TECHNICAL REPORT

ON THE

2019 MINERAL RESOURCE ESTIMATE UPDATE FOR THE SHAKESPEARE NI-CU-PGE SULPHIDE DEPOSIT, SHAKESPEARE PROJECT, ONTARIO, CANADA

NAD83 UTM Zone 17N 435,900 m E; 5,133,300 m N
LATITUDE 46° 21ôN, LONGITUDE 81° 50ôW

Prepared for:

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1 SUMMARY

SGS Canada Inc. (ñSGSò) was contracted by Magna Mining Corp. (ñMagnaò) to complete an updated Mineral Resource estimate for the Shakespeare Ni-Cu-PGE sulphide deposit (ñShakespeare depositò) within the Shakespeare Property (the ñPropertyò), located approximately 70 km west-southwest of Sudbury, Ontario, Canada, and to prepare a technical report written in support of the updated Mineral Resource estimate. The reporting of the updated Mineral Resource estimate complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the updated Mineral Resource is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014).

Magna is a Canadian private company involved in mineral exploration and development. Their current business address is 25 Adelaide St. E, Suite 1400, Toronto, Ont. M5C 3A1.

This technical report is written in support of the updated resource estimate recently completed by SGS for the Shakespeare deposit. The effective date of the current Mineral Resource estimate is February 15, 2018. The updated Mineral Resource presented in this report was estimated by Allan Armitage, Ph.D., P. Geo, (ñArmitageò or the ñAuthorò) of SGS. Armitage is an independent Qualified Persons as defined by NI 43-101.

1.1 Property Description, Location, Access, and Physiography

The Property is located in Shakespeare Township, immediately north and east of Agnew Lake. The Property is approximately 70 km west-southwest of Sudbury, Ontario. The closest towns are Webbwood, which is 9 km southwest of the Property, and Espanola, which is 11 km southeast. The Property is situated on N.T.S. 41I/5 near Latitude 46°21'00"N and Longitude 81°49'47"W.

Access to the Property is from the northeast via a secondary road branching north from the Trans Canadian Highway # 17 approximately 7.5 km east of Nairn Centre. An existing good quality logging road connects to the west side of the secondary road, approximately 13 km from Highway 17 and allows access to the Property.

Magna currently has a 100% interest in the Property, and an 81% joint venture interest with Glencore on certain claims surrounding the Shakespeare property. The Property comprises Patented and Unpatented Claims and Leases within the Sudbury/Baldwin/Dunlop Townships area, with a total area of 1,966.522 ha.

On February 8, 2017, Magna acquired a 100% interest in URSA Major Minerals Incorporated (ñURSA Majorò) from Wellgreen. Underlying acquired assets of URSA Major included various ownership interests in Ontario properties including the Shakespeare Mine, Shining Tree, Fox Mountain, Stumpy Bay, Porter Baldwin and Porter Option. Being a corporate acquisition, Magna assumed all assets and liabilities of URSA Major, including the restricted cash supporting a Letter of Credit related to the mine reclamation provision for the Shakespeare property and all existing royalty agreements.

Pursuant to the acquisition, Wellgreen retained a 1.0% net smelter returns (ñNSRò) royalty interest on the Shakespeare property (100% of the 1.0% NSR can be purchased by Magna).

The Property is subject to a 1.5% NSR in favour of Glencore. The Property is subject to a 1.0% NSR and certain mineral processing rights in favour of Wellgreen (now Nickel Creek Platinum Corp. (ñNickel Creekò).

Various exploration mineral claims that surround the Shakespeare Property are subject to an 81%/19% joint venture between the Company and Glencore.

The Shakespeare Property is situated in Shakespeare Township on NTS 41I/5 near latitude 46°21ôN and Longitude 81°50ôW. It is ~10km north of the town of Webbwood and 70km west of Sudbury.

The access road to the site is from the northeast via a secondary road branching north from the Trans Canadian Highway # 17 approximately 7.5 km east of Nairn Centre. An existing good quality logging road connects to the west side of the secondary road, approximately 13 km from Highway 17 and allows access to the property. For exploration purposes, the logging road does not require significant upgrading although minor brush clearing and grading may be necessary from time to time. The property can also be accessed by boat from Agnew Lake, ~1km south of the Shakespeare deposit. In 2003 URSA Major constructed an exploration camp and access road from the Stumpy Bay/Agnew Lake shoreline. The camp facilities included a core logging shack, shipping container for mineralized sections and core storage racks.

Power can be provided to the site by 44 kV overhead lines from the existing 115 kV grid lines located both nort (4 km) and south (6.5 km) of the Shakespeare Deposit. Substations with 10 MVA capacity can be built at the connection with the grid (115 kV/44 kV) and at the end of the 44 kV line. This will provide sufficient energy to operate a processing plant (44 kV/4,160 V) and other future site facilities.

Commercial air service is available from Montréal or Toronto to Sudbury on a daily basis. The Property may also be serviced by road or by float plane from air bases located Sudbury. The siteôs proximity to Sudbury affords access to experienced staff and personnel with good mining and processing experience. Consumables for the mine and mill, including fuel, propane, and cement; are readily available.

The topography on the property is rugged with abrupt ridges and valleys. The elevation of land above sea level ranges from approximately 260 meters (852 ft +/-) (level of Agnew Lake) to a maximum of 330 meter (1082 ft +/-), on top of some of the highest quartzite hills in the area (averaging about 300 m above sea level). The average topographic relief is about 90 m and bedrock outcrops are common. Much of the general area is covered by timber resources which consist of second growth birch, poplar, oak, maple, jack pine and spruce.

1.2 History

In 1941, Frobisher Exploration staked the property and over the next several years carried out a plane table survey, geological mapping and diamond drilling in the area of the west zone. Drill holes completed in 1942 included twelve short holes totaling 819 m on the Shakespeare deposit. These holes ranged in length from 12 to 136 m. Drill holes completed in 1948 included three holes totaling 1,360 m. These holes, number 13, 14 and 15 were drilled to depths of 320, 568 and 472 m, respectively.

In 1947, Falconbridge Nickel Mines Limited (ïFalconbridgeò) (now Glencore) acquired the claims from Frobisher Exploration, and commenced a program designed to more thoroughly explore and to provide more detailed information with respect to the Shakespeare West mineral deposit, including the possibility of enrichment with depth.

Drilling in 1951 included twelve short holes, numbered 16 to 27, totaling 1,892 m. The length of the holes range from 91 to 192 m and were designed for the purpose of checking the width and grade of mineralization to a 152 m depth.

In 1985, sixteen holes totaling 1,030 m were drilled. These holes were drilled to test the near-surface resource and to evaluate the precious metal (Au, Pt and Pd) potential of the zone. Holes from the program were designed to provide coverage on 30.5 m (100-foot) centres across the Shakespeare deposit at depths less than 30.5 m from surface.

In 1986, four holes totaling 1,617 m were drilled to test the deposit at depth and along strike to the southwest. Two of the holes were drilled on 2900W, one on 2300W and the other on 1800 W. All of the holes were drilled to total depths of 355 to 457 m and designed to test the deposit at a depth below surface of approximately 152 m.

Results of the historic diamond drill data indicated a continuous zone of sulphide and precious metal mineralization extending over a total strike length of 549 m to a depth of approximately 76 m with very few

holes testing below the 250-foot (76 m) level. This is now part of the west mineral zone at Shakespeare. The Centre of the zone is usually close to the baseline or slightly north of this and the dip variable, from shallow to steep north.

Possible explanations for the variability in dip are faulting or that the overall shape of the zone is arcuate with a slight curve to the north. If the zone is in fact arcuate in shape, then it is possible that the variations in dip observed on sections are simply a function of where the various drill holes intersected this.

The width of most intersections ranges between 23 and 38 m (75 and 125 feet), with the longest intersection of 79.6 m (261.8 feet) being recorded in ôhole 1ô(Table 6 1) and the shortest of 0.9 m being in hole 85-4. The range of grades intersected for nickel was 0.09% to 0.49%, copper 0.09 to 0.61%, gold 0.11 to 0.30 g/t, platinum 0.15 to 0.57 g/t, and palladium 0.17 to 0.57 g/t.

Ultimately Falconbridge concluded in 1986 that the project could not sufficiently meet the various economic parameters required to move the project forward. At that time the Shakespeare West mineral deposit / advance prospect was sufficiently remote enough and difficult to reach, effectively discouraging any further efforts. It is important to highlight that this conclusion was made prior to the construction of logging roads and a haulage access road into the property and the discovery of the larger east mineral zone in 2002-2003.

No further work was performed on the Shakespeare property until 2000, when it was acquired by URSA Major, through a ñJoint Ventureò agreement with Falconbridge. Early work carried out by URSA Major in 2000 and 2001 had involved digital compilation, geological mapping, sampling, and some limited geophysical surveys. From 2002 through to the 2012 an extensive amount of diamond drilling was conducted on the Shakespeare property. In June of 2003 the company discovered the Shakespeare East mineral deposit. From there on, the company carried out an extensive amount of exploration work which included additional ground and bore hole geophysics, surface trenching, geotechnical mapping probing, feasibility and base line environmental studies, public consultations and successful permitting. URSA Major carried out diamond drilling programs on the deposit from 2002-2006 and from 2010-2012.

Resource estimations have been conducted in 1951, 1974 and 1985 by personnel working for Falconbridge. Micon has completed three resource estimates for the Shakespeare deposit: the initial estimate in 2003; a second estimate, in support of a preliminary feasibility study, was released in 2004 after the completion of the 2003/2004 drilling program; and a third estimate, in support of a feasibility study, was released in 2006 after the completion of the 2005 drilling.

Wellgreen completed an internal updated resource estimate in 2014 in support of an internal feasibility study.

In late 2006, URSA Major announced an agreement with Xstrata nickel providing for the milling of an approximately 50,000 tonne bulk sample from the Shakespeare west deposit at the Strathcona mill and the subsequent processing of concentrates. URSA Major completed the trucking of the 50,000 tonne bulk sample in October 2007. Batch processing of the sample at Xstrata Nickelôs (ñXstrataôò) Strathcona mill was completed in October 2007, and in November 2007 blending tests with Shakespeare ore and Strathcona ore feed were also completed. Based on mill balances, the batch test processed 45,487 dry metric tonnes (ñdmtò) of ore with a head grade of 0.40% nickel, 0.46% copper, 0.026% cobalt, 0.186 g/t gold, 0.378 g/t platinum, and 0.483 g/t palladium.

Overall nickel and copper recoveries into concentrates were 76.20% and 89.42% respectively. Cobalt recovery into concentrate was 60.03%. Gold, platinum and palladium recoveries into concentrate were 62.56%, 66.12%, and 46.28% respectively. The batch ore sample produced 124.22 tonnes contained nickel in nickel concentrate, 186.86 tonnes contained copper in both copper concentrate and nickel concentrate, and 6.31 tonnes contained cobalt in nickel concentrate. Contained gold, platinum and palladium are 5.30 kg (170 oz.), 11.38 kg (366 oz.), and 10.18 kg (327 oz.) respectively.

During 2008, the Company shipped and processed a total of 83,029 tonnes of ore at Xstrataôs Strathcona mill. This ore had average grades of 0.39% nickel, 0.40% copper, 0.03% cobalt and over 1 gram/tonne precious metals. During the third quarter of 2008, the Ursa Major announced a temporary suspension of preproduction mining operations due to low commodity prices. However, in early 2009, an additional shipment of 10,000 tonnes of available ore was made.

For the quarter ended April 30, 2010, the Shakespeare Mine was again in pre-production. In February and March 2010, 29,533 tonnes of ore were delivered with contained metals totalling approximately 118,000 pounds of nickel, 182,000 pounds of copper, 6,000 pounds of cobalt and 380 ounces of precious metals. The ore shipped in February and March was mainly broken ore that had been on site since 2008. This ore averaged 20% below the average budgeted grade for 2010 that is based on the previous bulk sample and preproduction mined grades of 0.39% nickel, 0.44% copper, 0.03% cobalt and 1.1 gram/tonne precious metals.

The Company declared commercial production on May 27, 2010 and was in production until January 27, 2012. On December 13, 2011, URSA Major announced that it had limited operations at the Shakespeare Nickel Mine to crushing of existing broken ore, ore sampling and trucking operations as a consequence of reduced base metals prices. On February 3, 2012, Ursa announced it had temporarily suspended operations at the Shakespeare Property following the expiration, on December 31, 2011, of the two year milling agreement and the Company was not able to conclude a new processing agreement for Shakespeare ore with Xstrata.

During the nine months of production ending January 31, 2011, the Company delivered a total of 166,913 tonnes of ore to the Strathcona Mill at a grade of 0.357% nickel, 0.407% copper, 0.025% cobalt, 0.373 g/t platinum, 0.409 g/t palladium, 0.207 g/t gold and 2.328 g/t silver. Contained metals in the delivered ore totalled approximately 1,314,000 pounds of nickel, 1,499,000 pounds of copper, 92,204 pounds of cobalt and 1,900 ounces of platinum, 2,100 ounces of palladium, 1,100 ounces of gold and 12,100 ounces of silver.

During the year of operation ending January 31, 2012, the Company delivered 151,910 tonnes of ore to the Strathcona Mill for processing. Ore shipments were 47,090 tonnes below budget for the year ended January 31, 2012, primarily as a result of suspension of operations in December 2011.

Contained metals in the delivered ore for the year ended January 31, 2012, totalled approximately 1,052,000 pounds of nickel, 1,234,000 pounds of copper, 64,700 pounds of cobalt and 1,650 ounces of platinum, 1,840 ounces of palladium, 960 ounces of gold and 10,260 ounces of silver. The recovered and contained metals are subject to smelter recoveries and to further smelter deductions.

For the year ended January 31, 2012, the ore averaged 0.314% nickel, 0.368% copper, 0.019% cobalt, and 0.941 grams/tonne precious metals. This is approximately 84% of the average budgeted grade for 2011 that is based on the previous mined grades 0.373% nickel, 0.419% copper, 0.027% cobalt and 1.069 grams/tonne precious metals.

1.3 Geology and Mineralization

The Shakespeare copper-nickel deposit is hosted within gabbroic rocks (Shakespeare Intrusion) of the Nipissing Intrusive Suites situated along the north contact between the mafic intrusive body which crosses the Property and quartzites of the Mississagi Formation.

The Shakespeare intrusion hosts semi-massive to disseminated sulfides (Sproule et al. 2007). Sulfides, including pyrrhotite, chalcopyrite, pentlandite, and lesser pyrite, are present throughout the intrusion in varying proportions, mostly in trace amounts. Significant accumulations are present as:

- Disseminations of pyrrhotite, chalcopyrite, and pentlandite close to the melagabbro/gabbro contact, usually ~1 mm in size, typically comprising <1% of the rock

- Heavily disseminated to patchy net-textured (10-15%) pyrrhotite, chalcopyrite, and pentlandite, in rounded blebs that reach up to 2-5 cm in size, in the upper zone of the melagabbro
- Blebby pyrrhotite and chalcopyrite in the lower sections of the melagabbro and the base of the quartz gabbro.

The sulfides have experienced variable degrees of deformation and recrystallization during metamorphism. They vary from pristine magmatic blebs, to recrystallized blebs, to stringers, the latter of which tend to be richer in chalcopyrite.

Where the mineralization is proximal to shear zones that cross-cut the deposit, the sulphides are often sheared and attenuated. These sheared sulphides, together with the patchy-network textured mineralization, create an interconnectivity in the sulphides that allows portions of the deposit to be identified by remote electromagnetic (EM) geophysics surveys, a valuable tool in exploring for extensions to the deposit. The mineralized zones also contain abundant inclusions of quartzite, blue quartz eyes, and rare diorite. The sulfides have compositions consistent with having been derived from liquid immiscibility within the Shakespeare magma and they have equilibrated at moderate magma:sulphide ratios (500-1000) to generate the range of Ni, Cu, Co, and precious metal sulphide tenors.

The total strike length of Shakespeare mineralization is approximately 1,700 m and the mineralization extends to a depth of ~550m (open at depth). The deposit is subdivided into a West and East resource zone.

- The west zone plunges broadly to the west at ~15° and is of a slightly lower grade than the East zone. It is currently defined to a depth of ~120m and abruptly terminates at its western-most edge, possibly due to offsetting by faults. Deeper exploratory holes by URSA Major identified two lenses of mineralization down to ~210m depth. Although more work is required to better define these lenses, they may represent a down-dip, possibly fault-displaced extension of the east zone mineralization.
- The east zone plunges ~30° to ~40° east from surface and generally has higher grade mineralization, particularly nearer surface. The mineralized zones currently extends over ~1km and plunges from surface to a depth of ~ 550m. It remains open to the west and the up-dip and down-dip extensions have not been tested by drilling, leaving considerable opportunity to expand the resource.

1.4 Mineral Processing, Metallurgical Testing and Recovery Methods

Three phases of metallurgical testing were conducted by SGS Lakefield Research (ñSGS Lakefieldò) during the development of the Shakespeare project. These test work programs are termed: 2003 test work; 2004 test work; and 2005 test work.

The 2003 test work comprised preliminary flow sheet development including mineralogy, bulk flotation and an initial look at nickel-copper separation.

The metallurgical test work in 2004 was designed primarily on the premise that all production would be toll milled at the Strathcona concentrator of Falconbridge, ON. Accordingly, testing was focused on providing satisfactory proof that the metallurgical characteristics of the Shakespeare deposit would allow its treatment in that concentrator, either alone or mixed with Falconbridge ore. This test work program included a series of locked cycle flotation tests.

The 2005 test work program was designed to optimize a process for the on-site beneficiation of ore on site, with the production of a combined (Cu/Ni) concentrate.

The recovery estimates for a range of concentrate product qualities are shown in Table 1-1. These estimated results are based on metallurgical composite samples and do not take into account variations in head grade.

Table 1-1 Metallurgical Recovery Estimates

Element	Feed Grade (% or g/t)	Product 15% (Cu+Ni)		Product 18% (Cu+Ni)		Product 20% (Cu+Ni)	
		Recovery (%)	Grade (% or g/t)	Recovery (%)	Grade (% or g/t)	Recovery (%)	Grade (% or g/t)
Copper (Cu)	0.42	96.1	8.7	95.9	10.6	95.6	11.9
Nickel (Ni)	0.37	79.8	6.3	76.4	7.4	73.5	8.1
Platinum (Pt)	0.34	81.0	5.9	74.8	6.7	69.5	7.0
Palladium (Pd)	0.41	49.0	4.3	42.4	4.6	36.2	4.4
Gold (Au)	0.21	43.8	2.0	38.4	2.1	33.4	2.1

The current Mineral Resource estimate is based on optimization of recoveries that is enabled by construction of on-site mineral processing and tailings storage facilities versus constraining recoveries by processing mine production at the Glencore Xstrata Strathcona mill or the Vale Coleman mill. Therefore, metallurgical performance is related to an 18% Cu + Ni bulk concentrate category (i.e., a concentrate grading 7.4% nickel) with the following recoveries:

- Nickel recovery 76.4%
- Copper recovery 95.9%
- Cobalt recovery 71.0%
- Platinum recovery 74.8%
- Palladium recovery 42.4%
- Gold recovery 38.4%

1.5 Mineral Resource Statement

The current Mineral Resource estimate on the Shakespeare deposit is an update to a NI 43-101 Mineral Resource estimate completed for Magna in 2018. The estimate was prepared by SGS and is presented in a NI 43-101 Technical Report titled ñTechnical Report on the Updated Mineral Resource Estimate for the Shakespeare Ni-Cu-Pge Deposit, Shakespeare Project, Ontario, Canadaò dated September 25, 2018.

Completion of the current Mineral Resource estimate involved the assessment of a drill hole database, which included data for an additional 13 drill holes completed in 2018 by Magna, updated three-dimensional (3D) mineral resource models, and available written reports. Armitage conducted a site visited to the Property and core logging facilities on November 28 and 29, 2018. The effective date of the current Mineral Resource estimate is February 15, 2019.

The general requirement that all Mineral Resources have ñreasonable prospects for economic extractionò implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, the Author considers that the Shakespeare deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering ñreasonable prospects for economic extractionò by an open pit, WhittleÊ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be ñreasonably expectedò to be mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 1-3. A Whittle pit shell at a revenue factor of 1.0 was selected

as the ultimate pit shell for the purposes of this Mineral Resource estimate. The corresponding strip ratio is 7.7:1 and reaches a maximum depth of approximately 335 m below surface.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the ñreasonable prospects for economic extractionò by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.

The Mineral Resource estimate presented in this report for the Shakespeare deposit is presented in Table 1-2 and includes an open pit and an underground Mineral Resource (estimated from the bottom of the 2019 pit).

Highlights of the Shakespeare deposit Mineral Resource Estimate are as follows:

- The open pit Mineral Resource includes, at a cut-off grade of 0.2% NiEq, 14,436,000 tonnes grading 0.34% Ni, 0.37% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.19 g/t Au in the Indicated category, and 1,682,000 tonnes grading 0.29% Ni, 0.31% Cu, 0.02% Co, 0.27 g/t Pt, 0.30 g/t Pd and 0.17 g/t Au in the Inferred category.
- The underground Mineral Resource includes, at a cut-off grade of 0.5% NiEq, 2,489,000 tonnes grading 0.33% Ni, 0.38% Cu, 0.02% Co, 0.31 g/t Pt, 0.35 g/t Pd and 0.19 g/t Au in the Indicated category, and 2,905,000 tonnes grading 0.34% Ni, 0.39% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.21 g/t Au in the Inferred category.

Table 1-2 Shakespeare Deposit 2019 Open Pit (A) and Underground (B) Mineral Resource Estimate, February 15, 2019

(A)

Cut-off Grade	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t	NiEq %
Indicated								
0.2% NiEq	14,436,000	0.34	0.37	0.02	0.34	0.37	0.19	0.63
Inferred								
0.2% NiEq	1,682,000	0.29	0.31	0.02	0.27	0.30	0.17	0.54

(B)

Cut-off Grade	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t	NiEq %
Indicated								
0.5% NiEq	2,489,000	0.33	0.38	0.02	0.31	0.35	0.19	0.62
Inferred								
0.5% NiEq	2,905,000	0.34	0.39	0.02	0.34	0.37	0.21	0.64

(1) Mineral Resources are exclusive of material mined.

(2) CIM (2014) definitions were followed for Mineral Resources.

(3) Mineral resources which are not mineral reserves do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. Composites have been capped where appropriate.

(4) Open pit Mineral Resources are reported at a cut-off grade of 0.2% NiEq within a conceptual pit shell.

(5) Underground Mineral Resources are estimated from the bottom of the 2018 pit and are reported at a cut-off grade of 0.5% NiEq.

(6) A fixed specific gravity value of 3.00 was used to estimate the tonnage from block model volumes.

(7) *NiEq Cut-off grades are based on metal prices of $6.25/lb Ni, $2.80/lb Cu, $31.00/lb Co, $950/oz Pt, $900/oz Pd and $1,250.00/oz Au, and metal recoveries of 76.4% for Ni, 95.9% for copper, 71% for Co, 74.8% for Pt, 42.4% for Pd and 38.4% for Au.*

(8) *The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.*

(9) *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration.*

Table 1-3 Whittle™ Pit Optimization Parameters

Parameter	Value	Unit
Nickel Price	$6.25	US$ per pound
Copper Price	$2.80	US$ per pound
Cobalt Price	$31.00	US$ per pound
Platinum Price	$950.00	US$ per ounce
Palladium Price	$900.00	US$ per ounce
Gold Price	$1,250.00	US$ per ounce
Exchange Rate	0.76	$US/$CDN
Mining Cost	$2.20	US$ per tonne mined
Processing Cost (incl. crushing)	$8.00	US$ per tonne milled
General and Administrative	$1.75	US$ tonne of feed
Overall Pit Slope	55	Degrees
Nickel Recovery	76.4	Percent (%)
Copper Recovery	95.9	Percent (%)
Cobalt Recovery	71	Percent (%)
Platinum Recovery	74.8	Percent (%)
Palladium Recovery	42.4	Percent (%)
Gold Recovery	38.4	Percent (%)
Mining loss / Dilution (open pit)	5 / 5	Percent (%) / Percent (%)
Waste Specific Gravity	2.85	
Mineral Zone Specific Gravity	3.00	
Block Size	5 x 5 x 5	
Re-block for Optimization	10 x 10 x 10	

1.6 Mineral Resource Estimation Parameters

In order to complete an updated Mineral Resource estimate for the Shakespeare deposit, a database comprising a series of comma delimited spreadsheets containing drill hole and trench information was provided by Magna. The database included hole and trench location information (NAD83 / UTM Zone 17n), survey data, assay data, lithology data and specific gravity data. The data in the assay table included assays for nickel (%), copper (%), cobalt (%), gold (g/t), platinum (g/t) and palladium (g/t). The data was then imported into GEOVIA GEMS version 6.8.1 software (ñGEMSò) for statistical analysis, block modeling and resource estimation.

The database comprises data for 185 surface drill holes, 26 blast holes (for grade control) and 41 channels and includes data for drill holes completed in 2018 by Magna, completed since the last Mineral Resource estimate on the Shakespeare deposit. The database totals 9,838 assay samples.

The database was checked for typographical errors in drill hole locations, down hole surveys, lithology, assay values and supporting information on source of assay values. Overlaps and gapping in survey, lithology and assay values in intervals were checked. Gaps in the assay sampling were assigned a grade value of 0.001 for Ni, Cu, Co, Pt, Pd and Au.

All geological data was reviewed and verified by SGS as being accurate to the extent possible and to the extent possible all geologic information was reviewed and confirmed. SGS is of the opinion that the assay sampling and extensive QA/QC sampling of core by Granada Gold provides adequate and good verification of the data. The Authors believe the data is of sufficient quality to be used for the current resource estimate.

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the current Mineral Resource Estimate.

For the 2019 updated Mineral Resource estimate, modelling of the Shakespeare deposit was subdivided into four domains: the East and West Disseminated Domains and the East and West Blebby domains, representing the two styles of sulphide mineralization in the deposits.

The 3D grade-controlled models were built by visually interpreting mineralized intercepts from cross sections using Ni and Cu values. Polygons of mineral intersections (snapped to drill holes) were made on each cross section and these were wireframed together to create continuous resource wireframe models in GEMS.

The East domain polygons of mineral intersections were constructed on 60 m spaced sections (21 sections looking west) with a 30 m sectional influence. The West domain polygons were constructed on 30 m sections (23 sections looking west) with a 15 m sectional view. The sections were created perpendicular to the general strike of the mineralization and the spacing of the modeling was conducted based on the general spacing of the drill holes and channels. The models were extended 30 to 40 m beyond the last known intersection along strike and 15 ï 30 metres up and down dip. The modeling exercise provided broad controls of the dominant mineralizing direction. The East and West domains extend for an aggregate length of approximately 1,730 m, dip steeply to the northwest and extend to a maximum depth of 250 m in the West domains and 600 m in the East domains. All domains were clipped to the 2018 topographic surface. The total volume of the East and West grade control model is 9,264,486 m3.

The Shakespeare deposit grade control models were used to constrain composite values chosen for interpolation, and the mineral blocks reported in the estimate of the Mineral Resource. A block model within NAD83 UTM Zone 17N space (no rotation) with block dimensions of 5 x 5 x 5 metres in the x (east), y (north) and z (level) directions was placed over the grade shells with only that portion of each block inside the shell recorded (as a percentage of the block) as part of the Mineral Resource estimate (% Block Model). The block size was selected based on borehole spacing, composite length, the geometry of the mineralized domains, and the selected starting mining method (Open Pit). At the scale of the Shakespeare deposit this provides a reasonable block size for discerning grade distribution, while still being large enough not to mislead when looking at higher cut-off grade distribution within the model. The model was intersected with surface topography to exclude blocks, or portions of blocks, that extend above the bedrock surface.

Nickel, copper, cobalt, platinum, palladium and gold were estimated for each domain in the Shakespeare deposit. Blocks within each mineralized domain were interpolated using composites assigned to the same domain. To generate grade within the blocks, the Ordinary Kriging (OK) interpolation method was used for

the East mineralized domains. The interpolation method was inverse distance squared (ID2) for the West mineralized domains.

The search ellipse used to interpolate grade into the resource blocks for the East domains by OK is based on 3D semi-variography analysis of Ni for the 1.0 metre composites within the domains using GEMS. The same semi-variograms were used to interpolate grades of all metals into each block.

For the West domains, the search ellipse was interpreted based on orientation and size the mineralized domains. The search ellipse axes are generally oriented to reflect the observed preferential long axis (geological trend of the mineralization) of the grade control models and the observed trend of the mineralization down dip.

Three passes were used to interpolate grade into all of the blocks in the grade shells. For Pass 1 the search ellipse size (in metres) for all mineralized domains was set at 30 x 30 x 15 in the X, Y, Z direction; for Pass 2 the search ellipse size for each domain was set at 60 x 60 x 30; for Pass 3 the search ellipse size was set at 120 x 120 x 60. Blocks were classified as Indicated if they were populated with grade during Pass 1 and during Pass 2 of the interpolation procedure. The Pass 3 search ellipse size was set to assure all remaining blocks within the wireframe were assigned a grade. These blocks were classified as Inferred.

Grades were interpolated into blocks using a minimum of 6 and maximum of 12 composites to generate block grades during Pass 1 and Pass 2 (maximum of 3 sample composites per drill hole), and a minimum of 2 and maximum of 12 composites to generate block grades during pass 3.

The specific gravity values used for previous Mineral Resource estimates were obtained from measurements taken from test work performed by URSA Major personnel on drill hole numbers UR-03-23, UR-03-26, UR-03-30 and UR-03-36. Representative samples from all lithologies were taken and subjected to a wet/dry bulk specific gravity determination test. A total of 257 samples were analyzed. For the current Mineral Resource estimate update an SG of 3.00 is used for mineralized domains. An SG of 2.85 is used for waste as quartzite forms the hanging wall of the deposit and will be a significant portion of the waste rock from the open pit.

1.7 Recommendations

Magna is planning on conducting exploration on the Shakespeare property in 2019. The exploration program is to include surface mapping, stripping and chip and channel sampling in several locations and up to 6,000 m of drilling. The total cost of the recommended work program is estimated at C$1,500,000 million (Table 26 1).

Given the prospective nature of the property, it is the Authorsô opinion that the Property merits further exploration and that proposed plans for further work are justified. The current proposed work program will help advance the Shakespeare deposit towards a pre-development stage and will provide key inputs required to evaluate the economic viability of a mining project at a pre-feasibility level.

The Author recommends that Magna conduct the further exploration as proposed, subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

2 INTRODUCTION

SGS Canada Inc. (ñSGSò) was contracted by Magna Mining Corp. (ñMagnaò) to complete an updated Mineral Resource estimate for the Shakespeare Ni-Cu-PGE deposit (ñShakespeare depositò) within the Shakespeare Property (the ñPropertyò), located approximately 70 km west-southwest of Sudbury, Ontario, Canada, and to prepare a technical report written in support of the updated Mineral Resource estimate. The reporting of the updated Mineral Resource estimate complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the updated Mineral Resource is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014).

Magna is a Canadian private company involved in mineral exploration and development. Their current business address is 25 Adelaide St. E, Suite 1400, Toronto, Ont. M5C 3A1.

This technical report is written in support of the updated Mineral Resource estimate recently completed by SGS for the Shakespeare deposit. The effective date of the resource estimate is February 15, 2019.

The Mineral Resource presented in this report was estimated by Allan Armitage, Ph.D., P. Geo, (ñArmitageò or the ñAuthorò) of SGS. Armitage is an independent Qualified Persons as defined by NI 43-101.

2.1 Sources of Information

In preparing the Shakespeare updated Mineral Resource estimate, the Author has utilized a digital database provided to SGS by Magna. The Author has reviewed geological reports and miscellaneous technical papers, and other public information as listed in Section 27 (References). In addition, the Author has reviewed news releases and Managementôs Discussions and Analysis (ñMD&Aò) which are posted on SEDAR (www.sedar.com) under the previous owners profiles, URSA Major Minerals Incorporated (ñURSA Majorò) and Nickel Creek Platinum Corp. (ñNickel Creekò) (see section 4.3 below).

SEDAR, ñThe System for Electronic Document Analysis and Retrievalò, is a filing system developed for the Canadian Securities Administrators to:

- facilitate the electronic filing of securities information as required by Canadian Securities Administrator;
- allow for the public dissemination of Canadian securities information collected in the securities filing process; and
- provide electronic communication between electronic filers, agents and the Canadian Securities Administrator

The Property was the subject of a recent Technical Report SGS in 2018 and is presented in an internal Technical Report titled ñTechnical Report on the Updated Mineral Resource Estimate for the Shakespeare Ni-Cu-Pge Deposit, Shakespeare Project, Ontario, Canadaò dated September 25, 2018. The report was prepared by Armitage for Magna Mining Corp.

The Property was the subject of a Technical Report by Littlerock Consultants in 2014 and is presented in an internal Technical Report titled ñ2014 Mining Reserve / Mining Resource Technical Report, Shakespeare Mine Ontario, Canadaò dated October 27, 2014. The report was completed for Wellgreen Platinum Ltd. (ñWellgreenò) now Nickel Creek. However, the report was for internal use only. The resources/reserves were never released and the report was not posted on SEDAR.

The Property was the subject of a technical report by Micon International Limited (ñMiconò) and is presented in a NI 43-101 Technical Report titled ñAn Updated Mineral Resource Estimate and Feasibility Study on the Shakespeare Deposit, Shakespeare Property, Near Espanola, Ontarioò dated March, 2006. The report is filed on SEDAR under the profile of URSA Major.

The Author has carefully reviewed all of the Property information and assumes that all of the information and technical documents reviewed and listed in the ñReferencesò are accurate and complete in all material aspects. Information regarding the property history, regional property geology, deposit type and metallurgical test work (Sections 5-13) have been sourced from the previous technical reports and company filings on SEDAR and revised or updated as required.

Historical Mineral Resource figures contained in this report, including any underlying assumptions, parameters and classifications, are quoted ñas isò from the source.

2.2 Site Visit

Armitage personally inspected the Property on July 30, 2018, accompanied by Jonathan OÕCallaghan, consulting Project Geologist for Magna. Armitage examined several core holes and drill logs. Armitage completed a tour of the Property including the open pit, drill sites, office, and core storage facilities. At the time of the visit, there was no active exploration or mining activities on the Property and Magna had completed no exploration on the Property to date.

Armitage conducted a second site visit on November 28 and 29, 2018 accompanied by Marshall Hall, Project Geologist for Magna; Magna was in the process of completing a drill program. Armitage inspected the camp, drill and recent drill sites in the field as well as core security in the field. Armitage also inspected the offices, core logging facilities (located in Sudbury) and reviewed the logging and sampling procedures and core sample security. Armitage examined several recent core holes, and accompanying drill logs and assay certificates; assays were examined against drill core mineralized zones.

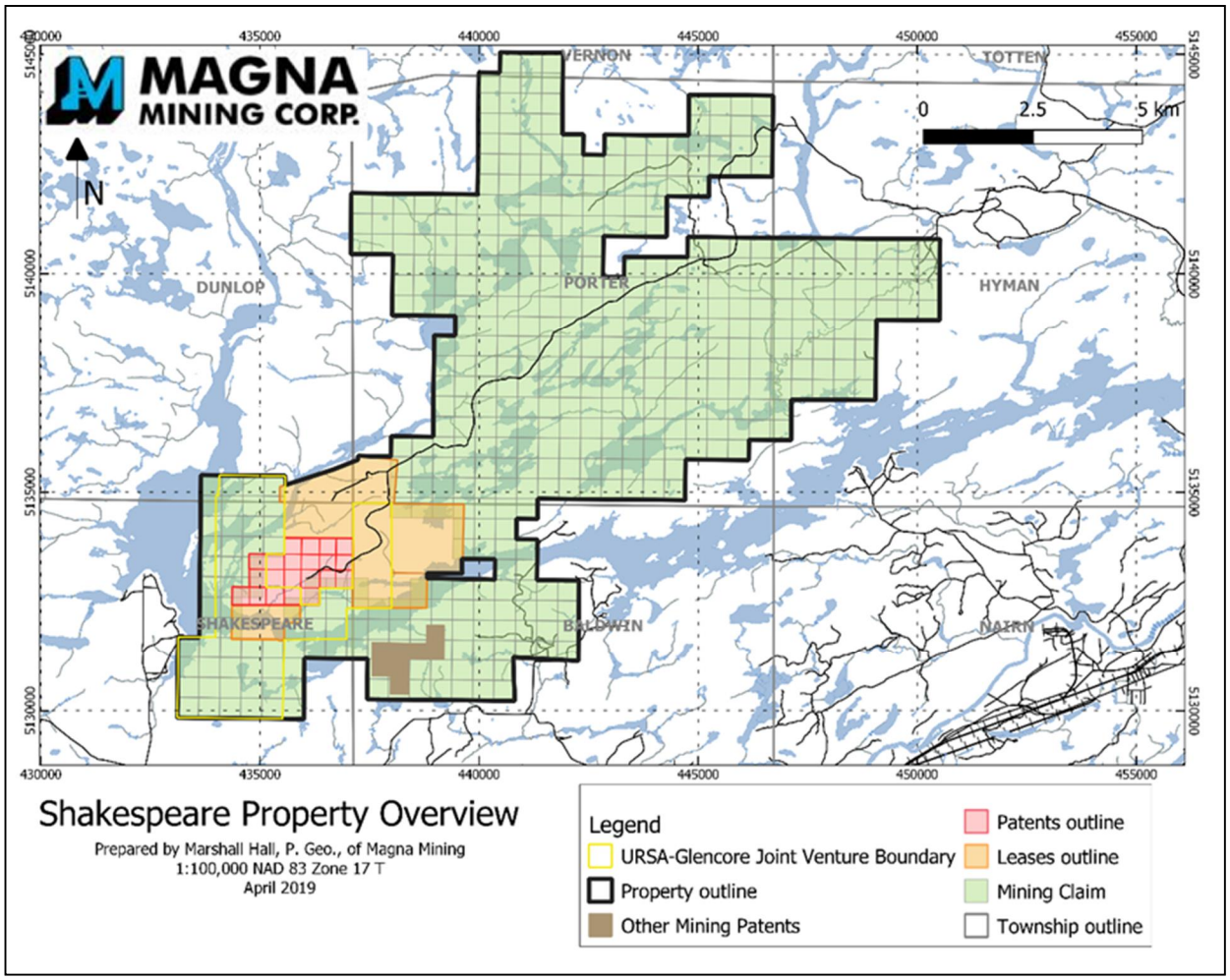
3 Reliance on Other Experts

Information concerning claim status and ownership which are presented in Section 4 below have been provided to the Author by Magna (Marshall Hall) by way of E-mail on March 19, 2019. The Author only reviewed the land tenure in a preliminary fashion, and has not independently verified the legal status or ownership of the Property or any underlying agreements. However, the Author has no reason to doubt that the title situation is other than what is presented in this technical report. The Author is not qualified to express any legal opinion with respect to Property titles or current ownership.

4 PROPERTY DESCRIPTION AND LOCATION

The Property is located in Shakespeare Township, immediately north and east of Agnew Lake (Figure 4-1). The Property is approximately 70 km west-southwest of Sudbury, Ontario. The closest towns are Webbwood, which is 9 km southwest of the property, and Espanola, which is 11 km southeast. The Property is situated on N.T.S. 41I/5 near Latitude 46°21'00"N and Longitude 81°49'47"W.

Figure 4-1 Property Location Map and Land Tenure Map



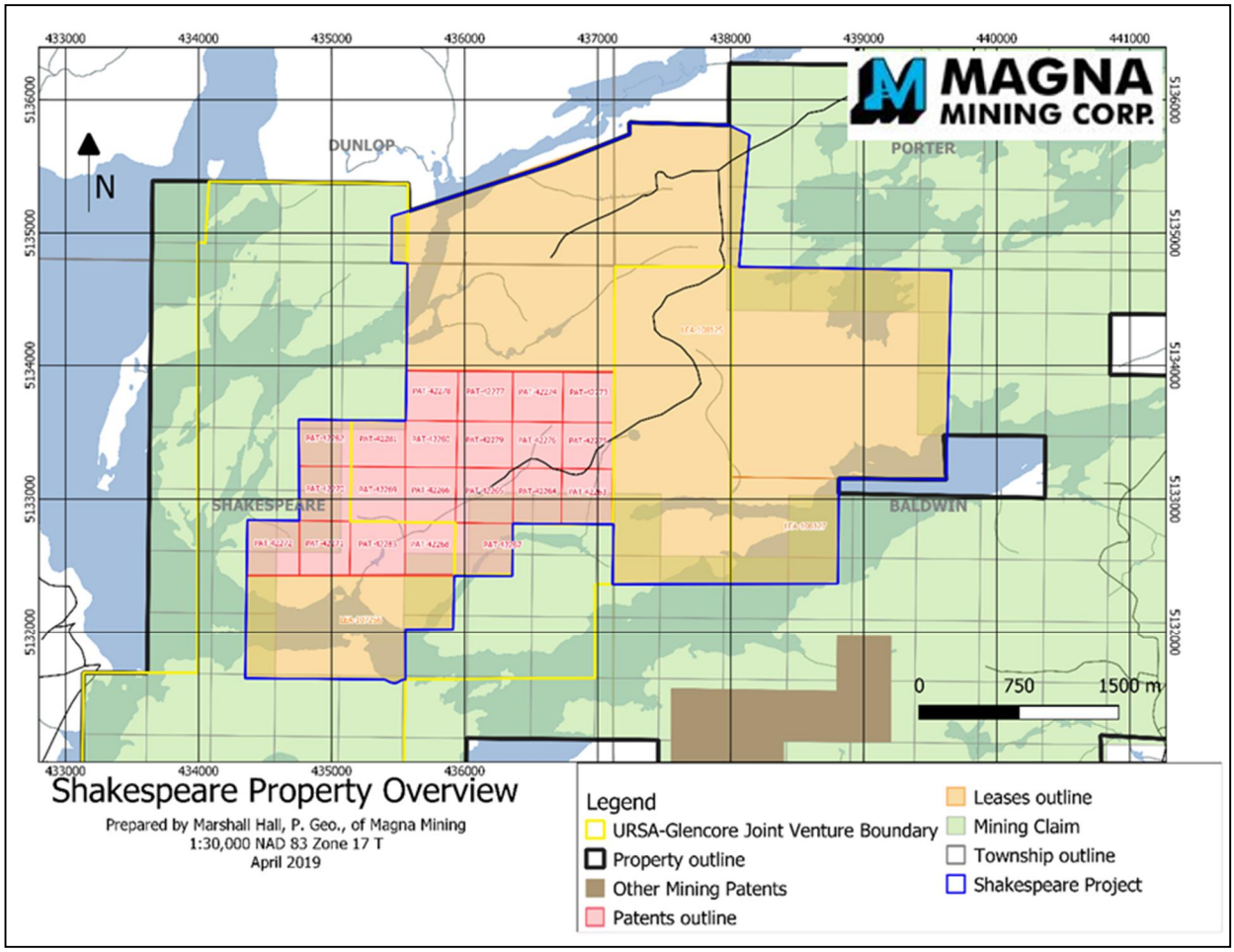
4.1 Mineral Tenure

The Shakespeare project is entirely comprised of patented and leased mining claims within Dunlop, Porter, Shakespeare, and Baldwin Townships and covers 1,296 ha of land. Magna currently has a 100% interest in most of the Shakespeare project with 81% ownership of a joint venture on certain claims, leases, and patents surrounding the Shakespeare Project (Table 4-1; Figure 4-2).

Table 4-1 Patents and Leases

MLAS TENURE	Township	Area (Ha)	MLAS POPULATED_NAME	%	Other Holder
LEA-107256	Shakespeare	112.66	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
LEA-108125	Dunlop, Porter, Shakespeare, Baldwin	786.28	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
LEA-108127	Baldwin	63.922	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42263	Shakespeare	15.325	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42264	Shakespeare	15.325	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42265	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42266	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42267	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42268	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
PAT-42269	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42270	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
PAT-42271	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
PAT-42272	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
PAT-42273	Shakespeare	14.72	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42274	Shakespeare	14.72	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42275	Shakespeare	14.72	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42276	Shakespeare	14.72	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42277	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42278	Shakespeare	16.455	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42279	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42280	Shakespeare	16.276	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42281	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	100	
PAT-42282	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
PAT-42283	Shakespeare	16.187	URSA MAJOR MINERALS INCORPORATED	81	GLENCORE CANADA CORPORATION
		1,296			

Figure 4-2 Shakespeare Property Land Tenure Map



4.2 Property Claim Status

The Shakespeare property was initially staked prior to 2018 under Ontarioôs ground-based claim staking process. On 10 April 2018, Ontario converted its manual system of ground and paper staking and maintaining unpatented mining claims to an online mining claim registration system known as the Mining Land Administration System (MLAS). All active, unpatented claims (legacy claims) were converted from their legally defined location by claim posts on the ground or by township survey to a cell-based provincial grid. The provincial grid is built on the latitude- and longitude-based National Topographic System (NTS) and is made up of more than 5.2 million cells each measuring 15 seconds latitude by 22.5 seconds longitude and ranging in size from 17.7 ha in the north to 24 ha in the south. Cells in the Property area are approximately 22 ha in size. Each cell has a unique identifier based on the cellôs position in the grid.

Ontario mining claims are now legally defined by their cell position on the grid and UTM coordinate location in the online MLAS Map Viewer. Legacy claims were not cancelled but continue as one or more cell claims or boundary claims that resulted from conversion.

As defined in the Mining Act, a cell claim is a mining claim that relates to all the land included in one or more cells on the provincial grid that is open for mining claim registration. A cell claim is created as a new registration after 10 April 2018 or at conversion where there are one or more legacy claims in a cell, and all are held by the same holder. In this case, if there is more than one legacy claim in a cell, those claims will

merge into one cell claim. A cell claim created from conversion can be a minimum of one cell (single cell mining claim or SCMC) though it can be amalgamated to form a multi-cell mining claim (MCMC) up to a maximum of 25 cells.

As defined in the Mining Act, a boundary claim is created at conversion when there are multiple legacy claims within a cell that cannot merge into a cell claim. There are two circumstances where mining claims will not merge into a cell claim:

- When the legacy claims are held by different holders.
- When the legacy claims are held by the same person who chooses to keep them separate by making an election through the Claim Boundary Report process.

Unpatented mining claims include no surface rights however a right to acquire the surface rights for development purposes exists through the Ontario Mining Act. The Mining Act also provides legal access to the land for the purpose of exploration.

Mining claims are generally subject to the following Crown reservations:

- The surface rights over a width of no more than 120 m from the high-water mark where a mining claim includes land covered with water or bordering on water
- Where a highway or road constructed or maintained by the Ministry of Transportation crosses a mining claim, the surface rights over a width of no more than 90 m, measured from the outside limits of the right
- of way of the highway or road along both sides of the highway or road
- Sand and gravel reserved
- Peat reserved.

Certain mining claims also:

- Are MRO or part MRO where all or part of the surface rights within the claim are held by a third party
- Exclude hydro right of ways
- Exclude withdrawn areas.

Given the nature of Ontarioâs MLAS cell-based map staking system, certain cell claims overlap areas which are withdrawn from mineral exploration and development. Such cell claims are referred to as encumbered claims. Features that are an encumbrance on a cell claim include:

- Land that is part of an Indian reserve.
- Provincial Park or a conservation reserve.
- Mining leases except for surface rights only leases.
- Freehold patents except those for surface rights only.
- Licences of occupation.
- Designated protected area in a community-based land use plan under the Far North Act.
- Land withdrawn under the Mining Act from prospecting, registration of mining claim, sale or lease for the following reasons:
    - Land included in a proposed Aboriginal land claim settlement
    - Land intended to be added to an Indian reserve

- Land part of a provincial park, conservation reserve or forest reserve created under Ontarioôs Living
- Legacy Land Use Strategy
- Land that meets the criteria for a site of Aboriginal Cultural Significance
- Land designated as an area of provisional protection under the Far North Act.

Where a cell or boundary claim overlaps a withdrawn area, the claim holder is only entitled to work on the claim area outside the withdrawn area.

Annual assessment work requirements per mining claim, to be filed on or before the claim due date (anniversary date), are:

- Single cell claim: $400 (unless a cell was encumbered at conversion)
- Multi-cell claim: $400 per cell (unless a cell was encumbered at conversion)
- Boundary claim: $200,

If a cell is encumbered at conversion, the assessment work requirement for a cell claim in that cell will be $200. This special rule applies only if the conversion process results in a claim holder having a cell claim in an encumbered cell. If that cell claim forfeits, the cell will be open for claim registration, subject to the encumbrance but any new cell claim registered for that cell will have the assessment work requirements set at the standard cell claim amount of $400.

4.3 Underlying Agreements

On February 8, 2017, Magna acquired a 100% interest in URSA Major Minerals Incorporated (ñURSA Majorò) from Wellgreen. Underlying acquired assets of URSA Major included various ownership interests in Ontario properties including the Shakespeare Mine, Shining Tree, Fox Mountain, Stumpy Bay, Porter Baldwin and Porter Option. Being a corporate acquisition, Magna assumed all assets and liabilities of URSA Major, including the restricted cash supporting a Letter of Credit related to the mine reclamation provision for the Shakespeare property and all existing royalty agreements.

Pursuant to the acquisition, Wellgreen retained a 1.0% net smelter returns (ñNSRò) royalty interest on the Shakespeare property (100% of the 1.0% NSR can be purchased by Magna).

The Property is subject to a 1.5% NSR in favour of Glencore. The Property is subject to a 1.0% NSR and certain mineral processing rights in favour of Wellgreen (now Nickel Creek).

Various exploration mineral claims that surround the Shakespeare Property are subject to an 81/19 joint venture between the Company and Glencore.

SGS is not aware of any other underlying agreements relevant to the Project.

