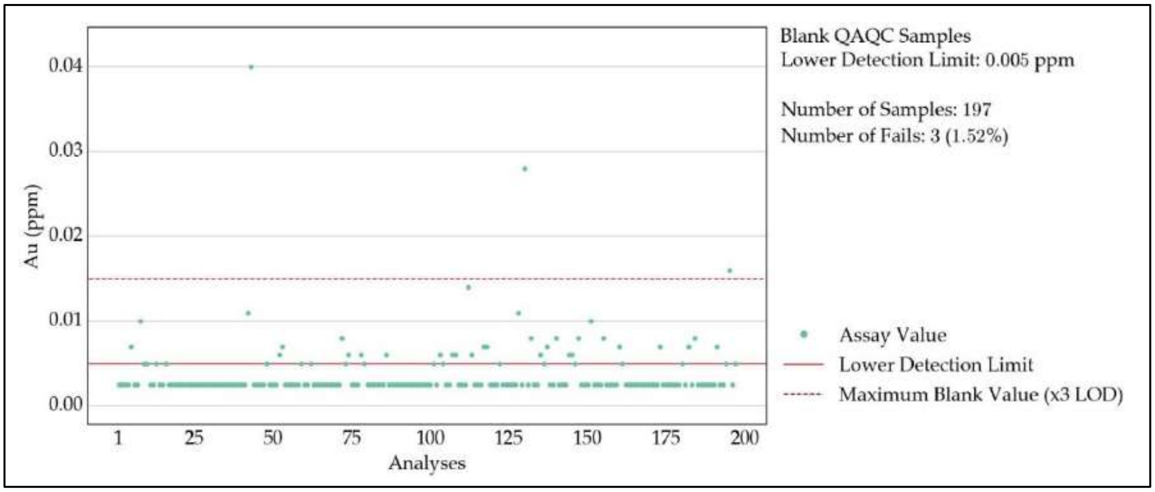
Coarse blanks were inserted into the sample stream randomly at regular intervals for all 2018 RC holes. A total of 197 coarse blanks were analyzed via fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). The results of the coarse blank fire assay analyses are illustrated in Figure 11-2 below.



Source: APEX, 2020

Figure 11-1: 2018 Duplicate Au Fire Assay Results

The blanks largely (98%) returned assay results within an allowable threshold (within 3x the lower detection limit), with the majority (73%) returning values below the Au-AA23 detection limit of 0.005 ppm Au. One blank sample (FG103932) returned 1.01 ppm Au; this sample was likely switched with the following RC sample FG103933 which assayed 0.008 ppm Au and has been re-assigned in the database. The results are considered acceptable.

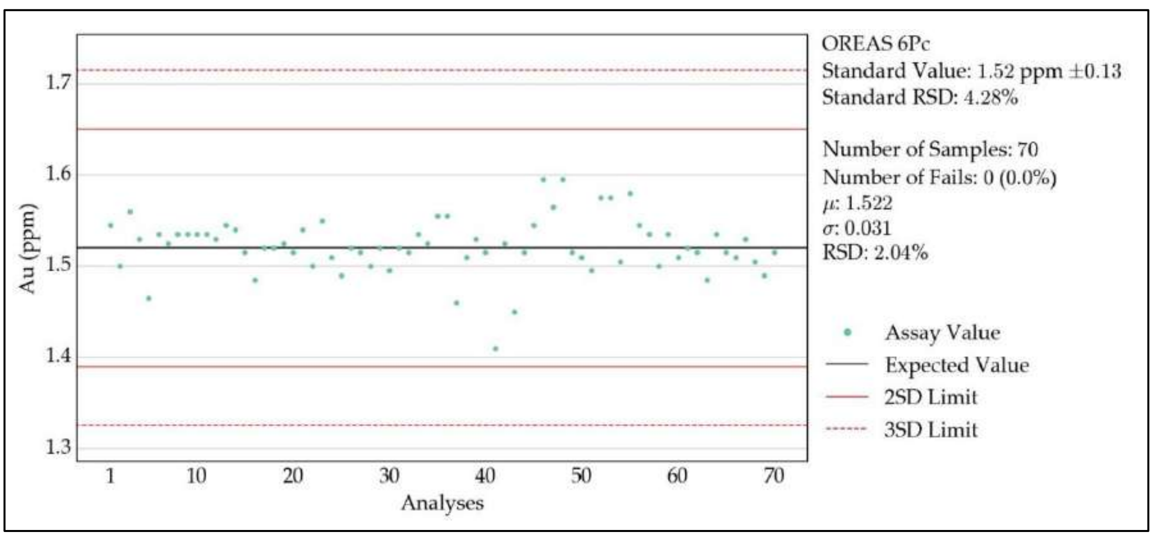


Source: APEX, 2020

Figure 11-2: 2018 Coarse Blank Au Fire Assay Results

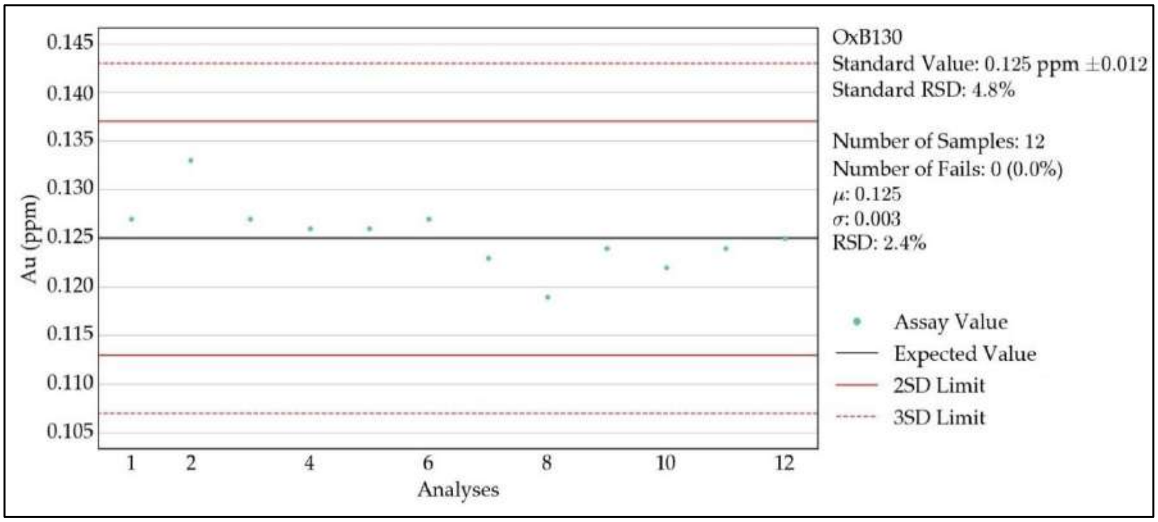
Standards were inserted into the sample stream randomly but at specified intervals for the 2018 RC drill holes. A total of 223 standards were analyzed using fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). Standards used during 2018 include five different certified reference materials from ROCKLABS: OxC129 (Au = 0.205 ppm, n = 66), OxE143 (Au = 0.621 ppm, n = 8), OxE126 (Au = 0.623 ppm, n = 59), OxB130 (Au = 0.125 ppm, n = 12), and OxI121 (Au = 1.834 ppm, n = 7), as well as one standard from OREAS: Oreas 6Pc (Au = 1.52 ppm, n = 70).

The results of the fire assay analyses for all standards are illustrated in Figure 11-3 through Figure 11-8. The majority of the standards returned assay results within acceptable limits. Three standard samples were mis-labeled and have been re-assigned to the correct standard and are included in the plots below.



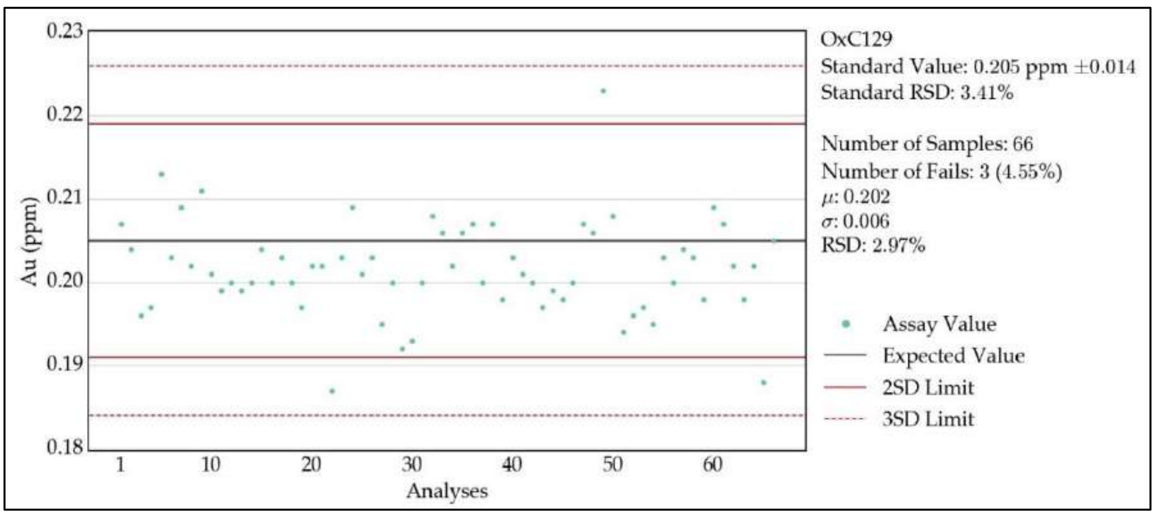
Source: APEX, 2020

Figure 11-3: 2018 Standard Reference Material (Oreas 6Pc) Fire Assay Results



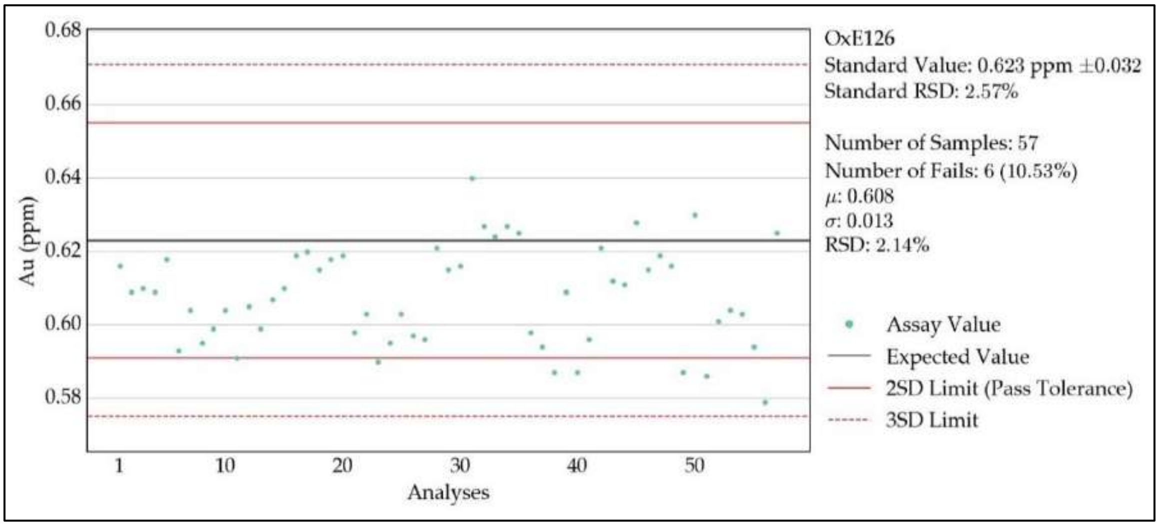
Source: APEX, 2020

Figure 11-4: 2018 Standard Reference Material (OxB130) Fire Assay Results



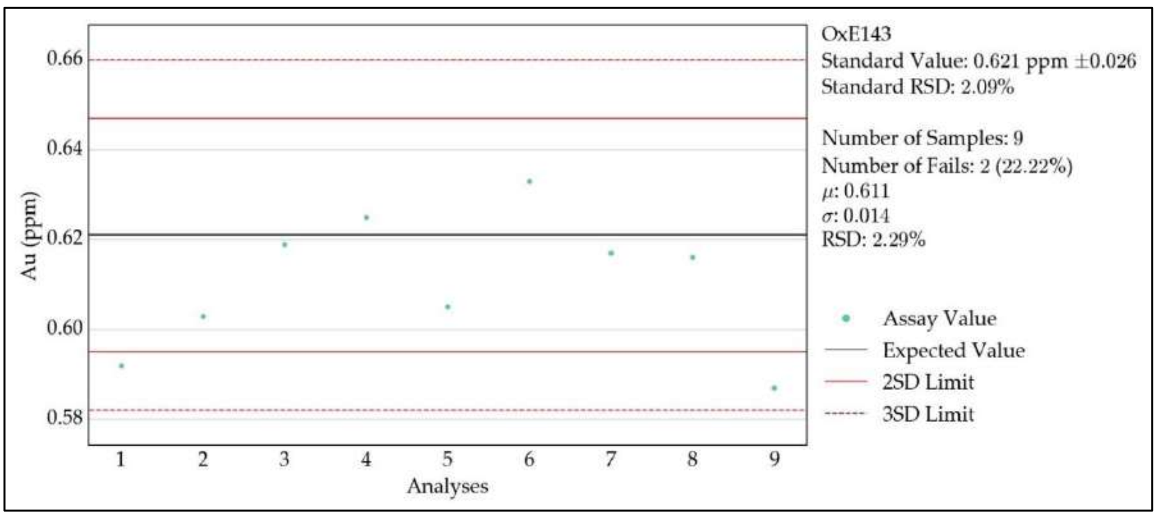
Source: APEX, 2020

Figure 11-5: 2018 Standard Reference Material (OxC129) Fire Assay Results



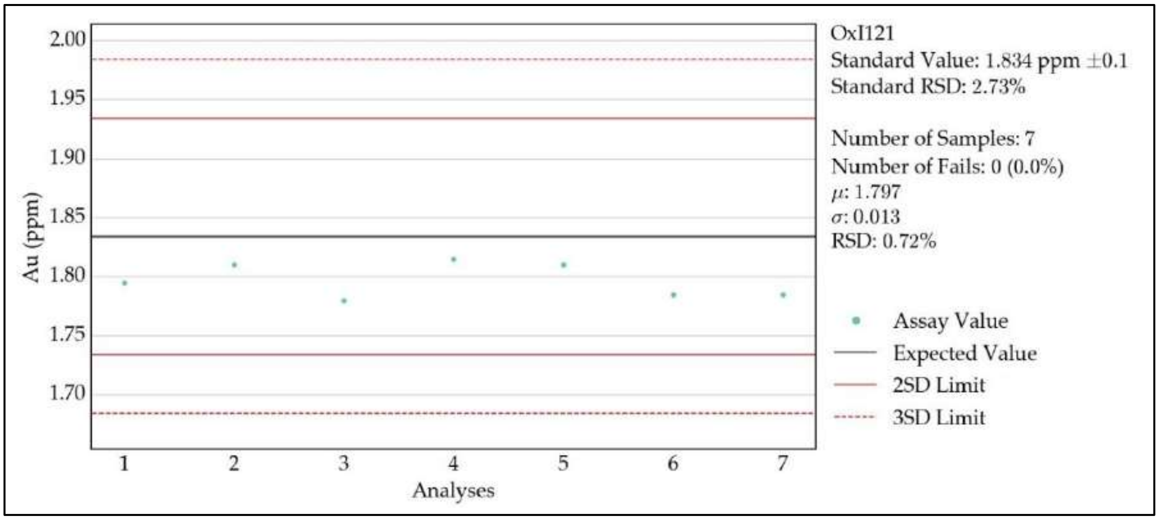
Source: APEX, 2020

Figure 11-6: 2018 Standard Reference Material (OxE126) Fire Assay Results



Source: APEX, 2020

Figure 11-7: 2018 Standard Reference Material (OxE143) Fire Assay Results



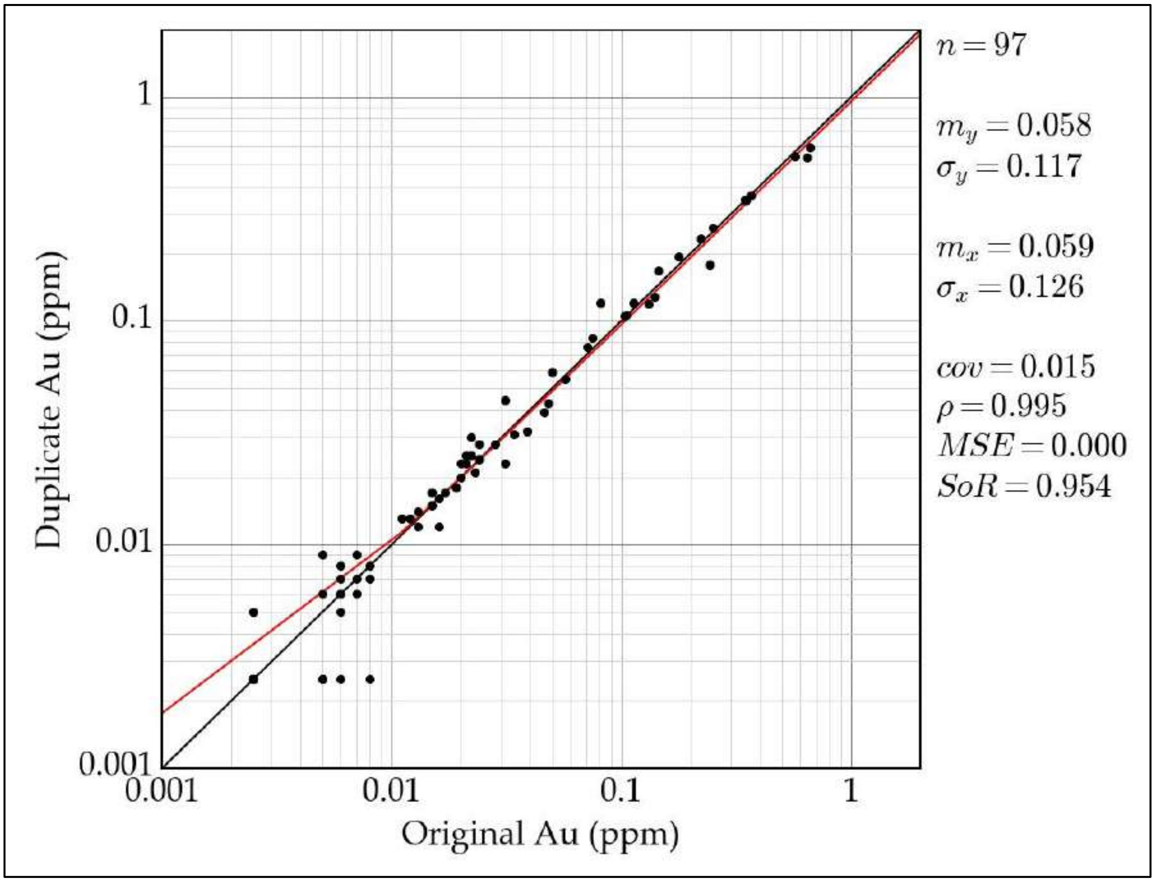
Source: APEX, 2020

Figure 11-8: 2018 Standard Reference Material (OxI121) Fire Assay Results

11.3.2 2019 Drilling QA/QC

In 2019, a total of 4,290 RC samples were sent to ALS for gold analysis, along with 579 randomly inserted (but at specified intervals) QA/QC samples. The QA/QC samples included 97 duplicate samples, 243 blank samples and 239 standards. One standard or blank was inserted approximately every 10 samples and one duplicate was inserted approximately every 50 samples.

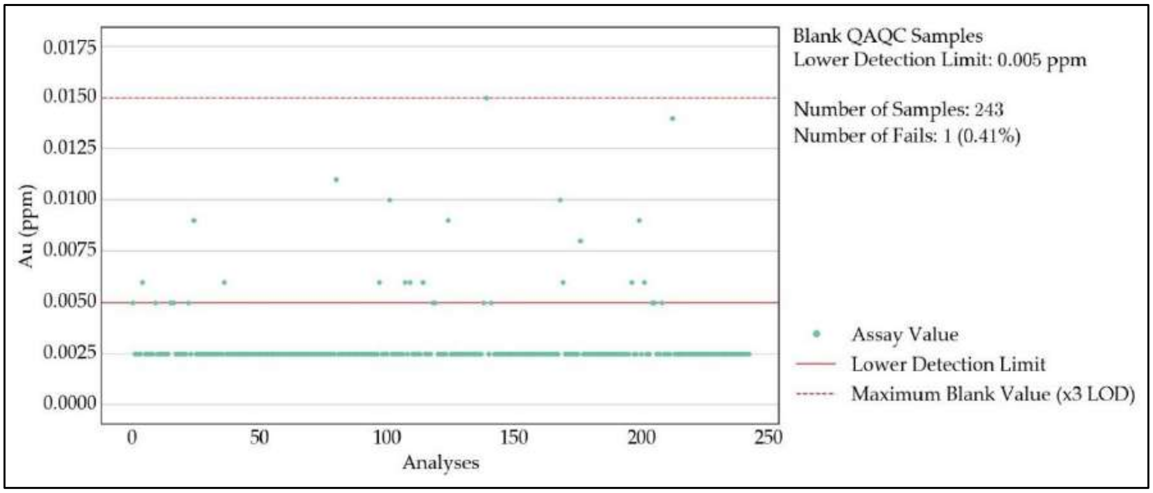
Duplicates were inserted into the sample stream randomly for the 2019 RC drill program. A total of 97 duplicates were analyzed via fire assay (Au-AA23) and cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11-9. The data show excellent correlation (ρ = 0.995) with no issues to report.



Source: APEX, 2020

Figure 11-9: 2019 Duplicate Au Fire Assay Results

Coarse blanks were inserted into the 2019 sample stream at regular intervals (approximately every 20 samples). A total of 243 coarse blanks were analyzed via fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11-10. All blanks, with the exception of one sample, fell within an allowable threshold (3x the lower detection limit), with the majority returning values below the Au-AA23 detection limit of 0.005 ppm Au. The blank that failed and samples around it were not re-assayed because it did not fall within a mineralized zone.

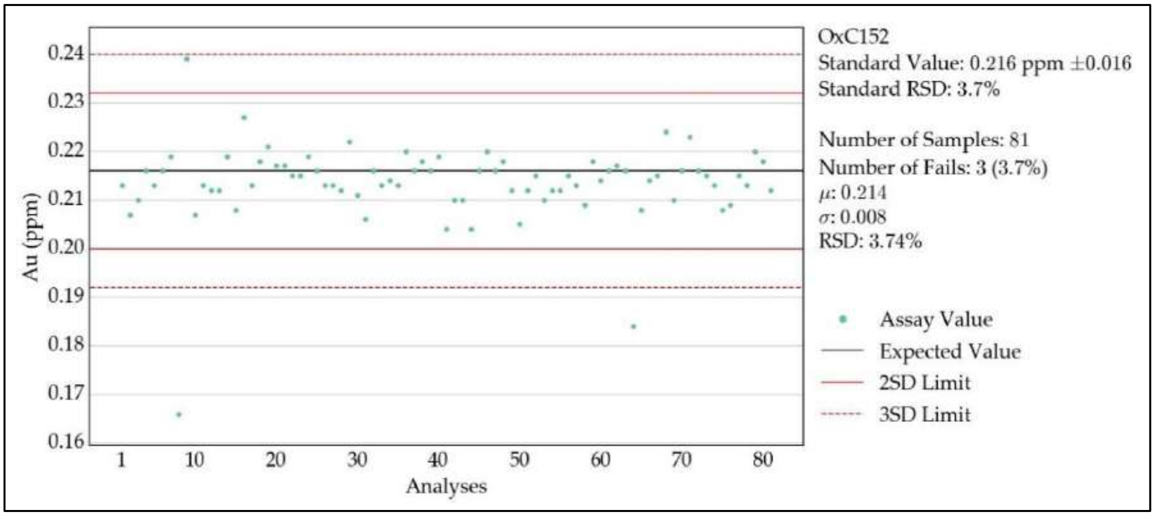


Source: APEX, 2020

Figure 11-10: 2019 Coarse Blank Au Fire Assay Results

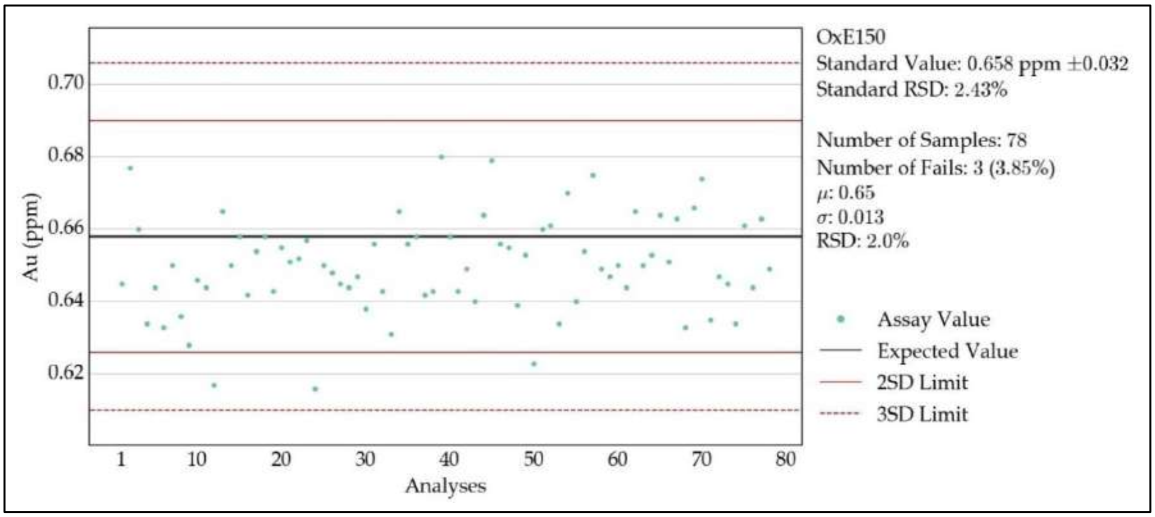
Standards were inserted into the 2019 sample stream at regular intervals (approximately every 20 samples). A total of 239 standards were analyzed via fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). Standards used during 2019 included three different certified reference materials from ROCKLABS: OxC152 (Au = 0.216 ppm, n = 81), OxE150 (Au = 0.658 ppm, n = 78), and OxJ137 (Au = 2.416 ppm, n = 80). The results of the fire assay analyses are illustrated in Figure 11-11 through Figure 11-13. No significant issues were identified, and the results are considered acceptable.

The majority of assay results for the standards during the 2019 drill program fell within 3 standard deviations from the certified value based on the standard deviation reported by the manufacturer. Failures outside of this range were only submitted for re-assay if the standard was within an anomalous mineralized zone (>0.2 ppm). A re-run would include 10 samples above the failed standard, the standard, and 10 samples below the failed standard. None of the standards that failed in 2019 fell within anomalous mineralized zones and hence none were sent for re-assay.



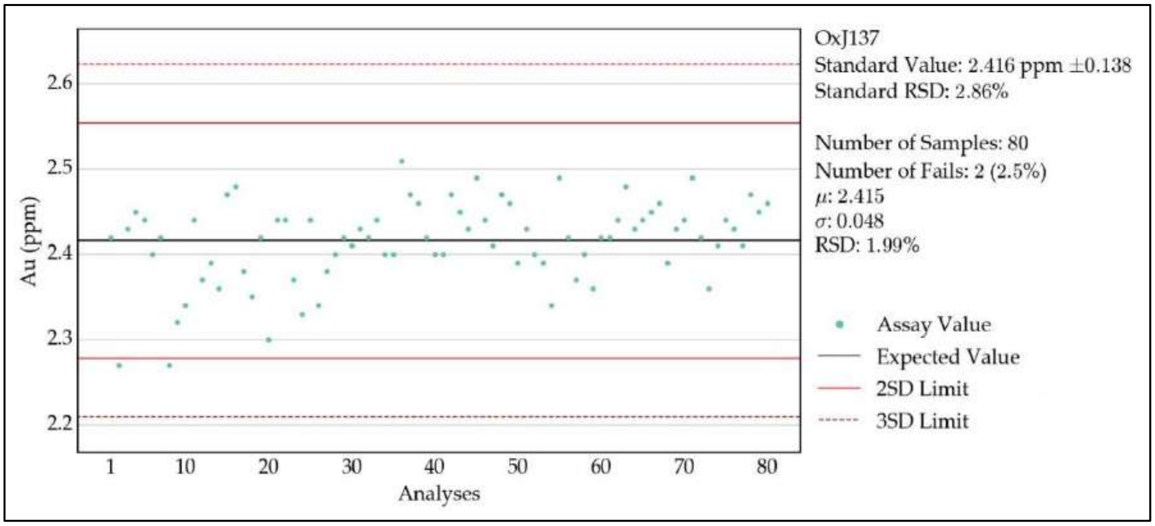
Source: APEX, 2020

Figure 11-11: 2019 Standard Reference Material (OxC152) Fire Assay Results



Source: APEX, 2020

Figure 11-12: 2019 Standard Reference Material (OxE150) Fire Assay Results



Source: APEX, 2020

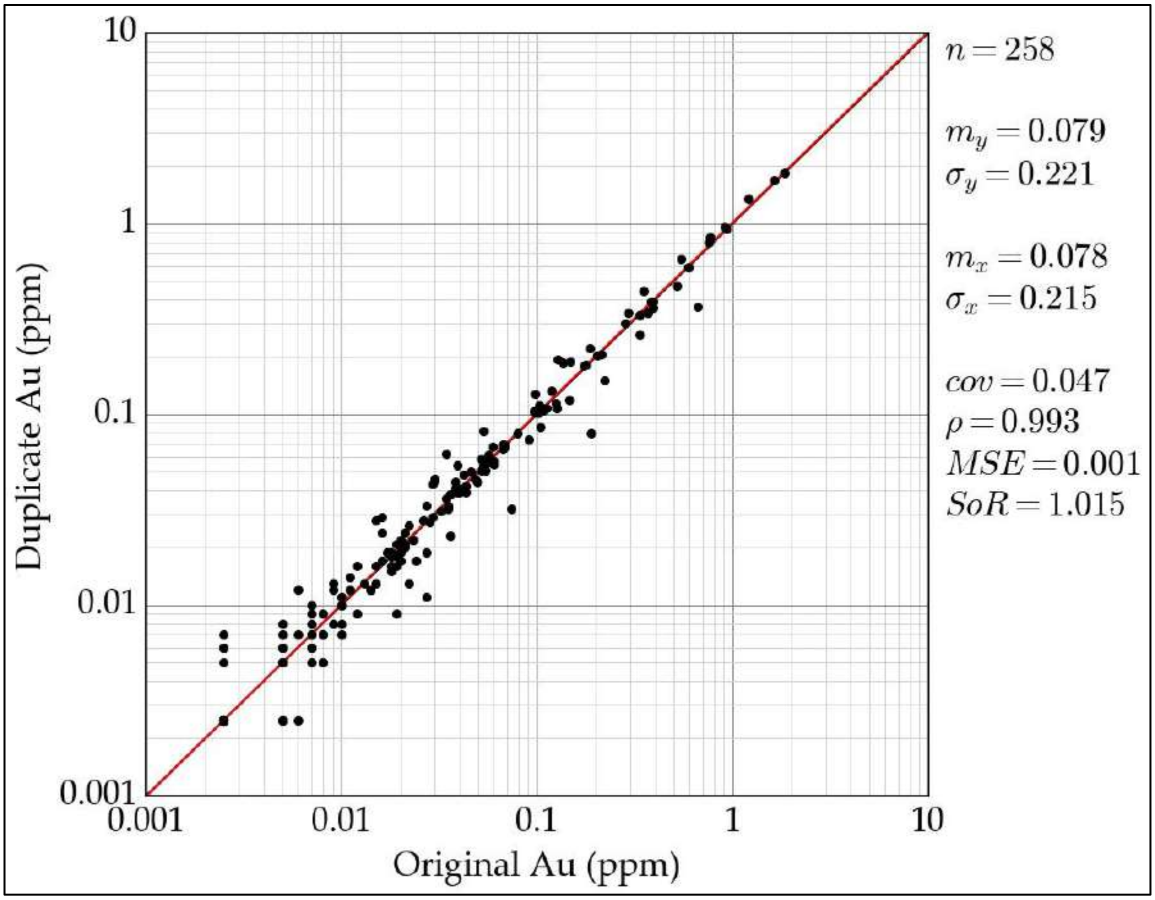
Figure 11-13: 2019 Standard Reference Material (OxJ137) Fire Assay Results

11.3.3 2020 Drilling QA/QC

During the February to June 2020 drill program a total of 8,626 RC samples were sent to ALS for gold analysis, along with 1,557 randomly inserted (but at specified intervals) QA/QC samples. The QA/QC samples included 258 duplicate samples, 650 blank samples and 649 standards. The same procedures from 2019 for inserting QA/QC samples and duplicates was followed for the 2020 program.

Duplicates were inserted into the sample stream randomly for the 2020 RC drill program. A total of 258 duplicates were analyzed via fire assay (Au-AA23) and cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11-14. Overall, the data show an excellent correlation (ρ = 0.993) with no major issues to report.

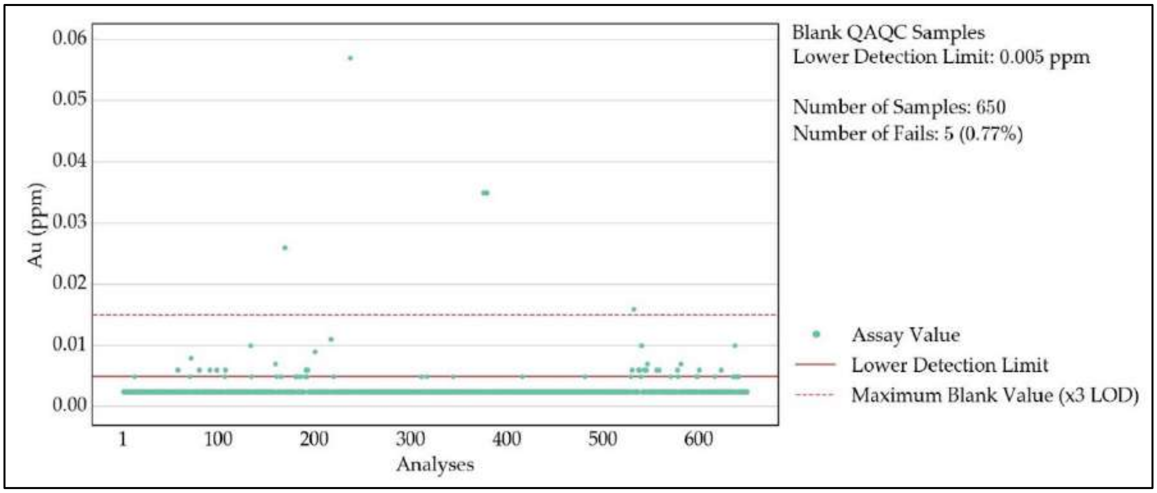
Failures in duplicate assays were assessed according to the following criteria: duplicate assays exceeding a 15% difference in ppm Au for samples assaying above 0.205 ppm Au were considered a failure. If a duplicate failure occurs within a mineralized zone the duplicate sample along with the 10 previous and 10 subsequent samples in the sample sequence are submitted for re-assay. In 2020, two duplicate samples failed and were submitted for re-assay. The discrepancy in the assay results between the original and duplicate samples was replicated by the re-assay and is attributed to heterogeneity inherent to the samples. The overall duplicate results are considered acceptable.



Source: APEX, 2020

Figure 11-14: 2020 Duplicate Au Fire Assay Results

Coarse blanks were inserted into the sample stream at regular intervals (approximately every 20 samples). A total of 650 coarse blanks were analyzed via fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). The results of the fire assay analyses are illustrated in Figure 11-15 below. The majority (99.2%) of the blanks fell within an allowable threshold, with the majority (91%) returning values below the Au-AA23 detection limit of 0.005 ppm Au. Four blanks fell outside of the 3x the lower detection limit. One of these blanks was within a mineralized zone and was submitted for re-assay along with the previous and following 9 samples in the sample sequence. The re-assay of this blank returned the same Au value in both Cyanide Leach (CN) and Fire Assay (FA) assays indicating that it contained a very small quantity of gold that may or may not have been the result of contamination. No significant issues were identified, and the results are considered acceptable.

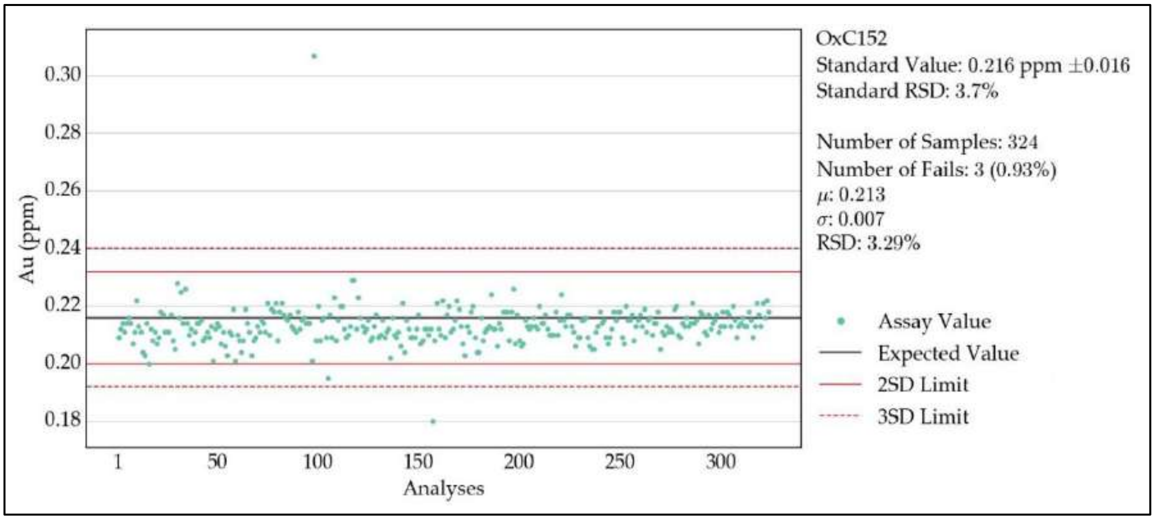


Source: APEX, 2020

Figure 11-15: 2020 Coarse Blank Au Fire Assay Results

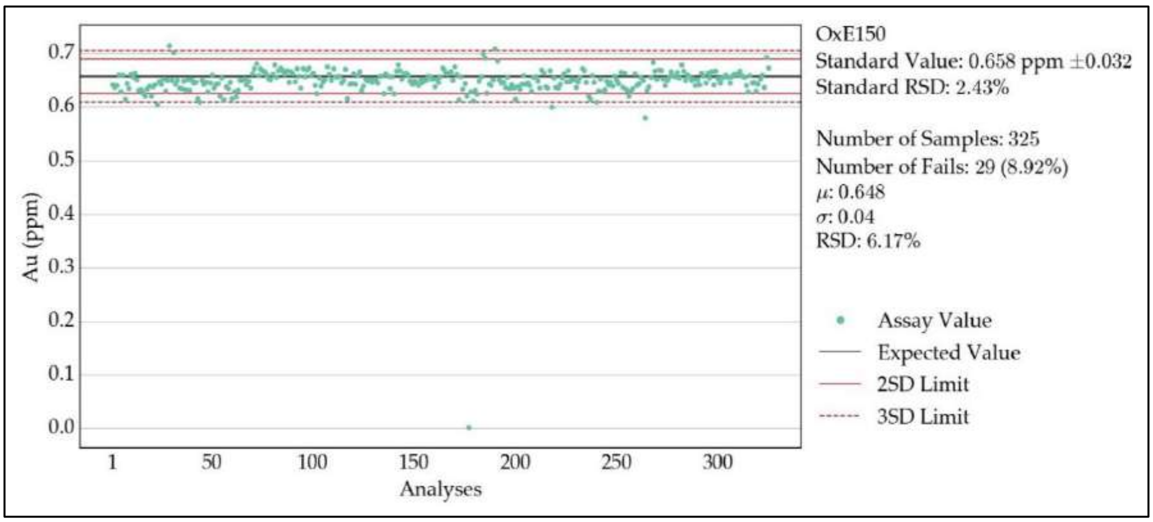
Standards were inserted into the sample stream at regular intervals (approximately. every 20 samples). A total of 649 standards were analyzed via fire assay (Au-AA23) and Preg-Robbing cyanide leach (Au-AA31, Au-AA31a). Standards used during 2020 included two different certified reference materials from ROCKLABS: OxC152 (Au = 0.216 ppm, n = 324), and OxE150 (Au = 0.658 ppm, n = 325). The results of the fire assay analyses are illustrated in Figure 11-16 and Figure 11-17.

The majority of assay results for the standards during the 2020 drill program fell within 3 standard deviations from the certified value based on the standard deviation reported by the manufacturer. Failures outside of this range were only submitted for re-assay if the standard was within an anomalous mineralized zone (>0.2 ppm). A re-run would include 10 samples above the failed standard, the standard, and 10 samples below the failed standard. None of the failures for the standards in 2020 fell within anomalous mineralized zones and hence none were sent for re-assay. No significant issues were identified, and the results are considered acceptable.



Source: APEX, 2020

Figure 11-16: 2020 Standard Reference Material (OxC152) Fire Assay Results



Source: APEX, 2020

Figure 11-17: 2020 Standard Reference Material (OxE150) Fire Assay Results

11.4 Adequacy of Sample Collection, Preparation, Security and Analytical Procedures

The 2018 to 2020 sample collection, sample preparation, security and analytical procedures used at the Pan Project are appropriate for the type of mineralization that is being evaluated and the stage of the Project. The QA/QC measures including the insertion rates and performance of blanks, standards, and duplicates for the 2018-2020 drill programs indicate the observed failure rates are within expected ranges and no significant assay biases were apparent. Based upon the evaluation of the drilling, sampling and QA/QC programs completed by Fiore, it is Mr. Dufresne's opinion that the Pan Project's drill and assay data are appropriate for use in the resource modeling and estimation work discussed in Section 14.

12 Data Verification

12.1 Geology and Resources

There have been numerous attempts to verify and validate historical drilling on the Pan Project. Of these, the most extensive data verification program was completed by Gustavson Associates on behalf of Midway in 2012 (Crowl *et al.*, 2012a). The most recent data verification was completed by SRK Consulting (US) Inc. on behalf of the issuer Fiore (Pennington *et al.,* 2017 and Deiss *et al.*, 2019). For more details regarding the historical data verification see the above reports. This section will focus on the data verification conducted by APEX personnel and the Co-author and QP Mr. Dufresne on behalf of Fiore. APEX personnel and Mr. Dufresne conducted their own independent verification of the drillhole database in 2019 – 2020 and are not relying on past validation efforts. The drillhole database was examined and checked, and was found to have only minor typographical errors, which were corrected. The drillhole database is deemed to be in good condition and suitable for mineral resource estimation.

12.1.1 Database Data Verification Process

APEX personnel at the request of Fiore compiled all digital drilling data into a Geosparks Analytics database. This was a combination of historical data compilations from SRK, as well as original Fiore assay certificate data and geological logs from the 2018 to 2020 modern drilling. The compilation included collar coordinates, downhole survey information, geological interval data, and assay information. All data were compiled into the Geosparks database. A total of 1,298 drill holes and 37,457 blast holes were compiled into the database. No data verification was conducted on the blast hole data. The blast hole data were not used in resource estimation but were used to assist in guiding the domain shapes and trends.

Once compiled, a brief and concise check program was completed comparing between the original drill logs, assay certificates, and collar coordinates, and the compiled database. The Geosparks database comes with verification tools and these were also employed to assist in the data verification. Original assay certificates and geological logs were utilized to check the Geosparks database for various generations of drilling. APEX personnel and Co-author Mr. Dufresne verified that the original data (including the pre-2018 drilling data) were adequately digitized and properly imported into the Geosparks database. Approximately 10% of the historical (pre-2018) drillhole data, including collars, downhole surveys (if present), geology and assays were checked against hardcopy paper logs and certificates in order to verify the historical data in Geosparks database. Minor typos and columns mismatches were found and rectified, but overall, the database is considered to be accurate and acceptable for resource estimation and mining given the current data at hand.

All of the Fiore drilling data for 2018-2020 was compiled by APEX personnel from original data provided by Fiore into the Geosparks database and was reviewed by the Co-author and QP. The 2018 – 2020 drilling data contained adequate QA/QC data as summarized in Section 11. The geological logs were compared to the original paper copies for digitizing errors, and no errors were found. At the time of the Geosparks database compilation, the 2020 drill program was underway. The 2020 drill hole data were validated and subsequently compiled into the Geosparks database. Mr. Dufresne considers the Pan drillhole database, including the historical pre 2018 data and the

2018 to 2020 data, well validated and suitable for the preparation of the MRE and Minerals Reserves as presented herein.

12.2 Mining and Reserves

The QP utilized surveyed inputs from Fiore, such as surrounding topography, existing mining surfaces, existing dumps, and infrastructure. During the site visit, the QP observed that these inputs were correct. Additionally, the QP observed that these surfaces aligned with the location of the resource model developed by the geology QP.

Equipment productivities used in scheduling were sourced from recorded production data and observed to be valid based on reports reviewed by the QP during the site visit.

12.3 Metallurgy

The QP for metallurgy has been involved with and overseen most testwork on site and verifies that the data supporting the metallurgical assumptions for this report is valid.

12.4 Environmental

The QP has reviewed and accepted the following documents used to prepare Section 20, Environmental Studies, Permitting and Social or Community Impact:

- BLM. 2013. Pan Mine Final Environmental Impact Statement Volume I and II, November 2013.
- Haley Aldrich, 2020. Standard Reclamation Cost Estimator (SRCE), August 2020. The data was verified by comparing the authorized disturbances with the authorized reclamation permit. The 2020 cost data utilized in the SRCE was that authorized by the Nevada Division of Environmental Protection and U.S. Bureau of Land Management.
- Haley Aldrich. December 23, 2020, Pan Mine Life of Mine Asset Retirement Obligation Estimate 2020. The disturbance acres and costs used to develop the costs were verified in coordination with Haley Aldrich.

12.5 Mine Economics

Economic models and costing were developed by the QP using first principals and through careful review of actual costs from the previous year of operating activities.

12.6 Rock Mechanics

The QP reviewed and analyzed the rock mass and visible structures and formations during their site visit. The data observed in the field was in consistent with that reported in previous rock mechanics studies.

13 Mineral Processing and Metallurgical Testing

GRP acquired the Pan project in May of 2017 and has been in operation for three years. Since then, the company name has been changed to Fiore Gold Corp.

Several metallurgical testing programs have been performed for the Pan project since 2010 by Resource Development Inc. (RDi), Phillips Enterprises LLC, Kappes Cassidy and Associates (KCA), McClelland Laboratories, Inc. and on-site Fiore personnel.

Extensive studies undertaken for the Feasibility Study were discussed in detail in the NI 43-101 reports issued in June 2015 and July 2017 and are briefly summarized in this report. The metallurgical studies undertaken since the acquisition of the Pan project by GRP in May 2017 are discussed in detail in this report. The plant operating data are also provided in this section.

13.1 Metallurgical Test Work by Midway Gold and GRP Prior to 2017

The metallurgical studies undertaken by various laboratories from 2010 to 2017 were disused in detail in the following reports.

1. NI 43-101 Technical Report 2015 Feasibility Study for the Pan Gold Project White Pine County, Nevada, Midway Gold, June 25, 2015;
2. NI 43-101 Updated Technical Report Pan Gold Project White Pine County, Nevada, GRP Minerals Corp. and Fiore Exploration Ltd., July 7, 2017

The highlights of the metallurgical studies indicated the following:

1. The composite samples from South and North Pan tested assayed from a low of 0.23 g/t Au to a high of 2.153 g/t Au.
2. Both South Pan and North Pan samples were amenable to heap leach. No composite samples exhibited preg-robbing properties.
3. The South Pan samples had low crushability work index compared to North Pan samples and abrasion index values indicated that the ore was non-abrasive.
4. The gold extraction for the South Pan samples was independent of the crush size, whereas North Pan Samples are size dependent and need finer crush to obtain reasonable recoveries. Also, the gold extraction was significantly higher for the South Pan samples than the North Pan samples.
5. The ROM recovery of 80% was projected for the South Pan ore as compared to 52% for the North Pan ore. If the North Pan ore was crushed to 80% minus 1 ½ inch, the gold extraction improved to 65%.
6. Based on these results, it was recommended that the mine proceed with the installation and operation of a crushing and agglomeration circuit.

13.2 Metallurgical Test Work by GRP, since January, 2017

Several studies were undertaken at RDi and on-site to physically characterize the various ore types to determine their response when subjected to a heap leach operation and to determine the impact of incorporating the crusher circuit on gold extraction.

The following reports were reviewed to prepare this section of the report:

1. Heap Leach Test Program, Pan Project, GRP Resources prepared by RDi dated January 23, 2017;
2. Static Leach Test Program Pan Project, GRP Resources prepared by RDi dated May 5, 2017;
3. Pan Mine Test Heap Leaching Results and Discussion prepared by Ken Brunk, August 23, 2018; and
4. Leach Testing of Pan Ore, Fiore Gold Ltd. Prepared by RDi dated August 31, 2018.

13.2.1 RDi Metallurgical Test Work in January to June, 2017

Six metallurgical samples (five from South Pan and one from North Pan) were sent to RDi for metallurgical test work. These samples were gathered by trenching along the ore faces of both the North and South pits. They represented argillized shale (Sample A1), argillized limestone (Sample A2), argillized solution breccia (Samples B1 and B2), silicified solution breccia limestone (Sample C1) and silicified solution breccia shale (Sample D1).

The metallurgical test work included sample preparation and characterization, agglomeration testing, bottle roll cyanide leaching and carbon adsorption testing. Additional static leach tests were performed on freshly mined North Pit ore.

The detailed procedures and results were discussed in the NI-43-101 updated Technical Report dated July 2017. The conclusions from the study were as follows:

- The gold values in the samples ranged from 0.27 g/t Au to 0.94 g/t Au. The cyanide soluble gold assays indicate that the majority of the gold is cyanide soluble. Very little silver was detected in any of the samples.
- The A samples contain a significant amount of clay while the A2 sample and the B samples contain a significant amount of calcite. The C1 and D1 samples are mainly composed of quartz.
- Drying screening of the samples indicated that the minus 100-mesh fractions of each sample ranged from 1.2% to 7.1%. Submersion tests showed that the B samples readily broke down in water, while the A samples showed slight degradation, and the C and D samples did not degrade. Wet screening of the B1 sample produced 43.3% minus 200-mesh.
- The gold grade generally increases with decreased particle size for all samples, but the gold distribution is consistent with the weight distribution.
- None of the agglomeration tests by individual rock type produced agglomerates of significant strength. Additional cement addition did not significantly improve the agglomerate strength of the A1 sample. The B sample appears to be most problematic due

to the breakdown of particles once wetted. The A and B samples will need to be blended with the C and D samples to produce stable agglomerates.

- Leach extractions were similar for the A and B samples, ranging from 71.2% to 90.2%. Very little silver was extracted from the samples, with a maximum of 14.1% extraction. Finer particle sizes exhibited small improvements in precious metal extraction for the A and B samples and larger improvements were observed with the C1 and D1 samples.
- Cyanide consumptions were low with an average consumption of 0.0826 kg/t NaCN. Cement consumptions were consistent between rock types with an average of 1.188 kg/t.
- The adsorption kinetics were similar for both the Jacobi and Pan carbon samples after 5.5 hours.
- The calculated head grade of the North Pan fresh sample was 0.53 g/t Au based on assay-by-size data. The precious metal distribution is similar to the particle size distribution with the lowest grade material coming from the plus 6-inch fraction.
- Static leach testing results showed that maximum gold extraction was achieved with the minus 1-inch material at 39.3%, while material at coarser size fractions achieved a maximum gold extraction of 19.4%. The ROM sample achieved slightly lower gold extractions than the minus 1-inch material (35.2% versus 39.3%). Silver extractions were less than 4% for all samples.
- The projected gold recovery after 180 days of leaching would be 51.8% for the North Pan ROM sample and 81.6% for the South Pan minus ¾ inch based on logarithmic model.
- Reagent consumptions increased as the particle size decreased. The North Pan ROM test consumed 1.03 kg/t of NaCN and 0.67 kg/t of cement. Actual consumptions in operation will be significantly less than the lab consumptions.
- Static leach testing results indicate that the gold extractions are similar for the ROM and minus 1-inch North Pan samples. An economic analysis should be completed to determine if the additional gold extraction observed with the finer material would justify the additional costs of crushing.

13.2.2 RDi Metallurgical Test Work, August 2018

RDi was sent 900 kgs of crushed material for metallurgical test work. This was the 50:50 South and North pan ore used for Mine Test Heap following the crushing of the blended ore. The primary objective of the study was to determine the extraction of gold in column leach tests with/without agglomeration. Additional leach testing was undertaken to determine metal extraction at various particle sizes and develop correlation between small-scale leach and column leach tests.

Sample Preparation and Head Assay

The “as received” sample was dried and the moisture content was determined to be 3.3%. The entire sample was blended and split into column charges, weighing approximately 80 kilograms each. A total of eight charges were saved for column testing, while two additional charges were utilized for head assay and bottle roll leach testing.

The sample splits designated for head assay and bottle roll leaches were first dried and then split into quarters. One half was utilized for screen analysis while one quarter was retained in storage. The last quarter of the sample split was crushed to minus 10 mesh and split in half. One half was prepared for head assay while the other half was retained for bottle roll leaches. The head assay sample was pulverized to minus 200 mesh and three 5-assay-ton samples were submitted for assay of gold, silver, copper, and cyanide soluble gold and silver. Cyanide soluble assays were determined by leaching the pulverized sample for 24 hours with 0.50% NaCN. In addition, a sample was submitted for 32 element ICP analysis and another split was submitted for XRF/XRD analysis. The results are shown in Table 13-1 and Table 13-2.

Table 13-1: Head Analyses of Composite Sample

Sample	Element				
	Au (g/t-oz/ton)	**Ag (g/t-oz/ton)**	**Cu (ppm)**	**CN Soluble Au (g/t-oz/ton)**	**CN Soluble Ag (g/t-oz/ton)**
A	0.437 - 0.0127	2.6 - 0.0759	18	0.40 - 0.0117	1.06 - 0.0309
B	0.431 - 0.0126	2.6 - 0.0759	16	0.40 - 0.0117	1.04 - 0.0303
C	0.434 - 0.0127	2.8 - 0.0817	16	0.38 - 0.0111	1.06 - 0.0309
Average	**0.434 - 0.0127**	**2.7 - 0.0788**	**17**	**0.39 - 0.0114**	**1.05 - 0.0306**

ICP Analysis

Element	%
Al	2.35
Ca	8.42
Fe	1.30
K	1.00
Mg	0.23
Na	0.17
P	0.13
S	0.50
Sn	0.01
Ti	0.08
Element	**ppm**
Ag	3
As	394
B	14
Ba	6390
Be	<2
Bi	<2
Cd	<1
Co	<1
Cr	77
Cu	18
Hg	3.74
La	16
Li	21
Mn	376
Mo	3
Ni	15
Pb	37
Sb	14
Sc	<5
Se	29
Sr	170
Ta	<10
Te	<2
Tl	7
U	29
V	62
W	<10
Zn	67

XRF Analysis

Element	Wt. %
Na_2O	<0.05
MgO	0.50
Al_2O_3	5.18
SiO_2	62.8
P_2O_5	0.14
S	<0.05
Cl	<0.02
K_2O	1.32
CaO	15.2
TiO_2	0.23
MnO_2	0.06
Fe_2O_3	2.03
BaO	0.83
Element	**ppm**
V	75
Cr	113
Co	<10
Ni	30
W	<10
Cu	14
Zn	122
As	455
Sn	<20
Pb	<10
Mo	<10
Sr	161
U	<10
Th	<10
Nb	<10
Zr	137
Rb	46
Y	23

Source: RDi, 2020

Table 13-2: Summary of XRD Results for Composite Sample

Mineral	Formula	Weight (%)
Quartz	SiO_2	55
Calcite	$CaCO_3$	27
Mica/illite	$(K, Na, Ca)(Al, Mg, Fe)_2(Si, Al)_4O_{10}(OH, F)_2$	10
Kaolinite	$Al_2Si_2O_5(OH)_4$	7
Marcasite	FeS_2	<2
Unidentified		<5

Source: RDi, 2020

The assay and mineralogical characterization results indicate the following:

- The composite sample assayed 0.434 g/t Au (0.0127 oz/ton Au) and 2.7 g/t Ag (0.0788 oz/ton Ag). Approximately 90% of the gold and 40% of the silver was cyanide soluble;
- Copper content of the sample was determined to be 17 ppm; and
- The composite sample was mainly quartz and calcite, but also contained 10% mica/illite and 7% kaolinite.

Assay by Size of Composite Sample

An assay-by-size analysis was completed with a representative split of the composite sample. The material was screened at 1 inch, ¾ inch, ½ inch, ¼ inch, 10 mesh, 30 mesh, 100 mesh, and 200 mesh. Each size fraction was crushed to minus 10 mesh and 2 kilograms splits were pulverized to minus 200 mesh for assay. Samples were submitted for assay of gold, silver, copper, and cyanide soluble gold and silver. No material was found to be larger than 1 inch. The results are summarized in Table 13-3.

Table 13-3: Particle Size and Metal Distribution of Composite Sample

Screen Fraction	Wt. (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.42 0.012	100.0	2.1 0.061	100.0	0.27 0.0079	100.0	1.0 0.029	100.0	21	100.0
3/4" x 1"	4.4	0.43 0.013	4.5	2.6 0.076	5.4	0.24 0.0070	3.9	1.3 0.038	5.8	18	3.7
1/2" x 3/4"	17.7	0.45 0.013	19.3	2.4 0.070	19.9	0.28 0.0082	18.1	1.0 0.029	17.5	16	13.2
1/4" x 1/2"	27.4	0.32 0.009	21.2	2.4 0.070	30.8	0.24 0.0070	24.0	1.1 0.032	29.9	24	30.7
10 mesh x 1/4"	23.8	0.34 0.010	19.4	2.2 0.064	24.5	0.20 0.0058	17.4	0.9 0.026	22.6	26	28.9
30 mesh x 10 mesh	11.4	0.41 0.012	11.1	2.0 0.058	10.7	0.20 0.0058	8.3	0.9 0.026	10.1	16	8.5
100 mesh x 30 mesh	6.5	0.45 0.013	7.0	1.4 0.041	4.3	0.22 0.0064	5.2	1.0 0.029	6.3	22	6.7
200 mesh x 100 mesh	2.7	0.67 0.020	4.4	1.2 0.035	1.5	0.32 0.0093	3.2	0.9 0.026	2.5	20	2.6
- 200 mesh	6.1	0.90 0.026	13.1	1.0 0.029	2.9	0.90 0.026	20.0	0.9 0.026	5.3	20	5.7

Source: RDi, 2020

The assay-by-size analysis results indicate the following:

- The majority of the mass and gold was found between the sizes of 10 mesh and 3/4 inch. The highest gold grades were in the minus 100 mesh fractions.
- The highest percentage of cyanide soluble gold was in the minus 200 mesh fraction.

Bottle Roll Leach of Composite Sample

Bottle roll leach tests were completed with 500-gram charges of feed material at particle sizes of minus 10 mesh and minus 65 mesh to determine size dependence of gold extraction. Tests were completed in duplicate at a pulp density of 30%, pH 10.5, and a maintained NaCN concentration of 0.15 lb./ton (0.07 g/L). Kinetic solution samples were taken at 1, 2, 4, and 24 hours. After 48 hours, the leaches were sampled. All solution and residue samples were submitted for assay of gold, silver, and copper. The results are shown in Table 13-4.

Table 13-4: Feed Composite Leach Results

Test #	Particle Size (P_{80})	Extraction %			Residue Grade			Calc Head Grade			NaCN Consump. (kg/t)	Lime Consump. (kg/t)
		Au	Ag	Cu	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)		
BR1	10 mesh	51.3	14.1	5.6	0.24 0.0070	1.6 0.047	24	0.49 0.014	1.9 0.055	25	0.053	1.719
BR2	10 mesh	60.8	9.5	5.3	0.18 0.0053	1.4 0.041	18	0.45 0.013	1.5 0.044	19	0.000	1.601
	Average	56.1	11.8	5.5	0.21 0.0061	1.5 0.044	21	0.47 0.014	1.7 0.050	22	0.027	1.660
BR3	65 mesh	77.2	35.9	17.7	0.11 0.0032	1.0 0.029	22	0.48 0.014	1.6 0.047	27	0.054	1.846
BR4	65 mesh	76.6	24.0	17.4	0.11 0.0032	1.6 0.047	24	0.45 0.013	2.1 0.061	29	0.013	1.647
	Average	76.9	30.0	17.6	0.11 0.0032	1.3 0.038	23	0.47 0.014	1.9 0.055	28	0.034	1.747

Source: RDi, 2020

The leach test results indicate the following:

- The leach extractions are size dependent. The 10-mesh samples averaged 56.1% gold extraction while the 65-mesh samples averaged 76.9%. In addition, the silver and copper extractions significantly increased at the finer particle size. The average silver extraction increased from 11.8% to 30.0%, while the average copper extraction increased from 5.5% to 17.6%.
- Reagent consumption was slightly higher for the fine particle size material. The sodium cyanide averaged 0.027 kg/t for the 10-mesh material and 0.034 kg/t for the 65-mesh material.

Static Leach Tests

Static leach tests were completed with the composite sample to provide a correlation between column leach and static leach tests. Static leach is predictive of column leach results and can provide extraction information with less sample, decreased cost and schedule as compared to a full set of column tests.

Static leach tests were completed in duplicate with the column feed sample. Approximately 2 kilograms of sample was placed in a bucket and leach solution was added to just cover the material. The sample and solution weights were tracked throughout the leach process and the material was lightly agitated on a daily basis. The leach conditions were pH 10.5 and 0.07 g/L NaCN maintained for the duration of the test. Kinetic solution samples were taken throughout the test to generate extraction curves. After 21 days of leaching, the final leach solution and leach residue were submitted for gold, silver, and copper assays. The results are shown in Table 13-5.

Table 13-5: Static Leach Results for Composite Samples

Test #	Recovery % (21 Days)			Leach Residue Grade			Calculated Head Grade			Sodium Cyanide Consump. (kg/t)	Lime Consump. (kg/t)
	Au	Ag	Cu	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)		
BT1	63.0	4.3	3.4	0.14 0.0041	1.2 0.035	43	0.38 0.011	1.3 0.038	42	0.380	1.774
BT2	68.3	3.8	8.5	0.13 0.0038	1.6 0.047	15	0.41 0.012	1.7 0.050	14	0.393	1.638
Average	65.7	4.1	6.0	0.14 0.0041	1.4 0.041	29	0.40 0.012	1.5 0.044	28	0.387	1.706

Source: RDi, 2020

The static leach test results indicate the following:

- The average gold extraction for the static leach tests was 65.7%. These results are slightly higher than the average column extraction of 61.6%;
- The average silver extraction of 4.1% and average copper extraction of 6.0% were similar to the results of the non-agglomerated columns (Ag-3.3%, Cu-6.5%); and
- The static leach reagent consumptions were significantly higher than those obtained for column tests. The sodium cyanide consumption was approximately 9 times higher than the columns and the lime consumption was approximately 5 times higher.

Column Leach Tests

Column leach tests were completed with the composite sample to determine metal extractions with and without agglomeration of the ore.

A total of four non-agglomerated columns and four agglomerated columns were completed. The feed material for non-agglomerated columns was blended with lime into the sample by shovel so that the material would not agglomerate. The feed material for agglomerated columns was agglomerated with cement in a cement mixer with the lifters removed and 0.15 lb./ton NaCN solution at a pH of 10.5. The prepared material was loaded in columns, covered, and allowed to cure for 24 hours before leaching. All tests utilized eight-inch diameter columns loaded with ore to a height of approximately 4.5 feet with non-agglomerated feed and approximately 6 feet with agglomerated material. Seven of the eight columns were run open-circuit, while one of the agglomerated columns was run closed-circuit. The pregnant leach solution from the closed-circuit column was batch processed with activated carbon to absorb the metals in solution. The cyanide concentration was then returned to 0.15 lb./ton and re-applied to the column. The columns were leached for approximately 36 days before rinsing with water. The leach solution at 0.15 lb./ton NaCN and pH of 10.5, was applied at a rate of 0.003 gpm/ft^2 to all columns. The metal extraction of each column was tracked on a daily basis throughout the leaching process. In addition, the pregnant solution pH, free cyanide, and column slump were also checked on a daily basis. The description of the column tests is as follows:

- Columns 1 and 2 - No Agglomeration - 2 lb./ton Lime;
- Columns 3 and 4 - No Agglomeration - 4 lb./ton Lime;
- Columns 5 and 6 - Agglomeration - 2 lb./ton Cement;
- Column 7 - open-circuit - Agglomeration - 4 lb./ton Cement; and
- Column 8 - closed-circuit - Agglomeration - 4 lb./ton Cement.

Once the leaching was completed, each column was detoxified to 5 ppm free cyanide with fresh water before unloading. The leach residue from each column was oven dried at less than 150ºF, and the percent moisture of the material was determined. Each residue was thoroughly blended and split in half. One half of the column residue was crushed to minus 10 mesh and a 2-kilogram sample was split out for assay. The entire 2-kilogram sample was pulverized to minus 200 mesh before splitting out three 200-gram samples (5-assay-ton) for fire assay of gold and silver and cyanide soluble gold and silver. A fourth sample was split out and submitted for 32 element ICP analysis. The other half of the residue was screened at the same screen fractions as the feed sample. Each size fraction was crushed to minus 10 mesh and 2-kilogram splits were pulverized to minus 200 mesh for assay. Samples were submitted for assay of gold, silver, copper, and cyanide soluble gold and silver.

The column leach test results are shown in Table 13-6 and Figure 13-1 through Figure 13-8.

