TECHNICAL REPORT
ON THE
GOLDEN BEAR PROJECT - GARRISON PROPERTY

LARDER LAKE MINING DIVISION
GARRISON TOWNSHIP, ONTARIO, CANADA

for

NORTHERN GOLD MINING INC.

Report No. 975

A.C.A. Howe International Limited
Toronto, Ontario, Canada

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Effective Date: December 30, 2013
Signing Date: March 03, 2014

A.C.A. HOWE INTERNATIONAL LIMITED
Mining and Geological Consultants

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1 SUMMARY

1.1 Introduction

This technical report ("the Report") has been prepared by A. C. A. Howe International Limited ("Howe") at the request of Mr. Martin Shefksy, President, Northern Gold Mining Inc. ("Northern Gold" or "the Company"). This report is specific to the standards dictated by National Instrument 43-101 and Form 43-101F1 (Standards of Disclosure for Mineral Projects) in respect to the Golden Bear Project ('the Project") and in particular the Garrison Property ("the Property") located in northeastern Ontario. The purpose of the report is to complete an update of Howe's April 19, 2012, mineral resource estimate for the Company's Garrcon Deposit (Hannon et al., 2012) and the 2009 mineral resource estimate for the Jonpol Deposit (George, 2009), both located on the Garrison Property. The Garrcon Deposit is a bulk tonnage resource encompassing the historically recognized, higher grade Shaft, South and North zones and the recently designated Green and East zones. The Jonpol Deposit is a lode gold resource encompassing the historically recognized JP, JD, RP and East zones. Howe's 2011 Garrcon Deposit Preliminary Economic Assessment ("PEA") (Hannon et al., 2011) is also repeated.

1.2 Property Location, Access and Description

The Company is currently focused on the exploration and development of its Golden Bear Project in northeastern Ontario. The Golden Bear Project is located in the Timmins-Kirkland Lake area along the Highway 101 corridor east of the town of Matheson. The Project is a portfolio of properties spanning a 50 km distance along the Destor-Porcupine Fault Zone within the Abitibi Greenstone Belt, from Hislop Township, 20 km east of Matheson, east to Marriott Township. It encompasses 16 non-contiguous properties including the Garrison (Garrcon and Jonpol deposits), Buffonta and Golden Pike advanced exploration properties. The Company's work to date has particularly focused on the Garrison Property, and to a lesser extent, the Buffonta and Gold Pike Properties.

The Garrison Property is located in Garrison Township, Larder Lake Mining Division, approximately 40 kilometres north of Kirkland Lake, 40 kilometres east of Matheson, and 100 kilometres east of Timmins, Ontario at approximately latitude 48°30'58" North and longitude 79°57'11" West (UTM Zone 17N co-ordinates 578,115E and 5,374,030N, NAD83 Datum). The Garrison Property comprises 63 patented mining claims and 3 unpatented claims covering an area of approximately 788 hectares (1947.2 acres). Forty-three of the patented claims that make up the Property have been historically grouped into four contiguous claim blocks known as the Newfield, Garrcon, Brydges and Linton Groups. These forty-three patented claims and the three unpatented claims are 100% owned by Northern Gold. An additional 20 patented mining claims including the historic Hastings and Wright-Hargreaves claim blocks were acquired by the Company from a subsidiary of Barrick Gold Inc. on September 10, 2013 are herein referred to as the Lac Group. The Company holds a 100% interest in 13 of these 20 claims and a 95% interest in the remaining 7 claims. These 20 claims are subject a back-in right of up to 51% as detailed in Section 4.3. Certain claims are subject to royalty payments as detailed in Section 4.3.

Golden Bear Project – General Property Information

Property	Claim Type	Number of Claims	Area (ha.)	Area (km^2)	Area (acres)	Claim Units
Garrison	Unpatented	3	22	0.22	55.36	3
	Patent	63	766	7.66	1892.30	63
	Total	66	788	7.88	1947.66	66
Buffonta	Unpatented	90	1763	17.63	4356.78	135
	Patent	24	359	3.59	886.63	24
	Total	114	2122	21.22	5243.41	159
Gold Pike	Unpatented	2	57	0.57	141.60	4
	Lease	24	411	4.11	1016.04	24
	Total	26	468	4.68	1157.65	28
Plato	Unpatented	24	370	3.70	914.52	24
Sims	Unpatented	24	398	3.98	984.42	24
Claim 352	Lease	1	154	1.54	381.56	11
Munro Hope Claim	Unpatented	1	16	0.16	39.16	1
Guibord	Unpatented	4	321	3.21	793.85	20
Michaud	Unpatented	20	646	6.46	1595.91	39
Collins Lake	Unpatented	3	44	0.44	109.94	4
Harker-Holloway	Unpatented	6	31	0.31	761.09	18
Holloway	Unpatented	1	31	0.31	76.98	2
Holloway Tailings	Unpatented	10	176	1.76	434.00	11
Boundary Claim	Unpatented	1	9	0.09	21.43	1
Bourkes	Unpatented	19	2113	21.13	5222.53	131
Kirana	Unpatented	11	846	8.46	2090.67	62
	Golden Bear Project Total	**331**	**8534**	**85.34**	**21774.77**	**601**

1.3 Geology and Mineralization

The Golden Bear Project is located within the Archean Abitibi Subprovince of the Superior Province of the Canadian Shield. The Garrison Property overlies about 4 kilometres of the regionally significant Destor-Porcupine Fault Zone and a major splay, the Munro Fault Zone. The Garrison Property is underlain by Kidd-Munro Assemblage metavolcanic rocks which, in the absence of faults, are unconformably overlain by Timiskaming Assemblage clastic metasedimentary rocks, composed of conglomerate, wacke-sandstone, siltstone, argillite and schist. The Timiskaming Assemblage rocks are closely associated with the Destor-Porcupine Fault Zone from the Quebec border to Hislop Township a distance of approximately 65 kilometres (Berger, 2002) . Banded magnetite-hematite iron formation is complexly interbedded and structurally interleaved with clastic metasedimentary rocks. On the Garrison Property the Timiskaming Assemblage is fault bounded, on the north side by the Munro fault and on the south side by the Destor-Porcupine Fault Zone.

The Destor-Porcupine Fault Zone comprises a variably altered and deformed sequence of metavolcanic rocks that include komatiites and tholeiitic basalts. Significant gold deposits generally occur in clusters within and adjacent the Destor-Porcupine Fault Zone. Where clustering occurs, the gold deposits are associated with disseminated pyrite zones in sub-parallel auriferous structures over limited strike distances. An example of this clustering is the Holloway Mine and Holt-McDermott gold mines in Holloway Township, approximately 15 kilometres east of the Property. These two deposits occur along two separate gold-bearing structures which, as at the Garrison Property, are largely covered by overburden.

Gold mineralisation on the Garrison Property is similar to many of the deposits in the Timmins Gold Camp, where high-grade, gold-mineralized quartz veins and gold-bearing disseminated sulphide zones occur within and adjacent to shear zones, as steeply dipping ore shoots. On the Garrison Property gold mineralisation occurs in quartz-pyrite vein stockworks within the intervening Timiskaming sedimentary rocks on the northern edge of the Destor-Porcupine Fault Zone (Garrcon Deposit) and also occurs in sulphide-rich bodies (pyrite-arsenopyrite) within the Destor-Porcupine Fault Zone (903 Zone) and Munro Fault Zone (Jonpol Deposit comprising the JD, JP, RP and East Zones).

1.4 Data Verification and QA/QC

Howe has reviewed the Garrcon deposit data provided by Northern Gold, including the drill hole database, has visited the site and has reviewed sampling procedures and security. Howe believes that the data presented by the Company are generally an accurate and reasonable representation of the Garrcon deposit mineralisation. Howe concludes that the database for the Garrcon deposit is of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

Northern Gold's current sampling and analytical protocols are considered by Howe to be appropriate. The quality control and quality assurance (QA/QC) protocols of the Company are industry standard. Northern Gold's QA/QC results to date indicate that there are no major problems with the accuracy of the analyses. While there is no available QA/QC data for the historic exploration on the Property, it was conducted under the supervision of experienced geologists and Howe is of the opinion that the data is of sufficient quality to be used in a current NI 43-101 compliant resource estimate.

1.5 Garrison Property 2014 Mineral Resource Estimate Update

A summary of the 2014 mineral resource estimate updates on the Garrison Property follows:

Garrison Property – 2014 Mineral Resource Updates Summary

Domain	Category	Cut Off	Tonnes	Au Grade (g/tonne)	Au (troy oz)
Garrcon	Measured	0.4	15,100,000	1.07	521,000
Garrcon	Indicated	0.4	14,100,000	1.16	526,000
Jonpol	Indicated	3.0	872,000	5.34	150,000
Garrcon and Jonpol	Total Indicated	3.0/0.4	14,972,000	1.40	676,000
Garrcon	Measured+Indicated	0.4	29,200,000	1.12	1,047,000
Garrcon and Jonpol	Measured+Indicated	3.0/0.4	30,072,000	1.24	1,197,000
Garrcon	Inferred	0.4/1.5	6,800,000	2.80	616,000
Jonpol	Inferred	3.0	1,073,000	5.56	192,000
Garrcon and Jonpol	Total Inferred	3.0/1.5/0.4	7,873,000	3.19	808,000

Notes on Mineral Resource Estimate:
1. Columns may not total correctly due to rounding
2. Garrcon mineral resources:
    a. Block cut-off grade for defining Mineral Resources was 0.4 g/tonne (open pit) and 1.5 g/tonne (underground).
    b. Ordinary block kriging ("OBK") was used for estimating block grades.
3. Jonpol mineral resources:
    a. Block cut-off grade for defining Mineral Resources was 3 g/tonne.
    b. Ordinary block kriging ("OBK") was used for estimating block grades.
4. See additional notes Table 14-18 and Table 14-19.

The 2014 Garrcon and Jonpol mineral resource estimate updates (this Report) are individually summarized below:

1.5.1 2014 Garrcon Deposit Mineral Resource Estimate Update (non-diluted)

Northern Gold’s exploration program from October 2009 to December 2013 has confirmed and delineated a significant gold resource at the Garrcon deposit.

As of March 2014, ACA Howe International Limited (“Howe”) completed a mineral resource estimate update to its 2012 mineral resource estimate for the Garrcon Deposit at Northern Gold’s Garrison Project. The resource estimate, completed in accordance to NI 43-101 requirements, all holes drilled by Northern Gold at the Garrcon and Jonpol deposits up to December 2013.

The updated resource estimate was prepared by Leon McGarry, B.Sc., P.Geo., Project Geologist with Howe. Ian Trinder, M.Sc., P.Geo., Senior Geologist with Howe provided geological input and management. Micromine software (Version 2012) was used to facilitate the resource estimating process. The resource estimate was prepared in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves[1] and reported in accordance to NI 43-101[2].

For resource estimation, Northern Gold provided several forms of digital data. Input files were created from the supplied data for import to Micromine resource modeling software.

Geological interpretations were made in cross section by digitizing polygons snapped to logged lithological intervals that were combined along strike to generate three dimensional geological domains. The main Garrcon zone is constrained to the south by Porcupine-Destor Fault which is delineated by ultramafic and chlorite talc schists. Similarly there appears to be a smaller more limited ultramafic body bounding (at least locally) the mineralisation to the north.

Mineralised zones were outlined to enforce geological control during block modeling. Because of the larger scale and lower grade nature of mineralisation at Garrcon, it was assumed that the deposit would be mined using larger scale, surface mining methods.

Using a cut-off grade of 0.1 g/tonne gold for mineralised zone interpretation, Howe outlined mineralised zones that combined, are nearly vertical, 1800 metres long and 300 metres wide (on average) and have been intersected to depths of up to 700 metres. Higher grade domains were created that delineate broad zones with a higher than usual concentration of samples with potentially economic gold grades.

Samples were regularised over 1.0 metre intervals - the most common sample interval for samples within the mineralised zones. Statistics were calculated for regularised samples within the main mineralised zone. The mean value for all samples in lower grade domains was 0.14 g/tonne Au and 0.59 g/tonne Au in higher grade domains.

Directional variography was carried out separately for the lower grade and higher grade sub-domains of the Garrcon Zone, revealing semi-variogram major ranges of up to 230 metres in the lower grade domains and up to 175 metres in the higher grade domains.

A block model was constructed with a parent block size of 10x10x10 metres. There were two sub-blocks in each direction for a geological resolution of 5x5x5 metres. Sub-blocks received the grade of the parent block.

The chosen cut-off grade for mineralised zone interpretation was 0.1 g/tonne of gold. The chosen "block cut-off"[3] grade for defining mineral resources was 0.4 g/tonne. A top-cut

[1] CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted November 27, 2010
[2] National Instrument 43-101 Standards Of Disclosure For Mineral Projects and Form 43101F1 Technical Report, June 24, 2011
[3] The grade at which it is possible to mine and process an exposed block (*i.e.*: stripping not included).

grade of 112 g/tonne Au and 114 g/tonne Au was applied to raw samples in higher grade and lower grade domains respectively.

Resource classification parameters were chosen based on a combination of variography results and the author's judgment. Inferred, Indicated, and Measured mineral resources were identified.

Because of the good results from directional variography, ordinary block kriging was considered to be an acceptable and appropriate method for estimating block grades in this deposit.

For each domain, grade estimation was carried out in three "runs". The first run had a maximum search radius equal to the half the domain variogram range. Model blocks that did not receive a grade estimate from the first interpolation run are used in the next interpolation run. Subsequent runs are equal to the variogram range.

Run 1 block estimates require a minimum of 3 holes, 2 samples per hole and 4 samples in total. Run 2 block estimates require a minimum of 2 holes and 2 samples per hole. Run 3 block estimates require a minimum of 1 hole and 2 samples per hole.

The 2014 Garrcon Mineral Resource Estimate (non-diluted) is presented below:

2014 Garrcon Measured and Indicated Mineral Resources

Non-diluted Measured Mineral Resources within a preliminary USD$1250 pit shell totaled 15.1 million tonnes with an average gold grade of 1.07 g/tonne for 521,000 ounces.

Non-diluted Indicated Mineral Resources considered amenable to open pit mining, within the USD$1250 preliminary pit shell and within 200m of surface outside the pit shell totaled 14.1 million tonnes with an average gold grade of 1.16 g/tonne for 526,000 ounces.

Non-diluted Measured+Indicated Mineral Resources considered amenable to open pit mining, totaled 29.2 million tonnes with an average gold grade of 1.12 g/tonne for 1,047,000 ounces.

2014 Garrcon Inferred Mineral Resources

Non-diluted Inferred Mineral Resources at a 0.4 g/tonne Au block cut off, within the USD$1250 preliminary pit shell and within 200 metres of surface outside the pit shell, totaled 1.7 million tonnes with an average gold grade of 0.72 g/tonne for 39,000 ounces.

Non-diluted Inferred Mineral Resources at a 1.5 g/tonne Au block cut off, more than 200 meters deep and outside of the pit shell totaled 5.1 million tonnes with an average gold grade of 3.49 g/tonne for 577,000 ounces.

The grand total for Inferred mineral resources was 6.8 million tonnes with an average gold grade of 2.80 g/tonne, for 616,000 ounces.

2014 Garrcon Mineral Resource Estimate Update (non-diluted).

Category	Cut-off	Tonnes	Au Grade (g/tonne)	Au troy oz
Open Pitable Resource (US$1250/oz pit shell; 55^{o} pit slope).				
Measured	0.4	15,100,000	1.07	521,000
Indicated	0.4	14,100,000	1.16	526,000
Measured + Indicated	0.4	29,200,000	1.12	1,047,000
Inferred	0.4	1,700,000	0.72	39,000
Underground Resource				
Inferred	1.5	5,100,000	3.49	577,000
Total Open Pitable and Underground Resource				
Measured + Indicated	**0.4**	**29,200,000**	**1.12**	**1,047,000**
Inferred	**0.4, 1.5**	**6,800,000**	**2.80**	**616,000**

Notes on 2014 Garrcon Mineral Resource Estimate:

1. Mineral Resources are calculated with commercial mining software. Drill holes traces showing lithology and gold grade were reviewed in plan and cross section.
2. The resource estimate has been prepared by Leon McGarry, B.Sc., P.Geo., ACA Howe Geologist.
3. Cut-off grade for mineralized zone interpretation is 0.1 g/tonne.
4. Block cut-off grade for potential open pitable Mineral Resources is 0.4 g/tonne. Block cut-off grade for potential underground (>200 m depth) Mineral Resources is 1.5 g/tonne.
5. Top-cuts of 112 g/tonne Au (high grade domains) and 114 g/tonne Au (low grade domains) applied to individual (non-composited) assays.
6. Gold price for the purpose of the resource estimate is $US 1250 per troy ounce.
7. Zones extend up to 100 meters down-dip from the last intercept. Along strike, zones extend halfway to the next cross-section.
8. Minimum width is 5 meters, though in no place is the zone that narrow.
9. A specific gravity (bulk density) value of 2.8 is applied to all blocks - a representative value based on 3,697 measurements.
10. Wireframe constrained block model grade interpolation has been undertaken using Ordinary Kriging (OK).
11. Measured mineral resources are defined where three holes are used to estimate block grades and the average distance to samples was 36 meters or less. Indicated mineral resources are defined where three holes are used to estimate block grades and the average distance to samples was 73 meters or less.
12. Mineral Resource tonnes quoted are not diluted.
13. No mineral reserves are identified.
14. Tonnes and ounces have been rounded to reflect the relative accuracy of the mineral resource estimate; therefore numbers may not total correctly.
15. Mineral resources are not mineral reserves and by definition do not demonstrate economic viability. This mineral resource estimate includes inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to the measured and indicated resource categories through further drilling, or into mineral reserves, once economic considerations are applied.
16. 1 troy ounce equals 31.10348 grams.
17. The volume/tonnes of volumetrically insignificant historical underground exploration workings have not been subtracted from this mineral resource

Howe is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that may materially affect the Garrcon mineral resource estimate.

1.5.2 2014 Jonpol Deposit Mineral Resource Estimate Update (non-diluted)

Northern Gold's 2011 to 2013 diamond drill exploration program confirmed and further delineated a significant gold resource at the Jonpol deposit.

As of March 2014, ACA Howe International Limited ("Howe") completed a mineral resource estimate update to the 2009 mineral resource estimate for the Jonpol Deposit at Northern Gold's Garrison Project. The resource estimate, completed in accordance to NI 43-101 requirements, includes holes up to Hole JP-13-28, drilled during 2013.

The updated resource estimate was prepared by Leon McGarry, B.Sc., P.Geo., Project Geologist with Howe. Ian Trinder, M.Sc., P.Geo., Senior Geologist with Howe provided geological input and oversight. Micromine software (Version 2012) was used to facilitate the resource estimating process. The resource estimate was prepared in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves[4] and reported in accordance to NI 43-101[5].

For resource estimation, Northern Gold provided several forms of digital data. Input files were created from the supplied data for import to Micromine resource modeling software.

At Jonpol mineralization occurs in highly deformed and altered mafic and ultramafic volcanic rocks of the Kidd-Munro Assemblage along the north contact of the Munro Fault. Grade shell domains were outlined to enforce geological control during block modeling. Domain interpretations were made in cross section by digitizing polygons snapped to assay intervals that were combined along strike to generate three dimensional grade shells.

A cut-off grade of 1.0 g/tonne gold is used for grade shell interpretation, Howe assumed that the deposit would be mined via underground mining methods therefore the grade shell envelope seeks to maintain a minimum grade of 3 g/t Au over a minimum thickness of 1.5m. Howe outlined four laterally contiguous mineralised zones that are nearly vertical, total 1,700 metres in length, are 20 metres wide (on average) and have been intersected to depths of up to 650 metres.

Samples were regularised over 1.0 metre intervals - the most common sample interval for samples within the mineralised zones. Statistics were calculated for regularised samples within the main mineralised zone. The mean value for all samples was 2.82 g/tonne Au.

[4] CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted November 27, 2010
[5] National Instrument 43-101 Standards Of Disclosure For Mineral Projects and Form 43101F1 Technical Report, June 24, 2011

Directional variography was carried out for the Jonpol Main Zone, the largest domain by sample density, revealing a down dip semi-variogram range of 60 metres, an along strike of 30 metres, and an across strike range of 20 m. The Jonpol Main Zone variogram parameters were applied to the other Jonpol domains.

A block model was constructed with a parent block size of 15x2x10 metres. There were two sub-blocks in each direction for a geological resolution of 2.5x1x5 metres. Sub blocks received the grade of the parent block.

The chosen cut-off grade for mineralised zone interpretation was 1.0 g/tonne of gold. The chosen "block cut-off" [6] grade for defining mineral resources was 3.0 g/tonne. A top-cut grade of 100 g/tonne Au was applied to the East Zone domain.

Ordinary block kriging was considered to be an acceptable and appropriate method for estimating block grades in the Jonpol deposit.

Grade estimation was carried out in two runs. The first run had a maximum search radius equal to the variogram range. The second run is double the variogram range. Run 1 block estimates require a minimum of 3 holes, 2 samples per hole and 4 samples in total. Run 2 block estimates require a minimum of 2 holes and 2 samples per hole.

Resource classification parameters were chosen based on drill density, the continuity of mineralization and the author's judgment. Inferred and Indicated mineral resources were identified.

The 2014 Jonpol Underground Mineral Resource Estimate (non-diluted) is presented below:

2014 Jonpol Indicated Mineral Resources
Non-diluted Indicated Mineral Resources, at a 3 g/tonne block cut off totaled 0.872 million tonnes with an average gold grade of 5.34 g/tonne for 150,000 ounces.

2014 Jonpol Inferred Mineral Resources
The grand total for Inferred mineral resources was 1.07 million tonnes with an average gold grade of 5.56 g/tonne, for 192,000 ounces.

[6] The grade at which it is possible to mine and process an exposed block (*i.e.*: stripping not included).

2014 Jonpol Underground Mineral Resource Estimate (non-diluted).

Zone	Cut-off	Tonnes	Au Grade (g/tonne)	Au (troy oz)
Indicated				
JD Zone	3.0	9,000	3.21	1,000
JP Zone*	3.0	411,000	4.93	65,000
RP Zone	3.0	97,000	4.63	14,000
East Zone	3.0	355,000	6.04	69,000
Total Indicated	3.0	**872,000**	**5.34**	**150,000**
Inferred				
JD Zone	3.0	199,000	6.87	44,000
JP Zone*	3.0	212,000	4.49	31,000
RP Zone	3.0	61,000	4.32	8,000
East Zone	3.0	601,000	5.63	109,000
Total Inferred	3.0	**1,073,000**	**5.56**	**192,000**

* Historic bulk sample tonnages and contained gold are discounted from the JP Zone estimate (see note16).

Notes on 2014 Jonpol Mineral Resource Estimate:
1. Mineral Resources are calculated with commercial mining software. Drill holes traces showing lithology and gold grade were reviewed in plan and cross section.
2. The resource estimate has been prepared by Leon McGarry, B.Sc., P.Geo., ACA Howe Geologist.
3. A greater than 1 g/t Au grade shell interpretation is made in cross section by digitizing polygons that are snapped to sample intervals. The envelope grade shell seeks to maintain a minimum grade of 3 g/t Au over a minimum thickness of 1.5m.
4. Block cut-off grade for potential underground Mineral Resources is 3 g/tonne.
5. Top cut of 100 g/tonne Au applied to non-composited assays in the East Zone. No top-cut applied in other zones. In zones other than the East Zone, assay database grade distributions are not skewed by erratic high values and assays are generally well constrained by wireframes and drill hole distribution. In ACA Howe's opinion the use of a top cut will not significantly affect the results in these zones.
6. Gold price for the purpose of the resource estimate is $US 1250 per troy ounce.
7. Zones extend up to 50 meters down-dip from the last intercept. Along strike, zones extend halfway to the next cross-section.
8. A default average specific gravity (bulk density) value of 2.8 has been used.
9. Wireframe constrained block model grade interpolation has been undertaken using Ordinary Kriging (OK).
10. Indicated mineral resources are defined where the mineralized zones exhibited good continuity between drill holes on section and along strike and are informed by 3 or more holes spaced less than 50 meters apart.
11. Mineral Resource tonnes quoted are not diluted.
12. No Measured Resources or Mineral Reserves of any category are identified.
13. Tonnes and ounces have been rounded to reflect the relative accuracy of the mineral resource estimate; therefore numbers may not total correctly.
14. Mineral resources are not mineral reserves and by definition do not demonstrate economic viability. This mineral resource estimate includes inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to the measured and indicated resource categories through further drilling, or into mineral reserves, once economic considerations are applied.
15. 1 troy ounce equals 31.10348 grams.
16. A bulk-sampling program on 4 sub-levels in the central part of the JP Zone was completed in 1996-97 with a total of approximately 49,087 tonnes mined and shipped, which produced 9,476 ounces of gold for an average recovered grade of 6.7 grams of gold per tonne.. This is comparable to a polygon some 80m in the along strike direction and 30m down dip believed to be centered on the position of the bulk sample, that outlines 78,400 tonnes at a grade of 5.3 for some 13,550 ounces of gold which has been discounted from the resource.

Howe is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that may materially affect the Jonpol mineral resource estimate.

1.6 2011 Garrcon Preliminary Economic Assessment

Howe reviewed the Garrcon Deposit at the level of a Preliminary Economic Assessment (PEA) in 2011 (Hannon et al., 2011). The reader is cautioned that this PEA uses Indicated and Inferred Mineral Resources. The reader is further cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate (Hannon et al., 2011) which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. The 2011 Garrcon PEA reported in this report has not been updated to reflect the changes in the Garrcon mineral resource and current costs however it is still an indication of the project's potential.

NI 43-101 Part 2, Section 2.3(1)(b) and Companion Policy 43-101CP, Part 2, Section 2.3(1) Restricted Disclosure, prohibits the disclosure of the results of an economic analysis that includes or is based on inferred mineral resources, an historical estimate, or an exploration target. However, under NI 43-101, Part 2, Section 2.3(3) and Companion Policy 43-101CP, Part 2 section 2.3(3), the use of inferred mineral resources is allowed in a Preliminary Economic Assessment in order to inform investors of the potential of the property.

The 2011 PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

For the purposes of the PEA, a pit was optimised using the following parameters.

Parameter	Value
Mining Cost, Ore or Waste (Drilling, Blasting, Loading & Hauling)	$2.34 per tonne
Rehab Cost	$0.25 per tonne Milled
Dilution	5%
Mining Recovery	95%
Gold Price	$US 1,200 per ounce
Processing Cost (CIL/CIP, Heap Leach)	$5.31 / $4.22, per tonne Processed
Processing Recovery	98%, 65%
Specific Gravity	2.73
Overall Slope Angle (rock, overburden / fault material)	45°, 30°

The pit optimisation results were as follows.

Pit Details	CIL/CIP	Heap Leach	Total
Gold Price ($US per Ounce)	$1,200		
Cut-off Grade (g/tonne):	0.30	0.15	
Non-Diluted Ore (tonnes)	33,000,000	18,300,000	51,300,000
Non-Diluted Ounces	960,000	120,000	1,080,000
Non-Diluted Grade (g/tonne)	0.90	0.20	0.65
Waste Tonnes	102,000,000		
Pit Depth (m)	300		
Footprint (Hectares)	43		
Stripping Ratio ($t_{waste}:t_{ore}$)	2:1		

A mining schedule and economic model was developed for the operation. The 2011 PEA indicates that the mining of the Garrcon gold deposit by open pit mining methods would be feasible today. This PEA has determined that, with the Mineral Resources outlined to date (2011), a combination gravity-agitated leach plant and a heap leach facility would be economic with a base case net present value (5.0% discount rate) of $266 million and an internal rate of return of 47%.

The 2011 PEA conditions included $1,200/troy ounce gold, a processing rate of about 11,300 tonnes per day and a heap leach facility processing about 2.3 million tonnes per year.

The project is most sensitive to grade and the price of gold and least sensitive to capital costs. The 2011 PEA has been completed using order of magnitude costs and rock quality values typical of northern Ontario. The project economics would be even better if the then present price of gold (2011 - $1500+) were used; however, at the time of the PEA (2011) the project was still 3 to 5 years from production and it was prudent to use a lower number. As the project advances, a gold price closer to the present price can be used.

1.7 Conclusions and Recommendations

Northern Gold's 2009 to 2012 exploration drilling programs have confirmed a significant gold resource at the Garrcon Deposit. Using a cut-off grade of 0.1 g/tonne for mineralised zone interpretation, a main mineralised zone was outlined that was nearly vertical, over 1800 metres long, 300 metres wide (on average), and up to 700 metres deep.

Using a block cut-off grade of 0.4 g/tonne, Howe has estimated Garrcon's non-diluted Measured Mineral Resources within a preliminary USD$1250 pit shell total 15.1 million tonnes with an average gold grade of 1.07 g/tonne for 521,000 ounces. Garrcon's non-diluted Indicated Mineral Resources considered amenable to open pit mining, within the USD$1250 preliminary pit shell and within 200m of surface outside the pit shell total 14.1 million tonnes with an average gold grade of 1.16 g/tonne for 526,000 ounces. Non-diluted Measured+Indicated Mineral Resources at Garrcon considered amenable to open pit mining, total 29.2 million tonnes with an average gold grade of 1.12 g/tonne for 1,047,000 ounces. Garrcon's non-diluted Inferred Mineral Resources at a 0.4 g/tonne Au block cut off, within the USD$1250 preliminary pit shell and within 200 metres of surface outside the pit shell, total 1.7 million tonnes with an average gold grade of 0.72 g/tonne for 39,000 ounces. Garrcon's non-diluted Inferred Mineral Resources at a 1.5 g/tonne Au block cut off, more than 200 meters deep and outside of the pit shell total 5.1 million tonnes with an average gold grade of 3.49 g/tonne for 577,000 ounces. The grand total for Garrcon Inferred mineral resources is 6.8 million tonnes with an average gold grade of 2.80 g/tonne, for 616,000 ounces.

Compared to the 2012 Garrcon estimate, there is a decrease in mean grade in the 2014 Garrcon estimate, attributed to the application of top-cuts of 112 g/tonne Au (high grade domains) and 114 g/tonne Au (low grade domains). Additionally, the use of domain specific directional ellipsoidal searches instead of the omni directional ellipses used in 2012 has locally constrained the influence of higher grade samples.

The application of a higher 0.4 g/t block cut-off grade for potential open pitable Mineral Resources in 2014 is based on an optimized pit using on $1250/oz gold, 55 degree pit wall slope and 2011 PEA pit mining parameters. 2014 Garrcon Measured resource tonnages have decreased by 2.54 million tonnes with a slight 0.01 g/t Au increase in grade for 83,000 fewer ounces of gold in comparison to the 2012 resource estimate.

The application of a 0.4 g/t cut off, the use of the in the pit shell limit, and 200m depth limit outside of the open pit shell has resulted in a significant decrease in Garrcon Indicated resources tonnage of 6.73 million tonnes with a slight 0.01 g/t Au increase in grade for 142,000 fewer ounces of gold from 2012 to 2014.

Garrcon blocks below the 200m RL and outside of the pit shell are now considered to be Inferred underground potential. The application of a 1.5 g/t Au cut off results in a significant decrease in tonnage of 8.98 million tonnes with a grade increase of 2.08g/t Au for an additional 249,000 ounces of gold from 2012 to 2014.

Northern Gold's 2011 to 2013 exploration drilling has confirmed a significant gold resource at the Jonpol Deposit. The Jonpol deposit comprises four, laterally contiguous mineralized zones (JD, JP, RP and East Zones) along the Munro Fault that have a total combined strike of 1700 metres. The JD zone has a strike length of up to approximately 800 metres, of which up to 500 metres is on the recently acquired Lac Group claims. The JP and RP have a combined strike of approximately 700 metres and the East zone has a strike of approximately 600 metres. The mineralized structures have been intersected from surface to a maximum drill intersected vertical depth of approximately 500 metres below surface. True widths of individual mineralized structures in the 2014 mineral resource estimate varied from a minimum width 1.5 metres to greater than 10 metres. The zones remain open to depth; The JD Zone is open to the west on the recently acquired Lac Group. Metallurgy to date indicates the JP and RP zones are partially refractory and the JD and East Zones are free milling.

Howe estimates Jonpol's non-diluted underground Indicated Mineral Resources (3 g/tonne block cut off and 1.5 metre minimum mining width) total 0.872 million tonnes with an average gold grade of 5.34 g/tonne for 150,000 ounces. The grand total for non-diluted underground Inferred mineral resources is estimated at 1.07 million tonnes with an average gold grade of 5.56 g/tonne, for 192,000 ounces.

The change from a highly selective polygonal section estimate used in the 2009 Jonpol mineral resource estimate to a 3D wireframe constrained block model grade interpolation in 2014 has resulted in a 2.43 g/t Au decrease in Indicated mean grade. The use of a broader wireframe model and additional drilling by Northern Gold has resulted in an increase of 0.618 million tonnes for an additional 86,000 ounces in the 2014 Jonpol resource estimate. The 2014 Jonpol resource update has resulted in an Inferred resource decrease of 0.483 million tonnes for 54,540 fewer ounces of gold in comparison to the 2009 mineral resource estimate.

Preliminary metallurgical testwork indicates that the Garrcon gold mineralisation is non-refractory and is free milling. Historical metallurgical testwork on behalf of previous operators indicated approximately 50% of the Jonpol JP Zone mineralisation is refractory in nature. Preliminary metallurgy by the Company indicates that the Jonpol JD and East Zones are of a free milling nature. The Company's current metallurgy work shows that the Jonpol RP Zone, like the JP Zone, is partially refractory. The Company will conduct further metallurgical studies to optimise potential gold recoveryies from the partially refractory JP and RP Zones. Resource estimates for the JP and RP Zones may have to be revised if economic gold recoveries cannot be obtained.

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect the Golden Bear Project Properties with respect to access, title, the right or ability to perform the work recommended in this Report, and the Garrcon and Jonpol mineral resource estimate updates reported herein. However at the time of this report, Howe is unaware of any such potential issues affecting the Project and in particular the Garrison Property pending the Company's submission and acquisition of any and all required exploration plans and permits in accordance with any prescribed requirements, including Aboriginal consultation and notification of surface rights holder(s) prior to any future recommended or planned exploration activities.

Based on the historic exploration work and the Company's exploration work to date, the 2014 Garrcon mineral resource update, the 2011 Garrcon PEA, and the 2014 Jonpol mineral resource update Howe concludes that the Garrcon Deposit, Jonpol Deposit and the Garrison Property warrant additional development expenditures.

Howe recommends that the following work be incorporated into Northern Gold's ongoing project development plans to further refine estimates of costs, recoveries, engineering and mine design to facilitate the development of a Pre-Feasibility Study:

1. Northern Gold continue to monitor and review CRM and blank sample assay results that fall outside of established control limits. Northern Gold should review sample handling procedures to ensure sample handling and labeling errors are eliminated.

2. The QA/QC program should seek to determine the repeatability of samples from rock that contains economically interesting gold grades. Core duplicates should be selected from mineralized lithologies. The number of pulp duplicate gravimetric analyses should also be increased.

3. Northern Gold's exploration database has expanded exponentially since it first started work at Garrison in 2009. The use of spreadsheets to manage exploration results increases the risk of transcription errors and data loss. A relational database should be implemented to allow efficient management, querying and validation of vast amount of data and study information.

4. The historical separation of the Garrcon, East Zone and Jonpol deposits have prevented the generation of property wide synthesis of all Garrison Project exploration data including geophysical and geochemical data and lithological and structural observations. A three dimensional litho-structural model should be created for the Garrison Project that allows rapid updates as new information becomes available. This model should assist in drill hole targeting and resource domain development.

5. Within the open pit portion Garrcon resource, there is scope to further refine the geological model. In particular the determination of controls to lamprophyre and syenite dyke emplacement and the possible influence of structural controls on the distribution of high grade mineralization.

6. Continue the advanced exploration permitting currently in progress to be followed by the work necessary for operational permitting.

7. Expand the permitting process to include potential mill sites, heap leach pads and tailings management areas using claims recently acquired by Northern.

8. Continue the exploration drilling program:
    a. Exploration should step out beyond the current Garrcon and Jonpol resource footprints to:
        i. test for potential mineralization in meta-sediments between the current Garrcon resource mineralization shell and the Munro Fault Zone/Jonpol East Zone to the north;
        ii. test geophysical anomalies defined by the 2011 IP survey and;
        iii. continue to test beneath meta-sediment outcrops and newly stripped meta-sediments hosting stockwork veining with anomalous gold mineralization including the 903 Zone.

9. Northern Gold should continue specific gravity measurements of representative samples particularly at Jonpol which is lacking a robust database. Sufficient samples should be tested to be representative of the various mineralized and non-mineralized rock types within deposits along its entire strike length, width and depth. The number of samples will depend on the statistical variance of the measurements.

10. Further mineral processing work on the Garrcon mineralization should be carried out to support assumptions that were made in the 2011 PEA. The work that has been carried out thus far is quite preliminary. This work should be expanded by exploring various processing options, determining which options would best suit this particular deposit and optimising the most promising flowsheet. Should that flowsheet consider heap leaching, a bulk sample pilot trial should be carried out to determine the actual, realised processing recovery value as opposed to the laboratory-predicted value. Testwork should include:
    a. Sieve analysis vs. gold grade.
        i. For each stage of the rock breakage history, a sieve analysis and grade of gold should be determined. This should be completed for selected bulk sampling sites where at least several hundred tonnes can be blasted on surface. At each stage of crushing, the ore should be sieved and a gold grade determined for each size fraction.
    b. Flotation Test Program
        i. Test four different grinds from approximately 70% at -200 mesh to 95% at -200 mesh. In these tests use reagent X-523 for 10 minutes followed by a 10-minute float with frother and potassium amyl xanthate.
        ii. Take the best of the above conditions and repeat with reagent Aerofloat 208 replacing the X-523. Take the best of the above conditions and jig the flotation feed and remove the coarser gold prior to flotation.
        iii. Have all tests that are performed above assayed for gold, silver and sulphur.
        iv. Repeat the best test of above and have all flotation floats performed for five 3-minute intervals to establish the flotation rate for the various minerals.
        v. Repeat the best tests of above but clean, reclean and re-reclean the two flotation products, and have the final re-reclean concentrate assayed for copper, lead and zinc as well. Also, repeat the best test using reclaimed water from a previous float test.
    c. Bottle roll tests to give some indication of the leaching character of the rock.
    d. Pending results from column leaching tests currently being run, colum leach tests should be continued and expanded to determine potential percolation rates and recoveries for proposed heaps.

e. Determination of solution application rates and solution percolation rates, crushing and agglomeration testing.

11. Continue testing the deposit for any potential Acid Rock Drainage (ARD) and confirmation of the relatively high calcium content, which is expected to neutralize any ARD potential.

12. A study of the structural geology, a map of the jointing system and a report on the geotechnical properties of the potential pit should be continueded. The geotechnical properties of the rock types at the Garrcon Deposit (Uniaxial Compressive Strength (UCS), Tensile Strength, Young's modulus and Poisson's ratio) should be determined. A suite of samples representing different parts of the deposit and each rock type should be tested at a rock mechanics laboratory.

13. Additional land may be required around the deposit, to store waste rock and tailings facilities. More detailed site engineering is required to confirm the suitability and sufficiency of the current property areas for final mine and processing facilities should they be constructed.

14. Approximately 10 kilometres of line will be required to bring 3 phase power to the site. A right of way for this line should be investigated. Northern Gold informs Howe that talks with Ontario Hydro have been initiated.

15. A hydrological study should be completed to determine the amount of water that must be pumped to keep the pit dry. Any water bearing fractures found should be mapped so that they can be grouted off if necessary. A water storage facility will have to be in place to supply mill water, heap leach water as well as fire-fighting water.

16. A rock penetration rate study should be undertaken in order to determine the penetration rate for down the hole hammer type blast hole drills. Drill manufacturers often offer this service. A variety of core or rock samples should be tested so that an accurate penetration rate can be determined.

Following Howe's recommendations, Northern Gold has developed a work program and cost estimate for the Garrison Property totaling $10,115,000 for the balance of 2014 and into 2015 to further advance the Garrison Property. The proposed program and budget as shown in the table below will permit Northern Gold to complete bulk sampling of the Garrcon Deposit; geotechnical, hydrogeological and environmental studies; and heap leach studies; the results of which will support a Garrcon Pre-Feasibility study. The proposed program also includes a small definition drilling budget at the 903 Zone and public and First Nations consulting costs.

Howe considers Northern Gold's proposed budget reasonable and recommends that the Company proceed with the proposed work program.

Proposed Garrison Property Budget – 2014-2015 (some 2015 costs incl)

Item	Activity	Estimated Cost
1	Bulk Sample (3rd Quarter 2014)	**$7,000,000**
2	Pre-Feasibility (includes the CP & Permits)	
	Start in 4th Quarter of 2014	$750,000
	2015 Costs	$500,000
	Subtotal	**$1,250,000**
3	Geotechnical Study - Complete in 3rd Quarter of 2014	
	Geotechnical Assessment (Terrane)	$65,000
	Geotechnical Drilling (5X325 m orientated core)	$275,000
	Subtotal	**$340,000**
4	Hydroeological Study Including Overburden Assessment	
	Pit Footprint - Estimated - 6 Monitoring Wells	$60,000
	Waste stockpile area - 2 monitoring wells	$20,000
	Ore stockpile area - 2 monitoring wells	$20,000
	Overburden stockpile area - 2 monitoring wells	$20,000
	Mill site area - 2 monitoring wells	$20,000
	Hydrogeological analysis & report	$55,000
	Subtotal	**$195,000**
5	Diamond Drilling	
	903 Zone Definition - 3000 m	$425,000
	Assaying	$60,000
	Surveying	$15,000
	Subtotal	**$500,000**
6	Complete Environmental Studies For Pre-Feasibility	
	Mill Siting	$25,000
	Archeology	$20,000
	Terrestrial Ecology	$55,000
	Hydrology & surface water quality	$25,000
	Federal Environmental Assessment	$200,000
	Subtotal	**$325,000**
7	Heap Leach Testing	
	2014 & 2015	**$600,000**
8	Public and First Nations Consulting	**$100,000**
	Total	**$10,115,000**

2 INTRODUCTION

2.1 General

This technical report ("the Report") has been prepared by A. C. A. Howe International Limited ("Howe") at the request of Mr. Martin Shefksy, President, Northern Gold Mining Inc. ("Northern Gold" or "the Company"). This report is specific to the standards dictated by National Instrument 43-101 and Form 43-101F1 (Standards of Disclosure for Mineral Projects) in respect to the Golden Bear Project ('the Project") and in particular the Garrison Property ("the Property") and focuses on Howe's 2014 independent Garrcon Deposit and Jonpol Deposit mineral resource estimate updates. Howe's 2011 Garrcon Deposit Preliminary Economic Assessment ("PEA") is also repeated. The Property is situated in Garrison Township, Larder Lake Mining Division, Ontario, approximately 100 kilometres east of the city of Timmins.

Northern Gold is a junior resource company listed on the TSX Venture Exchange under the symbol "NGM". The corporate head office is located at Suite 800 20 Victoria St., Toronto, Ontario, M5C 2N8. The company's field office is located on the Garrison Property adjacent the Jonpol Deposit (UTM coordinates: 577,300E, 5,374,400N). An auxiliary field office is maintained in the town of Kirkland Lake, Ontario, approximately 40 km south of the Property area.

The Company is currently focused on the exploration and development of its Golden Bear Project, a portfolio of properties along the Destor-Porcupine Fault within the Abitibi Greenstone Belt in northern Ontario. The Golden Bear Project spans a 50 km distance along the Destor-Porcupine Fault Zone, from 20 km east of Matheson in Hislop Township east to Marriott Township and encompasses several non-contiguous properties including the Garrison (Garrcon and Jonpol deposits), Buffonta and Golden Pike advanced exploration properties. The Company's work has particularly focused on the Garrison Property in which the Company has acquired an undivided 100% interest in 3 unpatented and 43 patented mining claims, and a further 100% interest in 13 patented mining claims plus a 95% interest in 7 patented mining claims. The latter 20 claims are subject a back-in right of up to 51% as detailed in Section 4.3. Certain claims are subject to royalty payments as detailed in Section 4.3.

Howe is an international mining and geological consulting firm that has been serving the international mining community for over 50 years. Howe is well recognized by the major Canadian Stock Exchanges and provincial regulatory bodies and its personnel have worked on projects involving a wide variety of commodities and deposit types throughout the world. The firm's services are provided through offices in Toronto and Halifax, Canada; and London, England.

Neither Howe nor any of the Authors of the opinions expressed in this Report (nor family members nor associates) have business relationships with the Company or any associated company, nor with any other company mentioned in this Report which is likely to materially influence their impartiality or create the perception that the credibility of this Report could be compromised or biased in any way. The views expressed herein are genuinely held and deemed independent of the Companies.

Moreover, neither the Authors of this Report nor Howe (nor their family members nor associates) have any financial interest in the outcome of any transaction involving the property considered in this Report, other than the payment of normal professional fees for the work undertaken in its preparation (which are based upon hourly charge-out rates and reimbursement of expenses). The payment of such fees is not dependent upon the content or conclusions of either this Report, nor any consequences of any proposed transaction.

2.2 Scope and Conduct

The purpose of the report is to complete an update of Howe's April 19, 2012, mineral resource estimate for the Company's Garrcon Deposit (Hannon et al., 2012) and the 2009 mineral resource estimate for the Jonpol Deposit (George, 2009), both located on the Garrison Property. The Garrcon Deposit is a bulk tonnage resource encompassing the historically recognized, higher grade Shaft, South and North zones and the recently designated Green and East zones. The Jonpol Deposit is a lode gold resource encompassing the historically recognized JP, JD, RP and East zones. Howe's 2011 Garrcon Deposit Preliminary Economic Assessment ("PEA") (Hannon et al., 2011) is also repeated.

This Report was prepared and co-authored by Mr. Leon McGarry B.Sc., P.Geo., and Mr. Ian D. Trinder, M.Sc., P.Geo., Geologists and QPs with Howe and Mr. Doug Roy, M.A.Sc., P.Eng., and Mr. Patrick Hannon, M.A.Sc., P.Eng., Associate Consulting Engineers and Qualified Persons (QP) with Howe. Mr. Ian Flint, Ph.D., P.Eng., Associate Consulting Engineer with Howe prepared Sections 13.1, 13.2, 17 and 20.2.2 under the supervision of Mr. Hannon. Mr. Roy is a mining engineer with over 15 years' experience in the mining industry. He has participated in numerous projects and resource estimates for precious metals and base metals projects and has authored or co-authored numerous OSC-2A and NI 43-101 resource reports. Mr. Hannon is a mining and geological engineer with over 40 years' experience in the mining industry. He has also participated in numerous projects, resource estimates, feasibility estimates and valuations for precious metals deposits. He has authored numerous OSC 2A and NI 43-101 reports. Mr. Flint is a mineral processing engineer with over 20 years of mineral processing experience in areas of design, operations, and research. Mr. Trinder has over 25 years' experience in the mining industry with a background in international precious and base metals mineral exploration including project evaluation and management. Mr. McGarry has over 7 years' experience in the mining industry including a background in international mineral exploration and project management for gold and base metal deposits.

The updated Garrcon and Jonpol mineral resource estimates were prepared in accordance with CIM Definition Standards for Mineral Resources and Mineral Reserves. Only mineral Resources were estimated – no Reserves were defined.

Mr. McGarry and Mr. Trinder visited the Garrison Property site and Northern Gold's Kirkland Lake field office on February 2nd and 3rd, 2013 as part of Howe's due diligence in the preparation of this technical report. During the property visit, Mr. McGarry and Mr. Trinder were accompanied by Mr. Gary Nassif, M.Sc., P.Geo., then Northern Gold's Manager Exploration Services, and met with Mr. Greg Matheson, P.Geo., the Company's Senior Project Geologist to examine the Property area and discuss the Company's exploration activities, methodologies, findings and interpretations. Messrs. McGarry and Trinder completed a thorough review of all recent Garrcon and Jonpol drilling on the Property, acquired a complete digital database of all historic and current Garrcon drilling on the Property, and reviewed and made copies of reports available for the Property. In addition, Messrs. McGarry and Trinder reviewed drilling and sampling methodology, quality assurance and quality control procedures, security, etc.

Mr. Roy visited the Garrison Property site and Northern Gold's Kirkland Lake field office on April 12-14, 2012 as part of due diligence in the preparation of Howe's 2012 technical report (Hannon et al., 2012). During the property visit, Mr. Roy met with Mr. Michael Gross, Northern Gold's Vice President Exploration and Mr. Brian Madill, the Company's Supervisor - Computer Modeling and Lands to discuss the Company's exploration activities, methodologies, findings and interpretations. Mr. Roy completed a review of Garrcondrilling to date on the Property, the drilling and sampling methodology, quality assurance and quality control procedures, security, etc. Mr. Roy conducted a site visit to the Property accompanied by Mr. Gross and Mr. Greg Matheson, the Company's Project Geologist to examine the Property area and ongoing exploration activities.

Mr. Trinder visited the Garrison Property site and Northern Gold's Kirkland Lake field office on January 19th to 22nd, 2011 as part of due diligence in the preparation of Howe's 2011 technical report (Hannon et al., 2011). During the property visit, Mr. Trinder met with Mr. Michael Gross, Northern Gold's Vice President Exploration and Mr. Greg Matheson, the Company's Project Geologist to examine the Property area and discuss the Company's exploration activities, methodologies, findings and interpretations. Mr. Trinder completed a thorough review of all Garrcon drilling to date on the Property, acquired a complete digital database of all historic and current Garrcon drilling on the Property, and reviewed and made copies of historic reports available for the Property. In addition, Mr. Trinder reviewed drilling and sampling methodology, quality assurance and quality control procedures, security, etc.

Mr. Trinder also visited the Garrison Property site and Northern Gold's Kirkland Lake field office on July 12th and 13th, 2010 as part of due diligence in the preparation of Howe's 2010 technical report (Roy and Trinder, 2010). During the property visit, Mr. Trinder met with Mr. Michael Gross, Northern Gold's Vice President Exploration and Mr. Greg Matheson, the Company's Project Geologist to examine the Property area and discuss the Company's exploration activities, methodologies, findings and interpretations. Mr. Trinder completed a thorough review of all Garrcon drilling to date on the Property, acquired a complete digital database of all historic and current Garrcon drilling on the Property, and reviewed and made copies of historic reports available for the Property. In addition, Mr. Trinder reviewed drilling and sampling methodology, quality assurance and quality control procedures, security, etc.

The effective date of this report is December 30, 2013; the Garrcon updated mineral resource estimate is based on historical and Northern Gold 2009-2012 drill hole assay data available to Howe as of December 30, 2013. All assay results from the Company's 2009-2012 drill programs up to GAR-12-270 are considered in the 2014 Garrcon resource estimate update. The 2014 Jonpol mineral resource estimate update is based on historical and Northern Gold 2012-2013 drill hole assay data available to Howe as of December 30, 2013. Assay results from the Company's 2012-2013 drill holes up to JP-13-28 are considered in the 2014 Jonpol resource estimate update. Since the completion of the resource estimate ACA Howe has received collar data for two holes at Jonpol, JP-13-16 and JP-13-17 with two wedge holes, JP-13-16A and JP-13-17A, and a geotechnical hole JPGT-02A. Collar information was found for an additional 9 historic holes: N94-1 to N94-3 and N95-1 to N95-6. These holes did not have assay data available at the December 30, 2013 data cut off and were not included in the resource database. Howe reserves the right, but will not be obligated to revise this Report and conclusions if additional information becomes known to Howe subsequent to the date of this Report.

Northern Gold reviewed draft copies of this Report for factual errors. Any changes made as a result of these reviews did not include alterations to the conclusions made. Therefore, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Report.

Northern Gold has accepted that the qualifications, expertise, experience, competence and professional reputation of Howe's Principals and Associate Geologists and Engineers are appropriate and relevant for the preparation of this Report. The Company has also accepted that Howe's Principals and Associates are members of professional bodies that are appropriate and relevant for the preparation of this Report.

Northern Gold has warranted that full disclosure of all material information in its possession or control at the time of writing has been made to Howe, and that it is complete, accurate, true and not misleading. The Company has also provided Howe with an indemnity in relation to the information provided by it, since Howe has utilized Northern Gold's information while preparing this Report. The Company has agreed that neither it nor its associates or affiliates will make any claim against Howe to recover any loss or damage suffered as a result of Howe's use of that information in the preparation of this Report. Northern Gold has also indemnified Howe against any claim arising out of the assignment to prepare this Report, except where the claim arises out of any proven willful misconduct or negligence on the part of Howe. This indemnity is also applied to any consequential extension of work through queries, questions, public hearings or additional work required arising out of the engagement.

2.3 Sources of Information

In preparing the Garrcon updated resource estimate, Howe has utilized a digital database received from Northern Gold in Microsoft Excel spreadsheet format. Howe has also reviewed geological reports, maps, miscellaneous technical papers, company letters and memoranda, and other public and private information as listed in Section 27 (References) of this Report. Howe has carefully reviewed all of this information and assumed that all of the information and technical documents reviewed and listed in the “References” are accurate and complete in all material aspects. Howe has only reviewed the land tenure in a preliminary fashion, and has not independently verified the legal status or ownership of the property or the underlying agreements. Historical mineral resource figures contained in the Report, including any underlying assumptions, parameters and classifications, are quoted “as is” from the source. Howe confirms the Garrcon and Jonpol mineral resource estimates were completed in accordance with National Instrument 43-101 and Form 43-101F1 (Standards of Disclosure for Mineral Projects) and the definitions and guidelines of the CIM Definition Standards for Mineral Resources and Mineral Reserves.

In addition, Howe carried out discussions with Mr. Michael Gross, Northern Gold’s Consulting Chief Operating Officer and Mr. Greg Matheson, the Company’s Senior Project Geologist and Mr. Gary Nassif, M.Sc., P.Geo., then Northern Gold’s Manager Exploration Services. Howe’s extensive experience in mesothermal vein deposits was also drawn upon.

The Authors believe that the data presented by Northern Gold are a reasonable and accurate representation of the Golden Bear Project and in particular, the Garrison Property.

2.4 Units and Currency

All units of measurement used in this report are metric unless otherwise stated. Historical tonnage figures are reported as originally published in “tons” (short tons). Base metal values are reported in percent (%) or parts per million (ppm). Historical gold and silver grades are reported in their original unit of oz Au/ton or oz Ag/ton (ounces per short ton), although metric equivalents are also given for clarity. Recent analyses are reported in g/t (grams per metric tonne), ppm or parts per billion (ppb). Distances are expressed as kilometres (km) and metres (m). The Canadian dollar is used throughout this Report unless otherwise stated. The exchange rate for conversion of U.S. dollars to Canadian dollars was US$1.00: C$1.06 at the effective date of this report. At the time of writing the 2011 Garrcon PEA (Hannon et al., 2011) as repeated in this report the exchange rate for conversion of U.S. dollars to Canadian dollars was US$1.00: C$1.03.

Location coordinates are expressed in Universal Transverse Mercator (UTM) grid coordinates, Zone 17, using the 1983 North American Datum, (NAD83).

2.5 Glossary

Angle of repose: The angle of repose or angle of rest is the maximum slope at which a heap of loose material will stand without sliding.

Bench [mining]: A bench may be defined as a ledge that forms a single level of operation above which mineral or waste materials are mined back to a bench face. The mineral bearing material or waste is removed in successive layers, each of which is a bench. Several benches may be in operation simultaneously in different parts of, and at different elevations in the open pit mine. The bench height is the vertical distance between the highest point of the bench, or the bench crest, and the toe of the bench (Figure 2-1, MEH[7])

Bench slope: The bench slope is the angle, measured in degrees, between the horizontal and an imaginary line joining the bench toe and crest.

Berm: A berm is a horizontal shelf or ledge within the ultimate pit wall slope. The berm interval, berm slope angle, and berm width are governed by the geotechnical configuration of the slope.

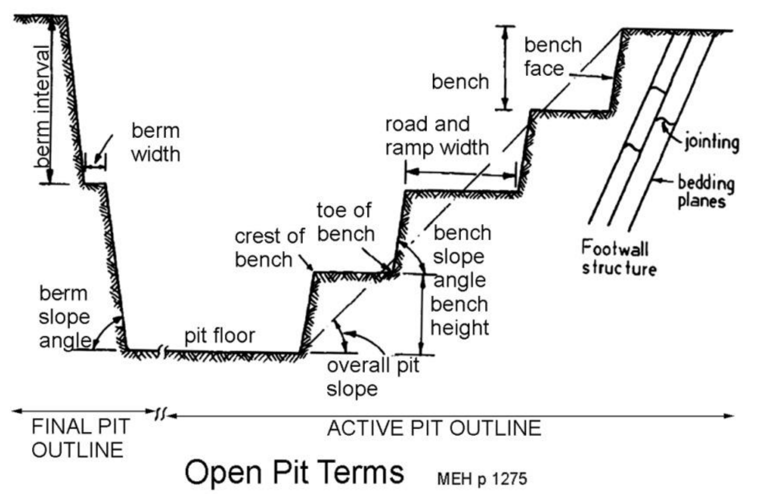


Figure 2-1: Open Pit Terms (MEH[8])

EBITDA: A measurement of a company's operating profitability. It is equal to earnings before interest, tax, depreciation and amortization (EBITDA) divided by total revenue. Because EBITDA excludes depreciation and amortization, EBITDA margin can provide

[7] MEH – Mining Engineering Handbook, Society for Mining, Metallurgy, and Exploration, Inc. 2nd printing: December 1996

[8] MEH – Mining Engineering Handbook, Society for Mining, Metallurgy, and Exploration, Inc. 2nd printing: December 1996

an investor with a cleaner view of a company's core profitability. (Ref: http://www.investopedia.com/terms)

Feasibility Study: " is a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of realistically assumed mining, processing, metallurgical, economic, marketing, legal, environmental, social and governmental considerations together with any other relevant operational factors and detailed financial analysis, that are necessary to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a Pre-Feasibility Study."

Haul Road: A haul road must be maintained into the pit for the duration of open pit mining. A spiral system is an arrangement whereby the haul road is arranged spirally along the perimeter walls of the pit so that the gradient of the road is more or less uniform from the top to the bottom of the pit. A zigzag or switchback system is an arrangement in which the road surmounts the steep grade of a pit wall by zigzagging, generally on the footwall side of the pit. The choice of spiral or zigzag is dependent upon several factors including the shape and size of the ore body, safety, truck economics and capabilities, and local pit slope stability.

Overall pit slope angle: The overall pit slope angle is the angle at which the wall of an open pit stands, as measured between the horizontal and an imaginary line joining the top bench crest with the bottom bench toe.

Pit limits: The pit limits are the vertical and lateral extent to which open pit mining may be economically conducted.

Preliminary Economic Assessment: A study, other than a pre-feasibility or feasibility study, that includes an economic analysis of the potential viability of mineral resources;
Companion Policy 43-101CP (4) "preliminary economic assessment" – The term "preliminary economic assessment", which can include a study commonly referred to as a scoping study, is defined in the Instrument. A preliminary economic assessment might be based on measured, indicated, or inferred mineral resources, or a combination of any of these. We consider these types of economic analyses to include disclosure of forecast mine production rates that might contain capital costs to develop and sustain the mining operation, operating costs, and projected cash flows.

Preliminary Feasibility (Pre-Feasibility) Study: "is a comprehensive study of the viability of a mineral project that has advanced to a stage where the mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, has been established and an effective method of mineral processing has been determined, and includes a financial analysis based on reasonable assumptions of technical, engineering, legal, operating, economic, social, and environmental factors and the evaluation of other relevant factors which are sufficient for a Qualified Person, acting reasonably, to determine if all or part of the Mineral Resource may be classified as a Mineral Reserve." The CIM Definition Standards requires the completion of a Preliminary Feasibility Study as the minimum prerequisite for the conversion of Mineral Resources to Mineral Reserves.

3 RELIANCE ON OTHER EXPERTS

Howe has relied upon the Company and its management for information related to underlying contracts and agreements pertaining to the acquisition of patented and unpatented mining claims and leases and their status (Madill and Matheson – 2014 email correspondence). Howe has also relied upon the Ontario Ministry of Northern Development and Mines ("MNDM") online "Claims" system for information on unpatented mining claims location and status (March 3, 2014). The MNDM disclaims any guarantee or warranty that their information is accurate, complete or reliable. The Property description presented in this report is not intended to represent a legal, or any other opinion as to title.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

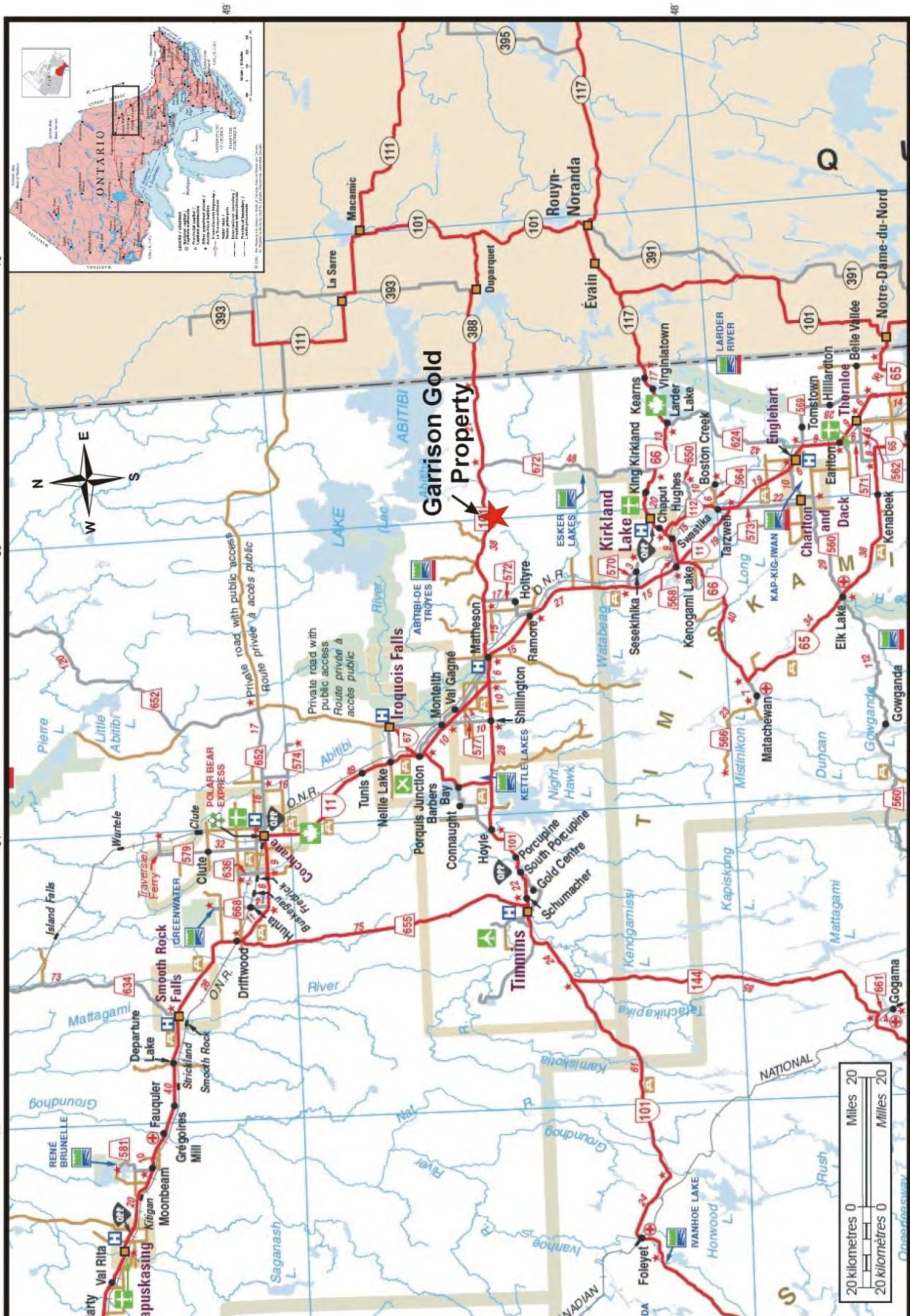
The Golden Bear Project is located in the Timmins-Kirkland Lake area of northeastern Ontario along the Highway 101 corridor east of the town of Matheson (Figure 4-1, Figure 4-2). The Project is a portfolio of properties spanning a 50 km distance along the Destor-Porcupine Fault Zone within the Abitibi Greenstone Belt, from Hislop Township, 20 km east of Matheson, east to Marriott Township. It encompasses 16 non-contiguous properties (Table 4-1) including the Garrison (Garrcon and Jonpol deposits), Buffonta and Golden Pike advanced exploration properties. The Company's work to date has particularly focused on the Garrison Property, and to a lesser extent, the Buffonta and Gold Pike Properties.

4.1.1 Garrison Property

The Garrison Property is located in Garrison Township, Larder Lake Mining Division, approximately 40 kilometres north of Kirkland Lake, 40 kilometres east of Matheson, and 100 kilometres east of Timmins, Ontario. The Property is situated within National Topographic System (NTS) map sheet 32/D12 at approximately latitude 48°30'58" North and longitude 79°57'11" West (UTM Zone 17N co-ordinates 578,115E and 5,374,030N, NAD83 Datum).

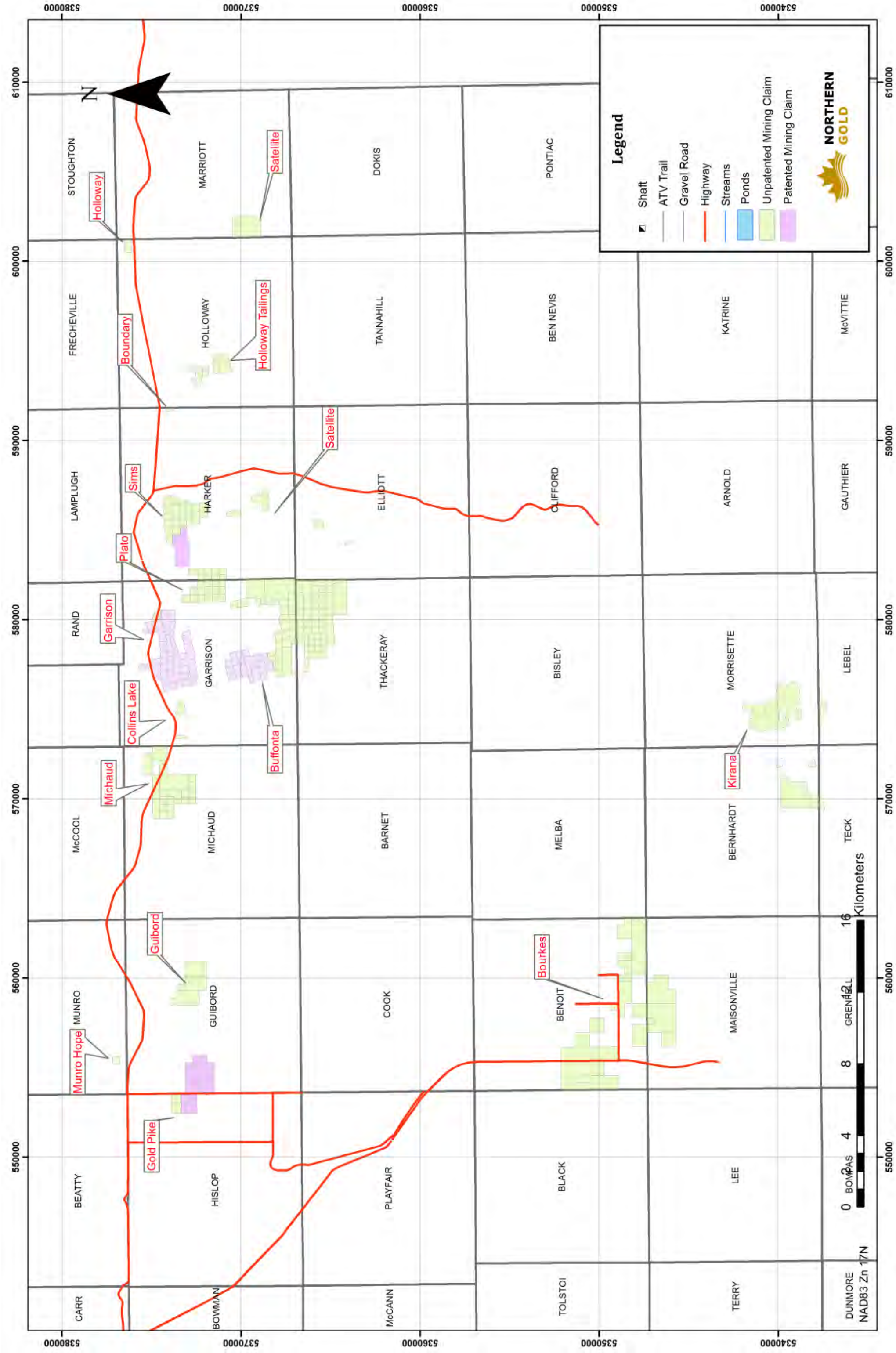
4.2 Property Description and Ownership

The Golden Bear Project consists of 16 groups of mining claims that have been purchased, optioned or staked since the Company began exploring what was initially referred to as the Garrison Gold Property ("Garrison Property") in 2009 (Table 4-1). Of these claim groups or properties, the Company is actively exploring the Garrison, Buffonta and Gold Pike Properties.



Map Source: Ontario Ministry of Transportation

Figure 4-1: Golden Bear Project and Garrison Property Location



Source: Northern Gold 2014

Figure 4-2: Location of the Golden Bear Project Properties

Table 4-1: Golden Bear Project – General Property Information

Property	Claim Type	Number of Claims	Area (ha.)	Area (km^2)	Area (acres)	Claim Units
Garrison	Unpatented	3	22	0.22	55.36	3
	Patent	63	766	7.66	1892.30	63
	Total	66	788	7.88	1947.66	66
Buffonta	Unpatented	90	1763	17.63	4356.78	135
	Patent	24	359	3.59	886.63	24
	Total	114	2122	21.22	5243.41	159
Gold Pike	Unpatented	2	57	0.57	141.60	4
	Lease	24	411	4.11	1016.04	24
	Total	26	468	4.68	1157.65	28
Plato	Unpatented	24	370	3.70	914.52	24
Sims	Unpatented	24	398	3.98	984.42	24
Claim 352	Lease	1	154	1.54	381.56	11
Munro Hope Claim	Unpatented	1	16	0.16	39.16	1
Guibord	Unpatented	4	321	3.21	793.85	20
Michaud	Unpatented	20	646	6.46	1595.91	39
Collins Lake	Unpatented	3	44	0.44	109.94	4
Harker-Holloway	Unpatented	6	31	0.31	761.09	18
Holloway	Unpatented	1	31	0.31	76.98	2
Holloway Tailings	Unpatented	10	176	1.76	434.00	11
Boundary Claim	Unpatented	1	9	0.09	21.43	1
Bourkes	Unpatented	19	2113	21.13	5222.53	131
Kirana	Unpatented	11	846	8.46	2090.67	62
	Golden Bear Project Total	**331**	**8534**	**85.34**	**21774.77**	**601**

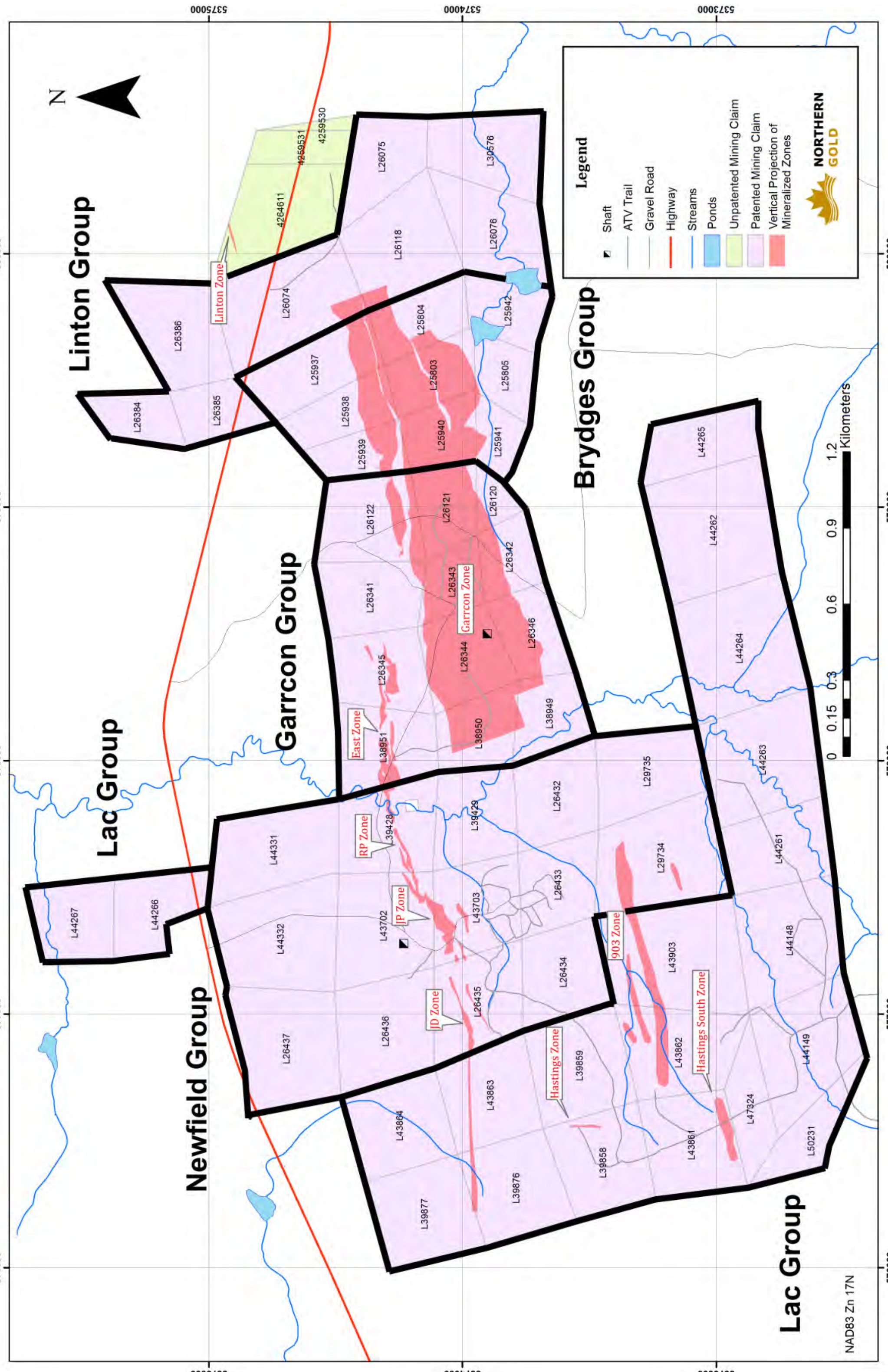
4.2.1 Garrison Property

The Garrison Property currently comprises 63 patented mining claims and 3 unpatented claims covering an area of approximately 788 hectares (1947.2 acres) (Table 4-2; Figure 4-3). The Company holds a 100% interest in 59 of the claims and a 95% interest in the remaining 7 claims. Forty-three of the patented claims that make up the Property have been historically grouped into four contiguous claim blocks known as the Newfield, Garrcon, Brydges and Linton Groups. An additional 20 patented claims including the historic Hastings and Wright-Hargreaves claim blocks were acquired by the Company from a subsidiary of Barrick Gold Inc. on September 10, 2013 are herein referred to as the Lac Group (Table 4-2; Figure 4-3). Additional claim details and status are presented in Appendix A.

Table 4-2: List of mining claims comprising the Garrison Property.

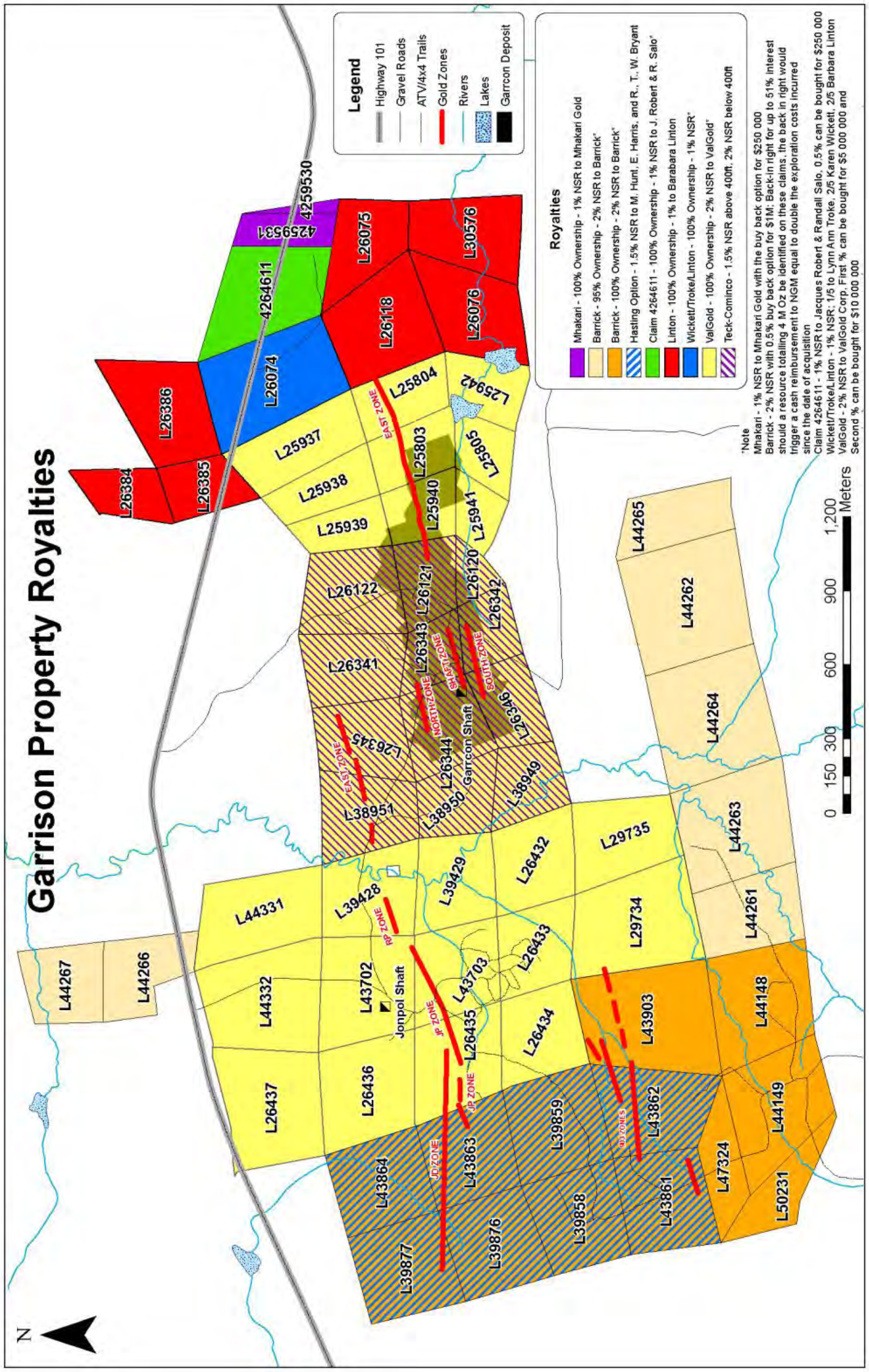
Claim Group	Claim Numbers (L)	No. Claims	Status	Holder	Percentage[1]
Newfield	26432 to 26437	6	Patented	Northern Gold Mining Inc.	100
	29734 to 29735	2	Patented	Northern Gold Mining Inc.	100
	39428 to 39429	2	Patented	Northern Gold Mining Inc.	100
	43702 to 43703	2	Patented	Northern Gold Mining Inc.	100
	44331 to 44332	2	Patented	Northern Gold Mining Inc.	100
Garrcon	26120 to 26122	3	Patented	Northern Gold Mining Inc.	100
	26341 to 26346	6	Patented	Northern Gold Mining Inc.	100
	38949 to 38951	3	Patented	Northern Gold Mining Inc.	100
Brydges	25803 to 25805	3	Patented	Northern Gold Mining Inc.	100
	25937 to 25942	6	Patented	Northern Gold Mining Inc.	100
Linton	26074	1	Patented	Northern Gold Mining Inc.	100
	26075 to 26076	2	Patented	Northern Gold Mining Inc.	100
	26116	1	Patented	Northern Gold Mining Inc.	100
	26384 to 26386	3	Patented	Northern Gold Mining Inc.	100
	30576	1	Patented	Northern Gold Mining Inc.	100
Lac[2]	39876 to 39877	2	Patented	Northern Gold Mining Inc.	100
	43858 to 43859	2	Patented	Northern Gold Mining Inc.	100
	43861 to 43864	4	Patented	Northern Gold Mining Inc.	100
	43903	1	Patented	Northern Gold Mining Inc.	100
	44148 to 44149	2	Patented	Northern Gold Mining Inc.	100
	44261 to 44267	7	Patented	Northern Gold Mining Inc.	95[3]
	47324	1	Patented	Northern Gold Mining Inc.	100
	50231	1	Patented	Northern Gold Mining Inc.	100
Unpatented	4264611	1	Unpatented[4]	Northern Gold Mining Inc.	100
	4259530 to 4259531	2	Unpatented[4]	Northern Gold Mining Inc.	100
	TOTAL:	**66**			

1: Subject to subject to royalty payments as detailed in Section 4.3.1
2: Subject to a "back-in" right of up to 51% as detailed in Section 4.3.1.
3: Remaining 5% held by Janet Ann Colbran
4: Mining rights only



Source: Northern Gold 2014

Figure 4-3: Garrison Property Claim Map with Historic Claim Group Outlines



Source: Northern Gold, 2014

Figure 4-4: Distribution of Royalties on the Garrison Property

4.2.1.1 Newfield, Garrcon and Brydges Groups

On September 9, 2009 Northern Gold entered into an Option Agreement with ValGold Resources Ltd. (ValGold) covering 35 claims of its 100% owned Garrison Property (Newfield, Garrcon and Brydges Groups). Under the terms of the agreement, Northern Gold could earn up to an undivided 80% interest in the Property in two phases.

Subsequently, under the terms of a sales agreement executed on April 7th 2011, Northern Gold purchased ValGold's 100% interest in the Garrison property with TSX Venture approval of the transaction granted on April 14, 2011.

In consideration for this sale, ValGold received:

- a cash payment of C$325,000 and a promissory note for an additional C$325,000 paid on or before August 13, 2011.
- 16 million common shares in Northern Gold ("Northern Gold Shares") giving ValGold aggregate holding of 17,437,500 common shares of Northern Gold, representing ownership of approximately 14.8% of the issued and outstanding shares of Northern Gold on a non-diluted basis.
- a 2% net smelter return royalty of which: (i) half (i.e. 1%) can be acquired by Northern Gold for C$5 million paid to ValGold at any time upon the earlier of thirty-six months following the date of closing and the commencement of commercial production, and (ii) the remaining 1% can be acquired for a further payment of C$10 million at any time upon the earlier of seventy-two months following the date of closing and the commencement of commercial production.

For a period ending on the earlier of twenty-four months after closing or a change of control Northern Gold had a right to vote the Northern Gold Shares. In addition, Northern Gold had a right of first refusal to provide a buyer for any sale by ValGold in excess of 160,000 Northern Gold Shares in any calendar month.

Under the terms of the original Garrison Option and Joint Venture Agreement, Northern Gold had the right to earn up to an undivided 80% interest in the Property in two phases. Northern Gold could acquire a 50% undivided interest in the property by making exploration expenditures totaling $4,000,000 plus cash payments to ValGold totaling $1,000,000 over four years for a total expenditure of $5,000,000. The cash payments to ValGold totaling $1,000,000 over four years could be made either in cash or in Northern Gold stock at Northern Gold's option, using a 20 day value weighted average price, upon regulatory approval. Northern Gold was also to complete work on the property in the amount of $4,000,000 over four years, with $500,000 being spent on the property in the first year of the agreement and not less than $750,000 to be expended in each of the subsequent years. After earning the 50% interest, Northern Gold could increase its interest to 80% percent by making additional cash payments totaling $1,000,000 over four years (again with all or part of the payments being made in Northern Gold stock equivalent, using a 20 day value weighted average price) and completing additional work on the property in the amount of $4,000,000 over four years.

At the time of closing of the buy-out of the Garrison Option and Joint Venture Agreement, Northern Gold was in the second year of the option agreement and had made $400,000 in payments ($200,000 in cash and the issuance of 2.2 million in shares in satisfaction of the other $200,000 payment obligation) and had incurred over $3,000,000 in exploration expenditures.

In addition, 12 of the 35 acquired patented claims (the Garrcon Group) are subject to a prior net smelter return royalty (NSR) held by Cominco (now Teck Resources Limited) (1.5% on ore above the 400-foot level and 2.0% on ore below the 400-foot level) on the Garrcon claim group (claims L26120 to 22, L26341 to 46, and L38949 to 51), which cover both the Jonpol East Zone and the Garrcon Zone. The NSR agreement was made between previous property holder Jonpol Explorations Ltd. and Cominco, and has not been reviewed by Howe.

4.2.1.2 Linton Group

On April 12, 2011 Northern Gold announced that it reached a definitive agreement with June Linton, Lynn Troke and Karen Wickett to acquire a 96.4% interest in the Linton Claim Group consisting of eight patented mining claims contiguous to the eastern boundary of the historic Brydges Group. The acquisition of this strategic group of claims increased the size of the Garrison Property to 476.1 hectares.

The claims were purchased in two transactions. The first transaction consisted of the purchase of a 100% interest in seven of the claims (26075 to 26076, 26116, 26384 to 26386 and 30576). They were purchased for a cash payment of $91,000 plus 107,692 common shares of Northern Gold Mines Inc., and a 1% NSR, with TSX Venture approval of the first transaction granted on April 25, 2011. The second transaction was the March 23 and May 2, 2012 purchase of a five sevenths (71.4%) interest in the eighth claim (26074) for a cash consideration of $20,000 and a 1% NSR, to be apportioned to the vendors on a pro rata basis.

In a third transaction, Northern Gold purchased on April 30, 2012, the remaining 3.6% interest in the Linton Claim Group (two sevenths (28.6%) interest in claim 26074) for a cash payment of $8,000 from Carol Linton Whelpdale with no stock or royalty payments.

4.2.1.3 Lac Group

On September 10, 2013, the Company announced it had completed an agreement to acquire 100% interest in 13 patented mining claims plus a 95% interest in 7 patented mining claims (remaining 5% held by Janet Ann Colbran) in Garrison Township from Lac Properties Inc. a wholly owned subsidiary of Barrick Gold Corporation. The claims are contiguous to the west, north and south of the historic Newfield group.

Pursuant to the terms of the agreement the Company acquired the 20 claims in consideration for:

- a cash payment of Cdn$750,000,

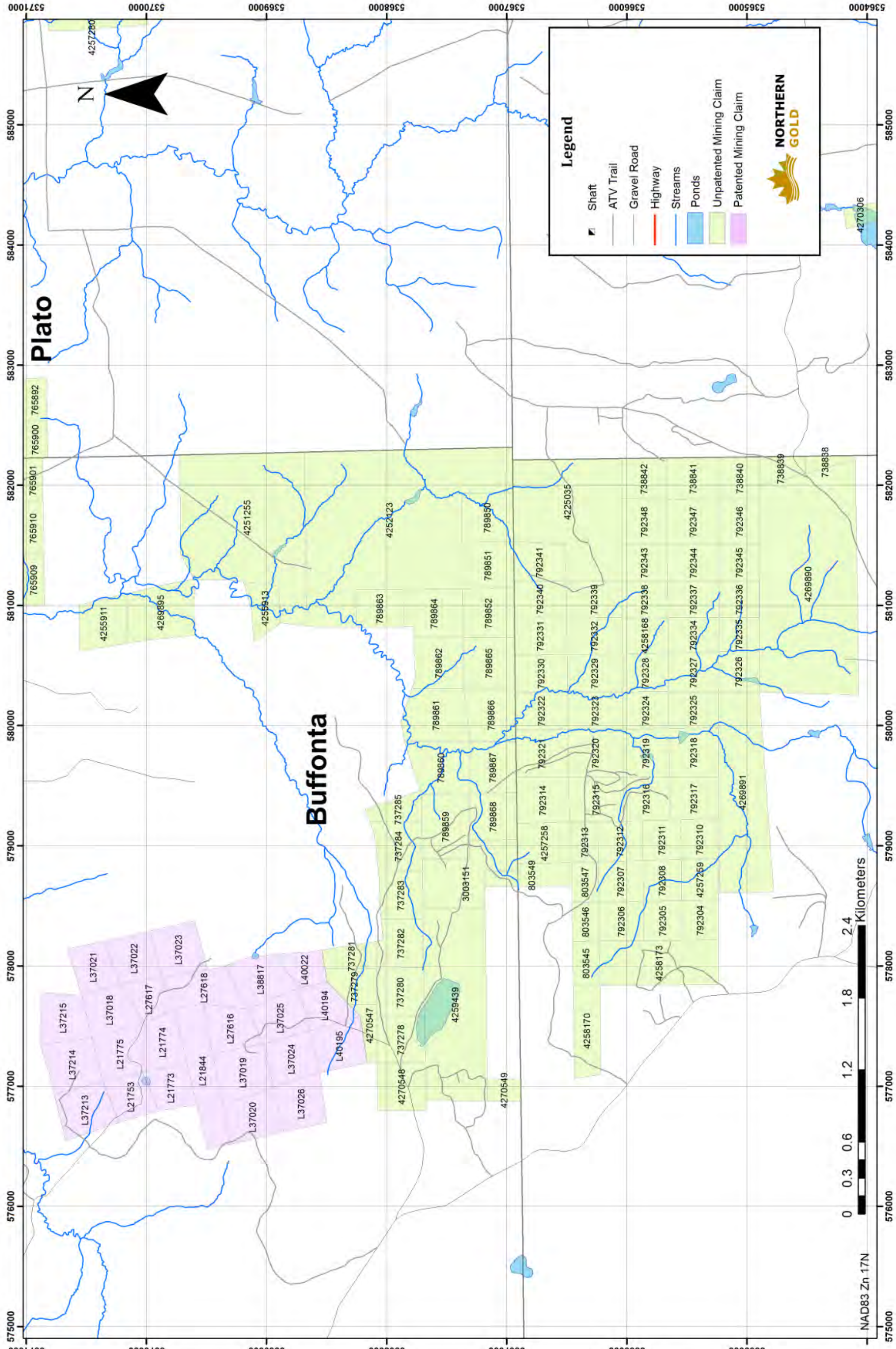
- the issuance of an aggregate number of Northern Gold common shares with a value limit of up to $250,000 based on a 10-day average trading price prior to issuance being 4,011,311 Common Shares issued at a price of approximately $0.06 per share,
- a back-in right for up to 51% interest in the property should a resource totaling 4 million ounces gold or gold equivalent be identified on the claims. Such back-in right would trigger a cash reimbursement to the Company equal to double the exploration costs incurred since the date of the transaction.
- Lac also retains a royalty of 2% of net smelter returns from production on the property with the Company having the right and option to purchase 0.5% of the royalty for $1,000,000.

4.2.2 Buffonta Property

The Buffonta Property comprises 90 staked mining claims and 24 patented claims covering 159 claim units containing 2,122 hectares in Garrison and Thackeray Townships, Larder Lake mining division, Ontario (Table 4-1, Figure 4-5). Claim details and status are presented in Appendix A.

Pursuant to a mining claim acquisition agreement dated September 6, 2012, as amended on September 27, 2012, between the Company and Tiger Gold Exploration Corporation, Gwen Resources Ltd, and Perrex Resources Inc., the Company acquired a 100% interest in the Buffonta Property (24 patented and 77 unpatented claims totalling 1,564 hectares) located near the Garrison Property in exchange for a cash payment of $1,500,000, a 3% NSR and 3,000,000 Common Shares to be issued in October 2013. The Company has the option to purchase 0.5% of the NSR for $1,000,000. The Common Shares were issued in October 2013 completing the purchase of the Buffonta Property.

Northern Gold subsequently consolidated 13 additional 100% owned unpatented claims (558 hectares) with the original Buffonta Property (Appendix A).



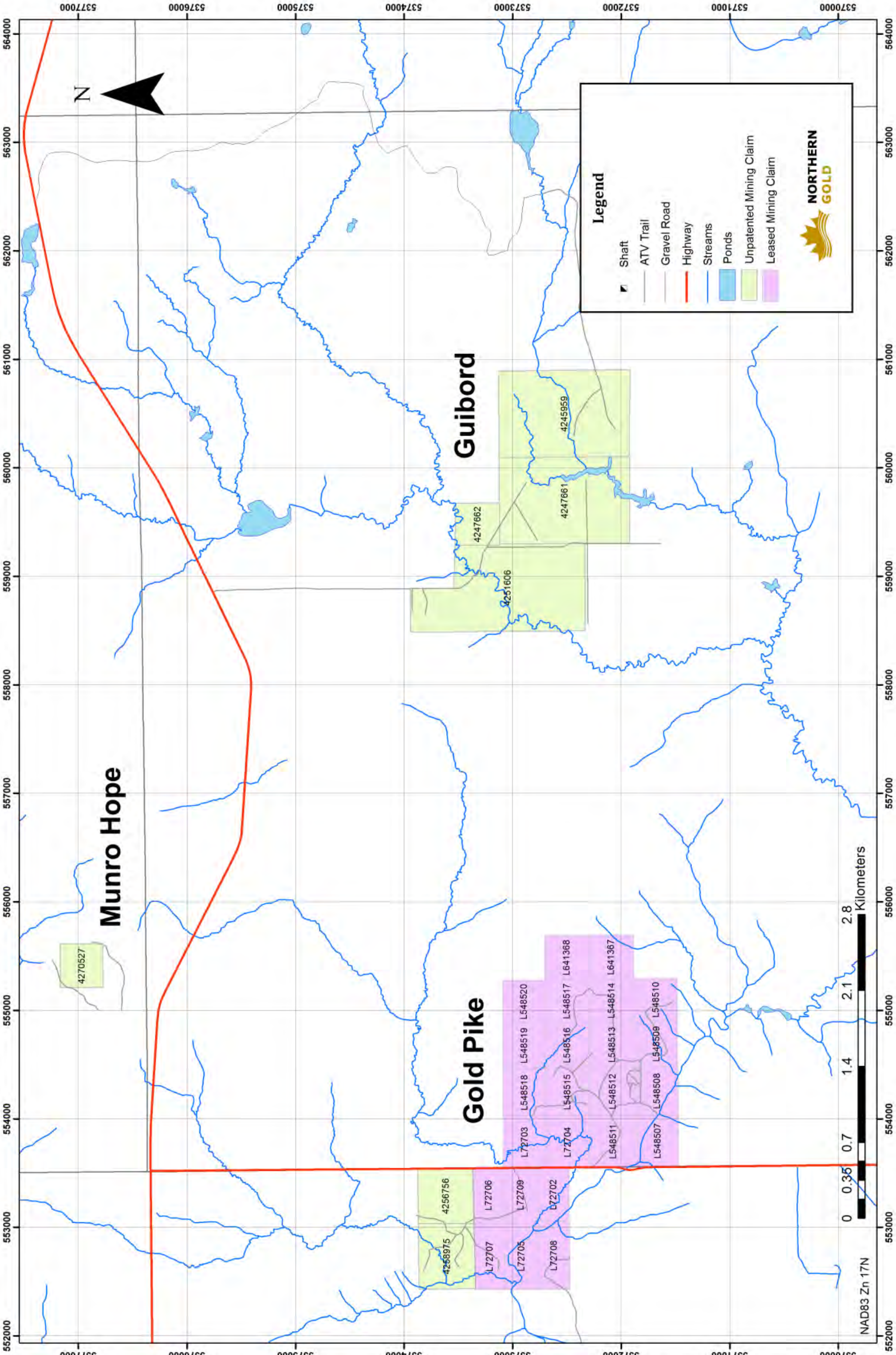
Source: Northern Gold 2014

Figure 4-5: Buffonta Property Claim Map

4.2.3 Gold Pike Property

At the Gold Pike Property, the Company holds 100% ownership in 2 staked mining claims of two units each, a 60% interest, with the potential to earn up to a 70% interest in 8 mining leases and a 40% interest, with the potential to earn up to a 60% interest in 16 mining leases covering 28 claim units containing 468 hectares in Guibord and Hislop Townships, Larder Lake mining division (Table 4-1; Figure 4-6).

Northern Gold's interest in the Gold Pike Property was acquired through the acquisition of Victory Gold Mines Inc. (Victory Gold), now a wholly-owned subsidiary. In December 2012, the Company entered into an amalgamation agreement to acquire all the issued and outstanding shares of Victory Gold, including Victory Gold's interest in the Gold Pike Property. Agreement terms stated that each Victory Gold shareholder would be entitled to receive one Common Share for every two common shares of Victory Gold held by such Victory Gold shareholder. Each holder of the outstanding 1,533,915 common share purchase warrants of Victory Gold would receive one-half the number of replacement Common Share purchase warrants of Northern Gold, having the same terms as the Victory Gold warrants, but exercisable at a price equal to double the exercise price of the warrant being exchanged. Certain consultants of Victory Gold that held an aggregate of 400,000 stock options and that would remain with Northern Gold would receive one-half the number of replacement stock options of Northern Gold, having the same terms, but exercisable at a price equal to double the exercise price of the Victory Gold options. On February 6, 2013, the Company completed the acquisition of Victory Gold and issued an aggregate of 21,231,318 Common Shares and 766,956 replacement common share purchase warrants expiring between April and December 2013 with various exercise prices between $0.50 and $0.70 and granting 200,000 replacement stock options expiring in one year exercisable between $0.30 and $0.44.



Source: Northern Gold 2014

Figure 4-6: Gold Pike, Munro Hope and Guibord Properties Claim Map

4.2.4 Plato Property

Northern Gold holds 100% interest in the Plato Property which comprises 24 unpatented mining claims, covering approximately 384 hectares, in Garrison and Harker Townships approximately 1 kilometre southeast of the Linton claim block portion of the Garrison Property (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

On May 25, 2011, Northern Gold announced that it had entered into a definitive agreement to acquire a 100% interest in the Plato Claim Group from Plato Gold Corporation (Plato). The Agreement is subject to an underlying 2% Gross Metal Royalty on all metals produced from the property and is held by Géoconseils Jack Stoch Ltée (Géoconseils) in accordance with an Agreement between Géoconseils and Plato dated November 27th, 2007. The claims were purchased for a cash payment of $72,000 and 175,000 common shares of Northern Gold on the closing date of May 27, 2011.

4.2.5 Sims Property

Northern Gold holds 100% interest in the Sims Property which comprises 24 unpatented mining claims, covering approximately 384 hectares, in Harker Township approximately 3.9 kilometers east of the Linton claim block portion of the Garrison Property (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

Northern Gold announced on April 19, 2011 that it had entered into a definitive agreement to acquire a 100% interest, subject to a NSR royalty, in the Sims Claim Group consisting of 24 staked mining claims. The Claims were purchased for a cash payment of $72,000 cash and issued 100,000 Common Shares valued at $50,000. The claims are subject to a 1.5% NSR royalty to the vendor; the Company may purchase the entire NSR at any time for $1,500,000. The agreement of purchase and sale was dated April 15, 2011 and approved by TSX Venture on April 26, 2011.

4.2.6 CLM352

CLM352 consists of a mining lease comprised of a block of 11 historical mining claims covering 154 hectares in Harker Township, Ontario (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

Pursuant to the terms of a mining claim acquisition agreement between Northern Gold and Plato Gold Corp. dated January 30, 2013, the Company acquired an 80% interest in CLM352 in exchange for CDN$200,000 payable to Plato; and 250,000 common shares of Northern Gold issuable to Plato. In a letter dated February 11, 2013, Plato was provided a cheque in the amount of $200,000 and 250,000 common shares. The Ministry of Northern Development and Mines granted consent for the transfer of the Property on March 19, 2013 and the transfer was registered on April 2, 2013 as CB93506. Plato retains a 20% participating interest in CLM352. If at any time, either party's interest is reduced to 10% or less, such interest shall be surrendered and the forfeiting party shall be granted a 1% NSR from production on CLM352. The non-forfeiting party shall have the right and option to purchase the entire 1% NSR for $1,000,000.

4.2.7 Munro Hope Claim

Northern Gold holds 100% interest in the Munro Hope claim, a 16 hectare one claim unit staked on June 1, 2012. It is located in Munro Township, Ontario, 600 metres southwest of the historic Croesus Mine, one of Ontario's highest grade gold mine (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

4.2.8 Guibord Property

Northern Gold holds 100% interest in the Guibord Property which consists of 4 unpatented claims totaling 20 claim units and covering 321 hectares in Guibord Township (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

The property was acquired though the Champagne Mining Claim Acquisition Agreement and Joint Venture (see Section 4.2.13). This property is adjacent to the south of Lakeshore Gold's Fenn-Gibb Property.

4.2.9 Michaud Property

The Michaud Property is comprised of 20 staked mining claims totaling 38 claim units covering 646 hectares in the Township of Michaud, Ontario. The Michaud Property is located 8 kilometres west of the Garrison Property and is easily accessible via paved Highway 101 (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

Eight of the Michaud Property claims were staked by Northern Gold over the last three years. One of the Michaud claims was acquired from Norm Collins, Chad Glister, and Clayton Larche on April 11, 2013 for $9,000. Also on April 11, 2013, four Michaud claims were acquired from Norm Collins, Chad Glister, and 1571925 Ontario Ltd. for $16,000. The remaining seven Michaud unpatented claims were acquired through the Champagne Mining Claim Acquisition Agreement and Joint Venture (see Section 4.2.13).

4.2.10 Collins Lake Property

The Collins Lake Property claims were acquired through staking August 21, 2010 covering 3 claims containing 44 hectares. The claims are located on the projection of the Munro Fault approximately 1.25 and 2.5 kilometres west from the Garrison Property (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

The claims were staked because of their potential to host Jonpol type mineralization.

4.2.11 Satellite Property

Following the termination of the Harker-Holloway Property option, the Company maintains 100% interest in 6 unpatented mining claims covering 18 claim units containing 308 hectares in Harker, Elliott, and Marriott Townships (Table 4-1, Figure 4-1). The claims were subsequently renamed as the Satellite claim group. Claim details, status and claim map are presented in Appendix A.

4.2.12 Holloway Property

Northern Gold holds 100% interest in the Holloway Property which consists of one unpatented claim (2 claim units, 31 ha) located in the northeast corner of Holloway Township (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

The claim was acquired on April 11, 2013, from Thomas Obradovich, Larry Gervais, Robert Robitaille, and Charles Iserhoff for $20,000 and 200,000 common shares. There is a 2% NSR on this claim, 1% of which may be purchased for $1,500,000.

4.2.13 Holloway Tailings Property

Northern Gold holds 100% interest in the Holloway Tailings Property. These 10 unpatented claims, consisting of two separate contiguous groups totaling 176 ha, are located in Holloway Township and cover a portion of St. Andrew Goldfield's Holt Tailings Facility (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

The Holloway Tailings Property was acquired through the Champagne Mining Claim Acquisition Agreement and Joint Venture. On May 6, 2013, the Holloway Tailings Property, seven Michaud and four Guibord claims were acquired for $250 000 and 70% ownership of the Kirana Property. There is a 1% NSR on these claims with the option to buy back 0.5% for $1,000,000.

4.2.14 Boundary Claim

Northern Gold holds 100% interest in the Boundary Claim which was staked on June 1, 2012. This 9 hectare claim is located 1.2 kilometres west of St. Andrew Goldfield's Holt Mine complex (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

4.2.15 Bourkes Property

The Bourkes Property consists of 19 staked mining claims with 131 mining claim units covering 2113 hectares located in Benoit and Maisonville Townships, Ontario. The Bourkes Property is road accessible, approximately 22 km northwest of Kirkland Lake (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

4.2.16 Kirana Property

The Kirana Property consists of 11 staked mining claims covering 62 claim units in five non-contiguous blocks in the Townships of Bernhardt, Lebel and Morrisette, Ontario (Table 4-1, Figure 4-1). Claim details, status and claim map are presented in Appendix A.

In a press release dated May 7, 2013, Northern Gold announced the transfer of 70% interest in the Kirana Property to Champagne Resources Limited, retaining a 30% participating interest in the property. The transfer was part of an agreement with Champagne for the acquisition by Northern Gold of certain mining claims in Guibord, Michaud and Holloway Townships (see Section 4.2.13).

4.3 Property Claim Status and Other Obligations

4.3.1 Golden Bear - General Statement

Land surveyors historically established claim boundaries of the patented claims at the time the claims were patented. The cost of maintaining tenure of the patented claims is comprised of nominal annual fees (Provincial Land Tax and Provincial Mining Tax). The cost of maintaining tenure of the unpatented claims is comprised of annual work commitment (assessment) dues which comprises $400 worth of approved assessment work per mining claim unit, per year filed on or before the claim anniversary date (due date). Annual fees and assessment costs for the mining claims of the Golden Bear Project are tabled in Appendix A. Golden Bear Project unpatented and patented mining claims and mining leases are all in good standing as of the Report date (Appendix A).

With exception to annual mining claim fees, assessment work requirements and the NSR's described in Section 4.2, Howe is unaware of any other obligations, underlying agreements, royalties or encumbrances on the Project and individual Property claims.

The Golden Bear Project areas are generally undeveloped with exception to forestry and ATV trails. Howe is unaware of any historic or current environmental liabilities to which the Project and Properties are subject. At the Garrison Property, the exploration shaft and ramp that were established at the Jonpol Deposit during the 1980's and 1990's have been capped and meet current regulatory standards for closure. The portal to the Jonpol ramp has been blocked with coarse mine waste. The historic Garrcon Shaft has also been capped. Historic open pits are also present on the Gold Pike and Buffonta Properties. To date, Northern Gold has based its exploration activities out of the Garrison Property field office and Kirkland Lake office.

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect access, title or the right or ability to perform the work recommended in this Report on the Golden Bear Project Properties. However at the time of this report, Howe is unaware of any such potential issues affecting the Project and in particular the Garrison Property pending the Company's submission and acquisition of any and all required exploration plans and permits in accordance with any prescribed requirements, including Aboriginal consultation and notification of surface rights holder(s) prior to any future recommended or planned exploration activities.

4.3.2 Early Exploration Plans and Permits

On November 1, 2012, new rules under Ontario's Mining Act took effect. These changes reflect key components of the modernized Mining Act that was passed in 2009 to promote mineral exploration and development in a manner that recognizes Aboriginal and treaty rights, is more respectful of private landowners and minimizes the impact of mineral exploration and development on the environment.

The Ministry of Northern Development and Mines (MNDM) has introduced a new regulation for exploration plans and permits, with graduated requirements applying to early exploration activities of low to moderate impact undertaken on mining claims, mining leases and licenses of occupation.

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.

Those proposing to undertake minimal to low impact exploration plan activities (early exploration proponents) must submit an exploration plan. Exploration plans became mandatory as of April 1, 2013. 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 metres or less.
- Mechanized drilling for the purposes of obtaining rock or mineral samples, where the weight of the drill is 150 kilograms or less.
- Mechanized surface stripping (overburden removal), where the total combined surface area stripped is less than 100 square metres within a 200-metre radius.
- Pitting and trenching (of rock), where the total volume of rock is between 1-3 cubic metres within a 200-metre radius.

In order 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 Ministry of Northern Development and Mines (MNDM) and have an opportunity to provide feedback before the proposed activities can be carried out.

Those proposing to undertake moderate impact exploration permit activities (early exploration proponents) must apply for an exploration permit. Exploration permits became mandatory as of April 1, 2013. Early exploration activities that require an exploration permit include:

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

The above activities will only be allowed to take place once the permit has been approved by 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.

Northern Gold warrants that it possesses or will acquire any and all early exploration plans and permits required to execute current and planned exploration activities on the Project and various Properties.

4.3.3 Advanced Exploration Plans and Permits

Northern Gold warrants that it possesses or will acquire any and all advanced exploration plans and permits required to execute current and planned exploration activities on the Project and various Properties.

4.3.3.1 Garrcon

On January 16, 2014 the Company announced its intent to submit an Advanced Exploration Closure Plan on the Garrcon Deposit. The Closure Plan will be submitted to the Ontario Ministry of Northern Development and Mines ("MNDM") under O. Reg. 240/00 of the Ontario Mining Act and outlines the Company's plan to conduct bulk sample mining and perform closure of the Garrcon bulk sample project. On January 9, 2014 the Company submitted a Notice of Project Status to the MNDM along with a Project Description. These documents give a brief outline of the Company's plan to mine and perform closure of the Garrcon bulk sample project and are the first steps in filing a certified mine Closure Plan.

- Within the Project Description the Company plans to:
- Conduct detailed definition drilling of near surface resources
- Mine up to 150,000 tonnes from the Garrcon Deposit using open pit mining methods

- Conduct bulk metallurgical testing of the deposit at an offsite custom milling facility
- Submit hydrological, environmental baseline, geotechnical and engineering studies
- Continue to monitor water quality in the surrounding environment
- Move the project toward full production if bulk sampling and milling confirm the Company's expectation or perform mine closure of the bulk sample pit(s) and surrounding disturbances

As required under the Ontario Mining Act, the Company held two community information sessions in the Town of Matheson and at Wahgoshig First Nation on January 23, 2014.

The Company intends to submit the Garrcon mine Closure Plan in early 2014 and subject to MNDM approval, to start bulk sample operations in mid-2014.

4.3.3.2 Jonpol

The Company has continued its efforts regarding the submission of a Closure Plan for the Jonpol deposit. A Consultation Plan was submitted to the Ministry of Northern Development, Mines and Forestry (MNDMF) on February 8, 2013 and a public meeting was held with Wahgoshig First Nation (WFN) on March 8, 2013 with a presentation on hydrogeology given by Schlumberger Water Services. Also, a written confirmation from the Métis Nation of Ontario (MNO), stating that the MNO have no objection or concerns with the Jonpol Project at this stage, was received from the MNO by the Company on March 22, 2013. The Company submitted a revised Consultation Plan to the MNDM on March 28, 2013, and expects to submit the Closure Plan document to the MNDM for review in early 2014.

4.3.4 Exploration on Mining Rights Only Mining Claims

Under Ontario's Mining Act, surface rights owners must be notified prior to conducting exploration activities.