4.4 Permits and Authorization

The Ontario Mining Act regulations require exploration plans and permits, with graduated requirements for early exploration activities of low to moderate impact undertaken on mining claims, mining leases and licences of occupation. Exploration plans and permits are not required on patented mining claims. The proposed work program by Magna includes diamond drilling to infill and expand current resources along strike. The proposed drilling by Magna for 2018 will be conducted on patented mining claims and therefore no permits are required.

An Impact Benefit Agreement with the Sagamok Anishnawbek is in place and the project has an approved Closure Plan for construction of an open pit mine, mineral processing plant and tailings storage facilities.

SGS is unaware of any other significant factors and risks that may affect access, title, or the right, or ability to perform the exploration work recommended for the Property.

4.4.1 Exploration Plans and Permits Required under the Mining Act

The Ontario Mining Act regulations require exploration plans and permits, with graduated requirements for early exploration activities of low to moderate impact undertaken on mining claims, mining leases and licences of occupation. Exploration plans and permits are not required on patented mining claims.

There are a number of exploration activities that do not require a plan or permit and may be conducted while waiting for a plan or permit is effective. These may include the following:

- Prospecting activities such as grab/hand sampling, geochemical/soil sampling, geological mapping
- Stripping/pitting/trenching below thresholds for permits
- Transient geophysical surveys such as radiometric, magnetic
- Other baseline data acquisition such as taking photos, measuring water quality, etc.

Exploration Plan

Those proposing to undertake minimal to low impact exploration plan activities (early exploration proponents) must submit an exploration plan. Early exploration activities requiring an exploration plan include:

- Geophysical activity requiring a power generator
- Line cutting, where the width of the line is 1.5 m or less
- Mechanised drilling for the purposes of obtaining rock or mineral samples, where the weight of the drill is 150 kg or less
- Mechanised surface stripping (overburden removal), where the total combined surface area stripped is less than 100 m2 within a 200 m radius
- Pitting and trenching (of rock), where the total volume of rock is between 1 m3 and 3 m3 within a 200 m radius.

To undertake the above early exploration activities, an exploration plan must be submitted, and any surface rights owners must be notified. Aboriginal communities potentially affected by the exploration plan activities will be notified by the MNDM and have an opportunity to provide feedback before the proposed activities can be carried out.

Exploration Permit

Those proposing to undertake moderate impact exploration permit activities (early exploration proponents) must apply for an exploration permit. Early exploration activities that require an exploration permit include:

- Line cutting, where the width of the line is more than 1.5 m
- Mechanised drilling, for the purpose of obtaining rock or mineral samples, where the weight of the drill is greater than 150 kg
- Mechanised surface stripping (overburden removal), where the total combined surface area stripped is greater than 100 m2 and up to advanced exploration thresholds, within a 200 m radius
- Pitting and trenching (rock), where the total volume of rock is greater than 3 m3 and up to advanced exploration thresholds, within a 200 m radius.

The above activities will only be allowed to take place once the permit has been approved by the MNDM. Surface rights owners must be notified when applying for a permit. Aboriginal communities potentially affected by the exploration permit activities will be consulted and have an opportunity to provide comments and feedback before a decision is made on the permit.

4.5 Environmental Considerations

As far as SGS is aware, the environmental liabilities related to the Project, if any, are negligible. There is a financial assurance with the Ministry of Northern Development and Mines (Ontario) (ñMNDMò) in the form of a cash deposit as part of the Stage 1 Closure Plan.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Accessibility

The Shakespeare Property is situated in Shakespeare Township on NTS 41I/5 near latitude 46°21ò N and Longitude 81°50ò W. It is ~10km north of the town of Webbwood and 70km west of Sudbury.

The access road to the site is from the northeast via a secondary road branching north from the Trans Canadian Highway # 17 approximately 7.5 km east of Nairn Centre. An existing good quality logging road connects to the west side of the secondary road, approximately 13 km from Highway 17 and allows access to the property. For exploration purposes, the logging road does not require significant upgrading although minor brush clearing and grading may be necessary from time to time. The property can also be accessed by boat from Agnew Lake, ~1km south of the Shakespeare deposit. In 2003 URSA Major constructed an exploration camp and access road from the Stumpy Bay/Agnew Lake shoreline. The camp facilities included a core logging shack, shipping container for mineralized sections and core storage racks.

5.2 Local Resources and Infrastructure

Power can be provided to the site by 44 kV overhead lines from the existing 115 kV grid lines located both nort (4 km) and south (6.5 km) of the Shakespeare Deposit. Substations with 10 MVA capacity can be built at the connection with the grid (115 kV/44 kV) and at the end of the 44 kV line. This will provide sufficient energy to operate a processing plant (44 kV/4,160 V) and other future site facilities.

Commercial air service is available from Montréal or Toronto to Sudbury on a daily basis. The Property may also be serviced by road or by float plane from air bases located Sudbury. The siteõs proximity to Sudbury affords access to experienced staff and personnel with good mining and processing experience. Consumables for the mine and mill, including fuel, propane, and cement; are readily available.

Figure 5-1 Local Resources and Infrastructure for the Project area

5.3 Climate

Climate is typical of temperate continental conditions with moderately long, cold winters and shorter, warm summers. Winter temperatures may drop below minus 20º C for extended periods and, in summer, maximum daily temperatures may exceed 25º C for extended periods. From December through March, daily mean temperatures typically are below 0º C. Precipitation is moderate. The wettest months are between May and October but rainfall is generally distributed evenly through the year. Estimated average annual precipitation is 899 mm with 657 mm falling as rain and the balance (242 mm water equivalent) as snow. The climate is classified as ÕDfbôaccording to the Koppen-Geiger classification system.

5.4 Physiography

The topography on the property is rugged with abrupt ridges and valleys. The elevation of land above sea level ranges from approximately 260 meters (852 ft +/-) (level of Agnew Lake) to a maximum of 330 meter (1082 ft +/-), on top of some of the highest quartzite hills in the area (averaging about 300 m above sea level). The average topographic relief is about 90 m and bedrock outcrops are common. Much of the general area is covered by timber resources which consist of second growth birch, poplar, oak, maple, jack pine and spruce.

The principal drainage channel is the Spanish River. The Spanish River and its tributaries drain the major part of the property. The part of the river near the property has been dammed for hydroelectric power

generation and has resulted in the creation of Agnew Lake. Numerous private cottages and several commercial tourist operators are located on Agnew Lake.

6 HISTORY

The exploration history presented here has been presented in previous technical reports on the Property and recently summarized by Jon OCallaghan, Consulting Geologist for Magna (internal report).

6.1 Historical Exploration

In 1941, Frobisher Exploration staked the property and over the next several years carried out a plane table survey, geological mapping and diamond drilling in the area of the west zone. Drill holes completed in 1942 included twelve short holes totaling 819 m on the Shakespeare deposit. These holes ranged in length from 12 to 136 m. Drill holes completed in 1948 included three holes totaling 1,360 m. These holes, number 13, 14 and 15 were drilled to depths of 320, 568 and 472 m, respectively.

In 1947, Falconbridge Nickel Mines Limited (ïFalconbridgeò) (now Glencore) acquired the claims from Frobisher Exploration, and commenced a program designed to more thoroughly explore and to provide more detailed information with respect to the Shakespeare West mineral deposit, including the possibility of enrichment with depth.

Drilling in 1951 included twelve short holes, numbered 16 to 27, totaling 1,892 m. The length of the holes range from 91 to 192 m and were designed for the purpose of checking the width and grade of mineralization to a 152 m depth.

In 1985, sixteen holes totaling 1,030 m were drilled. These holes were drilled to test the near-surface resource and to evaluate the precious metal (Au, Pt and Pd) potential of the zone. Holes from the program were designed to provide coverage on 30.5 m (100-foot) centres across the Shakespeare deposit at depths less than 30.5 m from surface.

In 1986, four holes totaling 1,617 m were drilled to test the deposit at depth and along strike to the southwest. Two of the holes were drilled on 2900W, one on 2300W and the other on 1800 W. All of the holes were drilled to total depths of 355 to 457 m and designed to test the deposit at a depth below surface of approximately 152 m.

Results of the historic diamond drill data indicated a continuous zone of sulphide and precious metal mineralization extending over a total strike length of 549 m to a depth of approximately 76 m with very few holes testing below the 250-foot (76 m) level. This is now part of the west mineral zone at Shakespeare. The Centre of the zone is usually close to the baseline or slightly north of this and the dip variable, from shallow to steep north.

Possible explanations for the variability in dip are faulting or that the overall shape of the zone is arcuate with a slight curve to the north. If the zone is in fact arcuate in shape, then it is possible that the variations in dip observed on sections are simply a function of where the various drill holes intersected this.

The width of most intersections ranges between 23 and 38 m (75 and 125 feet), with the longest intersection of 79.6 m (261.8 feet) being recorded in ïhole 1ô(Table 6-1) and the shortest of 0.9 m being in hole 85-4. The range of grades intersected for nickel was 0.09% to 0.49%, copper 0.09 to 0.61%, gold 0.11 to 0.30g/t, platinum 0.15 to 0.57g/t, and palladium 0.17 to 0.57g/t.

Ultimately Falconbridge concluded in 1986 that the project could not sufficiently meet the various economic parameters required to move the project forward. At that time the Shakespeare West mineral deposit / advance prospect was sufficiently remote enough and difficult to reach, effectively discouraging any further efforts. It is important to highlight that this conclusion was made prior to the construction of logging roads and a haulage access road into the property and the discovery of the larger east mineral zone in 2002-2003.

Table 6-1 Results from Pre-2002 Diamond Drilling

Hole-ID	From(ft)	To(ft)	Interval(ft)	Wt Ni %	Wt Cu %	Wt Pt (g/t)	Wt Pd (g/t)	Wt Au (g/t)	Wt Co %
1			261.8	0.43	0.47				
2			103.5	0.38	0.41				
3			48	0.39	0.44				
4			90	0.09	0.09				
5			79	0.26	0.35				
6			50	0.27	0.34				
7			142.5	0.41	0.61				
8			95	0.26	0.26				
9			17	0.45	0.19				
10			43.5	0.36	0.39				
11			112.5	0.33	0.38				
12	Missed the zone								
13			86.8	0.36	0.48				
14/15/16	Missed the zone								
17			5	0.09					
18			5	0.24	0.09				
19			19.8	Trace	0.42				
20			16	0.38	0.33				
21			128	0.28	0.42				
22			112.2	0.21	0.3				
23			31.1	0.29	0.24				
24			4.1	0.23	0.19				
25			119.1	0.23	0.19				
26			125	0.35	0.42				
27			16	0.16	0.19				
85-1	113	128	15	0.33	0.35	0.35	0.43	0.25	
85-2	Values All Low								
85-3	24.5	126.5	102	0.39	0.38	0.44	0.5	0.25	
85-4	88	91	3	0.15	0.19				
85-5	43.5	110	66.5	0.36	0.41	0.41	0.5	0.28	
85-6	10	140	130	0.28	0.32	0.31	0.38	0.18	
85-7	55	145	90	0.28	0.32	0.34	0.34	0.18	
85-8	72	195		0.36	0.4	0.4	0.44	0.21	
85-9	53.5	156	102.5	0.43	0.43	0.45	0.48	0.23	
85-10	81	160	79	0.29	0.29	0.32	0.31	0.17	
85-11	39	123.5	84.5	0.39	0.42	0.36	0.44	0.22	
85-12	207	235.3	28.3	0.39	0.47	0.46	0.57	0.23	
85-13	104.5	228	123.5	0.49	0.56	0.57	0.56	0.3	
85-14	87.3	184	96.8	0.41	0.44	0.52	0.51	0.27	
85-15	237	252.5	15.5	0.22	0.18	0.15	0.17	0.11	
85-16	239.5	273	33.5	0.21	0.18	0.21	0.22	0.17	
F86-1	1181	1188	7	0.1	0.14				
F85-2	890	917.5	27.5	0.15	0.3	0.22	0.24	0.15	
F85-3	1180	1238	58	0.09	0.18				
F85-4	Values All Low								

No further work was performed on the Shakespeare property until 2000, when it was acquired by URSA Major, through a ñJoint Ventureò agreement with Falconbridge. Early work carried out by URSA Major in 2000 and 2001 had involved digital compilation, geological mapping, sampling, and some limited geophysical surveys. From 2002 through to the 2012 an extensive amount of diamond drilling was conducted on the Shakespeare property. In June of 2003 the company discovered the Shakespeare East mineral deposit. From there on, the company carried out an extensive amount of exploration work which included additional ground and bore hole geophysics, surface trenching, geotechnical mapping probing, feasibility and base line environmental studies, public consultations and successful permitting. URSA Major carried out diamond drilling programs on the deposit from 2002-2006 and from 2010-2012.

6.1.1 2002-2003

The winter 2002/2003 exploration program consisted of diamond drilling on the discovery at the East Zone and early stage geophysical programs on adjacent claims controlled 100% by URSA Major. The geophysical program was conducted on the along-strike continuation of the lithologies hosting the Shakespeare deposit. Most holes were drilled from south to north across the projected dip of the zone at angles of between -50 to -65 degrees. Drill collars were spotted relative to the property grid which had been re-cut in 2000 by URSA Major along the same lines as the Falconbridge grid from 1985 and 1986.

Results from the diamond drilling to the south-west of Shakespeare that were designed to test under mineralized boulders discovered in 2001 were generally disappointing. Both holes intersected mainly barren gabbro and/or quartzite with no significant assays. However, results of the diamond drilling carried out east of the Shakespeare deposit were very good. Holes intersected several wide intervals of mineralization at distances of up to 1,400 feet beyond the east limit of the resource defined by Falconbridge in 1985. Typical widths of mineralization intersected were generally wider and grades for nickel and copper significantly higher than from past drilling at the original Shakespeare deposit. Grades for gold and platinum group elements were also marginally higher (Table 6-2).

Table 6-2 Results from 2002 Diamond Drilling

Hole-ID	From (ft)	To (ft)	interval (ft)	Ni %	Cu %	Pt (g/t)	Pd (g/t)	Au (g/t)	Co %
UR-03-03	61	79.4	18.4	0.53	0.58	0.44	0.44	0.21	0.04
UR-03-04	103.3	396.1	292.8	0.57	0.64	0.56	0.61	0.32	0.04
including	186	351.4	165.4	0.63	0.71	0.62	0.66	0.34	0.04
UR-03-05	197.9	402.2	204.3	0.45	0.53	0.42	0.51	0.25	0.03
including	297.2	369.4	72.2	0.55	0.66	0.51	0.62	0.28	0.03
	499.7	538.3	38.6	0.6	0.4	0.31	0.29	0.17	0.04
	613.2	624.3	11.1	0.25	0.43	0.37	0.35	0.25	0.02
	665	720.9	55.9	0.32	0.29	0.24	0.25	0.16	0.02
UR-03-06	111.5	377.3	265.8	0.66	0.61	0.47	0.54	0.27	0.04
including	111.5	262.5	151	0.73	0.66	0.54	0.64	0.3	0.04
	292	377.3	85.3	0.63	0.58	0.39	0.43	0.25	0.05
UR-03-07	181.9	436	254.1	0.39	0.54	0.44	0.54	0.26	0.03
UR-03-08	291.2	423.4	132.2	0.47	0.53	0.42	0.49	0.23	0.03
including	291.2	347.8	56.6	0.54	0.58	0.49	0.5	0.25	0.03
UR-03-09	347.8	515.1	167.3	0.48	0.5	0.41	0.49	0.26	0.03
including	360.9	416.7	55.8	0.55	0.56	0.42	0.49	0.25	0.03
	390.4	419.9	29.5	0.49	0.62	0.42	0.56	0.25	0.03
	439.6	498.7	59.1	0.52	0.55	0.48	0.58	0.33	0.03
	555.3	593.8	38.5	0.36	0.46	0.38	0.5	0.33	0.02

During the summer 2003 field season, after completion of the East Zone Mineral Resource estimate, URSA Major commenced further exploration activity at the Shakespeare project consisting of a trenching and mapping program and further drilling. Channel sampling was conducted in areas of exposed outcrop or where stripping of thin soil and moss cover could expose sub-crop over the deposit. The sampling protocols were conducted in such a way that the samples were continuous and could be entered into the database as pseudo drill holes. The trenching concentrated on increasing knowledge over the East Zone and searching along strike to the east. The work created considerable new surface exposure on the mineralized structure and extended the area of interest to the southeast of the current East Zone Mineral Resource. URSA Major also completed a winter drill program at the Shakespeare property commencing in November 2002 and continuing to March 2003. This program concentrated on an area to the east of the Shakespeare deposit outlined by Falconbridge in work performed up to 1985. A total 3,263 m of drilling was completed in 18 holes. To the end of March 2003, a total of 4,758 m were drilled by URSA Major on the Shakespeare project.

Core recovery in all the drill holes was very good and estimated at 95% plus. The holes were drilled on five sections (1+00 E, 3+00 E, 5+00 E, 7+00 E and 9+00 E), each section being spaced approximately ~60 m apart.

The earlier 2002 program determined that the dip of the mineralization in the East Zone area was approximately 65° to grid north. All holes for the 2002/2003 winter program were drilled from grid north to south at an azimuth of 147° with dips ranging from -44° to -80°. This orientation resulted in intersections of the mineralized zone which approximated, as closely as possible, true width. Drill hole collar locations and dips were selected to intersect the zone with approximate 100 ft (30 m) down dip spacing. Holes were limited to less than 300 m length in order to outline near-surface mineralization that could potentially be amenable to open pit extraction. A total of 800 ft (~250 m) of strike length (1+00 E to 9+00 E) was drilled off.

Most holes intersected a wide interval of sulphide mineralization and collectively defined a single zone of blebby and net-textured to disseminated sulphide mineralization (Table 6-3). Typical widths of mineralized intersections reported are approximately 40 m and grades for nickel, copper and precious metals are higher than the average grade of the original Shakespeare deposit. The mineralization remains open on strike in both directions and open at depth.

The drilling program had shown that the mineralization in the East Zone is contained within an approximately 80 m thick differentiated sill, here named the Shakespeare sill, that has intruded between quartzite in the northwest (hanging wall) and Nipissing gabbro in the southeast (footwall). From northwest to southeast the Shakespeare sill grades downward from biotite-quartz diorite, to biotite-quartz gabbro, then mineralized gabbro and melagabbro and finally downward into non-mineralized gabbro. Magmatic sulphides in the mineralized zone progress downward from sporadically disseminated, to scattered multi-centimetre sized blebby composite pyrrhotite- chalcopyrite grains, to more evenly distributed, heavily-disseminated to locally net-textured magmatic sulphides. Strong mineralization starts at the contact between the quartz gabbro and the gabbro-melagabbro and persists through most of the melagabbro. Intrusive contacts and the mineralized zone dip north at 80º to 85º and become shallower (to 60°) with depth.

Table 6-3 Summary of Results, Winter 2002/2003 Drill Program

Hole ID	From (ft)	To (ft)	Length (ft)	Length (m)	Ni (%)	Cu (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
UR-03-10	274.01	419.32	145.31	44.30	0.41	0.41	0.02	0.37	0.46	0.27
UR-03-11	352.80	466.25	113.45	34.58	0.37	0.36	0.02	0.32	0.34	0.18
UR-03-12	461.69	623.20	161.51	49.23	0.47	0.52	0.03	0.43	0.47	0.24
UR-03-13	590.7	671.1	80.4	24.51	0.39	0.40	0.02	0.47	0.45	0.27
UR-03-14	116.3	180.4	64.1	19.54	0.45	0.50	0.03	0.46	0.47	0.23
UR-03-15	185.9	245.7	59.8	18.22	0.40	0.38	0.03	0.34	0.36	0.21
UR-03-16	233.4	369.8	136.4	41.58	0.50	0.52	0.03	0.47	0.50	0.27
UR-03-17	288.1	378.8	90.7	27.67	0.39	0.04	0.01	0.62	0.67	0.04
Incl.	302.6	330.0	27.4	8.35	0.65	0.03	0.02	0.87	0.91	0.04
UR-03-19	402.5	495.9	93.3	28.5	0.39	0.39	0.02	0.38	0.41	0.19
Incl.	465.4	495.9	30.5	9.3	0.56	0.56	0.03	0.59	0.62	0.26
UR-03-20	596.0	648.5	52.5	16.0	0.21	0.18	0.02	0.18	0.16	0.10
UR-03-21	427.1	498.6	71.5	21.8	0.50	0.55	0.04	0.54	0.53	0.31
UR-03-23	413.3	530.0	116.7	35.6	0.47	0.52	0.03	0.47	0.51	0.23
UR-03-24	554.3	618.0	63.7	19.4	0.47	0.49	0.04	0.48	0.52	0.33
UR-03-26	413.1	581.9	168.8	51.5	0.48	0.51	0.03	0.49	0.53	0.25
UR-03-27	519.2	649.2	130.0	39.6	0.43	0.43	0.02	0.46	0.52	0.24

6.1.2 2003-2004

During the summer, fall and early winter of 2003/2004 a program of additional diamond drilling was performed by URSA Major on the Shakespeare project. This work was carried out from May 21, 2003 through to February 12, 2004 with the primary goal of further expanding and defining the limits of the Shakespeare East Zone. Efforts were also directed to the West Zone including the drilling of several holes to correlate the old Falconbridge exploration data with the newly-generated data and model and to develop a better understanding of the geology, stratigraphy, mineralization and the structural complexities known to occur within the area. Drilling completed totaled 6,274.63 m in 29 diamond drill holes (Table 6-4).

During this period 4,005.6 m in 15 diamond drill holes was drilled on the East Zone and 2,057.0 m in 13 diamond drill holes were completed on the original Falconbridge Shakespeare deposit (West Zone). Southeast of the Shakespeare mineral deposit area, one drill hole, 212.2 m in length was completed to explore the extent of Shakespeare-like sulphide mineralization that had been discovered during surface trenching work carried out in the summer of 2003.

The earlier 2002 drilling resulted in the understanding that the dip of the mineralized zone was approximately 65º to grid north. For the 2003/2004 diamond drilling program 26 of the 29 holes were drilled from grid north to south at an azimuth of 147º, while three of the 29 holes were drilled from grid south to north at an azimuth of 327º due to access constraints. The drill hole collar inclinations varied from -44 to -85 degrees from the horizontal. For holes drilled to grid south, this resulted in intersections of the mineralized zone which approximated true width. Drill hole inclinations were adjusted to intersect the zone with approximate 30 m down dip spacing. The depths of holes varied depending on collar locations relative to the local topography and estimated position of the sulphide mineralization. Consequently, the holes varied in depth from 89.69 m to a maximum of 363.00 m. The average depth of hole for the program was 216.37 m.

The holes were drilled on ten parallel sections where each section was separated by 200 feet (61 m). Core recovery within the various diamond drill holes was very good, typically in excess of 95%.

Table 6-4 Summary of Results, Winter 2003/2004 Drill Program

Hole ID	From (m)	To (m)	Length (m)	Ni (%)	Cu (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
UR-03-29	137.90	145.60	7.60	0.30	0.26	0.02	0.29	0.32	0.16
UR-03-30	177.70	235.00	57.30	0.42	0.44	0.03	0.40	0.47	0.25
Including	177.70	187.40	9.70	0.67	0.46	0.05	0.47	0.42	0.26
UR-03-31	200.60	250.00	49.40	0.39	0.46	0.03	0.38	0.43	0.24
UR-03-33	229.50	241.80	12.30	0.35	0.39	0.02	0.31	0.36	0.18
UR-03-34	6.40	28.00	21.70	0.40	0.49	0.03	0.44	0.46	0.23
And	56.70	64.50	6.80	0.41	0.51	0.02	0.41	0.46	0.23
UR-03-35	40.40	60.30	19.90	0.36	0.43	0.02	0.39	0.43	0.21
UR-03-36	76.00	97.20	21.20	0.35	0.41	0.02	0.37	0.41	0.20
UR-03-37				NSV	NSV	NSV	NSV	NSV	NSV
UR-03-38	58.10	65.10	7.00	0.31	0.30	0.02	0.27	0.35	0.16
UR-03-39	132.50	137.00	4.50	0.30	0.41	0.03	0.22	0.21	0.18
UR-03-40	49.69	77.55	27.86	0.60	0.50	0.03	0.54	0.58	0.25
UR-03-41	103.82	118.37	14.55	0.42	0.46	0.03	0.44	0.47	0.22
UR-03-42	149.03	153.90	4.87	0.21	0.30	0.02	0.26	0.32	0.13
UR-03-43	96.50	126.47	29.97	0.44	0.49	0.03	0.43	0.46	0.23
UR-03-44				NSV	NSV	NSV	NSV	NSV	NSV
UR-03-45	58.85	62.85	4.00	0.41	0.04	0.02	0.44	0.46	0.14
UR-03-46	122.10	129.48	7.38	0.19	0.13	0.02	0.25	0.21	0.07
UR-03-47				NSV	NSV	NSV	NSV	NSV	NSV
UR-03-48	145.70	197.65	51.95	0.43	0.48	0.03	0.43	0.45	0.26
Including	145.70	153.10	7.40	0.52	0.46	0.04	0.32	0.32	0.19
And	174.75	194.65	19.90	0.50	0.60	0.03	0.55	0.58	0.33
UR-03-49	170.20	212.30	42.10	0.42	0.45	0.03	0.41	0.43	0.23
Including	196.53	212.53	16.00	0.47	0.55	0.03	0.50	0.55	0.28
UR-03-50	195.47	229.28	33.81	0.39	0.42	0.02	0.35	0.39	0.20
UR-03-51	236.05	257.75	16.70	0.46	0.43	0.04	0.39	0.60	0.46
Including	238.20	243.00	4.80	0.63	0.50	0.05	0.34	1.10	1.00
UR-03-52	207.00	221.00	14.00	0.30	0.35	0.02	0.30	0.35	0.23
UR-03-53	230.28	291.83	61.55	0.40	0.42	0.03	0.39	0.42	0.26
Including	230.28	237.00	6.72	0.52	0.41	0.04	0.39	0.40	0.23
And	254.00	280.83	26.83	0.47	0.52	0.03	0.50	0.52	0.32
UR-03-54	254.40	290.30	35.90	0.41	0.46	0.02	0.35	0.38	0.20
Including	254.40	260.40	6.00	0.58	0.45	0.03	0.41	0.37	0.22
UR-03-55	123.10	144.42	21.32	0.37	0.39	0.02	0.28	0.31	0.17
Including	123.10	126.42	3.32	0.61	0.40	0.04	0.34	0.33	0.22

Following the completion of the 2003/2004 drill programs, Micon completed an updated Mineral Resource estimate (Hennessey and Puritch, 2004) followed by a Preliminary Feasibility Study (Lattanzi et al., 2004). Reports are posted on SEDAR under URSA Majors profile.

6.1.3 2004-2005

Between February 16, 2004, and September 15, 2004 URSA Major completed a further ten NQ-sized, inclined drill holes for a total of 3,648.9 m. The bulk of this drilling was performed on the East Zone mineralization and potential strike extensions. Seven of the ten drill holes (UR-03-59 through to UR-03-65) were targeted on known mineralization in the deposit for a total of 3,331.9 m (Table 6-5).

During the period from March 12, 2005 to June 24, 2005, URSA Major completed an additional 18 NQ-sized drill holes (17 inclined and one vertical) plus one vertical HQ-sized drill hole at the Shakespeare project (Table 6-6). The 19 drill holes represented a total of 2,443.1 m of drilling. Of the 19 drill holes completed in 2005, 15 were drilled principally to provide locally needed information on mineralization contacts in the deposit and to fill in sampling and grade information for the geological model and Mineral Resource estimate. Four of the 19 holes were drilled for geotechnical purposes related to mine design for the feasibility study presented herein. These were not assayed but were logged for geological and geotechnical information.

In late 2005 an NI43-101 compliant feasibility study for the Shakespeare deposit was completed by Micon and RPA (Hennessey et al. 2006). This report incorporated bulk sample metallurgical and extraction tests conducted in 2004 and 2005. The report is posted on SEDAR under URSA Majors profile.

Table 6-5 Summary of Results, 2004 Drill Program

Hole ID	From (m)	To (m)	Length (m)	Ni (%)	Cu (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
UR-03-56	Exploration hole, not located near Shakespeare deposit								
UR-03-57	Exploration hole, not located near Shakespeare deposit								
UR-03-58	Exploration hole, not located near Shakespeare deposit								
UR-03-59	337.17	384.85	47.68	0.37	0.43	0.02	0.38	0.41	0.21
Incl.	368.85	375.85	7.00	0.57	0.67	0.03	0.56	0.63	0.31
UR-03-60	383.83	444.90	61.07	0.44	0.42	0.03	0.43	0.45	0.24
Incl.	383.83	399.76	15.93	0.53	0.41	0.04	0.46	0.46	0.27
Incl.	384.68	389.31	4.63	0.72	0.49	0.06	0.33	0.35	0.20
UR-03-61	413.33	463.60	50.27	0.39	0.39	0.03	0.33	0.35	0.23
Incl.	413.33	427.44	14.11	0.52	0.41	0.05	0.34	0.33	0.20
Incl.	419.13	425.44	6.31	0.69	0.44	0.06	0.37	0.38	0.20
UR-03-62	433.70	451.05	17.35	0.34	0.41	0.02	0.30	0.35	0.19
And	454.36	460.20	5.84	0.41	0.60	0.03	0.37	0.43	0.28
UR-03-63	463.03	467.50	4.47	0.28	0.32	0.02	0.16	0.26	0.27
And	471.00	482.70	11.70	0.26	0.33	0.02	0.14	0.30	0.30
UR-03-64	510.40	518.00	7.60	0.19	0.13	0.02	0.06	0.11	0.12
And	523.00	551.00	28.00	0.31	0.41	0.02	0.17	0.30	0.35

Table 6-6 Summary of Results, Winter/Spring 2005 Drill Program

Hole ID	From (m)	To (m)	Length (m)	Ni (%)	Cu (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
UR-03-66	1.2	20.9	19.7*	0.49	0.55	0.028	0.55	0.58	0.25
UR-03-67				NSV	NSV	NSV	NSV	NSV	NSV
UR-03-68	21.5	31.8	10.3	0.30	0.27	0.025	0.29	0.28	0.15
UR-03-69	33.8	102.2	68.4	0.42	0.49	0.027	0.43	0.45	0.23
incl.	66.0	74.0	8.0	0.56	0.67	0.032	0.57	0.65	0.32
UR-03-70	4.7	17.6	12.9	0.47	0.54	0.020	0.42	0.48	0.28
UR-03-71	25.7	43.7	18.0	0.47	0.42	0.032	0.46	0.46	0.25
UR-03-72	45.8	52.8	7.0	0.33	0.38	0.023	0.32	0.38	0.19
UR-03-73	Geotechnical hole								
UR-03-74	90.5	116.8	26.3	0.36	0.41	0.023	0.38	0.45	0.29
UR-03-75	89.4	145.6	56.2	0.46	0.51	0.027	0.46	0.52	0.25
Incl.	89.4	106.1	16.7	0.59	0.62	0.033	0.58	0.61	0.31
UR-03-76	180.2	190.5	10.3	0.20	0.18	0.017	0.17	0.18	0.10
UR-03-77				NSV	NSV	NSV	NSV	NSV	NSV
UR-03-78	Geotechnical hole								
UR-03-79	62.2	74.9	12.7	0.45	0.44	0.029	0.42	0.46	0.21
UR-03-80	Geotechnical hole								
UR-03-81	11.8	26.8	15.0	0.18	0.18	0.014	0.16	0.19	0.10
UR-03-82	90.0	164.2	74.2	0.47	0.54	0.030	0.44	0.54	0.26
Incl.	101.7	111.4	9.7	0.61	0.73	0.037	0.57	0.66	0.30
UR-03-83	49.5	105.0	55.5	0.40	0.44	0.023	0.48	0.53	0.20
UR-03-84	Geotechnical hole								

* Vertical hole to test the proposed bulk sample location, deliberately stopped in mineralization.

6.1.4 2010-2012

Fill-in and step-out drilling in the underground portion of the East Zone, lying beneath the feasibility open pit, was carried out in 2010 and 2011 and consisted of 8,024 m in 13 diamond drill holes which represents 35% (by metres) of the drill hole database for the East Zone. The underground Mineral Resource estimate for the East Zone was updated by P&E in August 2012. The updated underground East Zone Mineral Resource estimate was disclosed in a press release of the Company dated September 12, 2012. The Company then completed two holes in December 2012 (holes U-03-133 and U-03-134) to test the underground down plunge extent of mineralization in the East Zone.

The Company initiated mining activities in 2010, declared commercial production on May 27, 2010 and was in production until January 27, 2012. Ore was processed under a two year toll milling agreement at Xstrataõs Sudbury processing facility. On December 13, 2011, URSA Major announced that it had limited operations at the Shakespeare Nickel Mine to crushing of existing broken ore, ore sampling and trucking operations as a consequence of reduced base metals prices. On February 3, 2012, Ursa announced it had temporarily suspended operations at the Shakespeare Property following the expiration, on December 31, 2011, of the milling agreement and the Company was not able to conclude a new processing agreement for Shakespeare ore with Xstrata.

6.1.5 2010-2017

Prophecy Platinum became Wellgreen Platinum in 2013 (now Nickel Creek Platinum) and completed an internal updated feasibility study on the Shakespeare deposit in 2014 with Littlerock Consulting (Petrina et al. 2014). Although two holes were planned to test the up-dip extension of the east mineral zone, these holes were never drilled. The deposit remained under care and maintenance as a non-core asset until its sale, along with all of Wellgreenõs Ontario assets, to the Magna in early-2017.

6.2 Historical Mineral Resource Estimates

The following is a description of previous (ñhistoricò) resources estimates completed on the Property. The historic Mineral Resource estimates presented in this report are only presented for information purposes as they represent material historical data which have previously been publicly disclosed. Magna has not done sufficient work to classify the historical estimates as current Mineral Resources or Mineral Reserves and Magna is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

The reader is cautioned that the Author has not done sufficient work to pass detailed comment on the historical Mineral Resource estimates and classification presented here and hence the Mineral Resource are considered historic. While these estimates were prepared, in accordance with National Instrument 43-101 and the ñCanadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Mineral Reserves Definition Guidelinesò in effect at the time, there is no assurance that they are in accordance with current CIM 2014 Mineral Resource reporting standards and these Mineral Resource estimates should not be regarded as consistent with current standards or unduly relied upon as such.

Resource estimations have been conducted in 1951, 1974 and 1985 by personnel working for Falconbridge (Kallio, 2002). The most recent estimate was compiled in 1985 between the limits of 2000 W and 500 W and indicates a total of 2,081,373 ton, grading 0.36 % Ni, 0.42 % Cu, 0.22 g/t Au, 0.40 g/t Pt, and 0.46 g/t Pd. Resources to a depth of 100 feet were estimated at 1,106,703 tons, grading 0.37 % Ni, 0.40 % Cu, 0.23 g/t Au, 0.41 g/t Pt and 0.45 g/t Pd. The Author has not verified this estimate.

Micon has completed three previous resource estimates for the Shakespeare deposit: the initial estimate in 2003; a second estimate, in support of a preliminary feasibility study, was released in 2004 after the completion of the 2003/2004 drilling program; and a third estimate, in support of a feasibility study, was released in 2006 after the completion of the 2005 drilling.

Wellgreen completed an internal updated resource estimate in 2014 in support of an internal feasibility study.

6.2.1 2003 Resource Estimate

Micon supervised the 2003 estimation of Mineral Resources for the newly discovered zone at the Shakespeare deposit, known as the East Zone (Hennessey and Puritch, 2003). The 2003 estimation does not include data from, or the mineralization in, the original Shakespeare deposit explored by Falconbridge. This Mineral Resource estimate is historical in nature and should not be relied upon. Magna has not done sufficient work to classify the historical estimates as current Mineral Resources or Mineral Reserves and Magna is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

The drill hole data used for the resource estimation was provided by URSA Major in the form of Excel files. A Gemcom database was constructed containing 27 holes, of which 25 were used for modeling purposes. Holes UR-03-01 and UR-03-02 were not in the vicinity of the East Zone, the area to be modeled. The database was validated in Gemcom and was found to be error free. The data in the assay table included assays for nickel, copper, cobalt, gold, platinum and palladium.

Topographic surface data was obtained from an Ontario Government OBM map and drill hole collars that were surveyed by Paul H. Torrance Surveying Ltd. Down-hole surveys were conducted by Sperry Sun

Drilling Services of Canada using a gyroscopic instrument. All coordinates were UTM, based on the NAD 83 datum. The decision was made to express all quantities in the resource estimate in metric units, although the grid used was the original Falconbridge one, set up in imperial units. Modern surface drilling equipment in Canada is now largely metric and the 2003 drill program was drilled with metric rods. The older Falconbridge drilling was in imperial units. However, none of these holes was used to estimate the East Zone resource. Elevations are in metres above sea level.

A geological domain model was constructed to control grade interpolation. Domain boundaries were determined by lithology, sulphide mineralization style and grade boundary interpretation from visual inspection of drill hole sections. There were five drill sections spaced at nominal 60-m (200-ft) intervals. These were sections 1+00 E, 3+00 E, 5+00 E, 7+00 E and 9+00 E. A total of 800 ft (~250 m) of strike length was drilled off during the program. The geological domains were extrapolated 25 m in either direction from the end of drilling and terminated. This resulted in a geological domain model approximately 300 m long.

The domains were physically created by computer screen digitizing on drill hole sections in Gemcom based on input from two URSA Major staff, Micon and Eugene Puritch. The outlines were influenced by selection of mineralized material (over Cdn$50 in situ value) that had a reasonable expectation of being profitably mined, lithology and structure, and a Cdn$30 value which approximately selects mineralization boundaries. The Canadian dollar in situ value was derived from the average of published spot commodity prices on the London Bullion Market, the London Metal Exchange and WMCôs cobalt trading website, the ñCobalt Open Sales Systemò for the period January 1 to May 15, 2003. The commodity prices used were US$3.73 per pound (lb) for nickel, US$0.74/lb for copper, US$8.24/lb for cobalt, US$346.40/oz for gold, US$653.04/oz for platinum and US$219.49/oz for palladium. The exchange rate used was Cdn$1.00 = US$0.6737, the average rate from January 1 to May 15, 2003, as reported by the Pacific Exchange Rate Service of the University of British Colombia.

On each section, polyline interpretations were digitized from drill hole to drill hole but never extrapolated more than 25 m into untested territory. Polylines were not typically projected to surface since a flat-dipping fault at shallow elevation has offset the zone. Two separate domains, called ñdisseminatedò and ñblebbyò were established to represent the two styles of sulphide mineralization in the deposit after a statistical analysis of all assays from the full mineralized domain showed two separate populations of data.

The blebby domain appears to be close to a single lognormally distributed population of data. However, the disseminated domain still contains two populations. It is possible that these two populations occupy the same location in space and cannot be separated. Further work in this area, including more detailed examination and description of sulphide textures, is warranted.

The two domains were used for resource estimation because the blebby domain successfully separated one population of data. The polylines from each section and domain were wireframed into 3-dimensional solids using Gemcom. The resulting domains were used for grade interpolation purposes (Figure 6-1).

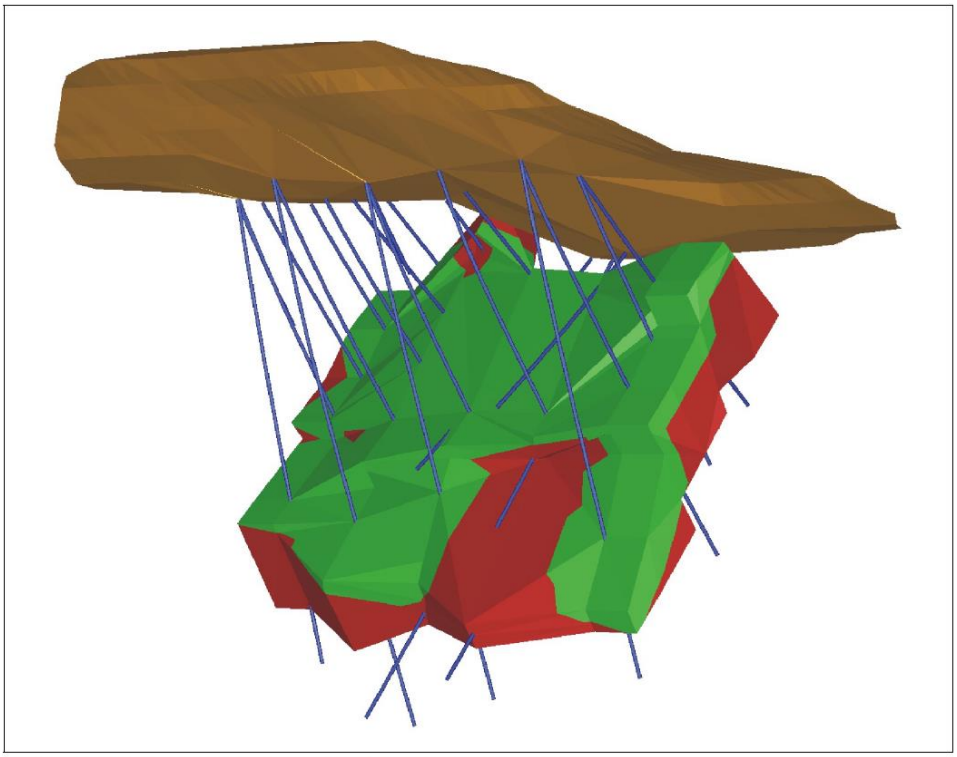
The rock types used for the resource model were coded from the mineralized domain solids as well as surface topography. The overburden/bedrock contact was used to limit domain upward extensions.

Length-weighted composites were generated for the portion of each of the 25 drill holes which fell within the constraints of the blebby sulphide and disseminated sulphide domains. These composites were calculated for nickel, copper, cobalt, gold, platinum and palladium. The composites were compiled over 2.5-m lengths starting at the first point of intersection between drill hole and hanging wall of the 3-dimensional zonal constraints. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as nulls and not utilized in the composite calculation. Any calculated composites less than 1.0 m in length, were discarded so as not to introduce any short sample bias in the interpolation process. The composite data was transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, value files.

Grade capping was investigated on the raw assay values in the database to ensure that the possible influence of erratic high values did not bias the estimates. Extraction files were created for constrained data

for all six metals. From the extraction files, normal histograms were generated. In addition, sample means, standard deviations and coefficients of variation were calculated. Minimal capping was completed on Co (0.15%), Au (1.1 g/t) and Pd (1 g/t) grades.

Figure 6-1 3-Dimensional View of East Zone Geological Domains and Drill Hole Traces (from Hennessey and Puritch, 2003)



Green = blebby domain, Red = disseminated domain, Brown = surface

Variography was carried out on the nickel, copper, cobalt, gold, platinum and palladium data from the constrained extraction files for both blebby and disseminated domains. A cobalt variogram could not be modelled, probably due to the relatively low grades and limited variability. The blebby sulphide domain is of limited size and the relatively small amount of data did not yield any discernable pattern in interpretation of the variograms. The disseminated domain gave reasonable variograms for both down-hole and omnidirectional in-the-plane-of-dip interpretations.

The omnidirectional variograms were modelled with two spherical structures. The range of the first structures varied from 25 to 30 m for all elements modelled. Second structure ranges of approximately 90 to 100 m were obtained for all elements in the dip plane and 17 to 25 m in the down-hole variograms. Nugget values and nugget to sill ratios were relatively low.

Indicated mineralization was interpolated in two passes. For the disseminated zone the first pass (Indicated 1) was made using a search range of the first variogram structure modelled and the second pass (Indicated 2) used two-thirds of the range of the second structure. For the blebby zone, due to its relative lack of data, the first pass was made using two-thirds the range of the second structure and the second pass used the full range. The ranges from the disseminated zone were used for blebby zone grade interpolation.

The search ellipsoid ranges used for grade interpolation, as established by the variography, were sufficient to code a majority of the constrained mineralization as indicated. The remainder of the block model was filled using a range of 100 m in the disseminated domain and 200 m in the blebby domain and was classified as inferred.

The specific gravities used for the resource model were from measurements taken from test work performed by JVX Ltd. on drill hole number UR0309. A full cross section of the mineralized horizon was used. A total of 12 samples within the interpolated domains was analyzed. An SG of 3.10 was used for Blebby Sulphide Zone and 3.08 was used for the Disseminated Sulphide Zone.

A block model framework was created with 2,240,000 blocks that were 5 m in the X direction, 5 m in the Y direction & 5 m in the Z direction. There were 200 columns (X), 140 rows (Y) and 80 levels (Z). The model was rotated 33 degrees in order to align it with the drill sections. The coordinates for the block model are in UTM units.

A percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining domains. As a result, the domain boundaries were properly represented by the percent modelôs ability to measure infinitely variable inclusion percentages. The nickel, copper, cobalt, gold, platinum and palladium composites were extracted from the Microsoft Access database composite table into 12 separate files for the blebby and disseminated domains.

Inverse distance squared (ID2) and ordinary kriging (OK) interpolation methods were used for the blebby and disseminated domain interpolations respectively. Three interpolation passes were used to determine the Indicated 1, Indicated 2 and Inferred classifications and to interpolate nickel, copper, cobalt, gold, platinum and palladium grades into each block. Contained metal values in Canadian dollars were also calculated for each block using the commodity price and exchange rate assumptions set out above.

For the purposes of this resource estimate, classifications were derived from the Indicated 1, Indicated 2 and Inferred spherical search ranges and interpolation parameters. Any grade block coded by the Indicated 1 and Indicated 2 search ellipsoids was classified as indicated and all other blocks were classified as inferred.

The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council August 20, 2000.

Under the CIM definitions, a Mineral Resource must be potentially economic in that it must be ñin such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction.òMicon has used a cutoff grade of Cdn$50/t for the reporting of the Mineral Resources in the Shakespeare East Zone. This number is based upon a simple review of the deposit geometry, local topography and recent experience of actual mining and processing costs on other projects in the Sudbury and Northern Ontario area. The following operating cost assumptions were used.

- Å Mining cost: Cdn$2/t
- Å Strip ratio (waste to ore): 5:1
- Å Total Mining costs: Cdn$12/t
- Å Processing costs: Cdn$13/t
- Å Transport to Falconbridge (100 km @ $0.08/t/km): Cdn$8
- Å Total cash operating costs: Cdn$33/t
- Å Payable metal (allowances for recoveries, smelter charges, etc.): 66%
- Å Contained metal value required to meet total costs: Cdn$50/t

The block model was reported using the Cdn$50 cutoff to produce the Mineral Resources for the East Zone (Table 6-7).

The majority of the blocks were coded as indicated resources and the mineralization shows good continuity from hole to hole and section to section.

Table 6-7 2003 Shakespeare East Zone Mineral Resources (Hennessey and Puritch, 2003)

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	Contained Value CdnS/t
Indicated	4,870,000	0.43	0.43	0.03	0.219	0.412	0.452	90.63
Inferred	110,000	0.32	0.29	0.02	0.153	0.301	0.297	67.23

6.2.2 2004 Resource Estimate

For its initial Technical Report of July, 2003, Micon had supervised the estimation of Mineral Resources for the newly discovered East Zone at the Shakespeare Project. The estimation did not include data from, or the mineralization in, the original Shakespeare deposit explored by Falconbridge, now called the Shakespeare West Zone. The West Zone was reported (pre NI43-101) to contain a near-surface resource, an Inferred Resource of 1.9 million tonnes grading 0.36% nickel, 0.42% copper, 0.44 g/t palladium, 0.40 g/t platinum and 0.23 g/t gold on the Property.

Subsequently, URSA Major drilled four evenly spaced sections within the full West Zone strike length which allowed the use and interpretation of the old Falconbridge drill data. The Mineral Resource estimate presented in 2004 includes all known mineralization at the Shakespeare deposit, in both the East and West Zones (Lattanzi, 2004).

The drill hole data used for the resource estimation were provided by URSA Major in the form of Microsoft Excel files. A Gemcom database was constructed containing 47 Falconbridge holes, 26 trench segments and 55 URSA Major holes (UR series), of which 53 were used for modelling purposes. Holes UR- 03-01 and UR-03-02 were not in the vicinity of the Shakespeare deposit, the area to be modelled. The database was validated in Gemcom until it was found to be error free. The data in the assay table included assays for nickel, copper, cobalt, gold, platinum and palladium.

Topographic surface data were obtained from an airborne LIDAR (Light Detection and Ranging) survey completed by Mosaic Mapping Systems Inc. The data were provided as an AutoCAD polyline file that was converted into a Gemcom 3D topographic surface for modelling. Drill hole collars were surveyed by Paul H. Torrance Surveying Ltd. Down hole surveys were conducted using an ñEZ Shotò electronic instrument. Some down hole check surveys were conducted by Sperry Sun Drilling Services of Canada using a gyroscopic instrument. All coordinates were UTM, based on the NAD 83 datum. The decision was made to express all quantities in the resource estimate in metric units, although the grid used was the original Falconbridge one, set up in imperial units. Modern surface drilling equipment in Canada is now largely metric and some of the 2003 drill program was drilled with metric rods. The older Falconbridge drilling was in imperial units and was converted to metric.

A geological domain model was constructed to control grade interpolation. Domain boundaries were determined by lithology, sulphide mineralization style and grade boundary interpretation from visual inspection of drill hole sections, as well as modelled faults interpreted from stratigraphic offsets and logged fault gouge in holes. There were twenty five drill sections at two different interval spacings. Drilling in the west area of the deposit was spaced at nominal 30-m (100-ft) intervals with sixteen sections from 5+00 W to 20+00 W. The east area of the deposit was drilled at nominal 60-m (200-ft) spaced intervals with nine sections from 1+00 E to 17+00 E. A total of 3,700 ft (~1,125 m) of strike length was drilled off during the program. However, the gap in the mineralization between the East and West Zones (sections 0+00 to 4+00 W) has received relatively little drilling. It shows limited mineralization and this area was not modelled. This gap appears to be caused by the mineralization transitioning from the hanging wall to the footwall of a group of faults. The geological domains were extrapolated 25 m in either direction from the end of drilling and terminated. This resulted in a two part geological domain model approximately 950 m in total aggregate length.

