Red Lake Operations
Ontario, Canada
NI 43-101 Technical Report

Report Effective Date:

31 December, 2015.

Prepared for Goldcorp Inc. by:

Mr Stephane Blais, P.Eng.

Mr Chris Osiowy, P.Geo.

Mr Nuri Hmidi, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

I, Stephane Blais, P.Eng., am employed as the Technical Services Manager at Red Lake Gold Mines, which is a subsidiary of Goldcorp Inc.

This certificate applies to the technical report titled "Red Lake Operations, Ontario, Canada, NI 43-101 Technical Report" that has an effective date of 31 December, 2015 (the technical report).

I am a member of Professional Engineers of Ontario (#100073324). I graduated from Laval University in 1995 with a degree in mining engineering.

I have practiced my profession for 21 years since graduation. I have been directly involved in Mineral Reserves estimation, mining engineering and management of technical services.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have worked at the Red Lake Operations since August 2001, and this familiarity with the operations serves as my scope of personal inspection.

I am responsible for Sections 1.1, 1.5, 1.13, 1.14, 1.16, 1.18, 1.19, 1.20, 1.21; Section 2; Section 3; Section 4.1; Sections 6.1, 6.2, 6.5; Section 15; Section 16; Section 18; Sections 20.1, 20.2, 20.3, 20.5, 20.6, 20.7, 20.8, 20.9; Section 21; Section 22; Section 24, Sections 25.1, 25.7, 25.8, 25.12, 25.13, 25.14; Section 26; and Section 27 of the technical report.

I am not independent of Goldcorp Inc. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Red Lake Operations since 2001, and I have previously co-authored the following technical reports on the operations:

- Blais, S., and Osiowy, C., 2011: Red Lake Gold Operation, Ontario, Canada, NI 43-101 Technical Report: technical report prepared for Goldcorp Inc., effective date January 15, 2011, revised 30 March, 2011.
- Crick, D., Blais, S., and Stechisen, A., 2006: The Red Lake Gold Mines Property, Red Lake Mining Division, Northern Ontario: technical report prepared for Goldcorp Inc., effective date November 17, 2006.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 23 March, 2016

"Signed and sealed"

Stephane Blais, P.Eng.

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I, Christopher Osiowy, P.Geo., am employed as the Exploration Manager at Red Lake Gold Mines, which is a subsidiary of Goldcorp Inc.

This certificate applies to the technical report titled “Red Lake Operations, Ontario, Canada, NI 43-101 Technical Report” that has an effective date of 31 December, 2015 (the technical report).

I am a member of the Association of Professional Geoscientists of Ontario (APGO #1324). I graduated from the University of Manitoba in 2000, with a Bachelor of Science with Honours degree.

I have practiced my profession for 15 years since graduation. I have been directly involved in mine and regional exploration as well as resource modelling and resource estimation at the Red Lake Operations.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have worked at the Red Lake Operations since 2001, and this familiarity with the operations serves as my scope of personal inspection.

I am responsible for Sections 1.2, 1.3, 1.4, 1.6, 1.7, 1.8, 1.9, 1.10, 1.12, 1.20, 1.21; Section 2; Section 3; Section 4; Section 5; Section 6; Section 7; Section 8; Section 9; Section 10; Section 11; Section 12; Section 14; Section 23; Sections 25.2, 25.3, 25.4, 25.6, 25.14; Section 26; Section 27; Appendix A; and Appendix B of the technical report.

I am not independent of Goldcorp Inc. as independence is described by Section 1.5 of NI 43–101.

I have been involved with the Red Lake Operations since 2001, and I have previously co-authored the following technical report on the operations:

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Dated: 23 March, 2016

"Signed and sealed"

Christopher Osiowy, P.Geo.

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CERTIFICATE OF QUALIFIED PERSON

I, Nuri Hmidi, P.Eng., am employed as the Surface Operations Manager at Red Lake Gold Mines, which is a subsidiary of Goldcorp Inc.

This certificate applies to the technical report titled "Red Lake Operations, Ontario, Canada, NI 43-101 Technical Report" that has an effective date of 31 December, 2015 (the "technical report").

I am a member of the Association of Professional Engineers of Ontario (APEO #1000145648). I graduated from the British Columbia Institute of Technology in 1988 with a Diploma of Technology in Mechanical Engineering; from the Laurentian University, Sudbury, Ontario in 1994 with a Bachelor of Engineering in Extractive Metallurgy degree; from Laurentian University, in 1997 with a Masters of Applied Science in Mineral Resources Engineering degree, and I am currently a PhD candidate in Natural Resources Engineering with Laurentian University.

I have practiced my profession since 2002. I have been directly involved in metallurgical research and the industrial application of metallurgy, focused primarily on optimization of gold extraction since that date. I have obtained operational metallurgical experience, with increasingly senior and supervisory roles, at gold processing plants in Ontario, including the Musselwhite and Red Lake Operations, since that date.

As a result of my experience and qualifications, I am a Qualified Person as defined in National Instrument 43–101 *Standards of Disclosure for Mineral Projects* (NI 43–101).

I have worked at the Red Lake Operations since February 2015, and this familiarity with the operations serves as my scope of personal inspection.

I am responsible for Sections 1.5, 1.11, 1.15, 1.16, 1.17, 1.18, 1.20, 1.21; Sections 2.1, 2.2, 2.3, 2.4, 2.6; Section 3; Section 13; Section 17; Section 18; Section 19; Section 20; Section 21; Sections 25.5, 25.9, 25.10, 25.11, 25.12, 25.13, 25.14; Section 26; and Section 27 of the technical report.

I am not independent of Goldcorp Inc. as independence is described by Section 1.5 of NI 43–101.

I have no previous involvement with the Red Lake Operations prior to commencing work at the operations in February 2015.

I have read NI 43–101 and the sections of the technical report for which I am responsible have been prepared in compliance with that Instrument.

As of the effective date of the technical report, to the best of my knowledge, information and belief, the sections of the technical report for which I am responsible contain all scientific and technical information that is required to be disclosed to make those sections of the technical report not misleading.

Dated: 23 March, 2016

"Signed and sealed"

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IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report by Goldcorp Inc. The quality of information, conclusions, and estimates contained herein are based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. Except for the purposes legislated under Canadian provincial securities law, any other uses of this report by any third party is at that party's sole risk.

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1.0 SUMMARY

1.1 Introduction

Mr Stephane Blais, P.Eng., Mr Chris Osiowy, P.Geo., and Mr Nuri Hmidi, P.Eng., (the Qualified Persons or QPs) prepared this Technical Report (the Report) for Goldcorp Inc. (Goldcorp) on the wholly-owned owned Red Lake Gold Operations, (the Red Lake Operations or the Project), located in Ontario, Canada.

This Report supports the disclosure of updated Mineral Resources and Mineral Reserves for the Project. Goldcorp will be using the Report in support of its 2015 Annual Information Form (AIF) filing.

The operating entity for the Project is a Goldcorp subsidiary, Red Lake Gold Mines Limited (RLGM). For the purposes of this report, “Goldcorp” is used to refer interchangeably to the parent and subsidiary companies.

1.2 Location, Climate, and Access

The Red Lake mining operation is located 180 km north of the town of Dryden, District of Kenora, northwestern Ontario. The Red Lake area is accessible by Highway 105, which joins the Trans-Canada Highway at Vermilion Bay, 175 km south and 100 km east of Kenora, Ontario. Commercial air services operate to Red Lake from Thunder Bay and Winnipeg.

Mining activities are conducted in and about the municipality of Red Lake (population approximately 4,670), which consists of six distinct communities, Red Lake, Balmertown, Cochenour, Madsen, McKenzie Island, and Starratt-Olsen.

The operations comprise the former Campbell and Red Lake underground mines, which are now integrated and operated as a single entity by RLGM, a Goldcorp subsidiary. For the purposes of this Report, the shafts and mill at Red Lake are collectively termed the Red Lake Complex; those at Campbell are termed the Campbell Complex. The combined mine area is also referred to as the Red Lake–Campbell Complex.

The Cochenour Complex covers mineralization discovered at the Western Discovery Zone deposit and the former Cochenour–Willans mine. It also includes the former Eagle Mines Joint Venture property.

The climate in the Red Lake area is typical of a northern continental boreal climate with warm summers and cold winters. Mining operations are conducted year-round.

1.3 Mineral Tenure and Surface Rights

The Red Lake Complex consists of 89 patented mineral claims covering 1,254 ha and the Campbell Complex consists of 77 patented mineral claims covering 1,084 ha.

Claims are held in the name of either Goldcorp Inc., or Goldcorp Canada Ltd, or are jointly held by the two companies.

The Cochenour Complex, including the Golden Eagle property, covers 1,358.21 ha, and comprises 110 patented mineral rights, licences of occupation, lease mineral rights, and one staked claim. Tenure is jointly held in the names of Goldcorp Inc. (72%), Goldcorp Canada (28%) or, in the case of 72 of the claims, held in the name of Gold Eagle Mines Ltd. (100%).

For the majority of the claims, as long as the annual fees are paid, the claims are indefinitely renewable. Remaining claims have expiry dates that range from October 2016 to 2035.

1.4 Royalties and Agreements

Some of the claims in the tenure holdings are subject to royalties (Appendix A), however, no royalties are payable on the tenures that host the current operations.

There are no key agreements that are currently relevant to the mine plan.

1.5 Environment, Permitting and Socio-Economics

The Red Lake Operations currently hold all required permits to operate including environmental permits.

1.6 Geology and Mineralization

The mineralization within the Red Lake Operations is typical of Archean greenstone belt-hosted gold deposits.

The Red Lake greenstone belt is located in the western portion of the Uchi Subprovince of the Canadian Shield. The Project area is underlain mainly by tholeiitic basalt and locally by komatiitic basalt of the Balmer Assemblage. The mine sequence also includes felsic, peridotitic and other mafic to lamprophyric intrusive rocks of various younger ages. The steeply-dipping, south–southwest-folded package is unconformably overlain by felsic volcaniclastic rocks, and clastic and chemical sedimentary rocks of the Bruce Channel assemblage.

The local package of rocks have been significantly flattened and folded. Fold limbs of the relatively plastic ultramafic units are so thinned and attenuated that major shear zones formed along them. These shear zones acted as primary hydrothermal fluid transportation corridors and host a significant portion of the gold mineralization in the area. Other significant mineralized structures occur within lower-strain areas of the stratigraphy, usually associated with brittle conjugate fracture systems in close proximity to lithological boundaries possessing high competency contrasts.

Gold deposits in the district have been classified into three main categories, mafic volcanic-hosted, felsic intrusive-hosted and stratabound. The majority of the productive zones in the Red Lake camp are of the mafic volcanic-hosted type and occur as vein systems and accompanying sulphide replacement within sheared mafic to komatiitic basalts of the Balmer Assemblage.

There are generally three styles of mineralization in the Red Lake–Campbell Complex: vein replacement mineralization, replacement mineralization, and sulphide mineralization. Vein replacement ore involves intense silica replacement of precursor ankerite veins often accompanied by abundant visible gold and minor sulphides. This is the dominant mineralization type found in zones such as the Red Lake High Grade Zone and the Campbell G and L zones. Replacement mineralization involved the intense silica replacement of sheared mafic rocks accompanied by abundant arsenopyrite and pyrrhotite ± biotite. This style of mineralization commonly envelops vein replacement mineralization, but can occur elsewhere. Sulphide mineralization is typically found within broad zones of strongly sheared mafic rocks and consists of fine disseminated pyrrhotite (as much as 30%) accompanied by biotite alteration.

Two styles of mineralization occur within the Cochenour–Willans Mine footprint: mineralization associated with discrete shear structures immediately in the footwall of the Cochenour Thrust structure, and mineralization that occurs well into the footwall north of the Cochenour Thrust associated with intersections between “north–south” carbonated shear zones with iron formation. The Bruce Channel deposit mineralization is hosted in highly sheared and sulphidized mafic rocks or in “grey sulphide” replacement breccia zones. The Western Discovery Zone mineralization consists of a series of sub-parallel, quartz-rich veinlets and tension veins developed in intrusive rocks of the McKenzie granodiorite stock.

Gold appears as free milling gold as well as refractory, arsenopyrite-associated gold.

In the opinion of the responsible QP, the knowledge of the deposit setting and lithologies, and of the mineralization style and its structural and alteration controls, is sufficient to support Mineral Resource and Mineral Reserve estimation.

1.7 Exploration

The Red Lake Operations have a long exploration and mining history. Gold mineralization was first identified in 1922. The Red Lake mine commenced production in 1948, and the Campbell mine in 1949.

Exploration activities on the Project have included regional and detailed geological and structural mapping, rock, silt and soil sampling, trenching, reverse circulation (RC) and diamond drilling, airborne geophysical surveys, ground induced polarization (IP) geophysical surveys, mineralization characterization and petrographic studies, metallurgical testing of samples, Mineral Resource and Mineral Reserve estimates, baseline environmental, geotechnical and hydrological studies, and technical studies.

In the opinion of the responsible QP, the exploration programs completed to date are appropriate to the known mineralization styles. There is considerable remaining exploration potential in the vicinity of the current mining operations.

1.8 Drilling

A significant amount of surface and underground core drill data has been collected over the 60^{+} year Project history. Drilling from 1945 to 2015 at the Red Lake and Campbell complex totals 63,774 drill holes (approximately 5,800,000 m). Drilling at the Cochenour Complex from 1939–2015 comprises about 11,900 drill holes (approximately 760,000 m).

Drill spacing in the Red Lake–Campbell Complex is variable. Typically drilling to outline resources is at a spacing of 45–60 m, infill drilling is carried out at 15–25 m centres and definition drilling is completed on 7.5 m centres. In the Cochenour Complex, the exploration programs are currently outlining the mineralization on a drill spacing of approximately 30–60 m drill spacing. Infill drilling is done at 15 m drill centres and localized, tight definition drilling is carried out on 3–5 m centres.

Standardized logging forms and geological legends are currently used. Logs record assays, lithologies, veining and replacement zones, vein styles and percentage amounts over sampled interval lengths and intensity, sulphide mineralization type and intensity, alteration type and intensity, faults and fracture frequency and orientation , rock quality designation (RQD), and structure type, frequency and intensity. Select drill holes are photographed.

Core quality is very high, with core recovery on average >95% on all core sizes. There are no areas where poor recovery is consistently encountered.

The collars of all drill holes are surveyed by transit for location, bearing and dip and tied into the mine grid. The same grid is used for all of the mine complexes.

Downhole surveys since 1995 at Red Lake were conducted in a systematic manner with a gyroscopic (gyro) survey instrument (unaffected by magnetics) used for drill holes steeper than 70°, and a Reflex Maxibor (Maxibor) survey instrument used for drill holes with flatter dips. Site specifications require downhole surveys at 30 m intervals or less. In the earlier stages of the mining operation, Sperry Sun multi-shot, Icefield multi-shot, Light-Log and Tropari instruments were used, but the gyro and Maxibor units have replaced this instrumentation.

Downhole surveys at the Campbell Complex utilized Reflex and Ranger electronic compass single-shot surveys tests. Most of the drill holes greater than 120 m are surveyed using the Maxibor method. Prior to that, Pajari test instruments were used, which provided azimuth and dip orientations. Sperry Sun multi-shot instruments were used on deep (>300 m holes) for a period from the early 1980s to the late 1990s. Pre-1980 and into the 1990s, drill hole inclination was derived using “acid tests”. This type of testing has been replaced by Reflex electronic compass single-shot surveys.

Downhole surveying since 2006 on both the Red Lake and Campbell complexes utilizes a combination of testing equipment that can include Reflex, Maxibor and north-seeking gyro, depending on the depth of the drill holes.

Drill data are typically verified prior to Mineral Resource and Mineral Reserve estimation by running a software program check.

Core sampling practices have varied between predecessor companies and over time. Typically, historic core sampling has targeted mineralized zones with additional bracket samples taken in waste rock. Current practice has changed, with some exceptions, to sampling the entire drill hole. Presently a high percentage of core sent out for assaying is whole core. A certain amount of core is cut and retained. This core in recent years has been from select, deep, High Grade Zone drilling and surface drilling.

At the Red Lake Complex, sampling honored lithological and mineralized zone boundaries. Typical sample lengths were 90 cm for un-mineralized intervals, 60 cm or less for mineralized intervals, and 30 cm intervals for visible gold, though samples were taken on shorter intervals that directly corresponded to very narrow, high-grade mineralized structures.

Until 1999 at the Campbell Complex, sample lengths were typically in the 0.6–1.0 m range, and usually shorter in the higher-grade sections. Low-grade rock and waste were typically sampled over 0.6–1.5 m lengths, averaging 0.67 m. High-grade sections were sampled over 15 cm to 60 cm intervals for BQ and NQ core, and 0.90 m for smaller AQ/AQTK core, except where significant geological differences were present, these normally being narrow, high-grade occurrences.

Current core sampling practices vary depending on the type of drill hole (surface, underground exploration, definition) and the size of the core:

- Mineralized <15 cm interval: sample length of 15 cm, and 15 cm shoulder sample;
- Mineralized 15–60 cm interval: sample length of 15–60 cm, and 30–45 cm shoulder sample;
- Mineralized >60 cm interval: sample length of 45–60 cm, and 45–60 cm shoulder sample;
- Barren or weakly altered: sample length of 60–90 cm, no shoulder sample taken.

For production purposes, chip sampling is performed on a blast-by-blast basis by the production geology team, while muck sampling is done by the miner during the mucking process. Muck samples are used to provide a general guide and back-up information for day to day operation, while test holes are required to ascertain that no mineralization is missed in the walls of the stope.

Historically a specific gravity (SG) of 2.91 (11.0 ft^3 /short ton (st)) has been used at the Red Lake Complex. An SG of 2.98, developed from composite averages, is used for the High Grade Zone. An SG of 2.91 was used for the Cochenour Complex.

In the opinion of the responsible QP, the quantity and quality of the lithological, geotechnical, collar, and down-hole survey data collected during the exploration and infill drill programs are sufficient to support Mineral Resource and Mineral Reserve estimation.

1.9 Sample Analysis and Security

Given the long production history, a number of laboratories have been used in support of operations.

Core drill and underground samples were analysed by a combination of independent laboratories and the Red Lake and Campbell Complex run-of-mine laboratories, using industry-standard methods for gold analysis. In general, exploration and infill core programs were analysed by independent laboratories using industry-standard methods for gold analysis from 2001. Current run-of-mine sampling is performed by the mine laboratory, which is operated independently of Goldcorp. Historically, the Campbell and Red Lake run-of-mine laboratories primarily performed day to day assays for mining operational purposes; however, exploration core has also been processed through the laboratories. Neither laboratory has held ISO accreditation. All remaining laboratories used for Project analytical data have held ISO certifications since 2001; it is not known what certification was held prior to that date.

Sample preparation for exploration and run-of-mine samples consists of drying as required, crushing, and selection of a sub-split that is then pulverized to produce a pulp sample sufficient for analytical purposes. Production samples and drill core are kept separate in the mine site laboratories to reduce the risk of contamination. The sample preparation procedure is in line with industry-standard methods for gold deposits that have coarse, visible gold, and a high nugget effect.

Samples are typically analyzed using fire assay (FA) with a gravimetric (GRAV) or atomic absorption (AA) finish, depending on the anticipated grade of the sample. In 2010, selected exploration drill core samples were submitted for inductively-coupled plasma (ICP) analysis as well as the regular fire assay and gravimetric (FAAA/GRAV) analysis. A certain percentage of the Project samples were also selected for pulp metallic analysis.

The collected sample data adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits.

There is limited information available on the QA/QC employed for the earlier drill programs; however, sufficient programs of reanalysis have been performed that the data can be accepted for use in estimation. Goldcorp drill programs since 2006 on the Red Lake and Campbell Complexes have included insertion of blank and standard reference material (SRM) samples. Submission of quality assurance and quality control samples was initiated for the Cochenour Complex in 2010, and comprises submission of SRM and blank materials.

Data that were collected were subject to validation, using in-built program triggers that automatically checked data on upload to the database. Data are also verified against the original hard copy monthly reports, as well as in other software packages. Verification is performed on all digitally-collected data on upload to the main database, and includes checks on surveys, collar co-ordinates, lithology data, and assay data. The checks are appropriate, and consistent with industry standards.

Drill core sample security is maintained at the Red Lake–Campbell Complex and the Cochenour Complex through supervision of transport of the core from the underground/surface drill or sample site, through to the logging facility and to the in-house or external assay laboratories. Chain-of-custody procedures consisted of filling out sample submittal forms that were sent to the laboratory with sample shipments to make certain that all samples were received by the laboratory. Current sample storage procedures and storage areas are consistent with industry standards.

The responsible QP is of the opinion that the quality of the gold analytical data are sufficiently reliable to support Mineral Resource and Mineral Reserve estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards.

1.10 Data Verification

A number of data verification programs and audits have been performed over the Project's recent history by independent consultants in support of technical reports and by Goldcorp personnel in support of mining studies. Goldcorp has also performed its own internal validations. Data verification checks were performed as follows:

- Micon (2004, 2006): Micon staff reviewed available data in support of technical reports prepared in 2004 and 2006 for Exall/Southern Ventures; no material biases or errors noted;
- Watts, Griffis, and McOuat (1999 to 2007): annually reviewed the QA/QC program and the logging and sampling/assaying procedures; concluded at the time of each

annual audit that the database was in good order and that the procedures were to industry standards;

- Goldcorp (2006 to date): database validation checks, laboratory inspections; no material biases or errors noted.

A reasonable level of verification has been completed, and no material issues would have been left unidentified from the programs undertaken. Data verification programs completed on the data collected from the Project adequately support the geological interpretations, and the quality of the analyses and the analytical database, and therefore support the use of the data in Mineral Resource and Mineral Reserve estimation.

1.11 Metallurgical Testwork

Over the Project history, a significant number of metallurgical studies and accompanying laboratory-scale and/or pilot plant testwork have been completed for the ores from the Red Lake and Campbell Complexes. Studies included mineralogical studies, grindability and comminution testwork, bench and pilot plant flotation tests, thickener tests, reagent testwork. Programs were sufficient to establish the optimal processing routes for the Red Lake–Campbell ores, were performed on mineralization that was typical of the deposits, and supported estimation of recovery factors for the various ore types.

Mill capacities, with accompanying life-of-mine average recoveries are:

- Campbell Complex: 1,678 st/d (1,850 t/d), 94.5% recovery;
- Red Lake Complex: 1,134 st/d (1,250 t/d), 97.0% recovery;
- Operation as a whole: 2,812 st/d (3,100 t/d), 96.5% recovery.

Depending on metallurgical type, average life-of-mine gold recoveries can range from 95.8% to 97.4% for the Red Lake Complex and from 94.0% to 96.4% for the Campbell Complex.