Table 13-6: Summary of Column Leach Results

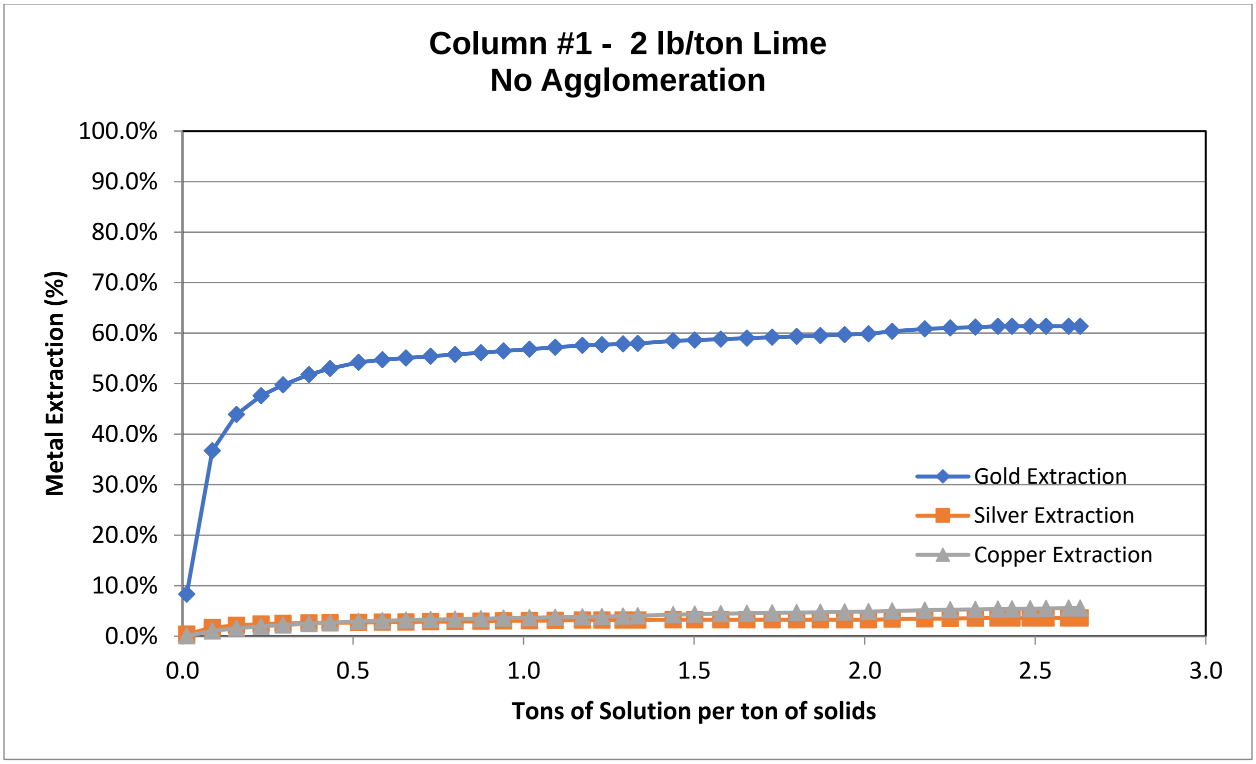
Column No.	Extraction (%)			Residue Assay			Calc. Head			NaCN Consump. (kg/t)	Lime Consump. (kg/t)
	Au	Ag	Cu	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)		
1	61.3	3.6	5.6	0.16 0.0047	1.4 0.041	15	0.41 0.012	1.5 0.044	16	0.060	0.337
2	64.0	3.0	6.5	0.18 0.0053	1.5 0.044	13	0.49 0.014	1.5 0.044	14	0.051	0.327
3	60.2	3.5	6.9	0.17 0.0050	1.3 0.038	13	0.41 0.012	1.4 0.041	14	0.030	0.353
4	62.3	2.9	7.1	0.15 0.0044	1.4 0.041	15	0.40 0.012	1.4 0.041	16	0.019	0.317
5 (Agg)	61.4	3.4	19.2	0.17 0.0050	1.3 0.038	16	0.43 0.013	1.4 0.041	19	0.050	0.348
6 (Agg)	62.4	3.6	19.3	0.15 0.0044	1.3 0.038	13	0.41 0.012	1.4 0.041	16	0.056	0.329
7 (Agg)	58.8	3.0	17.1	0.18 0.0053	1.6 0.047	14	0.43 0.013	1.6 0.047	17	0.031	0.347
8 (Agg)	62.1	3.9	16.8	0.16 0.0047	1.4 0.041	12	0.42 0.012	1.4 0.041	14	0.045	0.412

Source: RDi, 2020

The test results indicate the following:

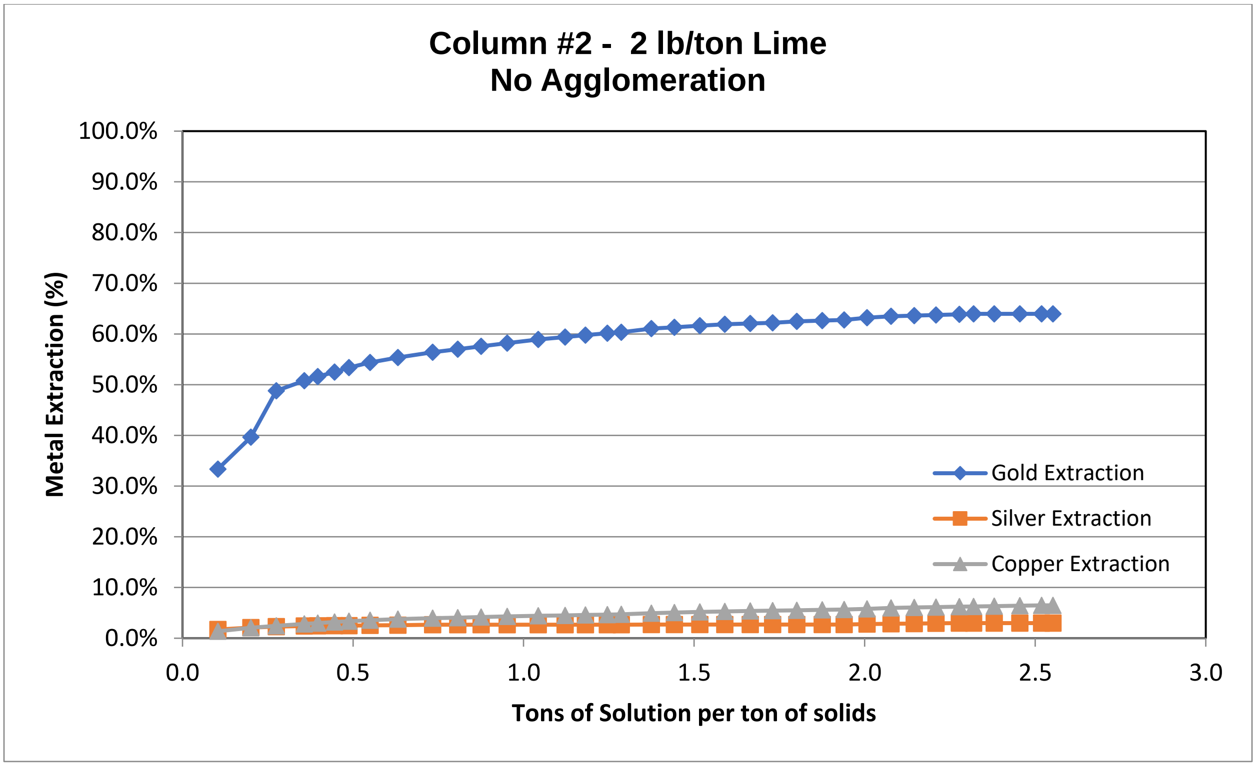
- Gold extractions ranged from 58.8% to 64.0%. Silver extractions were very low and ranged from 2.9% to 3.9%. The column test results were consistent with the static leach results.

- The gold leached quickly in all columns. Approximately 90% of the ultimate gold extraction was observed within the first 10 days of leaching.
- Copper extractions averaged 6.5% for the non-agglomerated columns and 18.1% for the agglomerated columns. The additional extraction observed in the agglomerated columns was most likely due to the cyanide utilized during agglomeration. The agglomerated columns started at a copper extraction that was approximately 10% versus approximately 1% for the non-agglomerated columns.
- Cyanide consumption averaged 0.043 kg/t NaCN.



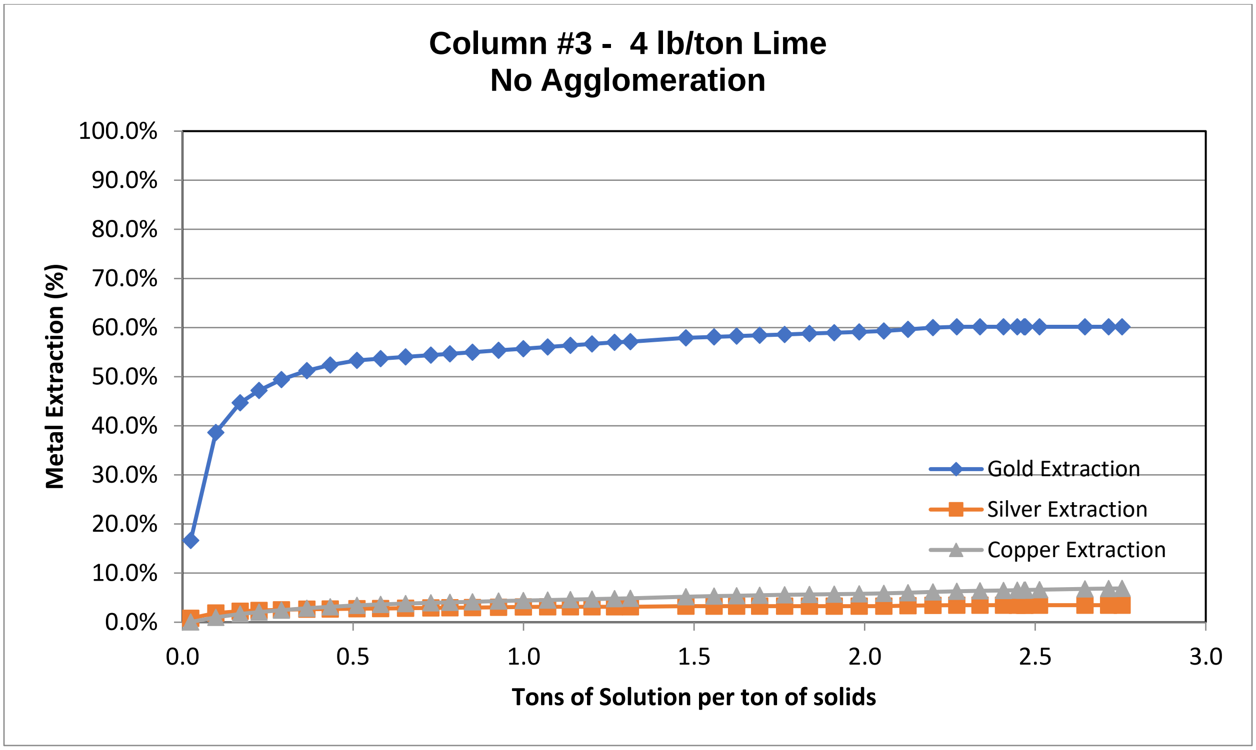
Source: RDi, 2020

Figure 13-1: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #1



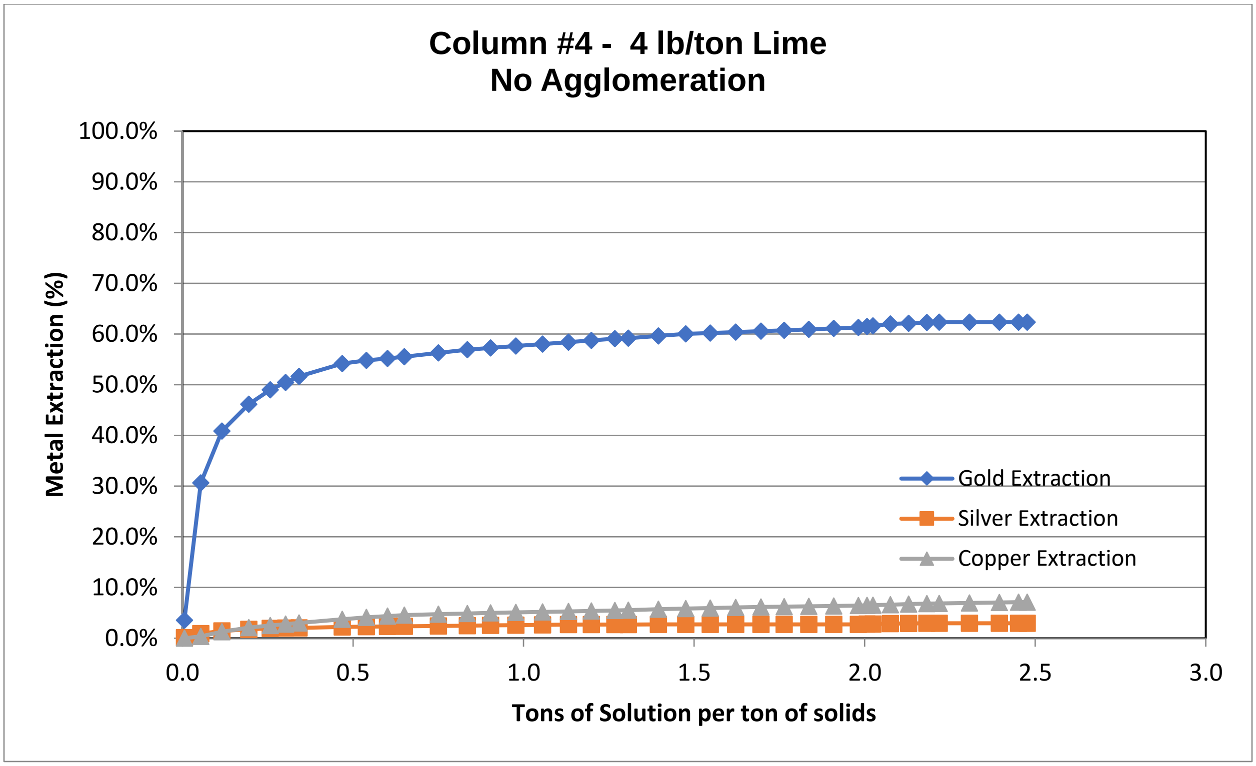
Source: RDi, 2020

Figure 13-2: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #2



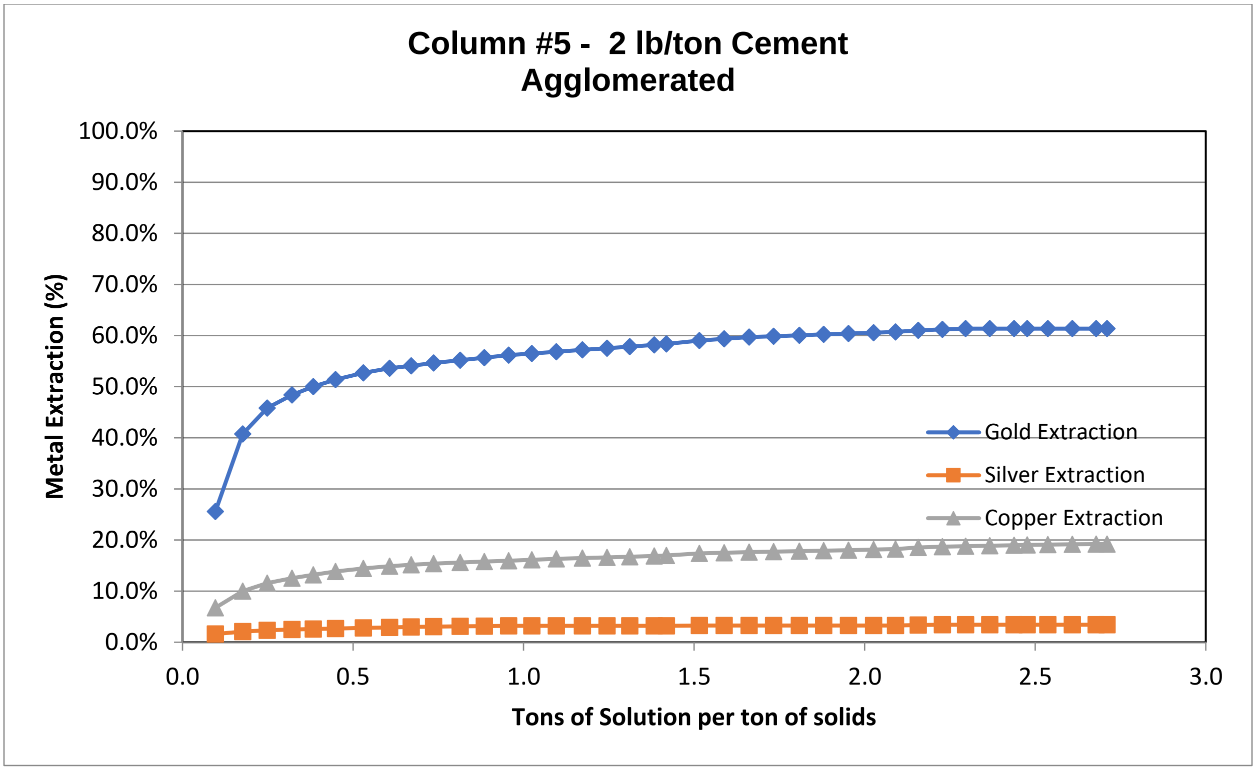
Source: RDi, 2020

Figure 13-3: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #3



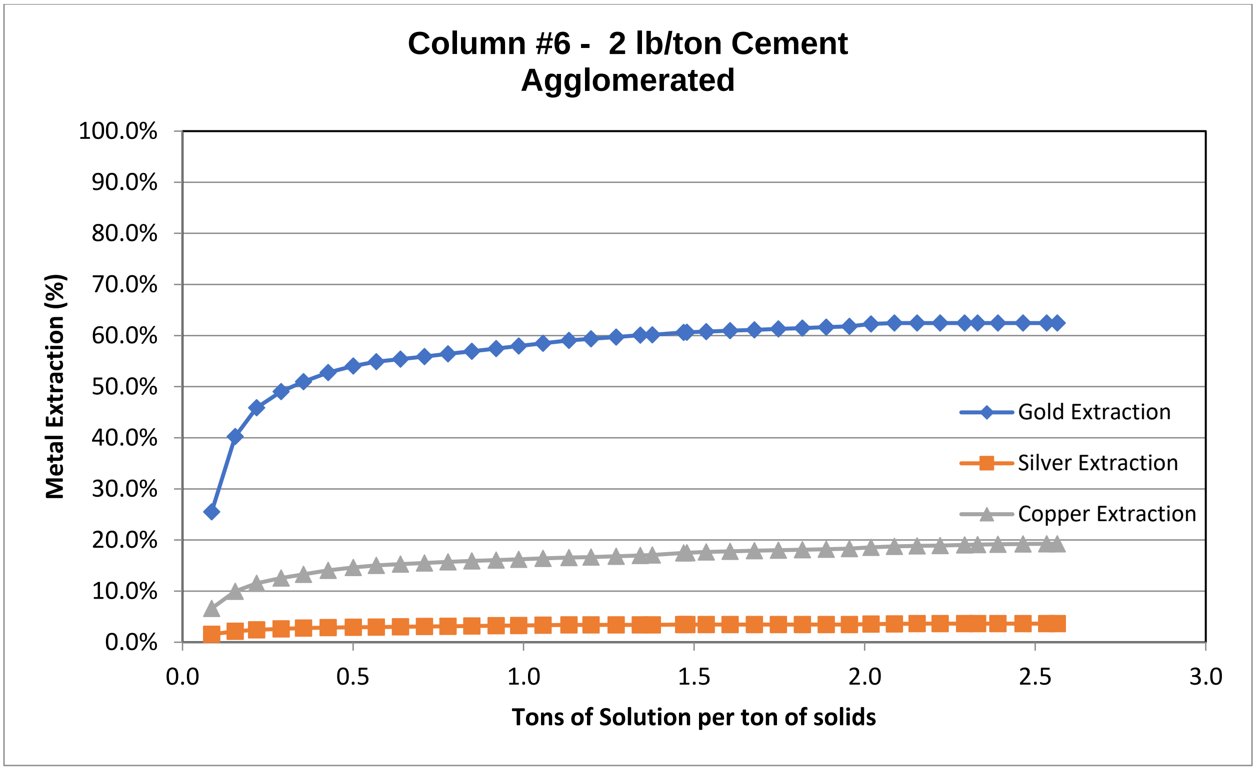
Source: RDi, 2020

Figure 13-4: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #4



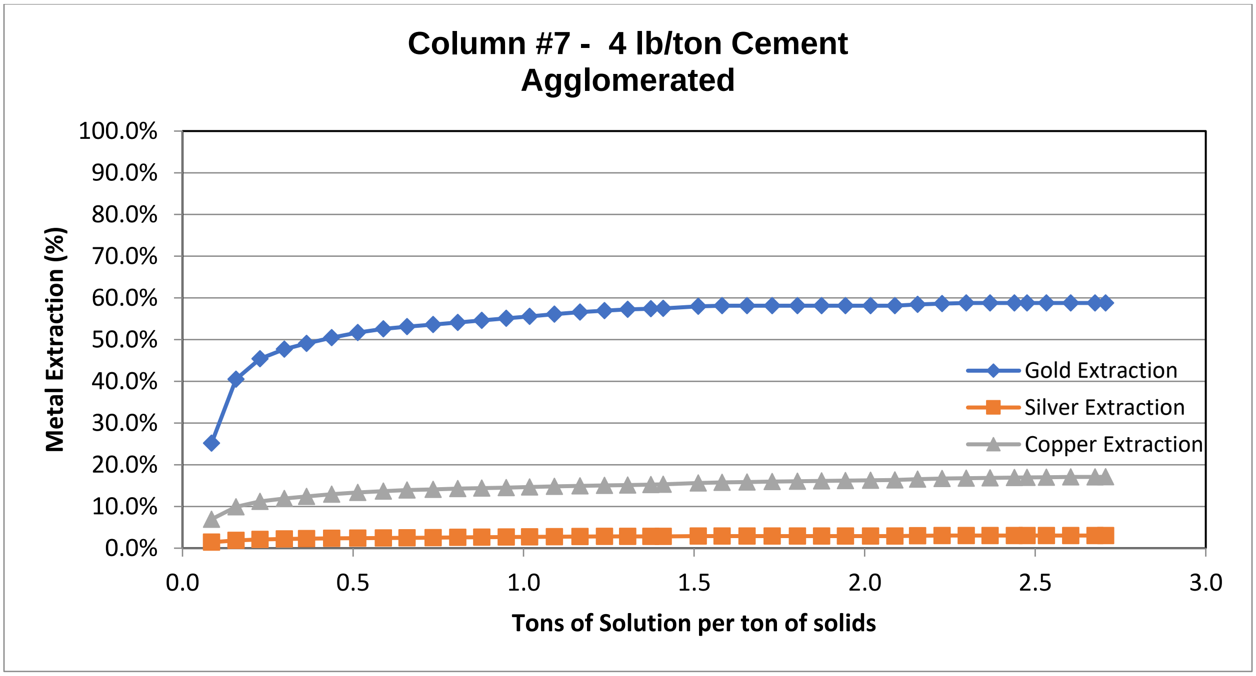
Source: RDi, 2020

Figure 13-5: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #5



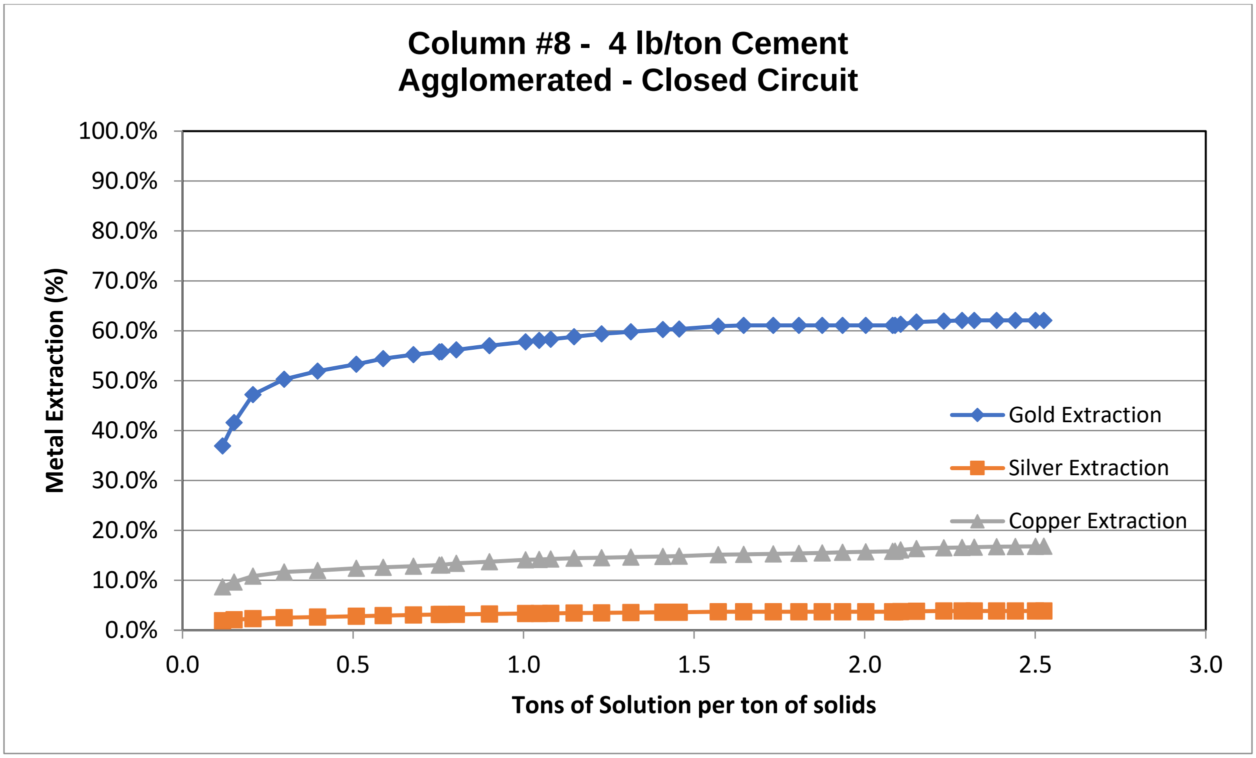
Source: RDi, 2020

Figure 13-6: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #6



Source: RDi, 2020

Figure 13-7: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #7



Source: RDi, 2020

Figure 13-8: Gold, Silver, Copper Extraction as a Function of Leach Solution for Column Test #8

Assay by Size of Column Test Residues

A representative sample was split out from each column residue after leaching for assay-by-size analysis. The material was screened at 1 inch, ¾ inch, ½ inch, ¼ inch, 10 mesh, 30 mesh, 100 mesh, and 200 mesh. Each size fraction was crushed to minus 10 mesh and 2-kilogram splits were pulverized to minus 200 mesh for assay. Samples were submitted for assay of gold, silver, and copper, and cyanide soluble gold and silver. No material was found to be larger than 1 inch. The results are shown in Table 13-7 through Table 13-14.

Table 13-7: Particle Size and Metal Distribution of Column 1 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.8 0.082	100.0	0.10 0.0029	100.0	1.1 0.032	100.0	16	100.0
3/4" x 1"	3.6	0.18 0.0053	4.9	4.4 0.128	5.6	0.14 0.0041	5.2	1.7 0.050	5.4	10	2.2
1/2" x 3/4"	15.3	0.16 0.0047	18.5	4.0 0.117	21.6	0.12 0.0035	19.0	1.6 0.047	22.1	12	11.5
1/4" x 1/2"	25.2	0.15 0.0044	29.2	3.4 0.099	30.2	0.12 0.0035	31.2	1.3 0.038	30.4	12	18.9
10 mesh x 1/4"	23.5	0.14 0.0041	25.9	3.4 0.099	28.2	0.10 0.0029	24.3	1.3 0.038	26.7	14	20.6
30 mesh x 10 mesh	7.1	0.14 0.0041	7.5	2.6 0.076	6.5	0.10 0.0029	7.4	1.0 0.029	6.3	18	8.0
100 mesh x 30 mesh	5.4	0.12 0.0035	5.1	1.8 0.053	3.5	0.08 0.0023	4.5	0.9 0.026	4.4	20	6.8
200 mesh x 100 mesh	1.6	0.10 0.0029	1.2	1.0 0.029	0.6	0.06 0.0018	1.0	0.5 0.015	0.8	24	2.4
-200 mesh	18.2	0.06 0.0018	7.7	0.6 0.018	3.9	0.04 0.0012	7.5	0.2 0.006	3.9	26	29.6

Source: RDi, 2020

Table 13-8: Particle Size and Metal Distribution of Column 2 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.15 0.0044	100.0	3.1 0.090	100.0	0.12 0.0035	100.0	1.3 0.038	100.0	16	100.0
3/4" x 1"	3.9	0.20 0.0058	5.1	3.0 0.088	3.8	0.16 0.0047	5.5	1.6 0.047	4.8	10	2.5
1/2" x 3/4"	16.1	0.20 0.0058	21.1	3.2 0.093	16.4	0.16 0.0047	22.4	1.6 0.047	18.8	10	10.4
1/4" x 1/2"	26.2	0.19 0.0055	31.9	4.0 0.117	33.5	0.14 0.0041	31.9	1.7 0.050	33.4	10	16.9
10 mesh x 1/4"	21.9	0.17 0.0050	23.8	4.4 0.0128	30.8	0.12 0.0035	22.9	1.6 0.047	26.6	16	22.6
30 mesh x 10 mesh	8.1	0.14 0.0041	7.3	3.2 0.093	8.3	0.10 0.0029	7.0	1.5 0.044	9.3	16	8.3
100 mesh x 30 mesh	5.2	0.11 0.0032	3.8	2.0 0.058	3.3	0.08 0.0023	3.6	0.9 0.026	3.6	18	6.1
200 mesh x 100 mesh	1.6	0.08 0.0023	0.9	1.4 0.041	0.7	0.06 0.0018	0.8	0.6 0.018	0.7	26	2.6
- 200 mesh	17.0	0.06 0.0018	6.2	0.6 0.018	3.3	0.04 0.0012	5.9	0.2 0.006	2.8	28	30.6

Source: RDi, 2020

Table 13-9: Particle Size and Metal Distribution of Column 3 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.3 0.067	100.0	0.08 0.0023	100.0	1.2 0.035	100.0	15	100.0
3/4" x 1"	3.4	0.20 0.0058	5.3	3.4 0.099	5.0	0.14 0.0041	5.9	1.7 0.050	4.8	10	2.3
1/2" x 3/4"	15.7	0.19 0.0055	23.7	3.8 0.111	25.9	0.12 0.0035	23.7	1.8 0.053	23.5	14	14.8
1/4" x 1/2"	23.9	0.15 0.0044	28.2	2.8 0.082	29.0	0.10 0.0029	29.9	1.5 0.044	29.6	10	16.0
10 mesh x 1/4"	23.0	0.14 0.0041	24.7	2.4 0.070	24.0	0.08 0.0023	23.1	1.3 0.038	26.2	14	21.7
30 mesh x 10 mesh	7.6	0.13 0.0038	7.7	2.4 0.070	7.9	0.08 0.0023	7.6	1.3 0.038	8.2	16	8.2
100 mesh x 30 mesh	5.3	0.10 0.0029	4.3	1.8 0.053	4.1	0.06 0.0018	4.0	1.0 0.029	4.3	18	6.4
200 mesh x 100 mesh	1.6	0.08 0.0023	1.0	1.0 0.029	0.7	0.04 0.0012	0.8	0.5 0.015	0.7	16	1.8
- 200 mesh	19.5	0.03 0.0009	5.2	0.4 0.012	3.4	0.02 0.0006	4.9	0.2 0.006	2.6	22	28.8

Source: RDi, 2020

Table 13-10: Particle Size and Metal Distribution of Column 4 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.14 0.0041	100.0	2.1 0.061	100.0	0.10 0.0029	100.0	1.0 0.029	100.0	14	100.0
3/4" x 1"	3.9	0.21 0.0061	6.1	3.6 0.105	6.9	0.16 0.0047	6.4	1.7 0.050	6.8	10	2.7
1/2" x 3/4"	16.8	0.21 0.0061	25.3	3.0 0.088	24.6	0.16 0.0047	27.4	1.5 0.044	26.2	8	9.3
1/4" x 1/2"	24.7	0.17 0.0050	29.7	2.4 0.070	28.8	0.12 0.0035	30.1	1.2 0.035	29.8	10	17.1
10 mesh x 1/4"	22.4	0.14 0.0041	23.5	2.2 0.064	23.9	0.10 0.0029	22.7	1.0 0.029	23.8	14	21.6
30 mesh x 10 mesh	7.4	0.12 0.0035	6.6	2.0 0.058	7.2	0.08 0.0023	6.0	0.9 0.026	6.6	24	12.2
100 mesh x 30 mesh	4.9	0.10 0.0029	3.5	1.8 0.053	4.3	0.06 0.0018	3.0	0.7 0.020	3.7	20	6.8
200 mesh x 100 mesh	1.5	0.07 0.0020	0.8	1.0 0.029	0.7	0.04 0.0012	0.6	0.4 0.012	0.7	22	2.3
- 200 mesh	18.4	0.03 0.0009	4.6	0.4 0.012	3.6	0.02 0.0006	3.7	0.1 0.003	2.3	22	27.9

Source: RDi, 2020

Table 13-11: Particle Size and Metal Distribution of Column 5 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.9 0.085	100.0	0.09 0.0026	100.0	1.2 0.035	100.0	14	100.0
3/4" x 1"	4.2	0.18 0.0053	5.8	3.6 0.105	5.2	0.14 0.0041	6.6	1.6 0.047	5.6	14	4.2
1/2" x 3/4"	16.3	0.19 0.0055	23.4	4.0 0.117	22.6	0.14 0.0041	25.8	1.6 0.047	22.4	12	14.0
1/4" x 1/2"	25.1	0.15 0.0044	29.4	4.2 0.123	36.4	0.10 0.0029	28.4	1.5 0.044	32.8	10	17.9
10 mesh x 1/4"	21.7	0.15 0.0044	25.4	3.0 0.088	22.5	0.10 0.0029	24.5	1.1 0.032	20.6	14	21.7
30 mesh x 10 mesh	7.1	0.12 0.0035	6.7	2.4 0.070	5.9	0.08 0.0023	6.4	1.0 0.029	6.1	14	7.1
100 mesh x 30 mesh	4.6	0.10 0.0029	3.4	1.6 0.047	2.5	0.06 0.0018	3.1	0.9 0.026	3.5	16	5.2
200 mesh x 100 mesh	1.5	0.06 0.0018	0.7	1.6 0.047	0.8	0.04 0.0012	0.7	0.8 0.023	1.0	20	2.1
- 200 mesh	19.6	0.03 0.0009	5.2	0.6 0.018	4.1	0.02 0.0006	4.4	0.5 0.015	8.0	20	27.9

Source: RDi, 2020

Table 13-12: Particle Size and Metal Distribution of Column 6 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.4 0.070	100.0	0.09 0.0026	100.0	1.2 0.035	100.0	16	100.0
3/4" x 1"	3.9	0.21 0.0061	6.6	4.0 0.117	6.5	0.16 0.0047	6.9	1.9 0.055	6.3	20	4.8
1/2" x 3/4"	16.5	0.16 0.0047	20.8	4.0 0.117	27.5	0.12 0.0035	22.0	1.8 0.053	25.0	18	18.3
1/4" x 1/2"	23.8	0.16 0.0047	29.9	2.8 0.082	27.7	0.12 0.0035	31.7	1.5 0.044	29.9	10	14.7
10 mesh x 1/4"	21.9	0.14 0.0041	25.1	2.4 0.070	21.98	0.10 0.0029	24.3	1.1 0.032	21.2	12	16.2
30 mesh x 10 mesh	7.4	0.13 0.0038	7.6	2.2 0.064	6.8	0.08 0.0023	6.6	1.0 0.029	6.5	14	6.4
100 mesh x 30 mesh	4.9	0.10 0.0029	3.7	2.0 0.058	4.1	0.06 0.0018	3.3	0.8 0.023	3.2	18	5.4
200 mesh x 100 mesh	1.6	0.06 0.0018	0.8	1.0 0.029	0.6	0.04 0.0012	0.7	0.7 0.020	1.0	22	2.1
- 200 mesh	20.1	0.03 0.0009	5.4	0.6 0.018	5.0	0.02 0.0006	4.5	0.4 0.012	6.8	26	32.2

Source: RDi, 2020

Table 13-13: Particle Size and Metal Distribution of Column 7 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.6 0.076	100.0	0.09 0.0026	100.0	1.3 0.038	100.0	17	100.0
3/4" x 1"	3.6	0.19 0.0055	5.3	4.0 0.117	5.54	0.14 0.0041	5.4	1.8 0.053	5.0	10	2.2
1/2" x 3/4"	14.8	0.21 0.0061	23.2	4.0 0.117	22.3	0.16 0.0047	25.1	1.8 0.053	21.0	14	12.4
1/4" x 1/2"	24.2	0.16 0.0047	29.2	3.2 0.093	29.2	0.12 0.0035	30.9	1.5 0.044	29.0	14	20.4
10 mesh x 1/4"	22.3	0.14 0.0041	24.6	2.4 0.070	20.2	0.10 0.0029	23.7	1.2 0.035	21.8	12	16.1
30 mesh x 10 mesh	7.7	0.12 0.0035	7.3	2.2 0.064	6.4	0.08 0.0023	6.6	1.1 0.032	6.5	14	6.5
100 mesh x 30 mesh	5.2	0.10 0.0029	4.1	2.2 0.064	4.3	0.06 0.0018	3.3	1.0 0.029	3.9	18	5.6
200 mesh x 100 mesh	1.7	0.08 0.0023	0.9	2.0 0.058	1.2	0.04 0.0012	0.7	0.8 0.023	1.1	20	2.0
- 200 mesh	20.6	0.03 0.0009	5.3	1.4 0.041	10.9	0.02 0.0006	4.4	0.7 0.020	11.7	28	34.7

Source: RDi, 2020

Table 13-14: Particle Size and Metal Distribution of Column 8 Residue

Screen Fraction	Wt (%)	Au (g/t) (oz/ton)	Au Dist. (%)	Ag (g/t) (oz/ton)	Ag Dist. (%)	CN Soluble Au (g/t) (oz/ton)	CN Au Dist. (%)	CN Soluble Ag (g/t) (oz/ton)	CN Ag Dist. (%)	Cu (ppm)	Cu Dist. (%)
Feed (calculated)	100.0	0.13 0.0038	100.0	2.5 0.073	100.0	0.09 0.0026	100.0	1.2 0.035	100.0	22	100.0
3/4" x 1"	3.5	0.23 0.0067	6.3	4.2 0.123	66.0	0.18 0.0053	7.1	1.7 0.050	5.0	14	2.2
1/2" x 3/4"	16.2	0.19 0.0055	24.0	4.0 0.117	26.3	0.14 0.0041	25.5	1.7 0.050	23.0	16	11.8
1/4" x 1/2"	25.9	0.17 0.0050	34.0	2.6 0.076	27.3	0.12 0.0035	34.8	1.4 0.041	31.8	28	33.0
10 mesh x 1/4"	22.0	0.12 0.0035	20.8	2.2 0.064	19.6	0.08 0.0023	19.7	1.1 0.032	20.2	18	18.0
30 mesh x 10 mesh	7.2	0.10 0.0029	5.7	2.2 0.064	6.5	0.06 0.0018	4.9	1.0 0.029	6.3	20	6.6
100 mesh x 30 mesh	4.7	0.10 0.0029	3.4	2.0 0.058	3.8	0.06 0.0018	3.1	0.9 0.026	3.7	20	4.3
200 mesh x 100 mesh	1.5	0.07 0.0020	0.8	2.0 0.058	1.2	0.04 0.0012	0.7	0.9 0.026	1.1	24	1.7
- 200 mesh	19.0	0.03 0.0009	5.0	1.2 0.035	9.3	0.02 0.0006	4.3	0.5 0.15	8.8	26	22.5

Source: RDi, 2020

The assay-by-size analysis results indicate the following:

- The majority of the gold is found between the sizes of 10 mesh and 3/4 inch, similar to the feed material. The lowest gold grades were in the finer fractions, which indicates the minus 10 mesh material leaches more readily than the plus 10 mesh material.
- A significant percentage of the gold in each fraction is cyanide soluble but was not extracted due to particle size.

Percent Slump/Percolation Rate

The height of the ore in the column tests was measured before and after leaching. None of the column tests exhibited significant slumping. The non-agglomerated columns averaged 1.2% slump while the agglomerated columns averaged 0.8% slump.

Percolation tests were conducted on each column after the rinsing was completed. The ore height and compaction had stabilized before the columns were tested. The percolation test procedure was as follows:

- The column was flooded to a level of approximately 2 inches above the surface of the material;
- The water flow rate was adjusted to maintain the level above the material surface; and
- The amount of solution exiting the bottom of the column was measured to evaluate the flow rate once the solution level was determined to be stable.

A summary of the compaction and percolation test results is reported in Table 13-15.

Table 13-15: Summary of Compaction/Percolation Test Results

Column No.	Column Density (lb./ft^3)	Column Compaction (%)	Percolation Rate		
			Liters/min	gpm/sq. ft.	Multiple of Application Rate
1	108.6	1.3	0.92	2.78	928
2	108.1	1.3	0.95	2.88	959
3	107.7	1.3	0.36	1.09	363
4	106.6	0.9	1.72	5.21	1735
5 (Agg)	86.0	1.4	12.15	36.78	12,259
6 (Agg)	88.5	0.9	17.13	51.85	17,284
7 (Agg)	86.3	0.4	16.29	49.31	16,437
8 (Agg)	83.4	0.4	17.68	53.52	17,839

Source: RDi, 2020

The permeability test results indicate significant differences between the agglomerated and non-agglomerated columns. The average percolation rate for the non-agglomerated columns was 3.0 gpm/ft^2 with a low of 1.1 gpm/ft^2, while the agglomerated columns averaged 47.9 gpm/ft^2 with a low of 36.8 gpm/ft^2.

Pregnant Solution Analyses

Initial and final pregnant solution samples were collected and analyzed for dissolved metals content utilizing Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analysis. Two sets of analyses were obtained for each test, one at the start and one at the end of the leaching cycle. The test results are summarized in Table 13-16 and Table 13-17.

Table 13-16: Pregnant Solution Analyses, Non-Agglomerated Columns 1-4

Element ppm	Column No.							
	#1		#2		#3		#4	
	Days 1-10	Day 38-43	Days 1-10	Day 38-43	Days 1-10	Day 38-43	Days 1-10	Day 38-43
Ag	<0.1	0.4	<0.1	0.2	<0.1	0.1	<0.1	<0.1
Al	0.2	<0.1	0.2	<0.1	0.6	0.1	0.2	0.4
As	0.4	1.1	0.4	1.2	<0.1	0.9	0.5	0.6
Ba	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bi	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ca	49.6	10.6	44.8	10.6	65.8	11.2	59.9	16.2
Cd	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Co	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cr	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cu	0.8	0.2	0.8	0.2	0.8	0.2	3.5	0.3
Fe	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
K	3.0	2.0	2.7	1.3	3.7	1.2	3.4	1.7
Mg	0.7	0.3	0.5	0.2	0.2	<0.1	0.1	<0.1
Mn	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mo	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1
Ni	0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Pb	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sr	0.2	<0.1	0.2	<0.1	0.4	0.1	0.5	0.2
Ti	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
V	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1
W	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	2.5	0.9	2.1	0.9	0.4	0.8	0.5	0.3

Source: RDi, 2020

Table 13-17: Pregnant Solution Analyses, Non-Agglomerated Columns 5-8

Element ppm	Column No.							
	#5		#6		#7		#8	
	Days 1-10	Day 38-43	Days 1-10	Day 38-43	Days 1-10	Day 38-43	Days 1-10	Day 38-43
Ag	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Al	0.6	<0.1	0.8	<0.1	0.1	0.1	0.5	<0.1
As	0.2	1.5	<0.1	1.3	0.7	0.7	<0.1	0.7
Ba	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Bi	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ca	74.2	10.8	89.0	10.9	60.7	21.8	90.7	39.3
Cd	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Co	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cr	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cu	3.1	0.3	1.0	0.3	3.7	0.2	3.2	0.5
Fe	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
K	4.7	2.2	4.6	1.8	3.2	2.8	5.4	5.3
Mg	<0.1	<0.1	0.3	<0.1	0.1	<0.1	<0.1	<0.1
Mn	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mo	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.2	0.2
Ni	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1
Pb	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sr	0.8	0.2	0.5	0.2	0.5	0.4	1.0	0.6
Ti	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
V	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1	0.2
W	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	0.3	0.8	0.2	0.7	0.6	0.2	0.1	<0.1

Source: RDi, 2020

The analyses of the leach solutions indicate that low levels of some cyanide soluble metals were dissolved into solution during leaching.

<u>Column Residue Leach Tests:</u>

Bottle roll leach tests were completed with each column test residue to determine if the material had leached completely. Tests were completed with 750-gram charges split out from the column residue. The column residue samples were leached at their respective particle sizes, approximately P_{80} 1/2 inch, and were not crushed or ground finer. The bottle rolls were completed at a pulp density of 30%, pH 10.5, and a maintained NaCN concentration of 0.15 lb./ton (0.07 g/L). Kinetic solution samples were taken at 6 and 24 hours. After 48 hours, the leaches were sampled. All solution and residue samples were submitted for assay of gold, silver, and copper. The results are summarized in Table 13-18.

Table 13-18: Column Residue Bottle Roll Leach Results

Test #	Column #	Extraction (%)			Residue Grade			Calc Head Grade			NaCN Consump. (kg/t)	Lime Consump. (kg/t)
		Au	Ag	Cu	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu (ppm)	Au (g/t) (oz/ton)	Ag (g/t) (oz/ton)	Cu ppm		
BR5	1	0.0	2.5	8.3	0.17 0.0050	2.6 0.076	14	0.17 0.0050	2.7 0.079	15	0.033	1.447
BR6	2	0.0	5.5	8.2	0.09 0.0026	1.2 0.035	10	0.09 0.0026	1.3 0.038	11	0.000	1.420
BR7	3	0.0	3.6	6.0	0.09 0.0026	1.2 0.035	10	0.09 0.0026	1.2 0.035	11	0.033	1.420
BR8	4	0.0	2.2	4.3	0.34 0.0099	1.0 0.029	12	0.34 0.0099	1.0 0.029	13	0.011	1.375
BR9	5	0.0	1.9	5.6	0.15 0.0044	1.2 0.035	12	0.15 0.0044	1.2 0.035	13	0.004	1.545
BR10	6	0.0	3.2	6.1	0.15 0.0044	1.4 0.041	10	0.15 0.0044	1.4 0.041	11	0.001	1.369
BR11	7	0.0	6.5	6.2	0.08 0.0023	1.0 0.029	10	0.08 0.0023	1.1 0.032	11	0.000	1.369
BR12	8	0.0	3.2	4.3	0.48 0.0140	1.4 0.041	12	0.48 0.0140	1.4 0.041	13	0.000	1.338

Source: RDi, 2020

The leach test results indicate the following:

- All of the available gold was leached during the column tests. No gold was extracted from any of the column test residues.
- The calculated gold head grades were not consistent with the assay values for some of the column residues. The sampling of these two samples was widely different and would account for the inconsistency in assay results. The column residue samples for the bottle roll leaches were split from 1/2" material and were only 750 grams each. The assay samples for the column residues were taken from half of the column and split after crushing to 10 mesh. A total of 2 kilograms was then split out and the entire sample was pulverized and assayed at 5 assay ton.
- Small amounts of silver and copper were extracted during the leach tests. Silver extractions averaged 3.6%, while the copper extractions averaged 6.1%.

<u>Conclusions</u>

The following conclusions can be drawn from this phase of the test work:

- Assays results for the composite sample were 0.434 g/t Au (0.0127 oz/ton Au), 2.7 g/t Ag (0.0309 oz/ton Ag) and 17 ppm Cu. Approximately 90% of the gold and 40% of the silver is cyanide soluble. The composite sample consists mainly of quartz and calcite, but also contains 10% mica/illite and 7% kaolinite.
- Assay-by-size analysis of the composite sample indicates the majority of the gold is found between the sizes of 10 mesh and 3/4 inch. The highest gold grades were in the minus 100 mesh fractions. The highest percentage of cyanide soluble gold was in the minus 200 mesh fraction.
- Bottle roll leach tests indicate that metal extractions are size dependent. Samples crushed to 10-mesh averaged 56.1% gold extraction whereas samples ground to 65-mesh averaged 76.9% gold extraction. Silver and copper extractions increased as well at the

finer particle size. The average silver extraction increased from 11.8% to 30.0%, while the average copper extraction increased from 5.5% to 17.6%. Slightly higher reagent consumptions were observed at the finer particle size. The sodium cyanide consumption averaged 0.027 kg/t for the 10-mesh material and 0.034 kg/t for the 65-mesh material.

- Static leach tests provided similar metal extractions as full column tests. The average gold extraction for the static leach tests was 65.7% while the average column extraction was 61.6%. The average silver extraction of 4.1% and average copper extraction of 6.0% were similar to the results of the non-agglomerated columns (Ag-3.3%, Cu-6.5%).
- Column tests exhibited gold extractions ranging from 58.8% to 64.0%. Silver extractions were very low and ranged from 2.9% to 3.9%. The gold leached quickly in all columns. Approximately 90% of the ultimate gold extraction was observed within the first 10 days of leaching. Copper extractions averaged 6.5% for the non-agglomerated columns and 18.1% for the agglomerated columns. The increased extraction was due to the cyanide utilized during agglomeration.
- Assay-by-size analysis of the column residues indicates the majority of the gold is found between the sizes of 10 mesh and 3/4 inch, similar to the feed material. The lowest gold grades were in the finer fractions, which indicates the minus 10 mesh material leaches more readily than the plus 10 mesh material. A significant percentage of the gold in each fraction is cyanide soluble, but was not extracted due to particle size.
- The column permeability test results indicate reasonable permeability for the non-agglomerated columns and very good permeability for the agglomerated columns. The average percolation rate for the non-agglomerated columns was 3.0 gpm/ft^2 with a low of 1.1 gpm/ft^2, while the agglomerated columns averaged 47.9 gpm/ft^2 with a low of 36.8 gpm/ft^2.
- None of the column tests exhibited significant slumping. The non-agglomerated columns averaged 1.2% slump while the agglomerated columns averaged 0.8% slump.
- The analyses of the leach solutions indicate that low levels of some cyanide soluble metals were dissolved into solution during leaching.
- Bottle roll leaches completed on the column test residues indicated that all of the available gold was leached during the column tests. No gold was extracted from any of the column test residues. Silver and copper extractions averaged 3.6%, and 6.1% respectively.

13.2.3 Pan Mine Test Heap, August 2018

A test heap-leaching program was designed and implemented at the Pan mine site in December of 2017. The program was designed to develop the recovery relationships between leaching Run-of-Mine (ROM) ore and ore crushed to minus one-inch particle size. The results would then be used to determine if crushing at Pan was economically favorable or if the mine should continue with ROM leaching.

Approximately 15,000 tons of ore was mined from each of the North and South pits (approximately 30,000 tons total) and set aside in separate stockpiles to serve as feed to the two test heaps. Based on blast hole assay ore control, the head grade gold assay of the mined material was calculated to be 0.0118 oz/ton (0.405 g/t).

The ore stockpiles were reclaimed in a manner to create a 50% North and 50% South ore blend as feed to each of the two test heaps. One portion of the re-claimed ore was fed to a crusher plant and the second portion was hauled to a dedicated area on the new phase two leach pad. During crushing, the finished product belt conveyor was stopped 16 times and 6 feet of material was removed each time to serve as a head sample. No attempt to obtain a head sample of the ROM material was made due to the uncertainty of such a sample due to rock particle size. The thorough mixing and "re-mining" of the entire stockpile was deemed sufficient to rely on the crushed ore head sample for use in the recovery determination from both test heaps. The collected crusher belt head sample, weighing about 1,500 pounds, was delivered to Resource Development Laboratory in the Denver area for column testing and sample analysis. The gold assay of the head sample from the crusher belt samples assayed by Florin Labs averaged 0.0127 oz/ton (0.434g/t). The results from the column tests were discussed in Section 13.2.2.

The above procedures resulted in the construction of a ROM test heap consisting of a calculated 13,002 tons with a surveyed crest surface area of 10,715 square feet. Also constructed was a crushed test heap containing 9,158 tons having surveyed crest area of 11,832 square feet.

The test heap solution distribution systems were piped in the same manner as the commercial heaps at Pan. Leach solution from the Pan process plant distribution system was used throughout the test. Each test pad was equipped with totalizing flow meters to measure the leach solution supplied to the distribution system as well as pregnant solution meters and solution sampling ports. Meter readings and solution samples were collected daily for the duration of the test. Solution assays were performed at the lab at Pan as well as at SVL Laboratories.

When leaching was completed a residue, sample was collected from each of the test pads. This was accomplished by digging a trench the length of the pad and then digging a cross trench near each end of the trench that was approximately the width of the crest. The trenched material was cone and quartered with a small end loader. About 1,500 pounds of each residue was sent to RDi for preparation for gold assay and other analysis.

The head assays for the crushed ore are given in Table 13-19.

Table 13-19: Test Heap Head Assays for Gold from Outside Labs

Lab	Au (oz/t)	Au (g/t)
RDi	0.0127	0.434
Ore Control	0.0118	0.405

Source: RDi, 2020

The assays indicate the close correlation between the actual assay head assay and the calculated value from the ore control practice at Pan.

The assays obtained from the crusher product belt samples are given in Table 13-20. All of the samples assayed above the mining cutoff and there is a range of assay values from 0.009 oz/ton (0.312 g/t) to 0.018oz/ton (0.617 g/t). The average calculated assay for the entire suite of samples is 0.0120 oz/ton (0.410 g/t). This agrees well with the 0.0127oz/ton (0.434 g/t) assay of the composite sample made from the belt samples.

Table 13-20: Crusher Belt Samples Gold Assays, Fiore Lab

Sample	Au (oz/ton)	Au (g/t)
1	0.0091	0.312
2	0.0115	0.394
3	0.0112	0.384
4	0.0113	0.387
6	0.0117	0.401
7	0.0110	0.377
8	0.0134	0.459
9	0.0109	0.374
10	0.0122	0.418
11	0.0102	0.350
12	0.0124	0.425
13	0.0111	0.381
14	0.0140	0.480
15	0.0130	0.446
16	0.0180	0.617
17	0.0105	0.360
Average	**0.0120**	**0.410**

Source: RDi, 2020

Gold Recovery

The gold recoveries from the ROM and Crushed Ore test heaps are presented in Table 13-21. The gold recovery in each of the cases presented below is based on the gold dissolved and reporting to the pregnant solution from its respective heap. This value was determined from the leach solution flow meter and the assay of daily sample that was analyzed by the outside laboratory, in this case SVL. The residue assay is the variable in these cases and that assay source is called out for each scenario in the table.

A review of the results in the table will show the ROM recovery varies from a low of 51.3% to a high of 66.9% while the Crushed Test Heap recoveries range from 63.6% to a high of 73.2%. These differences are due to the change in residue assays used in the calculations. However, the results show that in all except one case the ROM recovery is lower than the Crushed ore recovery.

Table 13-21: Gold Recoveries of Test Heaps Using Various Head and Residue Assays

Recovery using Head Assays	% Rec'y	Recovery Difference (Crushed - ROM)	Cal'd Head Au (oz/ton)	Cal'd Head (g/t)
ROM 100% - (1st Residue ÷ OC Head)	66.9		0.0104	0.357
Crushed 100% - (1st Residue ÷ OC Head)	71.2	4.3	0.0118	0.405
Crushed 100% - (2nd Residue ÷ OC Head)	63.6	-3.3	0.0128	0.437
ROM 100% - (1st Residue ÷ RDI Head assay)	69.3		0.0105	0.360
Crushed 100% - (1st Residue ÷ RDI Head assay)	73.2	3.9	0.0118	0.405
Crushed 100% - (2nd Residue ÷ RDI Head assay)	66.2	-3.1	0.0128	0.437
ROM (Recovered Au ÷ Total Au using RDI Head assay)	51.3		0.0127	0.434
Crushed (Recovered Au ÷ Total Au using RDI Head assay)	66.5	15.2	0.0127	0.434
Recovery using Residue Assays				
ROM (Recovered Au* ÷ [Recovered Au+ RDI 1st Residue assays])	62.6		0.0104	0.357
Crushed (Recovered Au* ÷ [Recovered Au+ RDI 1st Residue assays])	71.6	9	0.0118	0.405
ROM (Recovered Au* ÷ [Recovered Au+ RDI 2nd Residue assays])	62		0.0105	0.357
Crushed (Recovered Au* ÷ [Recovered Au+ RDI 2nd Residue assays])	72.6	10.6	0.0127	0.434

Note: * Gold recovered in test heap solutions

Source: RDi, 2020

Gold Characteristics by Particle Size

Gold recovery by particle size is shown in Table 13-22. The data indicate that gold extraction increases with decreasing particle size below one-half inch. Also, it is apparent that the gold assay of the finer material is significantly increased over the coarser ore particles. Those finer size fractions also produce a higher gold recovery than the coarser particles.

Table 13-22: Comparison of Gold Assays, Particle Size Analyses, and Gold Recovery by Particle Size of Select Column Tests with Crushed Ore Test Heap

Screen Fraction	Column Test Feed	Column 2 Residue	Column 7 Residue	Crushed Heap Residue	Column Feed		Column 2	Column 2	Column 7	Column 7	Crushed Heap	Crushed Heap
	% Wt. in Size Fraction	% Wt in Size Fractions	% Wt in Size Fraction	% Wt, in Size Fraction	Au (oz/ton)	Au (g/t)	Residue Au (g/t)	Au Recovery* (%)	Residue Au (g/t)	Au Recovery** (%)	Residue Au (g/t)	Au Recovery (%)
3/4" x 1"	4.4	3.9	3.6	2.5	0.013	0.43	0.2	53.5	0.19	55.8	0.17	60.5
1/2" x 3/4"	17.7	16.1	14.8	12.4	0.013	0.45	0.2	55.6	0.21	53.3	0.15	66.7
1/4" x 1/2"	27.4	26.2	24.2	23.6	0.009	0.32	0.19	40.6	0.16	50	0.16	50
10 mesh x 1/4"	23.8	21.9	22.3	20.6	0.01	0.34	0.17	50	0.14	58.8	0.15	55.9
30 mesh x 10 mesh	11.4	8.1	7.7	10.8	0.012	0.41	0.14	65.9	0.12	70.7	0.12	70.7
100 mesh x 30 mesh	6.5	5.2	5.2	5.7	0.013	0.45	0.11	75.6	0.1	77.8	0.09	80
200 mesh x 100 mesh	2.7	1.6	1.7	1.8	0.02	0.67	0.08	88.1	0.08	88.1	0.08	88.1
minus 200 mesh	6.1	17	20.6	22.6	0.026	0.9	0.06	93.3	0.03	96.7	0.04	95.6
Calculated head	100	100	100.1	100	0.012	0.42	0.15	64.3	0.13	69	0.12	71.4

* Highest Column Test Recovery, 64.0%
** Lowest Column Test Recovery, 58.8%

Source: RDi, 2020

Residue Assays

The residue assays from the two test heaps are given in Table 13-23. The assays from the 1st trench sample of each test heap showed little difference in the gold contained in the residues and neither assay supported the gold recoveries shown in the actual pregnant solutions obtained from the test heaps. Therefore, a second set of samples for ROM residue assay were obtained by utilizing the backhoe to grab material from the reject piles of the previously dug material. Those assays for the ROM test heap once again did not support the actual gold recovered. A second split of crushed residue was also submitted for assay. The assay of the second split was very near the theoretical that one would expect as referenced below. A note in Table 13-23 indicates the residue assay that one would expect from the leached test heap residues.

Table 13-23: Test Heap Residue Assays from Outside Lab

1st Trench Sample	Au (oz/ton)	Au (g/t)
ROM	0.0039	0.133
Crushed	0.0034	0.117
2nd Trench Sample		
ROM	0.004	0.137
Crushed	0.0043	0.147
Note: Theoretical residue assay based on RDI assay head and gold recovered in solution		
ROM	0.0062	0.2117
Crushed	0.0042	0.144

Source: RDi, 2020

While digging and preparing the ROM residue samples for shipment, the operator took grab samples from the piles for on-site assaying. The gold assays from these grab samples are given in Table 13-24. While trenching the operator took samples of the crushed test heap residue at varying depths. This set of grab samples were assayed at the Fiore lab on site and are given in Table 13-25.

Table 13-24: Residue Assays from ROM Trench Samples with Depth, Fiore Lab

Sample	Au (oz/ton)	Au (g/t)
1	0.0053	0.182
2	0.0079	0.271
3	0.0045	0.154
4	0.0051	0.175
Average	**0.0057**	**0.195**

Source: RDi, 2020

It is interesting to note that the assays of site grab samples closely align with the theoretical or expected residue assay.

Table 13-25: Residue Assays from Crushed Trench Samples with Depth, Fiore Lab

Sample	Au (oz/ton)	Au (g/t)
1	0.0037	0.127
2	0.0044	0.151
3	0.0032	0.11
4	0.0035	0.12
5	0.0035	0.12
Average	**0.0037**	**0.127**

Source: RDi, 2020

Leach Cycle

A comparison of the time required for the leaching to achieve a practical gold recovery is given in Table 13-26 and Table 13-27. One will note that without exception the crushed ore leaches at a significantly faster rate than the ROM ore.

Table 13-26: Comparison of Gold Recovery on a TS/TO Basis

TS/TO	Run of Mine Test Heap		Crushed Test Heap		Recovery Difference (%)	Days under leach
	Days Under leach	Recovery (%)	Days Under leach	Recovery (%)	Crushed minus ROM	Difference
0	0	0	0	0		
0.26	19	27.2	16	37.9	10.7	3
0.49	33	34.9	29	48.1	13.2	4
0.74	45	40.3	37	53.5	13.2	8
0.99	56	44.1	45	57.9	13.8	11
1.25	68	47	54	61.4	14.4	14
1.5	91*	49.2	62	63.1	13.9	29
1.74	104	50.9	70	64.4	13.5	34
1.86	110	51.3	74	64.8	13.5	36
2.25	NA	NA	101*	66.1	NA	NA
2.5	NA	NA	110	66.5	NA	NA

Source: RDi, 2020

NA means "Not Applicable"
* includes 10 day rest period when no leach solution was added to the heaps

Table 13-27: Comparison of Gold Recovery with Time

Days Under Leach	ROM	Crushed
	Cumulative % Gold Recovery	Cumulative % Gold Recovery
30	31.1	48.6
60	45.2	62.7
90*	49	65.2
110	51.3	66.5

*The rest period was removed and the recovery for each was advanced accordingly.

Source: RDi, 2020

Column Tests

A split of the head sample was used for ore characterization and column tests on both agglomerated and non-agglomerated ore at RDi. The column test results are reported in Section 13.2.2. A summary of the gold recoveries, presented in Table 13-28, indicates that the gold recoveries in the columns were lower than those obtained in the test heaps.

Table 13-28: Summary of Column Test Au Recoveries from RDi Testing on Splits of Crusher Test Pad Feed Ore

Column Test	Calculated Head (g/t)	Recovery (%)
1	0.41	61.3
2	0.49	64.0
3	0.41	60.2
4	0.4	62.3
5	0.43	61.4
6	0.41	62.4
7	0.43	58.8
8	0.42	62.1

Source: RDi, 2020

*Based on Calculated Heads
Note: Assay head was 0.434 g/t

Conclusions

The following conclusions can be drawn from this phase of the study:

- The head assays show a very good agreement between the actual assay head and the calculated head from the ore control practice at Pan Mine.
- All samples from the belt assayed indicated material was of ore grade. This means that the field flagging and mine control procedures are excellent.
- The gold extraction was significantly higher from the crushed ore as compared to ROM ore. The incremental recovery of gold is ±10%.
- The leaching of crushed ore showed improved kinetics and reduction in leach cycle by 33%.
- Cement agglomeration of crushed ore demonstrated that the permeability of the heap remained excellent as the pregnant solution from the test heaps remained clear throughout the test.

14 Mineral Resource Estimate

The Mineral Resource Estimate (MRE) herein is based upon the historical drilling and drilling conducted from 2018 to 2020 by Fiore and supersedes all of the prior resource estimates for the Pan Mine. The resource estimate provided by Pennington et al. (2017) and Deiss et al. (2019) are now superseded by the MRE detailed in this report due to mining depletion and new drilling. Other older resource estimates are all considered historical in nature.

This section details an updated NI 43-101 MRE completed for the Pan Mine by APEX Geoscience Ltd. (APEX) of Edmonton, Alberta, Canada. Mr. Warren Black, M.Sc., P.Geo. and Mr. Tyler Acorn, M.Sc. contributed to the MRE under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo, a qualified person who takes responsibility for Section 14. Mr. Dufresne, M.Sc., P.Geol., P.Geo., visited the property in September 2020. Mr. Black, M.Sc., P.Geo. visited the property in October and November 2019.

Definitions used in this section are consistent with those adopted by the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Council in “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014, and prescribed by the Canadian Securities Administrators' NI 43-101 and Form 43-101F1, Standards of Disclosure for Mineral Projects. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

14.1 Introduction

Statistical analysis, three-dimensional (3D) modelling and resource estimation was completed by Mr. Warren Black, M.Sc., P.Geo. and Mr. Tyler Acorn, M.Sc., of APEX (under the direct supervision of Mr. Michael Dufresne, M.Sc., P.Geol., P.Geo.). Mr. Dufresne takes full responsibility for Section 14 and the Pan MRE. The workflow implemented for the calculation of the Pan Gold Mine MRE was completed using the commercial mine planning software MICROMINE (v 20.5). Supplementary data analysis was completed using the Anaconda Python distribution (Continuum Analytics, 2017) and a custom Python package developed by Mr. Black and Mr. Acorn.

Fiore provided APEX with the Pan Mine drill hole database that consists of analytical, geological, density, collar survey information and downhole survey information. In addition, Fiore provided a geological model for the Pan Mine that contains a stratigraphic and structural 3D interpretation produced by Pennington et al. (2017) and modified and refined by Deiss et al. (2019) during an interval model update completed by SRK. APEX personnel spot checked the historical data reviewed and validated by Pennington et al. (2017) and later updated by Deiss et al. (2019), which included drill hole data collected by Fiore in 2018 and found no significant issues. Drilling completed in 2018 by Fiore was reviewed and validated by APEX personnel. Drilling by Fiore in 2019 and 2020 was validated and compiled on-site by APEX personnel. In the opinion of Mr. Dufresne, the current Pan drill hole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The MRE was calculated using a block model size of 20 ft (X) by 20 ft (Y) by 20 ft (Z). APEX personnel estimated the gold grade for each block using Ordinary Kriging with locally varying anisotropy (LVA) to ensure grade continuity in various directions is reproduced in the block model.

The block model was partially diluted by estimating a waste grade for the portions of the outer blocks overlapping the edge of the estimation domain boundaries using composites within a transition zone along the outer edge of the mineralized estimation domains. The waste grade was then proportionately combined with the estimated grade for the portion of the block within the mineralized domain to obtain a final grade for each overlapping block. This partially diluted block model was utilized for resource pit optimization studies. The MRE is reported as undiluted and only includes blocks or portions of blocks within the estimation domains. Details regarding the methodology used to calculate the MRE are documented in this section. The Mineral Resources defined in this section are not Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Modelling was conducted in the North American Datum (NAD) of 1983 (Zone 11) BLM feet projection. The database consists of 1,452 drill holes containing useable downhole data completed at the Pan Mine between 1978 to 2020. APEX personnel constructed estimation domains using a combination of gold grade and all available geological information that helped constrain different controls on mineralization. The estimation domains were used to subdivide the deposit into volumes of rock and the measured sample intervals within those volumes for geostatistical analysis.

14.2 Drill Hole Data Description

14.2.1 Fiore Drill hole Data

Fiore provided APEX with the historical drill hole database for the Pan Mine that comprised data collected from 1978 to 2018. As described in Section 12, the drill hole database was reviewed and validated by Pennington et al. (2017), including drill hole data collected up to and including 2016. APEX personnel spot checked the historical data and found no issues. Deiss et al. (2019) and Fiore completed additional validation work in 2018 that was reviewed by Mr. Dufresne and was comprised of:

- Adding six historical holes to the database;
- Adding historical analytical results;
- Rectifying problems with the survey and collar files; and
- Adding the 71 drill holes completed by Fiore in 2018 to the drill hole database.

Data from Fiore’s 2019 and 2020 drilling programs were captured and validated on-site by APEX personnel during each drill program. APEX personnel compiled the results with the previously validated and spot checked historical data. In the opinion of Mr. Dufresne, the current Pan drill hole database is deemed to be in good condition and suitable to use in ongoing resource estimation studies.

The drill hole database used to calculate the MRE is comprised of 1,452 exploration drill holes completed from 1978 to 2016 by previous operators (1,185 holes totaling 380,081 ft) and 267 holes completed from 2018 to 2020 by Fiore (267 holes totaling 107,460 ft), yielding a total of 95,181 sample/interval entries.

14.2.2 APEX Micromine Drill hole Database

A total of 84,250 intervals were assayed for gold and returned a value greater than zero. However, a portion of the assays are at or below the detection limit. A total of 10,897 intervals were not analyzed, and it is assumed that they were selectively not analyzed and classified as "no sample" (NS). A total of 34 drill hole intervals have explicit documentation that drilling did not return enough material to allow their analysis and are classified as "insufficient recovery" (IR). It is essential to distinguish between these two cases as they are treated differently during resource estimation. Intervals classified as "no sample" (NS) are assigned a nominal waste value of 0.0025 ppm Au, half the value of the lower detection limit of modern fire assay analyses. Intervals classified as "insufficient recovery" (IR) are left blank.

All data was validated using the Micromine^{TM} validation tools when the data was imported into the software. Any validation errors encountered were data entry errors rectified by consulting original documentation. A detailed discussion on the verification of historical and 2019-2020 drill hole data is provided in Sections 11 and 12 of this report. Mr. Dufresne considers the current Pan drill hole database to be in good condition and suitable for ongoing resource estimation studies.

14.3 Estimation Domain Interpretation

14.3.1 Geological Interpretation of Mineralization Domains

There are two dominant styles of gold mineralization at the Pan Mine. Both follow either the Devils Gate Limestone-Pilot Shale contact or the steeply dipping faults that trend north-south. Table 14-1 provides expanded details on both styles of mineralization and lists the estimation domains that contain each.