Where there is a surface rights holder of land, a person who,

1. prospects, stakes or causes to be staked a mining claim;
2. formerly held a mining claim that has been cancelled, abandoned or forfeited;
3. is the holder of a mining claim and who performs assessment work; or
4. is the lessee or owner of mining lands and who carries on mining operations,

on such land, shall compensate the surface rights holder for damages sustained to the surface rights by such prospecting, staking, assessment work or operations.

4.3.5 First Nations Agreements

On August 15, 2013 the Company announced that it had entered into an exploration agreement with the Wahgoshig First Nation community ("Wahgoshig") near Garrison Township, Ontario. The Agreement establishes a commitment by the Company to develop an ongoing relationship with Wahgoshig in the area of the Company's Golden Bear Project, and provides Wahgoshig with an opportunity to participate in the benefits of Northern Gold projects through training, ongoing communication and business development. Northern Gold has also agreed to negotiate an Impact Benefit Agreement with Wahgoshig should construction or mining operations commence on any of the Company's properties located on Wahgoshig traditional territory. In addition to Northern Gold's commitments to training, communication, community funding and business development, the Company also agreed to issue to Wahgoshig 200,000 common shares of the Company and 200,000 Share purchase warrants, with each Warrant exercisable to acquire one Share for a period of five years from the date of issuance of the Warrants at an exercise price of $0.05 per share.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPY

5.1 Accessibility

The Golden Bear Project's Garrison Property is located approximately 40 kilometres north of Kirkland Lake, 40 kilometres east of Matheson, and 100 kilometres east of Timmins, Ontario. Air access to the area is available via scheduled commercial flights to Timmins. Direct highway access to the area from Toronto is via Highways 400 and 11 north through North Bay to Matheson (approximately 560 km) then east from Matheson along Highway 101. Highway 101 traverses the north side of the Property and an 800 metre long gravel road, constructed in 1988, allows for 2-wheel drive access to the Property from the highway. Additional bush roads provide further access into the Property.

The majority of the other properties within the Golden Bear Project span a 50 km distance along the Destor-Porcupine Fault Zone, from 20 km east of Matheson in Hislop Township east to Marriott Township, within 5 to 10 kilometres of Highway 101.

5.2 Climate and Physiography

Topographic relief is low in the Project area. Elevations on the Garrison Property range from 289 to 305 metres above sea level (ASL) with swamp and overburden covered areas between hummocks of clay rimmed outcrop. Jack pine and balsam grow on esker and sandy soil areas; wet areas are vegetated with spruce, cedar and tag alder. Bedrock exposure is generally poor (~10-20% exposure) and overburden is typically >5 metres thick.

The Project area experiences four distinct seasons. Daily average winter temperature in January is -17 degrees Celsius with an extreme daily minimum of -47 Celsius. Daily average summer temperature in July is +18 degrees Celsius with an extreme daily maximum of +39 degrees Celsius. The region has average annual precipitation of approximately 89 centimetres including approximately 59 centimetres of rain, largely during the months of April to October and up to 3 metres of winter snow accumulation, occurring largely between the months of November and April.

Mineral exploration can be conducted year-round. In lake covered or swampy areas, exploration activities such as geophysical surveys and diamond drilling are more easily conducted in the winter due to better accessibility after freeze-up.

5.3 Local Resources and Infrastructure

There are numerous operating gold and base metal mines in the region and the necessary infrastructure for mining and mineral exploration, including skilled labour, is available locally. The Project and the Garrison Property are located about 100 kilometres east of the City of Timmins, Ontario (2011 population: 43,165), a major mining centre with a skilled and educated work force, a commercial airport and rail service. Other population centres in the area include Matheson (2011 population: 2,410) and Kirkland Lake (2011 population: 7,334), an active mineral exploration and mining town with rail service.

Existing surface site infrastructure at the time of Howe's latest site visit to the Garrison Property consisted of the following:

- A graveled site access road from Highway 101 allowing 2 wheel-drive vehicle access;
- A new core shack and office facility completed in early 2013. The new facility is located near the Jonpol Deposit project site. It hosts separate core logging, cutting and sampling rooms, several offices and a meeting room;
- 200Kw Diesel powered electric generator for the office and core shack facility; as of March 19, 2014 Northern Gold completed a 3 km long, single phase electrical transmission line to connect the facility with the grid at Wagoshig First Nation;
- Decommissioned railway boxcars for storage of sample rejects and pulps;
- All historic and Northern Gold Garrison drill core has been palletized and moved onto a gravel pad at the Jonpol site;
- Weather station.

A 115kV power transmission line of unknown capacity is located approximately 10 km southeast of the property along Highway 672 and water is readily available in the vicinity of the Property. The Garrison Property and adjacent Northern Gold claim holdings may be of sufficient area for the establishment of potential mine infrastructure such as tailings and waste storage areas, heap leach pads and processing plant site. More detailed site engineering is required to confirm the suitability and sufficiency of the current property area for final mine and processing facilities should they be constructed.

6 PROPERTY HISTORY

6.1 Garrison Property

Exploration conducted on the Property dates back to 1935 (Satterly, 1949). The mining claims that make up the Property are patented and as a result very little of the exploration work carried out on the Property has been filed with the government and hence the data is not in the government assessment work files. Initial drilling on the Property occurred in the period 1935-1946 on the historic Newfield, Garrcon, Brydges, Linton, Hastings and Wright-Hargreaves claim groups. Additional drilling was completed in 1983 by Long Lac Mineral Exploration Ltd. on former Wright-Hargreaves claim L43903 (the 903 Zone) and by Kerr Addison Mines on former Garrcon claim group claims L26344 and L26343. Northern Gold is currently compiling this information into its exploration drill hole database. The most important historic data relating to the Property is the exploration work completed since 1985 by Jonpol Explorations Ltd. (and its partners Cominco, Lac Minerals and Hillsborough Resources), ValGold and Northern Gold. Northern Gold's current drill hole database includes only holes drilled between 1985 and present. The majority of work has concentrated on the Jonpol deposit and Garrcon deposit areas within the Property.

Bath (1990) summarized the exploration and development from 1935 to 1989, for the area within and surrounding the present Property. Squair (2000) further summarized exploration conducted up to 1997. General and deposit specific exploration history is presented in the following Sections 6.1.1 to 6.1.4.

The historic resource and reserve estimates noted in Section 6.0 and its subsections of this Report are 'historical' in nature and not in compliance with NI 43-101. A qualified person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101 and as such they should not be relied upon. Howe and Northern Gold are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational purposes only.

6.1.1 General Property Exploration History Since 1985

1985-1992: In 1985 the current Property was acquired by Jonpol Explorations Ltd. (Jonpol). From 1985 to 1992 Jonpol and its partners completed 80,604 metres of surface BQ diamond drilling in 300 holes of which:

- 237 holes (65,637.5 metres) were focused on the Jonpol deposit and its strike extents. The drilling defined five zones – JD, JP, RP, Garrcon West and Garrcon East. The latter two zones are now collectively referred to as the East zone to avoid confusion with the Garrcon deposit.
- 48 holes (10,628.0 metres) were focused on the Garrcon deposit and its strike extents.
- 15 holes (4,338.6 metres) were focused on the eastern extension of the 903 zone on claim L29734.

1990: Jonpol and T & H Resources Limited concluded an option agreement with Lac Minerals Ltd. which expanded the existing property and allowed Jonpol and T & H the opportunity to conduct underground exploration on the JP zone, investigate the westward extension of the JD zone onto the Hastings ground (specifically claims L39876 and 43863), and to investigate the "903" gold zone (specifically claims L43903 of the Wright-Hargreaves group and L43862 of the Hastings group) which extends eastward onto the southeast corner of the Garrison Property (claim L29734) (Squair, 2000).

1991: The Lac Minerals agreement was terminated and the Hastings and Wright-Hargreaves properties along with five peripheral claims south of the Garrcon were returned to Lac (Squair, 2000).

1995-1996: In October 1995, Jonpol and T & H Resources Ltd. optioned the Linton and Brydges claim groups to Moneta Porcupine Mines Inc. Under the agreement Moneta Porcupine could earn an undivided 50% interest in the 16 claims by tendering 80,000 Moneta shares, a $7,000 payment and expending $500,000 in surface exploration on the property before October 26, 1998. A further 25% interest in the claims could be earned by Moneta Porcupine by expending an additional $1.0 million on surface exploration before October 26, 2000. The exploration program was joint ventured with Alto Minerals Inc., who conducted lithogeochemical sampling, mapping and real section IP geophysics to assess gold-bearing sulphide zones in this sector of the property. The joint venture completed 10.7 line km of real section IP on lines 100 m apart over the claims, and tested selected anomalous sections with four BQ diamond drill holes (MG-96-1 to 4) totaling 1,080 metres (3,544 ft.). The option agreement had lapsed by the time of Squair's (2000) report.

1996-1997: On July 26, 1996, Jonpol Explorations Ltd. and T & H Resources Ltd. signed an agreement with Hillsborough Resources Limited ("Hillsborough") whereby Hillsborough was granted an option to carry out an advanced exploration program at the JP Zone. Work completed is summarized in Section 6.3. The option agreement was terminated in 1997.

2005: ValGold Resources Inc. secured 100% ownership of the Property's Newfield, Garrcon and Brydges claim groups in June 2005 (subject to the Cominco NSR on the Garrcon claim blocks). Initial work consisted of data review and preliminary data compilation as part of the planning process for a diamond drilling program.

2009: In September 2009 Northern Gold entered into an Option Agreement with ValGold covering the Garrison property (historic Newfield, Garrcon and Brydges claim blocks).

2011: Under the terms of an agreement announced on April 7th 2011, Northern Gold purchased ValGold's 100% interest in the Garrison property (historic Newfield, Garrcon and Brydges claim blocks) with TSX Venture approval of the transaction granted on April 14, 2011.

On April 12, 2011 Northern Gold announced that it reached a definitive agreement with June Linton, Lynn Troke and Karen Wickett to acquire a 96.4% interest in the Linton Claim Group which has now been incorporated into the Garrison property.

2012: On April 30, 2012, Northern Gold purchased the remaining 3.6% interest in the Linton Claim Group (two sevenths (or 28.6%) interest in claim 26074) from Carol Linton Whelpdale.

2013: An additional 20 patented claims including the historic Hastings and Wright-Hargreaves claim blocks were acquired by the Company from a subsidiary of Barrick Gold Inc. on September 10, 2013 and are referred to as the Lac Group.

6.1.2 Garrcon Deposit Exploration History

Exploration and development history from 1935 to 1988 has been extracted from Bath (1990) with metric equivalents inserted by Howe:

"1935: The Consolidated Mining and Smelting Company of Canada Ltd. optioned 9 claims from a Mr. McKenzie, sank a 256 foot (78 metre) deep inclined (to the south at 62 degrees) shaft, performed about 1,033 feet (315 metres) of lateral exploration work on the 120 and 240 foot (36.5 and 73 metre) levels, and hoisted about 7,612 tons (6,920 tonnes) of waste material. By year end, about 10,550 feet (3,216 metres) of underground and surface diamond drilling had been completed (Young 1937, Sinclair et al. 1937, Sinclair et al. 1938).

1936: Garrcon Mines Ltd. was incorporated in May with Consolidated Mining and Smelting controlling the company and acting as operator on the Garrcon Mines property. 1,745 feet (532 metres) of lateral underground exploration work and additional underground diamond drilling were completed (Sinclair et al. 1938).

1937: 4 feet (1.2 metres) of shaft sinking, 1,542 feet (470 metres) of lateral underground exploration work, 21 surface holes totaling 5,070 feet (1,545 metres), and 33 underground holes totaling about 5, 905 feet (1,800 metres) were diamond drilled. Before operations were suspended at year end, aggregate lateral underground exploration work amounted to 636 feet (194 metres) on the 120 foot (36.5 metre) and 3,655 feet (1,114 metres) on the 240 foot (73 metre) levels (Sinclair et al. 1939), aggregate diamond drilling totaled 16,099 feet (4,907 metres) (of which 11,029 feet (3,362 metres) were drilled underground) and about 520 feet (158 metres) of trenching had been completed (Satterly 1949).

1941: Consolidated Mining and Smelting diamond drilled one 293 foot (89 metre) hole near the northeast corner of claim 38950.

1946: Consolidated Mining and Smelting completed a magnetic survey.

1949: By this time, Consolidated Mining and Smelting controlled in addition to the Garrcon property, 3 contiguous patented claims to the west (claim Nos. 39949-51). Before 1949, trenching and 4 holes totaling 2,110 feet (643 metres) were diamond drilled on these claims (Satterly 1949).

1983: Kerr Addison Mines Ltd. diamond drilled 10 holes on the 12 Consolidated Mining and Smelting/Garrcon Mines (by this time, optioned by Cominco Ltd.) claims (Jonpol Explorations Ltd. 1987 Annual Report).

1985: Jonpol Explorations Ltd. acquired the right to earn a 49% interest in the 12 Cominco/Garrcon Mines claims.

1986: Diamond drilling by Cominco was financed by Jonpol Explorations and delineated 2 additional auriferous zones (the North and South Zones). These were described (The Northern Miner, February 10, 1986) to be stratabound and not vein type. By July, Jonpol had earned a 49% interest in the property (The Northern Miner, July 21, 1986). By September, the South Zone was reported (The Northern Miner, September 29, 1986) to be hosted by altered sediment, to average 6 feet (1.8 metres) in width, and to have been traced by diamond drilling to the (vertical) 500 foot (152 metre) level along about l,300 feet (396 metres) of strike. The North Zone had by this time been traced along strike for about 200 feet (61 metres), to the (vertical) 500 foot (152 metre) level, averaged 10.7 feet (3.3 metres) in width, and was reported to be hosted by a wide shear.

1987: By midyear, drilling funded by Jonpol Explorations and supervised by Cominco had established reserves of 1.5 million tons (1.36 million tonnes) of material averaging 0.04 ounce of gold per ton (1.37 grams gold per tonne) above the 200 foot (61 metre) level near the shaft. The South Zone was indicated to average 0.15 ounce of gold per ton (5.14 grams gold per tonne) across 3.8 feet (1.2 metres) along l,400 feet (427 metres) of strike. The North Zone was reported to have been drill defined along 300 feet (91 metres) of strike. A new auriferous zone within the "Munro Shear" was reported to average 10 feet (3 metres) in width, to be drill defined along 250 feet (76 metres) of strike, with a mineralized drill core length of 36.9 feet (11.3 metres) averaging 0.30 (cut) ounce of gold per ton (10.28 grams gold per tonne - cut) intersected within it (Jonpol Explorations Ltd. 1987 Annual Report). By July, Jonpol Explorations/Cominco were reported (The Northern Miner, July 27, 1987) to have spent $500,000 and that an additional $2 million was budgeted for additional exploration during the next 2 years.

1988: Jonpol Explorations announced in a news release dated February 2, 1988 that aggregate drill defined reserves were estimated to be 350,900 tons (319,000 tonnes) of material averaging 0.191 ounce of gold per ton (6.55 grams gold per tonne) above the (vertical) 500 foot (152 metre) level in three distinct zones. Later, Jonpol Explorations acquired a 100% interest in the property following Cominco's having diamond drilled 79 holes totaling about 70,168 feet (21,387 metres) since 1983 (A. D. Drummond, project engineer, Jonpol Explorations Ltd. , pers. comm. 1988). In July, Lac Minerals Ltd. obtained the right to acquire a 50% interest in the (Jonpol Explorations) properties (The Kirkland Lake Northern Daily News, July 7, 1988; The Northern Miner, July 11, 1988), and in November, Lac Minerals optioned the property (The Northern Miner, November 21, 1988)."

1991: The Lac Minerals agreement was terminated.

2006-2007: ValGold completed 3 BQ and 11 NQ diamond drill holes on the Garrcon zone totaling 5,709 metres.

6.1.3 Jonpol Deposit Exploration History

Exploration and development history from 1935 to 1989 has been extracted from Bath (1990) with metric equivalents inserted by Howe:

"Pre-1946: The claim group was staked by G. Adams and was later optioned to Wright-Hargreaves Mines Ltd. Wright-Hargreaves Mines diamond drilled 4 holes totaling 2,742 feet (Satterly 1949).

1946-1947: Dome Exploration (Canada) Ltd. acquired the property and formed Newfield Mines Ltd. to explore it. Newfield Mines diamond drilled 20 holes totaling 16,164 feet (Satterly 1949), most of which were drilled in the south part of the property in an attempt to locate an eastern extension of an auriferous zone which had been intersected via diamond drilling by Wright-Hargreaves Mines on patented claim no. 43903. Results of the Newfield Mines drilling included auriferous intersections of 0.22, 0.17, 0.27, and 0.45 oz/ton Au across core lengths of 1.4, 4.8, 2.8, and 2.0 m, respectively, and additional "commercial" values in pyritic syenitic or feldspar porphyry.

1987: T & H Resources Ltd. (a member of the Jonpol group of companies) optioned the northernmost block of 9 claims (nos. 26435-37, 39428-29, 43702-03, and 44331-32) from Newfield Mines (The Northern Miner, July 6, 1987). Newfield Mines retained a 30% net profit interest. Jonpol Explorations Ltd. (a member of the Jonpol group) later earned a 50% interest in the T & H Resources property interest. T & H Resources and Jonpol Explorations completed magnetic and VLF electromagnetic surveys (T & H Resources Ltd. 1987 Annual Report) and diamond drilled 38 holes totaling 29,289 feet.

1988: Findore Resources Inc. optioned from Newfield Mines the southernmost block of 5 patented claims. Coastoro Resources Ltd. (a member of the Jonpol group) acquired a 20% interest of the T & H Resources - Jonpol Explorations interest in the northern 9 claims, and the Jonpol group raised $3 million to be spent in the area during 1988 (The Northern Miner, January 18, 1988). In February, Findore Resources optioned its Newfield Mines claims to Morgain Minerals Inc. and Orcana Resources Inc. (The Northern Miner, February 15, 1988). By March, gold mineralization on the Jonpol group controlled ground was reported (T & H Resources 1987 Annual Report) to consist of 3 mineralized Zones (the JP, the RP, and the JD) extending with breaks along about 2,200 feet of strike. By May, T & H Resources agreed to "... arrange a pooled interest merger with Coastoro..." (The Northern Miner, May 9, 1988)…….. By June 30, aggregate drilling on the property totaled about 105,000 feet in 103 holes (A. D. Drummond, project engineer, Jonpol group of companies, pers. comm., July 15, 1988). In July, Lac Minerals Ltd. obtained a right to acquire a 50% interest in the Jonpol group controlled part of the property (The Kirkland Lake Northern Daily News, July 7, 1988; The Northern Miner July 11, 1988). As of August 25, 1988, aggregate drilling by the Jonpol group totaled 132,697 feet in 136 holes (A. D. Drummond, pers. comm. August 1988)………. The Garrison Township assets of T & H Resources and Coastoro Resources were consolidated under the name T & H Resources (The Northern Miner, October 10, 1988). Lac Minerals optioned the property in November (The Northern Miner, November 21, 1988).

1989: T & H Resources and Jonpol Explorations began underground exploration, including the sinking of a 500 foot deep 3 compartment vertical exploration shaft (Jonpol Explorations Ltd. 1989 Annual Report; The Northern Miner, June 19, 1989). By September, the shaft had reached the 485 foot level and stations had been established on the 250 and 475 foot levels (Jonpol Explorations Ltd. / T & H Resources Ltd. Interim Report dated September 30, 1989).”

1990: T & H Resources’ and Jonpol Explorations’ underground program was completed in March 1990. Work included:

- 184 metre (605 foot) vertical 6.7 x 2.7 metre 3 compartment shaft
- 185 metres of 1.5 x 2.1 metre cross cut and drill stations
- 4,747.2 metres (15,575 feet) of AXT drilling in 42 holes
- 182.2 metres of Bazooka (AXT) drilling in 22 holes into walls of 476 foot (150 metre) level drift.
- 147.8 metres of drifting in the JP Main Zone on the 476 foot (150 metre) below surface level
- bulk sampling, 79 rounds

Metallurgical testing at Lakefield Research in November 1990 indicated that the material from the JP Main Zone in the Munro Fault Zone gives 50% recovery with direct cyanidation. Flotation concentrates contained 95% of the gold in the rougher concentrate which when cleaned could produce cleaner concentrates in the 4 to 8 oz/ton Au range. Pressure oxidation cyanide leach tests of the concentrate recovered 99 % of the contained gold suggesting a potential gold recovery of 95% using that system. The underground bulk sample rounds contained 0.3 to 1.4% As (Squair, 2000).

1990: Jonpol and T & H Resources Limited concluded an option agreement with Lac Minerals Ltd. which expanded the existing property and allowed Jonpol and T & H the opportunity to conduct underground exploration on the JP zone, investigate the westward extension of the JD zone onto the Hastings ground (specifically claims L39876 and 43863) (Squair, 2000).

1991: The Lac Minerals agreement was terminated and the Hastings and Wright-Hargreaves properties along with five peripheral claims south of the Garrcon were returned to Lac (Squair, 2000).

1992: Jonpol completed seven holes totaling 796 metres.

1994: Jonpol drilled three diamond drill holes (N-94-1, 2 and 3) with a northwest azimuth on claims P-26435 and P-26434 to test for the western down-plunge extension of the JP Zone (Squair, 2000). Total footage drilled was 1,563 metres (5,128 feet) between September 24 and October 22, 1994.

A four-line (3800W to 4400W) Mise-a-la-Masse survey was then completed to determine the near surface conductivity of the auriferous sulphide in drill hole N-94-1.

1995: Jonpol completed a follow-up diamond drilling program (Phase 2) to test strata and shear zones down dip and on strike from drill hole N-94-1 on claims 43703, 26433, 26434 and 26435. During the period from January 26 to February 16, 1995, six BQ diamond drill holes totaling 1,082 metres (3,550 feet) were completed (N-95-1 to N-95-6).

A four-hole, 2,804 metre (9,200 foot) Phase 3 drill program was then planned to test the potential for possible gold concentrations at the basal basalt/ultramafic contact and within felsic volcanic and intrusive rocks above the upper thrust of the Munro Fault to the east of the JP deposit and down plunge from the Garrcon West (now Jonpol East) zone. Two drill holes of the four-hole program, N-95-7 and N-95-8, were laid out on claims 38950 and 39429. Drill hole N-95-7 was completed September 16, 1995. Hole N-95-8 was lost at 387 metres (1,270 feet) in sheared ultramafic near the top of the Munro Fault. Repeated efforts to cement and drill through the zone were unsuccessful, and the hole plus the remainder of the program was abandoned on October 22, 1995. The two holes totaled 1,148 metres (3,767 feet). Gold-silver assays for 269 samples from 30 sulphide intersections within the two holes were of geochemical interest only, but the program has demonstrated that anomalous gold values occur within non-refractory sulphides (pyrite) south of the Munro Fault.

A six-line Mise-a-la-Masse survey was conducted to determine near surface conductivity around hole N-95-7.

1996-1997: On May 29, 1995, Jonpol Explorations Ltd. and T & H Resources Ltd. signed a letter of intent with Hillsborough Resources Limited ("Hillsborough") to complete a Joint Venture agreement whereby Hillsborough would be granted an option to carry out an advanced exploration program at the JP Zone. Under the agreement Hillsborough would undertake to develop and mine the known gold-bearing albite-sericite-pyrite zones and ship ore to a custom mill and smelter at Noranda, Quebec. After recovery of Hillsborough's initial costs, the parties would share net smelter proceeds, if any, from the advanced mine program. The Hillsborough option encompassed all known gold-bearing zones on the Newfield and Garrcon group of claims, to a vertical depth of 305 meters (1,000 ft) from the shaft collar on patented claim 43703; work was carried out on claims 43702 and 43703. Canadian Mine Development, a wholly owned subsidiary of Hillsborough Resources conducted the permitting and development work.

Permitting for the advanced exploration program began June 12, 1995, the mine closure plan was accepted by Ontario Ministry of Natural Resources ("MNR") on August 24, 1995, and site operations began in mid-October, 1995, with the excavation of the decline portal and the establishment of ore and waste pads. At the beginning of the test program, Hillsborough established an on-site fire assay laboratory to insure that sample and assay results kept pace with mine development.

The mineralized zone was developed from a 3.7 metre by 4.3 metre (12 foot x 14 foot), 18°-20° decline excavated to the 476 Level. A ventilation raise connected the 350 Level to surface. Ore was removed by drifting and benching on 6 levels between 80 and 150 metres below surface. The first gold-albite-sericite-pyrite-arsenopyrite test samples were shipped to the Noranda custom mill and smelter complex in September 1996. Between September 1996 and April 1997, 55,751 short wet tons or 54,109 short dry tons of mineralized rock, were shipped to the Noranda custom mill and smelter complex. Choi (1997) reports that the total recovered gold was 9,476 ounces and total gold lost to tailings was 1,100 ounces for total available gold of 10,576 ounces, a recovery of 89.60% and a calculated feed grade of 6.70 grams/tonne (0.1955 oz/ton Au). The calculated feed grade was much lower than the estimated grade of 8.33 grams/tonne (0.243 oz/ton) Au (Squair, 2000). The advanced underground exploration program was terminated on March 29, 1997. Mine closure and environmental clean-up procedures were completed and the Hillsborough option was terminated in 1997. A minimum of 458,000 tons at 0.28 oz/ton Au were reported to remain in place at the JP Zone (Squair, 2000).

2005-2007: ValGold completed 63 NQ diamond drill holes on the Jonpol deposit totaling 26,646.3 metres.

6.1.4 903 Zone Exploration History

1945-1947: Wright-Hargreaves Mines Ltd. diamond drilled 8 holes totalling 593 metres (1,944 feet) on (now patented) claim no. 43903, part of a contiguous 10 claim group in north central Garrison Township (Satterly 1949).

1988: By this date Lac Minerals Ltd. had acquired the (now patented) claims formerly held by Wright-Hargreaves Mines and adjacent Hastings claims. Lac completed 17 drill holes totaling 4,823 metres on the 903 zone.

1990: Jonpol and T & H Resources Limited concluded an option agreement with Lac Minerals Ltd. which expanded the existing property and allowed Jonpol and T & H the opportunity to investigate the “903” and Hastings gold zones (specifically claims L43903 of the Wright-Hargreaves group and L43862 of the Hastings group) which extends eastward onto the southeast corner of the Garrison Property (claim L29734) (Squair, 2000).

1991: The Lac Minerals agreement was terminated and the Hastings and Wright-Hargreaves properties along with five peripheral claims south of the Garrcon were returned to Lac (Squair, 2000).

6.1.5 Garrison Property Historic Reserves and Resources

Multiple historical resource estimates on gold mineralisation in the Jonpol and Garrcon deposits have been provided by various authors since the mid 1980's. These historical resources are summarized and reported by Bath (1990), and by Squair (2000) who referred to historical reports by DDH Geomanagement Ltd. (1989) and R.J. Bradshaw (1989).

6.1.5.1 Historic Garrcon Deposit Resource Estimates

By mid-1987, Jonpol Explorations Ltd. had established reserves of 1.5 million tons (1.36 million tonnes) of material averaging 0.04 oz/ton Au (1.37 grams gold per tonne) above the 200 foot (61 metre) level and within the area of the Garrcon shaft.

In a news release dated February 2nd, 1988, Jonpol Explorations Ltd. announced aggregate drill defined reserves of 350,900 tons (319,000 tonnes) of material averaging 0.191 oz/ton Au (6.55 grams gold per tonne) above the (vertical) 500 foot level and contained in three distinct zones (Table 6-1). Note that the Hole 33 Area corresponds to the current Jonpol East zone and is not within the current Garrcon deposit footprint.

Table 6-1: Historical Garrcon diamond drill defined reserves, Jonpol Explorations Ltd. (1988)

Mineralized Zone	Tonnage (tons)	Average Au Grade (opt)
Hole 33 Area (*Munro Fault Zone*)	81,300	0.267
North Zone Area	166,800	0.161
Shaft Area (*incl. South Zone?*)	102,800	0.180
Weighted Average:	**350,900**	**0.191**

By June 1988, drill defined reserves of 914,500 tons of material averaging 0.235 oz/ton Au in the JP Zone and 83,000 tons of material averaging 0. 234 oz/ton Au in the RP Zone had been delineated (The Northern Miner, June 13, 1988 in Bath, 1990).

Drill defined reserves were later revised in 1988 to 1.3 million tons of material averaging 0.231 oz/ton Au (The Northern Miner, September 5, 1988 in Bath, 1990).

The historic resource and reserve estimates noted above are ‘historical’ in nature and not in compliance with NI 43-101. A qualified person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101 and as such they should not be relied upon. Howe and Northern Gold are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational purposes only.

Using original terminology, the historical estimates were referred to as reserves (deemed to be economically viable at the time) and resources. These historic categories of “reserve” and “resource” do not conform to current CIM definitions as set out in sections 1.2 and 1.3 of NI 43-101. None of the historic estimates are supported by available technical reports. Howe has undertaken the work necessary to establish current mineral resources for the Garrcon deposit as reported in Section 14 of this report.

6.1.5.2 Previous Garrcon Deposit NI 43-101 Resource Estimates

Previous to the 2014 Garrcon mineral resource update presented in Section 14 of this report, Howe prepared mineral resource estimates in 2010, 2011 and 2012 (Roy and Trinder, 2010; Hannon et al., 2011; Hannon et al., 2012) as tabled below. Howe and Northern Gold are not treating these estimates as the current mineral resource; they are presented for informational purposes only. Howe has undertaken the work necessary to establish updated mineral resources for the Garrcon deposit as reported in Section 14 of this report.

2010 Garrcon Deposit Mineral Resource Estimate

Summary

Mineral Resource Category	Tonnes Above Cut-off	Average Gold Grade (g/tonne)	Ounces
Indicated			
Less Than 150 m Deep	3,300,000	1.2	130,000
More than 150 m Deep	480,000	0.9	14,000
Total Indicated	**3,780,000**	**1.2**	**144,000**
Inferred			
Less Than 150 m Deep	9,400,000	1.0	300,000
More than 150 m Deep	9,100,000	0.8	230,000
Total Inferred	**18,500,000**	**0.9**	**530,000**

Notes:
1. Cut-off grade for mineralised zone interpretation was 0.1 g/tonne.
2. Block cut-off grade for defining Mineral Resources was 0.5 g/tonne.
3. No top-cut grade was used. In the author's opinion, the use of a top cut would not have significantly affected the results.
4. Gold price was $US 900 per troy ounce.
5. Zones extended up to 100 metres down-dip from last intercept. Along strike, zones extended halfway to the next cross-section.
6. Minimum width was 5 metres, though in no place was the zone that narrow.
7. Non-diluted.
8. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
9. Resource estimate prepared by Doug Roy, M.A.Sc., P.Eng.
10. A specific gravity (bulk density) value of 2.6 was applied to all blocks (a representative value based on a limited number of measurements).
11. Ordinary block kriging ("OBK") was used for estimating block grades.
12. Indicated resources identified where sample intercept spacing was 50 metres or less (based on variography).
13. No Measured Mineral Resources or Mineral Reserves of any category were identified.
14. The volume/tonnage of historic Cominco shaft, drifts and crosscuts have not been deleted from the Howe mineral resource volume/ tonnage. Howe estimates the tonnage extracted from the resource area was less than 0.1% of the total inferred and indicated resource tonnage.

2011 Garrcon Deposit Mineral Resource Estimate Update

Summary

Mineral Resource Category	Block Cut-off Grade (g/tonne)	Tonnes Above Cut-off	Average Gold Grade (g/tonne)	Ounces
Indicated				
Less Than 150 m Deep	0.3	15,000,000	0.9	430,000
More than 150 m Deep	0.3	9,900,000	0.9	290,000
Total Indicated	**0.3**	**24,900,000**	**0.9**	**720,000**
Inferred				
Less Than 150 m Deep	0.3	5,600,000	0.8	140,000
More than 150 m Deep	0.3	13,000,000	0.7	290,000
Total Inferred	**0.3**	**18,600,000**	**0.7**	**430,000**

Notes:

1. Cut-off grade for mineralised zone interpretation was 0.1 g/tonne.
2. Block cut-off grade for defining Mineral Resources was 0.3 g/tonne.
3. No top-cut grade was used. In the author's opininion, the use of a top cut would not have significantly affected the results.
4. Gold price was $US 1200 per troy ounce.
5. Zones extended up to 100 metres down-dip from last intercept. Along strike, zones extended halfway to the next cross-section.
6. Minimum width was 5 metres, though in no place was the zone that narrow.
7. Non-diluted.
8. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
9. Resource estimate prepared by Doug Roy, M.A.Sc., P.Eng.
10. A specific gravity (bulk density) value of 2.73 was applied to all blocks (a representative value based on a limited number of measurements).
11. Ordinary block kriging ("OBK") was used for estimating block grades.
12. Indicated resources identified where sample intercept spacing was 50 metres or less (based on variography).
13. No Measured Mineral Resources or Mineral Reserves of any category were identified.
14. The volume/tonnage of historic Cominco shaft, drifts and crosscuts have not been deleted from the Howe mineral resource volume/ tonnage. Howe estimates the tonnage extracted from the resource area was less than 0.1% of the total inferred and indicated resource tonnage.

2012 Garrcon Deposit Mineral Resource Estimate Update

Depth	Resource Category	Block Cut-off Grade (g/tonne)	Tonnes	Au Grade (g/tonne)	Ounces Au
Less Than 200m Deep	Measured	0.3	16,400,000	1.04	548,000
	Indicated	0.3	9,230,000	0.92	274,000
	Measured+Indicated	0.3	25,630,000	1.00	822,000
	Inferred	0.3	4,450,000	0.67	95,000
More Than 200m Deep	Measured	0.3	1,240,000	1.41	56,000
	Indicated	0.3	11,600,000	1.06	394,000
	Measured+Indicated	0.3	12,840,000	1.09	450,000
	Inferred	0.3	11,330,000	0.75	272,000
Total	Measured	0.3	17,640,000	1.06	604,000
	Indicated	0.3	20,830,000	1.00	668,000
	Measured+Indicated	**0.3**	**38,470,000**	**1.03**	**1,272,000**
	Inferred	**0.3**	**15,780,000**	**0.72**	**367,000**

Notes on Mineral Resource Estimate:
1. Cut-off grade for mineralised zone interpretation was 0.1 g/tonne.
2. Block cut-off grade for defining Mineral Resources was 0.3 g/tonne.
3. No top-cut grade was used.
4. Gold price was $US 1500 per troy ounce.
5. Zones extended up to 100 metres down-dip from the last intercept. Along strike, zones extended halfway to the next cross-section.
6. Minimum width was 5 metres, though in no place was the zone that narrow.
7. Non-diluted.
8. No mineral reserves were identified. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
9. Resource estimate prepared by Doug Roy, M.A.Sc., P.Eng., ACA Howe International Limited.
10. A specific gravity (bulk density) value of 2.79 was applied to all blocks - a representative value based on 1,174 measurements.
11. Ordinary block kriging ("OBK") was used for estimating block grades.
12. Measured mineral resources were defined where three holes were used to estimate block grades and the average distance to samples was 25 metres or less. Indicated mineral resources were defined where three holes were used to estimate block grades and the average distance to samples was 40 metres or less (based on variography).
13. The volume/tonnes of historical underground exploration workings have not been subtracted from this mineral resource estimate - the amount would not be significant compared with the volume/tonnes of mineral resource.

6.1.5.3 Historic Jonpol Deposit Resource Estimates

The following diamond drill indicated reserves for the Jonpol deposit (Table 6-2) appeared in The Northern Miner on June 13, 1988 (Bath, 1990):

Table 6-2: Historical Jonpol diamond drill defined reserves, Jonpol Explorations Ltd. (1988)

Mineralized Zone	Approx. Strike Length (ft)	Average Width (ft)	Tonnage (tons)	Au Grade (oz/ton)
JP Zone	800	17.3	914,500	0.235
RP Zone	193	12.5	83,000	0.234
		Total (weighted average)	997,500	0.235

Drill defined reserves were revised to 1.3 million tons of material averaging 0.231 oz/ton Au as reported in The Northern Miner on September 5, 1988 (Bath, 1990).

In a report dated August 17, 1989, R.J. Bradshaw estimated that the JP Zone contained a mineral resource of 700,000 tons at 0.19 oz/ton Au to 1300 feet from surface (Squair, 2000)

Squair (2000) noted that DDH Geomanagement Ltd. (1989) reported the five zones of the Jonpol Deposit (JD, IP, RP, Garrcon West and Garrcon East) had an estimated gold mineralization (to a depth of 1,000 feet) of 513,800 tons at 0.28 oz/ton Au over 11 feet width, at a cut-off of 0.15 oz/ton Au, or 1,050,200 tons at 0.18 oz/ton Au over 10 feet width, at a cut-off of 0.08 oz/ton Au.

The historic resource and reserve estimates noted above are 'historical' in nature and not in compliance with NI 43-101. A qualified person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101 and as such they should not be relied upon. Howe and Northern Gold are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational purposes only.

Using original terminology, the historical estimates were referred to as reserves (deemed to be economically viable at the time) and resources. These historic categories of "reserve" and "resource" do not conform to current CIM definitions as set out in sections 1.2 and 1.3 of NI 43-101. None of the historic estimates are supported by available technical reports. Howe has undertaken the work necessary to establish current mineral resources for the Jonpol deposit as reported in Section 14 of this report.

6.1.5.4 Previous Jonpol Deposit NI43-101 Resource Estimate (2009)

Previous to the 2014 Jonpol mineral resource update presented in Section 14 of this report, Howe prepared a mineral resource estimate in 2009 (George, 2009; Hannon et al., 2012). Howe and Northern Gold are not treating this estimate as the current mineral resource; it is presented for informational purposes only. Howe has undertaken the work necessary to establish updated mineral resources for the Jonpol deposit as reported in Section 14 of this report.

2009 Jonpol Deposit Mineral Resource Estimate

Zone	Indicated Resource			Inferred Resource		
	Tonnes	Au g/tonne	Ounces Au	Tonnes	Au g/tonne	Ounces Au
JP Zone	236,100	7.69	58,380	812,400	4.66	121,750
JD Zone				168,000	7.37	39,830
RP Zone	12,100	10.91	4,260	124,300	5.05	20,170
East Zone	4,900	3.58	560	451,100	4.47	64,790
Totals	**253,100**	**7.77**	**63,200**	**1,555,800**	**4.93**	**246,540**

Notes on Jonpol Mineral Resource Estimate:

1. Resource estimate prepared by Peter T. George, P.Geo., Associate, ACA Howe International Limited.
2. Cut-off grade for mineralised zone interpretation was approximately 0.5 g/tonne.
3. No top-cut grade was used.
4. A specific gravity (bulk density) value of 2.8 was applied to all zones.
5. Mineral resources were estimated using the polygonal longitudinal section method.
6. Indicated mineral resources were permitted a 15 metre radius of influence around a drill hole pierce-point or half the distance to the adjacent drill hole pierce-point whichever the lesser. Inferred mineral resources were permitted a 25 metre radius of influence around a drill hole pierce-point or half the distance to the adjacent drill hole pierce-point whichever the lesser.
7. Resource is non-diluted.
8. No mineral reserves were identified. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
9. The tonnes extracted from historical underground exploration and bulk sample development workings have not been subtracted from this mineral resource estimate.

6.2 Buffonta Property

Bath (1990) and White (1997) have summarized the exploration and development from 1919 to 1997, for the area within and surrounding the present Property as presented in the italicized text below. Metric equivalents have been inserted by Howe.

6.2.1 General Property Exploration History

1919 – 1935: Digby Grimstone staked the original block of claims. Subsequently, additional claims were added. Staking was based upon the discovery of gold bearing quartz and pyrite on a hill above the surrounding sand covered flat area. The main exploration work consisted of rock trenching in the area of the discovery and prospecting.

1936 – 1937: Amca Mines Ltd. was incorporated, succeeding the Amca Mines Syndicate (Satterly 1949, Young 1938) and, at this time, owned 5 patented claims, 3 unpatented claims and had the right to purchase 18 additional claims in Garrison Township (Young 1938). A 790 pound bulk sample from the property was submitted to the Canada Department of Mines and Resources and yielded 0.165 ounce of gold and 0.11 ounce of silver (averaging 0.417 and 0.278 oz/ton Au of gold and silver, respectively) (DMR 1936).

Amca Mines Limited erected a fifty ton per day mill, power plant, assay office, bunk house and other buildings. An open cut 80 by 60 feet (24 by 18 metres) in area and 30 feet (9 metres) deep was excavated. During a month of operation the mill produced 37 ounces of gold and 4 ounces of silver. Operations by Amca Mines were suspended in March 1937 (Sinclair et al 1939).

Hollinger Gold Mines under an option agreement with Amca Mines drilled seven holes for a total of 1,759 feet (536 metres). Holes were mostly located towards the northeast of the open cut. Drill results were inconclusive, however intersections included 1.5 feet (0.46 metres) of 0.534 oz/ton Au, 13 feet (3.96 metres) of 0.21 oz/ton Au, 5 feet of 0.381 oz/ton Au, 10 feet (3.05 metres) of 0.144 oz/ton Au and 12 feet (3.66 metres) of 0.21 oz/ton Au. The open cut was channel sampled. Values in zones of alteration averaged 0.38 oz/ton Au.

1938: Buffonta Mines Ltd. was incorporated (Tremblay 1940).

1939 – 1940: Buffonta Mines Limited under the direction of T.L. Gledhill (1940) carried out an exploration program of prospecting, plane table geological mapping, trenching, blasting, diamond drilling and panning for gold. The number 5 Zone was discovered associated with feldspar porphyry and syenite dykes. A lamprophyre dyke was described within the zone (now known to be a kimberlite dyke). Eighteen diamond drill holes for a total of 5,750 feet (1,753 metres) were completed. Three of these were drilled into the number 5 Zone.

1941: Exploration of the claims was continued by Buffonta Mines Limited under the direction of Harold F. Taylor (1941 - 1946). Systematic trenching of the number 5 Zone led to the discovery of the number 6 Zone. Additional trenching in the Pit area led to the conclusion that ore structures dipped towards the northeast. (Partially true in the pit area; West of the pit the flat vein networks strike at 60 degrees to 55 degrees azimuth and dip towards the northwest). Other lamprophyre (kimberlite) dykes were found. Eight holes totaling 2,064 feet (629 metres) were drilled in the open pit, number 5 and number 6 Zones.

1942 – 1943: Twenty nine holes totaling 8,957 feet (2,730 metres) were drilled into the number 5 and number 6 Zones by Sisco Gold Mines Ltd. One hole intersected the number 5 shear system at a depth of 500 feet (152 metres). The intersection carried little mineralized material and this represents all that was known about depth extensions.

1945 – 1946: The Buffonta Mines claims were brought to patent (The Northern Miner, May 27, 1946).

1946 – 1947: 3,600 feet (1,097 metres) of diamond drilling in eight holes was completed by Hollinger Mines. By the end of 1947, aggregate surface diamond drilling on the Buffonta Mines claims totalled 22,130 feet (6,745 metres) (Satterly 1949).

1958 - 1959: Thorncliffe Mines Ltd. incorporated in 1958 (The Northern Miner, November 2, 1961) and a one hundred and fifty ton per day mill was constructed. The company sank a 111 foot (33.8 metre) deep 3-compartment shaft and established one level at a depth of 100 feet (30.5 metres). There were undocumented reports of visible gold being observed at the bottom of the shaft.

1960 - 1962: Thorncliffe Mines diamond drilled from surface 7 holes totalling 1,998 feet (609 metres) on the Buffonta Mines claims (Kelly and Riddell 1962). The property was reported (Canadian Mines Handbook 1960) to be leased from Buffonta Mines. Thorncliffe Mines dewatered the shaft, completed its timbering, and crosscut 40 feet (12.2 metres) on the 100 foot (30.5 metre) level. A 150 ton per day mill was installed (Kelly and Riddell 1964) and about 2,000 tons of material from the open pit was processed on site at a rate of about 50 tons per day (Kelly and Riddell 1963). A gold pour took place in late 1961, the mill feed having been obtained from the Open Pit Zone. The pour was estimated (The Northern Miner, November 2, 1961) to have yielded more than 200 ounces of gold. Golden Croesus Mines Ltd. completed magnetic and electromagnetic surveys and diamond drilled 15 holes totalling 5,489 feet (1,673 metres) on the Campbell claims on what was believed to be an extension of the Buffonta Mines Open Pit Zone. Anomalously auriferous material assaying 0.12 - 0.208 oz/ton Au across core lengths of 1.8 to 13.7 feet (0.55 to 4.18 metres) was intersected by this drilling. The ball mill was dismantled and removed from the Buffonta Mines claims. The mill was reported (Canadian Mines Handbook 1962) to have been transported to the Centre Hill Mine, in Munro Township.

1970: The Golden Croesus Mines Ltd. charter was cancelled in 1970 (NMI 320/05 Au1).

1975: Four short holes were drilled by Pamour Mines in the Open Pit Zone area. A feasibility study was completed. The owners of the claims did not sign a deal with Pamour.

1976: The Buffonta Mines claims were held by Buffonta Mines until 1976, when its charter was cancelled.

1979: The property was optioned by Kerr Addison Mines Limited. A Magnetometer, VLF EM and Induced Polarization surveys were completed by MPH Consulting. The Campbell Garrison Property, which adjoins the New Buffonta Property along the western boundary and consisting of 5 claims, was optioned at about the same time. Four holes were drilled in untested areas but were aimed at the main structure(s) which connect the known zones of mineralization. Poor results were obtained.

1980: Vertical drilling, mainly on 50 foot (15.25 metre) centres, was completed in forty holes over the Open Pit Zone for a total of 6,393 feet (1,949 metres). Other drilling was also completed. Up to the end of 1980 a total of one hundred and forty one *diamond drill holes for a total of about 36,750 feet (11,201 metres) had been drilled on the property. Of this total about eighty six holes (19,000 feet; 5,791 metres) had been drilled on the Open Pit Zone and immediate area.*

1981: Kerr Addison Mines Limited mined some 65,000 tons grading 0.138 oz/ton Au. About 165,000 tons of waste was also removed. Milling was done at Virginiatown.

1982: Kerr Addison Mines ceased production (Lovell et al 1983) after having open pit mined a total of approximately 70,000 tons of material averaging about 0.12 oz/ton Au (about 9,000 ounces of gold are estimated (Lovell et al 1984) to have been recovered.

1983 – 1985: Kerr Addison Mines Limited carried out local detailed VLF EM surveys, overburden drilling for basal till sampling using a Pionjar system, diamond drilling and geological mapping. More than one hundred and fourteen diamond drill holes were completed over the number 5 and number 6 Zones and their strike extensions for approximately 29,107 feet (8,872 metres) or an average of 255 feet (77.7 metres) per hole.

Diamond drilling on the Buffonta Mines claims by Kerr Addison Mines during the period 1979-1985 is reported (Gajaria 1987, Lovell et al., 1986) to have totalled about 35,000 feet (10,668 metres) in about 160 holes.

1986 – 1987: Silverside Resources Inc. optioned from Kerr Addison Mines an 88 claim group in Garrison Township, including the patented Buffonta Mines claims. Fifty-eight diamond drill holes totaling 24,062 feet (7,334 metres) were completed. Fifty five were located in or adjacent to the Pit and number 5 and number 6 Zones, three were located outside the boundaries of the New Buffonta Property. Nine miles (14.4 kilometres) of induced polarization surveys were carried out over the mineralized zones. Silverside Resources acquired a 100% interest in the 5 Campbell claims.

1987 – 1988: Proteus Resources Inc. and Lac Minerals Ltd. obtained an option to purchase remaining interest of Kerr Addison Mines in its 88 claim Garrison Township property, including the core Buffonta Mines claims. Proteus Resources drilled four holes on the number 5 and number 6 Zones to earn an interest in the property.

1987 - 1990: Lac Minerals became the manager and Perrex Resources Inc. bought in for 50% of Lac's interest. Twenty five diamond drill holes were completed for a total of 15,910 feet (4,849 metres).

Lac returned its interest in the property to Proteous Resources.

1990 - 1991: Gwen Resources mined 26,643 tonnes from the Number 6 Zone which yielded 2,902 ounces gold. The ore was shipped to the Kerr-Addison mill in Virginiatown, Ontario.

1991 Proteous Resources Inc. amalgamated with and changed name to Silverside Resources Inc. Name of Silverside Resources Inc. subsequently changed to Starmin Mining Inc.

1992 Starmin Mining Inc. transfers 87.50 % to Deak Resources Corporation.

1992 – 1993: Gwen Resources Ltd. and Deak Resources Corporation, under a joint venture agreement completed an exploration program of Magnetometer, VLF, over 2000 feet (610 metres) of stripping and trenching, and an additional 1373 feet (418.5 metres) of diamond drilling in 6 holes.

1997 Claimholder changes name from Deak Resources Corporation to AJ Perron Gold Corp.

1999 AJ Perron Gold Corp. transfers 87.50 % to Gwen Resources Ltd.

2008 Client changes name from Starmin Mining Inc. to Geopromining Gold Canada Ltd.

2010 Gwen Resources Ltd. transfers 87.50% to Tiger Gold Exploration Corporation.

2012: On September 6, 2012 Northern Gold entered into an agreement with Tiger Gold Exploration Corporation, Tiger Gold Exploration Corporation, Gwen Resources Ltd. and Perrex Resources Inc. to acquire a 100% interest in the Buffonta Property

6.2.2 Buffonta Property Historic Reserves and Resources

Kerr Addison Mines estimated diluted reserves of 73,500 tons grading 0.138 oz/ton Au for the Open Pit Zone As of December 31, 1980.

Diamond drill indicated reserves of 410,000 tons of material averaging 0.17 oz/ton Au, including 40,000 tons of material averaging 0.20 oz/ton Au in the Nos. 5 and 6 Zones were reported in The Northern Miner on May 9, 1988 (Bath, 1990).

Reserves of 200,000 tons of material averaging 0.19 oz/ton Au were also reported for a mineralized zone in the Open Pit area in The Northern Miner on November 21, 1988 (Bath, 1990).

Drill defined reserves of 600,000 tons of material averaging 0.175 oz/ton Au for the Nos. 5 and 6 and Open Pit Zones were reported by Proteus and Lac in The Northern Miner on September 18, 1989 (Bath, 1990).

A resource calculation completed by M.V.W. White & Associates Ltd in 1997 for Gwen Resources reported resources on the Buffonta Property as tabled below:

Zone	Grade (g/t)	Tonnes	Ounces (Au)
6 Zone	5.77	73,207	13,583
5 Zone	4.82	140,988	21,860
Kerr Pit	4.84	193,520	30,134
TOTAL	**5.00**	**407,715**	**65,577**

The historic resource and reserve estimates noted above are 'historical' in nature and not in compliance with NI 43-101. A qualified person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101 and as such they should not be relied upon. Howe and Northern Gold are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational purposes only. Additional confirmatory drilling would be required to classify the historical estimate as a current mineral resource.

Using original terminology, the historical estimates were referred to as reserves (deemed to be economically viable at the time) and resources. These historic categories of "reserve" and "resource" do not conform to current CIM definitions as set out in sections 1.2 and 1.3 of NI 43-101. None of the historic estimates are supported by available technical reports.

6.3 Gold Pike Property

Bath (1990) and Guy (2011) have summarized the exploration and development from 1918 to 1997, for the area within and surrounding the present Property as presented in the italicized text below. Metric equivalents have been inserted by Howe.

6.3.1 General Property Exploration History

1918: N. Falkenham discovered native gold within a quartz vein on the Quinn veteran lot (north half of lot 1, concession IV, Hislop Township) which was reported to be hosted by felsic volcanic or intrusive rocks (Knight at al. 1919). A 2 compartment 85 foot (25.9 metre) deep shaft (the No.1 shaft) was sunk on this vein by Falkenham and A. Peter (Knight et al. 1919). Moore (1936) reported this shaft to be inclined near surface, but that it becomes vertical at depth. Lateral underground exploration was not undertaken due to discouraging results during shaft sinking.

1927: Hislop Gold Mines Ltd. was incorporated (Rogers and Young 1928).

1934: Ventures Ltd. and Mining Corp. of Canada Ltd. (MCM; obtained assays as high as 0. 32 ounce of gold per ton from trenches blasted into quartz stringers (some of which were reported by Moore (1936) to carry visible gold) in outcrop east of the Pike River about 500m southwest of the No.1 shaft (Kilpatrick 1961). On the basis of the trench assays, these partners are reported (Kilpatrick 1961) to have diamond drilled 15 shallow (Moore, 1936) holes beneath the trenches along a strike length of 800 feet (244 metres).

1935: Hislop Gold Mines completed electromagnetic and magnetic surveys.

1937: On the western outcrop, a shaft (the No.2 shaft) was sunk 170 feet (51.8 metres) by Hislop Gold a few tens of metres southwest of the auriferous stringers explored by Ventures and MCM and the 150 foot (45.7 metre) level was established. Lateral exploration both to the east and west of the shaft on the 150 foot (45.7 metres) level totalled 290 feet (88.4 metres). 2,501 feet (762 metres) of underground diamond drilling north and south of the 150 foot (45.7 metre) level was completed from 10 evenly spaced drilling stations. 1670 feet (509 metres) of surface diamond drilling was also completed in the No.2 shaft area. By year end, the auriferous stringers exposed at surface had been demonstrated to have 'vertical' continuity and (on the 150 foot level) to average 0.08 oz/ton Au within an area measuring 120 feet (36.6 metres) long and averaging 45 feet (13.7 metres) in width. Erratic gold distributions with tenors ranging to as much as 0.72 oz/ton Au across (diamond drill core) assay lengths of 5 feet (1.52 metres) are reported to be characteristic of this auriferous zone (Sinclair et al. 1939, Kilpatrick 1961).

1944-1945: Hislop Gold was reorganized in 1944 as Hislop Mines Ltd. (hereinafter referred to as "Hislop Mines") (Canadian Mines Handbook 1946). Hislop Mines acquired 22 contiguous patented and unpatented mining claims in Guibord Township in addition to the 10 contiguous patented mining claims in Hislop and Guibord Townships which were formerly held by Hislop Gold. In aggregate, these claims formed an irregular but contiguous 32 claim block straddling the Hislop/Guibord Township common boundary. In 1944, 1,982 feet (604 metres) of surface diamond drilling was completed (Thorpe 1984) and in 1945, 9,446 feet (2,879 metres) of surface diamond drilling was completed in Guibord Township (Prest 1953).

1946 - 1958: Hislop Mines was reported (Prest 1953) to be a subsidiary of Hoyle Mining Co. Ltd.

1959 - 1960: The property was controlled by Gunnar Mining Ltd. (Ferguson et al. 1971). Hislop Mines Ltd. surrendered its charter in 1960 (Canadian Mines Register 1966).

1961: 8 contiguous claims (6 in Hislop Township and 2 in Guibord Township) of the group formerly held by Hislop Mines, including the claim in Hislop Township on which the 2 shafts are located, were owned by P.H. McCloskey of Toronto.

1962: Western Surf Inlet Mines Ltd. diamond drilled from surface three holes totalling 1,284.8 feet (391.6 metres) near the No.2 shaft.

1984: Canamax Resources Inc. reported that 2 grab samples of quartz vein material obtained from the eastern outcrop (along the west side of Highway 572) averaged 7.31 and 0.96 ppm of gold. MCM diamond drilled 3 holes totalling 1,208 feet (369 metres) which targeted auriferous quartz veins exposed in outcrop near the No. 1 shaft (sampled by Canamax Resources).The most auriferous intersection reported from the 1984 MCM diamond drilling was a 2 foot (0.61 metre) core length of white quartz-calcite vein material which was reported to carry accessory chalcopyrite, pyrrhotite, and pyrite; this averaged 0.08 oz/ton Au.

1988 - 1990: Noranda, and subsequently Alban Exploration Ltd., acquired from MCM the right to explore the property. Between May and September, 1988 an integrated gold exploration program was conducted on the property by Noranda. Linecutting and ground geophysical surveys including magnetometer and Max Min II Horizontal Loop E.M. were performed over the entire grid. These surveys were followed by detailed geological mapping and local humic geochemistry sampling. Two areas of particular interest, the No. 2 shaft area and the No. 1 shaft area were the focus of more intense exploration. Power stripping of the overburden exposed altered volcanic rocks which were geologically mapped and channel sampled in detail. Many channel samples assayed greater than 0.10 oz/ton Au. Following this work, six NQ diamond drill holes totalling 1374 metres were drilled in the No. 2 shaft area (Guy, 2011).

1993 – 1997: Property was under lease to Royal Oak. Royal Oak extracted 100,000 tons grading 0.1 oz/ton Au from an open pit and processed it in Timmins in the early 1990s (Guy, 2011).

2011-2012: Prior to its acquisition by Northern Gold, Victory Gold Mines drilled 52 holes totaling 11,056 metres on the Gold Pike Property in 2011 and 2012. Drilling was completed in two stages. The focus of the initial exploration drilling (37 holes totaling 7,270 metres) was to outline gold mineralization between surface and 200 metres deep in the area of the former producing open pit mine (1992-1993). The second stage of drilling (15 holes, totaling 3,786 metres) was designed to continue the testing from surface to a depth of 200 metres; to test for the depth continuity of gold mineralization both along strike and down-plunge below 200 metres. Drilling confirmed the presence of structurally hosted gold mineralisation over a strike length of up to 300 metres and down-plunge southeast to a depth of greater than 250 metres below surface.

6.3.2 Gold Pike Property Historic Reserves and Resources

In 1988, based on diamond drilling data completed by previous operators, Alban Exploration reported reserves above the 300 foot (91.4 metre) level in the No.2 shaft area of 200,000 tons of material averaging 0.09 oz/ton Au (Alban Exploration News Release dated April 27, 1988 in Bath, 1990).

The historic resource and reserve estimate noted above is ‘historical’ in nature and not in compliance with NI 43-101. A qualified person has not done the work necessary to verify the historical estimates as current estimates under NI 43-101 and as such they should not be relied upon. Howe and Northern Gold are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational purposes only. Additional confirmatory drilling would be required to classify the historical estimate as a current mineral resource.

Using original terminology, the historical estimates were referred to as reserves (deemed to be economically viable at the time) and resources. These historic categories of “reserve” and “resource” do not conform to current CIM definitions as set out in sections 1.2 and 1.3 of NI 43-101. None of the historic estimates are supported by available technical reports.

7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geological Setting

The Golden Bear Project including the Garrison Property, is situated in the Abitibi Greenstone Belt ("AGB"), which comprises Neoarchean supracrustal rocks of the Abitibi Subprovince of the Canadian Shield. Supracrustal rocks are divided into tectonostratigraphic units called assemblages for descriptive purposes. The reader is referred to Jackson and Fyon (1991) for a full discussion of the Archean geology of the Superior Province and to Ayer et al. (2001) for a more recent interpretation of the AGB geology. Gold deposits are structurally controlled and are widely distributed within the AGB, but all of the large deposits occur within 2 km of the Porcupine-Destor Fault Zone, the Pipestone Fault Zone and the Cadillac-Larder Lake Shear Zone.

The most recent description of the regional geology of the area is by Berger (2002) in his geological synthesis of the Highway 101 area, east of Matheson. Berger (op cit p.xvii) has summarized the regional geological setting as follows (Table 7-1):

"The study area is underlain by Neoarchean supracrustal and intrusive rocks that are subdivided into 5 lithotectonic assemblages. The Kidd-Munro assemblage underlies the north part of the study area and is composed of a tholeiitic metavolcanic member and a calc-alkalic metavolcanic member. Ultramafic to mafic layered sills intrude the metavolcanic rocks. The Tisdale assemblage is composed of tholeiitic metavolcanic rocks and subordinate amounts of calc-alkalic metavolcanic rocks. The distribution of the assemblage is poorly constrained because of the Porcupine-Destor deformation zone and related splay faults transect the assemblage in several places. The Kinojevis assemblage underlies the south part of the study area and is composed of predominantly mafic tholeiitic metavolcanic rocks that are intercalated with thin units of tholeiitic rhyolite and calc-alkalic metavolcanic rocks. The Porcupine assemblage underlies the northwest part of the study area and is composed of greywacke, argillite, and rare conglomerate that are intruded by small alkalic intrusions. The Timiskaming assemblage is composed of clastic and chemical metasedimentary rocks and rare alkalic metavolcanic rocks that are distributed within and near to the Porcupine-Destor deformation zone. Ultramafic to felsic alkalic intrusive rocks are also correlated with the Timiskaming assemblage and occur as dikes, small single-phase intrusions and large multi-phase intrusions throughout the area. Paleoproterozoic quartz-diabase dikes, Keweenawan-age olivine diabase dikes and Jurassic kimberlite dikes and diatremes intrude the Neoarchean rocks.

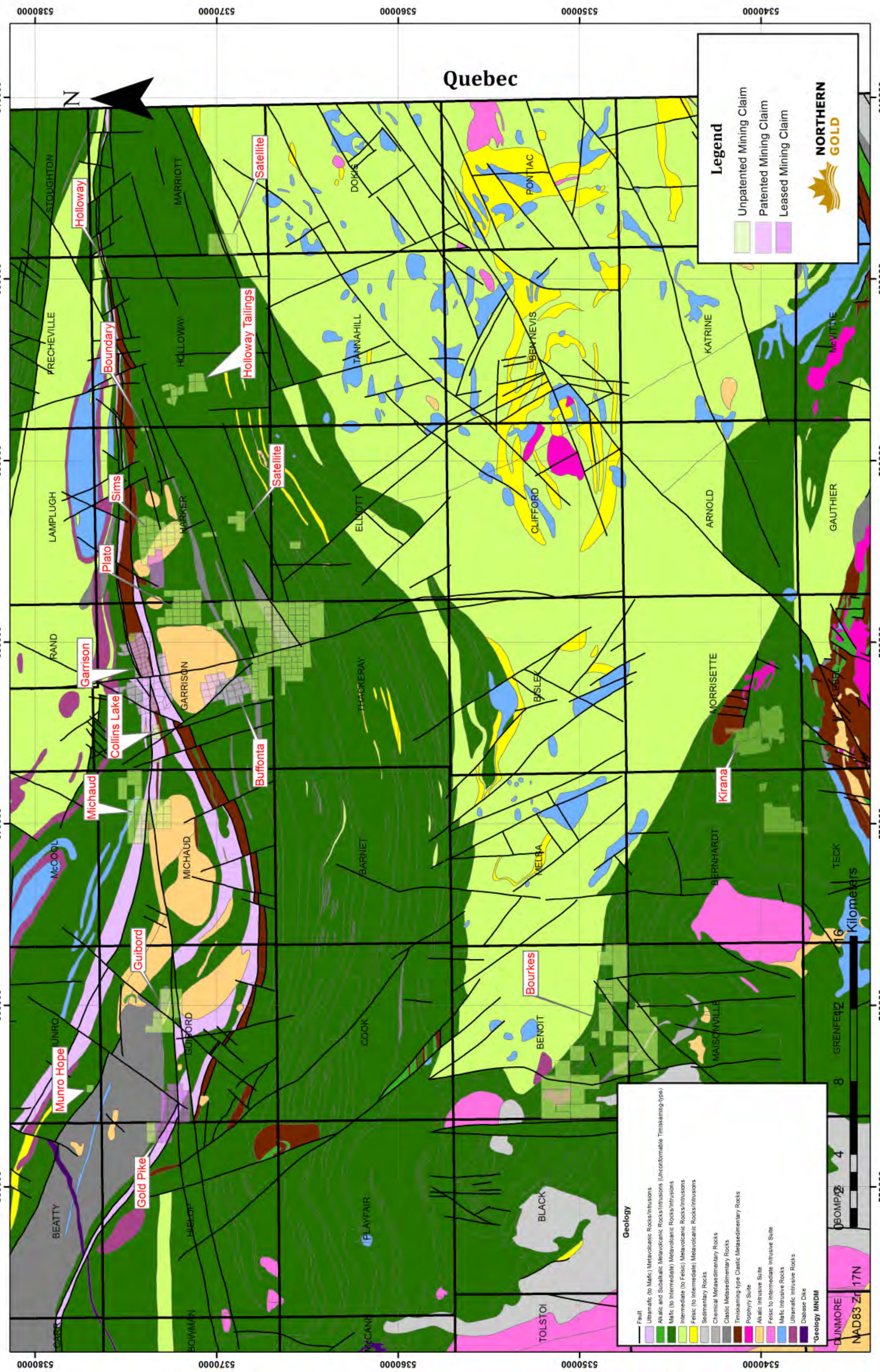
The Porcupine-Destor deformation zone is a crustal-scale structure that transects the study area and is characterized by south-side-up vertical movement. The fault zone and related northeast-striking splay faults such as the Ghostmount fault and McKenna fault, are the loci for gold mineralisation. Northeast-striking faults with dominant vertical displacement transect the Porcupine-Destor deformation zone. Two of these faults, the

Hislop fault and Garrison fault, are major structural features that act as the boundaries to different metallogenic segments. Gold mineralisation occurs in different structural settings, different styles, and different types of alteration patterns in each segment."

Gold is extracted from the St Andrew Goldfield Ltd.'s Holloway and Holt mines in Holloway Township, Primero Mining Corp.'s Black Fox mine in Hislop Township and St Andrew Goldfield Ltd.'s Hislop mine in Hislop Township (approximately 15 kilometres east, 32 kilometres west and 27 kilometres west of the Garrison Property respectively). Several past-producing gold mines are located in Hislop and Garrison townships. Many gold prospects and occurrences are located throughout the study area and there is excellent potential for future discoveries. There is potential for platinum group elements mineralisation in the ultramafic to mafic layered, intrusions and the ultramafic phases of the alkalic intrusions (Berger, 2002). Diamonds occur in some of the kimberlite intrusions (Berger, 2002). The authors of this Report note and caution the reader that they have been unable to verify the information on these regional mineral deposits and that they are not necessarily indicative of the mineralization on the Golden Bear Project properties.

Table 7-1: Regional Table of Formations (Berger 2002)

PHANEROZOIC
CENOZOIC QUATERNARY HOLOCENE Lake, stream and wetland deposits PLEISTOCENE Glacial, glaciofluvial and glaciolacustrine deposits, sand, gravel, and clay.
UNCONFORMITY
MESOZOIC JURASSIC Kimberlite dikes and diatremes
INTRUSIVE CONTACT
PRECAMBRIAN
PROTEROZOIC Mafic intrusive rocks, Diabase dikes
INTRUSIVE CONTACT
ARCHEAN NEOARCHEAN Metamorphosed Alkalic Felsic and Intermediate Intrusive Rocks Syenite, monzonite, quartz monzonite, granite, feldspar and quartz feldspar porphyry, intrusion breccia, pegmatitic syenite, schist, mylonite, albitite
INTRUSIVE CONTACT
Metamorphosed Alkalic Ultramafic and Mafic Intrusive Rocks Hornblendite, pyroxenite, melasyenite, pegmatitic melasyenite, lamprophyre, gabbro and/or diorite
INTRUSIVE CONTACT
Metamorphosed Tholeiitic Ultramafic and Mafic Intrusive Rocks Peridotite, pyroxenite, gabbro, gabbronorite, schist, diorite, pegmatitic gabbro
INTRUSIVE CONTACT
Mafic and Intermediate Alkalic Metavolcanic Rocks Massive and porphyritic amphibole-biotite-bearing flows, flow breccias Clastic and Chemical Metasedimentary Rocks: **Timiskaming Assemblage** Greywacke, sandstone, arkose, siltstone, argillite, polymictic conglomerate, schist, chert, laminated magnetite-hematite iron formation.
UNCONFORMITY
Clastic and Chemical Metasedimentary Rocks: Turbidites: **Porcupine Assemblage** Greywacke, siltstone, argillite, graphitic and pyritic mudstone, conglomerate, schist, chert Felsic Metavolcanic Rocks: **Kidd-Munro Assemblage and Kamiskotia Assemblage** Flows, tuffs, lapilli tuff, tuff breccia, schist Mafic to Intermediate Metavolcanic Rocks: **Kidd-Munro, Tisdale and Kinojevis Assemblages** Massive, flow-laminated and pillowed flows with flow top and pillow breccia, as well as amygdaloidal and variolitic varieties; tuff, lapilli tuff, schist, breccia, and feldspar porphyry Mafic Metavolcanic Rocks: **Kidd-Munro, Tisdale and Kinojevis Assemblages** Massive and pillowed flows with pillow and flow top breccia, as well as variolitic and amygdaloidal varieties; tuff and lapilli tuff, schist, leucoxene-bearing units, graphite breccia, dikes, hornfelsic greenstone Ultramafic, Komatiitic, and Mafic Metavolcanic Rocks: **Kidd-Munro, Lower Tisdale and Stoughton-Roquemaure Assemblages** Massive, spinifex and polysuture textured flows, schist and basaltic komatiite



Source: Northern Gold, 2014

Figure 7-1: Regional Geology of Golden Bear Project

7.2 Garrison Property Geology and Mineralisation

Satterly (1949) mapped Garrison Township for the Ontario Department of Mines and his mapping provides the best geological work relating to the geology of the Property. Berger (2002) made minor amendments to the geology and brought the nomenclature for the various volcanic-sedimentary units up-to-date in terms of the current understanding of the stratigraphy of the Abitibi Greenstone Belt.

Figure 7-2 presents a summary of the geology in the immediate area of the Property. The Property is underlain by rocks of the Kidd-Munro and Timiskaming Assemblages and about 4 kilometres of the regionally significant Destor-Porcupine Fault Zone and a major splay, the Munro Fault Zone. Both fault zones comprise a variably altered and deformed sequence of metavolcanic rocks that include komatiites and tholeiitic basalts. The map also shows the location of the various mineralized zones/deposits, the Jonpol and Garrcon shafts and the Property boundary.

The Kidd-Munro Assemblage is comprised of massive to pillowed, mafic (high magnesium and iron tholeiites) and ultramafic (komatiite) metavolcanic rocks. The metavolcanic flows strike in a general east-west direction and dip steeply to the south, however, outcrop is limited and there is probably significant local folding, particularly in the vicinity of the major fault zones that cross the property. No surface exposures of ultramafic (komatiite) metavolcanics have been identified, however, in drill core there are abundant occurrences of talc schists, talc-carbonate schists, and carbonate-mariposite schists that are indicative of the presence of ultramafic or high magnesium tholeiites in the metavolcanic sequence. It is a clear possibility that the Munro and Porcupine-Destor faults are focused within the ultramafic rock units because of their high ductility compared to the more brittle mafic metavolcanic, felsic metavolcanic and metasedimentary assemblages. The Munro fault hosts the Jonpol Deposit.

Timiskaming Assemblage clastic metasedimentary rocks, composed of conglomerate, wacke-sandstone, siltstone, argillite and schist, are closely associated with the Porcupine-Destor deformation zone from the Quebec border to Hislop Township a distance of approximately 65 kilometres (Berger, 2002). Banded magnetite-hematite iron formation is complexly interbedded and structurally interleaved with clastic metasedimentary rocks. The Timiskaming Assemblage is younger than the Kidd-Munro Assemblage and in the absence of faults; the contact between the assemblages is an angular unconformity. On the Property the Timiskaming Assemblage is fault bounded, on the north side by the Munro fault and on the south side by the Porcupine-Destor fault. The metasedimentary beds strike in a general east-west direction and dip steeply to the south. In general along the Munro fault zone the bedding tops are facing to the north, whereas to the south along the Porcupine-Destor fault zone the bedding tops are facing to the south. The Timiskaming metasediments host the Garrcon Deposit immediately north of the Porcupine-Destor fault.

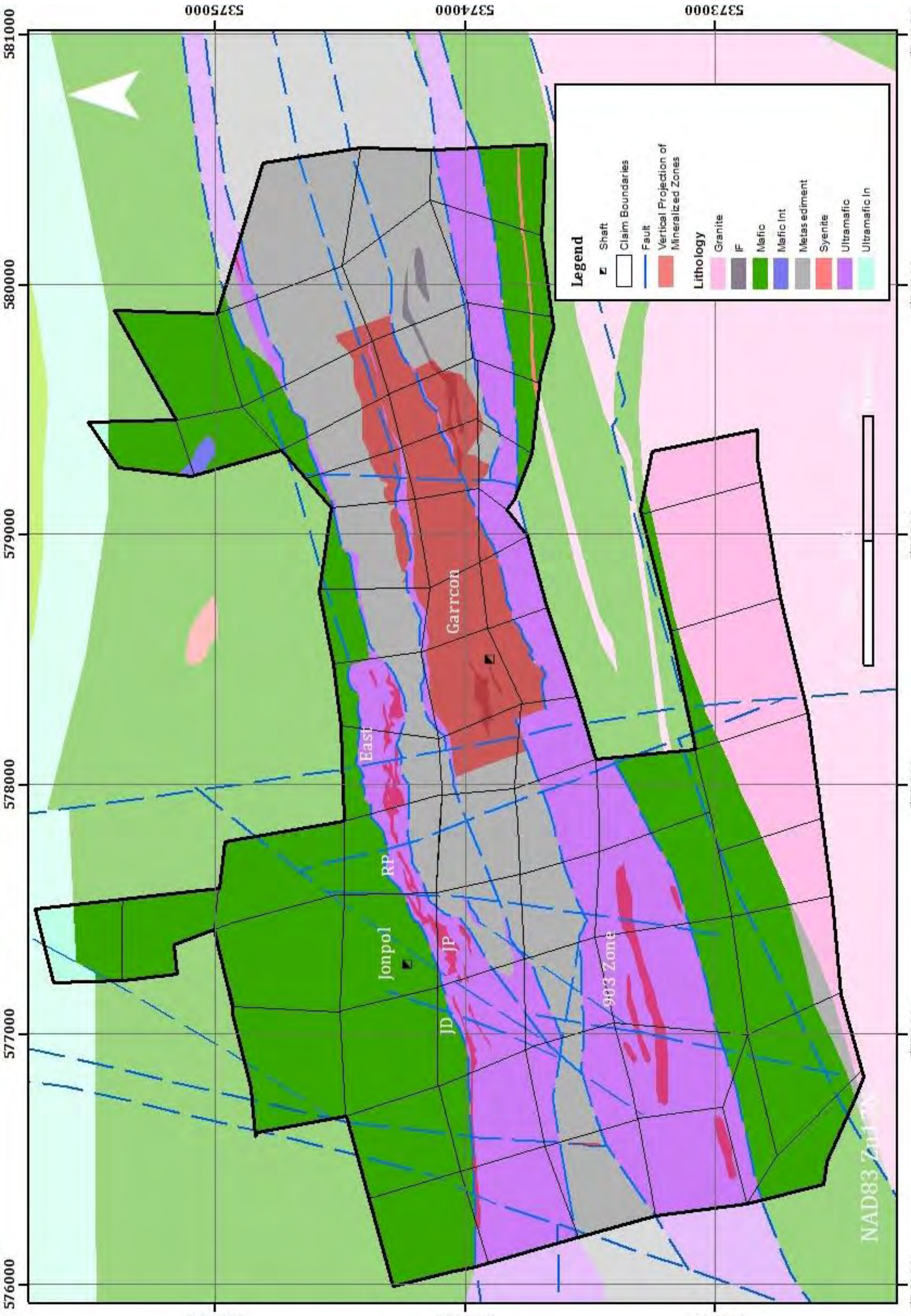
Immediately to the south of the Property is a large, metamorphosed, alkalic intrusive stock with a plan view diameter of 4 to 4.5 kilometres (Figure 7-1). The intrusive varies in composition from granite to monzonite.

7.2.1 Garrcon Deposit

The Garrcon Deposit located at UTM 5,374,000N and 579,000E on the Property comprises a broad zone of low grade enveloping gold mineralisation that includes the higher grade historic Shaft, South and North Zones as well as the Green and East Zones identified by the Company's drill programs. It occurs within the Timiskaming Assemblage adjacent to the Porcupine-Destor fault and is a zone of brecciated, silicified metasediment with stockwork quartz-carbonate veins and veinlets and minor disseminated sulphides cut by narrow variably altered lamprophyre and syenite dikes (Figure 7-2). Preliminary metallurgical testwork indicates that the Garrcon mineralisation is non-refractory and is free milling (Section 13).

7.2.1.1 Host Rocks, Structures, Mineralisation and Alteration

Gold mineralisation in the Garrcon North and Garrcon Shaft/South zones is hosted by Timiskaming-age metasedimentary rock sequences that include greywacke, arkose and iron formation cut by narrow lamprophyre and syenite dikes, occurring adjacent to the Destor-Porcupine Fault Zone (Figure 7-2). These metasedimentary sequences have been hydrothermally altered and mineralized in distinct zones persisting to depths greater than 650 meters vertically. The intrusive dikes are variably altered. Gold occurs in a complex system of stockwork veins hosted in a zone of brecciated and silicified metasediments. The veins are composed predominately of quartz-carbonate (calcite, dolomite, and ankerite) with and without albite. The stockwork veins are normally less than one centimeter in width with many being only a half centimeter wide or less. Gold occurs primarily as native gold within the stockwork veins with minor dissemination into the vein walls. Higher grade intersections (above 10 g/t) are frequently intersected in intervals where pyrite makes up much less than 1% of the total rock. Principal minerals are native gold, pyrite, magnetite, specularite, and pyrrhotite with subordinate chalcopyrite, sphalerite, galena and arsenopyrite. Pervasive wall rock alteration is common adjacent to the veins, usually consisting of carbonatisation (ankerite or ferroan dolomite) and minor sulphides (pyrite and pyrrhotite).



Source: Northern Gold 2014

Figure 7-2: Garrison Property Geology

7.2.1.2 Length, Width, Depth and Continuity of Mineralisation

Development and mining at the Garrcon Shaft zone began in 1935 with the sinking of a 256 foot (78 metre) deep shaft by Consolidated Mining and Smelting Company of Canada Ltd. In 1986, diamond drilling by Cominco Ltd. delineated 2 new auriferous ore zones (the North and South zones) which were described as "stratabound". The South Zone was reported to be hosted by altered sedimentary rocks, with mineralisation averaging 6 feet (1.8 metres) in width, and traced by diamond drilling to 500 feet (152 metres) vertical along 1,300 feet (396 metres) of strike. The South Zone is described by Bath (1990) as striking 75°, dipping south at 50° and within about 70 feet (21 metres) of and/or within a regional scale, east-striking and steeply shear developed between clastic sedimentary rocks to the north and komatiitic rocks to the south. The North Zone was reported to be hosted in a shear zone, had been traced along strike for about 200 feet (61 metres) down to 500 feet (152 metres) in the vertical, and averaged 10.7 feet (3.3 metres) in width.

Howe's deposit model was developed with the aim of establishing a bulk tonnage resource estimate for the Company's Garrcon Deposit encompassing the historically known Shaft, South and North Zones and the recently identified Green and East Zones all of which lie within a broad zone of enveloping lower grade mineralisation that extends over an east-west distance of 1800 metres. The mineralisation averages approximately 300 metres wide, with the narrowest width of 175 metres located on the more sparsely drilled eastern end of the zone, reaching a maximum width of 375 metres in the more densely drilled western portion of the zone. About half of the 1800 metre east-west length of the zone is bounded by the Destor-Porcupine fault system on the south and the contact with mafic and ultramafic rocks on the north. Mineralisation included in the resource extends from surface across the entire zone to a depth of 450 metres at the western end of the deposit and reaches a depth of up to 700 metres where supported by deeper drilling at the centre and eastern ends of the deposit. The deposit model remains open to the east at depth.

7.2.2 Jonpol Deposit

The Jonpol Deposit (JD, JP, RP and East Zones), located at UTM 5,374,100N and 577,300E, was the primary exploration target on the Property in the 1980s and 1990s. The Company renewed exploration at Jonpol in 2012.

7.2.2.1 Host Rocks, Structures, Mineralisation and Alteration

The Jonpol Deposit is a zone of gold mineralisation hosted in structurally controlled alteration zones within mafic to ultramafic (tholeiitic to komatiitic) rocks along the north contact of the Munro Fault which crosses the north-central part of the Property. The Jonpol gold mineralisation is generally associated with pervasive carbonate alteration with late stage silicification, sulphidisation (pyrite and arsenopyrite) and sericitisation, giving the altered rock a pale buff to pale purple-grey hue. Northern Gold reports that Lakefield (now SGS Canada Inc.) testwork on behalf of previous operators indicated approximately 50% of the Jonpol JP Zone mineralisation is refractory in nature. Preliminary metallurgy by the Company indicates that the JD and East zones are of a free milling nature. The Company's current metallurgy work shows that the RP, like the JP zone, is partially refractory.

7.2.2.2 Length, Width, Depth and Continuity of Mineralisation

The Jonpol deposit comprises four, nearly vertical, laterally contiguous mineralized zones (JD, JP, RP and East Zones) that combined, total 1,700 metres in length and are 20 metres wide (on average) along the Munro Fault, which is a splay from the regional Porcupine-Destor Fault. The mineralized structures strike approximately 070^{o} (true) and dip steeply to the south. The JD zone has a strike length of up to approximately 800 metres, of which up to 500 metres is on the recently acquired Lac Group claims. The JP and RP have a combined strike of approximately 700 metres and the East zone has a strike of approximately 600 metres (Figure 7-2). The mineralized structures have been intersected from surface to a maximum drill intersected vertical depth of approximately 650 metres below surface. True widths of individual mineralized structures in the 2014 mineral resource estimate varied from a minimum width 1.5 metres to greater than 10 metres. The zones remain open to depth.

7.2.3 903 Deposit

The 903 Zone, located at UTM 5,373,200N and 577,200E, was drill tested by previous operators in the mid-1940s and late 1980s. The Company renewed exploration at the 903 Zone in 2013.

7.2.3.1 Host Rocks, Structures, Mineralisation and Alteration

Diamond drilling has intersected a lithologically complex assemblage of mafic to felsic volcanic rocks, schists and sediments, as well as variably schistose and variably carbonate, sericite, chlorite, talc, and quartz altered equivalents of these rocks. Red and hematitic felsic dikes and/or sills are noted in the drill logs and, where fractured and/or pyritic and/or quartz vein bearing, these may be anomalously auriferous. The Company notes that the zone is principally hosted in linear syenite dykes hosted within the Destor Porcupine Fault Zone and exhibit similarities to other syenite hosted ore bodies in the Abitibi Gold belt. Peripheral mineralized zones hosted in Temiskaming type metasediments are similar to the bulk tonnage Garrcon deposit located 1 kilometre to the east.

Accessory sulfide minerals associated with anomalous gold tenors are reported to include pyrite, hematite, chalcopyrite, molybdenite, and galena. The presence in hornblende altered mafic volcanic rocks and quartz-biotite-cordierite schists and/or gneisses may represent a metamorphic aureole around the Garrison Stock, located several hundred metres south of the 903 Zone.

7.2.3.2 Length, Width, Depth and Continuity of Mineralisation

Fractured and/or pyritic and/or quartz vein bearing syenite dikes within the 903 Zone are anomalously auriferous along significant core lengths (ranging from about 30cm to about 10m). Historic drilling and drilling by the Company in 2013 has traced the zone along 720m of strike length. The zone remains open at depth and along strike.

7.3 Buffonta Property Geology and Mineralisation

The bedrock underlying the Buffonta Property is comprised of weakly metamorphosed subaqueous tholeiitic basalt and volumetrically minor intercalated interflow sediment of the Lower Blake River Group (Figure 7-3). The Garrison Stock, a 20 km^2 monzonitic body is located about 1 km northeast of the Kerr pit. Felsic dykes intrude the supracrustal rocks in the Kerr pit area and in the footwall of the No. 5 and No. 6 zones. Some of these dykes are believed to represent apophyses of the Garrison Stock. Mafic dykes of lamprophyric and kimberlitic composition are also present.

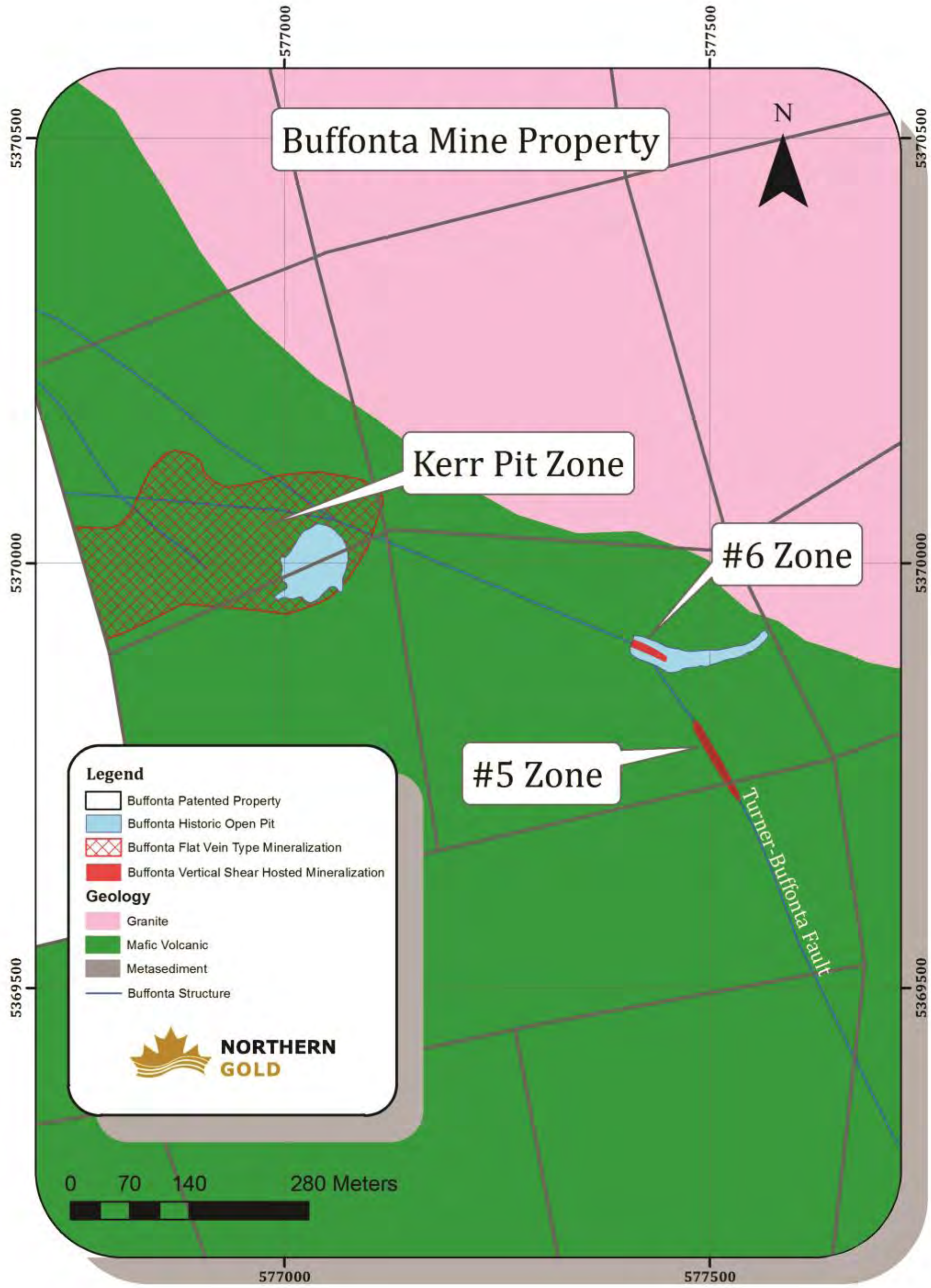
The Archean supracrustal rocks underlying most of the claim group are approximately 3.3 km south of the east striking, structurally complex Destor-Porcupine Fault Zone. The southern portion of the claim group is intersected by the Ghostmount Fault, host to the Holt-McDermott mine located approximately 12 km to the northeast.

7.3.1 Buffonta Deposits

Gold mineralisation on the Buffonta Property occurs in at least three distinct areas, referred to as the Kerr Pit (or Open Pit) Zone, No. 5 Zone and No. 6 Zone, group centred at approximately UTM 5,370,000N and 577,300E. All three zones are marginal to the Garrison Stock within locally northwest striking, south dipping Lower Blake River group meta-volcanic rocks subparallel to the inferred contact orientation of the adjacent Garrison Stock.

7.3.1.1 Host Rocks, Structures, Mineralisation and Alteration

Mineralization at the Kerr Pit Zone occurs in amphibolite grade meta-volcanic rocks which form part of the contact metamorphic aureole around the Garrison Stock. Gold occurs in quartz veins and vein breccias with prominent grey to brown colored alteration halos. The auriferous quartz veins are reported to fill planar fractures and to range from 1-25 mm in width. Visible native gold occurs within quartz breccia veins and within carbonate veins while microscopic native gold occurs with pyrite within and marginal to the quartz veins. The alteration halos surrounding the veins are millimetre to metre scale and carry up to 10-20% pyrite.



Source: Northern Gold 2014

Figure 7-3: Buffonta Property Geology

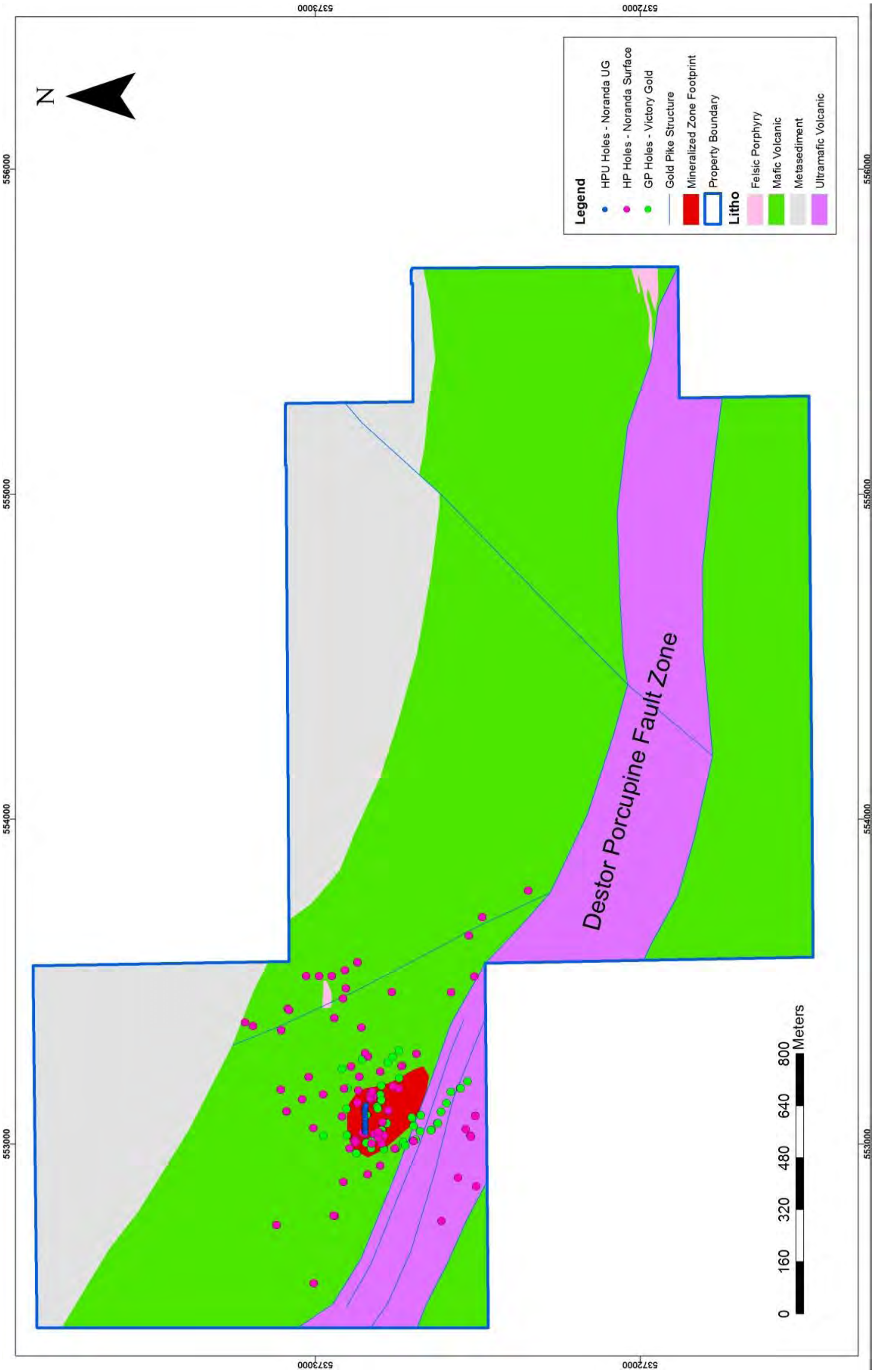
7.3.1.2 Length, Width, Depth and Continuity of Mineralisation

Gold mineralization at the Kerr Pit Zone occurs as planar shallow dipping quartz carbonate veins hosted within mafic volcanic units. The veins and associated alteration halos range in thickness from 0.3m up to 3m and are known to extend laterally several hundred meters west of the existing open pit. A series of stacked shallow (<30° dip) veins have been named by previous operators as veins 1 through 6. The veins have been traced to depths up to 160m.

Gold mineralization at the No. 5 and No. 6 Zones is restricted to an alteration envelope that surrounds two near vertical fault structures; namely the No. 5 shear and Buffonta-Turner shear respectively. Gold mineralization at the No. 5 and No. 6 zones are typically fracture fillings adjacent to the fault structures and within a broad alteration zone. Both mineralized zones show widths from 1 to 5 metres and have been traced along strike for about 150 metres and to depths of approximately 100 metres.

7.4 Gold Pike Property Geology and Mineralisation

The Gold Pike Property lies mostly to the north of the DPFZ and is underlain predominantly by mafic and ultramafic flows of the Stoughton-Roquemaure Group (Figure 7-4). The mafic flows have various flow textures including amygdaloidal, pillowed, flow breccias/hyaloclastic and massive. Spinifex textures and carbonate porphyroblastic and flow breccia textures are commonly observed within the ultramafic flows. Surface mapping by Noranda indicates the strike of the volcanic flow units is approximately 330^{o} dipping 70^{o}SW. Intruding these flows are strongly biotitic, and carbonate altered lamprophyre dykes, intermediate intrusive dykes (commonly proximal to mineralized zones) and gabbroic dykes. The DPFZ strikes through the southern part of the property at 120^{o} and is represented by sheared, serpentinized ultramafic volcanics (Figure 7-4). Auriferous quartz veining within altered mafic and ultramafic volcanics has been target of exploration on the property.



Source: Northern Gold 2014

Figure 7-4: Gold Pike Property Geology

7.4.1 Gold Pike Deposit

The Gold Pike Deposit is located at UTM 5,372,800N and 553,000E. The deposit was drilled by Noranda in 1988. Royal Oak extracted 100,000 tons grading 0.1 ounce per ton gold from an open pit and processed it in Timmins in the early 1990s. Prior to its acquisition by Northern Gold, Victory Gold Mines drilled 52 holes totaling 11,056 metres on the Gold Pike Property in 2011 and 2012.

7.4.1.1 Host Rocks, Structures Mineralisation and Alteration

At the Golden Pike deposit gold mineralization is hosted by mafic and ultramafic metavolcanic rocks adjacent and within the DPFZ. The host rocks are foliated to schistose and display intense carbonatization, sericitization (green mica), pervasive silicification, quartz veining and abundant disseminated pyrite. Visible gold is contained in discontinuous tensional quartz stringers located along both contacts between a narrow basalt flow and ultramafic metavolcanic rocks.

1988 geological mapping by Noranda of a stripped outcrop surface around the No. 2 shaft delineated lenticular tensional east-west trending and later northerly trending quartz veins in the green carbonate altered ultramafics, some forming narrow ladder structures and others more continuous, occurring along northerly trending faults. Within more brittle tholeiitic mafic volcanics ladder vein structures are less common and east-west veining is more pronounced, forming a stockwork near the southwestern contact with the ultramafic rocks. Most of the east-west veins dip steeply to the north and the north-south veins generally dip steeply to the east although some dip to the west. Visible gold occurred in numerous locations generally associated with north-south trending veins. These tensional veins indicate the importance of searching for mineralization orthogonal to the main trend of the DPFZ. Vein thicknesses vary from a few centimetres up to 1 metre.

7.4.1.2 Length, Width, Depth and Continuity of Mineralisation

1988 Noranda surface assays indicated a mineralized zone at surface around the No. 2 shaft covering an area of 70 metres by 20 to 25 metres (approximately 1650 square meters). Subsequent drilling in the pit area, has confirmed the presence of structurally hosted gold mineralisation over a strike length of up to 300 metres and down-plunge southeast to a depth of greater than 300 metres below surface. Drill indicated thickness of the mineralized zone ranges from 3 to 65 metres with estimated true thickness between 2.0 and 40.0 metres; the average thickness of the zone is approximately 15 metres.

8 DEPOSIT TYPES

8.1 Exploration Targets

8.1.1 Garrison Property

The Garrcon Deposit on the Garrison Property is a low grade bulk tonnage gold deposit which includes the higher grade historic Shaft, South and North Zones and recently defined Green and East Zones. It occurs within the Timiskaming Assemblage adjacent to the Porcupine-Destor fault and is a zone of brecciated, silicified, sandstone with gold associated with disseminated sulphides (predominantly pyrite) and irregular quartz veinlets. Preliminary metallurgical testwork indicates that the Garrcon gold mineralisation is non-refractory and is free milling (Section 13).

The Jonpol Deposit (JD, JP, RP and East Zones) was the primary exploration target on the Garrison Property in the 1980s and 1990s and the Company restarted exploration at Jonpol in 2012. The Jonpol Deposit is a zone of gold mineralisation hosted in structurally controlled alteration zones within mafic to ultramafic (tholeiitic to komatiitic) rocks along the north contact of the Munro Fault which crosses the central part of the Property. The Jonpol gold mineralisation is generally associated with pervasive carbonate alteration with late stage silicification, sulphidisation (pyrite and arsenopyrite) and sericitisation, giving the altered rock a pale buff to pale purple-grey hue. Northern Gold reports that Lakefield (now SGS Canada Inc.) testwork on behalf of previous operators indicated approximately 50% of the Jonpol JP Zone mineralisation is refractory in nature. Preliminary metallurgy by the Company indicates that the JD and East zones are of a free milling nature. The Company's current metallurgy work shows that the RP, like the JP zone, is partially refractory (Section 13). A bulk-sampling program on 4 sub-levels in the central part of the JP Zone was completed in 1996-97 with a total of 49,087 tonnes mined and shipped, which produced 9,476 ounces of gold for an average mill head recovered grade of 6.7 g/tonne Au (see section 6.1.3).

Diamond drilling at the 903 Zone has intersected anomalous gold mineralisation associated with fractured and/or pyritic and/or quartz vein bearing felsic dikes and/or sills (predominantly syenite) within the Destor Porcupine Fault Zone. The host rocks are lithologically complex assemblage of mafic to felsic volcanic rocks, schists and sediments, as well as variably schistose and variably carbonate, sericite, chlorite, talc, and quartz altered equivalents of these rocks.

Both the Jonpol JD Zone and the 903 Zone extend west onto the recently acquired Lac Group of claims, which is yet unexplored by the Company.

8.1.2 Buffonta Property

Gold mineralisation on the Buffonta Property occurs in at least three distinct areas, referred to as the Kerr Pit (or Open Pit) Zone, No. 5 Zone and No. 6 Zone. All three zones are marginal to the Garrison Stock. Gold occurs in quartz veins and vein breccias.

Kerr Addison Mines Limited mined approximately 70,000 tons averaging about 0.12 oz/ton Au from 1981 to 1982 (about 9,000 ounces of gold are estimated to have been recovered (Lovell et al 1984).

8.1.3 Gold Pike Property

At the Gold Pike deposit, gold mineralization is hosted by mafic and ultramafic metavolcanic rocks adjacent and within the DPFZ. The host rocks are foliated to schistose and display intense carbonatization, sericitization (green mica), pervasive and vein silicification and abundant disseminated pyrite. Visible gold is contained in discontinuous tensional quartz stringers located along both contacts between a narrow basalt flow and ultramafic metavolcanic rocks. Royal Oak extracted 100,000 tons grading 0.1 oz/ton Au from an open pit in the early 1990s.

8.2 Deposit Models

Robert (1998) has provided an updated statement of the geological characteristics of Archean gold deposits (an update of Robert 1996).

Robert has concluded that a close examination of the geological characteristics of Archean world-class gold deposits reveals a significant diversity in the nature and chemistry of the ore, hydrothermal alteration, and lithological or structural associations. Several geological styles of deposits can be distinguished:

- Quartz-carbonate veins in shear zones, faults and folds, and related extensional structures;
- Zones of stockwork veinlets and disseminated sulphides associated with small porphyry intrusions;
- Sulphide-rich veins and vein arrays;
- Gold-rich volcanogenic massive sulphide (“VMS”) lenses in felsic volcanic rocks; and
- Rare carbonate-rich veins and siliceous replacements.

Geological relationships suggest that the porphyry-style, gold-rich VMS and possibly epithermal-style deposits have formed during the stages of construction (volcanic-plutonic activity) of the greenstone belts at depths of less than 5 kilometres, whereas orogenic deposits have formed during deformation at depths in excess of 5 kilometres.

These different styles of gold deposits commonly occur within the same districts or along the same fault zones, indicating that gold deposits within a given district formed at different crustal levels, at different times, and by different processes, and have been juxtaposed by successive episodes of burial, uplift, and deformation that have been focused in certain areas.

With specific reference to the southern Abitibi Greenstone Belt, where the Property is located, Robert notes that development begins with the accumulation of volcanic rocks in one or more cycles and the emplacement of coeval igneous intrusions. This represents the main phase of construction of volcanic plutonic edifices, which is partly accompanied by, but mostly followed by, turbidite (greywacke, shale and siltstone) sedimentation. This main phase of construction was followed by a first episode of deformation (D1) tilting, folding and overthrusting of supracrustal units, accompanied by diorite-tonalite intrusions. Subsequent uplift and erosion led to the deposition of alluvial-fluvial Timiskaming-type sedimentary rocks above an angular unconformity. This Timiskaming stage can be regarded as a renewed stage of volcano-plutonic construction as it was accompanied by the emplacement of high-level intrusives and volcanic rocks of alkalic composition. The Timiskaming stage was followed by the main period of deformation of the volcanic-plutonic edifices, beginning with regional D2 shortening across the belt and evolving into D3 transcurrent deformation.

Quartz-carbonate vein deposits consist of networks of quartz-carbonate veins in moderately to steeply dipping brittle-ductile shear zones and related extensional veins and vein arrays and breccia veins in relatively competent lithologic units. The deposits are spatially associated with major shear zones but have a tendency to be hosted by second and third order structures and splays. In the larger deposits, the vein networks have a surface footprint exceeding 1 kilometre of strike length and generally extend vertically to depths of 1 kilometre or more (McIntyre deepest levels were at approximately 2.5 kilometres below surface.

Robert (op cit) further noted that there is a strong association of world-class deposits with districts that contain a large proportion of mafic and ultramafic volcanic rocks.

In the Timmins gold camp, all of the above-mentioned styles of mineralisation can be found, and multiple styles can be found within a single mine, for example the Dome and Hollinger-McIntyre mines.

In quartz-carbonate vein deposits gold mineralisation occurs in both the veins and in adjacent altered wall rocks, with the bulk of the gold found in the veins. The mineralized veins consist of quartz and carbonate minerals, with subordinate amounts of pyrite, arsenopyrite, pyrrhotite, native gold, base metal sulphides, tourmaline, scheelite, talc, sericite and chlorite. Alteration envelopes, a few metres to tens of metres thick surround the veins, and may consist of reduced carbon, carbonatisation, potassium metasomatism, sodium metasomatism, sulphidisation and silicification (Card et al, 1988).

Carbonatisation is the most common and most extensive type of alteration in quartz vein deposits. This type of alteration involves the progressive replacement of Ca, Fe and Mg silicate minerals by carbonate species through the addition of carbon dioxide and is inwardly zoned from calcite to ankerite and dolomite. Potassium metasomatism is found in close proximity to the veins as sericitisation of chlorite and plagioclase, the development of K-feldspar and biotite and the presence of fuchsite in ultramafic rocks. Sulphidation is restricted to the immediate wall rocks of the veins. Pyrite is the dominant sulphide with lesser amounts of pyrrhotite and arsenopyrite, but the volume of total sulphide minerals is generally less than 10%. Sodium metasomatism results in the formation of albite and paragonite. Silicification results in quartz flooding of the host rocks and an abundance of quartz veinlets and stockworks.

At the district and property scale, exploration for quartz-carbonate vein gold deposits focuses on broad transpressional shear zones located along lithologic boundaries. The gold mineralisation tends to occur within structures measuring hundreds to thousands of metres long that are subsidiary to major fault zones. At a more local scale mapping of alteration mineral assemblages can delineate favourable portions of shear zones. Even though the sulphide content of the quartz veins and the associated wall rock alteration is low, induced polarisation and resistivity geophysical methods result in a recognizable chargeability response, while the increased quartz content is recognized as an increase in resistivity. Carbonatisation causes destruction of magnetic minerals in mafic rocks, creating a negative magnetic feature coincident with alteration surrounding the lode deposits. In glaciated areas, geochemical surveys using heavy mineral concentrates derived from sampling till can be used to define areas of potential lode gold mineralisation. In addition, Mobile Metal Ion-type soil geochemical surveys have proven to be applicable in overburden covered areas.

9 EXPLORATION

The primary focus of Northern Gold's work and expenditures from has been the Garrcon Deposit located in the south central portion of the Garrison Property. Work programs implemented by Northern Gold from 2009 to 2013 include geophysics, surface stripping/sampling, diamond drilling, hyperspectral drill core imaging and analysis, metallurgical testing, asset and infrastructure rehabilitation/upgrades, preliminary archeology and environmental baseline studies. The Company restarted exploration at the Garrison Proprety's Jonpol Deposit in 2012.

9.1 Garrison Property

This section outlines work completed by Northern Gold on the Property through to the cut-off date for data, the effective date of this report, December 30, 2013. As of this date, collar, survey, lithology and assay information was available for all of the Company's 2009-2012 Garcon Deposit drill holes (note that because hole numbers are pre-assigned in groups of ten to a particular drill rig, some holes within this sequence were not competed or drilled at the Jonpol Deposit). The 2014 updated Garrcon mineral resource estimate includes new information for: eighty-four 2012 drill holes up to GAR-12-270; twelve drill hole extensions completed in 2012; and four 2011 drill holes which were either not yet drilled, not yet sampled or were awaiting the return of assay results from the laboratory at the time of Howe's previous 2012 mineral resource estimate.

The 2011 Garrcon PEA repeated in later sections of theis Report included assay data from all Northern Gold 2009-2011 drill holes up to GAR-11-74 except GAR-10-29 (not sampled at that time) and GAR-11-64 to GAR-11-69 and GAR-11-75 onward (assay data not available at the cut-off date for the 2011 Garrcon mineral resource estimate/PEA).

The 2014 updated Jonpol mineral resource database includes new data for thirty-nine 2012 drill holes, twenty-six 2013 drill holes; six 2011 drill hole extensions, three 2012 drill hole extensions and one 2013 wedge completed since Howe's previous 2009 mineral resource estimate. Three of the 2013 hole collars (JP13-16 and 17 and 17A) and one wedge start coordinates (JP13-16A) were not received until after the effective date and are therefore not included in the Jonpol mineral resource update.

Mineral exploration on the Garrison Property at the time of this Report is focussed on planning and permitting of the proposed 2014 Garrcon bulk sampling program.

9.1.1 2009 Garrison Exploration

Exploration conducted by Northern Gold is described in detail in Howe's 2010 technical report (Roy and Trinder, 2010). Work included:

- Satellite imagery; 25 square kilometer area over the entire Garrison Property.
- Due diligence review of the ValGold data to identify errors and omissions.
- 11 NQ diamond drill holes on the Garrcon Deposit totaling 2,330 metres.

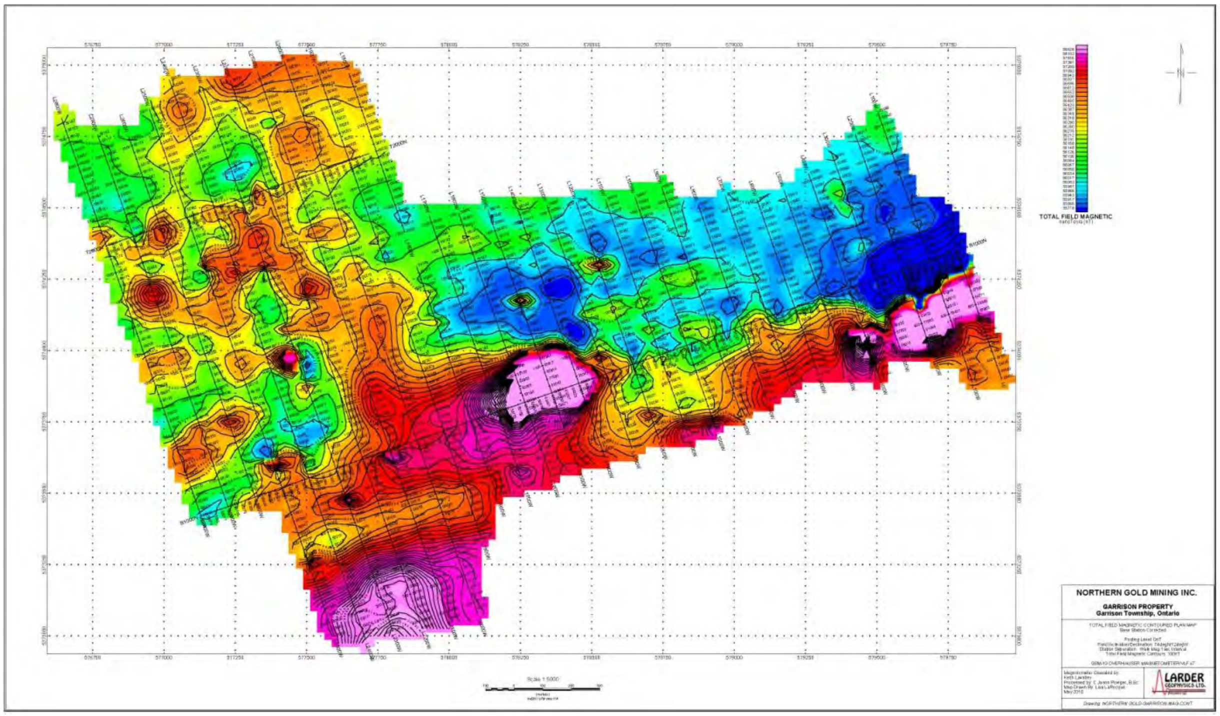
9.1.2 2010 and 2013 Garrison Surface Grid and Geophysics

Northern Gold contracted Kirkland Gems and Minerals, PO Box 834, Kirkland Lake, Ontario P2N 3K4, to chainsaw cut 40 line kilometres of grid on the Garrison Property between February 9th and March 18th 2010. The grid covers the entire property and includes a baseline with an azimuth of 070°/250° True North. Twenty nine grid lines were cut perpendicular to the grid at 340°/160° True North and one tie line was cut parallel to the baseline (Figure 9-1). Grid lines were spaced at 100 metre intervals with stations picketed every 25 metres. Northern Gold's Civil Technician, Dave Eves subsequently completed a GPS survey of the grid lines.