Testwork to date on the Cochenour Complex mineralization indicates three distinct mineralization types. All three mineralization types can be treated in the current Campbell process plant, but the plant may have to be modified or expanded, depending on how much each zone contributes to the mill feed, to handle the larger amount of sulphide content that could significantly tax the current autoclave and leaching circuits. The Bond work index determinations showed that the Bruce Channel mineralization hardness can be described as moderate to moderately soft. Therefore the mineralized material should be readily processed in the existing grinding circuit at Campbell. Relatively poor leach-only recoveries indicated that a refractory ore treatment process (autoclave) is required to achieve reasonable overall gold recovery. The much higher sulphur and arsenic grades within the Cochenour Complex mineralization will result in significantly higher concentrate production levels, up to twice as much as the current Campbell Complex levels.

1.12 Mineral Resource Estimate

Mineral Resources are based on drill hole composite and underground chip samples. The closeout date for the database supporting the estimation was October 19, 2015 for Red Lake-Campbell Complex and the closeout date for the Cochenour complex was November 24, 2015.

Building and naming of ore solids is influenced by geology interpretations, lithological units, structures, faults, and mineralization. The mineralized zones were interpreted based on alteration, mineralization, structures and assay results. Major lithologies and alteration styles were also interpreted on section and plan views. Geological models are constructed from cross sections perpendicular to the strike of the mineralization and reconciled on cuts. Structure is the primary consideration with grade as a secondary consideration. The interpreted models are then wire-framed.

Grade caps were selected after examination of the assay data, and were influenced by mine reconciliation.

All blocks are assigned a density by area, based on historical values.

Composite lengths are variable by zone. The length depends on the approximate average sample length within the mineralized zones, and is typically in the range of 45–60 cm per sample. Samples below 50% of the total length are excluded.

Mineral Resources for the Red Lake–Campbell Complex were historically estimated using polygonal methods. Since 2008, Goldcorp has upgraded the estimation method to a more generally-accepted industry standard of three-dimensional (3D) block modelling techniques. For the year-end 2015 Mineral Resource estimate, the Mineral Resource estimates in all zones were estimated from block models.

The current estimation method in use at the Red Lake–Campbell Complex is inverse distance weighting to the second power (ID2), without octants. The process also generates nearest-neighbour (NN) and ordinary kriging (OK) results for background checks. Search ellipsoids were defined for each of the Red Lake–Campbell Complex zones. The composite numbers used varied by zone, from a minimum of three composites to a maximum of 12.

Inverse distance weighting to the third power (ID3) was used for grade estimation at the Cochenour Complex. Estimation was performed in three passes, with differing numbers of samples required to inform each block. For Pass 1, a maximum of 10 and minimum of three samples were required, for Pass 2, a maximum of 10 and minimum of two, and for Pass 3, a maximum of 10 and a minimum of one were required.

All block models are validated by visual inspection and reconciled. Additional validation for some models use quantile–quantile (QQ) plots comparing the block model against the composited data. Validation of each of the block models indicated that the models were suitable to support Mineral Resource estimation.

Estimated blocks were classified into the Measured, Indicated and Inferred categories. Classification was based, depending on confidence category, on the distance to the nearest adjacent drill hole, with different numbers of samples and drill holes required depending on the level of confidence. Zones that are complex and have highly irregular shapes may be estimated by plan outlines and the calculated tonnage per vertical foot method is applied.

Reasonable prospects of eventual economic extraction for underground mineralization at Red Lake-Campbell include consideration of operating costs, mining widths, and cutoff grades. Mineral Resources are declared where the mineralization meets minimum grade and thickness requirements; these are variable by zone.

Mineral Resources take into account geological, mining, processing and economic constraints, and have been confined within geological boundaries; they can therefore be classified in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM 2014).

The QP for the Mineral Resource estimate is Mr Chris Osiowy, P.Geo, an employee of Goldcorp.

The Mineral Resources (exclusive of Mineral Reserves) for the Red Lake Operations are summarized in Table 1-1 and Table 1-2. The estimates have an effective date of 31 December, 2015.

Factors which may affect the geological models and the preliminary stope designs used to constrain the Mineral Resources, and therefore the Mineral Resource estimates include commodity price assumptions; dilution assumptions in deeper mining areas; changes to geotechnical, mining and metallurgical recovery assumptions; changes in interpretations of mineralization geometry and continuity of mineralization zones; and changes to assumptions made as to the continued ability to access the site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and retain the social licence to operate.

Table 1-1: Mineral Resource Statement, Red Lake–Campbell Complex

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Measured	1.24	21.88	0.87
Indicated	2.48	17.60	1.40
Measured + Indicated	*3.71*	*19.02*	*2.27*
Inferred	3.45	19.86	2.20

Table 1-2: Mineral Resource Statement, Cochenour Complex

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Inferred	4.16	16.36	2.19

Notes to Accompany Mineral Resource Tables:

1. Mr Chris Osiowy, P.Geo., a Goldcorp employee, is the Qualified Person for the estimate. The estimate has an effective date of 31 December, 2015.
2. The Mineral Resources are classified as Measured, Indicated and Inferred Mineral Resources, and are based on the 2014 CIM Definition Standards.
3. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not known with the same degree of certainty as Mineral Reserves and do not have demonstrated economic viability.
4. Based on a gold price of $1,300 per ounce and a US$:C$ exchange rate of 1.20.
5. Mineral Resources for the Red Lake–Campbell Complex are reported using a cutoff grade of 8.33 g/t gold. The in-situ block model has been diluted to minimum horizontal widths of 1.2 metres in the High Grade Zone and 2.0 metres in all other zones. Dilution is assigned zero grade.
6. The Inferred Mineral Resources for the Cochenour Complex are estimated using a top cap grade of 70–200 g/t gold depending on the geology and zone, and a cutoff grade of 6.00 g/t gold.
7. Mineral Resources for the Red Lake–Campbell Complex are estimated using 96.5% metallurgical recovery, and 90% metallurgical recovery for the Cochenour Complex.
8. The operating cost assumed is US$286.88/t and includes mining, processing and general and administrative (G&A) costs.
9. Numbers may not sum due to rounding.

1.13 Mineral Reserve Estimate

Mineral Resources classified as either Indicated or Measured were considered during conversion to Mineral Reserves. The requirements for Mineral Resources to be converted to Mineral Reserves are:

- Only Measured and Indicated Mineral Resources can be included;
- Dilution is included in the Mineral Reserve estimate;
- Mineral Reserves are supported by an economic mine plan.

Mineral Reserve estimates were prepared by Ms Boi Linh Van, P.Eng., an employee of Goldcorp. The QP for the Mineral Reserve estimate, who supervised the work, is Mr Stephane Blais, P.Eng., an employee of Goldcorp.

Mineral Reserves are reported at a gold price of US$1,100/oz Au and an assumed C$/US$ exchange rate of 1.20 over the life-of-mine, and have an effective date of December 31, 2015.

Mineral Reserves are summarized in Table 1-3. All Mineral Reserves are classified as Proven and Probable using the 2014 CIM Definition Standards.

Areas of uncertainty that may materially impact the Mineral Reserve estimates include: commodity price and exchange rate assumptions used; rock mechanics (geotechnical) constraints; geological complexity; maintaining constant underground access to all working areas; and cost escalation.

1.14 Mine Plan

Currently, the underground operations consist of a single underground operating mine (comprising the Red Lake and Campbell Complexes). In addition, underground exploration is being conducted on an advanced underground exploration project (Cochenour Complex) and an exploration project (H.G. Young). Production projections for 2016 are for 1,930 t/d, from which 82% will be provided by the Red Lake Complex and the remaining 18% from Campbell Complex.

Lithology changes, such fault structures and dykes, are believed to play an important role in stress distribution in both mining complexes. In general, the basalts are competent and rock bursting tends to concentrate around these contacts. Most ground problems or potential instabilities are related to unravelling ground conditions caused by localised microseismic activity associated with pre-existing structures and flat, stress-induced structures.

Both producing underground complexes maintain independent mine dewatering systems with primary sump locations and pumping stations established on key levels at the respective mining complexes. At the Cochenour Complex, dewatering of the upper horizon occurs through the Cochenour shaft. The dewatering system in the lower horizon connects to the system at the Campbell Complex.

Mining is carried out in the Red Lake Complex using a combination of long hole, mechanized underhand or overhand cut-and-fill techniques, which allow maximum ore extraction while generating minimal dilution. Stope sequencing is carefully analyzed and adapted to surrounding conditions to alleviate seismic activity induced by mining. Stope sequencing is based on an amalgamation of elastic/plastic stress modelling, seismic system data analysis and underground observations. Once mining blocks or lifts are completed, waste rock fill, paste fill, or a combination of both, is employed to fill the open excavation.

Table 1-3: Mineral Reserve Statement

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Proven	1.24	12.84	0.51
Probable	5.86	8.31	1.57
Proven + Probable	*7.10*	*9.10*	*2.08*

Notes to accompany Mineral Reserve Table

1. Mr Stephane Blais, P.Eng., an employee of Goldcorp, is the Qualified Person for the estimate. The estimate has an effective date of 31 December 2015 and was prepared by Ms Boi Linh Van, P.Eng., also a Goldcorp employee.
2. The Mineral Reserves are classified as Proven and Probable Mineral Reserves, and are based on the 2014 CIM Definition Standards.
3. Mineral Reserves are estimated using a gold price of US$1,100/oz and an exchange rate (C$/US$) of 1.20. These assume processing costs of US$39.79/t, mining operating costs of US$209.51/t and general and administrative costs of US$37.58/t, for a total life-of-mine estimated operating cost of US$286.88/t.
4. All decisions for inclusion or exclusion of material as Mineral Reserves are based on a detailed assessment of costs versus revenues. A global cutoff grade was calculated to be 8.4 g/t gold. Individual cutoff grades were used for design purposes and are dependent on mining method and area. The following cutoff grades were used: long-hole low cost: 6 g/t gold; long-hole higher cost: 6.4 g/t gold; and cut-and-fill: 17 g/t gold.
5. Mineral Reserves are constrained within mineable shapes, with varying mining widths that vary from 2.4–10.7 m, depending on the geometry of the ore body and mining method used. The operations use 100% mine recovery for scheduling the life-of-mine plan Mineral Reserves, and a 96.0% metallurgical recovery.
6. Numbers may not sum due to rounding.
7. To date, no Mineral Reserves have been prepared or disclosed for the Cochenour Complex.

Mining at the Campbell Complex primarily uses long-hole stoping and follows best practices for design and sequencing. Backfill of stope excavations is completed on an as-needed basis.

The Red Lake ventilation system is a push-pull design, with intake and exhaust fans on surface, and booster fans underground delivering approximately 24,075 m^3/min (850 kcfm) of fresh air. The mine is divided into two ventilation districts, with 37 level to surface as the upper district, and 37 to 51-1 sub-level as the lower district.

The upper district is ventilated by two booster fans located on the 16 and 23 levels, and two surface fans at the Red Lake and Campbell mine. The lower district is ventilated by two booster fans on 37 level and a surface fan at the Balmer Complex. Ramps serve as intake airways to the mine, but there are no dedicated return airways. Many drifts, raises, and ramps, plus the three shafts, make up the main ventilation circuit. Auxiliary fans of varying sizes bring the fresh air from the ramps to the working faces.

The Campbell Complex ventilation system is a push-pull design, with intake and exhaust fans on surface, and booster fans underground delivering approximately 13,954 m^3/min (500 kcfm) of fresh air. The Campbell ventilation system has three circuits and each is primarily independent of the others.

To support exploration activities at the Cochenour Complex, the ventilation system consists of two fresh air intake fans with two underground exhaust booster fans exhausting out to Campbell Complex on 36 level.

Fixed equipment and facilities include primary ventilation fans, mine air heaters, dewatering pumps, explosive magazines, maintenance shops, fuelling stations and personnel refuge stations.

Conventional percussive drills, long-hole drills, and “jumbo” drilling rigs are used for drilling ore and waste. Mucking machines or load–haul–dump (LHD) units ranging in size from 1 yd^3 to 4.0 yd^3 capacity (ore width determines the size of the LHD units used for mucking stopes), are used in conjunction with trains or haulage trucks to move the broken rock. There are currently three tele-remote LHDs operated from surface. Additional equipment includes ventilation fans, pumps, rock-breakers, rail-mounted vehicles, jumbo face drills, bolters, mine service and transport vehicles, and a variety of utility vehicles. As mining progresses deeper, the equipment fleet will change accordingly. Capital has been budgeted for equipment additions, replacements and rebuilds.

On the basis of Mineral Reserves only, the life-of-mine production plan is based on seven years of underground production to 2022 and reflects three years of production at an annual rate of approximately 340,000 to 350,000 oz/year, followed by four additional years of decreasing yearly ounce production. The horizontal development is planned for both the Red Lake and Campbell Complexes at 14 m/kt of ore with an additional 1 m/kt of vertical development. Following the cessation of underground activities in 2022, three years of production from reclaimed tailings will continue to the end of 2025.

As any typical underground mine, the quantification of Mineral Reserves is limited by the ability to define ore zones in advance of mining.

At this point in time, the Cochenour Complex does not have defined Mineral Reserves and is therefore not included in the life-of-mine production plan.

Deliberate efforts to install exploration drifts in strategic locations of the mines have allowed for the routine exploration of various orebodies as the mine progresses. It also allowed Campbell and Red Lake to be in operation for more than 60 years. With additional drilling, estimation of additional Mineral Resources, or upgrade in Mineral Resource confidence categories, conversion of some or all of those Mineral Resources to Mineral Reserves, and more than 60 years of mining history, there is very good potential that the underground mine life can be extended beyond 2022, and therefore the overall LOM can be extended beyond 2025.

As part of day-to-day operations, Goldcorp will continue to undertake reviews of the mine plan and consideration of alternatives to and variations within the presented mine plan. Alternative scenarios and reviews can be based on ongoing or future mining considerations, evaluation of different potential input factors, assumptions and corporate directives.

1.15 Process Plant

Process facilities at the Red Lake Complex consist of three separate plants: the crushing plant; processing plant; and paste fill plant. Commercial production from the facilities began on January 1, 2001. Plant capacity is currently 1,250 t/d.

The crushing plant is a two-stage process which reduces underground ore from about 30 cm to 1 cm. Underground ore from a coarse ore bin is fed to a jaw crusher and sizing screen. Screen oversize is crushed in a cone crusher and screen undersize is conveyed into a fine ore bin as plant feed material.

Unit operations in the processing plant include grinding, gravity concentrating, cyanidation, carbon-in-pulp (CIP), carbon elution and reactivation, electrowinning, bullion smelting/refining, cyanide destruction, flotation, and concentrate handling. Coarse gold is recovered from the ore via the gravity concentrating circuit. A portion of the ground slurry from the ball mill is fed to two Knelson concentrators which produce a gravity concentrate that is upgraded on a Diester table to a concentration of approximately 75% gold, and directly smelted into bullion. Bullion is then shipped to a refinery for later sale into the spot market. The Red Lake Complex processing plant also employs a typical sulphide flotation circuit generating a bulk sulphide concentrate. This concentrate is pumped as a slurry to the Campbell Complex for processing in the autoclave.

At the Campbell Complex, conventional crushing and grinding is followed by gravity concentration to recover free-milling gold. Refractory gold, finely disseminated in the arsenopyrite and pyrite matrix, is recovered by flotation followed by pressure oxidation, neutralization and carbon-in-leach (CIL). This stream joins the non-refractory flotation tails and is recovered by cyanidation/CIP processing. The current plant throughput rate is 1,800 t/d.

1.16 Infrastructure

Together with multiple shaft accesses to the underground workings, the Red Lake Operations maintain administrative, technical, operations support, and processing facilities on the active sites.

To support the required permanent workforce for operations and construction, Goldcorp operates modern camp facilities for shift personnel that do not live in and around the Red Lake area.

Power is supplied to the Red Lake area through the Hydro One transmission network via a radial line that taps into the 230kV grid at the Dryden transformer station where it is stepped down to 115 kV. The line continues up to the Ear Falls transformer station and finally terminates at the Red Lake transformer station.

The Balmer Complex is supplied by the M3 Hydro One feeder from the Red Lake TS with an approximate load of 10 MW.

The Red Lake Operations have been transferred off the Hydro One M6 feeder over to the RLGM Balmer transformer station (CTS), which is directly fed from the 115 KV E2R line from Ear Falls, with an approximate load of 26 MW. The Cochenour Complex remains on the M6 feeder with a load of approximately 2 MW. Diesel-powered generators provide emergency power to critical areas within the Red Lake Operations in the event of a main electrical disruption.

1.17 Markets and Contracts

Goldcorp's bullion is sold on the spot market by Goldcorp's in-house marketing experts.

The terms contained within the existing sales contracts are typical and consistent with standard industry practices, and are similar to contracts for the supply of doré elsewhere in the world.

1.18 Capital and Operating Cost Estimates

Capital costs were based on experience gained in from current operations, 2016 budget data, and quotes received from manufacturers during 2015. Capital cost estimates include funding for infrastructure, mobile equipment replacement, development, drilling, and permitting as well as miscellaneous expenditures required to maintain production. Infrastructure requirements are incorporated in the estimates as appropriate. Mobile equipment is scheduled for replacement when operating hours reach threshold limits. Sustaining capital costs reflect current price trends. The remaining life-of-mine capital expenditure is estimated at US$202.6 million.

Operating costs were based on actual historical data and include adjustments to reflect market conditions. The estimated average annual operating cost is US$286.88/t, consisting of US$39.79/t for processing, US$209.51/t for mining, and US$37.58/t for G&A.

1.19 Financial Analysis

Goldcorp is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production.

neral Reserve declaration is supported by a positive cashflow.

1.20 Interpretation and Conclusions

Under the assumptions in this Report, the Red Lake Operations show a positive cash flow over the life-of-mine and support Mineral Reserves. The mine plan is achievable under the set of assumptions and parameters used.

1.21 Recommendations

Recommendations are put forward for a five-year period, and comprise a single-phase work program, comprising infill and exploration drilling and concurrent test stoping, bulk sampling, specific gravity data collection, and metallurgical testwork and a budget estimate over the five-year timeframe to complete the work of about US$227–253 million.

The infill and exploration drilling would comprise approximately US$100 million at the Red Lake–Campbell complex, about US$40–50 million at the Cochenour Complex and US$40–50 million at H.G. Young. The complete drilling budget would be about US$180–200 million.

In addition, test stoping, bulk sampling, specific gravity data collection, and metallurgical testwork are recommended during this time-frame for the Cochenour Complex and H.G. Young, for a combined budget estimate totalling about US$47–53 million.

2.0 INTRODUCTION

2.1 Introduction

Mr Stephane Blais, P.Eng., Mr Chris Osiowy, P.Geo., and Mr Nuri Hmidi, P.Eng., (the Qualified Persons or QPs) prepared this Technical Report (the Report) for Goldcorp Inc. (Goldcorp) on the wholly-owned owned Red Lake Gold Operations, (the Red Lake Operations or the Project), located in Ontario, Canada.

2.2 Terms of Reference

This Report supports the disclosure of updated Mineral Resources and Mineral Reserves for the Project. Goldcorp will be using the Report in support of its 2015 Annual Information Form (AIF) filing.

The operating entity for the Project is a Goldcorp subsidiary, Red Lake Gold Mines Limited (RLGM). For the purposes of this report, “Goldcorp” is used to refer interchangeably to the parent and subsidiary companies.

Measurement units used in this Report can be either metric or imperial; where imperial units are used, these are clearly indicated. Imperial (short) tons are referred to as “st” to distinguish from metric tonnes. Currency is expressed in US dollars unless stated otherwise.

2.3 Qualified Persons

This Report has been prepared by the following QPs:

- Mr Stephane Blais, P.Eng., Technical Services Manager, RLGM;
- Mr Chris Osiowy, P.Geo., Manager of Exploration, RLGM;
- Mr Nuri Hmidi, P.Eng., Manager of Surface Operations, RLGM.

Figure 2-1: Project Location Map

Note: Figure prepared by Amec Foster Wheeler, 2015, using Google Earth backdrop.

2.4 Site Visits and Scope of Personal Inspection

The QPs are employees of Goldcorp based at the Red Lake mine complex, and work at the Project operations; this familiarity with the Project constitutes the personal inspection requirement for each QP.

Mr Stephane Blais has worked at Red Lake Operations since August 2001 and was working at the site at the Report effective date. In Mr Blais' role as Technical Services Manager, he has overall responsibility for the engineering and production geology activities at the site, including mine technical services (production geology, geotechnical, short-term, medium-term and long-term production planning, scheduling, ventilation, survey), mining-related and associated support services. He has participated directly in all aspects associated with the execution of annual business plans; has performed detailed reviews of operational performance, mining technical designs, financial performance; has participated in discussions and decision processes associated with long-term strategic planning.

Mr. Chris Osiowy has worked at the Red Lake Operations since 2001 and was working at the site at the Report effective date. In his role as Exploration Manager, he has inspected drill core, visited drill platforms and logging areas; discussed geology and mineralization with the staff; reviewed geological interpretations with staff; supervised and reviewed modeling efforts, supervised mineral resource estimates; audited and reviewed on-site data including reviews of budgets, modelling programs and sample results; visited the underground workings; and viewed the locations of key infrastructure.

Mr Nuri Hmidi has worked at the Red Lake Operations since February 2015 and was working at the site at the Report effective date. In his role as Manager of Surface Operations, he is responsible for surface activities, processing operations and metallurgical projects. He has inspected the process operations, and discussed aspects of milling, processing and testwork with Goldcorp staff.

2.5 Effective Dates

Several effective dates (cutoff dates for the information prepared) are appropriate for information included in this Technical Report.

The Report has a number of effective dates as follows:

- The effective date for the Mineral Resource Estimate is 31 December 2015;
- The effective date of the Mineral Reserve Estimate is 31 December 2015.

The overall effective date of this Report is the effective date of the Mineral Reserves and is 31 December, 2015.

2.6 Information Sources and References

This Report is based in part on internal company reports, maps, published government reports, and public information, as listed in Section 27 of this Report. Specialist input from Goldcorp employees in other disciplines, including legal, process, geology, geotechnical, hydrological and financial, was sought to support the preparation of the Report. Information used to support this Report is also derived from previous technical reports on the property.

All figures were prepared by Goldcorp personnel for the Report unless otherwise noted.

2.7 Previous Technical Reports

Goldcorp has previously filed the following technical reports on the Red Lake Operations:

- Blais, S., and Osiowy, C., 2011: Red Lake Gold Operation, Ontario, Canada, NI 43-101 Technical Report: technical report prepared for Goldcorp Inc., effective date January 15, 2011, revised 30 March, 2011.
- Crick, D., Blais, S., and Stechisen, A., 2006: The Red Lake Gold Mines Property, Red Lake Mining Division, Northern Ontario: technical report prepared for Goldcorp Inc., effective date November 17, 2006.