Table 14-1: Geological Characteristics of Controls on Mineralization that occur within each Estimation Domain

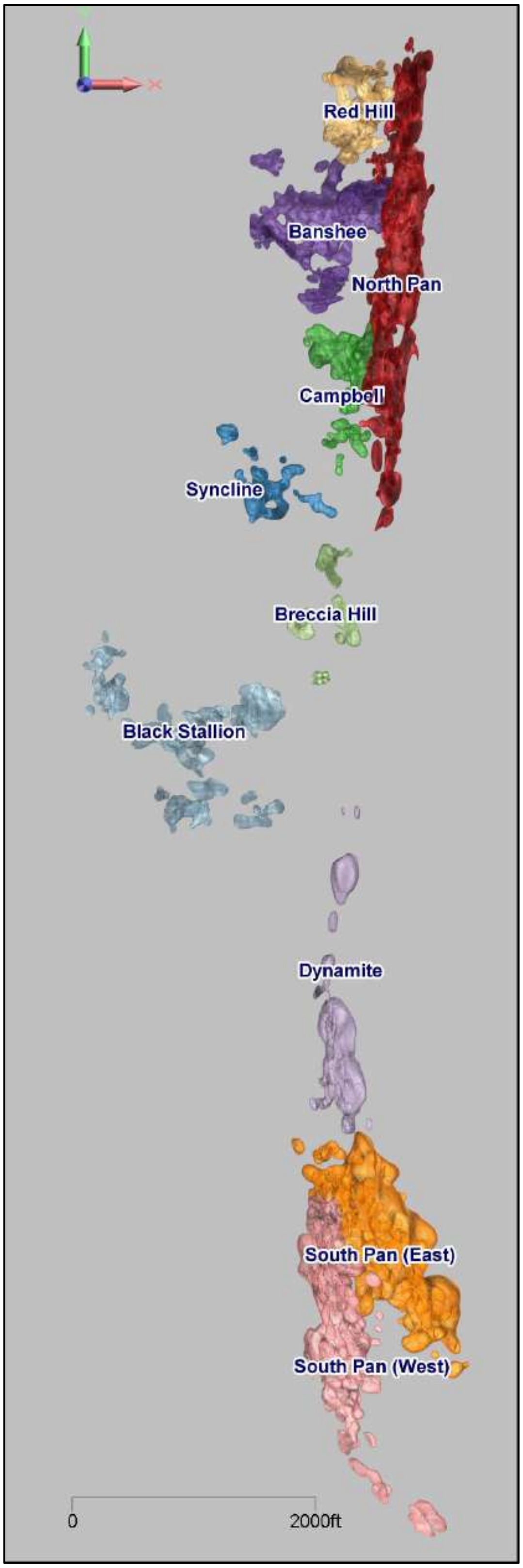
Geological Characteristics of Mineralization and Their Controls	Estimation Domains Characteristics are Present
Near-vertical pipes and bodies of silicified solution breccia localized at the Pilot Shale-Devils Gate Limestone contact adjacent to the Branham Fault	North Pan, South Pan (West), Dynamite
Stratiform-like breccia bodies and zones that run parallel or sub-parallel to the folded Pilot Shale–Devils Gate contact	Red Hill, Banshee, Campbell, South Pan (East), Dynamite, Breccia Hill, Banshee, Black Stallion, Red Hill, Syncline

Source: APEX, 2020

A total of 54 3D trend surfaces were modelled and used as input for the implicit modelling process to create the estimation domains. These trend surfaces ensured that the kriging honored the observed geological controls on mineralization. The trend surfaces were created using all available subsurface data, including RC and core drill hole assays, geological logs, and blasthole data. Seven of the trend surfaces represent faults associated with the BFZ. In contrast, the other 47 represent mineralization trends that run parallel or sub-parallel to the Pilot Shale–Devils Gate contact. The trend surfaces were modelled in a way where if it were a fault-controlled trend surface intersecting a contact-controlled trend surface, the intersection represents the orientation of a mineralized pipe. In combination with all the trend surface's orientation, those intersections are used to inform the LVA described in Section 14.6. Only the contact-controlled trend surfaces are used as input for the implicit modelling applied to create the estimation domains described in Section 14.3.2.

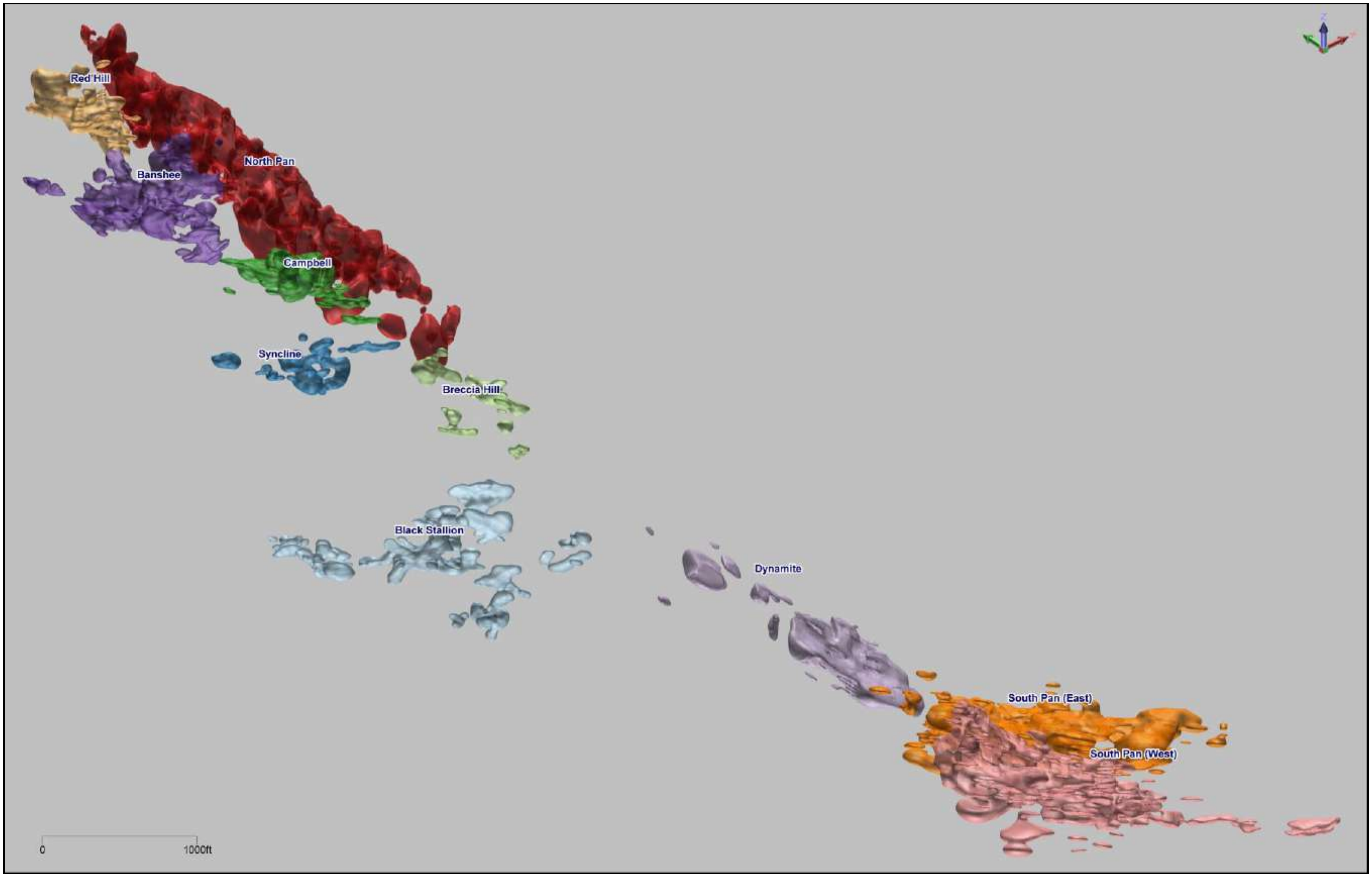
14.3.2 Estimation Domain Interpretation Methodology

An implicit modelling approach was used for constraining the estimation domains to a gold grade shell while still honoring interpretations of local geological controls on mineralization. The raw RC and core drill hole analytical data were composited and classified as either ore or waste. Those composites were then manually flagged as to what estimation domain they belong to, then used as input by implicit modelling to generate 3D estimation domain wireframes. The contact-controlled trend surfaces described in Section 14.3.1 are used as input for the implicit modelling process to ensure the generated estimation domains honor the observed geological controls on mineralization. Each estimation domain was evaluated in 3D and on a section-by- section basis. Control points were inserted to constrain spurious features in the generated wireframes and ensure that the underlying geology is honored. The control points were used in a second pass of the implicit model to construct the final estimation domains. Plan, oblique and an example cross-sectional view are provided in Figure 14-1 to Figure 14-3.



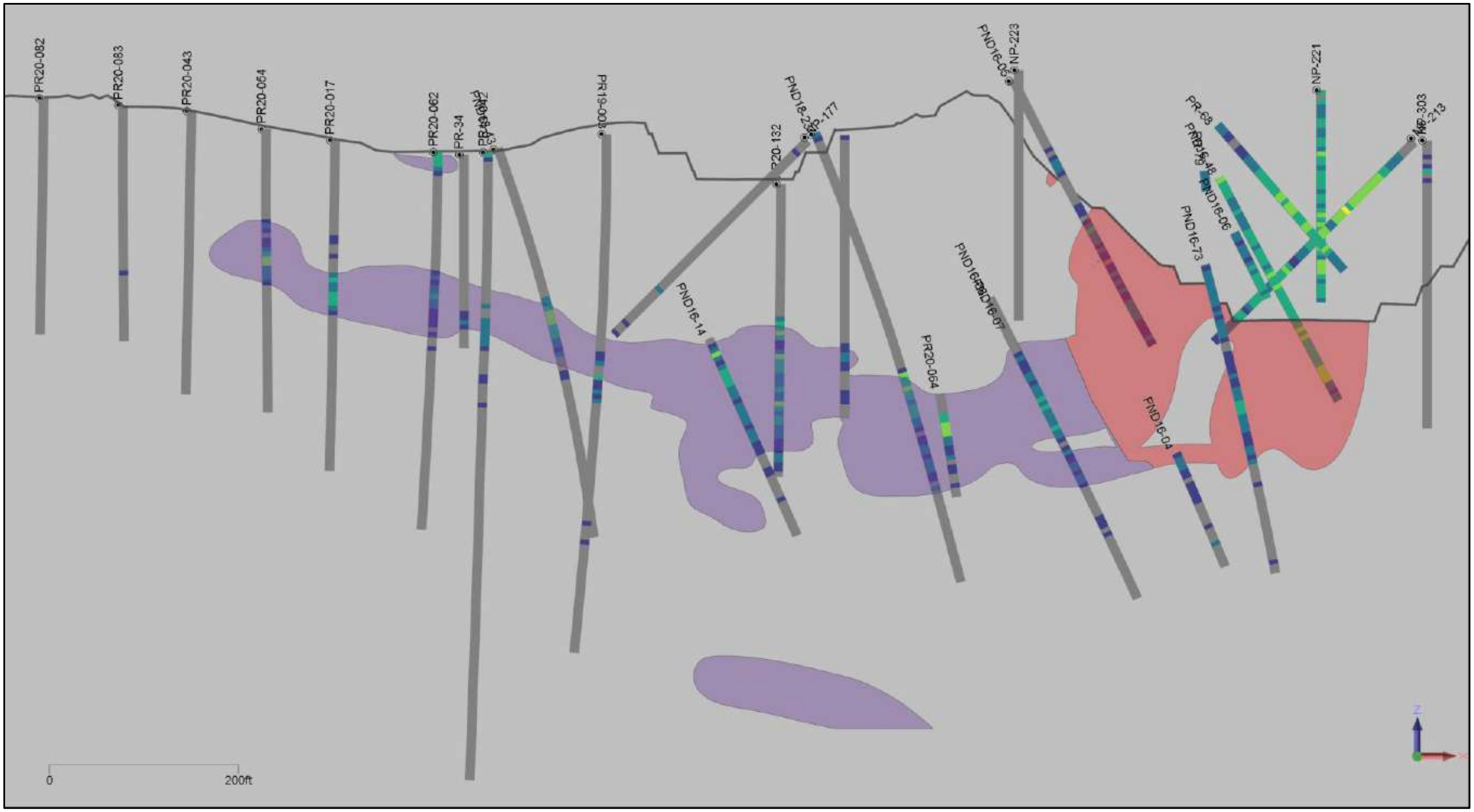
Source: APEX, 2020

Figure 14-1: Plan View of the Estimation Domain Wireframes



Source: APEX, 2020

Figure 14-2: Oblique View of the Domain Wireframes Looking Down the Vector 045/-45



Source: APEX, 2020

Figure 14-3: Cross-section Looking North along the Northing 14,280,385 N (purple – Banshee domain, red – North Pan domain)

14.4 Exploratory Data Analysis and Compositing

14.4.1 Bulk Density

No new density measurements have been acquired to warrant changes to the density model completed by SRK in the 2017 NI 43-101 Updated Technical Report (Pennington et al., 2017). This previous model was completed based on 256 out of 258 density measurements. Two of the density measurements were considered to be outliers and unrepresentative and were therefore rejected in the original statistical analysis. The 256 density measurements were well placed within the deposit to provide an assessment of the density by a combination of host lithology and overprinting alterations. Table 14-2 below lists the density values used to assign density to each block in the updated MRE based on its assigned lithology, alteration, and location.

Table 14-2: Tonnage Factors used in the MRE

Lithology - Alteration - Location	SG (g/cm^3)	Tonnage Factor (ft^3/ton)
Volcanics - North	2.8	11.44
Volcanics - South	2.6	12.32
Ely Limestone	2.58	12.42
Diamond Peak Conglomerate	2.3	13.93
Chainman Shale	2.263	14.18
Joanna Limestone	2.58	12.42
SBX - Unaltered	2.49	12.89
SBX - ArgilicClayBleach	2.37	13.51
SBX - SilicaPlusBarite	2.46	13.01
SBX - Unaltered - SE	2.49	12.89
SBX - ArgilicClayBleach - SE	2.18	14.67
SBX - SilicaPlusBarite - SE	2.31	13.84
Pilot Shale - Unaltered	2.28	14.03
Pilot Shale - ArgilicClayBleach	2.12	15.09
Pilot Shale - SilicaPlusBarite	2.31	13.84
Devils Gate Limestone - Unaltered	2.58	12.42
Devils Gate Limestone - ArgilicClayBleach	2.46	13.04
Devils Gate Limestone - SilicaPlusBarite	2.50	12.81
Unassigned	2.37	13.54

Source: APEX, 2020

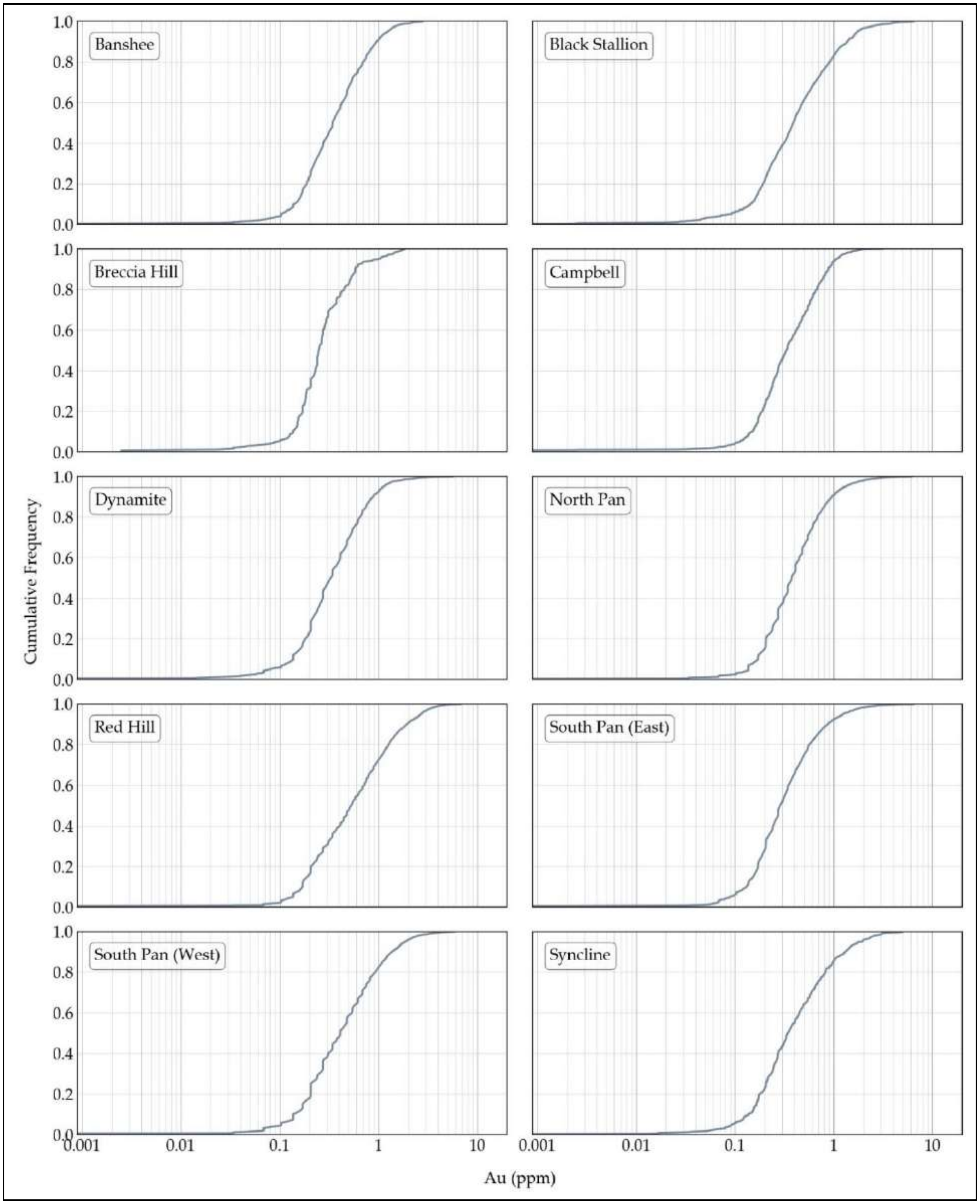
14.4.2 Raw Analytical Data

Cumulative histograms and summary statistics for the raw (un-composited) assays from sample intervals contained within the ten estimation domains are presented in Figure 14-4 and tabulated in Table 14-3. Assays within each domain generally exhibit a single statistical population.

Table 14-3: Summary Statistics of Raw Gold Assays (in ppm) from Sample Intervals Flagged within each of the Ten Estimation Domains

	Global	Banshee	Black Stallion	Breccia Hill	Campbell	Dynamite	North Pan	Red Hill	South Pan		Syncline
									East	West	
count	25,440	1,508	1,298	214	949	1,408	9,472	1,357	3,700	5,143	391
mean	0.54	0.47	0.62	0.34	0.44	0.46	0.52	0.84	0.44	0.63	0.58
std	0.60	0.39	0.69	0.29	0.34	0.47	0.56	0.88	0.54	0.68	0.65
var	0.36	0.15	0.48	0.09	0.12	0.22	0.32	0.77	0.29	0.46	0.42
CV	1.11	0.84	1.13	0.87	0.77	1.04	1.09	1.05	1.21	1.07	1.12
min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25%	0.21	0.21	0.21	0.18	0.21	0.21	0.24	0.24	0.19	0.21	0.21
50%	0.36	0.34	0.39	0.25	0.33	0.33	0.38	0.53	0.29	0.41	0.34
75%	0.64	0.62	0.75	0.38	0.60	0.57	0.62	1.10	0.50	0.79	0.69
max	20.55	3.89	6.51	1.85	3.16	7.88	20.55	7.58	9.91	8.68	5.03

Source: APEX, 2020



Source: APEX, 2020

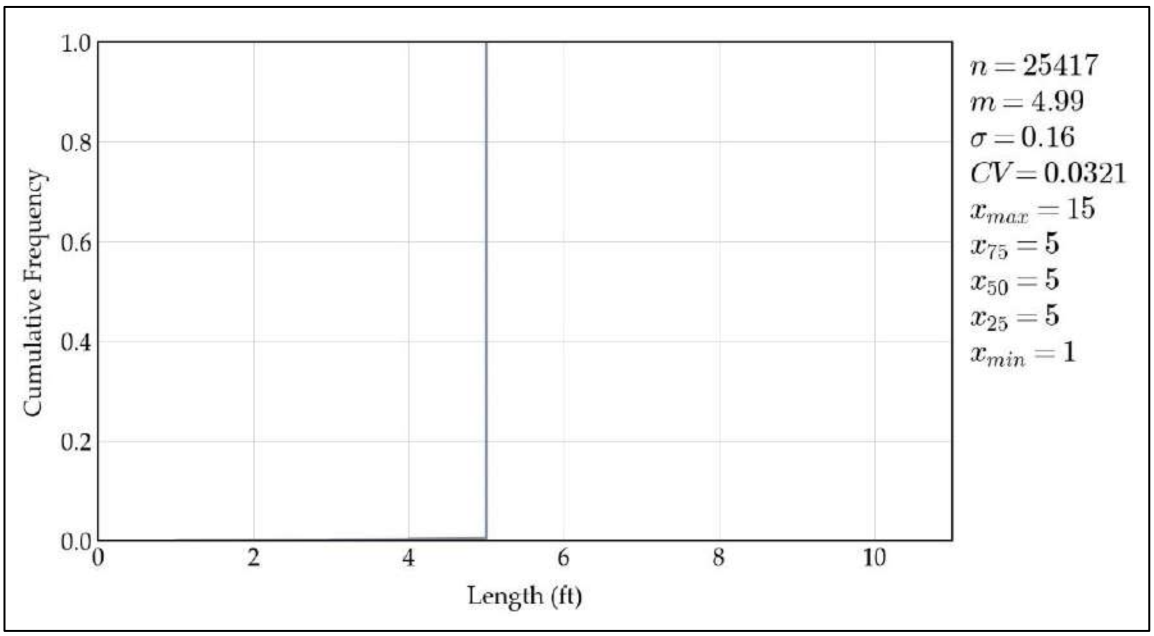
Figure 14-4: Cumulative Frequency Plot of Raw Gold Assays (in ppm) from Sample Intervals Flagged within each of the Ten Estimation Domains

14.4.3 Compositing Methodology

Downhole sample length analysis shows sample lengths range from 1.0 ft to 15.0 ft, with the dominant sample length being 5 ft. A composite length of 10.0 ft is selected as it provides adequate resolution for mining purposes and is equal to, or larger than all but one drill hole sample (Figure 14-5).

The length-weighted compositing process starts from the drill hole collar and ends at the bottom of the hole. However, the final composite intervals along the drill hole cannot cross contacts between estimation domains that demonstrate a hard boundary. Therefore, composites extending downhole are truncated when one of these contacts are intersected. A new composite begins at these contacts and continues to extend downhole until the maximum composite interval length is reached, or another truncating contact is intersected.

There are only a few instances where two estimation domains are in contact, and when this happens, the contact is treated as a soft boundary. Therefore, the resulting composites are fully contained within the estimation domains or are classified as waste if they lie outside of the estimation domain wireframes.



Source: APEX, 2020

Figure 14-5: Cumulative Histogram of the Sample Interval Lengths Analyzed within the Estimation Domains. Intervals that were not sampled or had insufficient recovery are not considered.

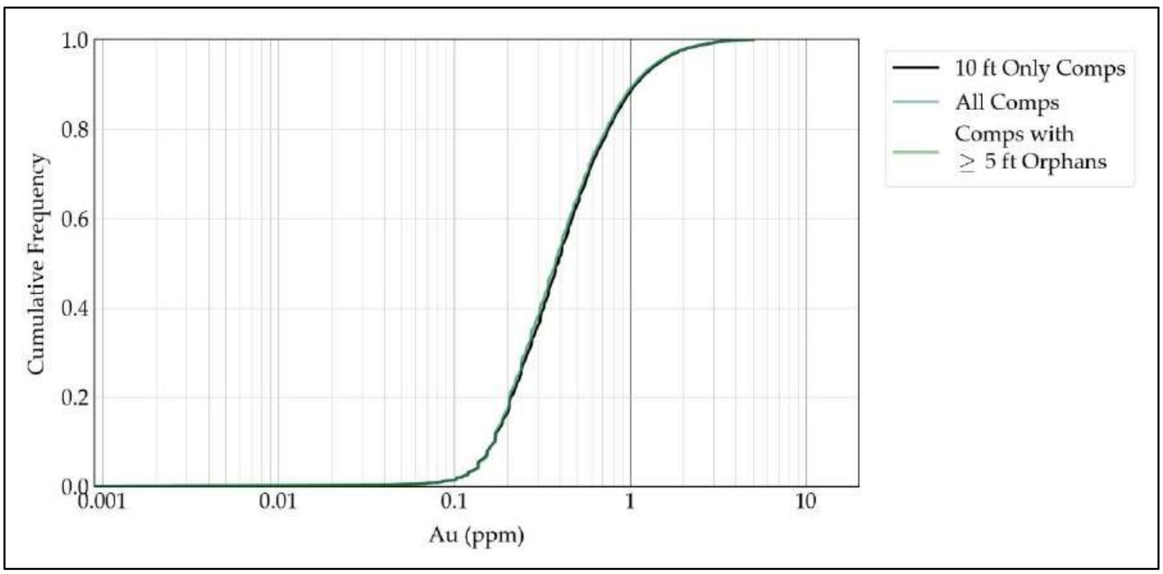
14.4.4 Orphan Analysis

Composites that do not reach their maximum allowed length are called orphans. Orphans are created during the truncation processes at contacts, as described in Section 14.4.3, or when a drill hole ends before the last composite reaches its final length. Considering all the orphans during the estimation process may introduce a bias. Therefore, gold's distribution was examined with and without orphans to determine if they should be deemed equivalent in importance to the full-length composite's estimation process. Three configurations are examined for this analysis:

1. Composites that are 10 ft in length without any orphans;
2. Composites and orphans greater than or equal to 5 ft in length; and
3. All composites and orphans.

It is common to observe a decrease in the mean when comparing the composite values to the original raw assay statistics. This decrease in the mean is typical as large un-sampled intervals (that are assigned a nominal waste value, as discussed in Section 14.2.2) are split into multiple smaller intervals. Also, by not snapping truncating contacts of the estimation domain wireframes to the start or end of raw sample intervals, many orphans can be created that are redundant data that is not representative that may skew the resource estimate. However, the boundaries of the estimation domains constructed occur at the start or end of raw sample intervals, which will reduce the number of orphan samples significantly.

An orphan analysis was completed for all gold assays contained within the estimation domains. Figure 14-6 illustrates little difference between the distribution of composited metal grade with the various composite length scenarios. When comparing only the composites equal to 10 ft to all composites, including the orphans, gold assays illustrate a mean change of ±1.85% when orphans are considered (Table 14-4). The 769 orphans that are ≥ 5 ft in length are used when calculating the MRE. However, the six orphans that are < 5 ft in length are not used to calculate the MRE as they are considered redundant.



Source: APEX, 2020

Figure 14-6: Orphan Analysis Comparing Global Cumulative Histograms of Raw Assays and Uncapped Composites with and without Orphans Contained within the Estimation Domains

Table 14-4: Orphan Analysis Comparing the Gold Statistics (in ppm) of Raw Assays and Uncapped Composite Samples with and without Orphans

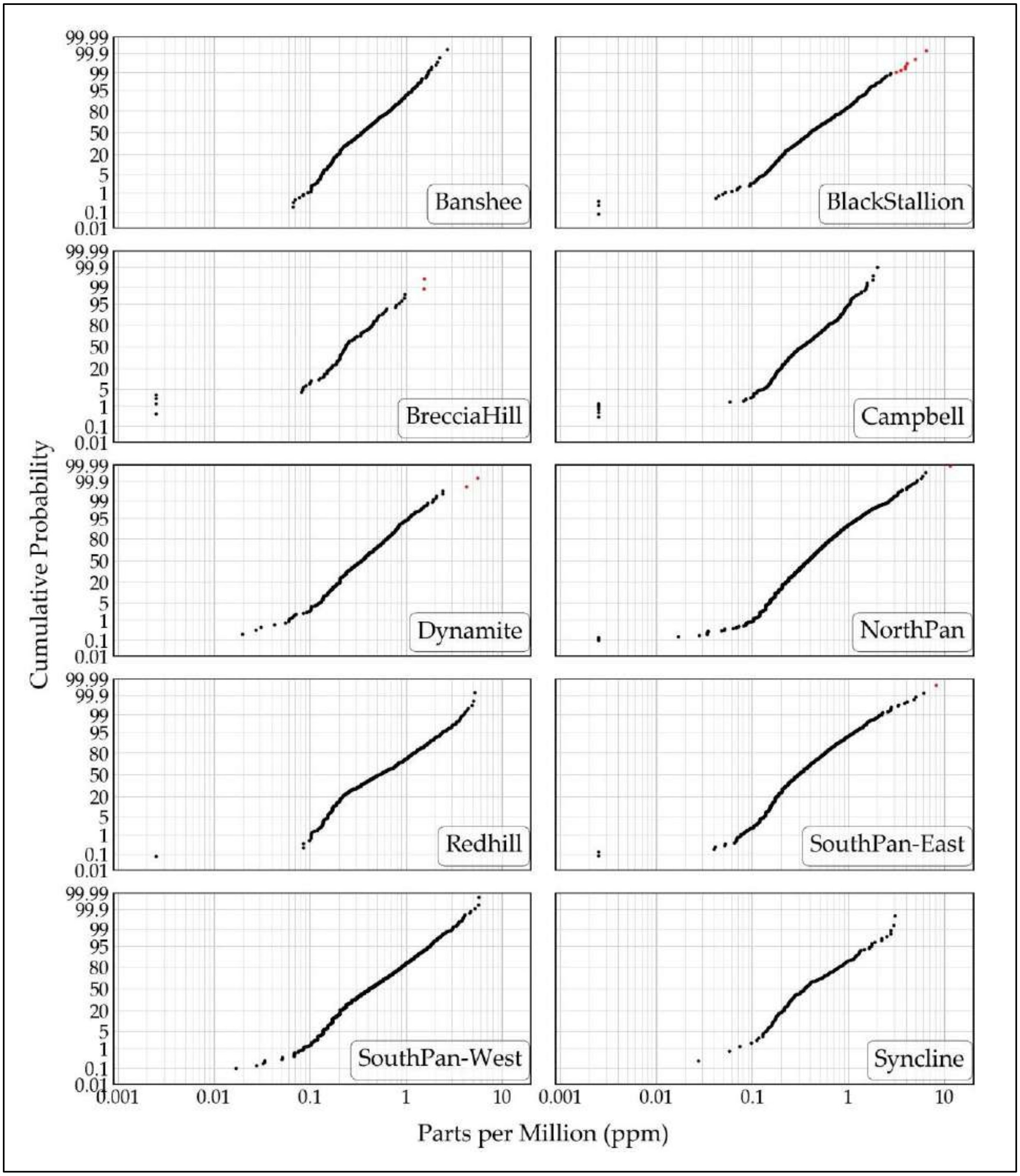
	Raw Assays	Comps with Orphans	Comps 10 ft Only	Comps ≥ 5 ft Orphans
count	25,440	13,102	12,327	13,096
mean	0.54	0.54	0.55	0.54
std	0.6	0.53	0.54	0.53
var	0.36	0.28	0.3	0.28
CV	1.11	1	0.99	1
min	0	0	0	0
25%	0.21	0.23	0.24	0.23
50%	0.36	0.38	0.39	0.38
75%	0.64	0.64	0.65	0.64
max	20.55	11.47	11.47	11.47

Source: APEX, 2020

14.4.5 Capping

To ensure gold grades are not overestimated by including outlier values during estimation, composites are capped to a specified maximum value. Probability plots illustrating each composite's values are used to identify outlier values that appear higher than expected relative to each estimation domain's gold distribution. Composites identified as potential outliers on the probability plots are evaluated in 3D to determine if they are part of a high-grade trend or not. If identified outliers are deemed part of a high-grade trend that still requires a capping level, the level used on them may not be as aggressive as the capping level used to control isolated high-grade outliers.

The probability plots of composited values (Figure 14-7) suggest the capping levels detailed in Table 14-5. Visual inspection of the potential outliers revealed they have no spatial continuity with each other. Therefore, the capping levels detailed in Table 14-5 are applied to composites used to calculate the MRE.



Source: APEX, 2020

Figure 14-7: Probability Plot of the Composited Gold Values Before Capping. Capped Values are Highlighted in Red

Table 14-5: Capping Levels Applied to Composites Before Estimation

Estimation Domain	Au Capping Level (ppm)
Banshee	NA
Black Stallion	3
Breccia Hill	1
Campbell	NA
Dynamite	2.5
North Pan	6.5
Redhill	NA
South Pan (West)	NA
South Pan (East)	NA
Syncline	NA

Source: APEX, 2020

Domains that did not require capping are indicated by not applicable (NA)

14.4.6 Declustering

It is typical to collect data in a manner that preferentially samples high valued areas over low-value areas. This preferential sampling is an acceptable practice; however, it produces closely spaced measurements that are likely statistically redundant, which results in under-represented sparse data compared to the closer-spaced data. Therefore, it is desirable to have spatially representative (i.e. declustered) statistics for global resource assessment and to check estimated models. Declustering techniques calculate a weight for each datum that results in sparse data having a higher weight than closely spaced data. The calculated declustering weights allow spatially repetitive summary statistics to be calculated, such as a declustered mean.

Cell declustering is performed globally on all composites within the estimation domains, which calculates a declustering weight for each composite. Cell declustering works by discretizing a 3D volume into cells that are the same size. The sum of the weights of all the composites within the cell must equal 1. Therefore, the weight assigned to each composite is proportional to the number of composites within each cell. For example, if there are four composites within a cell, they are all assigned a declustering weight of 0.25.

As a general rule of thumb, the cell size used to calculate declustering weights will ideally contain one composite per cell in the sparsely sampled areas. Visual evaluation of the sparsely sampled areas in a 3D visualization software gives a rough idea of this size. Additionally, a high-resolution block model populated with the distance to each block nearest composite can help guide the declustering of the cell size. The 90-percentile of the distance block model, with a cell size much lower than the final declustering cell size, approximates the optimal cell size. Finally, plotting a series of declustered means for a range of declustering cell sizes will help determine the optimal cell size. The optimal cell size will likely be when the declustered mean in the plot is locally low or high at a cell size that is very close to the two potential cell sizes that were determined from the visual review and calculated 90-percentile distance. Preferential sampling in high-grade zones results in a declustered mean that is likely within a local minimum. In contrast, preferential sampling in low-grade zones results in a declustered mean that is expected within a local maximum.

Declustering weights were calculated for each estimation domain separately. Visual evaluation of the sparsely sampled areas in Micromine suggests similar cell sizes as the 90-percentiles from the distance block model for each estimation domain. Plots comprised of a series of declustered means for a range of declustering cell sizes were used to inform the final cell sizes. Table 14-6 details the cell sizes used, and all were very close to the size indicated by the visual evaluation and distance block model.

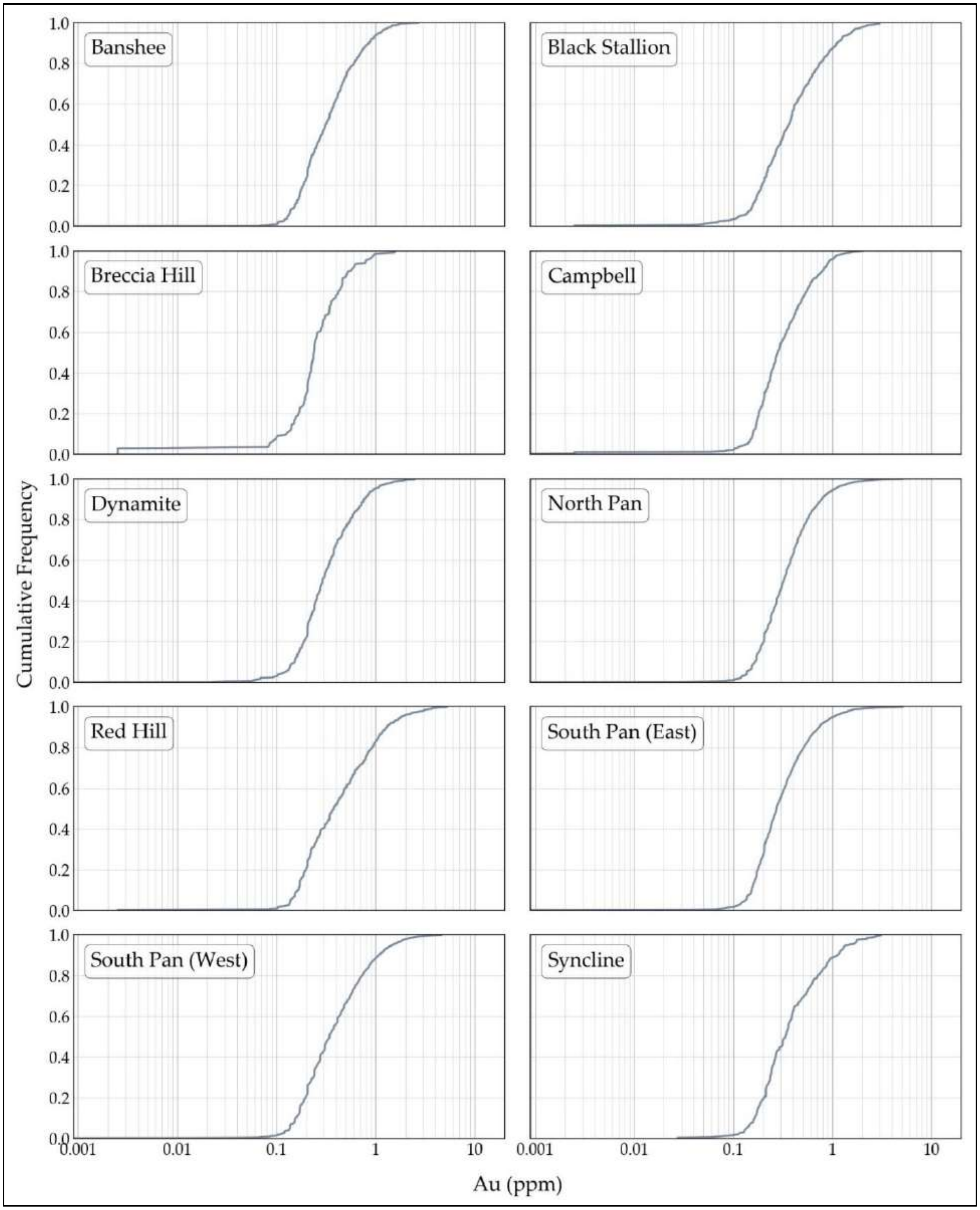
Table 14-6: Cell Sizes Used to Calculate Declustering Weight in each Estimation Domain

Estimation Domain	Cell Declustering Size (ft)
Banshee	70
Black Stallion	75
Breccia Hill	85
Campbell	69
Dynamite	112
North Pan	85
Redhill	65
South Pan (West)	75
South Pan (East)	91
Syncline	65

Source: APEX, 2020

14.4.7 Final Composite Statistics

Cumulative histograms and summary statistics for the declustered and capped composites contained within the interpreted estimation domains, without orphans < 5 ft, are presented in Figure 14-8 and tabulated in Table 14-7. The gold assays within each domain generally exhibit a single population.



Source: APEX, 2020

Figure 14-8: Cumulative Histogram of each Metal from Composites Contained within the Estimation Domains that have been Declustered and Capped, with the < 5 ft Orphans Removed

Table 14-7: Summary Statistics from Composites Contained within the Estimation Domains that have been Declustered and Capped, with the < 1.5 m Orphans Removed

	Global	Banshee	Black Stallion	Breccia Hill	Campbell	Dynamite	North Pan	Red Hill	South Pan		Syncline
									East	West	
count	13,096	795	677	116	497	726	4,835	700	1,912	2,631	207
mean	0.45	0.42	0.52	0.31	0.38	0.4	0.43	0.61	0.39	0.52	0.5
std	0.45	0.33	0.48	0.23	0.28	0.33	0.42	0.65	0.4	0.51	0.47
var	0.2	0.11	0.23	0.05	0.08	0.11	0.17	0.42	0.16	0.26	0.22
CV	0.98	0.78	0.92	0.76	0.73	0.82	0.97	1.06	1.03	0.99	0.94
min	0	0	0	0	0	0	0	0	0	0	0.03
25%	0.23	0.21	0.24	0.19	0.21	0.21	0.25	0.26	0.2	0.24	0.23
50%	0.38	0.35	0.4	0.24	0.33	0.35	0.38	0.55	0.31	0.43	0.35
75%	0.64	0.59	0.74	0.4	0.57	0.58	0.59	1.06	0.51	0.79	0.7
max	6.5	2.71	3	1.56	2.01	2.5	6.5	5.23	6.5	5.75	3.08

Source: APEX, 2020

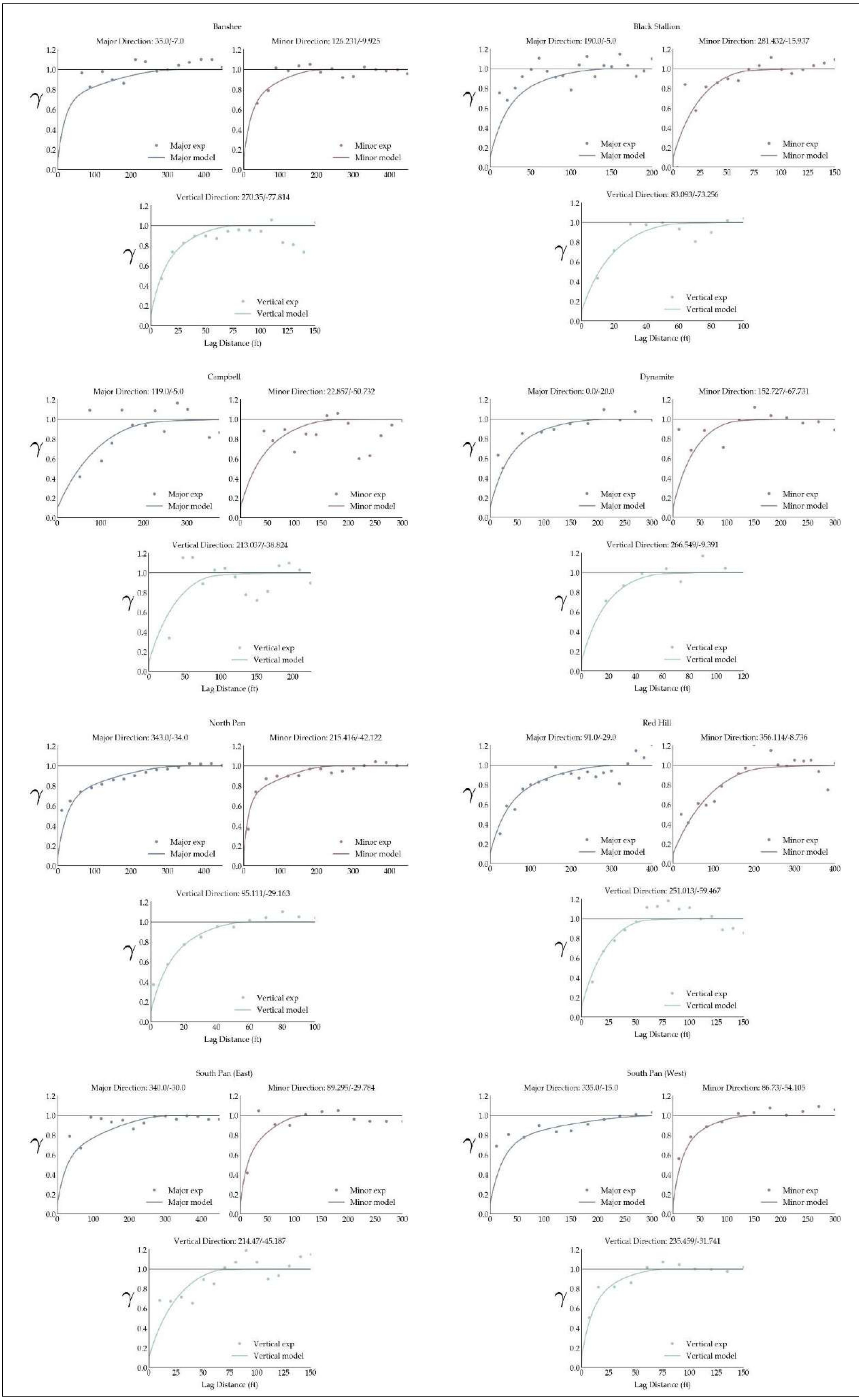
14.4.8 Variography and Grade Continuity

The experimental semi-variograms, shown in Figure 14-9, for each lode are calculated along the major, minor, and vertical principal directions of continuity that are defined by three Euler angles. Euler angles describe the orientation of anisotropy as a series of rotations (using a left-hand rule) that are as follows:

1. Angle 1: A rotation about the Z-axis (azimuth) with positive angles being clockwise rotation and negative representing counter-clockwise rotation;
2. Angle 2: A rotation about the X-axis (dip) with positive angles being counter-clockwise rotation and negative representing clockwise rotation; and
3. Angle 3: A rotation about the Y-axis (tilt) with positive angles being clockwise rotation and negative representing counter-clockwise rotation.

Using the correlogram algorithm, gold experimental variograms were calculated using the composites within each estimation domain (Figure 14-9). Table 14-8 details the final variogram model parameters used by Kriging. As described in Section 14.6, estimation uses LVA that defines the variogram's orientation on a per-block basis. The three Euler angles described in Table 14-8 are not used during estimation, only to calculate the experimental variogram.

Representative experimental variograms for the Breccia Hill and Syncline estimation domains could not be calculated. Therefore, it was assumed that the range and standardized covariance contribution and nugget effect parameters for each are the same as the Red Hill domain variogram model. Red Hill was selected as it is the least structurally complicated domain, allowing the calculation of a robust experimental variogram.



Source: APEX, 2020

Figure 14-9: Standardized Gold Experimental and Modelled Semi-variogram for each of the Estimation Domains that can Produce Representative Variograms

Table 14-8: Parameters of the Modelled Gold Variograms from each Estimation Domain

Zone	Euler Angles			Sill	C0	Structure 1					Structure 2				
	1	2	3			Type	C1	Ranges (ft)			Type	C2	Ranges (ft)		
								Major	Minor	Vertical			Major	Minor	Vertical
Banshee	35	-7	10	0.12	0.01	exp	0.07	60	60	35	sph	0.04	330	220	80
Black Stallion	190	-5	16	0.37	0.04	exp	0.24	60	60	45	sph	0.09	150	70	60
Breccia Hill	na	na	na	0.06	0.01	exp	0.04	120	220	50	sph	0.02	320	220	60
Campbell	119	-5	-51	0.1	0.01	exp	0.06	220	100	90	sph	0.03	220	180	90
Dynamite	0	-20	80	0.17	0.02	exp	0.12	100	100	45	sph	0.03	220	120	60
North Pan	343	-34	-54	0.25	0.03	exp	0.15	75	40	30	sph	0.08	350	250	60
Red Hill	91	-29	-10	0.65	0.06	exp	0.39	120	220	50	sph	0.19	320	220	60
South Pan (West)	335	-15	57	0.22	0.02	exp	0.11	70	35	50	sph	0.09	320	120	70
South Pan (East)	340	-30	35	0.35	0.04	exp	0.23	70	50	30	sph	0.09	320	150	80
Syncline	na	na	na	0.3	0.03	exp	0.18	120	220	50	sph	0.09	320	220	60

Source: APEX, 2020

Abbreviations - sph - spherical, exp - exponential; C0 - nugget effect; C1 - covariance contribution of structure 1; C2 - covariance contribution of structure 2; na – not available

14.4.9 Contact Analysis

The mineralization profile at the contact between different estimation domains can occur in a soft, hard, or semi-soft manner. Soft boundaries occur when mineralization at the contact gradually changes from high to low as you cross into the neighboring domain. Hard boundaries occur when mineralization at the contact abruptly changes as you cross into the neighboring domain. Semi-soft boundaries occur when mineralization changes gradually within a small window as you cross into the neighboring domain. If possible, the final block model should reproduce the mineralization profile observed in the drill hole data at contacts between estimation domains. A contact analysis was completed to evaluate the mineralization profile at each estimation domain contact using plots of grade as a function of distance to the contact to determine the type of mineralization profile.

There are few instances of domains contacting each other, when they do, the boundary is either artificially created for modelling purposes (e.g., Banshee-Red Hill contact) or is the merging point of two mineralized zones that resulted from the same geological processes (e.g., South Pan West-South Pan East contact). Therefore, it is not anticipated that there would be any instances of hard or semi-soft boundaries. Contact analysis of all the domain-domain contacts illustrated only soft boundaries. Therefore, the estimation of blocks within an estimation domain that is contact with another considers the composites within the adjacent estimation domain.

14.5 Pan Block Model

14.5.1 Block Model Parameters

The block model used for the calculation of the Pan Mine MRE fully encapsulates the estimation domains used for resource estimation described in Section 14.3. A block size of 20 ft by 20 ft by

20 ft is used. The coordinate ranges and block size dimensions used to build the Pan 3D block model are presented in Table 14-9.

A block factor (BF) representing the percentage of each block's volume that lies within each estimation domain was calculated and used to:

- flag what the estimation domain is for each block;
- calculate the volume of mineralized material and waste for each block; and
- calculate the tons of mineralized material of each block when calculating the MRE.

Table 14-9: Pan 3D Block Model Size and Extents

Axis	Number of Blocks	Block Size (ft)	Minimum Extent (ft)	Maximum Extent (ft)
X (Easting)	220	20	1996000	2000400
Y (Northing)	665	20	14269000	14282300
Z (Elevation)	66	20	5800	7120

Source: APEX, 2020

14.5.2 Volumetric Checks

A comparison of estimation domain wireframe volumes versus block model volumes illustrates there is no considerable over- or under-stating of tonnages (Table 14-10). The calculated block factor for each block is used to scale its volume when calculating the block model's total volume within each estimation domain.

Table 14-10: Estimation Domain Wireframe Versus Block-model Volume Comparison

Estimation Domain	Wireframe Volume (ft^3)	Block Model Volume with Block Factor (ft^3)	Volume Difference (%)
Banshee	53,914,493	53,941,375	0.05%
Black Stallion	34,285,480	34,268,000	-0.05%
Breccia Hill	9,134,620	9,136,000	0.02%
Campbell	25,637,900	25,600,500	-0.15%
Dynamite	74,691,623	74,681,750	-0.01%
North Pan	167,222,105	166,888,625	-0.20%
Red Hill	32,546,517	32,506,750	-0.12%
South Pan (East)	170,967,555	170,890,250	-0.05%
South Pan (West)	102,423,427	102,199,875	-0.22%
Syncline	5,630,160	5,643,250	0.23%
Total	**676,453,879**	**675,756,375**	**-0.10%**

Source: APEX, 2020

14.6 Grade Estimation Methodology

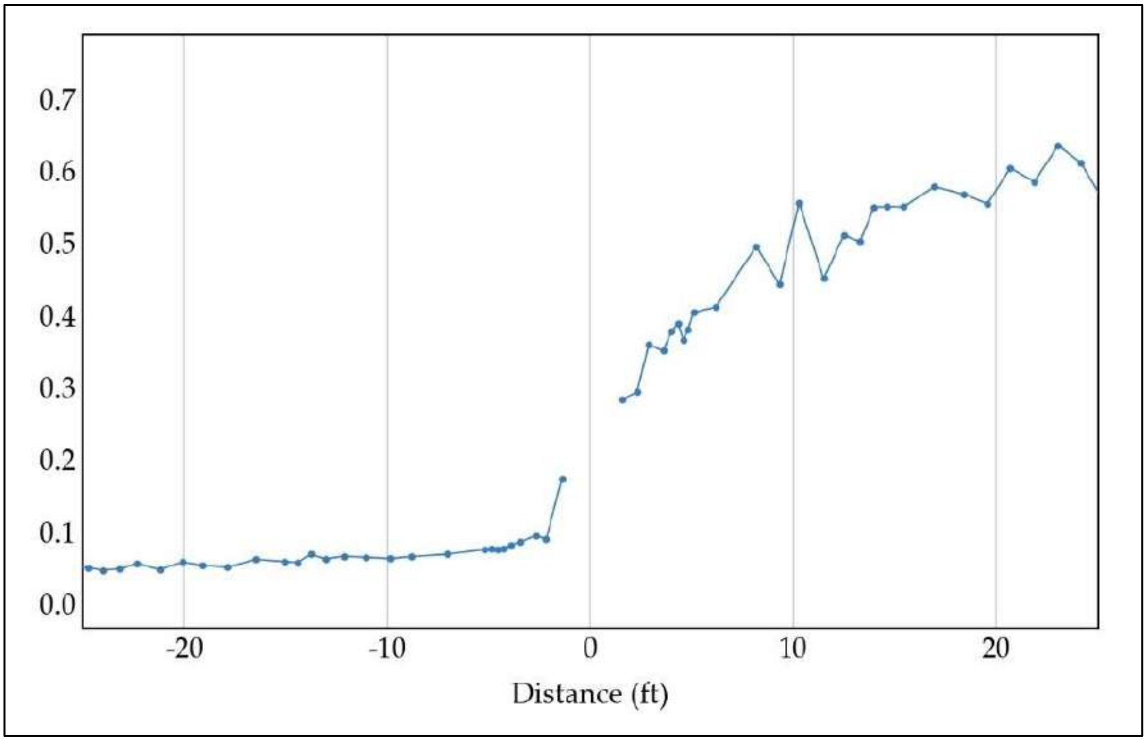
Ordinary Kriging (OK) was used to estimate gold grades for the Pan block models. Grade estimates are only calculated for blocks that contain more than 12.5% mineralized material by volume.

Estimation of blocks is completed with LVA, which uses different rotation angles to define the principal directions of the variogram model and search ellipsoid on a per-block basis. Blocks within the estimation domain are assigned rotation angles using a trend surface wireframe. This method allows structural complexities to be reproduced in the estimated block model. Variogram and search ranges are defined by the variogram model described in Section 14.4.8.

To ensure that all blocks within the estimation domains are estimated, a three-pass method was used for each domain that utilizes three different variogram model and search ellipsoid configurations (Table 14-11). The range of the first variogram structure never changes, while each subsequent run extends the range of the second structure as needed. The search ellipsoid distances are always defined by the range of the variogram's second structure. The second and third passes are required because of structural complexities in a couple of the domains geometry in particular due to folding. The search ellipsoid of the first pass is not able to look along bends paralleling the trends of folds, so the second and third passes increase the size of the search ellipsoids so the affected blocks receive a gold estimate. In the first pass, 98.39% of the blocks are estimated. The maximum distance between an estimated block and its closest composite is 315 ft; however, 99% of the estimated blocks are 168 ft from a composite or closer. The second and third passes are only required by a couple of domains including and four and six, respectively.

Volume-variance corrections are enforced by restricting the maximum number of conditioning data to 15 and the maximum number of composites from each drill hole to 3. These restrictions are implemented to ensure the estimated models are not over smoothed, which would lead to inaccurate estimation of global tonnage and grade. These corrections cause local conditional bias but ensure the global estimate of grade and tons is accurately estimated.

Blocks that contain more than or equal to 1.56% waste by volume are diluted by estimating a waste gold value that is volume-weight averaged with the estimated gold grade. It is desired that the behavior of gold at the boundary between the estimation domain and waste beyond its boundary is reproduced. The nature of gold mineralization at the mineralized/waste contact is evaluated and used to determine a window to flag composites that are used to condition a waste gold estimate for blocks containing waste material. As illustrated in Figure 14-10, gold behaves in a semi-soft manner, where the grade of the composite centroids flagged within an estimation domain transitions from mineralized to waste over a short window. Composites within a window of 20 ft into waste and 0 ft into the mineralized estimation domain are used to estimate a waste gold value.



Source: APEX, 2020

Figure 14-10: Contact Analysis of Gold Grade at the Boundary between the Pan Mine Mineralized Estimation Domain and Waste

Table 14-11: Gold Grade Estimation Search and Kriging Parameters

Pass	Domain	Variogram Euler Angles			Max Variogram and Search Range			Min No. Holes	Max Comps Per Hole	Min No. Comps	Max No. Comps
		1	2	3	Major	Minor	Vertical				
1	Banshee	LV	LV	LV	220	35	80	1	3	1	15
	Black Stallion	LV	LV	LV	70	45	60	1	3	1	15
	Breccia Hill	LV	LV	LV	220	50	60	1	3	1	15
	Campbell	LV	LV	LV	180	90	90	1	3	1	15
	Dynamite	LV	LV	LV	120	45	60	1	3	1	15
	North Pan	LV	LV	LV	250	30	60	1	3	1	15
	Redhill	LV	LV	LV	220	50	60	1	3	1	15
	South Pan (East)	LV	LV	LV	120	50	70	1	3	1	15
	South Pan (West)	LV	LV	LV	150	30	80	1	3	1	15
	Syncline	LV	LV	LV	220	50	60	1	3	1	15
2	Banshee	LV	LV	LV	330	35	120	1	3	1	15
	Black Stallion	LV	LV	LV	105	45	90	1	3	1	15
	Dynamite	LV	LV	LV	180	45	90	1	3	1	15
	North Pan	LV	LV	LV	375	30	90	1	3	1	15
	South Pan (East)	LV	LV	LV	180	50	105	1	3	1	15
	South Pan (West)	LV	LV	LV	225	30	120	1	3	1	15
3	Black Stallion	LV	LV	LV	225	45	120	1	3	1	15
	Dynamite	LV	LV	LV	240	45	120	1	3	1	15
	South Pan (East)	LV	LV	LV	240	50	140	1	3	1	15
	South Pan (West)	LV	LV	LV	300	30	160	1	3	1	15

Source: APEX, 2020

Abbreviations: LV – locally varying

14.7 Model Validation

A visual and statistical validation was completed to ensure that the estimated block model honors directional trends observed in the composites and that the block model is not over-smoothed or over- or under-estimated.

14.7.1 Visual Validation

The block model was visually validated in plan view and in cross-section to compare the estimated gold values versus the conditioning composites. Overall, the model compares well with the composites. There is some local over- and under-estimation observed. Due to the limited number of conditioning data available for the estimation in those areas, this is the expected result. As illustrated in Figure 14-11 and Figure 14-12, overall, the estimated block values compare well with composite gold values.

14.7.2 Statistical Validation

Swath Plots

Swath plots verify that the estimated block model honors directional trends and identifies potential areas of over- or under-estimation. They are generated by calculating the average metal grades of composites and estimated block models within directional slices. A window of 80 ft is used in east-west slices, 160 ft in north-south slices, and 40 ft in vertical slices.

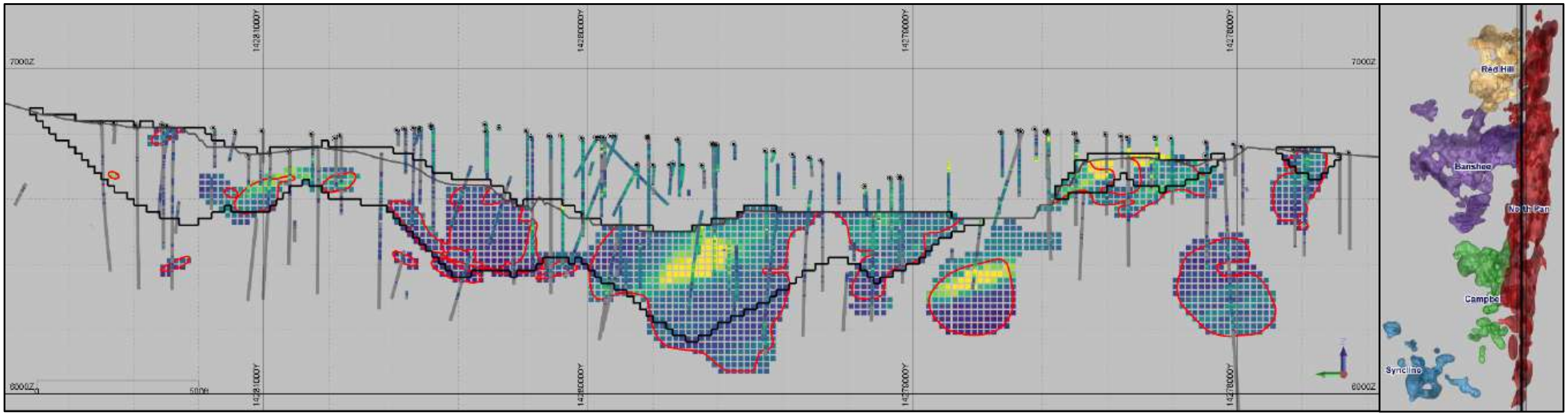
Swath plots for gold estimates in all of the estimation domains are illustrated in Figure 14-13. There are minor instances of localized over- and under-estimation; however, it is believed to be a product of a lack of conditioning data in those areas and the smoothing effect of kriging. Overall, the block model adequately reproduces the trends observed in the composites in all three directions.

Volume-Variance Validation

Smoothing is an intrinsic property of Kriging, and as described in Section 14.6 volume-variance corrections are used to help reduce its effects. To verify that the correct level of smoothing is achieved, theoretical histograms based on the composite data that indicate each estimated metal's anticipated variance and distribution at the selected block model size are calculated and plotted against the estimated final block model distribution in Figure 14-14. The actual block model variance and distribution fits closely to the calculated theoretical histograms. Smoothing is observed versus the composite data, which is considered normal; however, further modifications of the search strategy to help control the smoothing will degrade the quality of the gold estimates.

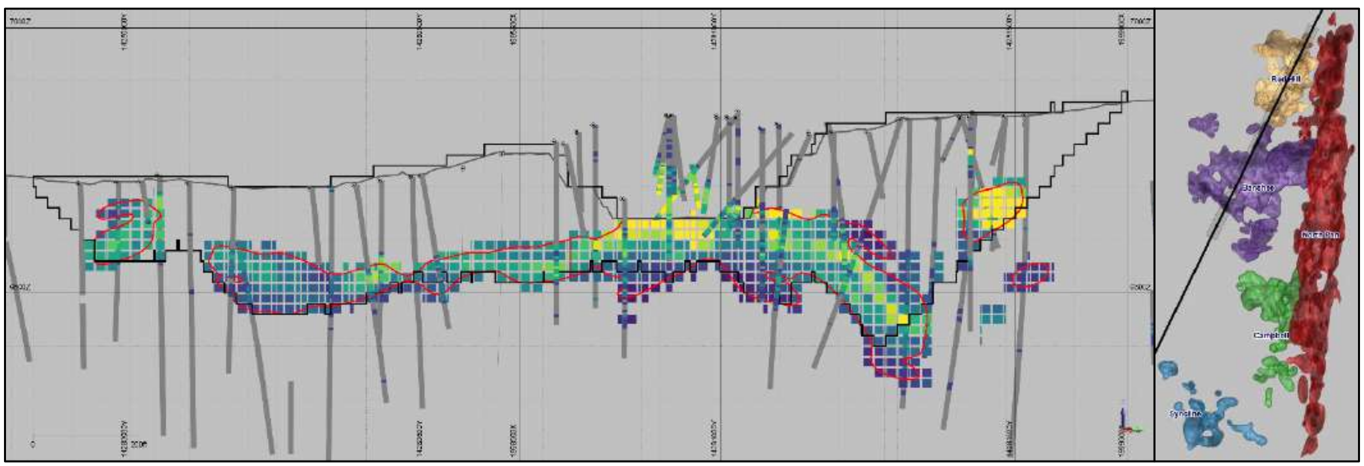
Contact Analysis Reproduction

As described in Section 14.6, blocks within the Pan Mine block model that contain more than or equal to 1.56% waste by volume are diluted using the estimated waste gold and mineralized zone gold values. Ideally, the nature of gold mineralization at the ore/waste contact observed in the composites is reproduced in the block model. A contact analysis plot checking contact profile reproduction is illustrated in Figure 14-15. The ore/waste contact profile is adequately reproduced with some over-estimation into waste and under-estimation into ore.