The Company contracted Larder Geophysics, 14579 Government Rd., Larder Lake, Ontario P0K 1L0, to complete a ground magnetometer - VLF/EM survey over the entire 40 kilometres of grid. The survey was conducted with a GSM-19 v7 Overhauser magnetometer in walking mag/VLF mode. Readings were collected every second with the position extrapolated using the time to go 12.5m. VLF samples were taken at 12.5m sample intervals. A second GSM-19 was employed as a base station for diurnal correction. A total of 38.2125 line kilometers of magnetic and VLF EM surveying was conducted over a five day period between April 19th and April 28th, 2010. The survey consisted of 59838 magnetometer and 3057 VLF EM readings.

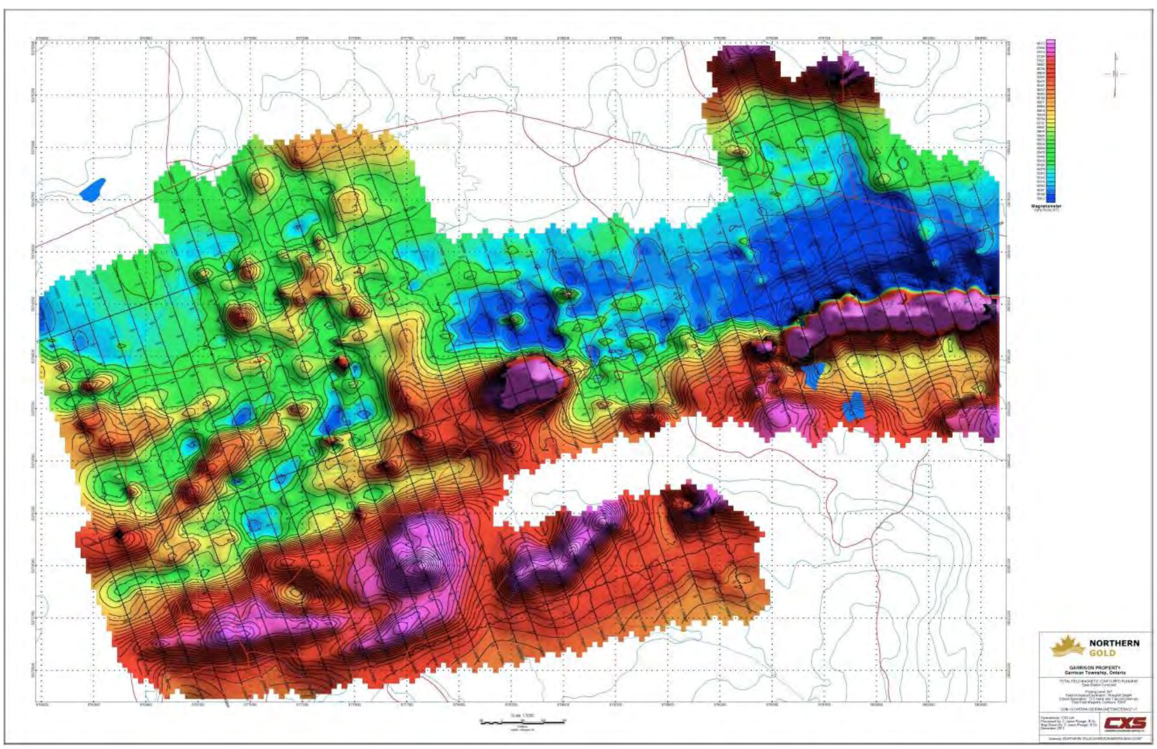
The contoured 2010 Total Field magnetic plan map is presented in Figure 9-1. The zone of higher magnetic response sub-paralleling the baseline to the south corresponds to the Porcupine-Destor Fault. The large ovoid shaped area of extremely high magnetic response on the baseline corresponds to magnetite iron formation.

In October of 2013 the company again contracted Larder Geophysics to complete ground magnetometer – VLF/EM surveys of the additional ground acquired as part of the Lac Group claim acquisition. This new data was subsequently merged with the 2010 ground survey data (Figure 9-2).



Source: Northern Gold 2010

Figure 9-1: 2010 Contoured Total Field Magnetic Plan Map – Garrison Property



Source: Northern Gold 2010

Figure 9-2: Merged 2010 & 2013 Contoured Total Field Magnetic Plan Map – Garrison Property

9.1.3 2010 Garrcon Drill hole Collar Survey

During the Company's attempt to ground truth collar locations of historical Garrcon diamond drilling it was evident that there were inconsistencies in the data supplied by ValGold. Northern Gold identified location inaccuracies related to diamond drill holes drilled from the "Cominco Grid". Ground-truthing deemed collar locations for holes drilled from the historical "Newfield Grid" to be accurate. Between January 26th and May 30th 2010, Northern Gold's Civil Technician, Dave Eves utilized a differential global positioning system (DGPS) to identify multiple drill holes and historical grid lines on the "Cominco Grid" and reposition these holes and grid lines to fit the ground-truthed model. The overall repositioning resulted in a roughly 10 metre shift to the West for all "Cominco Grid" drill holes.

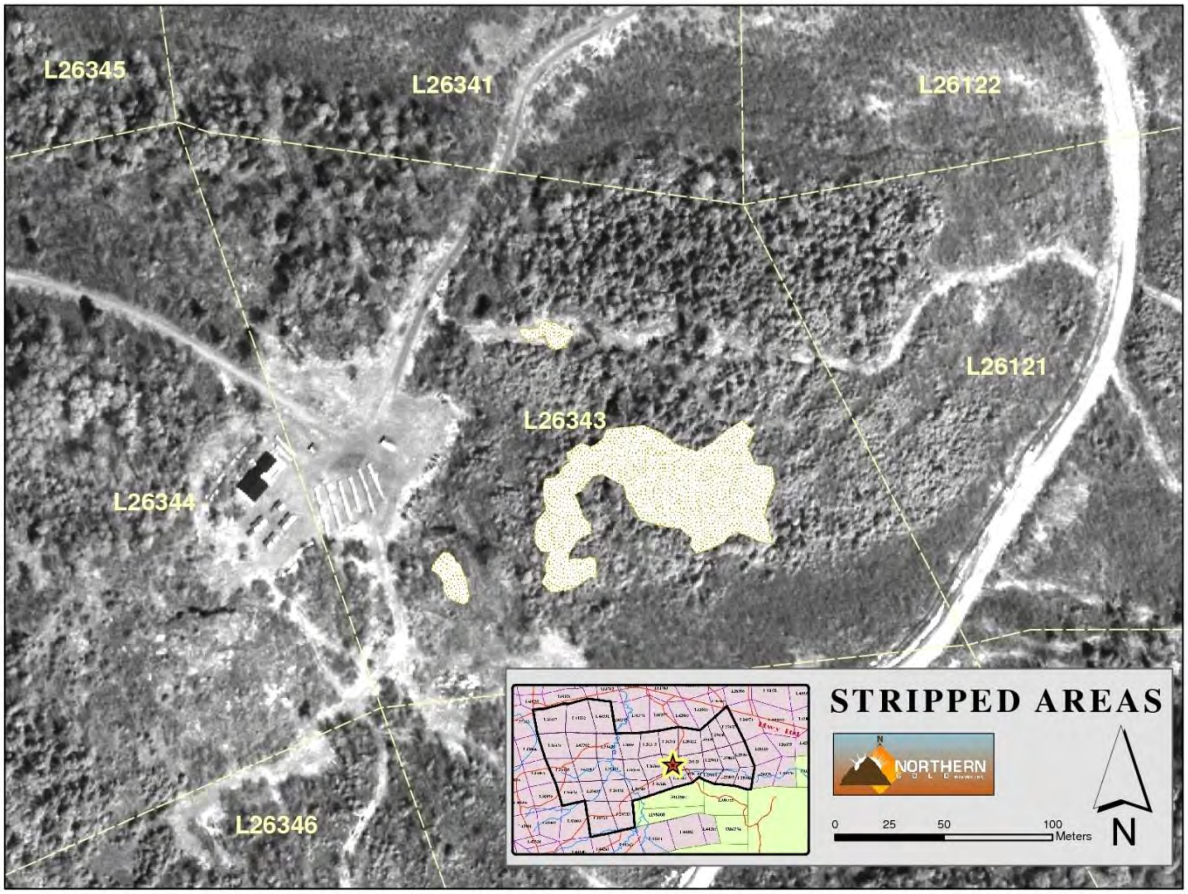
9.1.4 2010 Garrison Rehabilitation

In addition to property and core rehabilitation work conducted on the property in 2009 (Roy and Trinder, 2010), the following work was conducted in 2010:

- New core storage pads were constructed and new core storage racks were purchased and set up at the core shack facility.
- The core shack building was expanded to provide additional short term drill core storage until logging and splitting are completed, improve the core splitting work area and provide covered cold storage for ATV's and snow machines.

9.1.5 2010 Garrcon Surface Stripping / Sampling

Following receipt of high grade assays from grab samples collected on an outcropping quartz vein identified as the 1070 vein, Company prospecting found other quartz veins and evidence of earlier Cominco (?) work nearby. Consequently, a surface stripping program was initiated at the Garrison site on May 13th and conducted intermittently until July 3rd 2010. A total of four areas were stripped of overburden with an excavator and washed using a Wajax fire pump. The total surface area exposed in all four areas is roughly 5,000 m^2. The stripped and washed areas are identified as the light beige stippled areas in Figure 9-3.

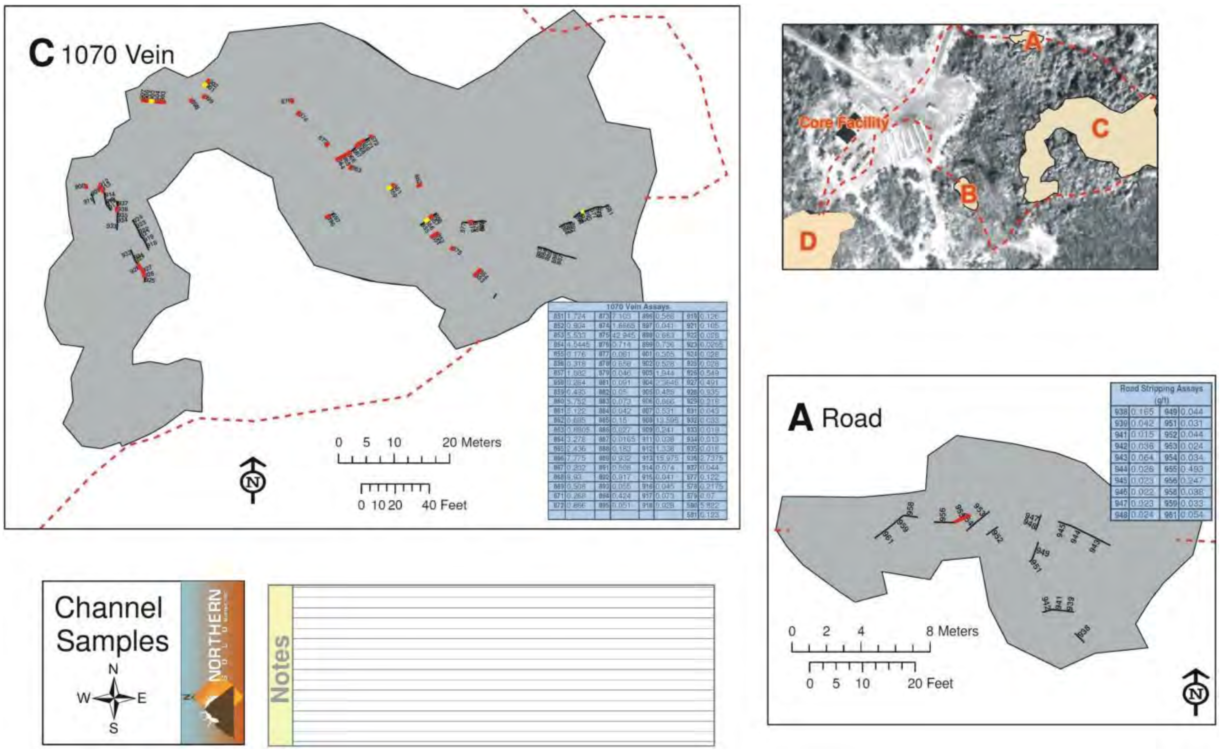


Source: Northern Gold 2010

Figure 9-3: 2010 Garrcon Surface Stripping Locations

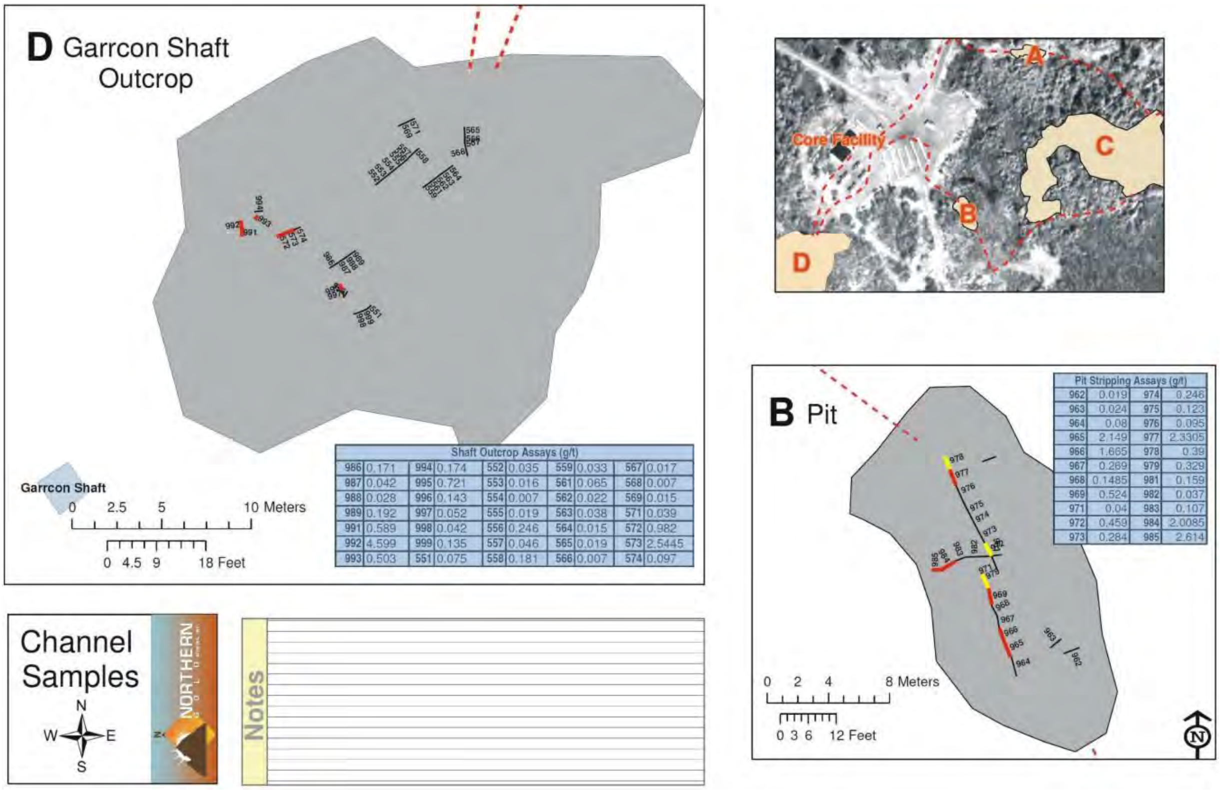
The largest of the four stripped areas focused on multiple high-grade veins found east of the core shack along the Garrcon Shaft Zone with visible gold frequently observed in the newly exposed quartz veins (outcrop area C). Area D is located immediately east of the hiostoric Garrcon Shaft and the other two stripped areas (A and B) were significantly smaller, focusing on small surface showings around drill hole collars from previous drilling by Northern or other operators.

In July and August 2010 approximately 150 metres of channel samples were cut on the newly exposed outcrops with a self-propelled circular saw using a diamond cutting blade (Figure 9-4 and Figure 9-5). Samples were collected from the channels at a maximum of one metre intervals. Channels were cut with an approximate 4 centimetre width and 4 centimetre depth. Channels were cut in both north-south and east-west directions and tested both overall mineralized zones and specific veins/stringers. Channel samples returning greater than 0.3 and 0.5 g/tonne gold are highlighted in yellow and red in (Figure 9-4 and Figure 9-5). Howe recommends detailed mapping and additional sampling on a more detailed east-west and north-south grid pattern at stripped area C and possibly area B and outcrop area D. Sampling on an orthogonal grid pattern will assist in confirming the spatial distribution of the gold mineralization.



Source: Northern Gold 2010

Figure 9-4: Distribution of Garrcon Surface Channel Samples and +0.3 g/tonne Au Intervals (+0.3 and +0.5 g/tonne Au highlighted yellow and red respectively)



Shaft Outcrop Assays (g/t)									
986	0.171	994	0.174	552	0.035	559	0.033	567	0.017
987	0.042	995	0.721	553	0.016	561	0.065	568	0.007
988	0.028	996	0.143	554	0.007	562	0.022	569	0.015
989	0.192	997	0.052	555	0.019	563	0.038	571	0.039
991	0.589	998	0.042	556	0.246	564	0.015	572	0.982
992	4.599	999	0.135	557	0.046	565	0.019	573	2.5445
993	0.503	551	0.075	558	0.181	566	0.007	574	0.097

Pit Stripping Assays (g/t)			
962	0.019	974	0.246
963	0.024	975	0.123
964	0.08	976	0.095
965	2.149	977	2.3305
966	1.665	978	0.39
967	0.269	979	0.329
968	0.1485	981	0.159
969	0.524	982	0.037
971	0.04	983	0.107
972	0.459	984	2.0085
973	0.284	985	2.614

Source: Northern Gold 2010

Figure 9-5: Distribution of Garrcon Surface Channel Samples and +0.3 g/tonne Au Intervals (+0.3 and +0.5 g/tonne Au highlighted yellow and red respectively)

9.1.6 2010 Garrcon Metallurgical Testing

In late 2010, Northern Gold submitted two composite samples of Garrcon mineralization to SGS Mineral Services of Lakefield, Ontario for preliminary metallurgical testwork. Results of the testwork are presented in Section 13 of this report.

9.1.7 2010 Garrcon Petrographic Study

Northern Gold submitted fourteen drill core samples to Craig H.B. Leitch, Ph.D., P. Eng., 492 Isabella Point Road, Salt Spring Island, B.C. for petrographic study in late 2010.

Mr. Leitch was provided the samples without field names in order not to influence his interpretation. He therefore based his rock type classification on petrographic textures. Mr. Leitch identified two mafic metavolcanic samples (PS-1 and 5), two intermediate crystal tuff samples (PS-6 and 7), seven felsic tuff to ash tuff samples (PS-4 and 8 to 13), two samples of possible hypabyssal intrusive porphyry (one felsic, PS-2, and one mafic, PS-14), and one sample of magnetite facies banded iron formation (BIF) (PS-3).

Albite-Kspar-dolomitic alteration or ankeritic carbonate-quartz-chlorite-sericite-pyrite-magnetite/hematite-rutile alteration is significant in most of the samples except PS-14, and is generally associated with intense, locally pervasive, stockworks of thin veinlets of quartz-carbonate ± albite-Kspar-chlorite-sulfides-magnetite/hematite, very minor chalcopyrite and possible trace sphalerite.

Gold was observed in two samples, PS-8 (included in, or along microfractures in, vein pyrite) and PS-11 (in Kspar or carbonate-chlorite-pyrite-hematite-local native gold stockwork veins). Gold was not observed in PS-13 which was reported to contain visible gold in the hand specimen.

9.1.8 2010 – 2014 Garrison Environmental Baseline Study / Permitting

9.1.8.1 2010 – 2011 Environmental Baseline Study / Permitting

Northern Gold retained N.A.R. Environmental Consultants Inc. (NAR) of Sudbury, Ontario from 2010 to 2011 to initiate environmental baseline studies on the Garrison property in anticipation of advanced exploration permitting and potential resource development. NAR's program is presented in Section 20 of this report.

9.1.8.2 2011 – 2014 Environmental Baseline Study / Permitting

In the fall of 2011, Blue Heron Solutions for Environmental Management Inc. (Blue Heron) of Timmins, Ontario, in conjunction with Golder Associates Ltd. (Golder), were contracted by Northern Gold to conduct a review of baseline study requirements, the existing NAR environmental baseline program, and to provide recommendations to expand upon the program to ensure sufficient and appropriate baseline information was being collected for the planning, permitting and potential development of the Company's proposed Garrcon open pit in particular. A Phase 1 Environmental Baseline Study Report on the NAR environmental baseline program (Blue Heron, 2012a) was prepared and submitted to Northern Gold. In support of the recommendations outlined in that report, the Blue Heron and Golder subsequently prepared a scope of work plan for a comprehensive Phase 2 Environmental Baseline Study to prepare Northern Gold for permitting of the Garrcon project (Blue Heron, 2012b). Northern Gold retained Blue Heron and Golder in April 2012 to conduct the recommended work. Blue Heron and Golder's program is presented in Section 20 of this report.

From 2012 to 2014 the Company continued environmental and permitting-related activities for the Jonpol and Garrcon Deposits as part of an ongoing baseline sampling program. Activities included water quality sampling of the creeks, profile water sampling of the Jonpol vertical shaft and rock dump sampling at Jonpol for acid rain drainage (ARD) and metal leaching analyses.

Hydrogeological and geotechnical studies commenced for the Jonpol closure plan in November 2012. A crown pillar assessment analysis for the Jonpol mining area, involving the drilling of orientated diamond drill holes was undertaken and a geotechnical component was completed by mid-December 2012. The Company continued its efforts towards the submission of a Closure Plan for the Jonpol deposit in 2013. A Consultation Plan was submitted to the Ministry of Northern Development, Mines (MNDM) on February 8, 2013 and a public meeting was held with Wahgoshig

First Nation (WFN) on March 8, 2013 with a presentation on hydrogeology given by Schlumberger Water Services. Also, a written confirmation from the Métis Nation of Ontario (MNO), stating that the MNO have no objection or concerns with the Jonpol Project at this stage, was received from the MNO by the Company on March 22, 2013. The Company submitted a revised Consultation Plan to the MNDM on March 28, 2013, and expects to submit the Closure Plan document to the MNDM for review in early 2014.

In 2013 the Company began working on an advanced exploration Closure Plan for a bulk sample on the Garrcon deposit. The bulk sample will provide "proof of concept" for the open pit gold mine, and will include grade control, drilling/blasting, crushing/screening, metallurgy and logistics data and costing. Pending regulatory approval, a tolling agreement with an offsite mill, and financing, the closure plan and related permits will allow the company to extract up to 150,000 tonnes from the Garrcon deposit in 2014. The Closure Plan is expected to be submitted to MNDM in early 2014.

9.1.9 2011 Garrison IP Geophysical Survey

An induced polarization (IP) survey was conducted by Peter E. Walcott & Associates Limited of 608 - 1540 West 2nd Ave. Vancouver British Columbia, using a pulse type system. The principal components of the system are manufactured by Instrumentation GDD Inc. of Quebec and basically consist of three units, a GDD GRx16 Receiver, a GDD 5 KW Transmitter and a Honda 6.5 Kw generator to power the transmitter. Approximately 34 kilometres of IP surveying was completed on the property from February 15 to March 20, 2011.

The survey was carried out using the "pole-dipole" method of surveying. In this method the current electrode, C_1, and the potential electrodes, P_1 through P_{n+1}, are moved in unison along the survey lines at a spacing of "a" (the dipole) apart, while the second current electrode, C_2, is kept constant at "infinity". The distance, "na" between C_1 and the nearest potential electrode generally controls the depth to be explored by the particular separation, "n", traverse.

Measurements – first to tenths separation – of apparent chargeability – the IP response parameter – and resistivity were made along the traverse lines with 25 and 50 metre dipole in various areas of the survey grid on 100 and 200 metre line spacing respectively.

Horizontal positions were recorded using a Garmin GPSMAP 60CX. This handheld unit has an accuracy of plus or minus 3 metres in excellent conditions with degradation to plus or minus 15 metres in obstructed areas such as thick forest. GPS Northings, eastings and elevations were recorded every 100 metres along the lines, although the GPS elevations were not used.

Station elevations were recorded using a Brunton ADC Summit altimeter. This instrument measures elevations using barometric pressures to an accuracy of plus or minus 3 metres. Corrections for errors due to variations in atmospheric pressure were made by comparison to readings obtained on a similar instrument, held stationary at a base location at 2 minute intervals. Altimeter elevations were recorded every 50 metres.

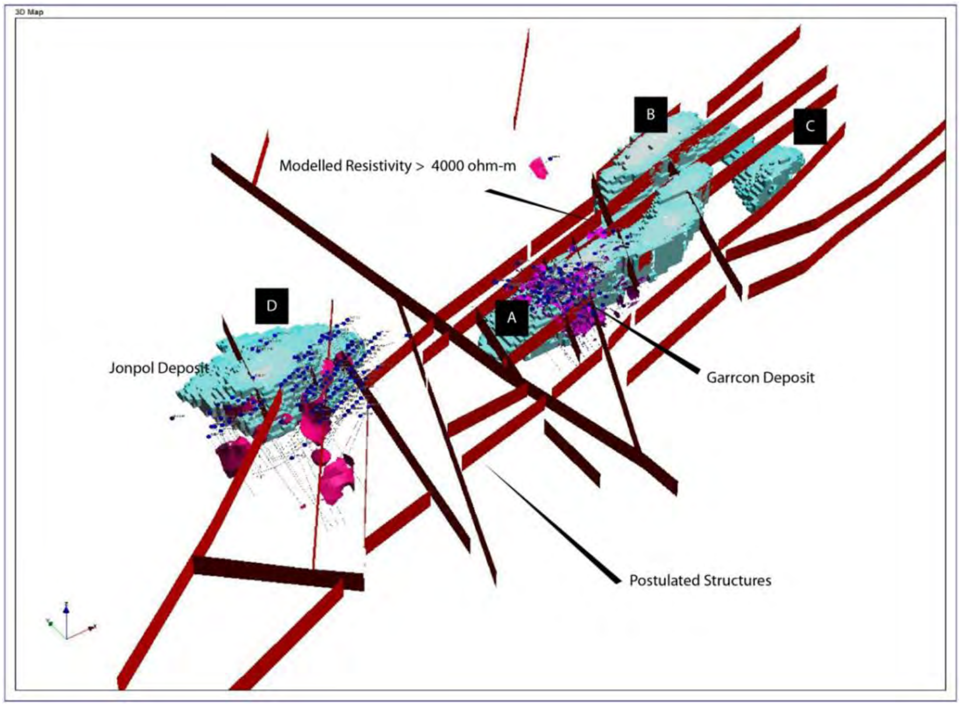
The I.P. data are presented by Walcott (2012) as individual pseudo section plots of apparent chargeability and resistivity at a scale of 1:5,000 along with 3D inverted sections and a discussion of the results.

A large number of inverted chargeability curves are potentially related to clay responses. Despite efforts to circumvent these issues a number of chargeability readings within the area of interest were removed. The data was then subjected to 3D inversion using Geoelectrical Loke 3D software. The chargeability component of the survey proved somewhat challenging and inversion parameters were modified in an attempt to compensate for the negative values, thus creating some doubt as to the effectiveness of the chargeability inversion.

Despite the potential limitations of the chargeability component of the survey, the 2011 induced polarization survey delineated a number significant features, in particular, a number of resistive units are proximal to both the Garcon and Jonpol deposits within the modeled resistivity data, and are likely associated with a silicified unit which hosts the aforementioned deposits (Walcott, 2012).

The Garrcon deposit is encompassed within an east-northeast trending resistive unit ‘A’ (Figure 9-6). The main Garrcon deposit is situated on the western end of this resistive unit flanking a small magnetic high. A moderate chargeability anomaly occurs within the region of known mineralization (Figure 9-7). A number of weak cross structures are interpreted from the magnetic dataset of the Ontario government airborne Megatem survey and may be a factor controlling the distribution of mineralization (Walcott, 2012).

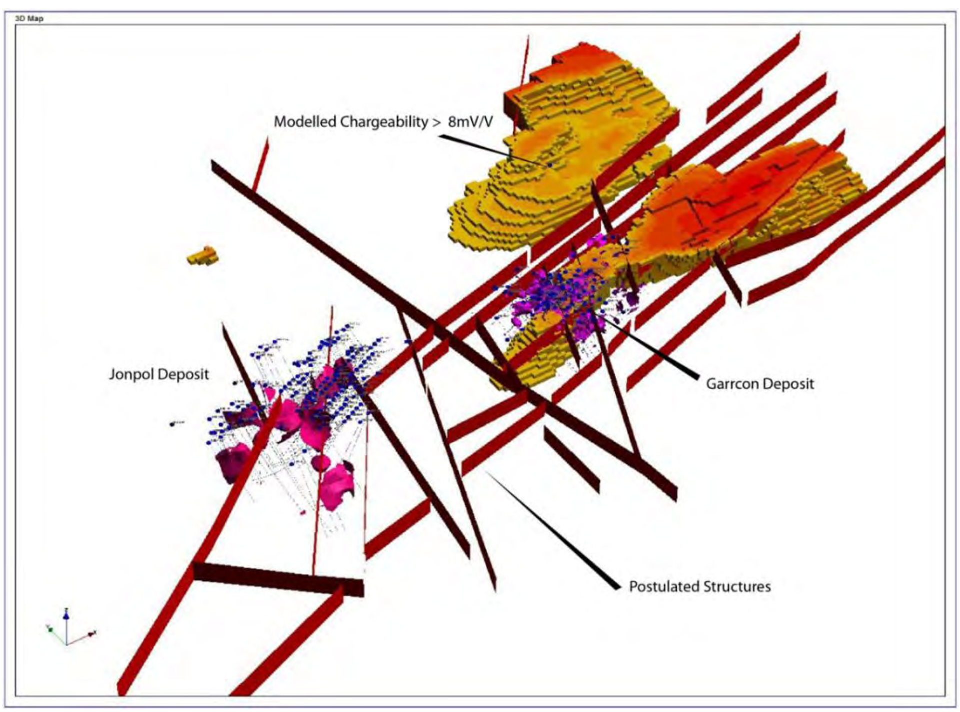
As the east-northeast trending resistive unit ‘A’ progresses east, it flanks the contact between the metasediments in the south and the volcanic unit in the north and is truncated in the east by a weak northwest trending structure interpreted from airborne magnetic (Figure 9-6). Throughout resistive unit ‘A’ a weak to moderate chargeability response is present within the modeled data set, however given the aforementioned issues with the chargeability responses, Walcott (2012) indicates caution should be exercised when evaluating it.



Source: (Walcott, 2012)

Figure 9-6: Modeled 3-D Resistivity

(perspective 3D view to NNE, no fixed scale; modeled resistivity = blue voxels; modeled mineralized drill intercepts = magenta)



Source: (Walcott, 2012)

Figure 9-7: Modeled 3-D Chargeability

(perspective 3D view to NNE, no fixed scale; modeled chargeability = orange voxels; modeled mineralized drill intercepts = magenta)

Paralleling the main unit, a secondary resistivity feature 'B' is present north of 'A' and within the Munro fault zones in the eastern portion of the survey grid (Figure 9-6). This feature is also associated with a weak to moderate chargeability response (Figure 9-7) and may be of interest. Walcott (2012) recommends that historic exploration data for this area should be reviewed and compiled, and if warranted this resistivity feature should be drill tested.

North of anomaly 'B' a large chargeability zone is observed (Figure 9-7), within a lower resistivity unit, on the north side of the Munro fault zone. Walcott (2012) interprets that this chargeability anomaly is likely associated with a lithological change and is of little interest.

Immediately south of Anomaly 'B' within a mapped meta-sediment unit, a large chargeability high, within moderate resistivity 'C' is observed (Figure 9-6 and Figure 9-7). This feature is associated with an intense magnetic high, potentially reflecting a banded iron formation.

Over the Jonpol deposit in the western portion of the survey area, a large resistivity feature 'D' can be observed in the modeled response, associated with a weak magnetic feature (Figure 9-6). The Jonpol deposit is situated on the southern contact, partially contained within the resistivity high. No discernible chargeability response can be observed within this zone.

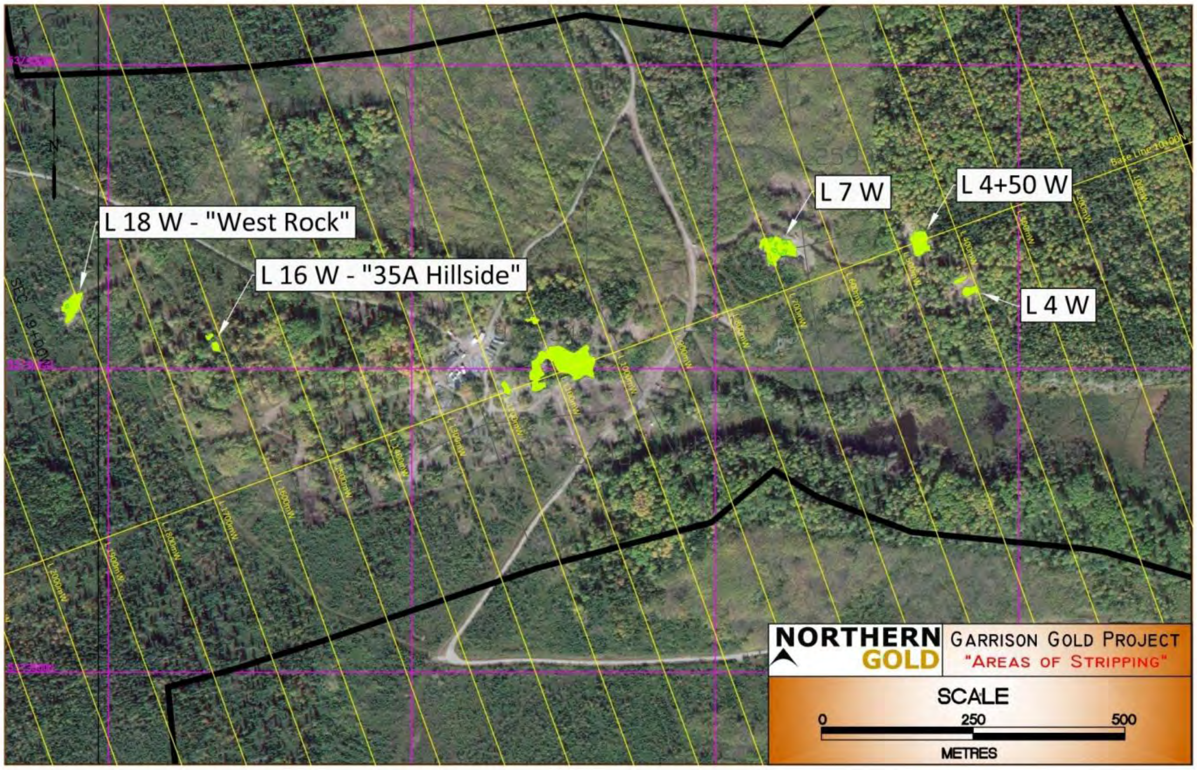
Walcott (2012) recommends that before additional geophysical surveys are undertaken, a detailed review of the Ontario government airborne Megatem survey should be completed. The raw EM data should be obtained and 3D inversion should be performed in order to generate a regional resistivity model over the Garrison property in an attempt to identify any highly resistive zones potentially associated with silification. In addition Walcott (2012) suggests that a high resolution heli-borne magnetic survey utilizing a horizontal gradient system may be useful in identifying weak cross structures bisecting the more resistive zones.

9.1.10 2011 Garrcon Surface Stripping / Sampling

Northern Gold continued a surface stripping program in the Garrcon deposit area in 2011. A total of five areas were stripped of overburden with an excavator and washed using a Wajax fire pump. The areas stripped and washed are identified in Figure 9-8 as the yellow striped areas.

One stripped area (L7W) was completed in May 2011 and focused on multiple veins in metasediments immediately north of the east end of the Garrcon resource area (Figure 9-8). Later in 2011 four additional areas were stripped. Two of these stripped areas (L4W and L4+50W) focused on multiple veins in metasediments immediately north of the east end of the Garrcon resource area (Figure 9-8). Two other stripped areas (Hillside and

L18W) were completed northwest of the Garrcon resource area and south of the Jonpol East zone (Figure 9-8).



Source: Northern Gold 2011

Figure 9-8: 2011 Garrcon Surface Stripping Locations (labeled)

Approximately 248 channel samples were cut on the newly exposed bedrock surface (L7W area was not sampled due to time constraints) with a self-propelled circular saw using a diamond cutting blade (Figure 9-9 and Figure 9-10). Samples were collected from the channels at a maximum of one metre intervals. Channels were cut with an approximate 4 centimetre width and 4 centimetre depth. Channels were cut in both north-south and east-west directions and tested both overall mineralized zones and specific veins/stringers. Twenty-eight (28) samples returned greater than 100 ppb Au of which 8 returned greater than 300 ppb Au and of which 7 returned greater than 500 ppb Au. Howe recommends detailed mapping and if possible additional sampling on a more detailed east-west and north-south grid pattern at stripped areas L4W, L7W, L4+50W and L18W–West Rock. Sampling on an orthogonal grid pattern will assist in confirming the spatial distribution of the gold mineralization.

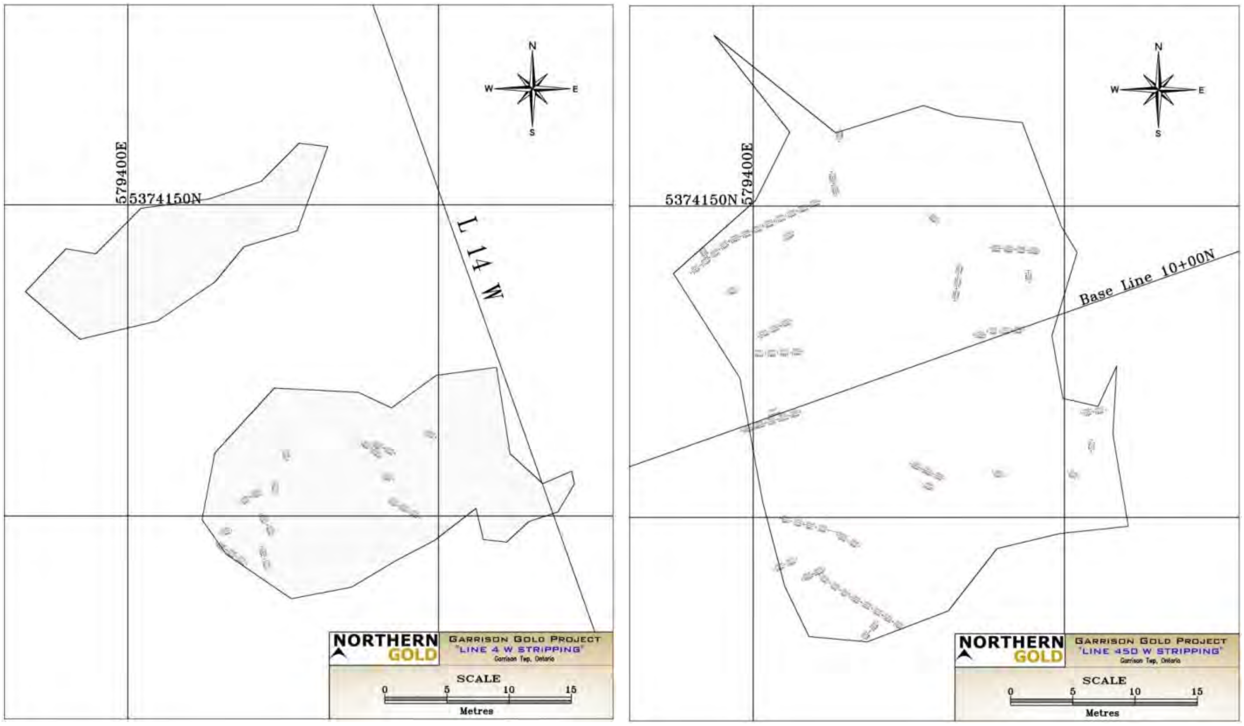


Figure 9-9: Distribution of Surface Channel Samples at 2011 Stripping Areas L4W and L4+50W

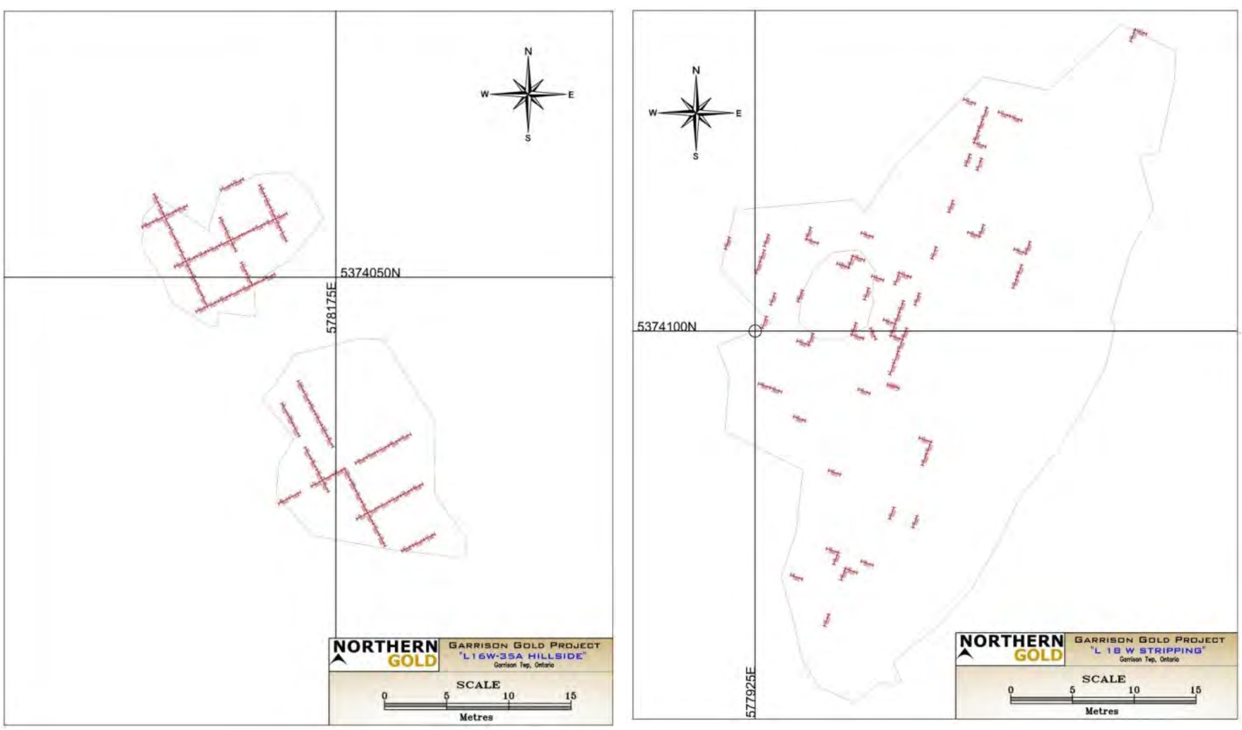


Figure 9-10: Distribution of Surface Channel Samples at 2011 Stripping Areas L16W - Hillside and L18W - West Rock

9.1.11 2011-2012 Hyperspectral Core Mapping

Northern Gold retained Photonic Knowledge Inc. (PK) of 481 Grande-Côte Rosemere, Québec in the spring of 2011 to conduct a test of its Core Mapper™ hyperspectral imaging system on 4,900 metres of Garrcon core including the generation of a project specific spectral library.

The Core Mapper™ hyperspectral system collects and analyses information from across the electromagnetic spectrum. The wavelength differences of absorbed and reflected light shone onto the core samples is analysed in hundreds of very narrow bands of the visible and near infrared light spectrum between wavelengths of 400 and 1000 nanometers down to a resolution of 2 nanometers. This technological application has a spatial precision of 1 square millimeter. Processing of the information identifies characteristic patterns for minerals, rock types and alteration types that can be mapped and displayed graphically in a variety of ways, in two or three dimensions, to guide additional drilling, model the deposits, target assaying zones within the core and generally speed up interpretation of results and generally add value by providing new insights into this and other data collected in a mineral exploration program.

The Core Mapper™ system simultaneously analyzes up to 5 boxes of drill core with resolution of up to 1 mm^2 per pixel and a field of view of 1.5 m^2. Up to 1,000 metres of NQ core may be processed per 12 hour shift. A second camera also acquires a high-definition RGB image (classic "photograph") of the core samples. The hyperspectral data is then processed to generate:

- A spectral classification of elements based of a spectral library highlighting mineralogy, lithology and alteration.
- A linearized image of the spectral classification.
- A digital file with hyperspectral data for import into drilling logs and modeling software.

PK generated a preliminary spectral library using core samples provided by Northern Gold and applied it to the initial test of 4,900 metres. Hyperspectral (and visual) identification of various lithologies at Garrcon is complicated by the pervasive overprint alteration minerals. Northern Gold and PK developed two spectral libraries, one to identify lithologies and the other alteration. The alteration-based spectral library is based on detailed analysis of alteration mineralogy in selected core samples and Northern Gold reports a strong correlation to gold assay values.

Northern Gold subsequently retained PK to conduct hyperspectral imaging of drill core at the Garrison Property. As of Howe's 2012 report, all Northern Gold Garrcon drill core to date has been scanned as well as 14 historic archived Garrcon drill holes and 3 historic Jonpol East zone drill holes. At that time, Northern Gold was using Core Mapper™ 1 to 2 days per week to map and determine the mineralogic content of approximately 1,500 to

2,000 metres of core with interpretation of the hyperspectral imaging data by Northern Gold personnel ongoing. Northern Gold's plan was to continue to use the Core Mapper™ system to analyze core from ongoing drilling and over 100,000 metres of historic core drilled by previous operators at the Jonpol deposit and elsewhere on the Property.

A corporate decision was made to discontinue hyperspectral imaging in October of 2012. Up to that time, 90,600m of Northern Gold diamond drill core from 278 drill holes including drill hole extensions and 4,050m of historical diamond drill core from 15 drill holes had been imaged.

9.1.12 2012 Garrison Structural Mapping

The Company contracted Tony Gilman and Thomas Mumford of Terrane Geoscience Inc. of Halifax, N.S. to conduct mapping and initial structural analysis on the Garrison property from October 10 to 21, 2012. The primary findings of the structural mapping and analysis on the property are:

- The JP zone occurs in a possible trans-tensional zone (southward jog) related to D3 left lateral movement along the Munro Fault zone. This southward jog could potentially represent a dilational zone that acted as a control on gold mineralization. This could prove useful in guiding further exploration on the property (i.e. by looking for southward jogs in the Munro and/or Porcupine-Destor Fault zones).
- In the Garrcon region of the property, the majority of the visible gold observed occurs in the (VJ2) flat lying extensional vein set. This helps constrain timing of the gold mineralizing event on the property between the D1 to D4 deformational events. Additionally, it may help in understanding Garrcon mineralization along strike and at depth.
- Pyrite enrichment in the axial planes of F3 folds was observed on the property. Given the correlation between gold mineralization and pyrite enrichment noted on the property the 060°/60° trend and plunge to F3 folds could be of significant importance as a control to any gold mineralization/ore shoots. It may be possible to use this as a predictive tool to guide further exploration and/or for the follow up of known mineralization on the property, and as a guide to assist resource estimation, when trying to connect known mineralized zones.

9.1.13 2010, 2011 and 2012 Garrcon Diamond Drill Programs

Northern Gold's 2010, 2011 and 2012 Garrcon diamond drill programs have focused on in-fill drilling and expanding the Garrcon Deposit mineral resource. The drill programs are described in Section 10 of this Report.

9.1.14 2011, 2012 and 2013 Jonpol Diamond Drill Programs

Northern Gold's 2011, 2012 and 2013 Jonpol diamond drill programs have focused on in-fill drilling and expanding the Jonpol Deposit mineral resource. The drill programs are described in Section 10 of this Report.

9.1.15 2012-2013 Historic Jonpol Drill Core Re-logging and Sampling

In early 2012, the Company assigned a team of geologists to work on the historic Jonpol core. Historic drilling at the Jonpol Deposit by previous operators, both surface and underground, consists of approximately 102,767 metres in 385 drill holes. The Company estimates that 50% to 60% of this core was never assayed. The work program for this historic core consisted of re-logging to verify consistency with current lithologic terminology and knowledge, assaying of all un-assayed sections and check assays of previously assayed core for QA/QC purposes. Additionally, all historic drill hole collars that have been located were re-surveyed to ensure accuracy and location in the new property grid system. To date, approximately 44,000 metres of historic core has been re-logged and un-assayed core split and sent for assaying. This work has been suspended for the time being.

9.1.16 2013 Geotechnical Assessment for Proposed Garrcon Bulk Sample

In 2014 the Company plans to submit an advanced exploration closure plan to complete a bulk sample from the Garrcon depositGarrison. Pending regulatory approval, the closure plan and related permits will allow the company to extract up to 150,000 tonnes from the deposit in 2014. The bulk sample stockpile will be toll milled. The test mining should allow the Company to gather the data necessary to complete a pre-feasibility study of the deposit.

Pursuant to regulations in Part 2 and Part 8 of the Mine Rehabilitation Code of Ontario, Schedule 1, O.Reg.240/00, a geotechnical assessment for the proposed Garrcon bulk sample pits was completed by Terrane Geoscience Inc. ("**Terrane**") of Halifax, Nova Scotia under the direction of Tony Gilman, P.Eng. Utilizing geotechnical field mapping and two oriented diamond drill holes in addition to compressive strength testing, Terrane completed geotechnical analysis to design stable slopes for the Garrcon Bulk sample open pits. The results of this analysis have given a slope that is considered safe with a bench face angle of 80° and overall slope angle of 66° for a total slope height of 15 m.

The two diamond drill holes were drilled within the boundary of the East and West bulk sample pit domains and showed assay results consistent with Northern Gold's previous diamond drilling in the area. Each of the holes was 51m in length for a total of 102m. GGT-13-01 was drilled north into the west pit domain in shallow overburden and interested gold mineralization within the pit domain. GGT-13-02 was drilled east into the east pit domain and intersected shallow overburden and significant gold mineralization in the upper 15m of the east pit domain.

Assay highlights from the drill holes include:

- **2.40 g/t Au over 12.0m** (7.0-19.0m) GGT-13-01
- **4.10 g/t Au over 17.0m** (3.0-20.0m) GGT-13-02

9.1.17 2013 Infrastructure Changes

Construction of the new core shack and office facility was completed early in 2013. The new facility is located near the Jonpol Deposit project site. It hosts a core cutting room, core logging and sample preparation areas, several offices and meeting room. This new facility was required to accommodate the personnel to manage ongoing exploration activities on the additional landholdings and projects the Company has acquired. Also, the previous facility was located within the Shaft Zone of the Garrcon Deposit and needed to be removed to clear the way for additional work on the Garrcon Deposit.

9.1.18 2013 Jonpol Preliminary Metallurgical Testwork

On September 26, 2013 the Company announced preliminary metallurgical testwork results on samples taken from the Jonpol Deposit. Three composite drill core samples were selected by Northern Gold from the Company's drilling on the JD, RP and East Zones of the Jonpol Deposit and submitted to XPS Consulting and Testwork Services of Falconbridge, Ontario for metallurgical testing. Results of the testwork are presented in Section 13 of this report.

9.1.19 2013 903 Zone Diamond Drill Program

The Company completed 6 drill holes totaling 1,914 metres during its 2013 903 Zone diamond drill program. The drill program is described in Section 10 of this Report. Also, the historical diamond drill hole data for the 903 Zone was digitized.

9.1.20 2013 Hastings Zone Exploration

The Hastings Zone is an underexplored high grade gold showing in the central portion of the recently acquired Lac Properties ground. The Company's 2013 summer exploration program at the Hastings Zone focused on surface mapping, grab sampling, surface stripping and channel sampling. Three outcrops totalling 2,802 m^2 in area were stripped and channel sampled. The showing occurs in a Temiskaming type sedimentary host rock similar to that which hosts the Garrcon deposit 1800 metres to the east. The Hastings showing comprises a steeply dipping, north striking, linear quartz vein and vein arrays. The vein system is open along strike to the north and along its southern extent is interpreted as terminating along the Destor Porcupine Fault. The mineralized vein system was traced on surface for over 120 metres and shows mineralized widths from 0.7 to 2.1 metres. Significant surface channel results are tabled below:

Channel ID	Grade (g/t)	Length (m)		Channel ID	Grade (g/t)	Length (m)
H13-4	2.29	0.7		H113-3	4.14	0.8
H14-4,5	3.47	1.9		H28-3	2.59	1.2
H16-3,4	20.56	2.1		H211-3	12.0	0.8
H17-4	3.23	1.0		H212-1	22.0	0.6
H111-3	3.23	0.7		H213-2	4.74	1.0

9.1.21 2013 – 2014 Garrcon Metallurgical Testing

In late 2013 Northern Gold submitted a composite drill core sample from the Garrcon Deposit to Kappes, Cassiday and Associates of Reno, Nevada for preliminary column leach testing of 100% minus 9.5mm crush material. Testwork is ongoing and results are pending.

9.2 Buffonta Property

9.2.1 2012 Reconnaissance Exploration

Company geologists began reconnaissance work at the Buffonta Property in 2012, investigating previously mined areas and sampling other areas to begin augmenting and verifying information learned during property acquisition due diligence.

9.2.1 2012-2014 Environmental Baseline Studies

Following signing of the Acquisition Agreement in the September 2012, the Company began planning and scheduling environmental background work to support the preparation of an application for an advanced exploration permit. Initial work was the selection of upstream and downstream sample points on Garrison Creek and tributaries to the Creek to begin establishing stream flow baseline data.

Activities have continued as part of an ongoing baseline sampling program with water quality sampling of the creeks, profile water sampling of the Kerr Pit and No. 6 Zone Pit, and rock dump sampling for acid rain drainage (ARD) and metal leaching analyses.

9.2.2 2012-2013 Diamond Drilling

The Company started a drilling program on the Buffonta Property in December 2012 and completed 24 drill holes totaling 8,128.5 metres on the Kerr Pit and No.5 and No. 6 zone areas by mid-2013. The drill program is described in Section 10 of this Report.

9.2.3 2012-2013 Geophysical Surveys

The Company completed a 41.6 km time domain pole-dipole induced polarization survey and a 45.3 km ground magnetometer survey on the Buffonta Kerr grid from December 3, 2012 to March 4, 2013. The consulting geophysicist has provided the Company with data interpretation and modeling of the chargeability and resistivity anomalies to guide further drilling and exploration on the Buffonta Kerr grid.

The Company established the 133 line kilometre Orecar/Thackeray exploration grid on the Buffonta Property, just south-southeast of the Buffonta Kerr grid. The Orecar/Thackeray grid is underlain by units of the Lower Blake River Assemblage, dominantly tholeiitic mafic volcanic rocks with some intermediate and felsic metavolcanics. The grid area is considered to lie in the area of intersection of north-northwest trending structures and the west-southwest projection of the Ghostmount Fault. Two geophysical surveys were undertaken during 2013 on portions of this grid: a 125.9 line-km ground magnetic survey and a 43.6-line km induced polarization survey.

9.2.4 2013 Geological Mapping and Sampling

The Company prospected, mapped and selectively sampled the Buffonta Property during the course of the 2013 summer field season. Investigative work focused on geophysical anomalies, fault zones and historical showings. Grab samples from these locations were analyzed for gold. Five grab samples returned preliminary gold values ranging from 1.03

g/t to 7.37 g/tonne. These higher grade samples were followed up with a stripping and channel sampling program late in the summer. Three outcrops with a total area of 1,600 m^2 were stripped and extensively channel-sampled (see below). The outcrops host gold-bearing veins with hematite-oxidized and sericite alteration haloes with up to 5% pyrite mineralization. Waste dumps were also sampled.

- The surface outcrop of the Buffonta No. 5 zone was excavated to complete geologic mapping and channel sampling. The Buffonta No. 5 zone is a shear hosted deposit along the Buffonta Turner fault. The zone has a known strike length of over 150 metres and has been traced at depth to over 120 metres. Significant surface channel sample results from the No. 5 Zone are tabled below:

Channel IDs	Grade (g/t)	Length (m)		Channel IDs	Grade (g/t)	Length (m)
B53-3	3.86	1.0		B514-1,2	2.68	2.0
B54-1,2	5.21	2.4		B515-1,2,3,4,5	8.98	5.1
B55-1,2	2.55	2.9		B516-1,2,3,4,5	14.09	5.1
B56-4	3.31	1.2		B517-1,2	9.96	2.1
B58-1,2,3	4.69	3.1		B517-7	2.46	1.0
B59-4	2.26	1.1		B519-1,2,3	5.35	3.0
B513-1,2,3	3.16	3.1		B520-1,2	3.54	2.0

- Geologic mapping and channel sampling was completed at two additional excavated surface outcrops. The two zones are near but not directly related to the No. 6 and No. 5 Zones. These two new zones, the Elbow and Roadside Zones, have returned anomalous gold tenures and locally higher grade gold mineralization. Significant surface channel sample results from the Elbow and Roadside Zones are tabled below:

Channel IDs	Grade (g/t)	Length (m)		Channel IDs	Grade (g/t)	Length (m)
BR5-2	1.36	1.0		BR8-1	1.83	1.2
BR6-3	1.50	1.0		BE-3	8.00	1.0
BR7-3	2.38	1.2				

9.3 Gold Pike

The Company has not yet conducted any significant exploration on the Gold Pike Property.

9.4 Michaud Property

The Michaud Property covers the confluence of two regional fault structures, the Munro Fault and Arrow Fault, both associated with the Destor-Porcupine Deformational event.

Previous property owners have completed diamond drilling on the Michaud Property. The Michaud Property is prospective for gold mineralization and represents a grass roots exploration project.

In early March 2013, the Company undertook a gradient induced polarization survey on a 5-line grid totaling 4 line-kilometres. At the end of April 2013, the Company expanded the grid and survey to cover 12 grid lines and 10.7 line-kilometres. Several chargeability anomalies outlined proximal to the Pipestone Fault warrant further exploration.

10 DRILLING

10.1 Garrcon Deposit

10.1.1 Historical Drilling on Garrcon Deposit

Initial drilling on the Garrcon Deposit occurred in the period 1935-1946 with additional drilling completed during 1983. None of this data is available in sufficient detail to be included in Northern Gold's current drill hole database. The most important historic data relating to Garrcon Deposit is the exploration work completed since 1985 by Cominco / Jonpol Explorations Ltd. and by ValGold Resources Inc.

The following surface diamond drill holes were completed by Cominco/Jonpol during the period 1985 to 1988 and by ValGold during 2006 and 2007. Northern Gold's current drill hole and resource database includes only holes drilled between 1985 and present (Appendix B).

Table 10-1: Historic Drilling included in Northern Gold's Garrcon Drill Hole and Resource Database

Company	Year	# Drill Holes	Length (m)
Cominco/Jonpol	1985	5	619.2
Cominco/Jonpol	1986	14	2,696.5
Cominco/Jonpol	1986-1987	6	1,417.3
Cominco/Jonpol	1987	11	3,481.4
Cominco/Jonpol	1988	3	592.3
ValGold	2006	10	3,393.0
ValGold	2007	5	2,361.0
	Total	**54**	**14,560.7**

10.1.2 Northern Gold Drilling on Garrcon Deposit

Northern Gold diamond drilling at the Garrcon deposit from 2009 to the end of 2012 is included in the Company's current drill hole database (Table 10-2) and detailed in subsections 10.1.2.1 to 10.1.2.4.

Table 10-2: Northern Gold 2009 to 2012 Diamond Drill Programs

Company	Year	# Drill Holes	Length (m)	# Drill Hole Extensions	Length (m)	Comments
Northern Gold	2009	10	2,336.0			Includes 2 failed holes GAR-09-03 restarted as GAR-09-03A GAR-09-07 redrilled as GAR-10-12
Northern Gold	2010	48	11,129.0	1	351.0	Includes 3 failed holes GAR-10-34 & 34B restarted as GAR-10-34C GAR-10-38 restarted as GAR-10-38A
Northern Gold	2011	118	39,273.0	7	576.8	
Northern Gold	2012	84	38,056.4	12	2,457.9	
	Total	**260**	**90,794.4**	**20**	**3,385.7**	

10.1.2.1 Northern Gold 2009 Drill Program

Northern Gold's 2009 diamond drill program focused on verifying results by in-filling historic drilling of the Shaft, South and North zones at the Garrcon Deposit. Northern Gold personnel supervised the Program.

Northern Gold's 2009 Garrcon Deposit diamond drilling program commenced October 26, 2009 and was completed on December 11, 2009. The program consisted of 2,330 metres of NQ core (47.6 millimetres diameter) in 10 drill holes. All holes were completed to their planned depths except holes GAR-09-03 and GAR-09-07 which were lost when they encountered the historic Cominco underground workings. GAR-09-03 required an offset and restart as GAR-09-03A. In 2010, drill hole GAR-10-12 was offset 3 metres from GAR-09-07 and completed to planned depth (Table 10-3, Appendix B).

Table 10-3: Northern Gold 2009 Garrcon Drill Holes

Diamond Drill Holes	# Holes
GAR-09-01 to 02	2
GAR-09-03A	1
GAR-09-04 to 10	7
Total	**10**

Major Drilling International Group (Major) of Winnipeg, Manitoba was the diamond drill contractor. For all holes, Major used a Longyear 50 skid-mounted rig that was operated on two 12-hour shifts per day, five days per week. The drill contractor constructed drill access trails and drill pads. Drill water was supplied by pump and hose from a local surface water sources.

At the completion of hole GAR-09-10, a total of approximately 2,571 core samples excluding standards, blanks and duplicates had been collected and sent to Swastika Labs in Kirkland Lake, Ontario.

10.1.2.2 Northern Gold 2010 Diamond Drilling

Northern Gold's 2010 diamond drill program at the Garrcon Deposit focused on infill drilling and some expansion of the east end of the resource where there were fewer holes. Northern Gold personnel supervised the Program.

In 2010, Northern Gold contracted with Major for a planned 10,000 metre diamond drilling program on the Garrcon Deposit. Major began drilling May 10, 2010 and as of December 16, 2010, 11,129 metres of NQ diamond drilling had been completed in 47 drill holes (Table 10-4, Appendix B). Three holes failed in overburden and required restarts (GAR-10-34, 34B and 38).

Table 10-4: Northern Gold 2010 Garrcon Drill Holes

Diamond Drill Holes	# Holes	Diamond Drill Hole Extensions	# Extensions
GAR-10-11 to 33	23	GAR-10-20X	1
GAR-10-34C	1		
GAR-10-35 to 37	3		
GAR-10-38A	1		
GAR-10-39 to 48	10		
GAR-10-50 to 58	9		
Total	**47**	**Total**	**1**

Major used up to two VD5000 skid-mounted rigs which operated on two 12-hour shifts per day, five days per week. The drill contractor constructed drill access trails and drill pads. Drill water was supplied by pump and hose from a local surface water sources.

The Company had completed up to hole GAR-10-22 at the time of Howe's first property visit on July 12, 2010. The drill rigs were onsite but the drilling program was on a three week break.

At the completion of hole GAR-10-58, a total of approximately 10,893 core samples from the 2010 drill holes and extensions excluding standards, blanks and duplicates had been collected and sent to the laboratory for analysis.

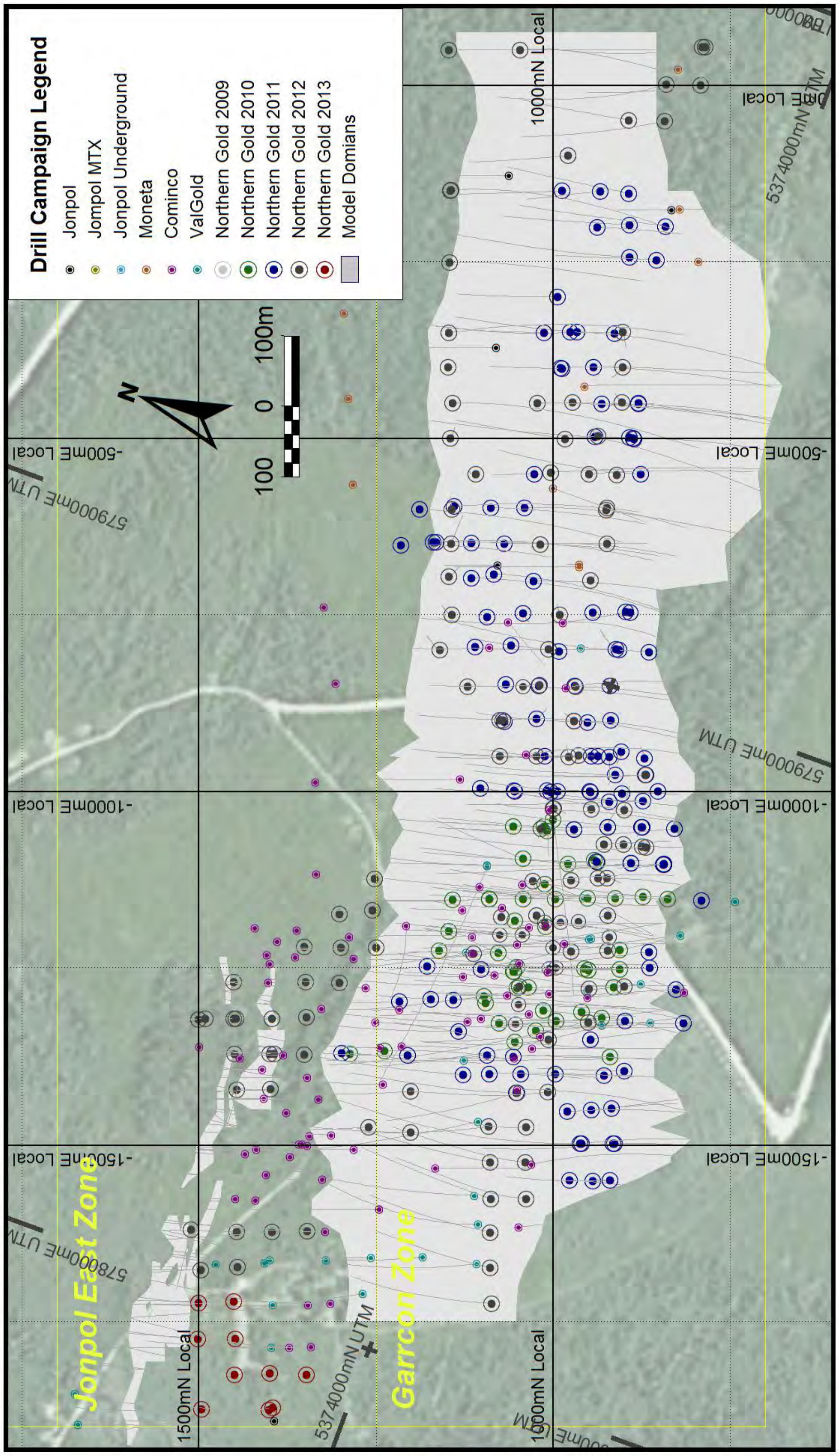


Figure 10-1: Historic and 2009-2012 Northern Gold Garrcon Diamond Drill Hole Plan (–xxx mE Local = xxx mW Local Grid)

10.1.2.3 Northern Gold 2011 Diamond Drilling

Northern Gold's 2011 diamond drill program was a continuation of its 2010 program and focused on infill and step-out drilling at the Garrcon Deposit. Northern Gold personnel supervised the Program as in 2009 and 2010.

The drill contractor, Major, resumed drilling January 4, 2011 and in August 2011, Asinii Drilling (Asinii) of Notre-Dame-Du-Nord, Quebec was added as a second drill contractor. In 2011, 39,273 metres of NQ diamond drilling was completed in 118 drill holes plus 576.8 metres in 7 hole extensions (Table 10-5, Appendix B). Four holes failed in overburden and required a restart.

Table 10-5: Northern Gold 2011 Garrcon Drill Holes

Diamond Drill Holes	# Holes	Diamond Drill Hole Extensions	# Extensions
GAR-11-49	1	GAR-11-24X	1
GAR-11-59 to 70	12	GAR-11-37X	1
GAR-11-71A	1	GAR-11-39X	1
GAR-11-72 to 126	55	GAR-11-50X	1
GAR-11-130 to 133	4	GAR-11-70X	1
GAR-11-134A	1	GAR-11-74X	1
GAR-11-135 to 138	4	GAR-11-95X	1
GAR-11-140 to 142	3		
GAR-11-143A to 144A	2		
GAR-11-145 to 152	8		
GAR-11-154	1		
GAR-11-160 to 183	24		
GAR-11-190 to 191	2		
Total	**118**	**Total**	**7**

Major used two Atelier VD5000 skid-mounted rigs which were operated on two 12-hour shifts per day, five days per week; Asinii used two Usinage Marcotte HTM2500 skid-mounted rigs which were operated on two 12-hour shifts per day, seven days per week. The drill contractors constructed drill access trails and drill pads. Drill water was supplied by pump and hose from a local surface water sources.

Major's two diamond drill rigs were working on holes GAR-11-61 and GAR-11-71A at the time of Howe's property visit on January 21, 2011.

At the completion of the 2011 drill hole program, a total of approximately 40,134 core samples from the 2011 drill holes and extensions excluding standards, blanks and duplicates had been sent to the laboratory for analysis.

10.1.2.4 Northern Gold 2012 Diamond Drilling

Northern Gold's 2012 diamond drill program was a continuation of its 2011 program and is focused on infill and step-out drilling at the Garrcon Deposit. Northern Gold personnel supervised the Program as during 2009 to 2011.

The drill contractors, Major and Asinii, resumed drilling January 3, 2012 and as of year-end, 38,056.4 metres of NQ diamond drilling was completed in 84 drill holes plus 2,457.9 metres in 12 hole extensions (Table 10-6, Appendix B).

Table 10-6: Northern Gold 2012 Garrcon Drill Holes

Diamond Drill Holes	# Holes	Diamond Drill Hole Extensions	# Extensions
GAR-12-127 to 129	3	GAR-12-46X	1
GAR-12-139	1	GAR-12-59X	1
GAR-12-153	1	GAR-12-66X	1
GAR-12-155 to 159	5	GAR-12-71AX	1
GAR-12-184 to 189	6	GAR-12-105X	1
GAR-12-192 to 213	22	GAR-12-114X	1
GAR-12-215 to 220	6	GAR-12-121X	1
GAR-12-222 to 223	2	GAR-12-131X	1
GAR-12-226 to 254	29	GAR-12-138X	1
GAR-12-260 to GAR-12-264	5	GAR-12-164X	1
GAR-12-266 to GAR-12-268	3	GAR-12-171X	1
GAR-12-270	1	GAR-12-242X	1
Total	**84**	**Total**	**12**

Until April 3, 2012, Major used two Atelier VD5000 skid-mounted rigs which were operated on two 12-hour shifts per day, five days per week and Asinii used two Usinage Marcotte HTM2500 skid-mounted rigs which were operated on two 12-hour shifts per day, seven days per week. After April 3, 2012 the contractors used one drill unit each, operating on two 12-hour shifts per day, five days per week. The drill contractors constructed drill access trails and drill pads. Drill water was supplied by pump and hose from a local surface water sources.

At the completion of 2012 drill hole program (GAR-12-270), a total of approximately 39,677 core samples from the 2012 drill holes and extensions excluding standards, blanks and duplicates had been sent to the laboratory for analysis.

10.2 Jonpol Deposit

10.2.1 Northern Gold 2011 to 2013 Diamond Drilling

Northern Gold's 2011-2013 diamond drill programs at the Jonpol Deposit focused on infill and step-out drilling. Northern Gold personnel supervised the Program as in the Garrcon 2009-2012 drill programs.

Late in 2011, six Garrcon drill holes were extended into the Jonpol deposit area totalling 2,262 metres. In 2012 (March to May and September to December) thirty-nine drill holes were drilled in the Jonpol Deposit area totalling 8,765.1 metres. Of these thirty-nine 2012 drill holes, six holes were geotechnical holes totalling 1,042.5 metres. Three drill hole extensions were also completed in 2012 totalling 1,064 metres. An additional twenty-six holes were completed in 2013 (January to May) totalling 7,982.3 metres. One drill hole wedge (JP13-16A) totalling 771 metres was also completed in 2013 (Table 10-7, Appendix B). Two 2012 holes required restarts.

Table 10-7: Northern Gold 2011 to 2013 Jonpol Drill Holes

Diamond Drill Holes	# Holes	Diamond Drill Hole Extensions	# Extensions
GAR-12-214	1	GAR-11-15X	1
GAR-12-224 to 225	2	GAR-11-35X	1
GAR-12-255	1	GAR-11-93X	1
GAR-12-256 to 259	4	GAR-11-94X	1
GAR-12-265	1	GAR-11-106X	1
GAR-12- 271A	1	GAR-11-109X	1
GAR-12-272 to 273	2	GAR-12-34X	1
GAR-12- 274A	1	GAR-12-53X	1
GAR-12-275 to 290	16	GAR-12-58X	1
JP-12-01 to 04	4		
GGT-01 to 02	2	JP13-16A (wedge)	1
JDGT-01 to 02	2		
JPGT-01 to 02A	2		
GAR-13-291 to 294	4		
JP-13-05 to 17	13		
JP-13-20 to 28	9		
Total	**65**	**Total**	**10**

Major and Asinii were the drill contractors at Jonpol and the same rigs were used at both Jonpol and Garrcon. Until April 3, 2012, Major used two Atelier VD5000 skid-mounted rigs which were operated on two 12-hour shifts per day, five days per week and Asinii used two Usinage Marcotte HTM2500 skid-mounted rigs which were operated on two 12-hour shifts per day, seven days per week. After April 2012 the contractors used one drill unit each, operating on two 12-hour shifts per day, five days per week. Major's contract ended at the end of 2012 and Asinii returned with two Usinage Marcotte HTM2500 skid-mounted rigs which were operated on two 12-hour shifts per day, five days per week during the 2013 drill program at Jonpol. The drill contractors constructed drill access trails and drill pads. Drill water was supplied by pump and hose from a local surface water sources.

At the completion of JP-13-28, a total of approximately 20,246 core samples from the 2011, 2012 and 2013 Jonpol drill holes and extensions excluding standards, blanks and duplicates had been or were sent to the laboratory for analysis.

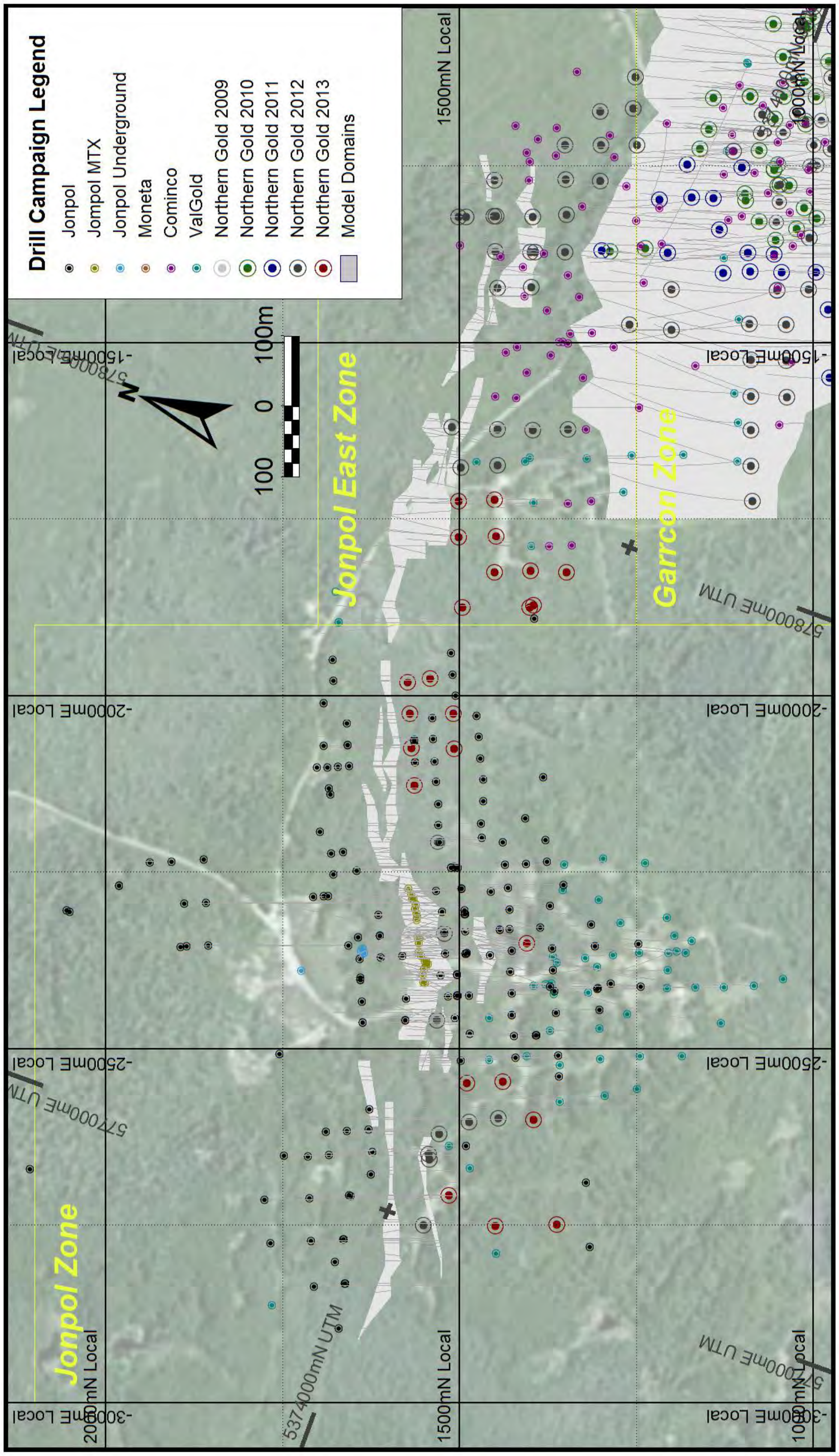


Figure 10-2: Historic and 2011-2013 Northern Gold Jonpol Diamond Drill Hole Plan (–xxx mE Local = xxx mW Local Grid)

10.3 903 Zone

The 903 Zone lies in the southwestern section of the Garrison Property. Northern Gold completed 6 drill holes (903-13-01 to 06) totaling 1,986 metres on the 903 Zone in 2013 including 72 metres in failed hole 903-13-02 (Table 10-8).

Table 10-8: 903 Zone - 2013 Diamond Drill Information

DDH ID	UTM E	UTM N	Elev (m)	Azi	Dip	Length (m)	Start	Finish
903-13-01	577640.7	5373060.9	291.6	337.8	-49.5	603	30/10/2013	12/11/2013
903-13-02 (Failed hole)	577605.9	5373154.5	293.3	340.0	-45.0	72	12/11/2013	14/11/2013
903-13-02A	577604.1	5373147.7	293.0	336.1	-47.0	99	14/11/2013	15/11/2013
903-13-03	577560.7	5373136.1	294.6	334.1	-47.9	363	15/11/2013	19/11/2013
903-13-04	577085.6	5373123.5	301.4	336.3	-51.4	330	20/11/2013	28/11/2013
903-13-05	577198.4	5373101.7	299.9	337.6	-46.3	345	29/11/2013	02/12/2013
903-13-06	576962.5	5373315.0	297.0	160.0	-45.0	174	03/12/2013	11/12/2013

Assay highlights from the drill holes include:

Table 10-9: 903 Zone – Significant Diamond Drill Assay Intervals

DDH ID	From (m)	To (m)	Length (m)	Au (g/tonne)
903-13-04	311.5	315.1	3.6	3.21
903-13-05	34.9	42.0	7.1	4.67
903-13-05	312	320.0	8.0	3.21
903-13-06	58.0	75.0	17.0	2.60

The 903 Zone has been the subject of exploration dating to the 1940's and to date over 50 drill holes have traced the zone along 720m of strike length. Viewed as a bulk tonnage open pit and underground exploration target by the Company, the 903 Zone shows considerable width of gold mineralization and favourable geology. The six 2013 Northern Gold drill holes have tested the zone along a 550m strike length with several drill intercepts on the recently acquired Lac Minerals property. The zone remains open at depth and along strike.

10.4 General Drill Hole, Core Handling, Logging and Sampling Methods and Approach

10.4.1 Historical Work

Historical (1985-1995) work on the Garrison Property was not reported in the manner currently required under NI 43-101, however, Howe is of the opinion that the geologists of the 1985-1995 era followed procedures related to the logging and sampling of drill core that would meet current NI 43-101 standards with exception of the insertion of QA/QC standards and blanks. However, written descriptions of the procedures were rarely recorded in technical reports at that time.

Sampling conducted by ValGold in its 2006-2007 drill programs have been described by Howe in its 2009 technical report (George, 2009). It is presumed by Howe that all historic sampling by Cominco / Jonpol in the 1985-1988 drill programs was completed in a manner consistent with accepted industry standard sampling and assaying techniques current at that time.

Based on a detailed review of the drilling and assay database of the Company's drilling and the historic drilling, Howe concludes that the historic sampling methods, core logging and assaying for the Property have met or were basically equivalent to standards currently required under NI 43-101.

The remainder of this section reviews the methods used by the Company.

10.4.2 Northern Gold Drill Hole Survey Methods

The drill casing is left in each hole and capped after the drill rig is removed to permit gyroscopic surveying of the hole and potentially future downhole geophysical testing and/or deepening of the holes.

Upon completion of drill holes in 2009 and 2010, drill hole collar coordinates and elevations were surveyed in UTM coordinates (NAD83) utilizing a Magellan Mobile Mapper CX DPGS with a horizontal accuracy of 0.3m. GPS coordinates of all collar locations were recorded and tied into the exploration grid. Northern Gold subsequently had all 2009 and 2010 drill holes resurveyed by Mazac Geoservices Inc. of 34, 9e Avenue Ouest, La Sarre, Quebec utilizing a Leica 1200 GPS system and Stabila electronic level.

Beginning in 2011, upon completion of drill holes, Northern Gold temporarily surveys the drill hole collar coordinates and elevations in UTM coordinates (NAD83) utilizing a Magellan Mobile Mapper CX DPGS (horizontal accuracy of 0.3m). GPS coordinates of all collar locations are recorded and tied into the exploration grid. Mazac, utilizing a Leica 1200 GPS system, completes a final survey of the new hole collars every one to two months when they are onsite to conduct downhole gyroscopic surveys.

In 2009 and 2010, the drill contractor completed down-hole directional surveys on all diamond drill holes at approximately 100 metre intervals using a Reflex EZ Shot single shot digital survey tool. Beginning in 2011, Northern Gold retained Mazac to complete gyroscopic downhole surveys of the completed drill holes in batches every one to two months. Because the holes are now surveyed after completion of the hole, five holes have not been surveyed due to damaged casing or downhole obstructions and six holes have been only partially surveyed due to downhole obstructions. Howe recommends that Northern Gold consider conducting preliminary Reflex downhole surveys at least near the top, middle and end of hole at the time of drilling to avoid the possibility of having no survey information if the gyroscopic survey cannot be completed because of subsequent obstructions in the hole.

Howe is of the opinion that the drill hole survey methods meet industry and NI 43-101 standards.

10.4.3 Northern Gold Drill Hole, Core Handling, Logging and Sampling Methods

Core is retrieved from the drill string using conventional wireline techniques. Sample security and chain of custody starts with the removal of core from the core tube and boxing of drill core at each drill. Core is removed from the core tube by the drill contractor's personnel, carefully placed in labeled wooden core boxes and localized by inserted depth blocks. The boxed core remains under the custody of the drillers until it is transported from the drill to Northern Gold's secure core processing and sampling facility at the Property by either the drill contractor or one of the Company's designated personnel.

2009 to 2012 diamond drill core was handled at the core processing facility located on the Garrcon Property near the Garrcon Shaft at the end of a gated road off of Highway 101. The facility had an office and an adjacent, secure core facility used for logging, sawing core and packing samples for shipment to the assay laboratory. The core facility had space for storage of core prior to logging. Construction of a new core shack and office facility was completed early in 2013. The new facility is located near the Jonpol Deposit project site. It hosts a core cutting room, core logging and sampling areas, several offices and a meeting room. This new facility was required to accommodate the personnel to manage ongoing exploration activities on the additional landholdings and projects the Company has acquired. Also, the previous facility was located within the Garrcon Deposit footprint and needed to be removed to clear the way for additional work on the Garrcon Deposit.

At the core facility, core boxes are opened and inspected to ensure correct boxing and labeling of the core by the drill contractors then re-closed. Remedial actions are undertaken, if necessary, to correct deficiencies in the spatial information prior to entry into a database. The core is stored securely at the company's core processing facility until it is moved into the core shack for processing.

Processing of the core starts with the core being laid out on workbenches and cleaned prior to logging and sample interval marking. Spatial information related to each box of core is checked for accuracy and consistency at this point. Remedial actions are undertaken, if necessary, to correct deficiencies in the spatial information prior to entry into a database. A geotechnical log of core recovery and RQD measurements is completed by a geological technician under the supervision of a Northern Gold geologist. A Northern Gold geologist then completes a descriptive log.

Prior to drill hole GAR-11-100 (June 2011) and after GAR-12-248 this descriptive log was a detailed description of rock type (maintaining consistency with previous work), structure, alteration, and mineralisation (including presence of VG, quartz veining and its angle with the axis of the core). During the period in which the Company was utilizing Photonic Knowledge ("PK") hyperspectral imaging, core logging comprised a quick lithologic log as a reference check for comparison with PK lithology (GAR-11-100 – GAR-12-248).

The core is next photographed with a high-resolution camera, capturing RAW digital images that are later converted to either a JPEG or TIFF formatted image. This high-resolution photography produces a digital image with a file resolution of 20 to 25 mega-pixels, assuring images of sufficient quality to enable re-logging on a monitor at greater than actual size. Three boxes of core are photographed at the same time, first photographing the core on one side and then rotating the core 180 degrees for a second image.

During the period in which the Company was utilizing hyperspectral imaging, following photography the core was securely stored on site and placed in the queue for hyperspectral imaging. Hyperspectral imaging provided a detailed analysis and false-colour image of the various hydrothermal alteration types associated with gold mineralization in the Garrcon Deposit. PK includes QA/QC imaging checks in every scan completed. Drill core and sample information are input into a digital database using portable computer workstations at the workbenches.

Following photography (and PK hyperspectral imaging when it was being conducted), the geologist selects the sample intervals and inputs the intervals into the drill hole database. The selected portions of core are marked and measured for sampling and are identified with one part of a three part assay tag, placed at the downhole end of the sample interval.

The core is sawn with a 230-volt 5hp Vancon water-cooled core saw with 14-inch diamond blade and with a mounted jig to assure the core is split equally. The core saw is located in a ventilated room separate from the core logging facility. Fresh water is used as a cooling/lubricating fluid; recycled water is not used.

The core is cut in half longitudinally, perpendicular to the foliation (50% split) with one half placed into plastic sample bags along with part two of the three part assay tag and sealed. The other half core is returned to the core box for archive and future verification and testing (if required). Each sample bag has the sample number written on the outside of the bag with black permanent marker corresponding to the sample tag placed inside. Information on the third part of the assay tag is entered into the database and the drill log, at which time accuracy and consistency are again reviewed and remedied, if necessary.

Core logging, sawing, sample bagging and sample shipment preparation is completed either by or under the onsite supervision of a Northern Gold geologist. Certified reference materials (standards), sample blanks and duplicate samples are inserted by Northern Gold into each sample batch submitted to the lab for the purpose of quality control (¼ core duplicates were submitted up to hole GAR-10-36, November 2010).

After sampling is completed, the archived core boxes are labeled and placed on core racks or cross-pile on pallets in the yard of Northern Gold's field office on the Garrison Property.

The process described above is standard procedure for all exploration drilling conducted outside of the Garrcon resource footprint, defined by Howe in its 2011 technical report (Hannon et al., 2011). Within that resource footprint, whole core analysis was utilized in preference to half-core analysis on infill diamond drill holes. Whole core sampling began with GAR-11-110 in August 2011 and stopped with the last infill hole, GAR-12-223 in mid-2012. Northern Gold noted that the benefits of and rationale for implementing whole core analysis included:

1. Larger sample size results in more reliable analyses, particularly in gold deposits.
2. At the time, Northern Gold was of the opinion that PK's hyperspectral imaging process produced far greater, better and more consistent lithology and alteration data than could be obtained by conventional visual core logging, reducing the need to retain half of the split core as a reference source.
3. The current physical archived core library from within the Garrcon resource footprint contains nearly 200 drill holes, which Northern Gold believes is more than adequate for any future needs.
4. The drill core photographic record is of sufficient quality to serve as a backup resource for questions that may arise regarding the lithology, alteration, or mineralization.
5. Coarse sample rejects are archived and securely stored onsite serving as another resource for questions that may arise regarding the lithology, alteration, or mineralization.

All of the Company's Jonpol diamond drill holes have been ½ core sampled.

Core recovery is generally very good in the Property area and Howe is confident that there are no sampling or recovery factors that would negatively impact the sampling procedures.

Sample intervals vary from 0.3 metres to a maximum of 1.0 metre in length. The majority of samples are 1.0 metre in length but some are shortened for geological reasons. More than 99% of the drill core is submitted to a certified analysis laboratory for assaying. The core not submitted for analysis is collected (retained) for hand samples, petrographic samples and ARD analysis or for such other technical needs as they arise from time to time.

Sealed sample bags are placed in rice sacks and sealed. Northern Gold personnel maintain possession of the samples in the secure core shack until delivery to the laboratory. Sample batches are transported to the analytical laboratory in a timely fashion by Company personnel and transferred to the laboratory's chain of custody procedures and protocols. Samples are shipped direct from the site to the laboratory or via the Company's Kirkland Lake office. Northern Gold's chain of custody protocols require the signing and maintenance of tracking logs and receipts when samples are shipped from the Property, and when they are picked up from analysis laboratories and delivered to another laboratory or returned to the Property. When utilizing commercial transportation to ship from the Property, all shipping sacks are sealed with a numbered tag, the removal of which is recorded upon receipt by the receiving analytical laboratory. Laboratory pulps and rejects are backhauled to the Property and stored in a locked boxcar container.

Following analysis, digital assay files provided by the laboratory are merged with a "from" and "to" interval file created by Northern, with the sample number linking the two files. This methodology limits data entry errors to sample numbering, as well as the "from" and "to" intervals.

Overall, sampling methods are to industry standards for mineralisation of this type. Howe notes that while Northern Gold's practice of whole core sampling of later infill holes within the Garrcon resource shell may not be considered an industry standard it is reasonable given the benefits and rationale of whole-core sampling of gold mineralization with a nugget effect such as that at Garrcon. Howe is of the opinion that whole core sampling of infill holes is appropriate within the current Garrcon resource "footprint" given that approximately 200 archived holes are available for this area and Northern Gold's implementation of protocols such as high resolution digital photography, secure onsite archiving of coarse sample rejects and state-of-the-art hyperspectral core imaging. Howe recommends Northern gold continue to half-core sample when testing the margins of the Garrcon resource and beyond where drill hole density is low, understanding of the lithology, alteration and mineralization is limited and a sufficient core archive has yet to be established. Howe is of the opinion that the sampling methods meet NI 43-101 standards.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Sampling and assaying methods conducted by ValGold in its 2006-2007 drill programs have been described by Howe in its 2009 technical report (George, 2009). It is presumed by Howe that all historic sampling by Cominco / Jonpol in the 1985-1988 drill programs was completed in a manner consistent with accepted industry standard sampling and assaying techniques current at that time.

Northern Gold's sample preparation and analyses for the 2009 drill program and holes GAR-10-11 and part of GAR-10-12 for the 2010 drill program were conducted by Swastika Laboratories Limited, Swastika, Ontario, P0K 1T0. Swastika Laboratories Limited participates in the Proficiency Testing Program for Mineral Analysis Laboratories (PTP-MAL), a testing program conducted bi-annually by the Standards Council of Canada. Swastika is the holder of a Certificate of Laboratory Proficiency.

Swastika Labs continued as Northern Gold's primary analysis laboratory until June 2010, at which time Swastika Laboratory informed the Company that turn-a-round for the Company's assays would increase because the laboratory had committed to providing priority service to another client who had committed to a significant sample volume. In the interest of maintaining better assay turn-a-round times, the Company decided to seek alternate analytical services.

As an immediate, though short term solution, the Company sent samples to Polymet Resources Inc. (Certified ISO 9001:2008) of Cobalt, Ontario (drill holes GAR-10-12 (part) to GAR-10-14).

Northern evaluated six analytical laboratories and selected Laboratoire Expert Inc. (Expert Labs) of 127 Boulevard Industriel, Rouyn-Noranda, Québec as its principal laboratory and SGS Canada Inc. Mineral Services (SGS) then of 1883 Leslie Street, Toronto Ontario as its secondary laboratory. Expert Labs is an accredited laboratory (PTP-MAL – Accredited by Standards Council of Canada – in accordance with ISO/IEC 43-1). SGS Mineral Services subsequently closed its Toronto office in 2013 and transferred operations to its site at 185 Concession St., Lakefield, Ontario. SGS-Toronto was and SGS Lakefield is a reputable, ISO/IEC17025 accredited laboratory qualified for the material analysed. Both Expert and SGS labs utilize industry standard quality control procedures.

As discussed in Howe's 2010 report (Roy and Trinder, 2010), a comparison of Swastika and Polymet check samples showed a significant scatter and generally poor gold analytical precision for pulps which Howe has attributed to the analytical detection limit and methods utilised at the Polymet laboratory. In addition, normal check sampling of primary Polymet analyses at Expert and SGS on samples from GAR-10-12 to GAR-10-14 returned differences between the check assays and the original Polymet results (Polymet was consistently lower, and in some cases, much lower) leading to the suspicion that the Polymet lab was under-reporting gold at the lower grades. Northern Gold submitted all pulps from the Polymet samples to both Expert Labs and SGS Mineral Services for re-assay. Upon comparison of the results from the three labs, Northern Gold, in consultation with Howe, elected to delete the Polymet assays from its assay database and average the Expert and SGS analytical results.

Northern Gold selected Accurassay Laboratories of 1046 Gorham Street, Thunder Bay Ontario to be its principal laboratory in early 2013. The use of Accurassay was then discontinued in April 2013 and SGS again became the principal laboratory with Swastika Laboratory acting as the check lab. Accurassay is a reputable, accredited laboratory (CAN P–4E - ISO/IEC 17025, and CAN–P–1579) qualified for the material analysed. The lab utilizes industry standard quality control procedures.

It is the opinion of Howe that all potential gold mineralized zones in the Company's drill core have been sampled and that that security, sample collection, preparation and analytical procedures undertaken by Northern Gold on the Garrison Gold Project during the 2009 to 2013 programs are appropriate for the sample media and mineralization type and conform to industry standards. Northern Gold has implemented a quality assurance and quality control (QA/QC) protocol as detailed in Section 11.6.

No aspect of the sample preparation subsequent to delivery to the laboratory was conducted by an employee, officer, director or associate of the Company.

11.1 Swastika Labs 2009-2010

Swastika Labs and its employees are independent from Northern Gold. Northern Gold personnel and consultants and contractors are not involved in sample preparation and analysis.

11.1.1 Sample Preparation

Sample preparation consisted of conventional drying in ovens if required; crushing; splitting and; pulverizing. After drying, the sample was passed through a jaw crusher producing material of approximately -1/2 inch, with further size reduction to -10 mesh by a roller mill. A 300 gm sample was riffle split from the -10 mesh sample and pulverised to >90% -200 mesh using a ring and puck pulveriser. Silica sand was used to clean the equipment between each sample to prevent cross contamination. Prepared sample pulps were matted to ensure homogeneity prior to analysis. The homogeneous sample was then sent to the fire assay laboratory.

11.1.2 Analytical Procedures

All samples were analysed for gold by fire assay. A homogenized 30 gram charge of the sample is mixed with a lead based flux fused for one hour and fifteen minutes. Each sample has a silver solution added to it prior to fusion that allows each sample to produce a precious metal bead after cupellation. The fusing process results in lead buttons that contain all of the precious metals from the sample as well as the silver that was added. The button is then placed in a cupelling furnace where all of the lead is absorbed by the cupel and a silver bead, which contains any gold from the sample, is left in the cupel. The cupel is removed from the furnace and allowed to cool. Once the cupel has cooled sufficiently, the silver bead is placed in an appropriately labeled test tube and digested using aqua regia. The samples are bulked up with 1.0 ml of distilled de-ionized water and 1.0 ml of 1% digested lanthanum solution. The samples are allowed to cool and are mixed to ensure proper homogeneity of the solution. Once the samples have settled they are analysed for gold using atomic absorption spectroscopy. The atomic absorption spectroscopy unit is calibrated using appropriate certified standards in an air-acetylene flame. All gold assays that are greater than 1 g/tonne are automatically re-assayed by fire assay with a gravimetric finish for better accuracy & reproducibility.

Swastika re-assays every 10th pulp (on average) as a check on laboratory precision and at their discretion frequently assays a second pulp.

11.2 Expert Labs 2010-2012

Expert Labs and its employees are independent from Northern Gold. Northern Gold personnel and consultants and contractors are not involved in sample preparation and analysis.

11.2.1 Sample Preparation

The total sample is dried if necessary and crushed to 90% -10 mesh. A 300 gram subsample is split out using a Jones type riffle splitter. The subsample is pulverized to 90% -200 mesh in a ring and puck pulveriser and used as the sample source for assaying.

The crusher reject material is stored until Northern is satisfied that assay results are acceptable, after which Northern instructs the laboratory to return the rejects to the Property or one of Northern Gold's designated personnel picks up the rejects and returns them the Property where they are placed in secure and dry storage for historic reference.

11.2.1 Analytical Procedures

All samples are assayed using the lead fire assay procedure with an AA geochemical finish. The detection limit is 0.005 g/tonne. All samples that assay higher than 1.0 g/tonne are re-assayed using a gravimetric finish to improve accuracy of the higher grade samples. The detection limit is 0.03 g/tonne.

Beginning in July 2010, Northern implemented the metallic screen lead fire assay analysis procedure for all sample intervals where visible gold or metallic minerals identified as visible gold are seen. Expert Labs metallic screen procedure is as follows:

- The entire sample is dried if necessary, crushed and pulverized.
- The pulverized material is screened by hand on a 100 mesh screen.
- The screen undersize is homogenized and lead fire assayed in triplicate (three individual 30g charges) using a gravimetric finish.

- The total screen oversize is lead fire assayed using a gravimetric finish.
- All assay results are combined using a weighted average calculation to determine an assay value for the entire sample.

As part of the Expert Lab's QA/QC protocol, the laboratory assays 10% of all samples submitted in duplicate. Additionally, the laboratory includes a reagent blank and a gold standard in each batch of 28 samples. All laboratory QA/QC results are reported to the Company.

Following completion of all assays, re-assays, analysis of results and upon instructions from Northern, the primary laboratory packages all remaining pulps, completes a submission document and ships the pulps to the secondary analysis laboratory, SGS-Toronto.

11.3 SGS Mineral Services 2010-2013

SGS Mineral Services and its employees are independent from Northern Gold. Northern Gold personnel and consultants and contractors are not involved in sample preparation and analysis.

In November 2010, because assay turn-a-round times at Expert in September and October were normally exceeding 25 days, the Company began sending a portion of its primary samples to SGS in Toronto. The resultant turn-a-round times for both Expert and SGS were better and the Company continued splitting the primary assaying between the SGS and Expert laboratories until the end of 2012. Following fire assaying and acceptance by the Company of the results, Expert was instructed to send pulps to SGS for analysis by CN solubility for gold and for geochemical analysis of a 32 mineral suite as discussed in more detail below. Following receipt of fire assay results from SGS, the Company issued instructions to SGS for the shipment of selected pulps amounting to about 5% of the samples submitted to Expert for re-assay as a check on the accuracy and efficiency of SGS. As of April 2013, SGS became the Company's principal laboratory and Swastika Laboratory became the check lab.

11.3.1 Sample Preparation

Primary core samples received at SGS are prepared using its sample preparation package PRP89, which consists of conventional drying if required, in 105^{o}C ovens; crushing; splitting and; pulverizing. After drying, the sample is passed through a primary oscillating jaw crusher producing material of 75% passing a 2mm screen. A 250-gram sub-sample is split from the crushed material using a stainless steel riffle splitter. This split is then ground to 85% passing 75 microns or better using a ring pulveriser.

11.3.2 Analytical Procedures

Primary core samples and check samples are prepared and assayed using the lead fire assay procedure with an ICP geochemical finish. The detection limit is 0.005 g/tonne. All samples that assay higher than 3.0 g/tonne are re-assayed using a gravimetric finish to improve accuracy of the higher grade samples (SGS' lower limit for reporting fire assay-gravimetric results is 3 g/tonne Au).

The metallic screen lead fire assay analysis procedure is implemented for all primary core sample intervals where visible gold or metallic minerals identified as visible gold are seen. SGS' metallic screen procedure is as follows:

- The entire sample is dried if necessary, crushed and pulverized.
- The pulverized material is screened by hand on a 100 mesh screen.
- The screen undersize is homogenized and lead fire assayed in triplicate (three individual 30g charges) using a gravimetric finish.
- The total screen oversize is lead fire assayed using a gravimetric finish.
- All assay results are combined using a weighted average calculation to determine an assay value for the entire sample.

In 2010 and 2011, all Garrcon sample pulps were assayed with the SGS BLE653 hot cyanide leach procedure with geochemical finish using a 30 gram sample. In 2012 SGS BLE653 analysis was completed on a selective basis (samples assaying >100ppb Au) up to the final hole GAR-12-270. Some 2012 Jonpol samples were analysed by SGS BLE653 but this was discontinued after JP-12-04 following the switch to Accurassay as the primary lab.

All sample pulps are assayed for multi-elements using the SGS ICP40B analysis procedure. The ICP40B procedure uses four (4) acid digestion followed by ICP OES (inductively coupled plasma atomic emission spectroscopy) and reports results for 32 elements at a variety of concentration limits.

Based on lead fire assay results in the primary analysis laboratory, Northern selects approximately 5% of the samples submitted to Expert to be re-assayed by SGS as check samples using lead fire assay procedures that are the same as those used by Expert. These check assays are to check the accuracy and efficiency of Expert Laboratories. Check assaying is conducted as follows:

- All samples reported by Expert to have a grade of less than 3 g/tonne are lead fire assayed using the SGS FAI323 procedure which is a lead fire assay on a 30 gram sample with an ICP geochemical finish.
- All samples reported by Expert to have a grade greater than 3 g/tonne will be lead fire assayed using the SGS FAG303 procedure which has a gravimetric finish and uses a 30 gram sample.

SGS also has its own internal QA/QC protocols including standards, blanks and duplicates and the results of these analyses are also reported along with the results on Northern Gold's samples.

Following verification from Northern that the SGS results are acceptable, SGS packages all remaining unused pulps and ships them back to the Company at its Kirkland Lake office. Upon receipt, the pulps are kept in secure storage until the next work day when the pulps are transported back to the Garrison Property, cataloged and placed in long term, dry and secure storage.

11.4 Accurassay Laboratories 2013

Accurassay Laboratories and its employees are independent from Northern Gold. Northern Gold personnel and consultants and contractors are not involved in sample preparation and analysis.

11.4.1 Sample Preparation

Primary core samples received at Accurassay are prepared using its sample preparation package ALP2, which consists of conventional drying if required, in 105°C ovens; crushing; splitting and; pulverizing. After drying, the <5kg sample is passed through a primary oscillating jaw crusher producing material of 90% passing a 2mm screen. A 1000-gram sub-sample is split from the crushed material using a stainless steel riffle splitter. This split is then ground to 90% passing 106 microns or better using a ring pulveriser. A silica abrasive is used to clean between each sample.

11.4.2 Analytical Procedures

Primary core samples are prepared and assayed using the lead fire assay procedure with an AAS geochemical finish (Accurassay code ALFA1 - 30g charge). The detection limit is 0.005 g/tonne. All samples that assay higher than 3.0 g/tonne are re-assayed using a gravimetric finish (Accurassay code ALFA7 – 50g charge) to improve accuracy of the higher grade samples (Accurassay's lower limit for reporting fire assay-gravimetric results is 0.5 g/tonne Au).

The metallic screen lead fire assay analysis procedure (ALPM4) is implemented for all primary core sample intervals where visible gold or metallic minerals identified as visible gold are seen. Accurassay's metallic screen procedure is as follows:

- The entire sample is dried if necessary and crushed to 90% passing a 2mm screen.
- The entire sample is pulverized to ~90% -150 mesh (106µ) and subsequently sieved through a 150-mesh (106µ) screen.
- The entire +150 metallics portion is assayed along with two duplicate sub-samples of the -150 pulp portion (maximum 50g charges) using an AAS finish.
- All assay results are combined using a weighted average calculation to determine an assay value for the entire sample.

Selected sample pulps are assayed for multi-elements using the Accurassay ALAR1 analysis procedure. The ALAR1 procedure uses Aqua Regia digestion followed by ICP OES (inductively coupled plasma atomic emission spectroscopy) and reports results for 33 elements at a variety of concentration limits.

Accurassay also has its own internal QA/QC protocols including standards, blanks and duplicates and the results of these analyses are also reported along with the results on Northern Gold's samples.

Following verification from Northern that the Accurassay results are acceptable, Accurassay packages all remaining unused pulps and ships them back to the Company at its Kirkland Lake office. Upon receipt, the pulps are kept in secure storage until the next work day when the pulps are transported back to the Garrison Property, cataloged and placed in long term, dry and secure storage.

11.5 Historic Quality Assurance/ Quality Control (QA/QC) Programs

Documentation is not available on any assay QA/QC program that may have been used by Cominco / Jonpol during their 1985-1988 drill programs however standards and blanks were not typically inserted by the exploration companies during this time period.

ValGold submitted blanks and standards representing approximately 1 blank or standard per 10 core samples during the period of its 2006-2007 drill program in 2005 to 2007. Howe (George, 2009) tabulated all of the blank and standard analyses and found no material deviations that would indicate any problems with the laboratory's accuracy and reproducibility.

11.6 Northern Gold QA/QC Programs

11.6.1 2009-2011 Northern Gold QA/QC Programs

Northern Gold implemented Quality Assurance and Quality Control ("QA/QC") procedures for the drill programs completed between 2009 and 2011 that included insertion of Certified Reference Materials ("CRMs"), blank sample and pulp and coarse reject duplicates. Howe reviewed and detailed the results of the 2009 QA/QC program in its 2010 technical report (Roy and Trinder, 2010) and the results of the 2010 to 2011 QA/QC program in its 2012 technical report (Hannon et al., 2012). Northern Gold's 2009 to 2011 QA/QC results indicate no major problems with the analyses with respect to accuracy, precision and contamination.

11.6.2 2012-2013 Northern Gold QA/QC Programs

Northern Gold continued Quality Assurance and Quality Control ("QA/QC") procedures for its 2012 and 2013 drill programs that included insertion of Certified Reference Materials ("CRMs"), blank sample and pulp and coarse reject duplicates. These QA/QC procedures are posted on the Company website at http://www.northerngold.ca/qa-qc-protocols and are reviewed below:

11.6.2.1 CRMs

To monitor accuracy, Certified Reference Materials (CRMs) are inserted sequentially into the sample stream before shipment from the field at a rate of at least 1 in every 20 samples submitted.

High, medium and lower-grade gold CRMs are used in each sample shipment. CRMs are obtained from Ore Research and Exploration Pty. Ltd. of Bayswater, Victoria, Australia (distributed by Analytical Solutions Inc. of Toronto, Ontario, Canada); and Rocklabs, Auckland, New Zealand. CRMs are received prepared (pulverized to –200 mesh and blended) from which Northern Gold weighs out 50 to 60 gram packets.

To check the accuracy of the 2012-2013 laboratory results, Howe established control at an accepted mean ±2σ (standard deviation) of the laboratory results. To maintain well constrained control limits, spurious outliers are not used to calculate standard deviations. CRM results are plotted in sequence with the control limits and the certified gold value of the CRM. Howe notes that in previous reports, it established control limits at mean ±3σ (standard deviation) and warning limits of mean ±2σ (standard deviation) of the certified CRM gold values.

Northern Gold has adopted a procedure of reviewing all CRMs and Blanks for pass or fail. Any CRMs and Blanks that fail are referred back to the appropriate laboratory and the CRMs or Blanks plus coarse reject splits of core samples before and/or following the failures are prepared and analysed to check the first run results. Howe recommends that the Company continue to review any results falling outside established control limits.

Accurassay
Most CRMs returned values within the accepted ±2 standard deviation control limits. There are a number of outliers for each CRM. CRM 206 returned 4 values close to the CRM 68a grade of 3.89; CRM 901 returned a spurious value of 2.267 possibly corresponding to CRM 206. Higher grade CRMs SK62 (4.075 g/tonne Au) and SN60 (8.595 g/tonne Au) have lower than expected mean grades associated with a large number of spurious low grade results that may be associated with mislabeled CRM samples.

Relative to the SGS and Expert laboratories, the Accurassay laboratory returned poor precision and a high degree of analytical drift in the control plots for SF67 (0.835 g/tonne Au), SH65 (1.348 g/tonne Au) and SK62 (4.075 g/tonne Au).

Table 11-1: Accurassay CRM Results - 2012 and 2013 drilling programs.