Gold Eagle Mines Ltd., now a subsidiary of Goldcorp, and its predecessor companies Exall Resources and Southern Star, filed the following reports on the Gold Eagle area, now part of the Project:

- Lewis, W.J., 2006: Technical Report on the Gold Mineralization Found in the Bruce Channel Zone and in the Western Discovery Zone Gold Eagle Mine Property, Red Lake, Ontario NTS 52 N/4: technical report prepared by Micon International Ltd for the Southern Star Resources Inc. and Exall Resources Limited Gold Eagle Joint Venture, effective date 27 October 2006;
- Lewis, W.J., 2006: Technical Report on the Gold Mineralization Found in the Bruce Channel Zone and in the Western Discovery Zone Gold Eagle Mine Property, Red Lake, Ontario NTS 52 N/4: technical report prepared by Micon International Ltd for the Southern Star Resources Inc. and Exall Resources Limited Gold Eagle Joint Venture, effective date 16 April 2006;
- Pressacco, R., 2005, Technical Report on the Resource Estimate of the Gold Mineralization Found on the Western Discovery Zone of the Gold Eagle Mine Property, Red Lake, Ontario, NTS 52 N/4, Micon International Limited, April 2005;
- Pressacco, R., 2004: Technical Report on the Resource Estimate of the Gold Mineralization Found on the Western Discovery Zone of the Gold Eagle Mine

Property, Red Lake, Ontario NTS 52 N/4: technical report prepared by Micon International Ltd for the Southern Star Resources Inc. and Exall Resources Limited Gold Eagle Joint Venture, effective date 30 November, 2004;

- Cargill, D.G., and Gow, N.N., 2002: Report on the Gold Eagle Mine Property Red Lake Area Northwestern Ontario, Canada (52N4): technical report prepared by Cargill Consulting Geologists Limited for Southern Star Resources Inc., effective date 13 December 2002.

3.0 RELIANCE ON OTHER EXPERTS

This section is not relevant to the Report as information on areas outside the QPs' experience was sourced from Goldcorp experts as noted in Section 2.6.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Red Lake Operations are located 180 km north of the town of Dryden, District of Kenora, northwestern Ontario. The Red Lake gold mine is at approximately latitude 51° 05' 58" and longitude 93° 43'21"W, UTM (NAD 27) co-ordinates 5653000N and 445400E, Zone 15, about 120 km east of the Ontario/Manitoba provincial border.

Mining activities are conducted in and about the municipality of Red Lake (population 4,670), which consists of six distinct communities, Red Lake, Balmertown, Cochenour, Madsen, McKenzie Island, and Starratt-Olsen.

The operations comprise the former Campbell and Red Lake underground mines, which are now integrated and operated by RLGM as a single entity. For the purposes of this Report, the shafts and mill at Red Lake are collectively termed the Red Lake Complex; those at Campbell are termed the Campbell Complex. The combined mine area is also referred to as the Red Lake–Campbell Complex.

The Cochenour Complex covers mineralization discovered at the Western Discovery Zone deposit and the former Cochenour–Willans mine (Figure 4-1). It also includes the former Gold Eagle Mines Joint Venture property (see Section 4.2); host to the Bruce Channel deposit and the former Gold Eagle mine.

There are also numerous closed mines, operated during the 1950s–1970s, such as the Detta mine and McMarmac mine, within the Project boundaries.

4.1 Project Ownership

The operating entity for the Red Lake Operations is Red Lake Gold Mines Limited.

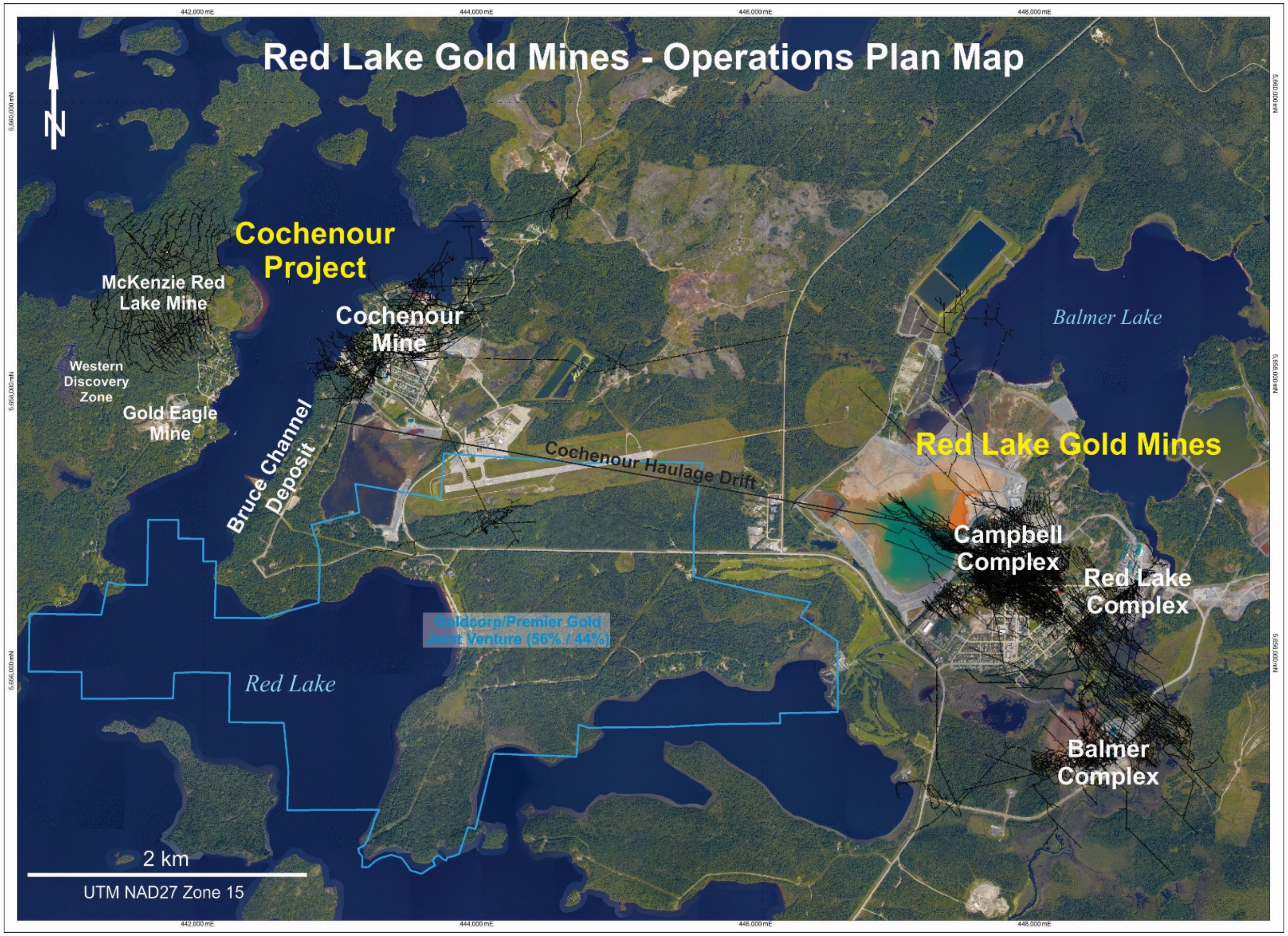
4.2 Mineral Tenure

The Red Lake Complex consists of 89 patented mineral claims covering 1,254 ha and the Campbell Complex consists of 77 patented mineral claims covering 1,084 ha. Claims are held in the name of either Goldcorp Inc., or Goldcorp Canada Ltd, or are jointly held by the two companies.

The Cochenour Complex, including the Golden Eagle property, covers 1,358.21 ha, and comprises 110 patented mineral rights, licences of occupation, lease mineral rights, and one staked claim. Tenure is jointly held in the names of Goldcorp Inc. (72%), Goldcorp Canada (28%) or, in the case of 72 of the claims, held in the name of Gold Eagle Mines Ltd. (100%).

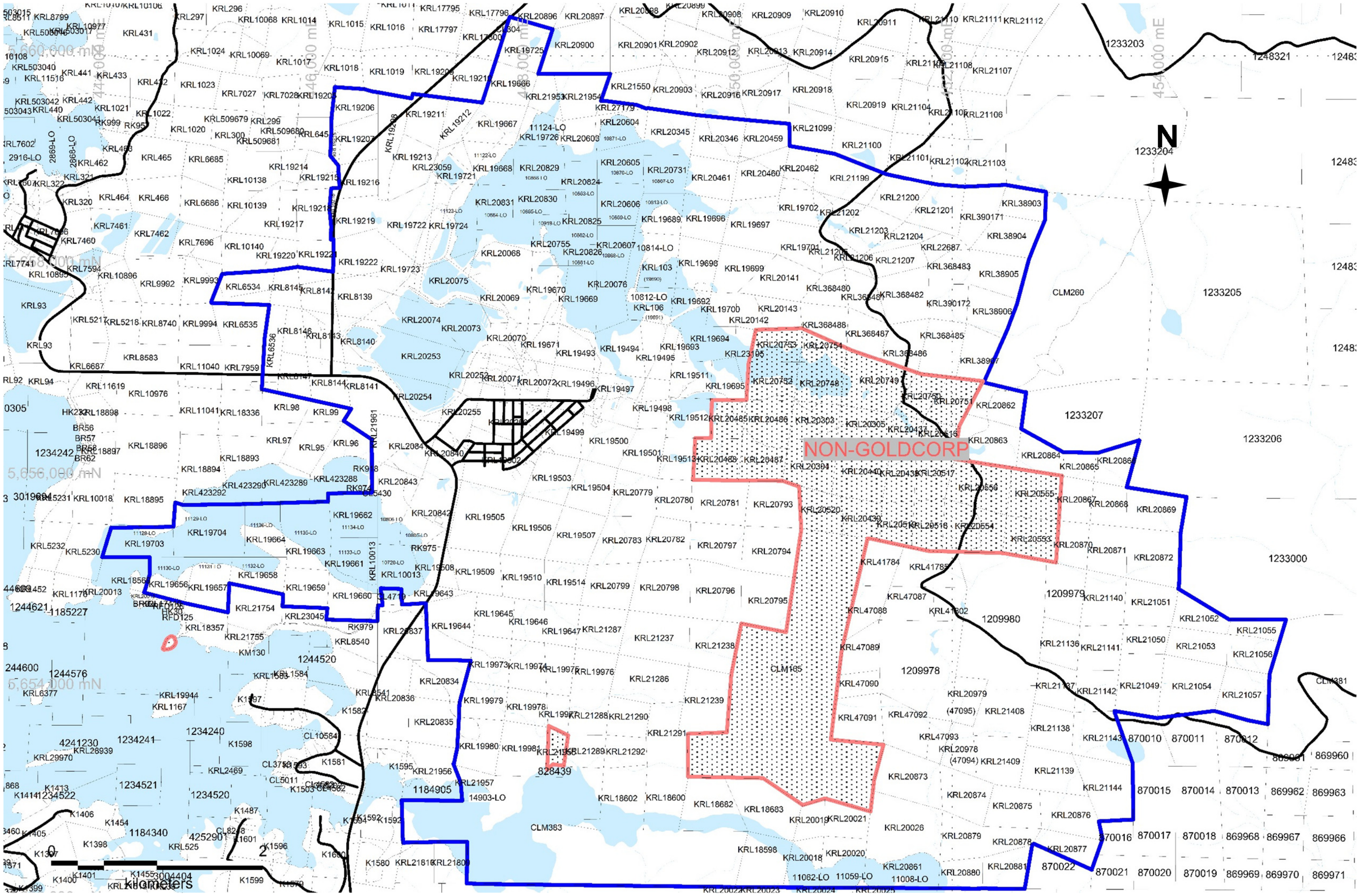
Claim boundaries are shown in Figure 4-2 (Red Lake–Campbell Complex) and Figure 4.3 (Cochenour Complex). Claim details are included in Appendix A (Red Lake–Campbell Complex) and Appendix B (Cochenour Complex).

Figure 4-1: Red Lake Gold Mines – Operations Plan Map



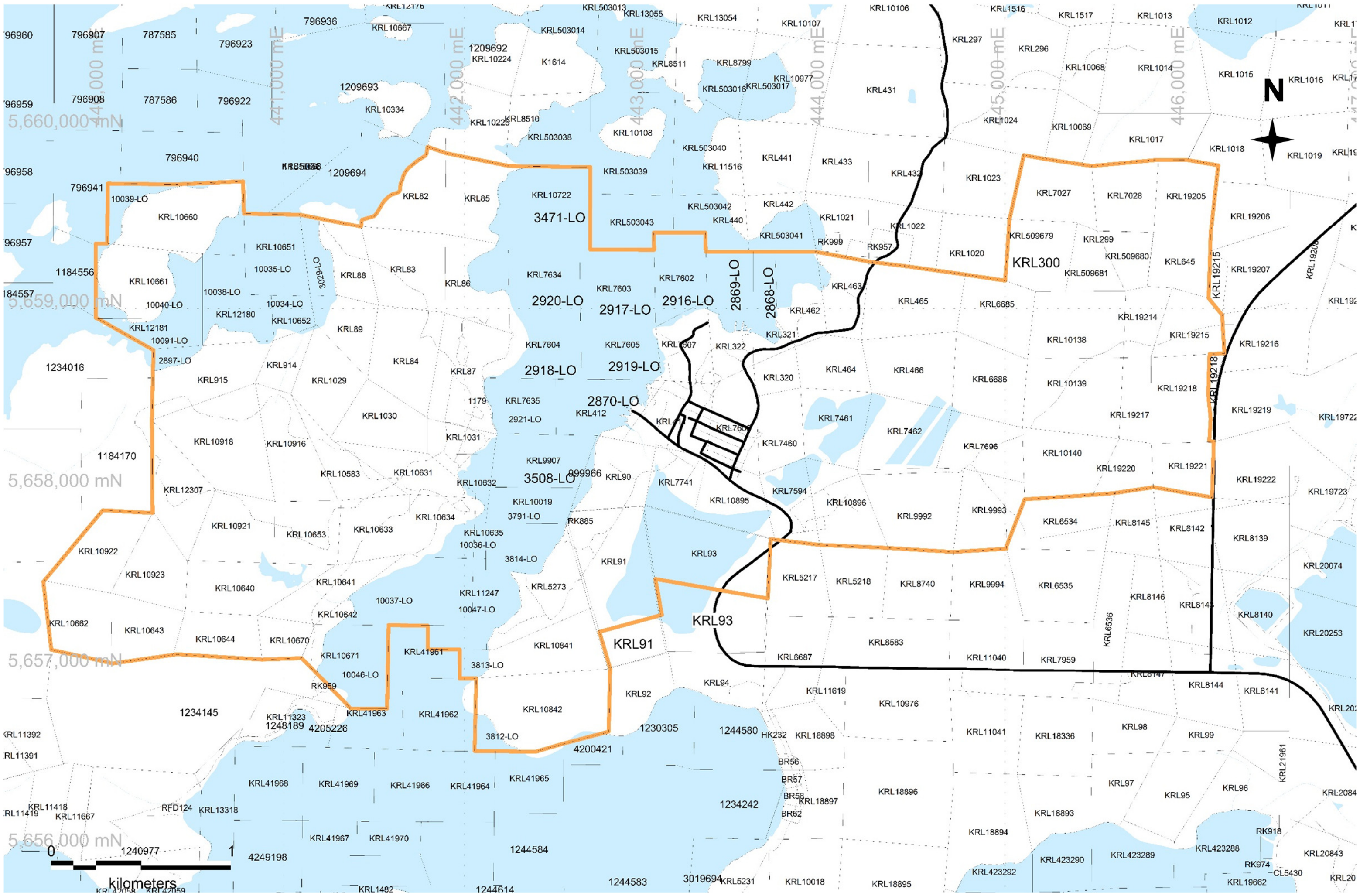
Note: Figure prepared by Goldcorp 2015.

Figure 4-2: Claim Location Map, Red Lake and Campbell Complexes



Note: Figure prepared by Goldcorp 2015.

Figure 4-3: Claim Location Map, Cochenour Complex



Note: Figure prepared by Goldcorp 2015.

As required under Ontario law, patented mining lands have been surveyed.

Required fees and duties have been paid to the appropriate regulatory authorities, and the claims are in good standing. For the majority of the claims, as long as the annual fees are paid, the claims are indefinitely renewable. Remaining claims have expiry dates that range from October 2016 to 2035 (see Appendix A and Appendix B).

Goldcorp is active in the greater Red Lake area, and in addition to the wholly-owned Project, has a number of joint ventures with third-parties which are at the exploration stage. The Rahill–Bonanza Joint Venture between Goldcorp (56% and operator) and Premier Gold Mines Limited (Premier; 44%) is considered to be a stand-alone project, and not part of the Red Lake Operations.

4.3 Surface Rights

Goldcorp hold sufficient surface rights through the granted patented claims to support the Red Lake–Campbell mining operations, and associated infrastructure. There are sufficient surface rights held in the Cochenour Complex area to support any proposed re-development.

4.4 Royalties and Encumbrances

There are no royalties currently payable on the mineral tenures that are being actively mined.

There is a royalty that would be payable on production from lease numbers 21409, 27179, and 21953 (see Appendix A) in the Red Lake–Campbell Complex of $0.25/st mined ore. This royalty is covered by the Ballentine Royalty Agreement with Campbell Mine (1984).

A separate royalty is payable on production from lease number 390172 in the Red Lake–Campbell Complex of 2.5%.

Selected leases in the Cochenour Complex will incur a 1% net smelter return royalty should production occur from the Cochenour Complex (refer to Appendix B).

4.5 Property Agreements

There are no material property agreements that would affect the current life-of-mine (LOM) plan.

4.6 Permits, Environment and Social Licence

The current status of the environment permitting and study status, community consultation and the social licence to operate is discussed in Section 20.

4.7 Comments on Section 4

The QPs note:

- The Project is wholly-owned by Goldcorp;
- Information provided by Goldcorp legal experts supports a conclusion that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources and Mineral Reserves;
- Goldcorp holds sufficient surface rights in the Project area to support the mining operations, including access and power line easements.

Environmental, social and permitting considerations are discussed in Section 20.

Goldcorp is not aware of any significant environmental, social or permitting issues that would prevent continued exploitation of the Project deposits under the current mine plan.

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

5.1 Accessibility

The Red Lake area is accessible by Highway 105, which joins the Trans-Canada Highway at Vermilion Bay, 175 km south and 100 km east of Kenora, Ontario.

Commercial air services operate to Red Lake from Thunder Bay and Winnipeg.

5.2 Climate

The climate in the Red Lake area is typical of a northern continental boreal climate with warm summers and cold winters. Temperatures can range from positive 18–30ºC in July, to negative 20–35ºC in January. Annual precipitation is 650 mm, with snow generally on the ground from about November to March.

Mining operations are conducted year-round.

5.3 Local Resources and Infrastructure

The mining operations are located near established power and road infrastructure in the Red Lake municipality.

Additional information on infrastructure is included in Section 18.

5.4 Physiography

Topography within the greater Red Lake region comprises irregular hills and discontinuous ridges created by glaciofluvial material and till. These are separated by depressions and hollows occupied by lakes, ponds and muskeg. Much of the Red Lake region is still untouched and is accessible only by air or canoe. The water level of Red Lake lies at 354 m above sea level; typically elevations are subdued, with hills rising only about 50 m above lake level.

Vegetation comprises black spruce, fir, larch (tamarack) and pine in the poorer-drained areas, and poplar, birch, willow, alder and mountain ash in better-drained areas, with a variety of shrubs in swampy areas.

Bedrock outcrops are scattered and consist of less than 1% of the surface area. Soil in the vicinity of the Red Lake and Campbell mines is characterized by a 30–50 cm layer of topsoil overlying compact sand with traces of clay, gravel and scattered cobbles and boulders. Low-lying areas contain silty clay sediments that were deposited in glacial lakes.

5.5 Comment on Section 5

In the opinion of the QPs, the availability of power, water, communications facilities and an existing workforce (see also Section 18) supports declaration of Mineral Resources and Mineral Reserves.

Mining operations are conducted year-round.

6.0 HISTORY

The first recorded prospecting in the Red Lake district was carried out by the Northwestern Ontario Exploration Company in 1887, but gold was not discovered in the district until 1922.

6.1 Red Lake Complex

Red Lake was first staked during the Red Lake Gold Rush in 1926. In 1944, the property was re-staked and Dickenson Red Lake Mines Limited was incorporated. Production mining began in 1948 at a rate of 113 t/d and increased to 454 t/d in the 1970s. In the early 1980s, mill capacity was increased to 907 t/d and long-hole stoping was introduced. The change in mining method resulted in a marked drop in production grade. Cut-and-fill mining was subsequently re-introduced and production increased to approximately 907 t/d by 1993–1994.

An exploration core drilling program initiated in 1995 within the lower levels of the mine resulted in the discovery of a cluster of high-grade gold veins between the 30 and 39 levels of the mine (the High Grade Zone).

Between June 1996 and April 2000, operations were suspended due to a strike. Mine staff and outside contractors maintained essential services and supported the exploration program on the property.

In September 1998, the feasibility of mining the High Grade Zone through a combination of existing mine infrastructure, new development, and a new processing facility was assessed, with mining commencing in early 2000.

The #3 shaft was developed from June 2003 to January 2007 to a depth of 1,925 m. Ventilation systems were upgraded in the period 2008–2009.

Since the beginning of operations in 1948 until the end of 2015, 12.3 Mt grading 25.81 g/t gold has been treated, producing 10,209,702 gold ounces.

6.2 Campbell Complex

The Campbell claims were staked in 1926. Subsequently, there was a period of claim cancellations and re-staking of the area. In the 1940s, George and Colin Campbell re-staked the area, Campbell Red Lake Mines was incorporated, and Dome Mines purchased an option that eventually resulted in Dome Mines acquiring a 57% ownership interest in the Campbell Red Lake Mines company.

In 1946, after additional exploration had been carried out, a four-compartment shaft with four levels was sunk to a depth of 182 m. Mill construction began in 1948 and the mill went into operation the following year, reaching a capacity of 272 t/d. The shaft was deepened to 655 m in the 1950s, to exploit a high-grade zone discovered on the 14th level of the mine.

Following the merger between Campbell, Dome, and Placer in the 1980s, an autoclave was installed at Campbell, replacing the existing roaster, the mill flotation circuit was upgraded, a paste-fill plant constructed, an underground decline developed, and the Reid Shaft was commissioned.

Since the beginning of operations in 1946 until the end of 2015, 22.2 Mt grading 17.71 g/t gold has been mined and processed, producing 12,643,919 gold ounces

6.3 Cochenour Complex

The earliest known exploration on the Cochenour–Willans property was in 1925. The original claims were staked in 1926–1927 by W.M Cochenour, D. Willans and H.G. Young and in 1928 the Cochenour–Willans syndicate was formed. Cochenour–Willans Gold Mines Ltd. was incorporated in 1936 and production began in 1939 at a rate of 136–181 t/d. Operations ran for 32 years, from 1939–1971. In that time, about 2.1 Mt grading 18.44 g/t Au was processed with approximately 1.24 Moz Au recovered.

Underground mine workings extended down to the 670 m (2200 ft) level. The No. 1 shaft bottoms at 792 m and the Wilmar Winze was sunk from the 1300 Level to 645 m.

A flotation circuit and smelting plant was constructed in 1940 and a roaster was added in 1947 to treat arsenical ore.