The domains were physically created by computer screen digitizing on drill hole sections in Gemcom based on input from two URSA Major staff, Micon and Eugene Puritch. The outlines were influenced by lithology, structure and a Cdn$30 in situ metal value which approximately selects continuous mineralization boundaries.

The Canadian dollar in situ value was derived from the average of published spot commodity prices on the London Bullion Market, the London Metal Exchange and WMCôs cobalt trading website, the ñCobalt Open Sales Systemò, for the period April 1, 2002 to March 31, 2004. The commodity prices used were US$4.21/lb for nickel, US$0.82/lb for copper, US$10.48/lb for cobalt, US$351.43/oz for Cdn$1.00 = US$0.7067, the average rate from October 1, 2002 to March 31, 2004, as reported by the Pacific Exchange Rate Service of the University of British Colombia. An 18-month window on the exchange rates versus a 24-month window on the commodity prices was chosen because a significant price spike in the US dollar-denominated metal prices had occurred over this time. However, much of this price spike was caused by the 20% to 25% concurrent devaluation of the US dollar. A shorter exchange rate time frame minimizes the exchange rate-affected portion of the price spike.

On each section, polyline interpretations were digitized in 3D, from drill hole to drill hole, but never extrapolated more than 25 m into untested territory. Polylines were not typically projected to surface, unless justified by trenching or surface mapping since a flat-dipping fault at shallow elevation has locally offset the zone. Four separate domains, called ñDisseminatedò (West and East) and ñBlebbyò (West and East) were established to represent the two styles of sulphide mineralization in the deposits after a statistical analysis of all assays from the full mineralized domain indicted separate populations of data.

An analysis performed for the entire mineralized width of the East Zone (both sulphide domains) in the previous resource estimate yielded probability plots similar where the cumulative distribution curve shows a distinct bend at 0.5% nickel indicating that two lognormally distributed populations of data are present.

The blebby domain appears to be close to a single, lognormally distributed population of data. However, the disseminated domain still contains two populations. It was considered possible that these two populations occupy the same location in space and cannot be separated.

Therefore two separate sulphide domains were used for resource estimation because the blebby domain successfully separated one population of data. The polylines from each section and domain were wireframed into 3-dimensional solids using Gemcom. The resulting domains were used for grade interpolation purposes (Figure 6-2).

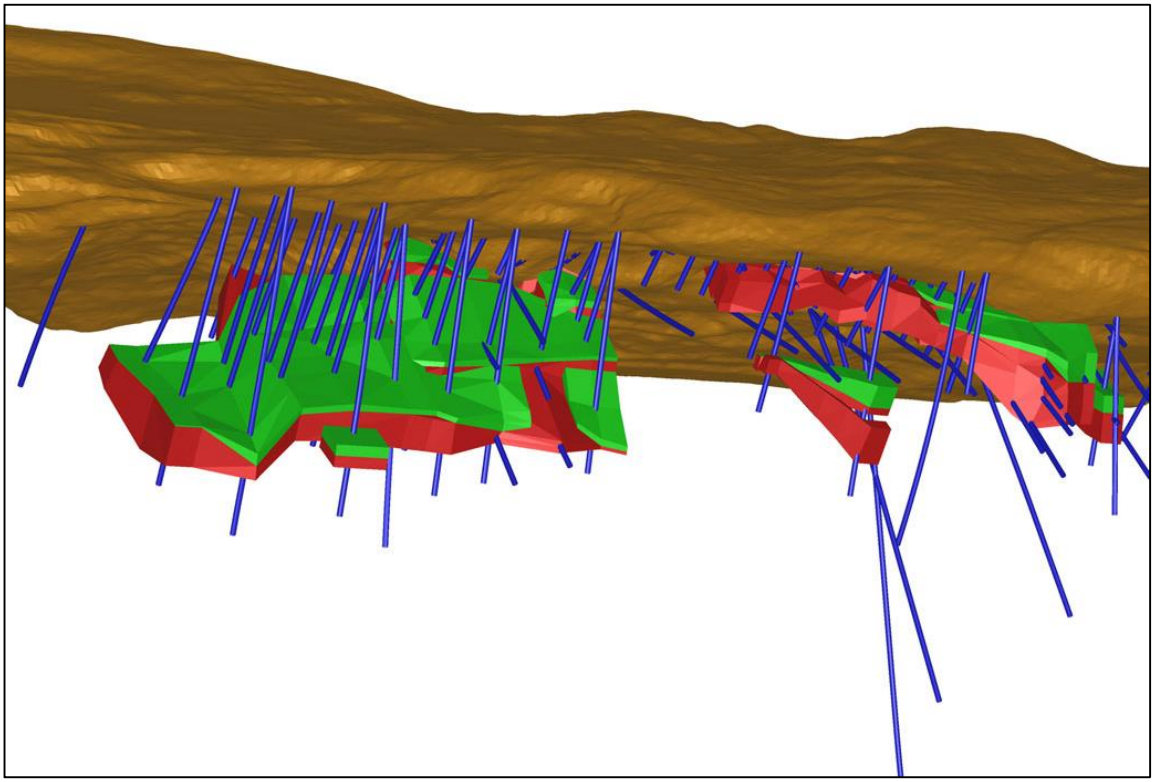
Further work in this area, including more detailed examination and description of sulphide textures, was recommended, however, no criteria for sorting the two populations in the disseminated domain have yet been identified. Probability plots which include the new URSA Major and the old Falconbridge drilling show similar results to those seen previously and the two sulphide texture domains continue to be used.

Length-weighted assay composites were generated for the portion of each of the 71 drill holes and 11 surface trenches (on 5 sections) which fell within the constraints of the blebby sulphide and disseminated sulphide domains. These composites were calculated for nickel, copper, cobalt, gold, platinum and palladium. The composites were compiled over 2.5-m lengths starting at the first point of intersection between drill hole and hanging wall of the 3D zonal constraints. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals were treated as nulls and not utilized in the composite calculation. Any calculated composites less than 1.0 m in length, were discarded so as not to introduce any short sample bias in the interpolation process. The composite data were transferred to Gemcom extraction files for the grade interpolation as X, Y, Z, value files.

Grade capping was investigated on the raw assay values in the database to ensure that the possible influence of erratic high values did not bias the grade estimates. Extraction files were created for constrained data for all six metals. From the extraction files, normal histograms and probability plots were generated. In addition, sample means, standard deviations and coefficients of variation were calculated.

Minimal capping of assays was required and the values chosen resulted in less than 1% of the data being capped.

Figure 6-2 3-Dimensional View of East Zone (left side) and West Zone (right side) Geological Domains and Drill Hole Traces (from Hennessey and Puritch, 2004)



Semivariograms (variograms) were created and analyzed for the nickel, copper, cobalt, gold, platinum and palladium data from the constrained extraction files for both blebby and disseminated domains. A cobalt variogram could not be modelled, probably due to the relatively low grades and the very limited variability in the data set. The two blebby sulphide domains are of limited size and the relatively small amount of contained data did not yield any discernable pattern in interpretation of the resulting variograms. The disseminated domains gave reasonable variograms for both down-hole and omni directional, in-the-plane-of-dip interpretations. Coherent along-strike and down-dip variograms could not be modelled. Nugget values were modelled on the omni directional variograms and forced on the across dip ones.

The omnidirectional variograms were modelled with one or two spherical structures as required, however, 2 structures were typically used. The range of the first structure varied from 15 m to 35 m for all elements modelled but was typically between 18 m and 25 m. Second structure ranges of approximately 50 m to 112 m were obtained for all elements in the dip plane. However, the West Zone platinum and palladium omni variograms had relatively short ranges of about 22 m and only one structure. Because this feature is not seen in the East Zone it is believed to be an artefact of the unusual PGE assay distribution in the old Falconbridge data (discussed above). The ranges in the across-dip or down-hole variograms varied from 9 m to 28 m. Nugget values and nugget to sill ratios were generally very low.

Disseminated Zone mineralization was interpolated using ordinary Kriging with Kriging parameters as set out in Tables 10.3 and 10.8. The Blebby Zone mineralization was interpolated in two passes using Inverse Distance Squared (ID2) grade interpolation because variograms could not be modelled for the zone. The first interpolation pass (Indicated 1) was made using a search ellipse distance of 2/3 of the full range of variogram structures modelled. Any blocks not filled were interpolated in a second pass (Indicated 2) which

used the full range. In both zones inferred mineralization was interpolated in a final pass using ranges double that used in the previous pass, so as to fill the model. The ranges from the Disseminated Zone were used for Blebby Zone grade interpolation.

The search ellipsoid ranges used for grade interpolation, as established by the variography, were sufficient to code a large majority of the constrained mineralization as indicated. The remainder of the block model was filled using the process described above and was classified as inferred.

The specific gravities used for the resource model were from measurements taken from test work performed by JVX Ltd. on drill hole number UR0309. A full cross section of the mineralized horizon was used. A total of 12 samples within the interpolated domains was analyzed. An SG of 3.10 was used for Blebby Sulphide Zone and 3.08 was used for the Disseminated Sulphide Zone.

A block model framework was created with 6,080,000 blocks that were 5 m in the X direction, 5 m in the Y direction and 5 m in the Z direction. There were 380 columns (X), 200 rows (Y) and 80 levels (Z). The model was rotated 33 degrees in order to align it with the drill sections. The coordinates for the block model are in UTM units.

A percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block and partial block inside the constraining domains. As a result, the domain boundaries were properly represented by the percent modelôs ability to measure infinitely variable inclusion percentages.

The nickel, copper, cobalt, gold, platinum and palladium composites were extracted from the Microsoft Access database composite table into 24 separate files for the East and West Blebby and Disseminated domains.

Inverse distance squared (ID2) and ordinary Kriging (OK) interpolation methods were used for the blebby and disseminated domain interpolations respectively. Three interpolation passes were used to determine the Indicated 1, Indicated 2 and Inferred classifications and to interpolate nickel, copper, cobalt, gold, platinum and palladium grades into each block. Contained metal values in Canadian dollars were also calculated for each block using the commodity price and exchange rate assumptions set out above in this section. The contained metal values were used to estimate a simplified NSR for the Whittle pit optimizer.

For the purposes of this resource estimate, classifications were derived from the Indicated 1, Indicated 2 and Inferred spherical search ranges and interpolation parameters for nickel (the principal economic contributor) which are close to those of most other elements. Any grade block coded by the Indicated 1 and Indicated 2 search ellipsoids was classified as indicated and all other blocks were classified as inferred.

Some small areas of the deposit have been drilled on a sufficiently tight spacing to technically allow their categorization as measured resources. These areas are restricted in size and do not fall into contiguous zones stretching from section to section. For this reason Micon has chosen not to classify any of the resource as measured.

Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council August 20, 2000.

Under the CIM definitions, a Mineral Resource must be potentially economic in that it must be ñin such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction.òMicon has used an internal cut-off grade of Cdn$24.09/t and average cutoff grade of $43.65/t within a Whittle-optimized pit shell for the reporting of the Mineral Resources in the Shakespeare West and East Zones. Whittle optimization was chosen because the deposit was plunging deeper at its northeast extent and it was not clear that all of the identified mineralization might be economic.

The resulting resource estimate is based upon a review of the deposit geometry, local topography and recent experience of actual mining and processing costs on other projects in the Sudbury and Northern Ontario area. The following operating and cost assumptions were used in the Whittle determined cut-offs:

Ore and waste mining cost	Cdn$1.75/t
Transport to Falconbridge (55 km @ $0.08/t/km)	Cdn$4.40/t
Processing costs	Cdn$10.50/t
G & A costs	Cdn$1.00/t
Total cash operating costs	Cdn$43.65/t
Payable metal (allowances for recoveries, smelter charges, etc.)	66%
Pit slopes	45 degrees

The block model was reported using the Cdn$24.09 internal cut-off to produce the Mineral Resources set out in Table 6-8 below. The vast majority of the blocks were coded as indicated resources and the mineralization shows good continuity from hole to hole and section to section.

Table 6-8 Shakespeare Mineral Resources (Lattanzi, 2004)

East Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Indicated	9,027,000	0.36	0.37	0.02	0.194	0.344	0.382
Inferred	22,000	0.29	0.24	0.02	0.135	0.229	0.237

West Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Indicated	2,978,000	0.29	0.33	0.02	0.185	0.341	0.373
Inferred	93,000	0.27	0.31	0.02	0.172	0.330	0.353

Total East and West Zones

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Indicated	12,005,000	0.35	0.36	0.02	0.191	0.343	0.380
Inferred	115,000	0.27	0.29	0.02	0.165	0.311	0.331

The vast majority of the blocks were coded as indicated resources and the mineralization shows good continuity from hole to hole and section to section.

6.2.3 2006 Resource Estimate

For the 2003 Mineral Resource report Micon had supervised the estimation of Mineral Resources for the newly discovered East Zone at the Shakespeare project. The estimation did not include data from, or the mineralization in, the original Shakespeare deposit discovered and explored by Falconbridge, now called the Shakespeare West Zone. This Mineral Resource estimate is historical in nature and should not be relied upon. Magna has not done sufficient work to classify the historical estimates as current Mineral Resources or Mineral Reserves and Magna is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

After the first estimate URSA Major drilled on 4 evenly-spaced sections within the full West Zone strike length. This confirmation work allowed for the use and interpretation of the old Falconbridge drill data. The second Mineral Resource estimate prepared by Micon included all of the known mineralization at the Shakespeare deposit, in both the East and West Zones.

After the second Mineral Resource estimate Micon recommended certain infill and definition drill holes prior to completion of a Mineral Resource estimate to be used in a feasibility study. Those holes were drilled and are used in the 2006 Mineral Resource estimate.

The drill hole data used for the resource estimation were provided by URSA Major in the form of Microsoft Excel files. A Gemcom database was constructed containing 47 Falconbridge holes, 28 trench segments (as pseudo drill holes) and 84 URSA Major holes (UR series), of which only 6 were not used for modeling purposes. Holes UR-03-01, UR-03-02, UR-03-47, UR-03-56, UR-03-57 and UR-03-58 were exploration holes not in the vicinity of the Shakespeare Deposit. The database was validated and corrected in Gemcom until it was found to be error free. The data in the assay table included assays for nickel, copper, cobalt, gold, platinum and palladium.

Topographic surface data were obtained from an airborne LIDAR (Light Detection and Ranging) survey completed by Mosaic Mapping Systems Inc. The data were provided as an AutoCAD polyline file that was converted into a Gemcom 3D topographic surface for modelling. Drill hole collars were surveyed by Paul H. Torrance Surveying Ltd. Down hole surveys were conducted using an ñEZ Shotò electronic instrument. Some down hole check surveys were conducted by Sperry Sun Drilling Services of Canada using a gyroscopic instrument. All coordinates were UTM, based on the NAD 83 datum. The decision was made to express all quantities in the resource estimate in metric units, although the exploration grid used was the original Falconbridge one, set up in Imperial units. Modern surface drilling equipment in Canada is now largely metric and some of the 2003 drill program was drilled with metric rods. The older Falconbridge drilling data was in imperial units and was converted to metric.

A geological domain model was constructed to control grade interpolation. Domain boundaries were determined by lithology, domain mineralization style and grade boundary interpretation from visual inspection of drill hole sections, as well as modelled faults interpreted from stratigraphic offsets and logged fault gouge in holes. There were thirty eight drill sections at two different interval spacings. Drilling in the west area of the deposit was at nominal 30-m (100-ft) spaced intervals with twenty three sections from Lines 0+00 W to 22+00 W. The east area of the deposit was drilled at nominal 60-m (200-ft) spaced intervals with fifteen sections from 1+00 E to 29+00 E. A total of 5,100 ft (approximately 1,555 m) of strike length was drilled off during the program. However, a gap in the mineralization between the East and West Zones (sections 0+00 to 4+00 W) has received relatively little drilling. It shows limited mineralization and this area was not modelled. This gap appears to be caused by the mineralization transitioning from the hanging wall to the footwall of a group of faults and at this time appears to represent a local absence of Mineral Resources. The geological domains were extrapolated 25 m in either direction from the end of drilling and terminated. This resulted in a two-part geological domain model approximately 1,435 m in total aggregate length.

The domains were physically created by computer screen digitizing on drill hole sections in Gemcom based on input from Terry Hennessey, Eugene Puritch and two URSA Major staff members. The outlines were influenced by lithology, structure and a CDN$30 in situ metal value which approximately selects continuous mineralization boundaries.

The Canadian dollar in situ values for nickel and copper were derived from the 24 month trailing average of published spot commodity prices on the Kitco Base Metals website (www.kitcometals.com), for the period September 1, 2003 to August 31, 2005. The commodity prices used were US$6.32 per pound (lb) for nickel and US$1.31/lb for copper. The remaining commodity prices were derived from the October 2004 pre-feasibility study and are as follows: US$15/lb for cobalt, US$400/oz for gold, US$800/oz for platinum and US$200/oz for palladium. The exchange rate used was CDN$1.00 = US$0.80.

On each section, polyline interpretations were digitized in 3D, from drill hole to drill hole, but never extrapolated more than 25 m into untested territory. Polylines were not typically projected to surface, unless justified by trenching or surface mapping since a flat-dipping fault at shallow elevation has locally offset the zone. Four separate domains, called ñDisseminatedò (West and East) and ñBlebbyò (West and East) were

established to represent the two styles of sulphide mineralization and the two zones after a statistical analysis of all assays from the full mineralized domain indicted separate populations of data.

An analysis performed for the entire mineralized width of the East Zone (both sulphide domains) in the first resource estimate yielded probability plots, where the cumulative distribution curve shows a distinct bend at 0.5% nickel indicating that two lognormally distributed populations of data are present.

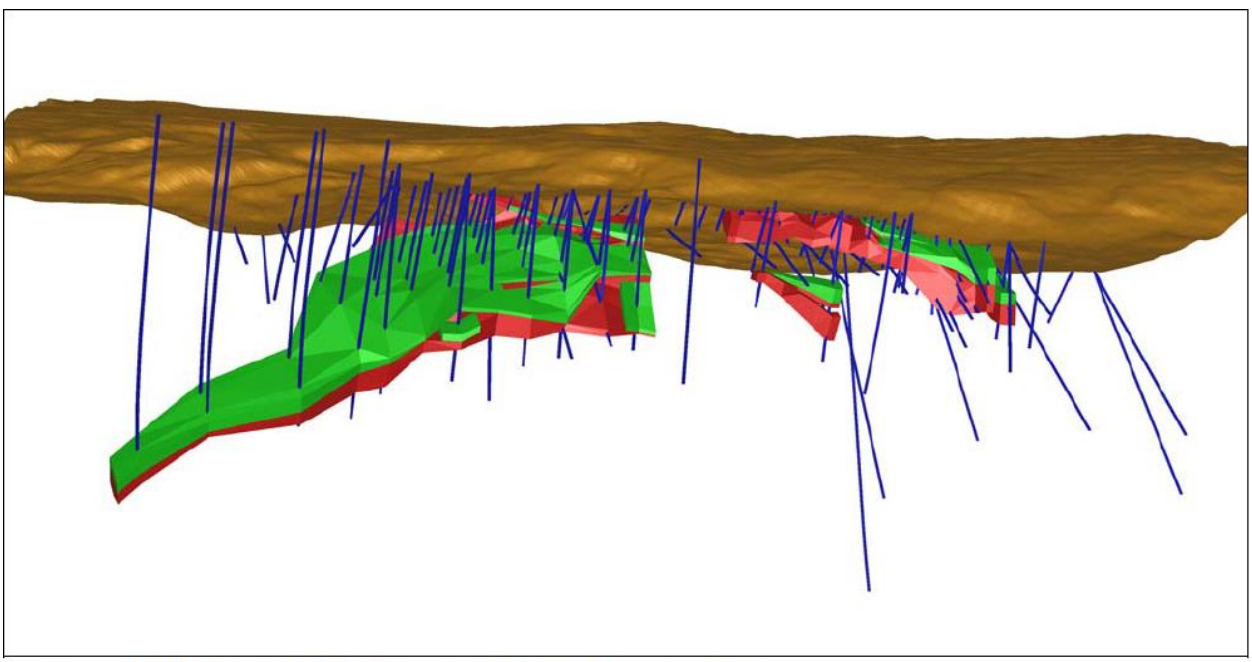
The blebby domain appears to be close to a single, lognormally-distributed population of data. However, the disseminated domain still contains two populations.

It was considered possible that these two populations occupy the same location in space and cannot be separated by domaining. Therefore two separate sulphide domains were used for resource estimation because the blebby domain successfully separated one population of data. The polylines from each section and domain were wireframed into 3-dimensional solids using Gemcom. The resulting domain solids were used for grade interpolation purposes (Figure 6-3).

Further work in this area, including more detailed examination and description of sulphide textures, was recommended however, no criteria for sorting the two populations in the disseminated domain have yet been identified. Probability plots which include the new URSA Major and the old Falconbridge drilling show similar results to those seen previously and the two sulphide texture domains continue to be used.

The rock types used for the resource model were coded from the mineralized domain solids as well as surface topography. The overburden/bedrock contact was used to limit upward extension of the domains.

Figure 6-3 3-Dimensional View of East Zone (Left Side) and West Zone (Right Side) Geological Domains and Drill Hole Traces (from Hennessey et al., 2006)



Green = blebby domain, Red = disseminated domain, Brown = surface

Length-weighted assay composites were generated for the portion of each of the 91 drill holes and 17 surface trenches that fell within the constraints of the blebby sulphide and disseminated sulphide domains. These composites were calculated for nickel, copper, cobalt, gold, platinum and palladium. The composites were compiled over 2.5-m lengths starting at the first point of intersection between drill hole and hanging wall of the 3D zonal constraints. The compositing process was halted upon exit from the footwall of the

aforementioned constraint. Un-assayed intervals were treated as nulls and not utilized in the composite calculation. Any calculated composites less than 1.0 m in length, were discarded so as not to introduce any short sample bias in the interpolation process.
The composite data was then transferred to Gemcom extraction files as X, Y, Z, value files for the grade interpolation.

Grade capping was investigated on the raw assay values in the database, prior to compositing to ensure that the possible influence of erratic high values did not bias the grade estimates.

Extraction files were created for domain-constrained data for all six metals of interest. From the extraction files, normal histograms, log histograms and probability plots were generated. In addition, sample means, standard deviations and coefficients of variation were calculated. These plots were used to identify the point at which lognormal populations broke down into scattered outlier values. The grade at these points was selected as the top cutting value. The top cutting values chosen have resulted in less than 1% of the data being capped.

Semivariograms (hereafter referred to as variograms) were created and analyzed for the nickel, copper, cobalt, gold, platinum and palladium data from the constrained assay composite extraction files for both blebby and disseminated domains. In past resource estimates cobalt variograms could not be modelled, and it was suspected that this was due to the relatively low grades and the very limited variability in the data set. However, the additional data provided by the 2005 drilling has allowed for the modelling of cobalt variograms although they still show limited variability of data and relatively low grades.

The two blebby sulphide domains are of limited size and the relatively small amount of contained data did not yield any discernable pattern in interpretation of the resulting variograms during the first two resource estimation attempts. However, the latest round of drilling has provided enough data to allow for the modelling of variograms in the East Blebby domain.

The East Disseminated domain gave reasonable variograms for both the down-hole and omni directional in-the-plane-of-dip interpretations. Coherent along-strike and down-dip variograms could not be modelled. Nugget values were modelled on the omnidirectional variograms and forced on the across dip ones. All four variogram types could be modelled for the West Disseminated and East Blebby domains.

The variograms were modelled with one or two spherical structures as required however, 2 structures were typically used for the omnidirectional variograms and one structure was normally used for the discreet variograms. The range of the first structure in the East Disseminated zone omnivariograms varied from 12 m to 20 m for all elements modelled. Second structure ranges of 99 m to 108 m were obtained for all elements in the dip plane. Across dip ranges varied from 13 m to 23 m.

The West Disseminated Zone had somewhat shorter ranges of 44 m to 85 m along strike and 36 m to 106 m down dip. The ranges in the across-dip or down-hole variograms varied from 8 m to 29 m. Nugget values and nugget to sill ratios were generally very low.

The East Blebby Zone also had somewhat shorter ranges of 51 m to 83 m along strike and 23 m to 48 m down dip. The ranges in the across-dip or down-hole variograms varied from 11 m to 28 m.

Nugget values and nugget to sill ratios were generally very low for all variograms.

Disseminated Zone and East Blebby Zone mineralization was interpolated using ordinary Kriging with Kriging parameters as set out in the tables. The West Blebby Zone mineralization was interpolated in two passes using Inverse Distance Squared (ID2) grade interpolation because no variograms could be modelled for it. The first interpolation pass (Indicated 1) was made using a search ellipse distance of 2/3 of the full range of variogram structures modelled. Any blocks not filled were interpolated in a second pass (Indicated 2) which used the full range. In all zones inferred mineralization was interpolated in a final pass using ranges double that used in the previous pass, so as to fill the model. The ranges for the West Blebby

Zone ID2 grade interpolation were determined after a review of the typical ranges seen in the variograms from the other zones.

The search ellipsoid ranges used for grade interpolation, as established by the variography, were sufficient to code a large majority of the constrained mineralization within the proposed open pit as indicated Mineral Resources. The remainder of the block model was filled using the process described above and was classified as inferred Mineral Resources. The majority of this mineralization occurs as deep mineralization down plunge to the east, and would likely be mined by underground methods.

The specific gravities used for the resource model were obtained from measurements taken from test work performed by URSA Major personnel on drill hole numbers UR-03-23, UR-03-26, UR-03-30 and UR-03-36. Representative samples from all lithologies were taken and subjected to a wet/dry bulk specific gravity determination test. A total of 257 samples were analyzed. An SG of 3.01 was used for the deposit.

A block model framework was created with 9,120,000 blocks that were 5 m in the X direction, 5 m in the Y direction & 5 m in the Z direction. There were 380 columns (X), 200 rows (Y) and 120 levels (Z). The model was rotated 33 degrees in order to align it with the drill sections. The coordinates for the block model are in UTM units.

A percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block and partial block inside the constraining domains. As a result, the domain boundaries were properly represented by the percent modelôs ability to measure infinitely variable inclusion percentages.

The nickel, copper, cobalt, gold, platinum and palladium composites were extracted from the Microsoft Access database composite table into 24 separate files for the East and West Blebby and East and West Disseminated domains.

Inverse distance squared (ID2) interpolation was used for the West Blebby domain while ordinary Kriging (OK) interpolation was used for the East Blebby and both East and West Disseminated domains.. Two interpolation passes were used to determine the Indicated and Inferred classifications and to interpolate nickel, copper, cobalt, gold, platinum and palladium grades into each block. Contained metal values in Canadian dollars were also calculated for each block using the commodity price and exchange rate assumptions set out in this section above. The contained metal values were used to estimate a simplified NSR for the Whittle pit optimization process. The open pittable mineralization table was reported from the Whittle runs.

The interpolation parameters utilized varied for nickel, copper, cobalt, gold, platinum and palladium by domain.

For the purposes of this resource estimate, confidence category classifications were derived from the Indicated and Inferred search ranges and interpolation parameters for nickel. Any grade block coded by the Indicated search ellipsoids for the nickel grade interpolation run was classified as indicated and all other blocks were classified as inferred.

The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council November, 2004.

Under the CIM definitions, a Mineral Resource must be potentially economic in that it must be ñin such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction.òMicon has used an internal open pit cut off grade of CDN$24.23/t and average cut off grade of CDN$36.46/t within a Whittle-optimized pit shell for the reporting of the Mineral Resources in the Shakespeare West and East Zones. Whittle optimization was chosen because the deposit was plunging deeper at its northeast extent and it was not clear that all of the identified mineralization might be economic by open pit extraction. The

remaining mineralization outside the pit limit was evaluated at a CDN$50/t cut-off to determine the underground resource.

The resulting resource estimate is based upon a review of the deposit geometry, local topography and recent experience of actual mining and processing costs on other projects in the Sudbury and other parts of Northern Ontario.

The following operating cost assumptions were used in the Whittle-determined cut offs:

- Å Ore mining cost: CDN$3.06/t
- Å Waste mining cost: CDN$1.89/t
- Å Haulage to plant: CDN$0.34/t
- Å Processing costs: CDN$11.00/t
- Å G/A Costs: CDN$1.73/t
- Å Smelter Treatment Charges CDN$212/t
- Å Concentration Ratio 19:1
- Å Total cash operating costs: CDN$43.65/t
- Å Payable metal (Ni=69.0%, Cu=83.7%, Co=35.5%, Au=28.9%, Pt=55.3% and Pd=34.0%)
- Å Pit Slopes: 55 degrees

After Whittle had optimized the pit the in-pit portion of the resources from the block model were reported using the CDN$24.23 internal cut-off to produce the open pit Mineral Resources set out in Table 6-9 below.

A CDN$50 cut-off was applied to mineralization outside the pit to determine the underground portion of the Mineral Resources as shown in Table 6-10 below.

The vast majority of the blocks within the pit were coded as indicated resources and the mineralization shows good continuity from hole to hole and section to section.

Table 6-9 Shakespeare 2006 Open Pit Mineral Resources (Hennessey et al., 2006)

East Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	9,460,000	0.37	0.38	0.02	0.204	0.357	0.393	$61.25
Inferred	220,000	0.32	0.24	0.02	0.127	0.225	0.208	$48.95

West Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	2,970,000	0.29	0.33	0.02	0.181	0.333	0.361	$50.90
Inferred	30,000	0.32	0.38	0.02	0.171	0.307	0.340	$54.56

Total **East & West Zones**

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	12,430,000	0.35	0.37	0.02	0.199	0.351	0.386	$58.78
Inferred	250,000	0.32	0.26	0.02	0.132	0.234	0.222	$49.54

Table 6-10 Shakespeare 2006 Underground Mineral Resources (Cut-off CDN% 50.00/t NSR) (Hennessey et al., 2006)

East Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	1,760,000	0.37	0.41	0.03	0.220	0.363	0.389	$62.68
Inferred	720,000	0.38	0.39	0.03	0.181	0.318	0.334	$62.12

West Zone

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	70,000	0.35	0.43	0.02	0.176	0.327	0.361	$60.17
Inferred	20,000	0.31	0.35	0.02	0.157	0.283	0.317	$52.21

Total East & West Zones

Category	Tonnes	Ni (%)	Cu (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)	NSR CDN$/t
Indicated	1,830,000	0.37	0.41	0.03	0.218	0.362	0.388	$62.59
Inferred	740,000	0.37	0.39	0.03	0.180	0.317	0.334	$61.85

6.2.4 2014 Resource Estimate

At the request of Wellgreen, RPA Inc. (ïRPAò) reviewed and consolidated underground and open pit Mineral Resource estimates for the East and West zones. Both estimates used by RPA were updated by P&E Mining Consultants Inc. (ïP&Eò), in 2007 for the West Zone and in 2012 for the East Zone. Neither of these estimates were published and not posted on SEDAR. The 2007 Update was not publicly released by URSA Major, and neither Micon nor P&E retained a record of the revisions, corrections, or improvements made to the Feasibility Study Mineral Resource. Consequently, the 2007 Update received by RPA to incorporate into the 2014 Shakespeare Mineral Resource review was not supported by documentation and was problematic to verify. This Mineral Resource estimate is historical in nature and should not be relied upon. Magna has not done sufficient work to classify the historical estimates as current Mineral Resources or Mineral Reserves and Magna is not treating the historical estimates as current Mineral Resources or Mineral Reserves.

RPA reviewed P&Eôs resource classification criteria for the West Zone (2007) and East Zone (2012) and found them to be acceptable for an internal Mineral Resource update. The level of drilling, assaying, and exploration work completed to February 2012 is sufficient to support the resource classification.

In the East Zone, P&E (2012) classified resources as Indicated and Inferred based on drill hole spacing and geologic confidence in continuity of the mineralized material and grade distribution. In the 2006 Feasibility Study, West Zone resource classification was derived by P&E from the Indicated and Inferred search ranges and interpolation parameters for nickel. RPA has been unable to determine if classification parameters were modified for the West Zone in 2007.

As part of the block model consolidation, RPA carried out the following tasks:

- Reviewed the 2007 and 2012 resource block models and P&Eôs open pit and underground Mineral Resource estimates to ensure that none of the blocks were captured in both the underground and open pit Mineral Resource estimates;

- Added data from the 2012 drilling to the drill hole database;
- Removed the mined blocks from the resource model;
- Re-estimated the open pit and underground Mineral Resource for nickel, copper, cobalt, platinum, palladium, and gold based on the updated drill hole database, with reporting done by NSR cut-off as appropriate for a polymetallic deposit, and using current metal prices;
- Recommended updates to the resource model.

The Company and P&E provided RPA with the following data:

- A compiled surface of the project site as a DWG file, current as at September 2011;
- Three comma delimited text files for the 2007 Shakespeare Block Model;
- The November 2011 Shakespeare Gemcom Project file, which included:
  - 2011 Shakespeare Block Model for East Zone;
  - Wireframes for East Zone mineralization from 2012, and previous iterations of the blebby and disseminated zones for the East and West Zone mineralization;
  - 2004 surface topography;
  - 2006 Feasibility Study pit surface;
  - Shakespeare drill hole database, current to the 2012 update.
- Two MS Excel files for the two 2012 drill holes (U-03-133 and U-03-134);
- A memorandum from P&E to the Company, dated August 13, 2012, summarizing the Shakespeare Mine East Zone underground Mineral Resource Update.

RPA further requested and received from P&E the 2007 Shakespeare Gemcom Project file, which included:

- Wireframes for the blebby and disseminated zones for the East and West Zone mineralization for 2005 and 2007.
- Shakespeare drill hole database, current to the 2007 update.

Using the 2011 DWG file provided, RPA extracted contour data from the West Pit. The contour lines were used to update the 2004 topography surface file with the mined out material. RPA updated the Shakespeare drill hole database with the relevant data from the 2012 drill hole files and validated the drill hole database. Minor errors were found and corrected.

The consolidated resource estimate is based entirely on diamond drilling, trenching, core sampling, and assaying. The drill hole database for the Shakespeare Project resource consists of 204 drill holes (Figure 6-4).

RPA then created a new resource block model (file name: 2013Merge) by combining the West Zone from the 2007 block model with the East Zone from the 2012 block model (Figure 6-5). The RPA block model is oriented at 057° azimuth and has block dimensions at 5 m x 5 m x 5 m. RPA copied columns 1 to 165 from the 2007 block model and columns 166 to 400 from the 2012 block model (Figure 7.14) to create the merged block model. The resultant resource block model has identical parameters to the 2012 model, and the block size, model orientation, and origin are the same as for the 2006 Feasibility Study.

A new grade attribute for the updated NSR formula was created (13NSR) and the NSR value was calculated for each block in the block model.

Figure 6-4 Shakespeare Project Resource Drill Holes (Petrina, 2014)

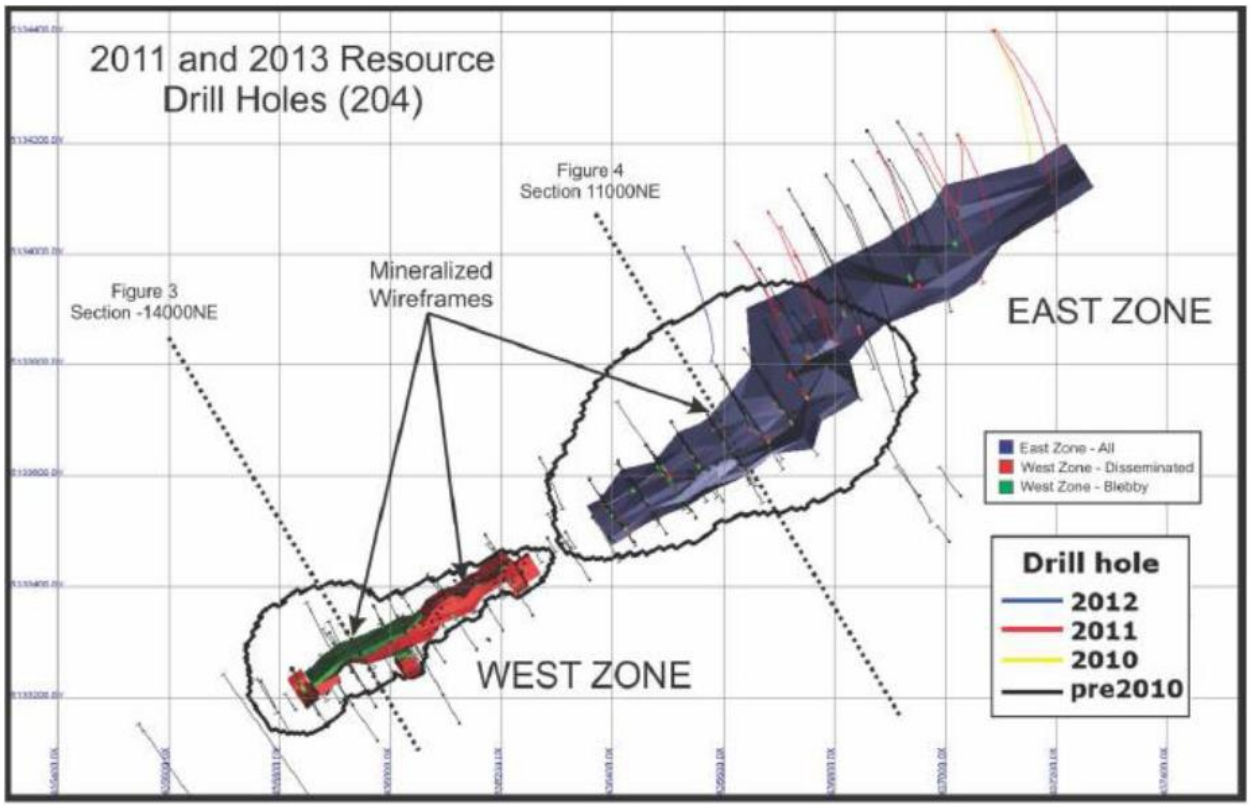
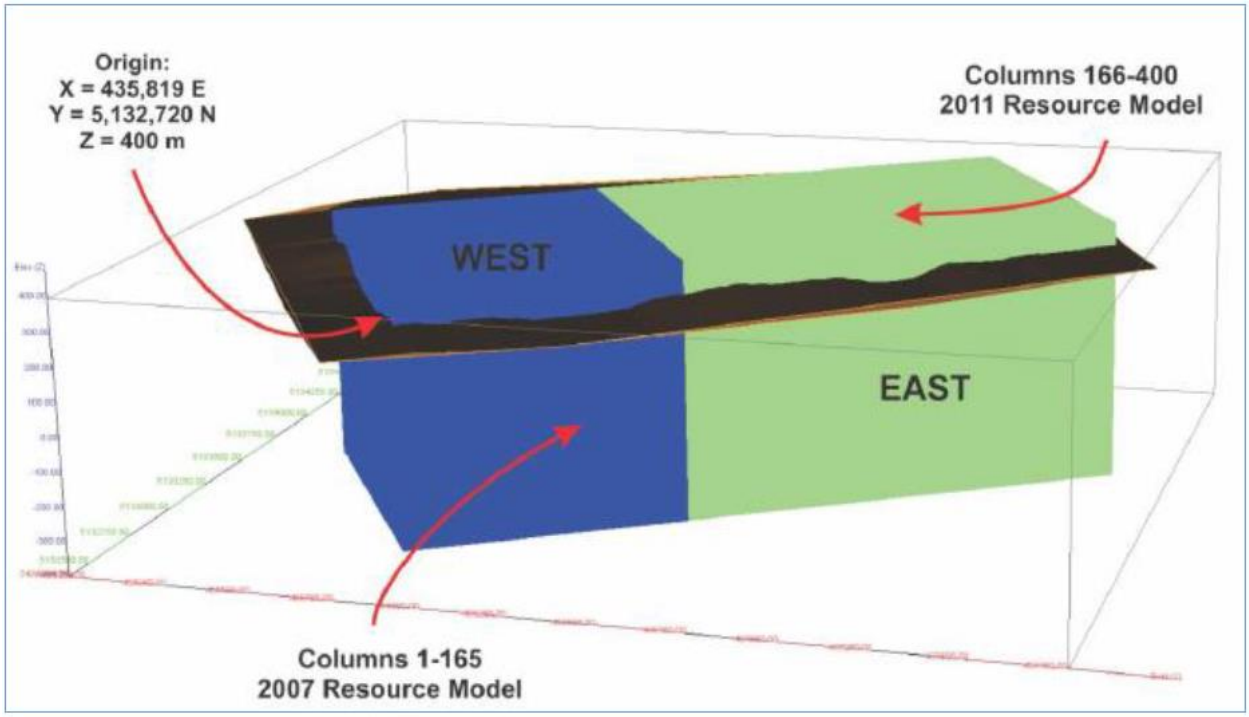


Figure 6-5 Shakespeare Project 2014 Block Model (Petrina, 2014)



Input parameters used to develop the updated NSR formula were supplied by Wellgreen Platinum.

The 2007 Block Model is made up of 425 columns, 200 rows, and 152 levels for a total of 12,290,000 blocks. The model origin (lower-left corner at highest elevation), in UTM NAD 83 Grid Space coordinates, is 435,819 m E, 5,132,720 m N and 400 m elevation. Each block is 5 m (x) by 5 m (y) by 5 m (z). The 2007 Block Model has the same origin and rotation as the 2006 Feasibility Study block model, but contains 45 additional columns and 32 additional rows (1,440 more blocks).

A percent block model is used to manage blocks partially filled by mineralized rock types, including blocks along the edges of the deposit. A percent model contains the percentage of a mineralized zone contained within each block. The 2007 Block Model was set up with three folders - BLEB, DISS, and 4X - where BLEB contains the block values for the Blebby Domains, DISS contains the block values for the Disseminated Domains, and 4X contains the block values for the combined Block Model. Each folder contains the following information:

- domain identifiers with mineralized Zone (ñRock Typeò);
- tonnage factors, in tonnes per cubic metre, specific to each rock type (ñDensityò);
- the percentage volume of each block within the mineralization wireframes (ñPercentò);
- estimated grades of nickel, copper, cobalt, gold, platinum, and palladium inside the wireframe models (ñNiò, ñCuò, ñCoò, ñAuò, ñPtò and ñPdò):
- the resource classification of each block (ñClassò); and
- Net smelter return (NSR) estimates calculated from block grades and related economic and metallurgical assumptions (ñNSRò, ñNSR-Feasibilityò, ñNSR-Final-Feasibilityò).

The BLEB and DISS folders contain only the attributes for the Blebby or Disseminated Domains, respectively. The Combined (4X) folder uses the block values from the BLEB and DISS folders and weights the value by their respective ñPercentò attribute to calculate the grade for each block (additive). Where Blebby and Disseminated wireframes overlap along edges, the ñPercentò attribute add to >100%. In such cases, the ñPercentò attribute field in the Combined (4X) block model must be normalized to 100% or the volumes (and thus tonnage) will be over reported. RPA noted 2,060 blocks (>3%) with a ñPercentò attribute value of >100% (up to 200%) in the 2007 Block Model, i.e., the 4X ñPercentò attribute was not normalized

P&E (2012) used Ordinary kriging (OK) and a four pass estimation strategy to interpolate grades into the East Zone wireframe. In the FS, disseminated mineralization in the West Zone was interpolated using the OK interpolation method. The Inverse Distance Squared (ID2) interpolation method was used for the West Zone blebby mineralization. Both methods employed a two pass strategy. RPA made no modifications to the grades interpolated into the block models.

To convert volume to tonnes, a bulk density of 3.01 t/m3 was applied uniformly throughout the East Zone by P&E in 2012 and 3.00 to/m3, to West Zone blebby and disseminated mineralization by P&E, 2007. A bulk density of 3.01 t/m3 was applied to all waste rock. RPA made no modifications to bulk density values coded into the block model.

Validation of the grade interpolation and models was carried out by comparison of assay, composites and block grade statistics, on-screen review of grades, and other block model estimation parameters versus drill hole composites, review of the volumetrics of wireframes versus reported resources, and comparison of volumetrics at a $0 NSR cut-off (only possible for 2012 estimate). In RPAôs opinion, the resource database and block models are acceptable for internal Mineral Resource evaluation of the Shakespeare Project.

Drill holes U-03-133 and -134, completed in 2012 by the Company, tested for the presence of additional mineralization in the down plunge direction in the East Zone. No significant mineralization was intersected. Since drill hole U-03-133 intersects the edge of the East Zone wireframe, RPA recommends that the

wireframe be modified to exclude this hole. This would only affect blocks classified as Inferred. RPA estimates that 250,000 tonnes will be removed from the East Zone Inferred Mineral Resource, averaging 0.35% Ni, 0.30% Cu, 0.03% Co, 0.24 g/t Au, 0.34 g/t Pt, and 0.30 g/t Pd. The resulting decrease in tonnage would amount to approximately 6% of the total tonnage of the underground Inferred Mineral Resource.

Resource assay sample lengths range from 13 cm to 4.27 m within the wireframe models. The majority of samples (approximately 47%) were 1.0 m in length. Forty percent of the samples were less than 1.0 m, 13% are greater than 1.0 m, and approximately 1.2% had lengths greater than 2.5 m. Given these distributions and considering the width of mineralization, P&E maintained composites of 2.5 m in length. Composite samples less than 1.0 m were removed from the database for resource estimation. For the 2006 Feasibility Study, the resource assays were length-weighted and composited starting at the first mineralized wireframe boundary from the collar and resetting at each new wireframe boundary. Unsampled intervals were treated as null and not used in the composite calculation. RPA assumes that the same methodology was followed in the 2007 Update.

In the Feasibility Study, variography analysis was completed by P&E with the Gemcom geostatistics module using the 2.5 m capped composites within the four mineralized domains. In the 2007 Update, P&E revised the variography of the West Disseminated Zone only using additional data available. Examination by RPA of omnidirectional variograms for copper, nickel, cobalt, gold, platinum, and palladium suggest shorter ranges, but the along-strike, down-dip, and downhole (across-dip) variograms have similar ranges, and a nugget to sill ratios were also very low (<0.20). As in the 2006 Feasibility Study, RPA assumed that the limited size and small amount of data contained within the West Blebby Domain precluded modelling of variograms.

In the 2006 Feasibility Study, variogram parameters were used for interpolation of copper, nickel, cobalt, gold, platinum, and palladium grades in three passes by Ordinary kriging (OK) for the West Disseminated Zone and two passes using Inverse Distance Squared (ID2) grade interpolation for the West Blebby Domain because no variograms could be modelled for it. In summary, the first interpolation pass (Indicated 1) was made using a search ellipse distance of 2/3 of the full range of variogram structures modelled for a grade element. Any blocks not filled were interpolated in a second pass (Indicated 2) which used the full range. In all zones, Inferred mineralization was interpolated in a final pass using ranges double those used in the previous pass, so as to fill the model. The ranges for the West Blebby Zone ID2 grade interpolation were determined after a review of the typical ranges seen in the variograms from the other zones.

Whether the grade interpolation strategy was modified in the 2007 Update is not known to RPA. Based on the comparison to the Feasibility Study Block Model, RPA notes that the additional drilling and sampling has resulted in minor changes to interpolated block grades.

RPA reviewed P&E's resource classification criteria for the West Zone (2007) and East Zone (2012) and finds them acceptable for an internal Mineral Resource evaluation. The level of drilling, assaying, and exploration work completed to February 2012 is sufficient to support the resource classification.

In the East Zone, P&E (2012) classified resources as Indicated and Inferred based on drill hole spacing and geologic confidence in continuity of the mineralized material and grade distribution. In the FS, West Zone resource classification was derived by P&E from the Indicated and Inferred search ranges and interpolation parameters for nickel. RPA has been unable to determine if classification parameters were modified for the West Zone in 2007. RPA recommends a review of the classification criteria and applying a consistent strategy to both the West and East Zones.

For the purpose of resource reporting by NSR cut-off, a 2013 NSR block model was created from the 2007 grade block model for the West Zone and the 2012 grade block model for the East Zone. The NSR formula used was:

$$NSR = (Ni\% \times \$98) + (Cu\% \times \$58) + (Co \times \$123) + (Au\ ppb \times \$16/1000) + (Pt\ ppb \times \$25/1000) + (Pd\ ppb \times \$5/1000)$$

RPAôs estimate of the updated minimum pit discard cut-off grade for Shakespeare open pit mining is NSR $16.06/tonne. Incremental costs for underground Mineral Resources were estimated to be NSR $46.06/tonne. The NSR formula was based on revised metal prices of US$9.10/lb Ni, US$3.42/lb Cu, US$15.58/lb Co, US$1,524/oz Pt, US$558/oz Pd, and US$1,323/oz Au, and a C$/US$ exchange rate of 0.979.

For a polymetallic deposit such as Shakespeare, the NSR value of the resource is used to determine the net value of each mining block and may be used in the same way as grades in a single-metal deposit in determining economic cut-off grades. The NSR for each block in the model was calculated in Gemcom GEMS and the block model generated was transferred to MineSight economic Planner ï LG3D software for the pit optimization work by SNC. The block model was reblocked to 10 m x 10 m x 10 m to reduce the number of blocks and implicitly, the processing time.

The revenue factor 1 pit (Pit 36) was then transferred to Gemcom GEMS for open pit resource reporting and served as a limit for underground resource reporting.

The revenue factor 1 pit (Pit 36) was then transferred to Gemcom GEMS for open pit resource reporting and served as a limit for underground resource reporting.

RPA used an internal open pit cut-off grade equal to NSR $16/tonne (rounded) within an optimized pit shell (LG3D algorithm) for the reporting of the Mineral Resources in the Shakespeare West and East Zones. Mineralization outside the pit limit was evaluated at an NSR $46/tonne (rounded) to determine the underground potentially mineable portion of the Mineral Resource.