CRM	206	901	15d	68a	SF67	SH65	SK62	SN60
Source	OREAS	OREAS	OREAS	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs
Control Grade	2.197	0.363	1.56	3.89	0.835	1.348	4.075	8.595
Count	19.00	18.00	23.00	21.00	115.00	126.00	121.00	127.00
Mean	2.41	0.47	1.49	3.27	0.76	1.31	3.77	7.72
Max	3.99	2.27	1.65	4.11	0.93	3.74	4.29	10.18
Min	0.37	0.32	0.34	2.11	0.26	0.64	1.26	0.01
Standard Dev	0.38	0.02	0.05	0.80	0.09	0.25	0.18	0.48
Average % Diff	10%	30%	-4%	-16%	-9%	-3%	-7%	-10%

Expert
As reported in 2012, Expert CRM analyses show high precision indicated by low standard deviation values. A slight bias to under-reporting of grade by the FA-AA method is indicated by CRM SG56 (1.027 g/tonne Au) and SH55 (1.375 g/tonne Au)

which returned mean grades of 5% and 7% less than the expected CRM value respectively. The Expert FA-Gravimetric method generally shows a slight positive bias.

Table 11-2: Expert CRM Results - 2012 and 2013 drilling programs.

CRM	SF57	SG56	SH55	SJ53	SK62	SN60
Source	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs
Control Grade	0.848	1.027	1.375	2.637	4.075	8.595
Count	95.00	49.00	39.00	39.00	49.00	98.00
Mean	0.84	0.98	1.28	2.57	3.95	8.41
Max	0.98	1.29	1.39	2.68	4.09	8.68
Min	0.81	0.83	1.00	2.47	3.45	7.92
Standard Dev	0.03	0.04	0.03	0.04	0.08	0.11
Average % Diff	-1%	-5%	-7%	-2%	-3%	-2%

SGS

Howe notes that while generally within acceptable levels, the number of failures and overall spread of analytical results for SGS analyzed standards is greater than that of Expert. In particular, Standard SF57 (0.848 g/tonne Au) and Standard SF67 (0.835 g/tonne Au) show obvious analytical drift over ranges of 0.1 g/tonne Au. SGS results for standard SH55 (1.375 g/tonne Au) and Standard SJ53 (2.637 g/tonne Au) show a positive bias with several sequential failures.

Table 11-3: SGS CRM Results - 2012 and 2013 drilling programs.

CRM	SF57	SF67	SG56	SH55	SH65	SJ53	SK62	SN60
Source	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs
Control Grade	0.848	0.835	1.027	1.375	1.348	2.637	4.075	8.595
Count	623.00	101.00	256.00	113.00	357.00	119.00	625.00	792.00
Mean	0.85	0.81	1.02	1.41	1.33	2.70	4.03	8.51
Max	8.85	1.06	1.36	1.48	1.45	2.88	4.42	9.09
Min	0.56	0.36	0.83	1.08	1.16	2.45	1.04	0.01
Standard Dev	0.32	0.04	0.03	0.05	0.04	0.07	0.10	0.19
Average % Diff	0%	-3%	-1%	2%	-1%	3%	-1%	-1%

Table 11-4: SGS Gravimetric CRM Results - 2012 and 2013 drilling programs.

CRM	SG56	SJ53	SK62	SN60	SN60
Source	Rock Labs	Rock Labs	Rock Labs	Rock Labs	Rock Labs
Laboratory	Expert	Expert	Expert	Expert	SGS
Control Grade	1.027	2.637	4.075	8.595	8.595
Count	39.00	39.00	48.00	95.00	5.00
Mean	1.06	2.67	4.13	8.55	8.50
Max	1.44	2.78	4.29	8.81	8.58
Min	0.99	2.54	3.50	8.23	8.37
Standard Dev	0.07	0.06	0.12	0.11	0.09
Average % Diff	3%	1%	1%	-1%	-1%

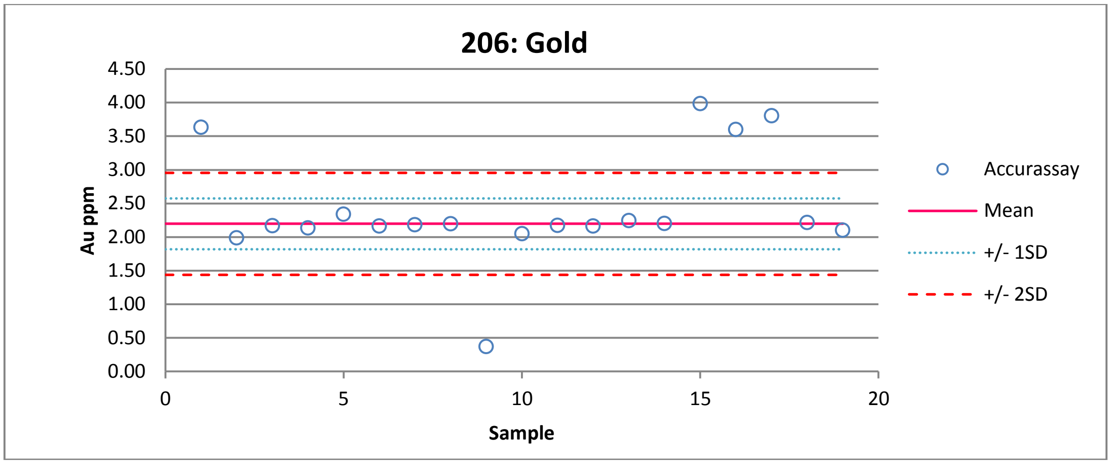


Figure 11-1: Standard OREAS 206 (2.197 g/tonne Au) results plotted against time

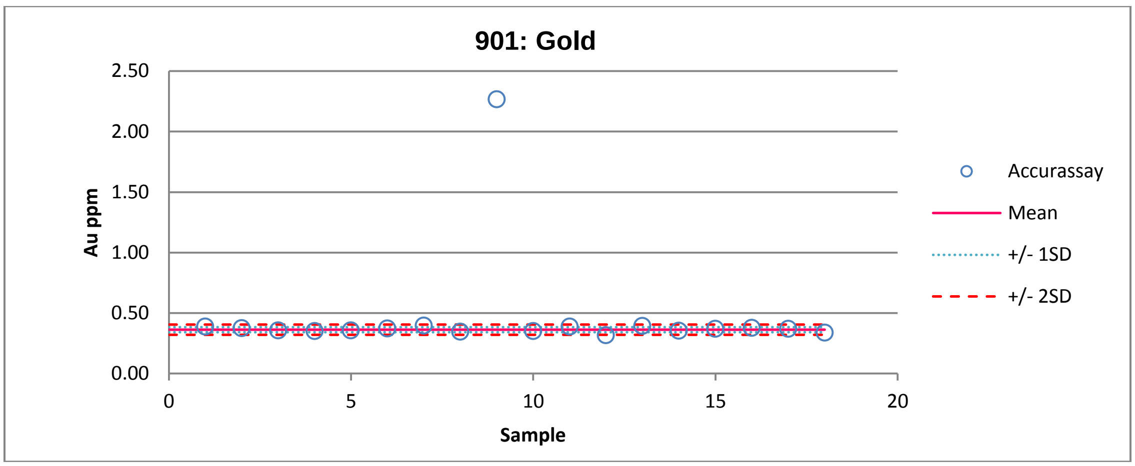


Figure 11-2: Standard OREAS 901 (0.363 g/tonne Au) results plotted against time

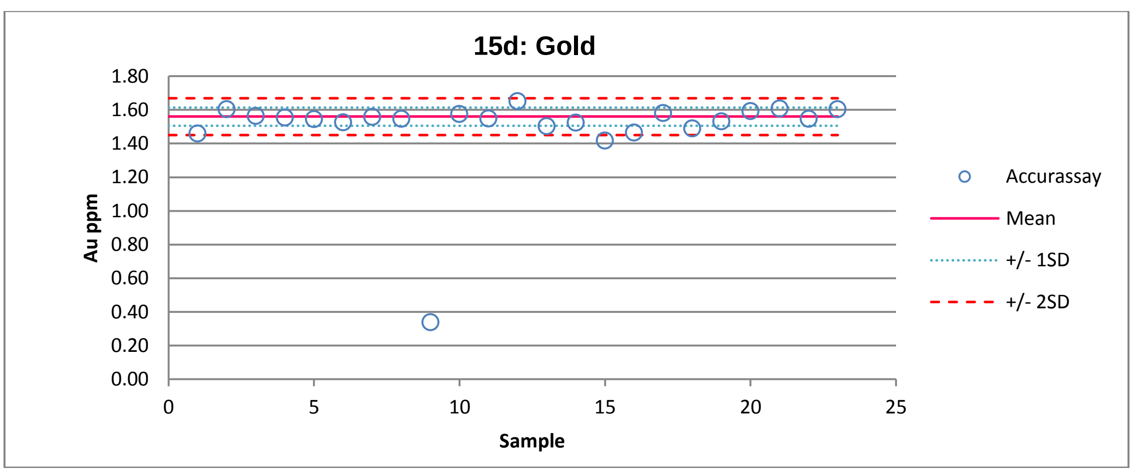


Figure 11-3: Standard OREAS 15d (1.56 g/tonne Au) results plotted against time

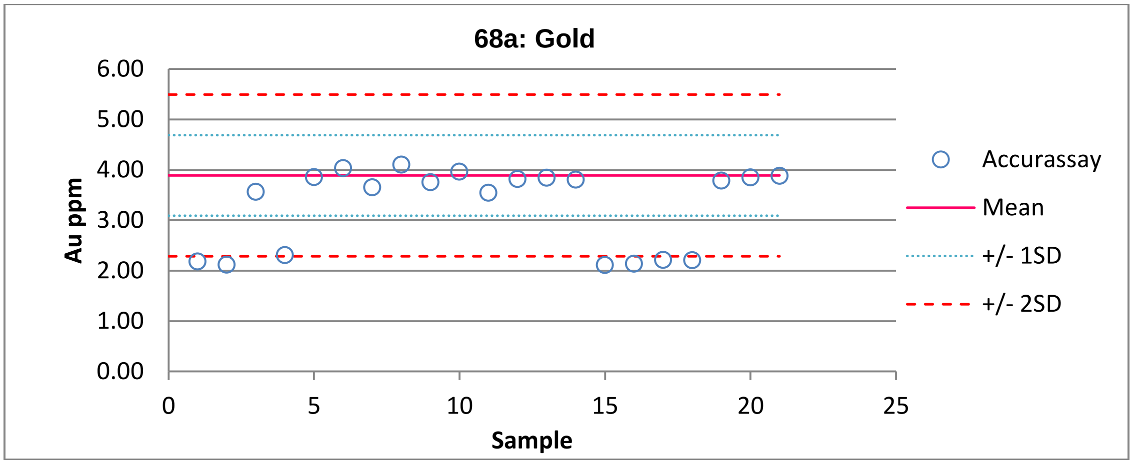


Figure 11-4: Standard 68a (3.89 g/tonne Au) results plotted against time

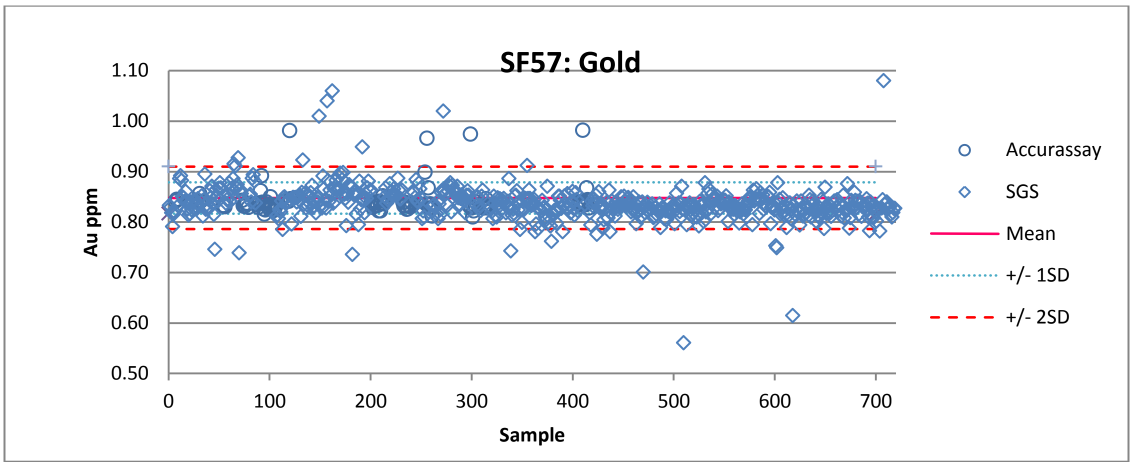


Figure 11-5: Standard SF57 (0.848 g/tonne Au) results plotted against time

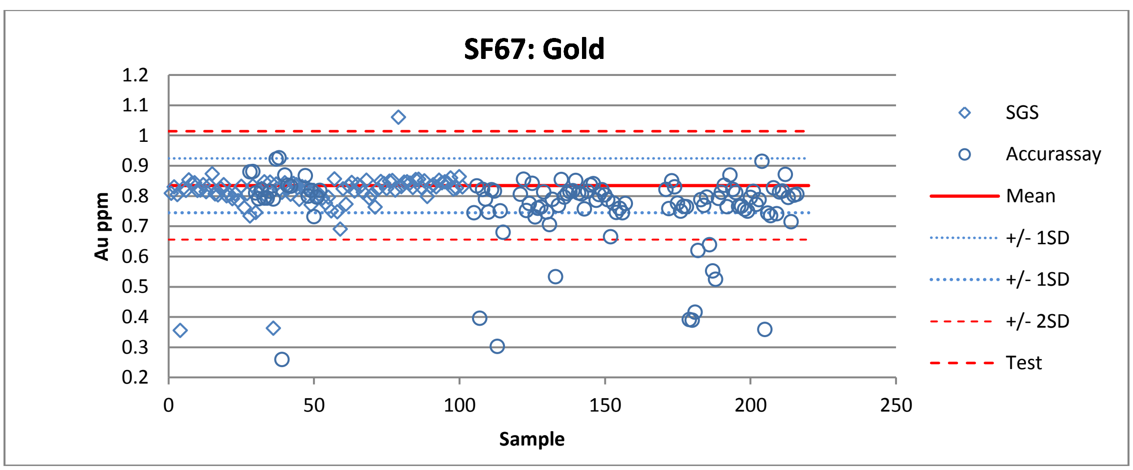


Figure 11-6: Standard SF67 (0.835 g/tonne Au) results plotted against time

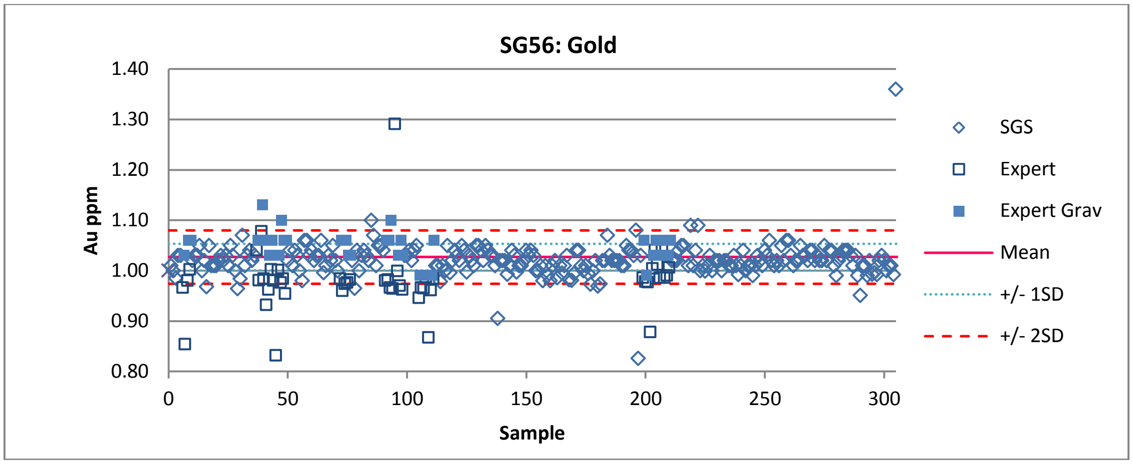


Figure 11-7: Standard SG56 (1.027 g/tonne Au) results plotted against time

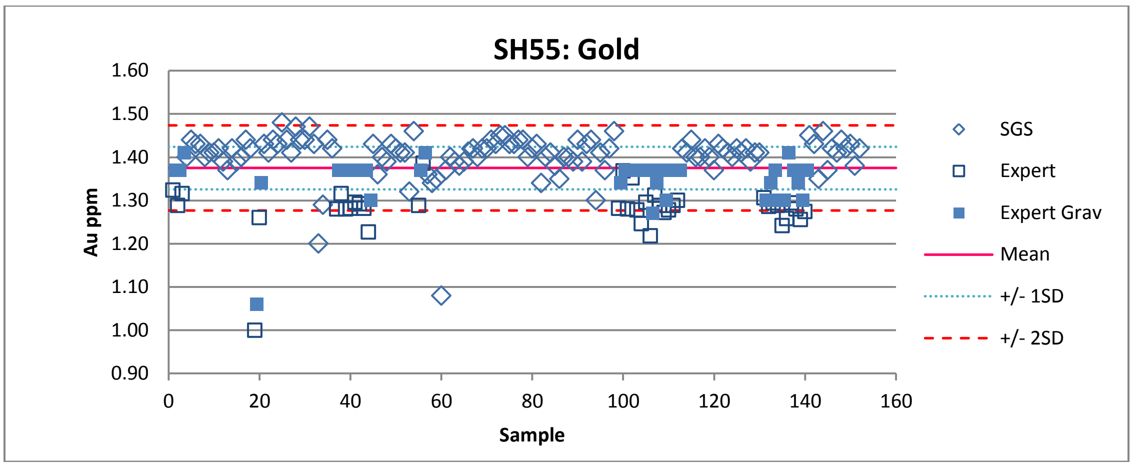


Figure 11-8: Standard SH55 (1.375 g/tonne Au) results plotted against time

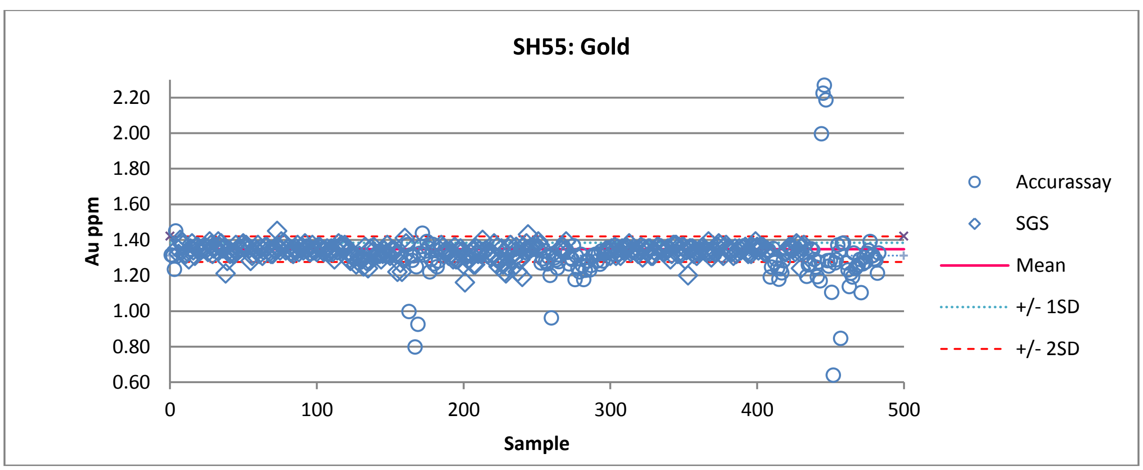


Figure 11-9: Standard SH65 (1.348 g/tonne Au) results plotted against time

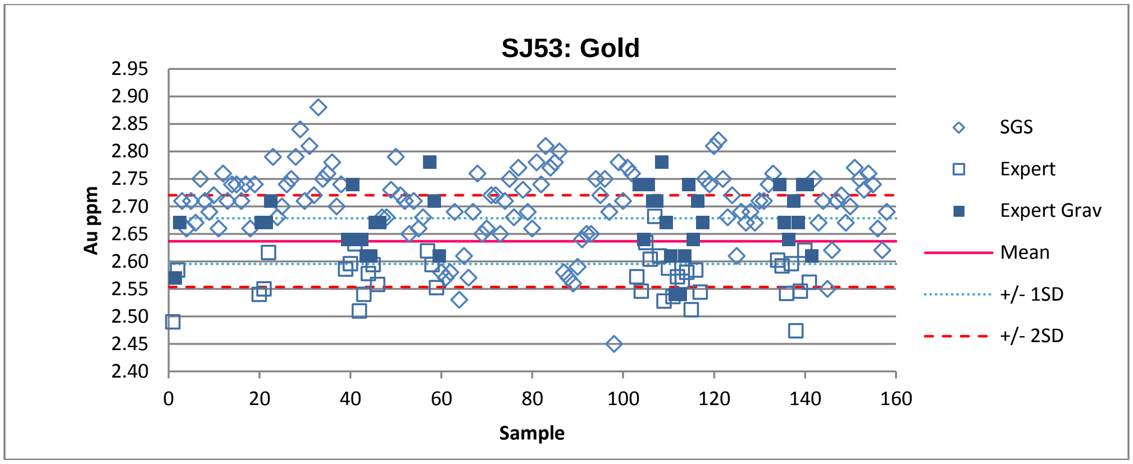


Figure 11-10: Standard SJ53 (2.637 g/tonne Au) results plotted against time

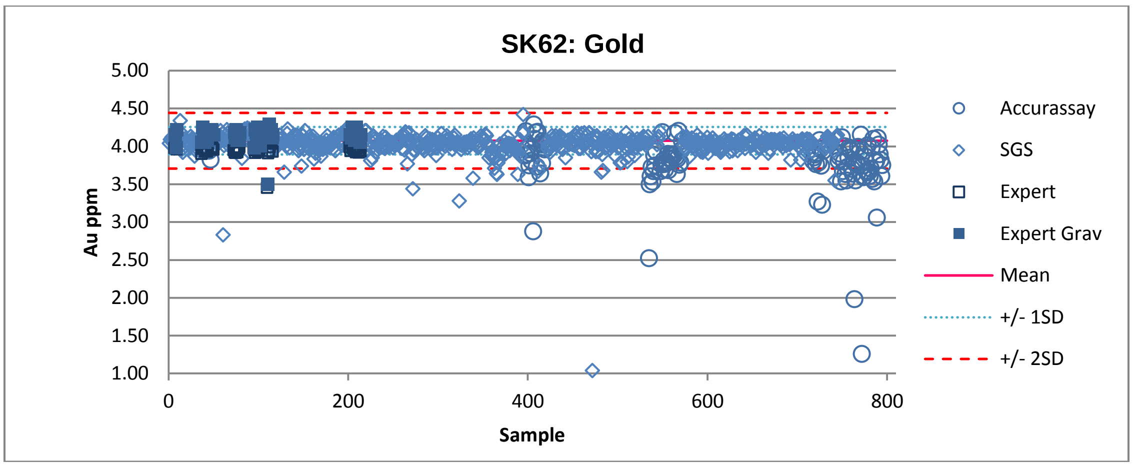


Figure 11-11: Standard SK62 (4.075 g/tonne Au) results plotted against time

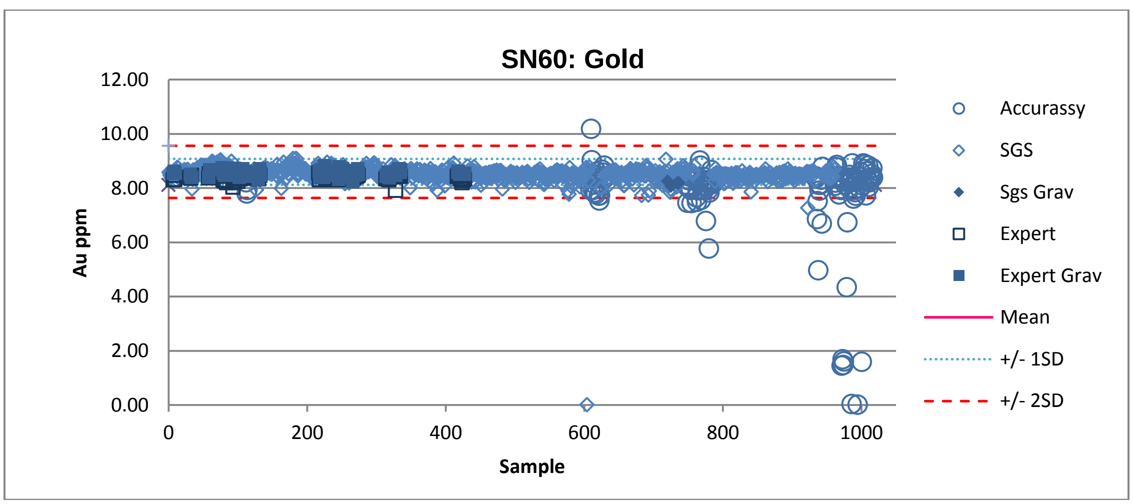


Figure 11-12: Standard SN60 (8.595 g/tonne Au) results plotted against time

11.6.2.2 Contamination

Sample contamination may arise through cross contamination during sample preparation, laboratory analysis. Contamination is normally monitored through the routine insertion of coarse field blank material into the sample stream. Northern Gold inserts blanks approximately every 20th sample into the drill core sample batches before shipment. The Company utilizes commercial coarse marble aggregate for the blank material.

As a rough guide, Howe suggests that blank samples should have analyses of less than 5x the detection limit. Howe suggests that the maximum acceptable value for the blank material be 25 ppb or 0.025 g/tonne gold. A blank sample that assays greater than the maximum acceptable value should be considered a failure.

Blanks sample analysis results are plotted with the 0.025 g/tonne Au control limit in Figure 11-13. Only one Expert blank sample result is above 0.025 g/tonne Au. Accurassay and SGS returned analysis results above the control limit for 1% of blank samples. Accurassay returned a value of 0.564 g/tonne Au for sample A00292020. SGS returned a value of 1.6 g/tonne for sample 216884 and 0.471 g/tonne for sample C099260. These values may indicate contamination, sample pulp mislabeling or a mix-up of sample order in the furnace tray at the lab.

There is a cluster of SGS blank analyses that returned values above the 0.025 g/tonne Au control limit (between sample sequence numbers 1,960 and 1,970 in Figure 11-13. Blank sample A00138560 returned a value of 0.0.93, A00138580 returned a value of 0.215 and A00138600 returned a value of 0.139.

Northern Gold has adopted a procedure of reviewing all CRMs and Blanks for pass or fail. Any CRMs and Blanks that fail are referred back to the appropriate laboratory and the CRMs or Blanks plus coarse reject splits of core samples before and/or following the failures are analysed to check the first run results. Howe recommends that the Company continue to review any results falling outside established control limits. Generally, checks of failed sample blanks have returned improved results. Howe recommends that the Company continue to monitor the potential for cross contamination during sample preparation and blank assay results that fall outside control limits.

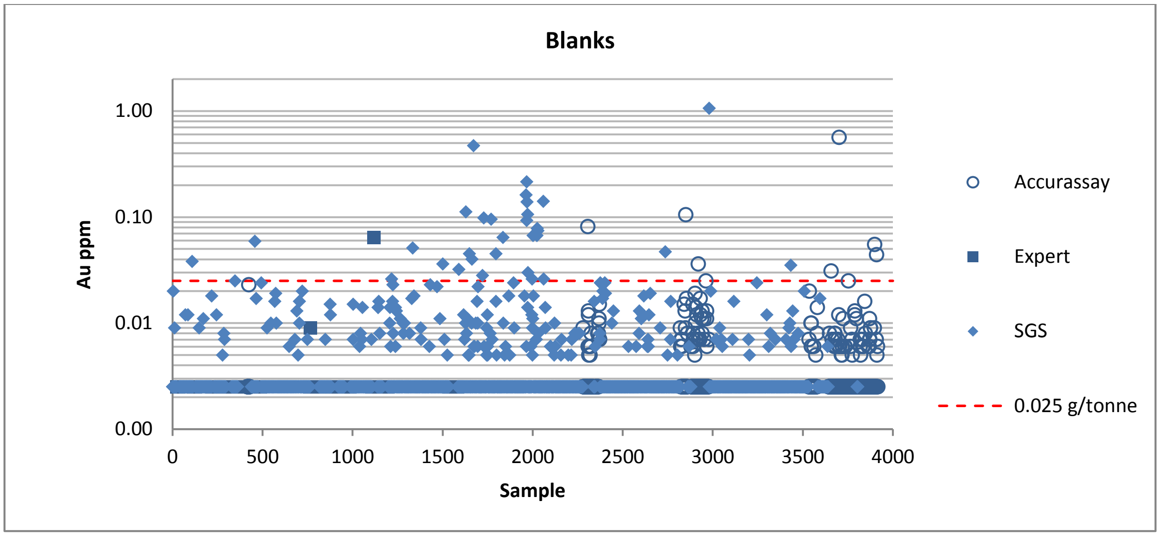


Figure 11-13: Blank sample analytical results plotted against time

11.6.2.3 Duplicates

Duplicates submitted as part of the 2012 and 2013 drill program include

- Half core samples - used to assess the presence of a 'nugget effect' or heterogeneity of gold mineralisation in drill core samples.
- Coarse reject samples - duplicate splits of coarsely crushed material generated during the initial jaw-crushing phase, used to check the presence of a nugget effect and to assess laboratory precision.
- Pulp duplicate samples - duplicate splits taken from pulp sample material generated during sample preparation, used to assess laboratory precision.
- Check pulp samples - duplicate splits taken from pulp material and submitted for analysis at a different laboratory.

Northern Gold inserted half core duplicates and coarse reject or alternatively pulp duplicates into the sample stream such that every 20th sample was a duplicate. Duplicate results are presented in scatter plots, Thompson-Howarth plots showing the absolute sample pair difference against sample pair mean, Half the Relative Difference plots and Half the Absolute Relative Difference plots (Figure 11-14 to Figure 11-17).

Half the Absolute Relative Difference (HARD), is half the absolute difference between the original and the duplicate assay, expressed as percentage of the pair mean. A HARD value of 0% is an optimum result where both the first and duplicate analyses have identical results and therefore perfect precision. The larger the HARD value, the greater the difference between the two analytical results and the poorer the precision.

Half the Relative Difference (HRD), is half the difference between the original and the duplicate assay, expressed as percentage of the pair mean. It is a measure of precision and relative difference, a positive HRD value shows that the duplicate assay value is lower than the original assay value. A negative HRD value shows the duplicate is higher than the original.

Core Duplicates

As part of the 2012 and 2013 drill program, Northern Gold submitted approximately 1,193 half core duplicate for analysis at the time of data cut-off for the Garrcon mineral resource estimate update.

The difference between the original analysis data and the half core duplicate analysis data are presented by laboratory in Table 11-5 and plotted in Figure 11-14. Any values that plot significantly away from the scatter chart correlation line may indicate a potential nugget effect or, less likely sample handling errors. Control charts show good correlation between original and half core duplicates, however because the core duplicate samples are regularly collected every 40th sample, the majority of the duplicated samples have primary gold values less than 0.3 g/tonne. Howe recommends that core duplicates be taken from mineralized envelopes identified after the primary analyses have been completed such that duplicate core sampling of non-mineralized core is minimized.

Sample C64738 had an original grade of 5.315 g/t Au and a duplicate grade below the <0.05 g/tonne Au limit of detection. Sample A00140279 had an original grade of 3.73 g/t Au and a duplicate grade of 0.105 g/tonne Au. . Sample A00152859 had an original grade of 2.35 g/t Au and a duplicate grade of 0.12 g/tonne Au. These high relative differences could indicate a high nugget with high assay value variance. The presence of a nugget effect is typical in gold deposits and is not considered a significant problem; however the presence of a nugget effect does necessitate the identification and treatment of outliers.

Only three half core duplicates were submitted for gravimetric analysis between 2012 and 2013. The limited number of analyses prevents a meaningful analysis.

Table 11-5: Core Duplicate Sampling Program Results (FA-AA).

Laboratory	SGS	Expert	Accurassay
Number of Pairs	1,093	66	34
Total Mean (g/tonne Au)	0.083	0.140	0.093
Difference of Means	0.011	0.064	0.011
Mean % HARD	19.657	21.977	13.183
Mean % HRD	-0.263	-2.501	0.830
Pearson Correlation	0.867	0.081	0.947
Regression Slope	0.751	0.007	0.896
% HARD Values within 20%	62.855	54.545	76.471

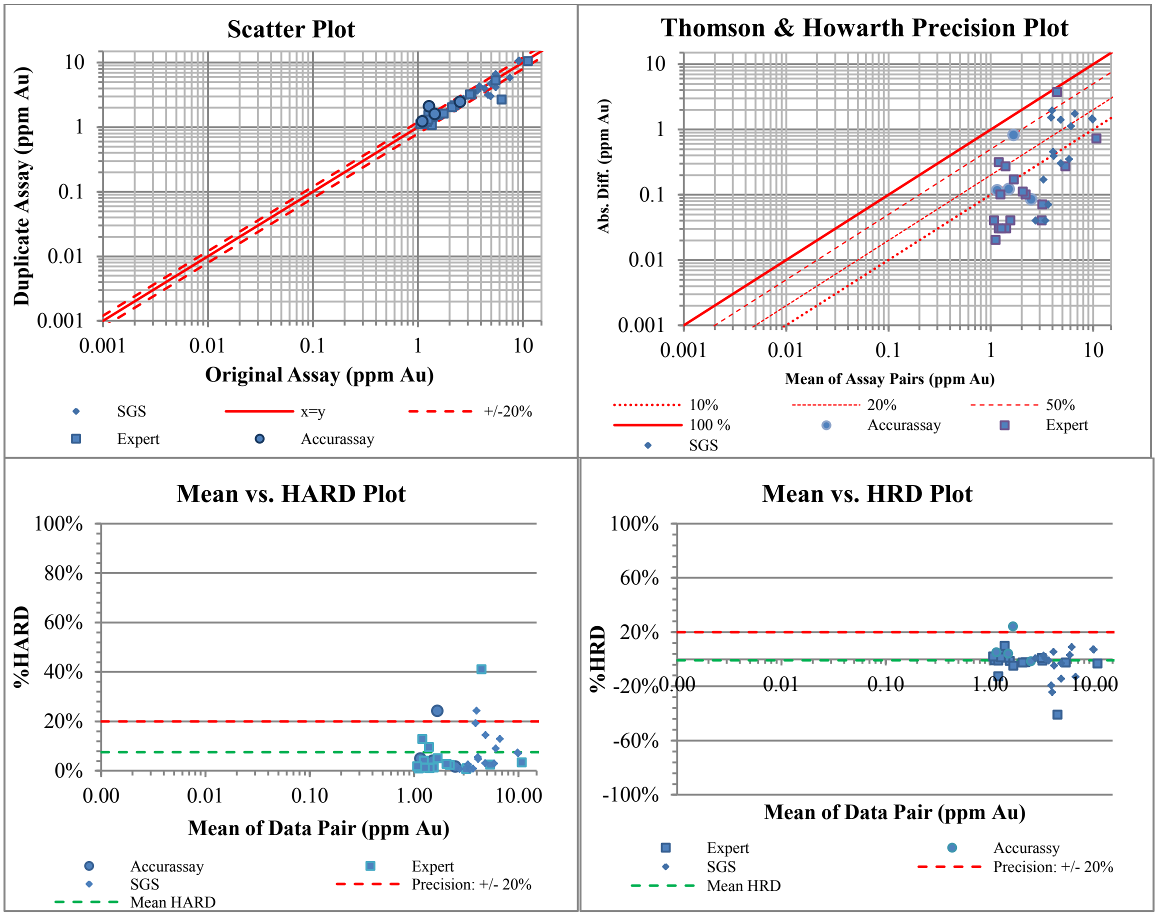


Figure 11-14: Plot of primary assays versus core duplicate assays (FA-AA)

Preparation Duplicates

The Company submitted approximately 2,755 preparation duplicate samples in the 2012 and 2013 programs. Preparation duplicates are split after crushing; so much of the initial geological variability should be eliminated, resulting in better precision overall. Original analysis data vs. the preparation duplicate analysis data is presented by laboratory in Table 11-6 and plotted in Figure 11-15.

Excellent repeatability of original assay values is indicated by a very strong Pearson correlation coefficient of 0.99. Eighty-two percent of repeat assay pairs had a HARD value within +/-20%. The mean HARD value is 11%. Variability decreases as mean grade increases. There is no relative bias between original and repeat assay values.

Large relative differences between assays at the lower limit of detection can result in an inaccurate analysis of sample repeatability. Because the preparation duplicate samples are collected at predetermined intervals, they are selected from both mineralized zones and non-mineralized intervals; only 354 of the 2,755 pairs had a mean gold grade above a cut off of 0.2 ppm Au and tested repeatability at economically significant grades. Above this nominal cut off repeatability appears to improve; 90% of pairs had a HARD value within

+/-20%. The mean HARD improves to 7.6%. Howe recommends that preparation duplicates be taken from mineralized envelopes identified after the primary analyses have been completed such that preparation duplicate sampling of non-mineralized intervals is minimized.

The overall quality of the coarse duplicate data is very good; however, relative to the other labs, SGS shows less satisfactory results. Table 11-6 shows SGS having the poorest repeatability, indicated by a higher Mean HARD value and a lower correlation coefficient. In addition, SGS has a slight relative bias made evident by a regression slope value of 0.928, which is comparably lower than the other labs. This suggests SGS may have a higher degree of analytical drift and lower precision. Overall, the control charts show good correlation between the original samples and preparation duplicates (Figure 11-15).

Table 11-6: Preparation Duplicate Sampling Program Results (FA-AA)

Laboratory	SGS	Expert	Accurassay
Number of Pairs	1,163	583	1,009
Total Mean (g/tonne Au)	0.144	0.088	0.241
Difference of Means	0.006	0.001	0.001
Mean % HARD	12.567	7.654	11.733
Mean % HRD	-1.294	0.838	-1.074
Pearson Correlation	0.963	0.994	0.997
Regression Slope	0.928	0.989	0.994
% HARD Values within 20%	78.590	90.223	80.971

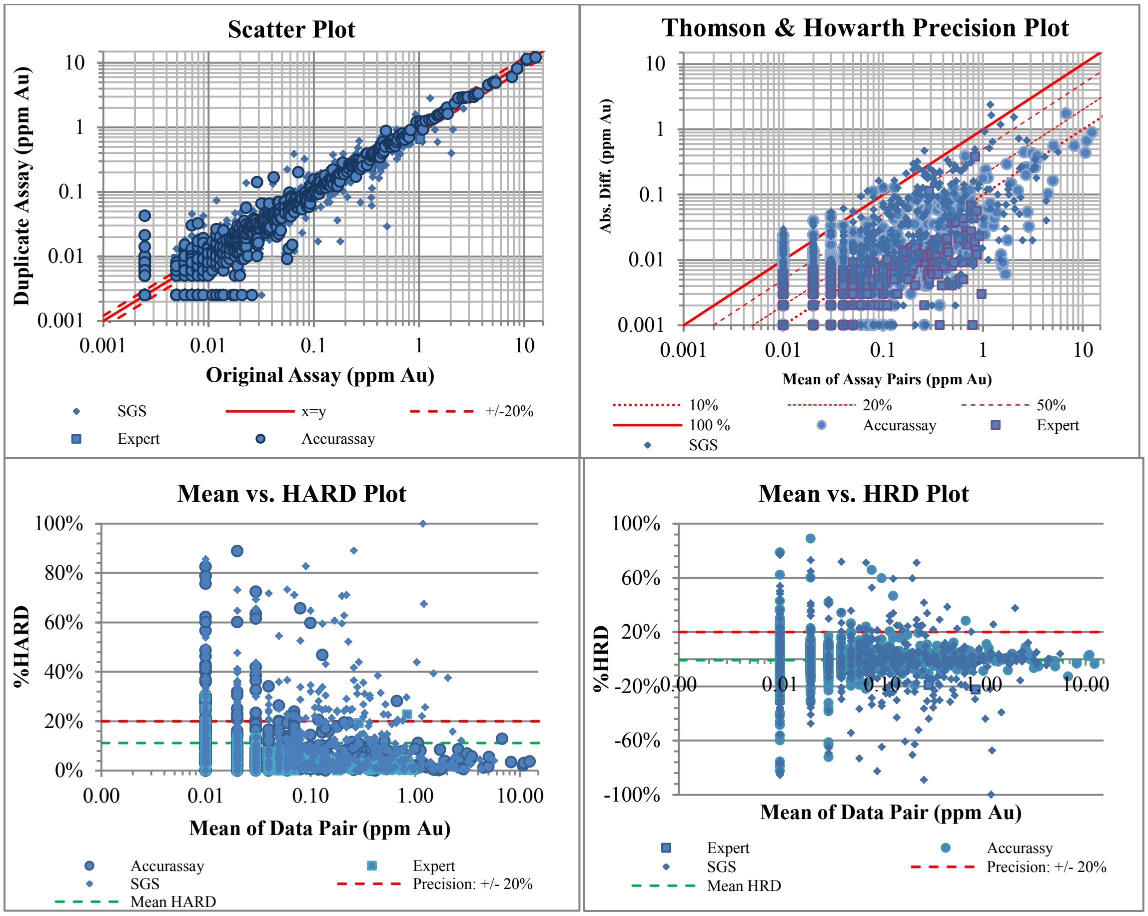


Figure 11-15: Plot of primary assays versus preparation duplicates (FA-AA)

Pulp Duplicates

Data is available for 1,193 pulp duplicate samples. Pulp duplicates are split after pulverizing; so the initial geological variability in the sample should be eliminated. Significant differences in pulp duplicate pairs may be an indication of errors in the sample preparation or analysis, a mix-up laboratory sample labeling or coarse gold / nugget effect.

Very good repeatability of original assay values is indicated by a Pearson correlation coefficient of 0.95. Seventy-five percent of repeat assay pairs had a HARD value within +/-20%. The mean HARD value is 14%. Variability decreases as mean grade increases. There is no relative bias between original and repeat assay values.

Because pulp duplicate samples are collected at predetermined intervals, they are selected from both samples with economically significant grades and non-mineralized samples. Only 269 of 2,054 pairs have a mean gold grade above 0.2 ppm; of these, 78% returned HARD values within 20% of the mean of the sample pair. Howe recommends that pulp duplicates be taken from mineralized envelopes identified after the primary analyses have been completed such that pulp duplicate sampling of non-mineralized intervals is minimized.

The overall quality of the pulp duplicate data is good. Relative to the other labs, SGS shows less satisfactory results with repeatability indicated by the higher Mean HARD value in Table 11-7. Results are plotted in Figure 11-16.

Table 11-7: Pulp Duplicate Sampling Program Results (FA-AA).

Laboratory	SGS	Expert	Accurassay
Number of Pairs	1,543	297	214
Total Mean (g/tonne Au)	0.158	0.107	0.132
Difference of Means	0.005	0.000	0.002
Mean % HARD	16.014	6.219	14.330
Mean % HRD	-1.245	0.465	-0.706
Pearson Correlation	0.951	0.967	0.965
Regression Slope	0.905	0.935	0.930
% HARD Values within 20%	70.706	93.603	77.570

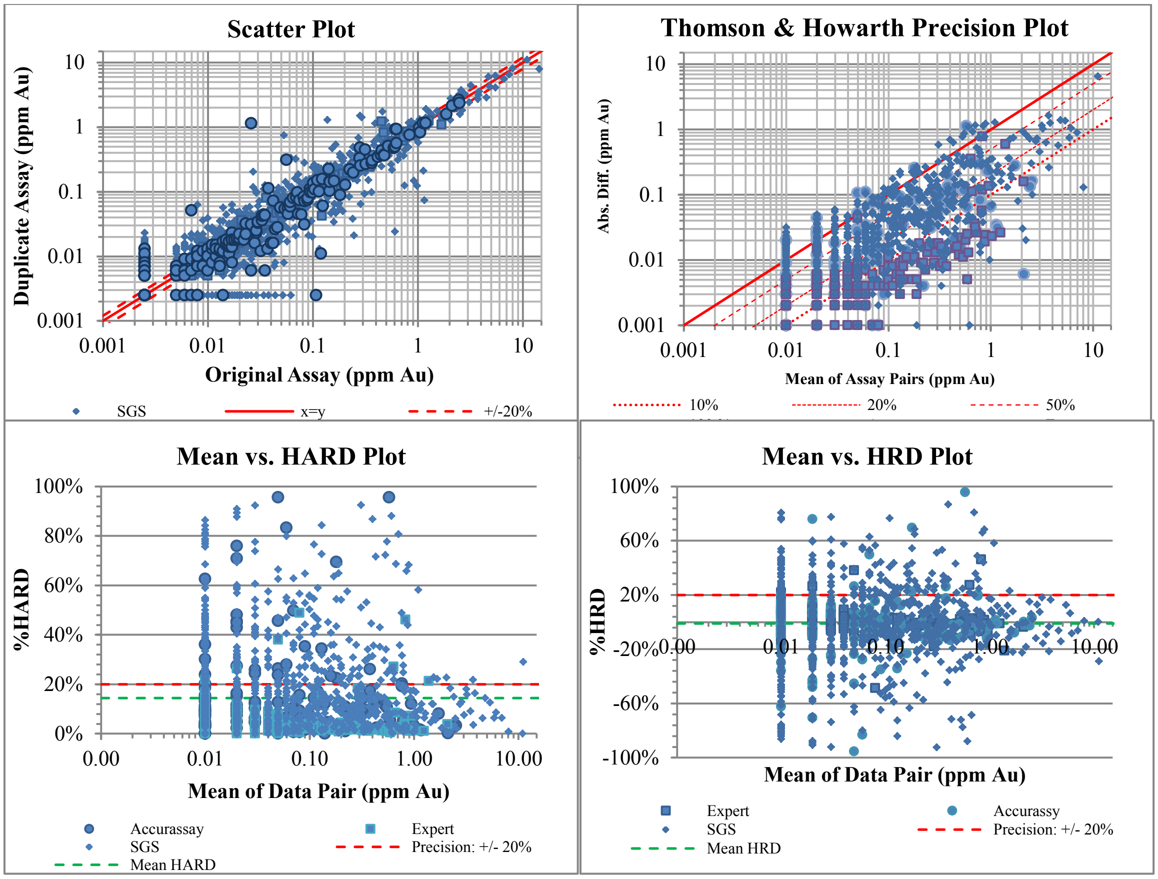


Figure 11-16: Pulp Duplicate Check Assay Scatter plot Comparison (FA-AA)

Gravimetric Duplicates

In 2012 and 2013, 37 samples were submitted for duplicate gravimetric analyses. These samples comprised a mixture of Pulp and Preparation duplicates. The results are presented in Table 11-8 and are plotted in Figure 11-17. Although the number of repeat analyses is relatively small there seems to be good repeatability of samples. Eighty-nine percent of repeat assay pairs had a HARD value within +/-20%.

Table 11-8: Gravimetric Duplicate Sampling Program Results (FA-Grav).

Laboratory	SGS	Expert	Accurassay
Number of Pairs	16.00	17.00	4.00
Total Mean (g/tonne Au)	6.97	2.63	1.72
Difference of Means	1.37	0.29	0.24
Mean % HARD	9.47	5.43	8.70
Mean % HRD	-0.52	-3.28	7.86
Pearson Correlation	0.97	0.94	0.79
Regression Slope	0.94	0.89	0.63
% HARD Values within 20%	87.50	94.12	75.00

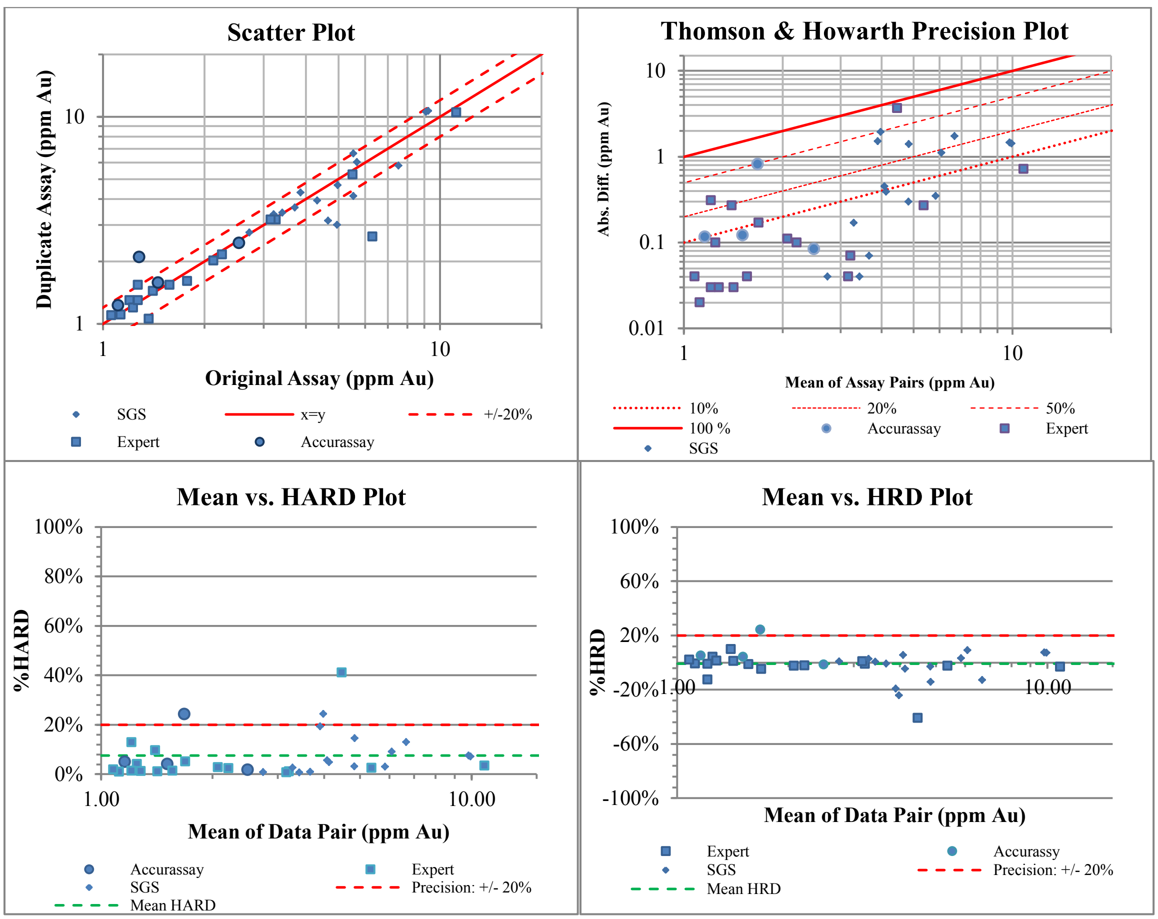


Figure 11-17: Gravimetric Duplicate Check Assay Scatter plot Comparison (FA-Grav)

Check Assays

In 2012 Northern Gold submitted approximately 311 pulp samples assayed at Expert for reanalysis at SGS. Relatively poor repeatability of original Expert assay values is indicated by a Pearson correlation coefficient of 0.41. Sixty-three percent of repeat assay pairs had a HARD value within +/-20%. The mean HARD value is 22.14%. Variability appears to decrease as mean grade increases. There is no relative bias between original and repeat assay values indicated by a mean HRD value of -0.08%.

11.6.3 QA/QC Conclusions

- It is Howe's opinion Northern Gold's independent QA/QC program undertaken during the 2012 and 2013 drill programs is appropriate and conforms to industry standards.
- It is Howe's opinion that the 2012 and 2013 blank, CRM and duplicate sample results provide sufficient confidence in the 2012 drill core assay values for their use in the estimation of CIM compliant resources.
- Howe recommends that Northern Gold continue to monitor and review CRM and blank sample assay results that fall outside of established control limits.
- Possible sample handling errors are identified in the 2012 and current QA/QC assessments. Northern Gold should review sample handling procedures to ensure sample handling and labeling errors are eliminated.
- The selection of core, preparation and pulp duplicates based on regular sample number intervals limits the ability to determine gold heterogeneity and sample repeatability (nugget effect) at economically interesting grades. To allow a better assessment of nugget effect Howe recommends that core duplicates in particular and also preparation and pulp duplicates be selected primarily from mineralized intervals. If mineralized intervals cannot easily be visually identified at the time of initial sampling, then core duplicates in particular and also preparation and pulp duplicates should be selected from mineralized intervals identified after primary analyses have been completed such that duplicate sampling of non-mineralized core is minimized.

12 DATA VERIFICATION

12.1 ACA Howe Site Visits

Confirmation of the existence of reported work sites was conducted by Howe representative and Co-author Mr. I. Trinder during his visit to the Property on July 12th, 2010 as part of Howe's due diligence in the preparation of its 2010 technical report (Roy and Trinder, 2010). Mr. Trinder completed an inspection of isolated surface outcrops, historic trenches, 2010 stripped areas and selected drill hole collars. The core logging / field office and sample preparation facilities were inspected. The condition of Company's onsite core storage racks and sample storage containers was checked and core from several holes was examined. All of the work sites and technical observations were as reported by the Company.

Mr. I. Trinder revisited the Property on January 21st, 2011 as part of Howe's due diligence in the preparation of Howe's 2011 technical report (Hannon et al., 2011). Mr. Trinder completed an inspection of the diamond drill rigs and selected drill hole collars. The upgraded core logging / sample preparation facility and field office were inspected. The core from several holes was examined. All of the work sites and technical observations were as reported by the Company.

Mr. I. Trinder made a third visit to the Property on May 20, 2011 to review the results of the Photonic Knowledge's preliminary spectrographic core mapping program.

As part of the property visits, Mr. Trinder met with Mr. Michael Gross, Northern Gold's Vice President Exploration and Mr. Greg Matheson, Northern Gold's Project Geologist on July 12th 2010 at the Property site and on July 13th 2010 at the Company's Kirkland Lake office to discuss and review the Company's exploration activities, methodologies, data, results and interpretations. Further discussions and review were conducted on January 19th, 20th and 22nd, 2011 at the Kirkland Lake office.

Mr. Roy visited the Property site and Northern Gold's Kirkland Lake field office on April 12-14, 2012. During the office visit, Mr. Roy met with Mr. Michael Gross, Northern Gold's Vice President Exploration and Mr. Brian Madill, the Company's Supervisor - Computer Modeling and Lands to discuss the Company's exploration activities, methodologies, findings and interpretations. Mr. Roy completed a review of recent drilling on the Property, the drilling and sampling methodology, quality assurance and quality control procedures, security, etc. Mr. Roy conducted the site visit to the Property accompanied by Mr. Gross and Mr. Greg Matheson, the Company's Project Geologist to examine the Property area and ongoing exploration activities.

Mr. McGarry and Mr. Trinder visited the Garrison Property site and Northern Gold's Kirkland Lake field office on February 2nd and 3rd, 2013 as part of Howe's due diligence in the preparation of this technical report. During the property visit, Mr. McGarry and

Mr. Trinder were accompanied by Mr. Gary Nassif, M.Sc., P.Geo., then Northern Gold's Manager Exploration Services and met with Mr. Greg Matheson, P.Geo., the Company's Senior Project Geologist to examine the Property area and discuss the Company's exploration activities, methodologies, findings and interpretations. Mssrs. Trinder and McGarry completed a thorough review of all recent Garrcon drilling on the Property, acquired a complete digital database of all historic and current Garrcon drilling on the Property, and reviewed and made copies of reports available for the Property. In addition, Mssrs. McGarry and Trinder reviewed drilling and sampling methodology, quality assurance and quality control procedures, security, etc.

12.2 ACA HOWE VERIFICATION SAMPLING

Howe conducted limited verification sampling during its 2010 site visit which included two rock samples from outcrop and six samples of quarter core from holes GAR-09-01 and GAR-09-06. Results are discussed in Howe's 2010 report (Roy and Trinder, 2010).

Howe conducted additional limited verification sampling during its January 2011 site visit which comprised four samples of half core from holes GAR-10-26 and GAR-10-39.

Mr. Trinder collected and sealed the sample bags with ladder lock ties and maintained possession of all samples until delivery by courier to SGS Canada's geochemistry lab at 1885 Leslie Street, Toronto, Ontario. SGS-Toronto is a reputable, ISO/IEC17025 accredited laboratory qualified for the material analysed. SGS quality control procedures are method specific and include duplicate samples, blanks, replicates, reagent / instrument blanks for the individual methods.

The samples were prepared using SGS sample preparation package PRP89, which consists of conventional drying if required, in 105^{o}C ovens; crushing; splitting and; pulverizing. After drying, the sample was passed through a primary oscillating jaw crusher producing material of 75% passing a 2mm screen. A 250-gram sub-sample was split from the crushed material using a stainless steel riffle splitter. This split was then ground to 85% passing 75 microns or better using a ring pulveriser.

The verification samples were analysed for gold using Au fire assay; ICP finish using a 30 g nominal sample weight (SGS analytical code FAI323; >5 ppb Au).

As with the 2010 verification samples, the 2011 duplicate core samples provide an independent confirmation of the presence of significant gold mineralisation at the Garrcon Deposit (Table 12-1). Data are too limited however, to make a meaningful comparison of Howe's duplicate sample analytical results with Northern Gold's original analytical results. Howe notes however, that the variations between the original and duplicate assay results are reasonable and are typical for gold exploration projects with coarse visible gold (nugget effect). The results do however confirm difficulty in assaying nugget gold mineralization and the requirement for duplicate samples to check precision/nugget effect.

Table 12-1: ACA Howe 2011 Duplicates *vs.* Original Samples

ACA Howe Sample #	ID	From	To	Zone	Sample Type	ACA Howe Au (ppb)	Northern Gold Sample #	Northern Gold Au (ave) (ppb)
ACA61661	GAR-10-26	66.0	67.0	Garrcon	1/2 core	665	61661	652
ACA61662	GAR-10-26	67.0	68.0	Garrcon	1/2 core	1290	61662	1704
ACA85378	GAR-10-39	220.0	221.0	Garrcon	1/2 core	1210	85378	360
ACA85381	GAR-10-39	221.0	222.0	Garrcon	1/2 core	13000	85381	1312
ACA10001	CDN-GS-5D Rec. Value: 5060 ppb Au				Standard	4910		

Howe completed further limited verification sampling during its February 2013 site visit which comprised six samples of quarter core from holes GAR-12-217 and GAR-12-287.

Mr. Trinder and Mr. McGarry collected and sealed the sample bags with ladder lock ties and maintained possession of all samples until delivered by Mr. Trinder to AGAT Lab's geochemistry lab at 5623 McAdam Road, Mississauga, Ontario. AGAT is a reputable, ISO/IEC17025 accredited laboratory qualified for the material analysed. AGAT quality control procedures are method specific and include duplicate samples, blanks, replicates, reagent / instrument blanks for the individual methods.

The samples were prepared using AGAT sample preparation package 200-001, which consists of conventional drying if required, in 105^{o}C ovens; crushing; splitting and; pulverizing. After drying, the sample was passed through a primary oscillating jaw crusher producing material of 75% passing a 2mm screen. A 250-gram sub-sample was split from the crushed material using a stainless steel riffle splitter. This split was then ground to 85% passing 75 microns or better using a ring pulveriser.

The verification samples were analysed for gold using Au fire assay; ICP-OES finish using a 30 g nominal sample weight (AGAT analytical code 202-062; 0.01 ppm Au lower detection limit).

As with the 2010 and 2011 verification samples, the 2013 duplicate core samples provide an independent confirmation of the presence of significant gold mineralisation at the Garrcon Deposit (Table 12-1). Data are too limited however, to make a meaningful comparison of Howe's duplicate sample analytical results with Northern Gold's original analytical results. Howe notes however, that the variations between the original and duplicate assay results are reasonable and are typical for gold exploration projects with coarse visible gold (nugget effect). The results do however confirm difficulty in assaying nugget gold mineralization and the requirement for duplicate samples to check precision/nugget effect.

Table 12-2: ACA Howe 2014 Core Duplicates *vs.* Original Samples

ACA Howe Sample #	ID	From (m)	To (m)	Zone	Sample Type	ACA Howe Au (g/tonne)	Northern Gold Sample #	Northern Gold Au (ave) (ppb)
ACA00021518	GAR-12-287	161	162	Jonpol East	1/4 core	0.38	NGM00021518	0.531
ACA00021524	GAR-12-287	164.6	165	Jonpol East	1/4 core	6.15	NGM00021524	6.49
ACA00151321	GAR-12-217	218	219	Garrcon	1/4 core	0.35	A00151321	2.6
ACA00151566	GAR-12-17	424	425	Garrcon	1/4 core	0.61	A00151566	1.12
ACA00151567	GAR-12-217	425	426	Garrcon	1/4 core	0.88	A00151567	0.791

12.3 DATA VERIFICATION

Howe compiled all of the drill hole information into digital spreadsheet files. The drilling data was imported to Micromine and the database files were validated. Identified errors were corrected and documented however no significant errors were detected. Unassayed drill hole intervals were assigned a grade of zero g/tonne Au. Howe also completed a spot check comparison of approximately 10% of the Company's assay database against digital scans/PDF files of laboratory certificates and historical logs where xcertificates were to verify accuracy and completeness. No significant errors were detected.

Howe is of the opinion that the assay database for the Garrison Property (Garrcon and Jonpol Deposits) is of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

Howe has not independently conducted property title searches but has relied upon Northern Gold and the Ontario Ministry of Northern Development and Mines ("MNDM") for information on the status of the claims, property title, agreements, and other pertinent permitting and environmental conditions (see Section 3).

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Garrcon Deposit

13.1.1 Preliminary Metallurgical Studies

In late November 2010, Northern Gold submitted two composite samples (Sample A and Sample B) to SGS Mineral Services (SGS), 185 Concession Street, Lakefield, Ontario to evaluate the processing and recovery characteristics of the Garrcon gold-bearing mineralization at a scoping level. The program incorporated ore characterization tests (head analysis and mineralogy), comminution tests as well as the evaluation of a number of processing options, including gravity separation, flotation and cyanidation.

Northern Gold indicates that the samples were obtained from diamond drill core logged and assayed during its 2009 and 2010 drilling programs. One composite sample (Sample A) was obtained from the mineralized area known as the Shaft Zone and the other (Sample B) was obtained from the mineralized area known as the North Zone. Each sample consisted of approximately 60 kilograms of archived 1/2 drill core splits. Individual sample lengths varied from 0.5 meters to 1.0 meter. The samples were selected from 10 different drill holes, five in each of the mineralized zones. The Shaft Zone composite sample included material from 32 different locations within the five drill holes. The North Zone composite sample included mineralized material from 30 separate sample intervals within the five drill holes sampled. Northern Gold notes that the samples were typical of the lithologies, alteration and mineralization logged and assayed to date.

The following description of test results is extracted from the Executive Summary of SGS' final report dated January 31, 2011 (SGS Mineral Services, 2011).

"*The average calculated gold head assay from the testwork for the two samples was 1.06 g/tonne for Sample A and 1.73 g/tonne for Sample B. The sulphur content of the two samples was 0.56% for Sample A and 0.25% for Sample B. The samples were also submitted for Bond ball mill grindability and abrasion index tests. Both samples were characterized as hard to very hard with BWI values of 21.9 and 21.6 kWh/t, respectively. The samples also fell into the abrasive range with abrasion indices (Ai) of 1.161 and 0.878.*

The test program included a number of standard gold processing options including; gravity separation, flotation and cyanidation. Gravity separation tests yielded gold recoveries of approximately 32% and 30% for Samples A and B respectively.

Sample A gravity tailing and whole ore flotation testwork achieved gold recoveries of approximately 94% independent of the grind size which was varied from ~131 µm to ~45 µm. Sample B gravity tailing flotation testwork did not achieve as high recoveries with values ranging from approximately 81% to 89%. There was also a direct correlation *between increased gold recovery and finer grind size shown in the Sample B gravity tailing flotation testwork.*

Cyanidation test results on gravity tailings and whole ore were excellent for both samples. Gold recoveries ranged from ~94% to 97% in the tests conducted on the gravity tailings and ~93% to 98% for the whole ore samples. Given the degree of gravity recoverable gold, inclusion of a gravity circuit within the process flowsheet is recommended even though the whole ore cyanidation results were comparable to gravity tailings results. Single carbon-in-leach tests were performed on both samples and there was no indication of preg-robbing.

Cyanidation tests were also conducted on the flotation concentrate to evaluate the effect of regrinding. The gold recoveries did increase when the flotation concentrate was reground prior to leaching. Overall gold recoveries by flotation and concentrate cyanidation for Samples A and B were lower than the other test options with gold recoveries of 92% and 86%, respectively."

SGS concluded that the results from the study indicated that the process flowsheet should focus on gravity separation and gravity tailing cyanidation. SGS noted that further testwork to optimize the design parameters is required so that an optimum process flowsheet can be developed. Flotation conditions and parameters would need to be studied further in order to increase flotation recovery to include this type of processing in the flowsheet.

13.1.2 Howe Discussion (from 2011 PEA)

Howe's 2011 Garrcon PEA is based on limited test work and site knowledge. In addition to the preliminary SGS metallurgical studies, Howe was provided geologic information in the form of drill logs describing the lithologies, alteration, veining and the homogeneity of the mineralized area along with fire assays, multi-element analyses and sulphur analysis. While this geological and analytical information cannot replace metallurgical testing, it can suggest potential processing techniques. This geologic information, along with the limited test work performed to date suggest that the processing scenario outlined in Section 17, or a similar one, may potentially provide a satisfactory method for recovering gold from the deposit. The suggested processing scenario must be verified, with the support of additional test work, for incorporation into a future pre-feasibility study. This PEA study is to be used for initial cost estimations only.

The SGS report indicates good gold recovery with cyanide. Additional test work is necessary to confirm recovery and the optimum mineral processing flow sheet. At this level, Howe is assuming a recovery of 98% for the processing plant based on the SGS testwork. A recovery of 65% for a heap leach facility was assumed as no column tests have yet been conducted to determine recovery rates. Slightly lower recoveries would have an insignificant impact on the overall capital and operating costs of the circuits analyzed.

13.1.3 2013 – 2014 Garrcon Metallurgical Testing

In late 2013 Northern Gold a composite drill core sample from the Company's drilling on the Garrcon Deposit and submitted to Kappes, Cassiday and Associates of Reno, Nevada for preliminary column leach testing of 100% minus 9.5mm crush material. Testwork is ongoing and results are pending.

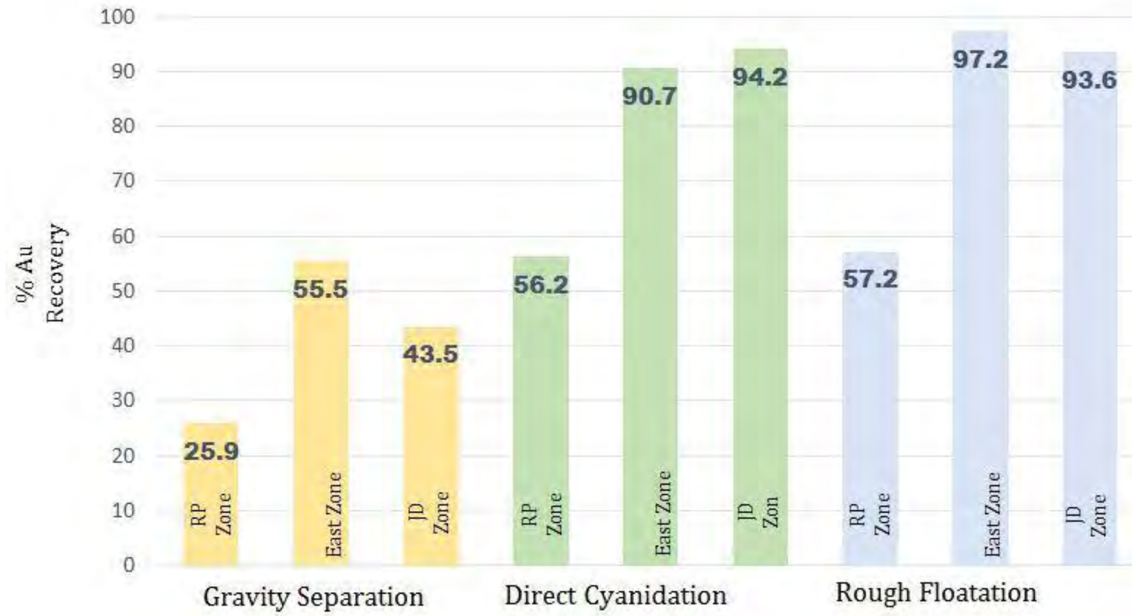
13.2 Jonpol Deposit 2013 Preliminary Metallurgical Testwork

On September 26, 2013 the Company announced preliminary metallurgical testwork results on samples taken from the Jonpol Deposit. Three composite drill core samples were selected by Northern Gold from the Company's drilling on the JD, RP and East Zones of the Jonpol Deposit and submitted to XPS Consulting and Testwork Services ("**XPS**") of Falconbridge, Ontario for Scoping Level metallurgical testing at their facility in Falconbridge, Ontario.

Each of the three samples was approximately 60 kg with head analysis that were representative of their respective zone's resource grade. Drill hole samples collected were chosen to represent typical mineralization in each of the respective zones. Each of the composited samples was comprised of sawn half core. For each of the samples a weighted average grade of downhole assays from the assayed half of core was calculated and reconciled against the average head grade of each sample.

Historical metallurgical test work performed in the 1990's was focused on the JP zone. The current 2013 testwork represents the first metallurgical investigations from each of the three other zones. The preliminary work appears to indicate that several metallurgical sub-domains are present in the deposit, thought to be separated by cross faulting.

The 2013 testwork indicates that the JD and East zones are of a free milling nature and responded well to gravity separation, direct cyanidation and floatation. It was previously believed that all of the Jonpol zones contained some component of refractory mineralization based on the historical JP metallurgical testwork. The 2013 testwork indicates this is not true. Historic and current work shows only the JP and RP zones samples are partially refractory. Further testwork is being planned for the JP and RP zones to optimize recovery. Figure 13-1 illustrates the recoveries obtained in each of the zones and extraction methods tested in 2013.



Source: Northern Gold 2013

Figure 13-1: Jonpol 2013 gold recoveries by zone (RP, East and JD) and extraction method

13.2.1 JD Zone

The JD zone test sample was composited from four drill holes and gave a head analysis of 4.77g/t Au. The results of the testwork indicated that the Bond Work index was 16.1 and is moderately abrasive. The gravity recovery was 43.5%, whole ore cyanidation gave a recovery of 94.2% and whole ore floatation had a recovery of 93.6%. These values indicate the zone to be of a free milling nature. The composite's reconciled grade was 30.6% lower than the weighted downhole assay values.

13.2.2 RP Zone

The RP zone test sample was composited from five recent holes and gave a head analysis of 8.49g/t Au. The results of the testwork indicated that the Bond Work index was 16.5 and is moderately abrasive. The gravity recovery was 25.9%, whole ore cyanidation gave a recovery of 56.2% and whole ore floatation had a recovery of 57.2%. These values indicate the zone to contain at least some component of refractory ore and that further test work will be required. The composite's reconciled grade was 19.9% higher than the weighted downhole assay values.

13.2.3 East Zone

The East zone test sample was composited from seven recent drill holes and gave a head analysis of 6.79g/t Au. The results of the testwork indicated that the Bond Work index was 16.0 and is moderately abrasive. The gravity recovery was 55.5%, whole ore cyanidation gave a recovery of 90.7% and whole ore floatation had a recovery of 97.2%. These values indicate the zone to be of a free milling nature. The composite's reconciled grade was 40.6% higher than the weighted downhole assay values.

14 MINERAL RESOURCE ESTIMATE

14.1 Introduction

During the period February 2013 to March 2014, ACA Howe International Limited ("Howe") carried out a resource estimate update study for Northern Gold's Garrison Property Project for both the Garrcon and Jonpol deposits. The resource estimate includes all holes drilled by Northern Gold at the Garrcon and Jonpol deposits up to December 2013.

This Garrcon resource study update incorporates:

- data from 88 new diamond drill holes completed at the deposit by Northern Gold in 2012 and 2013 and
- The results of resampling program undertaken by Northern Gold on 21 historical Garron holes.

The Jonpol resource study update incorporates:

- new data from 66 new diamond drill holes completed at the Jonpol deposit in 2012/2013 and
- The results of resampling program undertaken by Northern Gold on 77 historical Jonpol and Jonpol East Zone holes.

This section of the report presents resource estimate update methodologies, results, validations for the Garrison Property project. The resource estimates presented in the following sections have an effective date of December 30, 2013. The estimates are prepared in accordance with CIM Standards on Mineral Resources and Reserves (adopted November 27, 2010 and are reported in accordance with the Canadian Securities Administrators' NI 43-101. Classification, or assigning a level of confidence to Mineral Resources, has been undertaken with strict adherence to the CIM Standards on Mineral Resources and Reserves. In the opinion of Howe, the resource evaluation reported herein is a reasonable representation of the global gold mineral resources found in the Garrison Property gold deposits at the current level of sampling.

This resource estimate was prepared by Mr. Leon McGarry, Howe Project Geologist and Qualified Person (QP). Mr. McGarry has a B.Sc. degree in Earth Science and is a registered Professional Geoscientist (P.Geo.) in good standing registered in the Province of Ontario (APGO no. 2348). Mr. McGarry has over 7 years' experience in the mining industry including a background in international mineral exploration and project management for gold and base metal deposits. Mr. McGarry has visited the Garrison Property Project site between the 2nd and 3rd of February, 2013 to review the geology, collect verification samples and confirm the location of drill collars. Micromine software (Version 2012) was used to facilitate the resource estimating process.

14.2 Data Sources

A single Garrison drill hole dataset is used for the generation of the Garrcon and Jonpol resource estimates. The drill data was provided to ACA Howe in an Excel database titled "NGM_Master_Drillhole_Database.xlsm" and has an effective date of **December 30, 2013.** Drill holes within the database are assigned to three deposit areas based on collar location. Holes within the database are described in the following table, along with the availability of assay data, lithology data and survey data.

Since the completion of the resource estimate ACA Howe has received collar data for two holes at Jonpol, JP-13-16 and JP-13-17 with two wedge holes, JP-13-16A and JP-13-17A (abandoned), and a geotechnical hole JPGT-02A. Collar information was found for an additional 9 historic holes: N94-1 to N94-3 and N95-1 to N95-6. These holes did not have assay data available at the December 30, 2013 data cut off and were not included in the resource database.

Historical and recent drilling has targeted the Garrcon, East Zone and Jonpol deposits of the Garrison Property. Drill holes are collared on the same exploration grid. Holes drilled at one deposit may extend to, and inform, the other. Therefore a single database is maintained for the resource study.

14.2.1 Data Editing

Domain Classification
Upon review, the gold deposit setting and mineralization styles at the East Zone and the Jonpol Domains are considered to be similar. For efficiency the East Zone domain drill holes are reclassified as Jonpol domain holes.

Assay Selection
The Northern Gold database contains assay values derived from a variety of analysis types described in Section 11. Assay values are presented in a separate column for each analysis type. Values are averaged to create a final gold grade for each sampled interval. The averaged gold value was used to estimate resources in 2011 and 2012.

The current 2014 resource estimation study does not use an average. Instead, the primary assay of the most representative analysis technique is selected for each sample interval. Assays are selected in the following order: Primary Pulp Metallic Assay *if available* > Primary Gravimetric Fire Assay *if available* > Primary Fire Assay with Geochem Finish > Historic Fire Assay. The change in approach seeks to:

- limit systematic bias,
- limit unnecessary manipulation of the data set,
- prevent the mixing of results of variable quality,

Repeat analysis of reject material taken at regular intervals for the purposes of QA/QC will help to evaluate quality of the original dataset. It is not normal practice to incorporate these results into the dataset by averaging. The repeat analysis of selected samples above a given grade cut off may introduce selection bias.

Selecting samples above an assay cut off for reanalysis will almost always result in lower estimates of average grade in the re-assay results than in the original results. This happens because the sample selection is not independent of the variable being checked: the original assay. Large positive errors in the original results will be found, but large negative errors will not and the average of the second set of assays will be markedly lower than the first. If the mean of the original and repeat assay is included in the sample population, the mean grade of the population will be artificially less than if the original is used (Long, 2005 and Abzalov, 2008)

Samples are selected for gravimetric analysis using a grade cut off also generating potential for systematic bias. However, because gravimetric analysis is more effective at assaying higher grades the results are retained in the current study. The primary pulp metallic assays do not have a strong selection bias relative to the original fire assay results because they were selected using a geological control.

Table 14-1: Drill holes contained in the Northern Gold Master Database as of December 30th 2013.

Collars assigned to the Garrcon domain include:
68 historic drill holes (1985 to 2007)
Collar data is available for:- • Four (4) Jonpol Explorations holes: B-86-1 to B-86-5, with assay, lithology and survey data. • Nine (9) Moneta Porcupine holes: COQ87-33 and COQ87-37 with lithology and survey data but no assay data; and holes MG96-01 to MG96-04. All have assay, lithology and survey data except hole MG96-04 which has no down hole data. • Sixteen (16) ValGold holes: C06-01 to C06-05, C06-05A C06-05B and C06-06X to C06-09 and C07-02 to C07-05 with assay, lithology and survey data. C06-06X has no assay data. • Thirty nine (39) Cominco holes comprising (19) GD series holes GD85-1 to GD86-19 and twenty (20) GAR series holes: GAR-20 to GAR-25B, GAR-47 to GAR-52, GAR-55 to GAR-57, GAR-59, GAR-61, GAR-63, GAR-74 to GAR. All have assay, lithology and survey data..
249 Northern Gold drill holes and 8 drill hole extensions (2009 – 2012 – up to GAR-12-270)
• Collar data is available for holes: GAR-09-01 to GAR-10-48, GAR-10-50 to GAR-10-58, GAR-11-49, GAR-11-59 to GAR-11-138, GAR-11-140 to GAR-11-154, GAR-11-160 to GAR-11-183, GAR-11-190, GAR-11-191, GAR-12-127 to GAR-12-129, GAR-12-139, GAR-12-153, GAR-12-155 to GAR-12-159, GAR-12-18 to GAR-12-189, GAR-12-192 to GAR-12-213, GAR-12-215 to GAR-12-220, GAR-12-222, GAR-12-223, GAR-12-226 to GAR-12-254, GAR-12-260 to GAR-12-264, GAR-12-266 to GAR-12-268 and GAR-12-270. All have assay, lithology and survey data except for the following five (5) holes: GAR-10-34, GAR-10-34B, GAR-10-38, GAR-11-71, and GAR-11-143 which have no assay data; and the following three (3) holes that have no survey data: GAR-10-38, GAR-12-229 and GAR-12-266.
Collars assigned to the Jonpol domain include:
276 historic drill holes (1985 to 2007)
• Forty-nine (49) ValGold holes: G05-01 to G05-07, G06-01 to G06-42, G07-01 to G07-04. All have assay, lithology and survey data. • One hundred and eighty-three (183) Jonpol Exploration holes: N87-1to N87-38A and N88-39 to N88-140, N89-141 to N89-147, N90-148 to N90-153, N91-154 to N91-158 and N92-159 to N92-166. All have assay, lithology and survey data, except for the following holes which have no assay data: N88-135, N91-156A, N92-160, N92-161 and N92-166; and the following holes that have no down hole survey data: N87-24, N87-28, N87-29, N87-33 to N87-35A, N87-38A, N88-59, N88-63, N88-89, N88-93, N88-93A, N88-96, N88-98, N88-98A, N88-108, N88- 26, N88-134, N88-135 and N92-16. • Twenty two (22) Underground Bazooka holes: B-1 to B22 that have no lithology or survey data. • Thirty-one (31) Underground diamond holes: U-1 to U-6, U-8, U-10 toU-19, U-28, U-29, U-31, U-34 to U-37, U41 to U-48 and U-50. All have assay and survey data, except the following holes that have no survey data: U-5, U-11, U-17, U-35, U-42 and U-46. The underground holes have no lithology data.
29 Northern Gold drill holes (2012 – 2013)
• Collar data is available for holes: JDGT-01, JDGT-02, GGT-01, GGT-02, JPGT-01 and JP-12-01 to JP-12-04, JP-13-05 to JP-13-15 and JP-13-20 to JP-13-28. Assay, lithology and survey is available for all drill holes, except for holes JDGT-02 that have no assay data; and holes JP-13-17 to JP-13-28 that have no survey data.
Collars assigned to the Jonpol East Zone domain include:
67 historic drill holes (1985 to 2007)
• 3 Jonpol Exploration holes B-86-3 and B-87-17 and N87-18. Assay, lithology and survey is available for all holes, except hole B-87-17 which has no assay or survey data. • 14 ValGold Holes: G06-29 to G06-36 and G07-05 to G07-09. All have assay, lithology and survey data. • 5 Moneta holes COQ87-21, COQ87-22, COQ87-27, COQ87-28 and COQ87-31that have lithology and survey data but no assay data. • 45 Cominco holes: GAR-26 toGAR-46, GAR-48A, GAR-51, GAR-51A, GAR-53, GAR-53A, GAR-54 GAR-58, GAR-60, GAR-62, GAR-64, GAR-73, GAR-77 GAR-78 GAR-79. All holes have assay, lithology and survey data except holes GAR-35 and GAR-53A which do not have any assay data.
33 Northern Gold drill holes and 2 drill hole extensions (2012)
• GAR-12-214, GAR-12-224, GAR-12-225, GAR-12-255 to GAR-12-259, GAR-12-265, GAR-12-271 to GAR-13-294. All holes have assay, lithology and survey data.

14.2.2 Site Grid Transformation

Northern Gold drill hole collar coordinates were accurately surveyed using a differential GPS instrument in the UTM NAD 83 coordinate system.

As described in Section 9.1.2, the site grid baseline is at 070° True North. The site baseline origin (0 m West, 1000 m North) is located at the UTM NAD 83 coordinates (579,771.141 m East, 5,374,368.046 m North). The site grid has positive westings and eastings that intersect the baseline. To enable plotting in Micromine Software, positive westings are converted to negative eastings such that all local grid coordinate numbers increase to the east.

Table 14-2: Garrison Project Micromine Input Data Files

MM Data Type	Number of Records	Number of Holes	Comment
MM Database			
DH Collar	743	743	
DH Geology	18,840	665	
DH Assay	181,422	711	
DH Down Hole Survey	21,387	688	
DH Multi element	83,273	306	These were not used in resource modelling.
DH Density	4,076	203	
Additional Input Data			
3m Resolution DEM of the Garrison property			

14.2.3 Data Validation

For new and historical data acquired since the 2012 estimate, a random selection of records in the Master Assay Database file are checked against scanned copies of the hardcopy logs.

The data files created in Micromine are checked and interrogated via Micromine validation functions prior to constructing a drill hole database for the deposit. The resulting database contains all available drilling and sampling data for the project. Key fields within these critical drill hole database data files are validated for potential numeric and alpha-numeric errors. Data validation cross referencing collar, survey, assay and geology files was performed to confirm drill hole depths, inconsistent or missing sample/logging intervals and survey data. The data was validated – checked for logical or transcription errors such as overlapping intervals. There were a few, very minor errors that were corrected.

14.3 Classical Statistical Analysis

Descriptive statistical analysis of the Garrcon and Jonpol assay data was undertaken in order to understand the characteristics of the assay population. Specifically this analysis was undertaken to estimate the natural gold cut-off grade that defines the various mineralized envelopes, to determine the distribution parameters for gold and to compare assay data from different sample supports (drill campaigns, surface and underground data) and consider whether recent and historical datasets are compatible for use in resource estimation.

A review of geological interpretations, previous Howe studies and discussion with staff geologists suggested that the local geology and spatial features associated with the mineralization are well understood in a general sense.

14.3.1 Garrcon

Unrestricted descriptive statistics are generated for all drill hole assays for the Garrcon deposit, by corporate drill campaign and are shown in Table 14-3. No significant bias in sample support is noted. Mean grades and standard deviation are similar. Howe considers that diamond drill sample populations are sufficiently comparable to permit the use of assay data derived from different drill campaigns for resource estimation

Table 14-3: Garrcon Raw Assay Statistics

Values	Jonpol	Moneta	ValGold	Cominco	Northern	ALL
N	157	1,830	5,588	12,066	92,732	112,373
Min	0.006	0.001	0.001	0.002	0.001	0.001
Max	0.655	10.721	29.550	617.000	1,956.160	1,956.160
Average	0.060	0.108	0.317	0.350	0.243	0.255
StdDev	0.097	0.414	1.080	7.504	7.147	6.947
Var	0.009	0.171	1.166	56.315	51.077	48.258
CV	1.617	3.835	3.407	21.440	29.412	27.243

A review of the drill hole assay histogram shown in Figure 14-1 suggests that the gold grade distribution contains three or more mixed log normally distributed gold populations:

- A background or lower limit of detection population, with a mean value of 0.01 ppm Au that accounts for approximately 61% of assays.
- A low to medium grade population becomes dominant above a grade of 0.05 g/t Au, with a mean value of 0.13 ppm Au that accounts for approximately 35% of assays.
- High grade population becomes dominant above a grade of 1.5 g/t Au, with a mean value of 1.5 ppm Au that accounts for approximately 4% of assays.

It is not possible to discern a natural population break associated with a particular style or generation of mineralization at an economically significant grade. A lower cut off of 0.1 ppm Au is used for wireframe modelling.

14.3.2 Jonpol

Unrestricted descriptive statistics are generated for all drill hole assays for the Jonpol deposit by corporate drill campaign for surface and underground holes and are shown in Table 14-4. Mean grades and standard deviations are similar for surface drill holes. A review of assay histograms for underground drilling showed a higher population mean and variance as compared to drill hole data. Given that underground drill holes are biased towards higher grade areas, Howe considers that the underground and diamond drill sample populations are sufficiently comparable to permit the use of assay data derived from both methods in resource estimation.

Table 14-4 Jonpol Raw Assay Statistics

Values	Jonpol	Jonpol Under-ground	Jonpol Bazooka	Moneta	ValGold	Cominco	Northern	ALL
N	20,450	894	248	889	18,288	14,682	13,598	69,049
Min	0.005	0.035	0.035	0.003	0.001	0.003	0.003	0.001
Max	125.829	173.657	60.240	3.812	98.400	560.000	95.630	560.000
Average	0.425	2.447	2.781	0.053	0.131	0.247	0.166	0.288
StdDev	2.249	9.079	6.924	0.196	0.999	7.633	1.241	3.973
Var	5.057	82.433	47.935	0.038	0.997	58.257	1.540	15.789
CV	30.842	2.490	5.287	3.710	3.665	7.457	7.614	13.775

Historically sampling of Jonpol drill cores was selective. The histogram shown in Figure 14-2 has peaks associated with a high lower limit of detection grades. Gold grade population distributions are more erratic. It is possible to discern a mixed medium to high grade population that becomes dominant above a grade of 0.3 g/t Au, with a mean value of 0.85 ppm Au that accounts for 10% of assays. This clearer break between low grade and high grade samples allows the use of a more selective modeling approach.

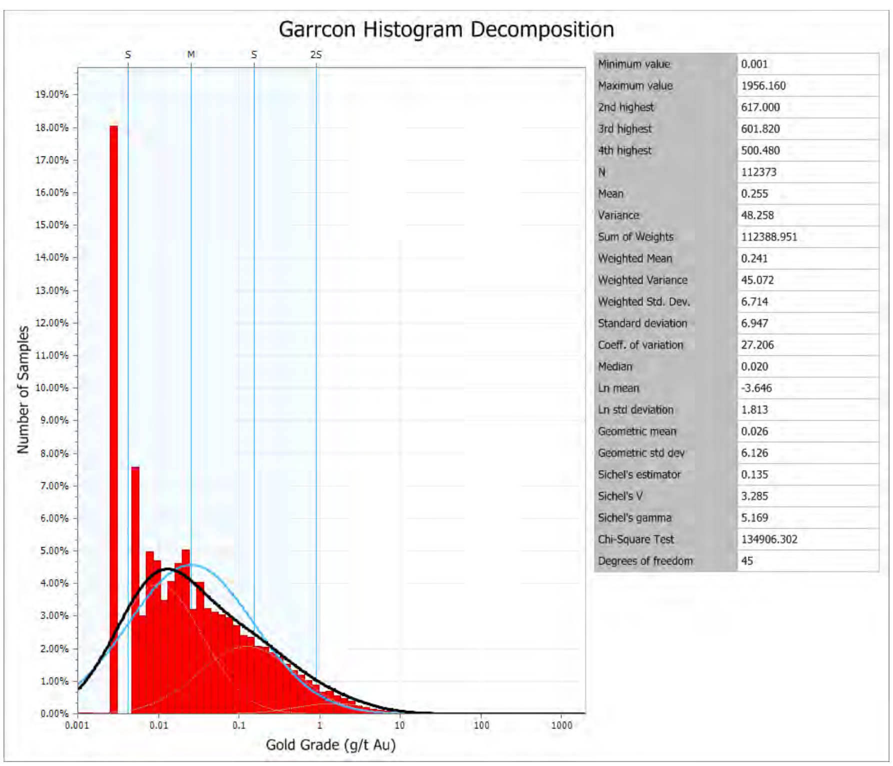


Figure 14-1 Garrcon Assay Histogram

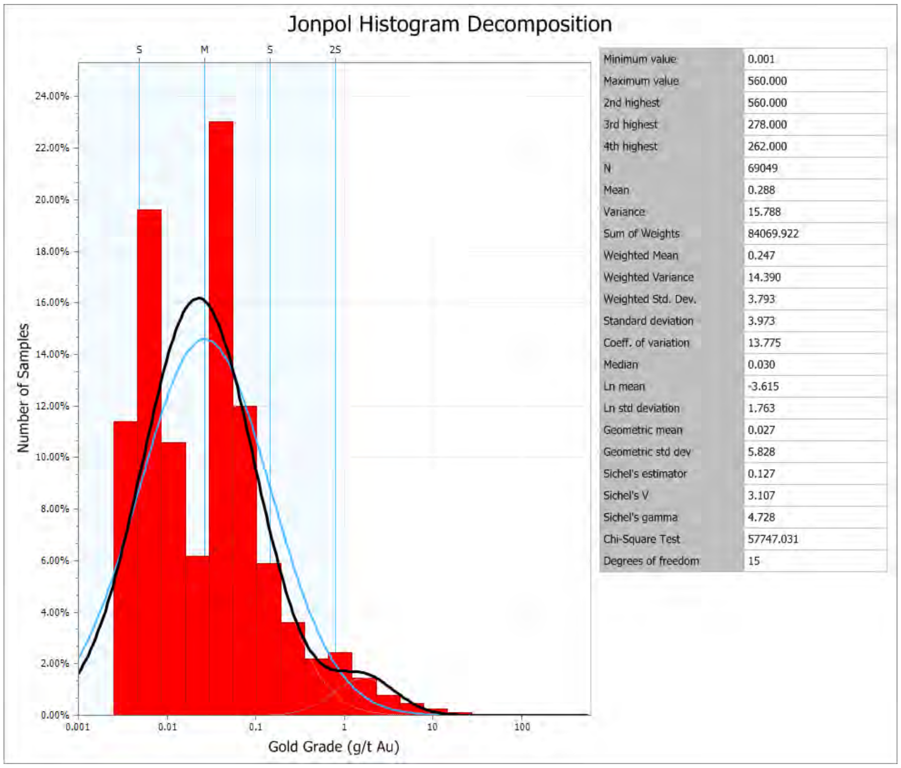


Figure 14-2 Jonpol Assay Histogram

14.4 Domain interpretation

The 2012 ACA Howe deposit model for the Garrcon deposit was developed with the aim of establishing a bulk tonnage resource estimate and as such identified broad zones of mineralization. The 2009 Jonpol resource model utilized a long section polygonal method of grade and thickness estimation.

Exploration conducted by Northern Gold in 2012 and 2013 and recent structural geology studies enable broad geological interpretations and the construction of 3D wireframe domains in the 2014 resource models based on the following:

- characteristic geological features,
- grade profiles and mineralization type,
- general strike orientations,
- fault or shear zone associations.

At the Garrcon Deposit a total of 5 geological domains and 9 grade domains have been developed. At Jonpol a total of 5 grade shell domains have been modeled.

14.4.1 Geology Domains

14.4.1.1 Garrcon

Garrcon deposit gold mineralization is hosted by Timiskaming-age metasedimentary rock sequences that include greywacke, arkose and iron formation, occurring adjacent to the Destor-Porcupine Fault Zone. As described in Section 7, the central portion of the Garrcon clastic sedimentary rocks are bound to the north and south by east-striking and steeply dipping shear zones that are logged as ultramafic shist or ultramafic talc schist (codes CMS and CT).

The ultramafic/talc schist provide two marker horizons that can be traced along the entire strike length of the Garrcon deposit. These units are used to generate three east-west trending domains shown in Figure 14-4.

- Garrcon Central
- Garrcon North (Formerly termed the Green Zone by Northern Gold)
- Garrcon South

The steeply dipping ultramafic/talc schist shear zones are typically unmineralised and are modeled as waste domains shown in Figure 14-7 and Figure 14-8:

- Garrcon CV North
- Garrcon CV South

Geological interpretations are made in cross section by digitizing polygons snapped to logged lithological intervals that are combined along strike to generate three dimensional wireframes. The unconstrained extents of geological polygons are interpreted to a maximum of 100 m strike direction and 300m in the down dip direction. Where constrained by drill hole data the extrapolation distance is taken to be half the drill data spacing.

Geology domains are hard boundaries for the purposes of resource estimation. Samples that are located in one geological domain will not inform the grade of a block within another.

14.4.1.2 Jonpol

At Jonpol (JD, JP, RP and East Zones) mineralization occurs in highly deformed and altered mafic and ultramafic volcanic rocks of the Kidd-Munro Assemblage along the north contact of the Munro Fault and is comprised of disseminated sulphides in silica flooded zones. The mineralized structures strike approximately 070^{o} (true) and dip steeply to the south. At Jonpol structurally controlled mineralization appears to crosscut lithology. Geology domains are not used. Instead mineralization is constrained by interpreted grade shells described in the following section.

14.4.2 Mineralized Zone Interpretation

14.4.2.1 Garrcon

At the Garrcon Deposit, gold mineralization occurs in disseminated quartz-carbonate vein stockworks within the clastic sedimentary host rocks. Higher grade domains correspond to broad zones with a higher than usual concentration of samples with potentially economic gold grades.

These zones are weakly anisotropic and have apparent gross trends that correspond to vein set orientations identified in the November 15, 2012 Terrane Geoscience report *Garrison Property –Mapping and Structural Analysis, Garrison Township, Ontario* (See Figure 14-3):

- VJ1 veins strike approximately east-west, dip steeply to the north . This vein set is generally cut by all other vein set
- VJ2 veins generally strike north-northwest to south-southeast and dip shallowly to the east and west. VJ2 veins are relatively undeformed and interpreted as extensional features. Terrane Geoscience note that in *the Garrcon region of the property the majority of the visible gold observed occurs in this (VJ2) flat lying vein* sets.
- VJ3 veins strike between 040^{o} to 060^{o}, are near vertical.

As described in Section 14.3, statistical analysis does not indicate clear gold population breaks. It is not possible to generate definitive domain boundaries. Instead limits of higher grade domains are loosely interpreted in plan and cross section, by digitizing string polygons that are not snapped to drill hole traces. Strings are combined along strike to form three dimensional wireframes. In accordance with the 2012 estimate the following guidelines were used during the interpretation process:

1. A cut-off grade of 0.1 g/tonne gold was generally used.
2. Along strike, zones were extended halfway to the next, under-mineralized cross-section.
3. Zones were extended down-dip by a maximum of 100 meters beyond the last intercept.
4. Zones were allowed to extend through “below cut-off” intercepts so long as there was a “geological reason” to do so.

As in the 2012 resource estimate, beyond approximately 925 meters Grid West, grades tend to be lower. Results from geophysics suggest an, as yet undefined, north-northeast trending structural boundary that bisects the Garrcon deposit. The Garrcon Central domain is divided into separate East and West lower grade. No higher grade zones were modeled in the Garrcon North and South Zones and these domains are modeled separately.

Figure 14-4 shows a three-dimensional (3-D) view of the interpreted zones. The strike length of defined mineralized zones used in wireframe restricted resource estimation totals approximately 18,000 meters, the width ranges from 200m to 500m and the maximum depth extent is approximately 700 meters below surface.

Garrcon high grade mineralized domains are soft boundaries for the purposes of resource estimation. Samples that are located in one domain can inform the grade of a block within another.

14.4.2.2 Jonpol

Five drill defined zones have been interpreted at Jonpol, the JD Zone, Jonpol (JP) Main Zone, Jonpol (JP) Main Zone Deep, RP Zone and East Zone. Strike and dip orientations of zones were interpreted using drill hole and underground data points and geological data. A greater than 1 g/t Au grade shell interpretation is made in cross section by digitizing polygons that are snapped to sample intervals. The grade shell seeks to maintain a minimum grade of 3 g/t Au over a minimum thickness of 1.5m.

Envelopes are developed in consideration of logged geology and vein characteristics as well as the 3D geological and fault model developed by Northern Gold and Terrane Geoscience. The unconstrained extents of mineralization polygons are interpreted to a maximum of 50 m in both strike and dip directions. Where constrained by drill hole data the extrapolation distance is taken to be half the drill data spacing. Jonpol grade shells are shown in Figure 14-6. The Jonpol (JP) Main Zone grade shell is shown in Figure 14-9. Polygons are combined along strike to form three dimensional wireframes.

The strike length of defined mineralized zones used in wireframe restricted resource estimation totals approximately 1,700 meters, the total width ranges from 5 to 60 meters and the maximum depth extent is approximately 650 meters below surface based upon 50m extension from deepest drill intercept and extents of robust geological model.

At Jonpol mineralized domains are hard boundaries for the purposes of resource estimation. Samples that are located in one domain will not inform the grade of a block within another.

Table 14-5: Rock Codes in the Garrcon Gold Project Block Model

Lithology	Deposit Area	Grade Domain	Domain Code	Sub Domain
Clastic Sedimentary Rocks: (SEDS/BIF)	Central	Lower grade	West	GC_C_W
			East	GC_C_E
		Higher grade	JV1	GC_HG_E
			JV1	GC_HG_JV1
			JV2	GC_HG_JV2
			JV2A	GC_HG_JV2A
			JV3	GC_HG_JV3
			JV3	GC_HG_JV3_Deep
			JV3	GC_HG_JV3_E
			JV3	GC_HG_JV3_W
	North	Low grade	-	GC_N
	South	Low grade	-	GC_S
Ultramafic/Talc Schist: (CT and CMS)	North	Waste	North	GC_CV_N
	South	Waste	South	GC_CV_S

Table 14-6: Garrcon and Jonpol Domain Wireframes

	Modelled Domain/ Sub Domain	Accum Strike (m)	Depth Extent (m)	Strike (deg)	Thickness (m)	Drill Sample Density (m)	n Holes	n Samples
Garrcon	GC_C_E	1,000	625	90	200	15x15 to 60x60	97	21,894
	GC_C_W	850	450-700	95	100-450	10x10 to 30x90	214	44,167
	GC_CV_N	1,850	550	98	30	30x30 to 60x120	164	6,027
	GC_CV_S	565	550	90	20	50x30 to 150x300	24	637
	GC_HG_E	900	600	90	70	30x30 to 150x300	50	4,421
	GC_HG_JV1	150	150	0	100	15x30 to 30x60	33	2,760
	GC_HG_JV2	300	200	0	75	25x30 to 25x50	46	3,245
	GC_HG_JV2a	325	300	0	175	30x30 to 90x90	28	3,483
	GC_HG_JV3	375	200	30	125	15x15 to 30x90	57	6,158
	GC_HG_JV3_Deep	100	220	0	125	60x60	5	414
	GC_HG_JV3_E	150	100	90	40	30x60	14	472
	GC_HG_JV3_W	185	100	75	40	30x90	10	480
	GC_N	1,000	550	95	130	30x30 to 50x100	52	7,613
	GC_S	550	550	90	150	60x30 to 150x300	97	21,894
Jonpol	JD	450	200	90	5-10	30x15 to 60x60	48	528
	JP_Deep	125	300	90	15	15x15 to 60x60	34	299
	JP	350	330	85	10-60, avg 40	10x10 to 30x30	133	1,819
	RP	300	90	90	15	30x30	7	83
	EZ	700	475	110	10-20	40x40 to 100x100	22	260

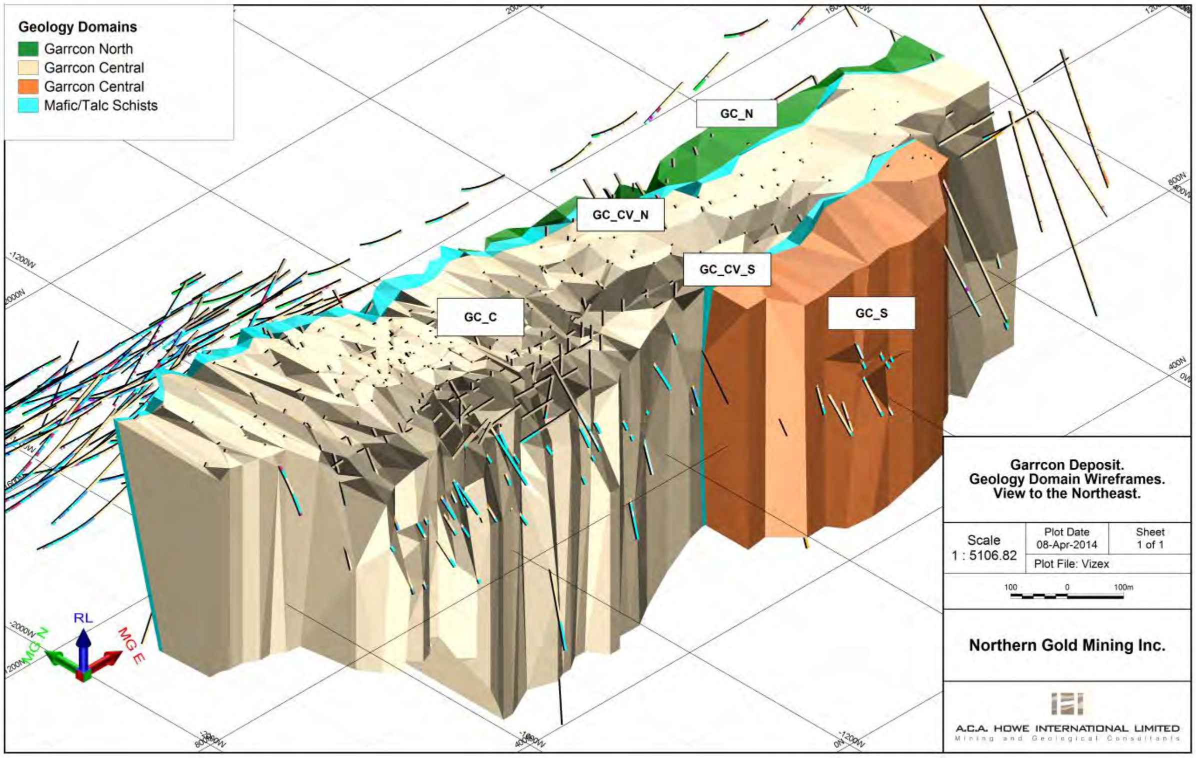


Figure 14-3 Garrcon Geological Model Domains

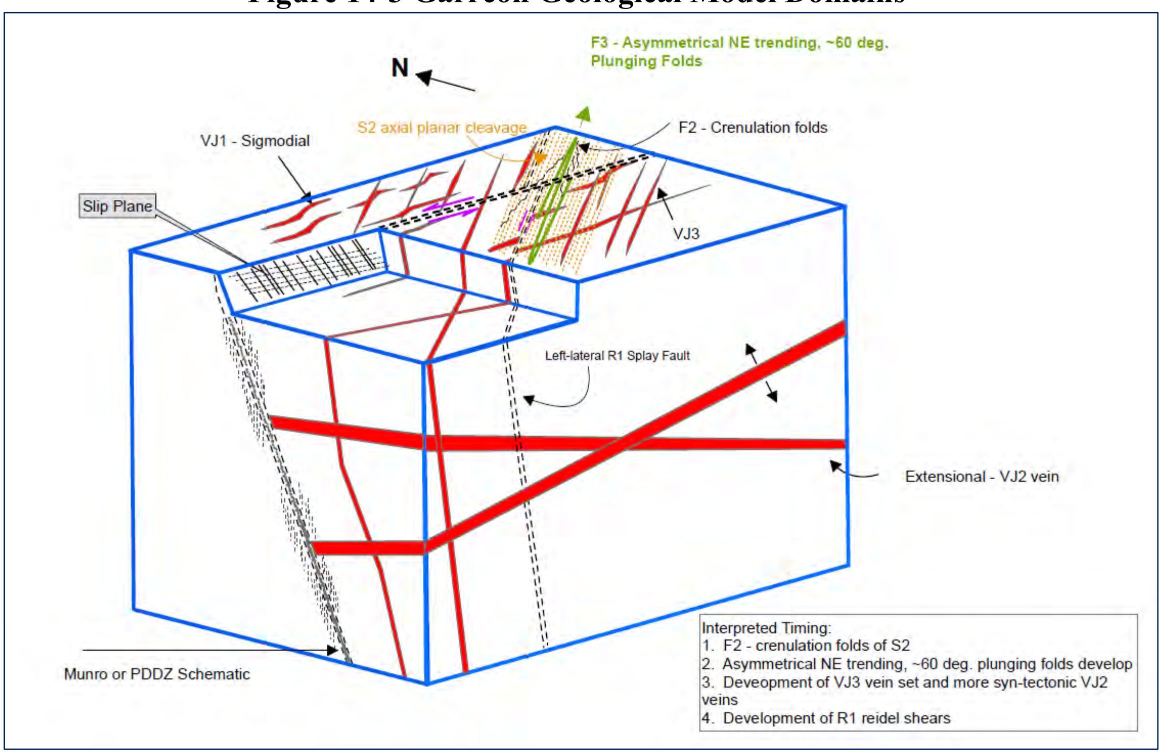


Figure 14-4 Block diagram displaying the relative orientations of VJ1, VJ2 and VJ3 vein sets (Source: Terrane Geoscience 2012)

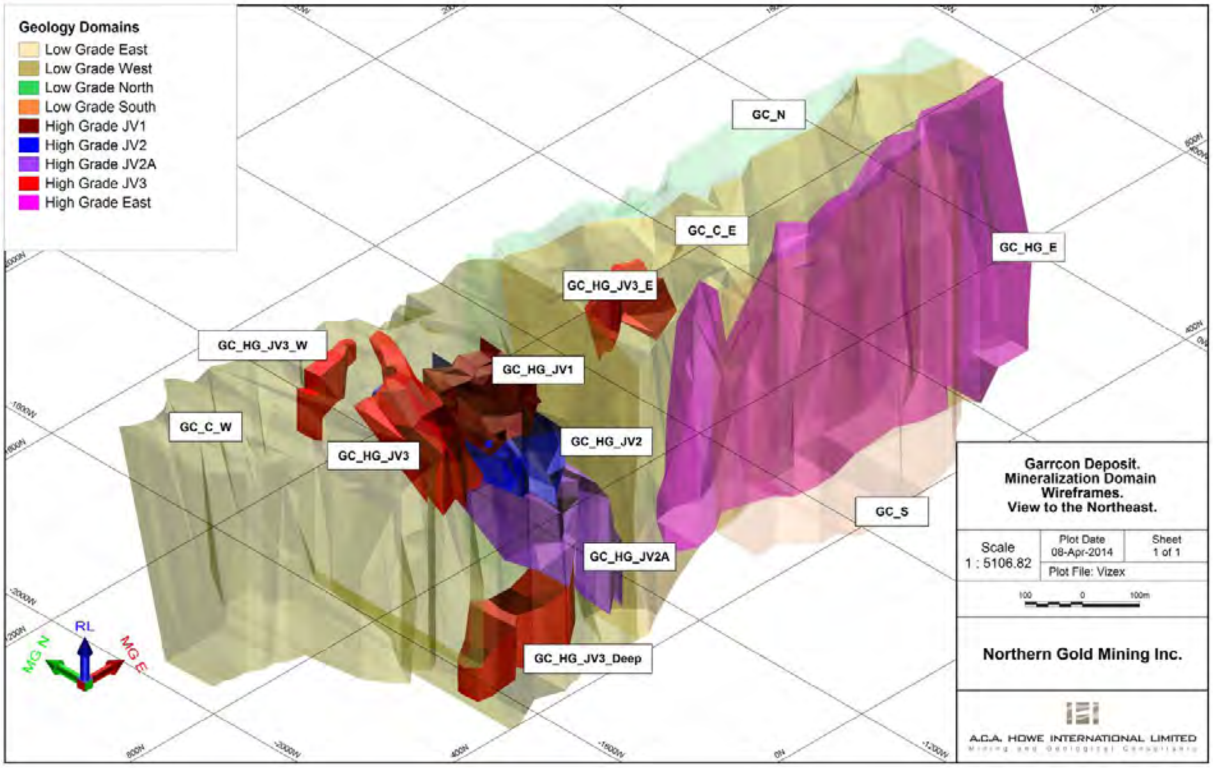


Figure 14-5 Garrcon Mineralized Domains and Sub Domains

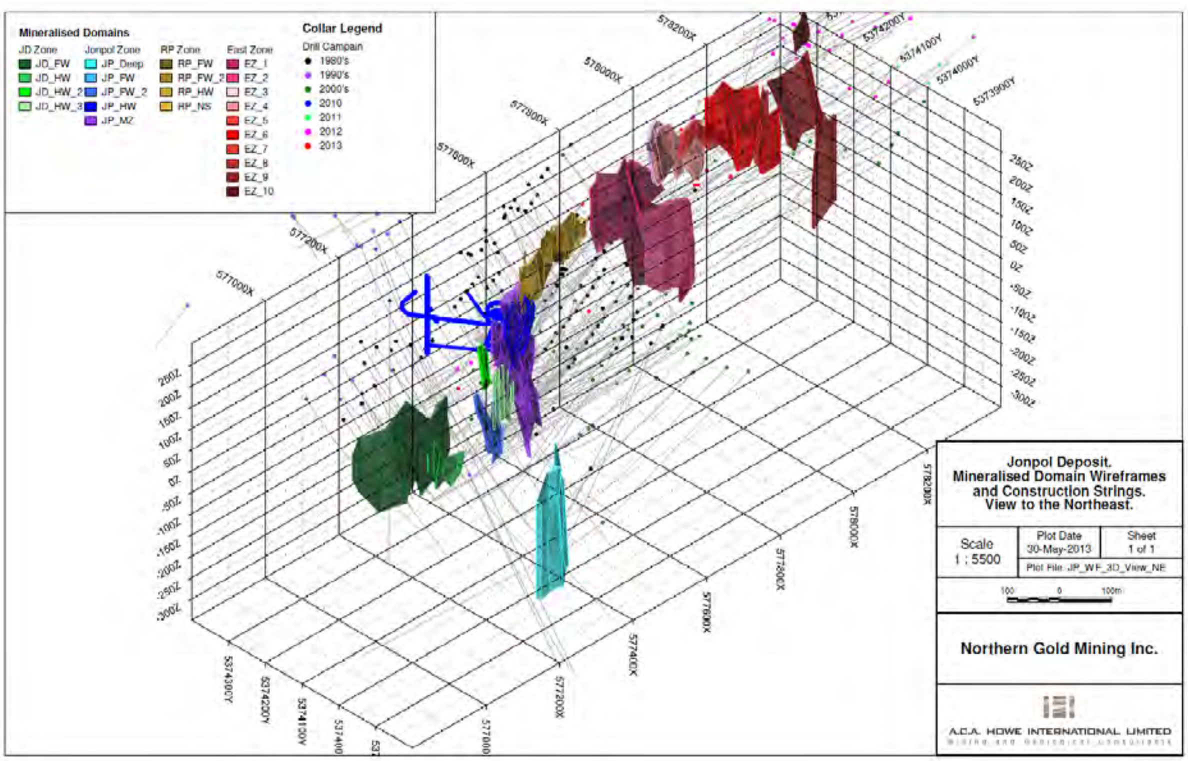


Figure 14-6: Jonpol Mineralized Domains and Sub Domains

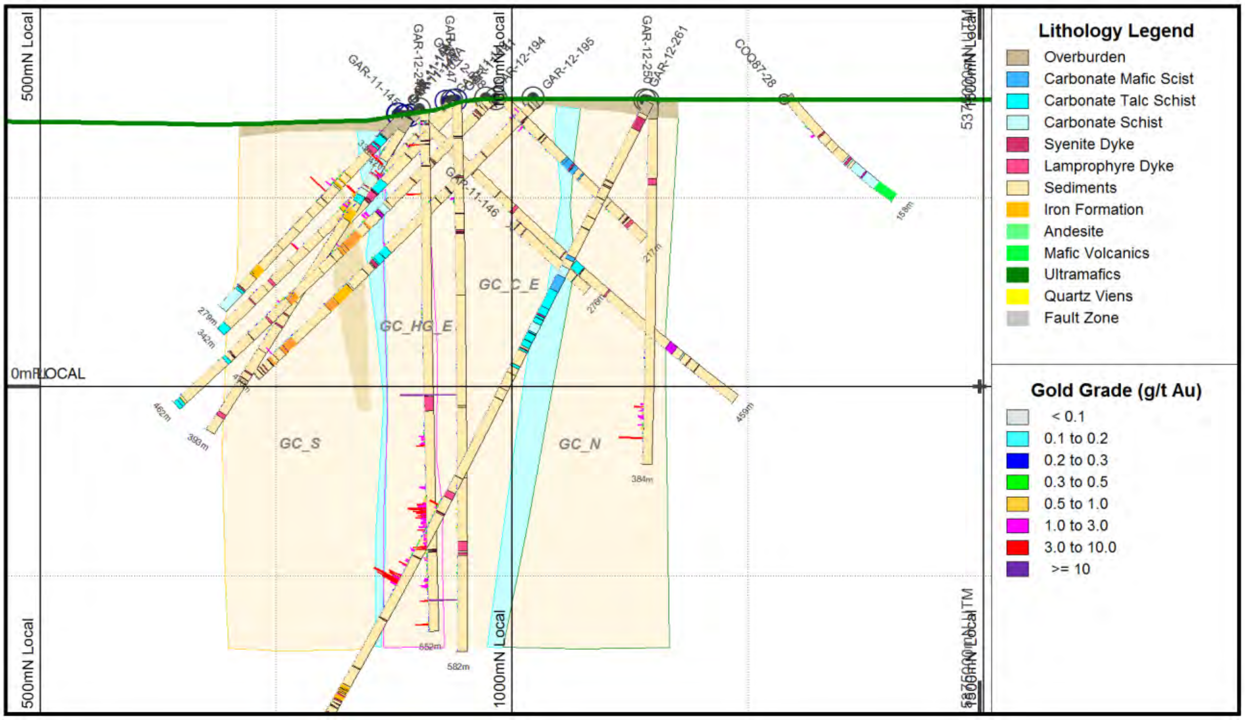


Figure 14-7: Garrcon Geology Domains Section 480 mW.