The property was expanded through exercise of an option on the Marcus Mines Ltd. ground holding in 1951 and the Martin–McNeely Mines Ltd. tenure package in 1958. In 1963, two exploration drives were completed to the Marcus and Wilmar (Martin McNeely) properties, from the 396 m (1,300 ft) Level, 4,572 m northeast and 1,676 m southeast respectively.

With discovery at Wilmar of several gold-bearing lenses, an internal shaft was sunk from the 396 m Level to the 625 m level with five stations developed at 45 m intervals. The Cochenour–Willans Mine operated at a loss after 1967, largely due to dilution of grade in the talcose ore at depth and the fixed gold price. Production from the Wilmar mine between 1967 and 1971 comprised about 190,510 t at a grade of 10.28 g/t Au.

Between mine closure in 1971 and 1991, the operations had a number of owners, including Camflo Mines, Wilanour Resources, Esso Minerals Canada (Esso) and Inco Gold Inc. (Inco). During this period work completed comprised drilling in support of exploration.

In 1997, Goldcorp Inc. purchased a 100% interest in Cochenour–Willans Mine area. Goldcorp completed trenching, grab sampling and compilation work between 1998 and 2002. The mine was allowed to flood in 2003. Surface drilling was undertaken from 2002 to 2009, consisting of 94 surface drill holes including wedges, totalling 66,968 m.

Following dewatering in 2010, renewed access to the underground Cochenour–Willans workings allowed completion of 49 underground drill holes (20,558 m), together with 17 surface drill holes (including wedges) totalling 13,881 m.

The Cochenour No. 1 shaft was slashed and deepened to below the 34 level in 2010 to 2014 to support exploration and development of the recently acquired Gold Eagle property located to the south. Both decline and incline ramp developments are currently active from the 34 level station.

6.3.1 Gold Eagle Property (Bruce Channel and Western Discovery Zone)

The Gold Eagle property, now part of the Cochenour Complex, was originally staked in 1926 and re-staked in 1932. From 1932 to 1934, there was a period of surface exploration. In 1934, a shaft was collared and completed to 160 m, with lateral work on four levels. The mill was brought into production in 1937. In 1938, an internal winze was sunk from the 152 m level to the 223 m level and in 1939 deepened to 305 m. Underground exploration failed to locate additional ore and the mine was closed in 1941. Production appears to have been approximately 184,160 t hoisted and 147,870 t milled for a recovered grade of 7.65 g/t Au (Horwood, 1940).

From 1940–1959, mineralization was tested with a number of diamond drill programs, and, in 1959, the small Gold Eagle South Zone was discovered.

The Gold Eagle Joint Venture between Exall Resources Ltd. and Southern Star Resources Inc. commenced modern exploration activity in 2003. Work comprised the establishment of a surface grid, geophysical surveying consisting of spectral induced polarization, resistivity, magnetometer, and very low frequency electromagnetic (VLF-EM) surveys, soil sampling, geological mapping and prospecting over geophysical anomalies, and core drilling. This led to the discovery of the Bruce Channel and Western Discovery Zone deposits in 2004. A Mineral Resource estimate was prepared for the Western Discovery Zone in 2004. Gold Eagle Mines was created in 2006; the company was purchased by Goldcorp in late 2008. Since acquisition, Goldcorp has performed core drilling and mineral resource estimation.

From 2011 to 2014 the 5 km long Cochenour Red Lake Haulage Drift was driven from the 36 Level of the Campbell Mine to the 5320 Level of the Cochenour Mine. During this same time the original Cochenour No. 1 shaft was slashed out and then deepened to below 3,500 feet to service deep exploration.

From 2014 to the present, ramping and sub-drifting to mineralization has been completed on the 5320, 5250 and 5180 sublevels, and both incline and decline ramps were driven from the 3400 level of the upgraded Cochenour Shaft. Ramping and subdrifting to mineralization on the 3990 and 4060 levels is planned for 2016. Exploration drilling continues on most of these recently-developed levels.

A total of 28,000 t at 5.03 g/t have been mined through exploration development during 2014–2015, and processed to produce 4,522 ounces of gold.

6.4 Historic Mining Operations in the Area

The prolific Red Lake Mine Trend contains numerous current and past producing mines. Aside from the Red Lake gold mines and Cochenour mine, Goldcorp also holds past producing operations that include the HG Young, Abino, McMarmac, Gold Eagle Mine, and McKenzie Red Lake mines.

None of the other Goldcorp-owned past producing mines, other than HG Young, contain mineralization that is considered to be currently economic, or have declared Mineral Resources or Mineral Reserves; however, there is considered to be significant exploration potential remaining at depth under these historic workings.

6.5 Production Record

Historic production from the area has been partly sourced from Lichtblau et al., (2014), and updated by Goldcorp. The known production record is summarized in Table 6-1.

Table 6-1: Gold Production within the Red Lake Greenstone Belt to December 31, 2013

Mine	Years of Production	Ore Milled (Short Tons)	Ounces	Ounces per Ton
Red Lake Gold Mines	2006–December 2015 (1)	7,822,596	5,661,517	0.73
Campbell Mine	1949–2006 (2)	19,944,241	11,216,443	0.564
Goldcorp (Dickenson)	1948–2006 (3)	9,606,894	5,962,948	0.621 (4)
Madsen	1938–1976; 1977(5) –1999	8,678,143	2,452,388	0.283 (6)
Cochenour–Willans	1939–1971	2,311,165	1,244,279	0.538 (7)
McKenzie Red Lake	1935–1966	2,353,833	651,156	0.277
Howey	1930–1941; 1957 (8)	4,630,779	421,592	0.091 (9)
Hasaga	1938–1952	1,515,282	218,213	0.144
Starratt Olsen	1948–1956	907,813	163,990	0.181
H.G. Young	1960–1963	288,179	55,244	0.192
McMarmac	1940–1948	152,978	45,246	0.296
Gold Eagle	1937–1941	180,095	40,204	0.223
Red Lake Gold Shore	1936–1938	86,333	21,100	0.244
Buffalo	1981–1982	31,986	1,656	0.052
Abino	1985–1986	2,733	1,397	0.511
Lake Rowan	1986–1988	13,023	1,298	0.1
Mount Jamie	1976	972	377	0.388
Red Summit	1935–1936	591	277	0.469
McFinley	1987	N/A	N/A	N/A
	Total	58,527,636	28,159,325	0.483

Notes:

(1) Includes total production from the Red Lake complex from January 1, 2006, production from the Campbell complex Subsequent to May 12, 2006, the date of acquisition, and development starting in 2014 from Cochenour's Bruce Channel Deposit acquired from Gold Eagle Mines Ltd in 2008.

(2) Includes production under Placer Dome (CLA) Ltd. to May 12, 2006.

(3) For 1997, 1998, and 1999, no production due to strike by unionized employees.

(4) From 1970, includes production from Robin Red Lake.

(5) Includes clean-up of ore and materials from the mine site.

(6) Historic grade, actual grade for 1999 was 0.14 ounces per ton gold.

(7) Includes production from Annco and Wilmar properties.

(8) Continuous production from 1930 to 1941; includes 268 ounces recovered from clean up in 1957.

(9) The ore mined at Howey, before sorting, totalled 5,158,376 tons. The average production from run-of-mine ore was therefore 0.0817 ounces per ton gold.

N/A = not available.

Table data modified from Lichtblau et al., (2014)

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Red Lake greenstone belt is located in the western portion of the Uchi Subprovince of the Canadian Shield. It consists of a series of eastward-trending belts of volcanic and sedimentary rocks and syn-volcanic intrusive rocks that span a time period of approximately 300 million years (3.0 to 2.7 Ga). The belt is defined by an east–northeast-oriented, bow tie-shaped anticline that is approximately 50 km x 30 km in extent (Figure 7-1).

7.1.1 Lithologies

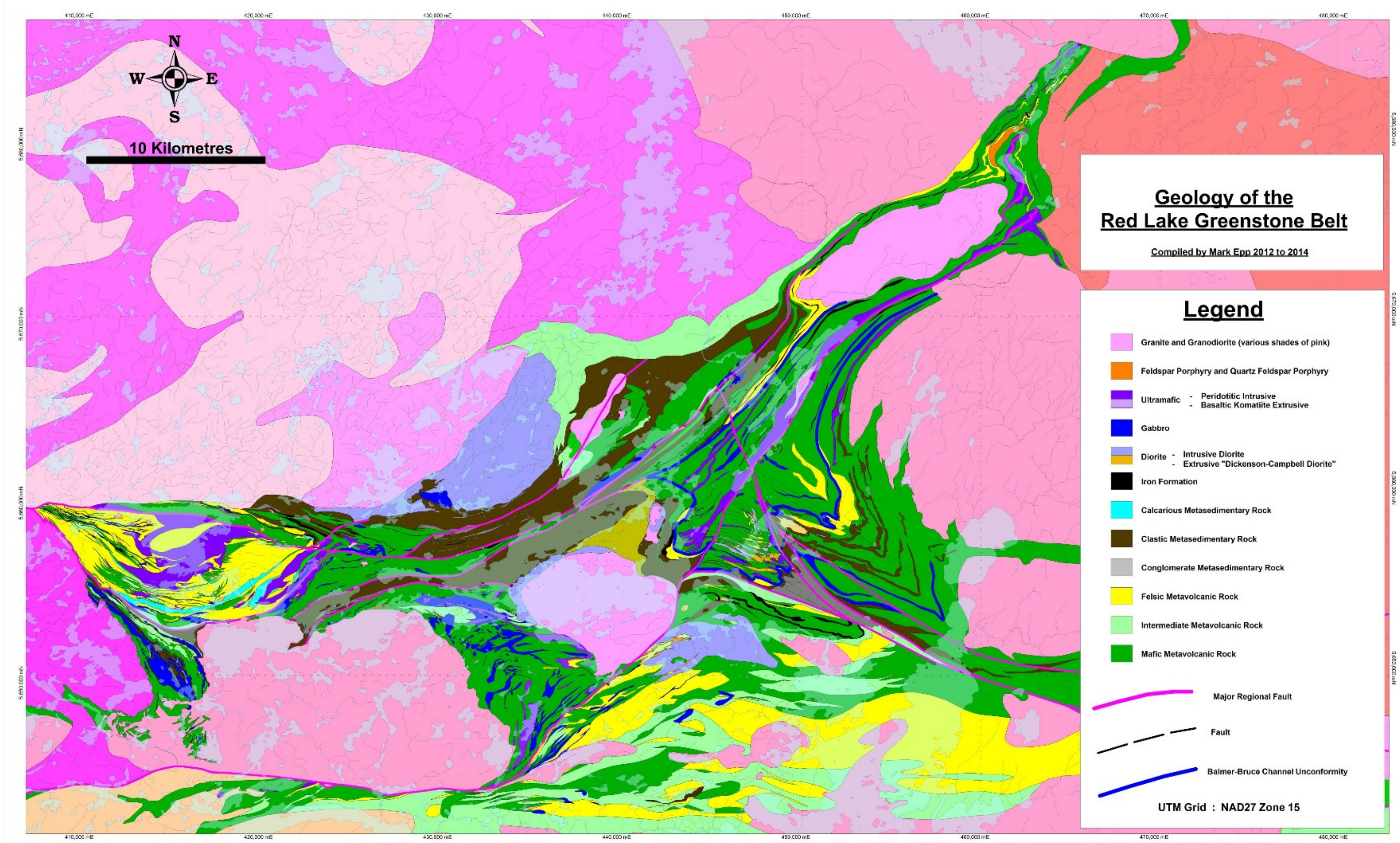
Principal geological units within the greenstone belt include:

- Balmer Assemblage: 2.99–2.96 Ga, predominantly tholeiitic and komatiitic mafic to ultramafic volcanic rocks, comprises about 50% of the greenstone belt;
- Ball Assemblage: 2.94–2.93 Ga, intermediate to felsic calc-alkaline flows and pyroclastic rocks;
- Bruce Channel Assemblage: 2.9 Ga, calc-alkaline dacitic to rhyodacitic pyroclastic rocks overlain by clastic sediments and chert-magnetite iron formation;
- Trout Bay Assemblage: 2.85 Ga, predominantly mafic tholeiitic extrusive rocks;
- Confederation Assemblage: 2.75–2.73 Ga, dominantly calc-alkalic felsic volcanic rocks;
- Graves Assemblage: 2.73 Ga, a calc-alkaline sequence consisting of andesitic to dacitic pyroclastic rocks and synvolcanic diorite and tonalite;
- English River Assemblage: 2.70 Ga, lithic sandstone to pebble conglomerate flysch deposits.

The Project area is underlain mainly by tholeiitic basalt and locally by komatiitic basalt of the Balmer Assemblage (refer to Figure 7-1). The mine sequence also includes felsic, peridotitic and other mafic to lamprophyric intrusions of various younger ages. The steeply-dipping, south–southwest-folded package is unconformably overlain by felsic volcaniclastic rocks, and clastic and chemical sedimentary rocks of the Bruce Channel assemblage.

Two significant plutonic intrusive events also occurred, the first at ~2.72 Ga, represented by the gold deposit-hosting McKenzie Island and Dome stocks and the Abino granodiorite. The second, younger plutonic event occurred at 2.70 Ga and is represented by the late stage Killala–Baird and the Cat Island batholiths.

Figure 7-1: Regional Geological Map of the Red Lake Greenstone Belt



Note: Geological map of the Red Lake Operations area, compiled by Goldcorp staff 2014.

7.1.2 Structure

The local package of rocks have been significantly flattened and folded during the D2 deformational event attributed to a continental collisional event occurring at ~2.715 Ga. During this northeast–southwest shortening event, fold limbs of the relatively plastic ultramafic units became so thinned and attenuated that major shear zones formed along them. These shears parallel the main regional fabric ranging from 135° in the east to 120° to the west, and appear to have a listric nature showing a near vertical orientation near surface which flattens out to ~60° to the south in the deeper parts of the Red Lake deposit.

The shear structures acted as primary hydrothermal fluid transportation corridors and host a significant portion of the gold mineralization in the area. Other significant mineralized structures occur within lower strain areas of the stratigraphy usually associated with brittle conjugate fracture systems in close proximity to lithological boundaries possessing high competency contrasts (i.e. mafic rocks in contact with ultramafic rocks).

Additional structural complexity can be seen in the area around the old Cochenour mine site where numerous other shear and fault structures can be found related to the intrusion of the nearby Dome and McKenzie granodioritic stocks. The two most significant structures created by these intrusions are the roughly east–west oriented Cochenour Thrust and the north–south oriented Gold Eagle Shear.

Structural features such as shear zones, normal and thrust faults, folds and unconformities are strong controls on mineralization.

7.1.3 Alteration

Hydrothermal alteration in the Red Lake greenstone belt is distributed in regional, zoned, alteration envelopes that show a spatial relationship to gold deposits. Initial alteration was related to broad scale carbonatization which acted as an important ground preparation for the later hotter, silicic hydrothermal event which actually was responsible for emplacement of the gold mineralization.

Distal calcic carbonatization is accompanied by weak potassic alteration, with more proximal carbonatization being dominated by ankerite. The area of strong ankeritic alteration conforms to the area of highest gold prospectivity defined by geochemistry. Late stage silicification with associated gold and sulphide mineralization overprints the proximal ankeritic alteration, forming discrete vein mineralization within replaced precursor carbonate veins and breccias, and forms broad disseminated mineralization along late developed shear zones.

7.1.4 Metamorphism

Within the Red Lake greenstone belt the typical regional metamorphic grade is characterized by greenschist facies metamorphic mineral assemblages, however, amphibolite facies mineral assemblages are noted in areas closer to the major late stage plutons.

7.1.5 Mine Site Nomenclature

Most historic colloquial terminology was replaces in the late 1990s when a geochemical characterization study was performed on the typical rock types found within the mine sequence. This study corrected the names of the majority of units (e.g. andesite became basalt, chickenfeed became peridotite, altered rock became basaltic komatiite, etc.); however, a few historic colloquial terms were not resolved (the most significant being the “Dickenson-Campbell Diorite” which is not an intrusive rock).

7.1.6 Mineralization

Gold deposits in the district have been classified into three main categories, mafic volcanic-hosted (i.e. Red Lake gold mines, Madsen mine, Cochenour mine), felsic intrusive-hosted (i.e. McKenzie, Gold Eagle, Howey/Hasaga and Buffalo mines) and stratabound (i.e. Bonanza deposit). The majority of the productive zones in the Red Lake camp are of the mafic volcanic-hosted type and occur as vein systems and accompanying sulphide replacement within sheared mafic to komatiitic basalts of the Balmer Assemblage.

7.2 Deposit Descriptions

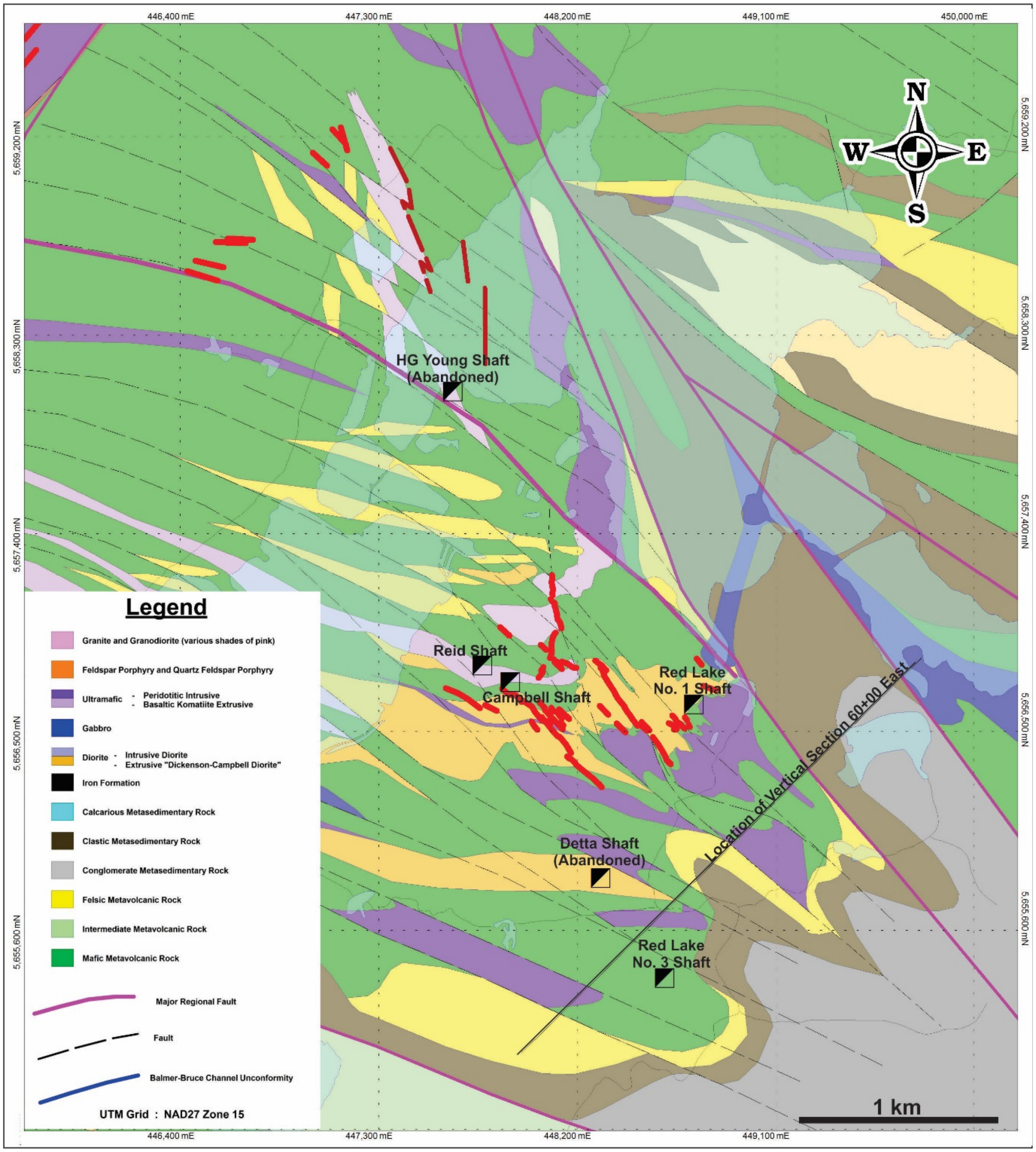
7.3 Red Lake–Campbell Complex

7.3.1 Setting

The Red Lake–Campbell Complex has approximate deposit dimensions of 2.2 km north–south, 3.2 km east–west, and remains open down-dip. Mine workings extend to 2,360 m depth (52 Level), with the deepest drill intercept currently at around 2,600 m depth.

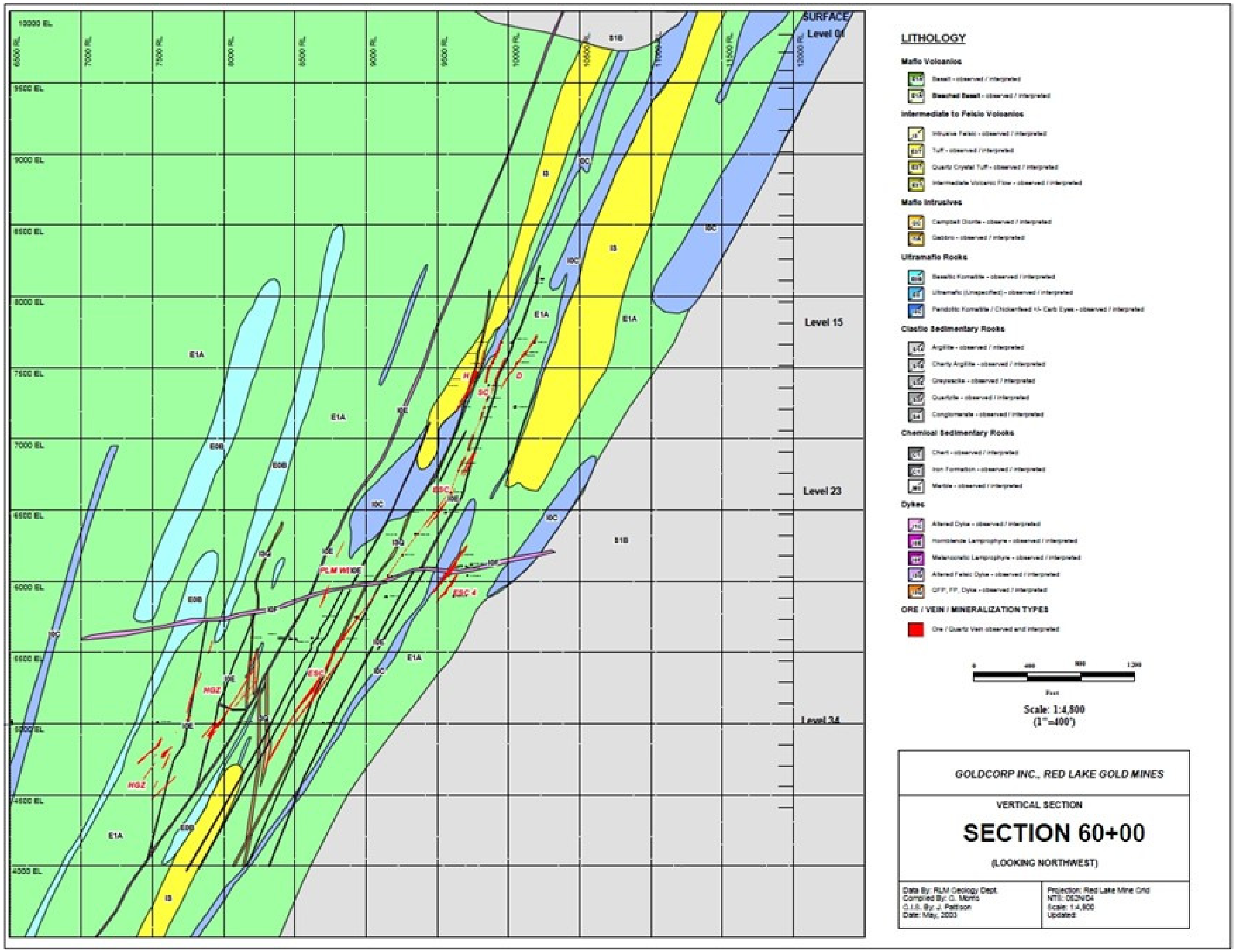
Figure 7-2 shows the geology projected to surface in the Red Lake–Campbell area; Figure 7-3 is an example cross-section through the deposit.