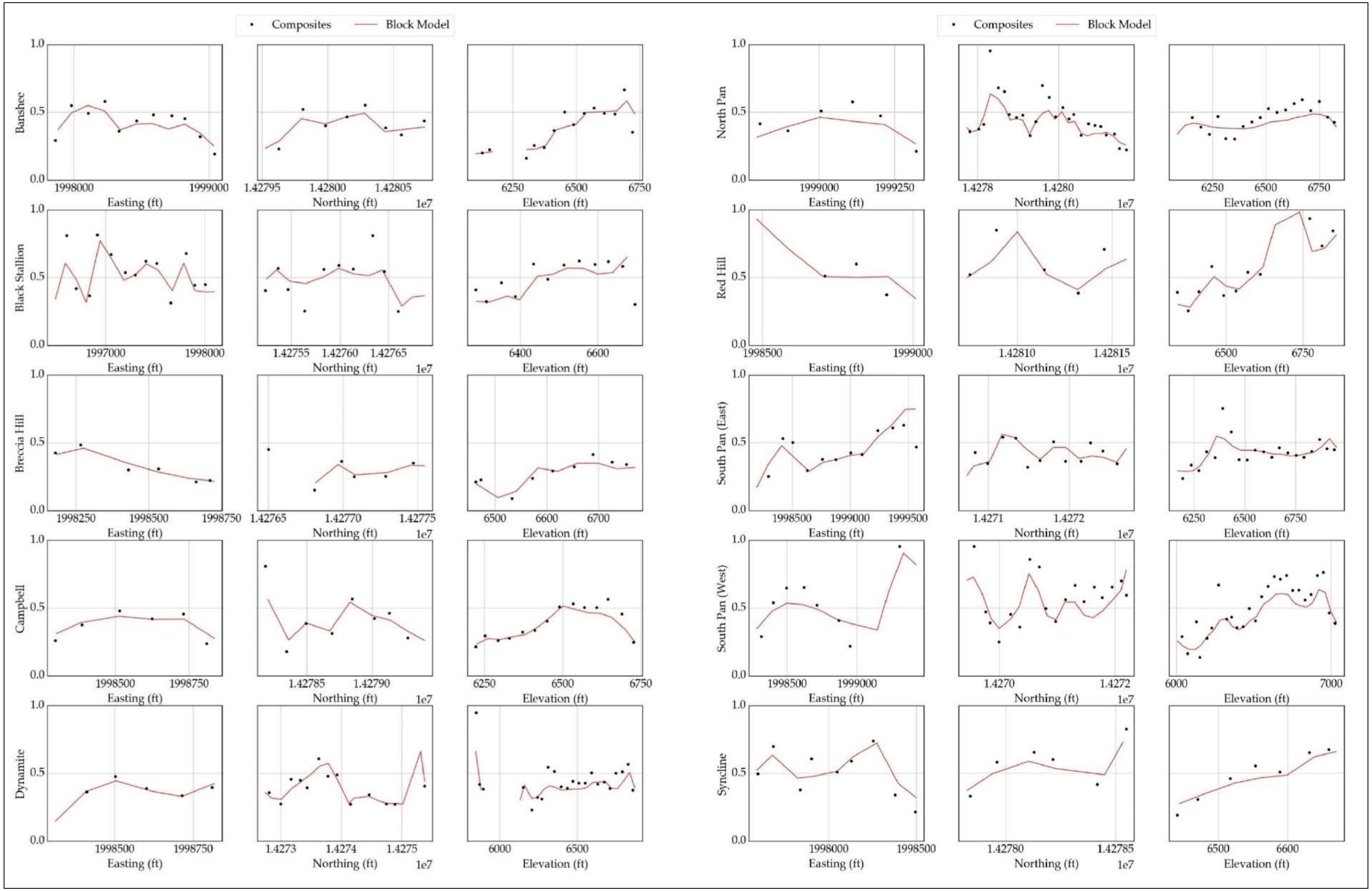
Source: APEX, 2020

Figure 14-11: Cross-section Looking East along 1998960E Illustrating the Estimated Au Values in the Block Model, the Estimation Domains (red line) and the $1700 Resource Pit Shell (thick black line)



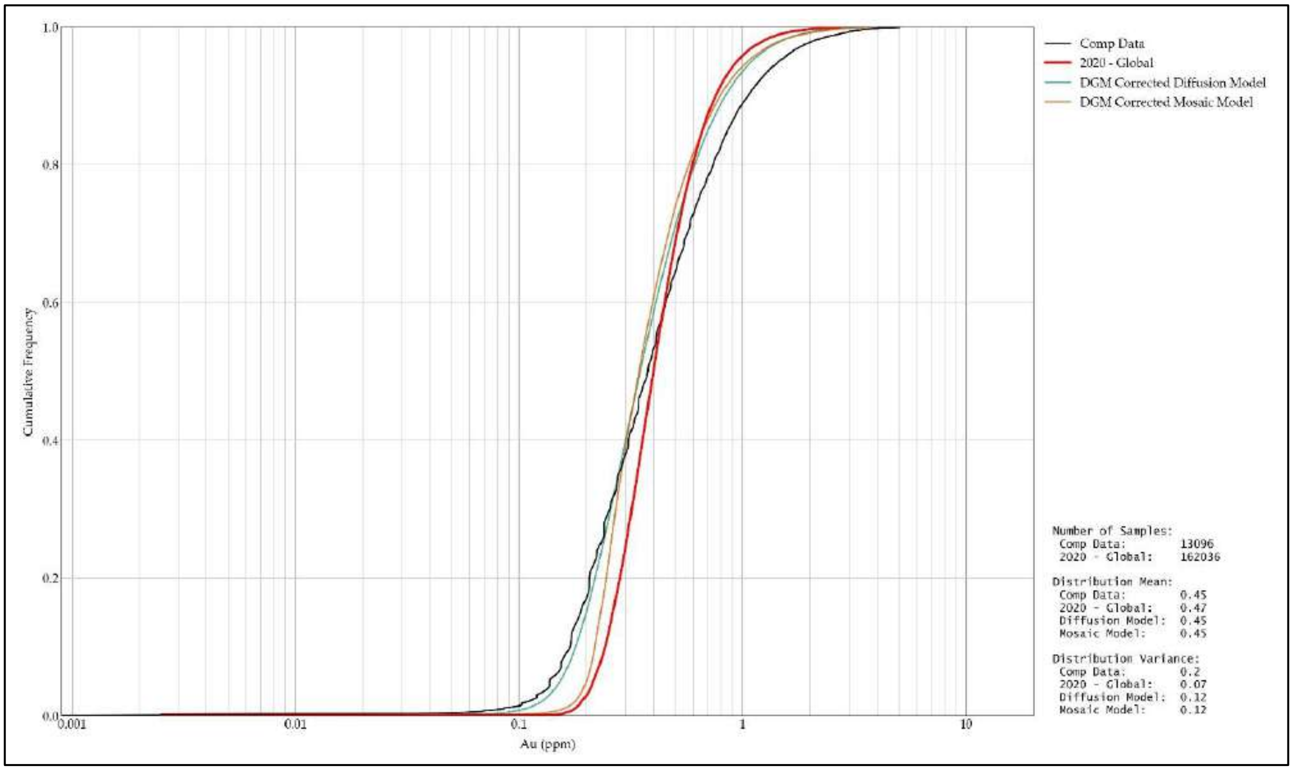
Source: APEX, 2020

Figure 14-12: Oblique Cross-section Looking North-northwest Illustrating the Estimated Au Values in the Block Model, the Estimation Domains (red line) and the $1700 Resource Pit Shell (thick black line)



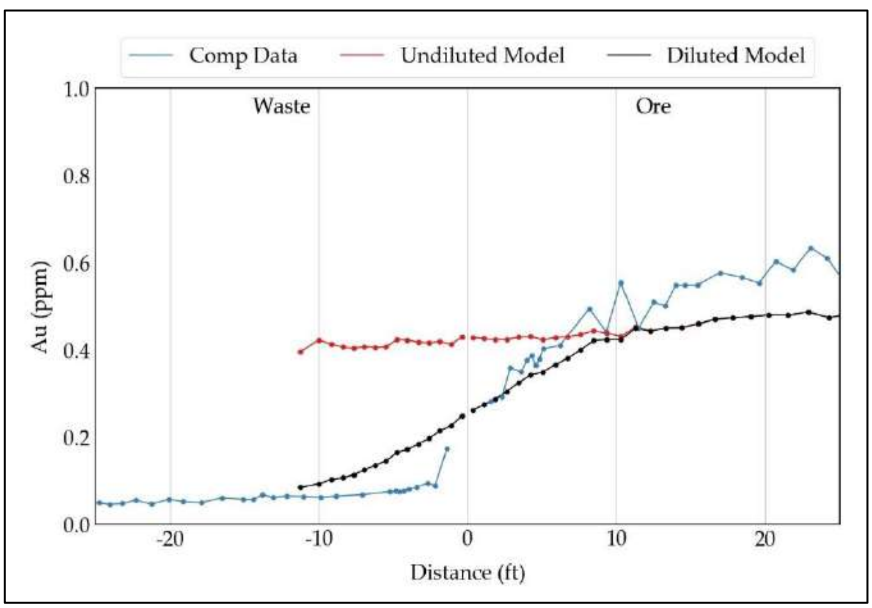
Source: APEX, 2020

Figure 14-13: Swath Plots Comparing Composite Gold Values Versus the Estimated Block Model Gold Values within each Domain



Source: APEX, 2020

Figure 14-14: Volume Variance Check of the Block Model's Estimated Gold Grades within all the Estimation Domains



Source: APEX, 2020

Figure 14-15: Contact Analysis of Comparison between Input Composites, Diluted and Undiluted Block Models Gold Grade at the Boundary of the Estimation Domain and Waste

14.8 Mineral Resource Classification

The Pan Mine MRE discussed in this report has been classified in accordance with guidelines established by the CIM "Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines" dated November 29, 2019 and CIM "Definition Standards for Mineral Resources and Mineral Reserves" dated May 14th, 2014.

A Measured Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

The 2020 Pan Mine MRE Update is classified as a Measured, Indicated and Inferred Resource according to the above CIM definition standards. The classification of the Pan Mine Measured, Indicated and Inferred Resource was based on geological confidence, data quality and grade continuity. The most relevant factors used in the classification process were:

- density of conditioning data;
- level of confidence in historical drilling results and collar locations;
- level of confidence in the geological interpretation; and
- continuity of mineralization.

Resource classification was determined using a multiple-pass strategy that consists of a sequence of runs that flag each block with the run number a block first meets a set of search restrictions. With each subsequent pass, the search restrictions are decreased, representing a decrease in confidence and classification from the previous run. For each run, a search ellipsoid is centered on each block and orientated in the same way described in Section 14.6. For each run, Table 14-12 details the range of the search ellipsoid and the number of composites that must be found within the ellipse for a block to be flagged with that run number. The runs are executed in sequence from run 1 to run 3. Classification is then determined by relating the run number that each block is flagged as to measured (run 1), indicated (run 2), or inferred (run 3). Also, any blocks that were not estimated during estimation-passes 2 or 3 are only classified as Inferred.

Table 14-12: Search Restrictions Applied During Each Run of the Multiple-pass Classification Strategy

Run No.	Classification	Min No. Holes	Min No. Comp	Major Range	Minor Range	Vertical Range
Run 1	Measured	5	30	175	115	25
Run 2	Indicated	4	15	300	200	30
Run 3	Inferred	1	1	-	-	-

Source: APEX, 2020

14.9 Evaluation of Reasonable Prospects for Eventual Economic Extraction

In order to demonstrate that the Pan Mine has the potential for future economic extraction, the unconstrained resource block model was subjected to several pit optimization scenarios to look at the prospect for eventual economic extraction. Pit optimization was performed in Micromine using the industry standard Lerchs-Grossmann algorithm (LG). The criteria used in the LG pit optimizer were considered reasonable for Nevada heap leach deposits including ongoing mining costs at the Pan Mine. All Mineral Resources reported below are reported within an optimized pit shell using $US1,700/oz for gold and was defined using blocks classified as Measured, Indicated, or Inferred. The criteria used for the $1,700/oz pit shell optimization are shown in Table 14-13. A variable lower gold grade cutoff and recovery is used based on the overprinting alteration. Blocks flagged as argillic altered or as unaltered utilized a lower cutoff of 0.003 oz/ton Au (0.09 g/t) and 80% recovery and blocks flagged as silicic altered utilized a grade cutoff of 0.004 oz/ton Au (0.14 g/t) and 60% recovery. This estimate was adjusted following the mine planning results to include additional material captured when detailed mine designs were captured.

Mr. Dufresne considers the LG pit parameters (Table 14-13) appropriate to evaluate the reasonable prospect for future economic extraction at the Pan Mine for the purpose of providing a MRE. The resources presented herein are not Mineral Reserves, and they do not have demonstrated economic viability. There is no guarantee that any part of the resources identified herein will be converted to Mineral Reserves in the future.

Table 14-13: Parameters for Lerchs-Grossman Pit optimization for Mineral Resource Estimate

Parameter	Unit	Cost
Gold price	$US/ounce	1,700
Gold recovery	%	Argillic – 80; Silicic – 60; Unaltered – 80
Pit wall angles	degrees	Limestone – 50; Default - 45
Ore Mining Cost	US$/ton	2.09
Waste Mining Cost	US$/ton	1.97
Ore Density	cubic feet/ton	Variable (see Section 14.4.1)
Waste Density	cubic feet/ton	Variable (see Section 14.4.1)
Processing Cost	US$/ton ore	2.4
G & A Cost	US$/ton ore	0.73
Royalty	percent	0

Source: APEX, 2020

14.10 Mineral Resource Reporting

The Pan Mine updated MRE is reported in accordance with the CSA NI 43-101 rules for disclosure and has been estimated using the CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines” dated November 29, 2019 and CIM “Definition Standards for Mineral Resources and Mineral Reserves” dated May 10th, 2014.

The MRE was estimated within 3D solids that were created from the cross-sectional lode interpretation of geology and alteration. The upper contact has been cut by the topographic surface as of June 30, 2020. There is little to no surficial overburden present at the Pan Mine. Grade was estimated into a block model with a block size of 20 ft (X) by 20 ft (Y) by 20 ft (Z).

Grade estimation of gold was performed using Ordinary Kriging (OK). For the purposes of the pit shell optimization, blocks that contain waste were diluted by estimating a waste value using composites within a transition zone along the outer boundary of the estimation domains. The final diluted gold grade for the diluted model assigned to each block is a volume-weighted average of the estimated gold and waste grade values. The MRE is reported within that pit shell and is reported as undiluted.

The updated Pan Mine MRE is reported at various cutoffs depending on what type of alteration each block is flagged as. The Measured, Indicated, and Inferred MRE is undiluted, constrained within an optimized pit shell, and includes a Measured Mineral Resource of 11.416 million tons (10.4 million tonnes) at 0.015 oz/ton (0.53 g/t) Au for 175,000 ounces of gold, an Indicated Mineral Resource of 19.7 million tons (17.714 million tonnes) at 0.013 oz/ton (0.44 g/t) Au for 252,400 ounces of gold, and an Inferred Mineral Resource of 3.726 million tons (3.4 million tonnes) at 0.016 oz/ton (0.56 g/t) Au for 61,500 ounces of gold (Table 14-14). The reported MRE utilizes a lower gold cutoff of 0.003 oz/ton Au (0.10 g/t) for blocks flagged as argillic altered or as unaltered and a cutoff of 0.004 oz/ton Au (0.14 g/t) for blocks flagged as silicic altered.

The Pan Mine MRE is presented versus alteration and recovery type in Table 14-15. Other cut-off grades are presented in Table 14-16 for review ranging from 0.003 oz/ton (0.10 g/t) Au to 0.012 oz/ton (0.4 g/t) Au for sensitivity analyses. The sensitivity analysis does not use variable cutoffs for each style of mineralization. Examples of the block model constrained within the resource pit shell are illustrated in Figure 14-11 and Figure 14-12.

The updated MRE shows a 21% decrease in Measured and Indicated Resources to 427,400 gold ounces versus the 2018 MRE that utilized a September 30, 2018 topographic surface (Deiss et al., 2019). The approximate calculated mining depletion for the period of September 30, 2018 to June 30, 2020 is a little over 9 million tons and about 140,000 oz Au, the vast majority of which were Measured and Indicated Resources from the 2018 MRE. The 2019 to 2020 drilling combined with an increased gold price has effectively resulted in the addition of Measured and Indicated Resource equivalent to what has been mined during the period from September 30, 2018 to June 30, 2020. An additional Inferred Resource of 61,500 gold ounces has been estimated at the Pan Mine, that with continued drilling may provide additional Measured and/or Indicated gold ounces.

The 2020 Pan Mine MRE has been classified as comprising Measured, Indicated, and Inferred Resources according to recent CIM definition standards. The classification of the Pan Mine resources was based on geological confidence, data quality and grade continuity. All reported Mineral Resources occur within a pit shell optimized using values of US$1,700 per ounce for gold. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. The MRE is undiluted and is inclusive of Reserves.

Table 14-14: Pan Mine Undiluted Resource Estimate Constrained within the '$1700/oz' Pit Shell for Gold at Cut-off Grades Specific to Alteration Type and Area (effective date of August 15, 2020 utilizing the June 30, 2020 mine topography)

Region	Classification	Au Cut-off (oz/ton)	Au Cut-off (g/t)	Tons (tons)**	Tonnes (tonnes)**	Au Grade (oz/ton)	Au Grade (g/t)	Contained Au (troy ounces)**
North	Measured*	mixed	mixed	5,686,000	5,158,000	0.015	0.53	83,700
	Indicated*	mixed	mixed	7,390,000	6,704,000	0.014	0.49	94,100
	M&I*	mixed	mixed	13,076,000	11,863,000	0.015	0.50	177,800
	Inferred*	mixed	mixed	840,000	762,000	0.023	0.78	11,800
Central	Measured*	mixed	mixed	962,000	872,000	0.016	0.54	17,400
	Indicated*	mixed	mixed	333,000	302,000	0.013	0.45	5,200
	M&I*	mixed	mixed	1,295,000	1,175,000	0.014	0.49	22,600
	Inferred*	mixed	mixed	236,000	214,000	0.015	0.51	5,900
South	Measured*	mixed	mixed	4,768,000	4,325,000	0.014	0.49	73,900
	Indicated*	mixed	mixed	11,991,000	10,878,000	0.012	0.41	153,100
	M&I*	mixed	mixed	16,759,000	15,203,000	0.012	0.43	227,000
	Inferred*	mixed	mixed	2,650,000	2,404,000	0.013	0.44	43,500
Total	Measured*	mixed	mixed	11,416,000	10,356,000	0.015	0.53	175,000
	Indicated*	mixed	mixed	19,714,000	17,884,000	0.013	0.44	252,400
	M&I*	mixed	mixed	31,130,000	28,240,000	0.014	0.47	427,400
	Inferred*	mixed	mixed	3,726,000	3,380,000	0.016	0.56	61,500

Source: APEX, 2020

*Measured, Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).

**May not add due to rounding

Table 14-15: The Pan Mine Resource Estimate Constrained within the '$1700/oz' Au Pit Shell for Gold at Cut-off Grades Specific to Alteration Type

Alteration Type	Classification	Au Cut-off (oz/ton)	Au Cut-off (g/t)	Tons (million tons)	Tonnes (million tonnes)	Au Grade (oz/ton)	Au Grade (g/t)	Contained Au (troy ounces)**
Argillic/ Unaltered	Measured*	0.003	0.1	4,865,000	4,413,000	0.015	0.51	71,700
	Indicated*	0.003	0.1	11,640,000	10,560,000	0.013	0.43	146,200
	M&I*	0.003	0.1	16,505,000	14,973,000	0.013	0.45	217,900
	Inferred*	0.003	0.1	3,020,000	2,740,000	0.017	0.57	50,400
Silicic	Measured*	0.004	0.14	6,557,000	5,948,000	0.016	0.54	103,400
	Indicated*	0.004	0.14	8,079,000	7,330,000	0.013	0.45	106,300
	M&I*	0.004	0.14	14,636,000	13,278,000	0.014	0.49	209,700
	Inferred*	0.004	0.14	740,000	671,000	0.015	0.51	11,100
Total	Measured*	mixed	mixed	11,422,000	10,361,000	0.015	0.53	175,000
	Indicated*	mixed	mixed	19,719,000	17,890,000	0.013	0.44	252,400
	M&I*	mixed	mixed	31,141,000	28,251,000	0.014	0.47	427,400
	Inferred*	mixed	mixed	3,760,000	3,411,000	0.016	0.56	61,500

Source: APEX, 2020

*Measured, Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (May, 2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).

**Contained ounces may not add due to rounding

Table 14-16: Sensitivity Analysis of the Pan Mine Undiluted Resource Estimate Constrained within the '$1700/oz' Pit Shell for Gold at Various Cut-off Grades (effective date of August 15, 2020 utilizing the June 30, 2020 mine topography)

Classification	Au Cut-off (oz/ton)	Au Cut-off (g/t)	Tons (tons)**	Tonnes (tonnes)**	Au Grade (oz/ton)	Au Grade (g/t)	Contained Au (troy ounces)**
Measured*	0.003	0.1	11,416,000	10,356,000	0.015	0.53	175,000
	0.004	0.14	11,416,000	10,356,000	0.015	0.53	175,000
	0.005	0.17	11,410,000	10,351,000	0.015	0.53	175,000
	0.006	0.21	11,312,000	10,262,000	0.015	0.53	174,400
	0.009	0.3	9,833,000	8,921,000	0.017	0.57	163,200
	0.012	0.4	7,502,000	6,806,000	0.019	0.64	139,300
Indicated*	0.003	0.1	19,714,000	17,885,000	0.013	0.44	252,400
	0.004	0.14	19,713,000	17,884,000	0.013	0.44	252,300
	0.005	0.17	19,684,000	17,857,000	0.013	0.44	252,200
	0.006	0.21	19,259,000	17,471,000	0.013	0.45	249,800
	0.009	0.3	14,854,000	13,475,000	0.015	0.50	216,600
	0.012	0.4	9,261,000	8,402,000	0.017	0.59	159,700
Measured and Indicated	0.003	0.1	31,130,000	28,241,000	0.014	0.47	427,400
	0.004	0.14	31,129,000	28,240,000	0.014	0.47	427,300
	0.005	0.17	31,094,000	28,208,000	0.014	0.47	427,200
	0.006	0.21	30,571,000	27,733,000	0.014	0.48	424,200
	0.009	0.3	24,687,000	22,396,000	0.015	0.53	379,800
	0.012	0.4	16,764,000	15,208,000	0.018	0.61	299,000
Inferred*	0.003	0.1	3,726,000	3,380,000	0.016	0.56	61,500
	0.004	0.14	3,723,000	3,377,000	0.016	0.56	61,200
	0.005	0.17	3,655,000	3,316,000	0.017	0.57	60,800
	0.006	0.21	3,550,000	3,221,000	0.017	0.58	60,200
	0.009	0.3	2,744,000	2,489,000	0.02	0.68	54,300
	0.012	0.4	2,071,000	1,879,000	0.023	0.79	47,400

Source: APEX, 2020

*Measured, Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).

**May not add due to rounding.

The Pan Mine Resource pit shell constrained MRE represents approximately 66% of the total volume and 73% of the total gold ounces in the entire unconstrained Pan Mine block model that was estimated in 2020.

14.11 Discussion of Resource Modelling and Risks

The drilling of 267 RC holes by Fiore from 2018 to 2020 in the Pan resource area focused on Pan North and Central greatly improved the understanding of the geological model that was used in the construction of the 2020 MRE. The geological and mineralization domains were improved and adjusted based upon this drilling versus the 2018 MRE constructed by SRK (Deiss et al., 2019), which was largely based on a significant amount of pre-2018 drilling. The Fiore 2018 to 2020 drilling also allowed for systematic capture of new fire assay Au data with concomitant cold CN soluble Au for all 267 RC holes and a thorough review of lithology, alteration, oxidation and gold mineralization at Pan North and Pan Central. The 2020 MRE also incorporated the use of the detailed blast hole data which was used to help guide the delineation of the mineralization domains for use in LVA trends and ongoing planning for drilling the extensions of potential mineralized zones.

Most of the data obtained from the 2018 to 2020 RC drilling at Pan has confirmed that the majority of mineralized material in the current MRE is oxidized with moderate to good CN soluble Au recoveries. However, there are some significant differences in the hardness of the mineralized material particularly between North and South Pan, and the behavior of that material with crushing. In addition, the current mining levels have progressed beyond much of the areas characterized by prior metallurgical work defined by historical core holes. The distribution and volumes of the "soft" versus "hard" mineralized material is not well understood nor well mapped in the current geological and MRE model. The gold recovery, bulk density and material hardness models for the Pan Deposits represent a low to moderate risk to the current MRE and warrant follow-up work. Additional work, including core drilling and detailed metallurgical work, will be required to improve the recovery, bulk density and perhaps hardness models and translate that into an estimate of volumes and tonnages.

The authors are not aware of any other significant material risks to the MRE other than the risks that are inherent to mineral exploration, development and mining in general. The authors of this report are not aware of any specific environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that might materially affect the results of this resource estimate much of which is mitigated with the Pan Gold Deposit currently being mined profitably.

15 Mineral Reserve Estimate

The conversion of mineral resources to ore reserves required accumulative knowledge achieved through LG pit optimization, detailed pit design, and associated modifying parameters. Reserve estimation was achieved using Hexagon's MineSight® software and applies to the full GRP Pan resource. Detailed access, haulage, and operational cost criteria were applied in this process for South Pan, North Pan, Banshee, Dynamite, and Black Stallion. The Project was built in U.S. units and all metal grades are in oz/ton.

The orientation, proximity to the topographic surface, and geological controls of the GRP Pan mineralization support mining of the ore reserves with open pit mining techniques. To calculate the mineable reserve, pits were designed following an optimized LG pit based on a US$1,575/oz Au sales price. The quantities of material within the designed pits were calculated using a base CoG of 0.003 Au oz/ton (0.10 g/t)for the argillized material sitewide and unaltered material in the South and Dynamite pit. A base CoG of 0.004 Au oz/ton (0.14 g/t)for the silicified material sitewide and unaltered material in the North, Black Stallion, and Banshee Pits which is based on the static US$1,575/oz Au sales price observed at the time of this study.

15.1 Conversion Assumptions, Parameters and Methods

Conversion of resources to reserves requires consideration of:

- The ore extraction method(s) used in relation to the ore body characteristics, which determine mining dilution and recovery; and
- Project operating costs and resulting CoG's.

In accordance with the CIM classification system only Measured and Indicated resource categories can be converted to reserves (through application of appropriate modifying factors). Inferred Mineral Resources are treated as waste for the purposes of reserve estimates.

Dilution calculations and CoG are considered to incorporate modifying factors in converting resources to reserves. Dilution accounts for mining factors, and CoG incorporates economic, processing, and other factors. Pit Optimization, Geotechnical criteria, Pit Design processes, and other mining details discussed in section 16 all contribute to modifying factors by defining the ultimate pit bounding the reserves reported in Table 15-1.The CoG may be modified to other values during the mining operations to optimize business profits. These operational CoG grades may accomplish different specific purposes.

15.1.1 Dilution

The Reserve is reported using Diluted Au grades that take into account the waste gold grades as described in Section 14.10. Grade was estimated by APEX into a block model with a block size of 20 ft (X) by 20 ft (Y) by 20 ft (Z). Blocks that contain waste were diluted by estimating a waste value using composites within a transition zone along the outer boundary of the estimation domains. The final diluted gold grade for the diluted model assigned to each block is a volume-weighted average of the estimated gold and waste values.

As stated above, these diluted grades were calculated by APEX in the resource estimation stage. It is the QP’s opinion that this level of dilution was sufficient to properly predict mining grades and additional dilution was not included.

15.1.2 Break Even Cut-off Grade

The typical expression for a break-even (BE) gold CoG is:

$$\text{BE CoG} = \frac{\text{Total Unit Ore Mining, Processing and Administration Operating Costs}}{\text{(Au Price – (Royalty + Final Sales Costs)) x Process Recovery}}$$

15.1.3 Internal Cut-off Grade

An operational CoG, the internal CoG, takes into account all operating costs, but only includes the ore mining cost that exceeds the waste mining cost of that same block. This material is considered marginal once it has been mined (for example to access ore with grades above the BE CoG) the mining cost is considered to be a sunk cost. If the material can pay for downstream processing costs and other ore related costs, then it qualifies as ore. This can be adjusted to allow for differential ore and waste haulage, or other costs.

The typical expression for an internal gold CoG is:

$$\text{Int. CoG} = \frac{\text{Total Unit (Ore – Waste) Mining, Processing and Administration Operating Costs}}{\text{(Au Price – (Royalty + Final Sales Costs)) x Process Recovery}}$$

The CoG used by SRK to determine whether a block was ore or waste was the internal cut-off reported as CoG 0.003 Au oz/ton (0.10 g/t) for the argillized material sitewide and unaltered material in the South and Dynamite pit. A base CoG of 0.004 Au oz/ton (0.14 g/t) for the silicified material sitewide and unaltered material in the North, Black Stallion, and Banshee Pits which is based on the static US$1,575/oz Au sales price observed at the time of this study. To maintain consistency with what was used in the optimization, these CoGs were used as a basis to define ore and waste in the production schedule.

15.2 Reserve Estimate

The Mineral Reserve Estimate for Pan is presented in Table 15-1.

Table 15-1: Pan Project Mineral Reserve Estimate as of June 30, 2020

Classification	Mass (000's tons)	Grade (oz/ton Au)	Grade (g/t Au)	Metal Contained (koz Au)
Proven	11,426	0.014	0.47	158.3
Probable (including stockpile)	12,031	0.011	0.38	132.2
Proven and Probable	23,457	0.012	0.42	290.5
Probable Leach Pad Inventory (recoverable)				26
Total Proven and Probable				317

Source: SRK 2020

- Reserves stated in the table above are contained within an engineered pit design following the US$1,575/oz Au sales price Lerchs-Grossmann pit. Date of topography is June 30, 2020;
- Mineral Reserves are stated in terms of delivered tons and grade, before process recovery. The exception is leach pad inventory, which is stated in terms of recoverable Au ounces;
- Allowances for external dilution are accounted for in the diluted block grades.
- Costs used include an ore mining cost of US$2.09/ton, a waste mining cost of $1.97/ton, an ore processing and G&A cost of US$3.13/ton;
- Reserves for Argillic (soft) ore are based upon a minimum 0.003 oz/ton Au (0.10 g/t) internal cut off grade ("CoG"), using a US$1,575/oz Au sales price and an Au recovery of 80%;
- Reserves for Silicic (hard) ore are based upon a minimum 0.004 oz/st Au (0.14 g/t) Internal CoG, using a US$1,575/oz Au sales price and an Au recovery of 60%;
- Mineral Reserves stated above are contained within and are not additional to the Mineral Resource, the exception being stockpile and leach pad inventory; and,
- Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

15.3 Relevant Factors

The reserve estimated herein is subject to potential change based on changes to the forward-looking assumptions underlying cost and revenue estimates utilized in this study.

The QP is not aware of any existing environmental, permitting, legal, socio-economic, marketing, political, or other factors that are likely to materially affect the mineral reserve estimate beyond those discussed herein.

16 Mining Methods

The Pan mine is a conventional hard rock open pit mine that uses a contractor to drill, blast, load, haul, and provide support equipment. Mining is performed on 20 ft benches using CAT 992 loaders, CAT 777 haul trucks, and conventional drill and blast activities. Ore is mined at a rate of 14,000 tons per day and is crushed before placement on the heap leach pad. Due to the argillic alteration predominantly found in the southern pits, ore from the North and South is blended to ensure permeability and heap stability. The blend is 60% rock to 40% clay by weight and will change as the heap leach height increases.

16.1 Current Mining Methods

Currently, conventional open pit mining methods are implemented at Pan. A contract miner is conducting the mining activities. Ore and waste are drilled and blasted, then loaded into CAT 777 haul trucks with CAT 992 wheel loaders. The loading and haulage fleet is supported by track dozers, motor graders, and water trucks. Waste is hauled to waste rock storage facilities near each pit. Ore is hauled and placed directly at the crusher feed stockpile and overflow ore is placed directly on the heap leach pad. The ore placed at the crusher feed stockpile is rehandled into the crusher with one CAT 988 wheel loader operated by GRP. The crushed ore is then rehandled from the crushed ore stockpile into CAT 777 haul trucks with CAT 992 wheel loaders and placed on the heap leach pad.

The Pan Mine uses a mining contractor for all mining activities with the exception of crushing the ore and placement of ore into the crusher. The Pan Mine owns, operates, and maintains all other equipment on the site. The general site layout, including pits, waste dumps, crusher site, ponds, and heap leach pad, is shown in Figure 5-1.

Ore production is planned at a nominal rate of 14,000 t/d, equivalent to 5.1 Mt/y with an expected 5-year mine life. Mining is planned on a 7 day per week schedule on a double 12-hour shift per day Monday through Thursday and single 12-hour day shift Friday through Sunday 365 days per annum. Peak ore and waste production is estimated at 50,000 t/d. The average LOM stripping ratio is 1.70:1 waste-to-ore, using a 0.003 oz/ton (0.10 g/t) internal cut-off for the argillic sitewide and unaltered material in the south and a 0.004 oz/ton (0.14 g/t) internal cut-off on silicic material site wide and unaltered material in the north. The change in CoG from one material to the next is a result of the metallurgical recovery testing, which showed the argillic and unaltered material to have an expected average recovery of 80% with the more silicified material having an expected recovery of 60%

16.2 Parameters Relevant to Mine or Pit Designs and Plans

Metallurgical test work and operating experience has indicated that the South and Central Pit ores (argillic/clay ores) need to be blended with silicified (rock) ore, primarily from the North Pan deposit, to achieve adequate permeability for ROM ores. Ore from the North and South is blended for permeability and heap stability. This ratio is 60% rock to 40% clay and will reduce as the heap leach pad is stacked higher. Test work also indicates that optimum gold recovery of the ores can be achieved after blending rock and clay ores with crushing and agglomeration using cement, due to the presence of clay minerals.

The ore is transported to a stockpile near the primary jaw crusher, which is set up on the leach pad. A front-end loader feeds the primary jaw crusher, which conveys the ore to the crushed ore stockpile on the heap leach pad. The crushed ore is then rehandled from the crushed ore stockpile into CAT 777 haul trucks with CAT 992 wheel loaders and placed on the pad. Waste material is loaded into CAT 777 haul trucks and hauled directly to the waste dumps. There are several satellite pits (Syncline and Black Stallion) that will be backfilled with waste as part of the closure plan. The backfill operations will take place prior to closure, during the 5-year mine life as part of concurrent reclamation planning.

16.2.1 Geotechnical Design – Pits

SRK conducted a geotechnical assessment of the current North pit with the objective of examining the feasibility of implementing the current slope design (Golder, 2011) in the future North pit expansion (SRK, 2021a). As part of this process, SRK conducted the following activities:

- Review previous geotechnical investigations;
- Review geotechnical rock mass characterization based on face mapping conducted in specific areas of the pit during the QP's site visit;
- Validate prior rock mass and joint strength assumptions based on field observations;
- Adjusted the prior rock mass fabric assumptions based on structural measurements conducted on current exposed walls during site visit;
- Conducted visual observation of the current pit performance;
- Observe drill and blasting techniques; and
- Review current operational practices.

The QP has accepted as a valid approach the use of a geotechnical-operational slope stability method, given the following considerations:

- The extension of the life of mine by about 5 years under current operation conditions observed during the site visit;
- Gradual vertical mine progression given the pit area versus depth, which reduces the level of wall stress; the QP understands that the vertical mine progression will be less than one triple bench per month;
- In the QP's opinion, it is unlikely that the final walls will be affected by groundwater due to the deep water table;
- Low regional seismicity;
- From the site visit, the QP's observations, such as bench faces that are in good condition, reflect good operational practices, in the QP's opinion; and
- During the site visit various areas of the North, Red Hills and Boulders pits were observed, supporting the opinion that appropriate strength parameters were provided by Golder (2011).

During 2010 Golder Associates conducted a geotechnical investigation (Golder, 2011), which included the completion of five geotechnical drill holes (2,501 ft) for estimating the rock mass quality of the Central and North pits. The investigation included seven laboratory tests, 125 point load tests, 12 density tests, three elastic modulus tests, and collection of tele-viewer data for determining the rock mass fabric of the deposit. In addition to the Golder (2011) database, SRK conducted a total of 14 face mapping sites (531 ft) located in specific areas of the current pit to expand the geotechnical database and validate and/or adjust the Golder strength parameters (SRK, 2020). The face mapping included estimation of the geotechnical strength index (GSI) of each rock unit, strength measurements (150 data points) using a Schmidt Hammer tester, and structural orientation measurements.

Based on the current pit performance, updated geotechnical database, current geological, structural, lithology and alterations models, in the QP's opinion, the implementation of the pit design provided by Golder (2011) is acceptable assuming the following:

- The mine will update the alteration model based on the ongoing 2020 exploration drilling program;
- The mine will conduct geotechnical data collection using six exploration drill holes: XP20-299, XP20-521, XP20-558, XP20-562, XP20-417, XP20-555;
- The mine will confirm and adjust the argillic material strength parameters used in this report;
- After completion of the geotechnical drilling program, the geotechnical model will be updated;
- The mine will continue with pre-split blasting and wall scaling; and
- The mine will implement a slope monitoring plan to anticipate potential wall instabilities.

Table 16-1 summarizes the geotechnical pit design criteria.

Table 16-1: Recommended Geotechnical Criteria for Mine Design

Pit Design Criteria	Limestone Units	All Other Rock Units
Inter-Ramp Angles	50°	45°
Face Angles	70°	63°
Catch Bench Berm	30 ft	30 ft
Catch Bench Vertical Spacing	60 ft	60 ft
Road Widths (Including Berm)	90 ft	90 ft
Road Grade	10%	10%

Source: Golder, 2011 modified SRK, 2020

Pre-splitting, buffer blasting, systematic bench scaling and slope monitoring practices are key components during pit implementation. The QP recommends that Fiore prepare a monitoring plan, geotechnical data collection protocols, and pit design implementation protocols, and updates the geotechnical models as the mine is progressing. It is further recommended that an annual site inspection be conducted by a geotechnical specialist to assess the pit wall performance and examine the pit design implementation practices.

Limitations

The alteration and major structural models are considered to be at PFS level (SRK, 2021a). The QP understands that Fiore intends to update both models after completion of the 2020 exploration drilling program.

Argillic, volcanic and conglomerate materials strength values have been estimated based on field observations and field tests and could be conservative. The QP recommends that Fiore conduct a full laboratory testing program to re-estimate the material strength parameters.

Current pit performance has direct correlation with the current implemented operational practices. Fiore should continue current blasting and operational practices during the full LOM for the geotechnical assumptions herein to be valid.

Conclusions and Recommendations

In the QP's opinion, the proposed pit design criteria (Golder, 2011) is acceptable to implement in this mine plan.

On the basis of the pit performance assessment, rock mass characterization, field observations, and slope stability assessment, in the QP's opinion, the current pit design complies with acceptable industry norms.

The implemented operational and blasting methods are considered good practices, which reduce wall damage and support safe work conditions. It is recommended that these practices are continued, particularly in the final pit walls.

The QP recommends continuing with pre-splitting, buffer blasting and systematic bench scaling and slope monitoring practices during pit implementation to achieve the proposed design.

The deep carbonate aquifer is approximately 600 ft below the bottom of the North and South pits. The rock mass in the current mine plan lies above the carbonate aquifer water table, and groundwater does not have a negative effect on the current and future slope performance.

A key uncertainty of this project is the extension of the argillic alteration, particularly in the western portion of the pit. The QP understands that an update of the argillic model following completion of the 2020 exploration drilling program will provide better understanding of the geometry and strength parameters of this material.

The QP also recommends an update of the alteration and major structural models to increase the geotechnical model reliability. The slope stability models should subsequently be updated with appropriate changes, if applicable, made to the pit design.

Additional recommendations include:

- Preparation of a slope monitoring plan to measure the pit slope performance during the life of mine;
- Update of the geotechnical models as the mine is progressing; and
- Annual geotechnical inspections by a geotechnical specialist as good practice, to assess the pit performance, examine the pit design implementation practices, review the updated models, and review the wall stability.

16.2.2 Geotechnical Design – Waste Rock Disposal Areas

Designed Waste Rock Disposal Areas (WRDA) are based on the current mine plan, which predicts approximately 39.8 Mt of waste rock. The waste rock will be placed in two empty pits as back fill and three WRDA at an overall reclaimed slope of 3H:1V (18.4°).

Vegetation will be cleared from any additional required WRDA footprints; coarse woody debris and plant growth medium will be salvaged and placed in separate stockpiles. Coarse woody debris may be chipped and spread over reclaimed areas or added to growth media stockpiles. The final surfaces of the WRDA will be constructed by end dumping to create typical mining waste rock facilities. On sloped terrain, where safe and practicable, some weathered geologic materials below the plant growth medium may be pushed downhill to construct toe berms, to prevent rocks from scattering on the hillside below the toes of the WRDA.

16.2.3 Hydrological

Based on existing data and the recent installation of three water supply wells, groundwater at the Project occurs in a deep carbonate aquifer and a shallow alluvial aquifer along the normally dry stream channel west of the mine area. Shallow alluvial groundwater west of the mine area occurs at elevations that are approximately 500 ft higher than the deep carbonate aquifer. The deep carbonate aquifer is approximately 650 to 800 ft below the heap leach facility and approximately 600 ft below the bottom of the south pit. The rock mass in the current mine plan is above the carbonate aquifer water table, and groundwater is not a factor in mine design.

16.3 Pit Optimization

Pit optimization was completed using Hexagon's MinePlan® Economic Planner (MPEP) pit optimization software. Pit optimization is based on preliminary economic estimations of mining, processing and selling related costs, slope angles, and metal recoveries. These pit optimization factors differ from those reported in the final economic analysis, which is based on the pit design criteria and production schedule that follows the optimization work. The pit optimization software considered grades and tonnages in the model along with prices, recovery factors and mining, processing, and administrative costs to evaluate what material could be economically extracted through the use of the Lerchs-Grossmann (LG) algorithm.

16.3.1 Mineral Resource Models

Only Measured and Indicated resources were considered in the evaluation; Inferred resources were treated as waste.

16.3.2 Topographic Data

Base topographic data is from an aerial survey completed in July 2010 by Aerotech Mapping of Reno, Nevada. Subsequently, the dataset has been updated with surveys from construction, and end of month surveys for the pit, leach pad, and dumps. The latest topography for the site is the end of month topography for June 2020.

16.3.3 Optimization Parameters and Constraints

Geotechnical slope parameters were determined by the rock units according to values in Table 16-1.

and were incorporated into the LG runs. Diluted grades were used as described in Section 15.1.1.

Royalties

A royalty of 4% was applied to the Net Smelter Return.

Mining Costs

Operating costs were based upon the current mine contractor's Time and Materials (T&M) agreement and adjusted for the future haul profiles.

Mining costs were estimated to be US$2.09 per ton of ore mined and US$1.97 per ton of waste mined for the pit optimization.

Processing Costs and Recoveries

Processing costs for the Pan area deposits, which includes North Pan, Central Pan, and South Pan pits, have been calculated at US$2.40 per ore ton for crushed and agglomerated ore. This estimate assumes primary crushing with addition of cement with belt agglomeration. This processing cost includes rehandling of the ore from the crushed ore stockpile to the leach pad cell, ADR and leaching costs. Recovery factors of 60% and 80% for silicic and argillic/unaltered materials, respectively, were used in the optimization runs.

Other Costs

General and administration costs were estimated at US$0.73 per ore ton from the current staff levels planned.

The pit optimization parameters are summarized in Table 16-2.

Table 16-2: Pit Optimization Parameters

Argillic and Unaltered Material		
Item	**Cost/Rate (US$)**	**Units**
Waste Mining Cost	$1.97	US$ per Waste ton
Ore Mining Cost	$2.09	US$ per Ore ton
Processing Cost	$2.40	US$ per Ore ton
G&A Cost	$0.73	US$ per Ore ton
Process Recovery	80%	
Slope Angle	Variable	Varies by Rock Units
Silicic Material		
Item	**Cost/Rate**	**Units**
Waste Mining Cost	$1.97	US$ per Waste ton
Ore Mining Cost	$2.09	US$ per Ore ton
Processing Cost	$2.40	US$ per Ore ton
G&A Cost	$0.73	US$ per Ore ton
Process Recovery	60%	
Slope Angle	Variable	Varies by Rock Units

Source: GRP, 2020

16.3.4 Overall Slope Angles and Restriction Codes

Overall slope angles (OSAs) were used in the LG algorithm to anticipate ramp positions within the pit design. This iterative process included first designing initial pit designs with interramp slope angles (IRAs) defined by the geotechnical pit design criteria, then OSAs were derived from measuring the slope from the crest of the pit to the toe of the pit with ramps included. OSA shells were then generated and a second set of pit designs were drawn around the OSA limits.

In preliminary economic runs, Fiore noted that mining the south eastern highwall, while economic, required a great deal of stripping that largely offset the gains from this material in the cashflow. Fiore believes that with additional drilling and metallurgical testing there is good potential to add materially to the resource in the south-eastern highwall area and reduce the stripping ratio to a more manageable level. Mining this area prematurely also runs the risk of potentially sterilizing any new mineralization that might be discovered through additional drilling. To prevent this area from being mined for the purposes of this study, a restriction code was added to the LG runs to limit the algorithm and exclude these areas.

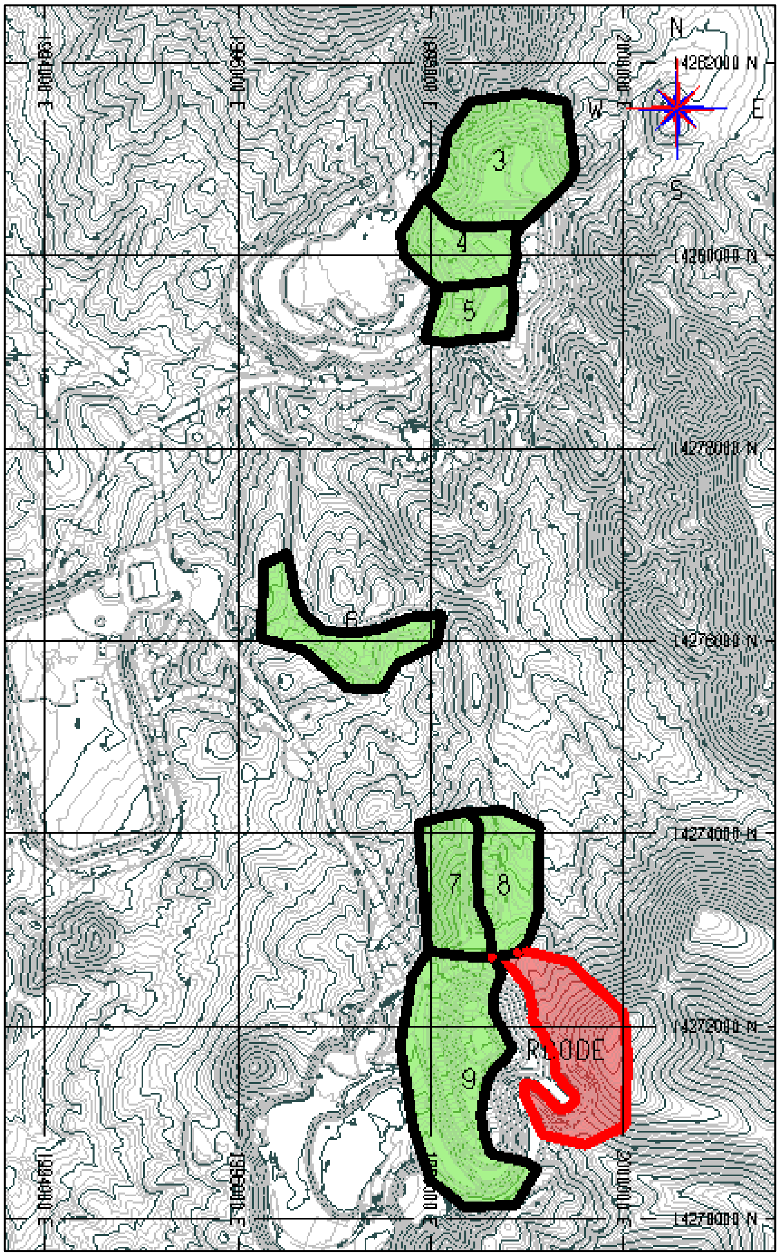
Table 16-3 provides the OSA angles used to generate the pit shells. The standard geotechnical guidance was used outside these zones.

Figure 16-1 shows the OSA sectors and restriction code zone (RCODE.) Sectors 1, 2 and 10 are not shown in the figure as they apply to specific rock types outside of the other sectors.

Table 16-3: Overall Slope Angles

Sector	OSA Angle (degrees)
1 (rock other than limestone)	45
2 (limestone)	50
3	36
4	25
5	33
6	30
7	34
8	35
9	35
10 (fill material)	27

Source: GRP, 2020



Source: GRP, 2020

Figure 16-1: Overall Slope Angle Zones and Restriction Zone

16.3.5 Optimization Results

Table 16-4 provides the material quantities within the US$1,575/oz Au sales price LG pit.

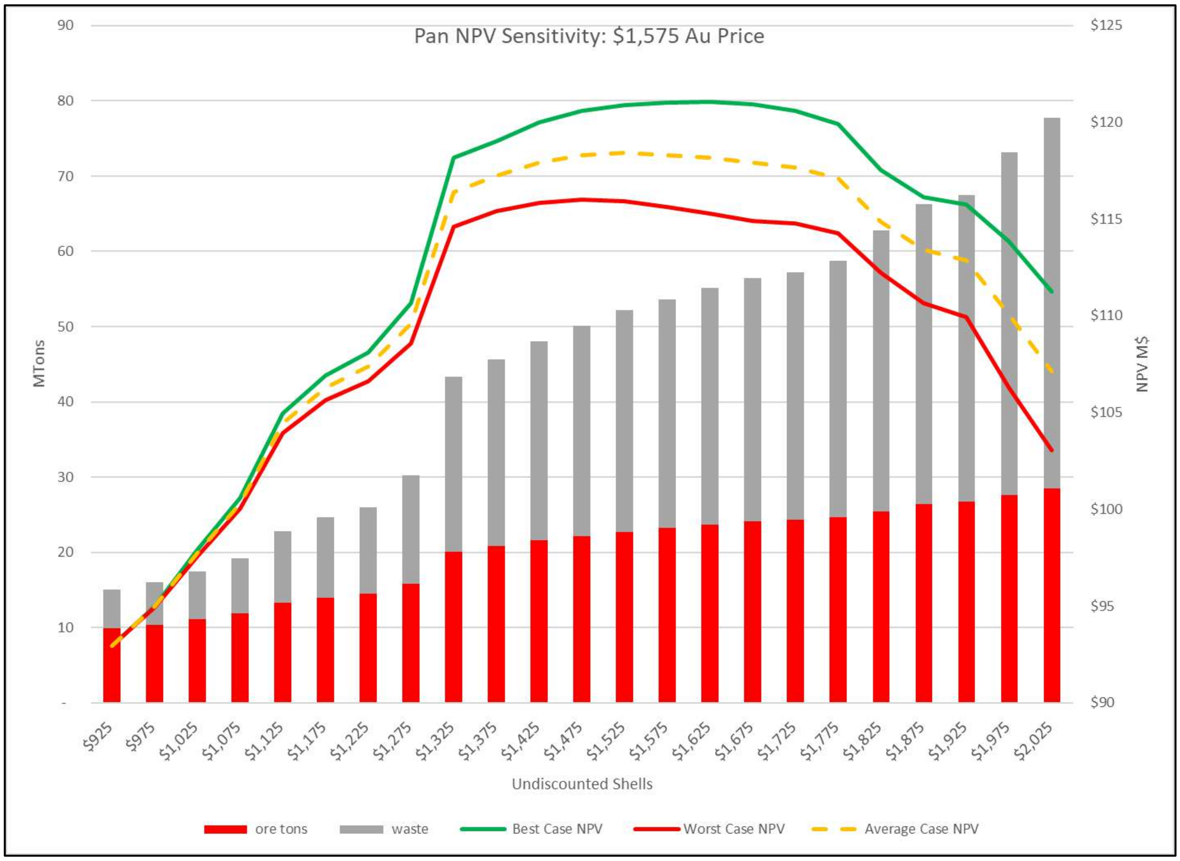
Table 16-4: Ultimate LG Pit Material Quantities, US$1,575/oz Gold Sales Price

Pit	Classification	Ore kton	Au Grade (oz/ton)	Au Grade (g/t)	Au Metal (koz)	Waste kton	Strip Ratio (waste/ore)
North	Proven	5,340	0.014	0.48	74	15,653	1.39
	Probable	5,902	0.012	0.41	69		
	Proven and Probable	11,242	0.013	0.45	144		
Central	Proven	1,119	0.015	0.51	17	1,881	1.36
	Probable	261	0.012	0.41	3		
	Proven and Probable	1,380	0.014	0.48	20		
South	Proven	4,483	0.014	0.48	64	12,494	1.33
	Probable	4,904	0.011	0.38	54		
	Proven and Probable	9,387	0.013	0.45	118		
Total	Proven	10,942	0.014	0.48	155	30,028	1.36
	Probable	11,067	0.011	0.38	126		
	Proven and Probable	22,008	0.013	0.45	281		

Source: GRP, 2020

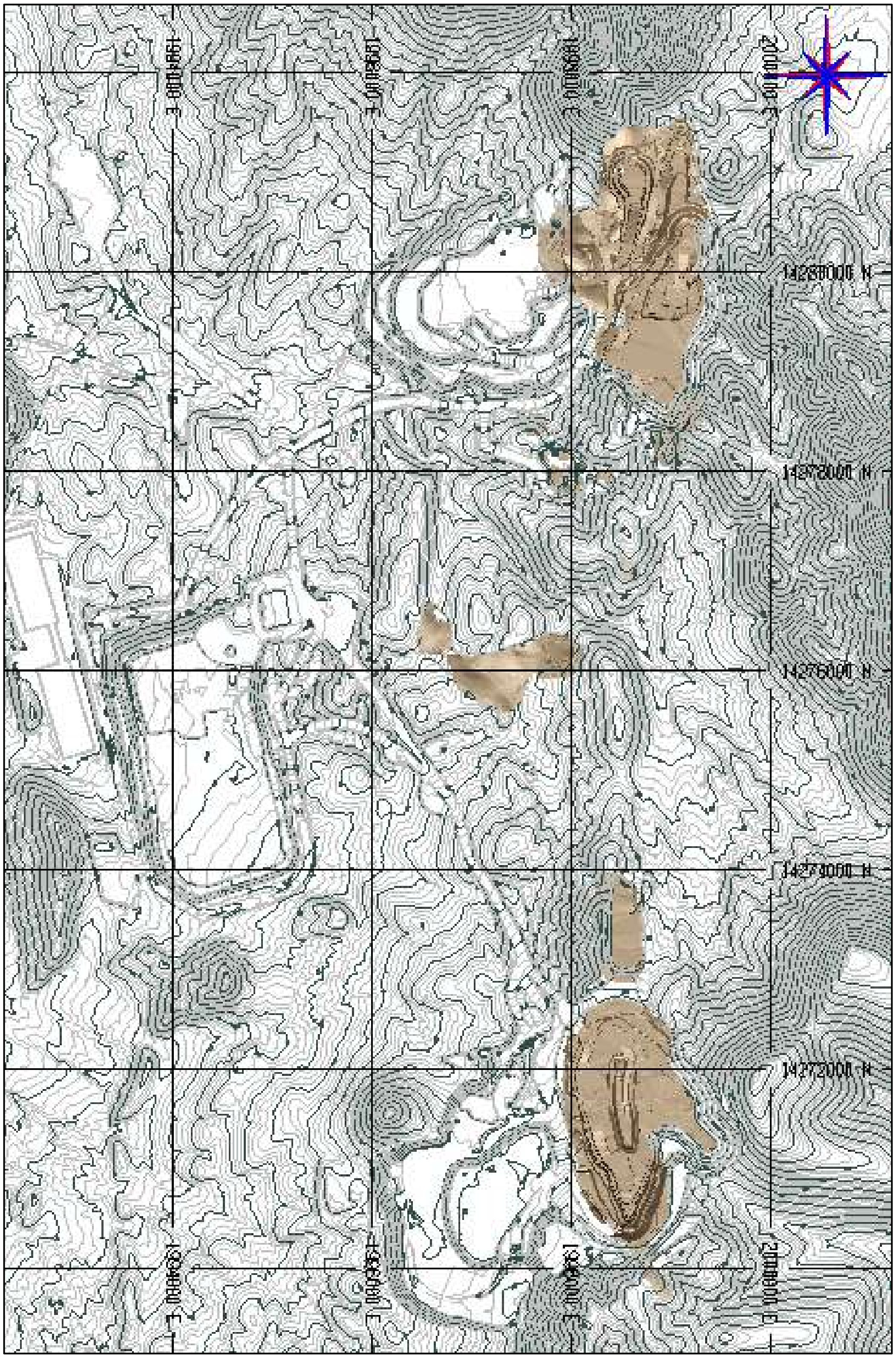
During the optimization, a series of LG pits were generated from US$925/oz to US$2,025/oz gold prices. As the gold price increases the pits grow larger in size and the ore and waste tonnages both increase. In Figure 16-2, a graph is presented showing the ore and waste tonnages and NPV using a constant US$1,575/oz gold price with an assumed 5% discount rate against each pit. Best Case scenarios were generated where the best case mined each incremental shell in sequence before mining the ultimate shell last. Worst Case scenarios were generated where the ultimate shell was mined first top to bottom and the incremental shells were not mined in sequence as in the Best Case scenario.

The ultimate LG pit configuration is shown in Figure 16-3.



Source: GRP, 2020

Figure 16-2: LG Pit Tonnages and NPV Sensitivity by $1,575 Gold Price



Source: GRP, 2020

Figure 16-3: US$1,575 Au Sales Price Ultimate LG Pit

16.4 Design Criteria

Haul roads and catch benches for North, Central, and South pits were based on the design criteria outlined in the Golder report (Golder, 2011). Haul roads are designed at a width of 90 ft and a maximum gradient of 10% to provide safe two-way haulage traffic when a berm is added. In some cases, the lowermost benches had the road grade increased to 12% and the haul road width narrowed to 70 ft to minimize excessive waste stripping. Pan's pit design criteria are presented in Table 16-5.

Table 16-5: Pit Design Criteria – Operations

Pit Design Criteria	Limestone Units	All Other Rock Units
Inter-Ramp Angles	50°	45°
Face Angles	70°	63°
Catch Bench Berm	30 ft	30 ft
Catch Bench Vertical Spacing	60 ft	60 ft
Road Widths	90 ft	90 ft
Road Grade	10%	10%
Road Widths Pit Bottom	70 ft	70 ft
Road Grade Pit Bottom	12%	12%

Source: GRP, 2020

A series of pit shells were generated on the South and North resource blocks based on profit factors, which calculate the profit of each block within the resource model based on the revenue minus operating costs using MPEP. A gold price of US$1,575 per oz was used to generate the optimized pit shells. MPEP was used to generate 23 pit shells from US$925 to US$2,025 per oz. The series of pit optimizations were evaluated and graphed to select appropriate economic phases. All pits were based on the maximum value US$1,575 per oz pit shells.

Using the selected economic phases, a series of pit designs were created including ramps and catch benches. These served as the basis for production scheduling and reserve reporting. The reserves for each pit design are included in Table 16-6.

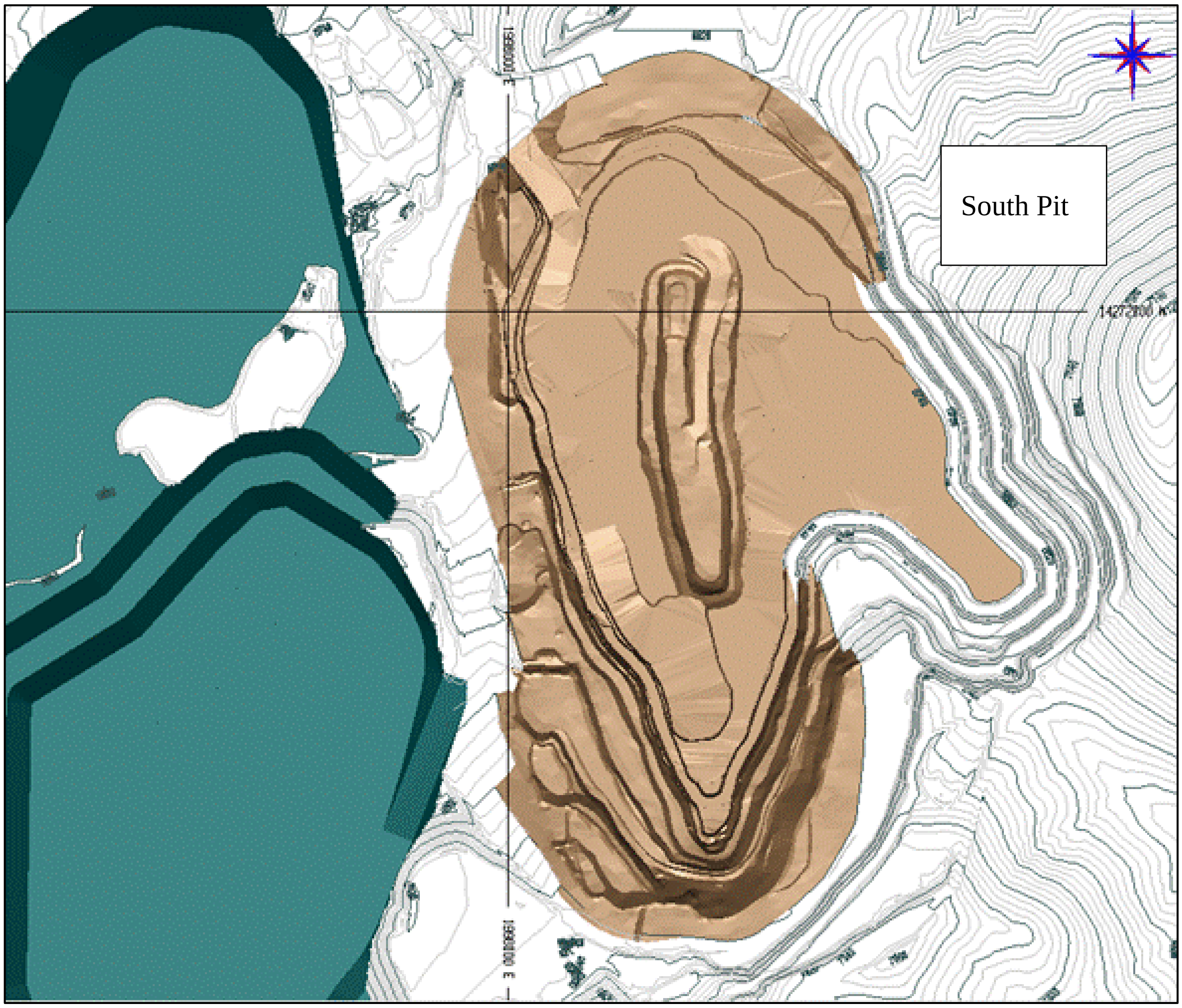
Table 16-6: Reserves by Pit Phase

Pit	Classification	Ore (kton)	Au Grade (oz/ton)	Au Grade (g/t)	Au Metal (koz)	Waste (kton)	Strip Ratio (waste/ore)
Banshee 1	Proven	564	0.014	0.48	8	4,116	4.04
	Probable	454	0.011	0.38	5		
	Proven and Probable	1,018	0.013	0.45	13		
Banshee 2	Proven	1,040	0.011	0.38	12	6,027	2.48
	Probable	1,389	0.010	0.34	14		
	Proven and Probable	2,429	0.011	0.38	26		
Banshee 3	Proven	2,334	0.013	0.45	29	7,369	1.58
	Probable	2,338	0.011	0.38	25		
	Proven and Probable	4,672	0.012	0.41	54		
North 3	Proven	1,043	0.015	0.51	16	1,396	0.71
	Probable	922	0.012	0.41	11		
	Proven and Probable	1,965	0.014	0.48	27		
North 4	Proven	75	0.013	0.45	1	190	1.59
	Probable	43	0.011	0.38	0		
	Proven and Probable	118	0.012	0.41	1		
North 5	Proven	644	0.015	0.51	10	1,381	0.75
	Probable	1,194	0.013	0.45	16		
	Proven and Probable	1,837	0.014	0.48	26		
Red Hill	Proven	62	0.032	1.10	2	24	0.37
	Probable	1	0.103	3.53	0		
	Proven and Probable	63	0.033	1.13	2		
Black Stallion	Proven	1,060	0.015	0.51	16	2,145	1.65
	Probable	243	0.012	0.41	3		
	Proven and Probable	1,303	0.014	0.48	19		
Dynamite	Proven	238	0.012	0.41	3	746	1.61
	Probable	226	0.009	0.31	2		
	Proven and Probable	464	0.011	0.38	5		
South 2	Proven	3,041	0.015	0.51	45	4,988	0.88
	Probable	2,597	0.011	0.38	29		
	Proven and Probable	5,638	0.013	0.45	74		
South 3	Proven	255	0.015	0.51	4	3,302	4.13
	Probable	545	0.011	0.38	6		
	Proven and Probable	800	0.012	0.41	10		
South 4	Proven	1,071	0.012	0.41	13	8,223	2.61
	Probable	2,079	0.010	0.34	21		
	Proven and Probable	3,150	0.011	0.38	34		
Total	Proven	11,426	0.014	0.48	158	39,907	1.70
	Probable	12,031	0.011	0.38	132		
	Proven and Probable	23,457	0.012	0.41	291		

Source: SRK, 2020

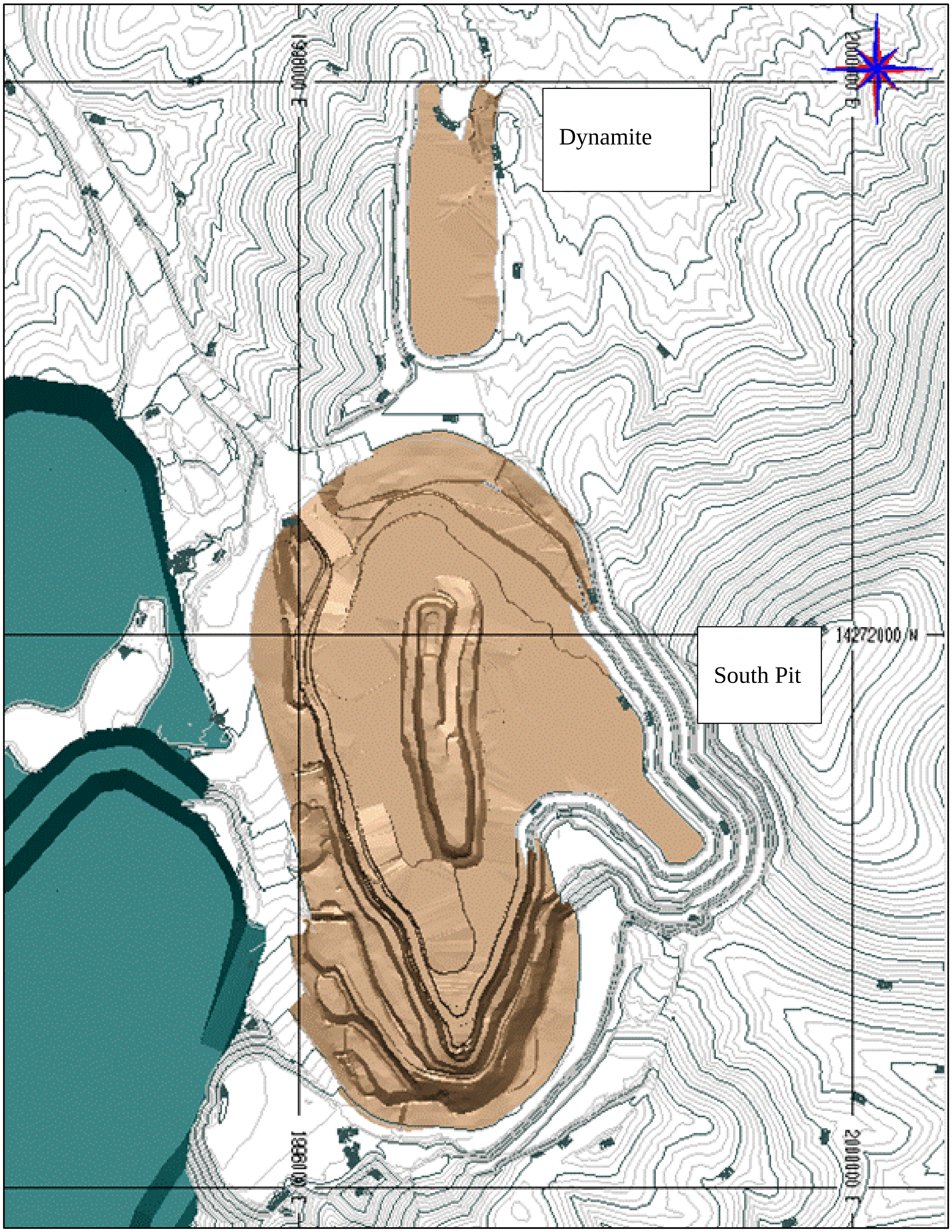
- Reserves stated in the table above are contained within an engineered pit design following the US$1,575/oz Au sales price Lerchs-Grossmann pit. Date of topography is June 30, 2020;
- Mineral Reserves are stated in terms of delivered tons and grade, before process recovery. The exception is leach pad inventory, which is stated in terms of recoverable Au ounces;
- Allowances for external dilution are accounted for in the diluted block grades.
- Costs used include an ore mining cost of US$2.09/ton, a waste mining cost of $1.97/ton, an ore processing and G&A cost of US$3.13/ton;
- Reserves for Argillic (soft) ore are based upon a minimum 0.003 oz/ton Au (0.10 g/t) internal cut off grade ("CoG"), using a US$1,575/oz Au sales price and an Au recovery of 80%;
- Reserves for Silicic (hard) ore are based upon a minimum 0.004 oz/ton Au (0.14 g/t) Internal CoG, using a US$1,575/oz Au sales price and an Au recovery of 60%;
- Mineral Reserves stated above are contained within and are not additional to the Mineral Resource, the exception being stockpile and leach pad inventory; and,
- Numbers in the table have been rounded to reflect the accuracy of the estimate and may not sum due to rounding.

Figure 16-4 and Figure 16-5 show the phase designs for the South Area pits. North and Central Area pits are shown on Figure 16-6 and Figure 16-7. Cross-sections of the North and South pits are shown on Figure 16-8 and Figure 16-9 respectively.