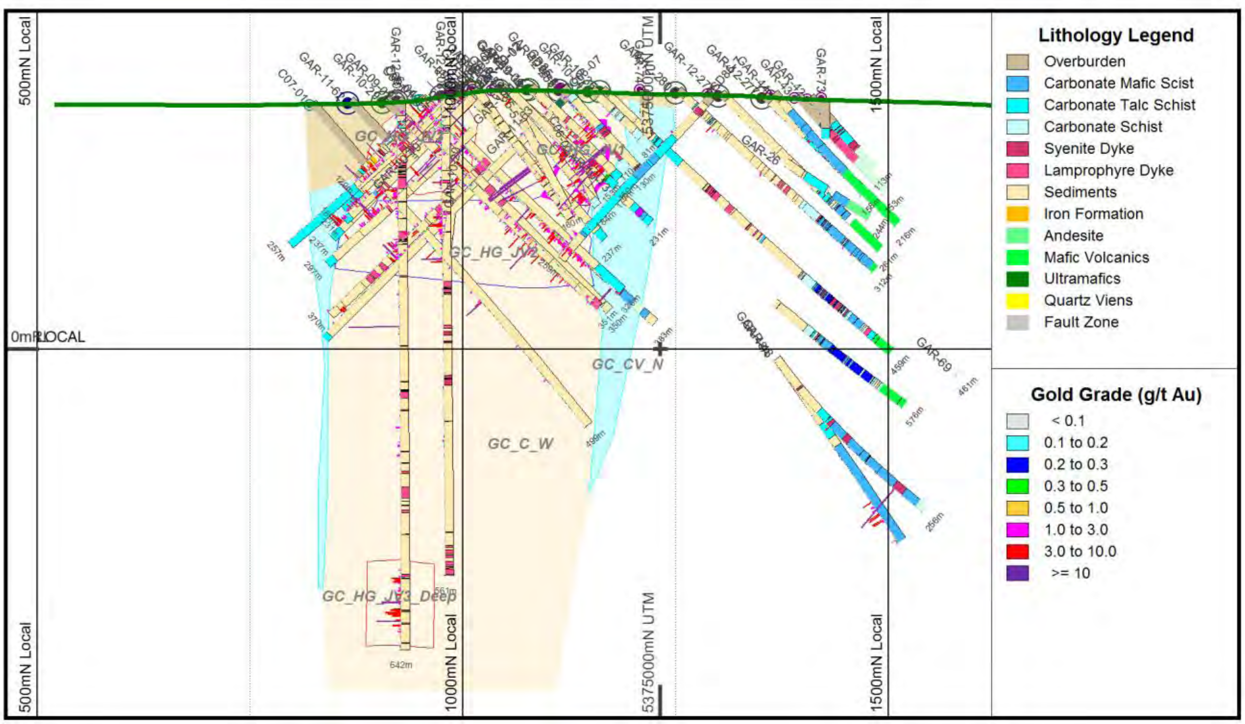


Figure 14-8: Garrcon Geology Domains Section 1,210 mW.

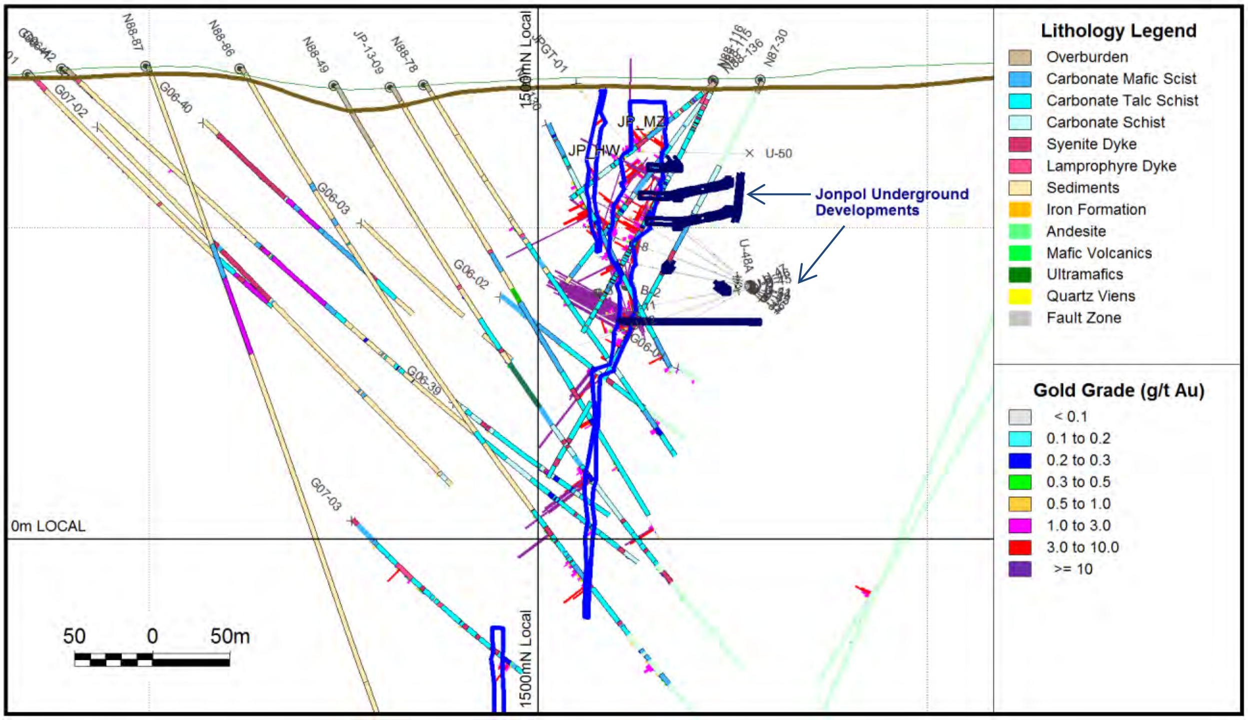


Figure 14-9: Jonpol Main Zone Grade Shell Domain Section 2,350 mW.

14.4.3 Overburden Boundaries

The base of overburden depth is identified in drill hole geology logs. Depth to the base of overburden varies from 0 to 20 meters in the central portion of the Garrcon deposit, south to the GC_CV_S (interpreted as the Destor Porcupine Fault) and north to the GC_CV_N. To the south of the GC_CV_S boundary overburden can extend up to 100 m deep. To the north of the GC_CV_N boundary overburden can extend up to 40 m deep.

At Garrcon and Jonpol, large changes in overburden thickness are accommodated by modelling domains up to the interpreted overburden depth in section, such that the resource model does not extend into the overburden

14.4.4 Bulk Densities

Based on 3,998 measurements, specific gravity ("SG") values for each Garrcon zone are as follows:

Zone	Specific Gravity	Number of Measurements
Lower Grade	2.79	2,566
Higher Grade	2.79	546
Internal Waste	2.90	137
Waste Rock	2.83	749
Total	2.80	3,998

By simplified lithology, SG values were:

Zone	Specific Gravity	Number of Measurements
Sedimentary	2.79	3,453
Igneous	2.82	244
Total	2.80	3,697

At Garrcon an average lithological bulk density value of 2.80 was used for the determination of tonnage from volumetric data.

At Jonpol the historical resource used a bulk density of 2.8. Lakefield Research (1990) reported specific gravity in the range 2.92 to 2.94 for samples on two bulk samples that were deemed to be representative of the JP Zone. Given that historical bulk samples are highly selective, a lower bulk density of 2.8 is been retained for the determination of tonnages at Jonpol.

14.5 Top-Cut Grade

Top cut analysis is performed on raw gold assay data to assess the influence spurious or extreme grade outliers have on the log-normally distributed sample population. Spurious values may be a high grade occurrence of gold but they may also arise through measurement or data entry errors. Extreme values may be reasonable within the context of the whole deposit or analogous deposits but may be unreasonable within the geological domain in which they are located.

The following steps are undertaken to investigate the clustering of potential outliers alongside higher grade samples: Using all sampling information, the mean and standard deviation are calculated for high grade and low grade Garrcon domains and Jonpol domains.

- The 3 sigma, 99.73 percentile confidence limit for each group of domain is established
- Samples falling outside this limit are considered “potential” outliers.
- In 3D space samples within 5 m of “potential” outliers are identified.
- For the new identified population the 3 sigma, 99.73 percentile confidences are calculated to derive a top cut value for each group of domains where necessary.

14.5.1.1 Garrcon

Garrcon high grade and low grade domain outliers are shown in the table below.

Table 14-7 Garrcon Outliers

Hole ID	Domain	Sample#	From	To	Interval	Au g/t Howe
GAR-11-76	GC_C_W	B16163	95.00	96.00	1.00	1956.16
GD85-1	GC_C_W	68087	88.50	89.10	0.60	617.00
GAR-12-222	GC_C_W	A00146304	142.00	143.00	1.00	601.82
GD86-8	GC_HG_JV3	67714A	67.71	67.92	0.21	500.48
GAR-10-46	GC_C_W	14284	178.00	179.00	1.00	414.45
GAR-12-220	GC_C_W	C74844	347.00	348.00	1.00	321.88
GAR-11-105	GC_C_W	B61052	228.00	229.00	1.00	181.27
GAR-11-74	GC_HG_JV2a	B15022	299.00	300.00	1.00	127.70
GAR-12-213	GC_C_W	100245	290.00	290.58	0.58	**114.14**
GD85-4	GC_HG_JV3	68628	117.05	117.35	0.30	**112.00**
GAR-12-213	GC_C_W	100246	291.00	292.00	1.00	102.81
GAR-10-42	GC_HG_JV3	86664	146.00	14.007	1.00	100.84

For samples within 5 m of potential outliers in the Garrcon low grade domains the 99.73 percentile confidence limit corresponds to the value of GAR-12-213 sample 100245 and the domain is capped at 114.14 g/t Au. In the high grade domain the confidence limit corresponds to the value of GD85-4 sample 68628 and the domain is capped at 112.00 g/t Au.

The application of a 114.14 g/t Au top cut reduces the mean grade of the Garcon low grade domains by 21% from 0.19 g/t Au to 0.15 g/t Au and affects 8 samples or 0.001% of all samples. The mean grade of the Garcon high grade domain is reduced by 3% from 0.61 g/t Au to 0.59 g/t Au and 2 samples or 0.01% of all samples are effected. These changes are considered acceptable.

14.5.1.2 Jonpol

Jonpol outliers are shown in the table below.

Table 14-8 Jonpol Outliers.

Hole ID	Domain	Sample#	From	To	Interval	Au g/t Howe
GAR-36	EZ_6	6372	196.9	198.12	1.22	560.00
GAR-45	EZ_6	120	307.85	309.01	1.16	262.00
U-50	JP_MZ	2767	171.91	172.82	0.91	173.657
U-4	JP_MZ	2614	94.18	94.79	0.61	148.491
N87-30	JP_MZ	69383	180.75	181.51	0.76	125.829
G06-02	JP_MZ	23905	288.00	289.00	1.00	98.400

For samples within 5 m of potential outliers in the Jonpol East zone domain the 99.73 percentile confidence limit is equal to 95.51 g/t Au. The application of a 100 g/t Au top cut reduces the mean grade of the Jonpol East zone domain by 10% from 0.19 g/t Au to 0.17 g/t Au and affects 2 samples or 0.38% of all samples.

Whilst a number of high grade samples are seen in the Jonpol (JP) main zone domain, these are not considered spurious when compared to the surrounding samples and are retained; no top cut is applied. No outliers are identified in other Jonpol domains.

Table 14-9: Garrcon and Jonpol Top Cut

Type	No of Samples	Cut Value	N Cut	% data cut	Un Cut			Cut		
					Mean	St Dev	CV	Mean	St Dev	CV
Garrcon Low-grade	76658	114	6	0.01	0.19	8.07	42.07	0.15	1.60	10.95
Garrcon High-grade	20,370	112	2	0.01	0.61	4.43	7.20	0.59	2.88	4.84
Jonpol East Zone	528	100	2	0.38	4.05	27.11	6.70	2.87	7.45	2.60

14.6 Sample Regularizing/Compositing

Prior to estimation, samples within the resource domain wireframes contained in Garrcon and Jonpol database are composited to standard lengths to reduce bias for geostatistical analysis and interpolation. Composite assay files were created for Garrcon and Jonpol for use as input for block model interpolation. Unsampled assay intervals are assigned a value of 0 g/t Au prior to compositing. Composite statistics for each domain are presented in Table 14-10 .

14.6.1 Garrcon

To generate representative length weighted composites and honor lithological boundaries, a file is created with assay and lithology interval divisions. Assays and partial assays that fall within geology and high grade wireframes are coded by domain. Domained assays are regularized to 1 meter intervals, the dominant assay interval length at the Garrcon deposit using length weighed averaging of gold grades.

14.6.2 Jonpol

At Jonpol lithological boundaries are not used. Assays that fall within Jonpol wireframes are coded by domain. Most of the historic core assay samples were multiples of imperial feet, the dominant length being 3ft in length. Garrcon 2012 and 2013 drilling was sampled at 1 meter lengths and this was taken to be the dominant interval.

14.7 Geostatistics

14.7.1 Domain Statistics

Descriptive statistics are generated for raw uncut data, top cut data and composite data within all the mineralized domains (Table 14-10 and Table 14-11). Mean gold values for Garrcon and Jonpol domains are contained in the tables. There is a slight smoothing of grades due to compositing indicated by lower standard deviations. The application of a zero grade to unsampled intervals results in slightly lower mean composite grades.

Table 14-10: Statistics for Capped Gold Composites for All Garrcon Resource Domains

	Assays								Composites				
			Uncapped			Capped							
Domain	Count n	Min g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au	Count n	Min g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au
Garrcon Low Grade Domains													
GC_C_E	21,821	0.003	46.330	0.085	0.795	46.330	0.085	0.795	20,388	0.000	37.535	0.081	0.604
GC_C_W	43,762	0.001	1956.160	0.266	10.667	114.000	0.188	2.036	42,360	0.000	114.140	0.179	1.883
GC_N	7,578	0.003	15.310	0.111	0.593	15.310	0.111	0.593	7,441	0.000	15.310	0.101	0.457
GC_S	3,497	0.003	7.530	0.111	0.354	7.530	0.111	0.354	3,403	0.000	5.486	0.104	0.306
Total	76,658	0.001	1956.160	0.192	8.074	114.000	0.147	1.609	73,592	0.000	114.140	0.140	1.473
Garrcon Higher Grade Domains													
GC_HG_E	4,414	0.003	95.440	0.317	2.589	95.440	0.317	2.589	4,137	0.000	95.440	0.322	2.669
GC_HG_JV1	2,749	0.001	37.240	0.610	2.031	37.240	0.610	2.031	2,477	0.000	27.936	0.570	1.677
GC_HG_JV2	3,238	0.002	87.460	0.777	2.890	87.460	0.777	2.890	3,017	0.000	73.200	0.804	2.764
GC_HG_JV2a	3,481	0.003	127.700	0.550	3.534	112.000	0.545	3.378	3,258	0.003	112.000	0.554	3.471
GC_HG_JV3	6,144	0.003	500.480	0.775	7.031	112.000	0.712	3.286	5,422	0.000	105.225	0.677	2.729
GC_HG_JV3_Deep	414	0.003	14.470	1.056	1.765	14.470	1.056	1.765	371	0.003	14.470	1.085	1.785
GC_HG_JV3_E	469	0.003	15.410	0.590	1.337	15.410	0.590	1.337	469	0.000	15.410	0.568	1.287
GC_HG_JV3_W	479	0.003	21.000	0.354	1.299	21.000	0.354	1.299	411	0.000	14.713	0.324	0.965
Total	2,1388	0.001	500.480	0.615	4.425	112.000	0.596	2.881	19,562	0.000	112.000	0.585	2.695

Table 14-11: Statistics for Capped Gold Composites for All Jonpol Resource Domains

	Assays								Composites				
			Uncapped			Capped							
Domain	Count n	Min g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au	Count n	Min g/t Au	Max g/t Au	Avg g/t Au	S Dev. g/t Au
EZ	528	0.003	560.000	4.045	27.106	100.000	2.867	7.450	533	0.000	100.000	2.836	7.004
JD	299	0.005	95.630	2.500	6.368	95.630	2.500	6.368	299	0.000	66.476	2.212	4.540
JP	1819	0.01	173.657	3.439	8.925	173.657	3.439	8.925	1860	0.000	94.183	2.882	6.373
JPDeep	83	0.03	27.570	2.264	3.463	27.570	2.264	3.463	90	0.000	27.570	2.163	3.333
RP	260	0.01	61.371	3.487	5.923	61.371	3.487	5.923	265	0.000	61.371	3.211	5.191
Total	**2989**	0.003	560.000	**3.424**	**13.626**	**173.657**	**3.216**	**8.112**	3047	0.000	100.000	2.816	6.172

14.7.2 Variography

Spatial data analysis is considered prior to block model grade estimation in an attempt to generate a series of semi-variograms that would define the directions of anisotropy and spatial continuity of gold grades, such that these variogram parameters could be used as inputs to the Ordinary Kriging ("OK") grade estimation technique.

At Jonpol and Garrcon, experimental semi-variograms are constructed using the 1 meter regularized assays. Down hole semi-variograms are constructed to determine the nugget value. Omni-directional semi-variograms are constructed to determine the sill value. Directional semi-variograms are constructed in the plane of the deposit.

14.7.2.1 Garrcon

At the Garrcon deposit variography is undertaken on high grade and low grade domains. In the April 2012 resource update study, an omnidirectional search sphere was used to estimate block grades in the Garrcon West, East and North Domains. Since the 2012 estimate, refinement of the Garrcon geological model has resulted in the development of directional search ellipses.

The spatial continuity of the grade of composites in the low grade, GC_C_W, GC_C_E GC_N and GC_S domains, and the high grade GC_HG_E is characterized by: significant relative nugget effects from 33% to 59%; generally well defined anisotropy with best continuity along the average E-W horizontal strike and down dip; the worst continuity was seen across dip. The variogram model for the lower grade domains indicates a relatively narrow initial range of co-variance over approximately half the final range. This is followed by an apparent gradual increase in variance over a broad range of up to 230m in the major and semi major axes (Table 14-12).

Higher Grade zones had poorly behaved variograms and much shorter continuity ranges. The variogram from domain GC_HG_VJ3 was applied to GC_HG_VJ3_Deep and GC_HG_VJ3_East.

The change from omni (2012) to directional (2014) variography at Garrcon results in more realistic grade interpolation. Where samples are not constrained by neighboring holes, omnidirectional search ellipses are not effective at limiting the lateral influence of high grade samples which can cause localized 'blow outs' of higher grade blocks. .

Table 14-12 Garrcon Modeled Variogram Parameters for Gold Grade Interpolation

Zone	Ellipse Rotation*			Nugget	Structure	P Sill	Range (m)		
	z	y	x	(Co)			Major	Semi-Major	Minor
GC_C_W	90	0	0	1.52 (57%)	1. Exp	0.62	51	21	22
					2. Exp	0.55	163	150	100
GC_C_E	90	0	0	1.22 (52%)	1. Exp	0.7	70	38	35
					2. Exp	0.41	225	250	150
GC_N	80	0	55	1.1 (42%)	1. Exp	1.00	150	150	70
					2. Exp	0.89	230	230	126
GC_S	85	10	-77	0.88 (33%)	1. Exp	1.16	150	40	25
					2. Exp	0.66	120	200	75
GC_HG_E	90	0	-85	1.80 (54%)	1. Spher	0.87	50	120	36
					1. Spher	0.67	175	175	58
GC_HG_VJ1	123	0	-84	1.4 (44%)	1. Spher	1.20	78	65	30
					2. Spher	0.55	27	18	25
GC_HG_VJ2	171	0	-13	1.4 (50%)	1. Spher	0.32	25	20	15
					2. Spher	1.06	55	50	30
GC_HG_VJ2A	171	0	13	1.95 (58%)	1. Spher	0.34	20	20	5
					2. Spher	1.08	40	40	20
GC_HG_VJ3	61	0	70	1.5 (59%)	1. Spher	0.54	15	15	15
					2. Spher	0.49	110	60	50

14.7.2.2 Jonpol

Variographic analysis was undertaken on closer spaced drilling and underground sample point data from the Jonpol Main (JP) Zone, the largest domain by sample density. In the other domains sample populations are low and at the current drill spacing over the deposit, there is insufficient sample data density to reliably generate directional semivariograms.

The resulting Jonpol Main (JP) Zone semivariogram nugget, sill and range values are considered suitable for the other Jonpol domains. The orientation of the variogram model was adjusted to match the general trend of each domain.

Table 14-13 Jonpol Modeled Variogram Parameters for Gold Grade Interpolation

Zone	Ellipse Rotation*			Nugget	Structure	P	Range (m)		
	z	y	x	(Co)		Sill	Major	Semi-Major	Minor
JD*	90	80	10	0.7 (37%)	1. Spher	0.94	30	20	10
					2. Exp	0.95	60	30	20
JP_Deep*	80	90	0	0.7 (37%)	1. Spher	0.94	30	20	10
					2. Exp	0.95	60	30	20
JP	100	60	25	0.7 (37%)	1. Spher	0.94	30	20	10
					2. Exp	0.95	60	30	20
RP*	100	60	25	0.7 (37%)	1. Spher	0.94	30	20	10
					2. Exp	0.95	60	30	20
EZ*	145	75	10.5	0.7 (37%)	1. Spher	0.94	30	20	10
					2. Exp	0.95	60	30	20

14.8 Resource Estimation Method

14.8.1 Grade Interpolation

Gold grade interpolation is undertaken using domained, top cut and composited drill samples. Ordinary Kriging ("OK") technique is considered to be an acceptable and appropriate method for estimating block grades at Garrcon and Jonpol. For each domain, the OK interpolation technique is used to interpolate block grades at increasing search radii, until all blocks within each domain receive an interpolated grade or are assigned a null value.

The OK interpolation method is a linear geostatistical method that uses the measured anisotropy of the deposit to weight composite assay values in the three orientation axes of mineralization within the deposit.

Blocks were discretised twice in each dimension. At Garrcon the grade estimation process was carried out using the parameters reported in Table 14-14. At Jonpol the estimation process was carried out using the parameters reported in Table 14-15.

14.8.2 Search Ellipse Parameters

14.8.2.1 Garrcon

Search ellipse parameters for each run are determined by means of the evaluation of the geological model, exploration data spacing and by analysis of the variogram parameters for described in Section 14.7.

For each domain, grade estimation was carried out in three “runs”. The first run had a maximum search radius equal to the half the domain variogram range. Model blocks that did not receive a grade estimate from the first interpolation run are used in the next interpolation run. Subsequent runs are equal to the variogram range.

Run 1 block estimates require a minimum of 3 holes, 2 samples per hole and 4 samples in total. Run 2 block estimates require a minimum of 2 holes and 2 samples per hole. Run 3 block estimates require a minimum of 1 hole and 2 samples per hole.

Data used to interpolate grade into the Garrcon block model contains locally clustered drill hole sample data that has the potential to introduce local bias. Domains containing clustered data may overstate block grades compared to, in some areas, relatively sparse drilling data. To address this issue the interpolations include a restriction on the maximum number of samples that can be used in block estimation. The search ellipse is divided into four sectors and a constraint of a maximum of 4 samples per sector applied, essentially de-clustering the data.

Table 14-14: Garrcon Grade Estimation Parameters.

Interpolation Method	Ordinary Kriging		
Interpolation Run #	1	2	3
Search Radii	or 1/2 range* in main directions	Equal to the range in main directions	Equal to the range in main directions
Number of Sectors	4	4	4
Max no of Samples per Sector	4	4	4
Min Number of Drill Holes	3	2	1
Min Number of Samples per Hole	2	2	2
Max Number of Samples per Hole	16	16	16
Min number of Samples (Total)	6	4	2
Max number of Samples (Total)	16	16	16
Discretisation	2*2*2	2*2*2	2*2*2

14.8.2.2 Jonpol

For each domain, grade estimation was carried out in two runs. The first run had a maximum search radius equal to the variogram range. The second run is double the variogram range.

Run 1 block estimates require a minimum of 3 holes, 2 samples per hole and 4 samples in total. Run 2 block estimates require a minimum of 2 holes and 2 samples per hole. Data used to interpolate grade into the Jonpol is highly clustered, the search ellipse is divided into eight sectors and a constraint of a maximum of 4 samples per sector applied.

Table 14-15: Jonpol Grade Estimation Parameters.

Interpolation Method	Ordinary Kriging	
Interpolation Run #	1	2
Search Radii	Equal to the range in main directions	Double the Range
Number of Sectors	8	8
Max no of Samples per Sector	4	4
Min Number of Drill Holes	2	1
Min Number of Samples per Hole	2	2
Max Number of Samples per Hole	10	10
Min number of Samples (Total)	2	2
Max number of Samples (Total)	32	32
Discretisation	2*2*2	2*2*2

14.9 Block Model

Domain wireframes were assigned to the block model, such that blocks falling inside any given domain were assigned to that domain. All blocks outside the wireframe model were then deleted during the assigning of wireframes

At both Jonpol and Garrcon a "partial" block model type was created. Only the mineralized zone was modeled. In other words, the country rock was not modeled. The domain wireframes were used to assign domain codes to the blocks.

Blocks are modelled up to the interpreted overburden depth in section such that the resource model does not extend into the overburden

14.9.1 Garrcon

A blank block model was created with the parameters that were reported in Table 14-16. The blocks were constrained by the mineralized zone wireframe. The “parent” block size was 10x10x10 meters (Easting x Northing x Elevation). There were two sub-blocks in each direction for a geological resolution of 5x5x5 meters (Easting x Northing x Elevation). Sub blocks received the grade of the parent block.

14.9.2 Jonpol

A blank block model was created with the parameters that were reported in Table 14-17. The blocks were constrained by the mineralized zone wireframe. The “parent” block size was 5x2x10 meters (Easting x Northing x Elevation). There were two sub-blocks in each direction for a geological resolution of 2.5x1x5 meters (Easting x Northing x Elevation). Sub blocks received the grade of the parent block.

A bulk-sampling program on 4 sub-levels in the central part of the JP Zone was completed in 1996-97 with a total of 49,087 tonnes mined and shipped, which produced 9,476 ounces of gold for an average mill head recovered grade of 6.7 grams of gold per tonne (see Section 6.1.3). This is comparable to a polygon some 80m in the along strike direction and 30m down dip believed to be centered on the position of the bulk sample, that outlines 78,400 tonnes. This polygon was used to remove these blocks from the model and is shown in Figure 14-16.

Table 14-16: Garrcon Block Model Parameters.

Direction	Model Origin (Grid, m)	Model Limit (Grid, m)	Model Extent (m)	Block Size (m)	Number of Blocks	Number of Sub-blocks
East	-2000	0	2000	10	201	2
North	500	1800	1300	10	131	2
Elevation (RL)	-500	400	900	10	91	2

Table 14-17: Jonpol Block Model Parameters.

Direction	Model Origin (Grid, m)	Model Limit (Grid, m)	Model Extent (m)	Block Size (m)	Number of Blocks	Number of Sub-blocks
East	-2920	-1200	1720	5	200	2
North	1300	1700	400	2	100	2
Elevation (RL)	-400	300	700	10	110	2

14.10 Block Model Validation

14.10.1 Local Validation

Once grade interpolation was complete, the block model was displayed in 2D Slices along with composite drill hole data in order to assess whether block grades honor the general sense of composite drill hole grades, that is to say that high grade blocks are located around high sample grades, and vice versa.

A degree of local smoothing is apparent but on the whole, block grades correlate very well with input composite sample grades. An example section at 480 mW Local Grid through domains GC_C_E, GC_N, GC_S and GC_HG_E is shown in Figure 14-10. An example section at 1,210 mW through the GC_C_W, GC_HG_JV3, GC_HG_JV3Deep and GC_HG_JV1 is shown in Figure 14-11. An example section at 2,350 mW Local Grid through the Jonpol main Zone domain is shown in Figure 14-12.

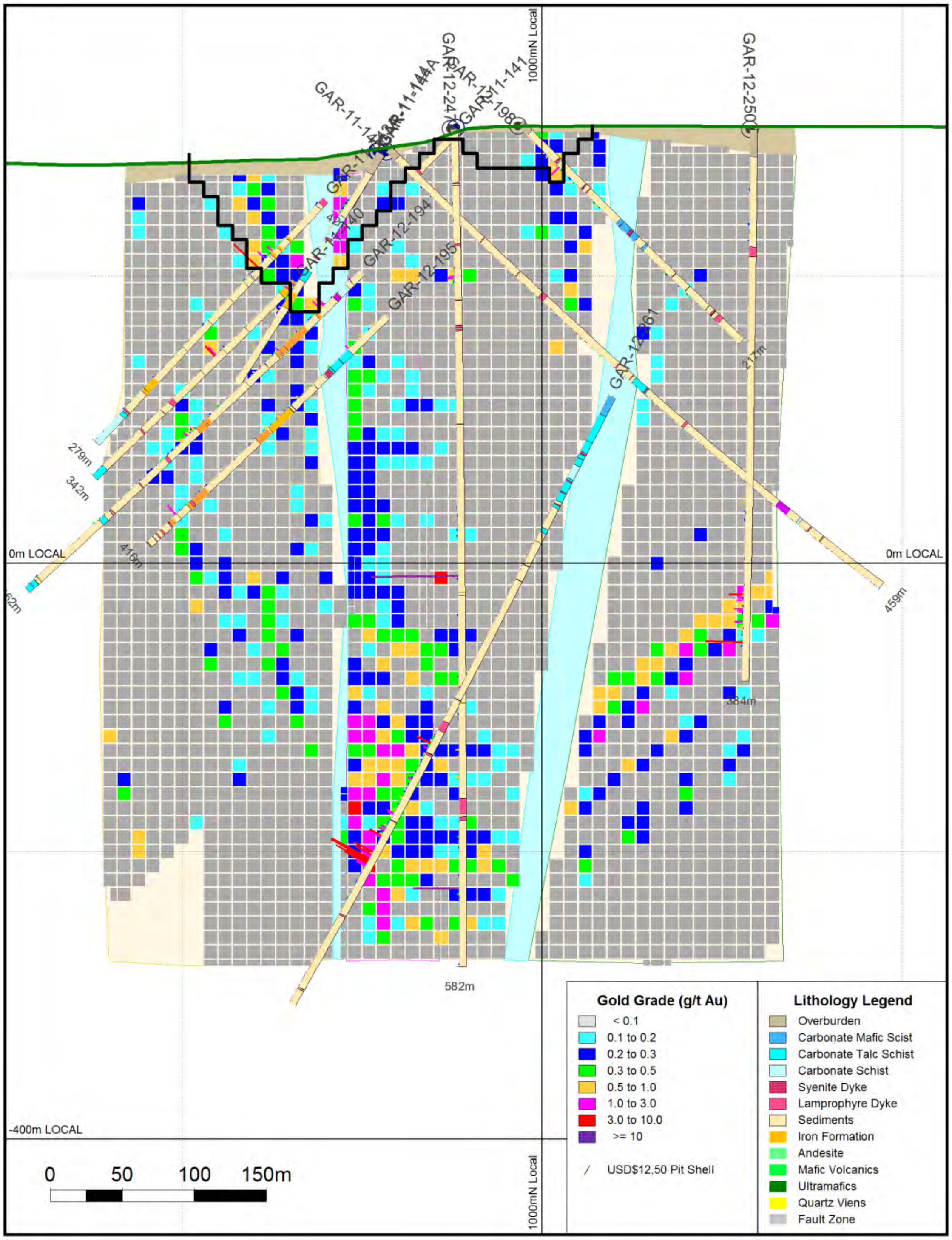


Figure 14-10: Garrcon Block Model Validation Section 480 mW Local Grid.

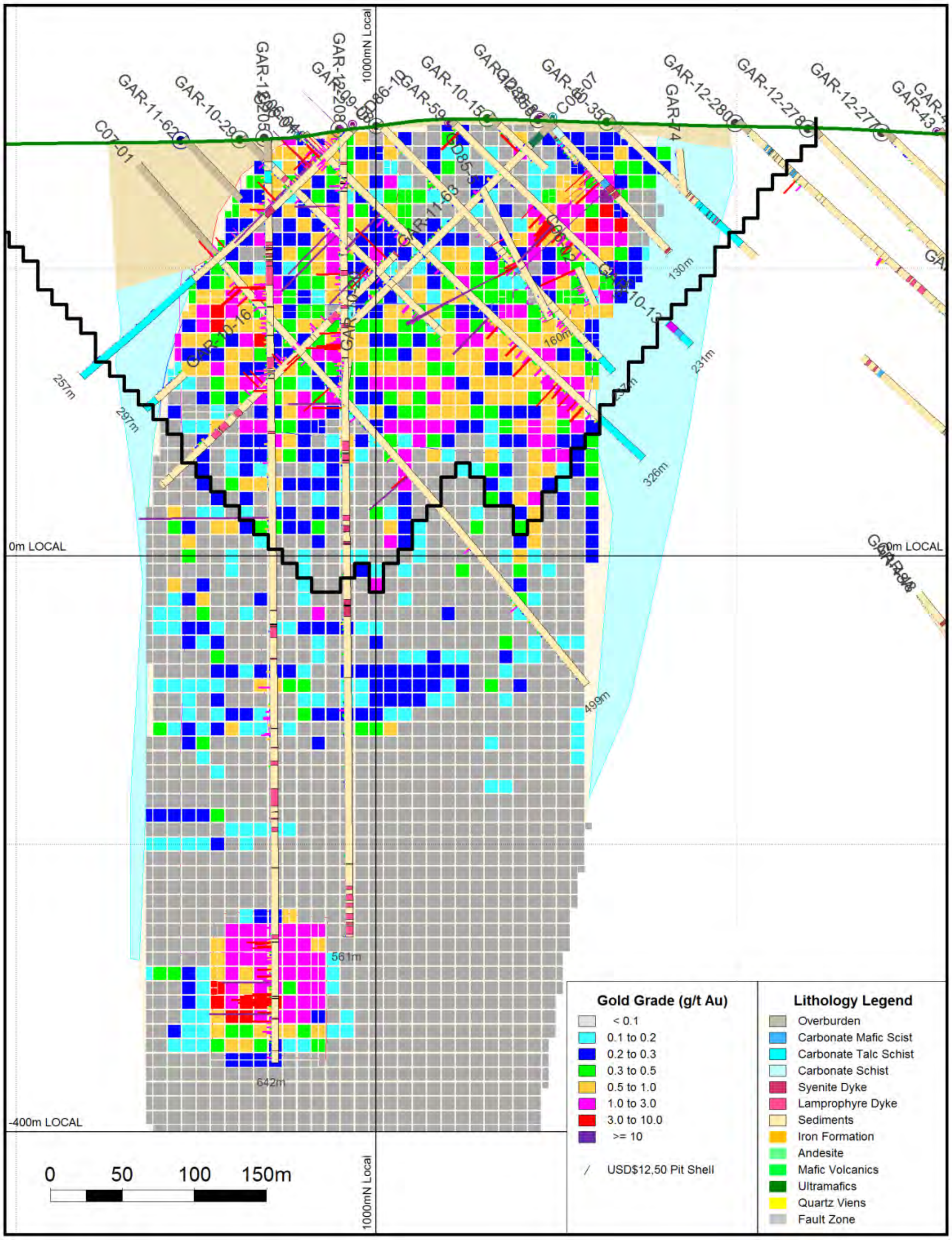


Figure 14-11: Garrcon Block Model Validation Section 1,210 mW Local Grid.

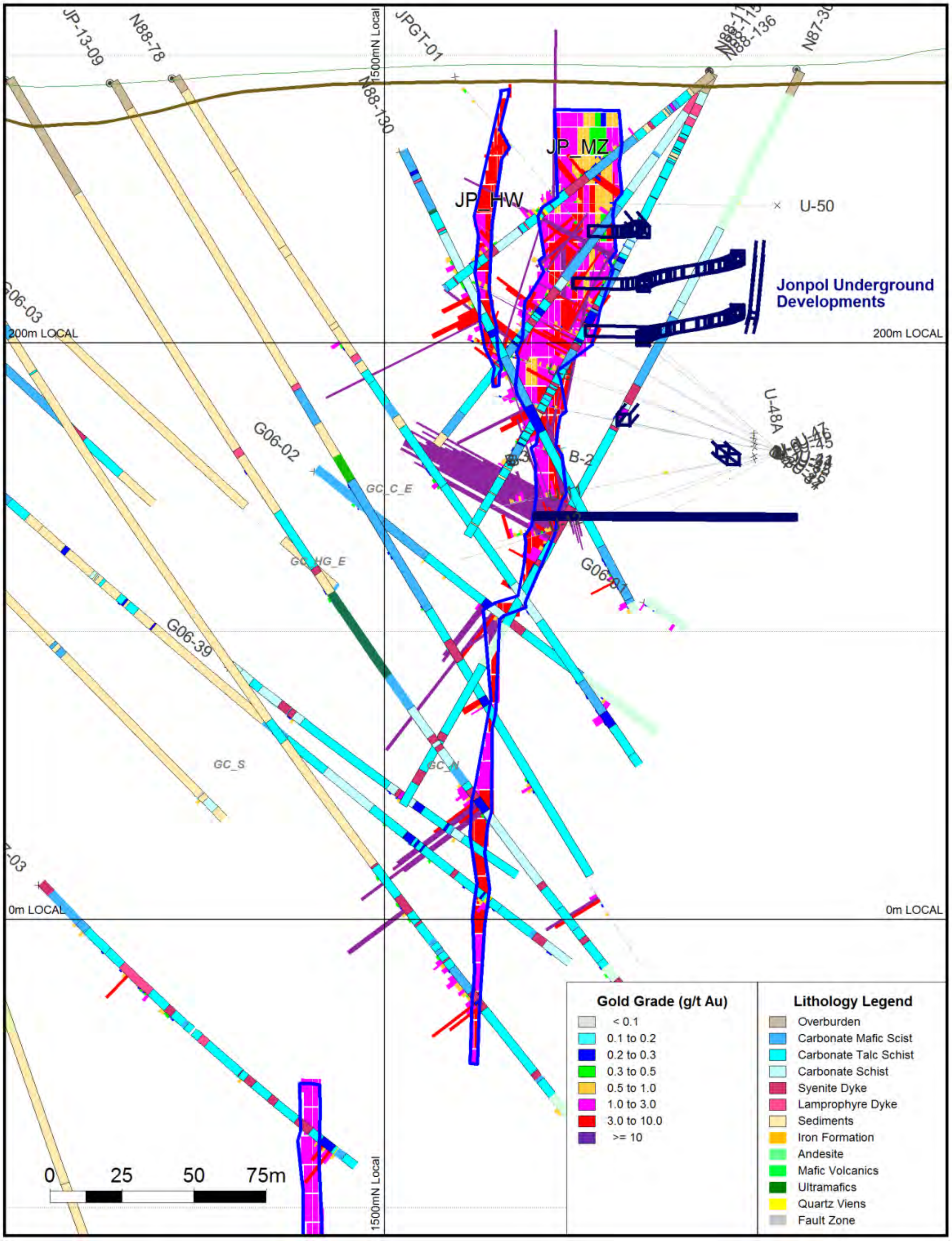


Figure 14-12: Jonpol Block Model Validation Section 2,350 mW Local Grid.

14.10.2 Sectional Validation Plots

14.10.2.1 Garrcon

Mean block model and composite grades are reported for 50 m interval slices in the easting direction and presented in the validation plot shown in Figure 14-13. Input composites and model blocks have reasonable correlation which improves as sample numbers increase. There is some smoothing of block grades, relative to composites. The spike in composite grades at the -1,200 m easting (1,200mW) is caused by high grade intervals in the GC_HG_JV3Deep domain which has a limited block model volume as shown in Figure 14-11.

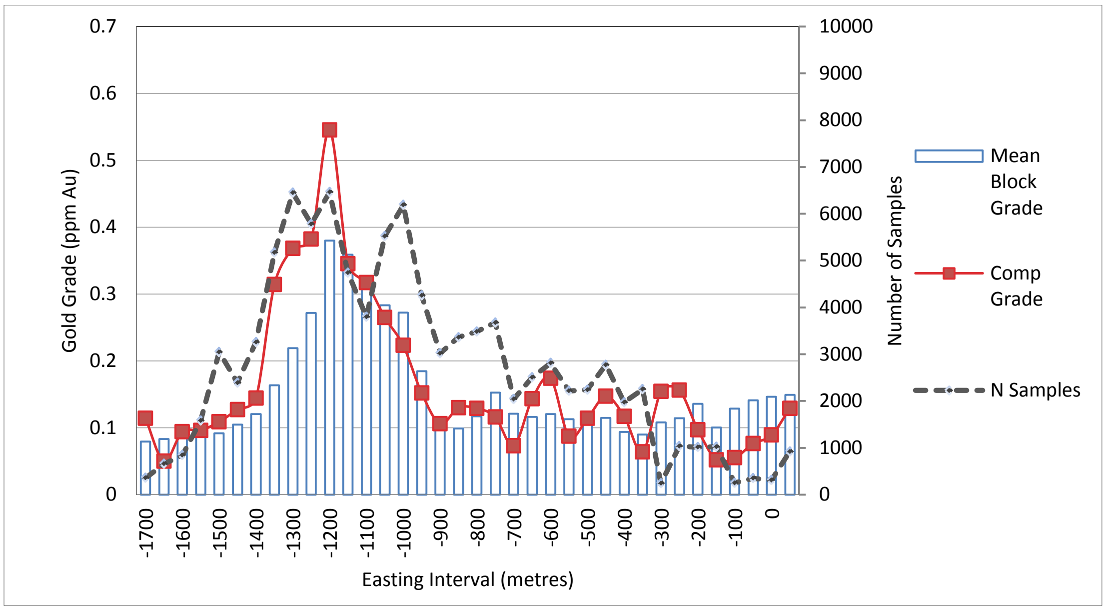


Figure 14-13 Composite Assays vs. Garrcon Block Model Grade Variation along Easting

14.10.2.2 Jonpol

Mean block model and composite grades are reported for 100 m interval slices in the easting direction and presented in the validation plot shown in Figure 14-14. Input composites and model blocks have reasonable correlation which improves as the number of samples increase. The spike in block model grades at the -2,525 m easting (2,525 mW) is caused by high grade blocks in the JD_FW_2 domain informed by a 7.36m interval at 13.422 g/t Au in hole JP-12-04.

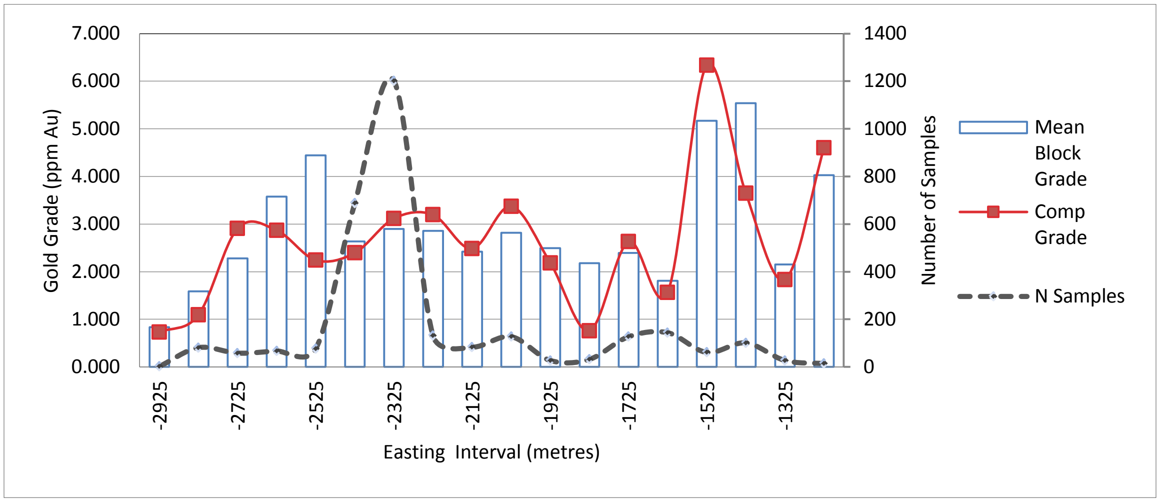


Figure 14-14: Composite Assays vs. Jonpol Block Model Grade Variation with Depth

14.11 Resource Reporting

The resource estimate was prepared in accordance with CIM Standards on Mineral Resources and Reserves[9] where:

- A *Measured Mineral Resource*, as defined by the CIM Standing Committee is "that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity."
- An *Indicated Mineral Resource* as defined by the CIM Standing Committee 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. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonable assumed." And,

[9] CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted November 27, 2010

- An *Inferred Mineral Resource* as defined by the CIM Standing Committee is "that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, working and drill holes."

Only mineral resources are identified in this report. No economic work that would enable the identification of mineral reserves has been carried out and no mineral reserves are defined. Mineral resources that are not mineral reserves do not account for mineability, selectivity, mining loss and dilution and do not have demonstrated economic viability. These mineral resource estimates include Inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these Inferred mineral resources will be converted to the Measured and Indicated categories through further drilling, or into mineral reserves, once economic considerations are applied.

Classification, or assigning a level of confidence to Mineral Resources, has been undertaken in strict adherence to the CIM Definition Standards for Mineral Resources and Mineral Reserves.

This resource estimate was prepared by Mr. Leon McGarry, Howe Project Geologist and Qualified Person (QP). Mr. McGarry has a B.Sc. degree in Earth Science and is a registered Professional Geoscientist (P.Geo.) in good standing registered in the Province of Ontario (APGO no. 2348). Mr. McGarry has over 7 years' experience in the mining industry including a background in international mineral exploration and project management for gold and base metal deposits. Mr. McGarry visited the Garrison Property Project site between the 2nd and 3rd of February, 2013 to review the geology, collect verification samples and confirm the location of drill collars. Micromine software (Version 2012) was used to facilitate the resource estimating process.

Howe is unaware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant issues that may materially affect the Garrcon and Jonpol mineral resource estimates.

14.11.1 Reasonable Prospects of Economic Extraction

CIM Definition Standards for Mineral Resources and Mineral Reserves (November 27, 2010) require that resources have "reasonable prospects for economic extraction". This generally 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 possible extraction scenarios and processing recoveries.

Howe considers that portions of the Garrison Property gold mineralization are amenable for open pit extraction. Mineralization that could possibly be extracted using an underground mining method has been considered.

14.11.1.1 Garrcon

A large bulk mining open pit operation is envisioned for the Garrcon deposit. Howe defined a preliminary pit shell for the Garrcon block model using Micromine™ pit optimization software. Mining and process costs, as well as process recoveries were taken from the 2011 PEA study. Revised base case parameters included: A maximum pit angle of 55 degrees, a milling cost of USD$5.31, a mining cost of USD$2.34, and gold recoveries of 98%. The gold price used was USD $1250 per Oz. The pit extends to a depth of 450m from surface (corresponding to the -160 m RL). The 2014 preliminary pit shell indicates a possible stripping ratio of approximately 1.8:1 waste:mineral resource. The reader is cautioned that this stripping ratio is provided for informational purposes only and is not to be relied upon; the stripping ratio will change with updates to mining and process costs, process recoveries, gold price and de-optimization of the pit.

Based on the pit shell the following is considered when assessing the prospect for economic extraction of modeled blocks at Garrcon:

- Within the preliminary pit shell, it is likely that resources may be economic at a 0.4 g/t Au cut off. Drill density is such that the quality, bulk density, shape, and physical characteristics of mineralization are sufficiently established that they can be estimated with confidence to support mine planning and evaluation of the economic viability of the deposit.

- Outside of the preliminary pit shell, but within 200 m of surface, additional drilling may delineate shallower material amenable to open pit extraction.

- It is unlikely that resource blocks outside of the preliminary pit shell and below 200 meters from surface will be of sufficient form or grade to have a reasonable prospect of economic open pit extraction.

  Well-developed mineralization, broadly contiguous with the preliminary pit shell in domains HG_JV3_Deep, HG_JV2A, GC_C_W, and GC_C_E and GC_N, is considered potentially amenable to selective bulk underground mining. A 1.5 g/t cut-off is considered appropriate for bulk underground extraction at this time.

14.11.1.2 Jonpol

At Jonpol mineralized domains are developed to ensure a nominal 1.5 meter true thickness at modeling cut-off grade of 1 g/t Au. Locally the inclusion of lower grade material is necessary for the development of the resource model along strike.

The Jonpol resource model is developed in accordance with selective underground mining methods. Historically T & H Resources and Jonpol Explorations undertook development activities that included, shaft sinking, 1.5 x 2.1 meter cross cuts, 147.8 meters of drifting, 79 rounds of bulk sampling from the the JP Main Zone in 1990, and the collection of a 49,000 metric tonne bulk sample from the the JP Main Zone between 1995 and 1997.

Based on the type of deposit, potential mining and economic constraints, Howe considers the 3 g/t cut off and 1.5m minimum mining thickness the most appropriate base-case for resource reporting at Jonpol at this time.

14.11.2 Resource Classification Parameters

Resource classification parameters were chosen based on a combination of variography results and the author's judgment. The degree of confidence in the reported resources was classified based on the validity and robustness of input data and the proximity of resource blocks to sample locations. Resources were reported, as required, in accordance to NI 43-101[10]., according to the CIM Standards on Minerals Resources and Reserves[11].

14.11.2.1 Garrcon

The following was taken into account when classifying resources at the Garrcon deposit:

- Drilling at Garrcon is predominantly recent, by the Company, and considered to be good quality, with high core recoveries such that ACA Howe is confident core samples, and the assay values derived from them, are representative of the material drilled and suitable for inclusion in resource estimation studies
- Digital lithology files have sufficient information to enable broad interpretations of geology. However there are limited structural observations in historical and Northern Gold logs.
- Sampling practices are considered to be industry standard and a review of all assay QA/QC drilling and underground sampling suggest that assay data used in resource estimation is robust for this purpose.
- There is good survey control on data point locations.
- Lithology and grade domain continuity is well established where drill density is greater than 30 x 30 meters, however there remains significant portions of the deposit at depth, where drill density is insufficient to establish continuity beyond an Inferred level.
- The estimation and modeling technique is considered generally robust for the open pitiable portion of the deposit.

To allow a meaningful comparison with the 2012 study, similar block grade estimation and resource classification criteria are used in the current study:

- Inferred resources are identified using the Run 3 parameters (refer to Table

[10] National Instrument 43-101 Standards Of Disclosure For Mineral Projects and Form 43101F1 Technical Report, June 24, 2011
[11] CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted November 27, 2010

14-14). Essentially, the minimum requirement was blocks had to be within the outlined Garrcon and have at least two samples from one hole within the search ellipse range.

At this time, the quantity and distribution of data that informs >2 g/t resource blocks is insufficient to make a confident interpretation of geology required to reasonably verify the continuity of mineralization. Resource blocks above a 1.5 g/t Au cut off that have reasonable chance of economic extraction outside of the pit shell and deeper than 200 m are assigned to the Inferred category.

- **Indicated** resources are identified where the average sample distance (recorded as a block parameter during grade estimation) was less than, or equal to, approximately 33-66 meters. At least nine samples from three holes (minimum three samples from each hole) were required for this category.

  Indicated resources are limited to blocks above the 200m RL level or within the preliminary $1250 per Oz gold pit shell.

- **Measured** resources were identified as Run 1 blocks where the average sample distance (recorded as a block parameter during grade estimation) was less than, or equal to, approximately 25 meters. At least twelve samples from three holes (minimum three samples from each hole) were required for this category.

  The preliminary $1250 per Oz gold pit shell is considered an appropriate boundary for the classification of Measured resources.

To outline Indicated and Measured Resources, blocks that met the above criteria were viewed in cross-section. Block categories were smoothed by incorporating a weighted average of surrounding categories to avoid islands or isolated blocks of different categories.

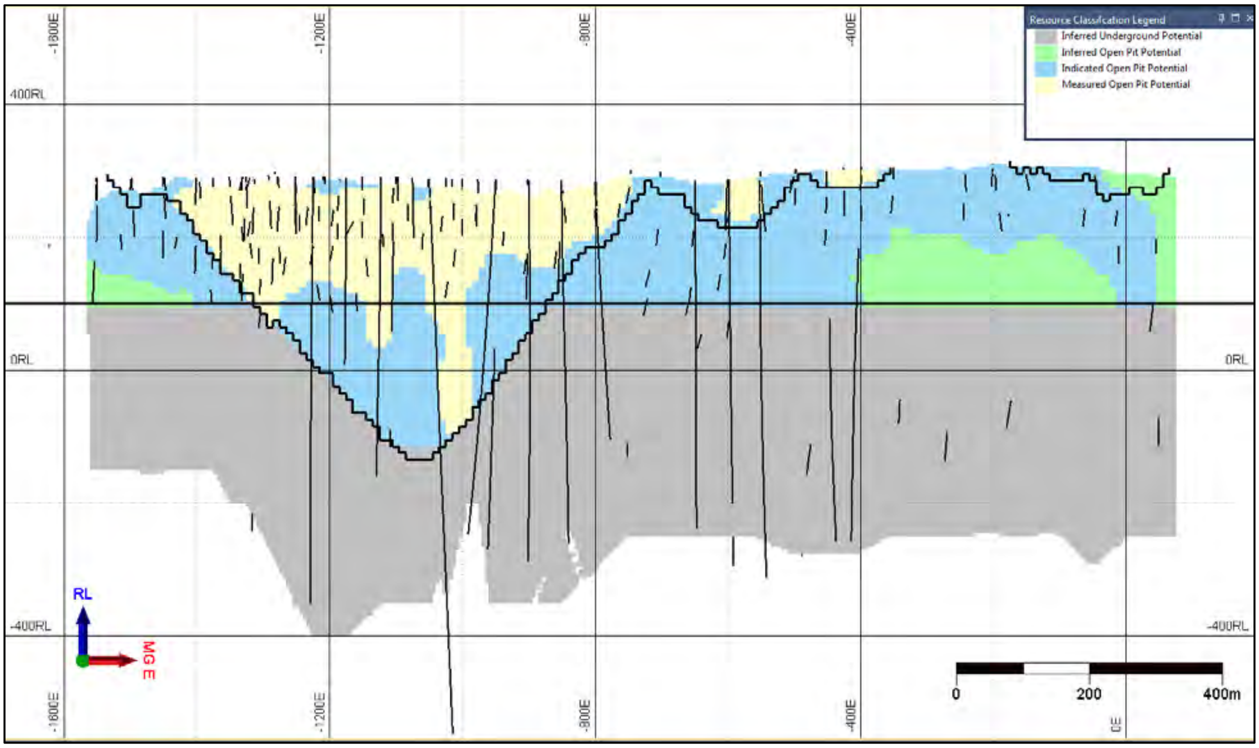


Figure 14-15: Classification of Garrcon Resource Blocks, Long Section 925mN.

14.11.2.2 Jonpol

The following was taken into account when classifying resources at the Jonpol deposit:

- Recent and historical drilling at Jonpol is considered to be good quality.
- For recent drilling, high core recoveries provide confidence that core samples, and the assay values derived from them, are representative of the material drilled and suitable for inclusion in resource estimation studies
- There is no digital record of historical core recovery or geotechnical data.
- Digital lithology files have sufficient information to enable broad interpretations of geology. However there are limited structural observations in logs for northern gold holes.
- Current sampling practices are considered to be industry standard. Northern Gold has undertaken extensive resampling of historic holes.
- For holes that have not been resampled, only limited quality assurance and quality control data is available for historic assays. Despite this, there is no reason to suspect that historical Jonpol assays contained in the database are not representative of in situ mineralization.
- The 2013 resurveying of historic drill collars show that historical location data is sufficient to allow the modeling of resources.
- Down-the-hole survey data is unavailable for 23 holes.

Jonpol Resource classification criteria:

- **Indicated** mineral resources are defined where the mineralized zones exhibit good continuity between drill holes on section and along strike and are informed by 3 or more holes spaced less than 50 meters apart. Indicated blocks were constrained by a 3D wireframe created from polygon outlines digitized on sections.

- **Inferred** resources incorporated the remainder of the Jonpol resource model not classified as Indicated.

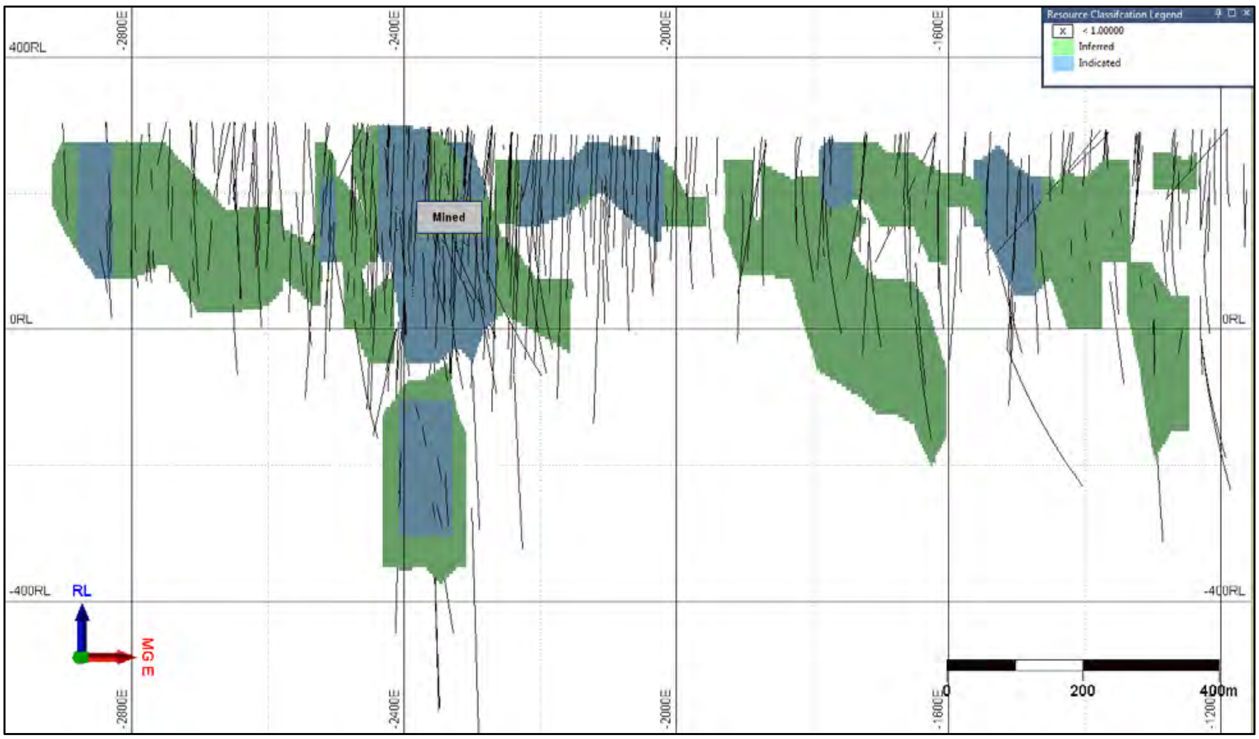


Figure 14-16: Classification of Jonpol Resource Blocks, 3D View to the North.

14.11.3 Garrcon Resource Statement

The 2014 Garrcon Mineral Resource Estimate (non-diluted) is presented in Table 14-18.

Measured and Indicated Mineral Resources

Non-diluted Measured Mineral Resources within a preliminary USD$1250 pit shell totaled 15.1 million tonnes with an average gold grade of 1.07 g/tonne for 521,000 ounces.

Non-diluted Indicated Mineral Resources considered amenable to open pit mining, within the USD$1250 preliminary pit shell and within 200m of surface outside the pit shell totaled 14.1 million tonnes with an average gold grade of 1.16 g/tonne for 526,000 ounces.

Non-diluted Measured+Indicated Mineral Resources considered amenable to open pit mining, totaled 29.2 million tonnes with an average gold grade of 1.12 g/tonne for 1,047,000 ounces.

Inferred Mineral Resources

Non-diluted Inferred Mineral Resources at a 0.4 g/tonne Au block cut off, within the USD$1250 preliminary pit shell and within 200 metres of surface outside the pit shell, totaled 1.7 million tonnes with an average gold grade of 0.72 g/tonne for 39,000 ounces.

Non-diluted Inferred Mineral Resources at a 1.5 g/tonne Au block cut off, more than 200 meters deep and outside of the pit shell totaled 5.1 million tonnes with an average gold grade of 3.49 g/tonne for 577,000 ounces.

The grand total for Inferred mineral resources was 6.8 million tonnes with an average gold grade of 2.80 g/tonne, for 616,000 ounces.

14.11.4 Jonpol Resource Statement

The 2014 Jonpol Underground Mineral Resource Estimate (non-diluted) is presented in Table 14-19.

Indicated Mineral Resources

Non-diluted Indicated Mineral Resources, at a 3 g/tonne block cut off totaled 0.872 million tonnes with an average gold grade of 5.34 g/tonne for 150,000 ounces.

Inferred Mineral Resources

The grand total for Inferred mineral resources was 1.07 million tonnes with an average gold grade of 5.56 g/tonne, for 192,000 ounces.

Table 14-18: 2014 Updated Garrcon Mineral Resource Estimate (non-diluted).

Category	Cut-off	Tonnes	Au Grade (g/tonne)	Au troy oz
Open Pitable Resource (US$1250/oz pit shell; 55^{o} pit slope).				
Measured	0.4	15,100,000	1.07	521,000
Indicated	0.4	14,100,000	1.16	526,000
Measured + Indicated	0.4	29,200,000	1.12	1,047,000
Inferred	0.4	1,700,000	0.72	39,000
Underground Resource				
Inferred	1.5	5,100,000	3.49	577,000
Total Open Pitable and Underground Resource				
Measured + Indicated	**0.4**	**29,200,000**	**1.12**	**1,047,000**
Inferred	**0.4, 1.5**	**6,800,000**	**2.80**	**616,000**

Notes on 2014 Garrcon Mineral Resource Estimate:

1. Mineral Resources are calculated with commercial mining software. Drill holes traces showing lithology and gold grade were reviewed in plan and cross section.
2. The resource estimate has been prepared by Leon McGarry, B.Sc., P.Geo., ACA Howe Geologist.
3. Cut-off grade for mineralized zone interpretation is 0.1 g/tonne.
4. Block cut-off grade for potential open pitable Mineral Resources is 0.4 g/tonne. Block cut-off grade for potential underground (>200 m depth) Mineral Resources is 1.5 g/tonne.
5. Top-cuts of 112 g/tonne Au (high grade domains) and 114 g/tonne Au (low grade domains) applied to individual (non-composited) assays.
6. Gold price for the purpose of the resource estimate is $US 1250 per troy ounce.
7. Zones extend up to 100 meters down-dip from the last intercept. Along strike, zones extend halfway to the next cross-section.
8. Minimum width is 5 meters, though in no place is the zone that narrow.
9. A specific gravity (bulk density) value of 2.8 is applied to all blocks - a representative value based on 3,697 measurements.
10. Wireframe constrained block model grade interpolation has been undertaken using Ordinary Kriging (OK).
11. Measured mineral resources are defined where three holes are used to estimate block grades and the average distance to samples was 36 meters or less. Indicated mineral resources are defined where three holes are used to estimate block grades and the average distance to samples was 73 meters or less.
12. Mineral Resource tonnes quoted are not diluted.
13. No mineral reserves are identified.
14. Tonnes and ounces have been rounded to reflect the relative accuracy of the mineral resource estimate; therefore numbers may not total correctly.
15. Mineral resources are not mineral reserves and by definition do not demonstrate economic viability. This mineral resource estimate includes inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to the measured and indicated resource categories through further drilling, or into mineral reserves, once economic considerations are applied.
16. 1 troy ounce equals 31.10348 grams.
17. The volume/tonnes of volumetrically insignificant historical underground exploration workings have not been subtracted from this mineral resource

Table 14-19: 2014 Jonpol Underground Mineral Resource Estimate (non-diluted).

Zone	Cut-off	Tonnes	Au Grade (g/tonne)	Au (troy oz)
Indicated				
JD Zone	3.0	9,000	3.21	1,000
JP Zone*	3.0	411,000	4.93	65,000
RP Zone	3.0	97,000	4.63	14,000
East Zone	3.0	355,000	6.04	69,000
Total Indicated	3.0	**872,000**	**5.34**	**150,000**
Inferred				
JD Zone	3.0	199,000	6.87	44,000
JP Zone*	3.0	212,000	4.49	31,000
RP Zone	3.0	61,000	4.32	8,000
East Zone	3.0	601,000	5.63	109,000
Total Inferred	3.0	**1,073,000**	**5.56**	**192,000**

* Historic bulk sample tonnages and contained gold are discounted from the JP Zone estimate (see note16).

Notes on 2014 Jonpol Mineral Resource Estimate:

1. Mineral Resources are calculated with commercial mining software. Drill holes traces showing lithology and gold grade were reviewed in plan and cross section.
2. The resource estimate has been prepared by Leon McGarry, B.Sc., P.Geo., ACA Howe Geologist.
3. A greater than 1 g/t Au grade shell interpretation is made in cross section by digitizing polygons that are snapped to sample intervals. The envelope grade shell seeks to maintain a minimum grade of 3 g/t Au over a minimum thickness of 1.5m.
4. Block cut-off grade for potential underground Mineral Resources is 3 g/tonne.
5. Top cut of 100 g/tonne Au applied to non-composited assays in the East Zone. No top-cut applied in other zones. In zones other than the East Zone, assay database grade distributions are not skewed by erratic high values and assays are generally well constrained by wireframes and drill hole distribution. In ACA Howe's opinion the use of a top cut will not significantly affect the results in these zones.
6. Gold price for the purpose of the resource estimate is $US 1250 per troy ounce.
7. Zones extend up to 50 meters down-dip from the last intercept. Along strike, zones extend halfway to the next cross-section.
8. A default average specific gravity (bulk density) value of 2.8 has been used.
9. Wireframe constrained block model grade interpolation has been undertaken using Ordinary Kriging (OK).
10. Indicated mineral resources are defined where the mineralized zones exhibited good continuity between drill holes on section and along strike and are informed by 3 or more holes spaced less than 50 meters apart.
11. Mineral Resource tonnes quoted are not diluted.
12. No Measured Resources or Mineral Reserves of any category are identified.
13. Tonnes and ounces have been rounded to reflect the relative accuracy of the mineral resource estimate; therefore numbers may not total correctly.
14. Mineral resources are not mineral reserves and by definition do not demonstrate economic viability. This mineral resource estimate includes inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to the measured and indicated resource categories through further drilling, or into mineral reserves, once economic considerations are applied.
15. 1 troy ounce equals 31.10348 grams.
16. A bulk-sampling program on 4 sub-levels in the central part of the JP Zone was completed in 1996-97 with a total of approximately 49,087 tonnes mined and shipped, which produced 9,476 ounces of gold for an average recovered grade of 6.7 grams of gold per tonne.. This is comparable to a polygon some 80m in the along strike direction and 30m down dip believed to be centered on the position of the bulk sample, that outlines 78,400 tonnes at a grade of 5.3 for some 13,550 ounces of gold which has been discounted from the resource.

14.12 Garrison Property Mineral Resources Summary

A summary of mineral resources on the Garrison Property follows:

Table 14-20: Garrison Property – Mineral Resources Summary

Domain	Category	Cut Off	Tonnes	Au Grade (g/tonne)	Au (troy oz)
Garrcon	Measured	0.4	15,100,000	1.07	521,000
Garrcon	Indicated	0.4	14,100,000	1.16	526,000
Jonpol	Indicated	3.0	872,000	5.34	150,000
Garrcon and Jonpol	Total Indicated	3.0/0.4	14,972,000	1.40	676,000
Garrcon	Measured+Indicated	0.4	29,200,000	1.12	1,047,000
Garrcon and Jonpol	Measured+Indicated	3.0/0.4	30,072,000	1.24	1,197,000
Garrcon	Inferred	0.4/1.5	6,800,000	2.80	616,000
Jonpol	Inferred	3.0	1,073,000	5.56	192,000
Garrcon and Jonpol	Total Inferred	3.0/1.5/0.4	7,873,000	3.19	808,000

Notes on Mineral Resource Estimate:

1. Columns may not total correctly due to rounding
2. Garrcon mineral resources:
    a. Block cut-off grade for defining Mineral Resources was 0.4 g/tonne (open pit) and 1.5 g/tonne (underground).
    b. Ordinary block kriging ("OBK") was used for estimating block grades.
3. Jonpol mineral resources:
    a. Block cut-off grade for defining Mineral Resources was 3 g/tonne.
    b. Ordinary block kriging ("OBK") was used for estimating block grades.
4. See additional notes Table 14-18 and Table 14-19.

14.12.1 Comparison with Previous Resource Estimate

The current mineral resource estimate results were compared with the results from the previous estimate (Trinder and Roy, 2012)

14.12.1.1 Garrcon

Relative to the 2012 estimate, there is a decrease in the 2014 estimate update's mean grade, attributed to the application of top-cuts of 112 g/tonne Au (high grade domains) and 114 g/tonne Au (low grade domains). Additionally, the use of domain specific directional ellipsoidal searches in the 2014 estimate update instead of the omni directional ellipses used in 2012 has locally constrained the influence of higher grade samples.

The application of a higher 0.4 g/t block cut-off grade for potential open pitable Mineral Resources in the 2014 estimate update is based on an optimized pit using on $1250/oz gold, 55 degree pit wall slope and 2011 PEA pit mining parameters.

Measured resource tonnages in the 2014 estimate update have decreased by 2.54 million tonnes with a slight 0.01 g/t Au increase in grade for 83,000 fewer ounces of gold.

The application of a 0.4 g/t cut off, the use of the in the pit shell limit, and 200m depth limit outside of the open pit shell in the 2014 estimate update has resulted in a significant decrease in Indicated resources tonnage of 6.73 million tonnes with a slight 0.01 g/t Au increase in grade for 142,000 fewer ounces of gold.

Blocks below the 200m RL and outside of the pit shell in the 2014 estimate update are now considered to be Inferred underground potential. The application of a 1.5 g/t Au cut off results in a significant decrease in tonnage of 8.98 million tonnes with a grade increase of 2.08g/t Au for an additional 249,000 ounces of gold.

Table 14-21: Comparison of the Updated 2013 Resource Estimate with the 2012 Garrcon and 2009 Jonpol Resource Estimates.

		2012 Garrcon and 2009 Jonpol Resource				2014 Garrcon Open Pit and Underground (Pit Shell: $1,250 per Oz Au, 55° Slope) and 2014 Jonpol Underground Resource				Change		
Domain	Category	Cut Off	Tonnes	Au Grade (g/t)	Ounces Au	Cut Off	Tonnes	Au Grade (g/t)	Ounces Au	Tonnes	Au Grade (g/t)	Ounces Au
Garrcon	Measured	0.3	17,640,000	1.06	604,000	0.4	15,100,000	1.07	521,000	-2,540,000	0.01	-83,000
Garrcon	Indicated	0.3	20,830,000	1.00	668,000	0.4	14,100,000	1.16	526,000	-6,730,000	0.16	-142,000
Jonpol	Indicated	--	253,100	7.77	63,200	3.0	872,000	5.34	150,000	618,900	-2.43	86,800
Garrcon and Jonpol	Total Ind	0.3/--	21,083,000	1.08	731,000	3.0/0.4	14,972,000	1.40	676,000	-6,111,000	0.32	-55,000
Garrcon	Mea+Ind		38,470,000	1.03	1,272,000	0.4	29,200,000	1.12	1,047,000	-9,270,000	0.09	-225,000
Garrcon and Jonpol	Mea+Ind	0.3/--	38,723,000	1.07	1,335,000	3.0/0.4	30,072,000	1.24	1,197,000	-8,651,000	0.17	-138,000
Garrcon	Inferred	0.3	15,780,000	0.72	367,000	0.4/1.5	6,800,000	2.80	616,000	-8,980,000	2.08	249,000
Jonpol	Inferred	--	1,555,800	4.93	246,540	3.0	1,073,000	5.56	192,000	-482,800	0.63	-54,540
Garrcon and Jonpol	Total Inf	0.3/--	17,336,000	1.09	614,000	3.0/1.5/0.4	7,873,000	3.19	808,000	-9,463,000	2.10	194,000

14.12.1.2 Jonpol

The change from a highly selective polygonal section estimate used in 2009 to a 3D wireframe constrained block model grade interpolation in the 2014 estimate update has resulted in a 2.43 g/t Au decrease in Indicated mean grade. The use of a broader wireframe model and additional drilling by Northern Gold in the 2014 estimate update has resulted in an increase of 0.618 million tonnes for an additional 86,000 ounces. The 2014 resource update has resulted in an Inferred resource decrease of 0.483 million tonnes for 54,540 fewer ounces of gold

14.13 Grade-Tonnage Relationship

For information purposes, grade tonnage values for the Garrcon and Jonpol block models are presented in Table 14-22 and Table 14-23. The Reader is cautioned that the values in presented in these tables are not Mineral Resource Statements. The values are only presented to show the sensitivity of the block model estimate to the selection of cut-off grade.

Table 14-22: Garrcon Grade Tonnage Relationship ($1250 Pit Shell)

Block Model Cut Value (Au g/t)	Block Model Tonnage (Mtonnes)	Block Model Avg. Grade (Au g/t)	Contained Ounces (Au)
10.0	600,000	14.40	276,000
5.0	1,550,000	9.97	495,000
3.0	2,870,000	7.08	654,000
2.0	5,600,000	4.82	867,000
1.5	9,240,000	3.59	1,068,000
1.0	17,500,000	2.47	1,390,000
0.8	26,930,000	1.91	1,651,000
0.6	37,150,000	1.57	1,871,000
0.5	47,470,000	1.35	2,052,000
0.4	63,250,000	1.12	2,279,000
0.3	90,140,000	0.89	2,577,000
0.2	137,730,000	0.67	2,951,000
0.1	248,990,000	0.43	3,456,000

Table 14-23: Jonpol Grade Tonnage Relationship

Block Model Cut Value (Au g/t)	Block Model Tonnage (Mtonnes)	Block Model Avg. Grade (Au g/t)	Contained Ounces (Au)
10.0	200,000	14.19	91,000
5.0	630,000	9.10	184,000
3.0	1,940,000	5.46	341,000
2.0	3,770,000	4.00	484,000
1.5	4,770,000	3.53	541,000
1.0	5,730,000	3.15	580,000
0.8	6,180,000	2.99	593,000
0.6	6,330,000	2.93	596,000
0.5	6,420,000	2.90	598,000
0.4	6,490,000	2.87	599,000
0.3	6,530,000	2.85	600,000
0.2	6,570,000	2.84	600,000
0.1	6,590,000	2.83	600,000

At Garrcon the grade tonnage table supports the choice of 0.4 g/tonne Au resource cut-off grade and generates an average grade of 1.12 g/t Au. A grade tonnage chart for the Garrcon model is presented in Figure 14-17 that shows the relative grade profile of the block model. The log normal distribution of input assay values observed in the input data is expressed in an exponential decrease in tonnage with increasing cut off grades.

A grade tonnage chart for the Jonpol model is presented in Figure 14-18, the resource model is not sensitive to decreasing cut off grades below the selected 1g/tonne modeling cut off used to create the resource grade shell. Above that grade, the distribution of input assay values shown in the input data is retained in block model resulting in a gradual decrease in tonnage with increasing grade.

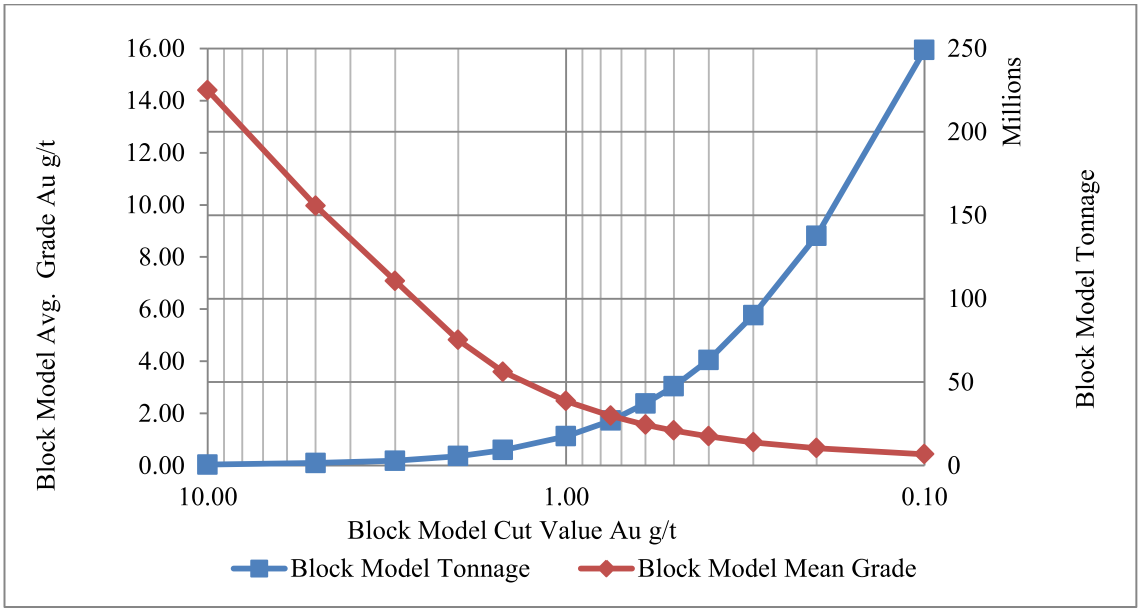


Figure 14-17: Garrcon Grade Tonnage Curve

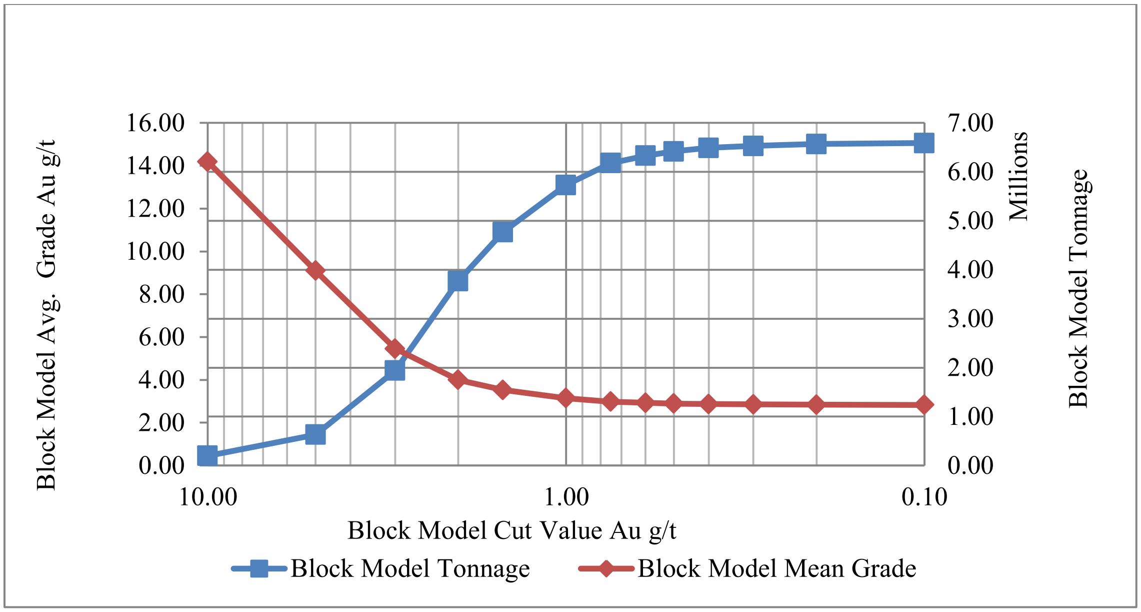


Figure 14-18: JonpolGrade Tonnage Curve

15 MINERAL RESERVE ESTIMATES

This section is not relevant to the current Garrison Property resource estimate. No mineral reserves have been estimated for the Property.

16 MINING METHODS - PROPOSED

Section 16 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the Garrcon mineral resource.**

16.1 Caution to the Reader

The reader is cautioned that this PEA uses Inferred Mineral Resources. NI 43-101 Part 2, Section 2.3(1)(b) and Companion Policy 43-101CP, Part 2, Section 2.3(1) Restricted Disclosure, prohibits the disclosure of the results of an economic analysis that includes or is based on inferred mineral resources, an historical estimate, or an exploration target.

"Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies." (Adopted by CIM Council on December 11, 2005)

Inferred Mineral Resources are based upon widely spaced samples and are speculative in nature. They may never be part of a mineral reserve.

Companion Policy 43-101CP, Part 2, Section 2.3(1), Restricted Disclosure states that "CIM considers the confidence in inferred mineral resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. The Instrument extends this prohibition to exploration targets because such targets are conceptual and have even less confidence than inferred mineral resources. The Instrument also extends the prohibition to historical estimates because they have not been demonstrated or verified to the standards required for mineral resources or mineral reserves and, therefore, cannot be used in an economic analysis suitable for public disclosure."

The Companion Policy 43-101CP, Part 2, Section 2.3(1), on the Use of Term "Ore" states: – *We consider the use of the word "ore" in the context of mineral resource estimates to be potentially misleading because "ore" implies technical feasibility and economic viability that should only be attributed to mineral reserves.*

However, under NI 43-101, Part 2, Section 2.3(3) and Companion Policy 43-101CP, Part 2 section 2.3(3), a Preliminary Economic Assessment is allowed to use inferred mineral resources and to carry out an economic assessment in order to inform investors of the potential of the property. Investors must be informed that the preliminary economic assessment is preliminary in nature, that it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The next logical step is to follow up the PEA with a pre-feasibility study which requires validation of resources through closer spaced sampling and cost confirmation by obtaining and using detailed quotes from suppliers. A detailed knowledge of the physical conditions at the site and extensive confirmation testing to determine the optimum processing method is also required.

16.2 Introduction

The Mineral Resources outlined to date for the Garrcon deposit indicate a large tonnage-low grade open pit mine. Howe used a circular type of analysis to determine a best case scenario for the deposit:

> "*the approach to solve it is based on a circular analysis combined with certain heuristic tools. ... In order to manage this complex problem, the mine planning process can be conveniently split off in three stages which are conceptual, feasibility and operational planning.*" (Camus and Jarpa, 1996).

Howe examined the open pit mine potential of the Garrcon deposit using processing capacities from 4,000 to 11,300 tonnes per day. In general, the higher the production rate, the lower the operating costs.

16.3 Summary of Relevant Information Available

Data received from Northern Gold and available through public and government sources includes:

- detailed drill hole data;
- mineral and waste inventory as per the 2011 Mineral Resource estimate in Howe's 2011 technical report (Hannon et al., 2011);
- Rock Quality Data from 46 of the 2010 drill holes included in this resource estimate;
- hydrologic and geotechnical information is sparse but acceptable for an order of magnitude cost study;
- topographic maps, including property boundaries are sufficient for a preliminary mine layout;

- preliminary metallurgical test work; and,
- a property / claim map.

Northern Gold geologists record core recovery and RQD measurements as well as descriptive logs including rock type, structure, alteration, and mineralisation. Drill core and sample information are input into a digital database using portable computer workstations at the workbenches. The core is digitally photographed before sampling (Howe, 2010).

Northern Gold retained N.A.R. Environmental Consultants Inc. (NAR) of Sudbury to conduct environmental baseline studies in 2010 and 2011. Water sampling stations were installed at three sites on and around the Garrison Property on April 28, 2010. Two ground water monitoring wells have been drilled for sampling and these in conjunction with water levels in the Jonpol shaft will establish a three point ground water monitoring system to be used to determine regional ground water movements (Roy and Trinder, 2011, 2010).

The information base is sufficient for an estimate of the capital and operating costs for this PEA. Additional geotechnical, hydrological and social and environmental studies are required as recommended in the Recommendations section.

16.4 Proposed Mining and Processing Methods

Mining will be by open pit with a stripping ratio of about 2:1. Shovels will be used to load 100 ton haul trucks. Ore will be designated, and the remaining material sent to the waste dumps. If the waste material contains sufficient gold to justify recovery by heap leach, it would be sent to a primary crusher and from there either to the processing plant or a heap leach facility.

A conventional gravity-agitated cyanide leach plant capable of treating 11,300 tonne per day plant is planned for higher grade ore, + 0.3 g/tonne, (average 0.9 g/tonne) and a seasonal heap leach facility is planned for the lower grade material with grades between 0.15 g/tonne and 0.3 g/tonne. The processing plant will operate 365 days per year and the heap leach facility will operate about 274 days per year (9 month operating season), treating 8,000 tonnes per day or about 2.3 million tonnes per year (Figure 16-1).

After mining and crushing, the lower grade material for a heap leach operation will go to a heap leach facility via a conveyor system.

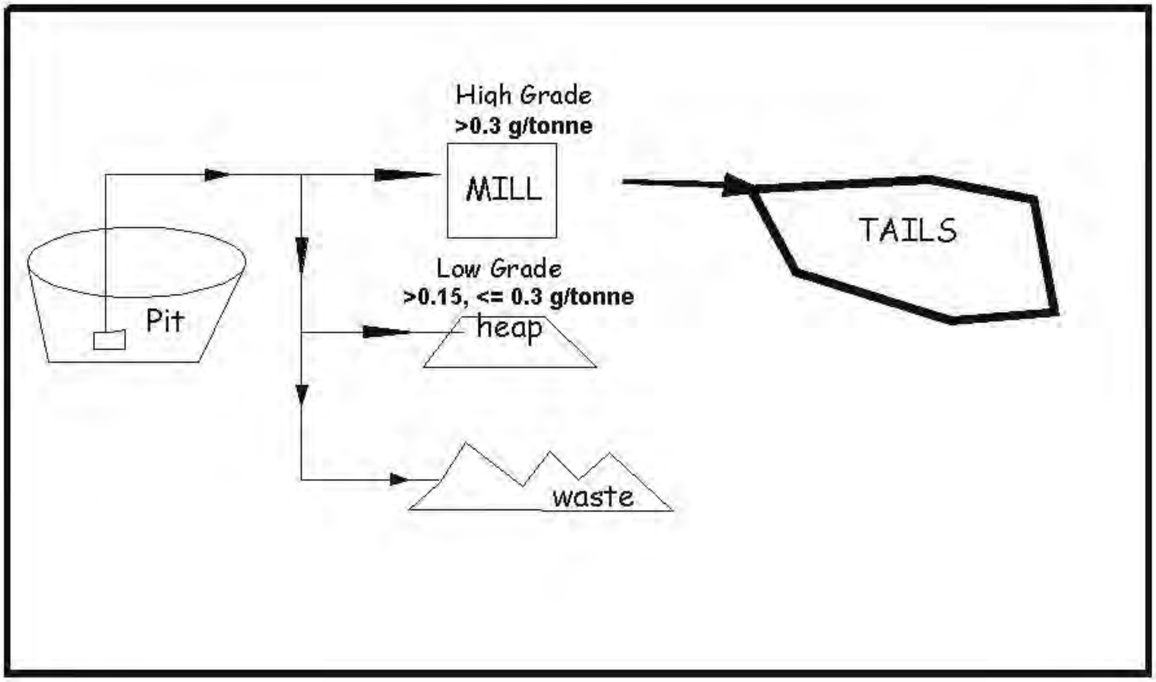


Figure 16-1: Mining and Processing of the Garrcon Gold Deposit

16.5 Open Pit Mining

16.5.1 Pit Optimisation

A pit was optimized using the parameters in Table 16-1. The pit optimisation was based on the plant milling costs (gravity with CIL/CIP). Revenue from heap leaching was not considered during pit optimisation, as the intent there was to process gold-bearing waste rock.

Table 16-1: Pit optimisation parameters.

Parameter	Value
Mining Cost, Ore or Waste (Drilling, Blasting, Loading & Hauling)	$2.34 per tonne
Rehab Cost	$0.25 per tonne Milled
Dilution	5%
Mining Recovery	95%
Gold Price	$US 1,200 per ounce
Processing Cost (CIL/CIP, Heap Leach)	$5.31 / $4.22, per tonne Processed
Processing Recovery	98%, 65%
Specific Gravity	2.73
Overall Slope Angle (rock, overburden / fault material)	45°, 30°

The proposed open pit mine will be roughly 0.9 km east-west (along strike) by about 700 metres north-south and nearly 300 metres deep with a footprint of 43 hectares (refer to Figure 16-2). The pit contained 33.0 million non-diluted (Indicated plus Inferred) tonnes of mill feed with an average grade of 0.90 g/tonne. Material that must be mined, that did not meet the 0.30 g/tonne cut-off grade but met the 0.15 g/tonne heap leach cut-off grade, amounted to an additional 18.3 million tonnes with an average grade of 0.20 g/tonne. Almost 90% of the gold would be recovered in the mill.

Waste tonnes, which included zero-grade waste rock and block model material that was below the 0.15 g/tonne heap leach cut-off, amounted to 102 million tonnes for an overall stripping ratio of 2:1.

Table 16-2: Summary of pit optimization results (Indicated plus Inferred mineral resources).

Pit Details	CIL/CIP	Heap Leach	Total
Gold Price ($US per Ounce)	$1,200		
Cut-off Grade (g/tonne):	0.30	0.15	
Non-Diluted Ore (tonnes)	33,000,000	18,300,000	51,300,000
Non-Diluted Ounces	960,000	120,000	1,080,000
Non-Diluted Grade (g/tonne)	0.90	0.20	0.65
Waste Tonnes	102,000,000		
Pit Depth (m)	300		
Footprint (Hectares)	43		
Stripping Ratio (t_{waste}:t_{ore})	2:1		

Table 16-3: In-pit 2011 mineral resources, by cut-off.

Indicated Category

Cut-off Grade (g/tonne)	Tonnes Above Cut-off	Average Gold Grade (g/tonne)	Ounces
10.00	101,000	16.4	53,000
8.00	160,000	13.6	70,000
6.00	277,000	10.7	95,000
4.00	645,000	7.4	150,000
2.00	1,660,000	4.6	240,000
1.50	2,470,000	3.7	290,000
1.00	4,630,000	2.5	370,000
0.90	5,500,000	2.3	400,000
0.80	6,750,000	2.0	430,000
0.70	8,410,000	1.8	470,000
0.60	10,600,000	1.5	520,000
0.50	13,600,000	1.3	570,000
0.40	17,900,000	1.1	630,000
0.30	**24,000,000**	**0.91**	**700,000**
0.20	*32,100,000*	*0.74*	*760,000*
0.15	*37,400,000*	*0.66*	*790,000*
0.10	*43,700,000*	*0.58*	*810,000*

Inferred Category

Cut-off Grade (g/tonne)	Tonnes Above Cut-off	Average Gold Grade (g/tonne)	Ounces
10.00	2,730	12.8	1,100
8.00	21,800	9.1	6,400
6.00	36,900	8.2	9,700
4.00	217,000	5.3	37,000
2.00	818,000	3.5	91,000
1.50	1,100,000	3.0	110,000
1.00	1,930,000	2.3	140,000
0.90	2,140,000	2.1	150,000
0.80	2,520,000	1.9	160,000
0.70	3,220,000	1.7	170,000
0.60	4,070,000	1.5	190,000
0.50	5,280,000	1.3	210,000
0.40	7,030,000	1.1	240,000
0.30	**9,000,000**	**0.9**	**260,000**
0.20	*11,600,000*	*0.8*	*280,000*
0.15	*13,900,000*	*0.7*	*290,000*
0.10	*18,100,000*	*0.5*	*310,000*

Note: Figures in *italics* represents material within the block model that was not considered to be a mineral resource and was included for information puposes only.

Notes:

1. Cut-off grade for mineralised zone interpretation was 0.1 g/tonne.
2. Block cut-off grade for defining Mineral Resources was 0.3 g/tonne.
3. No top-cut grade was used. In the author's opininion, the use of a top cut would not have significantly affected the results.
4. Gold price was $US 1200 per troy ounce.
5. Zones extended up to 100 metres down-dip from last intercept. Along strike, zones extended halfway to the next cross-section.
6. Minimum width was 5 metres, though in no place was the zone that narrow.
7. Non-diluted.
8. Mineral resources that are not mineral reserves do not have demonstrated economic viability.
9. Resource estimate prepared by Doug Roy, M.A.Sc., P.Eng.
10. A specific gravity (bulk density) value of 2.73 was applied to all blocks (a representative value based on a limited number of measurements).
11. Ordinary block kriging ("OBK") was used for estimating block grades.
12. Indicated resources identified where sample intercept spacing was 50 metres or less (based on variography).
13. No Measured Mineral Resources or Mineral Reserves of any category were identified.
14. The volume/tonnage of historic Cominco shaft, drifts and crosscuts have not been deleted from the Howe mineral resource volume/ tonnage. Howe estimates the tonnage extracted from the resource area was less than 0.1% of the total inferred and indicated resource tonnage.

Table 16-4: 2011 Resources by level

Bench Elevation (m)	Up to Elevation (m)	Resource Category	Total Tonnes	Tonnes In-Pit	Total Average Grade (g/tonne)	In-Pit Average Grade	Total Ounces	In-Pit Ounces	Percent of Total Within Pit	
									Tonnes	Ounces
250	300 (Approx)	Indicated	4,980,000	4,980,000	0.85	0.85	136,000	136,000	100%	100%
250	300 (Approx)	Inferred	2,860,000	2,860,000	0.82	0.82	75,400	75,400	100%	100%
200	250	Indicated	4,770,000	4,770,000	0.75	0.75	115,000	115,000	100%	100%
200	250	Inferred	1,800,000	1,450,000	0.81	0.90	46,900	42,000	81%	90%
150	200	Indicated	5,660,000	5,600,000	0.98	0.98	178,000	176,000	99%	99%
150	200	Inferred	892,000	631,000	0.87	0.99	25,000	20,100	71%	80%
100	150	Indicated	6,020,000	5,660,000	0.77	0.79	149,000	144,000	94%	97%
100	150	Inferred	1,780,000	1,130,000	0.67	0.71	38,300	25,800	63%	67%
50	100	Indicated	3,610,000	2,870,000	1.19	1.36	138,000	126,000	80%	91%
50	100	Inferred	3,740,000	1,770,000	0.64	0.69	77,000	39,300	47%	51%
0	50	Indicated	321,000	112,000	0.98	1.55	10,100	5,580	35%	55%
0	50	Inferred	4,220,000	1,150,000	0.78	1.56	106,000	57,700	27%	54%
-50	0	Indicated	-	-	-	-	-	-	0%	0%
-50	0	Inferred	1,800,000	-	0.59	-	34,100	-	0%	0%
-100	-50	Indicated	-	-	-	-	-	-	0%	0%
-100	-50	Inferred	1,440,000	-	0.54	-	25,000	-	0%	0%
-150	-100	Indicated	-	-	-	-	-	-	0%	0%
-150	-100	Inferred	311,000	-	0.41	-	4,100	-	0%	0%

Table 16-5: Percent of 2011 Resources in the Indicated category, by Level.

Bench	Tonnes	Ounces
250	64%	64%
200	73%	71%
150	86%	88%
100	77%	80%
50	49%	64%
0	7%	9%
-50	0%	0%
-100	0%	0%
-150	0%	0%

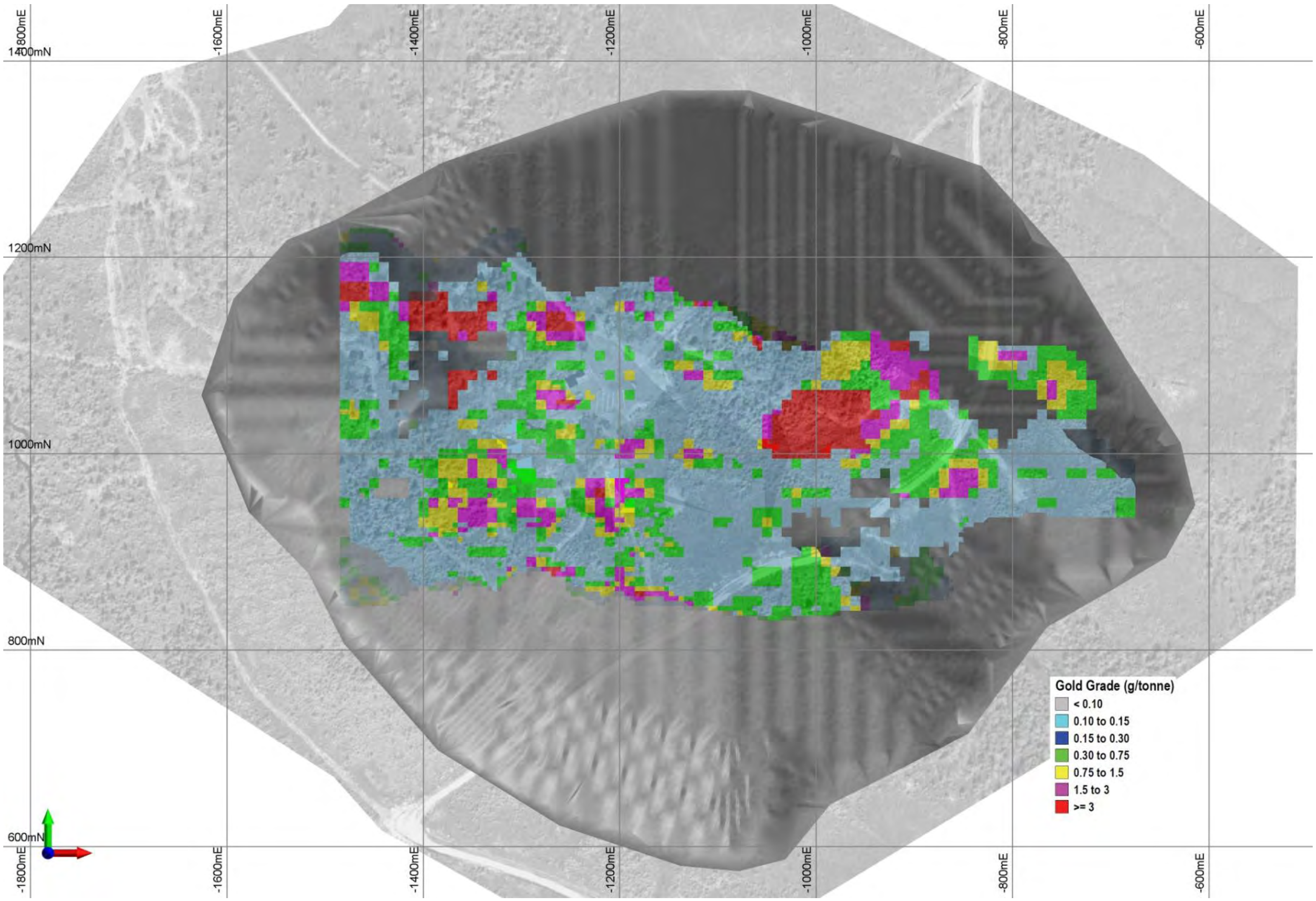


Figure 16-2: Plan view of $1200 pit (optimum pit).

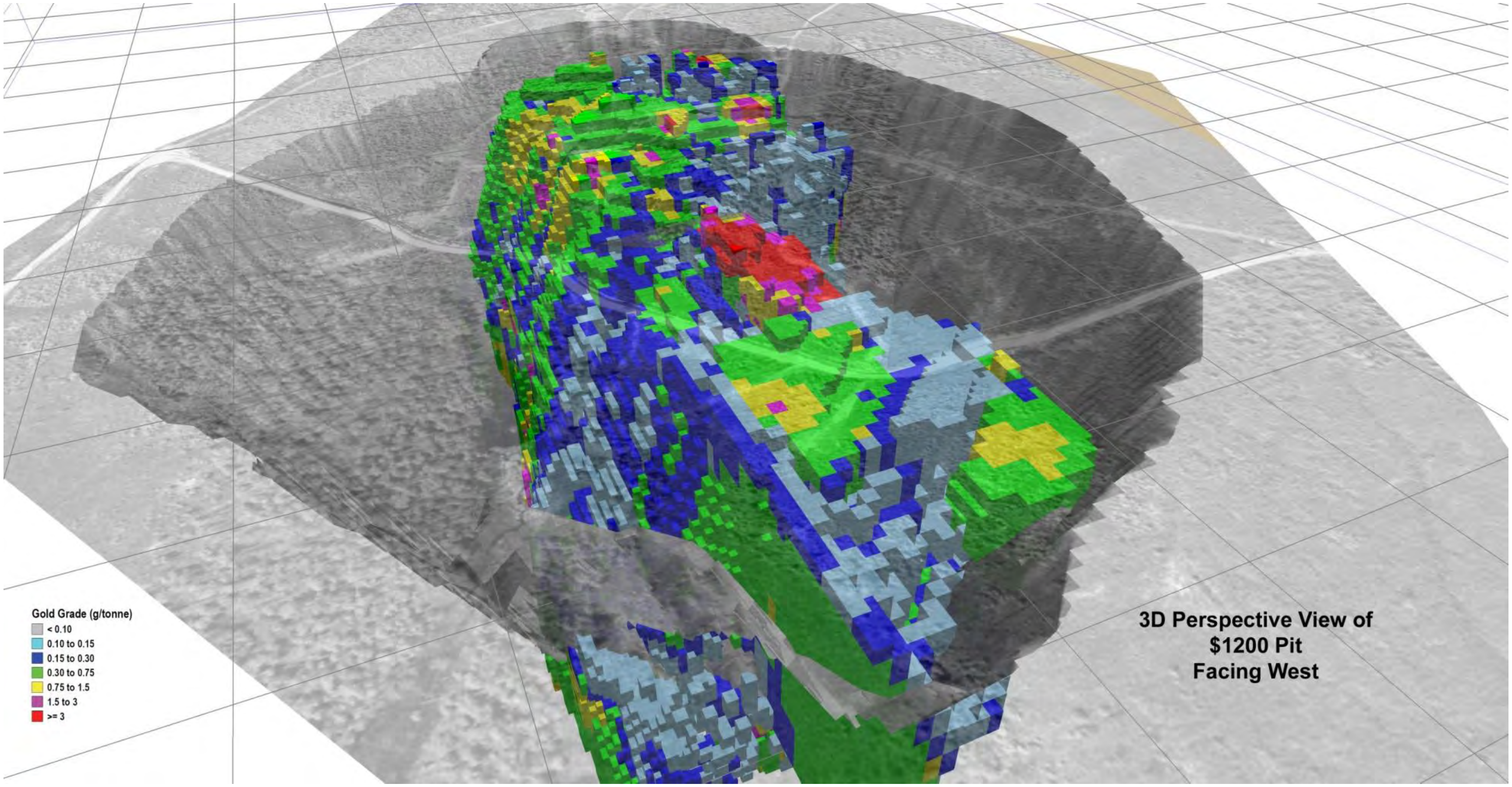


Figure 16-3: Three-dimensional view of the $1200 pit (optimum pit).

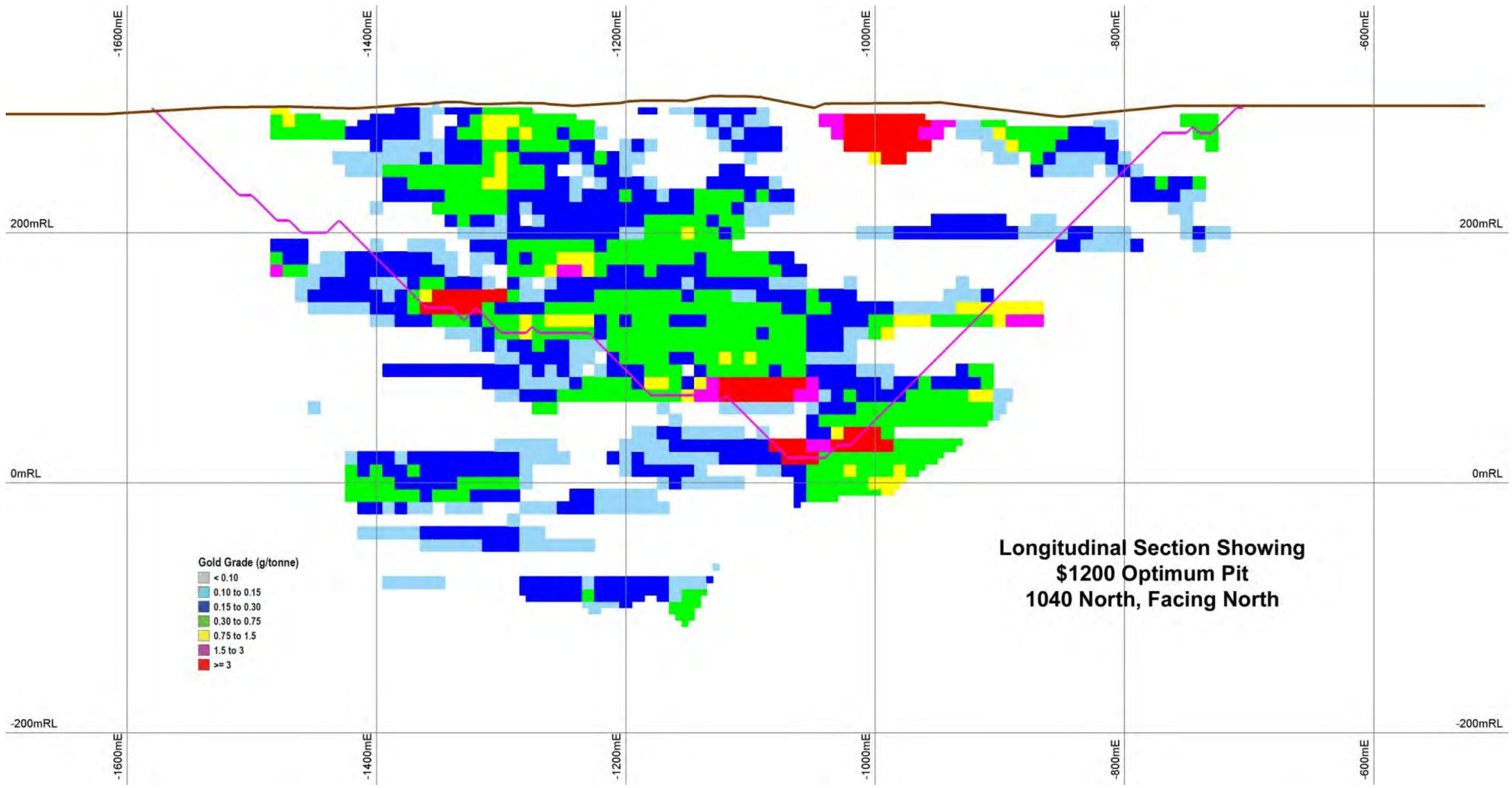


Figure 16-4: Longitudinal section showing the $1200 pit (optimum pit).