Figure 7-2: Geological Map of the Red Lake-Campbell Area



Note: Figure prepared by Goldcorp, 2016.

Figure 7-3: Cross Section 60+00 at Red Lake Looking Northwest



Note: Figure prepared by Goldcorp, 2015.

7.3.2 Geology

The Red Lake–Campbell Complex is underlain mainly by tholeiitic to komatiitic basalts and minor interflow iron formations of the Balmer Assemblage, with lesser amounts of younger peridotitic, felsic and gabbroic intrusive rocks. These rocks have been folded and fault offset with bedding now steeply-dipping to the south–southwest. Unconformably overlying the Balmer Assemblage are the chemical sedimentary rocks of the Bruce Channel Assemblage, succeeded by the conglomeratic, clastic and felsic volcaniclastic rocks of the Confederation Assemblage. The apparent anticlinal fold structure enclosing the deposit is defined by this unconformable contact between the Balmer Assemblage and the overlying sedimentary rocks, and is partially erosional and partly structural in nature. This apparent fold is oriented along a 135º trend and plunges moderately at 45º to the southwest.

Mineralization is primarily localized within the tholeiitic mafic rocks and shows strong structural control along broad to discrete shear structures running along a 135º trend in the east, refracting to a 120º trend in the west. Other significant mineralized zones occur along discordant brittle structures which most commonly appear as a conjugates system generally oriented east-west (110º azimuth) and north–south (160º azimuth). Competency and permeability contrasts between adjacent lithologies is also important as seen by the strong association of higher-grade mineralization when basalt comes in contact with ultramafic rocks.

Mineralized zones are cut by post-mineralization feldspar porphyry dykes and two generations of lamprophyre dykes. The generally east–west trending feldspar porphyry dykes are important since they are not mineralized, but are affected by D_2 deformation, thus providing a minimum age date for mineralization occurring during the later stages of the D_2 event (ca. 2.714 Ga). One set of lamprophyre dykes is typically steep-dipping and follows the mine-trend foliation (ranging from 120º to 135º azimuth). The second set is shallow-dipping (20º to 40º) to the west to southwest.

7.3.3 Alteration

Hydrothermal alteration associated with gold mineralization within the Red Lake–Campbell Complex can be subdivided into three main phases:

- Early alteration dominated by proximal pervasive carbonatization and biotite (potassic) alteration around permeable zones, grading outward into carbonate-chlorite dominated alteration.
- Main-stage vein formation phase of barren dolomite to ankerite, cockade breccias and sheeted veinlet zones with chloritic alteration.

- (Late) Mineralization phase which introduces arsenopyrite–pyrrhotite–pyrite ± gold ± magnetite ± stibnite, accompanied by quartz–sericite alteration and a late episodes of veinlet controlled biotite ± tourmaline alteration.

7.3.4 Mineralization

There are generally three styles of mineralization in the Red Lake–Campbell Complex: vein replacement mineralization, replacement mineralization, and sulphide mineralization. Vein replacement ore involves intense silica replacement of precursor ankerite veins often accompanied by abundant visible gold and minor sulphides. This is the dominant mineralization type found in zones like the Red Lake High Grade Zone and the Campbell G and L zones. Vein replacement zones occur along narrow discrete shears and along brittle high-angle structures, averaging widths of 1–2 m in width and extending over strike lengths ranging from 30–300 m.

Replacement mineralization involved the intense silica replacement of sheared mafic rocks accompanied by abundant arsenopyrite and pyrrhotite ± biotite. This style of mineralization commonly envelops vein replacement mineralization, but can occur elsewhere.

Sulphide mineralization is typically found within broad zones of strongly sheared mafic rocks and consists of fine disseminated pyrrhotite (as much as 30%) accompanied by biotite alteration. This mineralization generally runs lower grade, 0.25–0.50 oz/t Au (8.6–17.2 g/t) but can run higher grade if accompanied by notable amounts of arsenopyrite and vein replacement mineralization. Sulphide zones vary from 3–12 m in width and extend over a strike length of 120–180 m, though a few zones on the Red Lake side are continuous along an 800 m strike length.

Recent exploration has focused on an area northwest of the Red Lake Operations area immediately to the west of the old HG Young mine site area. The structural framework of this area is significantly different that the Red Lake gold mines, with the stratigraphy and mineralization hosting shear structure generally oriented north–south (more accurately along a 160º trend dipping moderately to the west). Although it is still early in the drill delineation phase, mineralization appears to be most consistently associated with narrow shear zones developed along the contact of carbonatized basaltic komatiites and tholeiitic basalts. The mineralization style also appears to be different in the HG Young area, with most of the mineralization associated primarily with glassy quartz veins, containing significant scheelite, minor sulphides, and locally, visible gold.

7.4 Cochenour Complex

7.4.1 Setting

The Cochenour Complex comprises the Main, Inco, Upper Main, Iron Formation, Footwall and Western Discovery zones. The Main and Inco zones form part of the original Cochenour Mine, while the remainder are located on ground acquired from Gold Eagle Mines Ltd. The Western Discovery Zone mineralization is located on McKenzie Island, approximately 1.5 km due west of the Cochenour mine site.

Figure 7-4 is a map showing the surface geology. Figure 7-5 shows the relative locations of the principal mineralized zones of the Cochenour Complex.

7.4.2 Geology

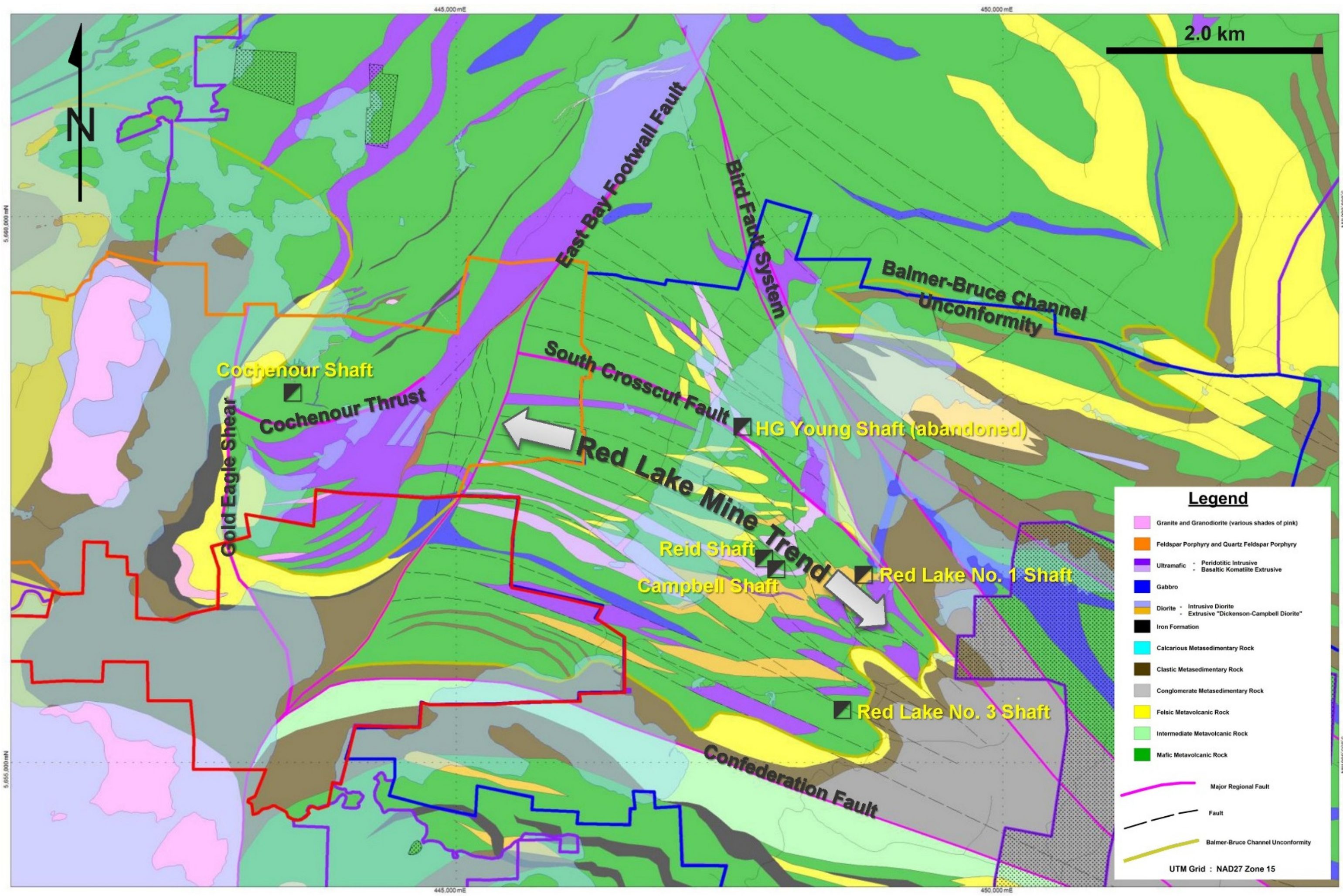
The complex is underlain by complexly faulted and folded, intensely altered, massive and pillowed mafic rocks of the Balmer Assemblage. Stratigraphy in the mine area strikes east to northeast as defined by interflow strata comprised of banded chert, argillite, siltstone, iron formation and calcareous sedimentary horizons. A strongly lithic, magnetite-rich sequence of sedimentary rocks associated with a calcareous (marble) horizon has been used as a useful marker horizon within the stratigraphy, and is referred to as the “Main Sedimentary Facies” (MSF). Stratigraphically below the MSF horizon (to the south), interflow sedimentary rocks become progressively cleaner and more cherty up to the point that the cherts appear waxy yellow with only minor amounts of disseminated magnetite. Significant amounts of late intrusive peridotite, diorite and felsic rocks are also present throughout the mine site stratigraphy.

7.4.3 Structure

The Cochenour Complex appears folded about a southwest-trending antiform, plunging to the southwest at 50º immediately in the hanging wall of the East Bay deformational corridor. A series of massive, felsic tuffs, reworked tuffs and felsic intrusions occurs along the western flank of the former Cochenour mine, which makes up the base of the overlying Bruce Channel assemblage. At surface, these rocks define the location of a north–south running shear zone, referred to as the Gold Eagle Shear, which is seen to dip steeply due west at approximately 65º underneath the Bruce Channel of Red Lake.

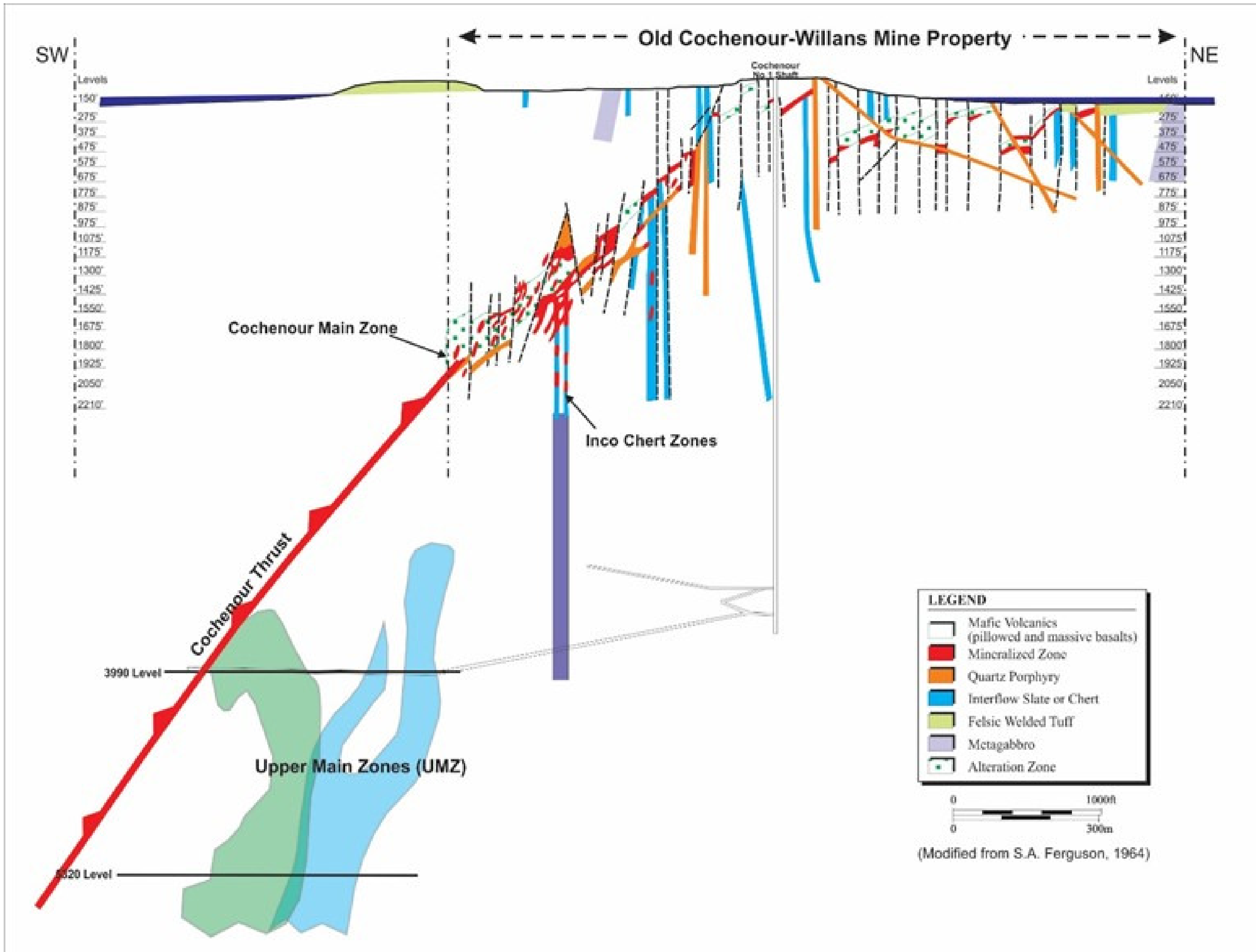
Along the southern limb of the Cochenour antiform the Bruce Channel Assemblage can be seen to be directly lying unconformably upon the Balmer Assemblage, unaffected by the Gold Eagle Shear.

Figure 7-4: Geology Map, Cochenour Complex



Note: Figure prepared by Goldcorp, 2016.

Figure 7-5: Schematic Cross-Section, Cochenour Complex, Showing Mineralized Zones



Note: Figure prepared by Goldcorp, 2011.

The southwest-trending East Bay Serpentinite succession (locally 1,000 m in thickness) appears to intrude along the 040° trending East Bay Deformational Corridor, but rotates westward and pinches out rapidly, appearing to interfinger with basaltic volcanic rocks, plunging to the southwest around the Cochenour antiform. The flanks of the serpentinite are altered to talc–carbonate schist, while the thicker core of the package is relatively massive competent serpentinite.

These westward-rotating structures along which the East Bay Serpentinite intruded are interpreted as thrust structures formed during the intrusion of the Dome Stock to the south. The primary structure immediately south of the Cochenour mine is referred to as the "Cochenour Thrust", and is very important because it appears to have controlled mineralization preferentially in the footwall of this structure within highly-silicified mafic volcanic rocks and interflow strata. There are, however, several examples where mineralized zones locally pierce into the overlying talcose-altered ultramafic rocks. The Cochenour Thrust is approximately coincidental with the orientation of numerous ultramafic, felsic and lamprophyre intrusions, oriented roughly east–west, and dipping about 50° to the south. Farther west, the Cochenour Thrust structure appears to be dragged into and merges with, the north–south oriented Gold Eagle Shear, with a right-lateral sense of offset.

7.4.4 Mineralization

Cochenour Main and West Zones

Mineralization is associated with discrete shear structures immediately in the footwall of the Cochenour Thrust structure. The geometries of this mineralization was complicated by numerous roughly north–south, steeply-oriented fault structures, as well as by numerous roughly east–west trending, steeply-dipping, very narrow (1 to 5 mm), brittle offset structures referred to as "black-line faults".

Mineralized zones associates with this structural settling were referred to as the Cochenour Main and West zones; however, these two zones were most likely a contiguous body that was later separated by one of the more significant late brittle offsets.

This mineralization type occurs within sheared ankerite-altered iron-tholeiitic basalts and ankerite veins, with higher-grade mineralization located in close proximity to peridotitic rocks. Mineralization consists of intense late, vitreous silica replacement accompanied by a significant component (locally up to 30%) sulphide minerals. The most common sulphides include fine needle-like arsenopyrite, pyrite–pyrrhotite, with minor sphalerite, chalcopyrite and stibnite. Gold occurs as both free-milling gold as well as refractory grain coatings on fine arsenopyrite grains.

Inco Zones

Drilling by Inco Exploration and Technical Services in the early 1990s showed that the East Zone structures continue to depth. This mineralization is what became known as the Inco Zones. Though much of the cherty iron formation shows anomalous to weak gold mineralization, the most intense ore grade mineralization occurred at the intersection with the North–South shears. These shears appear to widen out (up to 2.3 to 3 m wide) as they cross the brittle sedimentary horizons and dilatant brecciation of the sedimentary horizons increases towards the shears. This produced "cross" shaped, near vertical plunging mineralized zones with intense silica replacement of the carbonate shear and strong evidence of sulphide replacement of magnetite along the chert horizons.

Mineralogy is very similar to that located in the Cochenour Main/West Zones, and consists of intense late silica replacement accompanied by a significant component sulphide mineral replacement (fine needle-like arsenopyrite, pyrite/pyrrhotite, with minor sphalerite, chalcopyrite and stibnite). Gold appears as free milling gold as well as refractory arsenopyrite associated gold.

During 2015, ramp development from the 3400 level and drilling from 3710 and 5320 sub-levels has intersected mineralized cherts at depth giving good evidence that this mineralization style continues at depth.

Bruce Channel Deposit (Upper Main and Footwall Zones)

The Bruce Channel deposit was acquired from Gold Eagle Mines Ltd in 2008, and lies within properties immediately to the south of the Cochenour mine site. The deposit consists primarily of the Upper Main Zone (UMZ) and other localized mineralization along footwall structures. UMZ structures that host mineralization are located in the immediate footwall of the Gold Eagle Shear, generally trending north–south and dipping 65–70º to the west. The Cochenour Thrust also appears to have an influence on the UMZ mineralization, since all known mineralization appears to be restricted to the rocks within the footwall of the Cochenour Thrust (i.e. to the north).

With information gained by recent exploration work, the Upper Main Zone structure has been further subdivided into the Upper Main Zone siliceous sulphide-rich replacement ore to the south and the magnetite-rich, banded iron formation (BIF) ore to the north.

The southern Upper Main Zone mineralization is hosted by sheared and sulphidized mafic rock, accompanied by quartz–actinolite veins or veinlet swarms, immediately in the footwall of the Gold Eagle Shear. This mineralization has a lot of similarities to the "replacement" style ore at the Red Lake–Campbell Complex. The ore shows intense silica replacement, biotite alteration and introduction of pyrrhotite and pyrite, with fine-grained acicular arsenopyrite notably associated with higher-grade mineralization. Less common sulphide minerals include chalcopyrite, galena and sphalerite. Wall rocks surrounding this ore type show strong calcic alteration, which may be a good ground preparation step to the later replacement mineralization. Mineralization is most intense when in association with an early-formed calcite-cemented breccia texture within the host mafic rocks, this probably enhanced fluid movement.

The northern BIF zones are associated with magnetite-rich, interflow, sedimentary horizons that range from dark-grey, banded, siliceous chert to black, fine-grained argillite. These BIF horizons are oriented at approximately north–south, but rotate to a north–northeasterly orientation as they extend to the north. The dip of these horizons is fairly consistently at 70º to the west. Gold is associated with sulphide replacement of magnetite internal to the sediments, but much of the high-grade mineralization is associated with high angle to bedding quartz veins, and by the local development of irregular quartz actinolite zone (QAZ) flooding. These quartz veins and silica flooded zones are most often associated with cross-cutting faults, and boudinaged and brecciated margins of the BIF horizons, respectively.

Footwall Zone structures appear as a series of steeply-dipping, fault-hosted, ~160°-trending, sheared carbonate vein structures that are generally developed in the footwall to the UMZ. These Footwall Zone structures share many features in common with the north–south shear structures associated with the Inco Zone mineralization, and are probably directly related to the same suite of ~160°-trending narrow shears found higher up in the mine. Recent exploration work has now shown these structures to be narrow isolated veins/veinlets of quartz ± actinolite replacement up to a metre wide that can sometimes host high-grade gold values. These mineralized portions of the Footwall structures tend to have very short strike lengths, so must be in close proximity to existing infrastructure to be an attractive mining target.

Upper Main Zone structures currently extend vertically for about 1,000 m and locally have strike lengths as long as 550 m. Mineralization is typically 2–5 m wide, but can occur as broader, structurally-stacked zones.

Western Discovery Zone

The Western Discovery Zone is located approximately 500 m west of the past-producing Gold Eagle Mine shaft and bears similarities to gold mineralization seen at the Gold Eagle Mine. Gold-hosting structures at Western Discovery are interpreted to occur as a series of sub-parallel, quartz-rich veinlets and tension veins developed in intrusive rocks of the McKenzie granodiorite stock. The colour of the quartz veinlets/veins varies from predominantly milky white to locally dark grey, and cross-cutting textural relationships in some of the larger veins suggest that the different colours of quartz represent different episodes of veining. Within the veins, pyrite is the main sulphide ranging from 1–5% in both the veins and wall rock. Lesser pyrrhotite, chalcopyrite, galena and molybdenite have also been noted. Visible gold is commonly observed hosted by the quartz veinlets. The zone consists of three to four horizons of sub-horizontal veins ranging from 1 cm to 1.5 m in thickness.