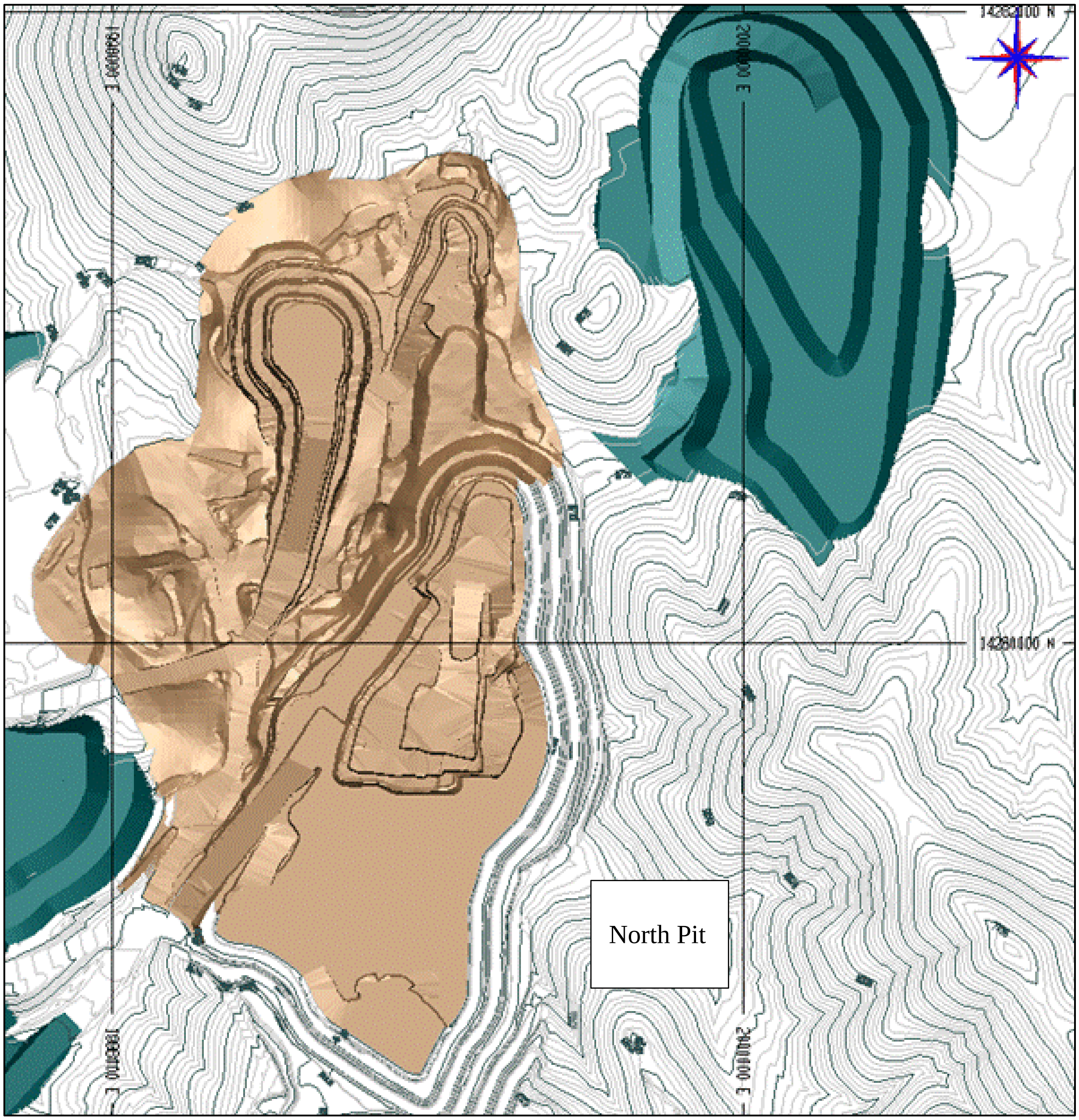
Source: GRP, 2020

Figure 16-4: South Pit Design



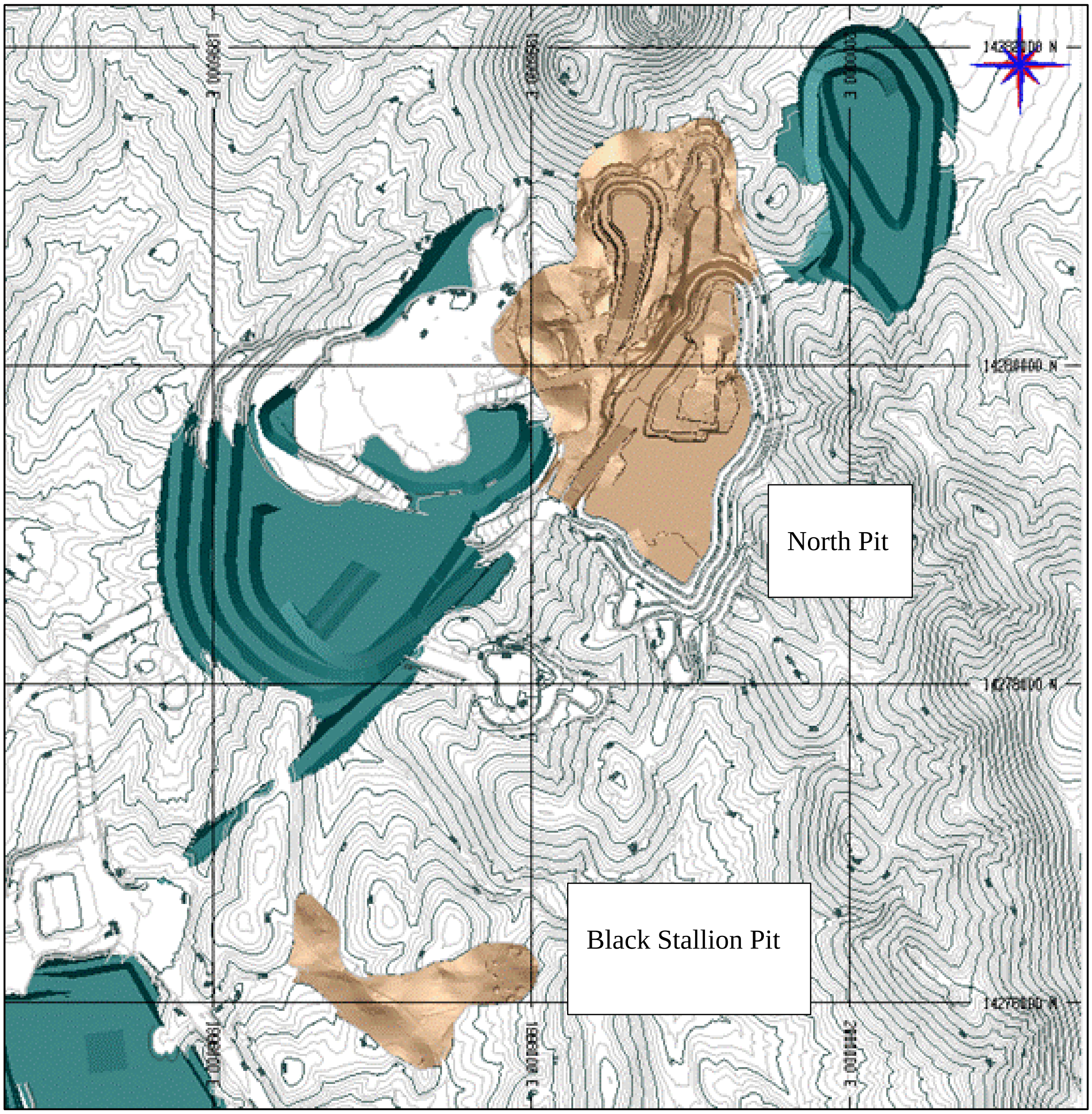
Source: GRP, 202

Figure 16-5: South Pit and Dynamite Pit Final Design



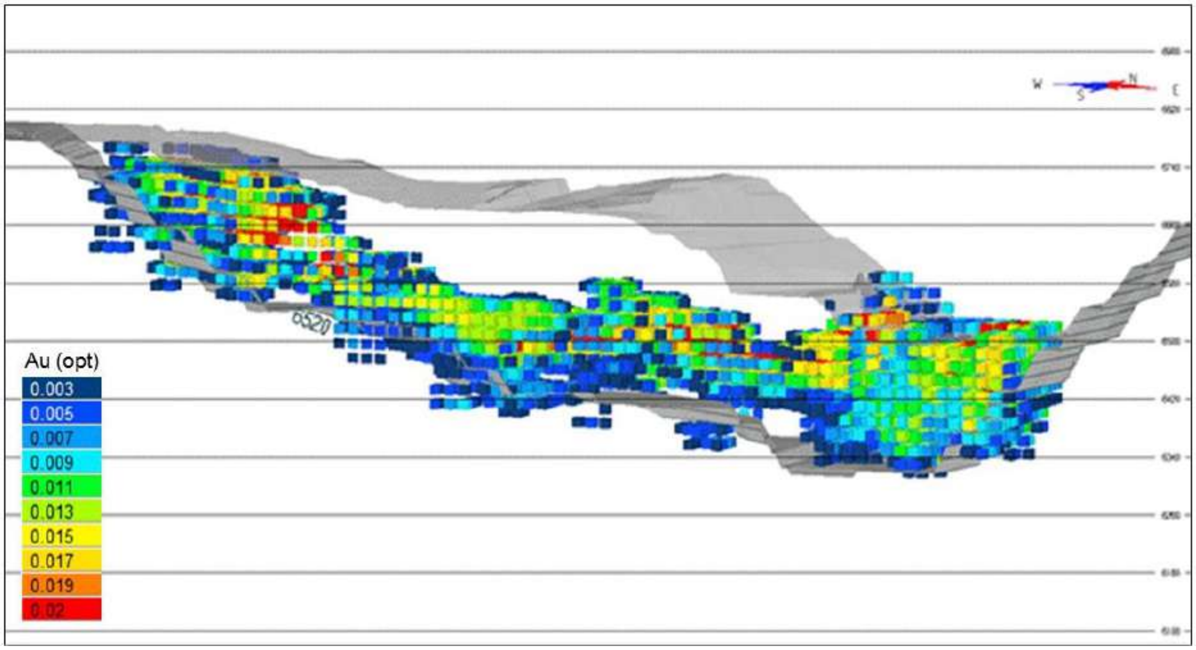
Source: GRP, 2020

Figure 16-6: North Pit Design



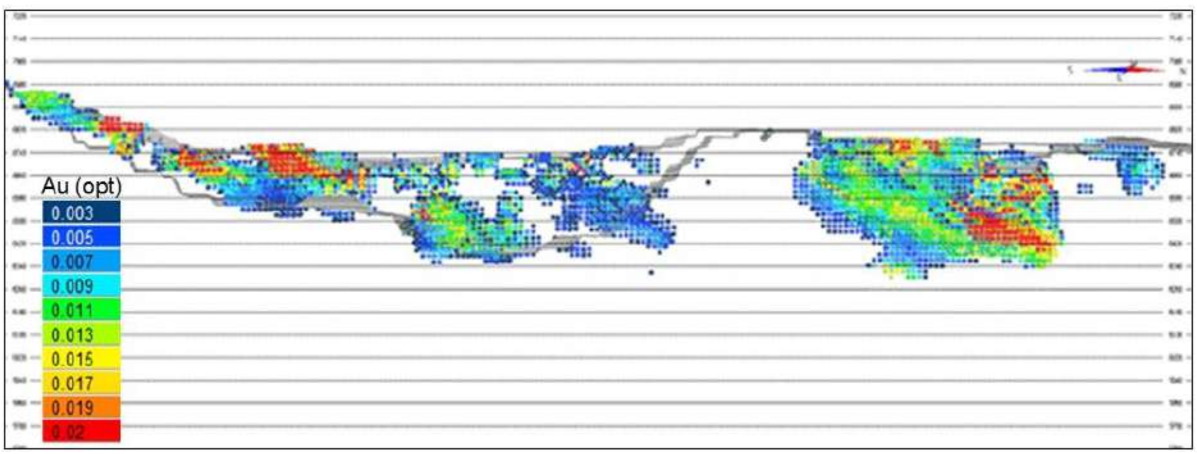
Source: GRP, 2020

Figure 16-7: North Pit and Black Stallion Pit Final Design



Source: GRP, 2020

Figure 16-8: North Pit Cross-Section



Source: GRP, 2020

Figure 16-9: South Pit Cross-Section

In Figure 16-9 above, the blocks on the right side of the image are in the Dynamite area. This zone is rather thin in comparison to the other mining areas and therefore has a higher stripping ratio as pits go deeper. Several scenarios were examined at various mining depths and, with the current economic assumptions, the pit designed in this zone is shallow to maximize net revenue.

16.5 Design Changes

Design changes are the changes in material quantities from the LG guide pit to a designed pit. The differences between the LG cones and the pit designs were related to the small pit areas and the narrow, steeply dipping ore zones, which the LG will mine, but cannot be accessed after roads and ramps are included in the design pit. Designing a pit with access can deviate materially from the LG cone, particularly with small pits. The narrow deposit made ramp access difficult to get to the bottom of the LG pit without additional waste mining.

Design changes can be reduced using Overall Slope Angles (OSA) in the LG optimization and a close approximation can be achieved to the design pits. However, it must be noted that minimum mining widths and geotechnical wall configurations avoiding pinnacles in the middle of the pit and sharp noses will still add additional waste in design as compared to the LG pit.

Table 16-7 shows the percentage change from design adjustments for each mining area after the inclusion of in-pit ramps and minimum mining widths. A negative value indicates a lower value in the design pit than the guide LG.

Table 16-7: Design Changes

Source	Mining Area	Ore (kton)	Grade (oz/ton)	Metal (koz)	Waste (kton)
LG Shells	North	11,242	0.013	144	15,653
	Central	1,380	0.014	20	1,881
	South	9,387	0.013	118	12,494
	Total	22,008	0.013	281	30,028
Design Pits	North	12,101	0.012	149	20,502
	Central	1,303	0.014	19	2,145
	South	10,053	0.012	123	17,259
	Total	23,457	0.012	291	39,906
Difference (Design - LG)	North	859	-0.001	5	4,849
	Central	(56)	-0.001	(2)	263
	South	882	0.000	7	4,765
	Total	1,942	-0.001	10	9,878
% Difference (Design - LG)/LG	North	9.9%	-5.9%	3.4%	31.0%
	Central	-4.1%	-4.2%	-8.1%	14.0%
	South	9.4%	-3.1%	6.0%	38.1%
	Total	8.8%	-4.7%	3.7%	32.9%

Source: GRP, 2020

16.6 Mine Production Schedule

The mine plan begins in July 2020 with mining in both the North and South Pan pits to facilitate blending of rock and clay ores to achieve adequate heap stability and permeability. Mining continues with ore and waste from both the North and South for the blending of ore types until both pits are completed.

16.6.1 Mine Production

The yearly mine production schedule is presented in Table 16-8, beginning in July 2020 and ending in early 2025 for a total 5 years. The schedule below was completed monthly for the entire mine life. The production schedule is driven by the nominal rate of 14,000 ore tons per day (5.1 Mt/y). Peak ore and waste production is 42,000 t/d and occurs in Fiscal 2023. Fiore operates on a fiscal year between October 1st and September 30th, as opposed to a calendar year.

Scheduling was carried out using the reserve output by bench from each phase of mining for each open pit. MinePlan Schedule Optimizer (MPSO) was used targeting 5.1 Mt/y and a maximum of one bench per month. The number of haulage trucks and loaders needed were calculated from the haulage profiles and dig rates generated by MPSO to ensure that the contractor's equipment list was sufficient to meet the planned production rate.

Table 16-8: Annual Production Schedule

Production Schedule		2020	2021	2022	2023	2024	2025
Ore	Tons (000's)	1,271	5,351	5,340	5,073	4,649	1,772
	Au Oz/ton	0.013	0.013	0.013	0.012	0.011	0.013
	Au g/t	0.45	0.45	0.45	0.41	0.38	0.45
	Au Oz (000's)	17	71	70	60	49	24
Waste	Tons (000's)	1,446	9,479	9,712	10,382	6,179	2,625
Total	Tons (000's)	2,717	14,830	15,052	15,455	10,828	4,397
Strip Ratio		1.14	1.77	1.82	2.05	1.33	1.2

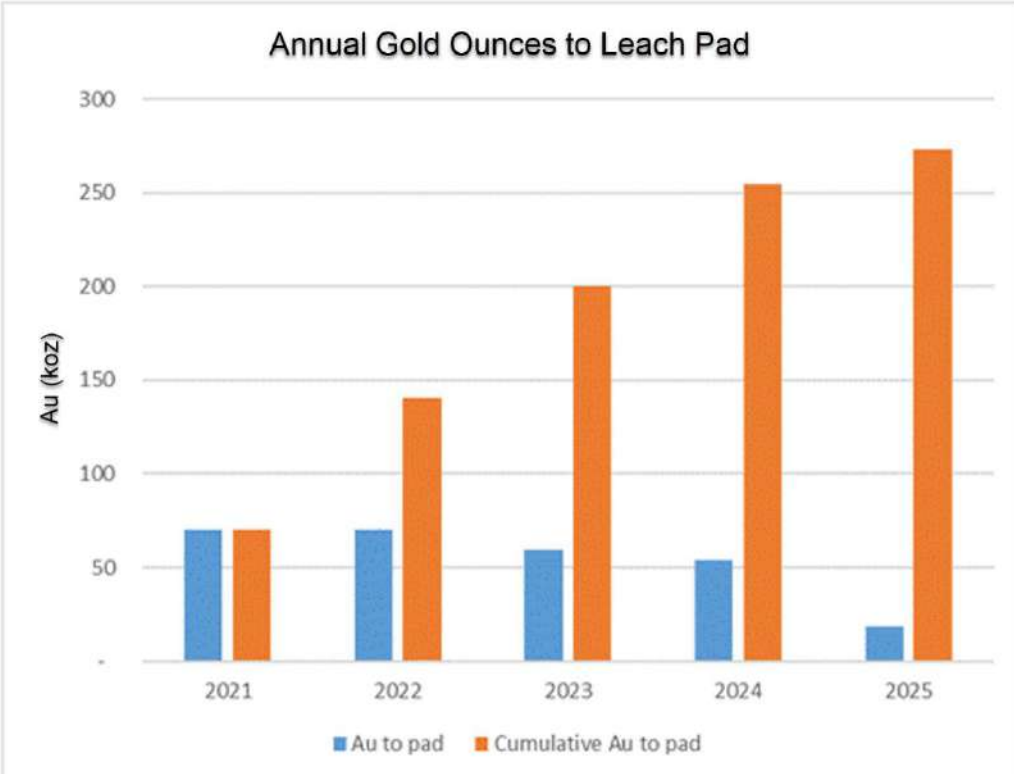
Source: GRP, 2020

16.6.2 Pit Schedule Sequence

The mining schedule begins in July 2020, with mining starting from the North and South Pan open pits

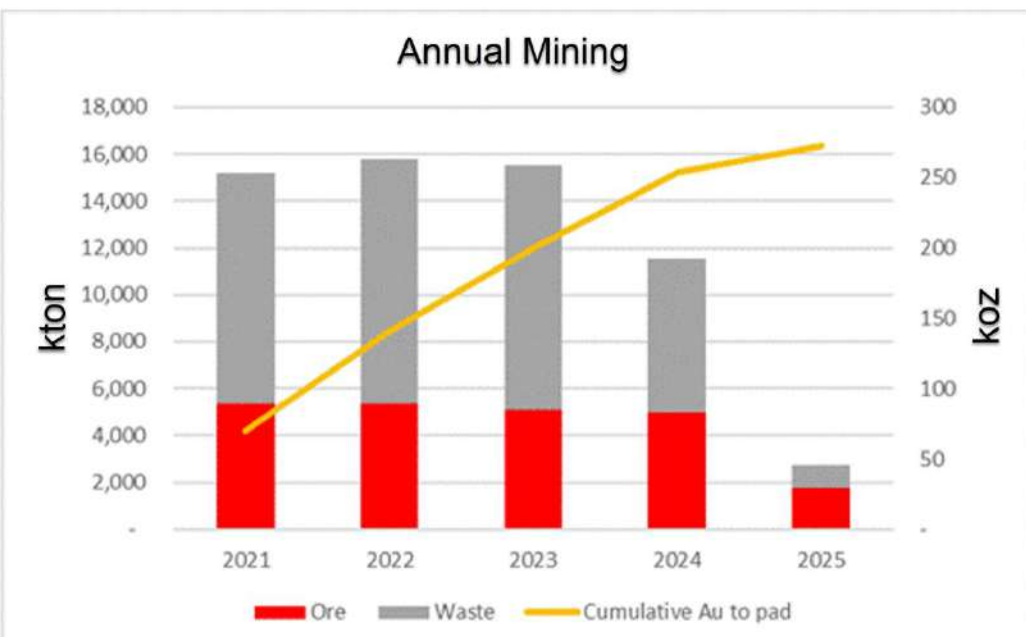
Mining continues with a nominal 60% rock: 40% clay ore ratio for 2020 and 2021. From 2022 onward, the blend adjusts due to pit position and need for durable material due to pad height. The ratio from 2022 onward fluctuates between 50% - 70% rock to 50% - 30% clay.

Charts of gold ounces to the leach pad, ore and waste production, and ore production by pit, by year, are shown in Figure 16-10 through Figure 16-12, respectively. The end of year mine layouts are shown in Figure 16-13 through Figure 16-20.



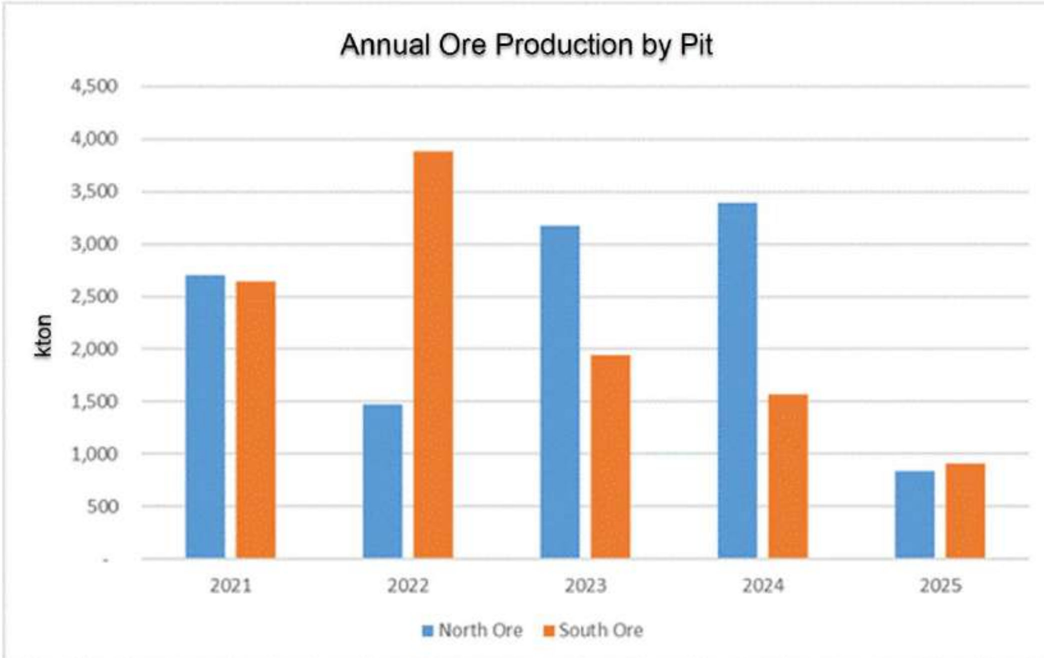
Source: GRP, 2020

Figure 16-10: Contained Gold Ounces to Leach Pad by Mining Year



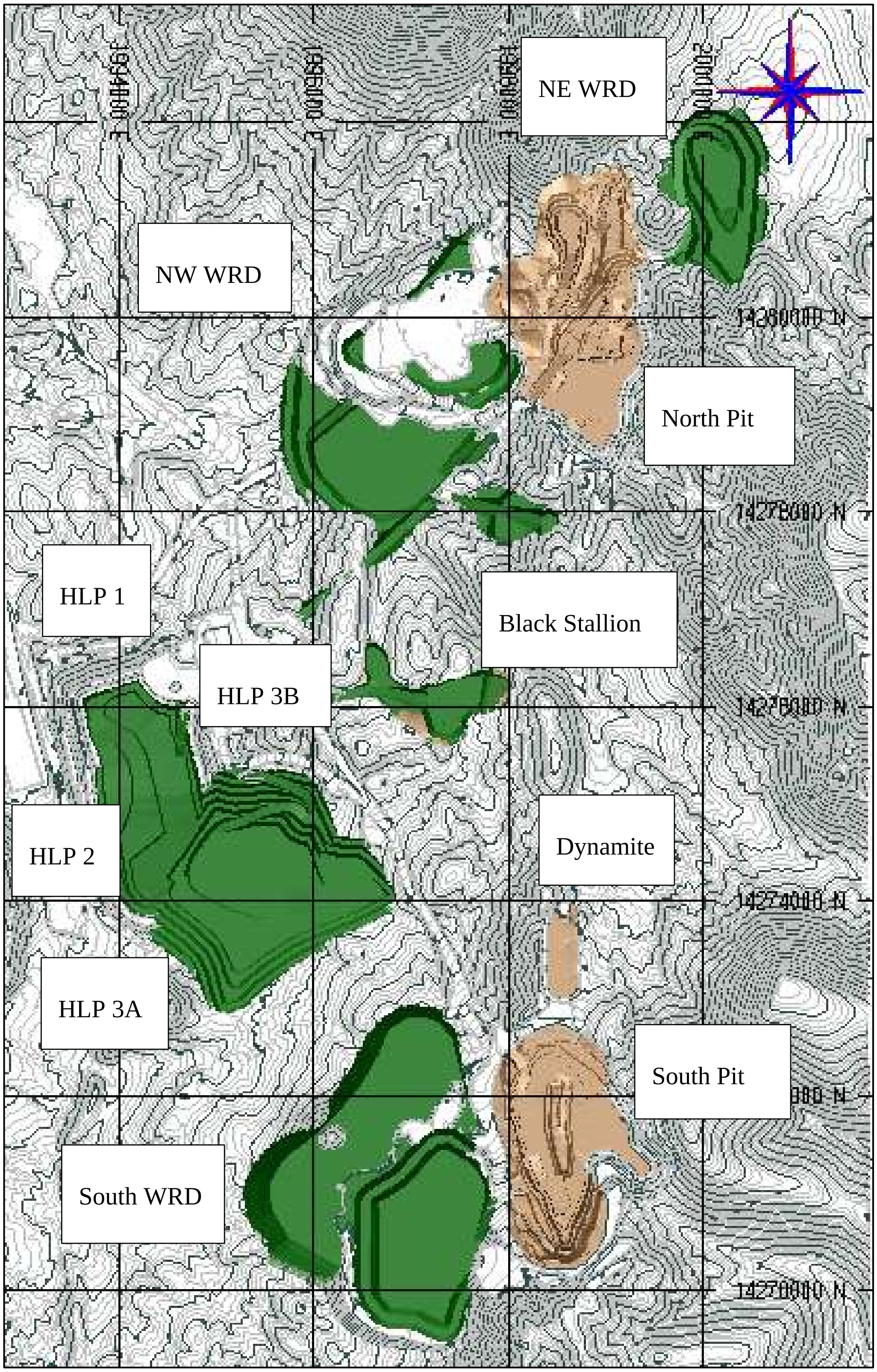
Source: GRP, 2020

Figure 16-11: Ore and Waste Mining (mined tons and contained Au oz) by Mining Year



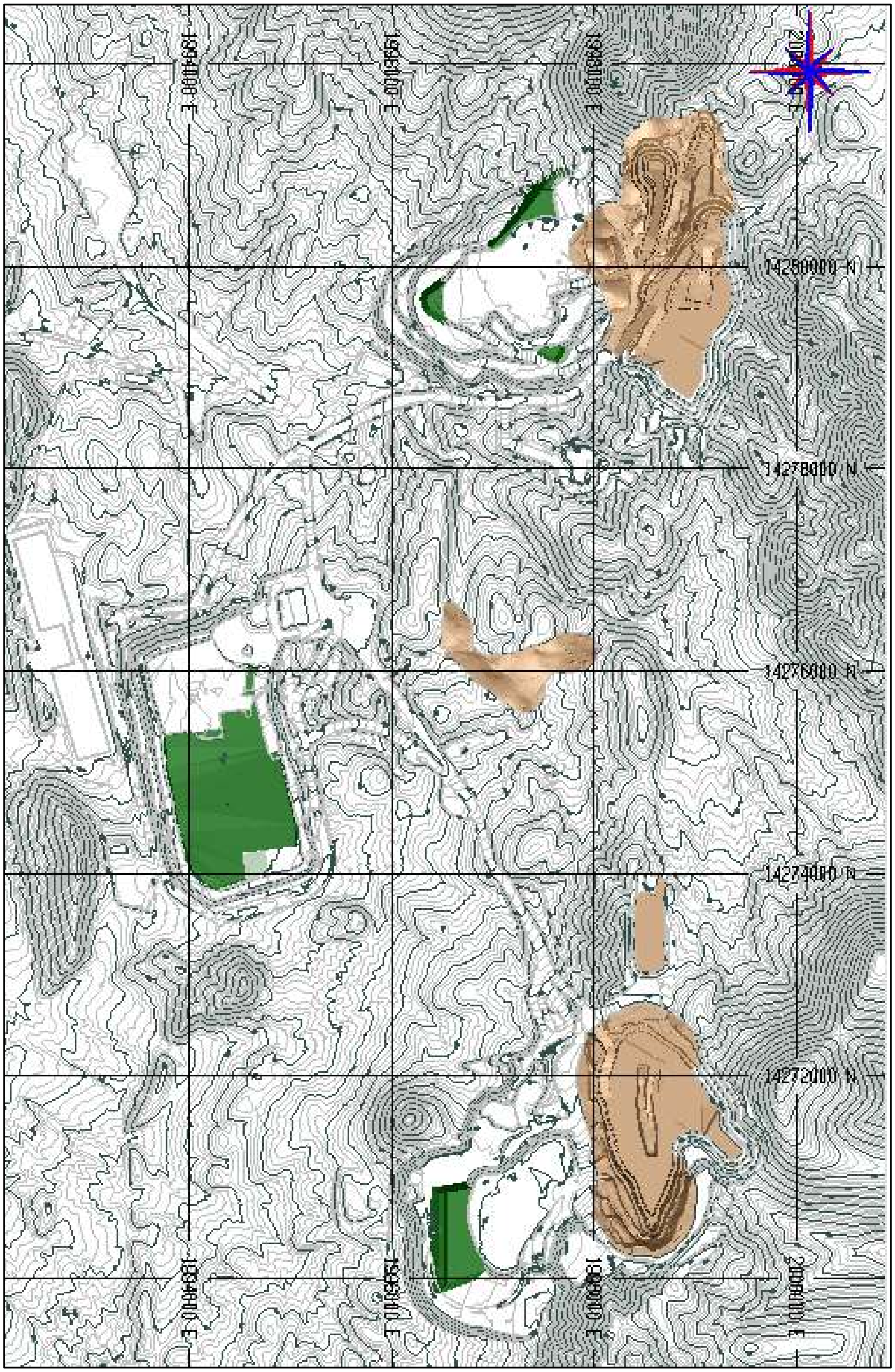
Source: GRP, 2020

Figure 16-12: Ore Production by Pit and Year



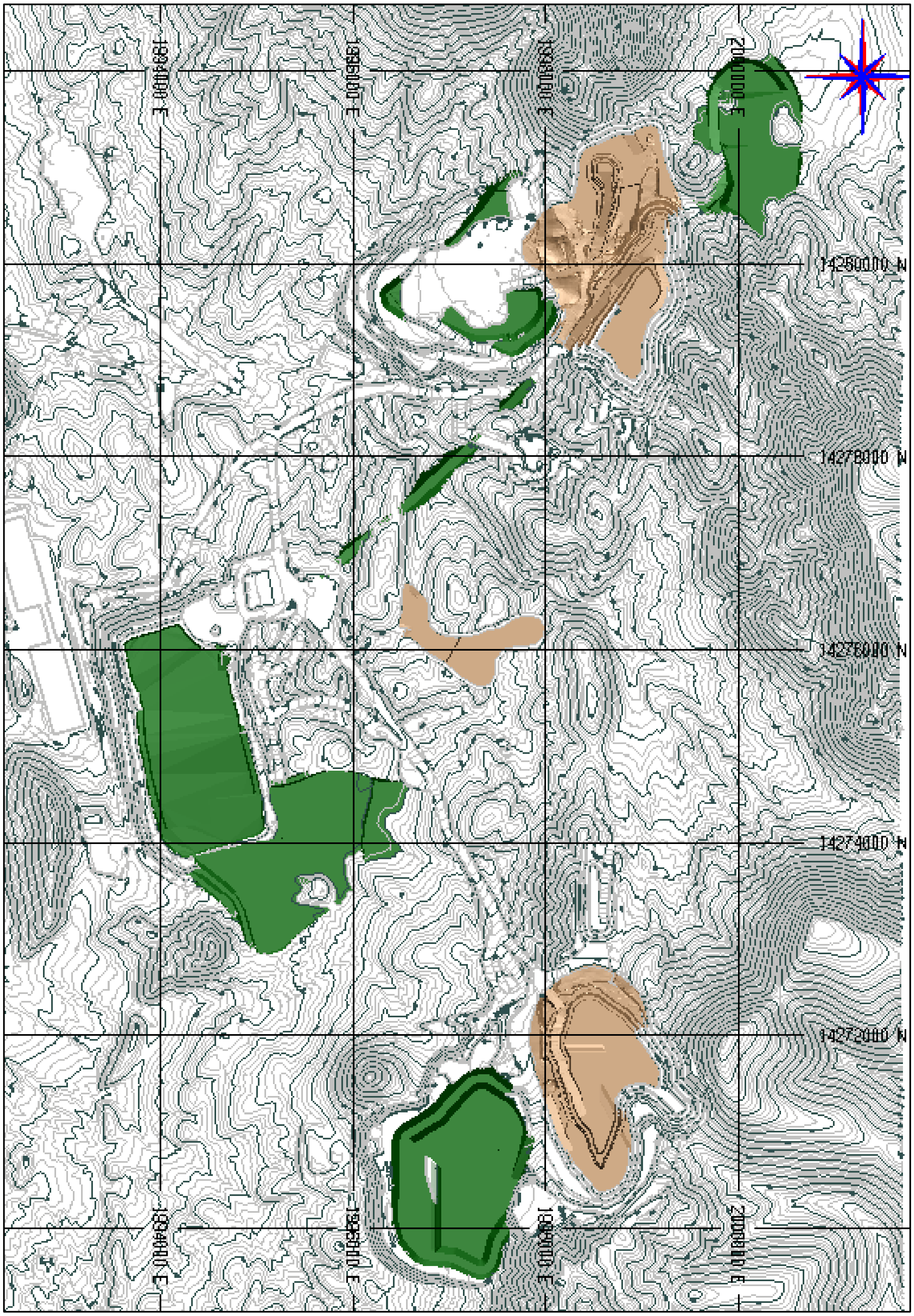
Source: GRP, 2020

Figure 16-13: Starting (EOM June 2020) Topography with Facilities Boundaries



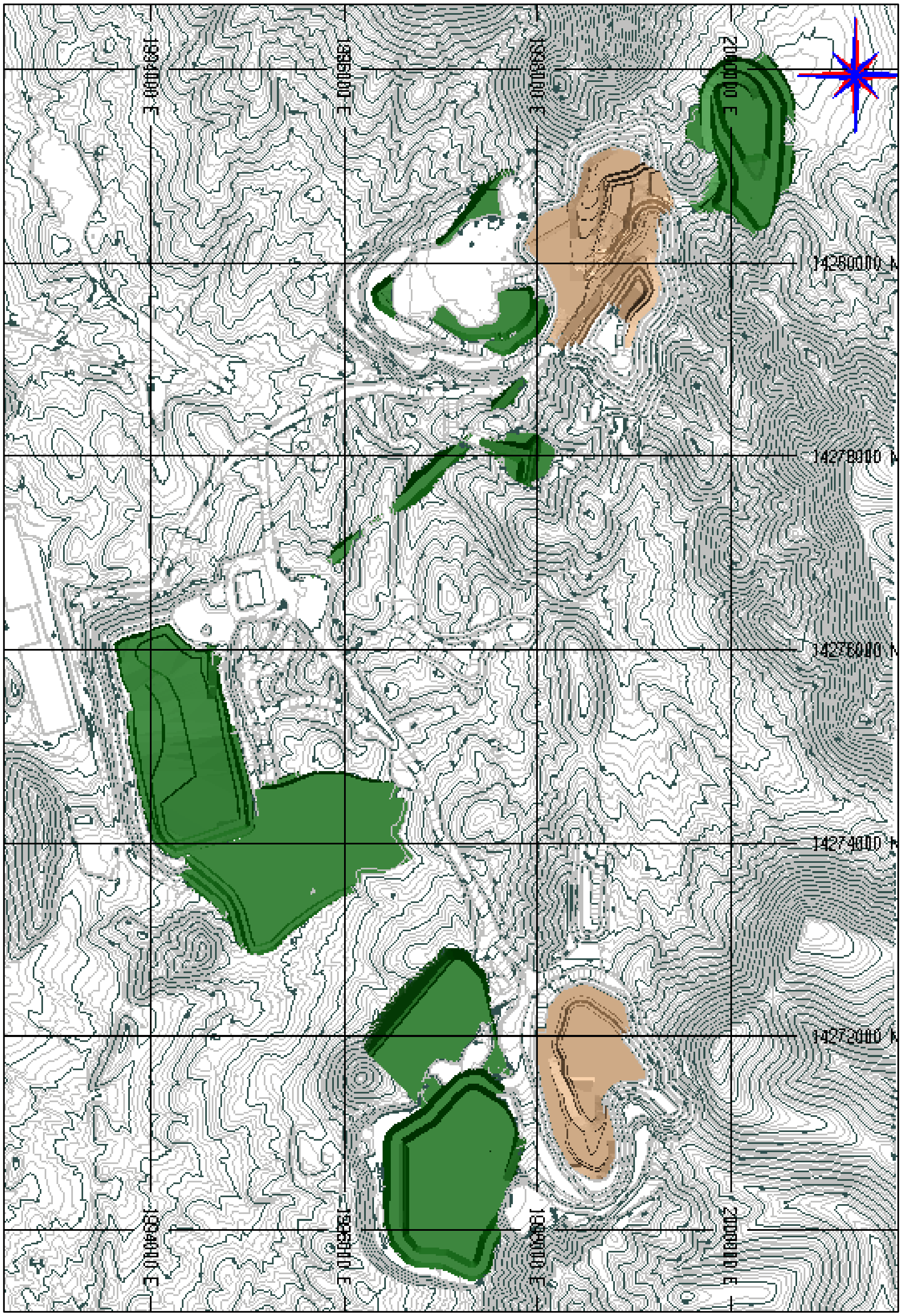
Source: GRP, 2020

Figure 16-14: End of 2020



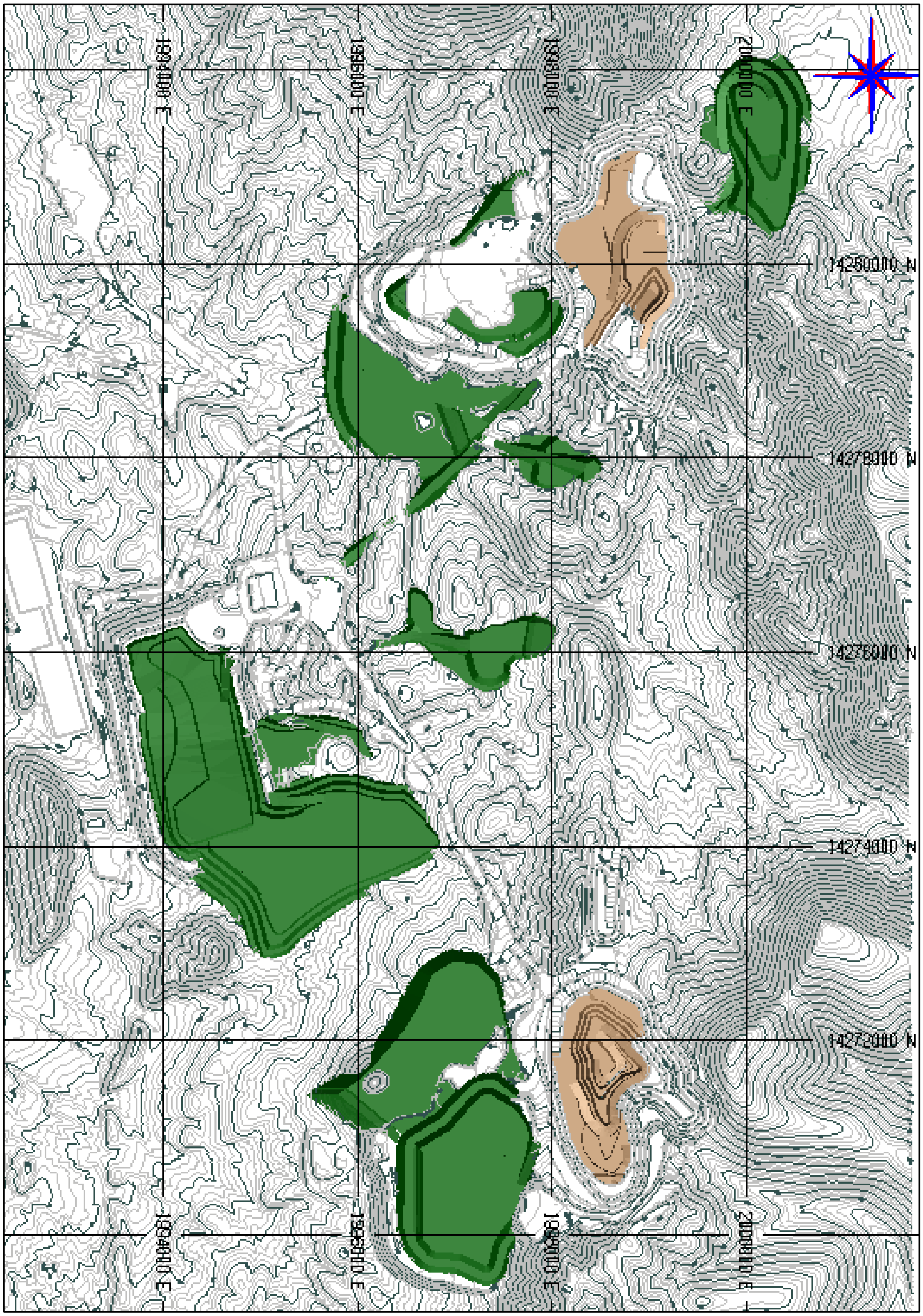
Source: GRP, 2020

Figure 16-15: End of 2021



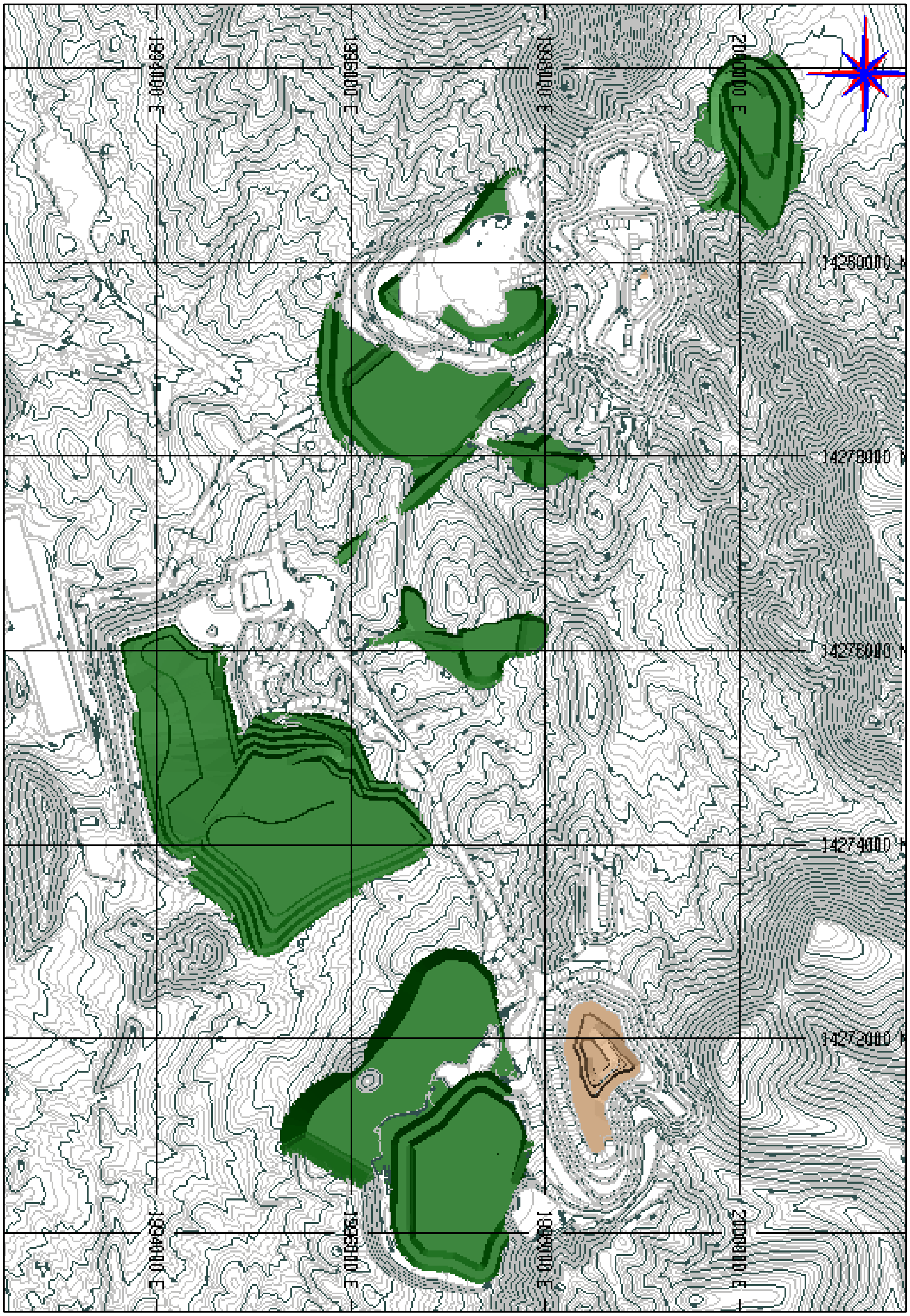
Source: GRP, 2020

Figure 16-16: End of 2022



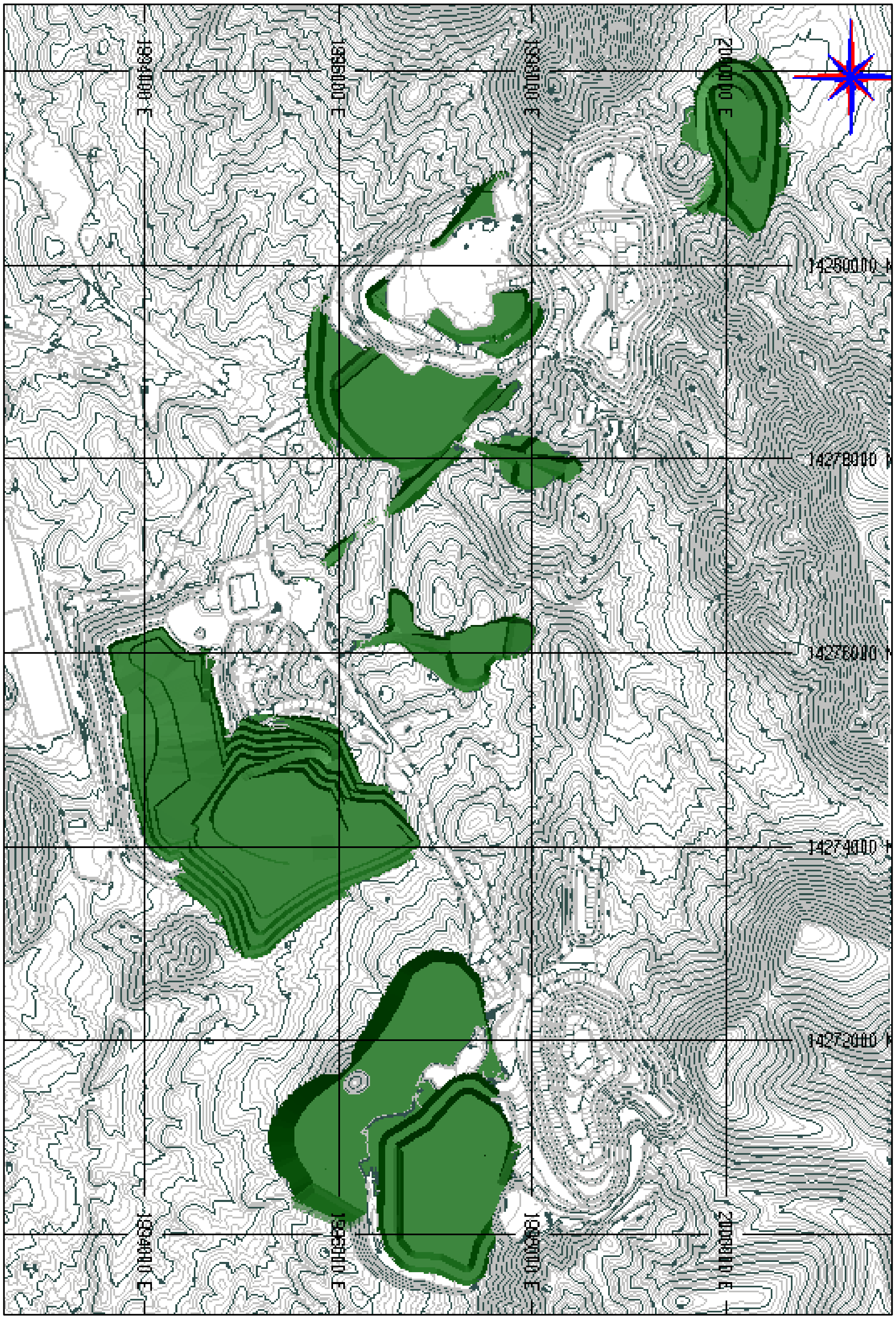
Source: GRP, 2020

Figure 16-17: End of 2023



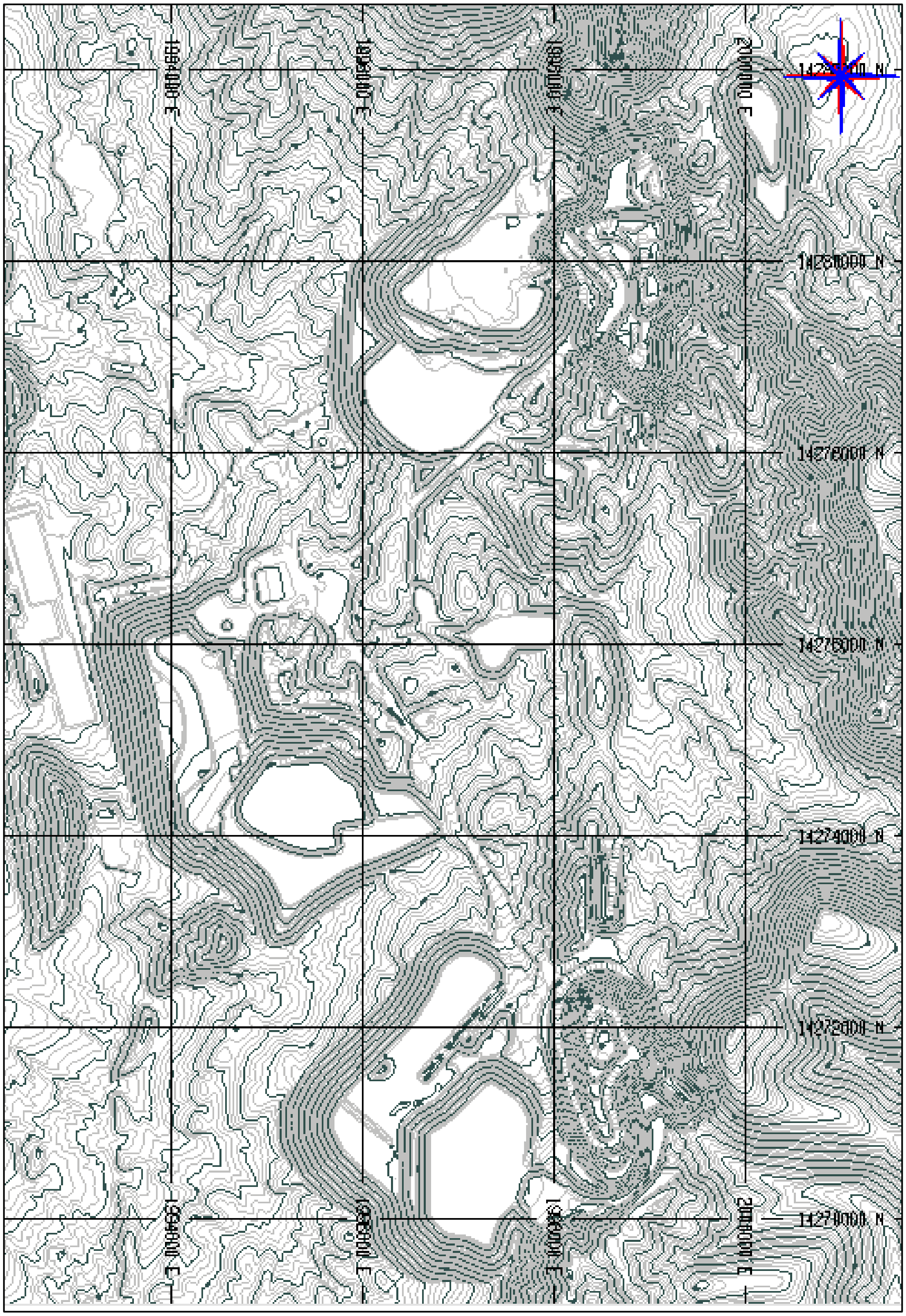
Source: GRP, 2020

Figure 16-18: End of 2024



Source: GRP, 2020

Figure 16-19: End of 2025



Source: GRP, 2020

Figure 16-20: Post-Reclamation Topography

16.7 Waste and Stockpile Design

Waste Rock Storage Facility

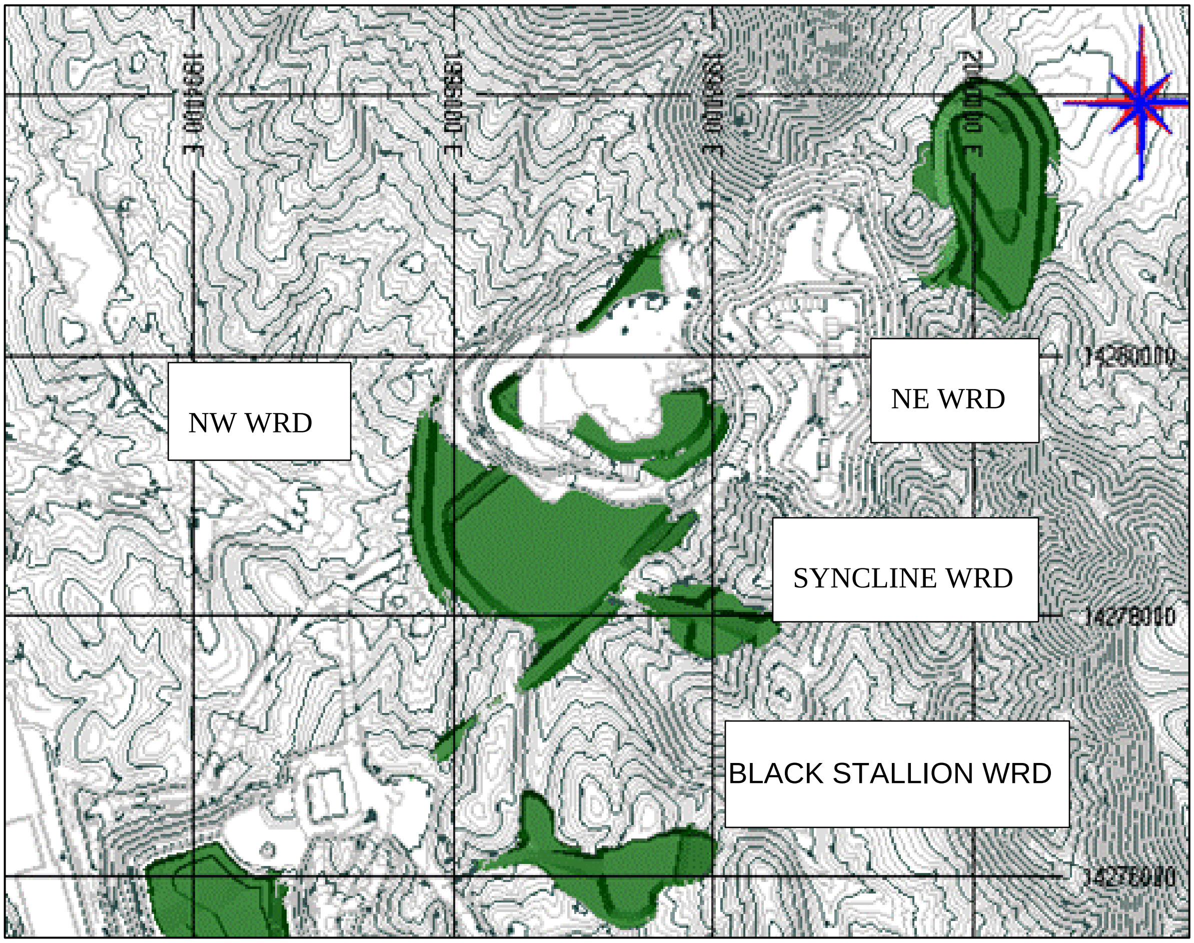
The waste dumps were designed to represent typical haul and end dump facilities. The maximum slope angle of the reclaimed waste dumps is limited to 3H:1V. Approximately 6.1 Mtons will go to the North East WRDA, 8.6 Mtons to the North West WRDA, and approximately 19.3 Mtons will go to the South WRDA. The Syncline Pit will be backfilled with about 1.4 Mtons and the Black Stallion pit will be backfilled with about 4.0 Mtons. The WRDAs are located along the perimeters of their respective pits, as shown in Figure 16-13.

The North Pan waste dumps will be covered with a vegetated soil cover to minimize the long-term potential for metals leaching. A 12-inch thick growth media cover will be placed over the dump.

The final configurations of the North Pan and South Pan waste dumps are shown in Figure 16-21 and Figure 16-22.

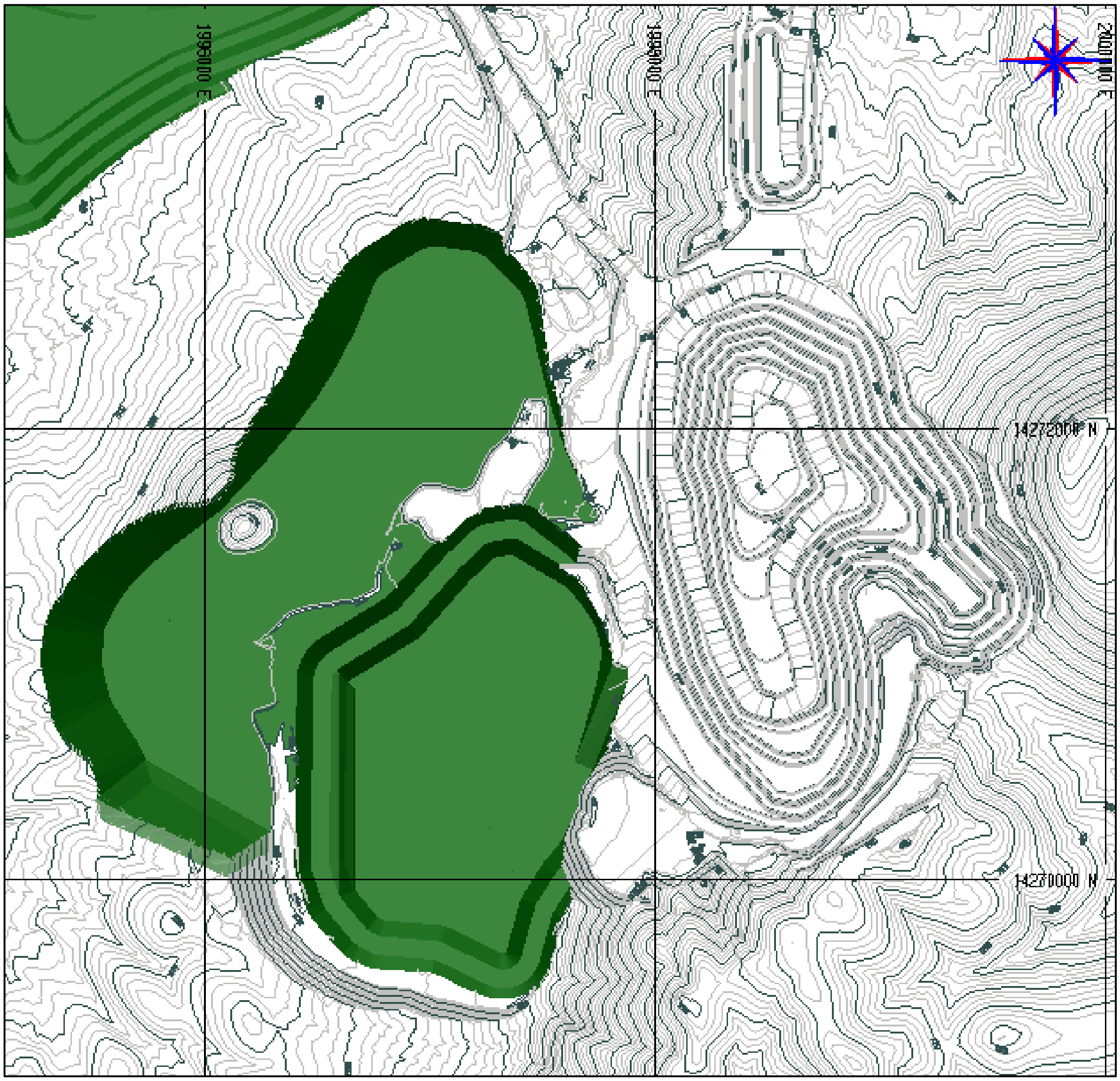
Ore Stockpiles

Two ore stockpiles are located near the crusher. The ore feed pile which is split for rock and clay ore placement will hold approximately 80,000 tons. The second ore pile located near the crusher on the leach pad is the crushed ore stockpile which will hold approximately 95,000 tons.



Source: GRP, 2020

Figure 16-21: North Pan Final WRDA



Source: GRP, 2020

Figure 16-22: South Pan Final WRDA

16.8 Mining Fleet and Requirements

16.8.1 General Requirements and Fleet Selection

All mine production equipment is provided by the mining contractor. Equipment on site includes CAT 992G/K loaders and CAT 777 off highway haul trucks. The contractor utilizes three Atlas Copco DM45 drills for blasthole drilling. Table 16-9 lists the mining fleet equipment numbers required to achieve the production schedule. Presently, there are 11 haul trucks at the mine. The mining contract is a Time and Materials based contract for equipment and manpower that allows GRP to modify the size of the fleet and crews as needed to meet the production requirements. GRP is responsible for supplying fuel to the mining contractor.

Table 16-9: Required Mine Production Equipment

Category	Make	Model	Number of Units
Truck	CAT	777F	10
Water Truck	CAT	773F	1
Water Truck	CAT	777D	1
Grader	CAT	14M	1
Front End Loader	CAT	992K or G	3
Dozer	CAT	D10T	3
Dozer	CAT	D6	1
Blasthole Drill	Atlas Copco	DM45	2

Source: GRP, 2020

16.8.2 Drilling and Blasting

Production drilling and blasting is included in the mining contract. GRP is responsible for providing ammonium nitrate and fuel oil (ANFO) for blasting. The design parameter used to define drill and blast requirements are based on a 6.75 inch diameter blasthole on a 15 ft by 17 ft pattern for all production blasts. Benches are blasted and mined on 20 ft levels with three feet of sub-drill in the North Pit and four feet of sub-drill in the South Pit. Buffer rows and pre-shear are planned to allow for controlled blasting and to minimize damage to the highwalls. The powder factor for the blasting is 0.42 lb/ton for both ore and waste.

16.8.3 Loading and Hauling

The main loading units at Pan are CAT 992K front end loaders. Cat 777 haul trucks with 100-t capacity are the main hauling units; the loaders will require 4 to 5 passes to load the trucks. Dig faces are defined by ore control and are marked in the field with flags and on maps that are provided to the operators. The mine plan calculates the required loader and truck hours needed to meet production targets in the mine schedule. The required hours are presented to the contractor to ensure there is enough equipment and operators to meet the mine schedule. In the QP's opinion, the equipment listed in Table 16-9 is reasonable for an operation of this size and scale.

16.8.4 Support and Auxiliary Equipment

Support equipment will consist of three CAT D10 track dozers and one CAT D9 track dozer as the main dozing units and one CAT D6 utilized for the leach pad. Two CAT road graders service the access road, haul roads, and leach pad along with two CAT water trucks. Mobile light plants will be utilized for lighting the working areas during production in low light conditions. A maintenance service truck supplied by the contractor will be used for field maintenance.

16.8.5 Manpower

Mining personnel is supplied by the mining contractor, which is also responsible for management of the mining crews. GRP technical and mine supervision personnel direct the mining contractor. The contractor currently has one project manager, one operations superintendent, one project coordinator, one safety coordinator, three shift supervisors, one maintenance superintendent, and one administrative assistant on site.

GRP has one shift supervisor to supervise the contractor and manage mining. GRP provides technical staff for mine planning, surveying, and ore control. Required personnel are summarized in Table 16-10.

Table 16-10: Personnel Requirements

	Supervisory and Technical	Operators	Maintenance
Contractor	9	63	Variable, with vendor support
GRP	8	0	0

Source: GRP, 2020

16.8.6 Ore Control

GRP currently implements a blasthole sampling system for ore control. Blasthole cuttings piles are cut orthogonally to the drill hole using a narrow shovel to obtain a representative sample. The sample bags are tagged with a number. The drill hole is then staked and tagged with the same number as the sample. Samples are then delivered to the on-site laboratory for cyanide solution and fire assay analysis.

Prior to blasting, the drillhole locations are surveyed and the cuttings logged for lithology and alteration type determination. This information is then used to develop a geologic map of the blast pattern. This geologic mapping on each blast and bench, with the assay results, are used to design ore blocks. Ore blocks are staked after blasting with lath and pin flags to guide mining. Movement due to blasting is accounted for in the field staking. GRP geologists monitor mining to maintain ore and waste control for proper material routing.

16.9 Mine Dewatering

16.9.1 Water Data Sources

Groundwater monitoring and water supply wells have been installed recently at the Project. Several historical wells in the Project vicinity have also provided groundwater data. There are no springs or bodies of surface water in the Project area.

16.9.2 Surface Water

Surface water from precipitation will be diverted from the open pits by using berms and ditches, which places the water in sediment basis for evaporation, infiltration or overflow.

Best management practices (BMP) are being used to limit erosion and reduce sediment in precipitation runoff from mining facilities and disturbed areas during construction, operations, and initial stages of reclamation. BMP utilized during construction and operations are designed to minimize erosion and control sediment runoff. These BMP include:

- Surface stabilization measures – dust control, mulching, riprap, temporary gravel construction access, temporary and permanent revegetation/reclamation, and placing plant growth media;
- Runoff control and conveyance measures – hardened channels, runoff diversions; and,
- Sediment traps and barriers – check dams, grade stabilization structures, sediment detention basins, sediment/silt fence and straw bale barriers, and sediment traps.

Revegetation of disturbed areas will reduce the potential for wind and water erosion. Following construction activities, areas such as cut-and-fill embankments and plant growth media/cover stockpiles are being seeded as soon as practicable and safe. Concurrent reclamation is maximized to the extent practicable to accelerate revegetation of disturbed areas. Sediment and erosion control measures will be inspected periodically, and repairs performed as needed.

16.9.3 Groundwater

Groundwater is in a carbonate aquifer that is approximately 600 ft below the bottom of the pit. This will not impact the pit highwalls or operations.

16.9.4 Dewatering System

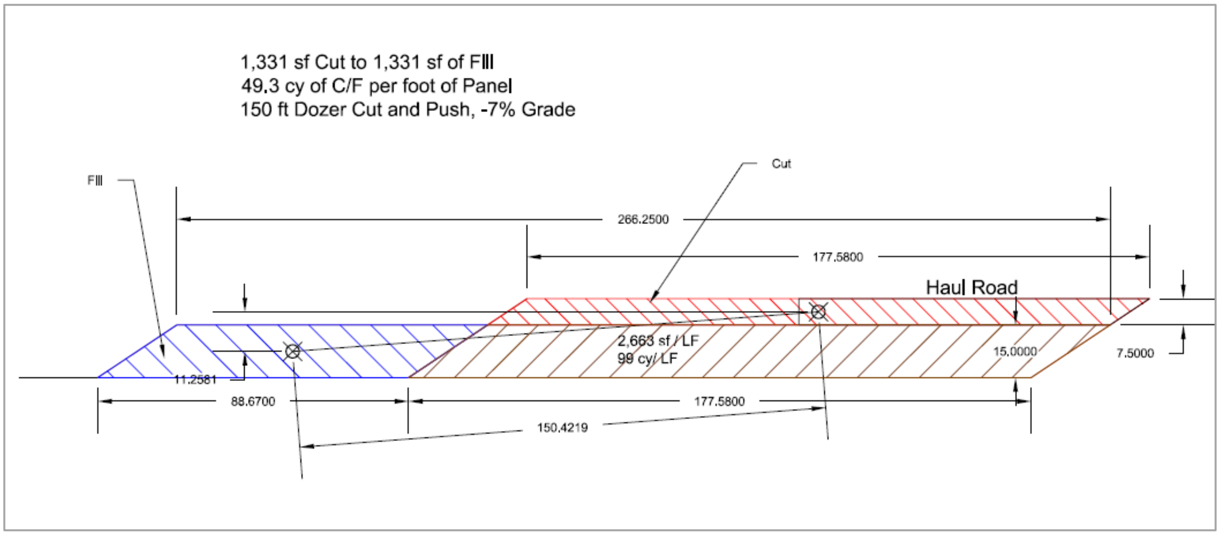
A dewatering system is not necessary for the current mine plan.