Using a $16/tonne NSR cut-off value, and constraining within Pit Shell 36 and revised surface topography, the open pit Mineral Resources are estimated at:

- 10.42 million tonnes of Indicated Resource averaging 0.34% Ni, 0.38% Cu, 0.02% Co, 0.36 g/t Pt, 0.40 g/t Pd, and 0.20 g/t Au; and
- 58,000 tonnes of Inferred Resource averaging 0.35% Ni, 0.41% Cu, 0.03% Co, 0.39 g/t Pt, 0.41 g/t Pd, and 0.23 g/t Au.

The average NSR value is C$72.90/tonne for the Indicated Resource and C$76.67/tonne for the Inferred Resource. The final four months of mining (October 2011 to February 2012) have not been depleted from the Mineral Resource; the most current surveyed surface topography available for the Shakespeare open pit was dated September 18, 2011.

Using a $46/tonne NSR cut-off value, and Pit Shell 36 as the upper constraint, the underground Mineral Resources are estimated at:

- 4.07 million tonnes of Indicated Resource averaging 0.29% Ni, 0.36% Cu, 0.02% Co, 0.30 g/t Pt, 0.33 g/t Pd, and 0.18 g/t Au; and
- 2.52 million tonnes of Inferred Resource averaging 0.30% Ni, 0.34% Cu, 0.02% Co, 0.32 g/t Pt, 0.34 g/t Pd, and 0.19 g/t Au.

The average NSR value is C$63.46/tonne for the Indicated Resource and C$64.13/tonne for the Inferred Resource. The underground Mineral Resources include tonnage that has not been confirmed by drill hole U-03-133.

6.3 Historical Reserves

The following is a description of previous (ñhistoricò) reserve estimates completed on the Property. The historic reserve estimates presented in this report are only presented for information purposes as they represent material historical data which have previously been publicly disclosed.

The reader is cautioned that the Author has not done sufficient work to pass detailed comment on the historical mineral reserve estimates and classification presented here and hence the mineral reserves are considered historic. While these estimates were prepared, in accordance with National Instrument 43-101 and the ñCanadian Institute of Mining, Metallurgy and Petroleum Standards on Mineral Resources and Mineral Reserves Definition Guidelinesò in effect at the time, there is no assurance that they are in accordance with current CIM 2014 Mineral Resource reporting standards and these Mineral Reserve estimates should not be regarded as consistent with current standards or unduly relied upon as such.

URSA Major completed the Shakespeare project feasibility study in January 2006 (Hennessey et al, 2006). Micon evaluated the base case of an open pit mine and 4,500 tonne/day on-site concentrator. In Miconôs opinion ñShakespeare project contains an economic mineral reserve and is worthy of continued development through detailed engineering and construction to produce 4,500 t/d of ore mining and subsequent concentrate for sale.ò

At conservative metal prices including nickel at an average of US$9.37/lb, the project is projected to yield an after tax internal rate of return (IRR) of 22.6% (29.1% pre-tax IRR) on an initial total capital cost of C$148,193,000. Net revenue (NSR) is $58.89/tonne and totals C$696,331,000 for the project. Total operating cost is C$26.64/tonne milled. The undiscounted total annual cash flow (NPV) is C$169,581,000 and the NPV discounted at 8% is C$73,297,000. The project has a 7.2 year mine production life. The economic analysis makes the conservative assumption of a reversion of metal prices from current levels to their 10-year historical median Canadian dollar prices, expressed in 2007 terms. Current price levels are assumed to regress exponentially toward the median, with a ódecayôhalf-life of three years. The resulting average prices over the life of the project, expressed in 2007 dollars, are nickel US$9.37/lb, copper US$2.11/lb, cobalt US$27.57/lb, platinum US$995.52/ounce, palladium US$342.49/ounce, and gold US$563.27/ounce. The Base Exchange rate for the economic analysis is taken from the average of over 9 months of 2007, for a rate of C$1 = US$0.9052.

The feasibility study has defined a diluted Probable Reserve of 11,828,000 tonnes grading 0.33% nickel, 0.35% copper, 0.02% cobalt, 0.33 g/t platinum, 0.36 g/t palladium and 0.18 g/t gold. The mineral reserve is to a maximum depth of 250 metres below surface and was determined by applying a C$12.84/tonne NSR internal cut-off value which is derived from the sum of the milling and G&A costs. The reserve is based on an Indicated Resource (undiluted) of 12,430,000 tonnes grading 0.35% nickel, 0.37% copper, 0.02% cobalt, 0.35 g/t platinum and 0.39 g/t palladium and 0.20 g/t gold. This Indicated Resource is contained within an optimized pit shell with an NSR cut off above C$24.23. An additional Indicated Resource of 1,830,000 tonnes grading 0.37% nickel, 0.41% copper, 0.03% cobalt, 0.36 g/t platinum, 0.39 g/t palladium and 0.22 g/t gold at an NSR cut off of CDN$50/tonne is located outside of the pit shell. The majority of the Indicated Resource is down plunge to the east of the pit shell. Mr. Terrence Hennessey, P.Geo, of Micon is the qualified person for the resource estimate. Mr. Eugene Puritch, P.Eng. of P&E Engineering is the qualified person for the reserve estimate. Mr. Ian Ward, P.Eng. of Micon is the qualified person for the feasibility study.

Subsequent to the year ended January 31, 2008, Micon completed an update to the feasibility study to take into account changes in metal price outlook, marketing of separate nickel and copper concentrates, a treatment and refining contract, and escalation of capital and operating costs since the original feasibility study was published in January 2006 (URSA Major MD&A, published April 30, 2009 and posted on SEDAR under URSAôs profile).

In early 2008, Micon completed an update to the Shakespeare project feasibility study using the base case of an open pit mine and a 4,500 tonne/day on-site concentrator. In Miconôs opinion, ñShakespeare project

contains an economic mineral reserve and is worthy of continued development through detailed engineering and construction to produce 4,500 t/d of ore and subsequent concentrate for saleò At projected metal prices including nickel at an average of US$9.37/lb, the project is projected to yield an after tax internal rate of return (ñIRRò) of 22.6% (29.1% pre-tax IRR)on an initial total capital cost of C$148,193,000. Net smelter revenue (ñNSRò) is $58.89/tonne and totals C$696,331,000 for the project. Total operating cost is C$26.64/tonne milled. The undiscounted total annual cash flow (ñNPVò) is C$169,581,000 and the NPV discounted at 8% is C$73,297,000. The project has a 7.2 year mine production life. The economic analysis makes the assumption of a reversion of metal prices from current levels to their 10-year historical median Canadian dollar prices, expressed in 2007 terms. Current price levels are assumed to regress exponentially toward the median, with a ódecayôhalf-life of three years. The resulting average prices over the life of the project, expressed in 2007 dollars, are nickel US$9.37/lb, copper US$2.11/lb, cobalt US$27.57/lb, platinum US$995.52/ounce, palladium US$342.49/ounce, gold US$563.27/ounce. The base exchange rate for the economic analysis is taken from the average of over 9 months of 2007, for a rate of C$1 = US$0.9052.

The feasibility study update has defined a diluted Probable Reserve of 11,828,000 tonnes grading 0.33% nickel, 0.35% copper, 0.02% cobalt, 0.33 g/t platinum, 0.36 g/t palladium and 0.18 g/t gold. The mineral reserve is to a maximum depth of 250 metres below surface and was determined by applying a C$12.84/tonne NSR internal cut-off value which is derived from the sum of the milling and G&A costs. The reserve is based on an Indicated Resource (undiluted) of 12,430,000 tonnes grading 0.35% nickel, 0.37% copper, 0.02% cobalt, 0.35 g/t platinum and 0.39 g/t palladium and 0.20 g/t gold. This Indicated Resource is contained within an optimized pit shell with an NSR cut off above C$24.23. An additional Indicated Resource of 1,830,000 tonnes grading 0.37% nickel, 0.41% copper, 0.03% cobalt, 0.36 g/t platinum, 0.39 g/t palladium and 0.22 g/t gold at an NSR cut off of CDN$50/tonne is located outside of the pit shell. The majority of the Indicated Resource is down plunge to the east of the pit shell. Mr. Terrence Hennessey, P.Geo, of Micon is the qualified person for the resource estimate. Mr. Eugene Puritch, P.Eng. of P&E Engineering is the qualified person for the reserve estimate. Mr. Ian Ward, P.Eng. of Micon is the qualified person for the feasibility study.

6.4 Historical Production

In late 2006, URSA Major announced an agreement with Xstrata nickel providing for the milling of an approximately 50,000 tonne bulk sample from the Shakespeare west deposit at the Strathcona mill and the subsequent processing of concentrates. URSA Major completed the trucking of the 50,000 tonne bulk sample in October 2007. Batch processing of the sample at Xstrata Nickelôs (ñXstrataôò) Strathcona mill was completed in October 2007, and in November 2007 blending tests with Shakespeare ore and Strathcona ore feed were also completed. Based on mill balances, the batch test processed 45,487 dry metric tonnes (ñdmtò) of ore with a head grade of 0.40% nickel, 0.46% copper, 0.026% cobalt, 0.186 g/t gold, 0.378 g/t platinum, and 0.483 g/t palladium.

Overall nickel and copper recoveries into concentrates were 76.20% and 89.42% respectively. Cobalt recovery into concentrate was 60.03%. Gold, platinum and palladium recoveries into concentrate were 62.56%, 66.12%, and 46.28% respectively. The batch ore sample produced 124.22 tonnes contained nickel in nickel concentrate, 186.86 tonnes contained copper in both copper concentrate and nickel concentrate, and 6.31 tonnes contained cobalt in nickel concentrate. Contained gold, platinum and palladium are 5.30 kg (170 oz.), 11.38 kg (366 oz.), and 10.18 kg (327 oz.) respectively.

During 2008, the Company shipped and processed a total of 83,029 tonnes of ore at Xstrataôs Strathcona mill. This ore had average grades of 0.39% nickel, 0.40% copper, 0.03% cobalt and over 1 gram/tonne precious metals. During the third quarter of 2008, the Ursa Major announced a temporary suspension of preproduction mining operations due to low commodity prices. However, in early 2009, an additional shipment of 10,000 tonnes of available ore was made.

For the quarter ended April 30, 2010, the Shakespeare Mine was again in pre-production. In February and March 2010, 29,533 tonnes of ore were delivered with contained metals totalling approximately 118,000 pounds of nickel, 182,000 pounds of copper, 6,000 pounds of cobalt and 380 ounces of precious metals.

The ore shipped in February and March was mainly broken ore that had been on site since 2008. This ore averaged 20% below the average budgeted grade for 2010 that is based on the previous bulk sample and preproduction mined grades of 0.39% nickel, 0.44% copper, 0.03% cobalt and 1.1 gram/tonne precious metals.

The Company declared commercial production on May 27, 2010 and was in production until January 27, 2012. On December 13, 2011, URSA Major announced that it had limited operations at the Shakespeare Nickel Mine to crushing of existing broken ore, ore sampling and trucking operations as a consequence of reduced base metals prices. On February 3, 2012, Ursa announced it had temporarily suspended operations at the Shakespeare Property following the expiration, on December 31, 2011, of the two year milling agreement and the Company was not able to conclude a new processing agreement for Shakespeare ore with Xstrata.

During the nine months of production ending January 31, 2011, the Company delivered a total of 166,913 tonnes of ore to the Strathcona Mill at a grade of 0.357% nickel, 0.407% copper, 0.025% cobalt, 0.373 g/t platinum, 0.409 g/t palladium, 0.207 g/t gold and 2.328 g/t silver. Contained metals in the delivered ore totalled approximately 1,314,000 pounds of nickel, 1,499,000 pounds of copper, 92,204 pounds of cobalt and 1,900 ounces of platinum, 2,100 ounces of palladium, 1,100 ounces of gold and 12,100 ounces of silver.

During the year of operation ending January 31, 2012, the Company delivered 151,910 tonnes of ore to the Strathcona Mill for processing. Ore shipments were 47,090 tonnes below budget for the year ended January 31, 2012, primarily as a result of suspension of operations in December 2011.

Contained metals in the delivered ore for the year ended January 31, 2012, totalled approximately 1,052,000 pounds of nickel, 1,234,000 pounds of copper, 64,700 pounds of cobalt and 1,650 ounces of platinum, 1,840 ounces of palladium, 960 ounces of gold and 10,260 ounces of silver. The recovered and contained metals are subject to smelter recoveries and to further smelter deductions.

For the year ended January 31, 2012, the ore averaged 0.314% nickel, 0.368% copper, 0.019% cobalt, and 0.941 grams/tonne precious metals. This is approximately 84% of the average budgeted grade for 2011 that is based on the previous mined grades 0.373% nickel, 0.419% copper, 0.027% cobalt and 1.069 grams/tonne precious metals.

7 GEOLOGICAL SETTING AND MINERALIZATION

The geological setting for the Shakespeare deposit is described in a Technical Report entitled ñTechnical Report for the Shakespeare Property, Shakespeare Township, Ontario, NTS 41I/5, for URSA Major Minerals Incorporated, Volume 1 of 2ò a report authored by Eric. A. Kallio, P. Geo., dated November 28, 2002 and filed with SEDAR on December 2, 2002 under URSA Majors profile. The property geology has been updated by Jon OôCallaghan, Consulting Geologist for Magna, to include information from more recent publications (internal report).

7.1 Regional Geology

The Dunlop-Shakespeare-Baldwin-Porter Township area is located along the southern margin of the Superior Province of the Canadian Shield and has had a prolonged evolutionary history involving the interaction between three structural provinces including the Superior, Southern and Grenville.

The bedrock underlying the area is dominated by rocks of Precambrian age, including Early Precambrian (Archean) felsic plutonic rocks of the Superior Province and by Middle Precambrian (Proterozoic) supracrustal rocks of the Huronian Supergroup of the Southern Province (Figure 4-1). These rocks have been cut by mafic intrusions of several ages including the East Bull Lake Suite, Nipissing Suite and Sudbury Breccia which is part of the Sudbury Igneous Complex.

The rocks of the Southern Province unconformably overly the Archean basement rocks. The Southern Province forms a discontinuous belt extending 750 miles (1,200 km) west from Quebec to central Minnesota along the southern margin of the Superior Province. The western portion of the Southern Province comprises a passive margin supracrustal sequence of the Marquette Range Supergroup, whereas in central Ontario the Southern Province is defined by the distribution of the Huronian Supergroup succession which is part of a basin forming rift margin. The Huronian Supergroup consists of a thick sequence (12,000 m) of clastic metasedimentary rocks. The Huronian rocks include sandstone, conglomerate, siltstone and greywacke, which were derived from the Archean granitoid terrains to the north.

Mafic to intermediate metavolcanics, including flows and pyroclastic rocks are intercalated with the metasedimentary units in the basal part of the Huronian Supergroup succession.

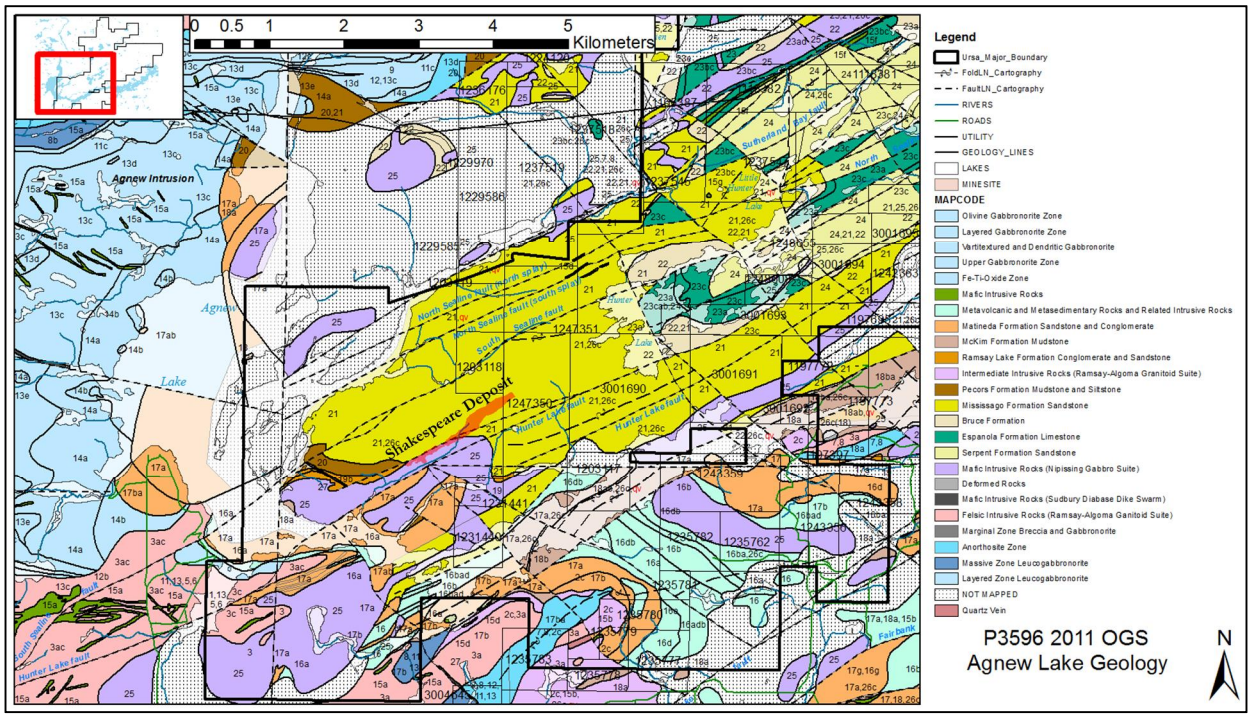
The East Bull Lake Suite is part of a major magmatic episode that occurred at 2480 ï 2470 Ma in Central Ontario contemporaneous with rifting of the Archean Superior Province Protocontinent and the formation of the Huronian Rift Zone, now represented by the Southern Province. The intrusions typically occur near the boundary between the Archean Superior Province and the Early Proterozoic Southern Province, and 14 generally appear to have been emplaced as large sills. Magmatism is also manifested in the form of mafic dykes, and as bimodal continental flood basalt sequences (Huronian Volcanics). The most prominent intrusions of the East Bull Lake suite surrounding the project include the: East Bull Lake, Agnew, and May Township Intrusions. The Nipissing Suite was emplaced at roughly 2.2 Ma and forms a trend extending from Sault St. Marie through the Sudbury Region to the Cobalt and Gowganda Regions (Card 1976).

The intrusions are located predominantly within the Huronian Supergroup, but are also localized along the Archean- Proterozoic unconformity. The intrusions primarily consist of gabbros with lesser diabase and granophyre, which range in thickness from a few hundred meters to over a thousand meters and typically outcrop at the present erosional levels as open ring structures, ring dikes, cone sheets, dykes and undulatory sills (Hriskevich, 1952, 1968). The Nipissing Intrusions have traditionally been described as undulatory sheets consisting of a series of basins and arches connected by limbs (Hriskevitch, 1968). The basinal portions of the sills consist of quartz diabase overlain by Hypersthene gabbro, and are overlain by vari-textured gabbro with pegmatoidal patches. The arches consist of vari-textured gabbro overlain by quartz diorite, granodiorite, granophyre and aplitic granitoids.

The west limit of the Sudbury Igneous Complex is centered close to Sudbury and was emplaced at approximately 1.85 Ma. The Sudbury Igneous Complex occurs along the contact between the Superior and

the Southern Province and consists of a thick composite mafic- felsic intrusion forming an elliptical ring having a major east-northeast trending axis that is 60 kilometres in length and a minor axis of 27 kilometres. The present outcrop distribution of the Huronian Supergroup does not reflect the size and shape of the original depositional system, but has rather been determined by syn- and post-Huronian folding, faulting and erosion. The most prominent faulting is syndepositional normal faulting along the east-northeast trending Murray Fault system which is considered to have controlled the accumulation and preservation of most of the Huronian Supergroup in Central Ontario.òUranium-lead (U-Pb) age determinations on zircon from the gabbroic rocks hosting the Shakespeare deposit confirm that the host rocks of the Shakespeare deposit belong to the Nipissing Suite (Sutcliffe et al. 2002).

Figure 7-1 Regional Geology of the Agnew Lake area from the Ontario Geological Survey, P3596 Map (Easton et al. 2004). The outline of the 2018 Shakespeare Deposit Mineral Resource and the claim boundary of the property are also projected



7.2 Property Geology

The area surrounding the Shakespeare property is predominantly underlain by units of the Huronian-aged Mississagi quartzite and gabbroic intrusions, which trend approximately north northeast and dip moderate to steeply north. In particular, the Mississagi quartzites dominate the north and south limit of the land package and are typically whitish, medium grained and uniform, with cross-bedding features providing way-up indicators.

The Shakespeare intrusion is a differentiated gabbroic intrusive sill that occurs predominantly in the south to central portion of the Shakespeare property and is between 300-500m wide, extending over a 14 km strike length. In cross-section, the intrusion has an arcuate profile in which the dip shallows with depth, from ~80° to 40° to the North (Figure 7-2). The gabbroic intrusive have been interpreted by the Ontario Geological Survey (OGS) (Card, 1976) as Nipissing Diabase, but others suggest that some may be part of the Agnew Intrusion, (Vogel, 1996) or even the Sudbury Igneous Complex. Subsequent radiometric dating has constrained the intrusion age to ~2217 Ma, 400 million years prior to the creation of the Sudbury Igneous Complex (Sutcliffe et al. 2002).

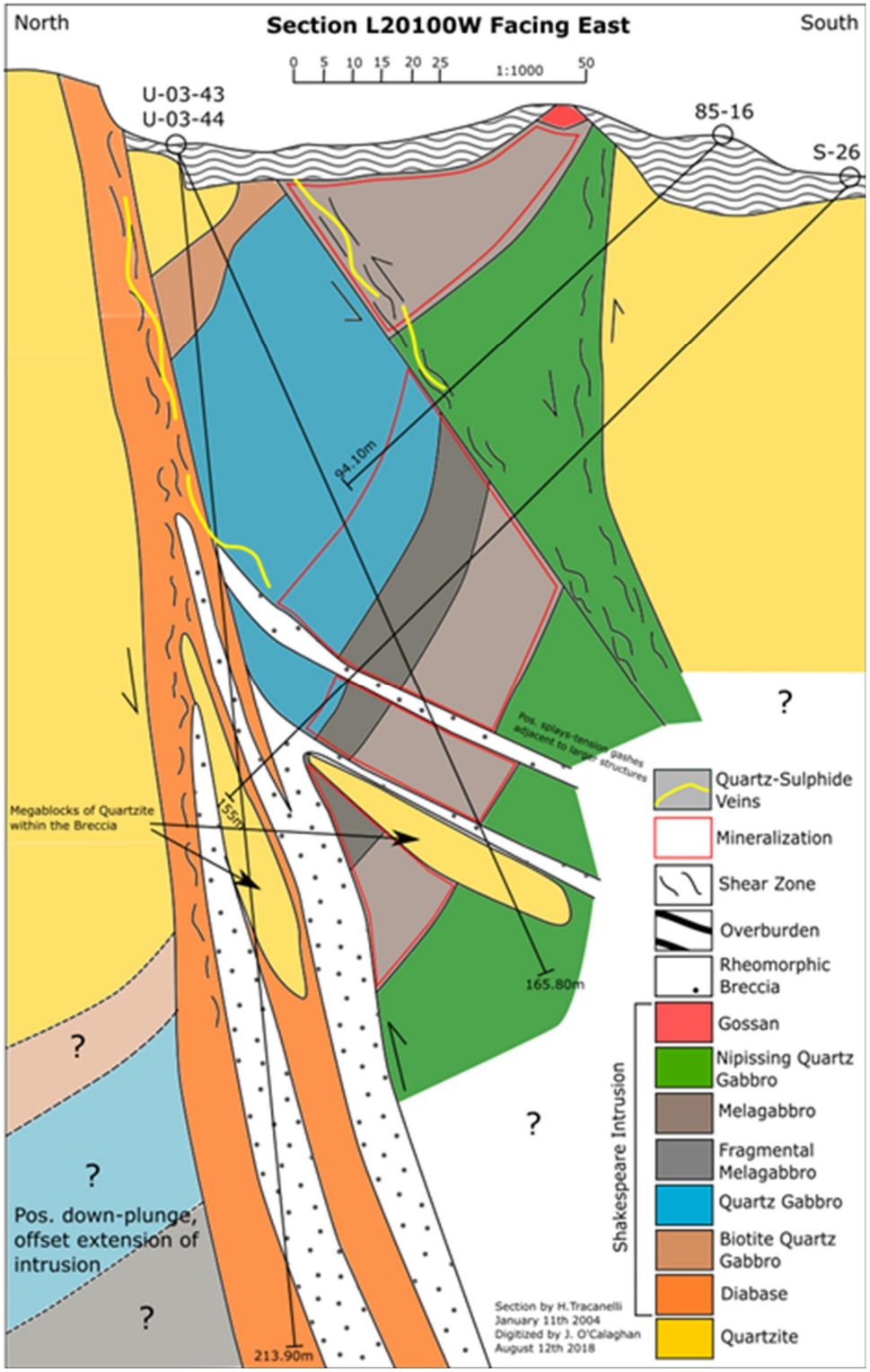
The intrusive sill is mainly dark-grey, fine grained and predominantly consists of gabbro. According to Sproule (et al. 2007), the intrusion can be subdivided into; 1) the Lower Group composed of unmineralized pyroxenite and gabbro and; 2) an Upper Group composed of mineralized melagabbro, quartz gabbro, and biotite quartz gabbro-diorite. The base of the Upper Group is the primary host for the sulphide mineralization in the Shakespeare complex (Figure 7-1). The presence of a chilled margin between the Upper and Lower Groups suggests that the Lower Group was partly crystallized as a second pulse of sulfur-saturated magma, (i.e., the Upper Group) entered the sill complex. Mineralized melagabbro dykes are also recorded intruding into the lower unmineralized gabbro/pyroxenite package of the Lower Group. This may represent feeder dykes to the overlying Upper Group or small injections of Upper Group material, cutting downward into the underlying Lower Group (Sproule et al. 2007; Dastil 2014). The entire intrusion has subsequently undergone greenschist facies metamorphism, likely associated with the regional Penokean orogeny (1900-1850 Ma) (Dastil 2014).

The north and south limits of the intrusion are bounded by the Mississagi quartzite. Inclusions, or entrained blocks of quartzite also occur locally within the overall limits of the intrusion, varying from near-zero to up to 30 vol.%. The contacts between the gabbro and the quartzites is locally sheared and altered. In places, the lower contact of the Shakespeare intrusion forms a visibly sharp, chilled contact with the adjacent rocks, while at several locations the contact appears evident as an irregular 5 to 15-meter-wide zone of admixture comprising melagabbro rocks and the underlying Nipissing Suite of gabbroic rocks. In some historic literature, this unit is referred to as the lower contact footwall zone.

The upper contact between the Shakespeare intrusion and the Mississauga quartzite is marked by ~5-10m wide, sharply defined rheomorphic breccia comprising a dark grey, aphanitic, fine grained matrix with sheared, elongate and partially melted blocks of quartzite. Although the breccia shares similarities with the 1850 Ma Sudbury breccia observed in target rocks surrounding the Sudbury impact structure (situated east of the Shakespeare intrusion), the high matrix to clast ratio and the elongated, contorted shape of some of the quartzite blocks is distinct from the Sudbury breccia. Instead, the rheomorphic breccia may represent a late injection of clast-laden diabase material into a shear zone active during the waning phases of the emplacement of the Shakespeare intrusion (Figure 7-1). Shear zones provide favorable conduits into which mafic intrusions can be injected. Furthermore, vein hosted and disseminated Cu-Co mineralization in a shear zone at Stumpy Bay (~1km South of the Shakespeare intrusion) may represent the hydrothermal remobilization of metals from the Shakespeare intrusion into proximal, still-active shear zones. Quartz-chalcopyrite veins are also observed adjacent to the rheomorphic breccia in the north side of the west pit. There are three main faults recorded in the vicinity of the Shakespeare intrusion, all of which appear to be splays of the Hunter Lake Fault (Figure 7-1). The strike of the faults is generally northeast-southwest and dip steeply. Several more northerly trending cross faults have also been identified.

Another major structure in the vicinity of the Shakespeare intrusion is the Porter Syncline. The main axis of the syncline is located north of the Shakespeare property and trends in a north-easterly direction. All rocks within the area including the mafic intrusions appear to have been folded into a series of tight to moderately open, upright, complex folds with axes trending roughly parallel to the above syncline. Mapping at the Shakespeare property, suggests that there may also be a major northeast trending anticline located on the Stumpy Bay joint venture lands to the south of the Shakespeare deposit, which trends parallel to the Porter syncline. The axis of the projected fold is just south of the Shakespeare deposit and the central part of the fold is defined by a prominent quartzite lens.

Figure 7-2 Section plan through the western most section of the Shakespeare deposit. Section modified after H. Tracanelli 2004 (unpublished internal diagrams). The section highlights the differentiated nature of the intrusion and its relationship to the adjacent host rocks and shear zones



7.3 Deposit Geology and Mineralization

The Shakespeare intrusion hosts semi-massive to disseminated sulfides (Sproule et al. 2007). Sulfides, including pyrrhotite, chalcopyrite, and lesser pyrite, are present throughout the intrusion in varying proportions, mostly in trace amounts. Significant accumulations are present as:

- Disseminated pyrrhotite and chalcopyrite blebs at the melagabbro/gabbro contact, usually ~1 mm in size, typically comprising <1% of the rock
- Heavily disseminated to patchy net-textured (10-15%) pyrrhotite, chalcopyrite, pentlandite, and gersdorfite in rounded blebs that reach up to 2-5 cm in size, in the upper zone of the melagabbro
- Blebby pyrrhotite and chalcopyrite in the lower sections of the melagabbro and the base of the quartz gabbro.

The sulfides have experienced variable degrees of recrystallization during metamorphism. They vary from pristine magmatic blebs, to recrystallized blebs, to stringers, the latter of which tend to be richer in chalcopyrite.

Where the mineralization is proximal to shear zones that cross-cut the deposit (Figure 7-2), the sulphides can be sheared and attenuated. These sheared sulphides, together with the patchy-network textured mineralization, create an interconnectivity in the sulphides that allows portions of the deposit to be identified by remote electromagnetic (EM) geophysics surveys, a valuable tool in exploring for extensions to the deposit. The mineralized zones also contain abundant inclusions of quartzite, blue quartz eyes, and rare diorite. The ores have compositions consistent with having been derived from the Shakespeare magma and to have equilibrated at moderate magma:sulphide ratios (500-1000).

The total strike length of Shakespeare mineralization is approximately 1,700 m and extends to a depth of ~550m. The deposit is subdivided into a West and East resource zone.

- The west zone appears to plunge to the west at ~15° and is of a slightly lower grade than the East zone. It is currently defined to a depth of ~120m and abruptly terminates at its western-most edge, possibly due to offsetting by faults. Deeper exploratory holes by URSA Major identified two lenses of mineralization down to ~210m depth. Although more work is required to better define these lenses, they may represent a fault-displaced down-dip extension of the east zone mineralization.

- The east zone plunges ~30° to ~40° east from surface and generally has higher grade mineralization, particularly nearer surface. The mineralized zones currently extends over ~1km and plunges from surface to a depth of ~ 550m. It remains open to the west and the up-dip and down-dip extensions have not been tested by drilling, leaving considerable opportunity to expand the resource.

8 DEPOSIT TYPES

The deposit model for the Shakespeare deposit is described in a Technical Report entitled ñTechnical Report for the Shakespeare Property, Shakespeare Township, Ontario, NTS 41I/5, for URSA Major Minerals Incorporated, Volume 1 of 2ò, a report authored by Eric. A. Kallio, P. Geo., dated November 28, 2002 and filed with SEDAR on December 2, 2002 under URSA Majors profile. The deposit model description has been updated by Jon OÕCallaghan, Consulting Geologist for Magna, to include information from more recent publications (internal report).

Within the area of interest, numerous occurrences of copper and nickel sulphides along with platinum group elements have been identified.

Copper, nickel sulphide mineralization containing platinum group elements (PGEs) and gold is typically associated with gabbroic rocks of the: East Bull Lake, Nipissing and Sudbury Complex Intrusive Suites. Mineralization also occurs to a lesser degree in Huronian metavolcanic and metasedimentary rocks. Mineralization typically occurs as fine disseminations of magmatic pyrrhotite, chalcopyrite and pentlandite with some of the sulphides exhibiting magmatic blebby textures.

Deposit models for the area include the Nipissing model, (Lightfoot, P. G. and Naldrett, A. J., 1996) and the Sudbury Offset model proposed by Lewis, C. L. (1949) and Sutcliffe, R. H, (2002).

The Nipissing model is based on the recognition of close spatial relationships of nickel, copper and platinum group elements with the Nipissing Diabase, (Lightfoot, 1996). Significant observations regarding mineralization according to the Nipissing model are described in Lightfoot, (1996) and include the following:

- Magmatic nickel, copper and PGE mineralization is spatially associated with Nipissing intrusions [which] lie on a trend which extends from Whitefish Falls to River Valley,

- The sulphides occur as fine disseminations of magmatic pyrrhotite (50 - 75%) with lesser chalcopyrite and pentlandite,

- The disseminated sulphides tend to be localized in the interior of the sills, (100 - 300 m above the base), within coarse grained gabbro-norites and hypersthene rich gabbros,

- Sulphides occurring locally as basal concentration can carry 1 - 15 % copper, 2.5 - 6.3 ppm Pt, 17 - 53 ppm Pd and 1 - 6 ppm Au (i.e. Wanapetei Intrusion).

The Sudbury offset model considers that mineralization to be related to radial dykes extending outwards from the Sudbury Igneous Complex. Key characteristics for mineralization related to offset dykes are discussed in Dressler (1991). Economic mineralization within offset dykes is typically spatially associated with inclusion rich quartz-diorite and local thinning. Sulphides often form blebs in the quartz Norite matrix. Past studies indicated a possible zoning in ore composition characterized by an increase in chalcopyrite content with increasing distance from discontinuities in the dyke, Cochrane (1984). According to Lewis (1949) some of the rocks surrounding the Shakespeare deposit contain similarities in texture, composition and mineral content to rocks of the Worthington and Copper Cliff offset dykes.

Radiometric age dating appears to eliminate the possibility of a Sudbury offset model as the intrusive hosting the mineralization is some 400 million years too old and defines the Shakespeare deposit as being hosted in Nipissing-aged intrusions.

The Shakespeare deposit has recently been interpreted to represent a new style of mineralization for the Nipissing Gabbro with Ni-Cu-PGE mineralization hosted inside the intrusion (Sproule et al. 2007).

The intrusion is a complex differentiated sill approximately 14 km in strike length and approximately ~300 to ~430 in thickness. It comprises two distinct magmatic packages: 1) a Lower Group composed of unmineralized pyroxenite and gabbro, and 2) an Upper Group composed of mineralized melagabbro, quartz gabbro, and biotite quartz gabbro-diorite.

The Shakespeare intrusion formed from a tholeiitic parental magma (Sproule,et al., 2007). All of the rocks in the intrusion are enriched in LREE relative to MREE and HREE, enriched in highly incompatible lithophile elements (HILE: Cs, Rb, U, Th, Nb, Ta, LREE) relative to moderately incompatible lithophile elements (MILE: Zr, Ti, HREE) and are strongly depleted in Nb and Ti relative to elements of similar incompatibility. These geochemical characteristics suggest that the Shakespeare magma underwent extensive degrees of crustal contamination prior to emplacement. Although other parts of the Nipissing Gabbro suite exhibit similar geochemical characteristics, the Shakespeare intrusion is more enriched in HILE and more strongly depleted in Nb-Ti, and therefore appears to have undergone greater degrees of crustal contamination.

Heavily disseminated to patchy net-textured (10-15%) Fe-Cu-Ni sulfides (pyrrhotiteï chalcopyriteï pentlandite) occur in the upper zone of the melagabbro near and at the contact with the overlying quartz gabbro and in the melagabbro dykes. The mineralized zone contains abundant inclusions of quartzite, blue quartz eyes, and rare diorite. The ores have compositions consistent with having been derived from the Shakespeare magma and to have equilibrated at moderate magma:sulfide ratios (500-1000).

The Ni-Cu-PGE mineralization in the Shakespeare deposit appears to have resulted from the following processes:

- Generation of Nipissing magmas in the mantle,
- Contamination of Nipissing magmas by continental crust en-route through the crust,
- Introduction and crystallization of contaminated but sulfide-undersaturated magmas into the Shakespeare intrusion, forming the Lower Group,
- Further, and apparently relatively local crustal contamination and sulfide saturation, of Nipissing magmas, resulting in the incorporation of abundant xenoliths of country rocks and the generation of moderate amounts of Ni-Cu-(PGE) sulfide melt, and,
- Introduction of the xenoliths and sulfide-bearing magma into the Shakespeare intrusion, forming the Upper Group, with heavier sulfides settling at the base of the new crystallization floor resulting in low-moderate R factor values. (Sproule et al. 2007; Dastil 2014).

The elevated U-Th content of the gabbroic rocks hosting the Shakespeare deposit suggests sulphide saturation was reached by assimilation of U-Th-rich crustal material. The proximal pyritic-quartz-pebble-conglomerates of the Matineda Formation are rich in uranium, thorium and are proposed as the source for the crustally-derived sulphur (Dastil 2014).

9 EXPLORATION

Since acquisition of the Property in 2017, Magna has only completed a single limited drill program which is described in Section 10 below. All other exploration on the Property has been completed by other issuers and is described in Section 6: History.

10 DRILLING

Magna completed a drill program in November and December of 2018. Thirteen holes were drilled for a total of 3,740m. Nine of the holes tested conductive plates identified using borehole electromagnetic methods. The remaining 4 holes were designed to provide more information about the resource, improve confidence through conversion of category, and provide material for metallurgical testing. A summary of collar information and targets is shown in

Table 10-1.

Drilling of the borehole electromagnetic targets systematically intersected zones of blebby to net-textured sulfides, confirming that the electromagnetic method is sensitive in the identification of extensions of mineralization. The in-fill drilling confirmed previous records of wide intervals of mineralization. Grades encountered in the in-fill holes are comparable to those of the overall deposit (Table 10-2). Interpretation of the data shows a general transition towards sulfides richer in Ni relative to Cu towards the west and towards lower elevations in the mineral zone (Figure 10-1). The data for the in-fill holes also indicate that there is a narrow (<5m) halo of PGE-enrichment within the footwall of mineralized gabbroic rocks.

Hole MMC-18-01 was targeted to evaluate the potential up-dip extension of mineralization towards a known magmatic sulfide occurrence at the surface in the eastern mineral zone. The hole was designed to investigate the potential to add to the pit resource at higher elevation where the material is presently classified as waste rock. Trace amounts of disseminated sulfide within Nipissing gabbro were intersected, but comparable melagabbro host rocks to those of the deposit were not encountered. Further work is required to investigate the linkages between the East Zone and the surface occurrence of mineralization.

Holes MMC-18-03, 07 and 09 targeted a borehole electromagnetic plate that extends beyond the base of the shallow portion of the eastern pit (Figure 10-1). Mineralized intersections were shorter than those of the main East Zone, but the data (Table 10-2) indicate that mineralization extends along the down-dip flank at 60-80m distance from the edge of the resource, with potential to impact pit design once remodeling of the resource is complete.

Holes MMC-18-02, 04-06, 13 were drilled to test the continuity of a conductive plate located between the east and west pits; this domain is termed the ñLink Plateò (Figure 10-1). All of the holes intersected mineralization with the shortest intersection being 10.81m (Table 10-2). The Ni equivalent grades of these holes is lower than that of East pit, but this is consistent with the grade of the resource modelled in the lower portion of the West pit. Interestingly almost all holes drilled in this plate have Ni dominated sulfides (as expressed by higher Ni tenors compared to Cu tenors), and this trend appears to increase with depth and towards the West.

In-fill drilling has confirmed the width and grade of intersections, and at the same time it has increased confidence by reducing drill spacing from 60-70m to 25-40m. These results are used to support a revised resource model for the portion of the pit in the earliest phase of life of mine.

Table 10-1 2018 Drill Hole Summary

Hole ID	Target	Easting83	Northing83	Elevation	Depth (m)	Azimuth	Dip
MMC-18-01	Exploration	436852.23	5133964.50	350.68	401.00	150	-65
MMC-18-02	Link Plate	436169.09	5133605.99	356.38	302.00	125	-45
MMC-18-03	East Plate	436511.02	5133896.64	360.23	435.00	150	-65
MMC-18-04	Link Plate	436168.40	5133605.19	356.24	281.07	140	-45
MMC-18-05	Link Plate	436167.97	5133605.72	356.34	282.01	140	-60
MMC-18-06	Link Plate	436167.14	5133605.10	356.38	281.00	160	-60
MMC-18-07	East Plate	436376.22	5133807.08	377.55	425.75	150	-65
MMC-18-08	In-fill	436403.00	5133599.58	324.07	152.75	150	-60
MMC-18-09	East Plate	436451.32	5133839.90	368.98	400.75	150	-60
MMC-18-10	In-fill	436403.20	5133599.57	324.67	176.75	150	-45
MMC-18-11	In-fill	436490.99	5133646.65	320.06	225.75	140	-65
MMC-18-12	In-fill	436491.26	5133646.36	320.08	200.75	140	-45
MMC-18-13	In-fill/link plate	436294.27	5133522.36	323.24	175.00	130	-45
Total					3,739.58		

Figure 10-1 Inclined section view of drilling intersections. Notice that assays are comparable to pit average at higher elevations and towards the East. Moving West and down samples develop higher Ni than Cu and on average intersection lengths decrease.

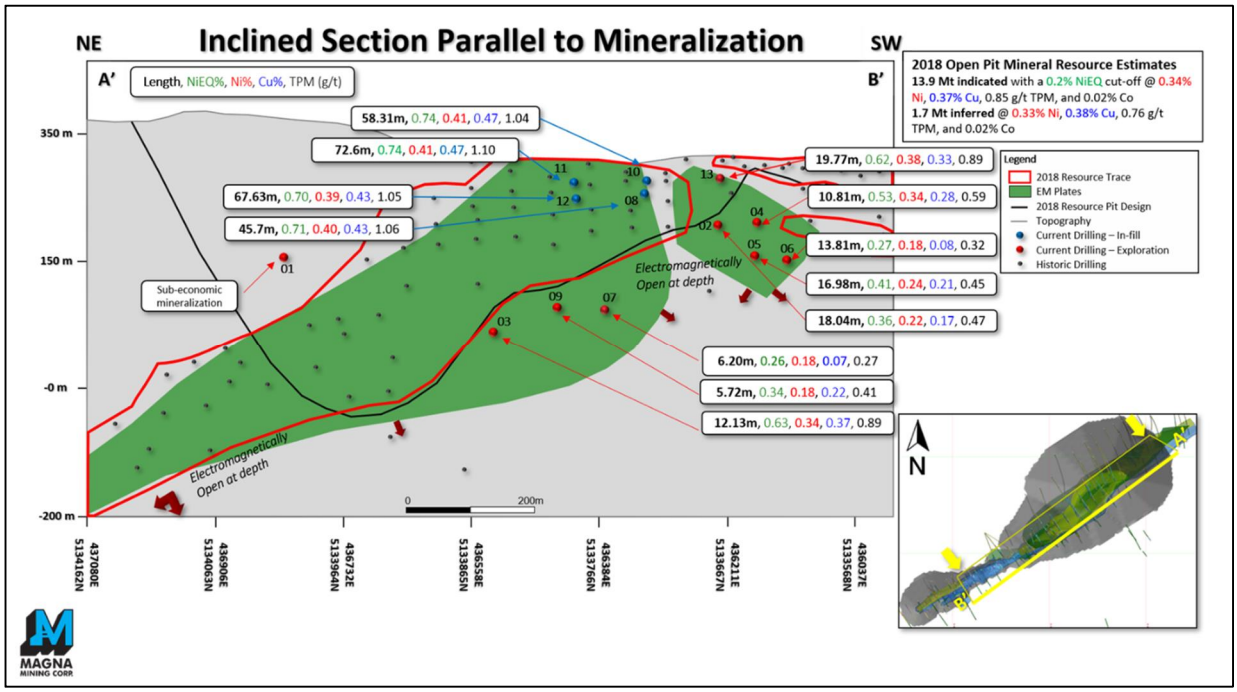


Table 10-2 Summary of Results, Winter 2018 Drill Program

Hole No.	From	To	Length	NiEQ	Ni%	Cu%	Co%	Au_ppm	Pt_ppm	Pd_ppm
MMC-18-01	NSA									
MMC-18-02	223.5	249.9	18.04	0.36	0.22	0.17	0.02	0.09	0.20	0.17
MMC-18-03	359.68	371.81	12.13	0.63	0.34	0.37	0.03	0.21	0.33	0.35
MMC-18-04	194.52	205.33	10.81	0.53	0.34	0.28	0.02	0.11	0.24	0.24
MMC-18-05	240.62	257.6	16.98	0.41	0.24	0.21	0.02	0.08	0.20	0.19
MMC-18-06	247	260.81	13.81	0.27	0.18	0.08	0.02	0.04	0.14	0.14
MMC-18-07	347.09	353.29	6.2	0.26	0.18	0.07	0.02	0.06	0.13	0.09
	382.51	383.73	1.22	0.42	0.34	0.12	0.03	0.01	0.06	0.03
MMC-18-08	93.8	139.5	45.7	0.71	0.40	0.43	0.03	0.23	0.39	0.43
MMC-18-09	324.45	330.17	5.72	0.34	0.19	0.23	0.02	0.11	0.13	0.17
MMC-18-10	87.78	146.09	58.31	0.74	0.41	0.47	0.03	0.21	0.39	0.44
MMC-18-11	96.78	169.38	72.6	0.74	0.41	0.47	0.03	0.22	0.40	0.48
MMC-18-12	83.67	151.3	67.63	0.70	0.39	0.43	0.03	0.20	0.39	0.46
MMC-18-13	70.63	90.4	19.77	0.62	0.38	0.33	0.03	0.22	0.31	0.36

11 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Sample preparation, analyses and security for the Project prior to acquisition by Magna is described in previous technical reports on the Project. Armitage assumes that the sample preparation, analyses, and security for drilling completed prior to the Magna acquisition has been reviewed and validated by previous authors of resource estimates including Micon, P&E Mining and RPA and has not been reviewed by Armitage for the current resource estimate. Armitage assumes that sample preparation, analysis and security by previous operators was completed in a manner consistent with industry standard sampling techniques at the time.

Bassically the results of prior QA/QC programs to date on the Project indicate there are no significant issues with the drill core assay data. The data verification programs undertaken on the data collected from the Project support the geological interpretations, and the analytical and database quality, and therefore data can support a mineral resource estimation.

11.1 2018 Drill Program

The results of the 2018 Sample Preparation, Analyses, Security and QA/QC program (November-December 2018) have been written up by Marshall Hall of Magna and reviewed by the Author. The results of the 2018 Sample Preparation, Analyses, Security and QA/QC program are detailed in Appendix A.

The results indicate there are no significant issues with the drill core assay data. The data verification program undertaken on the 2018 data collected from the Project support the geological interpretations, and the analytical and database quality, and therefore data can support mineral resource estimation.

12 DATA VERIFICATION

Since acquisition of the Property, exploration by Magna is limited to a single drill program conducted in late 2018 (November-December). All previous drilling has been completed by other issuers and is described in Section 6: History. The Author assumes that the sample preparation, analyses, and security for drilling completed by other issuers prior to the effective date of this report has been reviewed and validated by previous authors of resource estimates including Micon, P&E Mining and RPA and has not been reviewed by Armitage for the current resource estimate. Armitage assumes that sample preparation, analysis and security by previous operators was completed in a manner consistent with industry standard sampling techniques at the time.

12.1 July 2018 Site Inspection and Data Verification

For the current Mineral Resource technical report, Armitage personally inspected the Property on July 30, 2018, accompanied by Jonathan OÕCallaghan, consulting Project Geologist for Magna. Armitage examined several core holes and drill logs. Armitage completed a tour of the Property including the open pit, drill sites, office, and core storage facilities. There is currently no exploration or mining activities on the Property and Magna has completed no exploration on the Property to date.

Data verification and validation for drilling completed on the Property has been completed by previous authors and is described in previous reports by Micon, P&E Mining and RPA. Armitage conducted an independent verification of the assay data in the drill sample database. Approximately 10% of the digital assay records were randomly selected and checked against the laboratory assay certificate reports by Armitage. Armitage reviewed the assay database for errors, including overlaps and gapping in intervals and typographical errors in assay values. In general, the database was in good shape and no adjustments were required to be made to the assay values contained in the assay database.

Verifications were also carried out on drill hole locations, down hole surveys, lithology, SG, trench data, and topography information.

12.2 November 2018 Site Inspection and Data Verification

Armitage conducted a second site visit on November 28 and 29, 2018 accompanied by Marshall Hall, Project Geologist for Magna; Magna was in the process of completing a drill program. Armitage inspected the camp, drill and recent drill sites in the field as well as core security in the field. Armitage also inspected the offices, core logging facilities (located in Sudbury) and reviewed the logging and sampling procedures and core sample security. Armitage examined several recent core holes, and accompanying drill logs and assay certificates; assays were examined against drill core mineralized zones.

Armitage conducted verification of the laboratories analytical certificates and validation of the Project digital database supplied by Magna for errors or discrepancies. A minimum of 10% of the digital assay records were randomly selected and checked against the laboratory assay certificates. Verifications were carried out on drill hole locations (i.e. collar coordinates), down hole surveys, lithology, SG and topography information. There were no errors noted in the database.