During 2003–2004, approximately 25,000 m of drilling was completed at the Western Discovery Zone by Gold Eagle Mines. Goldcorp completed 9,218 m of drilling during 2009–2010 both to verify and investigate possible expansion of the Western Discovery Zone. Gold mineralization has been traced in the east–west direction for approximately 490 m, in the north–south direction for approximately 370 m, and over an elevation of approximately 230 m.

7.5 Comments on Section 7

Knowledge of the deposit settings, lithologies, and structural and alteration controls on mineralization is sufficient to support Mineral Resource and Mineral Reserve estimation and to support mine planning.

8.0 DEPOSIT TYPES

The mineralization within the Red Lake Operations can be classified as typical of Archean greenstone belt-hosted gold deposits.

The majority of the mineralization in these types of deposits is intimately associated with quartz ± carbonate (calcite, ankerite, or siderite) veins with persistent sericite–carbonate alteration haloes in highly deformed, Archean host rocks that have been regionally metamorphosed to lower or middle greenschist facies. The host rocks are highly-altered, supracrustal rocks; most commonly tholeiitic basalts, komatiites or their volcaniclastic or subvolcanic equivalents. Mineralization also occurs in felsic volcanic rocks, porphyries, greywackes and conglomerates.

Examples of this type of deposit in Canada include the Porcupine gold deposits in Ontario, the mined-out Kerr Addison deposit in the Kirkland Lake camp within Ontario, the Sigma mine in Quebec, and the Con and Giant Yellowknife mines of the Northwest Territories.

Significant international examples are hosted in the Western Australian Yilgarn Craton, the Zimbabwean Craton, the Amazonian Craton, southern India, and the west African Birimian belts.

8.1 Comment on Section 8

The Project deposits are examples of Archean greenstone belt-hosted gold deposits based on the following:

- Occur in a deformed greenstone belt;
- Hosted in tholeiitic basalts and ultramafic komatiitic flows intruded by intermediate to felsic porphyry intrusions;
- Metamorphism is greenschist to locally amphibolite-facies;
- Mineralization is spatially associated with fluvio-alluvial conglomerate;
- Associated with iron–carbonate alteration;
- Hosted by moderately to steeply dipping, compressional brittle-ductile shear zones and faults with locally associated shallow-dipping extensional veins and hydrothermal breccias;
- Veins are characterized by simple to complex networks of gold-bearing, laminated quartz–carbonate fault-fill veins;
- Gold is largely confined to the quartz–carbonate vein network but may also be present in significant amounts within iron-rich sulphidized wall-rock selvages or within silicified and arsenopyrite-rich replacement zones.

9.0 EXPLORATION

The Red Lake Operations have a long exploration and production history. Exploration other than drilling that is relevant to the current mining operations is summarized in Table 9-1. More detailed information on the exploration programs can be found in the technical reports listed in Section 2.6, and in the numerous public-domain publications on the area by government organisations and private researchers.

9.1 Grids and Surveys

The same survey grid is used for all of the mine complexes, and is called the RLGM or Mine Grid. The grid is based on UTM NAD 83/TRANS Zone 15N coordinates and was surveyed using Leica 1205 global positioning system (GPS) units with "Glonass". The grid is also referenced to both Provincial and Federal survey monuments in the area using static surveys of each control point.

9.2 Petrology, Mineralogy, and Research Studies

Since the 1940s, a significant number of structural, petrology, mineralogy, lithogeochemical, and research studies have been completed on the Red Lake greenstone belt.

Goldcorp initiated a research affiliation with the University of British Columbia Mineral Deposits Research Unit that has been operational since 2006. Through this program, post-graduate research students are assigned specific research directives to better understand the litho-structural controls on gold mineralization at the mine sites and apply observations from these research programs to support regional exploration in the Red Lake district.

The initial years of research were directed at establishing the hydrothermal footprint to the Red Lake gold mines using surface and underground mapping and sampling, core logging and sampling along two composite drill sections at the Campbell and Red Lake Complexes. Petrographic, mineralogical and geochemical sampling were completed in an effort to document the lithology, structure, and hydrothermal alteration, in an effort to identify practical mineralogical and geochemical exploration parameters for diamond drill targeting.

As part of the program, one or two graduate students undertake economic geology theses in an effort to advance the understanding of the complex geological setting of Archean lode gold mineralization in the Red Lake district.

Table 9-1: Exploration Summary

Type	Comment/Result
Surface geological mapping	Map scales varied from regional (1:25,000) to prospect scale (1:120). Map results were used to elucidate regional lithological relationships, alteration and mineralization, and, in prospect-scale work, to identify areas of quartz veining, alteration, silicification and sulphide outcrop that warranted additional work.
Underground geological mapping	Underground mapping of backs, walls and faces of drifts and stopes is performed at scales of one inch = 20 feet or one inch = 30 feet on a regular basis
Geochemical sampling	Soil, channel, adit, underground, grab and rock sampling were used to evaluate mineralization potential and generate targets for core drilling. Geochemical data have been superseded by production data at Red Lake–Campbell and drill programs at Bruce Channel, Western Discovery Zone, and Cochenour–Willans
Geophysical surveys	Airborne and ground geophysical surveys were used to vector into mineralization and generate targets for exploration drill programs. These program data have been superseded by mining and drill data from underground

9.3 Exploration Potential

9.3.1 Red Lake–Campbell Complex

There is considerable remaining exploration potential in the vicinity of the current mining operations (Figure 9-1).

9.3.2 Upper Red Lake Hanging Wall

Some high-grade intersections were encountered in the upper five mining levels of the Red Lake complex during near-surface exploration drilling. Additional surface drilling is planned.

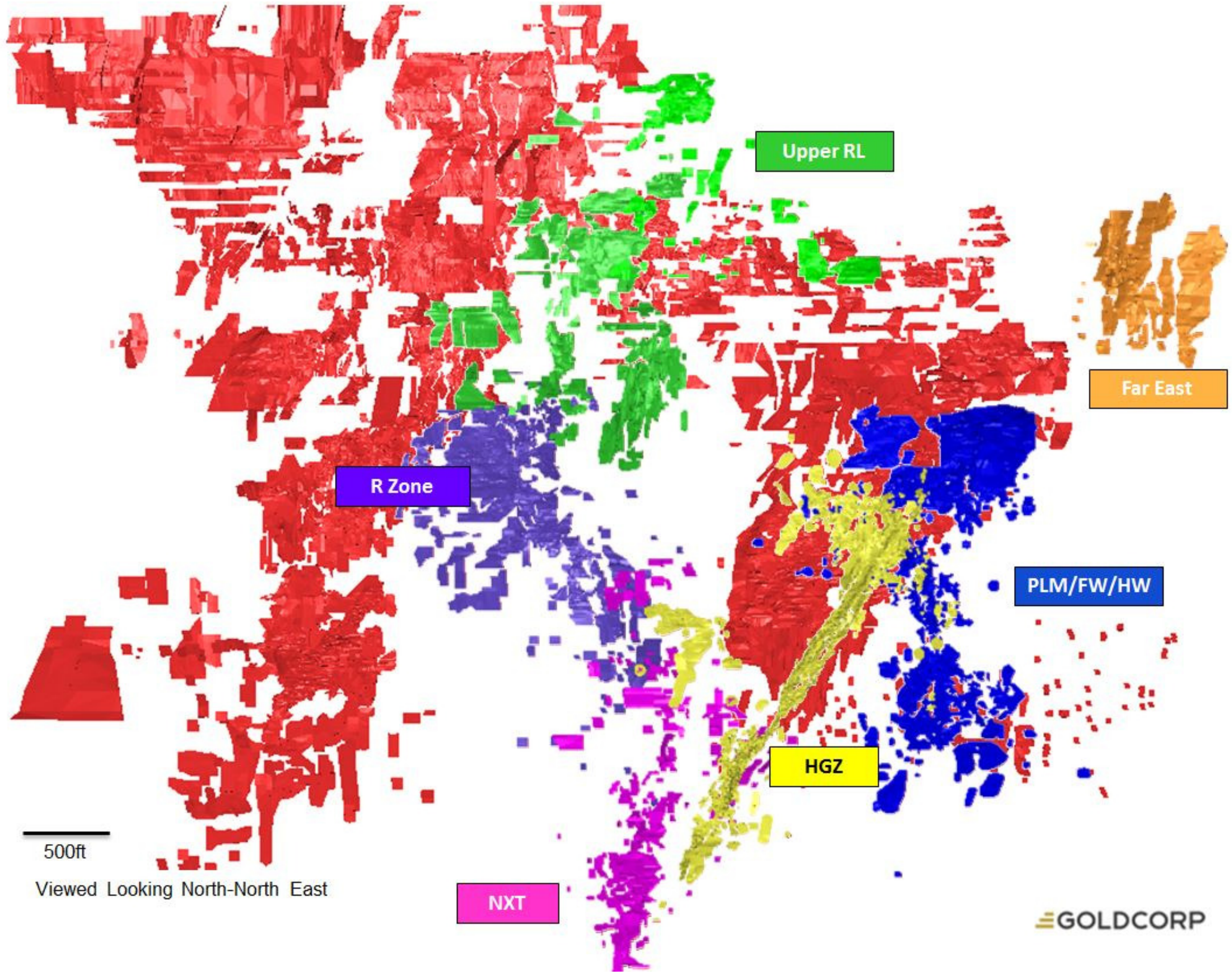
R Zone

R zone exploration is ongoing to expand the zone at depth from the 41-1 level drift at the Red Lake Complex and down from the 36 level drift from the Campbell Complex. Additional expansion drilling is underway from the 4199 connection drift with further drilling planned from the 47 level at the Red Lake Complex.

Far East

Exploration drilling to expand and confirm the Far East Zone is ongoing between the 16 and 21 levels at the Red Lake Complex. Long-term plans to expand the zone below 21 level require rehabilitation of existing development on the 26 and 34 levels of the Red Lake Complex.

Figure 9-1: Exploration Target Locations – Long Section



Note: Figure from Goldcorp 2011.

Red Lake PLM–FW Zone

Drilling to test unexplored gaps in the overall trend of the PLM–FW zone and the down-dip potential of the Red Lake Complex is underway. Exploration is ongoing from several horizons including the 27, 24 and 46 levels of the Red Lake Complex.

PW (Party Wall)

The Party Wall is a collection of different zones from the Red Lake and Campbell Complexes which prior to the merger were only explored to the edge of the respective property boundary or "party wall". There have been several connections and exploration drifts developed in the past year which allow access to explore this previously underexplored area. Drilling is ongoing from the 9 level of the Red Lake Complex and the 27 level of the Campbell Complex with additional exploration platforms being considered for rehabilitation.

Red Lake High Grade Zone

Drilling continues on the deep extents of the High-Grade Zone. Recent drilling is testing underexplored areas in the High Grade Zone corridor towards the east.

H.G. Young

The new H.G. Young exploration area is located on the northwestern boundary of the old Campbell mine site. This is currently one of the most active exploration projects, which is focusing on the definition of several north–south oriented vein structures. Drilling is active from surface and from the 14 level of the Campbell Complex.

In 2015, an exploration drift was developed on 14 level to provide a new drilling platform to test the H.G. Young structures from underground. During the year a total of 174,312 m was drilled from both surface and underground. Surface drilling was focused on step-out drilling to define the footprint of the mineralization, and the underground drilling was focused on testing the down-dip potential of the structures. Drilling will continue from both surface and underground in 2016.

F and NC Zones

Recent exploration has defined new structures between 8 to 13 levels in the historic Dickenson mine. These new ore structures lie above the F Zone and below the NC Zone. Much of this mineralization appears to be related to previously-unrecognized ore structures.

D Zone

Work continues to expand the potential of the active D-HW (D hanging wall) area. The main D zone has potential up dip to the south of the historically-mined area.

NS Zone

The NS (North Shaft) zone was the first developed structure on the Dickenson property and appears to have historically been poorly drill defined and mined. Based on recent exploration programs, this structure has potential from surface down to at least the 4 level.

9.3.3 Cochenour Complex

Construction of the 5 km long haulage drift to connect the Cochenour Complex with the Campbell Complex on the 36 level (1,645 metres below surface) was completed by the end of 2014. During 2015, the Footwall Zone and the Upper Main Zone were accessed via drifting and ramping from 36 level (3990 level), and the deposit was developed and sampled in 2015. The main ramp incline development up from the Red Lake-Cochenour haulage drift toward the shaft bottom level continued advancing in 2015.

At Cochenour the project focus changed in 2015 to further define the geological complexity and changes to the orientation of the deposit. Development concentrated on advancement of three preliminary stope levels. At Upper Cochenour development concluded on the decline to 3990 level. Two explorations drifts were established as drill platforms on the hanging wall and footwall.

During 2015, the focus of exploration was on drilling and development to increase the level of confidence in interpreting the deposit. Drilling continued from both the haulage drift and from the 3990 level with up to 13 drills. The total completed metreage was 163,672 m. Initial sill development, together with definition drilling and drift mapping, has shown geological complexity and changes in the orientation of the mineralized structures. Exploration and development continue at Cochenour to increase the understanding of the deposit.

Exploration opportunities within the Cochenour Complex include:

- Drill testing within the known Upper Main extents to identify additional mineralization that may potentially support Mineral Resource estimation;
- Drill testing of the extensions of the same zones along strike to the north and south;
- Down-dip potential of the Inco zones;
- Down-dip potential of the Cochenour West Zone;
- Drill testing to potentially expand the Western Discovery Zone mineralization;

- Continue to drill test beneath the past-producing McKenzie Red Lake Mine.

9.3.4 Additional Prospects

The haulage drift between the Red Lake operations and the Cochenour Complex doubles as an exploration drilling platform along its length.

9.4 Comment on Section 9

The exploration programs completed to date are appropriate to the style of the deposits and prospects within the Project. There are a number of targets prospective for further exploration assessment.

10.0 DRILLING

A significant amount of drill data has been collected over the 60+ year Project history. Drill data are summarized in Table 10-1 for the Red Lake Complex and Table 10-1 for the Cochenour Complex. Figure 10-1 and Figure 10-2 indicate the collar locations for the surface drilling.

10.1 Drill Methods

Multiple contractors have been used over the Project life. Surface drill methods typically employed core drilling methods.

At the Red Lake Mine drill core for surface drilling is typically NQ (47.6 mm) in size. Occasionally, surface core holes are reduced from NQ size to BQ (36.4 mm) if difficult drilling conditions are encountered. Underground core holes are typically NQ2 (50.5 mm), BQ (36.5 mm) and AQTK (30.5 mm) sizes. The larger diameter core is primarily used in exploration programs where drill density is sparse and drill holes are normally >300 m in length.

Underground definition and delineation drilling is AQTK wire-line (30.4 mm) core. Exploration drilling is usually BQ or NQ size core. Underground delineation drill spacing is based upon an approximate 3–15 m interval spacing with more detailed drilling in select areas.

Drilling performed at the Western Discovery Zone and Bruce Channel deposit was completed using primarily NQ size drill coring with a minor amount of BQ size drill coring.

Core was transferred to wooden core boxes, marked with “up” and “down” signs on the edges of the boxes using indelible pen. The drill hole number, box number and starting depth for the box was written before its use, whilst end depth were recorded upon completion. All information was marked with indelible pen on the front side of the box and also on the cover.

Core is transferred from the drill rig to company core shacks located on the Cochenour or Red Lake mine sites. Surface and underground core is logged at the Cochenour Mine or Campbell complex core facilities. Transport of exploration core boxes to the core shed was done by personnel from the company that was managing the drill program, or the drilling supervisor.

Core is received at the core shack by company personnel and organized for placement in core racks prior to logging by geology staff.

Table 10-1: Red Lake Complex Core Drill Hole Summary Table (includes Red Lake and Campbell)

Year	Project Operator	Deposit or Prospect	Number of Surface holes	Surface Core Metreage (m)	Number of Underground holes	Underground Core Metreage (m)	Total Drill Holes	Total Metreage (m)
1947–2006	Campbell Mine, Dome Mines Group, Placer Dome	Campbell Mine	984	190,532	24,898	1,615,717	25,882	1,806,249
2006–2010	Goldcorp	Campbell Mine	945	431,548	7,311	946,176	8,256	1,377,723
1947–2006	Dickenson Mines Ltd and Goldcorp	Red Lake Mine	595	143,872	21,732	1,639,896	22,327	1,783,768
2006–2010	Goldcorp	Red Lake Mine	Included in Campbell stats	Included in Campbell stats	7,309	830,536	7,309	830,536
Totals			***2,524***	***765,952***	***61,250***	***5,032,324***	***63,774***	***5,798,276***

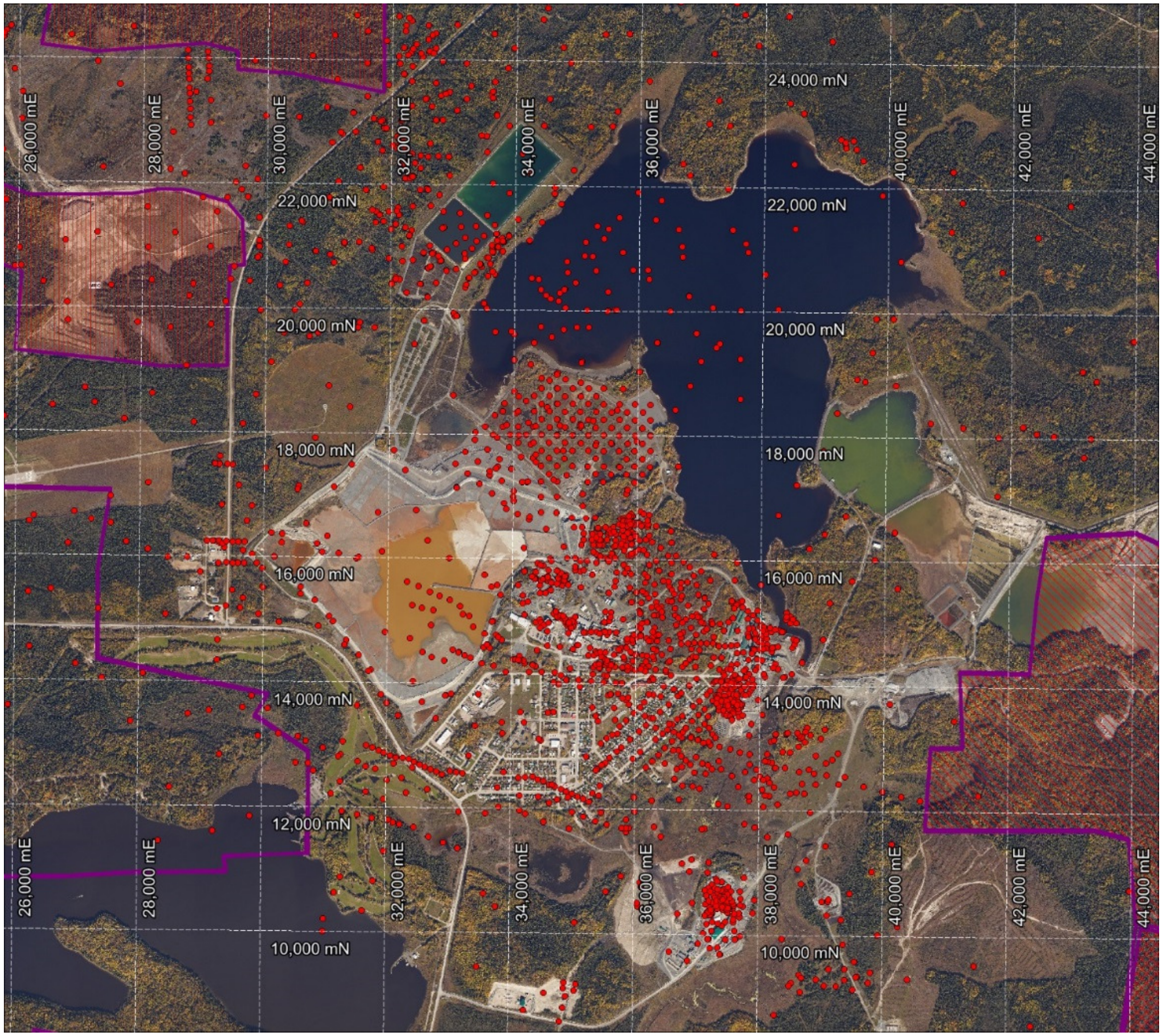
Note: Engineering technical holes, drain holes, geotechnical and surface environmental holes are not included in above table

Table 10-2: Cochenour Complex Core Drill Hole Summary Table

Year	Project Operator	Deposit or Prospect	Number of Surface holes	Surface Core Metreage (m)	Number of Underground Holes	Underground Core Metreage (m)	Total Drill Holes	Total Metreage (m)
1939–1971	Cochenour–Willans Mine	Cochenour	unknown	unknown	10,648	442,309	10,648(+)	442,309
1984	Esso	Cochenour	unknown	unknown	unknown	unknown	unknown	unknown
1988–1991	Inco	Cochenour	unknown	unknown	27	9,214	27	9,214
2003–2008	Gold Eagle Mines	Western Discovery – Bruce Channel	45	11,100	301	30,630	346	41,730
1997–2015	Goldcorp	Cochenour	495	182,442			495	182,442
2011–2015	Rubicon / Goldcorp	Cochenour	555	294,610	873	237,376	1,428	531,986
2009–2010	Goldcorp	Cochenour-UMZ / Footwall	15	7,469			15	7,469
2009–2015	Goldcorp	Western Discovery	48	26,292	49	20,557	97	46,849
Totals			***44***	***23,496***	***11,898***	***740,086***	***11,942***	***763,582***

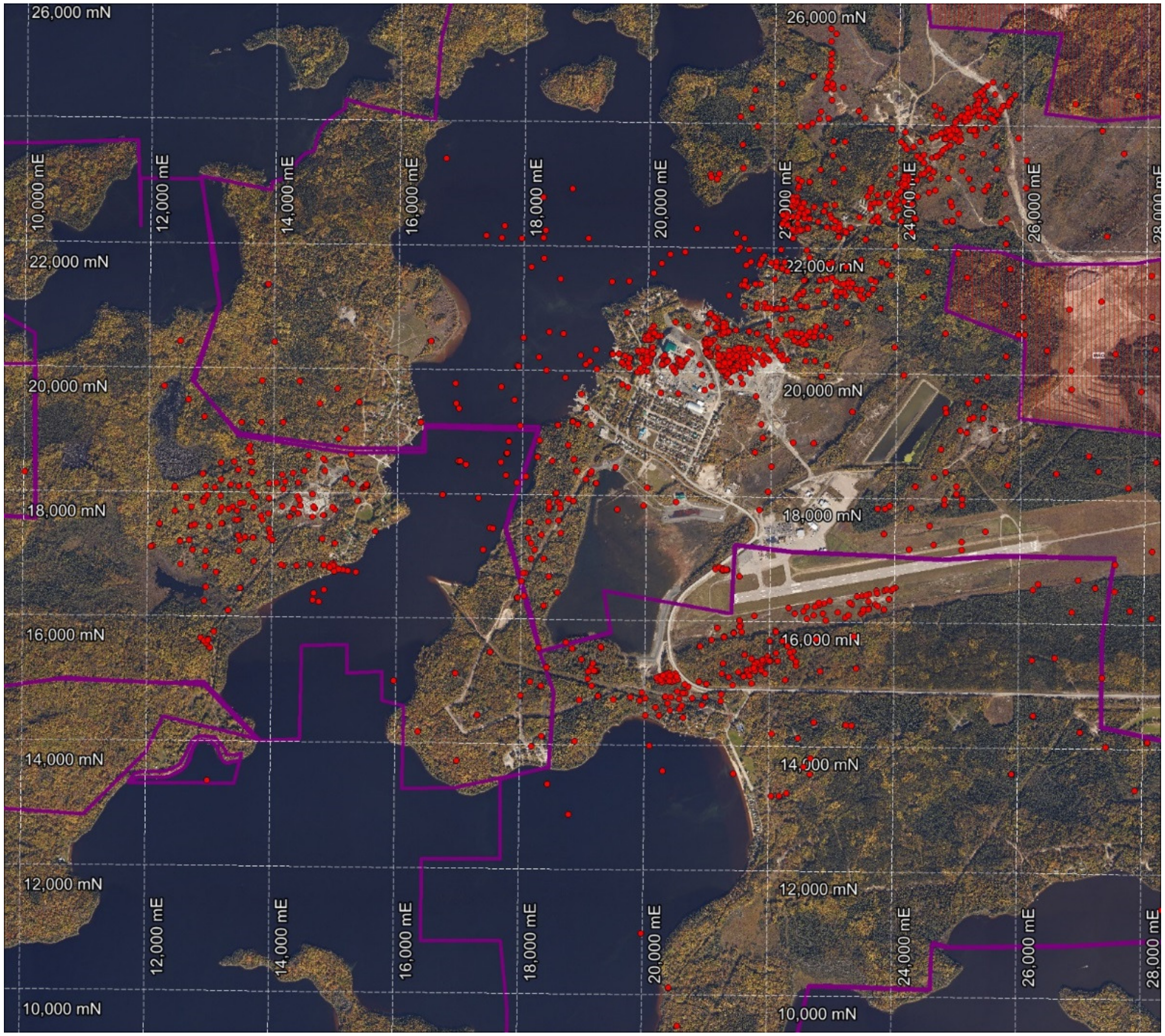
Note: Engineering technical holes, drain holes, geotechnical and surface environmental holes are not included in above table

Figure 10-1: Red Lake Deposit Drill Hole Location Map



Note: Figure prepared by Goldcorp, 2015. Figure superimposed on air photo base. North is to top of plan. Grid lines on photo are 1 km x 1 km.