17 Recovery Methods

17.1 Historical Operation Method

The initial operation of the heap leach with South Pan ore encountered permeability problems due to the placement methodology of clayey material and lack of blending with rocky material. The combination of ore placement in lifts as high as 50 ft., truck end dumping ore over the dump face leading to high segregation of course and fines as well as excessive equipment compaction on the dump surface all contributed to early permeability issues with the high clay content ROM ores. Leach solution applications much above 0.001 gpm/sqft. resulted in excessive ponding. These areas had to be shut down to remain in compliance with environmental permits and regulations. To improve permeability and gold recovery the first lift of ore placed on the leach pad was partially "capped and fluffed". This process involved placing a 3 to 5 ft lift of rocky material on top of the existing ore and blending that material in with the original high clay content ore to a depth of approximately 15 ft with an excavator. This was then triple ripped to a depth of 7 to 8 ft and leached again. Solution application rates of 0.004 gpm/ft2 were achieved and maintained to improve the rate of gold recovery. The previous owners completed capping and fluffing of approximately 60% of the ore stacked on the first lift. When Fiore acquired the assets the capping and fluffing work continued for the remaining 40% of the first lift material until sufficient area was created to begin mining and blending ores placed on a second lift. Laboratory testing showed that a 60% rock and 40% clay blend would achieve adequate permeability for primary leaching and to sustain flows when up to 160 ft of additional ore stacked on top of the lift. Lower rock/clay ratios achieved acceptable permeability as the heap height increased and ore stacking on top of the blended material decreased.

Fiore also improved the ROM ore stacking methodology to minimize equipment compaction, ensuring blending of rock and clay. The process started with the geologic model which identified the rock types so the mine plan can better anticipate rock and clay quantities for blending purposes. Additionally, an ore control geologist mapped the blasthole drill cuttings and ore faces to ensure proper rock and clay ore identification prior to loading and hauling to the leach pad. The mine department allocated trucks to loaders to achieve the proper blending ratio as they dump ore on the leach pad. All material was placed on the leach pad in approximately 22.5ft lifts with trucks dumping on top. Rock and clay material were blended with a dozer that pushed all material over the dump face. The leach cell, approximately 250 ft x250 ft, was stacked at 22.5 ft for roughly 2/3 of the capacity. Once this was complete, a dozer cuts the lift height down to 15 ft by ripping and pushing the top compacted 7.5 ft of material into the remaining 1/3 of the cell, as illustrated in Figure 17-1. The top surface was then triple ripped with dozers to a depth of 7ft before being placed under leach. This practice was maintained until late 2018 when testing verified that dumping on the 15 ft lift and using the dozer to push and blend ores over the crest maintained adequate permeability. Fiore continued placing ROM ore in this manner until the crushing and stacking system was installed.



Source: Fiore, 2017

Figure 17-1: Leach Pad Dozer Cut/ Fill for Panel

17.2 Processing Methods

Metallurgical testing at site using test heaps as well as laboratory testing at RDi indicated improved recovery of 10% to 20% by crushing the material as compared to ROM ore. Hence, Fiore management installed a primary crusher (Lippman 36 x 50 Jaw), a cement addition conveyor, several jump conveyors and radial stacking conveyor. The list of equipment installed is given in Table 17-1.

Approximately 14,000 tpd of ore consisting of a 60:40 ratio of hard to soft ore is mined from North and South Pan pits and crushed to nominal 4 inches and combined with 2 to 3 lb/ton of cement on the conveyor. Dry cement mixing takes place through the cascading action of the material at the four belt transfer points between the crusher and the radial stacker before final mixing in the drop from the stacker to the pile. Barren solution is added at a rate of 10 to 25 gpm total to the transfer points. Final moisture from stockpile grab averages 6% to 8%. A partial agglomeration of fines is expected to be produced by this process which in laboratory test work indicates will have an improvement in solution flows for crushed and blended hard and soft ores

Crushed material is loaded into trucks from the crushed ore stockpile, dumped on the top surface of the leach pad cell, and pushed over with a dozer.

Table 17-1: Crushing and Stacking Design Parameters

Equip No.	Name	Motor HP	Width, IN	Conveyor Length (ft)	Total Belt Length
	Vibratory Feeder	75			
	Jaw Crusher	250			
CV01	Primary Crusher Discharge Conveyor	25	54	45	105
CV02	Cement Addition Conveyor	30	48	65	145
CV03	Jump Conveyor #1	30	42	70	155
CV04	Jump Conveyor #2	30	42	70	155
CV05	Jump Conveyor #3	30	42	70	155
CV06	Radial Stacking Conveyor (Main)	30	42	100	215
CV07	Radial Stacking Conveyor (Stinger)	30	42	80	175

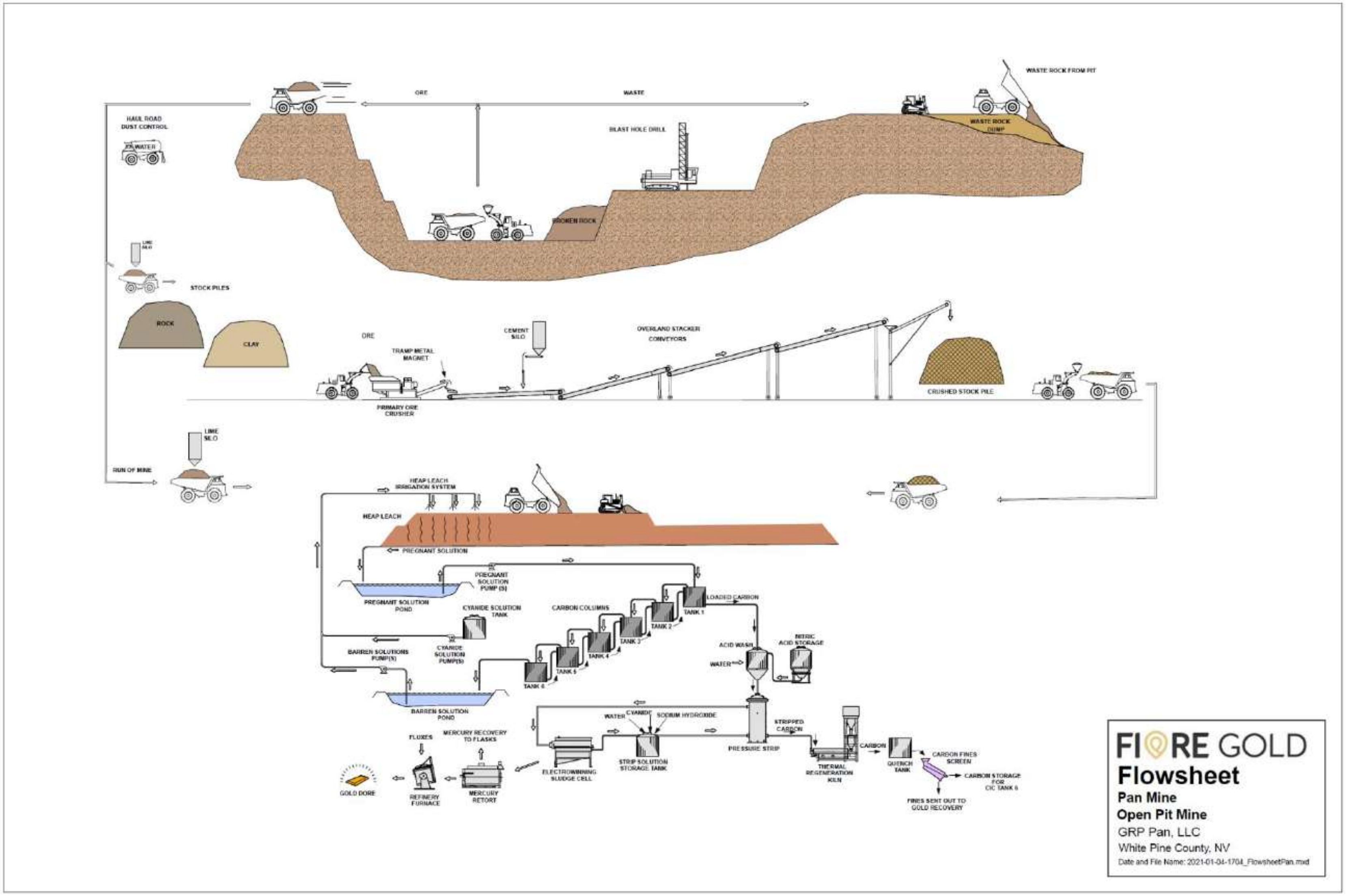
Source: ProSolv, 2020

Prior to dumping a new lift, the dump toe surface of the pad is ripped in two directions using a D10 dozer with a 6 ft to 8 ft shank. The ore is stacked in nominal 15 ft lifts. Trucks dump the bulk of the load on top of the cell material and it is pushed off with a dozer. The surface to be leached is cross ripped using a 6 ft to 8 ft shank. The final rip is perpendicular to the direction the drip emitters will be ripped in. Each cell is 250 feet x 250 feet top surface dimension. Emitters used are 1 gph spaced 24 inches in drip line and 36 inches on the header. The application rate generally does not exceed 0.0026 to 0.003 gpm/ft^2. The area under drip averages 1.45 M to 1.6 M ft^2 at an average application rate of 0.0022 gpm/ft^2.

17.3 Flowsheet

The process flowsheet including the recently installed crushing system is given in Figure 17-2. The ores are mined concurrently from both North and South Pan pits and trucked to the crushing facility. Properly blended hard and soft ore, as discussed in Section 17.2, is crushed, mixed with cement and some barren solution, and trucked to the pad.

The existing pregnant and barren solution ponds constitute a solution management system that will accommodate all process solutions including meteoric waters that enter the system as a result of the 25-year, 24-hour storm event. Barren solution is pumped from the barren pond via submersible and booster pumps to the top of the ore on the heap leach pad and the ore is irrigated using drip tube emitters. Cyanide levels are monitored and controlled with cyanide addition to the barren line as it pumps solution to the pad. Pregnant solutions report to the pregnant collection pond and are subsequently treated in the existing conventional ADR plant.



Source: GRP, 2020

Figure 17-2: Mining and Processing Flowsheet for Pan Mine

17.4 Plant Design and Equipment Characteristics

The detailed description of the plant design and installed equipment was provided in the July 2017 Technical Report. The installed crushing equipment is provided in Table 17-1 and the process flowsheet is given in Figure 17-2. Additional capabilities/facilities added in the last three years are briefly discussed in this section.

17.4.1 Analytical Laboratory

The analytical laboratory at the Pan Mine is located adjacent to the Administration Building and is housed in a Pre-engineered building. It contains all the necessary facilities and equipment for sample preparation and gold determination via fire assay and cyanide shake procedures with atomic absorption (AA) spectrometry or gravimetric finish. The facility is currently complete and has all equipment required to fully support mine and recovery plant operations. In addition to the analytical facilities, the lab contains offices and a sanitary facility for the technicians.

The sample preparation area has drying ovens and crushing, pulverizing, and splitting equipment for up to 250 samples per shift. The sample preparation area has dedicated ventilation and make-up air systems for dust control. The fire assay section includes two large electric furnaces for fusion and one smaller furnace for cupellation. The fire assay section has a dedicated ventilation system. The AA section has two AA machines (one dedicated to mercury analysis), hot plates, centrifuges and an acid fuming hood. The weighing area has a microbalance and a computer station for sample and analytical logging and reporting.

The analytical laboratory is capable of 250 cold cyanide shake assays and 120 fire assays (FA) per shift. All blasthole samples are assayed by cyanide shake for soluble gold metal determination. Then all samples above the cutoff mark are assayed by FA, as recoveries are specified from the contained grade and for resource and mine model reconciliation.

The assay laboratory work schedule consists of two crews of three, working four ten-hour days, with overlapping coverage on Wednesday. A lead person works Monday to Thursday to coordinate tasks to be completed, enter assays, run reports, and train employees.

17.4.2 Metallurgical Laboratory

A metallurgical laboratory has been setup in a space at the ADR plant. This lab has the ability to complete column and bottle roll tests. Columns are available at a variety of sizes up to six 18 in x 3 ft., which are primarily used for the coarse monthly crusher composites. The met lab also has a drying oven, Gilson screen shaker, wet sieves, filter pressure, pH meter, and titration equipment.

A crushed ore sample is taken daily by the leach pad crew from the crushed ore stockpile. The sample is taken by digging into the face of the pile and removing several buckets of material that is placed to the side. The material is roughly blended and cut to produce ~5 gallons of rock per day. This sample is taken to the laboratory, where it is split into an assay samples and coarse sample. These are placed into a 235°F oven for 12 hours or until dry. The coarse sample is poured into the monthly composite barrels. The assay sample is weighed before and after drying to determine the moisture content and is then crushed to P80 of 6 mesh (0.132 inch). The sample is then manually riffle split to create a 200-gram charges, one for assay and one to add to weekly composite. The assay charge is pulverized to 200 mesh and then assayed in duplicate for Cyanide Shake and Fire Assay.

The coarse monthly composites are blended and split to run duplicate columns and bottle rolls to determine the gold extractability in order to be compared to the model. The weekly crushed composites are blended and split to run duplicate bottle rolls each week. Results from the bottle roll tests are turned around rapidly enough to make operational changes if poor recovery is detected.

17.5 Current Operational Results

Fiore (previously GRP) management has made significant changes (including installation of crushing and cement mixing) over the last three years to operating methods in order to improve gold extraction from the deposit. The operational results are discussed in this section.

17.5.1 Tonnage to Leach Pad

Approximately 14,000 tpd of ROM and crushed ore are stacked on the leach pad. The plans are to crush 100% of the ore but only 17.3% and 82.8% of crushed ore was stacked in 2019 and first half 2020 as shown in Table 17-2. The crushing system became operational in July, 2019.

Table 17-2: ROM and Crushed Ore Stacked on Pad

	2018	2019	2020 (Jan-June)
Crushed Ore, Tons	-	859,849	3,346,880
ROM	5,172,946	4,115,420	694,851
Total	5,172,946	4,975,269	4,041,739

Source: ProSolv, 2020

17.5.2 Gold Recovery

The yearly gold recovery at Pan is summarized in Table 17-3. There has been a steady improvement since the Fiore management took over the operation.

The significant improvement in gold extraction in 2019 may partially be a result of installation of the crushing circuit but is primarily due to improvements in operating procedures.

Table 17-3: Yearly Gold Recovery

Year	Gold Recovery (%)
2017	33.2
2018	46.5
2019	57.3
2020 (June)	54.1

Source: ProSolv, 2020

The cyanide shake and fire assay gold results for 2020 are presented in Table 17-4. These results indicate that the ultimate gold extraction for the ore (pulverized samples) should be 76.2% (average of values in Table 17-4). Historical test work data showed recoveries of crushed hard and soft ore after 60 days of leaching at 41% and 69% respectively. Hence, 60:40 blends of hard and soft ROM ore are projected to have initial gold recovery of 51%. This was achieved in 2019 and early 2020.

Table 17-4: 2020 Data for Five Assay and Cyanide Shake

Quarter 2020	CN Shake opt Au	Fire Assay opt Au	CN/Fire (%)
1st	0.0117	0.0150	78.06
2nd	0.0116	0.0145	79.65
3rd	0.0089	0.0089	69.13
4th	0.0148	0.0190	77.97

Source: ProSolv, 2020

A primary crushing circuit was installed based on laboratory and test heap results which indicated 10% to 15% improvement in gold extraction when 50:50 ratio of hard to soft ore was crushed to nominal 1 inch as compared to ROM ore. The projected gold recovery should be 61% to 65% (average 63%) on material crushed to 1 inch. The initial recovery for 2020 till June is 54.1%. This is despite the fact that 82.8% of the ore was crushed to nominal 4 inch and mixed with cement. Hence, the benefit of installation of primary crusher and reducing the size of the ore to minus 4 inch likely has a minimum benefit of improvement of gold recovery (i.e., ±4%). The benefit related to gold extraction due to primary crusher is estimated to be 3% to 5% based on performance in early operations. Ultimate recovery should be verified by running static bucket leach tests on sized material and column leach tests on the crushed and cement mixed ore.

17.6 Operating Cost

The operating cost is an accumulation of costs for the various components namely, reagents, power, water, labor and G&A.

17.6.1 Reagents

The breakdown of the reagents cost per ton are given in Table 17-5 for the three years of operation. The reagents cost per ton has increased from $0.38 in 2018 to $0.54 in 2020 mainly due to switching from lime to cement mixing of crushed ore. However, on a per ton basis all reagent costs have increased.

Table 17-5: Reagent Cost Per Ton of Ore for 2017-2020

Reagent	Year								
	2018			2019			2020, June		
	lbs	$/lb	$/ton	lb.	$/lb	$/ton	lbs	$/lb	$/ton
Carbon	16,000	1.992	0.0062	28,000	2.254	0.0127	18,700	1.686	0.0078
Caustic	351,063	0.15	0.0102	366,987	0.156	0.0115	299,743	0.162	0.0120
Cyanide	695,114	1.529	0.2054	819,110	1.532	0.2523	824,632	1.205	0.2459
Cement	-	-	-	296,997	0.111	0.0066	733,893	1.297	0.2355
Lime	7,007,515	0.115	0.1553	5,302,866	0.116	0.1232	954,500	0.117	0.0277
Acid	164,476	0.183	0.0058	203,427	0.402	0.0164	130,573	0.249	0.0080
Total			**0.3829**			**0.4220**			**0.5369**

Source: ProSolv, 2020

17.6.2 Power

The power consumption in kwh and the cost per ton for power are given in Table 17-6 for 2018-2020. The power consumption increased in 2019 partially due to processing of higher tonnage (14,000 tpd from 10,000 tpd) but increased significantly due to installation of a crushing and stacking circuit. However, overall cost/ton has increased from $0.070 to $0.092.

Table 17-6: Power Cost Per Ton of Ore for 2017-2020

	2018	2019	2020, June
Consumption, kwh	4,563,000	5,162,400	4,816,800
Cost, $/kwh	0.079	0.08	0.077
$/ton	0.071	0.0826	0.0919

Source: ProSolv, 2020

17.6.3 Water

The peak make-up water requirements were estimated in 2017 PEA to be 520 gpm. The water source for the project is the production water well PW-1, located approximately three quarters of a mile north of the ADR plant and PW-2A located approximately 2,000 ft. southwest of the ADR plant. PW-1 and PW-2A wells are equipment with submersible pumps which pump to an enclosed tank located three quarters of mile north of the ADR plant at the 6520-ft. elevation. A third backup well PW-3 has been drilled near the ADR plant and could be put into service if either of the other wells failed. The system is designed for a peak flow of 5,000 gpm and consistent delivery of 3,800 gpm. No problems related to shortage of water has been experienced at the mine site. The cost of water is estimated to be $0.01/ton of ore processed.

17.6.4 Manpower

The Fiore man power at the mine site is divided into two sets, namely (1). 24 hours, 7 days per week, and (2). 10 hours, 5 days per week schedule. Labor in each category for 2017 to 2020 is listed in Table 17-7 and Table 17-8. Management and technical labor are listed in Table 17-9. The total number of employees at the mine site in 2020 is 44.

Table 17-7: 24-hr/7-Day Per Week Labor

Location	Per Shift	Total
ADR supervisor	1	4
ADR operations	1	4
Crusher/Stacking	2	8
Total		**16**

Source: ProSolv, 2020

Table 17-8: 10-hr/5-Day Per Week Labor

Location	Per Shift	Total
Leach pad	3	6
Assay lab	4	9
Mechanical	2	4
E&I	1	2
Total		**21**

Source: ProSolv, 2020

Table 17-9: Management & Supervision

Position	No.
Process Manager	1
Senior Metallurgist	1
Metallurgist	1
Maintenance Supervisor	1
Maintenance Planner	1
Refiner	1
Leach/Utility Supervisor	1
Total	**7**

Source: ProSolv, 2020

18 Project Infrastructure

The following introductory information is from Gustavson, 2015. Content in the rest of this chapter was written or edited in 2020 for this report.

The Project is located five miles by an all-season gravel road from US Highway 50, a major east-west, two-lane paved highway through central Nevada. Highway 50 connects to the towns of Eureka, 25 miles to the west and Ely, 60 miles to the east. Both towns supply housing for mine personnel. In addition, Ely has some mine vendors and support services. Elko, Nevada is a major hub for mining vendors and support services and is approximately 140 road miles to the north.

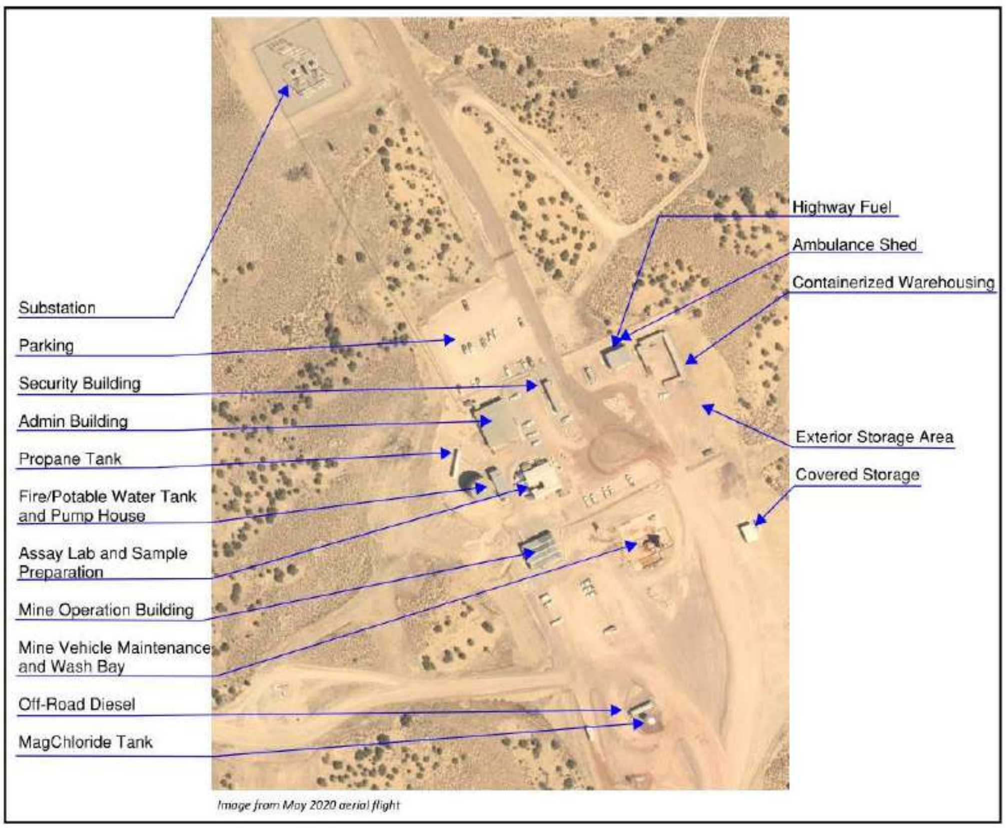
Airline service is available in Elko, Reno, Las Vegas, and Salt Lake City.

18.1 Infrastructure and Logistic Requirements

18.1.1 On-Site Infrastructure

The Project is a fully operational mine with infrastructure constructed by the previous operator. The following is a brief description of the existing infrastructure. A crusher was installed in 2019.

Figure 18-1 shows exiting infrastructure at the administrative office area.



Source: GRP, 2020

Figure 18-1: Existing Administrative Area Infrastructure

18.1.2 Water Supply and Site Water Management

GRP Pan LLC leases water rights with a total consumptive use limitation of 1,200.69 acre-feet annually. The peak diversion rate under all permits is 4.469 cubic Feet per second (2,005 gpm). This is equivalent to a continuous annual pumping rate of 744 gpm and is sufficient for all of the Pan Project's needs, as summarized in Table 18-1. Predicted periods of additional water consumption during leach pad expansion are limited to four months or less, averaging 174 gpm over a 12-month period, assuming a peak demand of 1.0 million gallons per day during major earthworks.

Table 18-1: Maximum Water Usage

	Required Makeup GPM
Ore	200
Roads/Dust Control	300
Operations	100
Construction	200
Total	**800**

Source: GRP, 2020

Water is currently extracted from two wells, PW-1 and PW-2A, which were constructed to depths of approximately 900 ft and have static water levels at approximately 640 ft. Both wells are fully equipped and operational. The well PW-1 is equipped with a 125 HP pump and can deliver approximately 500 gpm. Well PW-2A is equipped with a 250 HP pump and is capable of delivering approximately 800 gpm. PW-3 has been drilled but does not have a pump installed at this time.

Water from PW-1 meets Nevada drinking water standards and will feed the potable and process water systems as well as fire suppression systems for all facilities. Well PW-2A has slightly elevated arsenic levels and is used for process water only. A chlorination system may be necessary to condition potable water supplied to the administration offices, security and safety building, assay laboratory, and process plant.

Fire water is supplied to GRP's and mining contractor's offices, assay laboratory, security/safety building, ADR plant, and refinery. The fire suppression system is automated and includes a diesel-powered firewater pump located in the pump-house adjacent to the fire water storage. Fire water is reserved and physically separated in the bottom half of the tank. In addition to the fire water pumps the pump-house also accommodates the process water distribution pumps, the truck wash pump, and potable water distribution pump.

Two septic systems were constructed. One serves the administration offices, assay laboratory and guard-house/safety building. The second system serves the process plant. Portable toilets will be placed at the mining and crushing areas as necessary.

18.1.3 Service and Access Roads

The mine access road connects the project site to US Highway 50, approximately 5 miles from the front gate of the property. The access road is an all-weather gravel road. GRP is responsible for all road maintenance, including snow removal. In the summer, GRP applies magnesium chloride to the road for dust control.

Mine access and haulage roads have been established from the mining areas to the leach pad and waste rock storage facilities and to the administrative areas. New haulage roads may be constructed as required to access new waste rock storage areas and access to the planned crushing facilities.

In Q1 2020 a road was construction on existing BLM and County two-track roads to improve access to GRP's neighboring Gold Rock Property. This road is currently used to support the ongoing exploration program.

18.1.4 Mine Operations and Support Facilities

The mining contractor uses a reinforced concrete pad for tire and large component maintenance work. Adjacent to this pad is a separate truck wash pad with high pressure monitors and oil separator.

Diesel and gasoline are purchased in bulk and stored on site at two refueling depots. Both fuel facilities have been constructed using double wall tanks as a means of secondary containment. Mining and on-site diesel-powered mobile equipment are fueled at the 30,000-gallon storage tank. Over-the-highway diesel vehicles and gasoline powered vehicles refuel at the split tank having a capacity of 6,000 gallons of diesel and 2,000 gallons of gasoline.

18.1.5 Process Support Facilities

The process building is a pre-engineered, high-bay/low-bay steel building, with a footprint of 13,000 ft^2. The 30 ft high-bay section of the building contains all of the ADR process equipment, including the carbon-in-column (C-I-C) train, plant air system, and reagent storage tanks. The low-bay section houses the vault, refinery, and two security offices. The refinery is constructed with concrete-filled and steel-reinforced concrete blocks.

The laboratory is a pre-built modular building that is sized and fully equipped to handle all blasthole and process samples, including sample preparation and assaying. It includes a drying oven, fire assay kiln, and an instrument for AA analysis.

Buildings are heated with propane. Propane is also used by the carbon regeneration kiln and gold melt furnace. Tanks for propane storage are located in the administrative area and the process plant area.

18.1.6 Additional Support Facilities

The mine office building is a single-story, 4,320 ft^2 modular building that houses all administrative and technical staff. Meeting and training rooms are included in this building. It is located near the main access gate to the mine site.

The security and first aid building is a 240 ft^2 modular building which is located at the main gate. Standard security measures and operating procedures are established to control access to the site and secure the gold product. Security cameras record key areas around the mine site. Magnetic door locks with electronic key pads are used to control property gates and facility access.

The perimeter of the mine site is fenced with 3-strand barbed wire to keep out unauthorized personnel and grazing cattle. A security chain link fence is installed around the two process water ponds.

The emergency vehicle garage is a 1,200 ft^2 pre-engineered building to house the emergency and rescue vehicle.

The mining contractor has a single-story, 2,880 ft^2 modular building for administrative staff offices, a crew line out area, and training rooms.

A small pre-engineered steel building provides short-term storage for hazardous materials before they are shipped off-site to approved hazardous waste storage or disposal facilities.

A microwave-based communication system is on site to support internet and VOIP necessary for daily operation of the mine, plant, and office. The mine site also has good cell phone coverage.

A two-way radio system is established at the Project. Plant operators, survey crews, supervisors, and the mine contractor have portable hand-held radios for operational communications.

18.1.7 Power Supply and Distribution

The project is connected via a 69 kV utility power line to the mine substation with two transformers, each with a maximum capacity of 8,300 M Volt-Amperes, installed for 100% redundancy and being more than able to support all anticipated load additions and project expansions. The initial connected electrical load for the current operation is approximately 2.4 megawatts. The normal operating demand load is estimated to be 2.1 megawatts. When crushing, screening and agglomeration equipment are added, the demand load will increase to approximately 3.6 megawatts. Current power cost is 7.3 cents per kWh under a contract that limits power demand to 2.5 megawatts. When the anticipated load exceeds this level, a new contract will need to be negotiated with the utility company.

Site power is distributed throughout the mine site with three phase overhead powerlines at 24.9 kV. Local transformers drop the voltage to three phase 480 V or single phase 110/220 at the administrative area, the Process Plant, the water wells and at the future new crusher and ore stacking facility.

In the event of utility power interruption, back-up power is provided by a 1.5 MW diesel powered generator sized to run the pregnant and barren solution leach pumps thereby ensuring continuous control of process solutions and the maintaining of minimum freeboards in both process solution ponds. Back-up power is also available for critical pumps and processes in the ADR plant and communications systems.

18.2 Heap Leach Pad

Ore is currently processed on a 4,700,000 ft^2 leach pad, which is designed to support ongoing operations for roughly 3-years. Exact processing parameters can be found in Section 17. A 2,800,000 ft^2 expansion was started in 2020 which will connect on the south end of the existing pads. It is designated as Stage I, Phase 3A. With expansions, the leach pad will hold the scheduled total tonnage of ore. A description of the heap leach facilities is detailed in Section 17.

19 Market Studies and Contracts

The process facility for this operation produces gold doré bars between 80 and 99% purity, with 2 to 3% silver on average. Gold bars will be weighed and assayed at the mine to establish value. The bars are shipped regularly to a commercial refiner where their value is verified. Sale prices are obtained based on world spot or London Metals Exchange market pricing and are easily transacted. Silver values were not included in the economic analysis for this study.

The source of gold prices used for the project economics was the CIBC Global Mining Group's Consensus Forecast Summary dated July 2020. These values varied by year in the cashflow model based on the market forecast as presented in Table 19-1. The Reserve price used for this report was the average of these six years, approximately $1,575/oz Au.

Table 19-1: Gold price per ounce by year

Year	2020	2021	2022	2023	2024	2025 +
Gold Price ($/oz Au)	$1,770	$1,690	$1,590	$1,540	$1,450	$1,400

Source: CIBC, 2020

Fiore operates on a fiscal year from October through September and the gold prices in the report are on a calendar year. Therefore, gold price weighted averages are used to generate gold prices for the fiscal year.

19.1 Contracts and Status

Mining activities are currently performed by a contract miner, Ledcor Group (Ledcor). The mining contract was not made available for review to support this study. Rather, Fiore supplied hourly equipment rates were utilized and verified against the previous year's expenses and found to be in line with actual costs. The current Ledcor contract is in place through October 31, 2022 and can be extended through normal business practices through the end of the mine life.

Terms for an off-take and smelting agreement are based on an existing refinery agreement with METALOR Technologies USA Corporation, an international smelting and refining company with a facility at 225 John L. Dietsch Boulevard, North Attleboro, Massachusetts.

Contract terms and doré treatment charges listed below were used in this study:

- Treatment and Refining Charge: US$0.85/oz gross weight shipped under 1,000 troy ounces, US$0.65/oz gross weight shipped over 1,000 troy ounces;
- Gold Return: 99.93% of assayed content;
- Settlement: 5 working days from receipt; and
- Transportation Fee: US$875 pick-up fee plus US$0.25 per gross troy ounce.

20 Environmental Studies, Permitting and Social or Community Impact

The Pan Mine is located on public land administered by the BLM; as such, the BLM is the lead agency and federal permitting follows the BLM requirements. The permitting schedule for the Pan Mine Project was originally dictated by the federal NEPA process requirements, which typically include at least one year of baseline studies followed by a scoping process and production of draft and final EIS documents. Public review periods are required at the scoping, draft and final EIS stages. The Pan Mine baseline studies were completed in 2011, and the project went through the scoping process in 2012. The draft EIS was released for public review in March 2013. The final EIS was made available November 22, 2013, and the ROD was signed December 23, 2013. Construction began in January 2014. The NDEP-BMRR issued Reclamation Permit No. 0350, replacing exploration Permit No. 0228. The NEPA and permitting processes required approximately 36 months from initiation of baseline studies to the receipt of the ROD in late 2013.

The NDEP-BMRR issued Reclamation Permit No. 0350, replacing Exploration Reclamation Permit No. 0228. GRP has completed multiple minor modifications to their Plan of Operations, Reclamation Permit and reclamation cost estimate since 2014 to ensure alignment of operation goals with their regulatory authorizations. The site has obtained and maintained all required permits for operations as shown in Table 20-1. The major state permits include:

- Water Pollution Control Permit (WPCP), expires April 4, 2023;
- Reclamation Permit, issued for the life of the mine;
- Air Quality permits:
  - Class I Air Quality Operating Permit, expires November 28, 2022;
  - Class II Air Quality Operating Permit, expires July 7, 2022;
  - Mercury Operating Permit to Construct, issued for the life of mine; and
- Industrial Artificial Pond Permit, expires June 20, 2022.

GRP has maintained compliance with the permits and authorizations described in Section 20.1, so permit renewal of all major and minor permits required for operations within the regulatory mandated deadlines is anticipated.

20.1 Required Permits and Status

Midway Gold acquired the required original federal, state, and local permits for construction, operations, and reclamation of the Pan Mine. GRP has successfully transferred the permits to their control and maintained required permits for operations. Table 20-1 provides a list of the major permits, and authorizations, and their status as of August 2020.

Table 20-1: Status of Major Permits, Authorizations, and Licenses as of August 2020

Permit	Agency	Permit Number	Status
Federal Permits and Authorizations			
Notification of Commencement of Operations	Mine Safety and Health Administration	26-02755	Active
Record of Decision and approved Plan of Operation	BLM	NVN-090444	Active
Mineral Materials Negotiated Sale (Borrow)		NVN-089672	Active
Programmatic Agreement [(1)]	BLM/state Historic Preservation Office	NVN-090444	Active
Hazardous Waste ID (RCRA)	USEPA/NDEP/Department of Energy	SQG NVR 000 089 227	Active
FCC Radio License	Federal Communications Commission	Reg. #0023652175 Call Sign WQUC703	Active
Explosives Permit	Bureau of Alcohol, Tobacco, Firearms, and Explosives	#9-NV-033-33-1B-00416	Active
CSAT Security Threat	Department of Homeland Security	Midway Gold Corporation (MDW) Pan Facility ID 4133675	Active
		Facility survey ID 8022095 (dated Dec. 30, 2014)	
State Permits			
Air Quality Operating Permit -Class I	NDEP Bureau of Air Pollution Control	AP1041-3674	Active (Expires 11/28/2022)
Surface Area Disturbance Permit			Active
Air Quality Operating Permit – Class II		AP1041-3831	Active (Expires 07/07/2022)
Air Quality Permit – Mercury Operating Permit to Construct		AP1041-3302	Active
Reclamation Permit	NDEP Bureau of Mining Regulation and Reclamation	350	Active
Water Pollution Control Permit		NEV2012107	Active (Expires 04/04/2023)
Dam Safety Permit	Nevada Division of Water Resources	J-679	Active
Water Appropriation		Permits 81667- 81674	Leased from Kinross
Encroachment Permit	Nevada Department of Transportation	Occupancy Permit No. 200571	Active
Industrial Artificial Pond Permit	Nevada Department of Wildlife	S407100S	Active (Expires 06/20/2022)
Stormwater Permit	NDEP Bureau of Water Pollution Control	MSW-42137	Active
Commercial Septic System Construction Permit		GNEVOSDS09-S-0397	Active
Landfill Permit	NDEP Bureau of Sustainable Materials Management	SW 539	Active
		SW1762	
Liquid Petroleum Gas (LPG) Licenses	Nevada Board for the Regulation of Liquefied Petroleum Gas	5-5427-01 (Admin)	Active
		5-5427-02 (ADR)	
Potable Water “non-transient non-community water system”	NDEP Bureau of Safe Drinking Water	WP-1142-NT-NTNC	Active
Occupancy Permit	State of Nevada Fire Marshall	N/A	Active
Mine Safety	Nevada Department of Business and Industry, Division of Industrial Relations	Mine ID 26-02755	Active

Source: SRK, 2020

(1) Also signed by Mt. Wheeler Power Company, Te-Moak Tribe of Western Shoshone Tribe, Duckwater Shoshone Tribe, and the Lincoln Highway Association, Nevada.

20.2 Environmental Study Results

The final EIS identified potential impacts and provided for mitigation for the following resources:

- Special status plant and animal species;
- Archeological and cultural resources;
- Wild horses;
- Mine waste characterization and management;
- Groundwater characterization; and
- Visual resources.

20.2.1 Special Status Plant and Animal Species

Sagebrush Cholla – three specimens of sagebrush cholla were found west of the site, outside of the proposed Project Area. Sagebrush cholla is a Nevada Natural Heritage Program special status species (BLM, 2013). Identification and relocation of plants found in disturbance areas was required by the ROD. Relocations ultimately only were necessary along the relocated powerline route.

The ROD stipulates that a BLM-approved native seed mix be used within sand cholla habitat. A reference area was established at the time of transplantation and will be used as the target for reclamation. The frequency, density, and ground cover of the native vegetation will be documented for sand cholla habitat.

Greater Sage-Grouse – The Pan Mine is situated where there are few or no springs and seeps and sits high enough on the mountainside to not be located in primarily sagebrush habitat. During the EIS development, the mine was considered to be located within “preliminary priority” and “preliminary general” habitats. The habitat definitions and nomenclature have since changed as has the status of greater sage-grouse as described in the Approved Resource Management Plan Amendments for the Great Basin Region (ARMPAs) (BLM 2015). However, the ROD was issued prior to the finalization of the ARMPAs, so the mine activities are not presently subject to the conditions of the ARMPAs.

In addition to the suitable greater sage-grouse habitat associated with the Project area, four greater sage-grouse leks were identified within three miles of the mine during the EIS development. Two of the leks are considered active, one lek has an unknown status, and one lek is inactive. The power line and access road route were relocated to avoid these leks. There are other leks further away that are either sufficiently far away from the mining activities to not pose a threat to the birds’ well-being or are inactive. There were no timing limitations required during construction, and normal mining activities should not be impacted.

The ROD stipulates that no construction or new ground disturbance will occur during the period from March 1 through May 15 from one hour before sunrise until three hours after sunrise within two miles of active greater sage-grouse leks. Additionally, the Pan Mine has a Noise Monitoring Plan that stipulates specific hours of restricted activities, modified use of facilities within the Plan of Operations boundary, and best management practices for minimizing noise levels during times of critical greater sage-grouse lek activity. In coordination with the NDOW and the BLM, monitoring of noise at the lek locations during the lekking period (March 1 to May 15) from one hour before sunrise to three hours after sunset was conducted for multiple years and discontinued in 2018 due to no noise exceedances being attributed to the mine operations for two successive years. The noise monitoring is required to resume if changes to operations could raise the noise levels beyond what has been monitored previously. A crusher was installed in 2019. When the crusher was installed, a study, including noise modeling, was conducted on the additional noise from the crusher (Standlee, 2019) prior to the lekking season of 2020. The results of the crusher noise survey resulted in updated passive monitoring protocols for the Pan Mine (GRP 2020) that were reviewed and approved by the BLM and NDOW. In 2020, a new access road was installed through the Pan Mine to the Gold Rock property. A noise study, including a noise model, was prepared (Standlee 2020) to evaluate this change in operations. The model indicated the new access road and related traffic would not raise noise levels sufficiently to affect the lek. Passive monitoring was proposed for the 2020 lekking season and will be proposed again for the 2021 lekking period. Passive monitoring consists of changing operations slightly to avoid excessive noise on the west side of the property, observing mine operations and ensuring nothing out of the ordinary is occurring, notification and approval processes for non-routine activities, and training for all mine staff and contractors to ensure that noise levels stay below the baseline level that has been analyzed in past studies. Specific procedures are outlined in the Pan Mine Noise Monitoring Plan for 2020 (GRP, 2020). The noise limit is 10 decibels above ambient. Ambient is 18 decibels (L50).

From 2011 through 2015, the Sagebrush Ecosystem Council developed and implemented the Nevada Conservation Credit System (CCS) through the Sagebrush Ecosystem Technical Team (SETT). The goal of the Nevada CCS is to generate a net benefit of greater sage-grouse habitat by ensuring the impacts to greater sage-grouse habitat in the State of Nevada and federal lands from human disturbances (debits) are offset with commensurate habitat conservation actions (credits). Currently, the CCS is the required method for calculating off-site compensatory mitigation, which is a monetary sum a proponent would have to pay for the disturbance of greater sage-grouse habitat. However, as a result of the CCS not having a sufficiently developed process to determine accurate costs at the time of the original ROD for the Pan Project, or at the time of the preparation of the mitigation plan (2013 to 2019), GRP is not required to participate in the CCS program and may work directly with the BLM, with NDOW consultation, to develop a proponent-driven off-site mitigation program.

As part of its off-site compensatory mitigation, the Pan Mine has contributed approximately $1.7 million toward five years of sage grouse study conducted by the U.S. Geological Survey. As provided in the FEIS, the mine operator receives a fifty percent credit for funding contributed to the USGS study toward any required off-site compensatory mitigation. GRP is currently working with the BLM, in consultation with NDOW, to finalize the balance of off-site compensatory sage grouse mitigation through an offset mitigation implementation agreement. This plan will assign a value for the appropriate level of compensatory mitigation not covered by the USGS sage grouse study. At the time the Pan Mine was originally permitted in 2013, GRP anticipated that amount would be less than US$200,000 (Williams, 2017) and this is within in the range currently being negotiated with the BLM.

The off-site greater sage-grouse mitigation implementation plan agreement, developed and awaiting approved by the BLM, in consultation with the NDOW, of which the key components include:

- Complete off-site mitigation of impacted PPH on a three to one basis, meaning that for every one acre that is permanently impacted by the project within PPH, the operator would restore or enhance three acres of habitat either adjacent to the project, within the Population Management Unit, or within adjacent PPH habitats;
- Complete off-site mitigation of permanently impacted PGH on a two to one basis; and
- Off-site mitigation will be initiated within one year of ground disturbance and completed within 10 years of ground disturbance (BLM 2013).

Pygmy Rabbits – No pygmy rabbits were found on the site during baseline studies or during any pre-construction clearance surveys conducted at the Pan Mine (Dubray, 2020), though habitat is present and could be occupied (BLM 2013).

The ROD stipulates that pre-construction clearance surveys for pygmy rabbits will occur prior to any surface disturbance regardless of the season. If occupied pygmy rabbit habitat is identified during pre-construction clearance surveys and natal burrows are found, new disturbance will not occur within 200 ft of those areas. If disturbance of these areas is determined to be unavoidable, consultation with the appropriate BLM and Nevada Department of Wildlife (NDOW) wildlife biologists will occur to develop mitigation techniques. The pre-construction surveys only identified habitat in the southwest corner of the property, and this area has been avoided. However, future work in this area will require survey and potentially avoidance or consultation.

Western Burrowing Owl – Suitable habitat for western burrowing owl is present within the survey area though occurrences have not been documented. Construction activities could potentially destroy suitable and occupied nesting habitat for burrowing owls as well as displace individual owls.

The ROD stipulates that pre-construction clearance surveys for western burrowing owl will occur prior to any surface disturbance occurring from March 15 through August 31. If occupied western burrowing owl nesting territories are encountered, GRP will avoid the area within 0.25 miles of the active territory until a qualified biologist has determined the young have fledged, and the nesting territory has been abandoned for the season. If disturbance of these areas is determined to be unavoidable, consultation with the appropriate BLM and NDOW wildlife biologists will occur to develop mitigation techniques. No pre-construction clearance surveys to date have identified any occupied nesting territories, and no mitigation has been required.

Golden Eagles and Raptors – The golden eagle is listed as sensitive by the BLM and is protected by the State of Nevada. The species has no special status with the U.S. Fish and Wildlife Service (USFWS), although it is protected under the MBTA and the Bald and Golden Eagle Protection Act (BGEPA). During agency consultation, NDOW identified those golden eagle nests documented within the project vicinity. Two golden eagle nests were identified within the northern portion of the Project Area and 39 were identified within a 10-mile buffer. Further, golden eagles were observed nesting during baseline surveys (BLM 2013). GRP Pan is currently in the process of developing an *Eagle Conservation Plan*; the document is expected to be completed during the first half of 2021.

The bald eagle is listed as Sensitive by the BLM and is protected by the State of Nevada. The Plan Area and adjacent areas serve as potential foraging habitat.

The Bird and Bat Conservation Strategy (BLM 2013, Appendix 4A) describes the avian and bat protection measures for eagles, raptors, and other migratory bird and bat species. Annual nest surveys are conducted for the identified golden eagle and raptor nests within a 10-mile radius of the mine.

Migratory Birds and Bats – Several migratory bird species were found at the Pan site during baseline surveys. The BLM considers all bat species to be sensitive; however, no nesting or roosting habitat were found on site, and no further evaluation is required by the ROD.

The ROD stipulates GRP, will fully implement and adhere to the construction techniques, design standards, and avian mortality reporting set forth in the Bird and Bat Conservation Strategy for raptors, western burrowing owls, migratory birds, and bats and the Eagle Conservation Plan, if required, for golden and bald eagles. An Eagle Conservation Plan was not originally required by the USFWS subsequent to the ROD; however, the NDOW has subsequently requested a plan based on the on-going monitoring. GRP is developing a plan and the document is expected to be completed during the first half of 2021. Nesting surveys for migratory birds will be conducted within seven days of disturbance if disturbance needs to occur between April 1 and July 31. In coordination with the BLM, an avoidance buffer will be determined, and the nest will be avoided to prevent destruction or disturbance of nests until the birds are no longer present.

Dark Kangaroo Mouse – During pre-construction trapping for dark kangaroo mice in potentially suitable habitat within the Mine Area, occupied dark kangaroo mouse habitat was identified; however, this habitat is outside of the disturbance area. Currently, no disturbance in these areas is proposed; however, consultation with the appropriate BLM and NDOW wildlife biologists will occur to develop avoidance strategies and mitigation techniques should disturbance be proposed in these areas in the future.

20.2.2 Wild Horses

To minimize the potential of wild horses accidentally entering the fenced portion of the Project area and not being able to be released easily, gates will be installed along the fence line at every corner. If the fence stretches longer than one mile, a gate will be placed at one-mile increments. Gates will also be placed on either side of cattle guards.

20.2.3 Cultural Resources

The BLM, Nevada State Historic Preservation Office, and Midway signed a Programmatic Agreement (PA: FEIS Appendix 3B; BLM, 2013) in conjunction with Mt. Wheeler Power Company and the Lincoln Highway Association, Nevada that directed all activities associated with identifying and mitigating archaeological sites. This PA, which has been completed and transferred to GRP, facilitates future archaeological work on site.

The Lincoln Highway/Hamilton Stage Road – US Highway 50, was developed over the Lincoln Highway route in the Project area. The dirt road which originally accessed the Pan Mine and traversed the south end of the North Pit may have been an unimproved alternative route for the Lincoln Highway from 1913 to 1926, prior to the development of US Highway 50. Studies of this section of the route have determined that parts are eligible, and some parts are not eligible, for listing on the National Register of Historic Places (NRHP). A treatment plan was prepared, submitted to the BLM, and all required mitigation of segments within the mine disturbance area have been completed. The plan included designating another similar road in the area as a mitigation route, providing signage to inform and direct travelers to the new route, and installing two culverts on the road. Concurrence from the BLM was obtained in January 2013 and the completion of the mitigation was completed in early spring 2013.

The Hamilton Stage Road was a Pony Express, stage, and freight route between Elko and Hamilton, Nevada. It was likely constructed, or became used, in the late 1800s and was outdated by the early 1900s. The exact routing in the area of the Pan Project is unknown. It is believed to be in the Newark Valley, and not in the area of the Pan Project.

Carbonari sites, burn piles, and habitations from Swiss/Italian and Chinese charcoal producers have been identified within and near the Pan Mine Area. Cultural surveys have been conducted to identify, locate, and record the Carbonari sites. Approximately 300 sites were identified. Of these, approximately 150 were determined eligible for listing. Fifteen sites (10 percent) were determined to require mitigation due to their ability to provide knowledge about the Carbonari in the area. A plan to mitigate the sites through recordation prior to disturbance was developed and submitted to the BLM in January 2013. The sites were mitigated during the early spring 2013.

20.2.4 Mine Waste Characterization and Management

To assess the potential impact to groundwater during the operations, maintenance, and reclamation phase of mining, acid-base accounting (ABA) and metals leaching (ML) potential tests were performed on a variety of rock samples at the site. ABA-ML tests were performed on over 600 rock samples from the site. Based on the results of this testing, using parameters established by the NDEP-BMRR and BLM guidelines, the majority of waste rock samples were found to be non-acid generating with an overall low to moderate potential for metals leaching (BLM 2013).

Waste rock from the South Pan Pit has very low sulfur content (average sulfide sulfur less than 0.1 percent) and has a high neutralizing potential due to the high percentage of limestone (approximately 70 percent). The waste rock from the North Pan Pit has a higher percentage of samples considered potentially acid generating (PAG). Using Nevada BLM criteria, the majority of waste rock samples are considered non-acid generating, having both a net neutralization potential greater than 20 tons of material per thousand tons of calcium carbonate and a neutralization to acid potential ratio of greater than 3. Using the NDEP-BMRR criteria, the percentage of samples considered non-acid generating increases to 90 percent. Results of meteoric water mobility procedure (MWMP) analyses showed a low metals-leaching potential, with only arsenic and thallium having some leaching potential. Each of these elements was slightly above its respective Nevada groundwater Profile I Reference Value of 0.01 mg/L and 0.002 mg/L, respectively. Consequently, the potential for acid rock drainage and/or metals leaching from the WRDA is considered low (BLM 2013).

GRP continues to monitor waste rock and ore geochemistry as stipulated by the state water pollution control permit. During operations, waste rock grab samples are collected quarterly for each major rock type encountered and submitted for ABA and MWMP testing. Routine blasthole monitoring of a minimum of 10 percent of the North Pan Pit blastholes is tested to identify any PAG materials. Testing includes visual inspection and chemical analysis when indicated based on the visual inspection, paste pH, net acid generating pH, and LECO carbon/sulfur analyses.

20.2.5 Surface and Groundwater Characterization

The Pan Mine is located primarily in the Newark Valley (Hydrographic Basin 154), with a small portion in the northern end of the Railroad Valley Basin/Northern Part (Hydrographic Sub-Basin 173b). Both are terminal basins that drain to playas. The Newark Valley is approximately 801 square miles in an area with no surface water inlets or outlets, and the Railroad Valley/Northern Part is approximately 2,140 square miles (BLM 2013).

No seeps or springs were identified in the Plan Area, and all streams are ephemeral (BLM 2013). No water quality analyses are available.

There are three aquifers of note in southern Newark Valley: a small, perched alluvial aquifer just west of the Plan Area; an extensive valley fill aquifer; and a deep, regional, carbonate bedrock aquifer. The depth to groundwater beneath the Plan Area ranges from 650 to 800 ft below ground surface and, is not expected to be encountered by the construction or mining activities (BLM 2013). Groundwater quality below the Plan Area was good, with a neutral pH and total dissolved solids ranging from 260 to 290 mg/L. Groundwater was relatively warm at 80 degrees Fahrenheit (BLM 2013).

Five monitoring wells were installed in 2013, and no additional monitoring wells have been installed since 2013. Well DMW-1 characterizes the water quality in the deeper carbonate aquifer south of the property and four wells (MW-1, MW-2, MW-3, and MW-4) characterize the perched alluvial aquifer. An observation well (OBS-1) was installed prior to drilling the first production well. This well is used as a second deeper carbonate aquifer monitoring well on the north side of the property. The water quality was noted to vary between the deep carbonate and shallow alluvial aquifers (BLM 2013).

20.2.6 Visual Resources

The exterior surfaces of any ancillary facilities visible from any project Key Observation Point (KOP) or Highway 50 have or will be painted with non-reflective shale green if located in pinyon-juniper vegetation or shadow gray if located in shrublands or other open areas. Other non-reflective colors of paint, as determined by the BLM, may be used in place of shale green or shadow gray.

GRP is considering the expansion of the North West Waste Rock Facility, which would include increasing the disturbance footprint and height of the facility to allow for shorter haul distances and more favorable economics. Future expansions (footprint or height) of facilities such as the heap or WRDA may require additional analysis on the visual impacts of those proposed changes and may require additional mitigation by GRP.

20.3 Environmental Issues

Environmental issues identified in the final EIS completed for the mine are mitigated by the requirements of the Record of Decision as described for each resource below. At the time of publication, known environmental issues had been addressed and mitigated, as required.

20.4 Operating and Post Closure Requirements and Plans

20.4.1 Developed Operations

Mining began in May 2014 with pre-stripping and construction of the access road, South WRDA, and Phase 1 heap leach pad. Processing began when ore was first placed on the heap leach pad beginning late in the Q3 2014 with first leach solution applied in the Q1 2015. GRP is operating two pits within the Mine Area. Three smaller satellite pits are planned to be mined in the future. Ore from the South and North pits is blended; in the future, ore may be crushed on site, agglomerated, and processed on the heap leach facility. GRP hauls waste rock to the authorized waste rock facilities via a series of haul roads. Ore is leached on the heap, and the solution is sent to the ADR/refining plant for gold recovery.

20.4.2 Period of Operations

The life of mine is estimated at five years (until 2025), with additional time for associated closure, reclamation, and post-closure monitoring periods. The reclamation surety covers phased development (1,471 acres of disturbance) rather than the authorized 3,239 acres of disturbance. GRP will update the reclamation costs and surety as necessary.

The pits, WRDA, heap leach facility, roads, and ancillary facilities and a 69-kV transmission line may ultimately result in about 3,239 acres of total disturbance. Upon completion of mining, the operation will be closed and reclaimed in accordance with federal, state, and local requirements. Table 20-2 summarizes the bonded disturbance evaluated for Phase 1, and the total disturbance acreage for each component of the Pan Mine for complete build-out.

Table 20-2: Summary of Authorized Phase 1 and Life-of-Mine Disturbance

Mine Component	Authorized Disturbance (acres)	Existing Phase I Disturbance (acres)[1]	Proposed Phase I Disturbance (acres)	Total Phase I Disturbance (acres)[1]	Subsequent Phases Disturbance (acres)[2]
Open Pits					
South Pan Pit	**254**	96	88	184	70
North Pan Pit	**105**	76	29	105	---
Black Stallion Pit	**17**	5	12	17	---
South Syncline Pit	**3**	---	---	---	3
North Syncline Pit	**15**	6	6	12	3
Waste Rock Disposal Areas					
South WRDA	**202**	108	1	109	93
North West WRDA	**95**	88	---	88	7
North East WRDA	**82**	---	38	38	44
Other					
Roads[3]	**170**	154	6	160	10
Heap Leach Facility	**220**	112	68	180	40
Process Facilities	**15**	15	---	15	---
Process Ponds	**17**	15	-1	14	3
Yards[4]	**87**	53	-1	52	35
Growth Media Stockpile	**56**	35	-3	32	24
Borrow Areas	**216**	70	5	75	141
Exploration[5]	**209**	83	11	94	115
Ancillary Facilities[6]	**66**	4	-1	3	63
Interfacility Disturbance[7]	**1,410**	168	125	293	1,117
Net Total	**3,239**	**1,088**	**383**	**1,471**	**1,768**

Source: Reclamation Permit No. 0350, 2020

1 Current bonded acreage.
2 Additional surety required to be posted before engaging in Subsequent Phase disturbance.
3 Includes the access, haul and secondary roads.
4 Includes production wells PW-1 and PW-2 and monitoring well pads.
5 Reconciled existing exploration disturbance with current facilities to account for disturbance absorbed in other components.
6 Ancillary facilities include power supply, storm water controls, water supply and septic system, communication facilities, ore stockpile, monitoring wells and fencing.
7 Interfacility Disturbance is the area between mining components that may be disturbed during construction, operations and reclamation/closure.

Heap leach drain down, closure, and reclamation will require approximately four years, ending in about Year 8 of the authorized mine reclamation plan. The closure and reclamation of supporting facilities, and post-closure monitoring, will require approximately 30 years, bringing the entire Project life to approximately 38 years. Monitoring of the heap leach drain down may continue for up to 30 years following closure. Concurrent reclamation during active mining has been planned to begin as soon as practicable on areas where no further disturbance will occur, minimizing the need for post-mining reclamation.

20.4.3 Planned Operating Procedures

In addition to permit compliance, GRP has committed to many practices to prevent undue and unnecessary environmental degradation during the life of the mine. These practices listed below are part of the operating procedures included in the 2013 Plan of Operations or are parts of other permits:

- Fugitive dust control plan;
- Programmatic Agreement;
- Groundwater monitoring plan;
- Stormwater pollution protection plan;
- Waste rock management plan;
- Quality assurance plan;
- Spill contingency and mitigation plan;
- Interim management plan;
- Petroleum-contaminated soils management plan;
- Bird and bat conservation strategy;
- Noise monitoring plan for greater sage grouse; and
- Eagle Conservation Plan (under development).

20.5 Post-Performance or Reclamations Bonds

The NDEP-BMRR and the BLM issued reclamation permits (NVN-90444 and NDEP#0350) in 2013 and coordinate annual reviews. The SRCE is managed by NDEP and the bond (or surety) is held by the BLM. The bond is phased in that each year it is updated and re-calculated to estimate the predicted impacts for three years beyond the present.

20.6 Social and Community

The Pan Mine maintains support from the local community, counties (White Pine and Eureka), and state permitting authorities due to its capability to provide jobs and tax income. The two local Shoshone Tribes; the Ely and Duckwater Tribes, are both in support of the mine, which can provide employment for tribal members and for support of their own initiative to expand the Duckwater Reservation by about 31,229 acres. This initiative was realized in the Nevada Nations Land Act signed into law by President Obama on October 7, 2016. GRP supports various groups and community activities to the degree possible for an early start-up company. The final EIS identified a potential need for housing in the area. However, layoffs from other mines in the area that are closing or reducing operations, has reduced this potential impact. The Pan Mine has no set obligations to fund housing, but a lack of housing can adversely affect staffing needs for the operation.

20.7 Mine Closure

Mine closure is defined as the chemical stabilization of process components. Nevada Administrative Code (NAC) 445A.379 defines “stabilized” as “the condition which results when contaminants in a material are bound or contained so as to prevent them from degrading waters of the state under the environmental conditions that may be reasonably expected to exist at a site”.

The heap leach facilities will be decommissioned in accordance with NDEP regulations and guidelines for closure. A Tentative Plan for Permanent Closure, as required by NAC 445A.398, was included in the water pollution control permit. A Final Plan for Permanent Closure, to include all proposed process components, will be prepared and submitted to the NDEP and the BLM two years prior to the anticipated final termination of the heap leach facility operation, per NAC 445A.447.

Chemical stabilization of the heap leach facilities is required to obtain permanent closure. GRP anticipates that the spent heap will be allowed to drain with no fresh water rinsing. Final details of heap neutralization and closure will be developed at least two years prior to Project closure pursuant to the requirements of NAC 445A.446 and NAC 445A.447.

GRP will undertake the following conceptual plan for process fluid stabilization:

- After cessation of leaching, process solution will be recirculated from the process ponds to the heap until drain down is less than active evaporation capacity;
- Process solution will be actively evaporated on the heap until drain down flows can be managed through passive evaporation in the process ponds;
- The heap will be regraded;
- Growth media (i.e. cover soil,) will be placed on the heap with the aim of limiting long-term flow from the heap to a *de minimus* quantity; and
- The pregnant process pond will be converted to an evapotranspiration (ET) cell to store and release heap drain down through ET until *de minimus* flow is achieved, at which time the ET cell will be closed.

Operational monitoring data for drain down flows and chemistry will be used to confirm modeled flows and submitted as part of the Final Plan for Permanent Closure at least two years prior to the closure of the heap leach facility.

20.8 Reclamation Measures During Operations and Project Closure

Reclamation of disturbed areas resulting from activities outlined in the Pan Mine Plan of Operations and Reclamation Permit Application (Midway 2013) have and will continue to be completed in accordance with BLM and NDEP-BMRR regulations. The purpose of Subpart 43 CFR § 3809 – Surface Management, is to prevent unnecessary or undue degradation of public lands by operations authorized under the mining laws. This subpart establishes procedures and standards to ensure that operators and mining claimants meet this responsibility and provide for the maximum possible coordination with appropriate state agencies. The NDEP-BMRR requires that a reclamation plan be developed for any new exploration or mining project and for expansions of existing operations (NAC 519A).

GRP anticipates that, with the exception of the open pits for which reclamation exemptions under NAC 519A.250 were obtained, surface mine components and exploration will be reclaimed and revegetated according to the approved reclamation plan. The goals of the reclamation plan are to:

- Minimize surface disturbance and environmental impact to the extent practicable;
- Create diverse, reclaimed landscapes to promote vegetation and habitat diversity and hydrologic stability over time;

- Return mine-related disturbances to productive post-mining land uses that emphasize livestock grazing, greater sage-grouse habitat, wild horse use, and wildlife use with dispersed recreation and mineral exploration usage;
- Comply with applicable state and federal environmental rules and regulations;
- Limit visual impacts; and,
- Limit and/or eliminate long-term maintenance following reclamation to the extent practical.

These goals will be achieved by meeting the primary objectives listed below:

- Establish stable surface topographic and hydrologic conditions during mining and after reclamation that are compatible with the surrounding landscape by designing stable fill and cut slopes, controlling erosion, and managing surface water and earthen materials to minimize water quality impacts;
- Establish a stable, diverse and self-sustaining plant community through removing and redistributing suitable plant growth media on disturbed areas and by the seeding and planting of native and adapted plant species;
- Reclaim facilities that are no longer needed for operations as soon as practicable during the production period by implementing concurrent reclamation;
- Integrate mining plans with soil, water and waste management and reclamation plans;
- Separate process water and contact water from non-contact (i.e. un-impacted) water; and
- Incorporate operational stormwater management facilities into the design of closure stormwater.

GRP is committed to operating in a manner that protects, and where possible enhances, the environmental and social values of the ecosystems and communities within which it operates. To this end, GRP has proposed a reclamation plan to reclaim the land to productive post-mining land uses. Such voluntary measures include:

- Live-handling of plant growth media, including removal and direct placement of plant growth media on surfaces that have been prepared for reclamation without stockpiling;
- Construction of WRDAs using stable design principles;
- Salvage and redistribution of woody debris for final reclamation;
- Contouring the top of the spent heap leach pad to create more natural forms and lines; and
- A revegetation plan that includes sowing seed and planting shrub seedlings according to landscape position and aspect.

20.8.1 Reclamation of Open Pits

Pit berms will be constructed along the pit perimeters where necessary to preclude public access and deter livestock, for the pits that will remain as post-mining features. Groundwater conditions at the Pan Mine indicate the regional water table lies about 300 ft below the bottom of both pits. No groundwater will enter the pit either during operations or post closure. Depending upon the balance between surface water runoff and evaporation, there is the potential that the pits may temporarily accumulate surface water during spring melt and/or large storm events. Precipitation-related water that could accumulate in the bottom of the pits and/or benches will be temporary given the high net evaporation (51.5 inches) compared to precipitation (11.85 inches). The pits are exempted from backfilling per NAC 519A.250. However, backfilling of the Black Stallion, South Syncline, and North Syncline pits will be undertaken during operations as a commitment in the Plan of Operations

20.8.2 Reclamation of WRDAs

The goal of the WRDA design is to establish a sustainable landform. The WRDA will be constructed and reclaimed to slopes of 3H:1V and concurrently reclaimed where practicable. Erosion during an initial equilibration period is anticipated and considered acceptable, as long as it the erosion rate stabilizes to a sufficiently low long-term rate value.

The WRDA soil cover is intended to be non-erosive, or, for segments that undergo erosion, able to self-armor in a way that halts erosion before waste rock is exposed or free drainage is compromised. Concurrent reclamation of the WRDA during the production period would allow mine managers to monitor performance of the design, retrofit eroded areas as needed, and make adjustments to yet-to-be constructed segments, as part of an adaptive management strategy.

Waste rock will be placed in accordance with the Waste Rock Management Plan (Interralogic, 2013). Material determined to be PAG that is in manageable pods in the pit will be isolated in the central portion of the Northeast and Northwest WRDAs, as needed. The final lift over the isolated PAG material in the Northeast and Northwest WRDAs will consist of approximately 2.5 ft of high carbonate material using waste rock set aside during mining, with an overlying vegetated growth media cover 12 inches thick to minimize the long-term potential for acid generation and metals leaching. GRP has committed to covering the PAG material within the WRDAs with 6.5 ft of non-PAG ROM waste in addition to the 2.5 ft of high carbonate material and 12 inches of growth media, for a total cover thickness of 10 ft if PAG material is identified in future testing.

20.8.3 Reclamation of the Heap Leach Facility

The heap leach pad will be constructed in lifts set on a 3H:1V (horizontal to vertical) balance line such that the overall reclaimed slope angle will be approximately 3H:1V. Following the end of heap leaching operations, drain down, and closure as described above, each heap lift will be regraded to the final slope configuration of approximately 3H:1V. This design will mitigate aesthetic impacts, provide stability, promote run-off, and reduce infiltration.

When no longer required for evaporation of fluids, the surface solution distribution piping will be removed. The side-slopes of the heap will be graded so the final toe is within the interior crest of the perimeter berm. A store and release or evapotranspiration (ET) cover will be installed on the regraded heap surface to limit infiltration of precipitation into the spent ore. The soil cover on the spent heap will allow retention of water in the cover material during snow melt and precipitation to establish grass and herbaceous vegetation. By retaining the water in the soil cover for plant uptake and ET, the amount of water infiltrating is reduced, thus minimizing the drain down solution and steady–state seepage that will need to be managed during closure and post-closure. The recontoured heap will be covered with 2.5 ft of growth media, (i.e. cover soil.) Midway conducted vadose zone modeling of potential cover soil types from within the mine disturbance and borrow areas. The vadose zone modeling indicated that for representative potential cover soil types, a 2.5 ft thick layer of cover soil will limit infiltration through the cover to one percent under average and wet climate conditions.

Reclamation of the heaps will be carried out following growth media placement as described above. The Grassland/Erosion Control seed mixture will be applied to the heap. The working slopes and the ability to operate equipment safely will determine the method of seeding. Stormwater diversion structures will be constructed upgradient of the heaps to prevent impacts from stormwater run-on. These structures will be maintained to minimize erosion over the long term.

20.9 Closure Monitoring

During operations, annual qualitative monitoring of key indicators of site stability of concurrently reclaimed areas will be conducted. These key stability indicators may include vegetation, surface erosion, sedimentation, and slope stability parameters. If specified performance guidelines are not satisfied, then appropriate maintenance activities will be implemented. Following completion of concurrent reclamation activities and until such time that a final bond release is attained, maintenance activities will occur as necessary to satisfy performance guidelines. Maintenance activities may include one or more of the following:

- Sediment removal from sediment ponds, stormwater drainage channels, and diversion as necessary to maintain their design capacity;
- The function of temporary erosion control BMPs such as silt fences and straw bales will be maintained. These BMsP will be removed when no longer essential for erosion control;
- Diverting surface water away from reclaimed areas where erosion jeopardizes attainment of reclamation standards;
- Stabilization of rills, gullies, other erosion features or slope failures that have exposed mine waste;
- Noxious weed control; and
- Reseeding or re-application of reclamation treatments will occur in areas where determined through monitoring and agency consultation that reclamation has not yet met reclamation standards.