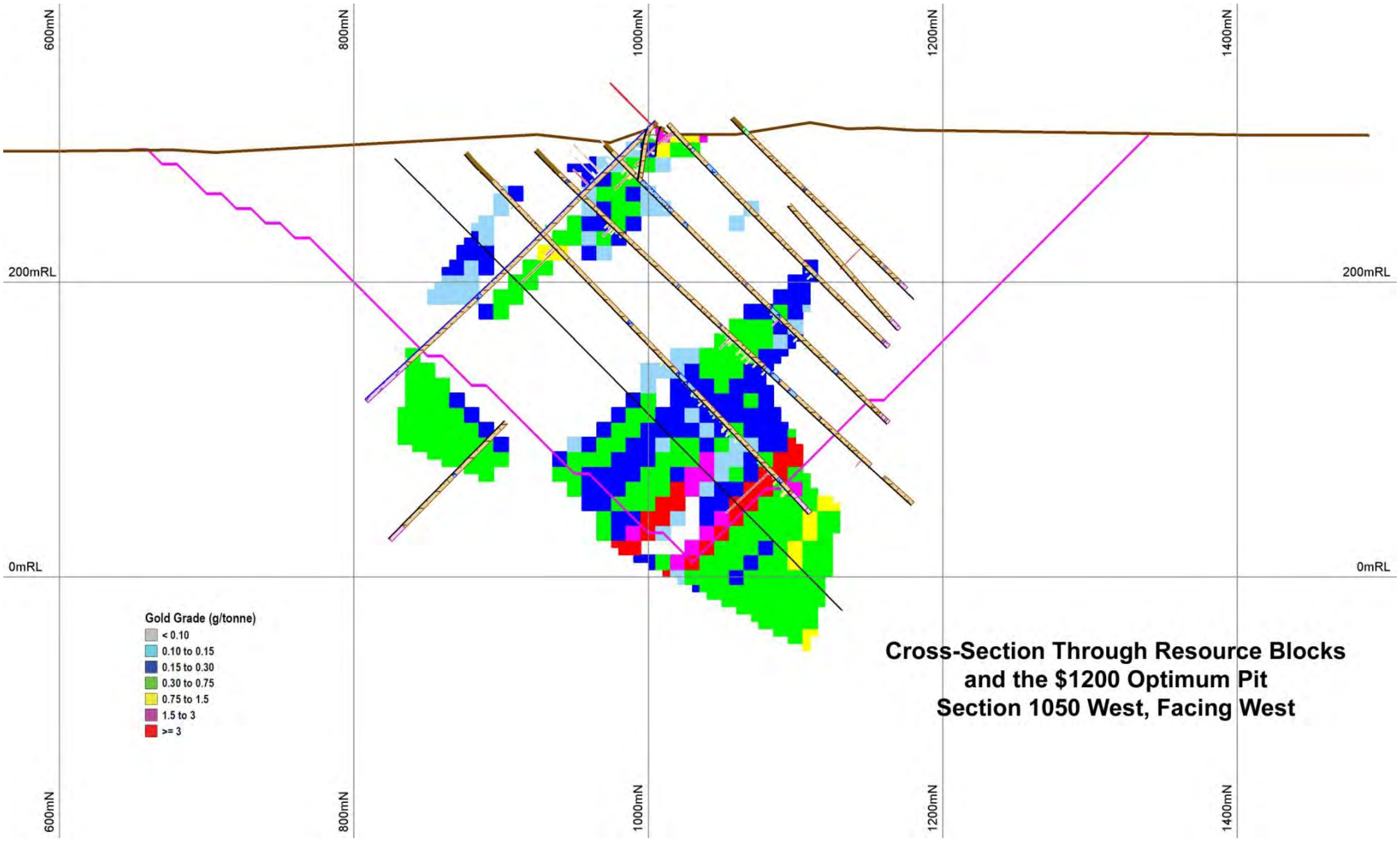


Figure 16-5: Cross-section 1050 West.

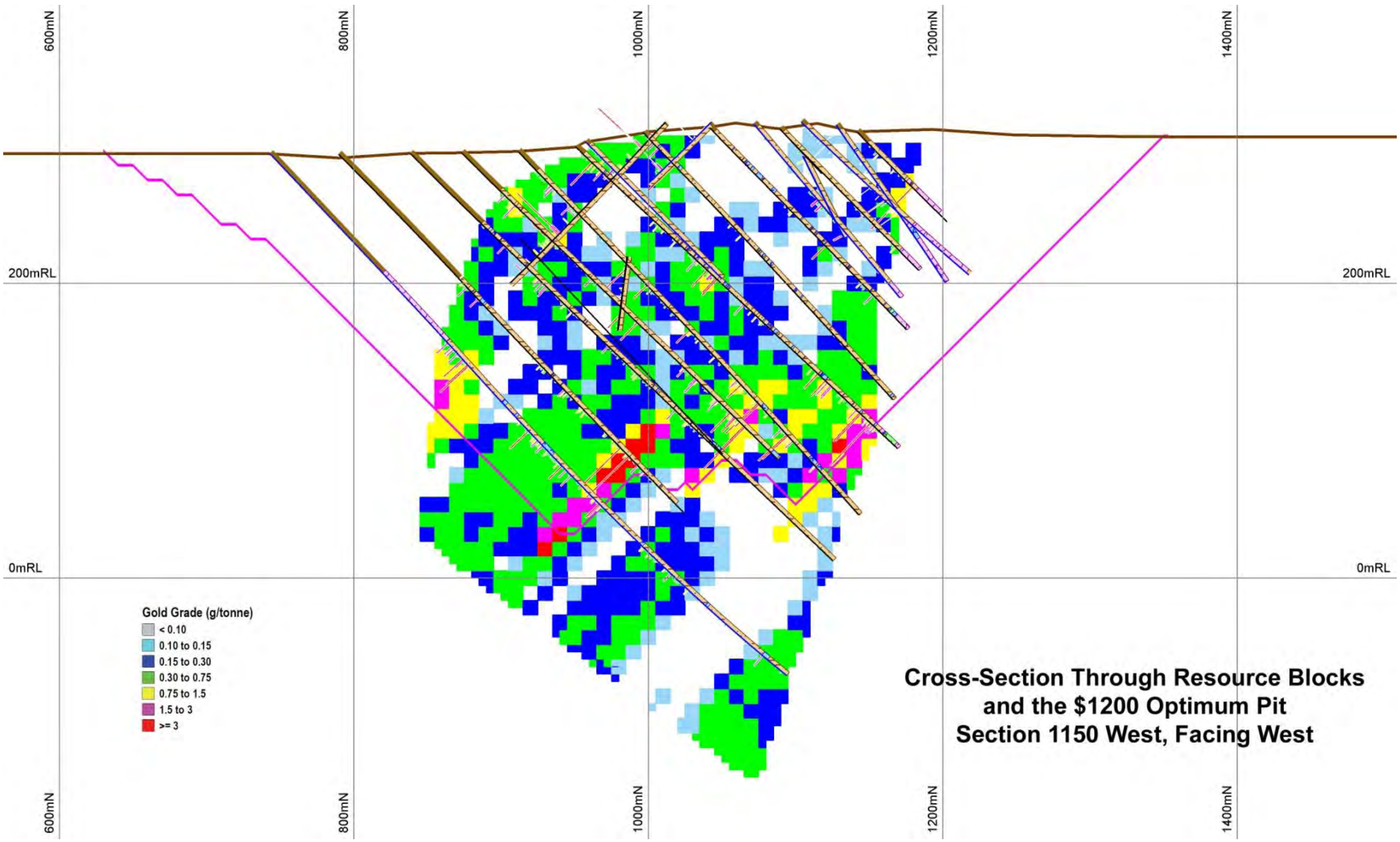


Figure 16-6: Cross-section 1150 West.

16.5.2 Practical Pit Design ("De-optimisation")

Benches and haul roads were added to the base case optimum pit.

The minimum haul road width is 20 metres. A 100 tonne capacity haul truck (a typical size for this deposit type and size) has a 6 metre width. Roads should be 2-3 times the haul truck width. The chosen width (20 metres) allows for a ditch on the "toe" side of the road and a safety berm on the "crest" side (refer to Table 16-6 and Figure 16-7).

Refer to Figure 16-8 and Figure 16-9 for the conceptual, "de-optimised" pit design.

Table 16-6: Pit design parameters ("de-optimisation").

Parameter	Value
Haul Road Width	20 metres (Minimum)
Bench Face Angle	80 deg
Final Bench Height	20 metres (Maximum)
Catch Bench Width	20-25 metres (Varies to Suit Overall Slope)
Overall Slope Angle	45 deg

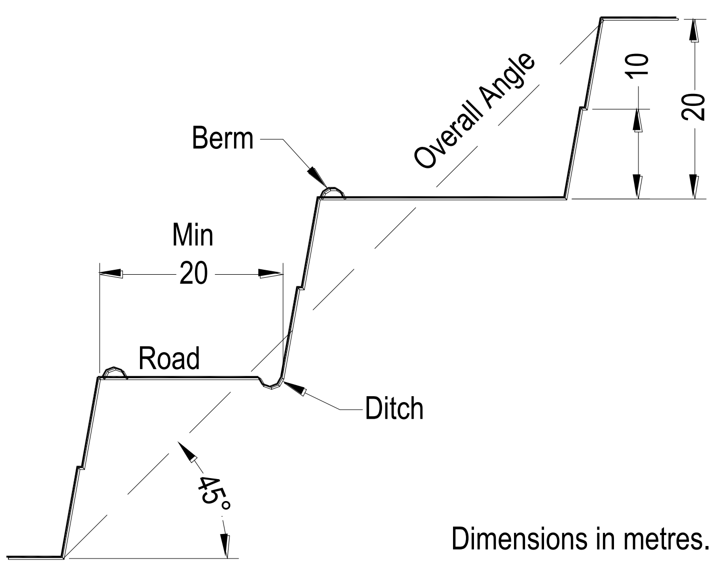


Figure 16-7: Conceptual pit design cross-section.

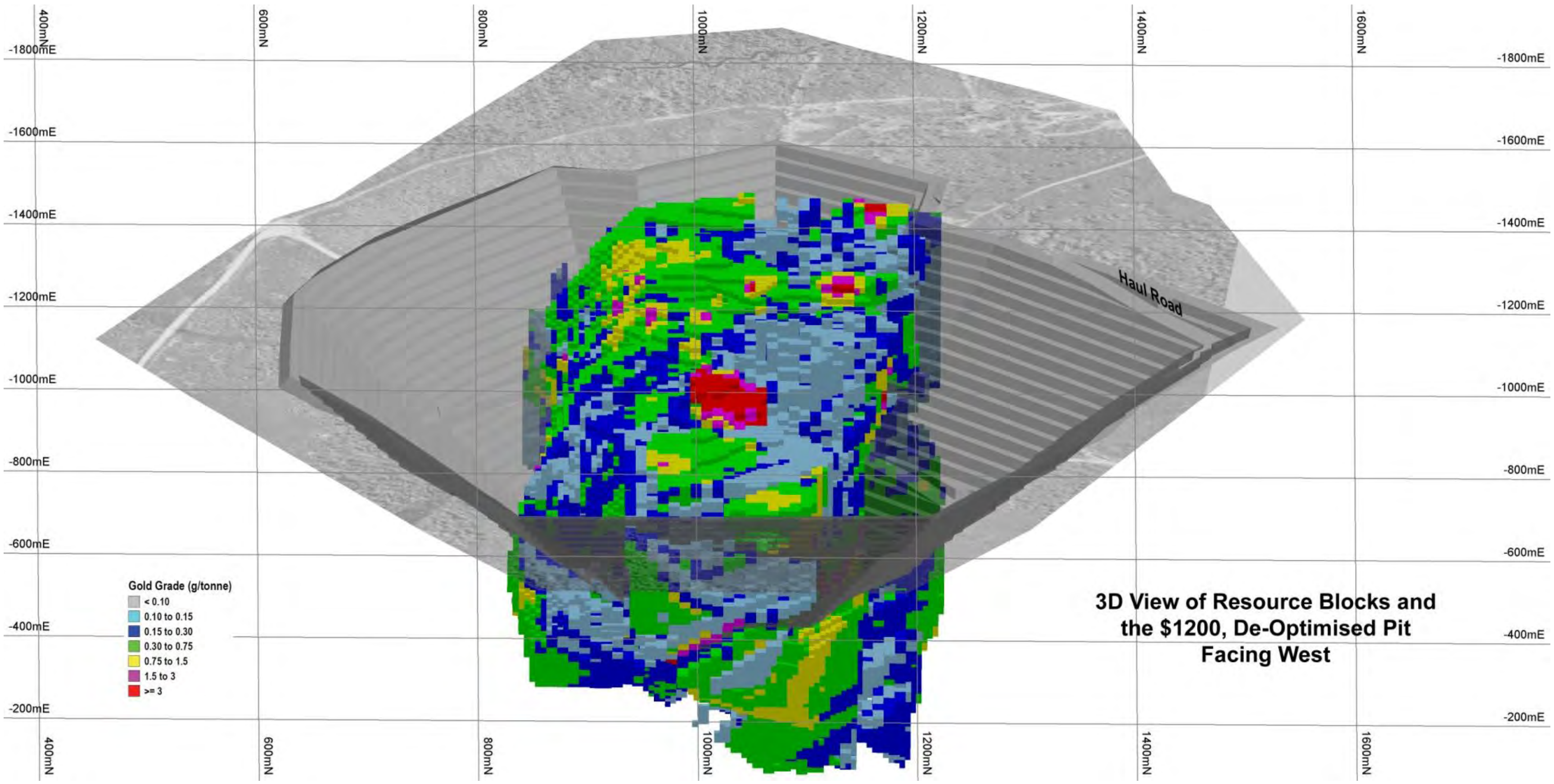


Figure 16-8: 3D view of the de-optimised (benches and haul roads added), $1200 pit, facing west.

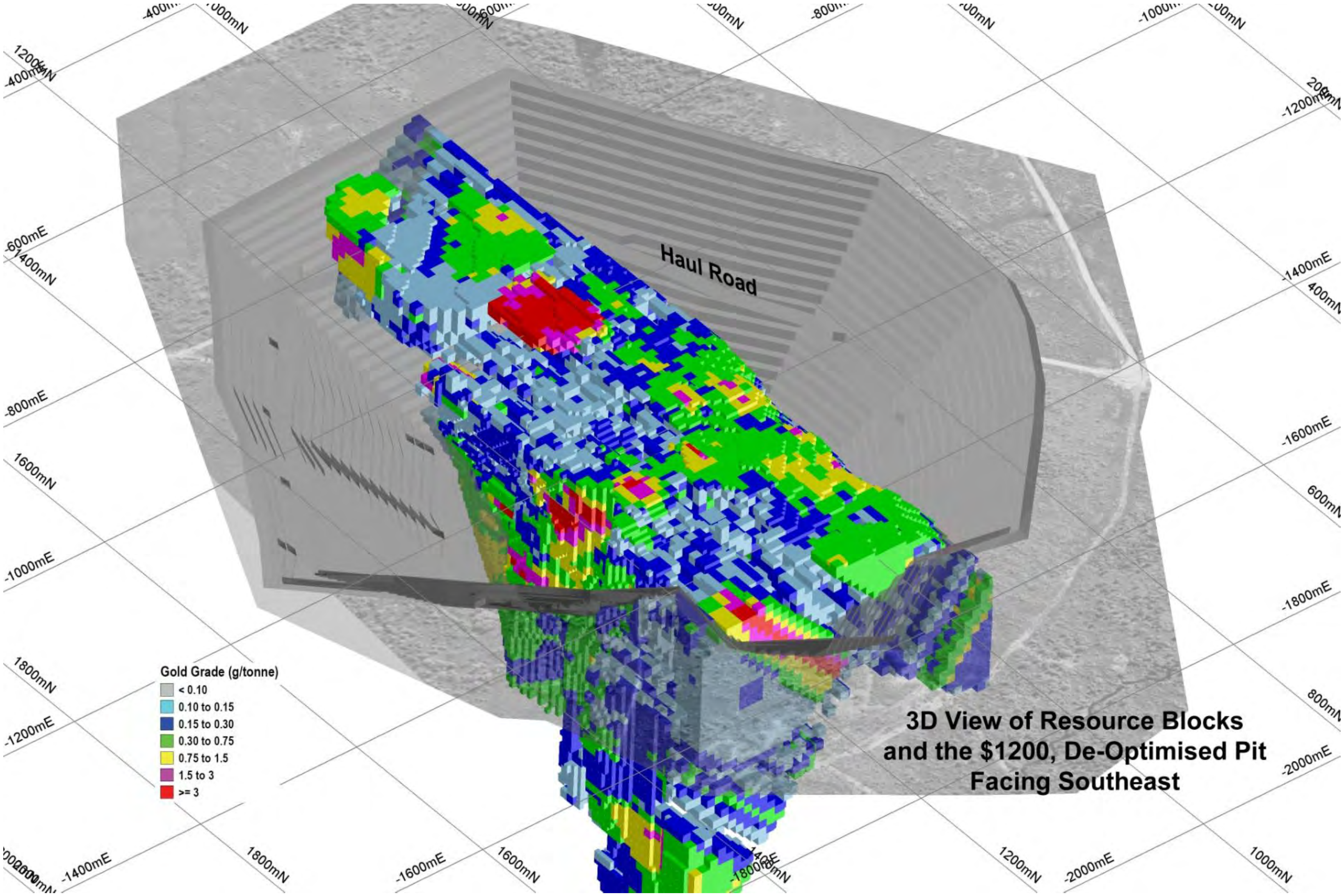


Figure 16-9: 3D view of the de-optimised (benches and haul roads added), $1200 pit, facing southeast.

16.6 Production Rate

Howe has created a cash flow model for the Garrcon deposit and this model is used to estimate the net present value of the revenue stream from the mine using production capacities ranging from 1,000 tpd to 12,000 tpd. The optimum tonnage rate, based on this work, is 11,300 tonnes per day giving an 8 year mine life.

16.7 Mine Schedule

Waste stripping will be completed 6 months to a year prior to mining. For the purpose of the PEA, the grade of the ore is treated as being uniform throughout the life of mine. As additional work is done, the schedule should be revised to reflect the actual pit ore grade. After the mill has been commissioned, higher grade material may be mined early, reducing the payback period.

Table 16-7 - Mining Schedule for 10,300 tpd plant (quantities rounded)

	Pre-Production Year 1	Pre-Production Year 2	Year 1	Year 2	Year 3-8
Waste tonnes Mined		6,311,000	12,519,000	12,519,000	6,259,000
LG ore to Crusher then Heap		572,000	2,288,000	2,288,000	1,716,000
H.G. Ore to Crusher the to Mill PAD		1,031,000	4,125,000	4,125,000	3,094,000
Dilution		52,000	206,000	206,000	155,000
Tonnes moved per year		7,966,000	19,138,000	19,138,000	11,223,000
loose m3 moved per year		5,431,000	13,049,000	13,049,000	7,652,000

16.8 Mine Planning Parameters

The mine engineering department will be responsible for mine planning and design, production scheduling, surveying, geotechnical design, and performance statistics and any other technical requirements that support the operation. The mine geology department will be responsible deciding which ore goes to the processing plant and which will go to the heap leach. Low and high grade can be mapped and confirmed by blast hole sampling. Processing options are discussed in processing section of the report.

Table 16-8 provides the basic criteria used in the pit design. The mine and mill operate 7 days per week, nominally 365 days per year. In reality however, there will be storm days and other times when it is not possible to work in the mine. The heap leach will operate about 9 months per year, 7 days per week. The mine will move and stockpile about 52,000 tonnes per 24-hr day. Large stockpile areas are required at the mill and at the first crushing station. In practice, more ore will be mined during the summer than during the winter and provisions are to be made for ore stockpiles to supply a minimum of 2 months mill feed (680,000 tonnes, requiring about 5 ha of storage area).

Table 16-8: Pit Quantities, Non-Diluted

Pit Quantities	1.98	tonnes waste/tonnes ore
Tonnes HG ore	***33,000,000***	tonnes
approximate m^3 tailings	***25,384,615***	m^3, s.g. = 1.3
tonnes/year to plant	***4,125,000***	per year
Tonnes LG Ore	***18,300,000***	tonnes
tonnes/year to heap leach	***2,287,500***	Seasonal, 9 months/year
approximate m^3 Heap Ore	***11,437,500***	m^3, s.g. = 1.6
waste rock, estimated	***101,800,000***	tonnes
approximate loose m^3	***63,625,000***	m^3, s.g. = 1.6
Ore plus waste tonnage combined	**153,100,000**	tonnes
INSITU HG Ore, g/t	**0.90**	g/t
Mine recovery	**0.95**	
INSITU LG Ore g/t	**0.20**	g/t

Table 16-9 lists the quantities used in the mine plan. These quantities were determined from the optimum pit at a gold price of $1,200 per ounce. Dilution of the ore to the mill is assumed to be 5% at zero grade. The mining recovery is assumed to be 100% for this PEA as the mineralized zones are wide, in reality however, mining recovery will be less than 100%.

Stripping is scheduled to be done a year ahead of mining in the PEA. This will ensure enough working places to permit a steady production of rock. The ore:waste strip ratio is approximately 2:1.

Table 16-9: Quantities used in the PEA study

GARRCON GOLD PROPERTY Mine Life, years	8.0
BASIC CRITERIA for Garrcon Open Pit Mine Plan	
Total tonnes ore plus waste	153,100,000
Dilution	5%
annual ore tonnes	4,125,000
annual loose cubic metres ore	2,580,000
annual waste tonnes	12,725,000
annual heap leach cubic metres (s.g. = 1.6)	1,430,000
annual heap leach tonnes	2,287,500
annual loose cubic metres waste	7,953,000
Annual tonnes ore and waste combined	19,137,500
Weekends and Annual legal holidays of total shutdown	0
Scheduled operating days per week	7
Annual scheduled operating days	365
Nominal tonnes mined / day	52400
Processing Plant, tonnes per day	11300
Number of shift crews	4
Heap Leach - 6 cells, heap depth, m	3
Heap Cycle, days- stack, leach, wash, prep for next lift,	70
scheduled hours per year	8,760
Average daily tonnage per 24 hour day	52,432
average hourly tonnage	2,185
peak delivery to dumping points	2,913
Overall job efficiency (55 min hour)	92%
Average mechanical availability of scheduled time	85%
Annual outage factor	95%

16.8.1 Required Mining Fleet and Machinery

Mining fleet and machinery requirements for the proposed pit are presented in Table 16-10.

Table 16-10: Major Mining Items

Item	Number
Hydraulic large shovel	2
Hydraulic Backhoe, 45 tonne	1
Frontend Loader , 350 kW	2
Haul Truck (New or good used)	13
Water Truck	2
Blast Hole Drills	4
Bull Dozer and ripper, 4.7m maximum blade width	3
Rubber Tired Front end loader, 300 kW	1
Grader, 4.3m blade width	1

16.8.1.1 Drilling and Blasting

A minimum of 4 good used or new rotary drills are required with the capacity to drill at least 10m per hour. Drilling tests should be completed to determine bit wear, drilling speed etc. A blast hole diameter of 223mm (9 inch) will provide a good penetration rate and a good powder distribution. Blast hole specifications and drill requirements are presented in Table 16-11.

Larger diameter drills lower drilling and blasting costs (greater down-hole pressure on the bit, thus drill faster; fewer detonators etc.). The larger 9 inch hole will also provide finer muck and thus lower crushing and grinding costs.

Table 16-11 – Blasthole Specifications and Drill Requirements

Hole Size	0.2286	m
Bench Height	15	
Hole Depth	17	m
Total Hole Volume	0.68	m^3
Percent of hole depth filled with explosives	60%	
volume of explosive	0.41	m^3
bulk density of explosives, average	1000	kg/m^3
Weight of explosive in hole	406	kg
explosive factor, kg/t rock blasted	0.25	
tonnes broken per hole	1625	
total tonnes ore and waste per year	19,137,500	tonnes
total holes per year	11775	
total length of hole	194282	m
drilling rate while drilling the hole	10	m/hr
actual drilling time required	19428	hours
scheduled annual hours	8,760	hr
overall job efficiency	80%	
mechancal availability	80%	
annual outage factor	95%	
production utilization	61%	
actual production hours	5,326	hr
drills required	3.6	
minimum drills in use or available	**4**	

Vertical holes will be drilled 17m deep to provide 15m benches. Holes will be bottom loaded and blasted in rows at least 5 deep. Burden, spacing and blast hole timing will be determined taking geotechnical elements into consideration as well as timing between holes and down holes will be determined for optimal fragmentation in the ore and waste. The ore near the waste contact can be blasted in 5 meter benches for grade control. Cushion blasting near the waste contact and final wall should minimize overbreak and dilution.

The physical properties of the rocks have not been determined but should be close to typical for the area, and from Morrison, 1971.

Table 16-12 - Physical Properties of Rocks

	Unconfined Strength				Elastic Moduli		
					stress/longitudinal strain	lateral strain / long. Strain	Shear Modulus
Physical Properties of Rocks[1]	**Compression, psi**	**Tension, psi**	**Shear, psi**	**Torsion, psi**	**Young's Modulus x 10-6 psi**	**Poisson's Ratio**	**Modulus of Rigitity x 10-6**
Conglomerate, Denison Mine	26,890	1,090	5,745		10.30	0.13	4.50
Conglomerate, Miliken Mine	17,590	1,070		1,658	13.20	0.10	6.30
Porphyry, Lakeshore Mine	36,280	1,900	3,430	3,600	9.40	0.21	3.90
1. from Table 1 (14) Morrison, p.20							
Physical Properties of Rocks	**Compression, Mpa**	**Tension, Mpa**	**Shear, Mpa**	**Torsion, Mpa**	**Young's Modulus x 10-6 Mpa**	**Poisson's Ratio**	**Modulus of Rigitity x 10-6**
Conglomerate, Denison Mine	185	8	40	-	0.0710	0.13	4.50
Conglomerate, Miliken Mine	121	7	-	11	0.0910	0.10	6.30
Porphyry, Lakeshore Mine	250	13	24	25	0.0648	0.21	3.90

16.8.1.2 Truck Fleet and Shovel Requirements

Haulage truck and shovel requirements (Table 16-13, Table 16-14 and Table 16-15) are estimated with the assumption that land for waste dumps, stockpiles, heap leach pads etc. are available close to the mine. A minimum of 13, 100 tonne trucks will be required. The 100-t units are recommended for better overall availability.

Waste rock and ore is assumed to be hauled, on average 3 km (giving a round trip of 6 km) over the life of mine. At a 6 % grade, the haul from the bottom of the pit to the top would be about 3.6 km. If the haul becomes longer than 3 km one way, then, a larger truck may be justified.

A 100 ton capacity haul truck (a typical size for this deposit type and size) has a 6.1 metre operating width and a height of 10 metres at full dump. The overall truck length is 9.8 metres. The truck has a fully loaded top speed of 60 km/hr and a turning radius of about 25 metres. When hauling material, truck speeds are determined by the weight per axel, which in turn depends upon the tires and the condition of the road surface.

Roads should be 2-3 times the haul truck width. The minimum haul road width is 20 metres which allows for a ditch on the “toe” side of the road and a safety berm on the “crest” side. Power lines and maintenance bay doors should be at least 13 metres high at the lowest point.

Table 16-13 - Haulage Truck Cycle Time

Truck Cycle Time		
manuvering for position	1.5	minutes
loading	3.5	minutes
Accelerating loaded truck	1.5	minutes
Haulage to dump point	10	minutes
decelerate and dump	2	minutes
Retrn empty	8	minutes
Total	**26.5**	**minutes**

Table 16-14 - Haulage Truck Requirement

Haulage trucks capacity:	100	tonne
Cycle time (continuous)	26.5	min
trips per hour	2.3	
tonnes per hour	230	
overall job efficiency	92%	
mechancal availability	85%	
annual outage factor	95%	
Scheduled hours/year	8,760	hrs
actual production hours	6,484.23	hr
annual production by truck	1,491,372	tonnes
annual production required	19,137,500	tonnes
	13	**trucks required**

Table 16-15 Shovel Cycle Time & Total Shovels Requirement

Shovel Cycle Time	Minutes		3.85
digging and hoisting	0.2		
Manuvering	0.2	Shovel Size, m^3	16
Backing and Turning Loaded	0.1	Shovel Fill Factor	90%
Traveling Loaded	0.15	Shovel Load, LCM	14.4
Dumping	0.08	Load Cycle time, minutes	3.85
Backing and Turning empty	0.1	Trucks Loaded per hour	14
Traveling Empty	0.08	1 shovel, maximum tonnes per	1429
Truck Exchange	0.45	Tonnes per year	19,137,500
Swinging Loaded	0.08	effective hours per year	7073.7
Swinging Empty	0.03	Shovels Required	2
Site Cleanup	0.5		

16.8.2 Dewatering

Water wells will be installed around the open pit to dewater and to reduce water pressure in the walls. Ground water pumped from the pit area will be used in processing. Water pressure reduces the stability of pit slopes by reducing the shear strength of potential failure surfaces and freezing groundwater during winter can cause wedging in water-filled cracks. Also, freezing surface water on slopes can block drainage paths causing excessive pressure on the walls (MEH, p 1276[12]).

Rock support such as cable bolts and an active wall drainage program will allow the walls to be kept stable.

16.8.3 Waste Management Area

Approximately 33,000,000 tonnes of gold ore will be processed through the mill, equating to about 25 million cubic metres of tailings, assuming a bulk S.G. of 1.3.

Potential land requirements for mine, processing, and waste management facilities are discussed in Section 18.1. The Garrison Property covers an area of 476.1 ha which when combined with adjacent 370.4 ha land area of the recently acquired Plato claim group gives a Northern Gold a total land area of 846.5 ha (Figure 4.4) in the immediate area of the Garrcon deposit. Detailed site engineering is required to confirm the suitability and sufficiency of the current property areas for final mine, processing, and waste management facilities should they be constructed. For the purpose of this PEA, Howe assumes that Northern Gold will be successful in acquiring any additional land in the vicinity of the deposit that may be required to carry out the mining plan.

16.9 Heap Leach Facility

The heap leach material will be stacked in prepared areas that have a clay base and a double pad liner. The liners will incorporate a leak detection system in the sand layer between the liners.

The time to extract approximately 65% of the gold from the lower grade material is estimated at 70 days. During this period, a second heap leach cell would be established. Both cells would have a working area 100 metres long by about 70 metres wide. The heaps would be established on a slight slope to enhance the movement of leach solution. Water consumption, the sprinkling rate, the time it takes to recover the gold is a function of the overall permeability of the lift and the local permeability. In practice most heap leach operations apply solution to crushed-ore heaps ranging from 7 to 20 litres per hour per square metre with an average of 11 litres/hr/sq. metre (Kappes, 2001).

The heap leach operation would therefore require approximately 125,000 cubic metres of water per 24 hour day (about 1,500 litres/second). Most of the heap leach water would be re-circulated. The heap leach facility is assumed to operate 9 months per year.

[12] MEH – Mining Engineering Handbook, Society for Mining, Metallurgy, and Exploration, Inc. 2nd printing: December 1996

The heap leach facility that operated at The Brewery Creek mine in the Yukon, described in "Yukon Mineral Property Update 2008" provides some guidance to operating in a cold climate (Deklerk and Burke, 2008). The Brewery Creek mine produced gold at about $250/ounce during the late 1990s utilizing a large permanent heap leach pad. As described by Deklerk and Burke (2008): "*The leach pad was divided into seven discrete cells, each nominally 83 m wide and 462 m long, with total capacity of 11.7 million tonnes of ore. The permitted and ultimate pad layout provided space to accommodate 18 million tonnes of stacked, run-of-mine ore.*

"A multiple-layer liner system was installed under the heap to collect process solution and direct it to the recovery plant, as well as prevent leakage to the environment. The possible loss of solution to the ponds and subsequent freezing of the drip-emitter system during an equipment failure was of prime concern because of the severe winter conditions. Temperatures have dipped to as low as minus 43.5°C. The following features were incorporated into the design to prevent this freezing.

- *Emitters were placed into the surface to act as an insulator;*
- *All outside piping was insulated and heat-traced;*
- *Waste heat from the diesel generator engines was used to heat the outgoing barren solutions.*
- *A waste-oil-fired heat exchanger was used to heat circulating solutions*."

It would be beneficial to heat the proposed Garrcon heap leach solution with waste heat or perhaps geothermal heat.

16.9.1 Design Considerations for Reclamation and Closure

Once the heap leaching operation is completed, the facility must be closed in accordance with local environmental requirements. Closure activities are highly variable depending on the environmental sensitivity of the site, and on the regulatory regime. In general, heaps are washed for a short period of time (commonly three years), during which time one tonne of wash water or recycled treated process solution is applied. Heaps are then capped, and ponds are filled and capped.

Kappes (2001) in his paper "Precious Metal Heap Leach Design and Practice" describes the reclamation of heap leach sites

> "the easiest heaps to reclaim are single-lift heaps because the older heaps are abandoned early in the life of the operation and can be washed while production operations continue. In "Valley Fill" heap leaches, nearly all the ore ever placed on the pad is situated directly under active leach areas. Thus, washing of the entire heap must wait until operations are completed. Larger operations may have two or more "Valley Fill" leach areas, and can appropriately schedule closure activities. Environmental regulations usually call for reasonably complete washing of the heap to reduce pH, to remove cyanide, and to partially remove heavy metals. Cyanide is fairly easy to remove since it oxidizes naturally, but pH and heavy metals are more difficult to control. Regulators are recognizing that a better approach is to conduct a "limited" washing program and then to cap the heap with clay and/or an "evapotranspiration" cover of breathable soil with an active growth of biomass. These covers are designed to prevent infiltration of water into the heap. After several years of active closure activities, the flowrate of the heap effluent decreases to a manageable level (or to zero in arid environments)."

SGS metallurgical testwork and ongoing geochemistry find that sulfide sulfur is only about 0.5%, and arsenic varies from slightly above to below its detection limit. The content of heavy metals as a group is very low, especially when compared to other Abitibi Greenstone Belt gold deposits that have been mined. The calcium content of the deposit (SGS metallurgical testwork and geochemistry) is in the range of 20% to 30% which provides an excellent buffer against ARD and heavy metals contamination. The SGS work and geochemistry to date suggest that ARD and heavy metals do not appear to be problem issues for the Garrcon Deposit; pending confirmation by additional testwork.

17 RECOVERY METHODS

Section 17 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2012 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the Garrcon mineral resource.**

Available information on test work is limited to two small samples (discussed in Section 13).

There are no operating results available relating to the recoverability of the gold at the Garrcon deposit.

The SGS work allows for a standard gold processing method to be tested. The operating philosophy is always to get the gold out of the rock as soon in the process as possible. To accomplish this, a standard gravity – cyanide circuit is proposed for the rock with greater than 0.3 g/tonne gold. Rock with a gold content between 0.15 g/tonne and 0.3 g/tonne would be sent to a heap leach facility.

Energy Requirements are estimated to be in the order of 10 Megawatts.

Water requirements are between 5 and 10 tonnes water per tonne of solids or between 50,000 m3/day and 100,000 m3/day (600 to 1,200 L/s). Essentially all of this is internally recycled.

17.1 Introduction

The proposed concentrator for this study is based on an annual mineable resource throughput of 4.1Mt, or 11,300 tpd at a 93% plant availability, for the production of a gold product; that being a gravity product, float product or gold bars, depending on the options chosen. The processing plant will operate 24 hours/day, 365 days/year. No assumptions are made on the grade of the material as this has an insignificant impact on capital and operating costs within the range of values analyzed. The tests done to date suggest that this could be on the order of 0.9 g/tonne. The company plans (subject to column test confirmation) to process all material between a grade of 0.15 g/T and 0.3 g/T in the heap leach system and material with a grade greater than or equal to 0.3 g/T will be processed in the gravity/vat leaching process.

In this circuit, it is assumed that sulphide separation requires a finer grind than 2000 micrometers and that essentially half of the crusher product will be ground. It also assumes that the sulphide separation is performed at a size of approximately 75 micrometers. A gravity separation circuit is included, as spirals, however, this may have to be replaced by a flotation circuit. In addition, no waste stream is produced at this point. The sulphide stream is assumed to represent 12% of the initial flow, or 1,360 tpd. This stream is reground and vat leached. The gravity, or flotation, underflow/tailings, is then vat leached.

The processing scenario presented in this report includes various run-of-mine stockpiles, crushing, fine and course ore stockpiles, heap leaching, the loading and unloading of gold onto the carbon, carbon regeneration, cyanide recycling and destruction, electrowinning and gold bar production. This circuit is shown as a block diagram in Figure 17-1.

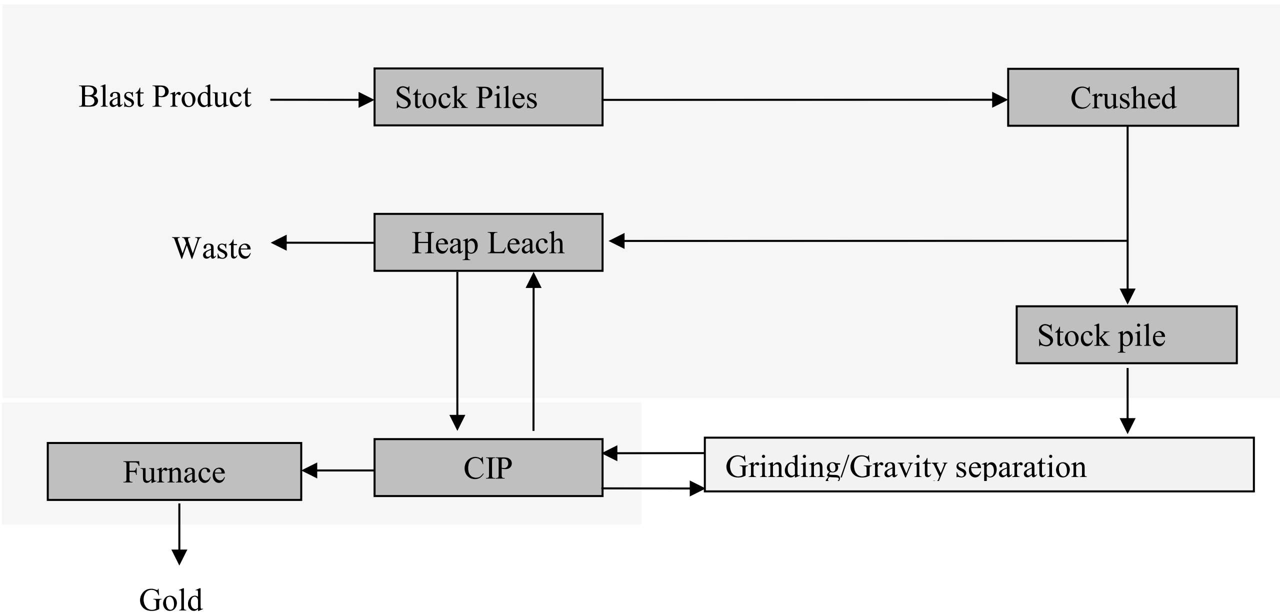


Figure 17-1: Gold processing sub-circuits including crushing, stock piles, heap leach, CIP and furnace as well as carbon regeneration and cyanide recycle and destruction. All processes concerning the tailings have not been included in the processing analysis.

The crushing section assumes a feed material similar to the blast fragmentation size analysis, provided by Northern Gold, as shown in Table 17-1.

Table 17-1: Blast fragmentation size analysis

Size finer than	Fraction	Cumulative
-1/4”	22%	22%
1”	22%	44%
2”	22%	66%
4”	13%	79%
8”	10%	89%
12”	8%	97%
+12”	3%	100%

The suggested crushing circuit is shown in Figure 17-2.

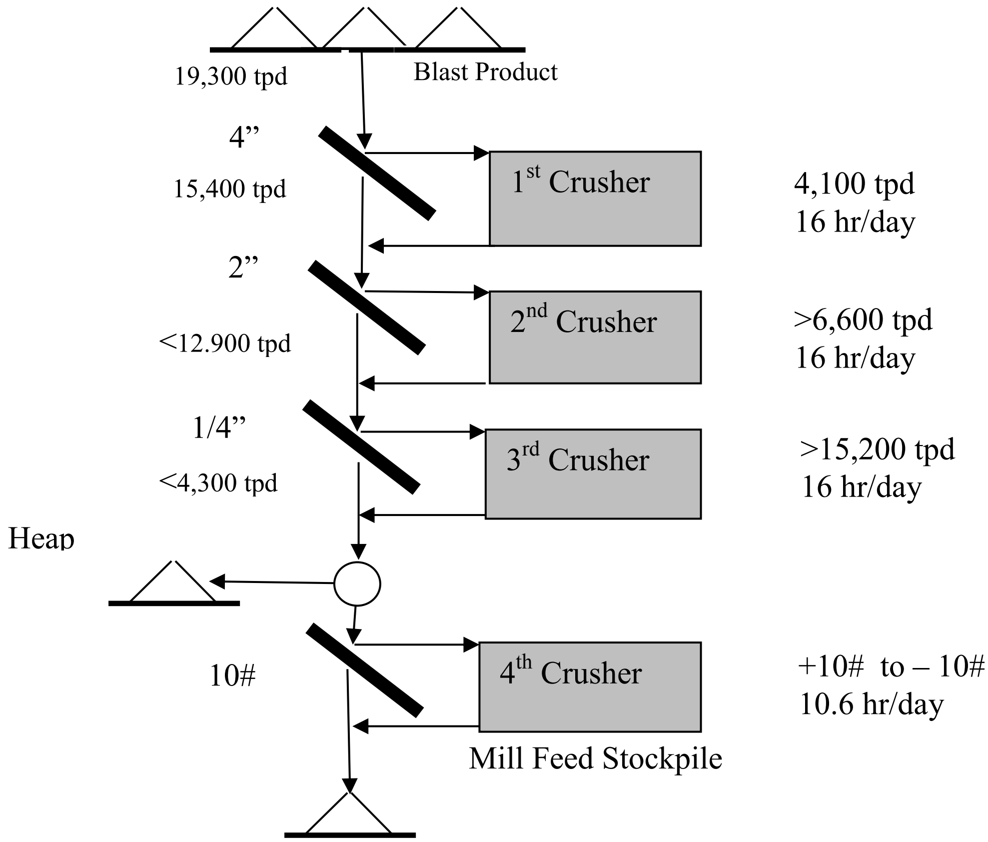


Figure 17-2: Northern Gold Crushing Circuit

The following assumptions are made in the configuration and costing of this circuit:

- 12” top rock size
- 100 metres of conveyors required to feed the crushing plant for the run-of-mine stockpiles
- The suitability of vertical shaft impact crushers
- Stockpile costs are taken as $100,000. This cost is ball-park only as it depends on the location and the size that will be required; Howe is estimating a 2 month supply for the mill, amounting to about 680,000 tonnes and requiring an area of about 5 ha. The coarse ore storage will consist of run-of-mine stockpiles that will be established and maintained in three categories. The main stockpile will be feed for the mill. This stockpile is assumed to have an average grade of 0.9 g/tonne. The second stockpile will be a run-of-mine stockpile for heap leach operations and will consist of rock grading between 0.15 and 0.30 g/tonne. The heap leach stockpile will be available to supplement mill feed if required. The third stockpile will be low grade stockpile whose grade is as yet unknown.
- VSI costs were substituted by Single rotor impact crusher at 400 t/hr, or a 32” by 44” model. Furthermore, it is assumed as there are two stages of this crusher so that two will be required.

The use of VSI must be further investigated and compared to additional stages alternative crushers in terms of effectiveness, capital cost and operating costs.

- That 11,300 tpd of 0.3 g/T, or greater, ore will be processed through the mill.
- The 8,000 tpd (9 months/year) of ore, ranging between 0.15 and 0.3 g/T, will be processed through the heap leach.

17.2 Gravity-Cyanide Circuit Design

The process circuit includes the following assumptions:

- Liberation of crystals within the rock can be achieved at a size of 75 micrometers
- Sulphides, the gold bearing silica and carbonates can be separated using gravity separators:
- Gold associated with the sulphides is exposed either on surface or in cracks, at a size of 75 micrometers; thus can be leached.
- The proper percent solids for the leach must be decreased from the hydrocyclone overflow by using thickeners.

The consumable costs are estimates only as the pumps have not been priced or sized, the exact mill size or grinding media consumption rate has not been determine and the chemical consumption rates have not been determined. The consumables include steel media, activated carbon and cyanide.

17.2.1 Basis of Design

1. That a grind size can be determined that will both liberate the pyrite and expose the gold sufficiently for cyanidation. A two stage grind may be considered at this point if these two sizes are considerably different. This size can be determined using representative mineralogical grain size studies and cyanidation tests.
2. A pyrite separation stage is to be performed if gold is found within the pyrite as small particles capable of being leached on exposure to cyanide solution as opposed to being encapsulated within the sulphide crystal lattice itself.
3. That the size of pyrite liberation is appropriate for gravitational separation techniques. It may be necessary to use a flotation as opposed to a gravitational separation. The selection of the type of gravity separation is also dependent upon this size.
4. That the regrind of the pyrite be performed to reduce the pyrite to a size where the particles of gold are exposed.
5. The silica/carbonate stream does not need to be reground and sufficient gold recovery is achieved at 120 micrometers.

The circuit is presented in Figure 17-3 as a block diagram. There are many other configurations that could result depending on results of future test work.

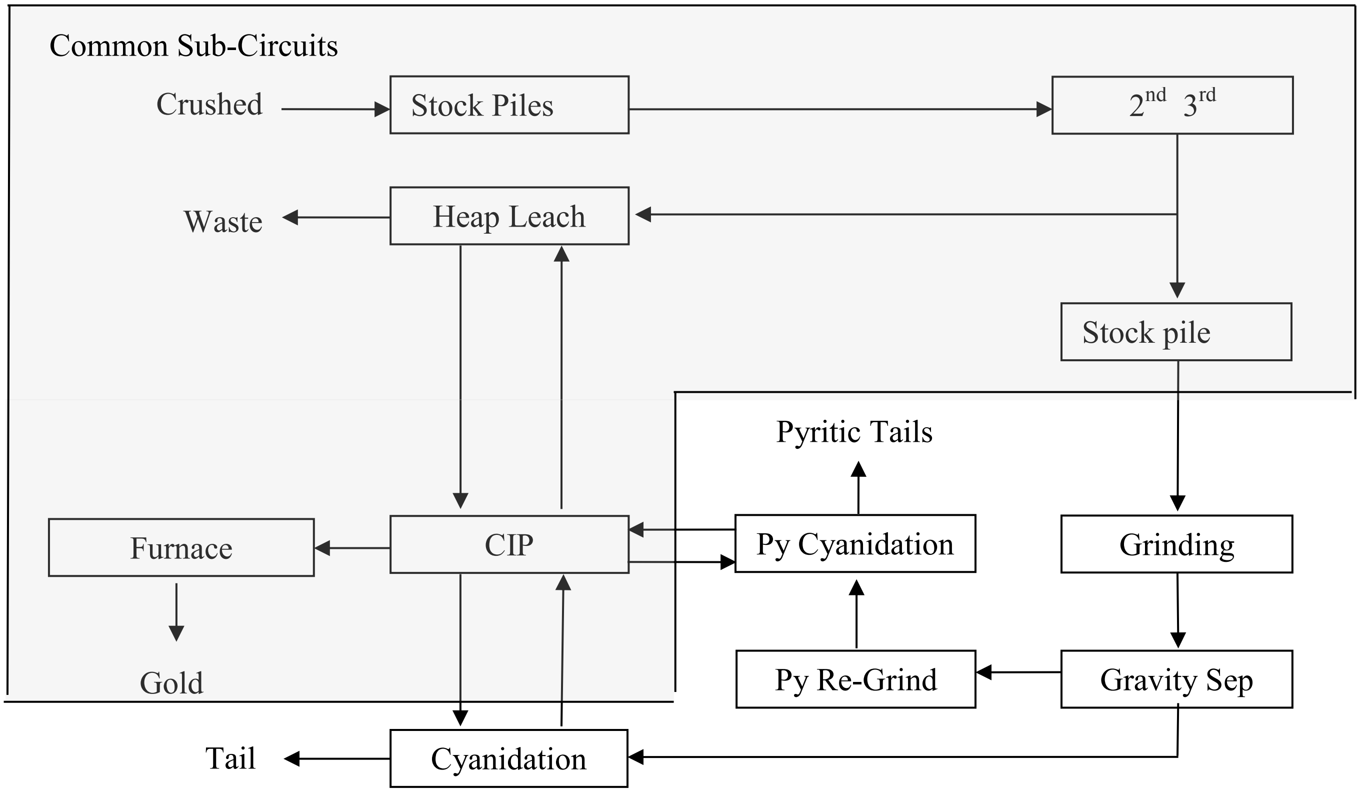


Figure 17-3: Simplified initial flow sheet showing 120 micrometers initial grind.

17.2.2 Grinding

This circuit is used to reduce the particle size from the crushed ore to that required for cyanidation or flotation. The grinding is assumed to be performed using ball mills in closed circuit. The resulting particle size is assumed to be on the order of 120 micrometers.

The consumption of grinding media, or steel balls, has been estimated at approximately 1.5 kg per tonnes of ore, or 17 tonnes per day. This will change depending on the grind size chosen and ore specific characteristics. This does not include any of the capital or consumption of potential regrind circuits. The hourly cost includes overhaul, maintenance and wear in terms of both labour and parts. No accounting is made for operating staff in this calculation.

17.2.3 Regrind

A regrind circuit reduces the particle size of the gravity circuit concentrate (pyrite) to expose the gold within the pyrite. It has been assumed that this circuit will process 12% of the ore, the costs of this regrind will be that of a hydrocyclone acting as a thickener and closing the circuit and one ball mill. The costs of alternatives; that is Knelson/Mozley, jigs or flotation have not been approximated at this time.

17.2.4 Sulphide Concentration

This section describes the circuit used to concentrate the sulphide minerals.

This circuit assumes that the pyrite in the rock will be removed and treated separately from the silicates and carbonates and that the largest grind size possible, to liberate the pyrite, is used in the grinding circuit. The type of separation used to remove the pyrite depends on the particle size. For larger sizes, gravity separation can be used. Two scenarios have been analyzed: (i) spirals and (ii) Knelson and Mozley type separators. Jigs should be considered for larger particle sizes and flotation for smaller sizes.

In case (i) the comminution circuit product is pumped at 25% solids (w/w) to a number of spirals, probably a series of three, that produce a heavy and light component. It is assumed that the heavy component will be composed of 12% of the feed. It is unlikely that this circuit will achieve the recovery of the test work, so, the recovery has been set at approximately 30% of the gold. It is assumed that the spirals have a capacity of 8 tonnes per hour; however, this is just an estimate that depends on the type of spiral, the percent solids, the size of the gold and other particles and other factors.

At 11,300 tonnes per day, 470 tonnes need to be produced per hour, or about 60 spirals in parallel. Assuming a 50% mass recovery in each, 30 will be needed in the second stage and 15 in the third for a total of 105 spirals. Two pumps and an appropriate splitter could feed the first stage, and one pump and splitter feed the second and third stages.

17.2.5 Silicate/Carbonate Leach

In this circuit the feed is assumed to be taken directly from either the grinding circuit cyclone overflow or the gravity circuit underflow to a thickener where the percent solids is adjusted from about 25% to 45%. Depending on the particle size, it may be possible to use screens or cyclones to replace the thickener.

The thickener has not been designed and its eventual size will depend on the grind size and rheology of the resulting slurry. Generally, this is assumed to be in the range of 0.3 to 1.3 m^2 per tonne of ore. The feed thickener is only changing the percent solids from 25% to 45% thus will be on the smaller side of these values. A value of 0.3 m^2/tonne, or 3000 m^2 is used in this estimate. In the 11,300 tonne per day scenario this results in a thickener 62 metres (200’) in diameter. This is probably an over estimate of the size required.

The tanks themselves are based on a requirement of a 24 hour residence time, based on 8 tanks in series, in two parallel lines. In the 11,300 tonne per day scenario a volume of approximately 1000 m^3 will be required per tank. Air lift will be required on each tank; this can also be done using oxygen sparging to increase the cyanidation rate. The solids then flow to a series of 16 leaching tanks, two parallel lines of 8, to give a total residence time of about 24 hours. Double the number of tanks is assumed for the 48 hour retention time scenario.

17.2.6 Cyanidation Consumables

The consumables have been estimated for only the whole rock cyanidation scenario. The cyanide consumption may change depending on the iron content. All other consumables are anticipated to remain approximately the same. Lime has been included in this section despite the fact that it is added in the grinding circuit as it is required when cyanidation is performed. The consumables for the refinery have also been included in this section because without cyanidation refining would probably not be performed on site. No cost estimates have been made on transportation or inventory costs. No cost has been included for kiln fuel.

Cyanide consumption is based on a consumption of 0.9 kg/tonne. Heap cyanidation consumables are included in the heap section.

17.3 Heap Leaching

It may be possible to use a heap leach to process the rock containing insufficient gold for the conventional leaching processes. The advantage of the heap leach is usually cost; however, this would come with a reduced recovery. The recovery is assumed to be 65% in this costing[13]. This scenario assumes the leached rock will contain between 0.15 and 0.30 g/T gold.

The rock would be removed from the crushing circuit between the tertiary and quaternary crushing stages.

This circuit assumes that the fragmentation from intense blasting along with crushing will develop the necessary cracks to enable cyanide solutions to contact the gold.[14]

The cyanide consumption in the heap has been assumed to be 0.35 kg/tonne of ore. Lime has been included in this section; however the amount of lime that will be required is not yet known as there are known carbonates in the rock itself.

[13] A 65% recovery is based on a number supplied by the company and has not been proven by metallurgical testing.
[14] The optimal size for leaching has yet to be determined

18 PROJECT INFRASTRUCTURE

Section 18 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the Garrcon mineral resource.**

There is no modern mining or processing infrastructure on site at this time. All facilities for a 11,300 tpd plant and heap leach facility are required.

Required infrastructure includes:

- Security / first aid building;
- office and administration building with employee parking;
- maintenance shop with doors high enough for the haul trucks,
- water storage ponds,
- fuel and lube storage,
- powder and cap explosives magazines,
- dry storage areas;
- an electrical substation for mine and substations for the processing plant;
- a +/- 10 km power line to the site and power distribution lines;
- a tailings management area;
- waste rock and ore stockpile areas;
- water treatment facility;
- heap leach cells, pregnant and barren solution ponds;
- processing plant; and,
- water and sewage facilities.

18.1 Land Requirements

Table 18-1 presents a range of estimated land area required for the mining plan dependant on the ultimate depths of potential tailings facilities and stacking heights of wastes dump and leach pads. Final land requirements will depend on ultimate mine design and detailed engineering and topographic studies of the property area.

The Garrison Property covers an area of 476.1 ha (the Property area has increased to 788 ha since the 2011 PEA) which when combined with adjacent 370.4 ha land area of the recently acquired Plato claim group gives a Northern Gold a total land area of 846.5 ha (Figure 4.4) in the immediate area of the Garrcon deposit. Detailed site engineering is required to confirm the suitability and sufficiency of the current property areas for final mine, processing, and waste management facilities should they be constructed. For the purpose of this PEA, Howe assumes that Northern Gold will be successful in acquiring any additional land in the vicinity of the deposit that may be required to carry out the mining plan.

Table 18-1: Estimated land area required for the mining plan based on solids depths.

LAND REQUIREMENTS	
Tailings Area Required (ha) 2X area of solids	Average Solids Depth
1015	5
508	10
338	15
254	20
Waste Rock Area Required (ha)	Average Solids Depth
1914	5
957	10
638	15
478	20
383	25
319	30
Heap Leach Area Required (ha)	Average Solids Depth
381	3
191	6
127	9
95	12
76	15
64	18

19 MARKET STUDIES AND CONTRACTS

Section 19 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the gold price.**

19.1 Gold Market

With some fluctuations, the spot price for gold has risen from approximately $US 250 per troy ounce since 2001 to a current spot price at the time of this report of approximately $US1,520 per ounce (Figure 19-1). Howe has elected to use a price of $US 1,200 per ounce ($US 37,324 per kilogram or $US 37.24/gm) as the base case gold price for the economic analysis.

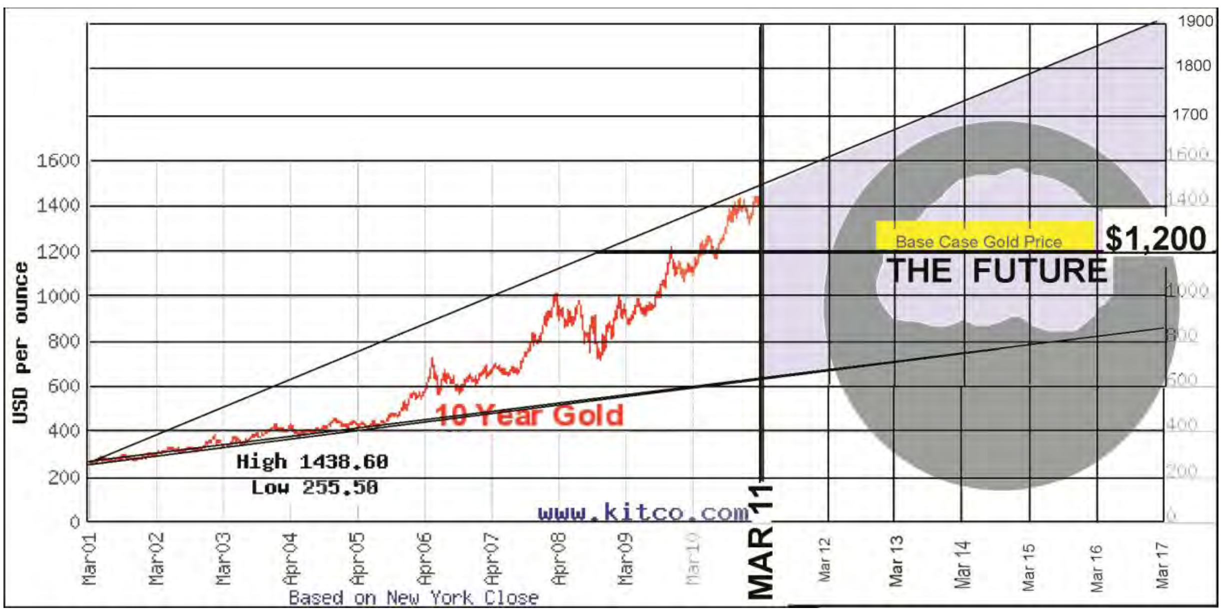


Figure 19-1 - Historical & Projected Gold Price (PEA is based on $1,200 per troy ounce gold)

The Royal Bank of Canada's Capital Market group (RBCCM) forecast for the next few years predicts the rise in gold price outpacing the cost of labour and materials, although these parameters are rising at a faster rate than the early part of the century (Figure 19-2).

> "*While operating cost escalation is seen as becoming a more pressing issue in 2011, gold price gains have been outpacing costs "thereby leaving producers with healthy margins to fund projects and return capital to shareholders; however, we may see contraction in 2011 if the gold price stalls. We forecast EBITDA margins of 51% in 2011 vs. 53% in 2010 for*

our coverage universe, reflecting our gold price assumption of $1,400 minus all-in cash costs" (RBCCM, 2010).

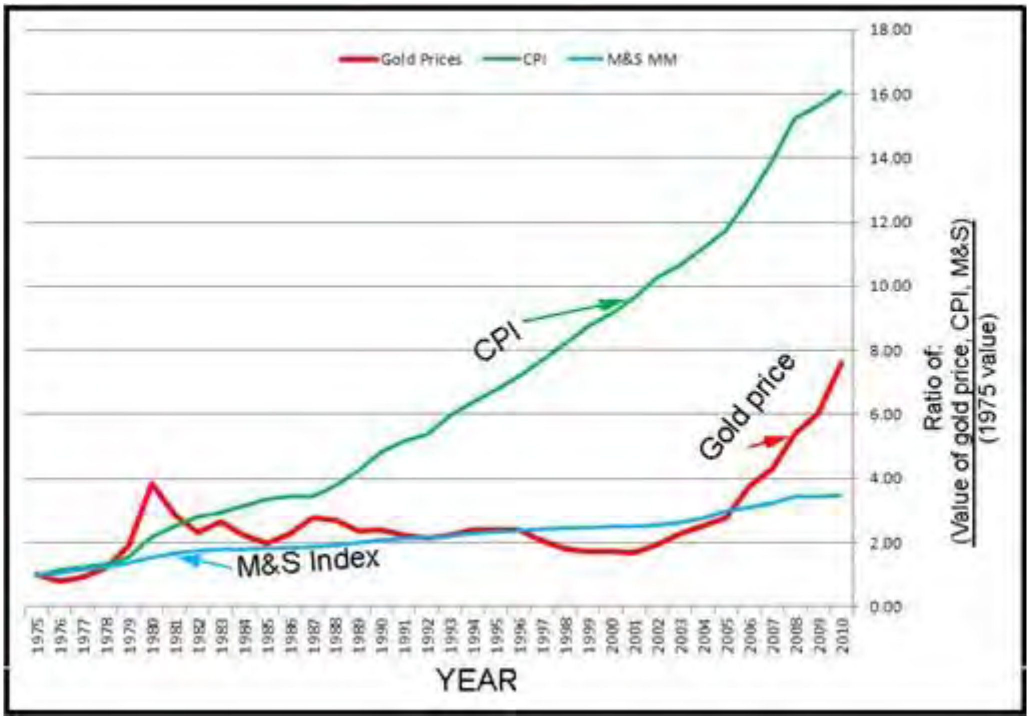


Figure 19-2: Gold price, consumer price index and the M&S Mine-Mill Index plotted against time from 1975 to present. The graph illustrates the value in year x divided by the value in 1975.

20 CAPITAL AND OPERATING COSTS

Section 20 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the Garrcon mineral resource and capital and operating costs.**

20.1 Accuracy of Cost Estimate

The accuracy of this PEA cost estimate is +30%, -20%. Figure 20-1 illustrates the accuracy range for the various classes of estimates.

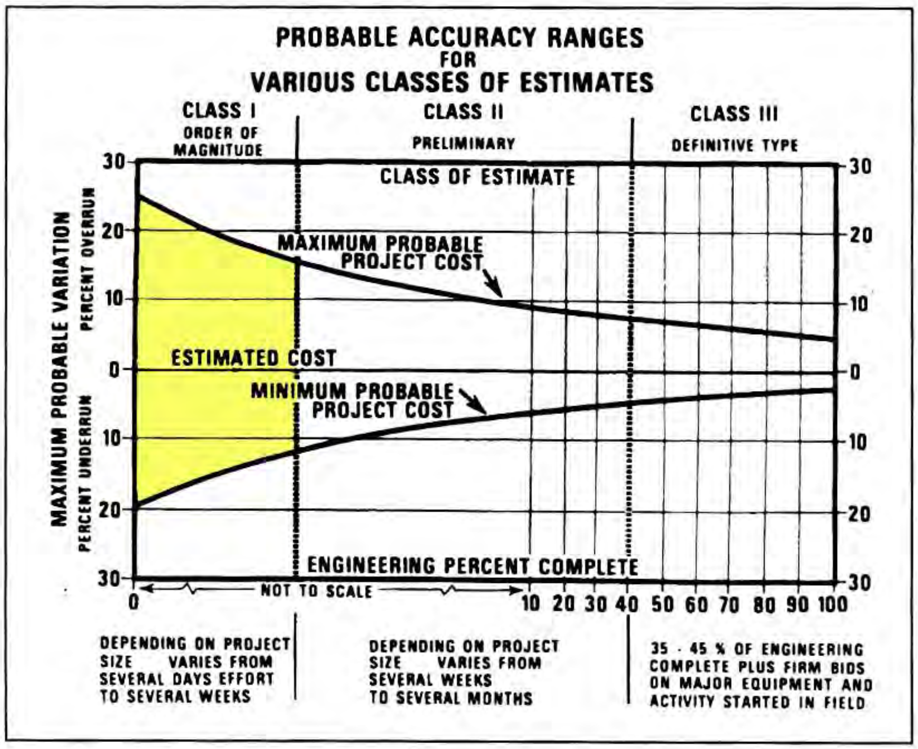


Figure 20-1 - Accuracy of Estimates for Projects (Modified after A.L. Mular, CIM S. Val. 25, 1982)

This cost analysis is based on limited metallurgical test work carried out by a SGS on two composite samples, thus, may not be representative of the entire ore body. Thus, this costing must be considered to be generic in nature and subject to variations that are not known at this time.

Historical capital costs were inflated and adjusted to present dollars using the Marshall and Swift Mine-Mill Index for processing plant costs (Figure 20-2). It is interesting to note that from 1975 to 2010, while the capital costs, as measured by the M&S Mine-Mill Index, have increased 3.5 times and the Consumer Price Index (CPI) has increased 16 times, the price of gold increased about 8.8 times. In 1975 the gold price averaged $160.86 and in 2010, the gold price averaged $1224.53 for a ratio of 1225/161 = 7.6. The Consumer Price Index (CPI) was set at 100 in 1975 and to 1606 in 2010 for a ratio of 1606/100 = 16.06. The Marshall and Swift (M&S) index was 451 in 1975 and grew to 1577 in 2010 for a ratio of 1577/451 = 3.5.

Operating costs for the open pit were derived from Howe personnel's experience with open pits and also from sourcebooks and trade publications. Key consumable prices (fuel, explosives, cyanide and lime) were obtained from operating mines.

One of the risks to the project is inflation of labour and equipment costs; however, in the past few years the gold price has outpaced the rise in capital and labour (RBCCM, 2010).

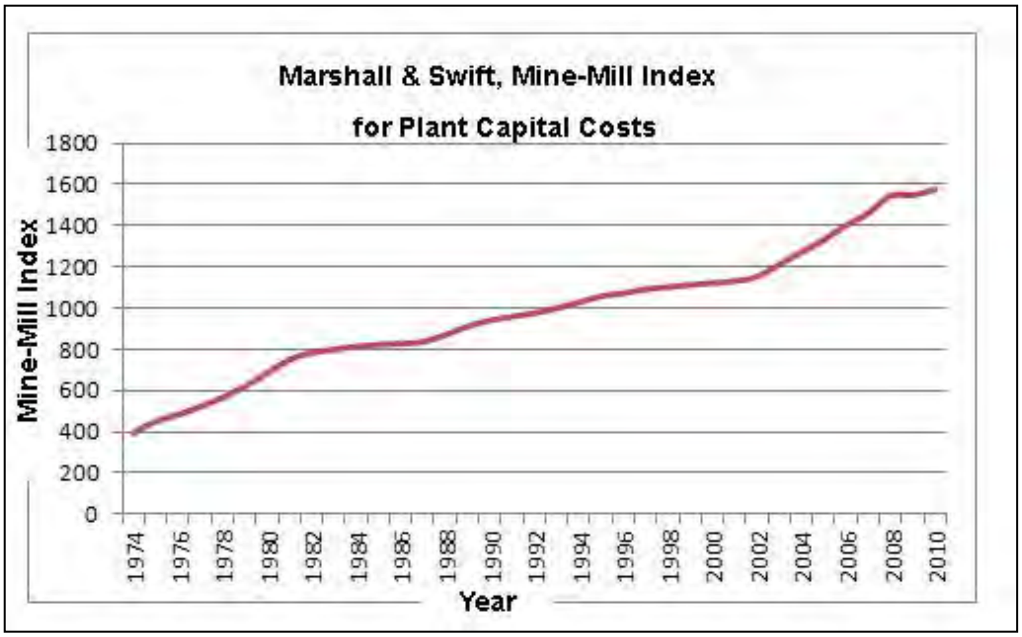


Figure 20-2 - Marshall & Swift Mine-Mill Index, 1974-2010

20.2 Capital Costs

20.2.1 Mining Capital Costs

Mining will be by open pit. Shovels will be used to load 100 ton haul trucks. Ore will be then sent to a primary crusher and from there either to a 11,300 tpd gravity-agitated leach processing plant (365 day year) or a 8,000 tonnes/day heap leach facility (274 day year). Table 20-1 lists the major capital items required for the mining portion of the project.

Table 20-1: Major Mine Equipment Capital Costs

Number	Item	cap cost	total
2	Hydraulic large shovel	2640000	$4,999,661
1	Hydraulic Backhoe, 45 tonne	750000	750,000
2	Frontend Loader , 350 kW	750,000	750,000
13	Haul Truck (New or good used)	1,200,000	15,600,000
2	Water Truck	250000	500,000
4	Blast Hole Drills	200000	800,000
3	Bull Dozer and ripper, 4.7m maximum blade width	536000	1,608,000
1	Rubber Tired Front end loader, 300 kW		500,000
1	Grader, 4.3m blade width	386500	386,500
1	Admin Building, Warehouse & Shop, 3,000 square metres		1,500,000
1	Mine Drainage Pumps, starters, electrical Equipment		350,000
1	Shop and Office Equipment		300,000
1	Haulage Dispatch System, Computerized. Includes installation, 20 units	470000	470,000
1	Water & Sewer		150,000
1	Power Lines		1,000,000
1	Substation		500,000
7	Pick-up Trucks	25000	175,000
1	Personal Safety Equipment		25,000
1	Miscellaneous Equipment		100,000
1	Conveyor distribution system		450,000
1	conveyor magnet, 1.2m long, 65 kg.,		1,200
1	Cyanide neutralization and detoxification plant (0.4 mg/l - 3 total CN, 0.25mg/l Free CN)		200,000
1	Fuel tank, 80,000 Litre, 4.57m diam., 4.87m high, 5.5 tonnes		63,700
1	Plant & Plumbing		50,000
1	Laboratory		200,000
1	Engineering & Constr. Supervision		664,188
1	Waste Management Area		5,000,000
	Subtotal	Subtotal	$37,100,000
			$11,130,000
	Total		$48,230,000

20.2.2 Processing Capital Costs

The processing plant / heap leach capital costs are summarized in Table 20-2 and are subject to change with additional test work that must be conducted before definitive processes can be designed. The estimate is considered to be order-of-magnitude only.

The capital cost for the various processing scenarios was estimated using the cost index ratio:

$$\text{Capital Cost "B"} = \left(\frac{\text{Capacity A}}{\text{Capacity B}}\right)^{\left(\frac{2}{3}\right)} \times \text{Capital Cost "A"}$$

Capital Cost A in this case is the estimated cost of a 10,000 tonne per day conventional gravity – cyanide leach processing plant.

The capital cost table includes equipment capital costs and other items estimated using cost factors - see Section 20.2.2.1.

Table 20-2: Major Mill Equipment Capital Costs

Item	Capital Cost (rounded)
Crushing	$3,549,000
Grinding	$4,721,000
Regrind	$1,194,000
Gravity, Sulfide Concentration	$358,000
Pyrite Leach	$1,020,000
Silica/Carbonate Leach	$3,419,000
CIP	$814,000
Carbon Stip	$434,000
Electrowinning	$260,000
Refining	$109,000
Carbon Regeneration	$543,000
Cyanide destruction	$868,000
Total Equipment	**$17,289,000**
Construction Labor	$6,566,000
Civil/Earthwork	$901,000
Concrete	$1,302,000
Buildings	$2,822,000
Structural Steel	$1,878,000
Piping	$3,744,000
Electrical/Instrumentation	$3,744,000
Painting/Insulation/Sealants	$901,000
Subtotal Direct Mill Costs	$39,000,000
Heap Costs	**$9,877,000**
Subtotal Direct Plant Costs	**$49,024,000**
EPCM @15%	*$7,348,000*
Freight @ 10%	*$4,906,000*
Initial Spares	$705,000
First Fills	$412,000
Vendor Commissioning/Startup	$65,000
Mobile Equipment	$217,000
Contingency @ 30%	*$14,706,000*
Subtotal Plant costs	$28,360,000
Total Capital Cost	**$77,384,000**

20.2.2.1 Estimation method and factors

The processing capital costs were estimated using the Western Mine Engineering, Inc., Mine and Mill Equipment Costs: An Estimators Guide and adjusted for inflation. These will have to be adjusted for local conditions. Factors were used, based on the equipment costs, in order to estimate the building and other costs associated with the final plant. These factors are shown in Table 20-3.

Table 20-3: Processing Capital Cost Estimation Factors

Item	Factor	Comments
Construction Labor	0.35	
Civil/Earthworks	0.05	
Concrete	0.07	
Buildings	0.15	Could be lower if leach tanks and thickener are outside
Structural Steel	0.10	
Piping	0.20	
Electrical/Instrumentation	0.20	Might be higher as cyanide is used
Painting/Insulation/Sealants	0.05	
EPCM	0.15	Based on the equipment subtotal
Freight	0.10	Based on the equipment subtotal
Initial Spare Parts	0.05	
First Fills	0.035	Initial inventory
Commissioning/Startup	0.04	Does not include plant commissioning
Mobile Equipment	0.015	
Contingency	0.30	

20.2.2.2 Crushing Circuit

The capital cost of the crushing circuit is tabulated in Table 20-4. .

Table 20-4 Crushing Circuit

Item	Description	Number	Cap Cost
1	High Grade Stockpile	1	$109,000
2	Low Grade Stockpile	1	$109,000
3	Other Stockpile	1	$109,000
4	Conveyors (60m assumed)	1	$315,000
5	Main Grizzly	1	$54,000
6	4" Grizzly	1	$54,000
7	Conveyors (20 m assumed)	3	$466,000
8	Jaw Crusher (22" x 50")	1	$304,000
9	2" Grizzly	1	$54,000
10	Cone Crushers(s) (4.25'd 200 hp)	1	$662,000
11	¼" screen	2	$54,000
12	-¼ VSI crusher (73"x83")	2	$1,150,000
13	Dust and negative pressure system	1	$109,000
	Total		**$3,549,000**

20.2.2.3 Heap Leaching

The estimated capital and operating expense for the heap leach facility as stated in Table 20-2 is detailed below in Table 20-5.

Table 20-5 Heap Leach Capital Costs

Part	Capital
Leach Pad & Ponds	$4,884,000
Conveying & Stacking	$3,473,000
Solution Pumps	$271,000
Heap Leach Piping	$380,000
Clarification	$868,000
Consumables	
Total	**$9,876,000**

The quoted heap leach capital costs must be considered to be low quality order of magnitude only because leach rates, topography and environmental considerations are not currently known and the assumption is made that an appropriate location can be found. Also, the performance of the heaps during the winter months has not been factored into the capital costs, operating costs or performance. The heap leaching will probably be seasonal for eight to nine months each year. In off months the run-of-mine material is stockpiled.

20.2.2.4 Grinding

This section describes the circuit used to reduce the particle size from the crushed ore to that required for cyanidation or flotation. The grinding is assumed to be performed using ball mills in closed circuit. The resulting particle size is assumed to be on the order of 120 micrometers.
The total estimated cost of the grinding section is $4.72 million. Not included in this part of the estimate are the building costs, installation costs, or the cost of any support equipment such as ball loaders, cranes, liner replacement equipment or any equipment associated with maintenance.

Table 20-6: Grinding circuit capital cost summary

Part	Capital	Total Hp
Ball Mill	$3,983,000	2,800
Feed distributor	$54,000	-
Cyclones	$520,000	-
Pumps various	$163,000	200
Total	**$4,720,000**	**3,000**

20.2.3 Reclamation Bonding

A reclamation bond will be required during mine operation. Howe has factored a $5 million bond into its PEA.

20.3 Operating Costs

Summary estimated mine and mill processing costs are presented in Table 20-7.

Table 20-7 – Mine and Mill Operating Costs

Operating Costs		**Pre-Production**	**Year 1**	**Year 2- 7**	**Year 8**
Haulage, Fuel, lub, Maintenance		$7,492,000	$17,999,000	$17,999,000	$10,555,000
$/tonne (waste & ore)		$0.94	$0.94	$0.94	$0.94
Drilling, explosives		$3,215,000	$7,724,000	$7,723,702	$4,529,371
$/tonne (waste & ore)		$0.40	$0.40	$0.40	$0.40
Mine Personnel Cost		$1,723,000	$9,913,000	$10,082,000	$8,398,000
$/tonne (waste & ore)		$0.22	$0.52	$0.53	$0.75
Total/yr		$12,430,000	$35,636,000	$35,804,702	$23,482,371
Mining cost/tonne moved		$1.56	$1.86	$1.87	$2.09
Mining Cost/tonne HG Ore		$12.05	$8.64	$8.68	$7.59
G&A Personnel Cost		$825,500	$929,500	$929,500	$825,500
G&A Personnel Cost/tonne HG Ore		$0.80	$0.23	$0.23	$0.27
Total G&A Cost		$825,500	$929,500	$929,500	$825,500
Plant Processing Cost		$4,766,912	$15,889,706	$15,889,706	$11,917,279
HG Processing Cost		$4,870,912	$17,644,706	$17,644,706	$13,672,279
Total HG Processing Cost/tonne HG processed		$4.72	$4.28	$4.28	$4.42
Processing personnel cost		$104,000	$1,755,000	$1,755,000	$1,755,000
personnel cost/tonne HG ore processed		$0.10	$0.43	$0.43	$0.57
Heap Leach Processing personnel cost		$135,200	$540,800	$540,800	$182,000
Heap Leach personnel cost/t processed		$0.24	$0.24	$0.24	$0.11
Operating cost for bulldaozer, ripper, pick up trucks		$114,000	$458,000	$458,000	$343,000
Heap Processing consumables & Misc. Cost		$1,739,804	$6,959,217	$6,959,217	$5,219,413
Heap Processing Cost		$1,989,000	$7,958,000	$7,958,000	$5,744,000
Heap Processing Cost, per tonne		$3.48	$3.48	$3.48	$3.35
Overall Total Processing Costs		$6,860,000	$25,603,000	$25,603,000	$19,416,000
total Processing Cost/tonne: (HG+LG Costs)/(HG+LG tonnes)		$4.15	$3.87	$3.87	$3.91
Total Operating Costs		$20,115,500	$62,168,500	$62,337,202	$43,723,871
Operating Cost per tonne HG Ore processed		$19.51	$15.07	$15.11	$14.13
Operating Cost per troy ounce produced, HG & LG		$636.16	$491.36	$492.70	$460.74
Reclamation					$5,000,000

20.3.1 Estimation method and factors

Processing operating costs were determined using the Western Mine Engineering, Inc., Mine and Mill Equipment Costs: An Estimators Guide and adjusted for inflation. These will have to be adjusted for local conditions. Operating costs that are not direct consumables are shown in Table 20-8.

Table 20-8: Indirect operating cost estimation factors excluding electricity, consumables, and process operators.

Item	Factor
Maintenance repair costs $/hr	$50
Diesel Fuel $/L	**$1.00**
Gasoline	$1.00
Natural Gas MCF	$10
Mill liners $/kg	$2.50
Electricity $/MWhr	$150

20.3.2 Mine Explosives

Boosters, detonators and liners for 15 metre blast holes cost approximately $36, plus ANFO. A powder factor of 0.25 kg/tonne was used so approximately 5,000 tonnes will be required per year. ANFO costs $1,500/tonne and is delivered by bulk truck. There will be almost 12,000 holes per year for a total annual drilling and blasting cost of about $8 million, without labour. Table 20-9 is an estimate of the powder requirements for the site. A higher powder factor may be necessary to assist in fragmentation in the ore. This is one of the necessary research projects recommended for the next phase of economic analysis - a preliminary feasibility study.

Table 20-9 - Explosives Use

Explosives Use				
delivery by ANFO, truck	$1,500	tonne		
		kg	tonnes	Total
explosives, ANFO; truck loaded		4784400	4784.4	$7,177,000
blast holes per year		11775		
Bits and drill consumables,			bits	
bits, 4000m/bit		$2,500	49	$122,500
booster, detonators & liners		$36.0	each hole	$424,000
			total	$7,723,500
			$/tonne	$0.40

20.3.3 Mine/Heap Leach Fuel Use and Storage

Approximately 12 million litres of fuel will be required per year, at the site (approximately 33,000 litres per mine working day). Ten -10,000 litre fuel tanks will be required for the fleet, giving about 3 days supply of fuel. Table 20-10 presents an estimate of fuel and maintenance costs for the mine and heap leach operation.

Table 20-10 - Fuel and Lubricant Use

Number	fuel	litres/hr	hours/yr	total litres	Lub & Maint Op Cost/hr	hours/year	Total op cost
13	Haul Trucks	80	6,500	6,760,000	$ 26.00	6500	$ 8,957,000
3	Excavators/shovels	75	6,500	1,410,733	$ 56.00	6500	$ 2,464,000
2	Water Truck	40	3,250	260,000	$ 25.00	3250	$ 423,000
4	Blasthole Drill	60	6,500	1,560,000	$ 50.00	6500	$ 2,860,000
2	Bull Dozer and ripper	50	6,500	650,000	$ 40.00	6500	$ 1,170,000
3	Rubber Tired Front end loader, 300 kW	50	6,500	975,000	$ 40.00	6500	$ 1,755,000
1	Grader, 4.3m blade width	40	3,200	128,000	$ 40.00	3200	$ 256,000
5	pickup trucks	5	4,333	108,333	$ 0.25	4333	$ 114,000
				11,852,066	$6,146,934		$ 17,999,000
	Diesel Fuel	$1.00	per litre, bulk		Fuel-LubMaint Cost/tonne		$0.94/tonne ore
Heap Leach							
Number	fuel	litres/hr	hours/yr	total litres	Lub & Maint Op Cost/hr	hours/year	Total op cost
1	Bull Dozer and ripper	58	2,190	127,600	$ 50.00	6570	$ 434,000
2	pickup	5	2,190	21,900	$ 0.25	6570	$ 23,500
						total	$ 457,000
					Fuel-LubMaint Cost/tonne		$0.20/tonne

20.3.4 Mine and Mill Personnel

A total of 157 persons are estimated for the mine and mill. Mine personnel should be available throughout the north and good mill personnel will be available in the Timmins / Kirkland Lake area.

Table 20-11 - Mine and Mill Personnel, Salary plus burden

Position	Number (yr3)	Rate, $/yr		Total
General and Administration				
General Mine Manager	1	170000		$170,000
Mill Manager	1	170000		$170,000
Clerical	5	40000		$200,000
Environment Manager	1	90000		$90,000
Human resources	1	85000		$85,000
		Office/Admin sub-total	$715,000	
Processing Plant				
Metallurgist	1	80000		$80,000
Comminution Operator	3	70000		$210,000
Gravity Operator	3	70000		$210,000
Labourer	2	30000		$60,000
Cyanidation Operator	4	70000		$280,000
Laboratory Manager	1	90000		$90,000
Laboratory Techs	4	60000		$240,000
Instrumentation Tech	2	90000		$180,000
		Plant, sub-total	$1,350,000	
Heap Operator	8	52000		$416,000
Mine Sift Foreman	4	85000		$340,000
Geologist	2	85000		$170,000
Surveyor	3	60000		$180,000
planning engineer	2	70000		$140,000
Security	4	60000		$240,000
Equipment Operators	87	65000		$5,655,000
Electrician	3	65000		$195,000
Mechanic	6	65000		$390,000
Welder	2	65000		$130,000
Tire Person	3	65000		$195,000
Casual Labour	4	30000		$120,000
		Mine sub-total	$8,171,000	
			Sub-Total	$10,236,000
		$85,000	*Burden, 30%*	*$3,070,800*
Total Employment	**157**	**157**	Annual Cost	**$13,307,000**

20.3.4.1 Common Processing Operating Costs

The operating costs of the common elements for the processing plant are presented in Table 20-12. Operating costs are presented as dollars per hour and dollars per tonne without the labour element. These numbers include all costs except heap costs. The heap costs are presented separately because they do not incur the same building costs.

Table 20-12: Common sub-circuit Operating costs in dollars per hour and dollars per tonne.

Tonnes crushed and treated in common		6,412,500	tonnes		
Description	**Non-Labour, $/hr**	**hours/year**	**$/YEAR**	**$/tonne**	
Crushing (2 shifts)	$222	5,840	$1,296,480	$0.20	HG+LG
CIP (/24hr)	$78	8,760	$683,280	$0.11	HG+LG
Carbon Stripping	$80	8,760	$700,800	$0.11	HG+LG
Electrowinning	$17	8,760	$148,920	$0.02	HG+LG
Refining					
Carbon Regeneration	$52	8,760	$455,520	$0.07	HG+LG
Cyanide destruction	$50	8,760	$438,000	$0.07	HG
Dewatering					
Common Circuit Total for process plant ore	$499	8,760		**$0.58**	HG
Common Circuit total for Heap Leach ore.	$449	6,480		**$0.51**	LG

Note: costs are based on 19,300 tonnes per day, whereas, the actual processing rate will depend on the time of year as the flows in some of the circuits depend on the heap operation. Where the flows vary the cost per tonne of the highest flow is used.

Note: Heap costs, in $/hr, assume a process rate of 6,000 tpd averaged over the year; this figure will change based on seasonal processing rates, about 8,000 tpd for 9 months and zero for 3 months.

20.3.4.2 Grinding Circuit

The operating costs – without labour – for the processing plant are tabulated below in Table 20-13.

Table 20-13 Estimated Operating Cost for the circuit

Sub-circuit	Op. Cost $/hr	Hours	$/year	Op. Cost $/t
Grinding	$385	8760	$3,372,600	$0.82
Sulfide regrind	$90	8760	$788,400	$0.19
Silica/carbonate regrind	$190	8760	$1,664,400	$0.40
Gravity	$60	8760	$525,600	$0.13
Pyrite Leach	$26	8760	$227,760	$0.06
Silica/Carbonate Leach	$220	8760	$1,927,200	$0.47
Consumables	$380	8760	$3,328,800	$1.03
				$3.09

20.3.4.3 Heap Leaching

The estimated operating expense for the heap leach facility are listed Table 20-14.

Table 20-14 Heap Leach Operating Costs

Heap Leach Operating Cost	
Leach Pad & Ponds	$0.15
Conveying & Stacking	$0.50
Solution Pumps	$0.35
Clarification	$0.20
Consumables	$1.33
Crushing	$0.20
CIP	$0.11
Carbon Stripping	$0.11
Electrowinning/Refining	$0.02
Carbon Regeneration	$0.07
Dozer and pick up trucks	$0.20
Total, less labour	**$3.24**
Heap Leach personnel cost/t processed	$0.24
Total with Labour	**$3.48**

20.3.5 Anticipated Reclamation and Environmental Costs during Closure Phase

Costs relative to environmental considerations during the closure phase consist of the environmental monitoring costs that may post-date the completion of the physical reclamation (removal of buildings, vegetation of stockpiles, etc.). It is typical for monitoring programs to run for 3-5 years after physical reclamation is completed and are in the order of $50,000 to $100,000 per year. We are not able to cost the physical reclamation program as the final mine design and permitted layout and reclamation approach will be developed later. Howe has assumed a $5 million reclamation cost in this PEA.

21 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

The following items categories are identified as potential conditions to permitting the Garrison Project:

1) *Bio-Physical*
2) *Archaeological and Heritage Resources*
3) *Aboriginal Peoples*
4) *Local Residents*
5) *Concurrent Developments*
6) *Public Consultation*

An abbreviated overview of the identified conditions follows.

21.1 Bio-Physical Conditions

The Project site is immediately south of Highway 101. A 115 kV power transmission line runs along the Highway 672 corridor from Kirkland Lake to St Andrew Goldfield Ltd.'s Holloway mine in Holloway Township, approximately 15 kilometres east of the Property. Surface diamond drilling and some limited underground mineral development activity dates back to 1935 with the most recent phase of surface diamond drill exploration initiated in 2005. A forestry haul road cuts through the Project area. Some disturbance of the site has therefore already occurred.

The Perry Lake North County Lodge is located 12.5 kilometres west of the Project site and provides year-round drive-in recreational activities including fishing, hunting, snowmobiling and ATV and horseback trail riding. The Project site is located 7 kilometres north of Thackery Provincial Nature Reserve. Thackery Provincial Nature Reserve covers an area of 116 hectares and protects a significant sequence of Archean metavolcanic rocks of the Kenojevis Group. The nature reserve is managed to protect its significant bedrock outcroppings. The Project site is located 18 kilometres north-northeast of Esker Lakes Provincial Park. Esker Lakes Provincial Park covers an area of 3,237 ha and straddles the continental divide between Arctic and Atlantic watersheds. The park features dozens of kettle lakes, part of the famous 250 kilometre Munroe esker, undulating hills and sand dunes. Recreational activities in the park include camping, fishing, animal viewing, birding, canoeing/boating, swimming, hiking and cycling.

An Environmental Assessment (EA) evaluates the potential environmental effects of a project and identifies appropriate mitigation and monitoring to minimize these effects. The resulting documentation focuses on the effects of the project on the receiving environment, and to a lesser extent, how the environment affects the project. Bio-physical components that are normally evaluated may include:

- aquatic habitat;
- wetlands;
- ground and surface water resources;
- rare and sensitive flora and fauna;

- air quality; and
- geology and soils.

At the mine planning and permitting stage considerable importance will need to be placed on evaluating the surface water quality, flow volumes and associated aquatic habitats for health and species diversity. If the aquatic habitats are designated as being valuable for specific species or rare/endangered plants or animals then alteration or destruction of the habitat will most likely trigger federal involvement and possibly federal environmental assessment. Where possible, the mine development should avoid causing impacts to aquatic habitats that have been deemed valuable through the baseline environmental studies. Public concern relative to possible effects of the mine development on access to any commonly used recreational locations and surface water quality within the site area will need to be examined and discussed at the public consultation stage.

21.1.1 NAR Environmental Baseline Studies 2010-2011

In Spring 2010, Northern Gold retained the services of N.A.R. Environmental Consultants Inc. (NAR) to facilitate the collection of all environmental baseline data in support of the Provincial and Federal regulatory permitting required for the development and operation of both the Garrcon and Jonpol mine deposits, collectively known as the Garrison Project.

NAR's efforts in 2010 and 2011 focused on the collection of environmental baseline data, as well as the establishment of engineering survey controls on site, topographic mapping, and the tie-in of key physical features, the location of diamond drill holes, monitoring wells, etc. Data collection and studies were designed to assess the Garrcon and Jonpol deposits until a clear plan of development is set based on exploration results and project economics.

The following study components were completed or are still active as of the date of this report:

- meteorological data collection (active)
- continuous hydrologic monitoring - Garrison Creek (active)
- surface water quality monitoring on Garrison and Thackery Creeks; 4 stations (active, monthly sampling)
- benthic community and sediment quality assessments; Garrison and Thackery Creeks (complete)
- fisheries and fish habitat assessment; Garrison and Thackery Creeks (complete)
- Species At Risk and wetland review/assessment; site overview (complete)
- regional ground water assessment; 2 wells plus supplementary measurement point at Jonpol shaft established
- preliminary Acid Base Accounting (ABA) – geochemistry characterization of Garrcon deposit.

Cooperatively, the Company and NAR's staff adapted the Garrcon exploration program to include both geo-technical (e.g. bulk density) and geo-environmental (e.g. fracture logging, ABA - geochemistry sampling) data requirements into day-to-day rock core logging activities in order to provide both a cost-effective and timely delivery of both deposit and regional site-level bedrock characterization data.

The increasing resources and tonnage of the Garrcon deposit and the shift in its proposed development to an open pit facility, potentially with an on-site mill, substantially scaled up the scope of baseline characterization studies required to permit the proposed mining facilities.

The development of a proposed open pit which would possibly extend below the local ground water table expanded the need to develop a much more comprehensive assessment of the local and regional ground water site-setting, potentially including the development of a ground water flow model to characterize and quantify inflows to the pit(s), as well as determination of pumping rates and any engineering controls (and associated costs).

21.1.1 Blue Heron / Golder Environmental Baseline Studies 2011-2014

In November 2011, Blue Heron Solutions for Environmental Management Inc. (Blue Heron) of Timmins, Ontario, in conjunction with Associates Ltd. (Golder), were contracted by Northern Gold to conduct a review of baseline study requirements, the existing NAR environmental baseline program, and to provide recommendations to expand upon the program to ensure sufficient and appropriate baseline information was being collected, particularly for the planning, permitting and development of the Company's potential Garrcon open pit. A Phase 1 Environmental Baseline Study Report (Blue Heron, 2012a) was prepared and submitted to Northern Gold. In support of the recommendations outlined in that report, the Blue Heron and Golder subsequently prepared a scope of work plan for a comprehensive Phase 2 Environmental Baseline Study to prepare Northern Gold for permitting of the Garrcon project (Blue Heron, 2012b). Northern Gold retained Blue Heron and Golder in April 2012 to conduct the recommended work. Work programs proposed for 2012 included:

- Aquatic Ecology
  - 2012 Aquatic Ecology Field Program:
    A field program is proposed in 2012 for the Unnamed Tributary to Thackery Creek and Thackery Creek. Elements of the field program will consist of a Fish Community and Fish Habitat Assessment and a Benthic Invertebrate Community Assessment. Baseline aquatic ecology work was to take place between spring and fall of 2012

- Terrestrial Ecology
  - Desktop Review and Survey Planning:
    Background information collected from regulatory agencies and applicable databases will allow the Project Team to supplement the preliminary description of the ecological environment and associated land use on the Site provided in the report titled Environmental Scan Northern Gold Property (Kershaw 2012). Information collected through the desktop review will also be used for planning of the field surveys described below. The terrestrial baseline studies will be focused within the Garrison Claims and adjacent lands extending to 120 m beyond the boundary of the Garrison Claims.
  - 2012 Terrestrial Ecology Field Program:
    The 2012 terrestrial ecology field program will comprise: Plant Community Surveys; Upland Breeding Bird Point Count Surveys; Marsh Bird Surveys; Whip-poor-will

and Common Nighthawk Surveys and; Basking Turtle Surveys. Flora and fauna data is subject to seasonal variation, necessitating appropriate lead time and data collection periods in order to establish terrestrial baseline conditions against which future environmental and social impacts can be assessed. All surveys were to be conducted during accepted, appropriate periods and suitable weather conditions from May to August, 2012

- Hydrology And Surface Water Quality
  - Amended Surface Water Program Implementation:
    Currently, Northern Gold personnel conduct water quality sampling at approximately monthly intervals. Blue Heron recommends that 2 additional surface water sample locations be added to the existing program (Ghost River (upstream) and Thackeray Creek (downstream). Surface water quality parameters analysed are to be amended.
  - Amended Hydrology Program:
    Northern Gold personnel currently undertake hydrology (streamflow) measurements on approximately a monthly basis. Blue Heron personnel propose to conduct the hydrology monitoring program during 2012. Activities associated with this task include: installation of staff gauge at locations GR-1 and TC-2; conduct streamflow measurements for the duration of 2012 on a monthly basis at locations GR-1 and TC-2; conduct streamflow measurements on location GC-1 until level transducer is re-established; procure and implement software for use for Electronic Level Transducer (location GC-1); and conduct monthly downloads of Electronic Level Transducer for location GC-1.

- Hydrogeology
  The baseline hydrogeology program will include a site reconnaissance by Golder and review of existing data that will guide the development of a program of monitoring well installation. As the mining plan is defined, additional information may be required and additional studies may be proposed. This baseline assessment will be advanced in a staged approach with the first stage being carried out in early 2012 and subsequent stages to follow. The first stage of the assessment will comprise the following components:
  - drilling and installation of one large diameter pumping well;
  - performance testing on the large diameter pumping well;
  - drilling, installation and development of up to four nested groundwater monitoring wells;
  - hydraulic conductivity testing of groundwater monitoring wells;
  - installation of automated water level data loggers in groundwater monitoring wells;
  - quarterly water quality sampling and water level measurements at groundwater monitoring wells;
  - groundwater assessment; and
  - initial hydrogeological screening of deep bedrock.

  The objective of this work program is to conduct subsurface investigations and assessment to better understand the hydraulic characteristics of the deep bedrock and the overburden in the bedrock trough in the vicinity of the proposed open pit. This investigation will be advanced in a staged approach, beginning with the Initial Hydrogeological Screening Level Testing Program, which will comprise a review of existing data to identify exploration boreholes suitable for hydraulic testing and which intersect stratigraphic and structural features of interest, completion of up to 20 short duration (1 to 2 hour) specific capacity tests in selected exploration boreholes and collection of groundwater quality samples.

- Geochemistry
  Completion of the geochemistry program should be completed in a phased approach, as follows:
  - Data Review and Interpretation:
    A thorough review of the existing data will be carried out in to determine additional sampling requirements in order for the overall Acid Rock Drainage/Metal Leaching program to meet the requirements of the Mine Rehabilitation Code of Ontario.
  - Geochemistry Program Recommendations:
    Based upon the results of the static testing program, the requirement to proceed to laboratory and/or field-based will be determined and a recommendations for a scope of work will be provided.

21.1.2 Status of the Environmental Baseline Studies as of November 2013

Golder was retained by Northern Gold in 2012 to conduct a preliminary aquatic assessment of six tributary streams of Garrison Creek, Thackery Creek and the Ghost River on the Garrison, Plato and Sims Properties may be affected by future mine development activities to determine whether or not these tributaries support fish or would be classified as fish habitat under the *Fisheries Act* (the Act). Field work was undertaken between September 25 and October 9, 2012, by one two-person field crew (Mellow and Seyler, 2013).

Results of the preliminary aquatic assessment indicate that each of the six tributaries assessed either contains fish habitat capable of sustaining a fish community and/or is connected (permanently or seasonally) to adjacent permanent streams that would classify the tributary as fish habitat. Therefore future development activities associated with the Site that may have an impact on the tributaries assessed must be considered relative to fish habitats present. Future aquatics investigations should focus on confirming whether or not sport fish species inhabiting the major watercourses that act as receivers for surface water draining off the Site, access and rely upon the catchments assessed during this study, in order to complete portions of their life history (e.g. spawning). This information will be required in order to address potential habitat compensation issues and permitting requirements under the Fisheries Act (Mellow and Seyler, 2013).

In November 2013 Blue Heron completed a review of the baseline environmental studies conducted to date at the Garrcon Project (Marshall, 2013). This review was intended to provide recommendations for additional baseline study components that will be required to support future permitting requirements and site development, and to provide a work plan to complete these studies.

As noted in the following summary table, the Hydrology Study is ongoing; Benthic Invertebrate Community Assessment, Sediment Quality Assessment and Stage 1 Archeological Study are completed; and the remaining proposed studies environmental baseline studies are yet to start.

Table 21-1: Summary and Status of Baseline Environmental Studies at the Garrcon Project as of November 2013

Baseline Environmental Study Components	Status	Recommended Timing	Anticipated Effort	Comments
Aquatic Studies				
Hydrology (Surface Water Quality and Stream Flow)	Ongoing	Ongoing	NA	Currently being conducted in-house by Northern Gold staff. See Table X for recommended revisions to the surface water sampling program.
Benthic Invertebrate Community Assessment	Complete	NA	NA	
Sediment Quality Sampling	Complete	NA	NA	
Fish Community and Fish Habitat Assessment	Required	June/July 2014	Approximately 1 week.	
			TOTAL	
Terrestrial Studies				
Desktop Values Review	Required	Should be completed during the winter of 2013/2014, ahead of the field based studies.		
Plant Community and Terrestrial Habitat Survey	Required	July 2014	2 days	
Breeding Bird and Marsh Bird Survey	Required	Early June 2014 and early July 2014.	4 days (2 days for each survey)	
Whip-poor-will and Common Nighthawk Survey	Required	Early June 2014 and early July 2014.	2 nights (1 for each survey)	
Basking Turtle Survey	Required	Early June 2014 and early July 2014.	4 days (2 days for each survey)	
Final Terrestrial Baseline Assessment Report				
			TOTAL	
Hydrogeology				
Baseline Hydrogeological Assessment	Required	Data review and well installation can commence immediately. Pumping tests and well sampling should be conducted when the ground is unfrozen (Spring to Fall 2014)	Approximately 2 weeks (field work only)	1. Northern Gold will contract the drilling subcontractor(s) directly. 2. Northern Gold will conduct groundwater quality sampling once the monitoring wells are installed. Sampling should be conducted on a quarterly frequency.
Hydrogeological Screening of Deep Bedrock	Required	Data review and well installation can commence immediately. Pumping tests and well sampling should be conducted when the ground is unfrozen (Spring to Fall 2014)	Approximately 5 days (field work only)	
Final Hydrogeological Report				
			TOTAL	
Geochemistry				
Data Review and Recommendations	Recommended	Winter 2013/2014	Approximately 1 week.	
			TOTAL	
Archaeology				
Stage 1 Archaeological Study	Complete	NA	NA	
Stage 2 Archaeological Survey	Only required if area of archaeological potential, identifed during Stage 1,	NA	NA	

Source: Marshall, 2013

21.2 Archaeological and Heritage Resources

No specific areas of archaeological or heritage resources are known with respect to the site. However, it is reasonable to assume that there is potential for Aboriginal Peoples sites to exist. Given the history of the regional area, potential also exists for historic resources related to past mining or forestry uses of the site area.

Golder Associates Ltd. (Golder) was retained by Northern Gold in 2012 to conduct a Stage 1 archaeological background study for the Garrison study area. This assessment was conducted as a due diligence effort by Northern Gold in advance of possible future ground disturbance. The objective of the Stage 1 assessment was to compile all available information about the known and potential cultural heritage resources within the study area and to provide specific direction for the protection, management and/or recovery of these resources, consistent with Ministry of Tourism, Culture and Sport (MTCS) guidelines (Government of Ontario 2011).

Based on the Stage 1 archaeological assessment property inspection completed June 18 and 19, 2012, Golder concluded that two areas at the Project have archaeological potential (Davidson and Parslow, 2012):

- Along the ridge in the southeast portion of the study area overlooking the marsh (UTM 17U 0579574E / 5373990N); and
- On top of the rise in elevation in the western portion of the study area (UTM 17U 0577295E / 5374174N, 0577361E / 5374227N).

These two areas were for the most part determined to retain archaeological potential due to their increased elevation with prominent views of the surrounding landscape (Davidson and Parslow, 2012).

Further assessment is not required in permanently waterlogged areas, areas of previous disturbance, or upon areas of exposed bedrock. Although bedrock areas may represent areas of higher elevation within the study area, they are generally thought to lack potential for archaeological sites as they do not provide adequate shelter and the exposed nature of them would make it difficult for archaeological sites to remain intact.

Golder recommended that a Stage 2 survey be conducted on any lands found to have archaeological potential prior to any ground disturbance activities. No further assessment is recommended for areas not found to exhibit archaeological potential. Areas lacking archaeological potential include:

- Areas in excess of 50 metres of modern water sources;
- Areas in excess of 150 metres of ancient water sources;
- Areas in excess of 150 metres of abandoned shore bluffs;
- Areas in excess of 150 metres of glacial beach ridges; or
- Areas within 150 metres of these features where the soil in not suitably well drained

Stage 2 archaeological assessments would be limited to lands confirmed to have archaeological potential that are subject to development, such as the proposed pit footprint and associated infrastructure layout. The objectives of the Stage 2 archaeological assessment are to provide an overview of any archaeological resources present on the property and to determine whether any of the resources might be artifacts or archaeological sites with cultural heritage value or interest. The method of survey for the Stage 2 assessment is test pitting. Test pits are excavated at five-metre intervals using a shovel with the dirt screened through a 6 mm mesh. All work would be carried out with monitors from Wahgoshig First Nation working alongside the archaeologists.

21.3 First Nations Communities

The Wahgoshig First Nation community, a political member of the Algonquin Anishinabeg Nation Treaty Council, is located 5 kilometres north-northwest of the proposed project.

Northern Gold has consulted with and informed the Wahgoshig First Nation of its exploration activities. The Company continues to use band services and also employs band members on a regular basis.

On August 15, 2013 the Company announced that it had entered into an exploration agreement with the Wahgoshig First Nation community ("Wahgoshig"). The Agreement establishes a commitment by the Company to develop an ongoing relationship with Wahgoshig in the area of the Company's Golden Bear Project, and provides Wahgoshig with an opportunity to participate in the benefits of Northern Gold projects through training, ongoing communication and business development. Northern Gold has also agreed to negotiate an Impact Benefit Agreement with Wahgoshig should construction or mining operations commence on any of the Company's properties located on Wahgoshig traditional territory. In addition to Northern Gold's commitments to training, communication, community funding and business development, the Company also agreed to issue to Wahgoshig 200,000 common shares of the Company and 200,000 Share purchase warrants, with each Warrant exercisable to acquire one Share for a period of five years from the date of issuance of the Warrants at an exercise price of $0.05 per share.

21.4 Local Residents

The Wahgoshig First Nation community, with an estimated population of 250 persons, is located 5 kilometres north-northwest of the proposed project. Area residents also include both full and part time (recreational) cottagers. There are approximately 45 residences located on Perry Lake approximately 12.5 kilometres west of the Project site, of which 7 are full-time. There is one residence located on Harker Lake approximately 10 kilometres east of the Project site.

Typically, issues related to local residents that will need to be considered include concerns such as stockpile locations, placement of entrance roads, trucking schedules, operating hours, blasting schedules and noise levels. As the local residents and lodge at Perry Lake are focused on recreation, there will be a high degree of sensitivity to issues of noise, surface water, fish habitat and visual (including light) impacts. Based on the proximity of the Wahgoshig community there likely will need to be a high level of First Nations involvement.

21.5 Other Developments

There are no other developments being considered, to the best knowledge of Howe, in the vicinity of the project. The Ontario Ministry of Environment has no projects listed under consideration for development near the Project site in their Environmental Assessment summary [Online – accessed March 2014].

21.6 Public Consultation

Typically, there are significant discussions relative to both the site layout and permitting process that involve the public. These discussions can be "formal", where parties involved document the items discussed and outcomes and these are part of the legislated public consultation requirement or "informal" where there is often follow-up documentation but the process is not necessarily required under any legislation.

21.7 Anticipated Permitting Timetable and Costs

Based on existing information on the site layout and constraints identified, Howe anticipates that the Garrison Property - Garrcon deposit will require a Provincial Environmental Assessment with potential federal involvement for fisheries issues. This process has roughly 40 weeks of mandated requirements in addition to the time required for environmental baseline studies (EBS) and public consultation. It would be reasonable for the EBS stage to take 12-15 months with some overlap with the 40 weeks noted above resulting in a 20-24 month period from initiation of the process to receipt of EA Approval.

The EBS start date is critical to meeting the 20-24 month EA process schedule, as there are seasonality issues with certain aspects and species (ex. plant surveys in the winter are not valid). It is also critical that the site layout is well defined prior to the EBS and public consultation phases so that impacts can be defined and the project interaction with the environment can be well understood and explained during public consultation. Northern Gold informs Howe that its initial EBS work on the Garrison property is now complete but the study has been expanded in scope as per recommendations from Blue Heron and Golder. That work will require an additional 12 months and is scheduled to start in the near future. Water flow monitoring and water sample analysis on streams is ongoing.

Various permitting and approvals requirements with respective provincial and federal agencies may need to be addressed in the permitting process. Specific permits and approvals to which a mineral project may be subject will depend on the specific features of the proposed project and its location in the social and environmental landscape. A more detailed summary of approvals processes for mining activities including provincial and federal laws, as well as local municipal bylaws that govern, or may govern, mineral development in Ontario is presented in MNDM's *Practitioner's Guide to Planning for and Permitting a Mineral Development Project in Ontario*.

How the mine, or mines are developed and their tonnage throughputs will ultimately dictate their specific permitting requirements (e.g. Federal Environmental Assessment and/or Provincial), but generically any mine in production in Ontario would require a Permit to Take Water (PTTW) and a

Section 53 Approval for an Industrial Sewage Works with supporting Receiving Water Assessment under the requirements of the *Ontario Water Resources Act*, and a Closure Plan under the provisions of the *Mining Act*.

Northern Gold has budgeted approximately $425,000 for the EBS, Public and First Nations Consultation and Permitting phases of the project for 2014 (Table 26-1).

21.8 Anticipated Environmental Costs during Operational Phase

Environmental costs during the operations phase of typical mining projects consist of compliance monitoring (as outlined in the EA and Operating Permits), effects monitoring (including Metal Mining Effluent Regulations requirements) and other monitoring and stewardship commitments made by the proponent or stipulated by approvals. For this scale of operation a budget of $250,000 per annum should be allocated. Approximately 50% of this relates to analytical costs and equipment requirements such as groundwater monitoring wells and surface water monitoring data loggers and 50% relates to staff and outside consulting for specialized services (benthic invertebrate, breeding bird surveys, etc.). A more detailed budget can be prepared after the EBS and permitting phases are complete because the costs related directly to the stipulations from the Province.

A reclamation bond will be required during mine operation. Howe has factored a $5 million bond into its 2011 PEA. Note that the bond value is typically returned in full after the reclamation program is completed and the company is “released” by the Province, so the net costs are only the interest costs on the bond.

21.9 Anticipated Environmental Costs during Closure Phase

Costs relative to environmental considerations during the closure phase consist of the environmental monitoring costs that may post-date the completion of the physical reclamation (removal of buildings, revegetation of stockpiles, etc.). It is typical for these programs to run for 3-5 years after physical reclamation is completed and are in the order of $50,000 to $100,000. Howe is not able to cost the physical reclamation program as the final mine design and permitted layout and reclamation approach will be developed later.

22 ECONOMIC ANALYSIS

Section 22 has been extracted from Howe's 2011 NI 43-101 technical report and PEA (Hannon et al., 2011) and repeated in this Report. The reader is cautioned that the 2011 Garrcon PEA is based on Howe's 2011 Garrcon mineral resource estimate which has now been replaced by the 2014 Garrcon mineral resource update presented in this report. **The 2011 Garrcon PEA reported in the following subsections has not been updated to reflect the changes in the Garrcon mineral resource, gold price and capital and operating costs.**

22.1 Principal Assumptions

The purpose of the economic analysis is to evaluate the effects of price assumptions and operational and cost factors on the Project's cash flow over the project's life and to calculate internal rate of return ("IRR") and net present values ("NPV") for the project.

This is a preliminary economic assessment (PEA) of the Garrcon deposit. It includes inferred mineral resources which are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves and there is no certainty that the preliminary assessment will be realized. Metal prices used have been estimated from in-house and industry sources.

This study uses financial mathematics to determine an optimum path for the company to follow given the mineral resources identified on the property at a point in time, that being, May 2011.