Figure 10-2: Cochenour Project Surface Drill Hole Location Map



Note: Figure prepared by Goldcorp, 2015. Figure superimposed on air photo base. North is to top of plan. Grid lines on photo are 1 km x 1 km.

10.2 Geological Logging

Over the years various lithological descriptions have been developed for each of the complexes and these have continued to develop and change. Since the merger of the Red Lake and Campbell operations, Goldcorp has developed a new, unified, lithological coding system that incorporates aspects of both previous logging systems. Logs record assays, lithologies, veining and replacement zones, vein styles and percentage amounts over sampled interval lengths and intensity, sulphide mineralization type and intensity, alteration type and intensity, faults and fracture frequency and orientation, rock quality designation (RQD), and structure type, frequency and intensity.

Upon arrival at the core facility, drill core is marked by a geologist and then geologically logged into the computer system utilizing a customized commercially available software.

All drill core is logged using computer codes for the various rock types, mineralization, alteration characteristics and structural/geotechnical data. The shear structures containing the various mineralized zones are logged in detail to establish the zone width and most appropriate sampling interval.

Select drill holes are photographed and digital files are stored on hard disc.

10.3 Recovery

Core quality is very high in both the Red Lake and Cochenour Complexes, with core recovery on average >95% on all core sizes. There are no areas where poor recovery is consistently encountered.

10.4 Collar Surveys

The collars of all drill holes are surveyed by transit for location, bearing and dip and tied into the mine grid. The mine grid relationship to the conventional map grid is discussed in Section 9. The same grid is used for all of the mine complexes.

The global positioning system (GPS) equipment used is Topcon's Hyper, dual constellation, real time kinematic system (RTK), which is a differentially corrected global positioning system (DGPS). This system is a two-piece GPS ensemble capable of measuring within millimetres the distance to the orbiting GPS satellites and consists of a base unit (stationary) and a rover unit (mobile).

The base unit is established over known survey control stations and transmits satellite corrections to a rover unit. The rover GPS antenna is located on the top of the survey pole established at Reid Shaft head-frame. By receiving the base GPS correctional signal, the rover unit is capable of 10 mm and 15 mm relative accuracy from the base in the horizontal and vertical directions respectively. Calibration of the GPS unit is regularly checked.

10.5 Downhole Surveys

Downhole surveys since 1995 at Red Lake were conducted in a systematic manner with a gyroscopic (gyro) survey instrument (unaffected by magnetics) used for drill holes steeper than 70°, and a Reflex Maxibor (Maxibor) survey instrument used for drill holes with flatter dips. Site specifications require downhole surveys at 30 m intervals or less. In the earlier stages of the mining operation, Sperry Sun multi-shot, Icefield multi-shot, Light-Log and Tropari instruments were used, but the gyro and Maxibor units have replaced this instrumentation.

Downhole surveys at the Campbell Complex utilized Reflex and Ranger electronic compass single-shot surveys tests. Most of the drill holes greater than 120 m are surveyed using the Maxibor method. Prior to that, Pajari test instruments were used, which provided azimuth and dip orientations. Sperry Sun multi-shot instruments were used on deep (>300 m holes) for a period from the early 1980s to the late 1990s. Pre-1980 and into the 1990s, drill hole inclination was derived using “acid tests”. This type of testing has been replaced by Reflex electronic compass single-shot surveys.

Downhole surveying on both complexes (since 2006) utilizes a combination of testing equipment that can include Reflex, Maxibor and north-seeking gyro, depending on the depth of the drill holes.

The QPs note that due to the age of the operation, and the time span of drilling on the Project, there are a few drill holes where there is uncertainty about the intercept location; however, statistical tests of the drill results performed to date indicate that location errors in drill holes that support estimation of Mineral Resources or Mineral Reserves are not material. Mining to-date has not encountered any problems with mis-located drill intercepts and ore outlines conform well to the outlines. Goldcorp continues to re-survey holes that appear to have location or downhole problems; however, the deviation in the drill holes is generally small and predictable.

10.6 Sample Length/True Thickness

Sample lengths will rarely equal true thickness because drill holes rarely intersect the veins at right angles. Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept (sample) widths are typically greater than true widths.

10.7 Drill Spacing

Drill spacing in the Red Lake–Campbell Complex is variable. Typically, drilling to outline Mineral Resources is at a spacing of 45–60 m, infill drilling is carried out at 15–25 m centres, and definition drilling is completed on 7.5 m centres.

In the Cochenour Complex, including the Western Discovery Zone, the exploration programs are currently outlining the mineralization on a drill spacing of approximately

30–60 m drill spacing. Infill drilling is done at 15 m drill centres and localized, tight, definition drilling is carried out on 3–5 m centres.

10.8 Comments on Section 10

In the opinion of the QPs, the quantity and quality of the lithological, geotechnical, collar and downhole survey data collected in the exploration and infill drill programs are sufficient to support Mineral Resource estimation as follows:

- Core logging meets industry standards for gold exploration;
- Collar surveys were performed using industry-standard instrumentation;
- Downhole surveys were performed using industry-standard instrumentation. A number of different instruments have been used over the life of the mines. Information from mining activities indicates no material errors are resulting from any mis-located drill data;
- Core recovery is acceptable and adequate to allow reliable sample data for estimation purposes;
- Depending on the dip of the drill hole, and the dip of the mineralization, drill intercept widths are typically greater than true widths;
- Drill orientations are generally appropriate for the mineralization style, and have been drilled at orientations that are optimal for the orientation of mineralization for the bulk of the deposit areas;
- Drill hole intercepts as summarized in Table 10-5 appropriately reflect the nature of the gold mineralization, and include areas of higher-grade intervals in low-grade drill intercepts;
- Drill sampling has been adequately spaced to first define, then infill, gold anomalies to produce prospect-scale and deposit-scale drill data. Drill hole spacing varies with depth. Drill hole spacing in exploration areas of the Red Lake–Campbell Complex is approximately 45 m to 100 m. In development and stope areas, underground drilling infills this spacing to approximately 7.5–15 m x 7.5–15 m. Drill hole spacing typically increases with depth as the available mining levels and number of holes decrease, drill holes deviate apart, and is more widely-spaced on the edges of the deposits;
- No factors were identified with the data collection from the drill programs that could materially affect estimation accuracy or reliability (see also Section 11 and Section 12).

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Sampling Methods

11.1.1 Geochemical Sampling

Geochemical samples were collected during early-stage exploration on the Project and are superseded by drill and production data.

11.1.2 Core Sampling

Core sampling practices have varied between predecessor companies and over time. Typically, historic core sampling has targeted mineralized zones with additional bracket samples taken in waste rock. Current practice has changed, with some exceptions, to sampling the entire drill hole.

Historic Red Lake Complex

Until July 1998, all identified mineralized structures at the Red Lake Complex were sampled by taking half core that was split using a diamond saw. Geologists marked the core split using a lumber crayon optimizing the mark on the core to bisect the ellipse of the suspected mineralized structure equally. The remaining half core was saved for future reference, part of which was used for metallurgical testing.

Sampling honoured lithological and mineralized zone boundaries. Typical sample lengths were 90 cm for un-mineralized intervals, 60 cm or less for mineralized intervals, and 30 cm intervals for visible gold. Some samples were taken on shorter intervals that directly corresponded to very narrow, high-grade mineralized structures.

Historic Campbell Complex

Campbell Complex core was split using a mechanical splitting machine until approximately 1988–1989. After that point a core-cutting diamond blade saw was used.

Until 1999, sample lengths were typically in the 0.6–1.0 m range, and usually shorter in the higher-grade sections. Low-grade rock and waste were typically sampled over 0.6–1.5 m lengths, averaging 0.67 m. High-grade sections were sampled over 15 cm to 60 cm intervals for BQ and NQ core, and 0.90 m for smaller AQ/AQTK core, except where significant geological differences were present, these normally being narrow, high-grade occurrences.

Current Core Sampling Practices

Current core sampling practices vary depending on the type of drill hole (surface, underground exploration, definition) and the size of the core.

Samples are marked on the drill core by the geologist in red grease pencil. Samples honour lithological and mineralization boundaries geology and where possible utilize natural core breaks. Sample lengths are similar to earlier programs, although there is leeway for the logger to adjust mineralized sample lengths and bracket sample lengths based on the width of mineralized zones as shown in Table 11-1. Note that very narrow high-grade samples will be diluted to 15 cm.

NQ core from surface drill holes and NQ and BQ core from underground exploration drill holes is typically cut with a diamond core saw, although some BQ core is sampled whole. Samples are cut such that the half that does not have the geologist's sample markings is taken as the sample and placed a plastic sample bag. One of the three bar-coded sample tags is placed in the bag, a second tag is attached to the outside of the bag and the third is stapled to the box at the end of the sample interval. The second half of the core is placed back in the box with the markings down and the technician marks the ends of the samples on the cut surface with a red grease pencil. The technicians also prepare additional plastic bags for the quality assurance and quality control (QA/QC) samples and insert them where required. With QA/QC sample tags the third tag is attached to the dispatch papers and the type of material or name of the standard is written on the tag, allowing it to be referred to later if there is a failure.

Underground exploration BQ core and definition drilling AQ core that is sampled whole goes through a similar process to that outlined above, except no tag is stapled to the box.

Samples being sent to external laboratories are placed in rice bags that are secured with a zap strap, and placed in large plastic bins that can be picked up with a forklift. While work is in progress, a plastic bag is attached to the side of the bin with the dispatch papers. When the shipment is ready a copy of the papers is placed in one of the rice bags and marked with flagging. An original copy with the QA/QC information is retained on site for the database manager.

Samples being sent to the internal laboratory are placed in pails and then into a plastic bin for transport to the laboratory. Dispatch papers are also included.

11.1.3 Production Sampling

Chip sampling is performed on a blast-by-blast basis by the production geology team, while muck sampling is done by the miner during the mucking process. Muck samples are used to provide a general guide and back-up information for day to day operation, while test holes are required to ascertain that no mineralization is missed in the walls of the stope.

Table 11-1: Current Sample Length Protocols

Sample Material	Sample Length (cm)	Bracket Samples (cm)
Mineralized < 15 cm	15	15
Mineralized 15–60 cm	15–60	30–45
Mineralized >60 cm	45–60	45–60
Barren or Weakly Altered	60–90	

Chip Sampling

All chip samples are taken either by a geologist or an experienced sampler. A weighted-average grade is determined for each blast based on the assay results of those samples influencing the grade of the volume blasted. These samples are most often collected at the mid-lift elevation. Occasionally, wall samples are also used to determine grade when the geometry of the vein dictated this usage. The volume used to calculate the blast grade is the estimated volume preceding the face.

Although sampling guidelines are such that geologic boundaries are respected, the minimum sampling chip recommended is 0.5 ft (0.15 m). Where possible, 2 ft (0.6 m) channel chips are preferentially taken, in an effort to duplicate the optimized drill sample interval of 2 ft (0.6 m). Production chip samples typically weigh about 1 kg.

Samples along the chip sample string bracketing the mineralized structures are carefully taken to assist in the modeling of mineralized structures. Computerized modeling is facilitated by snapping to the grade selvage in contact with waste when the geologist is wire-framing a three-dimensional solid interpretation of the of an ore lens.

Muck Sampling

Muck samples are taken extensively during mining, and are collected from the majority of the ore blasts during silling and subsequent mining. On average, at both complexes one muck sample is taken for every 20 st of ore. At the Campbell Complex muck samples are used for reconciliation whereas at the Red Lake Complex chip samples are the predominant assay type used in reconciliation.

Test-hole Sampling

Test-hole sampling is used at the mines as a grade control tool to identify economic mineralization in the ribs of drifts and stopes and are not used to estimate grade. Generally, test holes are 8 ft (2.4 m) long and three samples are collected from each. This information may result in further extraction, as required, to recover mineralization in ribs.

11.2 Metallurgical Sampling

Samples for metallurgical testwork were been collected in 2014 and 2015 for the Upper main and Footwall zones at Cochenour. Samples consisted of approximately 9 kg of drill core composited from several drill holes in the same area with the same intervals as the assay intervals. Twelve first-pass samples were collected in mid-2014. A second pass consisting of 14 composited samples was collected in early 2015 focusing high sulphide content. All samples were sent to SGS Lakefield.

11.3 Density Determinations

11.3.1 Red Lake Complex

Historically a specific gravity (SG) of 2.91 (11.0 ft^3/st) has been used at the Red Lake Complex.

In 1999, SG determinations were made for 130 mineralized composites from the High Grade Zone. ALS Chemex Laboratories Ltd. (ALS Chemex) of Mississauga used a pycnometer for these determinations. The bulk of the SG measurements range between 2.85 and 3.25, depending on the grade.

The average SG of the composites is 2.98, which is the SG used to estimate Mineral Resources for the High Grade Zone.

In 2015 a small program of bulk density testing on samples from within the Red Lake complex was initiated to determine if there were differences between mineralized zones. Samples were sent to AGAT, Accurassay, and SGS for determination on pulps by the pycnometer method. Results are pending.

11.3.2 Cochenour Complex

During completion of the Mineral Resource estimate for the Cochenour Complex, a SG of 2.91 was used for all zones except the Western Discovery Zone. Selection of the value was based on a number of reviews, including

- Past work by Inco Exploration Technical Services which utilized tonnage factors of 10.8 ft^3/st to 11.2 ft^3/st;
- Subsequent review by Strathcona Minerals recommended that a value of 11 ft^3/st (SG = 2.91) be used for mineralization and waste.

During 2010, Goldcorp completed SG determinations on 20 samples from the Cochenour Complex. Values ranged from 2.68 to 3.51, with an average of all samples returning 2.98. The range of SG values is similar to the range returned from the 1999 High Grade Zone program at the Red Lake Complex.

Based on the historic and more recent work a decision was made to continue to use the SG value of 2.91 for estimation purposes.

11.3.3 Western Discovery Zone

For the Western Discovery Zone a SG of 2.7 was selected for Mineral Resource estimation purposes based on examination of lithologies, alteration and mineralization observed in the drill core (Pressacco, 2004).

11.4 Analytical and Test Laboratories

Table 11-2 summarizes the laboratories used for the Project. In addition to the two on-site mine laboratories, all laboratories that have been used by Goldcorp are listed. External laboratories used by predecessor companies are not known.

The Campbell and Red Lake run-of-mine laboratories primarily performed day to day assays for mining operational purposes; however, exploration core has also been processed through the laboratories at times. Neither laboratory has held ISO accreditation. The Red Lake run-of-mine laboratory was closed in 1996.

All remaining laboratories used for operations analytical data have held ISO certifications since 2001; it is not known what certification was held prior to that date. Laboratories used recently including SGS, Accurassay, ALS Chemex, Actlabs, AGAT and TSL hold ISO/IEC 17025 accreditations.

Samples prior to 1995 were fire-assayed by Goldcorp's onsite laboratory at the Red Lake Complex, and make up the majority of the data included in the Sulphide Zones. Late in 1999, the primary assaying contract for exploration drill core was awarded to SGS in Rouyn-Noranda. At the re-commencement of production from the Red Lake Complex in July 2000, SGS established a gold assaying facility in Red Lake that handles definition drill core and production assaying analytical services.

From 2000 to present, the in-house laboratory at the Campbell Complex has typically processed definition core and performed day to day mine assays. Exploration core for the Campbell Complex has been processed by offsite laboratories since 2002–2003. Accurassay and Actlabs are currently the primary offsite laboratories, with other laboratories including SGS (Rouyn Noranda), TSL (Saskatoon) or ALS Chemex (Thunder Bay or Mississauga), handling overflow when needed.

Samples from drill programs completed on the Bruce Channel, Western Discovery, and Gold Eagle areas by Southern Star and Exall in the period 2004–2006 used the SGS Laboratory in Red Lake for preparation and analysis. Check samples, consisting of 500 coarse rejects, were analysed by Accurassay and ALS Chemex, both located in Thunder Bay.

Table 11-2: Laboratory Summary Table

Laboratory	Year From	Year To	Sample Types Analysed	Independent/ Not Independent of Goldcorp/RLGM
			Red Lake and Campbell Complexes	
Accurassay	2008	Present	Surface, exploration and some definition core	Independent
Actlabs	2009	Present	Surface, exploration and some definition core	Independent
ALS Chemex	1996	2011	Exploration and surface core	Independent
Campbell Laboratory	1949	Present	Campbell Complex mine production samples and definition and some exploration	Not independent
Goldcorp Red Lake	1949	1996	Mine production samples and all core	Not independent
SGS	1996	Present	Red Lake Complex mine production samples, most definition core, some exploration core	Independent
TSL	2000	2005	Exploration samples	Independent
AGAT	2013	Present	Surface and Mine exploration core	Independent
			Western Discovery Zone and Bruce Channel	
SGS	2004	2006	Exploration core	Independent
ALS Chemex	2004	2006	Check assays	Independent
Accurassay	2004	2006	Check assays	Independent
			Cochenour	
Accurassay	2006	Present	Exploration and U/G production core	Independent
Actlabs	2006	Present	Exploration and U/G production core	Independent
ALS Chemex	2006	2011	Exploration core	Independent
SGS	2015	2015	all U/G production samples, some definition core, some exploration core	Independent
TSL	2015	2015	Some definition Core	Independent

Samples from the drill programs completed by Goldcorp at the Cochenour Complex were submitted primarily to Accurassay in Thunder Bay. Actlabs and ALS Chemex acted as check laboratories.

11.5 Sample Preparation and Analysis

11.5.1 Sample Preparation

Sample preparation for exploration and run-of-mine samples consists of drying as required, crushing, and selection of a sub-split which is then pulverized to produce a pulp sample sufficient for analytical purposes. Table 11-3 summarizes the preparation methods for the main laboratories used, including the historic Red Lake laboratory.

Table 11-3: Sample Preparation Procedures

Laboratory	Procedure
Red Lake Complex run-of-mine laboratory	Dry, crush to 75% passing 2 mm, split (250 g), and pulverize to 85% passing -200 mesh.
Campbell Complex run-of-mine laboratory	Crush (<5 kg) to 905 passing 6.3mm, riffle split (250g) and pulverize to 93% passing -100 mesh.
SGS Red Lake	Dry, crush (<5kg) to 75% passing 2 mm, split (250 g), and pulverize to 85% passing -200 mesh.
Accurassay	Dry, crush (<5kg) to 75% passing 2 mm, split (250 g), and pulverize to 85% passing -200 mesh.
ALS	Crush (<5 kg) to 805 passing 2mm, riffle split (250 g) and pulverized to 90% passing -200 mesh.
Actlabs	Crush (<7 kg) to 90 % passing 2mm, riffle split (250 g) and pulverize to 95% passing -140 mesh.
AGAT	Dry, crush (<5kg) to 75% passing 2 mm, split (250 g) and pulverize to 85% passing -200 mesh.
TSL	Crush (<5 kg) to 85% passing 2mm, riffle split (250 g) and pulverized to 95% passing -140 mesh.

In addition to compressed air cleanings, most laboratories use regular silica sand washes on pulverizers between every, or every other, sample.

Production samples and drill core are kept separate in the mine site laboratory to reduce the risk of contamination.

11.5.2 Sample Analysis

Current practice is for samples to be analyzed for gold using a fire assay with an atomic absorption (AA) finish. If a value of >10,000 ppb gold is returned, then a fire assay with a gravimetric finish is run. If visible gold is noted in core, the sample tag is flagged and the laboratory will proceed directly to a fire assay with a gravimetric finish. Multi-element inductively-coupled plasma (ICP) packages are currently also routinely run on all samples. Different analytical methods may have historically been used by both internal and external laboratories in the past. Table 11-4 summarizes the current analytical methods used by the main laboratories.

Since 2000, samples from selected surface and underground drill holes have been submitted for ICP analysis as well as the regular fire assay/gravimetric (FAAA/GRAV) analysis.

A certain percentage of the Project samples were also selected for pulp metallic analysis.

11.6 Quality Assurance and Quality Control

A limited amount of data is available for quality assurance and quality control (QA/QC) programs by any companies prior to 2000.