Quantitative reclamation monitoring to measure compliance with the revegetation success criteria will begin during the first growing season after final reclamation is completed and will continue for a minimum of three years or until the reclamation success criteria are achieved. Qualitative monitoring of key indicators of site stability will continue, and the reclamation performance management guidelines will apply during this time. The reclamation bond release criteria will be applied to the data collected in the third year following reclamation. Data from previous years will be used to determine management needs. Revegetation success will be determined based on the NEDP guidelines contained in the document "Attachment B–Nevada Guidelines for Successful Revegetation for the Nevada Division of Environmental Protection, the Bureau of Land Management, and the USDA Forest Service" (NDEP, BLM, and USFS, 2016).

GRP submits an annual report on or before April 15 of each year to the BLM and NDEP for the preceding calendar year. The annual reports contain descriptions of the reclamation activities completed during the previous year. The annual report will also include a summary of areas reclaimed and a discussion of the general vegetation performance, surface erosion status, slope stability status, and corrective actions completed and/or proposed.

The ET cell and associated downgradient monitoring wells will continue to be monitored for 30 years following construction of the ET cell.

20.10 Reclamation Bond and Closure Cost Estimate

20.10.1 Agency-Approved Reclamation Surety

Per NAC 519A.350, GRP Pan, LLC is required to file a reclamation surety with the NDEP or a federal land management agency, as applicable, to ensure that reclamation will be completed on privately owned and federal land. The 2020 Pan Mine reclamation cost estimate was calculated using the Nevada Standardized Reclamation Cost Estimator (SRCE) 1.4.1 build 17b (NDEP, 2020). The SRCE is an estimation tool for the calculation of bond amounts required to reclaim land that is no longer used for exploration, mining, or processing ore. Cost inputs for the SRCE model are provided from the NDEP's Cost Data File, Mobilization/Demobilization Cost Calculator, and the Nevada Process Fluids Cost Estimator (PFCE). The cost data are updated annually by the BLM and the NDEP. Labor costs are based on Davis Bacon wage rates, and equipment and supply costs are based on regional rates. The SRCE costs are predicated on the reclamation being completed by a third party under agency direction.

The SRCE addresses the costs to regrade disturbed landforms, place growth media, seed with an agency-approved seed mix, and monitor for reclamation success. The demolition of buildings and foundations, removal of power lines and fences, and stormwater and erosion controls are also addressed. Monitoring of surface water quality and reclamation success and construction management costs are calculated. Other costs related to the management of draindown solution from the heap for interim fluid management and process fluid stabilization are calculated in the PFCE. The PFCE utilizes standardized labor crews, equipment, materials, and unit costs that are also updated annually to calculate bond amounts based on the specific heap leach pad or tailings storage facility physical parameters, volume of fluids, and timeframes required for the interim fluid management and process fluid stabilization. The Heap Leach Drain Down Estimator is used to estimate the timeframes and volumes of fluids to be managed.

The authorized 2020 annual bond reclamation cost update, recently approved by both agencies, stands at US$15,978,070, for 1,471 acres of disturbance shown in Table 20-3. This SRCE was prepared by Haley & Aldrich, Inc. (H&A 2020a) in August 2020 using the SRCE Version 1.4.1 build 17b and approved by the NDEP on September 16, 2020 (NDEP 2020); SRK did not validate the SRCE cost model provided by GRP Pan, LLC.

Table 20-3: Comparison of Existing, 2020 Reclamation Cost Estimate, Life-of-Mine, and Authorized Disturbance

Component	Disturbance			
	2020 Existing (acres)[1]	2020 Reclamation Cost Estimate (acres)[2]	Life of Mine ARO (acres)[1]	Authorized (acres)[1]
Open Pits				
South Pan Pit	96	184	93	254
North Pan Pit	76	105	92	105
Black Stallion Pit	5	17	17	17
South Syncline Pit	0	0	0	3
North Syncline Pit	6	12	10	15
WRDAs				
South	108	109	167	202
North West	88	88	121	95
North East	0	38	38	82
Other				
Roads	154	160	149	170
Heap Leach Facility	112	180	197	220
Process Facilities	15	15	15	15
Process Ponds	15	14	14	17
Yards	53	52	52	87
Growth Media Stockpiles	35	32	23	56
Borrow Areas	70	75	75	216
Exploration	83	94	209	209
Ancillary Facilities	4	3	3	66
Inter-Facility Disturbance	168	293	472	1,410
Total	**1,088**	**1,471**	**1,747**	**3,239**

Source: SRK, 2020

[1] DRAFT Pan Mine Life of Mine Asset Retirement Obligation Estimate 2020 (H&A 2021)

[2] 2020 Annual Update to the Pan Mine Reclamation Cost Estimate, Permit No. 0350, BLM Case File NVN-090444

The SRCE calculates the direct costs to reclaim a mine to achieve productive post-mining land uses. The SCRE also includes indirect costs for the managing agency to implement closure; these indirect costs added 35 percent of the Pan Mine direct costs to the total. This number includes all closure and post-closure monitoring plus contingencies, should the agency need to have the work done by a third-party contractor.

20.10.2 Closure Cost Estimate

GRP Pan, LLC provided the *Pan Mine Life of Mine Asset Retirement Obligation Estimate 2020* (LOM ARO) (H&A 2021) based upon the resource estimate described in this document. The LOM ARO estimate includes the obligations required by the following authorizations and permits:

- The approved site reclamation plan as provided in the Plan of Operations NVN-090444 administered by the BLM, and Reclamation Permit No.0350, administered by the NDEP.

- The mine closure obligations of water pollution control permit number NEV2012107, as administered by the NDEP.

The LOM ARO cost estimate was calculated using the SRCE 2.0 (NDEP, 2020). The purpose of the SRCE 2.0 model is to provide a tool to improve the consistency and accuracy of reclamation and closure cost estimates. Although the earlier SRCE models were developed to provide standardized approaches to reclamation and closure cost calculations, the need to account for diverse approaches to mine closure, and differences between mining operations and regulatory requirements required that the 2.0 model also provide a reasonable amount of flexibility. To that end, the 2.0 model requires fairly limited user input to perform the cost calculations and allows the user to combine or subdivide the input data in a number of different ways to account for site specific conditions and reclamation methods.

H&A used the three-year buildout included in the agency-approved reclamation cost estimate (H&A 2020) and included a hard look at mine-related disturbance commensurate with the resource estimate which decreased disturbance for the North Pan and South Pan pits and roads, and increased disturbance for the heap leach pad. Table 20-3 shows a comparison of existing, 2020 reclamation cost estimate, life-of-mine, and authorized disturbance. Mining facilities needed to accommodate the 2020 resource estimate are estimated to disturb about 1,741 acres, which is less than the authorized disturbance of 3,239 acres but more than the existing disturbance of 1,088 acres. The authorized 2020 reclamation cost estimate disturbance of 1,471 acres is an estimate of disturbance for the next three years and used for the purpose of calculating a reclamation surety amount.

Post-closure costs are included for revegetation and growth media maintenance, and reclamation monitoring to determine revegetation success. Groundwater monitoring at wells would be undertaken for six years. Funds are also included for monitoring the ET-Cell and associated monitoring well for an additional 25 years for a total of 30 years.

H&A developed the unit cost basis for the Pan Mine using the existing for-profit mining contract, a series of recent for-profit heavy equipment bids, and the Nevada SRCE cost data where more detailed site-specific data was not available (H&A 2021). SRK performed a high-level check on data used in the cost basis and determined that the equipment and labor costs appear to be reasonable but on the low end of standard costs; these synthesized cost data are predicated on the confidential for-profit mining contract not provided to SRK. SRK is relying on the synthesis of the cost data prepared by Fiore and used in the LOM ARO. Table 20-4 presents a summary of the LOM ARO closure costs.

Table 20-4: Life-of-Mine ARO Closure Costs

Facility/Activity Type	LOM ARO Cost (US$)
Exploration	36,125
Exploration Roads and Pads	531,237
Waste Rock Dumps	887,797
Heap Leach	926,413
Roads (Haul and Access)	410,907
Pits	41,766
Quarries/Borrow Pits	35,814
Foundations & Buildings[1]	490,567
Process Ponds	125,892
Landfills	8,992
Yards[2]	360,715
Waste Disposal	86,643
Well Abandonment	89,255
Misc. Costs[3]	400,967
Monitoring	333,767
Construction Management[4]	546,792
Mob/Demobilization	291,476
Fluid Management[5]	4,459,526
Post-Closure Monitoring	777,788
Sub-total Direct Costs	**10,842,439**
Contingency	503,233
Contractor Profit	301,940
Sub-total Indirect Costs	**805,173**
Grand Total	**11,647,612**

Source: H&A 2021

[1] Includes buildings, structures, process plant, process other, and site facilities – mobile/fixed equipment from the ARO
[2] Includes yards and other facilities from the ARO
[3] Includes, fence removal, pipes and culverts, and power systems from the ARO.
[4] Includes construction management, road maintenance, and general and administrative from the ARO.
[5] Includes fluid management – heaps and water treatment from the ARO.

Within the Mine Area, GRP will be responsible for reclaiming areas disturbed by other operators and not previously reclaimed. In the event GRP re-occupies previously disturbed or reclaimed areas outside of the mine fence and within the Plan Area, such disturbance will be considered new disturbance, and GRP will provide financial assurance to reclaim such areas under the provisions of this Plan.

21 Capital and Operating Costs

Estimation of capital and operating costs is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations. Therefore, changes in these forward-looking assumptions can result in capital and operating costs that deviate materially from the costs forecast herein.

21.1 Capital Cost Estimates

The Pan Mine is constructed and is currently operating. For the purposes of this Technical Report, all capital spent to date is considered a sunk cost. Additional capital is required to sustain the mine through the remaining mine life. Costs are also included for drilling, reclamation and closure. Table 21-1 summarizes these costs.

Table 21-1: Capital Costs

Description	Cost (US$ 000's)
Mine	359
Process	2,329
Admin	1,022
Leach pad, core logging & storage shed, water tanks	3,596
Reclamation & Closure	4,644
Drilling	381
Total	**12,331**
Contingency	**888**
Total with contingency	**13,218**

Source Fiore, 2020

21.1.1 Basis for Capital Cost Estimates

The basis for capital cost estimates is provided by Fiore. Vendor and supplier quotes, as well as historical data gathered during recent leach pad and drilling campaigns are used by Fiore to formulate the capital cost. A 5% contingency is applied to the capital cost to cover unknown events and the accuracy of quantity and cost estimates.

21.1.2 Mine Capital Costs

Mine capital costs primarily consist of sustaining capital costs for computer hardware and software to support contract mine services. A cost for an in-pit access road is also included, the cost estimate for the road was generated based on the QP's experience and professional judgement. Table 21-2 lists the mine capital cost.

Table 21-2: Mine Capital Costs

Description	Cost (US$ 000's)
MPSO Haulage (2) License (1)	154
Computer with MinePlan Software	65
Phase 6 Access Road	50
Replacement Computers	15
LIDAR Survey Upgrades	75
Total	**359**

Source Fiore, 2020

21.1.3 Process Capital Cost

Process capital costs include equipment for crushing, processing, supporting the mine contractor's maintenance infrastructure, as well as replacement lab equipment. Table 21-3 lists the process capital costs.

Table 21-3: Process Capital Costs

Description	Cost (US$ 000's)
Metallurgical lab equipment	14
Grieve oven breezeway (Eng)	24
Large diameter columns	36
Additional buildings at ADR	166
988 Loader	300
Tabletop rotary sampler	83
Lab Boyd rotary crusher	63
Mining contractor maintenance tent electrical line	30
302 Airpac	66
Spare vib feeder	110
Telehandler	250
Lab auto sampler	20
Skid Steer	75
550 Service truck	75
XRF	45
Light vehicle lift	12
Continuous ring mill	72
Replacement AA machines	45
Leach pad booster	75
Belt scale	20
Replacement backhoe	261
Replacement manlift	80
Refinery replacement pressure washers	7
Replacement water truck	50
988 Engine & transmission replacement	250
Replacement service truck	100
Total	**2,329**

Source Fiore, 2020

21.1.4 Administrative Capital Costs

The primary administrative capital cost is to replace light vehicles (US$744K) through the mine life. Dust monitors, industrial hygiene safety and dust monitor safety equipment are also included. Computer hardware, office equipment, as well improvements to gates and small projects related to the lease comprise the remaining administrative capital cost. Administrative capital costs are listed in Table 21-4.

Table 21-4: Administrative Capital Costs

Description	Cost (US$ 000's)
Noise monitoring & fit testing equip.	16
Light vehicles	744
Conference room & office furniture	12
Replacement copier	10
Met station EDMS software	38
Egnyte server & cabinet UPS's	60
Replacement computers	36
Gold Rock road gate	15
IH dust monitoring equipment	35
Replacement front gate at Pan	25
FY20 iPad program startup	7
Leasehold improvements	24
Total	**1,022**

Source Fiore, 2020

21.1.5 Leach Pad, Core Logging & Storage Shed, Water Tanks Capital Cost

Leach pad costs are split in two phases, 3A and 3B. Phase 3A was in the process of construction before July 1, 2020 and the capital costs included in this study represent the remaining cost to complete construction of the phase 3A leach pad. Additional leach pad must be constructed to process ore in the future, phase 3B will be constructed to hold the remaining mineral reserve. Costs for both pads are based on actual construction costs in fiscal year 2020. Costs for core storage and logging sheds are included in Table 21-5, as well as small water tanks for storage.

Table 21-5: Leach Pad, Core Logging and Storage Shed, Water Tanks Capital Cost

Description	Cost (US$ 000's)
Pan Phase 3A Heap Leach Expansion	1,254
Pan Phase 3B Heap Leach Expansion	1,818
Core Storage & Logging Facility + Light Table	449
PW-2 Storage Tanks	75
Total	**3,596**

Source Fiore, 2020

21.1.6 Reclamation and Closure Costs

Reclamation and closure costs (US$5.15) include costs for reclamation and closure, post closure monitoring offset by reclamation bond recovery. Reclamation and closure cost including contingency is (US$10.87M), post closure monitoring cost is (US$0.78M), offset by recovery of the reclamation bond deposit (US$6.50M). Reclamation and closure costs and post closure monitoring costs are discussed in Section 20 of this report.

21.1.7 Drilling Cost

Drilling cost ($381K) is for additional slope stability analysis, as well as additional definition drilling.

21.1.8 Contingency

A 5% contingency ($888K) is applied to the entire capital cost total. This contingency is used to account for miscellaneous uncertainties in price, scope or missing capital items.

21.2 Operating Cost Estimates

Total operating cost estimates for the Project are presented in Table 21-6. The unit operating costs are based on total ore stacked on the leach pad of 23,937 ktons. Total mined material is 63,279 ktons, of which 39,822 ktons is waste and 23,457 ktons is ore. The estimated mine life is five years.

Table 21-6: Life of Mine Operating Cost Summary

Operating Costs	(US$ 000's)	US$/ton-ore
Mining	131,283	5.60
Processing	72,047	3.06
G&A	18,959	0.81
Total Operating	**222,288**	**9.47**

Source: SRK, 2020

21.2.1 Basis for Operating Cost Estimates

Mining costs were dictated by the equipment selected and the conditions of the mine environment. The mine is presently operating using a contractor for all mining activities. Mining costs were developed based on the current mining contract and historic costs. Historic costs used for other mining costs which include the mine's support personnel are based on the period from July 1, 2019 through June 30, 2020.

Processing costs are developed from historical costs, primarily from the period of July 1, 2019 through June 30, 2020.

General and Administrative (G&A) costs are developed from historical costs, primarily from the period of July 1, 2019 through June 30, 2020.

21.2.2 Mining Cost Estimates

The Pan operation currently employs a contract miner for all mining activities. The contractor supplies all the mining and support equipment, personnel to operate the equipment and direct supervision. The contract is a Time and Materials (T&M) contract where the contractor supplies the equipment, personnel and works at the direction of Fiore Gold. This type of contract gives Fiore Gold the greatest flexibility on where the contractor will operate and the production rate. The current mine schedule is 6.5 days per week, 52 weeks per year. Drilling and blasting costs are based on historical unit tonnage rates. Loading and hauling costs are derived from the contractor's current hourly rates, as well as loader and truck hours derived from simulation software. The simulation software uses loader cycle times based on historical data. Haulage times are based truck cycle time from individual pits to waste dumps and the ROM ore stockpile. Support equipment costs are based on the mine schedule and current contractor hourly rates. Hourly equipment rates include operating labor, maintenance labor, fuel, repair parts and contractor profit. Equipment hourly rates were supplied by Fiore Gold based on the current contract which expires in October, 2022.

Table 21-7 shows the estimated cost for the direct contractor cost.

Table 21-7: Contractor Mining Cost Summary

Item	US$/ton Mined	LOM (US$ 000's)
Drilling Ore & Waste	0.100	6,328
Blasting Ore & Waste	0.190	12,023
Loading Ore & Waste	0.296	18,715
Haulage Cost	0.851	53,878
Support Equipment Cost	0.504	31,877
Total Contractor Cost	**1.941**	**122,821**

Source: SRK, 2020

In addition to the direct contractor cost, Pan is responsible for all engineering services including mine planning and survey, blasthole sampling, ore control and overall supervision of the contractor's operation. Table 21-8 shows the estimated additional mining costs. Table 21-9 summarizes the mine production costs.

Table 21-8: Additional Mining Costs

Item	US$/ton Mined	LOM (US$000)
Non-contractor salary & wages & employee related	0.097	6,130
Consumables	0.019	1,209
Safety and Environmental	0.001	32
Parts & Non Capital Equipment	0.002	109
Fees, Travel and Other Admin	0.016	983
Total Other Mining Cost	**0.134**	**8,462**

Source: SRK, 2020

Table 21-9: Mine Production Costs

Item	Cost	Unit
LOM Mining Cost	131,283	US$ 000's
Cost per ton mined	2.07	$/ton mined
Cost per ton ore	5.60	$/ton ore

Source: SRK, 2020

21.2.3 Processing Cost Estimates

The major processing cost elements include fixed and variable costs, as well as costs for rehandle of crushed, agglomerated stockpiled material. Fixed costs include labor, safety & environmental, non-capital equipment rents and leases and fees. Variable costs consist of chemical reagents, consumables, parts, fuel and lubricants and services. The fixed and variable costs represent the cost to crush, agglomerate, leach and process ore. Rehandle costs represent the cost for the mining contractor to load and haul ore from a crushed ore stockpile to the pad. The LOM operating cost to process 23.9 Mton of ore is US$72.5 million, or US$3.06/ton ore processed. Table 21-10 shows the summarized process production costs.

Table 21-10: Process Production Costs

Item	LOM (US$ 000's)	US$/ton-ore processed
Fixed	19,968	0.85
Variable	28,671	1.22
Rehandle	23,408	1.00
Total Processing Cost	**72,047**	**3.06**

Source: SRK, 2020

Process fixed costs used historical data as described in Section 21.2.1. Fixed costs primarily consist of labor, which is assumed to be relatively fixed throughout the mine life. Table 21-11 summarizes the fixed processing costs for the life of mine.

Table 21-11: Fixed Process Production Costs

Item	LOM (US$ 000's)	US$/ton-ore processed
Labor Salary, Wages & Employee Related	18,715	0.796
Safety & Environmental	157	0.007
Non-Capital Equipment Rents and Leases	1,045	0.044
Fees, Travel and Other Admin	50	0.002
Total Fixed Processing Cost	**19,968**	**0.849**

Source: SRK, 2020

Variable process costs are also based on historical costs as described in Section 21.2.1. Variable costs are calculated using actual costs and tonnages of the period. Table 21-12 lists the variable process production costs through the life of mine.

Table 21-12: Variable Process Production Costs

Item	LOM (US$ 000's)	US$/ton-ore processed
Acids	214	0.009
Anti-Scalents	462	0.020
Carbon	252	0.011
Caustic Soda	326	0.014
Cyanide	7,086	0.301
Chemicals and Other Reagents	18	0.001
Cement	4,220	0.179
Consumables - Other	287	0.010
Drip Supplies	757	0.027
Electric Power	2,577	0.092
Fasteners	131	0.005
Filter cloth	19	0.001
Ground Engaging	370	0.013
Lab Supplies/Crucibles	821	0.029
Pipe & Pipe Fittings	135	0.005
Propane/LPG	884	0.032
Small Tools	238	0.009
Steel	1,696	0.061
Tires	371	0.013
Utilities	187	0.007
Welding Supplies & Gases	184	0.007
Filters	58	0.002
Consumables - Allocated Costs	(464)	(0.020)
Air Conditioning	52	0.002
Blowers & Fan Parts	67	0.002
Compressors	66	0.002
Conveyors & Belting	601	0.026
Electrical & Instrumentation	438	0.016
Electrical Motors	62	0.002
Hoses & Fittings	18	0.001
Other Parts	345	0.012
Pumps	433	0.016
Valves	146	0.005
Repairs & Maintenance	194	0.007
Diesel	2,244	0.080
Oil & Lubricants	121	0.004
Consulting Services - 3rd Party	75	0.004
Contracted Services	1,819	0.046
Contracted Maintenance	762	0.031

Item	LOM (US$ 000's)	US$/ton-ore processed
Maintenance & Repairs	437	0.015
Assays and Analysis	64	0.000
Services - Allocated Costs	(104)	0.001
Total Variable Processing Cost	**28,671**	**1.100**

Source: SRK, 2020

Contractor rehandle process costs are modeled using loading and haulage simulation software to generate loader and truck haulage equipment hours. Hours for the D6 and D10 dozer hours are determined by the schedule. The same contractor hourly costs are used to generate the LOM costs summarized in Table 21-13.

Table 21-13: Contractor Rehandle Costs

Item	LOM (US$ 000's)	US$/ton-ore processed
Loading	4,873	0.207
Haulage	14,208	0.604
D6 Dozer	677	0.029
D10 Dozer	3,651	0.155
Total Contractor Rehandle Cost	**23,408**	**0.995**

Source: SRK, 2020

21.2.4 General and Administrative Cost Estimate

General and Administrative costs represent the Pan Mine actual costs based on the current manpower level which are expected to remain relatively constant through the life of the operation. The costs were assumed to be fixed through the end of mining and crushing. Costs are reduced during the last two years of processing without mining and crushing. Life of mine general and administrative costs are provided in Table 21-14.

Table 21-14: General and Administrative Costs

Item	LOM (US$ 000's)	US$/ton-ore processed
Salary Wages & Employee Related	6,625	0.282
Consumables	195	0.008
Safety & Environmental	2,715	0.115
Parts	159	0.007
Fuel & Lubricants	1,159	0.049
Non Capital Equipment	311	0.013
Rents & Operating Leases	799	0.034
Services	1,696	0.072
Fees & Dues	1,312	0.056
Travel Related & Other Admin Costs	3,989	0.170
Total General and Administrative Cost	**18,959**	**0.806**

Source: SRK, 2020

22 Economic Analysis

As with the capital and operating cost forecasts, the economic analysis is inherently a forward-looking exercise. These estimates rely upon a range of assumptions and forecasts that are subject to change depending upon macroeconomic conditions, operating strategy and new data collected through future operations.

The financial results of this report have been prepared on an annual basis. All costs are in Q2 2020 US$.

22.1 Principal Assumptions and Input Parameters

A financial model was prepared on an unleveraged, pre- and post-tax basis, the results of which are presented in this section. Key criteria used in this analysis are discussed in detail throughout this report. Financial assumptions used in this analysis are shown summarized in Table 22-1.

Table 22-1: Financial Assumption for Economic Modeling

Model Parameter	Technical Input
Mine Life	5 years
LOM Gold Price (US$/oz) average	$1,575
Discount Rate	5.0%

Source: SRK, 2020

The Project is currently in production. The mine will have approximately a five-year life according to the Mineral Reserve described in this report.

Capital and operating cost forecasts are based on historical data and are presented in real 2020 dollars. No inflation factors are used in the economic projections. The analysis uses variable gold market price over the five-year mine life. The gold price averages US$1,575/oz based on the prices used in the market analysis section of the report (Section 19). This price is lower than market spot gold price of approximately $1,785, as of the effective date of this report.

22.2 Cash Flow Forecasts and Annual Production Forecasts

The economic results, at a discount rate of 5%, indicate an NPV of US$71.4 million after estimated taxes. Internal rate of return and payback are not applicable since the mine is in production and has a positive cash flow throughout the mine life until reclamation and closure begin. The following provides the basis of the LoM plan and economics:

- A mine life of approximately five years;
- An overall average gold recovery rate of approximately 72%;
- An average cash operating cost of US$990 per Au oz-produced;
- Life of mine capital costs of US$13.2 million;
- Life of mine strip ratio of 1.70:1;
- Mine closure cost estimate (after offsetting by bond recovery) of US$5.1 million;
- After Tax NPV of US$71.4 million;
- The analysis does not include any allowance for end of mine salvage value; and,
- No allowance for corporate overhead was included.

Table 22-2 shows the LOM production, ore grades, and contained metal used in the economic analysis.

Table 22-2: Mine Production Summary

Item	Value	Units
Mine Production		
Waste	39,822	kton
Ore	23,457	kton
Total Material	**63,279**	**kton**
Stripping Ratio	1.70	waste:ore
Metal Grade		
Gold	0.012	oz/ton
Contained Metal		
Gold	290.5	koz

Source: SRK, 2020

Table 22-3 shows the LOM process tonnage, recoveries from the heap leach operation, and recovered metal used in the economic analysis.

Table 22-3: Process Production Summary

Item	Value	Units
Ore Processed		
Leach Pad	23,519	kton
Contained Metal		
Gold[1]	291.5	koz
Recovery		
Gold	72	%
Recovered Metal		
Gold	224.5	koz

[1] Includes recoverable gold in heap leach pad inventory.
Source: SRK, 2020

Table 22-4 summarizes the economic model results including the NPV of the forecast free cash flow at a 5% discount rate both with and without taxes.

Table 22-4: Project Economic Results

Description		With Tax (US$)	Without Tax (US$)
Market Prices			
Gold (LOM Avg)	/oz-Au	$1,575	$1,575
Estimate of Cash Flow (all values in US$ 000's)			
Payable Metal			
Gold	koz	224.4	224.4
Gross Revenue			
Gold		$353,346	$353,346
Revenue		**$352,346**	**$353,346**
Freight & Handling		($442)	($442)
Gross Revenue		**$352,904**	**$352,904**
Royalty		($14,134)	($14,134)
Net Revenue		**$338,770**	**$338,770**
Operating Costs	**$/ton-ore**		
Mining	$5.60	$131,283	$131,283
Processing	$3.06	$72,047	$72,047
G&A	$0.81	$18,959	$18,959
Property & Net Proceeds Tax	$0.40	$9,498	$9,498
Total Operating Costs	**$9.87**	**$231,786**	**$231,786**
Operating Margin (EBITDA)		**$106,984**	**$106,984**
LOM Capital		$13,218	$13,218
Income Tax		$11,001	$0
Free Cash Flow		**$82,764**	**$93,766**
NPV 5%		**$71,449**	**$80,806**

Source: SRK, 2020

Table 22-5 contains the LOM cash cost for the Project and cost per ton processed based on total revenue, total operating cost, and total operating margin.

Table 22-5: Operating Margin and Cash Costs

Operating Margin	Value	Units
Gold Sales Price	$1,575	US$ per oz
Leached Ore	23,457	kton
Total Revenue		
Gold	$353,346	US$ 000's
Total Revenue	$353,346	US$ 000's
$/ton-ore	$15.06	
Costs		
Refining and Transport	$195	US$ 000's
Royalty	$14,134	US$ 000's
Operating Costs	$232,530	US$ 000's
Cash Cost	$246,859	US$ 000's
$/ton-ore	$10.52	
Margin		
Operating Margin	$106,486	US$ 000's
$/ton-ore	$4.54	

Source: SRK, 2020

22.3 Taxes, Royalties and Other Interests

Fiore will be subject to the following taxes as they relate to the Project:

- Federal Income Tax; and
- Nevada Net Proceeds of Mining Tax.

Fiore is also subject to royalties as described in Section 4.3. A simplified approach to royalties was applied for this report as described in Section 22.3.2.

22.3.1 Federal Income Tax

Corporate Federal income tax is computed by subtracting all allowable operating expenses, overhead, depreciation, and amortization from current year revenues to arrive at taxable income before depletion. There are two forms of depletion for tax purposes: (1) Cost depletion, which is based on a cost recovery concept, and (2) Percentage depletion, which is a statutory concept based upon gross income of the applicable property. Taxpayers are required to use the method which results in the greatest depletion deduction amount in each year. Depletion is subtracted from taxable income before depletion to arrive at taxable income. An operating loss may be used to offset taxable income, thereby reducing taxes owed, in the previous three and following 15 years, which currently may be carried forward indefinitely. The corporate income tax rate is set at 21%.

Depreciation for Federal taxation has been applied to the SRK Technical Economic Model using the following guidelines provided by Fiore:

- 100% Bonus Depreciation for most assets placed into service through 2022;

- Assets placed into service after 2022 have a 50% Bonus Depreciation rate applied in the first year with a three-year tail based upon the Modified Accelerated Cost Recovery System (MACRS) tables. Reclamation costs were accrued over the life of the Project on a per ton mined basis.

22.3.2 Royalties

Fiore is subject to a complicated royalty agreement which considers prepayment and other factors. A simplified approach taken in this study was to apply a 4% NSR cost.

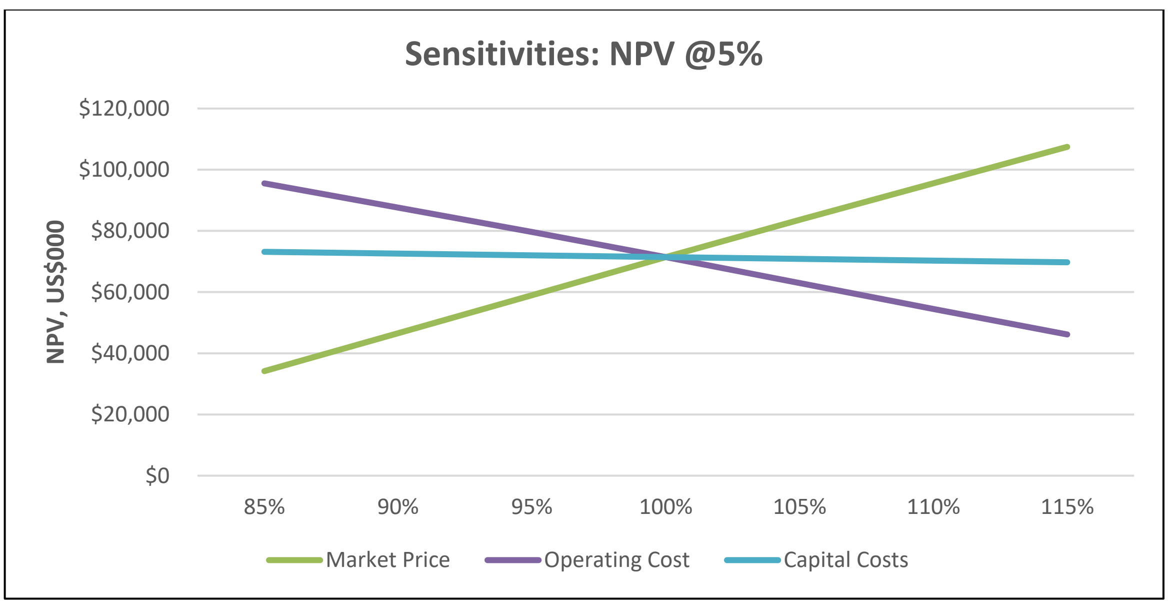
22.4 Sensitivity Analysis

Based on sensitivities of Market Price, Operating costs, and Capital costs, the Pan Mine is most sensitive to changes in Market Price and least sensitive to Capital Costs. The overall sensitivity at 5% discount rate is detailed in Table 22-6 and illustrated in Figure 22-1.

Table 22-6: Project Sensitivities

NPV (5%) (US$ 000's)	85%	90%	95%	100%	105%	110%	115%
Gold Price	34,177	46,551	58,988	71,449	83,607	95,535	107,463
Operating Cost	95,534	87,581	79,627	71,449	62,976	54,496	46,155
Capital Costs	73,161	72,590	72,020	71,449	70,879	70,308	69,738

Source: SRK 2020



Source: SRK, 2020

Figure 22-1: Project Sensitivities at 5% Discount Rate

A broad metal price sensitivity is presented in Table 22-7, with a base case of US$1,575/oz gold in bold text. The discount rate is held constant at 5%.

Table 22-7: Project Sensitivity to Metal Price

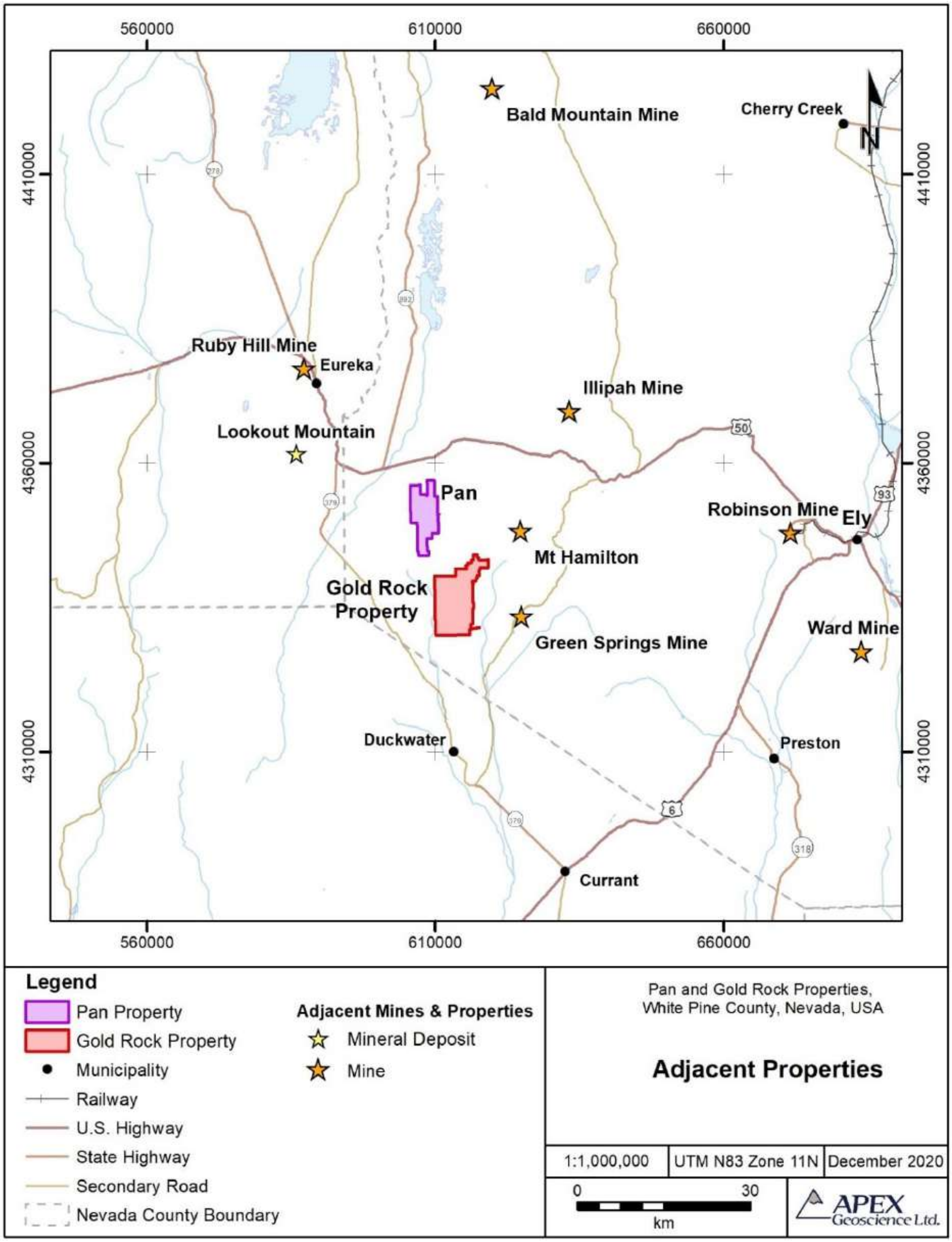
Gold US$/oz	**$1,050**	**$1,150**	**$1,250**	**$1,350**	**$1,450**	**$1,575**	**$1,650**
NPV 5% (US$ 000's)	(14,804)	3,170	18,571	34,143	49,952	**71,449**	81,278
Gold US$/oz	**$1,750**	**$1,850**	**$1,950**	**$2,050**	**$2,150**	**$2,250**	
NPV 5% (US$ 000's)	96,707	111,761	126,587	141,261	155,908	170,556	

Source: SRK, 2020

23 Adjacent Properties

The Pan Mine is situated to the south of the Battle Mountain – Eureka Carlin-type gold trend. This trend has been producing substantial mining projects for decades. Along with the Pan Mine Property, Fiore also has the Gold Rock Project in the southern portion of this trend located approximately 8 miles to the southeast of the Pan Mine. Other notable projects include the Bald Mountain Gold Mine located 45 miles north of the Pan Mine. There also a number of historical mines near the Pan Mine owned by a number of other companies including Mt Hamilton 10 miles to the southeast, Green Springs located 14 miles southeast. Illipah 19 miles to the northeast, Lookout Mountain (Windfall) 16.5 miles to the northwest and Ruby Hill 21 miles to the northwest near Eureka (Figure 23-1).

The authors of this report have been unable to verify the information pertaining to adjacent properties in the area. No inference is made in this report to similarities between the Pan Mine Property and adjacent properties discussed below.



Source: APEX, 2020

Figure 23-1: Properties adjacent to the Pan Mine

23.1 Bald Mountain Mine

The Bald Mountain mine lies approximately 45 miles north of the Pan Mine. The mine is located on the southern end of the Battle Mountain – Eureka trend. Bald Mountain is a Carlin-style deposit with disseminated, micron sized gold hosted in calcareous shales and limestones. Exploration at Bald Mountain began in 1977 with production starting in the early 1980's. During 1995, the 1-5 open pit produced 5.6 million tons of ore grading 0.063 oz/ton Au (Western Mining History, 2017). As of 2016, reserves at Bald Mountain – proven and probable – were 2.133 million ounces of gold within 123.8 million tons (110.5 million tonnes) at 0.018 opt (0.6 g/t) (Table 23-1). Also, a significant measured and indicated gold resource has been identified (Kinross, 2016).

Table 23-1: 2016 Bald Mountain Reserve Statement

Category	Tons (000's)	Tonnes (000's)	Au Grade (oz/t)	Au Grade (g/t)	Contained Ounces (Au)
Proven	13,389	10,332	0.023	0.8	271,000
Probable	110,400	100,154	0.018	0.6	1,862,000
Proven and Probable	123,789	110,486	0.018	0.6	2,133,000

Source: Kinross, 2016

23.2 Green Springs Mine

The historical Green Springs Mine is located 14 miles southeast of the Pan Mine within the White Pine Mining District. The historical Green Springs Mine is a gold and silver Carlin-style deposit located on the southern end of the Battle Mountain – Eureka trend. The Green Springs mine has produced 1.2 million tons of ore at 0.061 opt Au since the 1980's (Ely Gold, 2013).

Mineralization at the historical Green Springs Mine is dominantly found within the Joana Limestone; however, mineralization has also been found in the Pilot Shale. Exploration at the Green Springs Mine is ongoing to expand the potential of the property. Recent exploration by Colorado Resources Ltd. has yielded up to 135 ft of 0.094 oz/ton Au from the E Zone at the Chainman – Joana Limestone contact south of the historical mine workings (Colorado Resources Ltd., 2017).

23.3 Mount Hamilton Mine

Waterton Global's Mount Hamilton gold-silver deposit and historical mine is located 10 miles southeast of the Pan Mine within the White Pine Mining District. Exploration at Mount Hamilton began in the late 1960's. The Seligman and Centennial deposits were defined in the late 1980's with production and open pit mining of the Seligman Deposit commencing in 1994.

The epithermal/skarn oxide-hosted gold mineralization at Mt. Hamilton is typically hosted in the Cambrian Secret Canyon Shale and the Cambrian Dunderberg Shale, calcareous laminated mudstone units with thin limestone interbeds. Mineralization consists of skarn hosted tungsten, molybdenum, and copper +/- zinc with later possibly epithermal gold and silver. Gold mineralization is hosted in a thick skarn horizon bounded by hornfels. In the Centennial and Seligman deposits, gold is present as free gold, residing in oxide minerals or quartz, and adsorbed on clay minerals with oxide mineralization formed as a result of weathering and oxidation of original sulphide mineralization (Pennington *et al.*, 2014).

23.4 Lookout Mountain Project

Timberline Resources Corporation's Lookout Mountain Project is located approximately 16.5 miles northwest of the Pan Mine. Gold mineralization at Lookout Mountain is Carlin-type disseminated sediment-hosted mineralization with characteristic decalcification, argillization and silicification alteration. The 2013 NI 43-101 MRE at Lookout Mountain includes 28.9 million of 0.018 oz/ton Au for a total of 508,000 ounces of gold (at a 0.006 oz/ton Au cut-off) for total measured and indicated resource (Table 22-3). In addition, the Inferred MRE for Lookout Mountain includes 11.7 million tons of 0.012 oz/ton Au for a total of 141,000 gold ounces (Gustin, 2013). Timberline is currently conducting additional exploration and advancing Lookout Mountain toward a production decision.

Table 23-2: Lookout Mountain Mineral Resource Statement

Category	Tons (000's)	Tonnes (000's)	Au Grade (oz/t)	Au Grade (g/t)	Contained Ounces (Au)
Measured	3,043	2,761	0.035	1.20	106,000
Indicated	25,897	23,493	0.016	0.55	402,000
Measured and Indicated	28,940	26,254	0.018	0.62	508,000
Inferred	11,709	10,622	0.012	0.41	141,000

Source: Gustin, 2013

Carlin-type gold mineralization at Lookout Mountain occurs within the Lookout Mountain breccias, as well as in the overlying Cambrian Dunderburg Shale. Mineralization was discovered in jasperoid that caps Ratto Ridge at the surface and has been intersected to depths of 1,500 ft (457 m). Gold mineralization is associated with strong surface concentrations of arsenic, mercury, and antimony in surface rock and soil samples. The main feature controlling mineralization is interpreted to be hydrothermal-related dissolution and associated brecciation, dolomitization, sideritization, and ankeritization within the Geddes Limestone (Gustin, 2013).

23.5 Ruby Hill Mine

Waterton Global's Ruby Hill gold deposit is located 30 miles (45 km) northwest of the Gold Rock Property along the Battle Mountain / Eureka gold trend. The Archimedes deposit was defined in the mid-1990's with production and open pit mining of the commencing in 1997. Production ceased in 2002. In 2007 Barrick Gold started production as an open-pit heap leach operation and the mine has been in production since that time.

Mineralization of the Archimedes deposit is primarily hosted in thin to thick bedded cherty limestone of the early Ordovician Goodwin Limestone of the Pogonip Group. Additionally, mineralization has been identified in the micritic to shaley limestone of the early Ordovician Ninemile Formation of the Pogonip Group, and early Cretaceous quartz porphyry. Mineralization is coincident with zones of iron-stained jasperoid and decalcified limestone. Mineralization is primarily controlled by WNW- and NE- to NNE trending faults, with secondary control by open folds and faulted fold limbs. Mineralization is also associated with stratigraphic traps formed by contacts between the limey mudstone and wackestone. The shape of the deposit is complex and irregular. Generally, it has a central elongate, sub-tabular body with an ovate cross section from which lobes branch and flare out along structural intersections. The orebody has a central elongated lens of higher Jasperoid ore enclosed by a more tabular envelope of lower grade decalcified limestone ore (USGS MRDS #10310484).

24 Other Relevant Data and Information

24.1 Mineral Resources

The QP is not aware of any additional information that would materially impact the conclusions of this report.

24.2 Environmental

The QP is not aware of any additional information that would materially impact the conclusions of this report.

24.3 Mining

The QP is not aware of any additional information that would materially impact the conclusions of this report.

24.4 Rock Mechanics

The QP is not aware of any additional information that would materially impact the conclusions of this report.

24.5 Mine Economics

The QP is not aware of any additional information that would materially impact the conclusions of this report.

24.6 Metallurgy

The QP is not aware of any additional information that would materially impact the conclusions of this report.

25 Interpretation and Conclusions

25.1 Exploration

Sedimentary contacts and horizons have mineralization potential and many have not been tested. The Pan land package has potential for additional economic discoveries. Exploration targets should be included in future exploration expenditure, to increase the resource and replenish the reserves mined.

As production continues at Pan, it is important to conduct additional drilling to both replace reserves that are being mined and to maximize the mine life projections to create options for future financing.

It is recommended that a multi-year multi-phase program of exploration drilling is planned that allows for the growth of the overall project resources and reserves. The program should be laid out utilizing a strategy of prioritizing targets nearest current production to reduce planning and development time as well as improve odds of success. Further drilling of the south eastern highwall could add to the resources and reserves and reduce the relative stripping ratio.

In addition to drilling, general exploration of areas away from current mining should be completed. Detailed geologic mapping and additional geochemical sampling may provide additional targets beyond those already identified for future drilling.

A multi-phased development and exploration drilling plan is proposed for 2021 which includes many of the recommendations noted above. Among the targets to be evaluated in initial phases are:

- NW extension of Red Hill;
- East side of South Pan at depth;
- Portions of South pan (west) at depth;
- That NW-SE trending string of pearls of mineralization south of South Pan; and
- Test splay faults extending off the Branham Fault for near surface pockets of mineralization.

Additional areas to be considered for subsequent phases of development and exploration drilling are the north and south strike extensions of the Branham Fault Zone beyond previously identified mineralization and a number of previously identified (by Midway geologists) favorable geologic and geochemical targets within the Pan property boundary.

25.2 Mineral Resource Estimate

Pan has three main mineralized zones; North, Central, and South. Gold (Au) mineralization spatially follows the Devils Gate Limestone – Pilot Shale contact in all three, and is also controlled by steeply-dipping faults that trend north-south and secondarily by west-northwest (WNW) open fold axes.

This report provides an updated Mineral Resource Estimate (MRE) for the Pan Mine and is based upon historical drilling and drilling conducted from 2018 to 2020 and supersedes all of the prior resource estimates for the Pan Mine. The resource estimate provided by Deiss et al. (2019) and Pennington et al. (2017) are now superseded by the MRE presented herein due to mining depletion and new drilling. Other older resource estimates are now all considered historical in nature.

The updated Pan Mine MRE is reported at various cutoffs depending on what type of alteration each block is flagged with. The Measured, Indicated, and Inferred MRE is undiluted, constrained within an optimized pit shell, and includes a Measured Mineral Resource of 11.422 million tons (10.632 million tonnes) at 0.015 oz/ton (0.53 g/t) Au for 175,000 ounces of gold, an Indicated Mineral Resource of 19.719 million tons (17.889 million tonnes) at 0.013 oz/ton (0.44 g/t) Au for 252,400 ounces of gold, and an Inferred Mineral Resource of 3.76 million tons (3.411 million tonnes) at 0.016 oz/ton (0.56 g/t) Au for 61,500 ounces of gold (Table 25). The reported MRE utilizes a lower gold cutoff of 0.003 oz/ton Au (0.10 g/t) for blocks flagged as argillic altered or as unaltered and a cutoff of 0.004 oz/ton Au (0.14 g/t) for blocks flagged as silicic altered. The MRE is inclusive of reserves.

Table 25-25-1: Pan Mine Resource Estimate Constrained within the '$1700/oz' Pit Shell for Gold at Cut-off Grades Specific to Alteration Type and Area

Region	Classification	Au Cut-off (oz/ton)	Au Cut-off (g/t)	Tons (tons)**	Tonnes (t)**	Au Grade (oz/ton)	Au Grade (g/t)	Contained Au (troy ounces)**
North	Measured*	mixed	mixed	5,687,000	5,159,000	0.015	0.53	83,700
	Indicated*	mixed	mixed	7,399,000	6,713,000	0.014	0.49	94,200
	M&I*	mixed	mixed	13,086,000	11,871,000	0.015	0.50	177,900
	Inferred*	mixed	mixed	843,000	764,000	0.023	0.78	11,800
Central	Measured*	mixed	mixed	963,000	874,000	0.016	0.54	17,400
	Indicated*	mixed	mixed	335,000	304,000	0.013	0.45	5,200
	M&I*	mixed	mixed	1,298,000	1,178,000	0.014	0.49	22,600
	Inferred*	mixed	mixed	237,000	215,000	0.015	0.51	5,900
South	Measured*	mixed	mixed	4,772,000	4,329,000	0.014	0.49	73,900
	Indicated*	mixed	mixed	11,985,000	10,873,000	0.012	0.41	153,000
	M&I*	mixed	mixed	16,757,000	15,202,000	0.012	0.43	227,000
	Inferred*	mixed	mixed	2,680,000	2,432,000	0.013	0.44	43,700
Total	Measured*	mixed	mixed	11,422,000	10,362,000	0.015	0.53	175,000
	Indicated*	mixed	mixed	19,719,000	17,889,000	0.013	0.44	252,400
	M&I*	mixed	mixed	31,141,000	28,251,000	0.014	0.47	427,400
	Inferred*	mixed	mixed	3,760,000	3,411,000	0.016	0.56	61,500

Source: APEX, 2020

*Measured, Indicated and Inferred Mineral Resources are not Mineral Reserves. Mineral resources which are not mineral reserves do not have demonstrated economic viability. There has been insufficient exploration to define the inferred resources tabulated above as an indicated or measured mineral resource, however, it is reasonably expected that the majority of the Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration. There is no guarantee that any part of the mineral resources discussed herein will be converted into a mineral reserve in the future. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing or other relevant issues. The mineral resources have been classified according to the Canadian Institute of Mining (CIM) Definition Standards for Mineral Resources and Mineral Reserves (2014).and CIM Estimation of Mineral Resources & Mineral Reserves Best Practices Guidelines (2019).
**May not add due to rounding.

The Pan Mine pit shell constrained MRE represents approximately 66% of the total volume and 73% of the total gold ounces in the entire unconstrained Pan Mine block model that was estimated in 2020. The updated MRE shows a 1% decrease in Measured and Indicated Resources to 427,400 gold ounces versus the 2018 MRE that utilized a September 30, 2018 topographic surface (Deiss et al., 2019). The approximate calculated mining depletion for the period of September 30, 2018 to June 30, 2020 is a little over 9 million tons and about 140,000 oz Au, the vast majority of which were Measured and Indicated Resources from the 2018 MRE. The 2019 to 2020 drilling combined with an increased gold price has effectively resulted in the addition of Measured and Indicated Resource equivalent to what has been mined during the period from September 30, 2018 to June 30, 2020. An additional

Inferred Resource of 61,500 gold ounces has been estimated at the Pan Mine, that with continued drilling may provide additional Measured and/or Indicated gold ounces.

In terms of drilling there is conversion drilling and adding ounces with near pit drilling there are holes required along the BFZ at the north end of North Pan and deeper holes at the south end of North Pan. There is deeper drilling especially with higher prices of Au at South Pan along the BFZ (the west zone) and deeper on the East Stratigraphic Zone. Both targets could convert inferred and add ounces.

25.3 Mining and Mineral Reserve

Pit slopes should be evaluated for internal phases to see if there is opportunity to steepen them. This could push some waste mining back in the production schedule and potentially improve the project economics.

In the QP's opinion, additional refinement to the mine plan presents an opportunity to improve the economic projections of the operation.

25.4 Metallurgy and Processing

Recovery curves for future materials should be confirmed, and the metallurgical performance of mineral samples of potential value should be tested and confirmed.

Sensitivity testing to different ore preparation methods should be tested, and options to improve existing practices should be implemented should they show potential to improve cash flow and NPV.

25.5 Environmental Studies and Permitting

GRP has maintained compliance with the permits and authorizations, so permit renewal of all major and minor permits required for operations within the regulatory mandated deadlines is anticipated. Environmental issues identified in the final EIS completed for the mine are mitigated by the requirements of the ROD. At the time of reporting, known environmental issues had been addressed and mitigated, as required.

The authorized 2020 annual reclamation cost update, recently approved by the BLM and the NDEP, stands at US$15,978,070, covering 1,471 acres of disturbance.

The "in-ground" reclamation cost including contractor profit was estimated by Haley & Aldrich (Haley & Aldrich 2021) to be US$11.6 million. This estimate assumes that GRP will perform the work and is less than the bonded cost of US$15.98 million shown in Section 20.10. The QP performed a high-level check on data used in the cost basis and determined that the equipment and labor costs appear to be reasonable but on the low end of standard costs; these synthesized cost data are predicated on the confidential for-profit mining contract not provided to SRK. The QP is relying on the synthesis of the cost data prepared by Fiore and used in the LOM ARO.

25.6 Projected Economic Outcomes

Capital cost are developed primarily from Fiore vendor quotations and from 2020 construction actual costs, Capital and operating 2020 dollars. No inflation factors are used in the economic projections.

The analysis uses variable gold market price over the five-year mine life. The gold price averages US$1,575/oz based on the prices used in the market analysis section of the report (Section 19). NPV of the predicted Project free cash flow is US$71.2 million using a discount rate of 5% (after estimated taxes). The mine is currently in production and the IRR is not applicable since no initial investment is required. Project capital costs, including a 5% contingency, total US$13.2 million, of which sustaining capital is US$2.9 million over the LOM. The mine closure cost estimate, adding back bond recovery, is US$5.1 million. The analysis does not include any allowance for end of mine salvage value and no allowance for corporate overhead. The LOM average cash cost is US$933/Au oz produced.

Based on the assumptions presented herein, the Pan mine reserve generates positive free cash flow at the assumed $1,575 gold price. The gold spot price is approximately $1,785, as of the effective date of this report which presents opportunity to improve the economic forecast for the reserve.

25.7 Foreseeable Impacts of Risks

Gold prices are volatile and there is no guarantee that Fiore will receive the gold price as used in the economics.

Changes in government regulations could adversely impact the future growth and operation of the facilities.

Demand for skilled and technical labor has increased recently in central Nevada and some short-term operational difficulties could be encountered due to staff shortages or labor costs may increase, increasing operating costs.

In order to maintain recovery and permeability of the heap leach pad, Fiore will need to carefully control the blend of hard and soft ores being delivered to the crusher.

26 Recommendations

26.1 Resources and Exploration

A multi-phased development and exploration work plan is proposed for the short term at the Pan Mine and surrounding areas. The initial phase should focus on identify additional resource which can be ultimately converted to mineable reserve. In parallel and subsequent to the initial phase of development drilling should be exploration programs designed to identify zones of mineralization not currently in the resource base. These programs should utilize detailed geologic mapping, geochemical sampling (soil and rock chip) followed by evaluation based on the most current interpretation of mineralization controls and stratigraphy at the Pan Mine.

Favorable targets generated by this work would be prioritized and drill tested as warranted.

Subsequent and periodic resource conversion and exploration drilling programs should be employed to replace and add to reserves.

The estimated cost of the drilling program is approximately (US$1.0M)

26.2 Mining

If future, where pit and WRDA designs deviate from the designs in the Golder stability analysis, the QP recommends that additional stability analysis be completed.

With the extended mine life owner mining should also be evaluated to potentially reduce the mine operating costs. Refinement to the mine plan presents an opportunity to improve the economic projections of the operation. Estimated cost for owner mining evaluation (US$200K) and mine plan refinement (US$100K).

26.3 Pit Geotechnical

The QP recommends that additional slope stability work is completed. Additional stability analyses will be necessary if designs deviate from the designs in the Golder stability analysis. The estimate cost for updating the alteration model, confirming and adjusting the argillic model strength parameters, designing and implementing a slope monitoring program and geotechnical expenses are estimated to be $405K. Costs for the geotechnical drilling program are included in the economic section of the report.

- Update the alteration model based on the ongoing 2020 exploration drilling program;
- Conduct geotechnical data collection using six exploration drill holes;
- Confirm and adjust the argillic material strength parameters used in this report;
- After completion of the geotechnical drilling program, update the geotechnical model;
- Continues with pre-split blasting and wall scaling;
- Implement a slope monitoring plan to anticipate potential wall instabilities;
- Update the geotechnical models as the mine is progressing; and,
- Commission geotechnical inspections by a geotechnical specialist to assess the pit performance, examine the pit design implementation practices, review the updated models, and review the wall stability.

26.4 Metallurgy and Process

Processing currently includes primary crushing, mixing with small quantities of cement and belt spray with barren solution for moisture addition. The result is minimal agglomeration and minimal impact on size reduction. Possible opportunity exists to optimize through further size reduction of siliceous rock and better moisture control and mixing for agglomeration. Testing and economic analysis should be conducted to prove or disprove the economic support for changes to the unit operations withing the life of mine

There are several opportunities worth evaluating to improve performance and reduce operating costs in ore processing. These include evaluating the addition of a secondary crusher to the existing crushing circuit to further improve gold recovery. Fiore should also consider the addition of overland conveyors and stacking equipment to eliminate the use of mine equipment for rehandling of crushed ore from the crushed ore stockpile to the leach cells.

The leach pad was originally permitted for a stacking height of 160’ above liner. This was recently modified and approved to stack to 200 feet. Further geotechnical studies could support increasing the stacking height further, thereby reducing the need for additional leach pad construction.

The mining permit allows for production up to 17,000 tpd of ore while the operation is currently targeting 14,000 tpd. Increasing mine and processing capacity to 17,000 tpd could improve the project returns.

The estimated cost to evaluate the addition of a secondary crusher and stacking system, as well as geotechnical studies is $500K.

26.5 Costs

Estimated costs for the Recommendations include in Table 26-1.

Table 26-1: Summary of Costs for Recommended Work

Area	Cost Estimate (US$)
Exploration Drill Program	$1,000,000
Owner Mining Evaluation	$200,000
Mine Plan	$100,000
Geotechnical Program (Excluding Drill Program)	$400,000
Crushing, Stacking & Heap Geotechnical Evaluations	$500,000
Total	$2,200,000

Source: SRK, 2020

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28 Glossary

The Mineral Resources and Mineral Reserves have been classified according to CIM (CIM, 2014). Accordingly, the Resources have been classified as Measured, Indicated or Inferred, the Reserves have been classified as Proven, and Probable based on the Measured and Indicated Resources as defined below.

28.1 Mineral Resources

A **Mineral Resource** is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

An **Inferred Mineral Resource** is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An **Indicated Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

A **Measured Mineral Resource** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

28.2 Mineral Reserves

A **Mineral Reserve** is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified.

The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study.

A **Probable Mineral Reserve** is the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

A **Proven Mineral Reserve** is the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

28.3 Definition of Terms

The following general mining terms may be used in this report.

Table 28-1: Definition of Terms

Term	Definition
Assay	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG)	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Footwall	The underlying side of an orebody or stope.
Gangue	Non-valuable components of the ore.
Grade	The measure of concentration of gold within mineralized rock.
Hanging wall	The overlying side of an orebody or slope.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous	Primary crystalline rock formed by the solidification of magma.
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.
Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological	Geological description pertaining to different rock types.
LOM Plans	Life-of-Mine plans.
LRP	Long Range Plan.
Material Properties	Mine properties.

Term	Definition
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease	A lease area for which mineral rights are held.
Mining Assets	The Material Properties and Significant Exploration Properties.
Ongoing Capital	Capital estimates of a routine nature, which is necessary for sustaining operations.
Ore Reserve	See Mineral Reserve.
Pillar	Rock left behind to help support the excavations in an underground mine.
ROM	Run-of-Mine.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Shaft	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore and waste.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Stope	Underground void created by mining.
Stratigraphy	The study of stratified rocks in terms of time and space.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulfide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening	The process of concentrating solid particles in suspension.
Total Expenditure	All expenditures including those of an operating and capital nature.
Variogram	A statistical representation of the characteristics (usually grade).

28.4 Abbreviations

The following abbreviations may be used in this report.

Table 28-2: Abbreviations

Abbreviation	Unit or Term
°	degree
AAL	American Assay Labs
AAS	Atomic Absorption Spectrometry
ABA	acid-base accounting
ADR	adsorption-desorption-recovery
Ag	Silver
AMT	Alternative Minimum Tax
AMTI	Alternative Minimum Tax Income
ARMPA	Approved Resource Management Plan Amendments for the Great Basin Region
Au	Gold
BE	break-even

Abbreviation	Unit or Term
BGEPA	Bald and Golden Eagle Protection Act
BLM	United States Department of the Interior Bureau of Land Management
BMP	best management practices
C-I-C	carbon-in-column
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
cm	centimeter
cm^3	cubic centimeter
CNAA	cyanide-soluble atomic absorption
CoG	Cut-off Grade
CPPs	Cumulative Probability Plots
CRM	Certified Reference Material
CSV	comma-separated values
Cu	Copper
EBITDA	earnings before interest, tax, depreciation and amortization
EDC	engineering design change
EIS	environmental impact statement
ET	evapotranspiration
FA	fire assays
FoS	factors of safety
FS	feasibility study
ft^2	square feet
G&A	general and administrative
g	gram
g/t	gram per metric ton
g/L	grams per liter
gal	gallon
gpm	gallons per minute
ICP	Inductively Coupled Plasma
ID2	Inverse Distance Squared
IRR	Internal Rate of Return
KCA	Kappas, Cassidy and Associates
kg/t	kilograms per metric ton
KOP	Key Observation Point
koz	thousand troy ounces
kton	Thousand US short tons
kt	Thousand metric tonnes
kV	kilovolt
L	liter
lbs	pounds
LCY	loose cubic yard
LECO	LECO elemental analyzers – LECO Corporation
LG	Lerchs-Grossmann

Abbreviation	Unit or Term
LMDL	lower method detection limit
LOM	life-of-mine
M	million
MACRS	Modified Accelerated Cost Recovery System
MDW	Midway Gold Corp.
mg/L	milligrams per liter
Midway	Midway Gold Corp.
ML	metals leaching
Mn	manganese
MPEP	MineSight Economic Planner
MPEP	MineSight Economic Planner
Mt/y	million tons per year
MWMP	meteoric water mobility procedure
NAC	Nevada Administrative Code
NaCN	Sodium cyanide
NDEP-BMRR	Nevada Division of Environmental Protection-Bureau of Mining Regulation and Reclamation
NDEQ	Nevada Department of Environmental Quality
NDOT	Nevada Department of Transportation
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NI 43-101	National Instrument 43-101
NPV	Net Present Value
NRHP	National Register of Historic Places
NSR	Net Smelter Royalty
oz	Troy ounces
oz/ton	Troy ounces per short ton
PAG	potentially acid generating
Pan	Pan Gold Project
Pb	Lead
PE	Phillips Enterprises LLC
ppm	parts per million
PSHA	Probabilistic Seismic Hazard Analysis
Q	quarter
QA/QC	Quality Assurance/ Quality Control
QMS	Quality Management System
RDi	Resource Development Corp.
ROD	Record of Decision
ROM	run-of-mine
SEC	U.S. Securities and Exchange Commission
sec	second
SRCE	Nevada Standardized Reclamation Cost Estimator
SRK	SRK Consulting (U.S.), Inc.

Abbreviation	Unit or Term
ton	US short ton (2,000 lbs.)
t	Metric tonne
T&M	Time and Materials
ton/d	tons per day
TMT	Tentative Minimum Tax
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
V	volt
VA	volt-amperes
WRDA	Waste Rock Disposal Areas
XRD	X-ray diffraction (XRD
XRF	X-ray fluorescence

Appendices

Appendix A: Certificates of Qualified Persons

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: "NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada" prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the "Technical Report").

I, Deepak Malhotra, Ph.D., RM-SME do hereby certify that:

1 I am currently employed as President of Pro Solv, LLC with an office at 15450 W. Asbury Avenue, Lakewood, Colorado 80228.

2 I am a graduate of Colorado School of Mines in Colorado, USA (Masters of Metallurgical Engineering in 1973 and Ph. D. in Mineral Economics in 1978). I have 48 years of experience in the area of metallurgy and mineral economics.

3 I am a Registered Member of the Society for Mining, Metallurgy & Exploration and a member of the Canadian Institute of Mining and Metallurgy (CIM).

4 I have visited the Pan Gold property, for this Technical Report my site visit had taken place on 28 February 2017 and 1 March 2017.

5 I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.

6 As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7 I accept professional responsibility for Sections 1.3, 1.7, 12.3, 13, 17, 24.6, 25.4 and 26.4 of this Technical Report.

8 I was involved and a Qualified Person on the NI 43-101 Updated Technical Report completed in 2017.

9 As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

10 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Colorado, United States.

["signed and sealed"]

Deepak Malholtra, RM-SME

President

ProSolv Consulting, LLC

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: "NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada" prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the "Technical Report").

I, Fredy Henriquez, M.Sc., RM-SME, ISRM, do hereby certify that:

1 I am a Principal Consultant (Rock Mechanics) with the firm of SRK Consulting (U.S.), Inc. with an office at 1125 Seventeenth Street, Suite 600, Denver, CO, 80202, United States.

2 I am a graduate with a degree in Civil Mine Engineering from the University of Santiago, Chile in 2000 and received a Master's degree in engineering (Rock Mechanics) from WASM, Curtin University, Australia in 2011. I have practiced my profession continuously for 25 years since my graduation from university. My relevant experience includes civil and mining geotechnical projects ranging from conceptual through feasibility design levels and operations support. I am skilled in both soil and rock mechanics engineering and specialize in the design and management of mine excavations. My primary areas of expertise include mine operations, mine planning, hard rock and soft rock characterization, underground and open pit stability analysis, database management, geotechnical data collection, probabilistic analysis, risk assessment, slope monitoring, modeling and pit wall pore pressure reductions. I have undertaken and managed large geotechnical projects for the mining industry throughout North, Central, South America, Australia and South Africa.

3 I am a Registered Member of the Society for Mining, Metallurgy, and Exploration, Registration #4196405-RM.

4 I have visited the Pan Gold property, for this Technical Report my site visit had taken place on 9-10 September, 2020.

5 I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.

6 As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7 I accept professional responsibility for Sections 12.6, 16.2, 24.4, and 26.3 of this Technical Report.

8 I have had no prior involvement with the subject property.

9 As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

10 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Denver, United States.

["signed and sealed"]

Fredy Henriquez, M.Sc., RM-SME, ISRM

Principal Consultant (Rock Mechanics)

SRK Consulting (U.S.), Inc.

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: "NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada" prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the "Technical Report").

I, Justin Smith, B.Sc., P.E., RM-SME, do hereby certify that:

1 I am a Principal Consultant (Mining) with the firm of SRK Consulting (U.S.), Inc. with an office at 5250 Neil Rd #300, Reno, NV 89502, United States.

2 I am a graduate of Colorado School of Mines in 2009 and received a Bachelor's degree in mining engineering from Colorado School of Mines, United States. I have practiced my profession continuously since 2009 where I have provided on-site engineering, reserves calculations, and mine engineering. I have both worked at gold mines operations as well as consulted on a range of gold projects around the world. Additionally, I have been a contributor to several precious and base metal technical reports in Nevada, Alaska, Arizona, Nebraska, Idaho, and internationally.

3 I am a professional engineer registered with the State of Nevada, License #23214. I am a Registered Member of the Society for Mining, Metallurgy & Exploration, Registration #4152085-RM.

4 I have visited the Pan Gold property, for this Technical Report my site visit had taken place on 12 August, 2020.

5 I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.

6 As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7 I accept professional responsibility for Sections 1.5, 1.6, 1.8, 2, 3, 4, 5, 12.2, 15, 16 (Except 16.2), 18, 24.3, 25.3, 25.7, 26.2, 27 and 28 of this Technical Report.

8 I was involved and a Qualified Person on the NI 43-101 Updated Technical Report completed in 2017.

9 As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

10 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Reno, United States.

["signed and sealed"]

Justin Smith, B.Sc., P.E., RM-SME

Principal Consultant (Mining)

SRK Consulting (U.S.), Inc.

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: "NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada" prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the "Technical Report").