12.3 Conclusion

All geological data has been reviewed and verified by Armitage as being accurate to the extent possible and to the extent possible all geologic information was reviewed and confirmed. There were no errors or issues identified with the database. Armitage is of the opinion that the database is of sufficient quality to be used for the current resource estimate.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The following description of Mineral Processing and Metallurgical Testing for the Property has been extracted from previous reports. Magna has not complete mineral processing or metallurgical testing on the Property

Three phases of metallurgical testing were conducted by SGS Lakefield Research (ñSGS Lakefieldò) during the development of the Shakespeare project. These test work programs are termed: 2003 test work; 2004 test work; and 2005 test work.

The 2003 test work comprised preliminary flow sheet development including mineralogy, bulk flotation and an initial look at nickel-copper separation.

The metallurgical test work in 2004 was designed primarily on the premise that all production would be toll milled at the Strathcona concentrator of Falconbridge, ON. Accordingly, testing was focused on providing satisfactory proof that the metallurgical characteristics of the Shakespeare deposit would allow its treatment in that concentrator, either alone or mixed with Falconbridge ore. This test work program included a series of locked cycle flotation tests.

The 2005 test work program was designed to optimize a process for the on-site beneficiation of ore on site, with the production of a combined (Cu/Ni) concentrate.

13.1 2003 Test Work

Metallurgical testing of the Shakespeare deposit commenced in 2003 at SGS with two composite samples of drill core provided by URSA Major. The assays for the two samples were similar, as shown in Table 13-1.

Table 13-1 2003 Sample Assays

Sample	Cu (%)	Ni (%)	Fe (%)	Co (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
U3Met1	0.59	0.53	12.3	0.03	0.25	0.57	0.55
U3Met2	0.49	0.44	11.1	0.03	0.25	0.45	0.53

Mineralogical studies and flotation tests were conducted. The mineralogical study concluded that the samples were very similar. Pentlandite and pyrrhotite grains were both found to have a mean size of between 20-30 εm, and chalcopyrite and pentlandite were both found to have a high level of surface exposure (low mineral locking). Approximately 10% of the nickel was in solid solution in the pyrrhotite.

Flotation tests at different grind sizes led SGS Lakefield to recommend 82 εm as the optimum (k80) grind size for nickel, but the flotation test results with sample Met2 were similar at grind sizes of 126 and 82 εm. SGS Lakefield noted that finer grinding seemed to improve platinum group metal (PGM) recovery but not nickel recovery.

Initial tests (F1 to F6) produced low-grade bulk concentrates due to excessive pyrrhotite recovery. Later tests with addition of lime improved pyrrhotite rejection, and hence final concentrate grade, without significant nickel recovery loss. However, as seen in Table 13-2, for staged recovery after 7 minutes roughing, there appears to be little advantage to the more selective flow sheet at the roughing level, and PGM recovery is also adversely affected.

Subsequent tests employed cleaning of the rougher concentrate to obtain a final bulk concentrate, with the target of >20% combined copper + nickel. Copper recovery was maintained during cleaning but nickel recovery fell steeply as the grade increased. Attempts to improve performance by regrinding the rougher

concentrate and the use of pyrrhotite depressants were not successful. Test F10 indicated the best conditions. A copper-nickel separation in tests F13 and F14 yielded copper concentrates with up to 25% Cu but with unacceptably high nickel content. Summary results are shown in Table 13-3.

At the conclusion of the 2003 work, SGS Lakefield recommended a further mineralogical study to investigate nickel losses in cleaning and development of a less selective flotation upgrading scheme.

Table 13-2 Comparison Rougher Flotation, Tests F2 and F9 (2003)

Test	Sample	Product	Wt. (%)	Grade (%)			Recovery (%)			
				Cu	Ni	Cu+Ni	Cu	Ni	Pt	Pd
F2	U3Met2	7 min. Ro.	8.6	7.74	5.56	13.30	96.7	86.8	85.7	61.6
F9	U3Met2	7 min. Ro.	6.1	7.36	5.23	12.59	96.5	84.1	70.5	48.4
		Feed	100.0	0.48	0.39					

Table 13-3 Cleaning Flotation Tests (2003)

Test	Sample	Product	Grade (%)		Recovery (%)			
			Cu	Ni	Cu	Ni	Pt	Pd
F10	U3Met2	Bulk Cleaner -2 Conc.	13.50	8.80	93.5	68.8	68.7	27.6
		Ro Conc.	6.23	4.44	96.2	77.6	77.3	49.9
		Feed	0.47	0.41				
F14	U3Met2	Cu Conc.	25.10	3.94	90.0	16.8	9.5	10.3
		Cu-Ni Cleaner Conc.	7.16	5.05	96.5	81.0	81.6	53.0
		Feed	0.48	0.40				

13.2 2004 Test work

The metallurgical test work in 2004, conducted at the SGS laboratory in Lakefield, was designed primarily on the premise that all production would be toll milled at the Strathcona concentrator of Falconbridge (now Glencore Xstrata). Accordingly, testing focused on providing satisfactory proof that the metallurgical characteristics of the Shakespeare deposit would allow its treatment in that concentrator, either alone or mixed with Falconbridge ore, and to yield (i) acceptable concentrates for the Falconbridge smelter, and (ii) economic recovery levels of copper, nickel, cobalt and platinum group metals.

The primary grind size and flotation process were selected to mimic those of the Strathcona concentrator. Samples from drill cores of the Shakespeare deposit were collected and combined to form a number of composites. Five composites of the two main geological zones, (blebby and disseminated), were prepared and assayed, then combined to form main composites. Within each group of five zonal composites the content of each metal is extremely consistent, but there is some variation between the blebby and disseminated zone samples. The average content of the zone and main composites are shown in Table 13-4.

Table 13-4 2004 Composite Sample Assays

Composite	Cu (%)	Ni (%)	Fe (%)	S (%)	Au (g/t)	Pt (g/t)	Pd (g/t)
Blebby 1-5 av.	0.39	0.34	11.1	2.00	0.20	0.37	0.40
Disseminated 1-5 av.	0.42	0.50	14.3	4.28	0.34	0.48	0.50
Master Comp 1-5 av.	0.43	0.39	11.5	2.46	0.21	0.33	0.42

The first phase of the 2004 program examined the response of the Shakespeare ore following the processing scheme employed at the Strathcona mill and using the same reagent scheme. The sample was ground to an average of 140 εm (80% passing size, also employed for all following tests), prior to flotation with reagent additions of lime, xanthate, copper sulphate and frother added at various stages. After recovery of most of the copper and nickel to a bulk concentrate, additional nickel recovery was obtained by extended flotation of middlings products, regrinding of this product and re-flotation. The bulk concentrate was re-treated to separate copper and nickel concentrates. The flow sheet is illustrated in Figure 13-1. Copper and nickel recoveries by the above scheme were acceptable but the low nickel content of the feed prevented attainment of a suitable concentrate grade.

In follow up work, the Lakefield flow sheet and conditions were tested on a sample of Strathcona ore. Recoveries were acceptable but, even with this sample, nickel concentrate showed a low final grade. The test was repeated with different blends of the two ore samples, and results are summarized in Table 13-5. For comparison, summary results only are shown for copper and nickel recovery. Nickel recovery in similar concentrate grades appears to be strongly dependent on the feed content, and all tests show difficulty in producing a concentrate grade consistently at or above 10% nickel.

Subsequent testing examined the possibility of increasing the concentrate grade and maintaining acceptable recovery by additional copper cleaning. Results were marginally improved but nickel concentrate grade versus recovery was still seen to be sensitive. The results for Test F20 are presented in Table 13-5.

Figure 13-1 Testing Flow Sheet

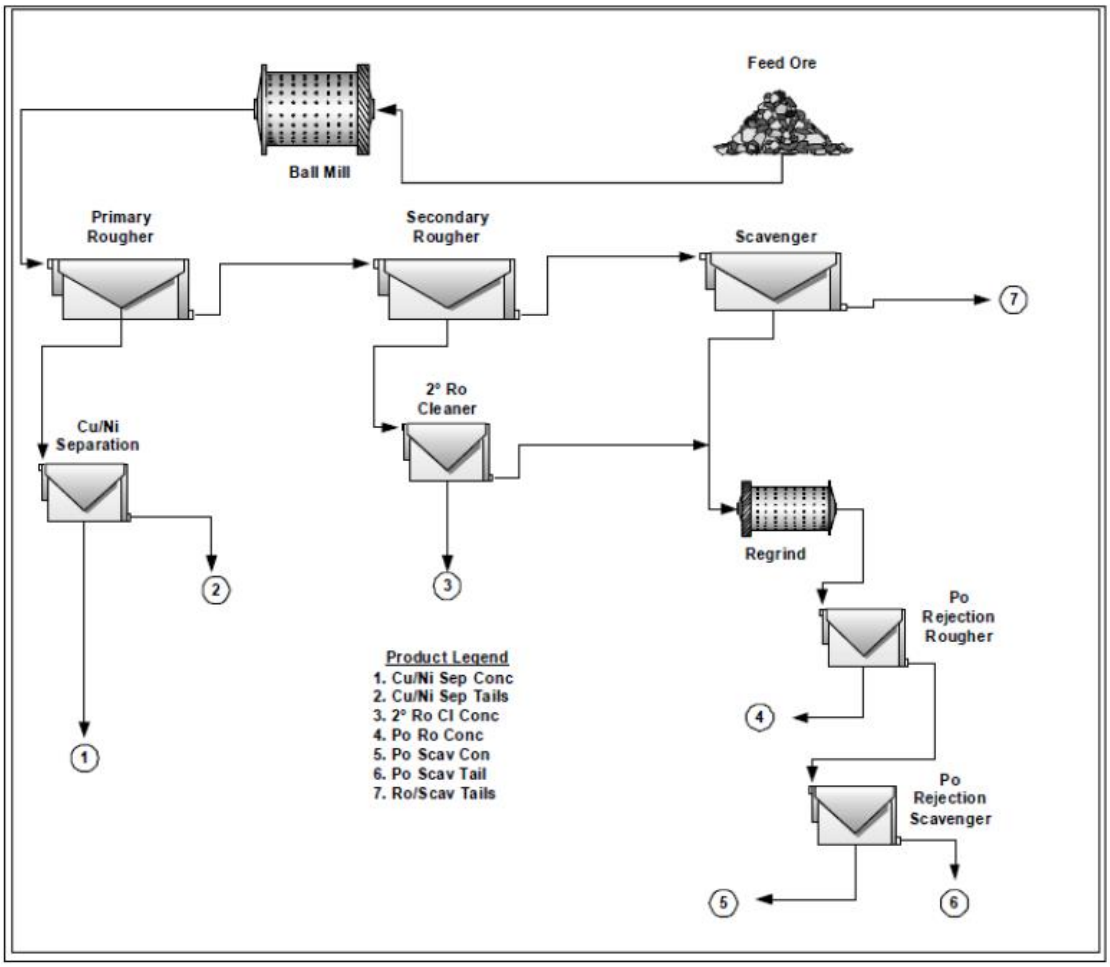


Table 13-5 2004 Tests - Summary of Results

Test	Blend Shakes:Strath	Product	Grade (%)		Recovery %	
			Cu	Ni	Cu	Ni
F4	0:100	Cu conc	19.00	1.91	86.8	4.5
		Ni conc	0.28	4.98	10.0	91.8
		Feed	0.78	1.53		
F5	60:40	Cu conc	11.70	2.44	88.5	12.2
		Ni conc	0.28	4.11	8.4	81.7
		Feed	0.56	0.85		
F6	40:60	Cu conc	17.00	1.92	87.0	5.9
		Ni conc	0.30	4.47	9.9	89.1
		Feed	0.64	1.06		
F7	20:80	Cu conc	16.90	2.31	85.9	6.4
		Ni conc	0.29	4.33	11.2	89.7
		Feed	0.70	1.29		
F20	100:0	Cu conc	21.20	1.05	85.7	4.5
		Ni conc	0.78	6.36	8.8	74.9
		Feed	0.42	0.40		

13.2.1 2004 Locked Cycle Tests

Locked cycle tests were conducted together with analysis of cobalt and PGMs on combined concentrates. Four or five cycles were employed with conditions similar to those established in the most recent batch tests. A full locked cycle test was completed for each of the blebby, disseminated and master composites. Copper and nickel performances in these tests were not significantly different from those in the better batch tests. It appears that while a concentrate grade of 10% Ni is obtainable, a nickel recovery of 65-68% would ensue. Results shown in Table 13-6 are compared by adding the lower grade products from the secondary recovery steps, reducing the concentrate grade to a level in the order of 5-7%, but maximizing recovery of nickel and the minor payable elements.

13.2.2 Bulk Concentrate Tests

Additional tests were completed within the 2004 test program to examine process options. In test F29, a bulk concentrate was produced with correspondingly improved copper and nickel recoveries. For a combined copper +nickel grade of 16.9%, prior to final cleaning, the respective recoveries were 92.8% and 76.3%. Summary results are shown in Table 13-7.

The conclusions from the 2004 test work program were:

- Production of a nickel concentrate containing about 10% nickel (i.e., the Glencore Xstrata Strathcona Mill) from Shakespeare ore does impact the recovery and a lower grade concentrate may be a better target;
- Retreatment of the primary copper concentrate will improve nickel rejection and, hence, overall nickel recovery;
- Predicted optimum metal recoveries for project economic evaluation, based on a copper concentrate of about 18% copper and a nickel concentrate of about 7% nickel, were:
    - Copper 94%, Nickel 75%, Cobalt 71%, Gold 34%, Platinum 65%, Palladium 40%

Table 13-6 Locked Cycle Test Results (2004)

Test	Blend Shakespeare	Product	Grade (%)		Recovery (%)	
			Cu	Ni	Cu	Ni
LCT-1	Blebby	Cu conc*	14.00	1.20	86.8	6.2
		Ni conc	0.38	5.21	6.4	78.5
		Feed	0.39	0.48		
LCT-2	Disseminated	Cu conc	20.90	1.35	84.8	6.1
		Ni conc	0.99	7.89	7.7	67.9
		Feed	0.37	0.33		
LCT-3	Master Comp1	Cu conc	18.90	1.47	87.2	7.4
		Ni conc	1.04	9.22	7.3	70.3
		Feed	0.42	0.38		
Test	**Blend Shakespeare**	**Product**	**Cobalt and PGM Recovery (%)**			
			Co	**Au**	**Pt**	**Pd**
LCT-1	Blebby	Cu conc	6.1	19.7	10.1	13.6
		Ni conc	76.4	24.0	71.4	33.2
		Total	82.5	43.7	81.5	46.8
LCT-2	Disseminated	Cu conc	6.8	9.3	13.4	7.3
		Ni conc	58.3	17.0	47.7	22.5
		Total	65.1	26.3	61.1	29.8
LCT-3	Master Comp1	Cu conc	8.7	13.8	20.3	12.6
		Ni conc	62.5	20.0	42.9	26.4
		Total	71.2	33.8	63.2	39.0

* Test LCT-1 appeared to be unstable and with possibly too much collector added. Copper concentrate grade varied from above 18% to 13%, 14% being the weighted average of the last two cycles, but is not likely the optimum from this sample.

Table 13-7 Bulk Concentrate Test F29 (2004)

Test	Blend Shakespeare	Product	Grade (%)			Recovery (%)	
			Cu	Ni	Cu+Ni	Cu	Ni
F29	Composite	Bulk cl. conc	11.60	8.60	20.20	89.8	72.5
		Bulk ro. Conc	9.64	7.27	16.91	92.8	76.3
		Feed	0.44	0.40			

13.3 2005 Test work

The 2005 metallurgical test program was also conducted at SGS Lakefield. The objective of this work was to develop a feasibility flow sheet and process design criteria for an on-site beneficiation facility. The aim

of the testing program was to develop an optimized process route to maximize nickel, copper and PGM recovery to a single concentrate with a target combined copper and nickel content of between 15 to 20%.

The 2005 feasibility study test work program comprised both flow sheet development and variability test programs, including grindability work, mineralogical investigations and bench scale flotation tests.

13.3.1 Metallurgical Samples

The samples used in this test program were selected and prepared on-site by URSA Major personnel. The samples included a single metallurgical composite and five grindability samples. The metallurgical composite sample was made up from 200 m of quarter NQ core weighing approximately 240 kg. Details of this sample are included in Table 13-8.

Samples for grindability testing were selected to include a variety of the typical mineralization that occurs at Shakespeare. These samples, measuring 2 to 6 inches in diameter and weighing a minimum of 20 kg each, included the scattered and interconnected blebby styles of pyrrhotite (po) and chalcopyrite (cpy) mineralization in Shakespeare quartz gabbro, and disseminated styles of po and cpy mineralization in the Shakespeare rock fragment bearing and the massive-equigranular melagabbro. A description of the five grindability samples is presented in Table 13-9.

A series of SAG mill tests were conducted on a bulk sample consisting of 390 kg of material crushed to minus 150mm material. This bulk sample comprised near surface mineralization selected from five locations on the property.

The program to determine the metallurgical variability was performed on a set of 19 samples. The first eight samples, identified as sample numbers SVMLO-1 to 8, were near-surface samples, the remaining 11 samples, identified as sample numbers SVMDC-1 to 11, were split diamond drill core. Table 13-10 shows the location of these samples.

Table 13-8 Metallurgical Composite Sample (2005)

Hole No	Location	Interval (m)		Length (m)	Assay (%)		Weight (kg)
		From	To		Ni	Cu	
U-03-55	11+00E / 1+16N	123.1	144.4	21.3	0.37	0.39	26
U-03-59	17+00E / 7+65N	337.2	384.9	47.7	0.37	0.43	57
U-03-60	21+00E / 8+74N	383.8	444.9	61.1	0.44	0.42	73
U-03-61	25+15E / 8+65N	413.3	463.6	50.3	0.39	0.39	60
U-03-63	21+00E / 10+49N	433.7	451.1	17.4	0.34	0.41	21

Table 13-9 Grindability Samples (2005)

Sample No.	Location UTM Coordinates	Description
98825	0435888E / 5133221N	Blebby po and cpy in quartz gabbro (4c) type B1/B2 mineralization
98826	0435882E / 5133275N	Disseminated po and cpy in melagabbro (4b) type D1 mineralization
98827	0435976E / 5133282N	Disseminated and blebby po and cpy in melagabbro (4f), transitional slightly altered mineralization types D1/D1S/B1
98828	0436041E / 5133326N	Disseminated and blebby po and cpy in melagabbro (4f), transitional strongly altered mineralization types D1/D1S/B1
98829	0436241E / 5133428N	Disseminated po and cpy in melagabbro (4f/4b) slightly altered type D1 mineralization

Table 13-10 Metallurgical Variability Samples (2005)

Sample No.	Location UTM Coordinates			Description
	UTM - N	UTM - E		
SVMLO-1	5133221	0435888		Near surface sample, (150mm) Lump Ore
SVMLO-2	5133275	0435882		Near surface sample, (150mm) Lump Ore
SVMLO-3	5133282	0435976		Near surface sample, (150mm) Lump Ore
SVMLO-4	5133326	0436041		Near surface sample, (150mm) Lump Ore
SVMLO-5	5133428	0436241		Near surface sample, (150mm) Lump Ore
SVMLO-6	5233221	0435888		Near surface sample, (150mm) Lump Ore
SVMLO-7	5133377	0436109		Near surface sample, (150mm) Lump Ore
SVMLO-8	5133600	0436538		Near surface sample, (150mm) Lump Ore
Sample No	**Hole No**	**From (m)**	**To (m)**	**Description**
SVMDC-1	U-03-66	1.18	11.04	Diamond drill core
SVMDC-2	U-03-66	11.04	20.9	Diamond drill core
SVMDC-3	U-03-69	33.8	68	Diamond drill core
	U-03-70	4.75	11.17	
	U-03-71	25.7	34.7	
SVMDC-4	U-03-69	68	102.2	Diamond drill core
	U-03-70	11.17	17.6	
	U-03-71	34.7	43.7	
SVMDC-5	U-03-74	90.5	103.65	Diamond drill core
	U-03-75	89.4	117.5	
	U-03-76	180.2	185.35	
SVMDC-6	U-03-74	103.65	116.8	Diamond drill core
	U-03-75	117.5	145.6	
	U-03-76	185.35	190.5	
SVMDC-7	U-03-82	90	127.1	Diamond drill core
	U-03-79	62.2	68.55	
SVMDC-8	U-03-82	127.1	164.2	Diamond drill core
	U-03-79	68.55	74.9	
SVMDC-9	U-03-83	49.5	90.3	Diamond drill core
SVMDC-10	U-03-36	76.46	78.46	Diamond drill core
	U-03-36	81.3	82.3	
	U-03-36	85.25	88.25	
	U-03-36	89.25	92.25	
	U-03-36	93.25	97.25	
	U-03-40	49.69	77.55	
SVMDC-11	U-03-29	137.94	145.58	Diamond drill core
	SVMDC-11	226.25	242.3	
	SVMDC-11	207	221	

13.3.2 Characterization

The main economic element assays for the metallurgical composite sample are reported in Table 13-11 and the multi minor elements in Table 13-12.

Table 13-13 presents the results of a qualitative x-ray diffraction (XRD) analysis performed on a sample of the metallurgical composite. The relative proportions of crystalline mineral assemblages shown in Table 13-13 are based on relative peak heights. The results do not reflect the presence of non-crystalline / amorphous compounds.

A metallurgical composite rapid mineral scan data report was provided by SGS. This report presented semi-qualitative indicative information on the ore mineralogy. A summary of these results is included in Table 13-14. These results, although not fully quantitative, indicate fairly good liberation of sulphide minerals at a grind size of 80% passing 75 εm and no significant evidence of problematic pentlandite - pyrrhotite flames. The results from mineralogical test work completed during the 2005 pre-feasibility test work program tended to support previous work, which indicated that chalcopyrite and pentlandite have a relatively low level of mineral locking and that approximately 10% of the nickel is in solid solution in the pyrrhotite.

Table 13-11 Metallurgical Composite (2005) Feed Major and Minor Element Analysis

Cu (%)	Ni (%)	S (%)	Fe (%)	Co (%)	Pt (g/t)	Pd (g/t)	Au (g/t)
0.42	0.37	2.45	11.79	0.02	0.34	0.41	0.21

Table 13-12 Metallurgical Composite (2005) Feed Minor Element Analysis

Element	Units	Value	Element	Units	Value	Element	Units	Value
SiO2	%	49.4	Ag	g/t	< 3	Mn	g/t	1,100
Al2 O3	%	13.3	Al	g/t	66,000	Mo	g/t	< 8
Fe2 O3	%	17.5	As	g/t	130	Na	g/t	12,000
MgO	%	7.14	Ba	g/t	170	Ni	g/t	3,500
CaO	%	6.89	Be	g/t	< 0.3	P	g/t	240
Na2O	%	1.69	Bi	g/t	< 20	Pb	g/t	< 25
K2O	%	0.77	Ca	g/t	43,000	Sb	g/t	< 10
TiO2	%	0.73	Cd	g/t	< 4	Se	g/t	< 30
P2O5	%	0.07	Co	g/t	240	Sn	g/t	< 20
MnO	%	0.17	Cr	g/t	170	Sr	g/t	130
Cr2O3	%	0.04	Cu	g/t	3,800	Ti	g/t	3,700
V2O5	%	0.05	Fe	g/t	120,000	Tl	g/t	< 30
LOI	%	2.82	K	g/t	7,800	V	g/t	220
			Li	g/t	< 8	Y	g/t	11
			Mg	g/t	42,000	Zn	g/t	100

Table 13-13 Metallurgical Composite (2005) Summary of Qualitative X-ray Diffraction Analysis

Major	Moderate	Minor	Trace
Chlorite	Actinolite	Calcite	Rhodochrosite
Quartz	Mica	Pyrite	Montmorillorite
	Plagioclase - feldspar	Mordenite	
		Magnetite	
		Pyrrhotite	

Table 13-14 Summary of Results from SGS Rapid Mineral Scan

Mineral	Abundance	Liberation		
		Liberated	Attached	Locked
Arsenopyrite	0%	100%	0%	0%
Pyrite	6%	0%	0%	0%
Chalcopyrite	12%	74%	10%	16%
Pyrrhotite	80%	82%	7%	11%
Pentlandite	3%	62% [1]	0%	0%

13.3.3 Grindability Test Work

The abrasion index of the metallurgical composite, determined by using the standard Bond abrasion test procedure, was 0.2909. This material would be considered as moderately abrasive.

The metric Bond rod mill index of the metallurgical composite, determined by SGS, was 16.9 kWh/t.

The Bond ball mill work indices for the various grindability samples and the metallurgical composite are listed in Table 13-15. It is noted that the two disseminated samples, 98826 and 98829, have relatively high work indices.

Table 13-15 Bond Ball Mill Work Indices

Sample	BWI –metric (kWh/t)	80% Passing Size (µm)	
		Feed (F_{80})	Product (P_{80})
Metallurgical composite	13.5	2,170	119
Sample No. 98825	14.9	2,200	120
Sample No. 98826	15.7	2,161	122
Sample No. 98827	13.5	2,234	116
Sample No. 98828	11.0	2,125	120
Sample No. 98829	15.9	2,307	119

As a comparison, the metric Bond ball and rod indices for the ñShakespeare Compositeò sample, determined during the 2004 test work program, were 12.6 and 15.9 kWh/t, respectively.

The five grindability samples listed in Table 13-15 were submitted to MinnovEX Technologies Inc. (MinnovEX) for a preliminary design of the Shakespeare grinding circuit based on CEET® (Comminution Economic Evaluation Tool) technology. The goal was to achieve an average tonnage throughput of 204 tph at an average P_{80} of 80 εm. in an advanced grinding design and performance predicting tool that uses the SPI® energy relationship and Bondôs third theory of comminution to model the energy performance of Semi-Autogenous Grinding (SAG) / ball mill circuits.

The samples submitted to MinnovEX were too fine for a full SPI® test, therefore the SPI®-Lite test was used with an accuracy estimated at +/-15%. The circuit studied in study contains a SAG Mill (with Crusher) + Ball Mill. A summary of results is presented in Table 13-16.

Table 13-16 Summary of MinnovEX SPI Test work Results

Sample No.	CI	SPI	WI	F_{80}	F_{50}	PCCL	T_{80}	P_{80}	tph	kWh/t (SAG)	kWh/t (Ball)
98825	10	165	14.9	150	68	28	2240	85	205	8.75	11.54
98826	10	152	15.7	150	68	27	2293	85	194	8.40	12.19
98827	10	158	13.5	150	68	28	2267	75	210	8.56	11.27
98828	10	116	11.0	150	68	22	2465	70	224	7.3	10.54
98829	10	187	15.9	150	68	31	2170	85	193	9.3	12.26

A MacPherson test was performed by SGS using the 390kg bulk SAG mill sample. Table 13-17 presents the results from the MacPherson test.

Table 13-17 MacPherson Test Work Results

Feed (kg/h)	Percentile of Hardness	F_{80} (µm)	P_{80} (µm)	Gross Work Index (kWh/t)	Correlated Work Index (kWh/t)	Gross Specific Energy Input (kWh/t)
6.7	81	22,225	174	18.0	15.0	12.4

The test resulted in a MacPherson Autogenous Work Index (Ai) of 15 kWh/t. The Bond rod and ball work index test results for this bulk sample were 16.3 and 13.8 kWh/t, respectively.

The 19 variability samples listed in Table 13-18 were subjected to standard Bond ball mill tests and JK Drop-Weight Tests. The latter is generally used to confirm the breakage response of an ore and to evaluate ore variability. The test determines energy vs. breakage distribution functions. Table 13-18 presents the results from the variability grinding tests.

Table 13-18 Summary of Variability Grinding Test Work Results

Sample Reference	Lithology (see notes)	Ore Density (g/m3)	Drop Weight Test Parameters					kWh/t (Ball)
			A	b	A x b	ta	DWI	
SAG composite	SS	3.05	100	0.22	22.0	0.23	12.4 *	13.8
SAG composite	SS	3.02	100	0.23	23.0	-	11.7	
SVMLO-1	SS	3.10	84.3	0.34	28.7	-	9.5	14.5
SVMLO-2	SS	3.06	81.8	0.34	27.8	-	9.9	15.8
SVMLO-3	SS	3.01	60.6	0.42	25.5	-	10.5	13.3
SVMLO-4	SS	2.97	70.9	0.37	26.2	-	10.2	12.3
SVMLO-5	SS	3.00	80.8	0.28	22.6	-	11.7	14.9
SVMLO-6	SS	3.22	72.9	0.47	34.3	-	8.5	14.4
SVMLO-7	SS	3.00	50.9	0.60	30.5	-	8.8	13.8
SVMLO-8	SS	3.00	74.9	0.33	24.7	-	10.8	14.1
SVMDC-1	DissemS	3.00	74.9	0.33	24.7	-	10.8	14.5
SVMDC-2	Dissem	3.01	66.5	0.37	24.6	-	11.0	13.1
SVMDC-3	Blebby	2.99	66.6	0.37	24.6	-	10.8	13.0
SVMDC-4	Dissem	3.04	59.8	0.40	23.9	-	11.5	12.5
SVMDC-5	Blebby	3.03	52.4	0.52	27.2	-	9.9	12.7
SVMDC-6	Dissem	3.02	74.7	0.32	23.9	-	11.2	13.0
SVMDC-7	Blebby	3.03	76.1	0.28	21.3	-	12.9	11.9
SVMDC-8	Dissem	2.97	63.2	0.41	25.9	-	10.1	13.9
SVMDC-9	Blebby	3.04	100	0.21	21.0	-	13.1	12.2
SVMDC-10	Dissem2	3.03	82.4	0.28	23.1	-	11.8	13.4
SVMDC-11	Dissem3	3.00	100	0.20	20.0	-	13.6	13.0
Disseminated (average)		3.01	66.1	0.38	24.6	-	11.0	13.1
Blebby (average)		3.02	73.8	0.35	23.5	-	11.7	12.5
Average (Total)		3.03	75.9	0.35	25.0	0.23	11.0	13.5
Std. Dev.		0.05	15.1	0.10	3.4	-	1.3	1.0
Relative Std. Dev.		1.8	19.9	29.4	13.4	-	12.3	7.4
Minimum		2.97	50.9	0.20	20.0	-	8.5	11.9
10rd Percentile		2.99	59.8	0.22	21.3	-	9.5	12.3
25rd Percentile		3.00	66.5	0.28	23.0	-	10.1	12.9
Median		3.02	74.9	0.34	24.6	-	10.8	13.3
75th Percentile		3.04	82.4	0.40	26.2	-	11.7	14.2
90th Percentile		3.06	100	0.47	28.7	-	12.9	14.6
Maximum		3.22	100	0.60	34.3	-	13.6	15.8

Notes - Lithology Reference:

SS = Surface Sample

Blebby = exhibit predominantly the blebby styles of po and cpy mineralization

Dissem = exhibit predominantly the disseminated style of po and cpy mineralization

DissemS = represent the typical disseminated style of po and cpy mineralization in the upper part of the Shakespeare project

Dissem2 = exhibit predominantly the disseminated styles of po and cpy with only the occasional scattered blebs of po and cpy mineralization

Dissem3 = exhibit predominantly the disseminated styles of po and cpy, the minor localized occurrences of the blebby styles of po and cpy mineralization

13.3.4 Flotation Test Work

The basis of the 2006 Feasibility Study flotation test work program was the development of a robust, simple mineral processing scheme, employing principally flotation, for the production of a single high-grade Cu/Ni bulk concentrate, containing at least 20% combined Cu and Ni.

The objective of rougher flotation development program was to exploit the differential flotation kinetics between the PGM/Cu/Ni and the pyrrhotite. The concept was to produce a primary fast-floating concentrate, which was expected to contain minimal pyrrhotite and would be cleaned by silicate rejection. This would then be followed by the production of a secondary slow-floating concentrate, which was expected to contain substantially more pyrrhotite. This concentrate would then be cleaned by establishing suitable pyrrhotite rejection chemistry.

The main phases of the bench scale flotation program included the investigations into:

- Rougher and Cleaner flotation kinetics;
- Pyrrhotite rejection in the rougher circuit;
- Effect of primary grind fineness;
- Two stage rougher circuit; and
- Regrinding.

13.3.5 Flotation Test Work Results

Table 13-19 summarizes the results from the first stage of rougher flotation test work. Tests F1 to F6 looked at rougher kinetics, tests F7 to F9 investigated pyrrhotite rejection and tests F11 to F13 considered different primary grind sizes. Tests F11 to F13 used primary grinds of 80% passing (P80) 157, 104 and 60 εm respectively, all other tests used a primary grind (P80) size of 80 εm. All the results are based on a 15 minute concentrate recovery.

A number of rougher flotation tests investigating the two stage rougher circuit were performed during the test work program. These results are summarized in Table 13-20.

Table 13-19 Rougher Flotation Test Results

		Conc Grade (%)			Recovery (%)			
Test No	Weight (%)	Cu	Ni	Cu+Ni	Cu	Ni	Pt	Pd
F1	9.62	3.97	3.23	7.19	97.01	85.76	82.60	50.77
F2	8.46	4.27	3.64	7.90	96.10	85.50	80.14	52.28
F3	8.94	4.27	3.41	7.68	96.77	84.83	76.29	50.64
F4	9.60	4.00	3.28	7.28	97.03	87.44	84.82	56.38
F5	9.74	3.92	3.24	7.16	92.97	86.18	89.69	58.65
F6	10.59	3.68	3.00	6.68	93.96	86.36	90.20	60.67
F7	17.34	2.27	1.91	4.18	97.35	86.98	90.43	62.34
F8	12.66	3.14	2.51	5.65	96.81	84.85	76.83	54.14
F9	9.08	4.60	3.48	8.08	96.23	82.26	63.08	47.11
F11	7.26	4.86	3.57	8.44	82.64	71.78	64.91	36.16
F12	8.91	4.03	3.13	7.15	83.11	75.36	76.53	41.65
F13	9.30	4.06	3.19	7.25	97.42	82.35	69.06	48.59

Table 13-20 Rougher Flotation Test Results

Test Number	Primary Rougher Concentrate				Secondary Rougher Concentrate			
	Recovery (%)		Concentrate Grade (%)		Recovery (%)		Concentrate Grade (%)	
	Cu	Ni	Cu	Ni	Cu	Ni	Cu	Ni
F14	91.55	51.06	10.59	5.25	4.86	29.99	0.32	1.74
F15	92.33	55.64	10.52	6.00	4.29	27.04	0.23	1.40
F16	94.10	61.90	8.59	5.16	2.19	20.83	0.14	1.24
F17	92.69	63.49	8.39	5.11	3.19	19.19	0.20	1.09
F18	93.54	59.59	8.65	4.97	3.44	23.17	0.18	1.07
F20	96.75	84.62	3.33	2.58	2.91	14.36	0.17	0.74
F14	86.26	22.19	21.85	4.99	3.22	10.93	3.32	10.00
F15	85.10	9.94	25.14	2.78	2.41	6.76	2.98	7.91
F16	83.17	6.19	28.40	1.93	1.56	7.13	1.67	6.98
F17	88.83	28.84	22.40	6.47	1.86	5.75	2.14	5.89
F18	90.02	16.51	21.90	3.62	1.88	4.30	3.25	6.68
F20	86.16	13.63	26.60	3.72	1.80	5.09	1.10	2.76

13.3.6 Discussion of the Initial Flotation Test Results

These rougher tests indicated that relatively good copper recoveries can be expected, irrespective of the details of the final flow sheet selected. Figure 13-2 plots copper recovery versus pyrrhotite (Po) recovery for these initial rougher tests and some data from the 2004 test work program. As historical work confirmed, nickel is less responsive to flotation, relative to copper.

Approximately 8% of the nickel is estimated to be present in non-sulphide form and, since this is considered to be unrecoverable into any form of sulphide concentrate, the ultimate recovery limit is around 92%. Of this 92%, some nickel is in solid solution in pyrrhotite. This is estimated to be about 4.5% of the total nickel in the composite sample, leaving approximately 87.5% of the remaining nickel in the sample as either as fine pentlandite (Pn) inclusions in pyrrhotite, or as discrete pentlandite particles.

Mineralogy determined that Pn is mainly liberated in the primary rougher concentrate, while the Pn in the secondary rougher concentrate (between the arrows) was 50% liberated and 50% locked with pyrrhotite. Both these observations fit well with the above model.

Figure 13-3 presents the pyrrhotite (Po) verses nickel recovery results from the preliminary rougher test work performed in 2005. The blue (thin) line indicates that nickel is recovered as discrete pentlandite mineralization up to about 75% nickel recovery. Higher recovery than 75% appears to be closely associated with the recovery of pyrrhotite (dotted line). Extrapolating the pyrrhotite recovery to 0% recovery provides an indication of the nickel content in pyrrhotite, which approximates 17% at the 80 εm grind. Of this 17% about 4.5% is solid solution nickel while the remainder (12.5%) occurs as micro-inclusions in pyrrhotite.

Mineralogy determined that Pn is mainly liberated in the primary rougher concentrate, while the Pn in the secondary rougher concentrate (between the arrows) was 50% liberated and 50% locked with pyrrhotite. Both these observations fit well with the above model.

Figure 13-2 Copper to Pyrrhotite Flotation Selectivity

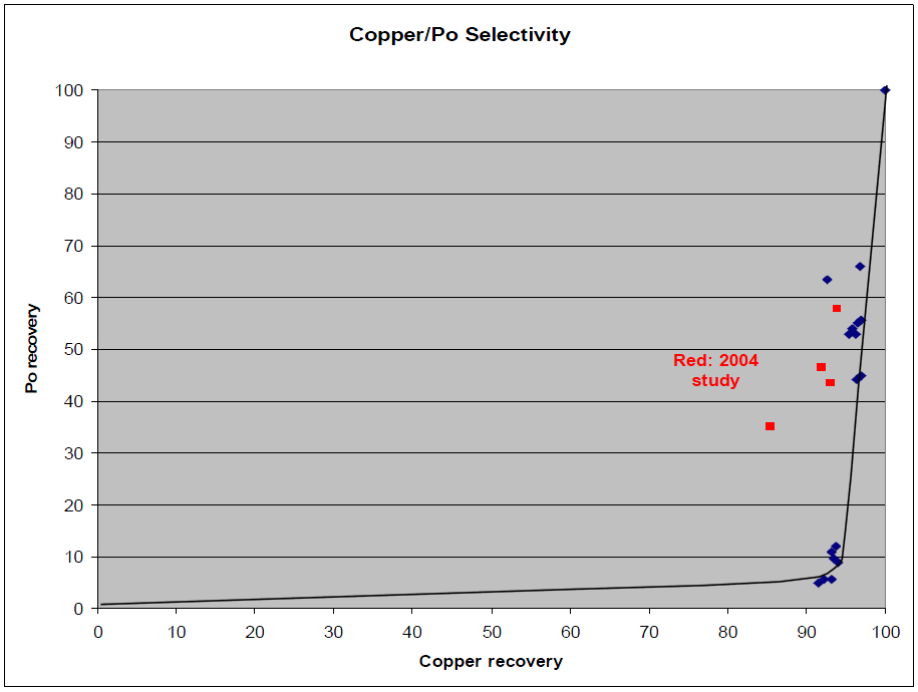
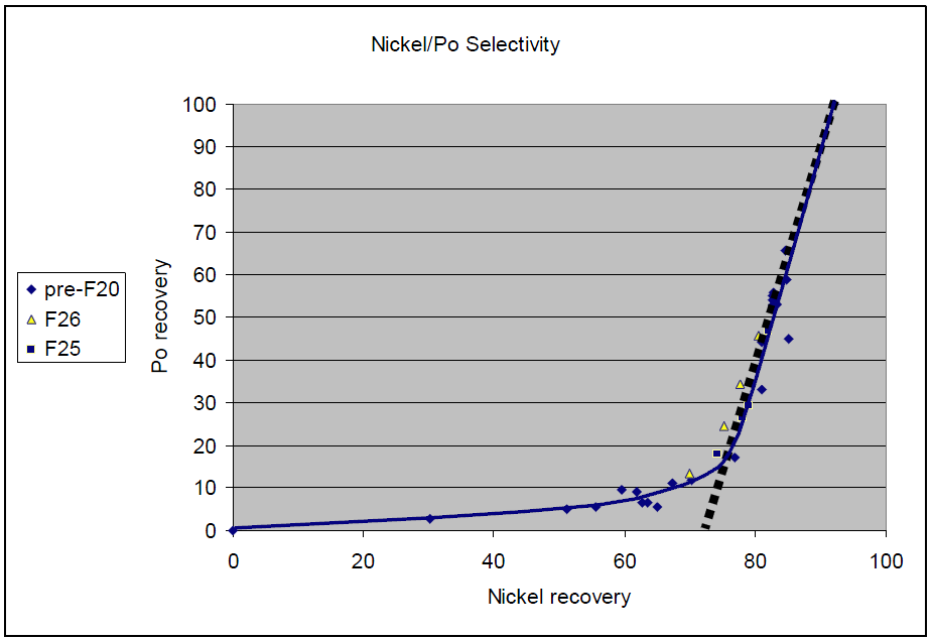


Figure 13-3 Nickel to Pyrrhotite Flotation Selectivity



13.3.7 Locked Cycle Tests

A series of four locked cycle tests targeting a range of concentrate qualities were performed by SGS using the 2005 metallurgical composite sample. The test conditions for these tests are summarized in Table 13-21.

Table 13-22 and Figure 13-4 present the results from the locked cycle tests. SGS concluded that tests F43 was unstable and the results were not indicative of probable plant operation. Results of test F47 were used for metallurgical predictions in the plant design and economic analysis.

The regression curves shown in Figure 13-4 have the following equations and regression coefficients:

%Cu recovery = -0.0028x2 + 0.0032x + 96.704 R2=0.8473
%Ni recovery = -0.0665x2 + 1.069x + 78.684 R2=0.9998
%Pd recovery = -0.1064x2 + 1.4267x + 83.544 R2= 0.999
%Pt recovery = -0.1884x2 + 4.0202x + 31.106 R2 = 0.9964
%Au recovery = -0.1348x2 + 2.6519x + 34.309 R2 = 1.0

A full element scan of a final concentrate produced during locked cycle testing is presented in Table 13-23.

Table 13-21 Summary of Locked Cycle Flotation Test Conditions

	Units	F38	F40	F43	F47
Primary grind (k_{80})	µm	82	82	82	82
Rougher time	Mins.	16	16	16	16
Cleaner 1 time	Mins.	5.5	5	4.5	5.5
Cleaner 2 time	Mins.	3.5	3	2.5	2.5
Cleaner 3 time	Mins.	2	2	2	2
Cleaner 4 time	Mins.	2	2	1.5	1.5
$Ca(OH)_2$	g/t	290	315	390	315
SIPX reagent	g/t	30.5	25	25	30
Aero 3477 reagent	g/t	20	20	20	22.5
CMC reagent	g/t	20	20	20	15
MIBC reagent	g/t	35	32.5	32.5	31.5
Float feed pH	-	9.5	9.5	9.5	9.5

Table 13-22 Locked Cycle Flotation Test Results

Test Number	Wt%	Concentrate Grade (%)				Recovery (%)		
		Cu	Ni	Cu+Ni	S	Cu	Ni	S
F38	5.78	6.51	5.10	11.62	27.80	96.33	82.12	72.69
F40	3.60	10.08	7.22	17.30	25.65	96.15	77.38	46.88
F43	2.37	15.21	8.24	23.45	27.17	95.28	67.22	29.32
F47	3.45	11.67	7.59	19.27	29.38	95.47	74.49	46.59
Test Number	**Wt%**	**Concentrate Grade (g/t)**				**Recovery (%)**		
		Pt	**Pd**	**Au**	-	**Pt**	**Pd**	**Au**
F38	5.78	4.42	3.45	1.81	-	85.71	52.26	46.92
F40	3.60	6.05	4.07	2.35	-	76.82	45.17	39.87
F43	2.37	6.88	3.20	2.32	-	58.62	21.99	22.36
F47	3.45	7.10	4.11	2.08	-	71.10	37.65	35.32

Figure 13-4 Locked Cycle Flotation Test Results

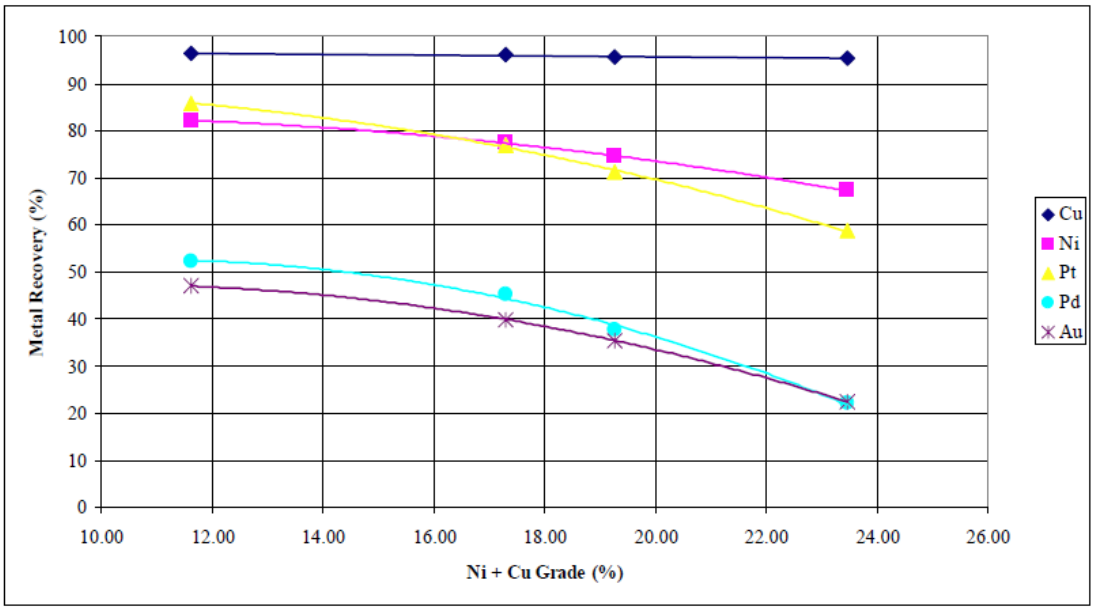


Table 13-23 Full Element Analysis of Shakespeare Flotation Concentrate

Element	Units	Value	Element	Units	Value
Solution XRF			**ICP**		
Cu	%	10.9	P	g/t	<200
Fe	%	29.1	Bi	g/t	<200
Ni	%	7.4	Cd	g/t	<20
Pb	%	0.01	Co	%	0.41
Mo	g/t	138	Al	g/t	10,389
Zn	g/t	331	Ca	g/t	7,993
As	%	0.1	Cr	g/t	152
Sb	%	0.003	Mg	g/t	4,138
U	%	<0.002	Mn	g/t	126
Fire Assay			Si	g/t	37.6
Pt	g/t	6.7	Ti	g/t	552
Pd	g/t	3.7	V	g/t	71.3
Au	g/t	1.7	Na	g/t	2,207
Carbon/Sulphur			K	g/t	1,079
C(t)	%	0.3	**ICP-MS**		
S	%	25.3	Ga	g/t	4.7
Powder XRF			Ge	g/t	2.5
Cl	g/t	50.4	In	g/t	0.8
F	%	<0.005	Te	g/t	82
Cold Vapour AA			Tl	g/t	19.4
Hg	g/t	0.6			

13.4 Variability Test work

The feed grades of the metallurgical variability samples are shown in Figure 13-5 and Table 13-24.

Figure 13-5 Variability Samples Comparison of Ni and Cu Feed Analyses

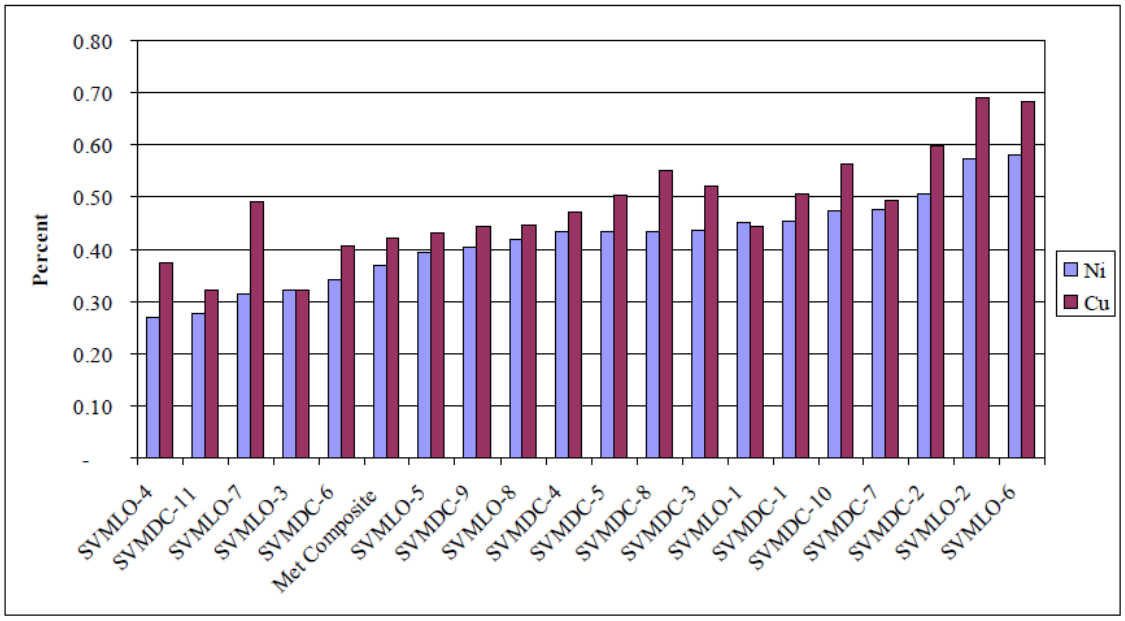


Table 13-24 Variability Samples Head Grades

No	Drill Ref.	Pt (g/t)	Pd (g/t)	Cu (%)	Ni (%)	S (%)
V1	SVMLO-1	0.32	0.28	0.44	0.45	4.90
V2	SVMLO-2	0.56	0.68	0.69	0.57	3.19
V3	SVMLO-3	0.30	0.39	0.32	0.32	1.67
V4	SVMLO-4	0.38	0.46	0.37	0.27	1.67
V5	SVMLO-5	0.35	0.43	0.43	0.39	2.22
V6	SVMLO-6	0.32	0.25	0.68	0.58	7.55
V7	SVMLO-7	0.40	0.48	0.49	0.31	1.80
V8	SVMLO-8	0.37	0.44	0.45	0.42	2.28
V9	SVMDC-1	0.46	0.57	0.51	0.45	2.40
V10	SVMDC-2	0.51	0.60	0.60	0.51	2.72
V11	SVMDC-3	0.38	0.48	0.52	0.44	2.47
V12	SVMDC-4	0.43	0.51	0.47	0.43	2.46
V13	SVMDC-5	0.42	0.47	0.50	0.43	2.74
V14	SVMDC-6	0.32	0.41	0.41	0.34	1.97
V15	SVMDC-7	0.49	0.62	0.49	0.48	3.10
V16	SVMDC-8	0.38	0.52	0.55	0.43	2.51
V17	SVMDC-9	0.43	0.52	0.44	0.40	2.09
V18	SVMDC-10	0.45	0.57	0.56	0.47	2.58
V19	SVMDC-11	0.28	0.30	0.32	0.28	1.51

The variation in ore hardness and grindability between the variability samples are presented in Table 13-18, above. The Bond ball mill work index for the 19 variability samples ranged between 11.9 and 15.8 kWh/t. The average work indices for disseminated and blebby type ores were 13.1 and 12.5 kWh/t, respectively.