This PEA makes the following assumptions:

- Zero inflation;
- No change in grade or tonnage throughout the mine life;
- No salvage value at the end of mine life;
- Gold price is $1,200 per ounce throughout the mine life;
- Currency exchange of $Cdn 1.00 = $US 1.00;
- No royalties or NSR to other parties;
- No tax loss carryforwards;

These assumptions will be refined in future studies, if the project looks economic under these ideal "rule of thumb" conditions.

22.2 Economic Analysis

22.2.1 Capital and Operating Costs

Capital and operating costs are detailed in Section 20.

Total capital costs are $156 million (including working capital) (Table 22-1).

Table 22-1: Capital Cost Summary

Capital Item	Cost (Millions)
Mining	$48.2
Processing Plant and Heap Leach	77.4
Pre-Production Stripping	19.3
Working Capital	6.7
Reclamation Bonding (Closure Costs)	5.0
Total Capital (Rounded)	**$156**

Yearly operating costs are summarized in Table 22-2.

Table 22-2: Yearly Operating Cost Summary

Operating Cost/Year	Pre-Production	Year 1	Years 2-7	Year 8
Mining	12,430,000	35,600,000	35,800,000	23,500,000
G&A	825,000	929,0000	929,000	825,000
Processing Plant	4,870,000	17,600,000	17,600,000	13,700,000
Heap Leach	1,990,000	8,000,000	7,960,000	5,740,000
Total Operating (Rounded)	**20,100,000**	**62,200,000**	**62,300,000**	**43,700,00**
Cost per troy oz	636	491	493	461
Reclamation				5,000,000

22.2.2 Projected Revenue

Table 22-3 – Projected Revenue

	Pre-Production		Production		
REVENUE	**Year 1**	**Year 2**	**Year 1**	**Year 2 - 7**	**Year 8**
Waste tonnes Mined		**6,310,938**	**12,518,750**	**12,518,750**	**6,259,375**
LG ore to Crusher then Heap		**571,875**	**2,287,500**	**2,287,500**	**1,715,625**
H.G. Ore to Crusher the to Mill PAD		1,031,250	4,125,000	4,125,000	3,093,750
Dilution		51,563	206,250	206,250	154,687.50
Tonnes moved per year		7,966,000	19,138,000	19,138,000	11,223,000
loose m3 moved per year		5,431,364	13,048,636	13,048,636	7,652,045
Metallurgical Recovery					
Grade of ore to heap leach		0.20	0.20	0.20	0.20
mining days per year		91	270	270	270
recovery, Leach		65.0%	65.0%	65.0%	65.0%
Grade of ore to mill		0.90	0.90	0.90	0.90
tonnes ore mined per day		11,866	11,866	11,866	8,900
mining days per year		91	365	365	365
grams gold in in HG ore to mill		928,100	3,712,500	3,712,500	2,784,400
grams gold in ore to LG heap		114,400	457,500	457,500	343,100
Total Grams in Ore		1,042,500	4,170,000	4,170,000	3,127,500
Total Troy Ounces in Ore		33,500	134,100	134,100	100,600
CIL/CIP		98.0%	98.0%	98.0%	98.0%
gold Recovery from CIL/CIP Plant, grams		909,500	3,638,300	3,638,300	2,728,700
gold Recovery from CIL/CIP Plant, troy ounces		29,200	117,000	117,000	87,700
gold Recovery from Heap Leach, grams		74,000	297,000	297,000	223,000
gold Recovery from Heap Leach, Troy Ounces		2,380	9,550	9,550	7,170
Total Grams gold recovered		983,500	3,935,300	3,935,300	2,951,700
Total Troy ounces gold recovered		31,620	126,523	126,523	94,899
gold value, per troy ounce		$ 1,200	$ 1,200	$ 1,200	$ 1,200
gold value, per gram		$ 38.58	$ 38.58	$ 38.58	$ 38.58
Value of gold Recovered from HEAP LEACH		$ 2,855,000	$ 11,459,000	$ 11,459,000	$ 8,604,000
Value of gold Recovered from CIL/CIP		$35,089,000	$140,369,000	$140,369,000	$105,276,000
Revenue before insurance, freight, refining		$37,944,000	$151,828,000	$151,828,000	$113,880,000
less, insurance, freight, refining		$758,880	$3,036,560	$3,036,560	$2,277,600
Gross Revenue	**$0**	**$37,185,000**	**$148,791,000**	**$148,791,000**	**$111,602,000**

22.2.3 Taxes

The combined Federal income tax and the Ontario Income, Mining and Capital tax on mining production is about 28% of the operating profit. In addition, there will be municipal taxes and fees, so the financial examination of the project uses a 30% overall tax on operating profits.

Details of the Federal taxes that mining operations are subject to can be found at:

https://www.nrcan.gc.ca/mining-materials/taxation/mining-taxation-regime/8892

22.2.3.1 Ontario Mining Tax

Ontario's mining tax is levied at 10% of taxable profits in excess of $500,000, which are derived from mining operations in Ontario.

Determination of taxable profit:

- Gross Revenue in excess of $500,000

Less

- Cost of production;
- Processing costs;
- Depreciation at prescribed rates;
- Exploration and development expenses;
- Processing allowance at prescribed rates;
- Operating and maintenance costs of certain social assets (e.g., housing, recreational and service facilities); and
- Scientific research conducted in Canada that relates to the output of mines.

22.2.4 Economic Summary

Table 22-4 summarizes the cash flow estimate for the PEA.

Table 22-4 Economic Summary - Income, Taxes and Interest Estimate

	Pre-Production Year 1	Pre-Production Year 2	Year 1	Year 2-7	Year 8
Net Operating Income (Gross Margin)					
Operating Cash Flow		$ 17,069,500	$ 86,622,500	$ 86,453,500	$ 72,878,129
Less Overhead Costs	$ 3,140,000	$ 3,140,000	$ 3,140,000	$ 3,140,000	$ 3,140,000
Net Operating Income (Gross Margin)	-$ 3,140,000	$ 13,929,500	$ 83,482,500	$ 83,313,500	$ 69,738,129
Per Tonne of Ore		$ 8.69	$ 13.02	$ 12.99	$ 14.50
Taxes and Interest					
Net Operating Income (Gross Margin)	-$3,140,000	$13,929,500	$83,482,500	$83,313,500	$69,738,129
Minus Loss Carried Forward		-$3,140,000	-$45,786,500		
Minus Capital Cost Allowance Deduction		$78,118,000	$78,117,000	$52,079,000	$964,000
Minus Resource Allowance Deduction		-$15,262,000	$2,126,000	$8,594,000	$16,729,000
Minus Interest Expenses		$0	$0	$0	$0
Taxable Income	-$3,140,000	-$45,786,500	$49,026,000	$22,640,500	$52,045,129
Federal Income Tax (18%)	$0	$0	$8,825,000	$4,075,000	$9,368,000
Ontario Mining Tax (10 %)	$0	$0	$4,903,000	$2,264,000	$5,205,000
Total Income Tax Payable	$0	$0	$13,728,000	$6,339,000	$14,573,000
Net Income After Interest and Taxes					
Net Operating Income (Gross Margin)	-$3,140,000	$13,929,500	$83,482,500	$83,313,500	$69,738,129
Add back working capital recovery					$6,705,167
Minus Total Income Tax Payable	$0	$0	$13,728,000	$6,339,000	$14,573,000
Minus Interest on Capital	$0	$0	$0	$0	$0
Net Income After Interest and Taxes	-$3,140,000	$13,929,500	$69,754,500	$76,974,500	$61,870,296

Present Value of Net Income	Pre-Production Year 1	Pre-Production Year 2	Year 1	Year 2	Year 8
Net Income After Interest and Taxes	-$3,140,000	$13,929,500	$69,754,500	$76,974,500	$61,870,296
Minus Capital Costs	$26,039,194	$78,117,583	$52,235,389	$0	$0
Subtotal	-$29,179,194	-$64,188,083	$17,519,111	$76,974,500	$61,870,296
Cumulative	-$29,179,194	-$93,367,278	-$75,848,167	$1,126,333	$394,194,725

$NPV_{5\%}$	$ 266,400,000
$NPV_{8.0\%}$	$ 211,500,000
$NPV_{10.0\%}$	$ 181,500,000
$NPV_{12.5\%}$	$ 150,000,000
$NPV_{15.0\%}$	$ 123,900,000
Internal Rate of Return (IRR)	47%

22.3 Financial Indicators

The Garrcon deposit appears to be viable as a large low grade mining operation as long as the gold price stays strong, above approximately $US 800 / troy ounce.

PEA indicators are presented in Table 22-5:

Table 22-5 - PEA Financial Indicators, Garrcon Deposit

NPV_{05}	$266,000,000
Cumulative Cash Flow	$394,000,000
Taxes Payable	$120,000,000
IRR	47%
Payback from start of production is just under 2 years	
$494 - average operating cost/ounce	
$154 - required capital /oz	
$648 total cost/ounce	
Troy Ounces of Gold produced, just over 1,000,000 - NOTE: with PEA outlined 50% Inferred resources	
PEA - EBITDA Margin 58%	

22.4 Payback

A payback of just under 2 years from the start of production is indicated in this study (Table 22-5). The Income Tax Act states that the start of commercial production is "The first day of the first 90 day period throughout which the mill operated consistently at 60% capacity or more".

The PEA EBITDA margin, ratio of earnings before interest, tax, depreciation and amortization and the total revenue is 58% (Table 22-5), which is above the average for gold producers.

22.5 Royalties

This PEA assumes no royalties.

22.6 Sensitivity

A sensitivity analysis was carried out on four key parameters: head grade, gold price, capital costs and operating costs.

Profitability is most sensitive to head grade and metal price which is a typical result. At $840 per ounce, the project's $NPV_{5\%}$ is $50 million and the IRR is 14%. At the average gold price as of the date of this report, approximately $US 1,560 per ounce gold, the $NPV_{5\%}$ is $480 million and the IRR is 79%, assuming all other variables are constant. Even with capital costs at 200% of the PEA value, $NPV_{5\%}$ remains positive at $141 million and the IRR is 18%.

Sensitivities of the various parameters are presented in Table 22-6 and graphically in Figure 22-1.

Table 22-6: Sensitivities Table

	$NPV_{5\%}$			
Change	**Grade**	**Capital**	**Operating**	**Gold Price**
-50%	-$97,000,000	$327,000,000	$418,000,000	-$97,000,000
-40%	-$23,000,000	$315,000,000	$388,000,000	-$23,000,000
-30%	$50,000,000	$303,000,000	$357,000,000	$50,000,000
-20%	$124,000,000	$291,000,000	$327,000,000	$124,000,000
-10%	$195,000,000	$279,000,000	$297,000,000	$195,000,000
PEA case	**$266,000,000**	**$266,000,000**	**$266,000,000**	**$266,000,000**
+10%	$338,000,000	$254,000,000	$236,000,000	$338,000,000
+20%	$409,000,000	$242,000,000	$206,000,000	$409,000,000
+30%	$480,000,000	$230,000,000	$175,000,000	$480,000,000
+40%	$551,000,000	$218,000,000	$145,000,000	$551,000,000
+50%	$622,000,000	$205,000,000	$115,000,000	$622,000,000

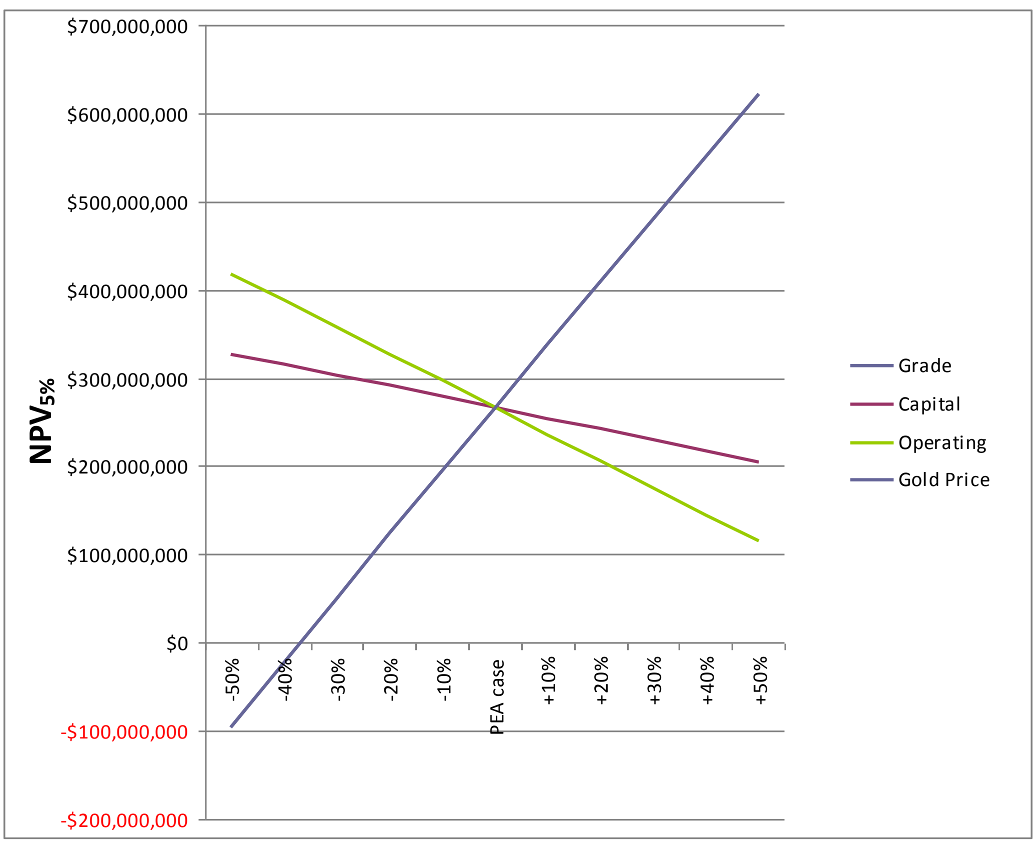


Figure 22-1: Sensitivity Spider diagram (Gold Grade and Gold Price have same trend)

23 ADJACENT PROPERTIES

Howe is unaware of any significant exploration results on immediately adjacent mineral properties.

Gold is extracted from the St Andrew Goldfield Ltd.'s Holloway and Holt mines in Holloway Township, Primero's Black Fox mine in Hislop Township and St Andrew Goldfield Ltd.'s Hislop mine in Hislop Township (approximately 15 kilometres east, 32 kilometres west and 27 kilometres west of the Property respectively). Several past-producing gold mines are located in Hislop and Garrison townships.

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant information known to Howe that would make this Report more understandable or if undisclosed would make this Report misleading.

25 INTERPRETATION AND CONCLUSIONS

Howe has reviewed the Garrcon Deposit and Jonpol Deposit data provided by Northern Gold, including the drilling database; has visited the site; and has reviewed sampling procedures and security. Howe believes that the data presented by the Company are generally an accurate and reasonable representation of the Garrcon Deposit and Jonpol Deposit mineralisation styles. Howe concludes that the database for the Garrcon Deposit and Jonpol Deposit is of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

Work by the Company at the Garrcon Deposit and Jonpol Deposit has confirmed the grade of mineralisation outlined by previous operators, provided further detail on the nature of the mineralised zones and permitted the completion NI 43-101 compliant updated Mineral Resource Estimates.

Northern Gold's QA/QC results to date indicate that there are no major problems with the accuracy of the analyses. The current sampling and analytical protocols are considered by Howe to be appropriate.

Northern Gold's 2009 to 2012 exploration drilling programs have confirmed a significant gold resource at the Garrcon Deposit. Using a cut-off grade of 0.1 g/tonne for mineralised zone interpretation, Howe has outlined mineralised zones that combined, are nearly vertical, over 1800 metres long, 300 metres wide (on average), and up to 700 metres deep.

The Garrcon Deposit on the Garrison Property is a low grade bulk tonnage gold deposit which includes the higher grade historic Shaft, South and North Zones and recently defined Green and East Zones. It occurs within the Timiskaming Assemblage adjacent to the Porcupine-Destor fault and is a zone of brecciated, silicified, sandstone with gold associated with disseminated sulphides (predominantly pyrite) and irregular quartz veinlets. Preliminary metallurgical testwork indicates that the Garrcon gold mineralisation is non-refractory and is free milling (Section 13).

The Jonpol Deposit (JD, JP, RP and East Zones) was the primary exploration target on the Garrison Property in the 1980s and 1990s and the Company restarted exploration at Jonpol in 2012. The Jonpol Deposit is a zone of gold mineralisation hosted in structurally controlled alteration zones within mafic to ultramafic (tholeiitic to komatiitic) rocks along the north contact of the Munro Fault which crosses the central part of the Property. The Jonpol gold mineralisation is generally associated with pervasive carbonate alteration with late stage silicification, sulphidisation (pyrite and arsenopyrite) and sericitisation, giving the altered rock a pale buff to pale purple-grey hue. Northern Gold reports that Lakefield (now SGS Canada Inc.) testwork on behalf of previous operators indicated approximately 50% of the Jonpol JP Zone mineralisation is refractory in nature. Preliminary metallurgy by the Company indicates that the JD and East zones are of a free milling nature. The Company's current metallurgy work shows that the RP, like the JP zone, is partially refractory (Section 13). A bulk-sampling program on 4 sub-levels in the central part of the JP Zone was completed in 1996-97 with a total of 49,087 tonnes mined and shipped, which produced 9,476 ounces of gold for an average mill head recovered grade of 6.7 g/tonne Au (see section 6.1.3).

Diamond drilling at the 903 Zone has intersected anomalous gold mineralisation associated with fractured and/or pyritic and/or quartz vein bearing felsic dikes and/or sills (predominantly syenite) within the Destor Porcupine Fault Zone. The host rocks are lithologically complex assemblage of mafic to felsic volcanic rocks, schists and sediments, as well as variably schistose and variably carbonate, sericite, chlorite, talc, and quartz altered equivalents of these rocks.

Gold mineralisation on the Buffonta Property occurs in at least three distinct areas, referred to as the Kerr Pit (or Open Pit) Zone, No. 5 Zone and No. 6 Zone. All three zones are marginal to the Garrison Stock. Gold occurs in quartz veins and vein breccias. Kerr Addison Mines Limited mined approximately 70,000 tons averaging about 0.12 oz/ton Au from 1981 to 1982 (about 9,000 ounces of gold are estimated to have been recovered (Lovell et al 1984).

At the Gold Pike deposit, gold mineralization is hosted by mafic and ultramafic metavolcanic rocks adjacent and within the DPFZ. The host rocks are foliated to schistose and display intense carbonatization, sericitization (green mica), pervasive and vein silicification and abundant disseminated pyrite. Visible gold is contained in discontinuous tensional quartz stringers located along both contacts between a narrow basalt flow and ultramafic metavolcanic rocks. Royal Oak extracted 100,000 tons grading 0.1 oz/ton Au from an open pit in the early 1990s.

Using a block cut-off grade of 0.4 g/tonne, Howe has estimated Garrcon's non-diluted Measured Mineral Resources within a preliminary USD$1250 pit shell total 15.1 million tonnes with an average gold grade of 1.07 g/tonne for 521,000 ounces. Garrcon's non-diluted Indicated Mineral Resources considered amenable to open pit mining, within the USD$1250 preliminary pit shell and within 200m of surface outside the pit shell total 14.1 million tonnes with an average gold grade of 1.16 g/tonne for 526,000 ounces. Non-diluted Measured+Indicated Mineral Resources at Garrcon considered amenable to open pit mining, total 29.2 million tonnes with an average gold grade of 1.12 g/tonne for 1,047,000 ounces.

Garrcon's non-diluted Inferred Mineral Resources at a 0.4 g/tonne Au block cut off, within the USD$1250 preliminary pit shell and within 200 metres of surface outside the pit shell, total 1.7 million tonnes with an average gold grade of 0.72 g/tonne for 39,000 ounces. Garrcon's non-diluted Inferred Mineral Resources at a 1.5 g/tonne Au block cut off, more than 200 meters deep and outside of the pit shell total 5.1 million tonnes with an average gold grade of 3.49 g/tonne for 577,000 ounces. The grand total for Garrcon Inferred mineral resources is 6.8 million tonnes with an average gold grade of 2.80 g/tonne, for 616,000 ounces.

Relative to the 2012 Garrcon estimate, there is a decrease in the 2014 Garrcon estimate update's mean grade, attributed to the application of top-cuts of 112 g/tonne Au (high grade domains) and 114 g/tonne Au (low grade domains). Additionally, the use of domain specific directional ellipsoidal searches in the 2014 update instead of the omni directional ellipses used in 2012 has locally constrained the influence of higher grade samples.

The application of a higher 0.4 g/t block cut-off grade for potential open pitable Mineral Resources is based on an optimized pit using on $1250/oz gold, 55 degree pit wall slope and 2011 PEA pit mining parameters.

Measured resource tonnages have decreased by 2.54 million tonnes with a slight 0.01 g/t Au increase in grade for 83,000 fewer ounces of gold.

The application of a 0.4 g/t cut off, the use of the in the pit shell limit, and 200m depth limit outside of the open pit shell has resulted in a significant decrease in Indicated resources tonnage of 6.73 million tonnes with a slight 0.01 g/t Au increase in grade for 142,000 fewer ounces of gold.

Blocks below the 200m RL and outside of the pit shell are now considered to be Inferred underground potential. The application of a 1.5 g/t Au cut off results in a significant decrease in tonnage of 8.98 million tonnes with a grade increase of 2.08g/t Au for an additional 249,000 ounces of gold.

Northern Gold's 2011 to 2013 exploration drilling has confirmed a significant gold resource at the Jonpol Deposit. The Jonpol deposit comprises four, laterally contiguous mineralized zones (JD, JP, RP and East Zones) along the Munro Fault that have a total combined strike of 1700 metres. The JD zone has a strike length of up to approximately 800 metres, of which up to 500 metres is on the recently acquired Lac Group claims. The JP and RP have a combined strike of approximately 700 metres and the East zone has a strike of approximately 600 metres. The mineralized structures have been intersected from surface to a maximum drill intersected vertical depth of approximately 500 metres below surface. True widths of individual mineralized structures in the 2014 mineral resource estimate varied from a minimum width 1.5 metres to greater than 10 metres. The zones remain open to depth; The JD Zone is open to the west on the recently acquired Lac Group. Metallurgy to date indicates the JP and RP zones are partially refractory and the JD and East Zones are free milling.

Howe estimates Jonpol's non-diluted underground Indicated Mineral Resources, at a 3 g/tonne block cut off and 1.5 metre minimum mining width, total 0.872 million tonnes with an average gold grade of 5.34 g/tonne for 150,000 ounces. The grand total for non-diluted underground Inferred mineral resources is estimated at 1.07 million tonnes with an average gold grade of 5.56 g/tonne, for 192,000 ounces.

The change from a highly selective polygonal section estimate used in the 2009 Jonpol mineral resource estimate to a 3D wireframe constrained block model grade interpolation has resulted in a 2.43 g/t Au decrease in Indicated mean grade. The use of a broader wireframe model and additional drilling by Northern Gold has resulted in an increase of 0.618 million tonnes for an additional 86,000 ounces in the 2014 Jonpol resource estimate. The 2014 Jonpol resource update has resulted in an Inferred resource decrease of 0.483 million tonnes for 54,540 fewer ounces of gold.

Preliminary metallurgical testwork indicates that the Garrcon gold mineralisation is non-refractory and is free milling. Historical metallurgical testwork on behalf of previous operators indicated approximately 50% of the Jonpol JP Zone mineralisation is refractory in nature. Preliminary metallurgy by the Company indicates that the Jonpol JD and East Zones are of a free milling nature.

The Company's current metallurgy work shows that the Jonpol RP Zone, like the JP Zone, is partially refractory. The Company will conduct further metallurgical studies to optimise potential gold recoveryies from the partially refractory JP and RP Zones. Resource estimates for the JP and RP Zones may have to be revised if economic gold recoveries cannot be obtained.

Howe reviewed the Garrcon Deposit at the level of a Preliminary Economic Assessment (PEA) in 2011 utilizing the previous 2011 Garrcon mineral resources estimate (Hannon et al., 2011). Howe's 2011 Garrcon mineral resource estimate has now been replaced by the 2014 Garrcon mineral resource update presented in this report. The 2011 Garrcon PEA has not been updated to reflect the changes in the Garrcon mineral resource and current costs however it is still an indication of the project's potential. The following conclusions were made:

- The reader is cautioned that this PEA uses Indicated and Inferred Mineral Resources. NI 43-101 Part 2, Section 2.3(1)(b) and Companion Policy 43-101CP, Part 2, Section 2.3(1) Restricted Disclosure, prohibits the disclosure of the results of an economic analysis that includes or is based on inferred mineral resources, an historical estimate, or an exploration target. However, under NI 43-101, Part 2, Section 2.3(3) and Companion Policy 43-101CP, Part 2 section 2.3(3), the use inferred mineral resources is allowed in a Preliminary Economic Assessment in order to inform investors of the potential of the property.

- This PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

- A mining schedule and economic model has been developed for the operation. The PEA indicates that the mining of the Garrcon gold deposit by open pit mining methods would be feasible today. This PEA has determined that, with the Mineral Resources outlined to date, a combination gravity-agitated leach plant and a heap leach facility would be economic with a base case net present value (5.0% discount rate) of $266 million and an internal rate of return of 47%.

- PEA conditions included $1,200/troy ounce gold, a processing rate of about 11,300 tonnes per day and a heap leach facility processing about 2.3 million tonnes per year.

- The project is most sensitive to grade and the price of gold and least sensitive to capital costs. The 2011 PEA has been completed using order of magnitude costs and rock quality values typical of northern Ontario. The project economics would be even better if the present price of gold (2011 - $1500+) were used; however, at the time of the PEA (2011) the project was still 3 to 5 years from production and it was prudent to use a lower number. As the project advances, a gold price closer to the present price can be used.

Environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues could potentially materially affect the Golden Bear Project Properties with respect to access, title, the right or ability to perform the work recommended in this Report, and the Garrcon and Jonpol mineral resource estimate updates reported herein. However at the time of this report, Howe is unaware of any such potential issues affecting the Project and in particular the Garrison Property pending the Company's submission and acquisition of any and all required exploration plans and permits in accordance with any prescribed requirements, including Aboriginal consultation and notification of surface rights holder(s) prior to any future recommended or planned exploration activities.

Based on: historic exploration work and the Company's exploration work to date, the 2014 Garrcon mineral resource update, the 2011 Garrcon PEA, and the 2014 Jonpol mineral resource update Howe concludes that the Garrcon Deposit, Jonpol Deposit and the Garrison Property warrant additional development expenditures.

26 RECOMMENDATIONS

Howe recommends that the following work be incorporated into Northern Gold's ongoing project development plans to further refine estimates of costs, recoveries, engineering and mine design to facilitate the development of a Pre-Feasibility Study for the Garrcon Deposit:

1. Howe recommends that Northern Gold continue to monitor and review CRM and blank sample assay results that fall outside of established control limits. Northern Gold should review sample handling procedures to ensure sample handling and labeling errors are eliminated.

2. The QA/QC program should seek to determine the repeatability of samples from rock that contains economically interesting gold grades. Core duplicates should be selected from mineralized lithologies. The number of pulp duplicate gravimetric analyses should also be increased.

3. Northern Gold's exploration database has expanded exponentially since it first started work at Garrison in 2009. The use of spreadsheets to manage exploration results increases the risk of transcription errors and data loss. A relational database should be implemented to allow efficient management, querying and validation of vast amount of data and study information.

4. The historical separation of the Garrcon, East Zone and Jonpol deposits have prevented the generation of property wide synthesis of all Garrison Project exploration data including geophysical and geochemical data and lithological and structural observations. A three dimensional litho-structural model should be created for the Garrison Project that allows rapid updates as new information becomes available. This model should assist in drill hole targeting and resource domain development.

5. Within the open pit portion Garrcon resource, there is scope to further refine the geological model. In particular the determination of controls to lamprophyre and syenite dyke emplacement and the possible influence of structural controls on the distribution of high grade mineralization.

6. Continue the advanced exploration permitting currently in progress to be followed by the work necessary for operational permitting.

7. Expand the permitting process to include potential mill sites, heap leach pads and tailings management areas using claims recently acquired by Northern.

8. Continue the exploration drilling program:
    a. Exploration should step out beyond the current Garrcon and Jonpol resource footprints to:

iv. test for potential mineralization in meta-sediments between the current Garrcon resource mineralization shell and the Munro Fault Zone/Jonpol East Zone to the north;
v. test geophysical anomalies defined by the 2011 IP survey and;
vi. continue to test beneath meta-sediment outcrops and newly stripped meta-sediments hosting stockwork veining with anomalous gold mineralization including the 903 Zone.

9. Northern Gold should continue specific gravity measurements of representative samples particularly at Jonpol which is lacking a robust database. Sufficient samples should be tested to be representative of the various mineralized and non-mineralized rock types within deposits along its entire strike length, width and depth. The number of samples will depend on the statistical variance of the measurements.

10. Further mineral processing work on the Garrcon mineralization should be carried out to support assumptions that were made in the 2011 PEA. The work that has been carried out thus far is quite preliminary. This work should be expanded by exploring various processing options, determining which options would best suit this particular deposit and optimising the most promising flowsheet. Should that flowsheet consider heap leaching, a bulk sample pilot trial should be carried out to determine the actual, realised processing recovery value as opposed to the laboratory-predicted value. Testwork should include:
    a. Sieve analysis vs. gold grade.
        i. For each stage of the rock breakage history, a sieve analysis and grade of gold should be determined. This should be completed for selected bulk sampling sites where at least several hundred tonnes can be blasted on surface. At each stage of crushing, the ore should be sieved and a gold grade determined for each size fraction.
    b. Flotation Test Program
        i. Test four different grinds from approximately 70% at -200 mesh to 95% at -200 mesh. In these tests use reagent X-523 for 10 minutes followed by a 10-minute float with frother and potassium amyl xanthate.
        ii. Take the best of the above conditions and repeat with reagent Aerofloat 208 replacing the X-523. Take the best of the above conditions and jig the flotation feed and remove the coarser gold prior to flotation.
        iii. Have all tests that are performed above assayed for gold, silver and sulphur.
        iv. Repeat the best test of above and have all flotation floats performed for five 3-minute intervals to establish the flotation rate for the various minerals.
        v. Repeat the best tests of above but clean, reclean and re-reclean the two flotation products, and have the final re-reclean concentrate assayed for copper, lead and zinc as well. Also, repeat the best test using reclaimed water from a previous float test.
    c. Bottle roll tests to give some indication of the leaching character of the rock.
    d. Pending results from column leaching tests currently being run, colum leach tests should be continued and expanded to determine potential percolation rates and recoveries for proposed heaps.

e. Determination of solution application rates and solution percolation rates, crushing and agglomeration testing.

11. Continue testing the deposit for any potential Acid Rock Drainage (ARD) and confirmation of the relatively high calcium content, which is expected to neutralize any ARD potential.

12. A study of the structural geology, a map of the jointing system and a report on the geotechnical properties of the potential pit should be continueded. The geotechnical properties of the rock types at the Garrcon Deposit (Uniaxial Compressive Strength (UCS), Tensile Strength, Young's modulus and Poisson's ratio) should be determined. A suite of samples representing different parts of the deposit and each rock type should be tested at a rock mechanics laboratory.

13. Additional land may be required around the deposit, to store waste rock and tailings facilities. More detailed site engineering is required to confirm the suitability and sufficiency of the current property areas for final mine and processing facilities should they be constructed.

14. Approximately 10 kilometres of line will be required to bring 3 phase power to the site. A right of way for this line should be investigated. Northern Gold informs Howe that talks with Ontario Hydro have been initiated.

15. A hydrological study should be completed to determine the amount of water that must be pumped to keep the pit dry. Any water bearing fractures found should be mapped so that they can be grouted off if necessary. A water storage facility will have to be in place to supply mill water, heap leach water as well as fire-fighting water.

16. A rock penetration rate study should be undertaken in order to determine the penetration rate for down the hole hammer type blast hole drills. Drill manufacturers often offer this service. A variety of core or rock samples should be tested so that an accurate penetration rate can be determined.

Following Howe's recommendations, Northern Gold has developed a work program and cost estimate totaling $10,115,000 for the balance of 2014 and into 2015 to further advance the Garrison Property. The proposed program and budget as shown Table 26-1 below will permit Northern Gold to complete bulk sampling of the Garrcon Deposit; geotechnical, hydrogeological and environmental studies; and heap leach studies; the results of which will support a Garrcon Pre-Feasibility study. The proposed program also includes a small definition drilling budget at the 903 Zone and public and First Nations consulting costs.

Howe considers Northern Gold's proposed budget reasonable and recommends that the Company proceed with the proposed work program.

Table 26-1: Proposed Budget – March to December 2014 (some 2015 costs incl)

Item	Activity	Estimated Cost
1	Bulk Sample (3rd Quarter 2014)	**$7,000,000**
2	Pre-Feasibility (includes the CP & Permits)	
	Start in 4th Quarter of 2014	$750,000
	2015 Costs	$500,000
	Subtotal	**$1,250,000**
3	Geotechnical Study - Complete in 3rd Quarter of 2014	
	Geotechnical Assessment (Terrane)	$65,000
	Geotechnical Drilling (5X325 m orientated core)	$275,000
	Subtotal	**$340,000**
4	Hydroeological Study Including Overburden Assessment	
	Pit Footprint - Estimated - 6 Monitoring Wells	$60,000
	Waste stockpile area - 2 monitoring wells	$20,000
	Ore stockpile area - 2 monitoring wells	$20,000
	Overburden stockpile area - 2 monitoring wells	$20,000
	Mill site area - 2 monitoring wells	$20,000
	Hydrogeological analysis & report	$55,000
	Subtotal	**$195,000**
5	Diamond Drilling	
	903 Zone Definition - 3000 m	$425,000
	Assaying	$60,000
	Surveying	$15,000
	Subtotal	**$500,000**
6	Complete Environmental Studies For Pre-Feasibility	
	Mill Siting	$25,000
	Archeology	$20,000
	Terrestrial Ecology	$55,000
	Hydrology & surface water quality	$25,000
	Federal Environmental Assessment	$200,000
	Subtotal	**$325,000**
7	Heap Leach Testing	
	2014 & 2015	**$600,000**
8	Public and First Nations Consulting	**$100,000**
	Total	**$10,115,000**

27 REFERENCES

Abzalov, M., 2008, Quality Control of Assay Data: A Review of Procedures for Measuring and Monitoring Precision and Accuracy. *Exploration and Mining Geology*, *17*(3-4),

Ayer, J. A. and Trowell, N. F., 2001, Project Unit 95-24, The Abitibi Greenstone Belt: A Program Update. In Summary of Field Work and Other Activities 2001, Ontario Geological Survey, OFR 6070, p. 4-1 to 4-9.

Bath, A.C., 1990, Mineral Occurrences, Deposits, and Mines of the Black River – Matheson Area, Ontario Geological Survey Open File Report 5735, 1883 p.

Berger, B. R., 2002, Geological Synthesis of the Highway 101 Area, East of Matheson, Ontario; Ontario Geological Survey Open File Report 6091, 124 p.

Bradshaw, R.J., 1989, A Report on the Newfield Property Gold Deposits, Garrison Township, Ontario, August 17, 1989, pp. 14.

Card, K. D., Poulsen, K. H., and Robert, F., 1988, The Archean Superior Province of the Canadian Shield and Its Lode Gold Deposits, p. 19-36; in Economic Geology Monograph 6: The Geology of Gold Deposits; the Perspective in 1988, edited by R. R. Keays, W. R. H. Ramsey, and D. I. Groves, Economic Geology Publishing Company, 667p.

Choi, T., 1997, Final Grade and Recovery Analysis of Jonpol Project, memo to G. Vooro, President and CEO, Hillsborough Resources Limited, May 8, 1997, 4 p.

Davidson, J. and Parslow, C., 2012, Stage 1 Archaeological Assessment, Northern Gold Garrison Property, Part of Garrison Township, Cochrane District, Ontario Golder and Associates, September 4, 2012, Report No. 1111920103-3000-R01, 72 p.

Deklerk, R. and Burke, M. (compilers), 2008. Yukon Mineral Property Update 2008. Yukon Geological Survey, p.3-7, 94 p.

Di Feo, T, 2013. Preliminary Metallurgical Scoping, Northern Gold, XPS Consulting and Testwork Services, September 5th, 2013.

DDH Geomanagement, 1989, unpublished exploration report

George, P.T., 2008, Technical Report, Mineral Resource Estimate and Preliminary Assessment of Garrison Gold Property, Abitibi Greenstone Belt, Garrison Township, Ontario, Canada for ValGold Resources Inc.; A.C.A. Howe International Limited Technical Report.

George, P.T., 2009, Technical Report, Mineral Resource Estimate and Preliminary Assessment of Garrison Gold Property, Abitibi Greenstone Belt, Garrison Township, Ontario, Canada for Northern Gold Mining Inc.; A.C.A. Howe International Limited Technical Report.

Guy, K., 2011, Technical Report on the Gold Pike Mine Project, Hislop and Guibord Townships (NTS 42A/09) Province of Ontario for Victory Gold Mines Inc.

Hannon, P., Roy, D. and Trinder, I. 2011, Technical Report and Preliminary Economic Assessment on the Garrcon Deposit - Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada for Northern Gold Mining Inc., ACA Howe International Limited, effective date June 23, 2011, signature date August 5, 2011, 185 p.

Hannon, P., Roy, D. and Trinder, I. 2012, Technical Report on the Garrcon Deposit - Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada for Northern Gold Mining Inc., ACA Howe International Limited, effective date June 23, 2011, signature date August 5, 2011, 185 p.

Jackson, S. L., and Fyon, J. A., 1991, The Western Abitibi Subprovince in Ontario; in Geology of Ontario, Special Volume 4, Part 1, Chapter 11, p.405-482.

Long, S., 2005, Assay Quality Assurance-quality Control Program for Drilling Projects at the Prefeasibility to Feasibility Report Level. AMEC Mining Consulting Group.

Marshall, R., 2013, Environmental Baseline Studies Program Review And Work Plan Development For The Garrcon Project for Northern Gold Mining Inc., Blue Heron Solutions For Environmental Management Inc., BH-13-PJ-760, 15 p.

Mellow, R. and Seyler, J., 2013, A Preliminary Assessment of Aquatic Features Associated with the Garrison Gold Project for Northern Gold Mining Inc., Golder and Associates, January 29, 2013, Report No. 11-1192-0103, 39 p.

Northern Miner, various

Robert, F., 1996, Quartz-carbonate vein gold; in Geology of Canadian Mineral Deposit Types, edited by O. R. Ekstrand, W. D. Sinclair, and R. I. Thorpe, Geological Survey of Canada, Geology of Canada, No 8, p 350-366.

Robert, F., 1998, An Overview of World Class Archean Gold Deposits; in The First Age of Giant Ore Formation; Stratigraphy, Tectonics, and Mineralisation in the Late Archean and Early Proterozoic; papers presented in a technical session at the Annual Convention and Trade Show of the Prospectors and Developers Association of Canada, Sunday March 8, 1998, p.137-162.

Rogers, D. S., 1982, Drilling as an aid in ore definition at the Dome Mine, Canadian Institute of Mining and Metallurgy, vol. 75, no. 842, June 1982, p. 98-104.

Roy, D. and Trinder, I. 2010, Technical Report and Mineral Resource Estimate on the Garrcon Deposit - Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada for Northern Gold Mining Inc., ACA Howe International Limited, September 23, 2010, 94 p.

SGS Mineral Services, 2011, An Investigation into the Recovery of Gold from the Garrcon Gold Deposit located on the Garrison Gold Property, prepared for Northern Gold Mining Inc., Project 12566-001 – Final Report January 31, 2011.

Sinclair, D.G., Keely, E.C., Cooper, D.F., Weir, E.B. and Webster, A.R., 1937, Mines of Ontario in 1935; Ontario Department of Mines, Annual Report of 1936, Volume 45, Part 1, p. 77-188.

Sinclair, D.G., Tower, W.O., Bayne, A.S., Cooper, D.F., Weir, E.B. and Webster, A.R., 1938, Mines of Ontario in 1936; Ontario Department of Mines, Annual Report of 1937, Volume 46, Part 1, p. 90-238.

Sinclair, D.G., Tower, W.O., Taylor, J.B., Douglas, D.P., Bayne, A.S., Cave, A.E., Cooper, D.F., Weir, E.B. and Webster, A.R., 1939, Mines of Ontario in 1937; Ontario Department of Mines, Annual Report of 1938, Volume 47, Part 1, p. 80-249.

Satterly, J., 1949, Geology of Garrison Township; Ontario Department of Mines Annual Report, v.58, pt.4, including Map M1949-01, Scale 1:12,000.

Squair, H., 2000, A Report on the Garrison Gold Project, Garrison Township, District of Cochrane, Ontario, for Aurado Exploration Ltd., April 2000, 34 p.

Walcott, P.E., 2012, A Report on Induced Polarization Surveying, Garrison Gold Project, Matheson, Ontario, 48^{o} 30’N, 79^{o} 55’E, NTS 32D/12 for Northern Gold Mining Inc., Peter E. Walcott and Associates Limited, 20 p.

Young, A.C., 1937, Statistical Review of the Mineral Industry of Ontario for 1935, Ontario Department of Mines, Annual Report of 1936, Volume 45, Part 1, p. 1-60.

28 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Garrison Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated March 03, 2014, was prepared and signed by the following authors:

Dated at Toronto, Ontario
March 3, 2014

Leon McGarry, B.Sc., P.Geo.
Geologist
A.C.A. Howe International Limited

Dated at Toronto, Ontario
March 3, 2014

Ian D. Trinder, M.Sc., P.Geo.
Senior Geologist
A.C.A. Howe International Limited

Dated at Halifax, Nova Scotia
March 3, 2014

Patrick J. Hannon, M.A.Sc., P.Eng.
Associate Consulting Engineer
A.C.A. Howe International Limited

Dated at Halifax, Nova Scotia
March 3, 2014

William D. Roy, M.A.Sc., P.Eng.
Associate Consulting Engineer
A.C.A. Howe International Limited

29 CERTIFICATES OF QUALIFICATIONS

CERTIFICATE of CO-AUTHOR

I, Leon McGarry, B.Sc., P.Geo. (ON), do hereby certify that:

1. I reside at Unit 2909, 375 King Street West, Toronto, Ontario, M5V 1K1.

2. I am employed as a project geologist with the firm of A.C.A. Howe International Limited, Mining and Geological Consultants located at 365 Bay St., Suite 501, Toronto, Ontario, Canada. M5H 2V1.

3. I graduated with a degree in Bachelor of Science Honours, Earth Science, from Brunel University, London, United Kingdom, in 2005.

4. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Geoscientists of Ontario (APGO, No. 2348). I am a member of the Prospectors and Developers Association of Canada.

5. I have over 7 years of direct experience with precious metal mineral exploration in Australia, Canada and West Africa including project evaluation and the estimation of precious metal resources. Additional experience includes the completion of National Instrument 43-101 ("NI 43-101") technical reports for precious metal projects.

6. I have read the definition of "qualified person" set out in NI 43-101 and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

7. I am co-author of the technical report titled: "Technical Report on the Golden Bear Project - Garrison Property Larder Lake Mining Division Garrison Township, Ontario, Canada for Northern Gold Mining Inc.", dated March 03, 2014 (the "Technical Report"). I am responsible for sections 14. and 11.6. I visited the Garrison Property Project site between the 2nd and 3rd of February, 2013.

8. I have had no prior involvement with the issuer and the property that is the subject of the Technical Report.

9. As of the effective date of the technical report, 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.

10. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.

11. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 3rd Day of March 2014.

Leon McGarry B.Sc., P. Geo.

CERTIFICATE of CO-AUTHOR

I, Ian D. Trinder, M.Sc., P.Geo. (ON, MAN), do hereby certify that:

1. I reside at 4185 Taffey Crescent, Mississauga, Ontario, L5L 2A6.

2. I am a Senior Geologist with the firm of A.C.A. Howe International Limited, Mining and Geological Consultants located at 365 Bay St., Suite 501, Toronto, Ontario, Canada. M5H 2V1.

3. I graduated with a degree in Bachelor of Science Honours, Geology, from the University of Manitoba in 1983 and a Master of Science, Geology, from the University of Western Ontario in 1989.

4. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM, No. 22924) and with the Association of Professional Geoscientists of Ontario (APGO, No. 452). I am a member of the Society of Economic Geologists and of the Prospectors and Developers Association of Canada.

5. I have over 25 years of direct experience with precious and base metals mineral exploration in Canada, USA and the Philippines including project evaluation and management. Additional experience includes the completion of various National Policy 2A and NI 43-101 technical reports for gold and base metal projects.

6. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

7. I am co-author of the technical report titled: "Technical Report on the Golden Bear Project - Garrison Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated March 03, 2014 (the "Technical Report"). I am responsible for Sections 1 to 10, 11.1 to 11.5, 12, 13.1.3, 13.2, 15, 21 and 23 to 27 of the report. I have visited the Garrison Property from July 12 to 13, 2010, January 19 to 22, 2011, May 20, 2011 and February 2 to 3, 2013.

8. I have prior involvement with the issuer and property as co-author of the following ACA Howe technical reports titled: "Technical Report on the Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated April 19, 2012; "Technical Report and Preliminary Economic Assessment on the Garrcon Deposit- Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated June 23, 2011; "Technical Report and Mineral Resource Estimate on the Garrcon Deposit- Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited, dated September 23, 2010.

9. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

10. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101.

11. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

12. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 3rd Day of March 2014.

IAN D. TRINDER
PRACTISING MEMBER
0452
ONTARIO

Ian D. Trinder, M.Sc., P. Geo.

CERTIFICATE of CO-AUTHOR

I, William Douglas Roy, M.A.Sc., P.Eng., do hereby certify that:

1) I am an Associate Mining Engineer of ACA Howe International Limited, whose office is located at 365 Bay St, Toronto, Ontario, Canada.
2) I graduated with a B.Eng. degree in Mining Engineering from the Technical University of Nova Scotia (now Dalhousie University) in 1997 and with an M.A.Sc. degree in Mining Engineering from Dalhousie University in 2000.
3) I am a Professional Engineer (Mining), registered with Engineers Nova Scotia (Registered Professional Engineer, No. 7472). I am a member of the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") and of the Prospectors and Developers Association of Canada ("PDAC").
4) I have worked as a mining engineer for more than ten years since graduating from university. This work has included the estimation of resources and reserves for precious metals, base metals and industrial minerals, as well as participation in pre-feasibility and feasibility studies.
5) I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43- 101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6) I am co-author of the technical report titled: "Technical Report on the Golden Bear Project - Garrison Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated March 03, 2014 (the "Technical Report"). I am responsible for Section 16.5: Open Pit Mining.
7) I have read NI 43-101 and Form 43-101 F1. This Technical Report has been prepared in accordance with that Instrument and form.
8) I have visited the Garrison Property.
9) I have prior involvement with the issuer and property as co-author of ACA Howe's technical reports titled "Technical Report on the Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated April 19, 2012; "Technical Report and Preliminary Economic Assessment on the Garrcon Deposit - Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited dated June 23, 2011; and "Technical Report and Mineral Resource Estimate on the Garrcon Deposit- Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada" for Northern Gold Mining Limited, dated September 23, 2010.
10) I am not aware of any material fact or material change with respect to the subject matter of this Report that is not reflected in the Report, the omission to disclose which makes the Report misleading.
11) I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101.
12) 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 report not misleading.
13) I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes.

Dated this 3rd Day of March 2014.

"Signed and Sealed"

____
William Douglas Roy, M.A.Sc., P. Eng.
Associate Mining Engineer
ACA Howe International Limited

CERTIFICATE of CO-AUTHOR

Name:	Patrick James Francis Hannon, M.A.Sc., P.Eng.
Address:	MineTech International Limited, 1161 Hollis St., Suite 211, Halifax, Nova Scotia, Canada 83H 2P6. Telephone: 1-902-492-4049; Facsimile: 1-902-492-9302; Email: pat@minetechint.com
Occupation:	Consultant Geological and Mining Engineer

Qualifications

I, Patrick J.F. Hannon, do hereby certify that:

1. I am director and President of:
MineTech International Limited of 1161 Hollis St., Suite 211, Halifax, Nova Scotia, Canada B3H 2P6 and an Associate Consulting (Mining) Engineer with A.C.A. Howe International Limited.

2. I graduated with a Bachelor of Science (Eng.) degree in Geological Engineering from Queen's University at Kingston in 1972. In addition, I have a Sr. Mining Technician Certificate from the Haileybury School of Mines (1968) and I obtained an M.A.Sc. in Mining Engineering from the Dalhousie University, Halifax in 1987.

3. I am a Member of Engineers Nova Scotia (#2734), the Professional Engineers and Geoscientists Newfoundland and Labrador and a member of the Association of Professional Engineers in Ontario (#18260018). I am a Fellow of the Canadian Institution of Mining and Metallurgy and a member of the American Institute of Mining Engineers.

4. I have worked in the mining industry for a total of 41 years since my graduation from university.

5. I have read the definition of "qualified person" and hereby certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

6. I have not personally visited the Garrison property of Northern Gold; however, I am familiar with the terrain having worked on several properties in the Kirkland Lake camp during the 1980s.

7. I am co-author of the technical report titled: “Technical Report on the Golden Bear Project - Garrison Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada” for Northern Gold Mining Limited dated March 03, 2014 (the “Technical Report”).I am responsible for sections 13.1.1 to 13.1.2, 16.1 to 16.4, 16.6 to 16.9, 17, 18, 19, 20 and 22, essentially the preparation of the mining engineering and financial analysis for the Preliminary Economic Assessment section of this Technical Report.

8. I am not aware of any material fact or material change with respect to the subject matter of Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

9. I am independent of the issuer applying all of the tests in Section 1.5 of National Instrument 43-101.

10. I have prior involvement with the issuer and property as co-author of ACA Howe’s technical reports titled: “Technical Report on the Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada” for Northern Gold Mining Limited dated April 19, 2012 and “Technical Report and Preliminary Economic Assessment on the Garrcon Deposit- Garrison Gold Property, Larder Lake Mining Division, Garrison Township, Ontario, Canada” for Northern Gold Mining Limited dated June 23, 2011.

11. I have read NI 43-101 and NI 43-101 Form 43-101F1. This Technical Report has been prepared in compliance with those instruments.

Dated this 3rd Day of March 2014.
“Signed and Sealed”

Patrick J.F. Hannon, M.A.Sc., P.Eng.

APPENDIX A

Golden Bear Project Land Tenure

Golden Bear Project - Patent Claim Status

Claim Number	PIN	Claim Group	Sub-Claim Group	Township	Tax Due Date	Tax Due	Approx Area (ha)	Ownership	NSR	Comments
L21753	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$49.05	12.15	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L21773	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$48.40	11.94	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L21774	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$55.85	13.94	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L21775	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$58.92	15.06	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L21844	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$103.60	26.30	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L27616	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$57.00	14.20	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L27617	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$39.54	10.12	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L27618	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$67.24	17.06	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37018	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$57.30	14.62	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37019	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$69.20	17.61	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37020	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$62.48	16.27	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37021	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$50.44	12.51	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37022	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$56.46	14.31	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37023	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$64.07	15.73	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37024	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$57.12	14.50	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37025	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$57.63	14.78	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37026	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$63.13	15.41	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37213	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$66.95	16.99	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37214	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$66.26	16.82	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L37215	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$62.06	15.19	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000

Golden Bear Project - Patent Claim Status										
Claim Number	**PIN**	**Claim Group**	**Sub-Claim Group**	**Township**	**Tax Due Date**	**Tax Due**	**Approx Area (ha)**	**Ownership**	**NSR**	**Comments**
L38817	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$64.49	16.40	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L40022	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$36.55	9.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L40194	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$49.34	12.17	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
L40195	65377-0197	Buffonta	Gwen Resources	Garrison	1-Apr-14	$61.12	15.70	100% NGM	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1,000,000
						$1,424.20	**358.81**			
L39858	65377-0136	Garrison	Barrick	Garrison	1-Apr-14	$55.41	13.88	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L39859	65377-0139	Garrison	Barrick	Garrison	1-Apr-14	$57.34	15.12	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L39876	65377-0137	Garrison	Barrick	Garrison	1-Apr-14	$58.23	13.99	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L39877	65377-0138	Garrison	Barrick	Garrison	1-Apr-14	$56.06	14.49	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant

Golden Bear Project - Patent Claim Status										
Claim Number	**PIN**	**Claim Group**	**Sub-Claim Group**	**Township**	**Tax Due Date**	**Tax Due**	**Approx Area (ha)**	**Ownership**	**NSR**	**Comments**
L43861	65377-0135	Garrison	Barrick	Garrison	1-Apr-14	$54.70	14.07	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L43862	65377-0140	Garrison	Barrick	Garrison	1-Apr-14	$57.90	14.71	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L43863	65377-0107	Garrison	Barrick	Garrison	1-Apr-14	$53.01	13.51	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L43864	65377-0108	Garrison	Barrick	Garrison	1-Apr-14	$51.88	13.40	100% NGM	3.5	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition 1.5% NSR to M. Hunt, E. Harris, T. Bryant, R. Bryant, and W. Bryant
L43903	65377-0143	Garrison	Barrick	Garrison	1-Apr-14	$88.24	22.19	100% NGM	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44148	65377-0142	Garrison	Barrick	Garrison	1-Apr-14	$69.51	17.36	100% NGM	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of

Golden Bear Project - Patent Claim Status										
Claim Number	**PIN**	**Claim Group**	**Sub-Claim Group**	**Township**	**Tax Due Date**	**Tax Due**	**Approx Area (ha)**	**Ownership**	**NSR**	**Comments**
										acquisition
L44149	65377-0141	Garrison	Barrick	Garrison	1-Apr-14	$68.16	16.79	100% NGM	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44261	65377-0147	Garrison	Barrick	Garrison	1-Apr-14	$49.58	12.26	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44262	65377-0158	Garrison	Barrick	Garrison	1-Apr-14	$91.57	22.53	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44263	65377-0148	Garrison	Barrick	Garrison	1-Apr-14	$76.81	19.07	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44264	65377-0153	Garrison	Barrick	Garrison	1-Apr-14	$92.01	22.28	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44265	65377-0159	Garrison	Barrick	Garrison	1-Apr-14	$38.66	10.11	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition

Golden Bear Project - Patent Claim Status

Claim Number	PIN	Claim Group	Sub-Claim Group	Township	Tax Due Date	Tax Due	Approx Area (ha)	Ownership	NSR	Comments
L44266	65377-0134	Garrison	Barrick	Garrison	1-Apr-14	$39.01	9.87	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L44267	65377-0135	Garrison	Barrick	Garrison	1-Apr-14	$38.15	9.79	95% NGM / 5% Janet Ann Colbran	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L47324	65377-0134	Garrison	Barrick	Garrison	1-Apr-14	$27.47	7.29	100% NGM	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L50231	65377-0133	Garrison	Barrick	Garrison	1-Apr-14	$27.42	7.67	100% NGM	2.0	2% NSR with 0.5% Buy Back option for $1M; Back-in right for up to 51% interest should a resource totalling 4 M Oz be identified on these claims, the back in right would trigger a cash reimbursement to NGM equal to double the exploration costs incurred since the date of acquisition
L26075	65377-0074	Garrison	Linton	Garrison	1-Apr-14	$40.55	10.11	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L26076	65377-0074	Garrison	Linton	Garrison	1-Apr-14	$55.65	13.45	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L26118	65377-0074	Garrison	Linton	Garrison	1-Apr-14	$64.34	15.95	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON Also known as L26116
L26384	65377-0057	Garrison	Linton	Garrison	1-Apr-14	$26.34	6.55	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L26385	65377-0057	Garrison	Linton	Garrison	1-Apr-14	$28.96	7.00	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L26386	65377-0057	Garrison	Linton	Garrison	1-Apr-14	$56.59	14.17	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L30576	65377-0074	Garrison	Linton	Garrison	1-Apr-14	$57.42	12.88	100% NGM	1.0	NSR Royalty 1% to BARBARA LINTON
L25803	65377-0085	Garrison	ValGold	Garrison	1-Apr-14	$32.86	8.03	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25804	65377-0080	Garrison	ValGold	Garrison	1-Apr-14	$36.39	8.41	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000

Golden Bear Project - Patent Claim Status

Claim Number	PIN	Claim Group	Sub-Claim Group	Township	Tax Due Date	Tax Due	Approx Area (ha)	Ownership	NSR	Comments
L25805	65377-0165	Garrison	ValGold	Garrison	1-Apr-14	$26.04	6.20	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25937	65377-0081	Garrison	ValGold	Garrison	1-Apr-14	$50.96	12.04	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25938	65377-0084	Garrison	ValGold	Garrison	1-Apr-14	$31.82	7.95	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25939	65377-0087	Garrison	ValGold	Garrison	1-Apr-14	$26.27	6.32	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25940	65377-0086	Garrison	ValGold	Garrison	1-Apr-14	$28.47	7.08	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25941	65377-0162	Garrison	ValGold	Garrison	1-Apr-14	$19.07	4.76	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L25942	65377-0166	Garrison	ValGold	Garrison	1-Apr-14	$31.16	7.74	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26120	65377-0161	Garrison	ValGold	Garrison	1-Apr-14	$11.61	3.10	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26121	65377-0090	Garrison	ValGold	Garrison	1-Apr-14	$30.79	7.62	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26122	65377-0089	Garrison	ValGold	Garrison	1-Apr-14	$54.10	13.21	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26341	65377-0092	Garrison	ValGold	Garrison	1-Apr-14	$45.34	11.19	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26342	65377-0156	Garrison	ValGold	Garrison	1-Apr-14	$25.54	6.51	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26343	65377-0091	Garrison	ValGold	Garrison	1-Apr-14	$27.02	6.03	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26344	65377-0095	Garrison	ValGold	Garrison	1-Apr-14	$43.27	10.98	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000

Golden Bear Project - Patent Claim Status

Claim Number	PIN	Claim Group	Sub-Claim Group	Township	Tax Due Date	Tax Due	Approx Area (ha)	Ownership	NSR	Comments
L26345	65377-0094	Garrison	ValGold	Garrison	1-Apr-14	$42.77	10.97	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26346	65377-0155	Garrison	ValGold	Garrison	1-Apr-14	$31.44	8.34	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26432	65377-0150	Garrison	ValGold	Garrison	1-Apr-14	$46.41	11.71	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26433	65377-0145	Garrison	ValGold	Garrison	1-Apr-14	$39.45	10.26	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26434	65377-0144	Garrison	ValGold	Garrison	1-Apr-14	$46.28	11.60	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26435	65377-0106	Garrison	ValGold	Garrison	1-Apr-14	$53.14	13.31	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26436	65377-0105	Garrison	ValGold	Garrison	1-Apr-14	$61.27	15.62	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26437	65377-0104	Garrison	ValGold	Garrison	1-Apr-14	$68.83	18.19	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L29734	65377-0146	Garrison	ValGold	Garrison	1-Apr-14	$76.81	19.26	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L29735	65377-0149	Garrison	ValGold	Garrison	1-Apr-14	$53.32	13.19	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L38949	65377-0151	Garrison	ValGold	Garrison	1-Apr-14	$32.89	8.26	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L38950	65377-0096	Garrison	ValGold	Garrison	1-Apr-14	$36.00	8.70	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L38951	65377-0097	Garrison	ValGold	Garrison	1-Apr-14	$47.40	11.87	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L39428	65377-0099	Garrison	ValGold	Garrison	1-Apr-14	$51.38	12.86	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L39429	65377-0100	Garrison	ValGold	Garrison	1-Apr-14	$47.04	11.64	100% NGM	2.0	2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L43702	65377-0102	Garrison	ValGold	Garrison	1-Apr-14	$63.34	16.07	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can

Golden Bear Project - Patent Claim Status										
Claim Number	**PIN**	**Claim Group**	**Sub-Claim Group**	**Township**	**Tax Due Date**	**Tax Due**	**Approx Area (ha)**	**Ownership**	**NSR**	**Comments**
										be bought for $5 000 000 and Second % can be bought for $10 000 000
L43703	65377-0101	Garrison	ValGold	Garrison	1-Apr-14	$49.26	12.31	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L44331	65377-0098	Garrison	ValGold	Garrison	1-Apr-14	$61.81	15.51	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L44332	65377-0103	Garrison	ValGold	Garrison	1-Apr-14	$72.39	18.79	100% NGM	4.0	"Teck-Cominco Royalty" 1.5% NSR above 400ft, 2% NSR below 400ft; 2% NSR to ValGold Corp, First % can be bought for $5 000 000 and Second % can be bought for $10 000 000
L26074	65377-0078	Garrison	Wickett	Garrison	1-Apr-14	$76.44	19.70	100% NGM	1.0	1% NSR; 1/5 to Lynn Ann Troke, 2/5 Karen Wickett, 2/5 Barbara Linton
						$3,059.35	**765.79**			

Golden Bear – Lease Claim Status													
Lease	**Claim Group**	**Sub-Claim Group**	**Township**	**PIN**	**Lease License Number**	**Former Lease Number**	**Expiry Date**	**Rent Due Date**	**Rent Due**	**Area_ ha**	**Ownership**	**NSR**	**Comments**
CLM352	Claim 352		Harker	65376-0148	108921		2032-Nov-30	1-Dec-14	$458.46	154.41	80% NGM / 20% Plato	1	If Plato's interest is diluted to 10% or less, such remaining interest shall be conveyed to the other party and granted a 1% NSR + up to $100,000 for legal/transfer costs; buy back option of the entire 1% NSR for $1,000,000
										154.41			
L548507	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	**1-Jun-14**	**$334.70**	18.13	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548508	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	**1-Jun-14**		17.44	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548509	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	**1-Nov-14**	**$490.78**	16.51	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548510	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	**1-Nov-14**		15.66	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548511	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	**1-Jun-14**		20.60	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548512	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	**1-Jun-14**		19.09	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000

Golden Bear – Lease Claim Status													
Lease	Claim Group	Sub-Claim Group	Township	PIN	Lease License Number	Former Lease Number	Expiry Date	Rent Due Date	Rent Due	Area_ ha	Ownership	NSR	Comments
L548513	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		17.76	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548514	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		16.49	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548515	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	1-Jun-14		17.92	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548516	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		16.93	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548517	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		15.83	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548518	Gold Pike		Guibord	65379-0203	109013	106570	2033-May-31	1-Jun-14		17.27	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548519	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		16.26	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L548520	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	1-Nov-14		15.40	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000

Golden Bear – Lease Claim Status													
Lease	**Claim Group**	**Sub-Claim Group**	**Township**	**PIN**	**Lease License Number**	**Former Lease Number**	**Expiry Date**	**Rent Due Date**	**Rent Due**	**Area_ ha**	**Ownership**	**NSR**	**Comments**
L641367	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	**1-Nov-14**		16.94	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L641368	Gold Pike		Guibord	65379-0174	108898	105982	2032-Oct-31	**1-Nov-14**		16.46	Plato Gold Corp/St. Andrews Goldfields Ltd, NGM can earn up to 60% interest, earned 40% as of Jan 2013	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $500,000
L72702	Gold Pike		Hislop	65380-0641	107976		2027-Aug-31	**1-Sep-14**	**$48.61**	14.53	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72703	Gold Pike		Guibord	65379-0176	107973		2027-Aug-31	**1-Sep-14**	**$55.19**	18.41	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72704	Gold Pike		Guibord	65379-0175	107972		2027-Aug-31	**1-Sep-14**	**$55.33**	19.22	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72705	Gold Pike		Hislop	65380-0561	107971		2027-Aug-31	**1-Sep-14**	**$48.61**	19.27	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72706	Gold Pike		Hislop	65380-0562	107974		2027-Aug-31	**1-Sep-14**	**$45.07**	14.24	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72707	Gold Pike		Hislop	65380-0563	107975		2027-Aug-31	**1-Sep-14**	**$45.07**	16.82	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72708	Gold Pike		Hislop	65380-0564	107977		2027-Aug-31	**1-Sep-14**	**$48.61**	18.34	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan ROFR
L72709	Gold Pike		Hislop	65380-0565	107978		2027-Aug-31	**1-Sep-14**	**$48.61**	15.66	Matachewan Consolidated Mines, Earn up to 70% interest	2	Subject to a 2% NSR Royalty, 1% of which may be purchased for $1 000 000, Matachewan

Golden Bear – Lease Claim Status													
Lease	Claim Group	Sub-Claim Group	Township	PIN	Lease License Number	Former Lease Number	Expiry Date	Rent Due Date	Rent Due	Area_ ha	Ownership	NSR	Comments
													ROFR
									$1,679.04	411.18			

Golden Bear – Unpatented Claim Status

Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
4270546	Boundary Claim		Harker	1	8.67	1-Jun-12	1-Jun-14	$400.00	100% NGM	0.0	NGM Staked
				1	**8.67**			**$400.00**			
3003041	Bourkes		Benoit	4	63.24	20-Mar-06	20-Mar-15	$1,600.00	100% NGM	0.0	
3003044	Bourkes		Benoit	14	224.92	13-Mar-06	13-Mar-15	$5,600.00	100% NGM	0.0	
3010008	Bourkes		Benoit	8	128.62	19-Aug-05	19-Aug-15	$3,200.00	100% NGM	0.0	
3010009	Bourkes		Benoit	12	191.63	19-Aug-05	19-Aug-15	$4,800.00	100% NGM	0.0	
3011713	Bourkes		Benoit	12	195.79	13-Mar-06	13-Mar-15	$4,800.00	100% NGM	0.0	
3019563	Bourkes		Benoit	2	30.01	29-Jul-04	29-Jul-14	$800.00	100% NGM	0.0	
3019564	Bourkes		Benoit	1	17.06	29-Jul-04	29-Jul-16	$400.00	100% NGM	0.0	
3019565	Bourkes		Benoit	2	29.89	29-Jul-04	29-Jul-16	$800.00	100% NGM	0.0	
4203162	Bourkes		Benoit	4	66.10	19-Oct-05	19-Oct-15	$1,600.00	100% NGM	0.0	
4203163	Bourkes		Benoit	2	34.30	19-Oct-05	19-Oct-16	$800.00	100% NGM	0.0	
4203164	Bourkes		Benoit	16	258.40	19-Oct-05	19-Oct-15	$6,400.00	100% NGM	0.0	
4203165	Bourkes		Benoit	5	76.50	19-Oct-05	19-Oct-15	$2,000.00	100% NGM	0.0	
4206294	Bourkes		Benoit	6	102.81	19-Oct-05	19-Oct-16	$2,400.00	100% NGM	0.0	
4206298	Bourkes		Benoit	8	125.48	19-Oct-05	19-Oct-15	$3,200.00	100% NGM	0.0	
4206299	Bourkes		Maisonville	1	13.85	19-Oct-05	19-Oct-15	$400.00	100% NGM	0.0	
4211719	Bourkes		Maisonville	4	64.58	4-Aug-06	4-Aug-16	$1,600.00	100% NGM	0.0	
4211790	Bourkes		Maisonville	15	246.30	4-Aug-06	4-Aug-15	$6,000.00	100% NGM	0.0	
4211791	Bourkes		Maisonville	13	211.28	4-Aug-06	4-Aug-15	$5,200.00	100% NGM	0.0	

Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
4225661	Bourkes		Benoit	2	32.72	3-Mar-08	3-Mar-16	$800.00	100% NGM	0.0	
4270301	Bourkes		Maisonville	1	16.00	25-Nov-13	25-Nov-15	$400.00	100% NGM	0.0	New
				132	**2129.49**			**$52,800.00**			
737278	Buffonta	Tiger Gold	Garrison	1	15.21	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737279	Buffonta	Tiger Gold	Garrison	1	10.94	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737280	Buffonta	Tiger Gold	Garrison	1	15.98	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737281	Buffonta	Tiger Gold	Garrison	1	8.46	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737282	Buffonta	Tiger Gold	Garrison	1	14.87	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737283	Buffonta	Tiger Gold	Garrison	1	14.50	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737284	Buffonta	Tiger Gold	Garrison	1	16.14	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
737285	Buffonta	Tiger Gold	Garrison	1	8.21	28-Dec-83	28-Dec-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
738838	Buffonta	Perrex Resources	Thackeray	1	3.70	19-Mar-84	31-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
738839	Buffonta	Perrex Resources	Thackeray	1	7.37	19-Mar-84	31-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
738840	Buffonta	Perrex Resources	Thackeray	1	11.63	19-Mar-84	19-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
738841	Buffonta	Perrex Resources	Thackeray	1	11.98	19-Mar-84	19-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
738842	Buffonta	Perrex Resources	Thackeray	1	10.68	19-Mar-84	19-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789850	Buffonta	Perrex Resources	Garrison	1	17.46	21-Feb-84	21-Feb-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789851	Buffonta	Perrex Resources	Garrison	1	16.44	21-Feb-84	21-Feb-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789852	Buffonta	Perrex Resources	Garrison	1	17.64	21-Feb-84	21-Feb-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789859	Buffonta	Tiger Gold	Garrison	1	21.51	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789860	Buffonta	Tiger Gold	Garrison	1	21.05	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000

Golden Bear – Unpatented Claim Status											
Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
789861	Buffonta	Tiger Gold	Garrison	1	22.71	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789862	Buffonta	Tiger Gold	Garrison	1	17.41	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789863	Buffonta	Perrex Resources	Garrison	1	12.39	21-Feb-84	21-Feb-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789864	Buffonta	Perrex Resources	Garrison	1	18.97	21-Feb-84	21-Feb-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789865	Buffonta	Tiger Gold	Garrison	1	17.96	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789866	Buffonta	Tiger Gold	Garrison	1	17.90	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789867	Buffonta	Tiger Gold	Garrison	1	16.49	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
789868	Buffonta	Tiger Gold	Garrison	1	15.28	21-Feb-84	21-Feb-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792304	Buffonta	Tiger Gold	Thackeray	1	10.20	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792305	Buffonta	Tiger Gold	Thackeray	1	10.52	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792306	Buffonta	Tiger Gold	Thackeray	1	12.12	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792307	Buffonta	Tiger Gold	Thackeray	1	12.49	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792308	Buffonta	Tiger Gold	Thackeray	1	10.84	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792310	Buffonta	Tiger Gold	Thackeray	1	10.31	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792311	Buffonta	Tiger Gold	Thackeray	1	10.56	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792312	Buffonta	Tiger Gold	Thackeray	1	12.46	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792313	Buffonta	Tiger Gold	Thackeray	1	7.32	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792314	Buffonta	Tiger Gold	Thackeray	1	16.38	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792315	Buffonta	Tiger Gold	Thackeray	1	12.86	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792316	Buffonta	Tiger Gold	Thackeray	1	11.49	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792317	Buffonta	Tiger Gold	Thackeray	1	11.16	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000

Golden Bear – Unpatented Claim Status

Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
792318	Buffonta	Tiger Gold	Thackeray	1	12.91	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792319	Buffonta	Tiger Gold	Thackeray	1	12.79	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792320	Buffonta	Tiger Gold	Thackeray	1	14.02	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792321	Buffonta	Tiger Gold	Thackeray	1	17.24	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792322	Buffonta	Tiger Gold	Thackeray	1	13.51	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5%	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792323	Buffonta	Tiger Gold	Thackeray	1	10.96	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792324	Buffonta	Tiger Gold	Thackeray	1	9.79	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792325	Buffonta	Tiger Gold	Thackeray	1	9.73	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792326	Buffonta	Tiger Gold	Thackeray	1	11.54	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792327	Buffonta	Tiger Gold	Thackeray	1	10.59	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792328	Buffonta	Tiger Gold	Thackeray	1	10.08	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792329	Buffonta	Tiger Gold	Thackeray	1	11.15	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792330	Buffonta	Tiger Gold	Thackeray	1	13.41	14-Mar-84	14-Mar-16	$400.00	NGM 87.5% / Geopromining Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792331	Buffonta	Perrex Resources	Thackeray	1	13.58	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792332	Buffonta	Perrex Resources	Thackeray	1	10.93	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792334	Buffonta	Perrex Resources	Thackeray	1	9.64	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792335	Buffonta	Perrex Resources	Thackeray	1	9.43	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792336	Buffonta	Perrex Resources	Thackeray	1	10.05	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792337	Buffonta	Perrex Resources	Thackeray	1	10.13	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792338	Buffonta	Perrex Resources	Thackeray	1	9.51	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792339	Buffonta	Perrex Resources	Thackeray	1	10.79	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000

Golden Bear – Unpatented Claim Status											
Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
792340	Buffonta	Perrex Resources	Thackeray	1	12.92	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792341	Buffonta	Perrex Resources	Thackeray	1	13.23	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792343	Buffonta	Perrex Resources	Thackeray	1	9.76	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792344	Buffonta	Perrex Resources	Thackeray	1	10.57	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792345	Buffonta	Perrex Resources	Thackeray	1	10.40	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792346	Buffonta	Perrex Resources	Thackeray	1	12.44	14-Mar-84	14-Mar-16	$255.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792347	Buffonta	Perrex Resources	Thackeray	1	12.90	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
792348	Buffonta	Perrex Resources	Thackeray	1	11.88	14-Mar-84	14-Mar-16	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
803545	Buffonta	Tiger Gold	Thackeray	1	8.21	6-Sep-84	6-Sep-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1 000 000
803546	Buffonta	Tiger Gold	Thackeray	1	7.29	6-Sep-84	6-Sep-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1 000 000
803547	Buffonta	Tiger Gold	Thackeray	1	7.37	6-Sep-84	6-Sep-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1 000 000
803549	Buffonta	Tiger Gold	Thackeray	1	12.27	6-Sep-84	6-Sep-15	$400.00	NGM 87.5% / Geoproming Gold Canada Ltd. 12.5% (1)	3.0	3% NSR to John Perron, 0.5% of which may be purchased for $1 000 000
3003151	Buffonta	Tiger Gold	Garrison	3	30.35	28-Nov-02	28-Nov-15	$1,200.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
4225035	Buffonta	Tiger Gold	Thackeray	5	66.47	8-Feb-08	8-Feb-15	$2,000.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000 On 6 month hold - Due August 8, 2013
4251255	Buffonta		Garrison	10	117.82	29-Mar-10	29-Mar-15	$4,000.00	100% NGM	0.0	NGM Staked
4252123	Buffonta	Tiger Gold	Harker	11	179.73	3-Dec-09	3-Dec-15	$4,400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
4255911	Buffonta	Tiger Gold	Garrison	1	15.97	22-Oct-10	22-Oct-19	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000
4255913	Buffonta	Tiger Gold	Garrison	1	10.10	8-Oct-10	8-Oct-15	$400.00	100% NGM	3.0	3% NSR to John Perron, 0.5% of which 05 be purchased for $1 000 000

Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
4257258	Buffonta		Thackeray	1	15.32	17-Aug-12	17-Aug-15	$400.00	100% NGM	0.0	NGM Staked
4257259	Buffonta		Thackeray	1	10.65	18-Sep-12	18-Sep-15	$400.00	100% NGM	0.0	NGM Staked
4258168	Buffonta		Thackeray	1	9.47	6-Sep-12	6-Sep-15	$400.00	100% NGM	0.0	NGM Staked
4258170	Buffonta		Thackeray	2	16.87	18-Sep-12	18-Sep-15	$800.00	100% NGM	0.0	NGM Staked
4258173	Buffonta		Thackeray	3	36.79	18-Sep-12	18-Sep-15	$1,200.00	100% NGM	0.0	NGM Staked
4259439	Buffonta		Garrison	5	82.65	1-Sep-11	1-Sep-15	$2,000.00	100% NGM	0.0	NGM Staked
4269890	Buffonta		Thackeray	9	149.43	18-Sep-12	18-Sep-15	$3,600.00	100% NGM	0.0	NGM Staked
4269891	Buffonta		Thackeray	5	66.59	18-Sep-12	18-Sep-15	$2,000.00	100% NGM	0.0	NGM Staked
4269895	Buffonta		Garrison	2	24.79	30-Oct-12	30-Oct-15	$800.00	100% NGM	0.0	NGM Staked
4270547	Buffonta		Garrison	1	6.13	1-Jun-12	1-Jun-16	$400.00	100% NGM	0.0	NGM Staked
4270548	Buffonta		Garrison	1	16.09	13-Jun-12	13-Jun-15	$400.00	100% NGM	0.0	NGM Staked
4270549	Buffonta		Garrison	1	5.27	1-Jun-12	1-Jun-16	$400.00	100% NGM	0.0	NGM Staked
				135	**1763.13**			**$53,855.00**			
4245888	Collins Lake		Garrison	2	26.08	20-Aug-10	20-Aug-17	$800.00	100% NGM	0.0	NGM Staked
4257257	Collins Lake		Garrison	1	10.83	16-Feb-12	16-Feb-20	$400.00	100% NGM	0.0	NGM Staked
4259431	Collins Lake		Garrison	1	7.57	9-May-11	9-May-18	$400.00	100% NGM	0.0	NGM Staked
				4	**44.49**			**$1,600.00**			
4259530	Garrison	Mhakari	Garrison	1	1.14	2-Jun-11	2-Jun-20	$400.00	100% NGM	1.0	1% NSR to Mhakari, buy back option $250 000
4259531	Garrison	Mhakari	Garrison	1	5.27	2-Jun-11	2-Jun-20	$400.00	100% NGM	1.0	1% NSR to Mhakari, buy back option $250 000
4264611	Garrison	Unpatent 4264611	Garrison	1	15.98	3-Jun-11	3-Jun-20	$400.00	100% NGM	1.0	1% NSR to J. Robert and R. Salo, 0.5% can be bought for $250 000
				3	**22.40**			**$1,200.00**			

Golden Bear – Unpatented Claim Status

Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
4245959	Guibord	Champagne	Guibord	6	96.77	17-Apr-09	17-Apr-17	$2,400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4247661	Guibord	Champagne	Guibord	6	95.87	23-Mar-09	23-Mar-17	$2,400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4247662	Guibord	Champagne	Guibord	1	15.68	23-Mar-09	23-Mar-17	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4251606	Guibord	Champagne	Guibord	7	112.95	26-Feb-10	26-Feb-17	$2,800.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
				20	**321.26**			**$8,000.00**			
4257280	Harker-Holloway/ Satellite	Harker Claims	Harker	2	21.18	11-Sep-12	11-Sep-18	$800.00	100% NGM	0.0	NGM staked
4258167	Harker-Holloway/ Satellite	Harker Claims	Harker	3	59.46	12-Oct-12	12-Oct-18	$1,200.00	100% NGM	0.0	NGM staked
4258169	Harker-Holloway/ Satellite	Harker Claims	Harker	1	12.92	12-Oct-12	12-Oct-18	$400.00	100% NGM	0.0	NGM staked
4258180	Harker-Holloway/ Satellite	Harker Claims	Marriott	9	184.64	8-Jan-13	8-Jan-15	$3,600.00	100% NGM	0.0	NGM staked
4269897	Harker-Holloway/ Satellite	Harker Claims	Elliott	2	23.72	16-Nov-12	16-Nov-18	$800.00	100% NGM	0.0	NGM Staked
4270306	Harker-Holloway/ Satellite	Harker Claims	Elliott	3	46.99	3-Sep-13	3-Sep-15	$1,200.00	100% NGM	0.0	NGM staked
				20	**348.91**			**$8,000.00**			
1204299	Holloway		Holloway	2	31.15	2-Nov-94	9-Dec-14	$800.00	100% NGM	2.0	Subject to a 2% Net Smelter Return Royalty, 1% of which may be purchased for $1 500 000
				2	**31.15**			**$800.00**			
4227730	Holloway Tailings	Champagne	Holloway	2	22.41	5-Jun-09	5-Jun-14	$800.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000

Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
4227731	Holloway Tailings	Champagne	Holloway	1	13.12	5-Jun-09	5-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4240358	Holloway Tailings	Champagne	Holloway	1	35.02	2-Jun-09	2-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4240364	Holloway Tailings	Champagne	Holloway	1	22.21	2-Jun-09	2-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4240365	Holloway Tailings	Champagne	Holloway	1	16.91	2-Jun-09	2-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4244883	Holloway Tailings	Champagne	Holloway	1	10.05	3-Jun-09	3-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4244884	Holloway Tailings	Champagne	Holloway	1	13.90	3-Jun-09	3-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4244889	Holloway Tailings	Champagne	Holloway	1	9.26	11-Jun-09	11-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4247729	Holloway Tailings	Champagne	Holloway	1	16.49	5-Jun-09	5-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4250562	Holloway Tailings	Champagne	Holloway	1	16.28	5-Jun-09	5-Jun-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
				11	**175.65**			**$4,400.00**			
4211797	Kirana	JV Champagne	Morrisette	4	58.98	15-Oct-07	15-Oct-15	$1,600.00	30% NGM / 70% Champagne Resources	0.0	
4220044	Kirana	JV Champagne	Morrisette	16	227.02	11-Oct-07	11-Oct-15	$6,400.00	30% NGM / 70% Champagne Resources	0.0	
4220094	Kirana	JV Champagne	Morrisette	2	25.17	15-Oct-07	15-Oct-15	$800.00	30% NGM / 70% Champagne Resources	0.0	
4225071	Kirana	JV Champagne	Bernhardt	1	14.84	4-Jun-08	4-Jun-15	$400.00	30% NGM / 70% Champagne Resources	0.0	
4225077	Kirana	JV	Morrisette	3	42.69	15-Oct-	15-Oct-	$1,200.00	30% NGM / 70% Champagne	0.0	

Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
		Champagne				07	15		Resources		
4225395	Kirana	JV Champagne	Lebel	1	15.28	15-Jul-09	15-Jul-15	$400.00	30% NGM / 70% Champagne Resources	0.0	
4225398	Kirana	JV Champagne	Morrisette	13	144.28	15-Oct-07	15-Oct-15	$5,200.00	30% NGM / 70% Champagne Resources	0.0	
4225600	Kirana	JV Champagne	Bernhardt	1	18.91	28-Feb-08	28-Feb-15	$400.00	30% NGM / 70% Champagne Resources	0.0	
4230172	Kirana	JV Champagne	Bernhardt	4	39.50	8-Aug-08	8-Aug-16	$1,600.00	30% NGM / 70% Champagne Resources	0.0	
4240395	Kirana	JV Champagne	Bernhardt	16	243.24	8-Aug-08	8-Aug-16	$6,400.00	30% NGM / 70% Champagne Resources	0.0	
4250929	Kirana	JV Champagne	Lebel	1	16.15	11-Aug-09	11-Aug-14	$351.00	30% NGM / 70% Champagne Resources	0.0	
				62	**846.06**			**$24,751.00**			
4202280	Michaud	Champagne	Michaud	2	32.31	26-Jun-07	26-Jun-15	$800.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4245476	Michaud	Champagne	Michaud	1	14.90	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4248290	Michaud	Champagne	Michaud	1	17.45	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4249289	Michaud	Champagne	Michaud	1	14.85	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4251583	Michaud	Champagne	Michaud	1	16.28	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4251828	Michaud	Champagne	Michaud	1	16.74	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1 000 000
4254416	Michaud	Champagne	Michaud	1	16.78	12-Apr-10	12-Apr-14	$400.00	100% NGM	1.0	1% NSR to Champagne Resources with a 0.5% buy back option for $1

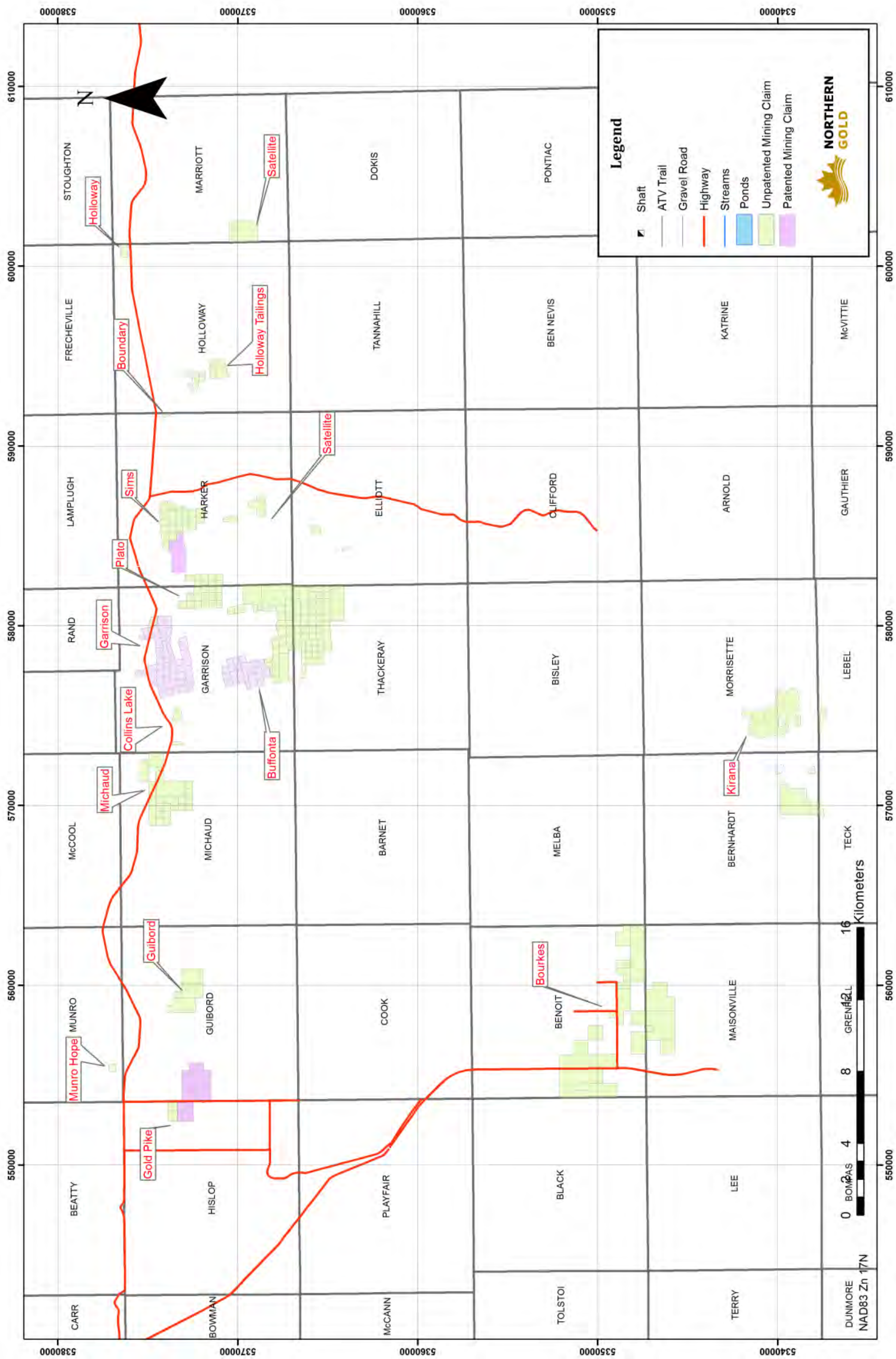
Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
											000 000
4254594	Michaud		Michaud	1	17.03	23-Jun-11	23-Jun-14	$400.00	100% NGM	0.0	NGM staked
4257256	Michaud		Michaud	2	59.29	16-Feb-12	16-Feb-14	$800.00	100% NGM	0.0	NGM staked
4259432	Michaud		Michaud	8	134.79	7-Apr-11	7-Apr-14	$3,200.00	100% NGM	0.0	NGM staked
4259436	Michaud		Michaud	4	66.28	6-Feb-12	6-Feb-15	$1,600.00	100% NGM	0.0	NGM staked
4259440	Michaud		Michaud	3	49.21	7-Apr-11	7-Apr-14	$1,200.00	100% NGM	0.0	NGM staked
4259537	Michaud		Michaud	1	15.65	23-Jun-11	23-Jun-16	$400.00	100% NGM	0.0	NGM staked
4259539	Michaud		Michaud	1	16.24	24-Jun-11	24-Jun-14	$400.00	100% NGM	0.0	NGM staked
4267446	Michaud	Gloster	Michaud	1	16.59	21-Jul-11	21-Jul-14	$400.00	100% NGM	0.0	No NSR
4267447	Michaud	Gloster	Michaud	1	15.55	21-Jul-11	21-Jul-14	$400.00	100% NGM	0.0	No NSR
4267448	Michaud	Gloster	Michaud	1	16.04	21-Jul-11	21-Jul-14	$400.00	100% NGM	0.0	No NSR
4267449	Michaud	Gloster	Michaud	1	16.62	21-Jul-11	21-Jul-14	$400.00	100% NGM	0.0	No NSR
4269892	Michaud		Michaud	2	32.39	22-Jan-13	22-Jan-16	$800.00	100% NGM	0.0	NGM staked
4270965	Michaud	Gloster	Michaud	4	60.85	31-Jul-12	31-Jul-15	$1,600.00	100% NGM	0.0	No NSR
				38	**645.85**			**$15,200.00**			
4270527	Munro Hope Claim		Munro	1	15.85	1-Jun-12	1-Jun-14	$400.00	100% NGM	0.0	NGM staked
				1	**15.85**			**$400.00**			
765892	Plato		Harker	1	13.91	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765893	Plato		Harker	1	14.73	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765894	Plato		Harker	1	13.78	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765895	Plato		Harker	1	12.17	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée

Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
765896	Plato		Harker	1	17.72	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765897	Plato		Harker	1	11.25	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765898	Plato		Harker	1	12.67	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765899	Plato		Harker	1	13.20	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765900	Plato		Harker	1	11.97	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765901	Plato		Garrison	1	11.88	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765902	Plato		Garrison	1	15.38	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765903	Plato		Garrison	1	15.65	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765904	Plato		Garrison	1	18.60	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765905	Plato		Garrison	1	17.95	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765906	Plato		Garrison	1	17.14	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765907	Plato		Garrison	1	18.04	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765908	Plato		Garrison	1	17.67	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765909	Plato		Garrison	1	13.99	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765910	Plato		Garrison	1	13.91	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765911	Plato		Garrison	1	18.21	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765912	Plato		Garrison	1	18.90	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765913	Plato		Garrison	1	18.01	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765914	Plato		Garrison	1	19.17	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
765915	Plato		Garrison	1	14.21	15-Jun-83	15-Jun-15	$400.00	100% NGM	2.0	2% NSR to Géoconseils Jack Stoch Ltée
				24	**370.09**			**$9,600.00**			

Golden Bear – Unpatented Claim Status											
Claim	Claim Group	Sub-Claim Group	Township	Claim Units	Approx Area (ha)	Recording Date	Claim Due Date	Work Required	Ownership	NSR	Comments
684565	Sims		Harker	1	19.44	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684566	Sims		Harker	1	16.84	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684567	Sims		Harker	1	17.60	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684568	Sims		Harker	1	17.90	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684569	Sims		Harker	1	18.68	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684570	Sims		Harker	1	24.79	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684571	Sims		Harker	1	20.07	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684572	Sims		Harker	1	17.95	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684573	Sims		Harker	1	17.40	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684574	Sims		Harker	1	17.50	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684575	Sims		Harker	1	19.54	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684576	Sims		Harker	1	3.47	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684577	Sims		Harker	1	14.56	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684578	Sims		Harker	1	14.45	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684579	Sims		Harker	1	15.08	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684580	Sims		Harker	1	8.68	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684581	Sims		Harker	1	18.55	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684582	Sims		Harker	1	12.41	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684583	Sims		Harker	1	11.91	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684584	Sims		Harker	1	14.30	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684585	Sims		Harker	1	16.22	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000

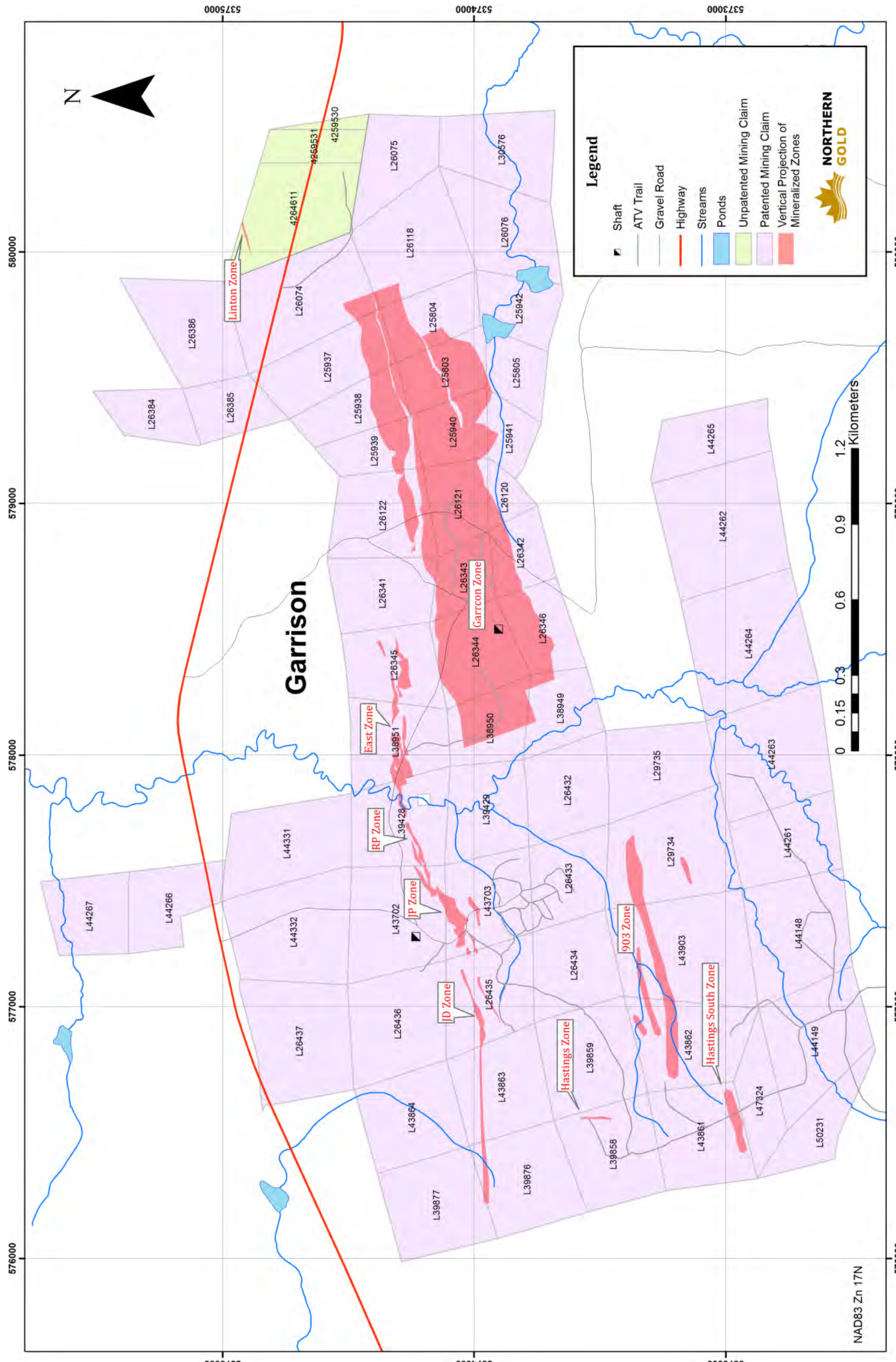
Golden Bear – Unpatented Claim Status											
Claim	**Claim Group**	**Sub-Claim Group**	**Township**	**Claim Units**	**Approx Area (ha)**	**Recording Date**	**Claim Due Date**	**Work Required**	**Ownership**	**NSR**	**Comments**
684586	Sims		Harker	1	19.51	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684587	Sims		Harker	1	20.04	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
684588	Sims		Harker	1	21.49	29-Nov-82	29-Nov-15	$400.00	100% NGM	1.5	1.5% NSR to William Sims Industries Ltd., buy back option for $1 500 000
				24	**398.38**			**$9,600.00**			
4256756	Victory Gold	Gold Pike	Hislop	2	26.05	25-Nov-10	25-Nov-18	$800.00	100% NGM	2.0	Subject to a 2% Net Smelter Return Royalty, 1% of which 05 be purchased for $1 000 000
4258975	Victory Gold	Gold Pike	Hislop	2	31.25	25-Nov-10	25-Nov-18	$800.00	100% NGM	2.0	Subject to a 2% Net Smelter Return Royalty, 1% of which 05 be purchased for $1 000 000
				4	**57.31**			**$1,600.00**			

(1) As per Buffonta purchase agreement Northern Gold holds 100% of these claims however title transfer from Geoproming is pending