I, Michael B. Dufresne, M.Sc., P.Geol., P.Geo., do hereby certify that:

1 I am President and a Principal Consultant with the firm of APEX Geoscience Ltd. with an office at 11450 - 160 Street NW, Suite #100, Edmonton AB, T5M 3Y7 Canada.

2 I graduated with a B.Sc. in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. in Economic Geology from the University of Alberta in 1987. I have practiced my profession continuously since 1983. I have provided a range of on-site geological modelling and mineral resource estimation consulting at gold development and mining operations as well as consulted on a range of gold projects around the world.

3 I am and have been registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Alberta since 1989 (Licence M48439). I have been registered as a Professional Geologist with the association of Professional Engineers and Geoscientists of BC since 2011 (Licence 169929).

4 I have visited the Pan Gold property, for this Technical Report my site visit had taken place on September 1, 2020.

5 I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.

6 As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7 I accept professional responsibility for Sections 1.1, 1.2, 1.4, 6, 7, 8, 9, 10, 11, 12.1, 14, 23, 24.1, 25.1, 25.2, 26.1, and Appendices 1 - 4 of this Technical Report.

8 I have had limited prior involvement as a Qualified Person on geological consulting at the Pan Project from 2017 to 2020.

9 As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

10 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Edmonton, Alberta Canada.

["signed and sealed"]

Michael B. Dufresne, M.Sc., P.Geol., P.Geo.
President and Principal Consultant
APEX Geoscience Ltd.

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: “NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada” prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the “Technical Report”).

I, Michael Iannacchione, P.E., MBA, do hereby certify that:

1. I am an Associate Technical Consultant (Mining) with the firm of SRK Consulting (U.S.), Inc. with an office at 5250 Neil Rd #300, Reno, NV 89502, United States.
2. I am a graduate of University of Nevada-Reno in 1978 and received a Bachelor’s degree in mining mineral engineering from the University of Nevada-Reno, United States, and a Master’s in Business Administration in 2018 from the University of Notre Dame, United States. I have practiced my profession continuously since 1978. I have worked as an engineer, mine manager supervising operations and technical services, as well as general manager positions primarily in gold operations. I also was employed by a base metals company as Vice President/General Manager. My relevant experience includes economic analysis, mine operations, management of operations which processed by heap leaching and milling. I practiced economic analysis internal to companies and independently as a technical consultant.
3. I am a professional engineer registered with the State of Nevada, License #10643.
4. I have visited the Pan Gold property, for this Technical Report my site visit had taken place on 10 September, 2020.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “Qualified Person” for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.
6. As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.
7. I accept professional responsibility for Sections 1.10, 1.11, 1.12, 12.5, 19, 21, 22, 24.5, 25.6 and 26.5 of this Technical Report.
8. I spent two weeks as an independent consultant in 2015 reviewing operational and safety functions at the Pan Mine.
9. As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Reno, United States.

[“signed and sealed”]

Michael Iannacchione, P.E., MBA

Associate Technical Consultant (Mining)

SRK Consulting (U.S.), Inc.

CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled: "NI 43-101 Updated Technical Report on Resources and Reserves Pan Gold Project, White Pine County, Nevada" prepared for Fiore Gold Ltd. dated 22 January, 2021, with an amended date of September 8, 2021, with an effective date of December 23, 2020 (the "Technical Report").

I, Valerie Sawyer, RM-SME, do hereby certify that:

1 I am a Principal Consultant (Environmental) with the firm of SRK Consulting (U.S.), Inc. with an office at 1250 Lamoille Hwy, Suite 520, Elko, NV 89801, United States.

2 I am a graduate of University of Michigan in 1981 and received a Bachelor's degree in metallurgical engineering from Michigan Technological University, United States. I have practiced my profession continuously since 1981 where I have over 39 years of experience in federal, state, and local mine environmental permitting and compliance and metallurgical engineering in the western United States.

3 I am a Registered Member with the Society for Mining, Metallurgy & Exploration, Registration #4192564-RM.

4 I have visited the Pan Gold property, for this Technical Report my site visit had taken place on 14 January, 2014.

5 I have read the definition of "Qualified Person" set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43 101F1.

6 As a Qualified Person, I am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.

7 I accept professional responsibility for Sections 1.9, 12.4, 20, 24.2 and 25.5 of this Technical Report.

8 I was involved and a Qualified Person on the NI 43-101 Updated Technical Report completed in 2017.

9 As of the date of this certificate, to the best of my knowledge, information and belief, the portion of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portion of the Technical Report for which I am responsible not misleading.

10 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated 8th September, 2021 at Elgin, Arizona, United States.

["signed and sealed"]

Valerie Sawyer, RM-SME

Principal Consultant (Environmental)

SRK Consulting (U.S.), Inc.

Appendix B: Mineral Claims

BLM Serial #	Claim Name	Expiration Date	Owner
NMC1031802	PR 1	8/31/2021	Nevada Royalty Corp.
NMC1031803	PR 2	8/31/2021	Nevada Royalty Corp.
NMC1031804	PR 3	8/31/2021	Nevada Royalty Corp.
NMC1031805	PR 4	8/31/2021	Nevada Royalty Corp.
NMC1031806	PR 5	8/31/2021	Nevada Royalty Corp.
NMC1031807	PR 6	8/31/2021	Nevada Royalty Corp.
NMC1031808	PR 7	8/31/2021	Nevada Royalty Corp.
NMC1031809	PR 8	8/31/2021	Nevada Royalty Corp.
NMC1031810	PR 9	8/31/2021	Nevada Royalty Corp.
NMC1057236	PC 1	8/31/2021	Nevada Royalty Corp.
NMC1057237	PC 2	8/31/2021	Nevada Royalty Corp.
NMC1057238	PC 3	8/31/2021	Nevada Royalty Corp.
NMC1057239	PC 4	8/31/2021	Nevada Royalty Corp.
NMC1057240	PC 5	8/31/2021	Nevada Royalty Corp.
NMC1057241	PC 6	8/31/2021	Nevada Royalty Corp.
NMC1057242	PC 7	8/31/2021	Nevada Royalty Corp.
NMC1057243	PC 8	8/31/2021	Nevada Royalty Corp.
NMC1057244	PC 9	8/31/2021	Nevada Royalty Corp.
NMC1057245	PC 10	8/31/2021	Nevada Royalty Corp.
NMC1057246	PC 11	8/31/2021	Nevada Royalty Corp.
NMC1057247	PC 12	8/31/2021	Nevada Royalty Corp.
NMC1057248	PC 13	8/31/2021	Nevada Royalty Corp.
NMC1057249	PC 14	8/31/2021	Nevada Royalty Corp.
NMC1057250	PC 15	8/31/2021	Nevada Royalty Corp.
NMC1057251	PC 16	8/31/2021	Nevada Royalty Corp.
NMC1057252	PC 17	8/31/2021	Nevada Royalty Corp.
NMC1057253	PC 18	8/31/2021	Nevada Royalty Corp.
NMC1057254	PC 20	8/31/2021	Nevada Royalty Corp.
NMC1102847	NC 125	8/31/2021	Nevada Royalty Corp.
NMC1102848	NC 134	8/31/2021	Nevada Royalty Corp.
NMC1102849	PAN 114	8/31/2021	Nevada Royalty Corp.
NMC1102850	PAN 121	8/31/2021	Nevada Royalty Corp.
NMC1102851	LAT 48	8/31/2021	Nevada Royalty Corp.
NMC205565	PAN #119	8/31/2021	Nevada Royalty Corp.
NMC37169	PAN # 37	8/31/2021	Nevada Royalty Corp.
NMC37170	PAN # 38	8/31/2021	Nevada Royalty Corp.
NMC37172	PAN # 63	8/31/2021	Nevada Royalty Corp.
NMC37173	PAN # 65	8/31/2021	Nevada Royalty Corp.
NMC37174	PAN # 67	8/31/2021	Nevada Royalty Corp.
NMC37175	PAN # 69	8/31/2021	Nevada Royalty Corp.
NMC427129	PE # 50	8/31/2021	Nevada Royalty Corp.

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NMC427131	PE # 52	8/31/2021	Nevada Royalty Corp.
NMC427133	PE # 54	8/31/2021	Nevada Royalty Corp.
NMC57946	PAN # 71	8/31/2021	Nevada Royalty Corp.
NMC57947	PAN # 72	8/31/2021	Nevada Royalty Corp.
NMC57948	PAN # 73	8/31/2021	Nevada Royalty Corp.
NMC57949	PAN # 74	8/31/2021	Nevada Royalty Corp.
NMC61102	PAN # 22	8/31/2021	Nevada Royalty Corp.
NMC61103	PAN # 23	8/31/2021	Nevada Royalty Corp.
NMC61104	PAN # 24	8/31/2021	Nevada Royalty Corp.
NMC61105	PAN # 25	8/31/2021	Nevada Royalty Corp.
NMC61106	PAN # 26	8/31/2021	Nevada Royalty Corp.
NMC61107	PAN # 27	8/31/2021	Nevada Royalty Corp.
NMC61108	PAN # 28	8/31/2021	Nevada Royalty Corp.
NMC61114	PAN # 34	8/31/2021	Nevada Royalty Corp.
NMC61115	PAN # 35	8/31/2021	Nevada Royalty Corp.
NMC61116	PAN # 36	8/31/2021	Nevada Royalty Corp.
NMC630283	PA 8A	8/31/2021	Nevada Royalty Corp.
NMC630284	PA 10	8/31/2021	Nevada Royalty Corp.
NMC630285	PA 12	8/31/2021	Nevada Royalty Corp.
NMC630286	PA 13	8/31/2021	Nevada Royalty Corp.
NMC630287	PA 14	8/31/2021	Nevada Royalty Corp.
NMC630288	PA 15	8/31/2021	Nevada Royalty Corp.
NMC630289	PA 16	8/31/2021	Nevada Royalty Corp.
NMC630290	PA 17	8/31/2021	Nevada Royalty Corp.
NMC630291	PA 18	8/31/2021	Nevada Royalty Corp.
NMC630323	PA 49A	8/31/2021	Nevada Royalty Corp.
NMC815131	LAT 9	8/31/2021	Nevada Royalty Corp.
NMC815132	LAT 10	8/31/2021	Nevada Royalty Corp.
NMC815133	LAT 11	8/31/2021	Nevada Royalty Corp.
NMC815134	LAT 12	8/31/2021	Nevada Royalty Corp.
NMC815135	LAT 13	8/31/2021	Nevada Royalty Corp.
NMC815136	LAT 14	8/31/2021	Nevada Royalty Corp.
NMC815137	LAT 15	8/31/2021	Nevada Royalty Corp.
NMC815138	LAT 16	8/31/2021	Nevada Royalty Corp.
NMC815139	LAT 17	8/31/2021	Nevada Royalty Corp.
NMC815140	LAT 18	8/31/2021	Nevada Royalty Corp.
NMC815141	LAT 19	8/31/2021	Nevada Royalty Corp.
NMC815142	LAT 20	8/31/2021	Nevada Royalty Corp.
NMC815143	LAT 21	8/31/2021	Nevada Royalty Corp.
NMC815144	LAT 22	8/31/2021	Nevada Royalty Corp.
NMC815145	LAT 23	8/31/2021	Nevada Royalty Corp.
NMC815146	LAT 24	8/31/2021	Nevada Royalty Corp.
NMC815147	LAT 25	8/31/2021	Nevada Royalty Corp.

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NMC815148	LAT 26	8/31/2021	Nevada Royalty Corp.
NMC815149	LAT 27	8/31/2021	Nevada Royalty Corp.
NMC815150	LAT 28	8/31/2021	Nevada Royalty Corp.
NMC815151	LAT 29	8/31/2021	Nevada Royalty Corp.
NMC815152	LAT 30	8/31/2021	Nevada Royalty Corp.
NMC815153	LAT 31	8/31/2021	Nevada Royalty Corp.
NMC815154	LAT 32	8/31/2021	Nevada Royalty Corp.
NMC815155	LAT 33	8/31/2021	Nevada Royalty Corp.
NMC815156	LAT 34	8/31/2021	Nevada Royalty Corp.
NMC815157	LAT 35	8/31/2021	Nevada Royalty Corp.
NMC815158	LAT 36	8/31/2021	Nevada Royalty Corp.
NMC815159	LAT 37	8/31/2021	Nevada Royalty Corp.
NMC815160	LAT 38	8/31/2021	Nevada Royalty Corp.
NMC815161	LAT 40	8/31/2021	Nevada Royalty Corp.
NMC815162	LAT 42	8/31/2021	Nevada Royalty Corp.
NMC815163	LAT 44	8/31/2021	Nevada Royalty Corp.
NMC815164	LAT 46	8/31/2021	Nevada Royalty Corp.
NMC815166	LAT 49	8/31/2021	Nevada Royalty Corp.
NMC815167	LAT 50	8/31/2021	Nevada Royalty Corp.
NMC815168	LAT 51	8/31/2021	Nevada Royalty Corp.
NMC815169	LAT 52	8/31/2021	Nevada Royalty Corp.
NMC815170	LAT 53	8/31/2021	Nevada Royalty Corp.
NMC815171	LAT 54	8/31/2021	Nevada Royalty Corp.
NMC815172	LAT 55	8/31/2021	Nevada Royalty Corp.
NMC815173	LAT 56	8/31/2021	Nevada Royalty Corp.
NMC815174	LAT 57	8/31/2021	Nevada Royalty Corp.
NMC815175	LAT 58	8/31/2021	Nevada Royalty Corp.
NMC815176	LAT 59	8/31/2021	Nevada Royalty Corp.
NMC815177	LAT 60	8/31/2021	Nevada Royalty Corp.
NMC815178	LAT 47	8/31/2021	Nevada Royalty Corp.
NMC815179	LAT 61	8/31/2021	Nevada Royalty Corp.
NMC815180	LAT 62	8/31/2021	Nevada Royalty Corp.
NMC815181	LAT 63	8/31/2021	Nevada Royalty Corp.
NMC815182	LAT 64	8/31/2021	Nevada Royalty Corp.
NMC815183	LAT 65	8/31/2021	Nevada Royalty Corp.
NMC958546	NC 30	8/31/2021	Nevada Royalty Corp.
NMC958547	NC 31	8/31/2021	Nevada Royalty Corp.
NMC958548	NC 32	8/31/2021	Nevada Royalty Corp.
NMC958549	NC 33	8/31/2021	Nevada Royalty Corp.
NMC958550	NC 34	8/31/2021	Nevada Royalty Corp.
NMC958551	NC 35	8/31/2021	Nevada Royalty Corp.
NMC958552	NC 36	8/31/2021	Nevada Royalty Corp.
NMC958553	NC 37	8/31/2021	Nevada Royalty Corp.

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NMC958554	NC 38	8/31/2021	Nevada Royalty Corp.
NMC958555	NC 39	8/31/2021	Nevada Royalty Corp.
NMC958556	NC 40	8/31/2021	Nevada Royalty Corp.
NMC958557	NC 41	8/31/2021	Nevada Royalty Corp.
NMC958558	NC 42	8/31/2021	Nevada Royalty Corp.
NMC958559	NC 43	8/31/2021	Nevada Royalty Corp.
NMC958560	NC 44	8/31/2021	Nevada Royalty Corp.
NMC958561	NC 45	8/31/2021	Nevada Royalty Corp.
NMC958562	NC 46	8/31/2021	Nevada Royalty Corp.
NMC958563	NC 47	8/31/2021	Nevada Royalty Corp.
NMC958564	NC 48	8/31/2021	Nevada Royalty Corp.
NMC958565	NC 49	8/31/2021	Nevada Royalty Corp.
NMC958566	NC 50	8/31/2021	Nevada Royalty Corp.
NMC958567	NC 51	8/31/2021	Nevada Royalty Corp.
NMC958568	NC 52	8/31/2021	Nevada Royalty Corp.
NMC958575	NC 59	8/31/2021	Nevada Royalty Corp.
NMC958576	NC 60	8/31/2021	Nevada Royalty Corp.
NMC958577	NC 61	8/31/2021	Nevada Royalty Corp.
NMC958578	NC 62	8/31/2021	Nevada Royalty Corp.
NMC958579	NC 63	8/31/2021	Nevada Royalty Corp.
NMC958580	NC 64	8/31/2021	Nevada Royalty Corp.
NMC958581	NC 65	8/31/2021	Nevada Royalty Corp.
NMC958582	NC 66	8/31/2021	Nevada Royalty Corp.
NMC958583	NC 67	8/31/2021	Nevada Royalty Corp.
NMC958584	NC 68	8/31/2021	Nevada Royalty Corp.
NMC958585	NC 69	8/31/2021	Nevada Royalty Corp.
NMC958586	NC 70	8/31/2021	Nevada Royalty Corp.
NMC958587	NC 71	8/31/2021	Nevada Royalty Corp.
NMC958588	NC 72	8/31/2021	Nevada Royalty Corp.
NMC958610	NC 94	8/31/2021	Nevada Royalty Corp.
NMC958611	NC 95	8/31/2021	Nevada Royalty Corp.
NMC958612	NC 96	8/31/2021	Nevada Royalty Corp.
NMC958613	NC 97	8/31/2021	Nevada Royalty Corp.
NMC958614	NC 98	8/31/2021	Nevada Royalty Corp.
NMC958615	NC 99	8/31/2021	Nevada Royalty Corp.
NMC958616	NC 100	8/31/2021	Nevada Royalty Corp.
NMC958617	NC 101	8/31/2021	Nevada Royalty Corp.
NMC958618	NC 102	8/31/2021	Nevada Royalty Corp.
NMC958619	NC 103	8/31/2021	Nevada Royalty Corp.
NMC958620	NC 104	8/31/2021	Nevada Royalty Corp.
NMC958621	NC 105	8/31/2021	Nevada Royalty Corp.
NMC958622	NC 106	8/31/2021	Nevada Royalty Corp.
NMC958623	NC 107	8/31/2021	Nevada Royalty Corp.

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NMC958624	NC 108	8/31/2021	Nevada Royalty Corp.
NMC958625	NC 109	8/31/2021	Nevada Royalty Corp.
NMC958626	NC 110	8/31/2021	Nevada Royalty Corp.
NMC958627	NC 111	8/31/2021	Nevada Royalty Corp.
NMC958628	NC 112	8/31/2021	Nevada Royalty Corp.
NMC958629	NC 113	8/31/2021	Nevada Royalty Corp.
NMC958630	NC 114	8/31/2021	Nevada Royalty Corp.
NMC958631	NC 115	8/31/2021	Nevada Royalty Corp.
NMC958632	NC 116	8/31/2021	Nevada Royalty Corp.
NMC958633	NC 117	8/31/2021	Nevada Royalty Corp.
NMC958634	NC 118	8/31/2021	Nevada Royalty Corp.
NMC958635	NC 119	8/31/2021	Nevada Royalty Corp.
NMC958636	NC 120	8/31/2021	Nevada Royalty Corp.
NMC958637	NC 121	8/31/2021	Nevada Royalty Corp.
NMC958638	NC 124	8/31/2021	Nevada Royalty Corp.
NMC958640	NC 126	8/31/2021	Nevada Royalty Corp.
NMC958641	NC 127	8/31/2021	Nevada Royalty Corp.
NMC958642	NC 128	8/31/2021	Nevada Royalty Corp.
NMC958643	NC 129	8/31/2021	Nevada Royalty Corp.
NMC958644	NC 130	8/31/2021	Nevada Royalty Corp.
NMC958645	NC 133	8/31/2021	Nevada Royalty Corp.
NMC958647	NC 135	8/31/2021	Nevada Royalty Corp.
NMC958648	NC 136	8/31/2021	Nevada Royalty Corp.
NMC958649	NC 137	8/31/2021	Nevada Royalty Corp.
NMC958650	NC 138	8/31/2021	Nevada Royalty Corp.
NMC958651	NC 139	8/31/2021	Nevada Royalty Corp.
NMC958652	NC 142	8/31/2021	Nevada Royalty Corp.
NMC958653	NC 143	8/31/2021	Nevada Royalty Corp.
NMC958654	NC 144	8/31/2021	Nevada Royalty Corp.
NMC958655	NC 145	8/31/2021	Nevada Royalty Corp.
NMC958656	NC 146	8/31/2021	Nevada Royalty Corp.
NMC958657	NC 149	8/31/2021	Nevada Royalty Corp.
NMC958658	NC 150	8/31/2021	Nevada Royalty Corp.
NMC958659	NC 151	8/31/2021	Nevada Royalty Corp.
NMC958660	NC 152	8/31/2021	Nevada Royalty Corp.
NMC958661	NC 153	8/31/2021	Nevada Royalty Corp.
NMC958662	NC 154	8/31/2021	Nevada Royalty Corp.
NMC958663	NC 157	8/31/2021	Nevada Royalty Corp.
NMC958664	NC 158	8/31/2021	Nevada Royalty Corp.
NMC958665	NC 159	8/31/2021	Nevada Royalty Corp.
NMC958666	NC 160	8/31/2021	Nevada Royalty Corp.
NMC958667	NC 161	8/31/2021	Nevada Royalty Corp.
NMC958668	NC 162	8/31/2021	Nevada Royalty Corp.

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NMC958669	NC 165	8/31/2021	Nevada Royalty Corp.
NMC958670	NC 166	8/31/2021	Nevada Royalty Corp.
NMC958671	NC 167	8/31/2021	Nevada Royalty Corp.
NMC958672	NC 168	8/31/2021	Nevada Royalty Corp.
NMC958673	NC 169	8/31/2021	Nevada Royalty Corp.
NMC958674	NC 170	8/31/2021	Nevada Royalty Corp.
NMC980710	CT 30	8/31/2021	Nevada Royalty Corp.
NMC980711	CT 31	8/31/2021	Nevada Royalty Corp.
NMC980712	CT 32	8/31/2021	Nevada Royalty Corp.
NMC980713	CT 33	8/31/2021	Nevada Royalty Corp.
NMC980714	CT 34	8/31/2021	Nevada Royalty Corp.
NMC980715	CT 35	8/31/2021	Nevada Royalty Corp.
NMC980716	CT 38	8/31/2021	Nevada Royalty Corp.
NMC980717	CT 39	8/31/2021	Nevada Royalty Corp.
NMC980718	CT 40	8/31/2021	Nevada Royalty Corp.
NMC980719	CT 41	8/31/2021	Nevada Royalty Corp.
NMC980720	CT 42	8/31/2021	Nevada Royalty Corp.
NMC980721	CT 43	8/31/2021	Nevada Royalty Corp.
NMC980722	CT 46	8/31/2021	Nevada Royalty Corp.
NMC980723	CT 47	8/31/2021	Nevada Royalty Corp.
NMC980724	CT 48	8/31/2021	Nevada Royalty Corp.
NMC980725	CT 49	8/31/2021	Nevada Royalty Corp.
NMC980726	CT 50	8/31/2021	Nevada Royalty Corp.
NMC980727	CT 51	8/31/2021	Nevada Royalty Corp.
NMC980728	PETER 1	8/31/2021	Nevada Royalty Corp.
NMC980729	PETER 2	8/31/2021	Nevada Royalty Corp.
NMC980730	PETER 3	8/31/2021	Nevada Royalty Corp.
NMC980731	PETER 4	8/31/2021	Nevada Royalty Corp.
NMC980732	PETER 5	8/31/2021	Nevada Royalty Corp.
NMC980733	PETER 6	8/31/2021	Nevada Royalty Corp.
NMC980734	PETER 7	8/31/2021	Nevada Royalty Corp.
NMC980735	PETER 8	8/31/2021	Nevada Royalty Corp.
NMC980736	PETER 9	8/31/2021	Nevada Royalty Corp.
NMC980737	PETER 10	8/31/2021	Nevada Royalty Corp.
NMC980738	PETER 11	8/31/2021	Nevada Royalty Corp.
NMC980739	PETER 12	8/31/2021	Nevada Royalty Corp.
NMC980740	PETER 13	8/31/2021	Nevada Royalty Corp.
NMC980741	PETER 14	8/31/2021	Nevada Royalty Corp.
NMC980742	PETER 15	8/31/2021	Nevada Royalty Corp.
NMC980743	PETER 16	8/31/2021	Nevada Royalty Corp.
NMC980744	PETER 17	8/31/2021	Nevada Royalty Corp.
NMC980745	PETER 18	8/31/2021	Nevada Royalty Corp.
NMC980746	PETER 19	8/31/2021	Nevada Royalty Corp.

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NMC980747	PETER 20	8/31/2021	Nevada Royalty Corp.
NMC980748	PETER 21	8/31/2021	Nevada Royalty Corp.
NMC980749	PETER 22	8/31/2021	Nevada Royalty Corp.
NMC980750	PETER 23	8/31/2021	Nevada Royalty Corp.
NMC980751	PETER 24	8/31/2021	Nevada Royalty Corp.
NMC980752	PETER 25	8/31/2021	Nevada Royalty Corp.
NMC980753	PETER 26	8/31/2021	Nevada Royalty Corp.
NMC980754	PETER 27	8/31/2021	Nevada Royalty Corp.
NMC980755	PETER 28	8/31/2021	Nevada Royalty Corp.
NMC980756	PETER 29	8/31/2021	Nevada Royalty Corp.
NMC980757	PETER 30	8/31/2021	Nevada Royalty Corp.
NMC980758	PETER 31	8/31/2021	Nevada Royalty Corp.
NMC980759	PETER 32	8/31/2021	Nevada Royalty Corp.
NMC980760	PETER 33	8/31/2021	Nevada Royalty Corp.
NMC980761	PETER 34	8/31/2021	Nevada Royalty Corp.
NMC980762	PETER 35	8/31/2021	Nevada Royalty Corp.
NMC980763	PETER 36	8/31/2021	Nevada Royalty Corp.
NMC980764	PETER 37	8/31/2021	Nevada Royalty Corp.
NMC980765	PETER 38	8/31/2021	Nevada Royalty Corp.
NMC980766	PETER 39	8/31/2021	Nevada Royalty Corp.
NMC980767	PETER 40	8/31/2021	Nevada Royalty Corp.
NMC980768	PETER 41	8/31/2021	Nevada Royalty Corp.
NMC980769	PETER 42	8/31/2021	Nevada Royalty Corp.
NMC980770	PETER 43	8/31/2021	Nevada Royalty Corp.
NMC980771	PETER 44	8/31/2021	Nevada Royalty Corp.
NMC980772	PETER 45	8/31/2021	Nevada Royalty Corp.
NMC980773	PETER 46	8/31/2021	Nevada Royalty Corp.
NMC980774	PETER 47	8/31/2021	Nevada Royalty Corp.
NMC980775	PETER 48	8/31/2021	Nevada Royalty Corp.
NMC980776	PETER 49	8/31/2021	Nevada Royalty Corp.
NMC980777	PETER 50	8/31/2021	Nevada Royalty Corp.
NMC980778	PETER 51	8/31/2021	Nevada Royalty Corp.
NMC980779	BSW 38	8/31/2021	Nevada Royalty Corp.
NMC980780	BSW 39	8/31/2021	Nevada Royalty Corp.
NMC980781	BSW 40	8/31/2021	Nevada Royalty Corp.
NMC980782	BSW 41	8/31/2021	Nevada Royalty Corp.
NMC980783	BSW 42	8/31/2021	Nevada Royalty Corp.
NMC980784	BSW 43	8/31/2021	Nevada Royalty Corp.
NMC980785	BSW 44	8/31/2021	Nevada Royalty Corp.
NMC980786	BSW 45	8/31/2021	Nevada Royalty Corp.
NMC980787	BSW 1	8/31/2021	Nevada Royalty Corp.
NMC980788	BSW 2	8/31/2021	Nevada Royalty Corp.
NMC980789	BSW 3	8/31/2021	Nevada Royalty Corp.

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NMC980790	BSW 4	8/31/2021	Nevada Royalty Corp.
NMC980791	BSW 5	8/31/2021	Nevada Royalty Corp.
NMC980792	BSW 6	8/31/2021	Nevada Royalty Corp.
NMC980793	BSW 7	8/31/2021	Nevada Royalty Corp.
NMC980794	BSW 8	8/31/2021	Nevada Royalty Corp.
NMC980795	BSW 9	8/31/2021	Nevada Royalty Corp.
NMC980796	BSW 10	8/31/2021	Nevada Royalty Corp.
NMC980797	BSW 11	8/31/2021	Nevada Royalty Corp.
NMC980798	BSW 12	8/31/2021	Nevada Royalty Corp.
NMC980799	BSW 13	8/31/2021	Nevada Royalty Corp.
NMC980800	BSW 14	8/31/2021	Nevada Royalty Corp.
NMC980801	BSW 15	8/31/2021	Nevada Royalty Corp.
NMC980802	BSW 16	8/31/2021	Nevada Royalty Corp.
NMC980803	BSW 17	8/31/2021	Nevada Royalty Corp.
NMC980804	BSW 18	8/31/2021	Nevada Royalty Corp.
NMC980805	BSW 19	8/31/2021	Nevada Royalty Corp.
NMC980806	BSW 20	8/31/2021	Nevada Royalty Corp.
NMC980807	BSW 21	8/31/2021	Nevada Royalty Corp.
NMC980808	BSW 22	8/31/2021	Nevada Royalty Corp.
NMC980809	BSW 23	8/31/2021	Nevada Royalty Corp.
NMC980810	BSW 24	8/31/2021	Nevada Royalty Corp.
NMC980811	BSW 25	8/31/2021	Nevada Royalty Corp.
NMC980812	BSW 26	8/31/2021	Nevada Royalty Corp.
NMC980813	BSW 27	8/31/2021	Nevada Royalty Corp.
NMC980814	BSW 28	8/31/2021	Nevada Royalty Corp.
NMC980815	BSW 29	8/31/2021	Nevada Royalty Corp.
NMC980816	BSW 30	8/31/2021	Nevada Royalty Corp.
NMC980817	BSW 31	8/31/2021	Nevada Royalty Corp.
NMC980818	BSW 32	8/31/2021	Nevada Royalty Corp.
NMC980819	BSW 33	8/31/2021	Nevada Royalty Corp.
NMC980820	BSW 34	8/31/2021	Nevada Royalty Corp.
NMC980821	BSW 35	8/31/2021	Nevada Royalty Corp.
NMC980822	BSW 36	8/31/2021	Nevada Royalty Corp.
NMC980823	BSW 37	8/31/2021	Nevada Royalty Corp.
NMC980824	BSW 46	8/31/2021	Nevada Royalty Corp.
NMC980825	BSW 47	8/31/2021	Nevada Royalty Corp.
NMC980826	PA 19	8/31/2021	Nevada Royalty Corp.
NMC980827	PA 21	8/31/2021	Nevada Royalty Corp.
NMC980828	PA 44	8/31/2021	Nevada Royalty Corp.
NMC980829	PA 46	8/31/2021	Nevada Royalty Corp.
NMC980830	PA 48	8/31/2021	Nevada Royalty Corp.
NMC980831	PE 56	8/31/2021	Nevada Royalty Corp.
NMC980832	NP 1	8/31/2021	Nevada Royalty Corp.

BLM Serial #	Claim Name	Expiration Date	Owner
NMC980833	NP 2	8/31/2021	Nevada Royalty Corp.
NMC980834	NP 3	8/31/2021	Nevada Royalty Corp.
NMC980835	NP 4	8/31/2021	Nevada Royalty Corp.
NMC980836	NP 5	8/31/2021	Nevada Royalty Corp.
NMC980837	NP 6	8/31/2021	Nevada Royalty Corp.
NMC980838	NP 7	8/31/2021	Nevada Royalty Corp.
NMC980839	NP 8	8/31/2021	Nevada Royalty Corp.
NMC980840	NP 9	8/31/2021	Nevada Royalty Corp.
NMC980841	NP 10	8/31/2021	Nevada Royalty Corp.
NMC980842	NP 11	8/31/2021	Nevada Royalty Corp.
NMC980843	NP 12	8/31/2021	Nevada Royalty Corp.
NMC980844	NP 13	8/31/2021	Nevada Royalty Corp.
NMC980845	NP 14	8/31/2021	Nevada Royalty Corp.
NMC980846	NP 15	8/31/2021	Nevada Royalty Corp.
NMC980847	NP 16	8/31/2021	Nevada Royalty Corp.
NMC980848	NP 17	8/31/2021	Nevada Royalty Corp.
NMC980849	NP 18	8/31/2021	Nevada Royalty Corp.
NMC980850	NP 19	8/31/2021	Nevada Royalty Corp.
NMC980851	NP 20	8/31/2021	Nevada Royalty Corp.
NMC980852	NP 21	8/31/2021	Nevada Royalty Corp.
NMC980853	NP 22	8/31/2021	Nevada Royalty Corp.
NMC980854	NP 23	8/31/2021	Nevada Royalty Corp.
NMC980855	NP 24	8/31/2021	Nevada Royalty Corp.
NMC980856	NP 25	8/31/2021	Nevada Royalty Corp.
NMC980857	NP 26	8/31/2021	Nevada Royalty Corp.
NMC980858	NP 27	8/31/2021	Nevada Royalty Corp.
NMC980859	NP 28	8/31/2021	Nevada Royalty Corp.
NMC980860	NP 29	8/31/2021	Nevada Royalty Corp.
NMC980861	NP 30	8/31/2021	Nevada Royalty Corp.
NMC980862	NP 31	8/31/2021	Nevada Royalty Corp.
NMC980863	NP 32	8/31/2021	Nevada Royalty Corp.
NMC980864	NP 33	8/31/2021	Nevada Royalty Corp.
NMC980865	NP 34	8/31/2021	Nevada Royalty Corp.
NMC980866	NP 35	8/31/2021	Nevada Royalty Corp.
NMC980867	NP 36	8/31/2021	Nevada Royalty Corp.
NMC980868	NP 37	8/31/2021	Nevada Royalty Corp.
NMC980869	NP 38	8/31/2021	Nevada Royalty Corp.
NMC980870	NP 39	8/31/2021	Nevada Royalty Corp.
NMC980871	NP 40	8/31/2021	Nevada Royalty Corp.
NMC980872	NP 41	8/31/2021	Nevada Royalty Corp.
NMC980873	ET 1	8/31/2021	Nevada Royalty Corp.
NMC980874	ET 2	8/31/2021	Nevada Royalty Corp.
NMC980875	ET 3	8/31/2021	Nevada Royalty Corp.

BLM Serial #	Claim Name	Expiration Date	Owner
NMC980876	ET 4	8/31/2021	Nevada Royalty Corp.
NMC980877	ET 5	8/31/2021	Nevada Royalty Corp.
NMC980878	ET 6	8/31/2021	Nevada Royalty Corp.
NMC980879	ET 7	8/31/2021	Nevada Royalty Corp.
NMC980880	ET 8	8/31/2021	Nevada Royalty Corp.
NMC980881	ET 9	8/31/2021	Nevada Royalty Corp.
NMC980882	ET 10	8/31/2021	Nevada Royalty Corp.
NMC980883	ET 11	8/31/2021	Nevada Royalty Corp.
NMC980884	ET 12	8/31/2021	Nevada Royalty Corp.
NMC980885	ET 13	8/31/2021	Nevada Royalty Corp.
NMC980886	ET 14	8/31/2021	Nevada Royalty Corp.
NMC980887	ET 15	8/31/2021	Nevada Royalty Corp.
NMC980888	ET 16	8/31/2021	Nevada Royalty Corp.
NMC980889	ET 17	8/31/2021	Nevada Royalty Corp.
NMC980890	ET 18	8/31/2021	Nevada Royalty Corp.
NMC980891	ET 19	8/31/2021	Nevada Royalty Corp.
NMC980892	ET 20	8/31/2021	Nevada Royalty Corp.
NMC980893	ET 21	8/31/2021	Nevada Royalty Corp.
NMC980894	ET 22	8/31/2021	Nevada Royalty Corp.
NMC980895	ET 23	8/31/2021	Nevada Royalty Corp.
NMC980896	ET 24	8/31/2021	Nevada Royalty Corp.
NMC980897	ET 25	8/31/2021	Nevada Royalty Corp.
NMC980898	ET 26	8/31/2021	Nevada Royalty Corp.
NMC980899	ET 27	8/31/2021	Nevada Royalty Corp.
NMC980900	ET 28	8/31/2021	Nevada Royalty Corp.
NMC980901	ET 29	8/31/2021	Nevada Royalty Corp.
NMC980902	ET 30	8/31/2021	Nevada Royalty Corp.
NMC980903	ET 31	8/31/2021	Nevada Royalty Corp.
NMC980904	ET 32	8/31/2021	Nevada Royalty Corp.
NMC980905	ET 33	8/31/2021	Nevada Royalty Corp.
NMC980906	ET 34	8/31/2021	Nevada Royalty Corp.
NMC980907	ET 35	8/31/2021	Nevada Royalty Corp.
NMC980908	ET 36	8/31/2021	Nevada Royalty Corp.
NMC980909	ET 37	8/31/2021	Nevada Royalty Corp.
NMC980910	ET 38	8/31/2021	Nevada Royalty Corp.
NMC980911	ET 39	8/31/2021	Nevada Royalty Corp.
NMC980912	ET 40	8/31/2021	Nevada Royalty Corp.
NMC980913	ET 41	8/31/2021	Nevada Royalty Corp.
NMC984635	GWEN 17	8/31/2021	Nevada Royalty Corp.
NMC984636	GWEN 18	8/31/2021	Nevada Royalty Corp.
NMC984637	PAN 111	8/31/2021	Nevada Royalty Corp.
NMC984638	PAN 112	8/31/2021	Nevada Royalty Corp.
NMC984640	PAN 120	8/31/2021	Nevada Royalty Corp.

BLM Serial #	Claim Name	Expiration Date	Owner
NMC984642	PAN 122	8/31/2021	Nevada Royalty Corp.
NMC1057292	PC 19	8/31/2021	GRP Pan, LLC
NMC1057293	PC 21	8/31/2021	GRP Pan, LLC
NMC1057294	PC 22	8/31/2021	GRP Pan, LLC
NMC1057295	PC 23	8/31/2021	GRP Pan, LLC
NMC1057296	PC 24	8/31/2021	GRP Pan, LLC
NMC1057297	PC 25	8/31/2021	GRP Pan, LLC
NMC1057298	PC 26	8/31/2021	GRP Pan, LLC
NMC1057299	PC 27	8/31/2021	GRP Pan, LLC
NMC1057300	PC 28	8/31/2021	GRP Pan, LLC
NMC1057301	PC 29	8/31/2021	GRP Pan, LLC
NMC1148240	SP 1	8/31/2021	GRP Pan, LLC
NMC1148241	SP 2	8/31/2021	GRP Pan, LLC
NMC1148242	SP 3	8/31/2021	GRP Pan, LLC
NMC1148243	SP 4	8/31/2021	GRP Pan, LLC
NMC1148244	SP 5	8/31/2021	GRP Pan, LLC
NMC1148245	SP 6	8/31/2021	GRP Pan, LLC
NMC1148246	SP 7	8/31/2021	GRP Pan, LLC
NMC1148247	SP 8	8/31/2021	GRP Pan, LLC
NMC1148248	SP 9	8/31/2021	GRP Pan, LLC
NMC1148249	SP 10	8/31/2021	GRP Pan, LLC
NMC1148250	SP 11	8/31/2021	GRP Pan, LLC
NMC1148251	SP 12	8/31/2021	GRP Pan, LLC
NMC1148252	SP 13	8/31/2021	GRP Pan, LLC
NMC1148253	SP 14	8/31/2021	GRP Pan, LLC
NMC1148254	SP 15	8/31/2021	GRP Pan, LLC
NMC1148255	SP 16	8/31/2021	GRP Pan, LLC
NMC1148256	SP 17	8/31/2021	GRP Pan, LLC
NMC1148257	SP 18	8/31/2021	GRP Pan, LLC
NMC1148258	SP 19	8/31/2021	GRP Pan, LLC
NMC1148259	SP 20	8/31/2021	GRP Pan, LLC
NMC1148260	SP 21	8/31/2021	GRP Pan, LLC
NMC1148261	SP 22	8/31/2021	GRP Pan, LLC
NMC1148262	SP 23	8/31/2021	GRP Pan, LLC
NMC1148263	SP 24	8/31/2021	GRP Pan, LLC
NMC1148264	SP 25	8/31/2021	GRP Pan, LLC
NMC1148265	SP 26	8/31/2021	GRP Pan, LLC
NMC958517	NC 1	8/31/2021	GRP Pan, LLC
NMC958518	NC 2	8/31/2021	GRP Pan, LLC
NMC958519	NC 3	8/31/2021	GRP Pan, LLC
NMC958520	NC 4	8/31/2021	GRP Pan, LLC
NMC958521	NC 5	8/31/2021	GRP Pan, LLC
NMC958522	NC 6	8/31/2021	GRP Pan, LLC

BLM Serial #	Claim Name	Expiration Date	Owner
NMC958523	NC 7	8/31/2021	GRP Pan, LLC
NMC958524	NC 8	8/31/2021	GRP Pan, LLC
NMC958525	NC 9	8/31/2021	GRP Pan, LLC
NMC958526	NC 10	8/31/2021	GRP Pan, LLC
NMC958527	NC 11	8/31/2021	GRP Pan, LLC
NMC958528	NC 12	8/31/2021	GRP Pan, LLC
NMC958529	NC 13	8/31/2021	GRP Pan, LLC
NMC958530	NC 14	8/31/2021	GRP Pan, LLC
NMC958531	NC 15	8/31/2021	GRP Pan, LLC
NMC958532	NC 16	8/31/2021	GRP Pan, LLC
NMC958533	NC 17	8/31/2021	GRP Pan, LLC
NMC958534	NC 18	8/31/2021	GRP Pan, LLC
NMC958535	NC 19	8/31/2021	GRP Pan, LLC
NMC958536	NC 20	8/31/2021	GRP Pan, LLC
NMC958537	NC 21	8/31/2021	GRP Pan, LLC
NMC958538	NC 22	8/31/2021	GRP Pan, LLC
NMC958539	NC 23	8/31/2021	GRP Pan, LLC
NMC958540	NC 24	8/31/2021	GRP Pan, LLC
NMC958541	NC 25	8/31/2021	GRP Pan, LLC
NMC958542	NC 26	8/31/2021	GRP Pan, LLC
NMC958543	NC 27	8/31/2021	GRP Pan, LLC
NMC958544	NC 28	8/31/2021	GRP Pan, LLC
NMC958545	NC 29	8/31/2021	GRP Pan, LLC
NMC958569	NC 53	8/31/2021	GRP Pan, LLC
NMC958570	NC 54	8/31/2021	GRP Pan, LLC
NMC958571	NC 55	8/31/2021	GRP Pan, LLC
NMC958572	NC 56	8/31/2021	GRP Pan, LLC
NMC958573	NC 57	8/31/2021	GRP Pan, LLC
NMC958574	NC 58	8/31/2021	GRP Pan, LLC
NMC958589	NC 73	8/31/2021	GRP Pan, LLC
NMC958590	NC 74	8/31/2021	GRP Pan, LLC
NMC958591	NC 75	8/31/2021	GRP Pan, LLC
NMC958592	NC 76	8/31/2021	GRP Pan, LLC
NMC958593	NC 77	8/31/2021	GRP Pan, LLC
NMC958594	NC 78	8/31/2021	GRP Pan, LLC
NMC958595	NC 79	8/31/2021	GRP Pan, LLC
NMC958596	NC 80	8/31/2021	GRP Pan, LLC
NMC958597	NC 81	8/31/2021	GRP Pan, LLC
NMC958598	NC 82	8/31/2021	GRP Pan, LLC
NMC958599	NC 83	8/31/2021	GRP Pan, LLC
NMC958600	NC 84	8/31/2021	GRP Pan, LLC
NMC958601	NC 85	8/31/2021	GRP Pan, LLC
NMC958602	NC 86	8/31/2021	GRP Pan, LLC

BLM Serial #	Claim Name	Expiration Date	Owner
NMC958603	NC 87	8/31/2021	GRP Pan, LLC
NMC958604	NC 88	8/31/2021	GRP Pan, LLC
NMC958605	NC 89	8/31/2021	GRP Pan, LLC
NMC958606	NC 90	8/31/2021	GRP Pan, LLC
NMC958607	NC 91	8/31/2021	GRP Pan, LLC
NMC958608	NC 92	8/31/2021	GRP Pan, LLC
NMC958609	NC 93	8/31/2021	GRP Pan, LLC
NMC965337	GWEN 1	8/31/2021	GRP Pan, LLC
NMC965338	GWEN 2	8/31/2021	GRP Pan, LLC
NMC965339	GWEN 3	8/31/2021	GRP Pan, LLC
NMC965340	GWEN 4	8/31/2021	GRP Pan, LLC
NMC965341	GWEN 5	8/31/2021	GRP Pan, LLC
NMC965342	GWEN 6	8/31/2021	GRP Pan, LLC
NMC965343	GWEN 7	8/31/2021	GRP Pan, LLC
NMC965344	GWEN 8	8/31/2021	GRP Pan, LLC
NMC973537	REE 82	8/31/2021	GRP Pan, LLC
NMC977346	GWEN 50	8/31/2021	GRP Pan, LLC
NMC977347	GWEN 51	8/31/2021	GRP Pan, LLC
NMC977350	GWEN 54	8/31/2021	GRP Pan, LLC
NMC977353	GWEN 59	8/31/2021	GRP Pan, LLC
NMC977354	GWEN 60	8/31/2021	GRP Pan, LLC
NMC977355	GWEN 61	8/31/2021	GRP Pan, LLC
NMC984556	GWEN 19	8/31/2021	GRP Pan, LLC
NMC984557	GWEN 20	8/31/2021	GRP Pan, LLC
NMC984558	GWEN 21	8/31/2021	GRP Pan, LLC
NMC984559	GWEN 22	8/31/2021	GRP Pan, LLC
NMC984560	GWEN 23	8/31/2021	GRP Pan, LLC
NMC984561	GWEN 24	8/31/2021	GRP Pan, LLC
NMC984562	GWEN 25	8/31/2021	GRP Pan, LLC
NMC984563	GWEN 26	8/31/2021	GRP Pan, LLC
NMC984564	GWEN 27	8/31/2021	GRP Pan, LLC
NMC984565	GWEN 28	8/31/2021	GRP Pan, LLC
NMC984566	GWEN 29	8/31/2021	GRP Pan, LLC
NMC984567	GWEN 30	8/31/2021	GRP Pan, LLC
NMC984568	GWEN 31	8/31/2021	GRP Pan, LLC
NMC984569	GWEN 32	8/31/2021	GRP Pan, LLC
NMC984570	GWEN 33	8/31/2021	GRP Pan, LLC
NMC984571	GWEN 34	8/31/2021	GRP Pan, LLC
NMC984572	GWEN 35	8/31/2021	GRP Pan, LLC
NMC984573	GWEN 36	8/31/2021	GRP Pan, LLC
NMC984574	GWEN 37	8/31/2021	GRP Pan, LLC
NMC984575	GWEN 38	8/31/2021	GRP Pan, LLC
NMC984576	GWEN 39	8/31/2021	GRP Pan, LLC

BLM Serial #	Claim Name	Expiration Date	Owner
NMC984577	GWEN 40	8/31/2021	GRP Pan, LLC
NMC984578	GWEN 41	8/31/2021	GRP Pan, LLC
NMC984579	GWEN 42	8/31/2021	GRP Pan, LLC
NMC984580	GWEN 43	8/31/2021	GRP Pan, LLC
NMC984581	GWEN 44	8/31/2021	GRP Pan, LLC
NMC984582	GWEN 45	8/31/2021	GRP Pan, LLC

Appendix C: Nevada Department of Transportation Right-Of-Way Permit

725-1

Fee $ 500 00/100	Permit No. 20657
Milepost MP-8.00 / US-50	District 3
District No.: 33-1-12	
Applicant: Midway Gold.	
Type of Work: Type-5 Approach	
FOR DEPARTMENT USE ONLY	

REVOCABLE APPLICATION AND PERMIT FOR OCCUPANCY OF
NEVADA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY
(Under the provisions of NRS 408.423, 408.210 and NAC 408)

1. Location where excavation, construction, installation and/or occupancy is proposed

US-50 — Local name of highway

STA. 428+87, MP. WP-8.00 — Street address or nearest cross street

2. Describe in detail the type and scope of work; capacity or size of facility; stages and time frame for development; scheduled dates for start and completion. Attach 4 sets of detailed plans or drawings.

Construct a Type-V approach along US Highway 50 at STA. 428+87. The new approach is needed for access to Midway Gold's new exploration road. The roadway will be constructed shortly after approval by the BLM. It is anticipated that construction will begin early in 2012 pending upon BLM approval, and be completed early in 2013. We will notify NDOT of BLM's approval so that a more accurate construction start date can be set.

3. PERMITTEE hereby acknowledges that he has read and received a copy of the specific Terms and Conditions Relating to Right-of-Way Occupancy Permits issued by the State of Nevada Department of Transportation, and accepts said terms and conditions and any additional terms and conditions stated in this permit.

4. **SPECIFIC TERMS AND CONDITIONS APPURTENANT TO THIS PERMIT ARE LISTED ON PAGE 2.**

5. THE PERMIT SHALL BE SIGNED AND RETURNED TO THE DISTRICT OFFICE.

Midway Gold Company Name of PERMITTEE (Type or Print)	[signature] Signature of PERMITTEE
705 Avenue K Address	VP of New Ops — 775-530-4314 Title — Phone No.
Ely, Nevada 89301 City, State, Zip	December 20, 2011 Date of Application
(775) 289-2851 Phone No. — (775) 289-2490 Fax No.	Permittee's I.D. No. or Parcel No.

NDOT
035 001
Rev. 10/03

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Appendix D: 2018-2020 Drill Hole Collar Information

2018 Drill Hole Collars

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PN18-09	Breccia Hill	1998380	14276809	6686	100	-70	380
PN18-10	Breccia Hill	1998498	14276806	6702	88.9	-70	205
PN18-11	Breccia Hill	1998639	14276796	6695	90	-70	480
PN18-12	Breccia Hill	1998707	14277007	6722	0	-90	400
PN18-47	Breccia Hill	1998612	14277503	6769	90	-70	345
PN18-49	Breccia Hill	1998506	14277283	6764	90	-65	400
PN18-50	Breccia Hill	1998369	14277391	6746	84	-70	300
PN18-51	Breccia Hill	1998298	14277501	6725	90	-70	300
PN18-52	Breccia Hill	1998436	14277499	6758	90	-70	300
PN18-57	Black Stallion	1997492	14275263	6637	130	-65	350
PN18-58	Black Stallion	1997197	14275388	6622	130	-74	400
PN18-59	Black Stallion	1997172	14275479	6626	130	-70	400
PN18-60	Black Stallion	1997222	14275580	6640	130	-60	400
PN18-61	Black Stallion	1997278	14275648	6653	130	-60	375
PN18-62	Black Stallion	1997764	14276131	6658	130	-70	425
PN18-63	Black Stallion	1997843	14276060	6666	130	-70	310
PN18-64	Black Stallion	1997961	14276056	6679	130	-70	320
PN18-65	Black Stallion	1997894	14276321	6656	130	-60	265
PN18-66	Black Stallion	1997753	14276231	6654	130	-60	385
PN18-67	Black Stallion	1997209	14276166	6669	130	-60	305
PN18-68	Black Stallion	1996871	14276226	6631	130	-70	265
PN18-69	Black Stallion	1997387	14276178	6686	130	-65	245
PN18-70	Dynamite	1998617	14273622	6791	130	-70	245
PN18-71	Dynamite	1998617	14273622	6791	240	-60	600
PND18-01	North Pan	1998882	14279127	6639	90	-75	550
PND18-02	North Pan	1998983	14279148	6639	90	-75	450
PND18-03	North Pan	1998989	14278666	6808	20	-60	520
PND18-04	North Pan	1998699	14278733	6719	20	-60	510
PND18-05	Campbell	1998412	14279103	6685	90	-70	500
PND18-06	Campbell	1998508	14279091	6686	90	-70	500
PND18-07	Campbell	1998544	14278752	6724	75	-70	350
PND18-08	North Pan	1998808	14278773	6743	82	-65	600
PND18-13	Syncline	1997843	14278075	6646	60	-60	300
PND18-14	Syncline	1998080	14278264	6680	60	-65	250
PND18-15	Syncline	1997895	14278384	6623	60	-65	250
PND18-16	Syncline	1997800	14278340	6626	60	-65	250
PND18-17	North Pan	1998851	14278471	6778	90	-70	600
PND18-18	North Pan	1998695	14278490	6737	90	-70	360
PND18-19	North Pan	1999002	14278494	6780	90	-50	180
PND18-20	Campbell	1998563	14278496	6739	90	-70	500
PND18-21	Campbell	1998471	14278478	6732	90	-75	350

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PND18-22	Campbell	1998338	14279103	6675	90	-70	400
PND18-23	Red Hill	1998665	14280389	6719	90	-70	500
PND18-24	Red Hill	1998486	14280102	6695	90	-65	360
PND18-25	Red Hill	1998338	14280114	6689	90	-90	380
PND18-26	North Pan	1998943	14281089	6807	90	-50	600
PND18-27	Red Hill	1998809	14281085	6792	90	-80	600
PND18-28	Red Hill	1998704	14281098	6819	0	-90	500
PND18-29	Red Hill	1998674	14280207	6718	90	-85	400
PND18-30	Red Hill	1998777	14281336	6827	0	-90	545
PND18-31	Red Hill	1998839	14281368	6829	283	-80	500
PND18-32	North Pan	1999049	14281395	6839	90	-60	550
PND18-33	North Pan	1999019	14281506	6839	90	-50	450
PND18-34	Red Hill	1998364	14280592	6733	90	-85	410
PND18-35	Red Hill	1998386	14280506	6721	90	-70	385
PND18-36	Red Hill	1998786	14281085	6792	274	-85	345
PND18-37	Red Hill	1998729	14280897	6798	100	-80	365
PND18-38	Red Hill	1998634	14280910	6832	90	-75	405
PND18-39	Red Hill	1998716	14281197	6818	90	-70	465
PND18-40	Red Hill	1998544	14280496	6735	100	-70	435
PND18-41	Red Hill	1998692	14280507	6730	90	-70	465
PND18-42	Red Hill	1998172	14280196	6724	90	-70	555
PND18-43	Red Hill	1998329	14280396	6703	90	-70	425
PND18-44	Red Hill	1998336	14280300	6697	90	-70	445
PND18-45	Red Hill	1998209	14280006	6708	90	-70	375
PND18-46	North Pan	1999017	14281356	6826	90	-70	385
PND18-48	Breccia Hill	1998754	14277493	6750	90	-65	465
PND18-53	Campbell	1998562	14279375	6639	90	-70	365
PND18-54	North Pan	1998864	14279036	6654	119	-75	300
PND18-55	Campbell	1998433	14279215	6667	90	-75	450
PND18-56	Campbell	1998527	14279030	6692	90	-70	485

Pan 2019 RC Drill Hole Collars

HoleID	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR19-001	1998398	14277990	6686	199	-89	500
PR19-002	1998460	14280444	6737	187	-90	550
PR19-003	1998443	14280356	6720	128	-90	550
PR19-004	1998231	14280094	6707	37	-90	500
PR19-005	1998089	14280068	6733	2	-89	500
PR19-006	1998164	14280065	6722	160	-90	500
PR19-007	1998154	14280195	6725	316	-90	500
PR19-008	1998225	14279935	6689	246	-89	500
PR19-009	1998254	14280292	6696	102	-90	500
PR19-010	1998481	14279943	6683	290	-90	500
PR19-011	1998470	14280861	6739	6	-90	400
PR19-012	1997783	14278347	6626	101	-90	400
PR19-013	1997529	14278580	6581	290	-90	400
PR19-014	1997805	14278474	6603	1	-90	400
PR19-015	1998910	14280642	6759	174	-90	500
PR19-016	1998894	14280784	6760	172	-89	500
PR19-017	1998622	14280057	6684	116	-90	500
PR19-018	1998780	14280457	6737	89	-80	500
PR19-019	1999129	14271861	6782	241	-79	650
PR19-020	1998929	14272130	6780	239	-82	685
PR19-021	1998900	14272306	6799	240	-82	650
PR19-022	1998231	14272522	6820	92	-64	800
PR19-023	1998483	14272602	6820	266	-60	600
PR19-024	1998622	14272945	6816	268	-85	500
PR19-025	1998619	14273623	6791	250	-85	700
PR19-026	1997842	14277770	6602	207	-90	400
PR19-027	1997750	14277794	6608	32	-89	400
PR19-028	1997747	14277868	6613	263	-90	400
PR19-029	1997708	14277961	6623	147	-89	400
PR19-030	1997627	14278030	6625	282	-90	550
PR19-031	1996932	14275382	6616	136	-70	500
PR19-032	1997253	14275303	6627	99	-87	565
PR19-033	1996669	14276434	6625	179	-90	445
PR19-034	1996743	14276177	6628	120	-89	400
PR19-035	1997049	14275899	6655	213	-89	400
PR19-036	1998411	14278515	6721	82	-60	495
PR19-037	1998408	14278514	6721	240	-90	425
PR19-038	1998417	14278425	6725	89	-46	545
PR19-039	1998247	14279049	6640	67	-70	500
PR19-040	1998219	14279209	6632	69	-71	550
PR19-041	1998369	14280494	6720	95	-90	525

HoleID	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR19-042	1998318	14280350	6700	184	-90	665

Pan 2020 RC Drill Hole Collars

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR20-001	Red Hill	1998883	14281530	6834	137	-89	645
PR20-002	Red Hill	1998880	14281531	6834	278	-61	605
PR20-003	Red Hill	1998982	14281394	6820	17	-90	500
PR20-004	Red Hill	1998932	14281282	6819	22	-89	500
PR20-005	Red Hill	1998865	14280885	6761	13	-89	350
PR20-006	Red Hill	1998989	14281049	6735	81	-80	400
PR20-007	Red Hill	1998961	14280924	6747	123	-90	350
PR20-008	Red Hill	1998902	14280733	6760	120	-90	350
PR20-009	Red Hill	1998852	14280789	6760	24	-89	300
PR20-010	Banshee	1998062	14279989	6716	9	-89	300
PR20-011	Banshee	1997988	14280286	6749	64	-90	350
PR20-012	Banshee	1998033	14280196	6749	129	-89	350
PR20-013	Banshee	1998012	14280147	6748	207	-89	305
PR20-014	Banshee	1998079	14280330	6730	218	-89	350
PR20-015	Banshee	1998086	14280254	6729	283	-90	350
PR20-016	Banshee	1998177	14280305	6705	360	-89	350
PR20-017	Banshee	1998156	14280385	6713	221	-90	350
PR20-018	Red Hill	1998327	14280959	6799	56	-89	250
PR20-019	North Pan	1998861	14278357	6759	224	-89	455
PR20-020	North Pan	1998762	14278320	6750	36	-89	400
PR20-021	Syncline	1998559	14277757	6738	133	-90	250
PR20-022	Syncline	1997549	14278651	6587	347	-90	250
PR20-023	Campbell	1998707	14279321	6601	41	-89	350
PR20-024	Syncline	1997668	14278452	6626	56	-89	300
PR20-025	Syncline	1997865	14278298	6639	189	-89	300
PR20-026	North Pan	1998986	14278099	6734	284	-90	350
PR20-027	Black Stallion	1997696	14276147	6658	351	-89	300
PR20-028	Black Stallion	1997402	14275897	6653	291	-65	250
PR20-029	Black Stallion	1996843	14276045	6642	26	-46	200
PR20-030	Black Stallion	1996750	14276477	6627	181	-89	250
PR20-031	Red Hill	1998778	14281317	6826	177	-71	500
PR20-032	Red Hill	1998981	14281503	6835	191	-89	460
PR20-033	Red Hill	1998911	14280837	6758	161	-89	450
PR20-034	Red Hill	1998829	14280727	6757	83	-90	400
PR20-035	Banshee	1997532	14280300	6753	184	-90	300
PR20-036	Banshee	1997704	14280493	6750	44	-89	300
PR20-037	Banshee	1997853	14280728	6754	224	-89	300
PR20-038	Campbell	1998386	14279330	6601	30	-88	500
PR20-039	Campbell	1998502	14279288	6601	7	-90	400
PR20-040	Campbell	1998648	14279178	6601	231	-90	320
PR20-041	Campbell	1998614	14278944	6599	57	-89	350

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR20-042	Banshee	1997981	14280474	6745	262	-89	300
PR20-043	Banshee	1998004	14280403	6744	252	-89	300
PR20-044	Banshee	1997936	14280318	6751	288	-90	300
PR20-045	Banshee	1997949	14280263	6753	19	-90	300
PR20-046	Banshee	1997949	14280142	6747	87	-90	300
PR20-047	Banshee	1997973	14280055	6734	0	-90	350
PR20-048	Banshee	1998002	14280031	6732	288	-89	300
PR20-049	Banshee	1998439	14279894	6674	203	-89	400
PR20-050	Banshee	1998358	14279869	6675	283	-89	400
PR20-051	Banshee	1998393	14279817	6665	309	-90	255
PR20-052	Red Hill	1998609	14280277	6699	209	-90	350
PR20-053	Red Hill	1998620	14280816	6678	297	-89	300
PR20-054	Banshee	1998084	14280408	6725	227	-90	300
PR20-055	Red Hill	1998561	14281001	6677	272	-66	200
PR20-056	Red Hill	1998582	14280324	6699	91	-76	400
PR20-057	Red Hill	1998640	14280668	6678	72	-90	300
PR20-058	Red Hill	1998511	14280256	6700	75	-86	400
PR20-059	Banshee	1998290	14279948	6692	72	-90	350
PR20-060	Banshee	1998148	14279907	6706	6	-89	350
PR20-061	Banshee	1998277	14280441	6704	54	-89	350
PR20-062	Banshee	1998266	14280384	6700	310	-90	400
PR20-063	Banshee	1998097	14280143	6737	251	-90	300
PR20-064	Red Hill	1998731	14280332	6725	89	-76	400
PR20-065	Banshee	1998182	14280126	6722	227	-90	300
PR20-066	Banshee	1997924	14280497	6751	268	-90	300
PR20-067	Red Hill	1998732	14280232	6721	70	-75	500
PR20-068	Banshee	1997918	14279954	6753	269	-89	300
PR20-069	Banshee	1997862	14280108	6755	289	-89	300
PR20-070	Banshee	1997858	14280271	6756	154	-90	250
PR20-071	Banshee	1997827	14280471	6757	180	-90	250
PR20-072	Mustang	1994936	14283051	6732	167	-90	300
PR20-073	Mustang	1994942	14283054	6732	70	-45	300
PR20-074	Mustang	1994877	14283248	6704	308	-89	300
PR20-075	Mustang	1994883	14283251	6704	61	-46	300
PR20-076	Mustang	1994787	14283404	6721	74	-89	300
PR20-077	Mustang	1994782	14283398	6721	226	-45	300
PR20-078	Mustang	1994873	14283247	6704	240	-45	300
PR20-079	Mustang	1994932	14283057	6732	249	-45	300
PR20-080	Banshee	1997883	14280037	6754	93	-89	250
PR20-081	Banshee	1997853	14280193	6755	207	-89	250
PR20-082	Banshee	1997848	14280367	6758	253	-89	250
PR20-083	Banshee	1997932	14280412	6750	261	-90	250
PR20-084	Banshee	1998168	14279977	6709	244	-90	300

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR20-085	Banshee	1998209	14280441	6705	334	-90	300
PR20-086	Banshee	1998294	14280072	6695	246	-90	350
PR20-087	Banshee	1998283	14280162	6698	213	-90	350
PR20-088	Campbell	1998649	14278852	6581	262	-89	350
PR20-089	North Pan	1998939	14278043	6722	96	-86	865
PR20-090	North Pan	1999234	14280745	6739	45	-89	520
PR20-091	Red Hill	1998847	14281439	6840	270	-85	600
PR20-092	Red Hill	1998845	14281438	6840	264	-66	620
PR20-093	Campbell	1998738	14279215	6581	105	-90	400
PR20-094	Campbell	1998724	14279133	6580	158	-89	400
PR20-095	Campbell	1998679	14279073	6579	197	-90	400
PR20-096	Red Hill	1998752	14280449	6735	113	-89	445
PR20-097	Banshee	1997856	14280650	6751	339	-89	400
PR20-098	Banshee	1997976	14280768	6734	104	-89	270
PR20-099	Banshee	1998005	14280553	6740	307	-89	250
PR20-100	Banshee	1998114	14280656	6725	85	-89	200
PR20-101	NE Proposed Dump	1999592	14280514	6719	115	-89	800
PR20-102	NE Proposed Dump	2000491	14280996	6764	254	-90	400
PR20-103	North Pan	1998568	14279725	6581	146	-90	300
PR20-104	North Pan	1998687	14279813	6582	337	-89	300
PR20-105	North Pan	1998651	14279739	6580	65	-90	300
PR20-106	North Pan	1998717	14279710	6580	329	-90	300
PR20-107	Banshee	1998354	14280437	6712	273	-89	300
PR20-108	Banshee	1997805	14280038	6754	334	-89	300
PR20-109	Banshee	1997792	14280228	6755	113	-90	365
PR20-110	Banshee	1997791	14280317	6756	343	-90	400
PR20-111	Banshee	1997788	14280138	6755	126	-90	300
PR20-112	Banshee	1997840	14279964	6753	100	-90	300
PR20-113	Banshee	1998317	14280533	6715	349	-88	400
PR20-114	Banshee	1998229	14280509	6710	60	-89	250
PR20-115	Banshee	1998156	14280502	6712	156	-90	250
PR20-116	Banshee	1998066	14280495	6724	228	-90	250
PR20-117	Banshee	1998102	14280573	6718	221	-90	250
PR20-118	Banshee	1998176	14280582	6717	49	-90	250
PR20-119	Banshee	1998258	14280588	6720	335	-89	350
PR20-120	Red Hill	1998845	14280645	6751	134	-89	400
PR20-121	Red Hill	1998953	14280982	6740	16	-89	450
PR20-122	NE Proposed Dump	1999306	14281350	6789	186	-89	800
PR20-123	NE Proposed Dump	1999612	14281520	6794	86	-90	800
PR20-124	NE Proposed Dump	1999633	14282024	6827	130	-89	800

HoleID	Target	East NAD83 (ft)	North NAD83 (ft)	Elev (ft)	Azi	Dip	TD (ft)
PR20-125	NE Proposed Dump	2000065	14281768	6773	223	-88	600
PR20-126	NE Proposed Dump	2000513	14282001	6769	138	-89	400
PR20-127	NE Proposed Dump	2000516	14281509	6805	236	-85	400
PR20-128	NE Proposed Dump	2000476	14280507	6823	129	-87	400
PR20-129	Red Hill	1998638	14280551	6659	348	-89	600
PR20-130	Red Hill	1998601	14280517	6659	291	-89	400
PR20-131	Red Hill	1998588	14280445	6665	82	-90	400
PR20-132	Red Hill	1998628	14280421	6667	14	-89	600
PR20-133	Campbell	1998794	14279274	6561	86	-86	400
PR20-134	Campbell	1998675	14279262	6583	90	-86	400
PR20-135	Campbell	1998585	14279269	6580	78	-85	400
PR20-136	Banshee	1998359	14279935	6684	199	-90	300
PR20-137	Banshee	1998292	14279878	6684	229	-89	300
PR20-138	Banshee	1998332	14279779	6670	139	-89	300
PR20-139	Extended Lyle Dump	1997558	14279118	6668	20	-88	500
PR20-140	Extended Lyle Dump	1997868	14279196	6658	267	-89	500
PR20-141	Extended Lyle Dump	1998284	14279408	6637	270	-88	500
PR20-142	Extended Lyle Dump	1998133	14279186	6620	275	-85	500
PR20-143	Banshee	1998015	14280706	6730	196	-89	300
PR20-144	Banshee	1998053	14280788	6733	64	-89	300
PR20-145	Banshee	1997950	14280822	6741	254	-89	300
PR20-146	Banshee	1997925	14280701	6750	210	-88	300
PR20-147	Red Hill	1998900	14281200	6811	197	-84	550
PR20-148	Red Hill	1998778	14281318	6826	228	-75	550
PR20-149	Red Hill	1998779	14281323	6826	248	-75	550
PR20-150	Banshee	1998462	14280315	6712	201	-86	350
PR20-151	Banshee	1998440	14280233	6706	194	-88	350
PR20-152	Banshee	1998465	14280640	6761	232	-88	400
PR20-153	Banshee	1998415	14280582	6734	273	-88	300
PR20-154	Syncline	1997809	14278479	6603	338	-74	400