The variability flotation testing was undertaken by SGS in October and November 2005. This work comprised 38 batch cleaner flotation tests using 2 kg feed samples and was supported by mineralogical studies using QEMSCANTM.

Variability flotation tests were conducted on all 19 variability samples, eight surface lump ore samples (V1 to V8) and 11 drill core samples (V9 to V19). It was noted that the results obtained for the oxidized, surface material were poor and, therefore, as they are not truly representative of the future mill feed, those results are not reported here. The drill core samples were representative of typical fresh mineralization.

The standard flotation test protocol followed for the batch variability flotation work was based on the locked cycle tests, which corresponds to the final process flow sheet adapted for the 2006 Feasibility Study. While a consistent grind time was used in preparing the flotation feed samples, there was some variability is product size between the different samples. The results are shown in Table 13-25, which presents the estimated metal recoveries for a target concentrate grade of 18% combined copper plus nickel.

The flotation test results showing the individual metal recoveries verses percent Ni plus Cu in the concentrate are presented in Figure 13-7.

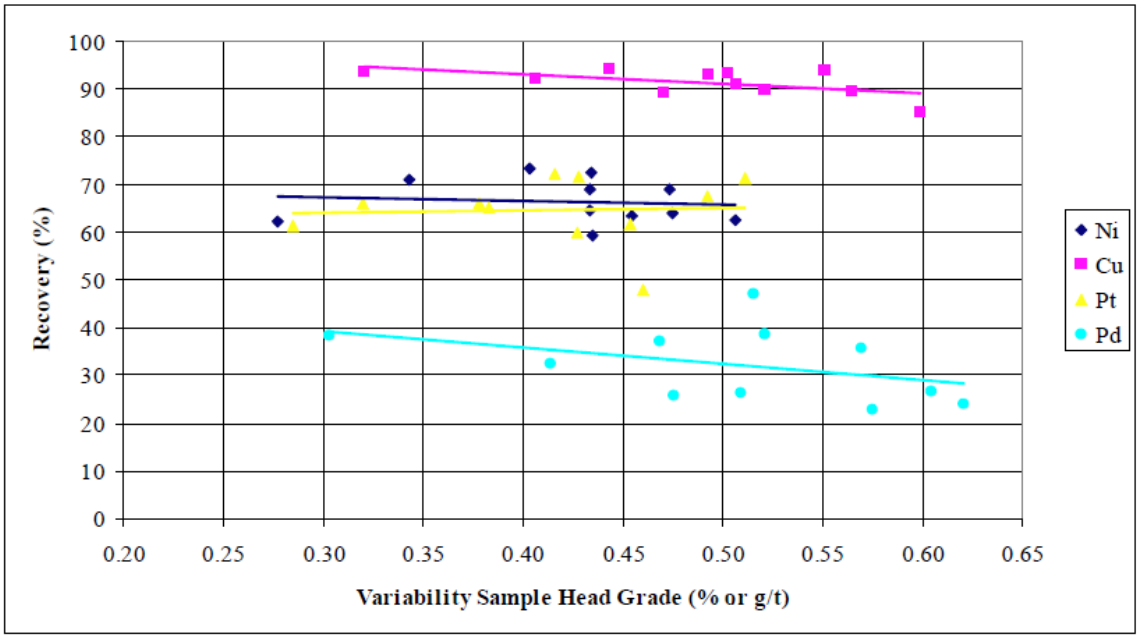
The data, as plotted in Figure 13-6 shows that there is no correlation between head grade and recovery for any of the principal metals, based on the samples tested in the variability program.

The recoveries from the batch variability tests are generally 3 to 10% lower than for locked cycle tests conducted using the metallurgical composite. This is not unexpected due to the lack of supplemental recovery gleaned by re-processing the middlings streams, as per locked cycle testing. This information is contained in the 2006 Feasibility Study.

Table 13-25 Summary of Variability Flotation Test Results

Sample	Feed k_{80} (µm)	Ni Recovery (%)	Cu Recovery (%)	Pt Recovery (%)	Pd Recovery (%)
V9	81	63.33	90.85	47.94	22.91
V10	88	62.70	84.95	71.34	26.64
V11	79	59.30	89.79	65.11	25.78
V12	73	64.75	89.19	59.98	26.28
V13	75	69.03	93.35	72.26	37.11
V14	84	71.11	91.98	66.19	32.37
V15	70	64.06	93.05	67.51	24.06
V16	84	72.60	93.88	66.03	38.69
V17	73	73.35	94.09	71.64	46.95
V18	82	69.15	89.47	61.73	35.81
V19	78	62.25	93.61	61.37	38.20

Figure 13-6 Variability Tests – Head Grade vs Recovery



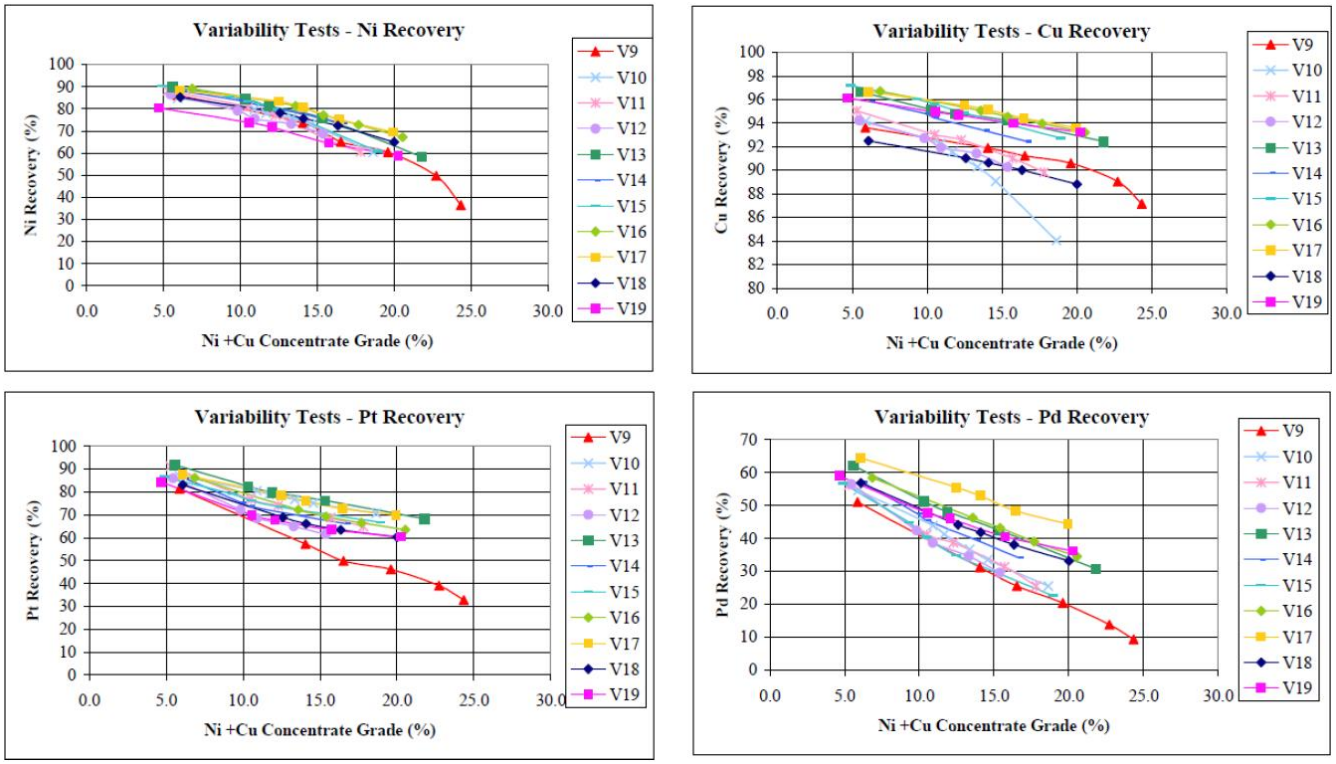
13.5 Metallurgical Recovery Estimates

The recovery estimates for a range of concentrate product qualities, based on the regression curves shown in Figure 13-7, are shown in Table 13-26. These estimated results are based on the metallurgical composite sample and do not take into account variations in head grade.

Table 13-26 Feasibility Study Recovery Estimates

Element	Feed Grade (% or g/t)	Product 15% (Cu+Ni)		Product 18% (Cu+Ni)		Product 20% (Cu+Ni)	
		Recovery (%)	Grade (% or g/t)	Recovery (%)	Grade (% or g/t)	Recovery (%)	Grade (% or g/t)
Copper (Cu)	0.42	96.1	8.7	95.9	10.6	95.6	11.9
Nickel (Ni)	0.37	79.8	6.3	76.4	7.4	73.5	8.1
Platinum (Pt)	0.34	81.0	5.9	74.8	6.7	69.5	7.0
Palladium (Pd)	0.41	49.0	4.3	42.4	4.6	36.2	4.4
Gold (Au)	0.21	43.8	2.0	38.4	2.1	33.4	2.1

Figure 13-7 Variability Flotation Test Metal Recoveries vs Concentrate Grade



13.6 2014 Metallurgical Recovery Estimate

The 2014 Mining Reserve / Mining Resource technical report is based on optimization of recoveries that is enabled by construction of on-site mineral processing and tailings storage facilities versus constraining recoveries by processing mine production at the Glencore Xstrata Strathcona mill or the Vale Coleman mill. Therefore, metallurgical performance is related to the 18% Cu + Ni bulk concentrate category (i.e., a concentrate grading 7.4% nickel) with the following recoveries:

- Nickel recovery 76.4%
- Copper recovery 95.9%
- Cobalt recovery 71.0%
- Platinum recovery 74.8%
- Palladium recovery 42.4%
- Gold recovery 38.4%

14 MINERAL RESOURCE ESTIMATES

14.1 Introduction

The current Mineral Resource estimate on the Shakespeare deposit is an update to a NI 43-101 Mineral Resource estimate completed for Magna in 2018. The estimate was prepared by SGS and is presented in a NI 43-101 Technical Report titled ñTechnical Report on the Updated Mineral Resource Estimate for the Shakespeare Ni-Cu-Pge Deposit, Shakespeare Project, Ontario, Canadaò dated September 25, 2018.

The 2018 Mineral Resource statement describes open pit and underground Indicated and an Inferred Mineral Resources. The open pit Mineral Resource included, at a cut-off grade of 0.2% NiEq, 13,920,000 tonnes grading 0.34% Ni, 0.37% Cu, 0.02% Co, 0.32 g/t Pt, 0.35 g/t Pd and 0.18 g/t Au in the Indicated category, and 1,685,000 tonnes grading 0.29% Ni, 0.32% Cu, 0.02% Co, 0.28 g/t Pt, 0.31 g/t Pd and 0.17 g/t Au in the Inferred category. The underground Mineral Resource included, at a cut-off grade of 0.5% NiEq, 2,233,000 tonnes grading 0.33% Ni, 0.38% Cu, 0.02% Co, 0.32 g/t Pt, 0.33 g/t Pd and 0.18 g/t Au in the Indicated category, and 2,492,000 tonnes grading 0.33% Ni, 0.38% Cu, 0.02% Co, 0.32 g/t Pt, 0.35 g/t Pd and 0.19 g/t Au in the Inferred category.

Completion of the current Mineral Resource estimate involved the assessment of a drill hole database, which included data for an additional 13 drill holes completed in 2018, updated three-dimensional (3D) mineral resource models, and available written reports. Armitage visited the property on July 30 and 31. Armitage also visited the Property and core logging facilities on November 28 and 29, 2018. The effective date of the current Mineral Resource estimate is February 15, 2019.

Ordinary Kriging (ñOKò) and Inverse Distance squared (ñIDò) restricted to mineralized domains were used to Interpolate grades for Ni (%), Cu (%), Co (%), Pt (g/t), Pd (g/t) and Au (g/t) into a block model. Indicated and Inferred Mineral Resources are reported in the summary tables in Section 14-10. The Mineral Resource estimate takes into consideration that the Shakespeare Deposit will be mined by both open pit and underground mining methods. Open pit mining was selected as the starting method to of development of the Shakespeare deposit. This is based on the size of the resource, tenor of the grade, grade distribution, and proximity to topography. The Author is of the opinion that with current metal pricing levels and knowledge of the mineralization, open-pit mining offers the most reasonable approach for initial development of the deposit.

14.2 Drill Hole Database

In order to complete an updated Mineral Resource estimate for the Shakespeare deposit, a database comprising a series of comma delimited spreadsheets containing drill hole and trench information was provided by Magna. The database included hole and trench location information (NAD83 / UTM Zone 17n), survey data, assay data, lithology data and specific gravity data. The data in the assay table included assays for Ni (%), Cu (%), Co (%), Pt (g/t), Pd (g/t) and Au (g/t). The data was then imported into GEOVIA GEMS version 6.8.1 software (ñGEMSò) for statistical analysis, block modeling and resource estimation.

The database comprises data for 185 surface drill holes, 26 blast holes (for grade control) and 41 channels and includes data for drill holes completed in 2018 by Magna, completed since the last Mineral Resource estimate on the Shakespeare deposit. The database totals 9,838 assay samples.

The database was checked for typographical errors in drill hole locations, down hole surveys, lithology, assay values and supporting information on source of assay values. Overlaps and gapping in survey, lithology and assay values in intervals were checked. Gaps in the assay sampling were assigned a grade value of 0.001 for Ni, Cu, Co, Pt, Pd and Au.

14.3 Topography

Magna provided topographic surface data from previous studies as well as a recent survey completed by Magna in 2018.

Topographic surface data was obtained from an airborne LIDAR (Light Detection and Ranging) survey completed in 2004 by Mosaic Mapping Systems Inc. The data was provided by Magna as a point data file that was imported into GEMS and converted into a 3D topographic surface for modelling.

A revised topographic surface file based on a 2011 survey of the west pit was provided by Magna as three-dimensional (3D) DXF file. The 2011 topographic surface file was created by extracting contour data from the west pit to update the 2004 topography surface file in order to account for the mined out area.

Mining of the west pit continued briefly in 2011. As a result Magna had a bathometric survey completed in the west pit in order to revise the 2011 topographic surface to reflect the mined out area of the Shakespeare deposit. The bathometric survey was completed by Tulloch Engineering of Sudbury, Ontario in June of 2018. A 3D DXF file of the contour data for the west pit was provided and imported into GEMS.

Figure 14-1 Plan View of Shakespeare Deposit Area Showing Various Topographic Surfaces and Mined Out Area

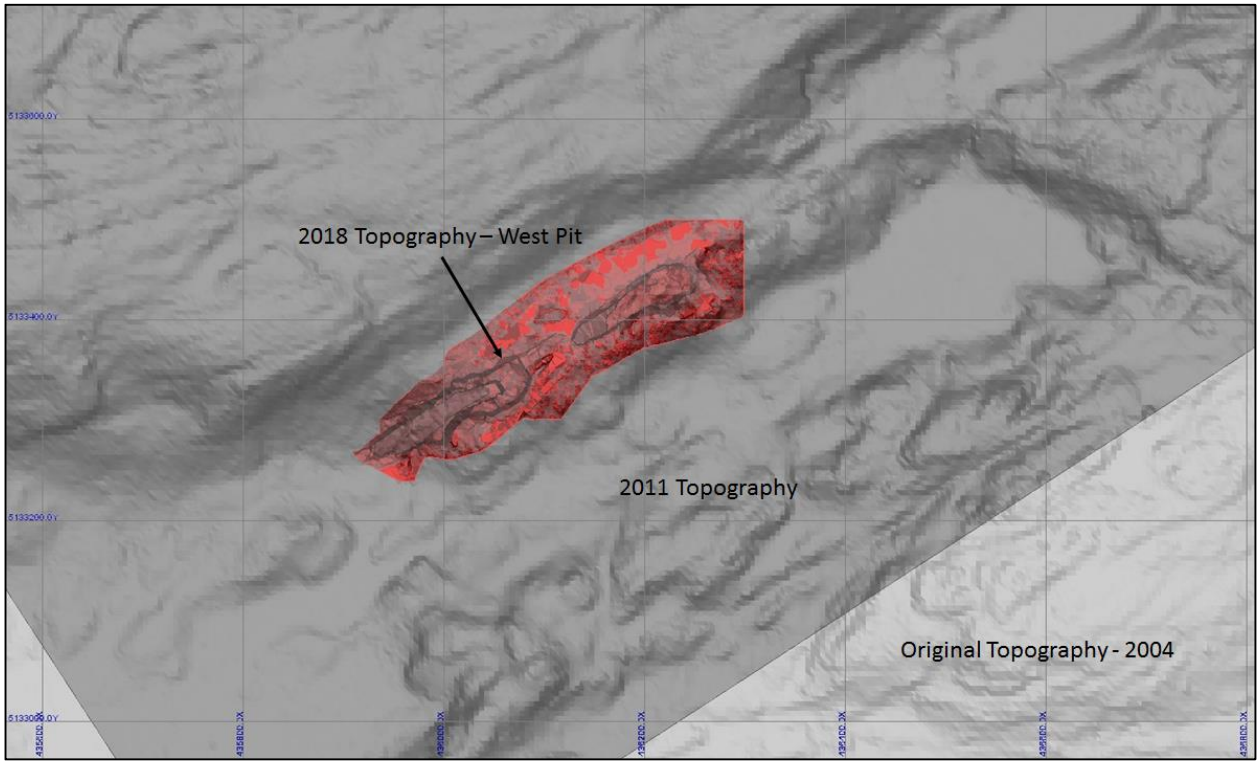
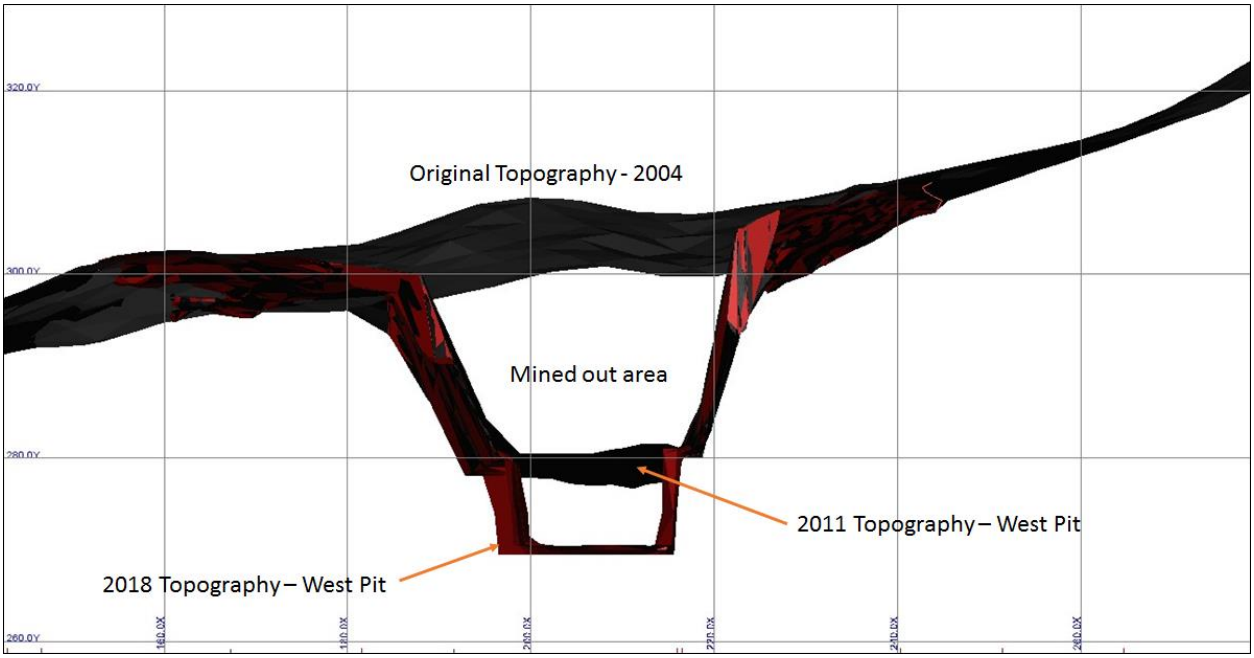


Figure 14-2 Vertical Section Looking Southwest Showing Various Topographic Surfaces and Mined Out Area



14.4 Mineral Resource Modelling and Wireframing

For the 2018 Mineral Resource estimate, Magna provided three-dimensional (3D) wireframe models from previous studies, in DXF format. These models were imported into GEMS, reviewed and revised by SGS to reflect mineralization at an approximate 0.2% Ni + Cu. As with previous Mineral Resource estimates, modelling of the Shakespeare deposit was subdivided into four domains: the East and West Disseminated Domains and the East and West Blebby domains, representing the two styles of sulphide mineralization in the deposits. The 2018 3D wireframe models were revised based on the results of the 2018 drilling (Figure 14-3 to Figure 14-5).

The 3D grade controlled models were built by visually interpreting mineralized intercepts from cross sections using Ni and Cu values. Polygons of mineral intersections (snapped to drill holes) were made on each cross section and these were wireframed together to create continuous resource wireframe models in GEMS.

The East domain polygons of mineral intersections were constructed on 60 m spaced sections (21 sections looking west) with a 30 m sectional influence. The West domain polygons were constructed on 30 m sections (23 sections looking west) with a 15 m sectional view. The sections were created perpendicular to the general strike of the mineralization and the spacing of the modeling was conducted based on the general spacing of the drill holes and channels. The models were extended 30 to 40 m beyond the last known intersection along strike and 15 ï 30 metres up and down dip. The modeling exercise provided broad controls of the dominant mineralizing direction. The East and West domains extend for an aggregate length of approximately 1,730 m, dip steeply to the northwest and extend to a maximum depth of 250 m in the West domains and 600 m in the East domains. All domains were clipped to the 2018 topographic surface. The total volume of the East and West grade control model is 9.613,081 m^3 (28,839,243 tonnes) (Table 14-1).

Figure 14-3 Plan view of the Shakespeare Deposit Area Showing Drill Holes, Channels and mineralized Models (red – disseminated mineralization, green – blebby mineralization)

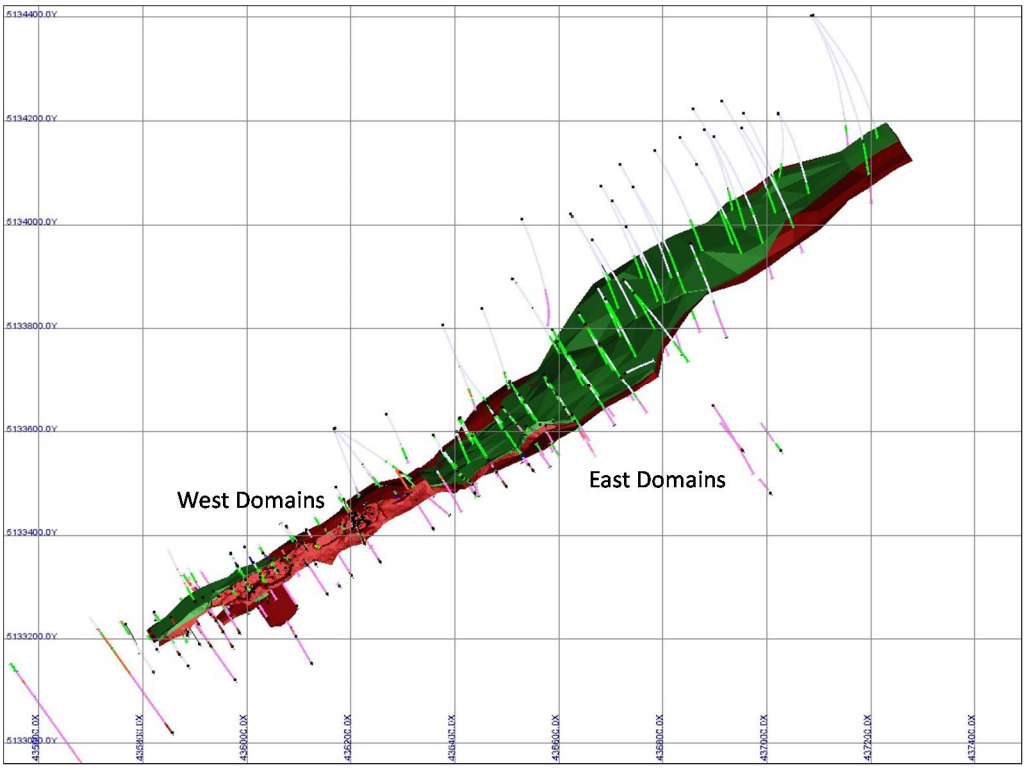


Figure 14-4 Isometric View Looking South of the Shakespeare Deposit Area Showing Driil Holes, Channels and mineralized Models (red – disseminated mineralization, green – blebby mineralization)

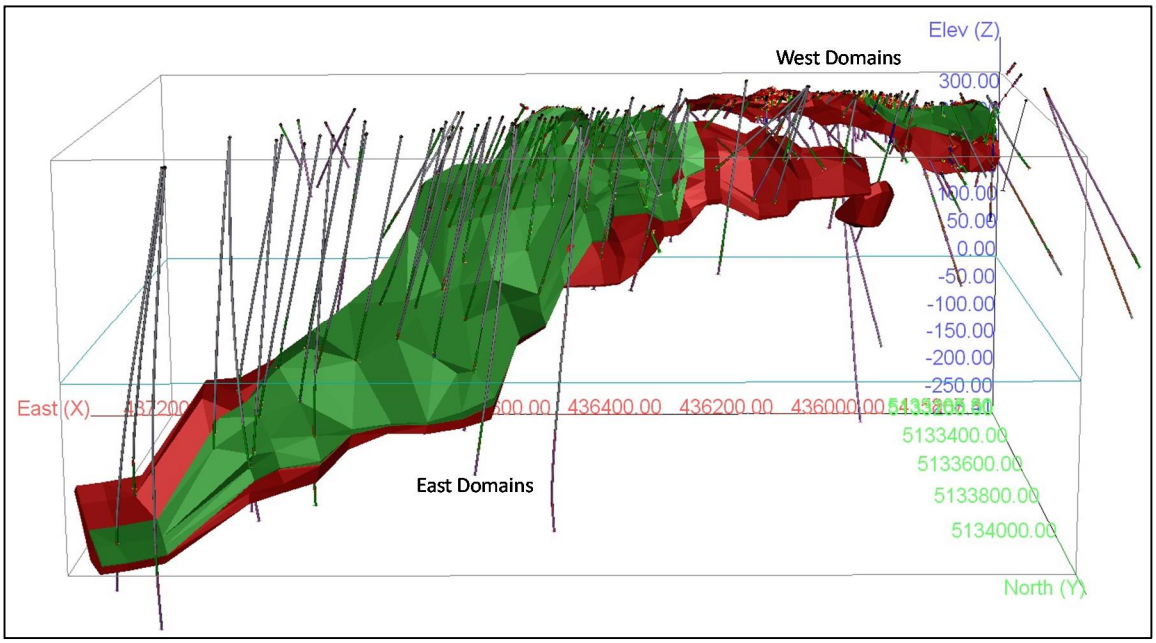


Figure 14-5 Isometric View Looking Southwest of the Shakespeare Deposit Area Showing Drill Holes, Channels and mineralized Models (red – disseminated mineralization, green – blebby mineralization)

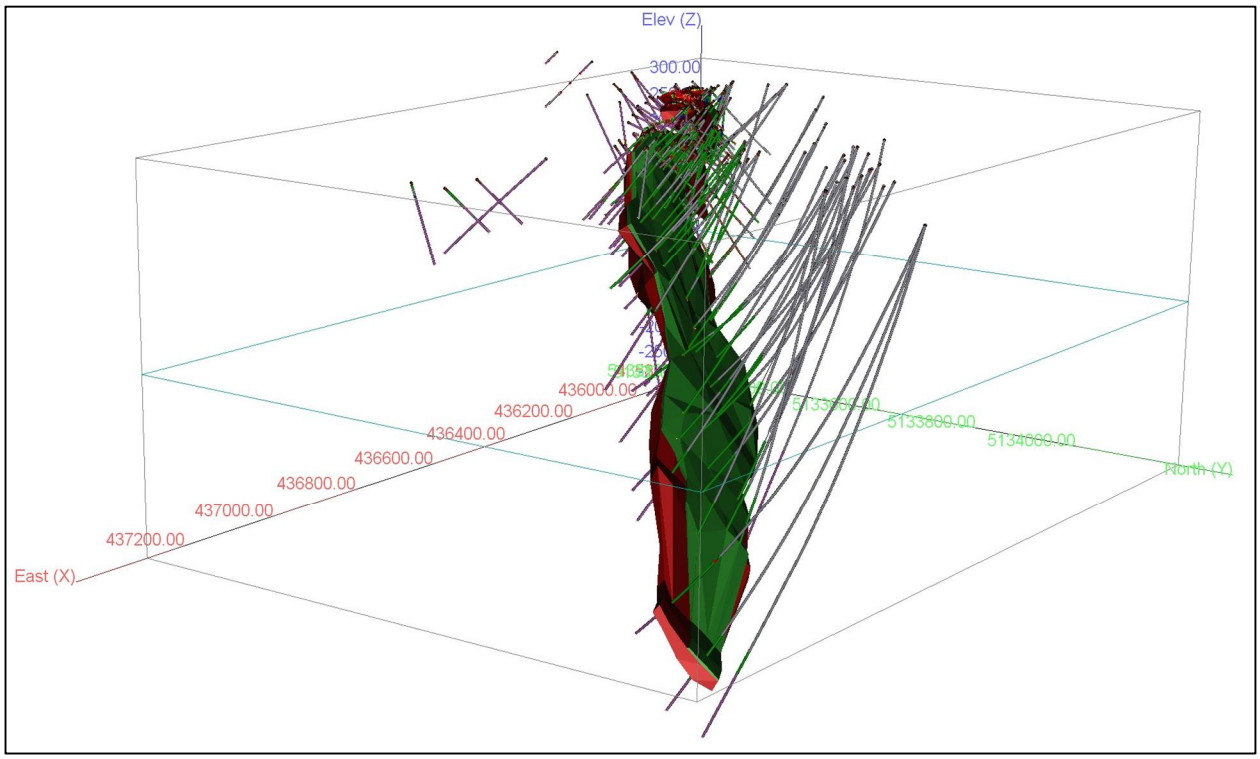


Table 14-1 Shakespeare Deposit – Domain Description

Domain	Rock Code	Domain Volume	Domain Tonnage
East Disseminated	20	6,636,719	19,910,157
East Blebby	10	1,701,246	5,103,738
West Disseminated	21	1,164,223	3,492,669
West Blebby	11	110,893	332,679
		9.613,081	**28,839,243**

14.5 Compositing

The assay sample database available for the revised resource modelling totalled 9,838 representing 9,436.17 metres of drilling and channel sampling. This includes 1,303 assays representing 1,166.83 m of drilling from the 2018 drill holes. A total of 5,755 assays from 155 drill holes and 39 channels occur within the Shakespeare deposit mineral domains. A statistical analysis of the assay data from within the mineralized domains is presented in (Table 14-2). Average length of the assay sample intervals is 0.99, within a range of 0.13 m to 4.27 m. Of the total assay population approximately 86 % are 1.00 m or less with approximately 14% of the samples greater than 1.00 m in length and only 8% greater than 1.50 m (Figure 14-6). To minimize the dilution and over smoothing due to compositing, a composite length of 1.00 m was chosen as an appropriate composite length for the 2019 Mineral Resource estimate.

Further analysis of the data indicates the elements of interest within the Shakespeare deposit are generally well correlated (Table 14-3). The best correlation is between Ni, Cu, Pt and Pd.

Composites were generated starting from the collar of each hole. Un-assayed intervals were given a value of 0.001 for Ni, Cu, Co, Cu, Pb and Zn. Composites were then constrained to the mineral domains. The constrained composites were extracted to point files for statistical analysis and capping studies. The constrained composites were grouped based on the mineral domain (rock code) of the constraining wireframe model.

A total of 3,598 composite sample points occur within the resource wire frame models (Table 14-4; Table 14-5). These values were used to interpolate grade into resource blocks.

Table 14-2 Statistical Analysis of the Drill and Channel Assay Data from Within the Shakespeare Deposit Mineral Domains

Variable	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Total # Assay Samples	5,755					
Average Sample Length	0.99 m					
Minimum and Maximum Length	0.13 to 4.27 m					
Minimum Grade	0.00	0.00	0.00	0.00	0.00	0.00
Maximum Grade	1.38	2.85	0.30	1.93	4.09	3.87
Mean	0.33	0.37	0.02	0.33	0.36	0.19
Median	0.34	0.37	0.02	0.33	0.37	0.19
Variance	0.04	0.05	0.00	0.05	0.06	0.02
Standard Deviation	0.19	0.22	0.15	0.19	0.21	0.12
Coefficient of variation	0.57	0.61	0.69	0.57	0.58	0.65
97.5 Percentile	0.70	0.77	0.05	0.68	0.73	0.40

Table 14-3 Shakespeare Deposit Correlation Coefficient Analysis of Assays

	NI_%	*CU_%*	*CO_%*	*AU_GPT*	*PT_GPT*	*PD_GPT*
NI_%	1.00					
CU_%	0.76	1.00				
CO_%	0.68	0.49	1.00			
AU_GPT	0.66	0.69	0.44	1.00		
PT_GPT	0.77	0.75	0.50	0.83	1.00	
PD_GPT	0.78	0.73	0.49	0.75	0.90	1.00

Figure 14-6 Sample length histogram for Drill and Channel Assay Samples from Within the Shakespeare Deposit Mineral Domains

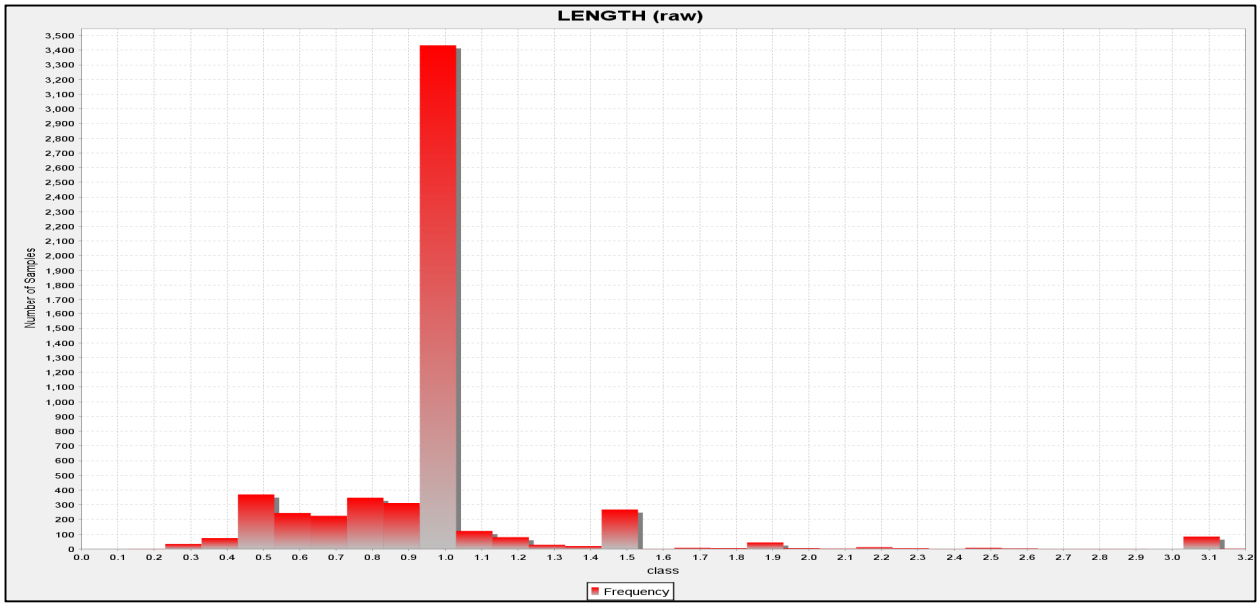


Table 14-4 Summary of the 1.0 metre Composite Data Constrained by the Shakespeare Mineral Resource Models (Drill and Channel Samples)

Variable	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Total # of Composites	5,828					
Average Composite Length	1.00 m					
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	0.97	2.63	0.30	1.27	4.09	3.87
Mean	0.32	0.36	0.02	0.32	0.36	0.18
Median	0.33	0.37	0.02	0.37	0.33	0.19
Variance	0.03	0.04	0.00	0.03	0.04	0.01
Standard Deviation	0.18	0.21	0.02	0.18	0.20	0.12
Coefficient of variation	0.55	0.57	0.77	0.55	0.56	0.63
97.5 Percentile	0.65	0.72	0.04	0.65	0.70	0.38

Table 14-5 Summary of the 1.0 metre Composite Data Subdivided by Vein Domain

Variable	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Domain	East Disseminated					
Total # of Composites	2,746					
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	0.97	1.27	0.11	0.98	4.09	3.87
Mean	0.34	0.38	0.02	0.39	0.39	0.20
Median	0.35	0.40	0.02	0.40	0.40	0.21
Variance	0.03	0.04	0.00	0.03	0.05	0.02
Standard Deviation	0.19	0.21	0.01	0.19	0.22	0.13
Coefficient of variation	0.54	0.55	0.51	0.54	0.56	0.66
97.5 Percentile	0.67	0.75	0.04	0.68	0.73	0.43
Domain	East Blebby					
Total # of Composites	600					
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	0.93	1.16	0.10	0.85	0.91	0.52
Mean	0.29	0.25	0.02	0.23	0.23	0.12
Median	0.24	0.20	0.02	0.20	0.19	0.10
Variance	0.04	0.03	0.00	0.02	0.02	0.01
Standard Deviation	0.19	0.19	0.01	0.15	0.16	0.09
Coefficient of variation	0.64	0.74	0.61	0.67	0.68	0.75
97.5 Percentile	0.73	0.67	0.06	0.56	0.56	0.32
Domain	West Disseminated					
Total # of Composites	2,351					
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	0.83	2.63	0.30	1.27	0.88	0.61
Mean	0.31	0.37	0.02	0.33	0.36	0.18
Median	0.33	0.38	0.02	0.35	0.38	0.19
Variance	0.03	0.04	0.00	0.03	0.03	0.01
Standard Deviation	0.16	0.20	0.02	0.16	0.18	0.09
Coefficient of variation	0.52	0.53	1.12	0.50	0.49	0.50
97.5 Percentile	0.57	0.70	0.04	0.61	0.64	0.33
Domain	West Blebby					
Total # of Composites	131					
Minimum value	0.00	0.00	0.00	0.00	0.00	0.00
Maximum value	0.66	0.98	0.04	0.65	0.68	0.36
Mean	0.25	0.26	0.01	0.23	0.24	0.13
Median	0.23	0.22	0.02	0.23	0.23	0.13
Variance	0.02	0.03	0.00	0.03	0.03	0.01
Standard Deviation	0.13	0.17	0.01	0.16	0.17	0.09
Coefficient of variation	0.54	0.64	0.77	0.70	0.71	0.69
97.5 Percentile	0.54	0.65	0.04	0.56	0.56	0.28

14.6 Grade Capping

A statistical analysis of the composite database within the Shakespeare 3D wireframe models (the ñresourceò population) was conducted to investigate the presence of high grade outliers which can have a disproportionately large influence on the average grade of a mineral deposit. High grade outliers in the composite data were investigated using statistical data (Table 14-5), histogram plots, and cumulative probability plots of the 1.0 m composite data. The statistical analysis was conducted by domain and was completed using GEMS.

After review it is the Authorôs opinion that minimal capping of high grade composites to limit their influence during the grade estimation is necessary for Cu, Pt, Pd and Au. A summary of grade capping values by Vein Domain is presented in Table 14-6.

The capping values chosen have resulted in a total of 4 composite samples capped. The capped composites were used for grade interpolation into the Shakespeare deposit block model.

Table 14-6 Gold Grade Capping Summary by Vein Domain

Domain	Total # of Composites	Capping Value					
		Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
East Disseminated	2,746	No Capping	1.4	No Capping	1.0	1.0	1.0
East Blebby	600	No Capping	1.4	No Capping	1.0	1.0	1.0
West Disseminated	2,351	No Capping	1.4	No Capping	1.0	1.0	1.0
West Blebby	131	No Capping	1.4	No Capping	1.0	1.0	1.0

14.7 Specific Gravity

The specific gravity values used for previous Mineral Resource estimates were obtained from measurements taken from test work performed by URSA Major personnel on drill hole numbers UR-03-23, UR-03-26, UR-03-30 and UR-03-36. Representative samples from all lithologies were taken and subjected to a wet/dry bulk specific gravity determination test. A total of 257 samples were analyzed. The results are set out in Table 14-7. The mineralization is contained within lithological units 4b and 4f. For the current Mineral Resource estimate update an SG of 3.00 is used for mineralized domains. An SG of 2.85 is used for waste as quartzite forms the hanging wall of the deposit and will be a significant portion of the waste rock from the open pit.

Table 14-7 Specific Gravity Data for the Shakespeare Deposit (2006 Feasibility Study)

Lithology	Lithology Code	Bulk Specific Gravity
Quartzites	1a	2.67
Biotite quartz diorite	4d	2.78
Quartz gabbro	4c	2.91
Rock fragment phase	4f	3.00
Melagabbro	4b	3.02
Nipissing gabbro	3a	2.97
Mafic dyke	6a	3.08

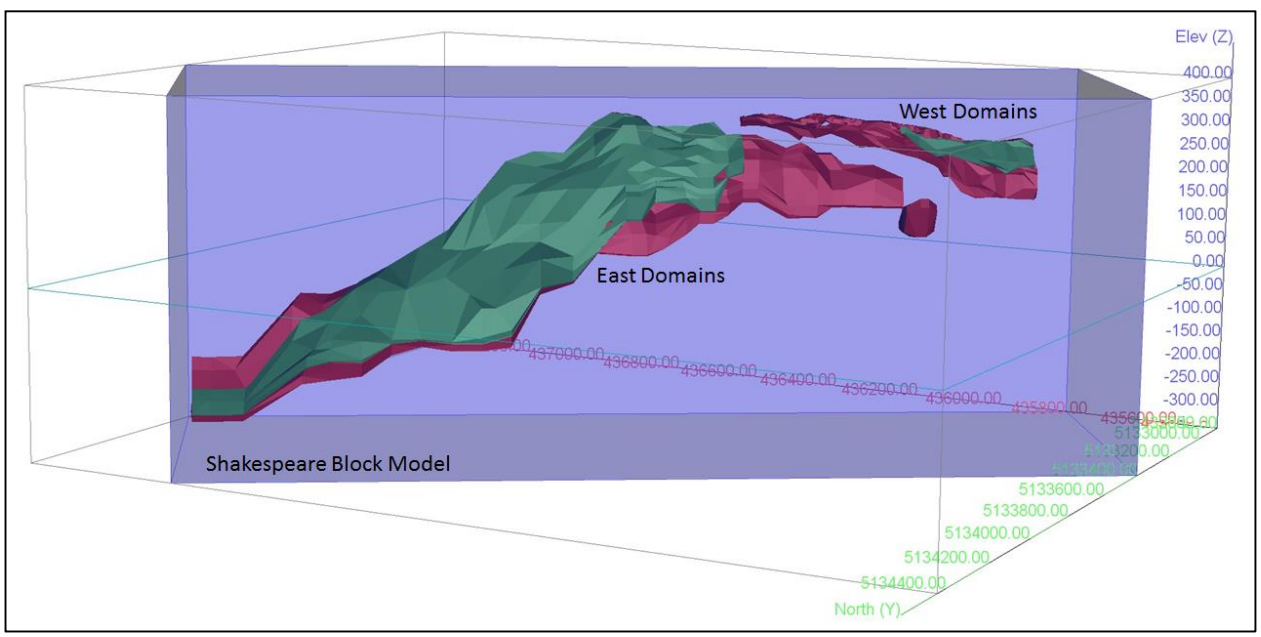
14.8 Block Model Parameters

The Shakespeare deposit grade control models were used to constrain composite values chosen for interpolation, and the mineral blocks reported in the estimate of the Mineral Resource. A block model within NAD83 UTM Zone 17N (Table 14-8) space (no rotation) (Figure 14-7) with block dimensions of 5 x 5 x 5 metres in the x (east), y (north) and z (level) directions was placed over the grade shells with only that portion of each block inside the shell recorded (as a percentage of the block) as part of the Mineral Resource estimate (% Block Model). The block size was selected based on borehole spacing, composite length, the geometry of the mineralized domains, and the selected starting mining method (Open Pit). At the scale of the Shakespeare deposit this provides a reasonable block size for discerning grade distribution, while still being large enough not to mislead when looking at higher cut-off grade distribution within the model. The model was intersected with surface topography to exclude blocks, or portions of blocks, that extend above the bedrock surface.

Table 14-8 Deposit Block Model Geometry

Model Name	UH Deposit		
	X (North)	Y (East)	Z (Level)
Origin (NAD83 UTM Zone 17N)	435850	5132880	400
Extent	380	125	150
Block Size	5	5	5
Rotation (counter clockwise)	33°		

Figure 14-7 Isometric View Looking Southeast Showing the Shakespeare Deposit Mineral Resource Block Model and Mineralization Domains



14.9 Grade Interpolation

Nickel, copper, cobalt, platinum, palladium and gold were estimated for each domain in the Shakespeare deposit. Blocks within each mineralized domain were interpolated using composites assigned to the that domain. To generate grade within the blocks, the Ordinary Kriging (OK) interpolation method was used for the East mineralized domains. The interpolation method was inverse distance squared (ID^2) for the West mineralized domains.

The search ellipse used to interpolate grade into the resource blocks for the East domains by OK is based on 3D semi-variography analysis of Ni for the 1.0 metre composites within the domains using GEMS. The same semi-variograms were used to interpolate grades of all metals into each block in the East domains (Table 14-9).

For the West domains, the A search ellipse was interpreted based on orientation and size the mineralized domains. The search ellipse axes are generally oriented to reflect the observed preferential long axis (geological trend) of the vein structures and the observed trend of the mineralization down dip (Table 14-9).

Three passes were used to interpolate grade into all of the blocks in the grade shells (Table 14-9). For Pass 1 the search ellipse size (in metres) for all mineralized domains was set at 30 x 30 x 15 in the X, Y, Z direction; for Pass 2 the search ellipse size for each domain was set at 60 x 60 x 30; for Pass 3 the search ellipse size was set at 120 x 120 x 60. Blocks were classified as Indicated if they were populated with grade during Pass 1 and during Pass 2 of the interpolation procedure. The Pass 3 search ellipse size was set to assure all remaining blocks within the wireframe were assigned a grade. These blocks were classified as Inferred.

Grades were interpolated into blocks using a minimum of 6 and maximum of 12 composites to generate block grades during Pass 1 and Pass 2 (maximum of 3 sample composites per drill hole), and a minimum of 2 and maximum of 12 composites to generate block grades during pass 3 (Table 14-9).

Table 14-9 Grade Interpolation Parameters by Domain

Parameter	East Domains			West Domains		
	Pass 1	Pass 2	Pass 3	Pass 1	Pass 2	Pass 3
	Indicated	Indicated	Inferred	Indicated	Indicated	Inferred
Calculation Method	Ordinary Kriging			Inverse Distance squared		
Search Type	Ellipsoid			Ellipsoid		
Principle Azimuth	17.7°			325°		
Principle Dip	-37.8°			-60°		
Intermediate Azimuth	261.0°			55°		
Anisotropy X	30	60	120	30	60	120
Anisotropy Y	30	60	120	30	60	120
Anisotropy Z	15	30	60	15	30	60
Min. Samples	6	6	2	6	6	2
Max. Samples	12	12	12	12	12	12
Min. Drill Holes	2	2	1	2	2	1

14.10 Mineral Resource Classification Parameters

The Mineral Resource Estimate presented in this Technical Report was prepared and disclosed in compliance with all current disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the current Mineral Resource Estimate into Indicated and Inferred is consistent with current 2014 CIM Definition Standards - For Mineral Resources

and Mineral Reserves, including the critical requirement that all mineral resources ñhave reasonable prospects for eventual economic extractionò

The current Mineral Resource is sub-divided, in order of increasing geological confidence, into Inferred and Indicated categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earthôs crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

Interpretation of the word óeventualô in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage óeventual economic extractionôas covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time.