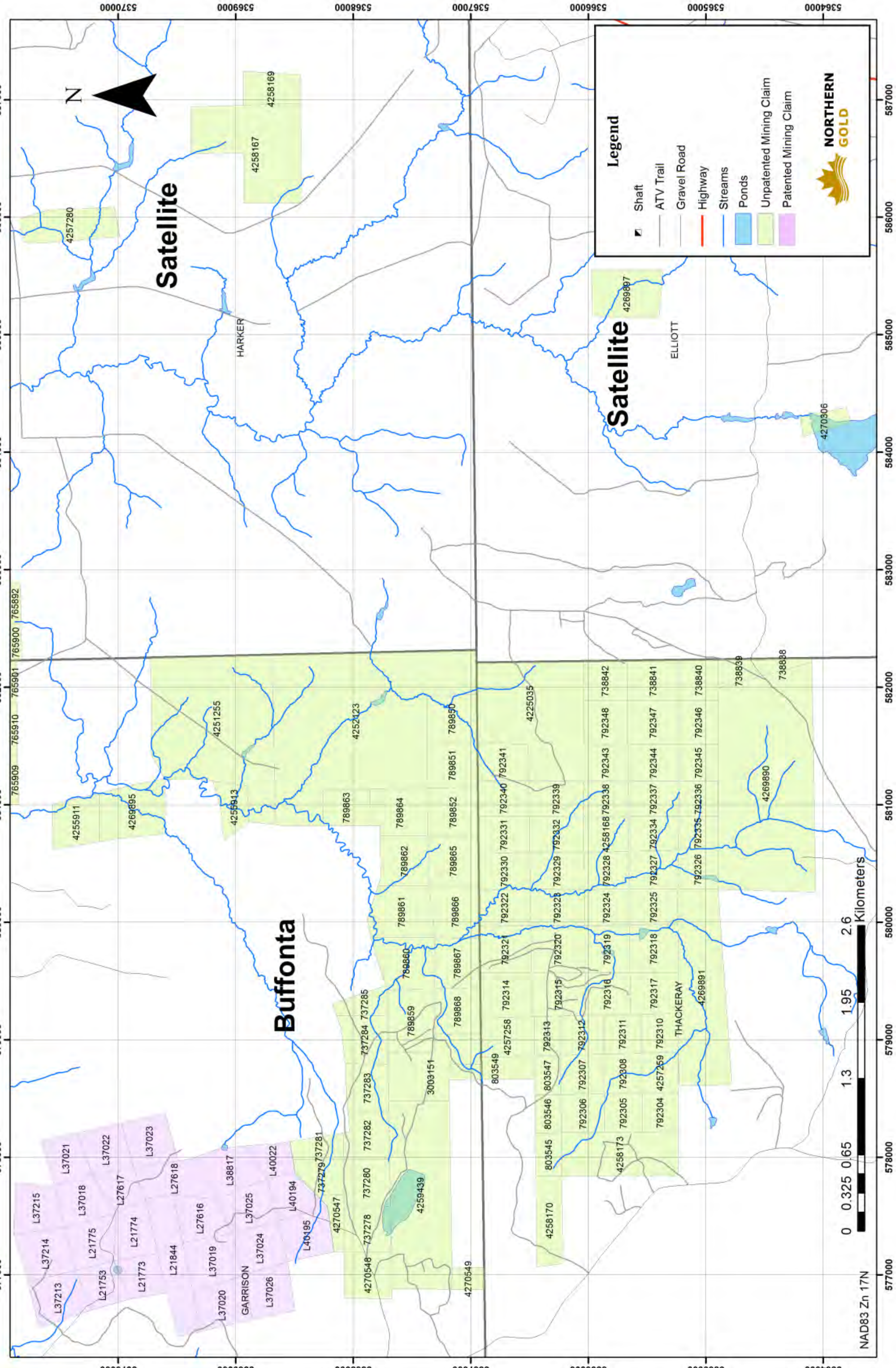
Source: Northern Gold, 2014

Location of Golden Bear Properties



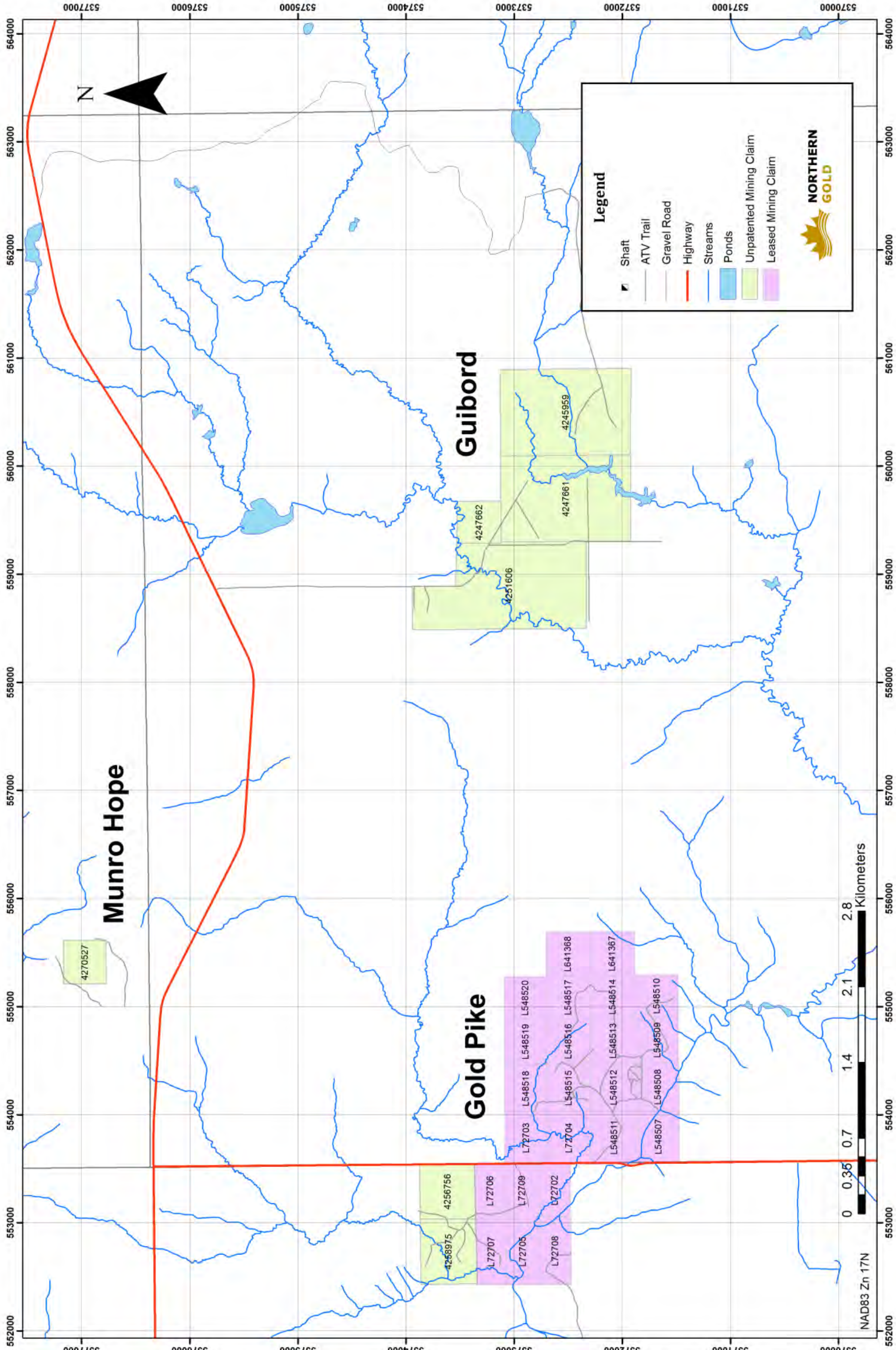
Source: Northern Gold, 2014

Garrison Property Claim Map



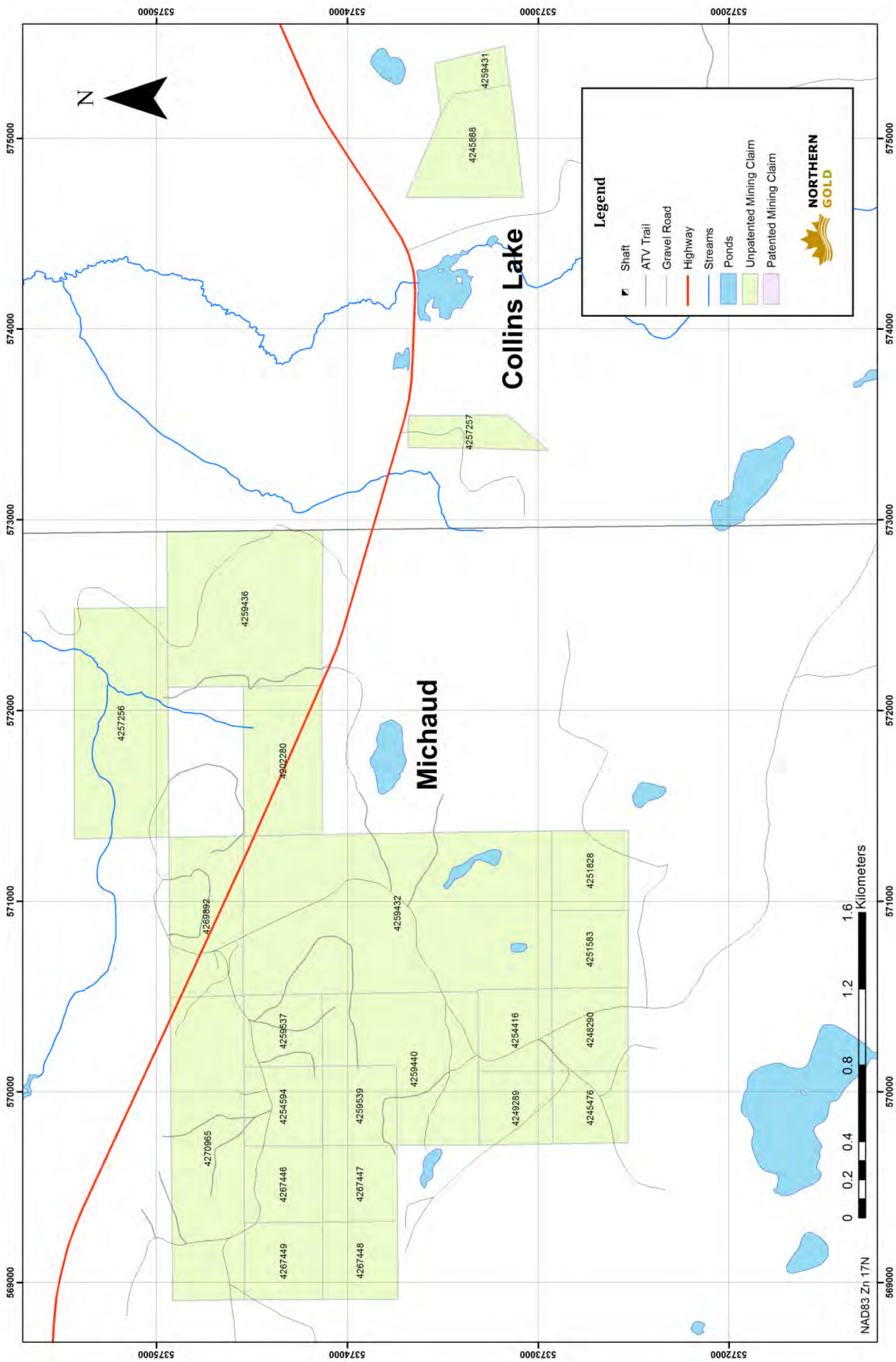
Source: Northern Gold, 2014

Buffonta Property and Satellite Property Claim Map



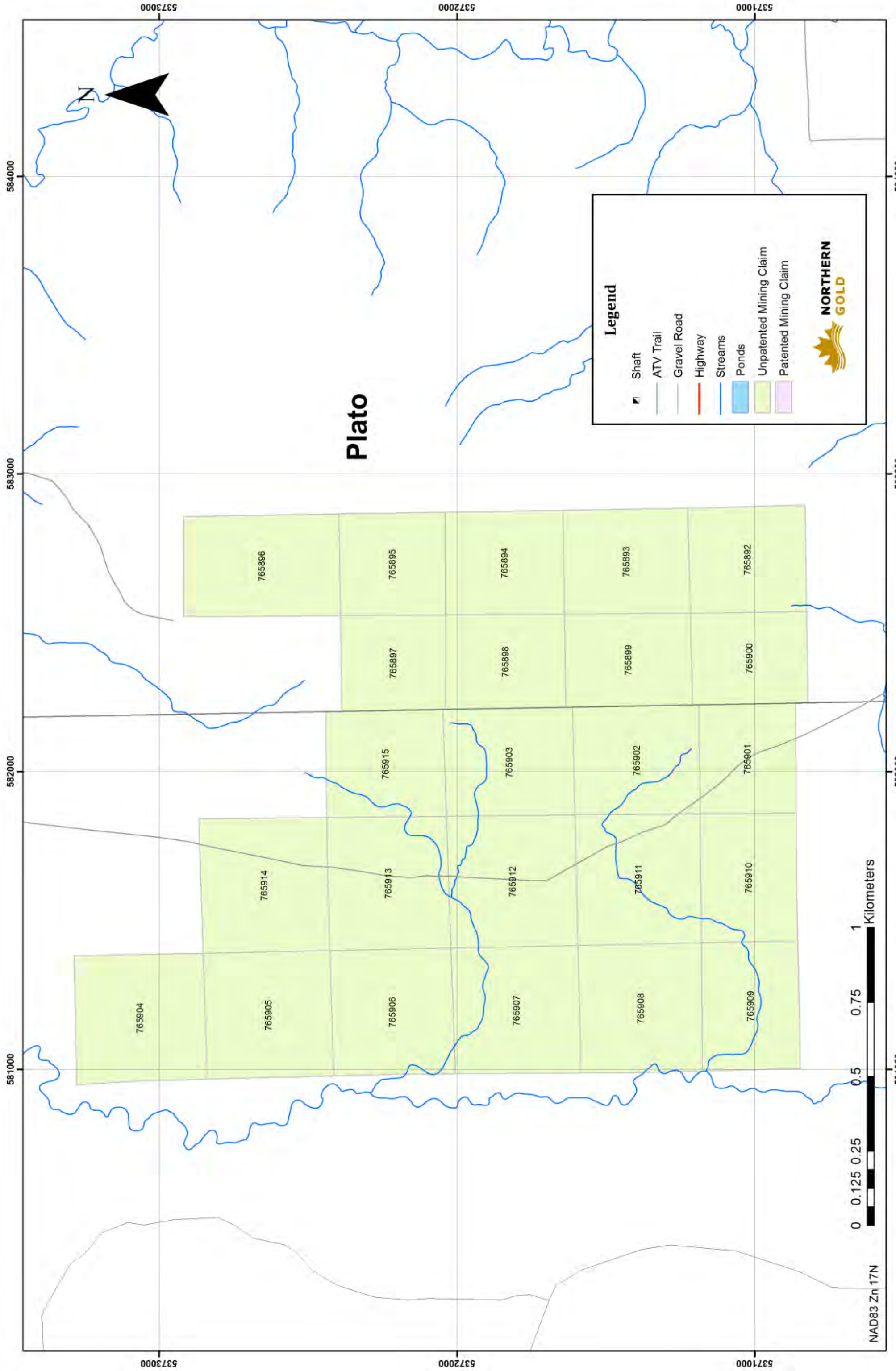
Source: Northern Gold, 2014

Gold PikeProperty, Munro Hope Property, and Guibord Property Claim Map



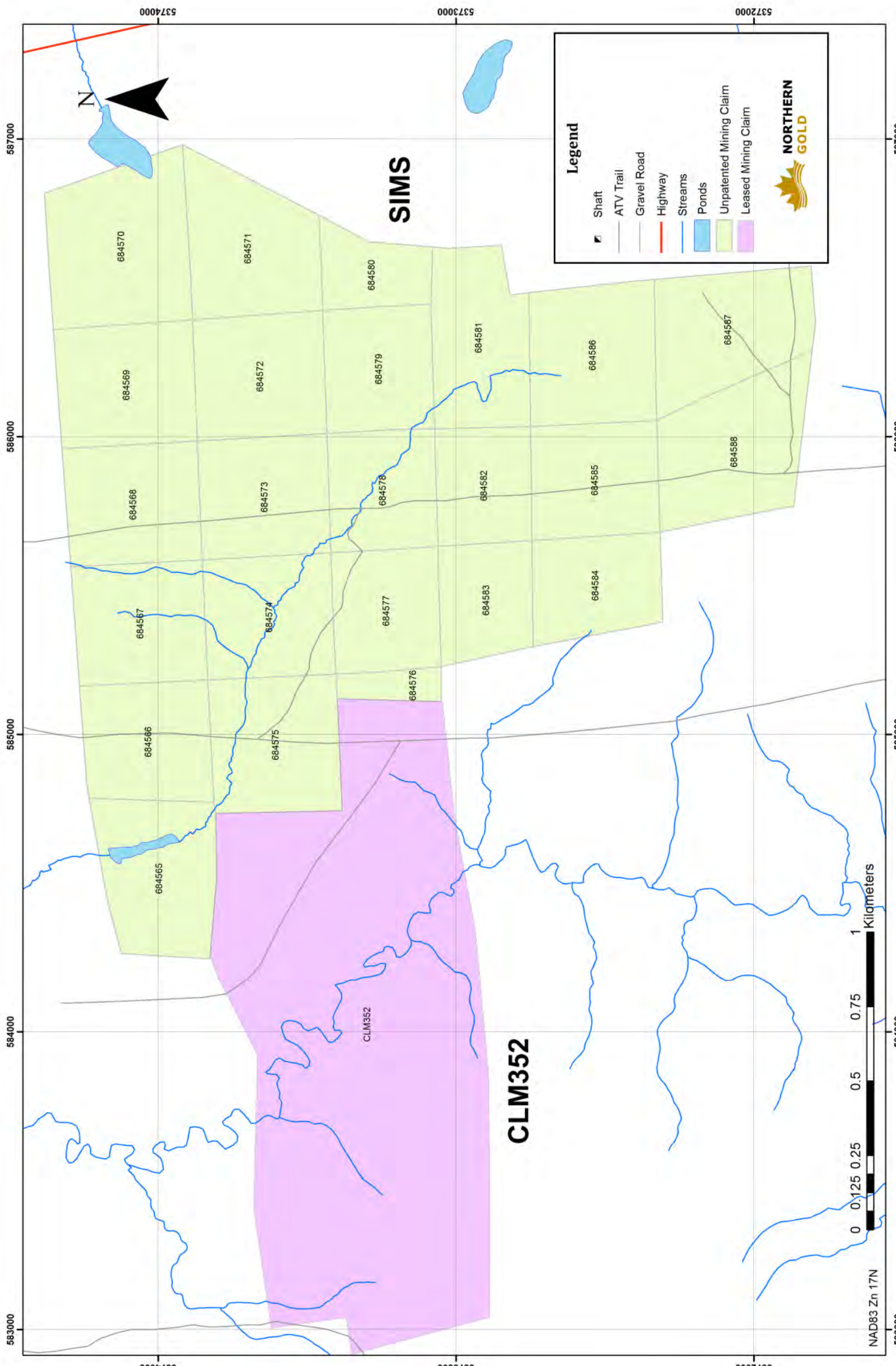
Source: Northern Gold, 2014

Michaud Property and Collins Lake Property Claim Map



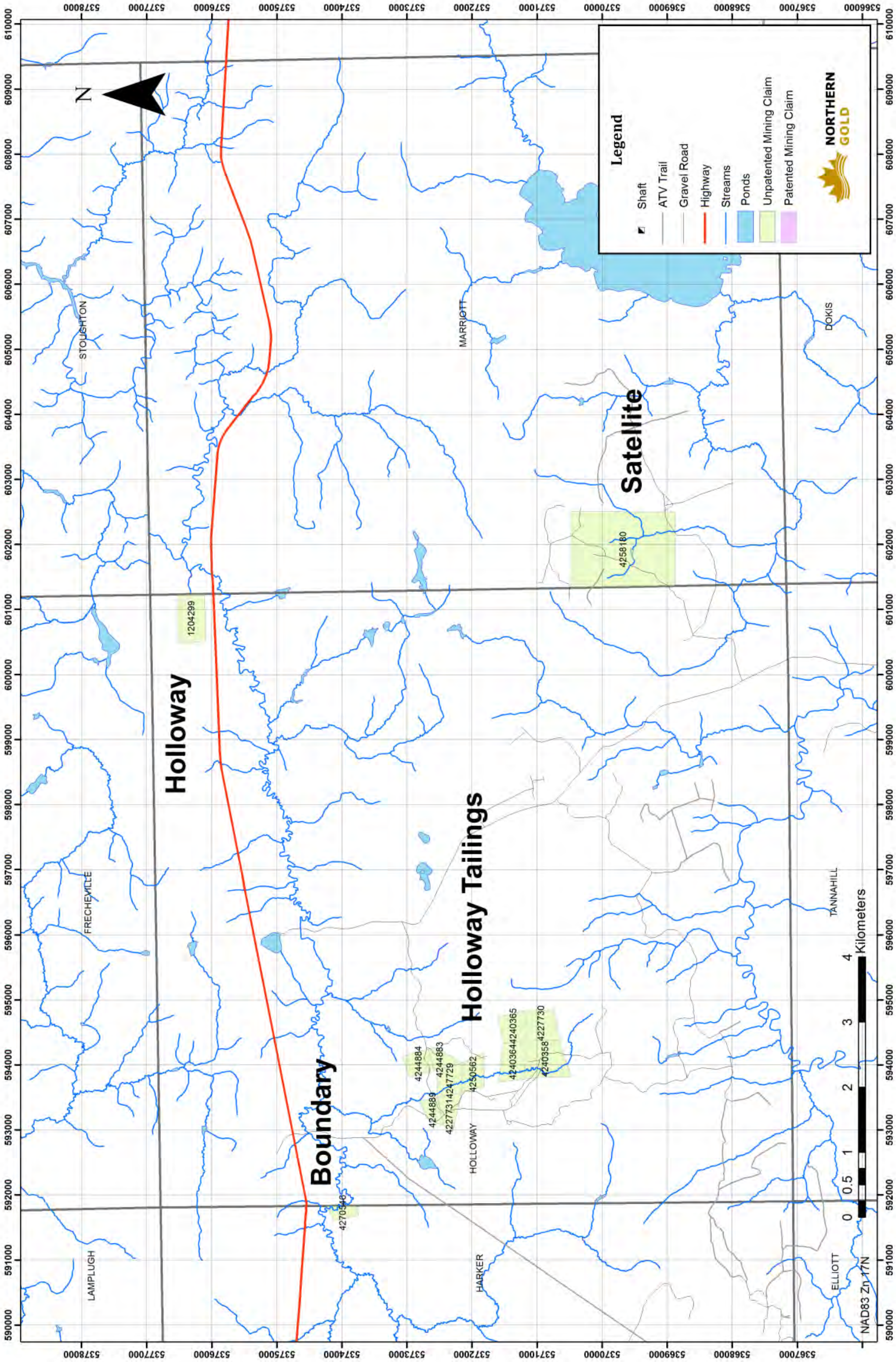
Source: Northern Gold, 2014

Plato Property Claim Map



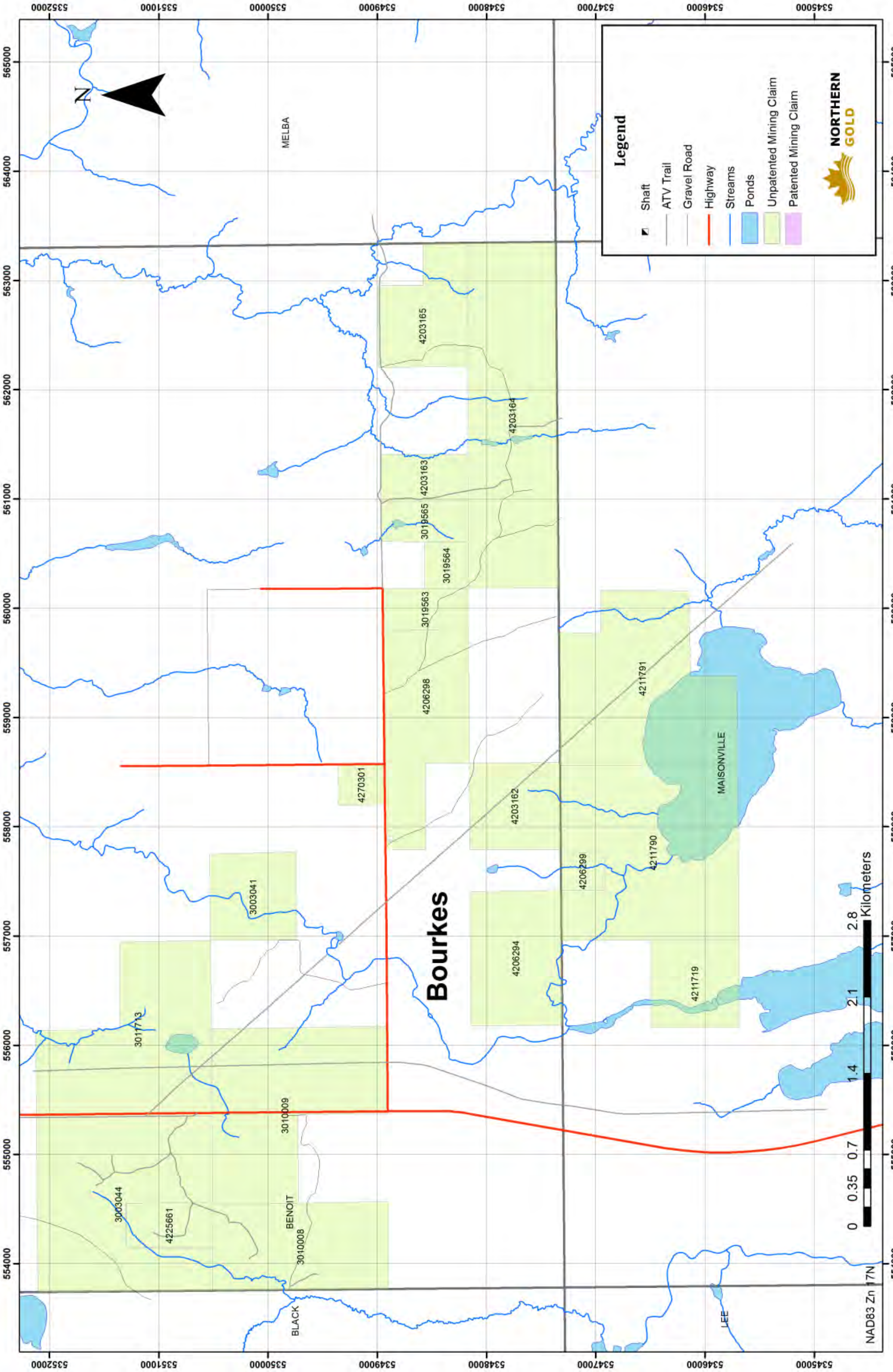
Source: Northern Gold, 2014

Sims Property and CLM352 Property Claim Map



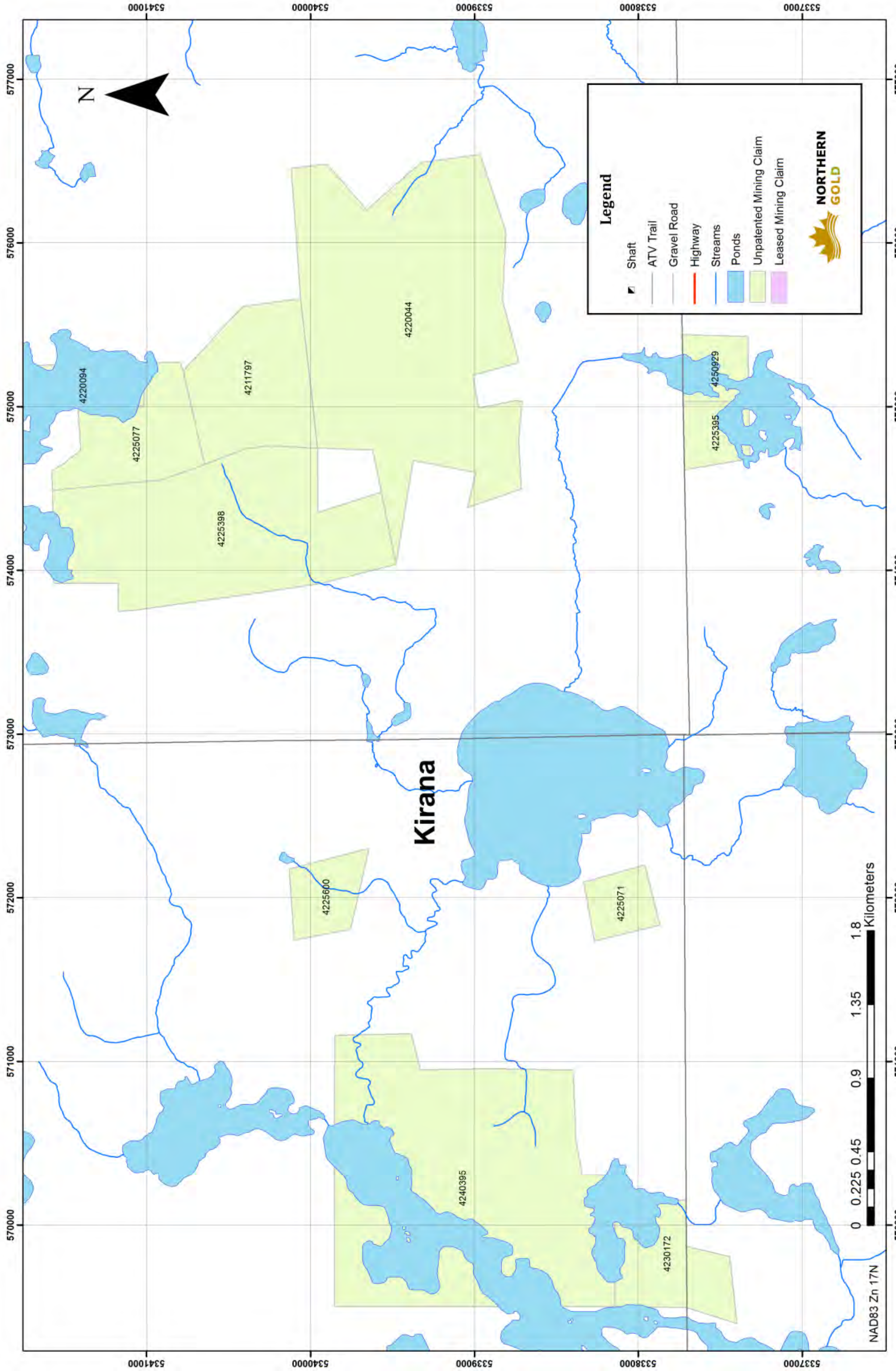
Source: Northern Gold, 2014

Boundary, Holloway, Holloway Tailings and Satellite Properties Claim Map



Source: Northern Gold, 2014

Bourkes Property Claim Map



Source: Northern Gold, 2014

Kirana Property Claim Map

APPENDIX B

Diamond Drill Holes used in 2014 Garrcon and Jonpol Resource Estimate Updates

DDH ID	Zone	Company	Year	UTM East NAD 83	UTM North NAD 83	Elev m	Length m	Dip	Azimuth	Core Diameter
GD85-1	Garrcon	Cominco	1985	578598.94	5374063.34	305.69	110.05	-50.00	350.00	BQ
GD85-2	Garrcon	Cominco	1985	578627.22	5373754.26	289.00	93.88	-58.00	360.00	BQ
GD85-3	Garrcon	Cominco	1985	579034.29	5374167.64	301.61	111.00	-45.00	210.00	BQ
GD85-4	Garrcon	Cominco	1985	578573.75	5373880.43	292.48	144.30	-60.00	155.00	BQ
GD85-5	Garrcon	Cominco	1985	578586.34	5373986.75	302.28	160.02	-61.00	5.00	BQ
B-86-1	Garrcon	Jonpol	1986	579105.50	5374209.26	303.50	108.20	-50.00	340.00	BQ
B-86-2	Garrcon	Jonpol	1986	579394.08	5374315.77	304.80	144.78	-50.00	340.00	BQ
B-86-4	Garrcon	Jonpol	1986	579629.18	5374382.99	308.40	106.68	-45.00	340.00	BQ
B-86-5	Garrcon	Jonpol	1986	579662.55	5374149.95	304.00	106.68	-45.00	340.00	BQ
GAR-20	Garrcon	Cominco	1986	578324.89	5373874.58	300.39	275.84	-45.00	148.00	BQ
GAR-21	Garrcon	Cominco	1986	578235.71	5373860.22	290.10	142.34	-45.00	152.00	BQ
GAR-22	Garrcon	Cominco	1986	578692.60	5374021.21	309.50	282.55	-45.00	150.00	BQ
GD86-10	Garrcon	Cominco	1986	578634.02	5373936.80	299.98	256.85	-45.50	160.00	BQ
GD86-11	Garrcon	Cominco	1986	578273.50	5374000.05	300.81	180.31	-45.50	160.00	BQ
GD86-12	Garrcon	Cominco	1986	578558.82	5374014.65	303.39	165.56	-45.00	340.00	BQ
GD86-13	Garrcon	Cominco	1986	578668.41	5374077.14	309.50	181.02	-45.00	340.00	BQ
GD86-14	Garrcon	Cominco	1986	578417.73	5373929.42	300.90	300.41	-45.00	160.00	BQ
GD86-15	Garrcon	Cominco	1986	578804.84	5374021.21	305.58	273.92	-45.00	160.00	BQ
GD86-16	Garrcon	Cominco	1986	578538.41	5373987.58	302.39	115.49	-45.00	340.00	BQ
GD86-17	Garrcon	Cominco	1986	578438.22	5374149.48	298.63	198.12	-45.00	160.00	BQ
GD86-18	Garrcon	Cominco	1986	578419.16	5374103.68	299.50	131.12	-45.00	160.00	BQ
GD86-19	Garrcon	Cominco	1986	578494.95	5374011.01	302.50	95.31	-45.00	345.00	BQ
GD86-6	Garrcon	Cominco	1986	578630.18	5374088.53	302.60	129.95	-56.00	340.00	BQ
GD86-7	Garrcon	Cominco	1986	578539.17	5374225.52	299.31	259.08	-49.00	160.00	BQ
GD86-8	Garrcon	Cominco	1986	578576.96	5374054.71	304.50	129.54	-50.00	340.00	BQ
GD86-9	Garrcon	Cominco	1986	578479.46	5373928.86	302.00	279.98	-45.00	160.00	BQ
COQ87-33	Garrcon	Moneta	1987	579145.44	5374100.87	297.00	29.57	-50.00	340.00	BQ
COQ87-34	Garrcon	Moneta	1987	579143.15	5374100.03	297.00	306.63	-50.00	340.00	BQ
COQ87-35	Garrcon	Moneta	1987	579385.71	5374180.27	305.05	460.25	-51.10	152.72	BQ
COQ87-36	Garrcon	Moneta	1987	579605.88	5374089.53	303.50	269.75	-50.00	160.00	BQ
COQ87-37	Garrcon	Moneta	1987	579666.95	5374139.63	303.90	324.92	-50.00	160.00	BQ
GAR-23	Garrcon	Cominco	1987	578867.19	5374079.41	304.39	303.89	-45.00	150.00	BQ
GAR-24	Garrcon	Cominco	1987	578975.65	5374059.38	295.25	233.78	-45.00	150.00	BQ
GAR-25B	Garrcon	Cominco	1987	579060.31	5374094.53	301.69	178.92	-45.00	155.00	BQ
GAR-47	Garrcon	Cominco	1987	578483.61	5374027.66	301.16	529.86	-52.00	340.00	BQ
GAR-48	Garrcon	Cominco	1987	578541.72	5374055.03	303.50	674.43	-52.00	340.00	BQ
GAR-49	Garrcon	Cominco	1987	578803.13	5374154.94	304.78	470.06	-50.00	336.00	BQ
GAR-50	Garrcon	Cominco	1987	578992.32	5374179.66	301.70	474.88	-50.00	336.00	BQ
GAR-52	Garrcon	Cominco	1987	578499.25	5373923.68	304.02	213.94	-45.00	337.00	BQ
GAR-55	Garrcon	Cominco	1987	578523.31	5373949.64	302.00	228.94	-45.00	340.00	BQ
GAR-56	Garrcon	Cominco	1987	578560.72	5373932.63	301.39	197.57	-45.00	337.00	BQ
GAR-57	Garrcon	Cominco	1987	578588.78	5373944.96	300.28	186.96	-45.00	345.00	BQ
GAR-59	Garrcon	Cominco	1987	578610.76	5373999.41	301.00	152.95	-45.00	340.00	BQ
GAR-61	Garrcon	Cominco	1987	578639.16	5373991.94	303.50	183.95	-45.00	337.00	BQ
GAR-63	Garrcon	Cominco	1987	578457.68	5373948.72	304.62	167.98	-45.00	340.00	BQ
GAR-74	Garrcon	Cominco	1988	578581.88	5374155.90	304.31	165.96	-50.00	250.00	BQ
GAR-75	Garrcon	Cominco	1988	578648.88	5373971.00	303.87	271.42	-55.00	340.00	BQ
GAR-76	Garrcon	Cominco	1988	578652.40	5374036.99	304.30	154.96	-50.00	340.00	BQ
MG96-01	Garrcon	Moneta	1996	580017.81	5374349.79	298.80	264.00	-45.00	180.00	BQ
MG96-02	Garrcon	Moneta	1996	579852.45	5374209.22	304.40	222.00	-55.00	180.00	BQ
MG96-03	Garrcon	Moneta	1996	580020.73	5374319.59	299.80	210.00	-45.00	360.00	BQ
MG96-04	Garrcon	Moneta	1996	579234.32	5374172.69	305.90	186.00	-45.00	180.00	BQ
C06-01	Garrcon	ValGold	2006	578654.25	5373903.70	291.80	383.00	-44.50	342.20	BQ
C06-02	Garrcon	ValGold	2006	578701.10	5374076.92	308.41	461.00	-44.60	271.95	BQ
C06-03	Garrcon	ValGold	2006	578701.24	5374077.96	308.34	254.00	-54.40	337.93	BQ
C06-04	Garrcon	ValGold	2006	578652.65	5373906.10	292.00	326.35	-45.10	331.30	BQ
C06-05	Garrcon	ValGold	2006	578543.80	5373847.49	290.00	45.00	-45.00	330.00	BQ
C06-05A	Garrcon	ValGold	2006	578543.80	5373847.49	290.00	47.00	-50.00	330.00	BQ
C06-05B	Garrcon	ValGold	2006	578543.80	5373847.49	290.00	497.00	-50.00	324.00	BQ
C06-06X	Garrcon	ValGold	2006	578583.00	5373884.00	298.00	455.00	-44.90	338.10	BQ
C06-07	Garrcon	ValGold	2006	578574.63	5374063.14	305.00	422.00	-44.70	151.40	BQ
C06-08	Garrcon	ValGold	2006	578430.81	5374014.52	303.25	422.00	-43.00	159.70	BQ
C06-09	Garrcon	ValGold	2006	578703.77	5373934.24	293.50	131.00	-45.10	338.60	BQ
C07-01	Garrcon	ValGold	2007	578701.07	5373786.85	286.00	499.00	-48.60	326.50	BQ

C07-02	Garrcon	ValGold	2007	578771.92	5373730.85	288.00	500.00	-46.60	337.40	BQ
C07-03	Garrcon	ValGold	2007	578617.92	5373815.76	290.00	512.00	-56.10	333.00	BQ
C07-04	Garrcon	ValGold	2007	578570.65	5373784.88	288.00	581.00	-57.00	340.00	BQ
C07-05	Garrcon	ValGold	2007	579035.01	5374058.07	299.00	269.00	-88.00	340.00	BQ
GAR-09-01	Garrcon	Northern	2009	578626.43	5373997.20	304.38	177.00	-40.50	343.50	NQ
GAR-09-02	Garrcon	Northern	2009	578664.34	5373880.92	289.91	350.00	-44.60	339.20	NQ
GAR-09-03	Garrcon	Northern	2009	578594.19	5373944.90	298.65	80.00	-43.70	159.80	NQ
GAR-09-03A	Garrcon	Northern	2009	578598.55	5373936.29	298.00	198.00	-43.70	154.30	NQ
GAR-09-04	Garrcon	Northern	2009	578503.98	5373962.35	304.94	291.00	-42.60	156.00	NQ
GAR-09-05	Garrcon	Northern	2009	578531.68	5373968.01	304.37	288.00	-45.60	162.50	NQ
GAR-09-06	Garrcon	Northern	2009	578661.12	5373952.70	300.78	189.00	-45.30	170.40	NQ
GAR-09-07	Garrcon	Northern	2009	578653.33	5373972.99	301.73	83.00	-45.20	165.90	NQ
GAR-09-08	Garrcon	Northern	2009	578624.10	5373950.47	298.82	237.00	-45.30	340.80	NQ
GAR-09-09	Garrcon	Northern	2009	578614.93	5374026.61	304.12	150.00	-45.40	343.40	NQ
GAR-09-10	Garrcon	Northern	2009	578955.96	5374116.68	292.57	293.00	-45.00	162.50	NQ
GAR-10-11	Garrcon	Northern	2010	578670.99	5373929.01	295.66	129.00	-44.00	161.60	NQ
GAR-10-12	Garrcon	Northern	2010	578648.29	5373970.62	302.07	237.00	-45.40	155.30	NQ
GAR-10-13	Garrcon	Northern	2010	578580.97	5373988.15	304.05	231.00	-44.00	346.60	NQ
GAR-10-14	Garrcon	Northern	2010	578479.55	5373955.29	304.52	324.00	-45.90	162.60	NQ
GAR-10-15	Garrcon	Northern	2010	578590.77	5374020.43	304.14	576.00	-43.59	333.06	[Hole extended from 138.0m to 576.0m=438.0m]
GAR-10-16	Garrcon	Northern	2010	578640.94	5374014.25	304.59	297.00	-44.30	162.20	NQ
GAR-10-17	Garrcon	Northern	2010	578535.57	5373932.61	306.63	261.00	-45.00	166.20	NQ
GAR-10-18	Garrcon	Northern	2010	578573.07	5373990.71	303.99	330.00	-46.50	162.00	NQ
GAR-10-19	Garrcon	Northern	2010	578704.55	5373992.25	309.29	231.00	-45.80	179.20	NQ
GAR-10-20	Garrcon	Northern	2010	578793.78	5374012.52	305.92	351.00	-44.90	241.90	[Hole extended from 75.0m to 351.0m=276.0m]
GAR-10-21	Garrcon	Northern	2010	578776.30	5374014.96	305.47	51.00	-44.70	245.90	NQ
GAR-10-22	Garrcon	Northern	2010	578760.14	5373937.58	290.54	96.00	-45.00	160.00	NQ
GAR-10-23	Garrcon	Northern	2010	578552.85	5373978.22	304.07	336.00	-44.80	158.80	NQ
GAR-10-24	Garrcon	Northern	2010	578526.18	5374017.96	303.68	234.00	-44.59	331.61	[Hole extended from 120.0m to 234.0m=114.0m]
GAR-10-25	Garrcon	Northern	2010	578496.95	5373985.64	304.71	354.00	-44.00	161.50	NQ
GAR-10-26	Garrcon	Northern	2010	578505.04	5373932.63	304.29	291.00	-43.90	156.60	NQ
GAR-10-27	Garrcon	Northern	2010	578505.97	5373822.07	289.16	177.00	-48.50	337.30	NQ
GAR-10-28	Garrcon	Northern	2010	578552.15	5373880.99	293.26	150.00	-58.20	164.90	NQ
GAR-10-29	Garrcon	Northern	2010	578653.37	5373860.56	289.40	351.00	-44.80	343.50	NQ
GAR-10-30	Garrcon	Northern	2010	578689.55	5373970.86	301.95	249.00	-45.80	342.20	NQ
GAR-10-31	Garrcon	Northern	2010	578674.38	5374013.26	305.52	192.00	-45.60	340.30	NQ
GAR-10-32	Garrcon	Northern	2010	578719.82	5373891.33	289.33	339.00	-45.60	341.30	NQ
GAR-10-33	Garrcon	Northern	2010	578706.49	5373928.23	292.32	300.00	-43.40	339.10	NQ
GAR-10-34	Garrcon	Northern	2010	578658.25	5374058.05	304.66	42.00	-45.00	338.20	Hole Abandoned in OB
GAR-10-34B	Garrcon	Northern	2010	578658.25	5374058.05	304.66	43.00	-46.00	338.20	Hole Abandoned in OB
GAR-10-34C	Garrcon	Northern	2010	578658.25	5374058.05	304.66	528.00	-44.91	335.26	[Hole extended from 135m to 528m]
GAR-10-35	Garrcon	Northern	2010	578564.77	5374099.45	301.60	459.00	-44.21	335.16	[Hole extended from 66.0m to 459.0m=393.0m]
GAR-10-36	Garrcon	Northern	2010	578735.21	5373856.00	288.51	300.00	-44.00	340.90	NQ
GAR-10-37	Garrcon	Northern	2010	578744.31	5373822.00	288.01	400.00	-44.76	337.13	[Hole extended from 300.0m to 400.0m=100.0m]
GAR-10-38	Garrcon	Northern	2010	578611.53	5373892.61	291.98	70.00	-45.00	160.00	Hole Abandoned in OB
GAR-10-38A	Garrcon	Northern	2010	578611.53	5373892.61	291.98	126.00	-62.90	155.10	NQ
GAR-10-39	Garrcon	Northern	2010	578600.49	5373850.00	289.47	351.00	-43.30	342.60	[Hole extended from 300.0m to 351.0m=51.0m]
GAR-10-40	Garrcon	Northern	2010	578558.84	5373963.64	303.44	225.00	-44.80	343.40	NQ
GAR-10-41	Garrcon	Northern	2010	578572.50	5373991.40	303.92	225.00	-78.10	160.40	NQ
GAR-10-42	Garrcon	Northern	2010	578517.48	5374013.13	303.87	300.00	-45.00	159.90	NQ
GAR-10-43	Garrcon	Northern	2010	578611.26	5373897.81	292.32	300.00	-44.70	339.80	NQ
GAR-10-44	Garrcon	Northern	2010	578627.55	5373851.79	289.72	330.00	-43.30	340.40	NQ
GAR-10-45	Garrcon	Northern	2010	578528.20	5373910.68	301.93	351.00	-36.10	348.22	NQ
GAR-10-46	Garrcon	Northern	2010	578554.10	5373851.37	289.83	525.00	-45.50	326.83	[Hole extended from 300.0m to 525.0m=225.0m]
GAR-10-47	Garrcon	Northern	2010	578405.43	5374123.97	295.65	234.00	-45.00	160.00	NQ
GAR-10-48	Garrcon	Northern	2010	578384.77	5374168.78	293.45	249.00	-45.00	160.00	NQ
GAR-10-50	Garrcon	Northern	2010	578758.43	5373933.27	290.47	351.00	-45.30	338.60	[Hole extended from 300.0m to 351.0m=51.0m]
GAR-10-51	Garrcon	Northern	2010	578742.88	5373970.58	294.63	300.00	-45.40	343.90	NQ
GAR-10-52	Garrcon	Northern	2010	578727.43	5374033.41	308.92	198.00	-45.80	2.10	NQ
GAR-10-53	Garrcon	Northern	2010	578638.53	5374106.66	302.66	411.00	-44.70	338.50	[Hole extended from 87.0m to 411.0m=324.0m]
GAR-10-54	Garrcon	Northern	2010	578594.94	5374096.69	302.15	81.00	-45.20	341.60	NQ
GAR-10-55	Garrcon	Northern	2010	578791.02	5373978.99	292.29	270.00	-44.40	336.65	NQ
GAR-10-56	Garrcon	Northern	2010	578810.08	5373936.11	288.26	351.00	-45.00	340.00	NQ
GAR-10-57	Garrcon	Northern	2010	578780.28	5374020.80	306.07	213.00	-45.00	340.00	NQ
GAR-10-58	Garrcon	Northern	2010	578766.25	5374061.98	310.19	513.00	-44.68	342.72	[Hole extended from 166.0m to 513.0m]
GAR-11-100	Garrcon	Northern	2011	578392.92	5373773.93	289.19	159.00	-62.92	155.72	NQ
GAR-11-101	Garrcon	Northern	2011	578391.98	5373776.19	289.13	252.00	-49.13	333.33	NQ
GAR-11-102	Garrcon	Northern	2011	578332.67	5373784.99	289.22	102.00	-72.59	154.27	NQ

GAR-11-103	Garrcon	Northern	2011	578322.45	5373816.17	290.70	240.00	-69.87	164.09	NQ
GAR-11-104	Garrcon	Northern	2011	578377.10	5373817.12	290.89	309.00	-60.02	154.20	NQ
GAR-11-105	Garrcon	Northern	2011	578449.03	5373985.56	302.42	615.00	-68.66	333.28	[Hole extended from 420.0m to 614.0m=194.0m]
GAR-11-106	Garrcon	Northern	2011	578410.54	5374091.51	297.47	423.00	-43.89	338.04	[Hole extended from 93.0m to 423.0m=330.0m]
GAR-11-107	Garrcon	Northern	2011	578496.27	5374086.82	300.60	102.00	-44.45	341.76	NQ
GAR-11-108	Garrcon	Northern	2011	578537.61	5374108.34	300.78	75.00	-44.94	335.82	NQ
GAR-11-109	Garrcon	Northern	2011	578477.60	5374128.31	298.15	396.00	-44.83	336.41	[Hole extended from 51.0m to 396.0m=345.0m]
GAR-11-110	Garrcon	Northern	2011	578759.88	5373933.92	290.36	402.00	-79.01	338.22	NQ
GAR-11-111	Garrcon	Northern	2011	578774.23	5373887.31	288.08	501.00	-81.56	333.34	NQ
GAR-11-112	Garrcon	Northern	2011	578788.55	5373843.08	286.36	408.00	-81.23	329.58	NQ
GAR-11-113	Garrcon	Northern	2011	578790.76	5373979.56	292.49	421.71	-89.35	54.36	NQ
GAR-11-114	Garrcon	Northern	2011	578810.62	5373936.39	288.20	837.00	-87.14	70.17	[Hole extended from 463.61 to 837.0m]
GAR-11-115	Garrcon	Northern	2011	578827.34	5373890.24	286.13	462.00	-88.38	245.32	NQ
GAR-11-116	Garrcon	Northern	2011	578849.20	5373977.53	288.21	450.00	-89.54	71.49	NQ
GAR-11-117	Garrcon	Northern	2011	578862.31	5373932.85	286.00	537.00	-88.69	29.91	NQ
GAR-11-118	Garrcon	Northern	2011	578882.75	5373887.25	283.93	504.00	-87.65	158.70	NQ
GAR-11-119	Garrcon	Northern	2011	578919.30	5373920.81	284.26	618.00	-89.30	110.43	NQ
GAR-11-120	Garrcon	Northern	2011	578341.64	5373762.10	289.01	216.00	-48.34	339.07	NQ
GAR-11-121	Garrcon	Northern	2011	578376.16	5373819.55	290.95	537.00	-46.89	338.70	[Hole extended from 378.0m to 537.0m=159.0m]
GAR-11-122	Garrcon	Northern	2011	578830.00	5374029.00	304.00	420.00	-90.00	0.00	[Temp.]
GAR-11-123	Garrcon	Northern	2011	578874.68	5374053.96	300.62	438.00	-89.84	78.04	NQ
GAR-11-124	Garrcon	Northern	2011	578905.05	5373968.18	285.12	534.00	-88.92	357.84	NQ
GAR-11-125	Garrcon	Northern	2011	578953.56	5373983.94	285.54	573.00	-89.25	30.00	NQ
GAR-11-126	Garrcon	Northern	2011	578935.82	5374032.04	287.84	438.00	-87.31	24.42	NQ
GAR-11-130	Garrcon	Northern	2011	579138.00	5374210.00	301.50	285.00	-45.00	160.00	[Temp.]
GAR-11-131	Garrcon	Northern	2011	579194.59	5374201.14	302.47	456.00	-45.59	157.49	[Hole extended from 276.0m to 456.0m=180.0m]
GAR-11-132	Garrcon	Northern	2011	579178.84	5374245.93	301.07	309.00	-46.63	161.75	NQ
GAR-11-133	Garrcon	Northern	2011	579122.98	5374254.92	300.20	366.00	-43.53	159.14	NQ
GAR-11-134	Garrcon	Northern	2011	579105.00	5374305.00	298.96	127.30	-45.00	160.00	Hole Abandoned
GAR-11-134A	Garrcon	Northern	2011	579106.60	5374301.22	298.96	399.00	-45.76	155.68	NQ
GAR-11-135	Garrcon	Northern	2011	579162.59	5374295.11	300.38	383.00	-48.44	155.54	NQ
GAR-11-136	Garrcon	Northern	2011	579076.25	5374237.86	300.08	393.00	-45.38	161.91	NQ
GAR-11-137	Garrcon	Northern	2011	579092.21	5374209.39	304.09	366.00	-44.30	163.21	NQ
GAR-11-138	Garrcon	Northern	2011	579102.41	5374153.60	308.08	348.00	-44.95	160.26	[Hole extended from 249.0m to 348.0m=99.0m]
GAR-11-140	Garrcon	Northern	2011	579370.38	5374148.21	300.94	342.00	-44.79	158.59	NQ
GAR-11-141	Garrcon	Northern	2011	579323.76	5374141.64	302.56	393.00	-44.63	173.53	NQ
GAR-11-142	Garrcon	Northern	2011	579415.90	5374177.69	305.77	357.00	-44.58	161.60	NQ
GAR-11-143	Garrcon	Northern	2011	579388.00	5374100.00	287.40	33.00	-45.00	160.00	Hole Abandoned
GAR-11-143A	Garrcon	Northern	2011	579389.51	5374100.75	287.40	279.00	-46.13	168.52	NQ
GAR-11-144	Garrcon	Northern	2011	579339.00	5374089.00	285.88	42.00	-60.00	160.00	Hole Abandoned
GAR-11-144A	Garrcon	Northern	2011	579340.41	5374090.22	285.88	393.00	-59.01	160.88	NQ
GAR-11-145	Garrcon	Northern	2011	579339.21	5374095.66	286.15	459.00	-44.78	339.67	NQ
GAR-11-146	Garrcon	Northern	2011	579295.54	5374063.28	284.32	276.00	-45.04	344.86	NQ
GAR-11-147	Garrcon	Northern	2011	578964.93	5374095.89	290.78	504.00	-89.19	43.55	NQ
GAR-11-148	Garrcon	Northern	2011	578982.27	5374047.65	288.04	459.00	-89.68	82.46	NQ
GAR-11-149	Garrcon	Northern	2011	578999.31	5374001.18	285.37	546.00	-89.33	44.29	NQ
GAR-11-150	Garrcon	Northern	2011	578951.06	5374140.20	296.74	463.87	-88.94	294.45	NQ
GAR-11-151	Garrcon	Northern	2011	578919.85	5374082.82	297.74	483.00	-88.47	130.91	NQ
GAR-11-152	Garrcon	Northern	2011	579054.22	5374151.65	308.31	504.00	-88.58	223.80	NQ
GAR-11-154	Garrcon	Northern	2011	578900.57	5374124.16	303.34	408.00	-89.18	213.21	NQ
GAR-11-160	Garrcon	Northern	2011	579050.74	5374011.50	284.56	483.00	-86.95	7.14	NQ
GAR-11-161	Garrcon	Northern	2011	579106.40	5374009.80	283.84	416.00	-87.97	303.39	NQ
GAR-11-162	Garrcon	Northern	2011	579105.35	5374015.97	283.72	414.00	-43.53	326.95	NQ
GAR-11-163	Garrcon	Northern	2011	579088.95	5374059.94	301.37	540.00	-88.85	232.89	NQ
GAR-11-164	Garrcon	Northern	2011	579579.09	5374183.34	307.06	716.00	-45.94	343.17	NQ
GAR-11-165	Garrcon	Northern	2011	579588.45	5374145.57	306.84	207.00	-46.61	342.59	NQ
GAR-11-166	Garrcon	Northern	2011	579622.18	5374198.23	306.76	246.00	-44.88	343.25	NQ
GAR-11-167	Garrcon	Northern	2011	579637.92	5374149.85	306.31	300.00	-47.57	347.48	NQ
GAR-11-168	Garrcon	Northern	2011	579663.38	5374214.60	306.27	243.00	-44.35	351.48	NQ
GAR-11-169	Garrcon	Northern	2011	579603.69	5374240.07	311.26	174.00	-47.18	163.35	NQ
GAR-11-170	Garrcon	Northern	2011	578916.94	5373954.62	284.51	555.00	-88.13	241.85	NQ
GAR-11-171	Garrcon	Northern	2011	578985.88	5374198.69	299.84	573.00	-88.81	171.95	[Hole extended from 422.0m to 573.0m=151.0m]
GAR-11-172	Garrcon	Northern	2011	579005.78	5374152.26	305.62	478.95	-89.12	28.61	NQ
GAR-11-173	Garrcon	Northern	2011	579031.95	5374198.26	301.47	312.00	-89.34	102.21	NQ
GAR-11-174	Garrcon	Northern	2011	579085.76	5374347.33	297.54	303.00	-45.63	159.88	NQ
GAR-11-175	Garrcon	Northern	2011	579142.44	5374339.70	298.04	399.00	-44.25	163.72	NQ
GAR-11-176	Garrcon	Northern	2011	579244.95	5374204.50	303.73	84.00	-46.87	337.29	NQ
GAR-11-177	Garrcon	Northern	2011	579398.49	5374221.19	307.35	408.00	-45.35	157.40	NQ

GAR-11-178	Garrcon	Northern	2011	579470.94	5374165.93	304.20	321.00	-44.73	339.99	NQ
GAR-11-179	Garrcon	Northern	2011	579454.21	5374216.00	309.30	291.00	-43.10	336.49	NQ
GAR-11-180	Garrcon	Northern	2011	579450.75	5374225.16	309.96	396.00	-46.21	161.10	NQ
GAR-11-181	Garrcon	Northern	2011	579437.52	5374259.30	308.07	210.00	-45.37	340.32	NQ
GAR-11-182	Garrcon	Northern	2011	579491.53	5374259.34	311.13	199.58	-44.83	338.98	NQ
GAR-11-183	Garrcon	Northern	2011	579398.35	5374219.00	307.24	147.00	-45.31	342.10	NQ
GAR-11-190	Garrcon	Northern	2011	579652.92	5374253.68	307.11	150.00	-46.75	333.40	NQ
GAR-11-191	Garrcon	Northern	2011	579634.77	5374304.18	312.66	246.00	-45.74	336.82	NQ
GAR-11-49	Garrcon	Northern	2011	578381.58	5374180.09	293.42	75.00	-64.95	166.48	NQ
GAR-11-59	Garrcon	Northern	2011	578758.58	5373775.70	287.34	513.00	-45.36	342.14	[Hole extended from 330.0m to 513.0m=183.0m]
GAR-11-60	Garrcon	Northern	2011	578627.81	5373766.60	288.17	300.00	-55.99	335.72	NQ
GAR-11-61	Garrcon	Northern	2011	578643.42	5373811.90	288.83	330.00	-46.07	337.22	NQ
GAR-11-62	Garrcon	Northern	2011	578664.47	5373820.92	288.78	399.00	-46.96	332.39	NQ
GAR-11-63	Garrcon	Northern	2011	578560.13	5374035.03	303.68	370.00	-44.31	145.13	NQ
GAR-11-64	Garrcon	Northern	2011	578459.93	5373949.75	303.48	278.00	-44.02	157.09	NQ
GAR-11-65	Garrcon	Northern	2011	578561.02	5373819.39	288.84	327.00	-55.00	340.00	NQ
GAR-11-66	Garrcon	Northern	2011	578586.21	5373741.05	288.14	538.00	-56.44	337.13	[Hole extended from 313.0m to 538.0m=225.0m]
GAR-11-67	Garrcon	Northern	2011	578519.76	5373855.99	290.65	195.00	-60.85	151.63	NQ
GAR-11-68	Garrcon	Northern	2011	578494.12	5373796.16	288.44	175.00	-48.79	342.29	NQ
GAR-11-69	Garrcon	Northern	2011	578478.87	5373820.61	289.10	150.00	-63.06	158.46	NQ
GAR-11-70	Garrcon	Northern	2011	578773.85	5373888.20	287.98	369.00	-46.20	332.13	[Hole extended from 300.0m to 369.0m=69.0m]
GAR-11-71	Garrcon	Northern	2011	578787.71	5373843.90	286.88	62.00	-45.00	336.50	Hole Abandoned in Overburden
GAR-11-71A	Garrcon	Northern	2011	578788.20	5373842.78	286.73	591.00	-46.43	336.48	[Hole extended from 348.0m to 591.0m=243.0m]
GAR-11-72	Garrcon	Northern	2011	578862.40	5373901.51	285.21	345.00	-46.19	340.07	NQ
GAR-11-73	Garrcon	Northern	2011	578883.39	5373951.25	286.31	312.00	-45.83	341.11	NQ
GAR-11-74	Garrcon	Northern	2011	578826.52	5373891.41	286.48	339.00	-51.08	342.36	[Hole extended from 318.0m to 339.0m=21.0m]
GAR-11-75	Garrcon	Northern	2011	578844.51	5373946.20	287.48	291.00	-46.98	335.93	NQ
GAR-11-76	Garrcon	Northern	2011	578898.51	5373910.72	284.92	345.00	-45.88	334.02	NQ
GAR-11-77	Garrcon	Northern	2011	578813.82	5374077.49	308.93	162.00	-46.02	338.21	NQ
GAR-11-78	Garrcon	Northern	2011	578813.51	5374076.99	308.95	336.00	-45.71	164.59	NQ
GAR-11-79	Garrcon	Northern	2011	578829.68	5374034.65	305.65	264.00	-44.79	159.08	NQ
GAR-11-80	Garrcon	Northern	2011	578800.13	5374123.99	307.87	399.00	-44.50	167.24	NQ
GAR-11-81	Garrcon	Northern	2011	578840.63	5373846.36	283.53	432.00	-44.94	334.38	NQ
GAR-11-82	Garrcon	Northern	2011	579051.63	5374006.70	284.44	258.00	-44.00	341.45	NQ
GAR-11-83	Garrcon	Northern	2011	579063.45	5373965.92	282.84	420.00	-45.39	343.74	NQ
GAR-11-84	Garrcon	Northern	2011	579021.26	5374085.52	302.19	171.00	-41.55	344.95	NQ
GAR-11-85	Garrcon	Northern	2011	578833.60	5374020.31	303.50	306.00	-69.81	336.06	NQ
GAR-11-86	Garrcon	Northern	2011	578849.34	5373975.94	288.34	354.00	-65.56	340.32	NQ
GAR-11-87	Garrcon	Northern	2011	578897.44	5373992.29	286.49	363.00	-64.36	334.69	NQ
GAR-11-88	Garrcon	Northern	2011	578940.42	5374013.28	286.76	352.00	-66.23	346.15	NQ
GAR-11-89	Garrcon	Northern	2011	578900.76	5373983.37	286.12	354.00	-60.14	336.91	NQ
GAR-11-90	Garrcon	Northern	2011	578426.12	5373820.53	291.16	222.00	-60.04	152.66	NQ
GAR-11-91	Garrcon	Northern	2011	578456.51	5373885.44	303.61	219.00	-60.48	159.42	NQ
GAR-11-92	Garrcon	Northern	2011	578439.99	5373931.35	303.52	165.00	-58.21	162.18	NQ
GAR-11-93	Garrcon	Northern	2011	578466.34	5374034.77	302.42	564.00	-44.48	340.17	[Hole extended from 177.0m to 564.0m=387.0m]
GAR-11-94	Garrcon	Northern	2011	578410.91	5374008.26	300.49	570.00	-44.45	344.24	[Hole extended from 201.0m to 570.0m=369.0m]
GAR-11-95	Garrcon	Northern	2011	578425.45	5373973.41	302.47	315.00	-59.79	156.88	[Hole extended from 150.0m to 315.0m=165.0m]
GAR-11-96	Garrcon	Northern	2011	578413.49	5373928.27	301.45	327.00	-44.90	340.00	NQ
GAR-11-97	Garrcon	Northern	2011	578505.50	5374057.20	302.14	480.00	-45.12	156.19	NQ
GAR-11-98	Garrcon	Northern	2011	578438.10	5373794.79	289.61	180.00	-61.13	151.30	NQ
GAR-11-99	Garrcon	Northern	2011	578412.68	5373851.38	292.86	327.00	-59.36	155.99	NQ
GAR-12-127	Garrcon	Northern	2012	578870.82	5374065.18	301.87	198.00	-44.95	335.64	NQ
GAR-12-128	Garrcon	Northern	2012	578902.41	5374127.27	303.69	348.00	-44.86	156.90	NQ
GAR-12-129	Garrcon	Northern	2012	578885.45	5374022.18	293.56	504.00	-88.10	51.57	NQ
GAR-12-139	Garrcon	Northern	2012	579154.42	5374162.16	298.62	273.00	-44.76	157.05	NQ
GAR-12-153	Garrcon	Northern	2012	579069.71	5374102.84	306.32	504.00	-88.45	47.53	NQ
GAR-12-155	Garrcon	Northern	2012	579018.27	5374101.04	301.46	351.00	-89.17	277.86	NQ
GAR-12-156	Garrcon	Northern	2012	578841.16	5373922.23	286.43	561.00	-88.17	118.61	NQ
GAR-12-157	Garrcon	Northern	2012	578795.26	5373906.20	287.61	591.00	-88.88	179.00	NQ
GAR-12-158	Garrcon	Northern	2012	578785.39	5373932.86	288.98	391.58	-75.66	154.75	NQ
GAR-12-159	Garrcon	Northern	2012	578702.46	5374008.88	308.13	531.00	-89.33	237.37	NQ
GAR-12-184	Garrcon	Northern	2012	578929.46	5374189.76	300.63	481.70	-89.24	184.68	NQ
GAR-12-185	Garrcon	Northern	2012	578852.80	5374113.35	307.68	177.00	-45.19	342.15	NQ
GAR-12-186	Garrcon	Northern	2012	578891.56	5374008.83	289.18	234.00	-44.12	338.15	NQ
GAR-12-187	Garrcon	Northern	2012	579130.53	5374077.77	298.25	533.13	-88.68	127.82	NQ
GAR-12-188	Garrcon	Northern	2012	579186.87	5374074.50	286.28	526.06	-89.34	80.03	NQ
GAR-12-189	Garrcon	Northern	2012	578964.59	5374244.86	297.37	523.35	-88.32	14.19	NQ
GAR-12-192	Garrcon	Northern	2012	579684.55	5374313.44	308.23	201.00	-45.46	334.32	NQ

GAR-12-193	Garrcon	Northern	2012	579761.15	5374249.99	305.73	225.00	-45.92	349.01	NQ
GAR-12-194	Garrcon	Northern	2012	579358.51	5374188.10	304.43	462.00	-46.23	161.52	NQ
GAR-12-195	Garrcon	Northern	2012	579340.61	5374234.94	304.56	415.78	-44.80	160.21	NQ
GAR-12-196	Garrcon	Northern	2012	579254.61	5374183.68	304.19	486.00	-44.15	156.48	NQ
GAR-12-197	Garrcon	Northern	2012	579270.75	5374131.53	299.80	342.00	-46.50	154.91	NQ
GAR-12-198	Garrcon	Northern	2012	579306.44	5374181.07	303.87	217.00	-43.80	347.85	NQ
GAR-12-199	Garrcon	Northern	2012	578276.35	5373864.49	295.21	558.00	-70.35	347.05	NQ
GAR-12-200	Garrcon	Northern	2012	578966.89	5374095.47	290.74	216.00	-42.81	336.08	NQ
GAR-12-201	Garrcon	Northern	2012	578776.27	5374023.95	306.19	436.80	-88.18	262.58	NQ
GAR-12-202	Garrcon	Northern	2012	578808.55	5374017.05	305.44	441.00	-79.12	340.00	NQ
GAR-12-203	Garrcon	Northern	2012	578808.67	5374016.83	305.58	476.47	-87.73	176.12	NQ
GAR-12-204	Garrcon	Northern	2012	578693.21	5373893.64	290.11	666.00	-88.79	321.09	NQ
GAR-12-205	Garrcon	Northern	2012	578646.45	5373875.83	290.33	642.00	-89.15	330.95	NQ
GAR-12-206	Garrcon	Northern	2012	578658.58	5373987.46	304.29	576.00	-89.12	290.13	NQ
GAR-12-207	Garrcon	Northern	2012	578640.10	5374033.57	304.92	537.00	-89.18	323.48	NQ
GAR-12-208	Garrcon	Northern	2012	578627.84	5373924.87	296.51	561.00	-89.64	343.98	NQ
GAR-12-209	Garrcon	Northern	2012	578606.81	5373837.22	289.02	510.00	-88.84	321.91	NQ
GAR-12-210	Garrcon	Northern	2012	578900.99	5374131.19	303.67	156.00	-43.73	341.41	NQ
GAR-12-211	Garrcon	Northern	2012	578826.70	5373967.03	289.08	459.00	-88.97	349.18	NQ
GAR-12-212	Garrcon	Northern	2012	578722.11	5373958.69	294.09	465.00	-88.47	155.24	NQ
GAR-12-213	Garrcon	Northern	2012	578742.02	5373912.09	290.46	507.00	-87.68	170.39	NQ
GAR-12-215	Garrcon	Northern	2012	578355.06	5373948.76	300.74	492.00	-69.18	330.80	NQ
GAR-12-216	Garrcon	Northern	2012	578308.31	5373929.71	300.02	513.00	-68.34	349.14	NQ
GAR-12-217	Garrcon	Northern	2012	578259.82	5373911.74	295.82	498.00	-67.53	357.63	NQ
GAR-12-218	Garrcon	Northern	2012	578214.69	5373895.40	293.15	513.00	-69.80	352.25	NQ
GAR-12-219	Garrcon	Northern	2012	578324.64	5373882.71	296.72	513.00	-69.21	346.56	NQ
GAR-12-220	Garrcon	Northern	2012	578586.78	5373883.16	292.33	471.00	-89.18	259.64	NQ
GAR-12-222	Garrcon	Northern	2012	578555.73	5373976.10	304.03	477.00	-89.79	243.91	NQ
GAR-12-223	Garrcon	Northern	2012	578541.70	5373867.81	291.43	534.42	-88.83	115.02	NQ
GAR-12-226	Garrcon	Northern	2012	578167.33	5373878.59	288.09	490.00	-70.34	353.15	NQ
GAR-12-227	Garrcon	Northern	2012	578121.04	5373859.00	286.09	552.00	-68.95	341.94	NQ
GAR-12-228	Garrcon	Northern	2012	578371.97	5373899.62	286.09	531.00	-70.00	340.00	NQ
GAR-12-229	Garrcon	Northern	2012	579776.80	5374202.20	305.00	285.00	-45.00	340.00	NQ
GAR-12-230	Garrcon	Northern	2012	579017.82	5374245.30	298.51	558.00	-88.46	326.36	NQ
GAR-12-231	Garrcon	Northern	2012	579066.86	5374267.73	298.83	441.00	-88.41	129.38	NQ
GAR-12-232	Garrcon	Northern	2012	578935.90	5374031.81	288.02	465.06	-71.60	163.65	NQ
GAR-12-233	Garrcon	Northern	2012	578982.26	5374046.36	287.86	360.00	-69.15	163.38	NQ
GAR-12-234	Garrcon	Northern	2012	578413.78	5373928.19	301.33	537.00	-70.38	319.27	NQ
GAR-12-235	Garrcon	Northern	2012	578429.72	5373886.89	300.41	546.00	-70.52	330.91	NQ
GAR-12-236	Garrcon	Northern	2012	578738.07	5373924.32	290.97	573.00	-73.18	161.51	NQ
GAR-12-237	Garrcon	Northern	2012	579111.50	5374281.41	299.35	388.00	-88.13	123.77	NQ
GAR-12-238	Garrcon	Northern	2012	579158.63	5374296.44	300.13	411.00	-88.71	24.23	NQ
GAR-12-239	Garrcon	Northern	2012	579216.69	5374282.39	301.15	459.00	-88.70	282.90	NQ
GAR-12-240	Garrcon	Northern	2012	579826.65	5374217.43	305.49	315.00	-46.26	324.01	NQ
GAR-12-241	Garrcon	Northern	2012	579842.51	5374172.18	305.63	231.00	-48.05	330.24	NQ
GAR-12-242	Garrcon	Northern	2012	579893.51	5374187.66	306.90	297.00	-44.45	330.38	NQ
GAR-12-243	Garrcon	Northern	2012	579895.05	5374184.38	306.89	225.00	-44.21	151.35	NQ
GAR-12-244	Garrcon	Northern	2012	579234.56	5374091.17	286.39	582.00	-89.02	93.85	NQ
GAR-12-245	Garrcon	Northern	2012	579283.07	5374094.83	286.12	599.24	-89.85	7.38	NQ
GAR-12-246	Garrcon	Northern	2012	579232.00	5374091.64	286.32	441.00	-75.43	167.39	NQ
GAR-12-247	Garrcon	Northern	2012	579325.78	5374138.45	301.86	582.00	-88.35	1.95	NQ
GAR-12-248	Garrcon	Northern	2012	579382.62	5374122.47	292.89	552.00	-88.90	5.79	NQ
GAR-12-249	Garrcon	Northern	2012	579429.58	5374139.16	298.51	555.30	-87.82	294.36	NQ
GAR-12-250	Garrcon	Northern	2012	579252.21	5374332.70	301.71	384.00	-89.14	6.18	NQ
GAR-12-251	Garrcon	Northern	2012	578898.14	5373911.08	284.91	199.04	-47.40	337.63	NQ
GAR-12-252	Garrcon	Northern	2012	578801.19	5373880.75	287.17	183.00	-45.86	336.82	NQ
GAR-12-253	Garrcon	Northern	2012	578802.32	5373875.28	287.71	471.00	-46.06	159.57	NQ
GAR-12-254	Garrcon	Northern	2012	578499.12	5373911.25	304.82	550.00	-69.93	331.78	NQ
GAR-12-260	Garrcon	Northern	2012	579476.66	5374155.80	302.96	555.00	-90.00	0.00	NQ
GAR-12-261	Garrcon	Northern	2012	579299.69	5374346.68	302.82	752.36	-61.92	159.66	NQ
GAR-12-262	Garrcon	Northern	2012	579391.77	5374385.79	304.64	608.38	-59.36	155.71	NQ
GAR-12-263	Garrcon	Northern	2012	579485.63	5374419.41	305.82	570.00	-60.00	160.00	NQ
GAR-12-264	Garrcon	Northern	2012	579582.09	5374451.96	306.26	600.00	-60.00	160.00	NQ
GAR-12-266	Garrcon	Northern	2012	579767.00	5374523.00	304.65	582.00	-60.00	160.00	NQ
GAR-12-267	Garrcon	Northern	2012	579955.00	5374592.00	298.10	627.00	-60.00	160.00	NQ
GAR-12-268	Garrcon	Northern	2012	579802.00	5374429.00	302.40	405.00	-60.00	160.00	NQ
GAR-12-270	Garrcon	Northern	2012	579345.72	5374370.65	303.72	438.00	-90.00	0.00	NQ
N87-1	Jonpol	Jonpol	1987	577474.90	5374017.45	287.79	90.22	-50.00	340.00	BQ

N87-10	Jonpol	Jonpol	1987	577125.18	5373926.76	303.46	96.01	-50.00	340.00	BQ
N87-11	Jonpol	Jonpol	1987	577236.19	5373975.72	302.91	215.50	-50.00	340.00	BQ
N87-12	Jonpol	Jonpol	1987	577707.45	5374339.75	284.62	309.98	-50.00	160.00	BQ
N87-13	Jonpol	Jonpol	1987	577290.21	5374003.68	302.06	194.16	-50.00	340.00	BQ
N87-14	Jonpol	Jonpol	1987	577645.70	5374329.92	285.02	193.85	-50.00	160.00	BQ
N87-15	Jonpol	Jonpol	1987	577339.47	5374042.81	300.23	178.92	-50.00	340.00	BQ
N87-16	Jonpol	Jonpol	1987	577588.10	5374309.79	287.33	178.92	-50.00	156.39	BQ
N87-17	Jonpol	Jonpol	1987	577410.13	5374031.71	294.00	203.30	-64.00	340.00	BQ
N87-19	Jonpol	Jonpol	1987	577348.39	5374021.88	299.44	249.35	-50.00	340.00	BQ
N87-2	Jonpol	Jonpol	1987	577390.33	5373987.67	294.83	258.17	-50.00	340.00	BQ
N87-20	Jonpol	Jonpol	1987	577556.05	5374308.20	288.55	313.03	-70.00	160.00	BQ
N87-21	Jonpol	Jonpol	1987	577438.03	5374043.61	292.50	324.92	-70.00	340.00	BQ
N87-22	Jonpol	Jonpol	1987	577472.35	5374272.52	291.88	282.25	-52.00	160.00	BQ
N87-23	Jonpol	Jonpol	1987	577465.44	5374057.38	300.00	299.62	-70.00	340.00	BQ
N87-24	Jonpol	Jonpol	1987	577422.49	5374234.79	290.14	41.76	-50.00	160.00	BQ
N87-25	Jonpol	Jonpol	1987	577491.46	5374072.97	289.50	288.34	-70.00	340.00	BQ
N87-26	Jonpol	Jonpol	1987	577388.65	5374236.85	296.50	271.00	-52.00	160.00	BQ
N87-27	Jonpol	Jonpol	1987	577429.16	5373987.07	291.36	166.12	-70.00	340.00	BQ
N87-28	Jonpol	Jonpol	1987	577438.22	5374205.44	290.47	35.05	-50.00	160.00	BQ
N87-29	Jonpol	Jonpol	1987	577429.16	5373987.07	291.36	388.62	-70.00	340.00	BQ
N87-3	Jonpol	Jonpol	1987	577859.47	5374091.34	283.20	355.70	-50.00	340.00	BQ
N87-30	Jonpol	Jonpol	1987	577350.68	5374171.22	294.80	289.26	-65.00	160.00	BQ
N87-31	Jonpol	Jonpol	1987	577380.54	5374020.51	298.72	324.96	-75.00	340.00	BQ
N87-32	Jonpol	Jonpol	1987	577322.78	5374159.33	297.79	350.52	-65.00	160.00	BQ
N87-33	Jonpol	Jonpol	1987	577326.43	5373996.04	297.39	32.31	-70.00	340.00	BQ
N87-34	Jonpol	Jonpol	1987	577610.75	5374179.85	284.93	39.62	-50.00	340.00	BQ
N87-34A	Jonpol	Jonpol	1987	577610.75	5374179.85	284.93	42.06	-50.00	340.00	BQ
N87-35	Jonpol	Jonpol	1987	577639.97	5374192.17	284.50	32.31	-65.00	340.00	BQ
N87-35A	Jonpol	Jonpol	1987	577638.65	5374191.74	284.50	37.19	-65.00	340.00	BQ
N87-36	Jonpol	Jonpol	1987	577276.45	5373976.39	301.81	209.09	-75.00	340.00	BQ
N87-37	Jonpol	Jonpol	1987	577320.71	5374011.05	300.33	329.18	-74.00	341.11	BQ
N87-38	Jonpol	Jonpol	1987	577239.08	5374123.66	304.04	334.06	-65.00	160.00	BQ
N87-38A	Jonpol	Jonpol	1987	577239.08	5374123.66	304.04	10.36	-60.00	160.00	BQ
N87-4	Jonpol	Jonpol	1987	577542.83	5374055.30	285.60	262.13	-50.00	340.00	BQ
N87-5	Jonpol	Jonpol	1987	577567.94	5374280.29	290.14	248.11	-50.00	160.00	BQ
N87-6	Jonpol	Jonpol	1987	577051.07	5373713.85	303.43	330.10	-50.00	340.00	BQ
N87-7	Jonpol	Jonpol	1987	577629.69	5374290.13	287.85	322.17	-50.00	160.00	BQ
N87-8	Jonpol	Jonpol	1987	577134.30	5373750.64	302.24	309.37	-50.00	340.00	BQ
N87-9	Jonpol	Jonpol	1987	577679.55	5374327.86	285.78	313.03	-50.00	160.00	BQ
N88-100	Jonpol	Jonpol	1988	577653.00	5374003.34	284.68	537.06	-60.00	340.00	BQ
N88-101	Jonpol	Jonpol	1988	577529.51	5373983.68	285.29	431.29	-60.00	340.00	BQ
N88-102	Jonpol	Jonpol	1988	577589.90	5374007.00	286.02	438.00	-62.40	343.61	BQ
N88-103	Jonpol	Jonpol	1988	577546.62	5374024.86	285.99	439.98	-60.30	335.53	BQ
N88-104	Jonpol	Jonpol	1988	577518.44	5374011.63	287.28	367.89	-59.80	338.39	BQ
N88-105	Jonpol	Jonpol	1988	577488.26	5373996.39	288.64	391.97	-58.90	337.43	BQ
N88-106	Jonpol	Jonpol	1988	577460.44	5373984.26	289.84	387.98	-57.70	331.50	BQ
N88-107	Jonpol	Jonpol	1988	577266.51	5373904.57	299.83	428.55	-60.00	340.00	BQ
N88-108	Jonpol	Jonpol	1988	577601.53	5374278.38	288.81	321.87	-65.00	160.00	BQ
N88-109	Jonpol	Jonpol	1988	577601.79	5374278.24	288.92	211.23	-50.00	160.00	BQ
N88-110	Jonpol	Jonpol	1988	577573.89	5374266.34	289.77	203.00	-45.00	160.00	BQ
N88-111	Jonpol	Jonpol	1988	577534.10	5374282.35	292.27	291.39	-60.00	160.00	BQ
N88-112	Jonpol	Jonpol	1988	577382.70	5374250.80	296.00	276.15	-50.00	160.00	BQ
N88-113	Jonpol	Jonpol	1988	577390.47	5374155.21	292.00	123.75	-45.00	160.00	BQ
N88-114	Jonpol	Jonpol	1988	577370.45	5373816.26	295.60	523.95	-50.00	340.00	BQ
N88-115	Jonpol	Jonpol	1988	577362.57	5374143.32	294.01	160.33	-55.00	160.00	BQ
N88-116	Jonpol	Jonpol	1988	577362.57	5374143.32	294.16	181.66	-65.00	160.00	BQ
N88-117	Jonpol	Jonpol	1988	577294.88	5374147.44	299.91	209.09	-55.00	160.00	BQ
N88-118	Jonpol	Jonpol	1988	577294.88	5374147.44	300.11	244.15	-60.00	161.00	BQ
N88-119	Jonpol	Jonpol	1988	577291.97	5374077.37	302.23	105.16	-44.80	157.67	BQ
N88-120	Jonpol	Jonpol	1988	577262.86	5374067.86	303.33	108.51	-45.00	170.00	BQ
N88-121	Jonpol	Jonpol	1988	577262.86	5374067.86	303.25	184.71	-65.00	160.00	BQ
N88-122	Jonpol	Jonpol	1988	577262.86	5374067.86	303.23	212.14	-70.00	124.50	BQ
N88-123	Jonpol	Jonpol	1988	577320.65	5374011.36	300.18	152.10	-60.00	340.00	BQ
N88-124	Jonpol	Jonpol	1988	577320.65	5374011.36	300.18	169.77	-65.00	340.00	BQ
N88-125	Jonpol	Jonpol	1988	577348.39	5374021.88	299.55	152.10	-50.00	341.00	BQ
N88-126	Jonpol	Jonpol	1988	577348.39	5374021.88	299.65	181.97	-60.00	343.00	BQ
N88-127	Jonpol	Jonpol	1988	577346.56	5374103.53	298.29	93.27	-45.00	166.00	BQ
N88-128	Jonpol	Jonpol	1988	577334.67	5374131.43	296.38	120.70	-45.00	163.00	BQ

N88-129	Jonpol	Jonpol	1988	577380.39	5374020.72	298.69	151.79	-47.10	335.65	BQ
N88-130	Jonpol	Jonpol	1988	577382.23	5374019.82	298.73	214.88	-65.00	346.00	BQ
N88-131	Jonpol	Jonpol	1988	577433.05	5374041.05	300.38	199.95	-49.90	338.26	BQ
N88-132	Jonpol	Jonpol	1988	577433.10	5374040.90	300.36	213.97	-53.80	338.17	BQ
N88-133	Jonpol	Jonpol	1988	577433.20	5374040.71	300.39	259.99	-59.00	339.06	BQ
N88-134	Jonpol	Jonpol	1988	577465.35	5374057.59	300.18	170.08	-45.00	336.00	BQ
N88-135	Jonpol	Jonpol	1988	577465.35	5374057.59	300.18	151.49	-55.00	334.50	BQ
N88-136	Jonpol	Jonpol	1988	577362.57	5374143.32	294.34	137.47	-40.00	157.00	BQ
N88-137	Jonpol	Jonpol	1988	577391.02	5374231.27	296.00	196.90	-49.00	160.00	BQ
N88-138	Jonpol	Jonpol	1988	577456.34	5374232.73	290.06	121.92	-54.00	161.00	BQ
N88-139	Jonpol	Jonpol	1988	577487.89	5374081.34	289.60	183.19	-55.00	339.00	BQ
N88-140	Jonpol	Jonpol	1988	577487.89	5374081.34	289.50	242.62	-68.00	331.00	BQ
N88-39	Jonpol	Jonpol	1988	577266.98	5374135.55	302.67	333.45	-62.00	160.00	BQ
N88-40	Jonpol	Jonpol	1988	577297.67	5374148.63	300.08	340.16	-65.00	160.00	BQ
N88-41	Jonpol	Jonpol	1988	577398.24	5374059.62	296.75	203.00	-50.00	340.00	BQ
N88-42	Jonpol	Jonpol	1988	577425.02	5374072.16	296.00	203.00	-49.70	339.40	BQ
N88-43	Jonpol	Jonpol	1988	577450.36	5374090.20	292.89	175.57	-49.10	335.87	BQ
N88-44	Jonpol	Jonpol	1988	577490.25	5374078.17	289.93	184.71	-50.00	339.62	BQ
N88-45	Jonpol	Jonpol	1988	577370.34	5374047.72	298.46	218.24	-50.00	340.00	BQ
N88-46	Jonpol	Jonpol	1988	577127.62	5374072.97	305.79	487.68	-51.70	157.33	BQ
N88-47	Jonpol	Jonpol	1988	577071.77	5374048.00	306.01	619.35	-62.50	160.00	BQ
N88-48	Jonpol	Jonpol	1988	577002.87	5374055.93	307.22	504.75	-60.00	160.00	BQ
N88-49	Jonpol	Jonpol	1988	577429.79	5373908.22	291.05	457.51	-60.00	340.00	BQ
N88-50	Jonpol	Jonpol	1988	577315.68	5374023.73	302.26	172.52	-55.00	341.80	BQ
N88-51	Jonpol	Jonpol	1988	577516.06	5374109.19	287.22	231.34	-49.30	340.18	BQ
N88-52	Jonpol	Jonpol	1988	577538.41	5374118.68	286.68	266.40	-50.50	337.80	BQ
N88-53	Jonpol	Jonpol	1988	577595.04	5374142.72	285.69	257.86	-61.30	339.60	BQ
N88-54	Jonpol	Jonpol	1988	577621.45	5374154.74	284.87	245.67	-60.00	340.00	BQ
N88-55	Jonpol	Jonpol	1988	577650.17	5374167.20	284.29	282.25	-61.10	341.69	BQ
N88-56	Jonpol	Jonpol	1988	577677.65	5374178.36	283.74	288.34	-60.30	336.38	BQ
N88-57	Jonpol	Jonpol	1988	577718.91	5374159.19	283.21	355.40	-60.70	336.46	BQ
N88-58	Jonpol	Jonpol	1988	577745.91	5374173.29	282.86	324.92	-60.30	335.72	BQ
N88-59	Jonpol	Jonpol	1988	577773.75	5374185.67	282.30	91.75	-70.00	339.76	BQ
N88-60	Jonpol	Jonpol	1988	577490.27	5374075.76	289.50	288.95	-60.00	340.00	BQ
N88-61	Jonpol	Jonpol	1988	577702.51	5374121.13	283.32	364.85	-61.10	340.00	BQ
N88-62	Jonpol	Jonpol	1988	577675.89	5374107.99	283.57	443.18	-60.30	340.00	BQ
N88-63	Jonpol	Jonpol	1988	577646.99	5374095.95	283.83	190.81	-59.70	340.00	BQ
N88-64	Jonpol	Jonpol	1988	577621.06	5374081.08	284.44	218.24	-60.40	340.00	BQ
N88-65	Jonpol	Jonpol	1988	577592.15	5374070.84	284.93	388.93	-60.90	333.22	BQ
N88-66	Jonpol	Jonpol	1988	577561.53	5374063.27	285.72	346.25	-60.00	340.00	BQ
N88-67	Jonpol	Jonpol	1988	577566.73	5374129.18	286.21	270.05	-59.30	338.39	BQ
N88-68	Jonpol	Jonpol	1988	577562.00	5374294.25	289.13	315.77	-60.00	160.00	BQ
N88-69	Jonpol	Jonpol	1988	577448.84	5374248.04	291.08	230.43	-60.00	155.44	BQ
N88-70	Jonpol	Jonpol	1988	577099.57	5374064.20	305.53	220.68	-60.00	160.00	BQ
N88-71	Jonpol	Jonpol	1988	577087.68	5374092.11	305.96	432.21	-60.00	160.00	BQ
N88-72	Jonpol	Jonpol	1988	577075.79	5374120.01	306.51	263.96	-60.00	160.00	BQ
N88-73	Jonpol	Jonpol	1988	577047.26	5374105.04	306.81	303.58	-61.60	153.51	BQ
N88-74	Jonpol	Jonpol	1988	577035.13	5374132.30	307.67	321.26	-58.30	152.39	BQ
N88-75	Jonpol	Jonpol	1988	577024.11	5374163.92	309.25	547.42	-60.00	160.00	BQ
N88-76	Jonpol	Jonpol	1988	577434.47	5373974.60	291.02	306.63	-59.00	337.44	BQ
N88-77	Jonpol	Jonpol	1988	577157.35	5374218.72	311.96	623.62	-90.00	0.00	BQ
N88-78	Jonpol	Jonpol	1988	577406.64	5373961.08	291.73	303.58	-58.90	341.32	BQ
N88-79	Jonpol	Jonpol	1988	577378.11	5373952.13	291.63	327.96	-60.00	340.00	BQ
N88-80	Jonpol	Jonpol	1988	577570.77	5373970.37	286.79	403.86	-60.00	340.00	BQ
N88-81	Jonpol	Jonpol	1988	577542.54	5373957.18	287.37	413.92	-60.00	340.00	BQ
N88-82	Jonpol	Jonpol	1988	577518.90	5373924.39	288.51	466.95	-60.00	340.00	BQ
N88-83	Jonpol	Jonpol	1988	577485.60	5373932.00	288.13	442.87	-60.00	340.00	BQ
N88-84	Jonpol	Jonpol	1988	577451.75	5373934.06	289.10	463.91	-60.00	340.00	BQ
N88-85	Jonpol	Jonpol	1988	577479.52	5373868.32	299.58	527.00	-61.30	336.31	BQ
N88-86	Jonpol	Jonpol	1988	577453.57	5373852.42	302.00	506.88	-60.00	340.00	BQ
N88-87	Jonpol	Jonpol	1988	577477.36	5373796.62	303.79	706.83	-70.00	340.00	BQ
N88-88	Jonpol	Jonpol	1988	577350.21	5373940.24	294.20	279.81	-60.00	340.00	BQ
N88-89	Jonpol	Jonpol	1988	577321.48	5373930.30	296.84	126.80	-60.00	340.00	BQ
N88-89A	Jonpol	Jonpol	1988	577321.48	5373930.30	296.94	288.34	-60.00	340.00	BQ
N88-90	Jonpol	Jonpol	1988	577400.72	5373896.38	292.13	401.12	-60.00	340.00	BQ
N88-91	Jonpol	Jonpol	1988	577373.99	5373884.44	291.51	501.70	-60.00	340.00	BQ
N88-92	Jonpol	Jonpol	1988	577346.09	5373872.55	291.66	556.26	-60.00	340.00	BQ
N88-93	Jonpol	Jonpol	1988	577306.30	5373888.56	292.73	91.44	-60.00	340.00	BQ

N88-93A	Jonpol	Jonpol	1988	577306.78	5373887.44	293.40	209.09	-60.00	340.00	BQ
N88-94	Jonpol	Jonpol	1988	577290.29	5373848.77	293.00	355.40	-60.00	340.00	BQ
N88-95	Jonpol	Jonpol	1988	577262.39	5373836.88	294.53	498.35	-60.00	340.00	BQ
N88-96	Jonpol	Jonpol	1988	577294.41	5373916.46	297.24	303.58	-60.00	340.00	BQ
N88-97	Jonpol	Jonpol	1988	577411.41	5373813.68	301.68	523.95	-60.00	340.00	BQ
N88-98	Jonpol	Jonpol	1988	577398.87	5373828.23	297.79	32.00	-65.00	340.00	BQ
N88-98A	Jonpol	Jonpol	1988	577397.77	5373828.64	297.88	439.83	-65.00	340.00	BQ
N88-99	Jonpol	Jonpol	1988	577421.55	5373772.84	302.30	622.40	-70.00	340.00	BQ
N88-99B	Jonpol	Jonpol	1988	577377.88	5373892.84	-31.04	455.07	-68.00	340.00	BQ
N89-141	Jonpol	Jonpol	1989	576942.02	5374044.20	306.27	185.01	-48.70	160.86	BQ
N89-142	Jonpol	Jonpol	1989	576883.79	5374020.12	306.06	213.97	-50.00	160.00	BQ
N89-143	Jonpol	Jonpol	1989	576820.76	5374007.80	306.04	184.71	-50.00	160.00	BQ
N89-144	Jonpol	Jonpol	1989	576979.44	5374109.56	308.25	306.02	-52.90	157.91	BQ
N89-145	Jonpol	Jonpol	1989	576941.89	5374044.65	306.16	249.02	-64.90	156.77	BQ
N89-146	Jonpol	Jonpol	1989	576883.12	5374021.10	305.94	245.97	-66.10	156.33	BQ
N89-147	Jonpol	Jonpol	1989	576907.55	5374045.16	305.88	242.32	-65.50	157.26	BQ
N90-148	Jonpol	Jonpol	1990	576923.71	5374086.86	306.35	306.93	-53.50	156.38	BQ
N90-149	Jonpol	Jonpol	1990	576865.23	5374060.55	305.72	364.24	-54.50	154.18	BQ
N90-150	Jonpol	Jonpol	1990	577003.15	5374058.39	304.80	181.97	-49.00	160.00	BQ
N90-151	Jonpol	Jonpol	1990	576956.42	5374168.04	307.90	372.16	-55.00	160.00	BQ
N90-152	Jonpol	Jonpol	1990	576901.00	5374139.73	306.18	345.34	-52.40	156.09	BQ
N90-153	Jonpol	Jonpol	1990	577041.22	5374040.04	305.58	92.35	-60.00	159.47	BQ
N91-154	Jonpol	Jonpol	1991	577379.05	5374414.09	289.50	783.79	-60.00	160.00	BQ
N91-155	Jonpol	Jonpol	1991	577323.25	5374390.31	299.90	709.82	-65.00	160.00	BQ
N91-156	Jonpol	Jonpol	1991	577267.45	5374366.53	304.00	949.45	-70.00	160.00	BQ
N91-156A	Jonpol	Jonpol	1991	577335.24	5374180.26	-166.72	446.54	-63.00	160.00	BQ
N91-157	Jonpol	Jonpol	1991	577255.56	5374394.43	301.90	445.92	-70.00	160.00	BQ
N91-158	Jonpol	Jonpol	1991	577311.36	5374418.21	299.10	1012.73	-70.00	160.00	BQ
N92-159	Jonpol	Jonpol	1992	577245.96	5374571.66	290.60	112.96	-45.00	160.00	BQ
N92-160	Jonpol	Jonpol	1992	577245.51	5374566.45	288.88	100.89	-61.60	159.33	BQ
N92-161	Jonpol	Jonpol	1992	576883.32	5374494.26	299.70	138.07	-60.00	340.00	BQ
N92-162	Jonpol	Jonpol	1992	577349.32	5374483.84	291.70	192.63	-45.00	340.00	BQ
N92-163	Jonpol	Jonpol	1992	577361.21	5374455.94	293.40	103.02	-45.00	340.00	BQ
N92-164	Jonpol	Jonpol	1992	577303.59	5374513.80	290.80	79.86	-45.00	160.00	BQ
N92-165	Jonpol	Jonpol	1992	577303.59	5374513.80	290.80	77.72	-60.00	160.00	BQ
N92-166	Jonpol	Jonpol	1992	577251.99	5374402.80	301.80	103.94	-45.00	340.00	BQ
G05-01	Jonpol	ValGold	2005	577116.35	5373949.80	303.00	161.00	-45.00	331.50	BQ
G05-02	Jonpol	ValGold	2005	577096.90	5373910.98	302.98	200.00	-44.30	333.50	BQ
G05-03	Jonpol	ValGold	2005	576995.97	5373834.80	305.96	302.00	-55.17	333.13	BQ
G05-04	Jonpol	ValGold	2005	576819.51	5374107.35	305.46	341.00	-60.07	153.65	BQ
G05-05	Jonpol	ValGold	2005	577306.04	5373958.23	296.90	182.00	-48.18	333.98	BQ
G05-06	Jonpol	ValGold	2005	577251.12	5373938.11	301.15	161.00	-47.91	334.05	BQ
G05-07	Jonpol	ValGold	2005	577273.53	5373889.33	299.50	230.00	-45.65	333.53	BQ
G06-01	Jonpol	ValGold	2006	577418.78	5373903.46	291.50	305.00	-45.00	335.70	BQ
G06-02	Jonpol	ValGold	2006	577432.70	5373859.55	295.99	371.00	-45.10	337.20	BQ
G06-03	Jonpol	ValGold	2006	577449.69	5373824.54	302.89	451.00	-44.83	337.16	BQ
G06-04	Jonpol	ValGold	2006	577479.87	5373752.08	302.76	617.00	-54.54	314.91	BQ
G06-04W1	Jonpol	ValGold	2006	577378.61	5373899.61	60.27	24.34	-51.20	335.70	BQ
G06-04W2	Jonpol	ValGold	2006	577382.09	5373892.66	69.41	205.00	-49.30	335.70	BQ
G06-04W3	Jonpol	ValGold	2006	577370.74	5373914.49	42.41	155.45	-42.90	332.00	BQ
G06-05	Jonpol	ValGold	2006	577426.51	5373839.38	299.83	461.00	-45.22	329.87	BQ
G06-06	Jonpol	ValGold	2006	577387.69	5373839.30	296.14	403.00	-47.51	337.59	BQ
G06-07	Jonpol	ValGold	2006	577369.65	5373884.31	291.24	314.00	-46.20	335.25	BQ
G06-08	Jonpol	ValGold	2006	577319.04	5373871.04	292.08	317.00	-44.70	331.44	BQ
G06-09	Jonpol	ValGold	2006	577346.17	5373806.99	298.10	380.00	-44.51	335.38	BQ
G06-10	Jonpol	ValGold	2006	577377.90	5373776.47	299.63	417.00	-42.47	336.56	BQ
G06-11	Jonpol	ValGold	2006	577328.66	5373739.51	300.78	416.00	-44.20	335.36	BQ
G06-12	Jonpol	ValGold	2006	577305.52	5373790.77	299.54	377.00	-47.18	340.18	BQ
G06-13	Jonpol	ValGold	2006	577278.28	5373842.04	294.10	332.00	-45.70	336.81	BQ
G06-14	Jonpol	ValGold	2006	577229.39	5373824.61	296.00	320.00	-45.76	345.19	BQ
G06-15	Jonpol	ValGold	2006	577258.19	5373767.61	300.82	401.00	-44.00	336.00	BQ
G06-16	Jonpol	ValGold	2006	577283.06	5373727.59	301.00	456.00	-45.00	339.00	BQ
G06-17	Jonpol	ValGold	2006	577495.74	5373829.85	303.43	452.00	-45.06	344.37	BQ
G06-18	Jonpol	ValGold	2006	577516.77	5373870.66	298.18	434.00	-46.01	340.15	BQ
G06-19	Jonpol	ValGold	2006	577512.02	5373922.29	288.05	350.00	-43.86	340.72	BQ
G06-20	Jonpol	ValGold	2006	577546.77	5373933.15	287.24	371.00	-45.38	338.30	BQ
G06-21	Jonpol	ValGold	2006	577573.60	5373884.18	286.31	452.00	-46.23	340.81	BQ
G06-22	Jonpol	ValGold	2006	577587.21	5373826.46	286.62	500.00	-44.40	340.88	BQ

G06-23	Jonpol	ValGold	2006	577525.37	5373770.71	299.00	539.00	-44.65	338.73	BQ
G06-24	Jonpol	ValGold	2006	577432.73	5373736.64	304.00	524.00	-44.70	337.30	BQ
G06-25	Jonpol	ValGold	2006	577460.66	5373661.96	302.29	671.00	-54.47	336.90	BQ
G06-26	Jonpol	ValGold	2006	577348.69	5373684.46	301.83	632.00	-48.61	341.11	BQ
G06-27	Jonpol	ValGold	2006	577759.74	5374349.59	287.12	77.00	-45.58	159.37	BQ
G06-27A	Jonpol	ValGold	2006	577759.66	5374349.74	287.07	401.00	-51.01	158.79	BQ
G06-37	Jonpol	ValGold	2006	577500.38	5373586.94	290.23	786.20	-55.85	333.89	BQ
G06-37A	Jonpol	ValGold	2006	577412.42	5373895.09	-174.89	800.00	-49.50	352.10	BQ
G06-38	Jonpol	ValGold	2006	577411.90	5373648.12	302.11	797.00	-54.65	346.30	BQ
G06-39	Jonpol	ValGold	2006	577455.78	5373744.63	302.83	560.00	-43.57	338.98	BQ
G06-40	Jonpol	ValGold	2006	577465.86	5373790.96	303.88	497.00	-44.17	340.00	BQ
G06-41	Jonpol	ValGold	2006	577485.00	5373742.00	302.00	536.00	-43.50	341.00	BQ
G06-42	Jonpol	ValGold	2006	577505.81	5373752.52	300.31	587.00	-43.43	344.65	BQ
G07-01	Jonpol	ValGold	2007	577507.31	5373726.82	298.42	536.00	-45.87	339.03	BQ
G07-02	Jonpol	ValGold	2007	577487.60	5373728.72	301.31	551.00	-45.17	342.48	BQ
G07-03	Jonpol	ValGold	2007	577446.95	5373698.95	302.00	603.00	-54.50	338.60	BQ
G07-04	Jonpol	ValGold	2007	577477.32	5373623.04	292.83	759.00	-54.67	340.12	BQ
GGT-01	Jonpol	Northern	2012	578073.97	5374294.03	283.71	204.00	-65.77	262.82	NQ
GGT-02	Jonpol	Northern	2012	577277.86	5374026.50	302.90	198.00	-64.46	266.61	NQ
JDGT-01	Jonpol	Northern	2012	577089.65	5373969.15	304.87	150.00	-49.68	330.42	NQ
JDGT-02	Jonpol	Northern	2012	576998.74	5373944.85	305.20	117.00	-51.69	330.97	NQ
JP-12-01	Jonpol	Northern	2012	577095.59	5373972.83	305.16	315.00	-47.57	338.26	NQ
JP-12-02	Jonpol	Northern	2012	577128.26	5373969.10	304.50	279.00	-46.04	338.63	NQ
JP-12-03	Jonpol	Northern	2012	577158.38	5373934.26	303.79	249.00	-45.20	342.02	NQ
JP-12-04	Jonpol	Northern	2012	577177.25	5373897.23	303.07	294.00	-46.70	339.21	NQ
JPGT-01	Jonpol	Northern	2012	577397.03	5374058.19	296.49	97.83	-50.82	327.66	NQ
JP-13-05	Jonpol	Northern	2013	577050.94	5373925.73	305.01	360.00	-46.10	340.79	NQ
JP-13-06	Jonpol	Northern	2013	577032.94	5373849.87	304.88	243.00	-47.66	341.63	NQ
JP-13-07	Jonpol	Northern	2013	577228.35	5373909.92	302.57	303.00	-49.10	336.03	NQ
JP-13-08	Jonpol	Northern	2013	577208.72	5373956.73	302.84	273.00	-46.60	338.85	NQ
JP-13-09	Jonpol	Northern	2013	577424.39	5373944.61	290.06	357.00	-59.90	337.52	NQ
JP-13-10	Jonpol	Northern	2013	577064.30	5373768.24	307.00	339.00	-46.40	334.71	NQ
JP-13-11	Jonpol	Northern	2013	577580.00	5374170.00	286.00	324.00	-61.81	340.00	NQ
JP-13-12	Jonpol	Northern	2013	577648.00	5374135.00	284.00	333.00	-60.00	340.00	NQ
JP-13-13	Jonpol	Northern	2013	577694.00	5374153.00	283.20	354.00	-60.00	340.00	NQ
JP-13-14	Jonpol	Northern	2013	577673.00	5374211.00	284.60	320.00	-60.00	340.00	NQ
JP-13-15	Jonpol	Northern	2013	577193.00	5373850.00	288.80	350.00	-45.00	340.00	NQ
JP-13-20	Jonpol	Northern	2013	577936.58	5374071.00	286.80	444.00	-45.10	343.84	NQ
JP-13-21	Jonpol	Northern	2013	577921.12	5374120.41	284.72	345.00	-45.40	332.95	NQ
JP-13-22	Jonpol	Northern	2013	577902.26	5374166.49	283.57	297.00	-45.40	342.63	NQ
JP-13-23	Jonpol	Northern	2013	577839.94	5374192.66	282.80	297.00	-45.40	336.72	NQ
JP-13-24	Jonpol	Northern	2013	577872.00	5374103.00	283.50	363.00	-45.00	340.00	NQ
JP-13-25	Jonpol	Northern	2013	577876.85	5374099.78	283.43	445.00	-46.70	328.27	NQ
JP-13-26	Jonpol	Northern	2013	577714.00	5374229.00	283.80	270.00	-60.00	340.00	NQ
JP-13-27	Jonpol	Northern	2013	577730.00	5374201.00	283.10	336.00	-60.00	340.00	NQ
JP-13-28	Jonpol	Northern	2013	577628.00	5374192.00	285.30	264.00	-60.00	340.00	NQ
JPGT-02	Jonpol	Northern	2013	577515.42	5374111.89	287.05	276.00	-50.93	330.22	NQ
B-1	Jonpol	Jompol	1990	577378.02	5374091.59	162.74	6.10	9.00	290.00	MTX
B-10	Jonpol	Jompol	1990	577340.94	5374068.13	162.94	9.14	3.00	335.00	MTX
B-11	Jonpol	Jompol	1990	577332.28	5374067.62	163.04	6.28	9.50	152.00	MTX
B-12	Jonpol	Jompol	1990	577321.92	5374060.13	163.14	20.73	6.00	188.00	MTX
B-13	Jonpol	Jompol	1990	577401.49	5374101.52	162.84	6.10	11.00	300.00	MTX
B-14	Jonpol	Jompol	1990	577405.62	5374102.80	162.84	6.40	5.00	298.00	MTX
B-15	Jonpol	Jompol	1990	577410.74	5374105.54	162.84	6.10	5.00	11.00	MTX
B-16	Jonpol	Jompol	1990	577415.72	5374108.86	162.94	6.10	7.50	1.00	MTX
B-17	Jonpol	Jompol	1990	577422.02	5374110.77	162.94	6.10	2.00	185.00	MTX
B-18	Jonpol	Jompol	1990	577428.40	5374115.79	163.04	6.10	4.00	190.00	MTX
B-19	Jonpol	Jompol	1990	577427.67	5374118.04	163.04	6.10	6.00	7.00	MTX
B-2	Jonpol	Jompol	1990	577378.81	5374089.67	162.74	6.10	12.00	180.00	MTX
B-20	Jonpol	Jompol	1990	577433.89	5374121.68	163.04	6.71	5.00	7.00	MTX
B-21	Jonpol	Jompol	1990	577439.20	5374128.00	163.04	6.10	12.50	327.00	MTX
B-22	Jonpol	Jompol	1990	577322.37	5374062.69	163.14	12.19	5.00	7.00	MTX
B-3	Jonpol	Jompol	1990	577371.52	5374087.91	162.74	6.10	12.00	312.00	MTX
B-4	Jonpol	Jompol	1990	577360.26	5374083.55	162.84	6.10	11.50	338.00	MTX
B-5	Jonpol	Jompol	1990	577356.72	5374078.57	162.84	9.45	7.50	330.00	MTX
B-6	Jonpol	Jompol	1990	577350.87	5374071.47	162.94	12.80	17.50	277.00	MTX
B-7	Jonpol	Jompol	1990	577351.80	5374069.38	162.94	9.14	11.50	167.00	MTX
B-8	Jonpol	Jompol	1990	577347.19	5374067.88	162.94	15.85	12.00	341.00	MTX

B-9	Jonpol	Jompol	1990	577348.05	5374065.55	162.94	6.71	13.00	157.00	MTX
U-1	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.34	101.50	11.00	147.00	BQ
U-10	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.54	103.02	40.00	159.00	BQ
U-11	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.14	92.66	-11.00	159.00	BQ
U-12	Jonpol	Jonpol UG	1990	577332.70	5374155.77	161.94	99.97	-20.00	159.00	BQ
U-14	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.34	105.46	9.00	174.00	BQ
U-15	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.54	102.11	19.00	174.00	BQ
U-16	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.74	98.15	28.00	174.00	BQ
U-17	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.94	105.77	38.00	174.00	BQ
U-18	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.14	105.46	-9.00	174.00	BQ
U-19	Jonpol	Jonpol UG	1990	577332.70	5374155.77	161.94	118.87	-18.00	174.00	BQ
U-2	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.54	105.46	22.00	147.00	BQ
U-28	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.34	124.36	8.00	184.00	BQ
U-29	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.54	117.04	16.00	184.00	BQ
U-3	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.74	121.92	32.00	147.00	BQ
U-31	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.14	126.49	-8.00	184.00	BQ
U-34	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.34	104.85	10.00	139.00	BQ
U-35	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.54	103.63	20.00	139.00	BQ
U-36	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.74	124.36	30.00	139.00	BQ
U-37	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.94	104.24	40.00	139.00	BQ
U-4	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.94	136.55	41.00	147.00	BQ
U-41	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.54	101.19	9.00	132.00	BQ
U-42	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.74	103.94	18.00	132.00	BQ
U-44	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.94	104.24	38.00	132.00	BQ
U-45	Jonpol	Jonpol UG	1990	577337.15	5374159.06	162.14	115.52	-10.00	132.00	BQ
U-46	Jonpol	Jonpol UG	1990	577337.15	5374159.06	161.94	123.44	-19.00	132.00	BQ
U-47	Jonpol	Jonpol UG	1990	577337.15	5374159.06	161.74	113.08	-26.00	132.00	BQ
U-48A	Jonpol	Jonpol UG	1990	577334.60	5374160.43	161.28	76.20	-60.00	270.00	BQ
U-5	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.24	101.19	-11.00	147.00	BQ
U-50	Jonpol	Jonpol UG	1990	577278.73	5374230.58	247.34	195.38	0.00	143.00	BQ
U-6	Jonpol	Jonpol UG	1990	577332.70	5374155.77	161.94	117.04	-20.00	147.00	BQ
U-8	Jonpol	Jonpol UG	1990	577332.70	5374155.77	162.34	112.78	22.00	159.00	BQ
B-86-3	East Zone	Jonpol	1986	579583.91	5374643.93	304.40	141.73	-50.00	340.00	BQ
B-87-17	East Zone	Jonpol	1987	579930.61	5374758.71	304.80	154.23	-50.00	340.00	BQ
COQ87-21	East Zone	Moneta?	1987	579478.25	5374582.42	304.50	152.10	-55.00	340.00	BQ
COQ87-22	East Zone	Moneta?	1987	579716.60	5374680.69	304.70	157.58	-56.00	340.00	BQ
COQ87-27	East Zone	Moneta?	1987	579366.65	5374534.85	304.10	167.94	-55.00	340.00	BQ
COQ87-28	East Zone	Moneta?	1987	579255.04	5374487.29	303.50	157.58	-50.00	340.00	BQ
COQ87-31	East Zone	Moneta?	1987	579143.44	5374439.73	302.20	152.47	-50.00	340.00	BQ
GAR-26	East Zone	Cominco	1987	578512.34	5374209.03	298.61	243.84	-45.00	340.00	BQ
GAR-27	East Zone	Cominco	1987	578465.10	5374318.63	293.31	245.36	-45.00	340.00	BQ
GAR-28	East Zone	Cominco	1987	578607.24	5374299.97	298.61	136.25	-45.00	340.00	BQ
GAR-29	East Zone	Cominco	1987	578728.83	5374345.32	295.42	137.16	-45.00	340.00	BQ
GAR-30	East Zone	Cominco	1987	578870.00	5374366.00	300.00	142.34	-45.00	338.00	BQ
GAR-31	East Zone	Cominco	1987	578965.78	5374419.58	296.81	148.44	-45.00	340.00	BQ
GAR-32	East Zone	Cominco	1987	578350.17	5374256.03	294.11	269.44	-45.00	340.00	BQ
GAR-33	East Zone	Cominco	1987	578255.50	5374182.34	293.11	394.90	-45.00	340.00	BQ
GAR-34	East Zone	Cominco	1987	578406.85	5374131.04	299.31	250.94	-45.00	340.00	BQ
GAR-35	East Zone	Cominco	1987	578191.05	5374054.48	298.00	78.03	-50.00	340.00	Hole Abandoned in OB
GAR-35A	East Zone	Cominco	1987	578191.05	5374054.48	298.00	593.14	-50.00	340.00	BQ
GAR-36	East Zone	Cominco	1987	578218.06	5374197.82	293.27	409.90	-55.00	340.00	BQ
GAR-37	East Zone	Cominco	1987	578275.34	5374224.29	292.11	255.94	-55.00	340.00	BQ
GAR-38	East Zone	Cominco	1987	578267.40	5374154.00	294.42	304.92	-50.00	340.00	BQ
GAR-39	East Zone	Cominco	1987	578324.94	5374312.44	292.61	238.66	-50.00	250.00	Hole Abandoned
GAR-40	East Zone	Cominco	1987	578200.23	5374259.15	289.50	285.95	-50.00	340.00	BQ
GAR-41	East Zone	Cominco	1987	578439.73	5374310.74	293.11	178.96	-50.00	340.00	BQ
GAR-42	East Zone	Cominco	1987	578476.01	5374326.89	293.31	113.00	-50.00	340.00	BQ
GAR-43	East Zone	Cominco	1987	578498.97	5374319.24	294.81	153.00	-50.00	340.00	BQ
GAR-44	East Zone	Cominco	1987	578523.23	5374299.04	297.55	157.95	-50.00	340.00	BQ
GAR-45	East Zone	Cominco	1987	578359.19	5374109.45	297.81	356.92	-50.00	340.00	BQ
GAR-46	East Zone	Cominco	1987	578029.63	5374102.54	288.19	418.89	-50.00	336.00	BQ
GAR-48A	East Zone	Cominco	1987	578486.16	5374287.19	-11.74	255.94	-53.50	353.00	Wedge
GAR-51	East Zone	Cominco	1987	578259.04	5374117.39	296.22	244.94	-50.00	340.00	BQ
GAR-51A	East Zone	Cominco	1987	578212.11	5374246.34	137.35	253.00	-45.00	340.00	Wedge
GAR-53	East Zone	Cominco	1987	578239.77	5374192.59	292.42	139.96	-63.00	340.00	BQ
GAR-53A	East Zone	Cominco	1987	578241.48	5374187.89	292.42	45.99	-65.00	340.00	Hole Abandoned in OB
GAR-54	East Zone	Cominco	1987	578241.86	5374180.50	292.42	472.87	-60.00	337.00	BQ
GAR-58	East Zone	Cominco	1987	578203.60	5374143.72	294.22	397.89	-50.00	340.00	BQ

GAR-60	East Zone	Cominco	1987	578182.77	5374220.88	290.61	214.95	-50.00	340.00	BQ
GAR-62	East Zone	Cominco	1987	578143.85	5374222.36	290.11	410.90	-55.00	337.00	BQ
GAR-64	East Zone	Cominco	1987	578135.84	5374250.61	289.31	305.00	-50.00	340.00	BQ
GAR-65	East Zone	Cominco	1987	578283.41	5374260.73	292.50	277.92	-50.00	340.00	BQ
GAR-66	East Zone	Cominco	1987	578136.00	5374114.79	289.30	392.89	-55.00	340.00	BQ
GAR-67	East Zone	Cominco	1987	578321.31	5374276.70	293.31	258.93	-50.00	340.00	BQ
GAR-68	East Zone	Cominco	1987	578320.36	5374371.57	290.11	254.75	-50.00	250.00	BQ
GAR-69	East Zone	Cominco	1987	578479.42	5374179.30	299.42	460.89	-50.00	340.00	BQ
GAR-70	East Zone	Cominco	1987	578332.38	5374213.13	294.50	248.90	-50.00	340.00	BQ
N87-18	East Zone	Jonpol	1987	579759.55	5374850.66	299.00	181.97	-50.00	160.00	BQ
N87-18	East Zone	Jonpol	1987	577526.88	5374277.63	292.46	187.15	-50.00	160.00	BQ
GAR-71	East Zone	Cominco	1988	578308.66	5374188.15	295.11	294.92	-50.00	340.00	BQ
GAR-72	East Zone	Cominco	1988	578466.78	5374124.27	301.11	706.83	-65.00	337.00	BQ
GAR-72A	East Zone	Cominco	1988	578430.45	5374227.98	87.83	161.06	-62.00	343.00	Wedge @ 239.9386m
GAR-73	East Zone	Cominco	1988	578505.67	5374355.44	294.31	137.95	-50.00	250.00	BQ
GAR-77	East Zone	Cominco	1988	577963.65	5374106.88	286.80	433.88	-45.00	340.00	BQ
GAR-78	East Zone	Cominco	1988	577975.35	5374077.79	285.70	529.86	-60.00	337.00	BQ
GAR-79	East Zone	Cominco	1988	578043.14	5374073.27	288.42	548.00	-60.00	337.00	BQ
G06-28	East Zone	ValGold	2006	577799.41	5374368.48	282.70	74.00	-44.50	160.20	Hole Abandoned
G06-29	East Zone	ValGold	2006	578071.20	5374175.29	291.00	353.00	-42.30	340.00	BQ
G06-30	East Zone	ValGold	2006	578166.33	5373898.43	289.56	341.00	-43.06	333.45	BQ
G06-31	East Zone	ValGold	2006	578255.73	5373935.03	297.96	584.00	-43.92	342.12	Hole extended
G06-32	East Zone	ValGold	2006	578356.00	5373965.00	307.00	638.00	-42.50	328.20	BQ
G06-33	East Zone	ValGold	2006	578098.00	5374100.00	288.30	430.30	-52.50	339.80	BQ
G06-34	East Zone	ValGold	2006	578219.00	5373916.00	298.00	740.00	-47.60	339.70	BQ
G06-35	East Zone	ValGold	2006	578012.92	5374149.19	291.81	251.00	-45.10	337.30	BQ
G06-36	East Zone	ValGold	2006	577954.99	5374130.60	284.80	251.00	-45.00	341.10	BQ
G07-05	East Zone	ValGold	2007	578123.17	5374041.57	290.70	542.00	-55.40	338.10	BQ
G07-06	East Zone	ValGold	2007	578064.20	5374180.29	288.00	455.00	-57.00	340.00	BQ
G07-07	East Zone	ValGold	2007	578039.41	5374244.23	286.20	257.00	-51.00	336.40	BQ
G07-08	East Zone	ValGold	2007	578070.97	5374034.72	291.00	593.00	-50.70	333.00	BQ
G07-09	East Zone	ValGold	2007	578149.44	5373973.18	293.10	698.00	-52.50	335.40	BQ
GAR-12-214	East Zone	Northern	2012	578363.77	5374069.73	296.09	471.00	-46.63	335.66	NQ
GAR-12-224	East Zone	Northern	2012	578296.23	5374108.16	294.41	459.00	-45.30	334.52	NQ
GAR-12-225	East Zone	Northern	2012	578309.58	5374049.79	298.55	420.00	-44.61	339.26	NQ
GAR-12-255	East Zone	Northern	2012	578577.91	5374053.16	303.40	588.30	-49.92	332.46	NQ
GAR-12-256	East Zone	Northern	2012	578458.42	5374262.20	293.68	255.00	-44.92	337.94	NQ
GAR-12-257	East Zone	Northern	2012	578412.03	5374244.01	292.97	236.98	-45.21	337.06	NQ
GAR-12-258	East Zone	Northern	2012	578393.54	5374288.20	291.05	224.00	-46.38	339.43	NQ
GAR-12-259	East Zone	Northern	2012	578423.63	5374357.05	289.82	135.00	-45.09	337.84	NQ
GAR-12-265	East Zone	Northern	2012	579581.30	5374453.37	306.27	417.00	-46.59	338.57	NQ
GAR-12-271	East Zone	Northern	2012	578375.00	5374340.00	291.50	104.47	-45.00	340.00	NQ
GAR-12-271A	East Zone	Northern	2012	578376.11	5374336.91	290.21	129.00	-45.48	342.46	NQ
GAR-12-272	East Zone	Northern	2012	578329.07	5374321.16	289.77	189.00	-44.74	339.84	NQ
GAR-12-273	East Zone	Northern	2012	578357.41	5374386.36	288.58	75.00	-44.79	339.54	NQ
GAR-12-274	East Zone	Northern	2012	578345.61	5374274.74	290.32	102.00	-44.95	343.39	NQ
GAR-12-274A	East Zone	Northern	2012	578347.44	5374268.68	290.32	231.00	-45.61	341.48	NQ
GAR-12-275	East Zone	Northern	2012	578473.74	5374216.03	296.97	264.00	-45.99	340.64	NQ
GAR-12-276	East Zone	Northern	2012	578361.24	5374376.83	288.92	117.00	-45.64	338.85	NQ
GAR-12-277	East Zone	Northern	2012	578504.38	5374280.47	294.13	216.03	-44.63	335.65	NQ
GAR-12-278	East Zone	Northern	2012	578521.17	5374232.06	296.98	261.00	-44.76	337.84	NQ
GAR-12-279	East Zone	Northern	2012	578565.97	5374249.73	298.69	231.00	-43.14	340.11	NQ
GAR-12-280	East Zone	Northern	2012	578538.71	5374184.92	300.53	312.00	-43.99	335.59	NQ
GAR-12-281	East Zone	Northern	2012	578586.01	5374207.77	300.45	273.00	-44.24	337.59	NQ
GAR-12-282	East Zone	Northern	2012	578629.15	5374220.12	300.74	243.00	-43.91	335.86	NQ
GAR-12-283	East Zone	Northern	2012	578361.81	5374228.43	291.93	270.00	-46.70	341.83	NQ
GAR-12-284	East Zone	Northern	2012	578281.89	5374301.14	288.13	210.00	-45.25	332.61	NQ
GAR-12-285	East Zone	Northern	2012	578299.11	5374256.41	290.00	264.00	-45.28	335.69	NQ
GAR-12-286	East Zone	Northern	2012	578093.19	5374232.28	287.32	264.00	-45.66	340.82	NQ
GAR-12-287	East Zone	Northern	2012	578109.77	5374184.99	288.99	318.00	-43.34	335.06	NQ
GAR-12-288	East Zone	Northern	2012	578127.70	5374139.17	289.16	408.00	-44.37	342.98	NQ
GAR-12-289	East Zone	Northern	2012	578046.04	5374214.50	288.39	279.00	-45.35	337.48	NQ
GAR-12-290	East Zone	Northern	2012	578024.79	5374262.05	286.53	234.00	-45.06	337.63	NQ
GAR-13-291	East Zone	Northern	2013	577979.76	5374248.96	285.53	237.00	-44.98	342.74	NQ
GAR-13-292	East Zone	Northern	2013	577998.68	5374202.36	286.91	285.00	-45.20	337.58	NQ
GAR-13-293	East Zone	Northern	2013	577950.57	5374182.20	284.98	300.00	-44.63	341.22	NQ
GAR-13-294	East Zone	Northern	2013	577931.64	5374232.33	283.73	204.00	-46.40	340.61	NQ