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.

Indicated Mineral Resource

An óIndicated Mineral Resourceô is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, 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.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource Estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions

Inferred Mineral Resource

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 Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow

models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

14.11 Mineral Resource Statement

The general requirement that all Mineral Resources have ñreasonable prospects for economic extractionò implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, the Author considers that the Shakespeare deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering ñreasonable prospects for economic extractionò by an open pit, WhittleÊ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be ñreasonably expectedò to be mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 14-10. A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of this Mineral Resource estimate. The corresponding strip ratio is 7.7:1 and reaches a maximum depth of approximately 335 m below surface.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the ñreasonable prospects for economic extractionò by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.

The current Mineral Resource estimate for the Shakespeare deposit is presented in Table 14-11 and includes an open pit and an underground Mineral Resource (estimated from the bottom of the 2019 pit) (Figure 14-9 and Figure 14-9).

Highlights of the Shakespeare deposit Mineral Resource Estimate are as follows:

- The open pit Mineral Resource includes, at a cut-off grade of 0.2% NiEq, 14,436,000 tonnes grading 0.34% Ni, 0.37% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.19 g/t Au in the Indicated category, and 1,682,000 tonnes grading 0.29% Ni, 0.31% Cu, 0.02% Co, 0.27 g/t Pt, 0.30 g/t Pd and 0.17 g/t Au in the Inferred category.

- The underground Mineral Resource includes, at a cut-off grade of 0.5% NiEq, 2,489,000 tonnes grading 0.33% Ni, 0.38% Cu, 0.02% Co, 0.31 g/t Pt, 0.35 g/t Pd and 0.19 g/t Au in the Indicated category, and 2,905,000 tonnes grading 0.34% Ni, 0.39% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.21 g/t Au in the Inferred category.

Table 14-10 Whittle™ Pit Optimization Parameters

Parameter	Value	Unit
Nickel Price	$6.25	US$ per pound
Copper Price	$2.80	US$ per pound
Cobalt Price	$31.00	US$ per pound
Platinum Price	$950.00	US$ per ounce
Palladium Price	$900.00	US$ per ounce
Gold Price	$1,250.00	US$ per ounce
Exchange Rate	0.76	$US/$CDN
Mining Cost	$2.20	US$ per tonne mined
Processing Cost (incl. crushing)	$8.00	US$ per tonne milled
General and Administrative	$1.75	US$ tonne of feed
Overall Pit Slope	55	Degrees
Nickel Recovery	76.4	Percent (%)
Copper Recovery	95.9	Percent (%)
Cobalt Recovery	71	Percent (%)
Platinum Recovery	74.8	Percent (%)
Palladium Recovery	42.4	Percent (%)
Gold Recovery	38.4	Percent (%)
Mining loss / Dilution (open pit)	5 / 5	Percent (%) / Percent (%)
Waste Specific Gravity	2.85	
Mineral Zone Specific Gravity	3.00	
Block Size	5 x 5 x 5	
Re-block for Pit Optimization	10 x 10 x 10	

Table 14-11 Shakespeare Deposit 2018 Open Pit (A) and Underground (B) Mineral Resource Estimate, July 31, 2018

(A)

Cut-off Grade	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t	NiEq %
Indicated								
0.2% NiEq	14,436,000	0.34	0.37	0.02	0.34	0.37	0.19	0.63
Inferred								
0.2% NiEq	1,682,000	0.29	0.31	0.02	0.27	0.30	0.17	0.54

(B)

Cut-off Grade	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t	NiEq %
Indicated								
0.5% NiEq	2,489,000	0.33	0.38	0.02	0.31	0.35	0.19	0.62
Inferred								
0.5% NiEq	2,905,000	0.34	0.39	0.02	0.34	0.37	0.21	0.64

(1) *Mineral Resources are exclusive of material mined.*

(2) *CIM (2014) definitions were followed for Mineral Resources.*

(3) *Mineral resources which are not mineral reserves do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. Composites have been capped where appropriate.*

(4) *Open pit Mineral Resources are reported at a cut-off grade of 0.2% NiEq within a conceptual pit shell.*

(5) *Underground Mineral Resources are estimated from the bottom of the 2018 pit and are reported at a cut-off grade of 0.5% NiEq.*

(6) *A fixed specific gravity value of 3.00 was used to estimate the tonnage from block model volumes.*

(7) *NiEq Cut-off grades are based on metal prices of $6.25/lb Ni, $2.80/lb Cu, $31.00/lb Co, $950/oz Pt, $900/oz Pd and $1,250.00/oz Au, and metal recoveries of 76.4% for Ni, 95.9% for copper, 71% for Co, 74.8% for Pt, 42.4% for Pd and 38.4% for Au.*

(8) *The results from the pit optimization are used solely for the purpose of testing the "reasonable prospects for economic extraction" by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.*

(9) *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. There is no certainty that all or any part of the Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration.*

Figure 14-8 Isometric View Looking North of the Shakespeare Deposit Mineral Resource Block Grades and Whittle Pit

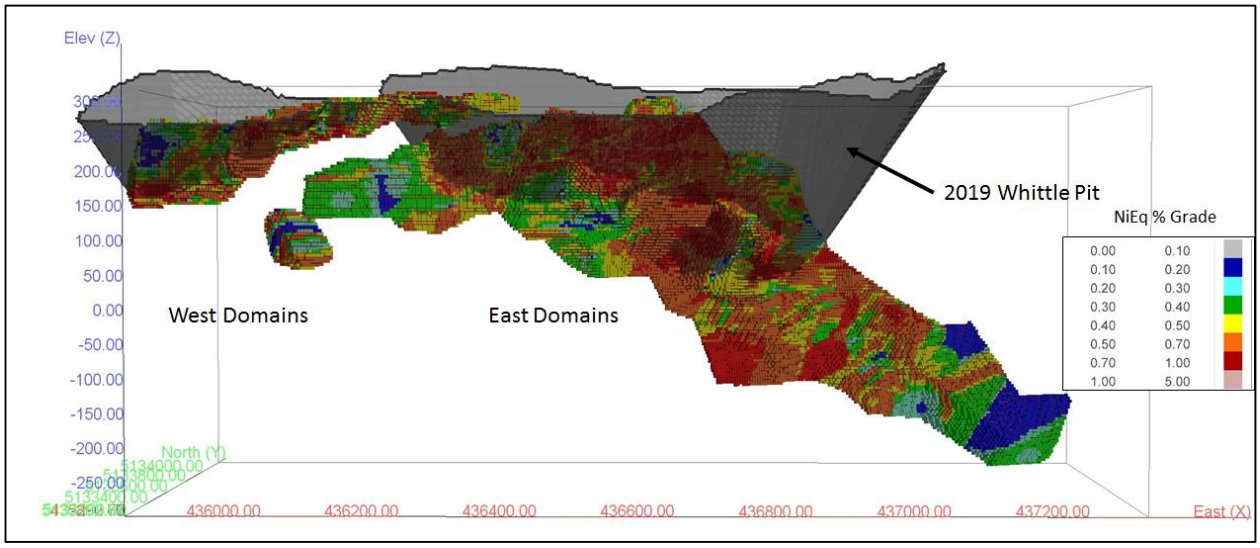
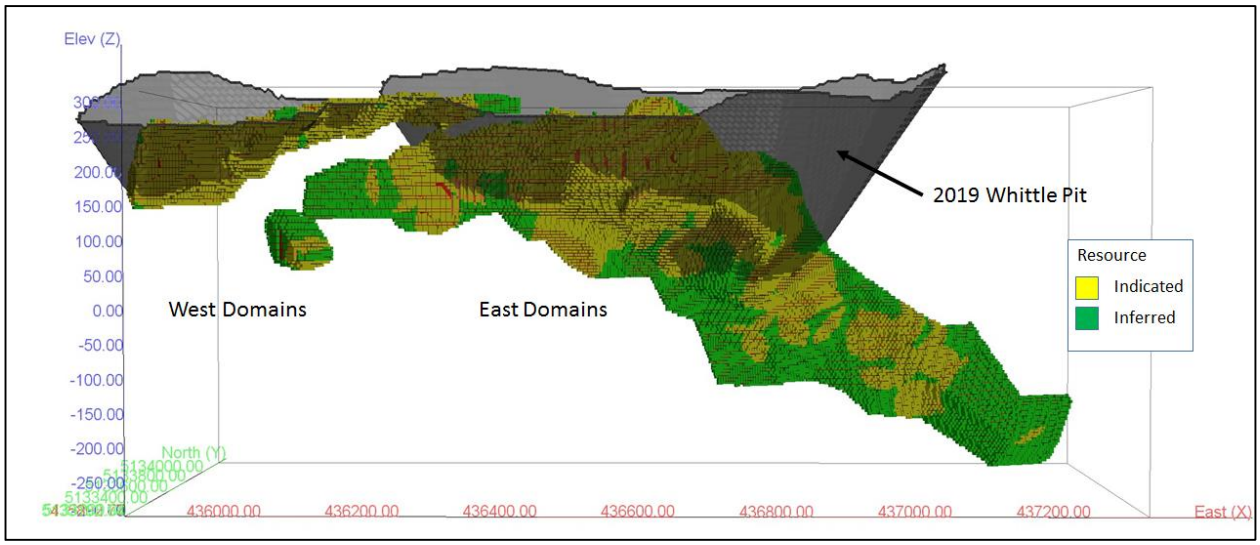


Figure 14-9 Isometric View Looking North of the Shakespeare Deposit Indicated and Inferred Mineral Resource Blocks and Whittle Pit



14.12 Mineral Resource Estimate Divided By Ownership

As discussed in section 4 above, various exploration mineral claims that surround the Shakespeare Property are subject to an 81/19 joint venture between the Company and Glencore. The northeast end of the Shakespeare deposit is subject to this joint venture agreement (Figure 14-10). That portion of the global Mineral Resource estimate that is 19% Glencore property is limited to 3,600 tonnes of inferred underground resources and are a negligible part of the global resource estimate.

Figure 14-10 Shakespear Deposit Subdivided by Property Ownership

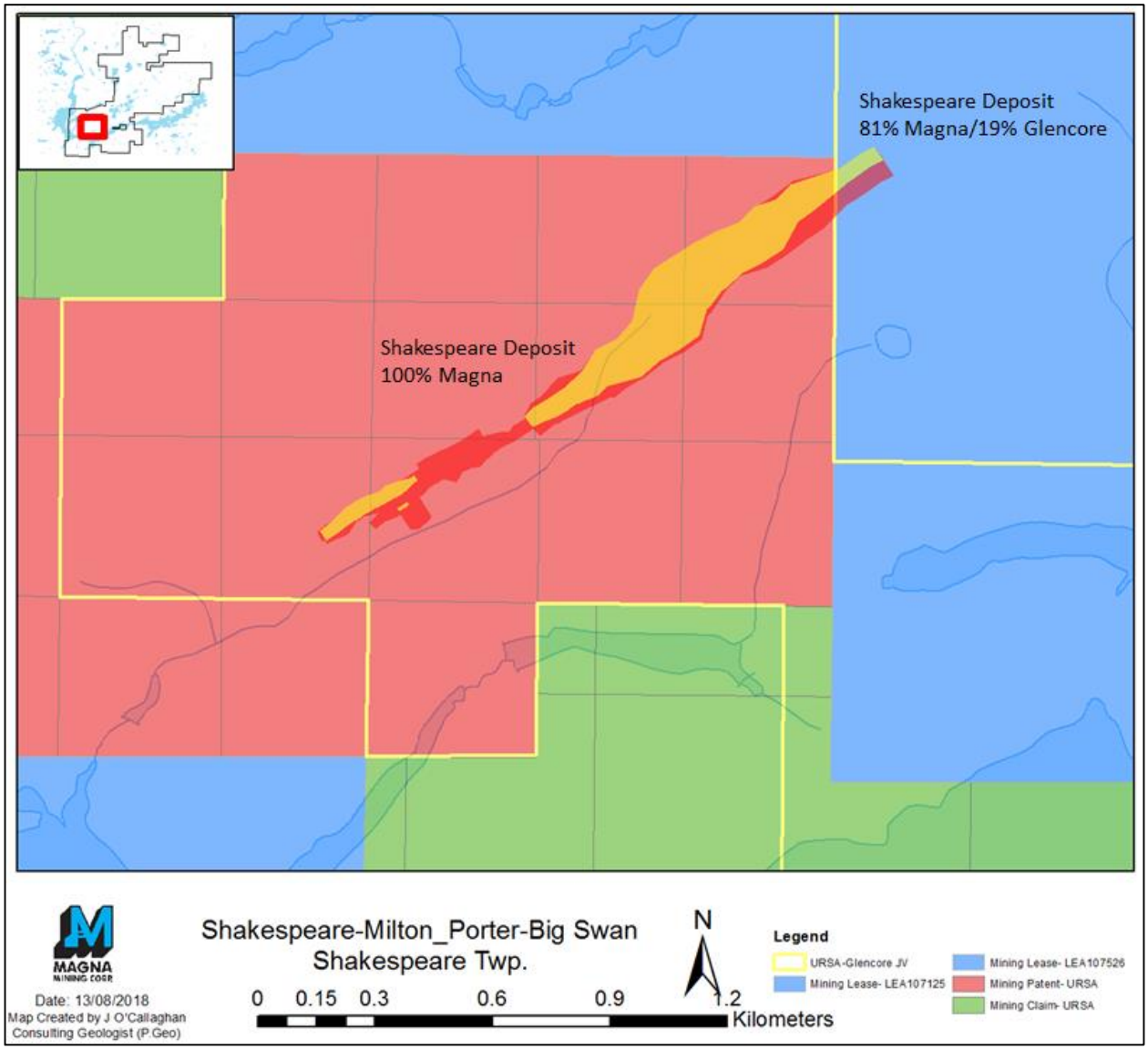


Figure 14-11 Isometric View Looking Northwest of the Shakespeare Deposit Identifying the Part of the Property that is Under 19% Glencore Ownership

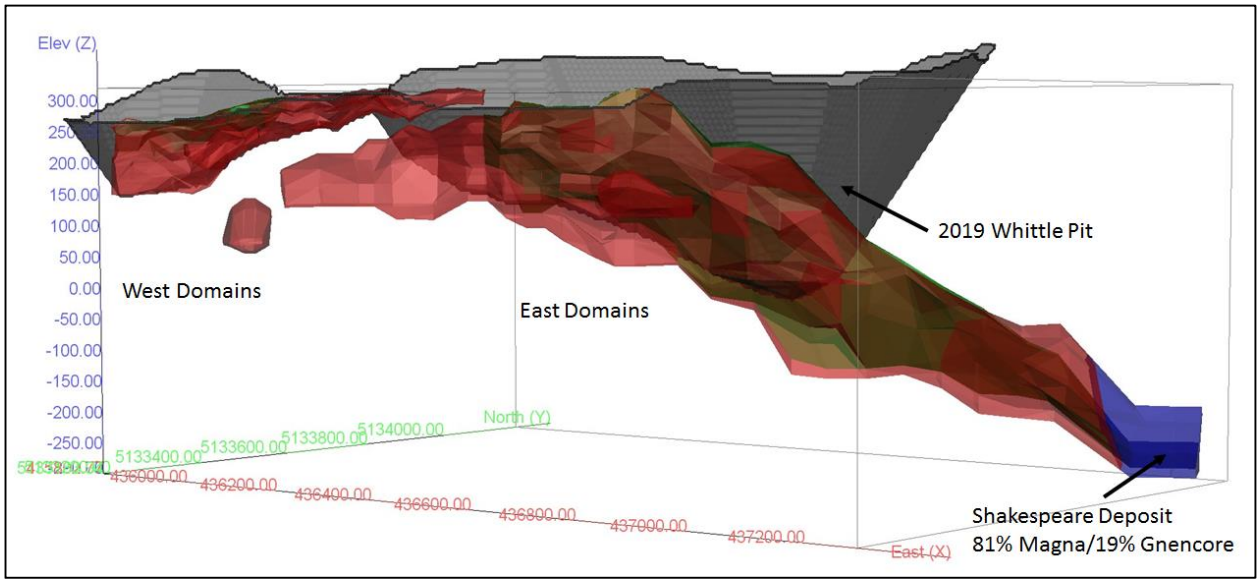


Table 14-12 That Portion of the Total Resource Estimate that is 19% Glencore

Cut-off Grade	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t	NiEq %
Inferred								
0.5% NiEq	3,600	0.25	0.37	0.02	0.30	0.34	0.16	0.52

14.13 Model Validation and Sensitivity Analysis

The total volume of the Shakespeare deposit resource blocks in the Mineral Resource model, at a 0.0% NiEq cut-off grade value compared well to the total volume of the vein structures with the total volume of the block model being 0.3% lower than the total volume of the mineralized domains (Table 14-13). The slightly higher volume of the domains is the result of minor overlapping of domains. However, where solids overlap, GEMS assigns the data to the first possible solid based on the ñSolid Precedenceò setting.

Visual checks of block grades gold against the composite data on vertical section showed good correlation between block grades and drill intersections.

A comparison of the average composite grades with the average grades of all the blocks in the block model, a 0.0% NiEq cut-off grade was completed and is presented in Table 14-14. The block model average grades compared well with the composite average grades. The lower block grades are likely due to grade smoothing during the interpolation procedure.

Table 14-13 Comparison of Block Model Volume with the Total Volume of the Vein Structures

Deposit	Total Domain Volume	Block Model Volume	Difference %
Shakespeare Deposit	9,613,081	9,585,983	0.28%

Table 14-14 Comparison of Average Composite Grades with Block Model Grades

Deposit	Variable	Total	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Shakespeare Deposit	Composites Capped	5,828	0.32	0.36	0.02	0.32	0.36	0.17
	Blocks	99,552	0.29	0.33	0.02	0.29	0.32	0.17

14.13.1 Sensitivity to Cut-off Grade

The Shakespeare deposit Mineral Resource has been estimated at a range of cut-off grades presented in Table 14-15 to demonstrate the sensitivity of the resource to cut-off grades. The current Mineral Resources are reported at a cut-off grade of 0.2% NiEq within a conceptual pit shell and underground Mineral Resources are reported at a cut-off grade of 0.5% NiEq below the conceptual pit shell.

Table 14-15 Shakespeare Deposit 2019 Open Pit (A) and Underground (B) Mineral Resource Estimate, February, 2019 at Various NiEq Cut-off Grades

(A)

Cut-off Grade NiEq (%)	Tonnes	Ni%	Cu%	Co%	Au g/t	Pt g/t	Pd g/t	NiEq%
Indicated								
0.1	14,624,000	0.34	0.36	0.02	0.19	0.33	0.37	0.62
0.2	14,436,000	0.34	0.37	0.02	0.19	0.34	0.37	0.63
0.3	13,757,000	0.35	0.38	0.02	0.20	0.35	0.38	0.65
0.4	12,464,000	0.37	0.40	0.02	0.21	0.34	0.40	0.68
0.5	10,575,000	0.39	0.42	0.02	0.22	0.38	0.43	0.72
0.6	8,148,000	0.41	0.45	0.03	0.23	0.41	0.46	0.77
Inferred								
0.1	1,733,000	0.28	0.31	0.02	0.17	0.27	0.29	0.53
0.2	1,682,000	0.29	0.31	0.02	0.17	0.27	0.30	0.54
0.3	1,487,000	0.31	0.33	0.02	0.18	0.29	0.32	0.58
0.4	1,399,000	0.32	0.34	0.02	0.18	0.30	0.32	0.59
0.5	1,010,000	0.36	0.37	0.02	0.20	0.32	0.34	0.65
0.6	641,000	0.38	0.40	0.03	0.21	0.34	0.37	0.70

(B)

Cut-off Grade NiEq (%)	Tonnes	Ni%	Cu%	Co%	Au g/t	Pt g/t	Pd g/t	NiEq%
Indicated								
0.1	5,511,000	0.25	0.30	0.02	0.15	0.25	0.27	0.48
0.2	5,416,000	0.25	0.30	0.02	0.15	0.25	0.27	0.49
0.3	4,755,000	0.27	0.32	0.02	0.16	0.26	0.29	0.52
0.4	3,577,000	0.30	0.35	0.02	0.17	0.29	0.32	0.57
0.5	2,489,000	0.33	0.38	0.02	0.19	0.31	0.35	0.62
0.6	1,305,000	0.37	0.41	0.03	0.21	0.33	0.38	0.70
Inferred								
0.1	6,798,000	0.24	0.29	0.02	0.15	0.24	0.27	0.46
0.2	5,891,000	0.26	0.31	0.02	0.16	0.27	0.29	0.50
0.3	5,174,000	0.28	0.33	0.02	0.17	0.28	0.31	0.53
0.4	4,151,000	0.31	0.36	0.02	0.19	0.31	0.33	0.58
0.5	2,905,000	0.34	0.39	0.02	0.21	0.34	0.37	0.64
0.6	1,623,000	0.39	0.42	0.02	0.23	0.38	0.40	0.71

(1) Open pit Mineral Resources are reported at a cut-off grade of 0.2% NiEq within a conceptual pit shell and underground Mineral Resources are reported at a cut-off grade of 0.5% NiEq from the bottom of the conceptual pit shell. Values in this table reported above and below the cut-off grades should not be misconstrued with a Mineral Resource Statement. The values are only presented to show the sensitivity of the block model estimates to the selection of cut-off grade. All values are rounded to reflect the relative accuracy of the estimate and numbers may not add due to rounding.

(2) All figures are rounded to reflect the relative accuracy of the estimate. Composites have been capped where appropriate.

14.14 Comparison to Previous Mineral Resource Estimate

A comparison of the current Shakespeare deposit Mineral Resource estimate (open pit and underground) and the 2018 Mineral Resource estimate completed by SGS and 2006 Mineral Resource estimate completed by Micon is presented in Table 14-16. The resulting current Mineral Resource estimate is informed by revised 3D resource wire frame modeling based on additional drilling completed in 2018.

Table 14-16 Comparison of the 2006 and 2018 Shakespeare Deposit Mineral Resource Estimates, (A) In-pit and (B) Underground

(A)

Cut-off Grade (Au g/t)	Tonnes	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Indicated							
2019 Mineral Resource	14,436,000	0.34	0.37	0.02	0.34	0.37	0.19
2018 Mineral Resource	13,920,000	0.34	0.37	0.02	0.32	0.35	0.18
% Difference	3.6%	0.26%	-1.13%	7.29%	4.56%	5.56%	5.70%
2006 Mineral Resource	12,430,000	0.35	0.37	0.02	0.35	0.39	0.20
Inferred							
2019 Mineral Resource	1,682,000	0.29	0.31	0.02	0.27	0.30	0.17
2018 Mineral Resource	1,685,000	0.29	0.32	0.02	0.28	0.31	0.17
% Difference	-0.2%	-0.07%	-2.61%	2.08%	-1.83%	-4.49%	-0.25%
2006 Mineral Resource	250,000	0.32	0.26	0.02	0.23	0.22	0.13

(1) 2018 and 2019 Open pit Mineral Resources are reported at a cut-off grade of 0.2% NiEq within a conceptual pit shell.

(2) 2006 Open pit Mineral Resources are reported at an NSR cut-off grade of CDN $24.23 within a conceptual pit shell.

(B)

Cut-off Grade (Au g/t)	Tonnes(1)	Ni %	Cu %	Co %	Pt g/t	Pd g/t	Au g/t
Indicated							
2019 Mineral Resource	2,489,000	0.33	0.38	0.02	0.31	0.35	0.19
2018 Mineral Resource	2,233,000	0.33	0.38	0.02	0.32	0.33	0.18
% Difference	10.3%	0.00%	0.80%	10.29%	-2.44%	5.68%	3.96%
2006 Mineral Resource	1,830,000	0.37	0.41	0.03	0.36	0.39	0.22
Inferred							
2019 Mineral Resource	2,905,000	0.34	0.39	0.02	0.34	0.37	0.21
2018 Mineral Resource	2,492,000	0.33	0.38	0.02	0.32	0.35	0.19
% Difference	14.2%	3.99%	3.54%	4.86%	6.59%	6.59%	11.26%
2006 Mineral Resource	740,000	0.37	0.39	0.03	0.32	0.33	0.18

(1) 2018 and 2019 Underground Mineral Resources are reported at a cut-off grade of 0.5% NiEq outside a conceptual pit shell.

(2) 2006 Open pit Mineral Resources are reported at an NSR cut-off grade of CDN $50.00/t outside a conceptual pit shell.

14.15 Disclosure

All relevant data and information regarding the Project are included in other sections of this Technical Report. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.

The Author is not aware of any known mining, processing, metallurgical, environmental, infrastructure, economic, permitting, legal, title, taxation, socio-political, or marketing issues, or any other relevant factors not reported in this technical report, that could materially affect the current Mineral Resource Estimate.

15 Mineral Reserve Estimates

There are no current mineral reserve estimates stated on this project. This section does not apply to the Technical Report.

16 MINING METHODS

This section does not apply to the Technical Report.

17 RECOVERY METHODS

This section does not apply to the Technical Report.

18 PROJECT INFRASTRUCTURE

This section does not apply to the Technical Report.

19 MARKET STUDIES AND CONTRACTS

This section does not apply to the Technical Report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section does not apply to the Technical Report.

21 CAPITAL AND OPERATING COSTS

This section does not apply to the Technical Report.

22 ECONOMIC ANALYSIS

This section does not apply to the Technical Report.

23 ADJACENT PROPERTIES

There is no information on properties adjacent to the Property necessary to make the technical report understandable and not misleading

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. To the Authorsô knowledge, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or Mineral Resource estimate.

25 CONCLUSIONS

SGS was contracted by Magna to complete an updated Mineral Resource estimate for the Shakespeare deposit within the Shakespeare Property, located approximately 70 km west-southwest of Sudbury, Ontario, Canada, and to prepare a technical report written in support of the updated Mineral Resource estimate. The reporting of the updated Mineral Resource estimate complies with all disclosure requirements for Mineral Resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects. The classification of the updated Mineral Resource is consistent with current CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014).

The current Mineral Resource estimate on the Shakespeare deposit is an update to a NI 43-101 Mineral Resource estimate completed for Magna in 2018. The estimate was prepared by SGS and is presented in a NI 43-101 Technical Report titled ñTechnical Report on the Updated Mineral Resource Estimate for the Shakespeare Ni-Cu-Pge Deposit, Shakespeare Project, Ontario, Canadaò dated September 25, 2018.

Completion of the current Mineral Resource estimate involved the assessment of a drill hole database, which included data for an additional 13 drill holes completed in 2018 by Magna, updated three-dimensional (3D) mineral resource models, and available written reports.

Ordinary Kriging (ñOKò) and Inverse Distance squared (ñIDò) restricted to mineralized domains were used to Interpolate grades for Ni (%), Cu (%), Co (%), Pt (g/t), Pd (g/t) and Au (g/t) into a block model. Indicated and Inferred Mineral Resources are reported in the summary tables in Section 14-10. The Mineral Resource estimate takes into consideration that the Shakespeare Deposit will be mined by both open pit and underground mining methods. Open pit mining was selected as the starting method to of development of the Shakespeare deposit. This is based on the size of the resource, tenor of the grade, grade distribution, and proximity to topography. The Author is of the opinion that with current metal pricing levels and knowledge of the mineralization, open-pit mining offers the most reasonable approach for initial development of the deposit.

The current Mineral Resource estimate for the Shakespeare deposit is presented in Table 14-11 and includes an open pit and an underground Mineral Resource (estimated from the bottom of the 2019 pit) (Figure 14-9 and Figure 14-9).

Highlights of the Shakespeare deposit Mineral Resource Estimate are as follows:

- The open pit Mineral Resource includes, at a cut-off grade of 0.2% NiEq, 14,436,000 tonnes grading 0.34% Ni, 0.37% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.19 g/t Au in the Indicated category, and 1,682,000 tonnes grading 0.29% Ni, 0.31% Cu, 0.02% Co, 0.27 g/t Pt, 0.30 g/t Pd and 0.17 g/t Au in the Inferred category.

- The underground Mineral Resource includes, at a cut-off grade of 0.5% NiEq, 2,489,000 tonnes grading 0.33% Ni, 0.38% Cu, 0.02% Co, 0.31 g/t Pt, 0.35 g/t Pd and 0.19 g/t Au in the Indicated category, and 2,905,000 tonnes grading 0.34% Ni, 0.39% Cu, 0.02% Co, 0.34 g/t Pt, 0.37 g/t Pd and 0.21 g/t Au in the Inferred category.

The general requirement that all Mineral Resources have ñreasonable prospects for economic extractionò implies that the quantity and grade estimates meet certain economic thresholds and that the Mineral Resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to meet this requirement, SGS considers that the Shakespeare deposit mineralization is amenable for open pit and underground extraction.

In order to determine the quantities of material offering ñreasonable prospects for economic extractionò by an open pit, WhittleÊ pit optimization software 4.7.1 and reasonable mining assumptions to evaluate the proportions of the block model (Indicated and Inferred blocks) that could be ñreasonably expectedò to be

mined from an open pit were used. The pit optimization was completed by SGS. The pit optimization parameters used are summarized in Table 14-10. A Whittle pit shell at a revenue factor of 1.0 was selected as the ultimate pit shell for the purposes of this Mineral Resource estimate. The corresponding strip ratio is 7.7:1 and reaches a maximum depth of approximately 335 m below surface.

The reader is cautioned that the results from the pit optimization are used solely for the purpose of testing the ñreasonable prospects for economic extractionò by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a Mineral Resource statement and to select an appropriate resource reporting cut-off grade.

26 RECOMMENDATIONS

Magna is planning on conducting exploration on the Shakespeare property in 2019. The exploration program is to include surface mapping, stripping and chip and channel sampling in several locations and up to 6,000 m of drilling. The total cost of the recommended work program is estimated at C$1,500,000 million (Table 26-1).

Given the prospective nature of the property, it is the Authorsô opinion that the Property merits further exploration and that proposed plans for further work are justified. The current proposed work program will help advance the Shakespeare deposit towards a pre-development stage and will provide key inputs required to evaluate the economic viability of a mining project at a pre-feasibility level.

The Author recommends that Magna conduct the further exploration as proposed, subject to funding and any other matters which may cause the proposed exploration program to be altered in the normal course of its business activities or alterations which may affect the program as a result of exploration activities themselves.

Table 26-1 Proposed Budget for the 2019 Program

Budget for start of May to end of September (5 months)				
Category	**Priority**	**Item**	**Cost**	
Surface Geophysics	High	EM, IP and linecutting	**$**	**250,000**
Drilling	High	West pit gaps and extension (2,000m)	$	250,000
Estimated all in price/m	Moderate	East pit infill (2,000m)	$	250,000
$125	Low	Exploration drilling (2,000m)	$	250,000
6,000m is estimated to take 11 weeks		Logging software	$	50,000
			$	**800,000**
Advanced Exploration	Moderate	Trenching location 1	$	40,000
Stripping and washing	Moderate	Trenching location 2	$	40,000
	Moderate	Trenching location 3	$	40,000
			$	**120,000**
Mapping	High	Minimum 2 weeks mapping the mine area	$	15,000
Outlines mapping priorities and	High	Minimum 4 weeks mapping key areas on property	$	30,000
estimated expenses. Cost is built	Low	Regional mapping of Nipissing contact (2 months)	$	60,000
into personnel section			**$**	**105,000**
Sampling		Surface samples (~30/week for 2 month program)	$	12,000
		Drilling samples (30% of 4,000m)	$	60,000
		Petrography (10% of samples)	$	7,200
		Bags, tags, misc (10% of sampling cost)	$	7,200
		IoGAS software package	$	2,000
			$	**88,400**
Support Equipment		Truck rental (x2)	$	15,000
		Side x side (at site)	$	-
		Fuel (assumes staying on site, 2 fills a week/truck)	$	8,000
		Mapping tablet and programming (x2)	$	7,500
		GIS programming	$	5,000
		3D modelling software	$	30,000
		Handheld GPS x2	$	500
		Beepmat (purchase)	$	14,000
		Misc and consumables	$	2,500
			$	**82,500**
Personnel and camp costs (based on 5 months)		4 man crew	$	100,000
		Food	$	10,000
		Camp costs (lodging, mobilization, etc)	$	35,000
Covers wages, transport, and		Internet	$	2,500
misc expenses for duration of		Propane	$	2,000
program		Generator/powersource	$	6,000
			$	**155,500**
Honours thesis		Structural form-line and comparison of regional folding to mineralized shears		
Built into costs		Compare regional geochemical variation on the property. Focus on Nipissing suite rocks from mineralized locations on the property		
			$	**1,496,400**

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28 DATE AND SIGNATURE PAGE

This report titled ñ2019 MINERAL RESOURCE ESTIMATE UPDATE FOR THE SHAKESPEARE NI-CU-PGE SULPHIDE DEPOSIT, SHAKESPEARE PROJECT, ONTARIO, CANADAò dated April 03, 2019 (the ñTechnical Reportò) for Magna Mining Corp. was prepared and signed by the following author:

The effective date of the report is April 03, 2019.
The date of the report is February 15, 2019.

Signed by:

Qualified Persons	Company
Allan Armitage, Ph.D., P. Geo.,	SGS Canada Inc. (ñSGSò)
April 03, 2019	

29 CERTIFICATES OF QUALIFIED PERSONS

QP CERTIFICATE – ALLAN ARMITAGE

To Accompany the Report titled ñ2019 MINERAL RESOURCE ESTIMATE UPDATE FOR THE SHAKESPEARE NI-CU-PGE SULPHIDE DEPOSIT, SHAKESPEARE PROJECT, ONTARIO, CANADAò dated March 18, 2019 (the ñTechnical Reportò) for Magna Mining Corp.

I, Allan E. Armitage, Ph. D., P. Geol. of 62 River Front Way, Fredericton, New Brunswick, hereby certify that:

1. I am a Senior Resource Geologist with SGS Canada Inc., 10 de la Seigneurie E blvd., Unit 203 Blainville, QC, Canada, J7C 3V5 (www.geostat.com).

2. I am a graduate of Acadia University having obtained the degree of Bachelor of Science - Honours in Geology in 1989, a graduate of Laurentian University having obtained the degree of Masters of Science in Geology in 1992 and a graduate of the University of Western Ontario having obtained a Doctor of Philosophy in Geology in 1998.

3. I have been employed as a geologist for every field season (May - October) from 1987 to 1996. I have been continuously employed as a geologist since March of 1997.

4. I have been involved in mineral exploration and resource modeling for gold, silver, copper, lead, zinc, nickel, and uranium in Canada, Mexico, Honduras, Chile, Cuba and Peru at the grass roots to advanced exploration stage since 1991, including resource estimation since 2006.

5. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and use the title of Professional Geologist (P.Geol.) (License No. 64456; 1999).

6. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia and use the designation (P.Geo.) (Licence No. 38144; 2012).

7. I am a member of The Association of Professional Geoscientists of Ontario (APGO) and use the designation (P.Geo.) (Licence No. 2829; 2017).

8. I have read the definition of "Qualified Person" set out in National Instrument 43-101 (ñNI 43-101") and certify that by reason of my education, affiliation of my professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person".

9. I am responsible for all sections of the Technical Report.

10. I visited the Shakespeare Project on July 30, 2018 and on November 28 and 29, 2018.

11. I have had prior involvement in the Shakespeare Project. I was the author of a previous technical repot for the Shakespeare Property, dated September 25, 2018 for Magna Mining Corp.

12. I am independent of Magna Mining Corp.as defined by Section 1.5 of NI 43-101.

13. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

14. I have read NI 43-101 and Form 43-101F1 (the ñFormò), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

Signed and dated this 03th day of April, 2019 at Fredericton, New Brunswick.

"Signed and Sealed"

Allan Armitage, Ph. D., P. Geo., SGS Canada Inc.

APPENDIX A

Results of the 2018 Sample Preparation, Analysis, Security and QA/QC Program

Sampling Method and Approach

Drill core sampling

Once core was logged the geologist would then select intervals for sampling. Samples were selected such that boundaries between rock types, alteration, and mineralization were not crossed by the sample intervals. To accomplish this, samples were given a minimum length of 30cm and maximum length of 1.5m. In general the geologists endeavored to keep samples in approximate range of 1m.

Samples were measured from meter marks created by the geologist or core technician before core logging began. In zones of continuous sampling, measurements are carried down from the previous sample. This is done to ensure that sample lengths are accurate, and in cases where the driller blocks did not align with measured distances, the latter were taken as correct. The only exception to this was samples that were extremely blocky, gravelly, or otherwise indicative of potential core loss. In these cases samples would be reset at the next driller block. Once the sample was marked out, a sample tag was placed at the end of the sample and a reference line was drawn on top of the core.

Upon completion of sample markup, the core was then cut using a diamond core saw. Core was placed in the core tray with the reference line perpendicular to the blade and cut. Core was then placed back in the tray in its original position. The top half (side of core with reference line) was then placed in a labelled plastic bag along with a copy of the assay tag and sealed. The remaining half of core is then stored for future reference, sampling and review.

In cases where large zones of sulfide were cut, the blade would be cleaned by cutting properly sized pieces of cement block to remove any possible sulfide contamination on the blade. As the saw used recirculated water, the water source would also be changed upon completion of sampling mineralized zones.

The newly bagged samples were then placed into standard fibre rice bags for shipping. An average of 10 samples were placed in the rice bags to keep weight <50lbs. Rice bags were clearly labelled with batch number, number of rice bags per batch, samples contained within the bag, and with the companies contact information. To ensure that samples did not fall out of the rice bags, they were zip-tied shut after ñspot-checksòwere completed to ensure rice bags contained the samples listed on them.

Once all rice bags were filled and checked for QAQC they were then transported by truck to SGS Laboratories Garson facility. While dropping samples at the facility, Magna personnel would then confirm the samples being dropped off and have an SGS representative sign-off as confirmation of sample receipt.

Lab Work

SGS Processing

Once at SGS the samples were crushed and pulverized at the Garson, Ontario facility and were then sent to Burnaby, British Columbia for analysis. Once at Burnaby the primary 3 methods of analysis were GE IMS90AS (34 elements), GE FAI313 (Au), and GE FAI313AE (Pt, Pd). In some instances samples would exceed detection limits and need to be analyzed using GO FAG303 (Au), or GO ICP90Q (base metals) (Tables A-1 to A-4).

Table A-1: Sample preparation codes and description

Method Code	Description
LOG02	Pre-preparation processing, sorting, logging, boxing etc.
	SAMPLE PREPARATION
PRP89	Weigh, dry <3.0kg, crush to 75% passing 2mm, split 250g, pulverize to 85% passing 75 microns.
	Sample Preparation Charges only applicable to overweight samples (>3.0kg)
DRY11	Dry samples >3.0kg at 105°C, per kg rate.
CRU22	Crush >3.0kg to 75% passing 2mm, per kg rate.
	Sample Preparation Charges only applied to samples received as pulps or to client requested pulp duplicates
WGH79	Weighing of samples and reporting of weights.
SPL26	Split into representative sub-samples using riffle splitter, per kg rate.
PUL45	Pulverize 250g, Cr steel to 85% passing 75 microns.
	SAMPLE HANDLING AND STORAGE
STO98	Storage of pulps, 30 day rate, Rate applied after initial 90 day free storage period expires.
STO99	Storage of rejects, 30 day rate. Rate applied after initial 30 day free storage period expires.
RTN96	All samples will be returned to the client at cost plus 15%.
DIS94	Disposal of samples, per kg rate.

Table A-2: Sample analysis codes and descriptions with detection limits

Method Code	Description
	PRIMARY ANALYSIS METHODS
GE IMS90AS	34 element Standard package - sodium peroxide fusion, ICP-MS. See table below for elements and limits.
GE FAI313	Au - 30g Fire Assay, ICP-AES. Reporting limits 1 - 10 000ppb.
GE FAI313AE	Pt or Pd - additional element by GE FAI313. Reporting limits Pt 10 - 10 000ppb, Pd 1 - 10 000ppb.
	OVER LIMIT ANALYSIS METHODS
GO FAG303	Au - ore grade 30g Fire Assay, gravimetric. Reporting limits 0.5 - 10000ppm.
GO ICP90Q	Single element - ore grade sodium peroxide fusion, ICP-AES. See table below for available elements and limits.
GO ICP90QAE	Additional element by GO ICP90Q.

Table A-3: Detection limits for the 34 element GE IMS90A S method

Elements and Limit(s)					
Ag	1 – 200 ppm	Fe	0.01 – 25 %	Si	0.1 – 40 %
Al	0.01 – 25 %	K	0.1 – 30 %	Sn	1 – 10 000 ppm
As	3 – 10 000 ppm	La	0.1 – 10 000 ppm	Sr	10 – 10 000 ppm
Ba	10 – 10 000 ppm	Li	5 – 10 000 ppm	Te	1 – 1000 ppm
Be	1 – 2500 ppm	Mg	0.01 – 30 %	Ti	0.01 – 30 %
Bi	0.1 – 1000 ppm	Mn	10 – 10 000 ppm	V	5 – 10 000 ppm
Ca	0.1 – 25 %	Mo	2 – 10 000 ppm	W	5 – 10 000 ppm
Cd	0.2 – 10 000 ppm	Ni	5 – 50 000 ppm	Y	0.5 – 10 000 ppm
Co	0.5 – 10 000 ppm	P	0.01 – 25 %	Yb	0.1 – 1000 ppm
Cr	5 – 10 000 ppm	Pb	2 – 50 000 ppm	Zn	5 – 50 000 ppm
Cs	0.1 – 10 000 ppm	S	1 – 25 %		
Cu	2 – 50 000 ppm	Sb	1 – 10 000 ppm		

Table A-4: Detection limits for the GO ICP90Q (overlimits) method

Elements and Limit(s)					
Co	0.01 – 30 %	Mo	0.01 – 30 %	Zn	0.01 – 30 %
Cu	0.01 – 30 %	Ni	0.01 – 30 %		
Fe	0.05 – 30 %	Pb	0.01 – 30 %		

SGS Internal Quality Control (standards and blanks)

SGS routinely added quality control samples such that they comply with ISO/IEC 17025. Standards are selected to match the typical matrix of samples submitted to ensure that grades are being reported accurately. SGS quality control personnel monitor and submit QAQC documentation as well as reporting their QC sample analysis with assay certificates. Review of these analysis shows that results are within acceptable limits.

SGS Internal Duplicates

SGS routinely analyzes random samples for duplicate analysis. This is done to ensure the machines are reporting accurately and to estimate the reproducibility related to uncertainties in analytical methods and the homogeneity of sample pulps. Essentially this tests the precision of the labs analytical procedures, which are expected to be less than 10%. Meaning that at 95% confidence the duplicate assay will be within ±10% of the original assay value. Lab duplicates are shown in

Figure A-2: Cu (%) variation within lab duplicates

to A-4 and it can be seen that there is minor variation outside of the 10% threshold. However, the variation is limited; lab precision is acceptable.

Figure A-1: Ni (%) variation within lab duplicates

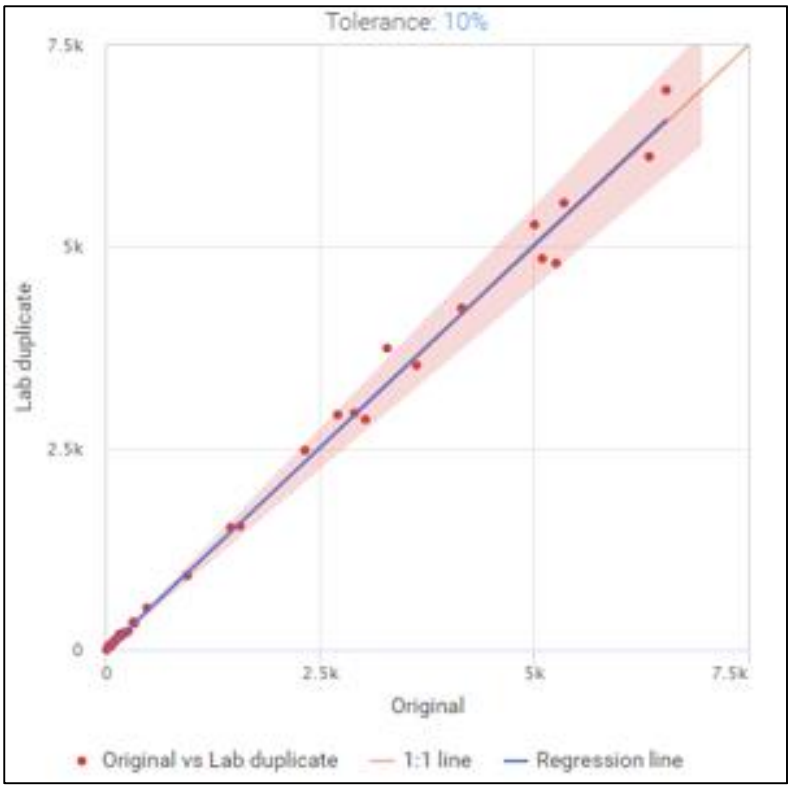


Figure A-2: Cu (%) variation within lab duplicates

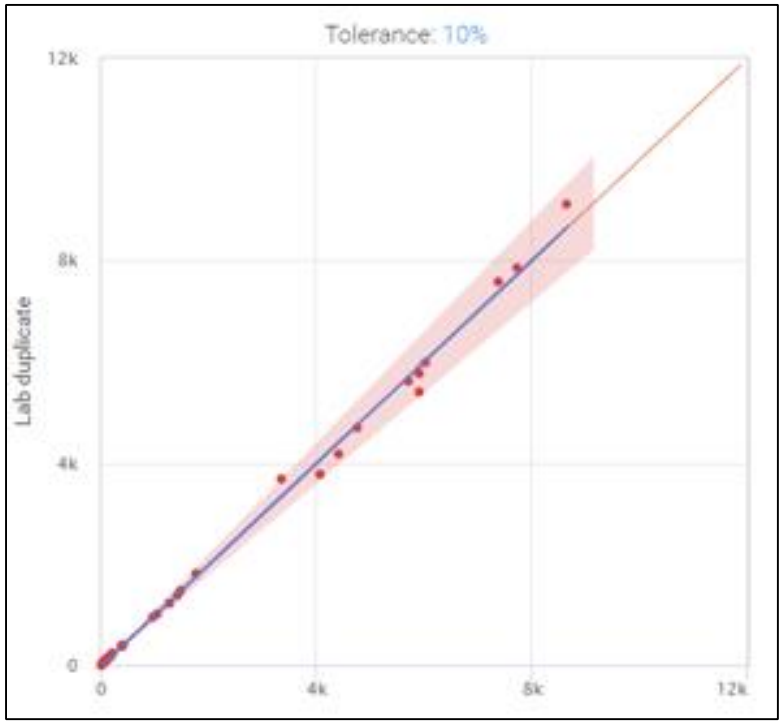


Figure A-3: Pt (ppb) variation within lab duplicates

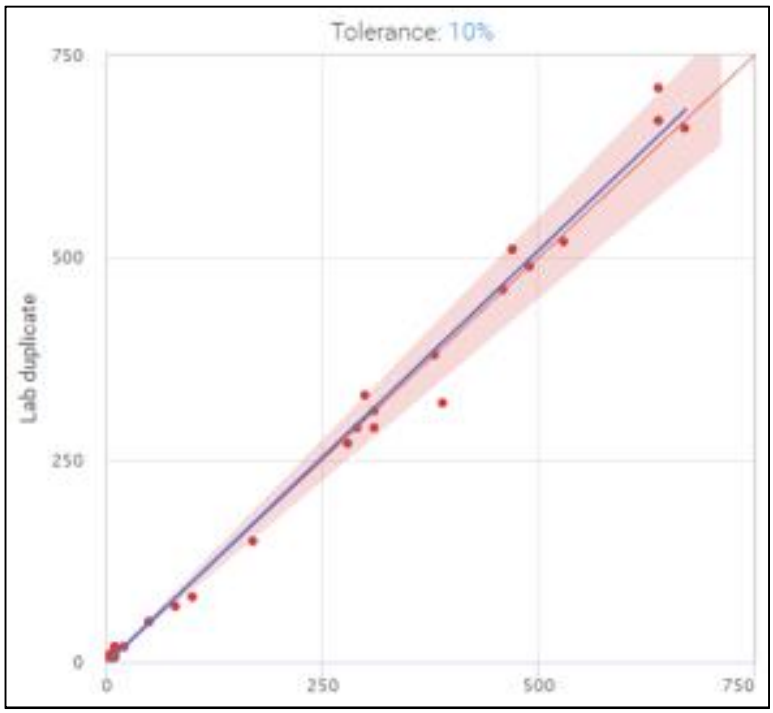
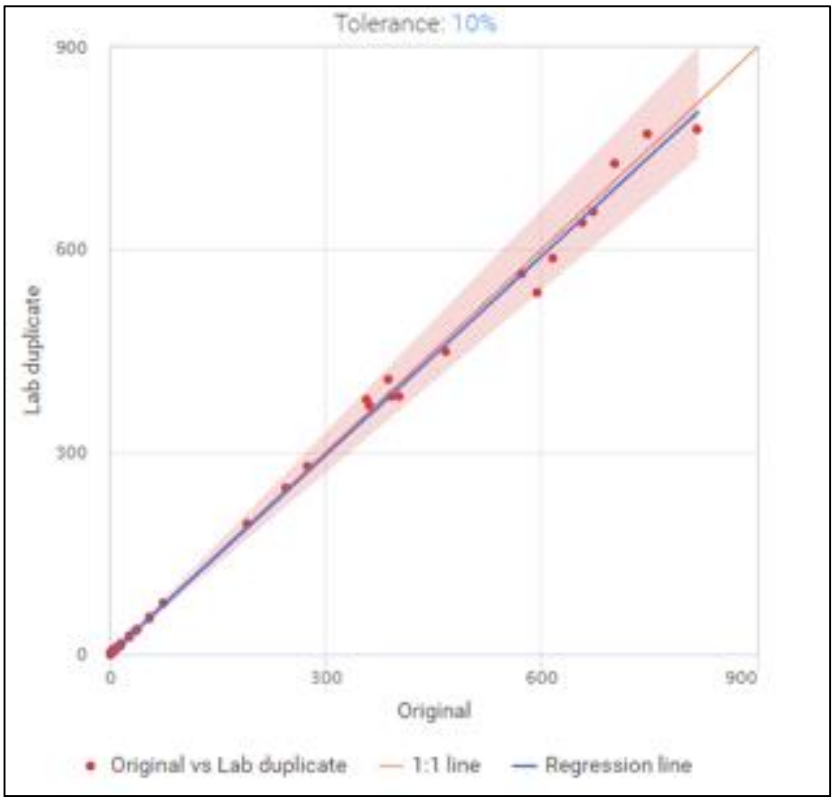


Figure A-4: Pd (ppb) variation within lab duplicates



Data Verification – Magna Mining's Internal Protocol

To ensure proper reporting and analysis by SGS Magna inserted standards and blanks at regular intervals throughout the 2018 drill program as part of a QAQC program. These QC samples underwent the same sample preparation as drill core. They were submitted at predetermined intervals such that there was one CDN-ME-1208, one CDN-ME-1310, one field duplicate, one CDN-BL-10, and one quartz pebble blank submitted in every 50 samples. Random quartz pebble blanks were also inserted in mineralized sections to ensure that contamination between samples is being kept to a minimum. It should be noted that the quartz pebble blank was added during the program and the first few holes did not have any submitted and were submitted with only CDN-BL-10 powdered blanks. In the duration of the 2018 drilling program a total of 59 standards, 29 field duplicates, 92 blanks were submitted for a total of 180 control samples or 12% of the samples taken in this program.

Magna Submitted Standards

Certified reference materials (CRM) are routinely submitted with samples to establish long term assay bias or problems with specific sample batches. Magna utilized two standards that were selected to cover the spectrum of mineralized grades expected to be seen at the Shakespeare deposit. Of the 59 standards submitted only one failed to fall within 3 standard deviations and that was only for method GE FAI313 (**Figure A-5**). This sample passed analysis for Cu and Ni. This was brought to the attention of SGS and the standard was re-assayed as well as the previous 5 samples, the standard was the last sample in that batch and therefore no samples were assayed after the standard. The values reported from the re-assay were extremely close for the samples before the standard and within acceptable limits for the standard itself (Figures A-6 and A-7) and because of this it is assumed that the remaining assays of this batch are acceptable. Detailed results are outlined in Figures A-8 to A-11) and show all analysis falling within 3 standard deviations and because of this all analysis are assumed to be correct for the 2018 program.
It is important to note that the values for gold are provisional and therefore the three samples exceeding 2 standard deviations have been deemed to be within acceptable levels.

Figure A-5: Original assay certificates for all standards including one failed standard. Note that gold values are provisionary with the analytical technique used and are therefore deemed as acceptable.

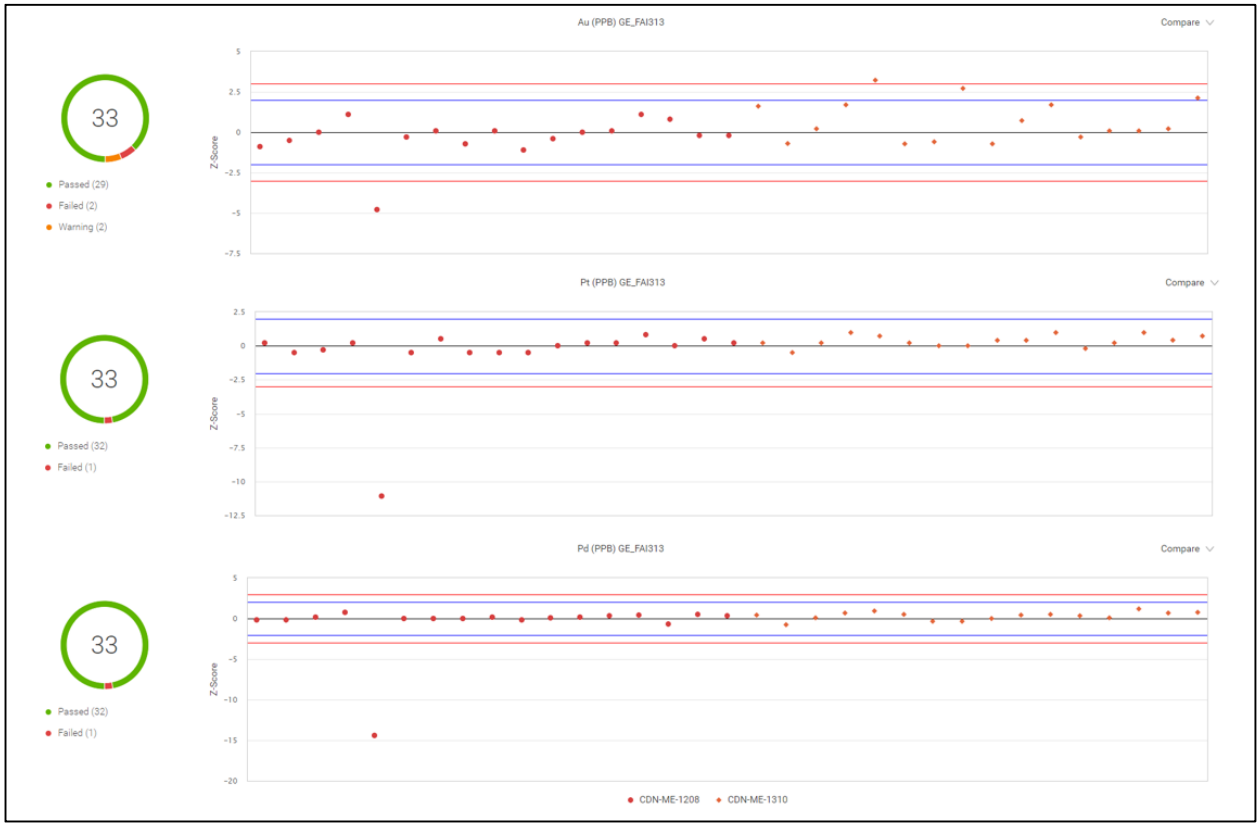


Figure A-6: Z-score plot of all standards after reanalysis of failed sample for method GE FAI313 (Au, Pt, Pd). Note that gold values are provisionary with the analytical technique used and are therefore deemed as acceptable.

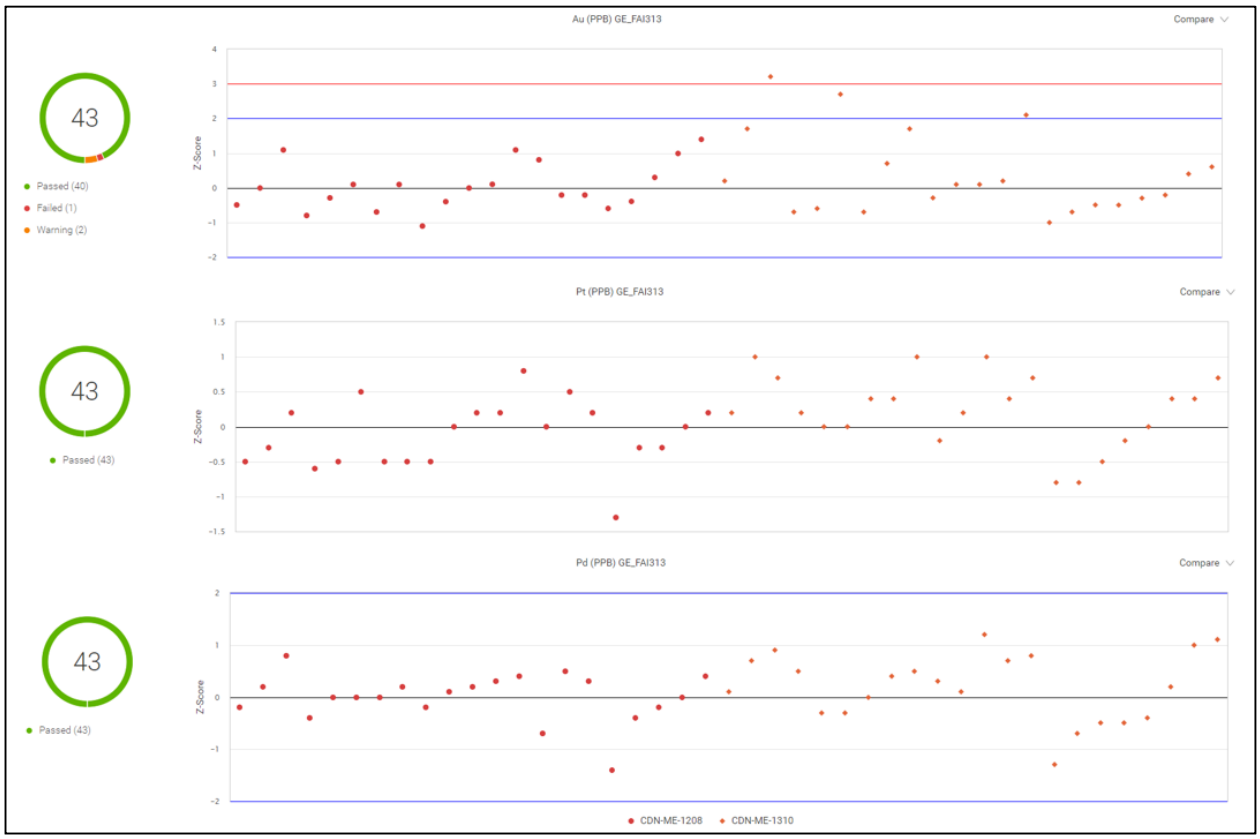


Figure A-7: Z-score plot of all standards for method GE IMS90A (Cu and Ni)

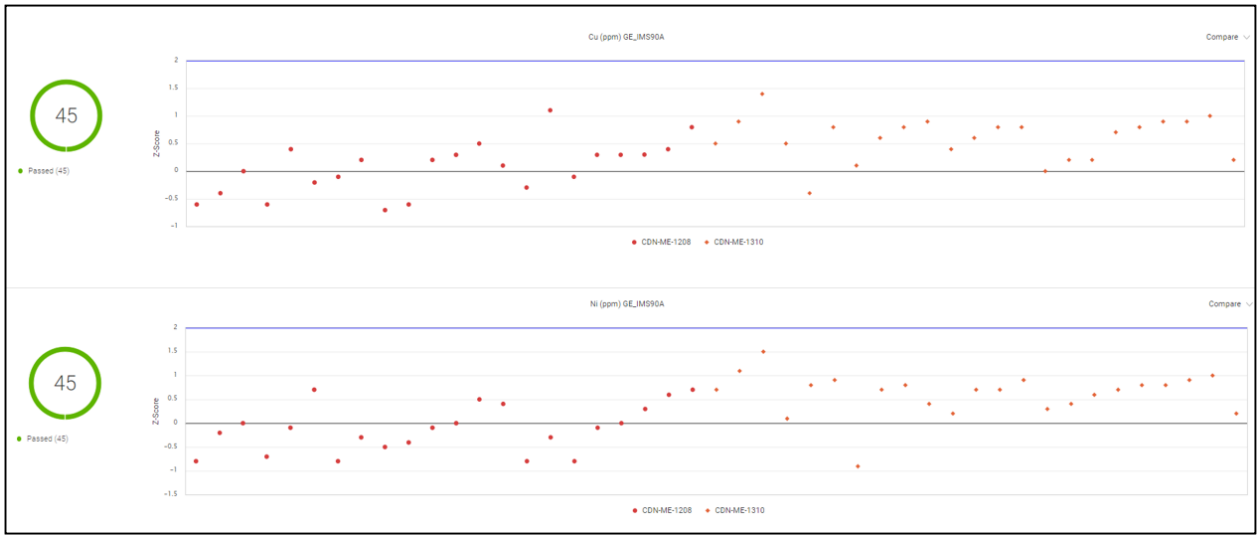
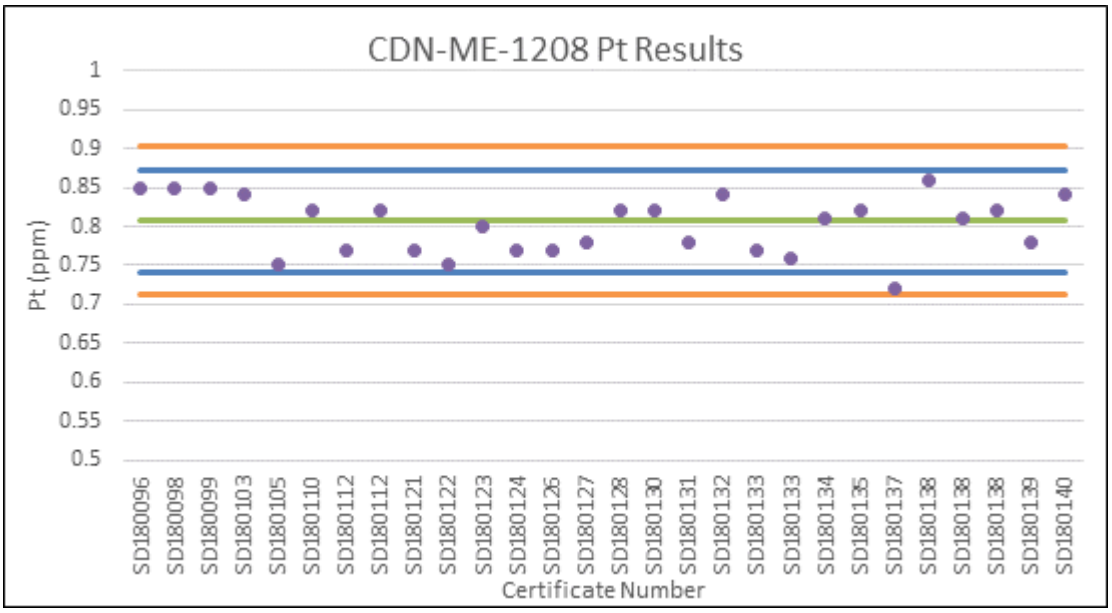


Figure A-8: Results of standard analysis for Pt and Pd. Note that all samples fall within 3 standard deviations



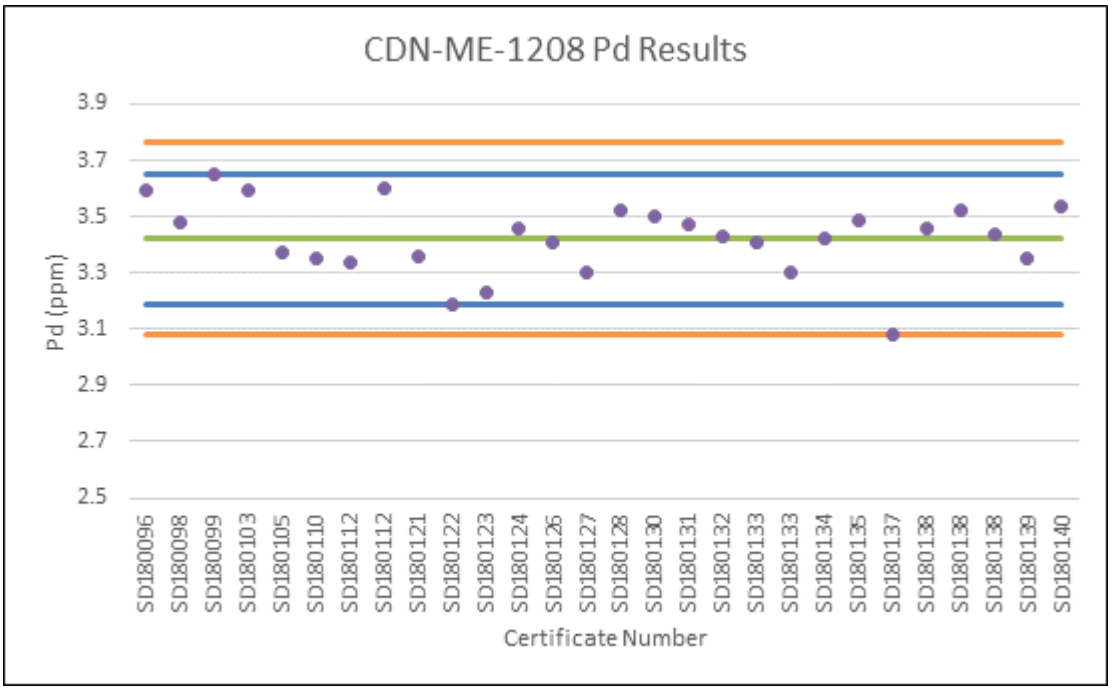
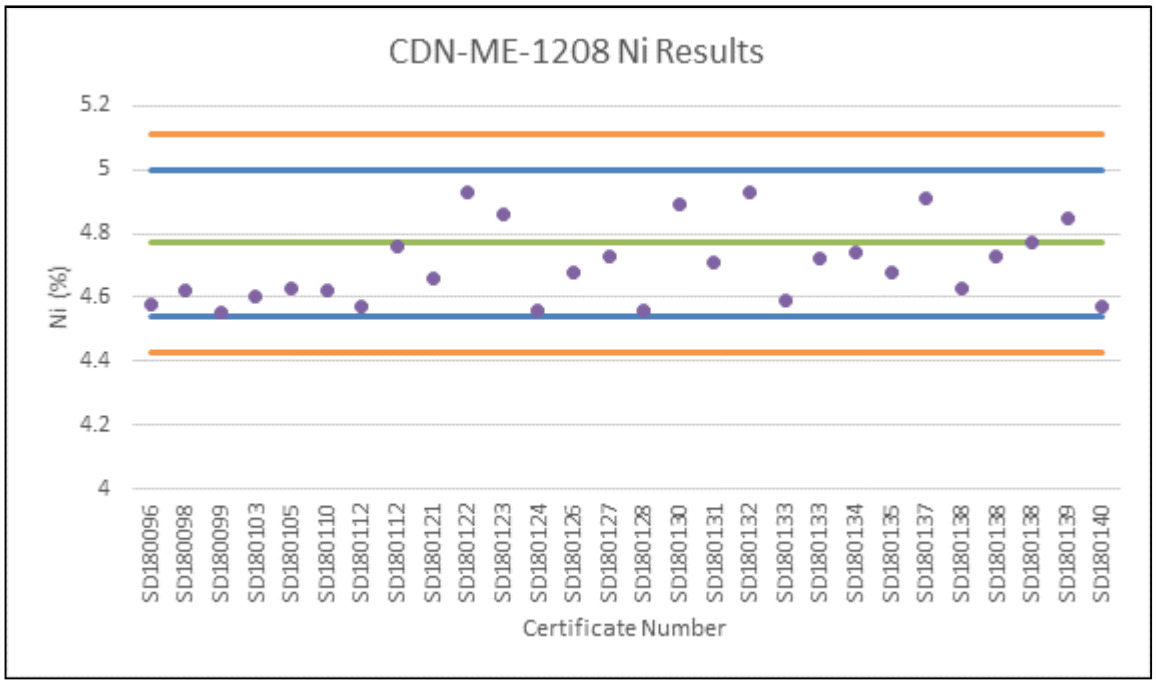


Figure A-9: Results of standard analysis for Ni and Cu. Note that all samples fall within 3 standard deviations



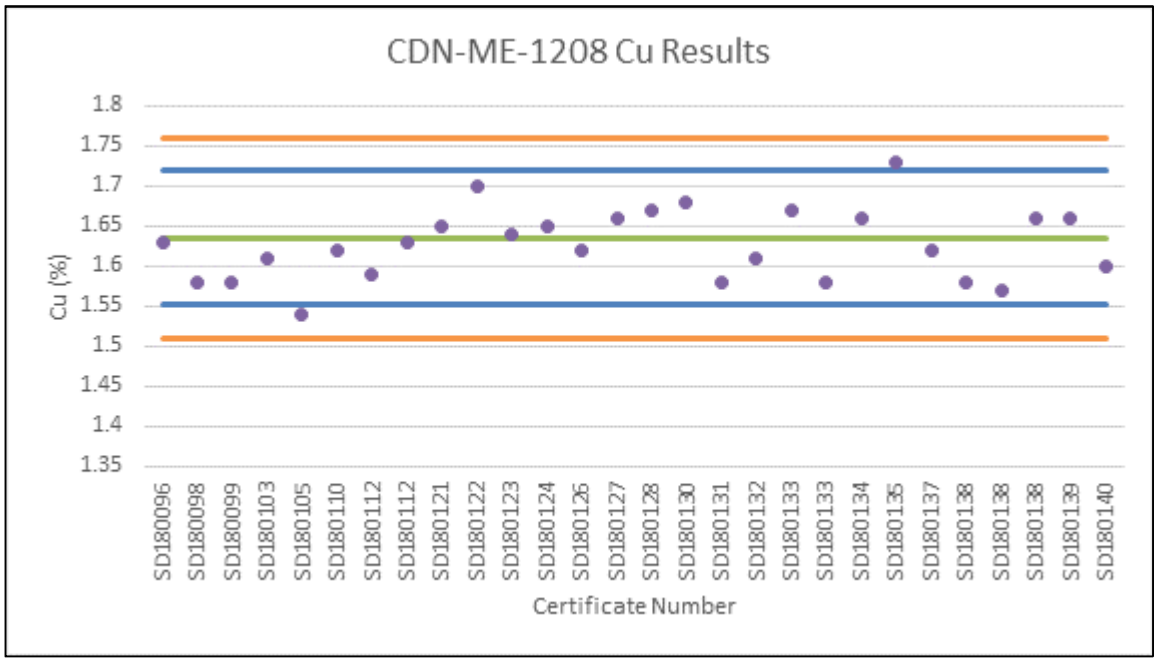
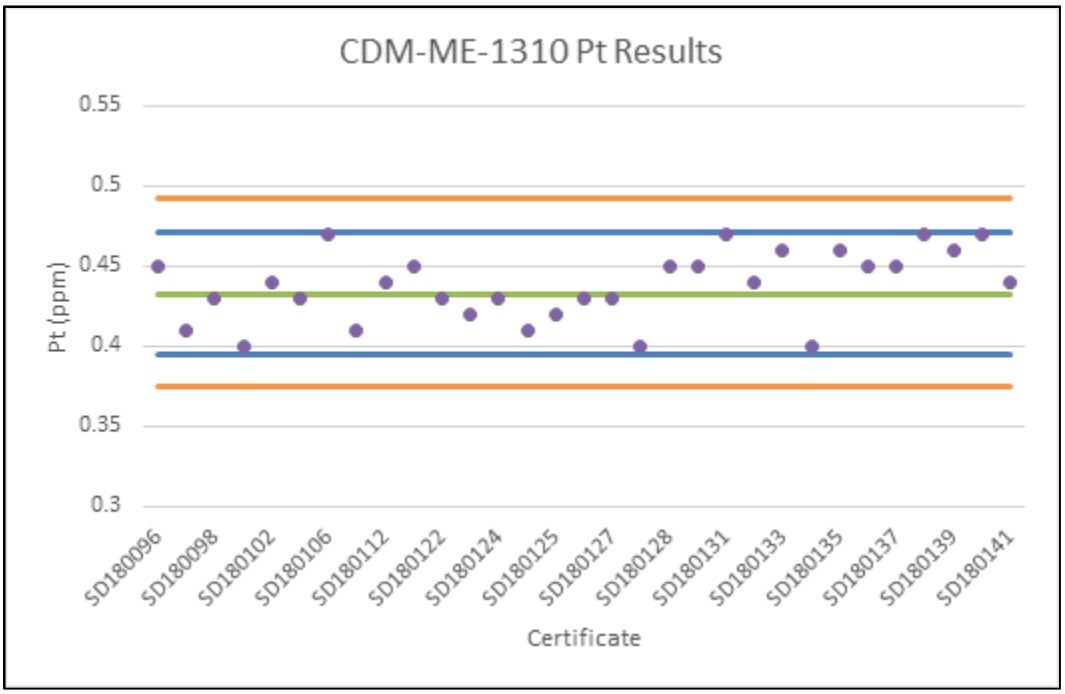


Figure A-10: Results of standard analysis for Pt and Pd. Note that all samples fall within 3 standard deviations



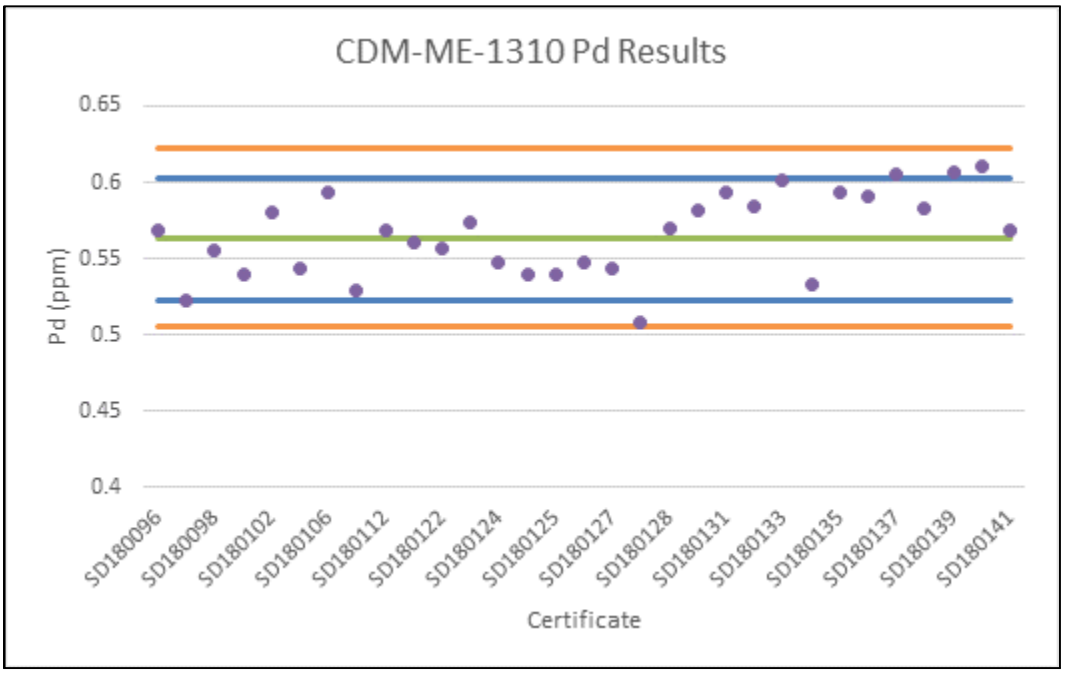
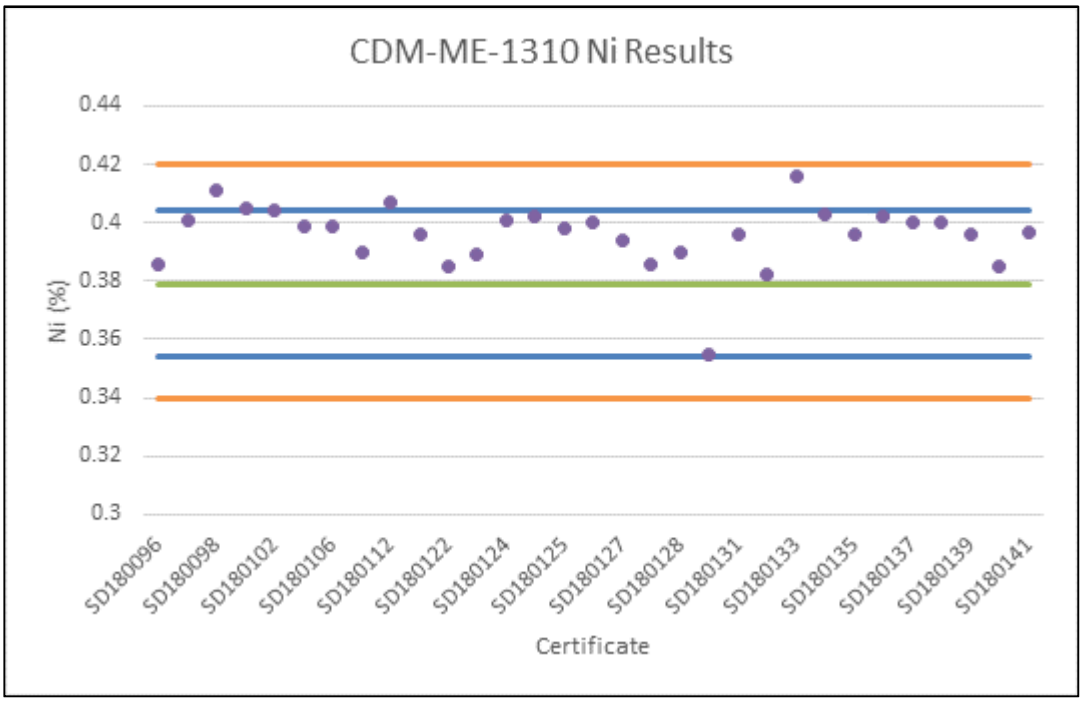
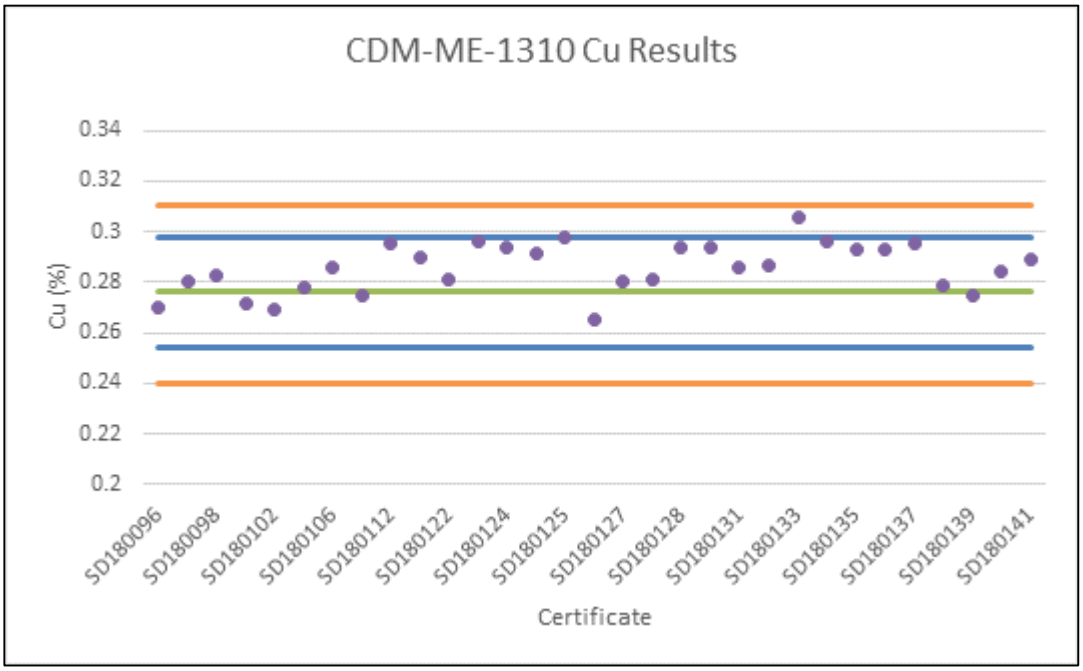


Figure A-11: Results of standard analysis for Ni and Cu. Note that all samples fall within 3 standard deviations





Magna Submitted Blanks

During the crushing and preparation of samples at the lab there is potential for mineralized samples to contaminate subsequent samples. To test if this is occurring two types of blanks were submitted into the sample sequence. Powdered blanks (CDN-BL-10; powdered from granitic material) and 2-4cm quartz gravel chunks. Metal values for gravel blanks are assumed to be near zero and values for powdered blanks are also negligible. Both blanks were inserted into the sample chain at regular intervals and the quartz gravel was inserted randomly in mineralized zones. The purpose of this is twofold, it allows for testing for contamination of samples, and also helps clean the laboratory equipment.

Failure limits for the standards are defined as 4ppb (Au), 40 ppb (Pt), and 4 ppb (Pd) for powdered blanks as defined by CDN thresholds. For coarse blanks these thresholds were carried over, however, it is important to note that the gravel blanks are not certified materials and there could be natural variation in the samples. Neither of the blank types have defined failure limits for Ni and Cu and failure limits were set at 150 ppm Cu and 50 ppm Ni for powdered blanks and 50 ppm Cu and 50 ppm Ni for quartz gravels. Results of the blank assays are shown in Figure A-12 to Figure A-15.

The figures show that there is some contamination of samples within mineralized zones. However, the degree of contamination is relatively limited and only rarely exceeds defined thresholds. In these cases the exceeded values are within a few ppb for Au, Pt, and Pd; and all within acceptable levels for Cu and Ni. It is therefore assumed that contamination of samples from the 2018 program did not occur.

Figure A-12: Powdered blank analysis for method GE FAI313 (Au, Pt, Pd)

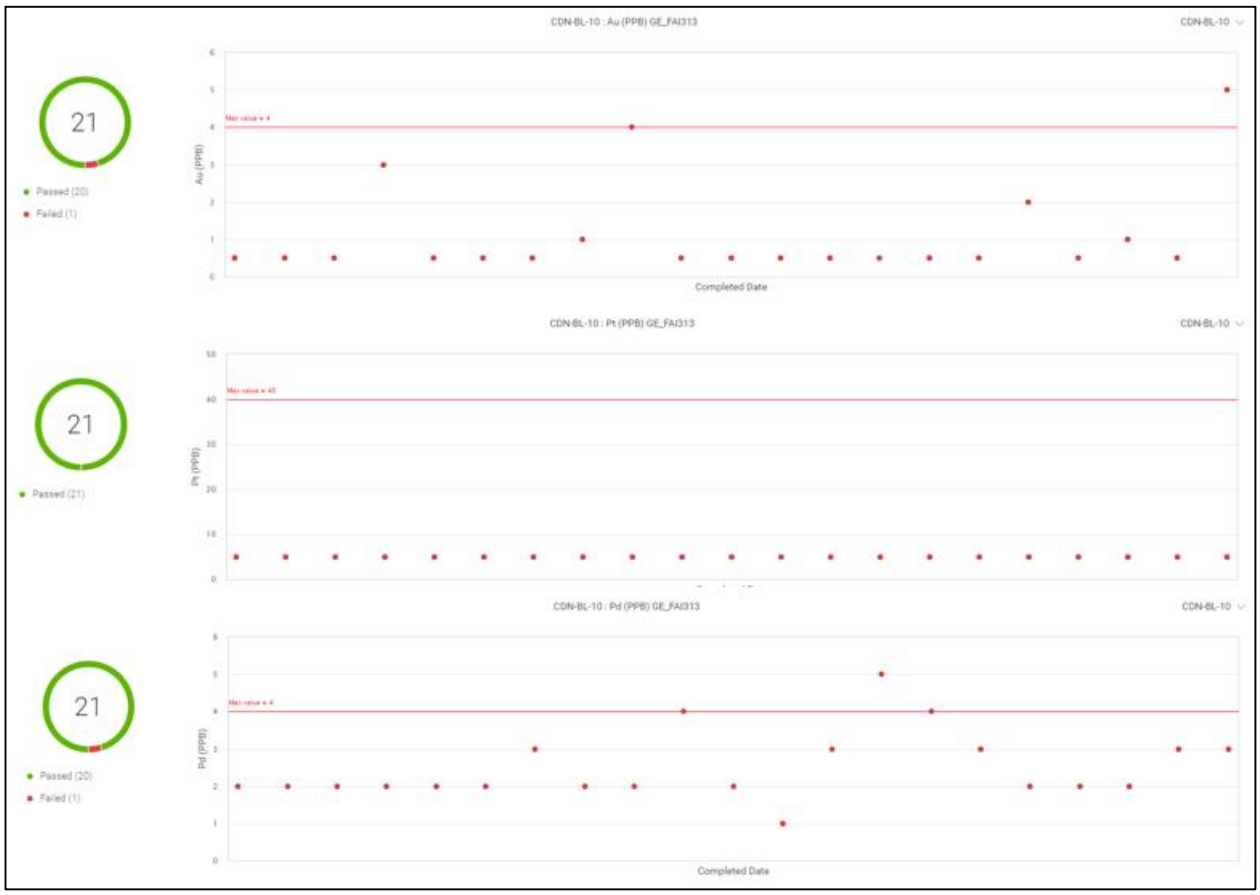


Figure A-13: Coarse blank analysis for method GE FAI313 (Au, Pt, Pd)

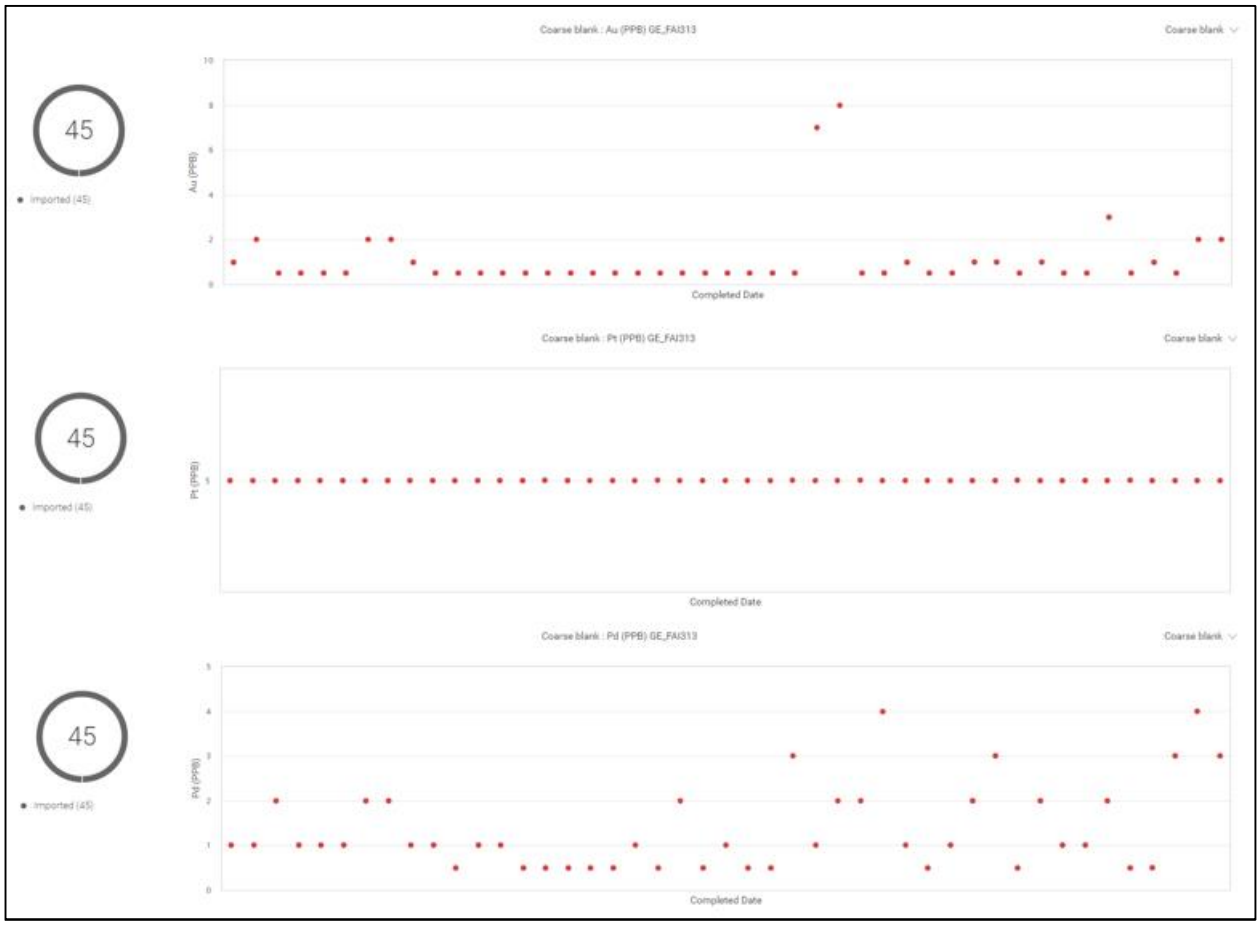


Figure A-14: Powdered blank analysis for method GE IMS90A (Cu, Ni)

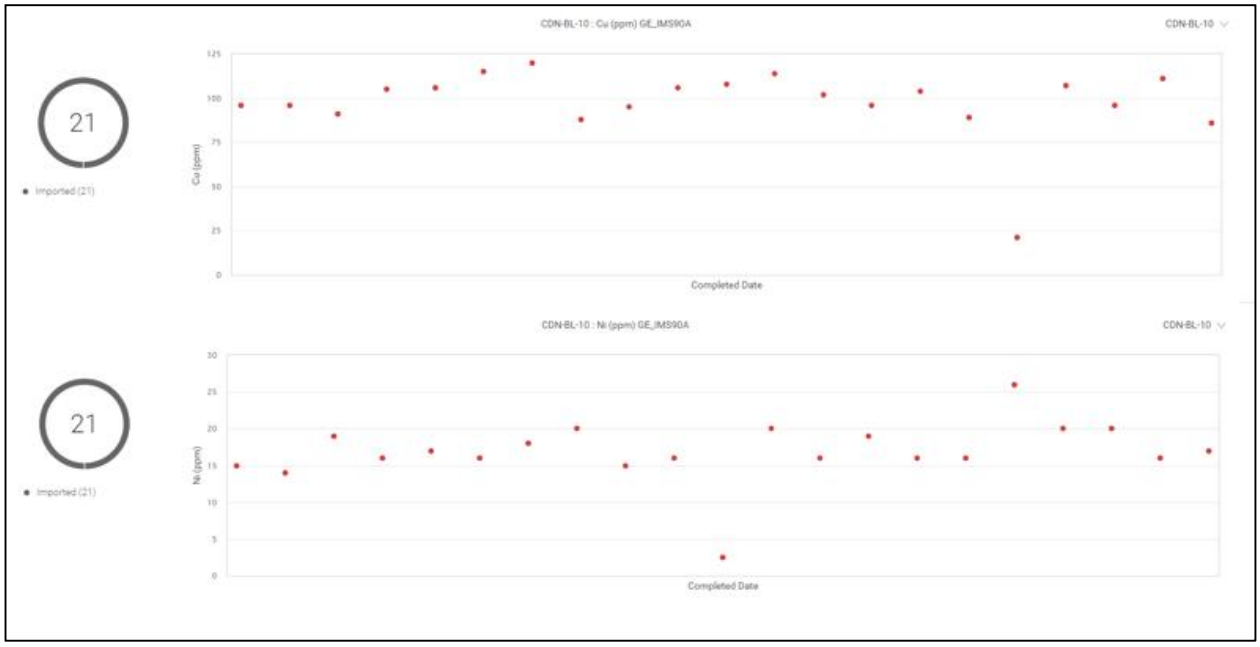
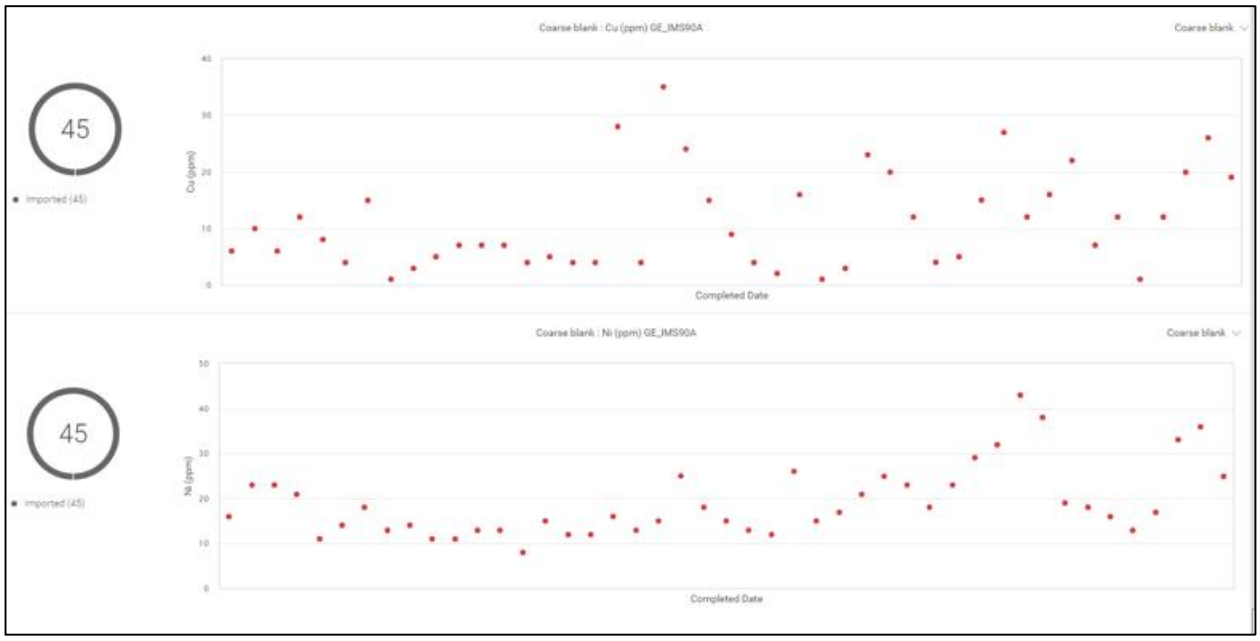


Figure A-15: Coarse blank analysis for method GE IMS90A (Cu, Ni)



Magna Field Duplicates

Since natural variation is present in all rocks, such as ore/mineral distribution. Sample duplicates were placed systematically within the sample chain. These samples were submitted to test the variability within the rocks themselves and independently test the precision of the lab. Results of the field duplicates are seen in Figure A-16 and Figure A-17.

The scatter of these analysis is much higher than that of the laboratory duplicates. In most cases this variation can be attributed to the nugget effect and variable distribution of ore within the core. These duplicates are based on ¼ and therefore made it difficult to insure even distribution of mineralization between duplicates.

Figure A-16: Results of field duplicates for Pt (top) and Pd (bottom)

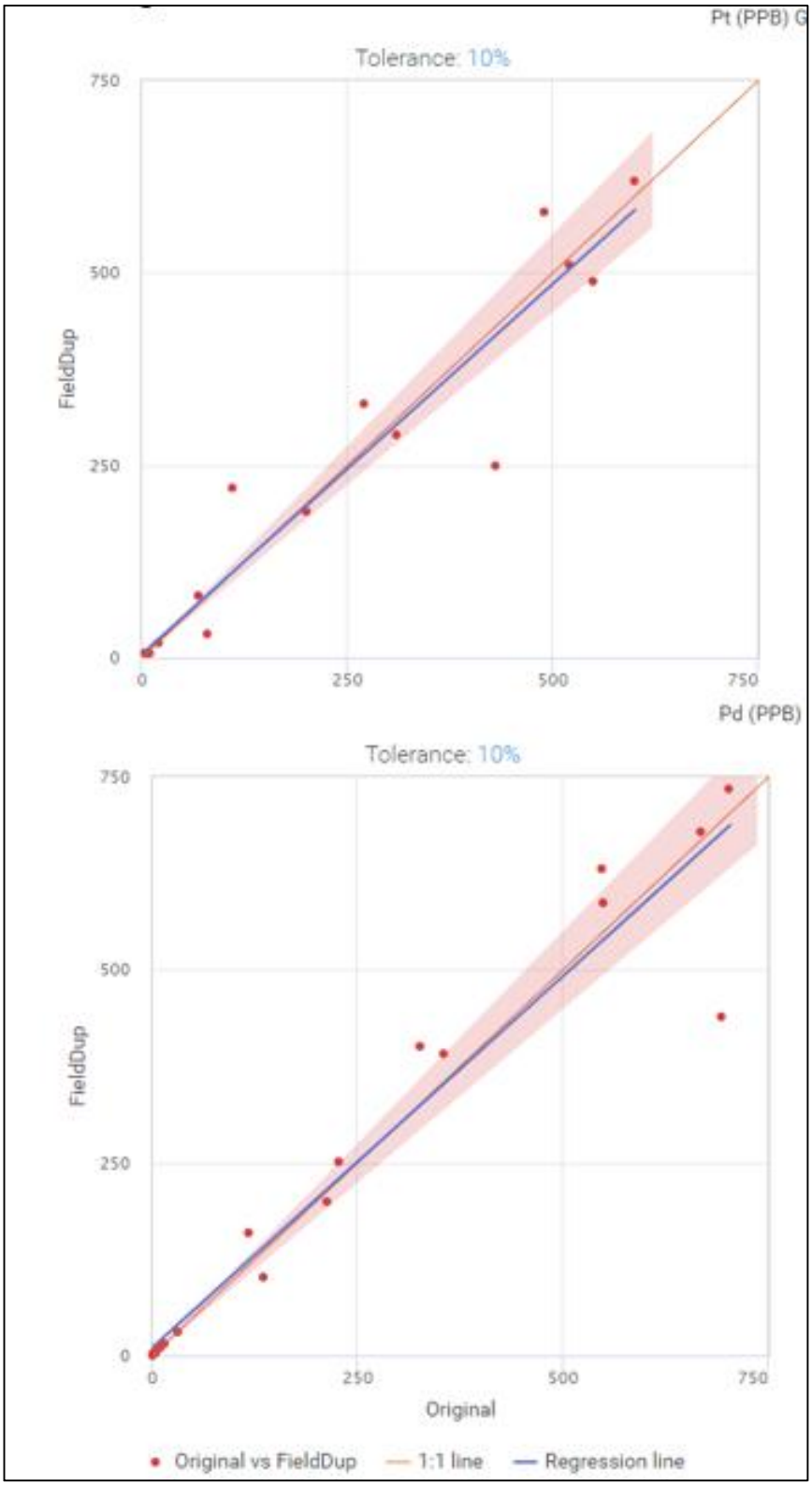


Figure A-17: Results of field duplicates for Cu (top) and Ni (bottom)