Table 11-4: Analytical Methods

Laboratory	Procedure
Red Lake Complex run-of-mine laboratory	Fire assay on a 30 g sample with AA finish
Campbell Complex run-of-mine laboratory	Fire assay for gold on a 5 gram sample with aqua regia leach/MIBK extraction and AA finish, fire assay for gold on a 15 g sample with Grav finish.
SGS Red Lake	Fire assay for gold on 30 g sample with AA finish, fire assay for gold on a 30 gram sample with a Grav finish, multi element ICP by multi acid digestion and ICP-OES.
Accurassay	Fire assay for gold on 30 g sample with AA finish, fire assay for gold on a 30 gram sample with a Grav finish, multi element ICP by multi acid digestion and ICP-OES.
ALS	Fire assay for gold on 30 g sample with AA finish, fire assay for gold on a 30 gram sample with a Grav finish, multi element ICP by multi acid digestion and ICP-OES.
Actlabs	Fire assay for gold on 30 g sample with AA finish, fire assay for gold on a 30 gram sample with a Grav finish, multi element ICP by multi acid digestion and ICP-OES.
AGAT	Fire assay for gold on 30 g sample with AA finish, fire assay for gold on a 30 gram sample with a Grav finish, multi element ICP by multi acid digestion and ICP-OES.
TSL	Fire assay for gold on a 30 g sample with AA and/or Grav finish. Screen metallics on 1,000 g, assay entire +150 mesh fraction, duplicate assays on -150 mesh fraction, weighted average for entire sample reported.

Note: MIBK = methyl isobutyl ketone; grav = gravity; OES = optical emission spectroscopy

11.6.1 Run-of-Mine Laboratories

The Red Lake Complex laboratory historically used a QA/QC procedure where each tray of 24 samples contained 21 company samples, and one laboratory blank, one reference standard (SRM) and one duplicate. Copper was added to four samples to ensure the trays do not get turned around during the handling process.

The Campbell Complex laboratory QA/QC procedure is for each 24 sample tray to have a blank, a duplicate assay and two quality control SRMs. From 2006 until recently the laboratory has used commercially-available river rock (landscaping gravel) as a blank, but in 2015 the laboratory started to use stemming sand that is stocked in the mine warehouse. The laboratory prepares a pulp duplicate and the standards are commercial RockLabs SRMs. If the blank sample assays >0.01 oz/t gold, then the entire sample tray is re-assayed.

11.6.2 Cochenour Complex

The QA/QC for the early Cochenour drill programs, including the Golden Eagle programs for Bruce Channel and Western Discovery Zone, relied upon the laboratory internal controls; no pre-laboratory QA/QC samples were employed. In 2010, submission of SRMs and blanks was instigated. Check samples were submitted to check laboratories during the Exall/Southern Ventures programs (2004–2006) and the data indicated that no biases were evident in the original sampling and assaying. Since the beginning of 2010, approximately 3–5% of the Cochenour Complex pulps generated from the primary laboratory are sent to another laboratory to verify analytical accuracy.

11.6.3 Campbell and Red Lake Complexes QA/QC Programs

Data, including SRMs and blanks, exists for QA/QC submissions dating back to 2000; however, exact QA/QC protocols are not known. At least as far back as 2006 Goldcorp programs have included one SRM or one blank every 20 samples, with additional blanks inserted immediately after a sample where visible gold was noted. Starting in 2012 the protocol was changed to one SRM or one blank every 25 samples with additional blanks. The protocol is the same for samples going to both the internal and external laboratories. No field duplicates have been submitted but reject and pulp duplicates have been prepared by the analytical laboratories. Additionally, check assays have been carried out at several laboratories.

The insertion of QA/QC materials is pre-programed into acquire, and the core logger is alerted when an insertion is needed. The order of insertions is left to the discretion of the logger who, for example, may insert two blanks in a row and then two SRMs. The SRM inserted is also at the logger’s discretion. Usually low-, medium- and high-grade SRMs are available for use at any given time.

Blanks

Several different blanks have been used while Goldcorp has operated in Red Lake. Approximate dates and materials are:

- Blanks are recorded for 2000 to 2005; however, the material used is not known;
- From 2005 to 2012 lamprophyre dykes, from drill holes were submitted with drill core samples;
- From 2012 to early 2014 granites from drill core were submitted with core samples;
- Since early 2015, Nelson Granite from Vermillion, Ontario has been used as a blank with core samples.

Blanks are assessed using 0.685 g/t gold failure limit (0.02 oz/t gold). Results do not indicate any contamination issues.

Standard Reference Materials

A number of different SRMs, both commercial and site-specific, and over a wide range of gold values, have been used over the years.

SRMs are assessed using ±3 standard deviations, and bias relative to the expected value. Typically assay accuracy is very good, with biases for most standards being well within ±5% of the expected value.

Duplicates

Several of the laboratories used on the project prepare reject duplicates and almost all laboratories prepare pulp duplicate from the samples they are sent. Rates vary from one reject duplicate every 25 to 60 samples and one pulp duplicate every 12 to 30 samples depending on the laboratory.

The results of the data are assessed using the entire data set (both reject and pulp duplicate results mixed) but separately for analyses with AA or gravimetric finishes for gold. Acceptance levels are set at 20% absolute relative percentage difference (ARPD). On this basis 73% of samples analysed using a gravimetric finish and 85% of samples analysed using an AA finish have ARPD values of less than 20%. Given the high grade and nugget nature of the mineralization, assay precision is good.

Check Assays

Samples (pulps) have been sent from the on-site laboratory, Accurassay and SGS Red Lake to several other laboratories for check assay including AGAT, Actlabs, SGS, TSL and the onsite laboratory. Typically assay accuracy between laboratories is good; however, outliers are relatively common, likely due to the presence of particulate gold.

Assessment and Follow Up

QA/QC results are assessed as they are received form the laboratory. Apparent failures are first assessed for sample switches or data entry errors. If required re-runs are requested using 10 samples both before and after the failure. All QA/QC results are summarized for each lab in monthly reports and include the number of each QA/QC item inserted, number of failures and action taken.

11.7 Databases

11.7.1 Red Lake–Campbell Complex

Currently, geological data are stored in a SQL 2005 acQuire database and accessed through the same geological software interface, as well as through the commercially-available modelling software Datamine.

Assays are received electronically from the laboratories and imported directly into the database on a per-batch basis.

Drill hole collar and down hole survey data are reported electronically and imported directly into the database. The Reflex survey tool data are manually entered into the database. In all cases, a copy of the surveys is distributed to the geologist responsible for the program, and to the geology database technician.

Data are verified on entry to the database by means of in-built program triggers and validations within the mining/geological software. Checks are performed on surveys, collar co-ordinates, lithology data, and assay data. If any data errors are found they are investigated thoroughly and changed in the database only when the change is proven to be the correct data. A senior geologist always reviews and must agree with the data before any change is made.

Paper records are kept for all assay and QA/QC data, geological logging and bulk density information, downhole and collar coordinate surveys. All paper records are filed by drill hole for quick location and retrieval of any information desired. Assays, downhole surveys, and collar surveys are stored in the same file as the geological logging information. In addition, sample preparation and laboratory assay protocols from the laboratories are monitored and kept on file.

11.7.2 Cochenour Complex

In 2009–2010 the original Gold Eagle data were digitally re-coded and validated by Goldcorp staff for merging into the Cochenour Complex geological dataset for use in Mineral Resource estimation.

The majority of the Cochenour–Willans surface and underground mine drill holes were entered digitally by Inco into their proprietary BORIS system during the period 1988–1990. On purchase of the Cochenour–Willans assets, Goldcorp compiled, converted, translated and validated this data into a MS-Access–Gemcom based system.

With the onset of the 2002 drilling the Cochenour Complex has used two digital logging systems; a Logger-based system (in-house MS Access/Gemcom) and, since 2008, an acQuire logging package. In 2007 the existing Cochenour and regional area drill hole data were imported into the acQuire system.

Drill hole collar data are currently entered by the logging geologist along with any Reflex type downhole surveys. All other downhole surveys are entered electronically into the system via software routines.

11.8 Sample Security

Surface drill core is delivered to the on-site core logging area by surface drilling contractor. Underground drill core is delivered shaft stations by the underground drilling contractor, after which it is retrieved by Goldcorp staff and delivered to the core logging area.

After sample collection, individual samples are sealed in the sampling area with a stapler. Samples to be sent to the internal laboratory are placed into a pallet bin and, when full, delivered to the laboratory. All other samples are placed into rice bags (6–8 samples per bag) that are marked with the drill hole number, the sample sequence in the bag, and the number of the bag in the shipment (e.g. one of 10) and then placed into collapsible plastic bins. Samples for analysis by SGS in Red Lake are picked up and transported to the lab by SGS staff. Samples for other external laboratories are shipped by a commercial carrier (Manitoulin Transport) to their respective destinations.

Chain-of-custody procedures consist of filling out sample submittal forms that are sent to the laboratory with sample shipments to make certain that all samples are received by the laboratory.

11.9 Sample Storage

A variety of core that was drilled from various locations from surface and underground from Campbell and Red Lake Complexes is stored on surface at the sites. Two examples of this are core from High Grade Zone drilling and selected surface reference holes from 2008, 2010 drilling that was completed under the Balmertown site. Historical core from pre-town site drilling in the 1940s and1950s no longer exists.

The pulps and rejects from the pre-2009 drill programs conducted by Exall/Southern Ventures were kept in box crates and transported to the Cochenour site once Goldcorp acquired the property. Prior to 2009, pulps and rejects were shipped back to the Cochenour site and then disposed of on an as-needed basis.

Currently, after logging, selected drill core is stored in wooden core boxes on steel racks in the buildings adjacent to the core logging and cutting facilities. The core boxes are racked in numerical sequence by drill hole number and depth.

Since 2009, rejects from samples sent to external labs are stored at the laboratory site for 90 days, and then are disposed of. Pulps are stored for a period of six months at the laboratory and then disposed.

11.10 Comment on Section 11

The QPs are of the opinion that the quality of the gold analytical data are sufficiently reliable (also see discussion in Section 12) to support Mineral Resource and Mineral Reserve estimation and that sample preparation, analysis, and security are generally performed in accordance with exploration best practices and industry standards as follows:

- Sample preparation for samples that support Mineral Resource and Mineral Reserve estimation has followed a similar procedure since 2006 when Goldcorp became overall Project operator, and has been essentially similar to the post-2006 preparation procedure since 2001. The preparation procedure is in line with industry-standard methods for gold deposits that have coarse, visible, gold and a high nugget effect;

- Sample data collected adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposit;
- Drill core samples and underground samples are currently analysed by a combination of independent laboratories and the Campbell run-of-mine laboratory, using industry-standard methods for gold analysis. In general, exploration and infill core programs were analysed by independent laboratories using industry-standard methods for gold analysis from 2001. Earlier drill programs were analysed by the run-of-mine laboratories including the Red Lake laboratory which closed in 1996. Current run-of-mine sampling is performed by the Campbell mine laboratory and SGS in Red Lake, which is operated independently of Goldcorp;
- There is limited information available on the QA/QC employed for the earlier drill programs; however, sufficient programs of reanalysis have been performed that the data can be accepted for use in estimation;
- Typically, Goldcorp drill programs since 2001 on the Red Lake and Campbell Complexes included insertion of blanks and standards, while the laboratories have prepared reject and pulp duplicates. The QA/QC program results do not indicate any problems with the analytical programs, therefore the gold analyses from the core and underground sampling are suitable for inclusion in Mineral Resource estimation;
- QA/QC data for the Cochenour Complex have relied on the laboratory internal QA/QC controls. No evidence of analytical bias is evident from this work. In 2010, a conventional program including blank and standard insertions was instituted;
- Data that were collected were subject to validation, using in-built program triggers that automatically checked data on upload to the database. Data are also verified against the original hard copy monthly reports, as well as in other software packages;
- Verification is performed on all digitally-collected data on upload to the main database, and includes checks on surveys, collar co-ordinates, lithology data, and assay data. The checks are appropriate, and consistent with industry standards;
- Sample security has relied upon the fact that the samples were always attended or locked in the on-site sample preparation facility;
- Chain-of-custody procedures consist of filling out sample submittal forms that are sent to the laboratory with sample shipments to make certain that all samples are received by the laboratory;
- Current sample storage procedures and storage areas are consistent with industry standards.

12.0 DATA VERIFICATION

12.1 Internal Reviews

12.1.1 Laboratory Inspections

Goldcorp personnel visit and inspect the laboratories used to analyze their samples twice a year. During the visit, employees are observed to ensure that laboratory policies and procedures are being followed. Equipment and working areas are also inspected to ensure they are maintained and in good working order (i.e.: cracks in riffle splitters, dents/cracks in the crusher or pulverizer pans, excessive dust etc.). Any issues or concerns (are brought to the attention of the appropriate laboratory manager.

12.1.2 QA/QC Verification

Daily QA/QC is undertaken to ensure the assays being imported into the database are correct. Mine and exploration geologists are required to review the assays and approve or reject them if deemed necessary. Charts and data are examined and reruns are requested where necessary.

Bi-weekly reports highlighting differences between the estimated grade of samples logged and the actual result are sent to each geologist. This report gives the geologists another opportunity to review the assays pertaining to their drill program or production sampling, ensure they are acceptable, approve or reject, and if needed, request re-runs from the appropriate laboratory.

Monthly QA/QC reports are prepared summarizing the results of sample submissions to each laboratory including the total number of samples, the number and type of standard and blanks, as well as the number of failures and the actions taken on failures (re-runs). The reports include charts detailing results for blanks, standards, supplicates and check assays.

Assay data undergo a QA/QC check upon database import which identifies possible errors to investigate. Hard-copy assay certificates are also compared with the electronic file issued by the laboratory to ensure the correct results are reported in both hard-copy and digital records.

12.1.3 Validation Checks

Validation checks are performed by operations personnel on data used to support estimation comprise checks on surveys, collar co-ordinates, lithology data, and assay data.

The database that supports Mineral Resource and Mineral Reserve estimation is validated using quality control routines in the acQuire software program to check for gaps, overlaps and duplicate entries. The data then runs through a final check when the logging is performed and the data is set for approval. Datamine is used as a final check to verify the location and accuracy of chip samples and drill holes.

Where errors are noted, the geologists fix the problem prior to the database being used for estimation purposes.

12.2 External Reviews

A number of data verification programs and audits have been performed over the Project history, primarily in support of technical reports.

12.2.1 Micon Technical Reports, 2004, 2006

Micon staff reviewed available data in support of technical reports prepared in 2004 and 2006 for Exall/Southern Ventures (Pressacco, 2004; Lewis 2006a, 2006b).

2004

The 2004 report (Pressacco, 2004) reviewed check assays, comprising about 9% of the then database on the Western Discovery Zone. Micon concluded that both the ALS Chemex and Accurassay laboratories reported gold values greater than those values reported by SGS, indicating SGS assay data were slightly conservative for those gold values below 3 g/t Au. Micon observed:

Micon has reviewed the sample collection, sample preparation, security, and analytical procedures that were followed during the 2004 diamond drilling program at the Western Discovery Zone. It concludes that the procedures followed conform to the highest of industry standards currently in effect and that these procedures are adequate to ensure a representative determination of the gold contents of any intervals of veining or alteration that were observed in the drill core.

Micon took seven independent samples from half drill core from the Western Discovery Zone and submitted these for analysis to the ALS Chemex facility in Mississauga. On review of the results, Micon stated:

Micon is satisfied that its check samples have confirmed the presence of gold in the selected samples of drill core in approximately the same range as originally determined by SGS Minerals Services.

In preparation for the 2004 Mineral Resource estimate, Micon reviewed the core from a small number of drill holes to confirm the accuracy of the lithologies, alteration, and mineralization noted in the drill logs, to confirm the accuracy of any structural features noted in the drill logs, and to confirm the accuracy of the samples taken for assay. No major discrepancies were found during this exercise. Micon was satisfied that the Gold

Eagle JV personnel demonstrated a good understanding of the lithological, alteration, mineralization, and structural settings of the property.

In addition, a total of 10 drill hole logs were selected for review, comprising approximately 30% of the number of drill holes that were contained in the property database for the Western Discovery Zone. The collar information, down hole survey information, lithology and assay information contained in the logs for each of these drill holes were compared to that which was entered in the database. A number of differences were noted between the information contained in the drill logs and that contained in the database; however, Micon concluded that these differences would not have a material impact upon the accuracy of the 2004 mineral resource estimate.

2006

Micon reviewed the data available from the existing drill programs (Lewis 2006a, 2006b), concluding:

Micon has reviewed the sample collection, sample preparation, security, and analytical procedures that were followed during the 2005 diamond drilling program on the Bruce Channel Zone. It concludes that the procedures followed conform to the highest of industry standards currently in effect and that these procedures are adequate to ensure a representative determination of the gold contents of any intervals of veining or alteration that were observed in the drill core.

Micon collected a total of seven samples of quarter-sawn drill core from selected intervals of five drill holes. These samples were selected so as to provide a representation of a range of gold grades and typical mineralization styles encountered in the 2005 drilling program at the Bruce Channel Zone. Conclusions were that:

Micon is satisfied that its check samples have confirmed the presence of gold in the selected samples of drill core in approximately the same range as originally determined by SGS Minerals Services.

12.3 External Audits

External audits were performed on an annual basis between 1999 and 2007 by Watts, Griffis, and McOuat (WGM). The audits included:

- Reviewing and spot validating the database supplied by the Goldcorp mine staff;
- Checking zone interpretations, solid models and digitized boundaries on cross sections and level plans;
- Reviewing statistical analyses of the main zones to corroborate cutting/capping parameters;

- Spot checking of zone identification, composite grades and horizontal width calculations and transfer of this information into appropriate polygons for grade and tonnage estimation (where polygonal methods were employed);
- Checking zone calculations and totals completed outside of software (in 2005 and 2007, all final tabulations were performed using Excel spreadsheets);
- Verifying classification and reporting of Mineral Resources and Mineral Reserves.

WGM did not verify information from drill logs or assay certificates, generate any new data or interpretations or perform an independent sampling program. WGM reviewed the QA/QC program and the logging and sampling/assaying procedures and concluded at the time of each audit that the database was in good order and that the procedures were to industry standards.

12.4 Comments on Section 12

Goldcorp has established internal controls and procedures on their mining operations and exploration programs, which are periodically reviewed for effectiveness. These are considered by the QP to be supportive of data verification.

The process of data verification for the Project has been performed by external consultancies and Goldcorp personnel. Goldcorp considers that a reasonable level of verification has been completed, and that no material issues would have been left unidentified from the programs undertaken.

The QP, who relies upon this work, has reviewed the appropriate reports, and is of the opinion that the data verification programs undertaken on the data collected from the Project adequately support the geological interpretations, the analytical and database quality, and therefore support the use of the data in Mineral Resource and Mineral Reserve estimation, and in mine planning:

- Inspection of all laboratories are undertaken on a regular basis to ensure that they are well maintained and that all procedures are being followed properly. Deficiencies or concerns are reported to the laboratory manager;
- QA/QC data are monitored closely and detailed reports are prepared on a monthly basis. Assay data needs to be approved before import in to the database;
- Drill data including collar co-ordinates, down hole surveys, lithology data, and assay data are typically verified prior to Mineral Resource and Mineral Reserve estimation by running program checks in both database and resource modelling software packages;
- External reviews of the database have been undertaken in support of acquisitions, support of feasibility-level studies, and in support of technical reports, producing independent assessments of the database quality. No significant problems with the

database, sampling protocols, flowsheets, check analysis program, or data storage were noted.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 Metallurgical Testwork

13.1.1 Red Lake–Campbell Complex

Over the Project history, a significant number of metallurgical studies and accompanying laboratory-scale and/or pilot plant testwork have been completed. Studies included mineralogical studies, grindability and comminution testwork, bench and pilot plant flotation tests, thickener tests, reagent testwork,

Programs were sufficient to establish the optimal processing routes for the Red Lake–Campbell ores, were performed on mineralization that was typical of the deposits, and supported estimation of recovery factors for the various ore types.

13.1.2 Cochenour Complex

To date, metallurgical testing on limited numbers of samples indicates three main mineralization types:

- Upper Main;
- Grey (Low Sulphide);
- Grey (High Sulphide) zones.

Tests indicate that all three mineralization types can be treated in the current Campbell process plant, but the plant may have to be modified or expanded, depending on how much each zone contributes to the mill feed, to handle the larger amount of sulphide content that could significantly tax the current autoclave and leaching circuits.

Overall recovery of gold varied between 93% and 96% (Table 13-1).

Testing indicated:

- Sulphur, and hence gold, recovery to a flotation concentrate will be more difficult with Upper Main Zone mineralized material due to more complex mineral associations;
- Upper Main Zone mineralized material will be more abrasive than the other mineralized material types due to the appreciably higher quartz content.

The Bond work index determinations showed that the Bruce Channel mineralization hardness can be described as moderate to moderately soft. Therefore the mineralized material should be readily processed in the existing grinding circuit at Campbell.

Relatively poor leach-only recoveries indicated that a refractory ore treatment process (autoclave) is required to achieve reasonable overall gold recovery.

Table 13-1: Cochenour Bruce Channel Test Data – Campbell Circuit Comparison

Parameter	Unit	Upper Main Zone	Grey Zone Low Sulphide	Grey Zone High Sulphide	Campbell Process Plant (typical values)
Head grade: Au	g/t Au	13.9	8.3	8.6	13
Sulphur	%	0.86	2.31	4.03	0.8
Gravity recovery	%	40	22	16	44
Flotation concentrate	g/t Au	228	45	24	140–180
Sulphur assay	%	10.9	13.1	14.1	12–16
Overall Laboratory Recovery	***%***	***93.6***	***94.2***	***97.5***	***95–96***

The much higher sulphur and arsenic grades within the Cochenour Complex mineralization will result in significantly higher concentrate production levels, up to twice as much as the current Campbell Complex levels. There are a number of processing options that could be considered including:

- Alternative refractory ore treatment options such as ultra-fine grinding prior to intensive cyanidation;
- Expansion of the current autoclave;
- Off-site sale/processing of concentrate.

Additional metallurgical testing is required to:

- Establish the relative proportions of each mineralization type and the rate at which these mineralized materials would be mined;
- Investigate the variability within each mineralization type, especially with respect to sulphide sulphur content and gold:sulphur ratio;
- Optimise the sulphur oxidation versus gold recovery relationship including the effects of concentrate P80 of the autoclave feed;
- Investigate alternative refractory mineralization treatment options, especially ultra-fine grinding with intensive cyanide leaching, as lower capital cost alternatives to accommodate likely peaks in the sulphur delivery schedule.

13.2 Recovery Estimates

Recovery estimates are primarily based on production data and supported by information from metallurgical testwork.

Mill capacities, with accompanying life-of-mine average recoveries are:

- Campbell Complex: 1,678 short tons (st)/d (1,850 t/d), 94.5% recovery;
- Red Lake Complex: 1,134 st/d (1,250 t/d), 97.0% recovery;

- Operation as a whole: 2,812 st/d (3,100 t/d), 96.5% recovery.

Depending on metallurgical type, average life-of-mine gold recoveries can range from 95.8% to 97.4% for the Red Lake Complex and from 94.0% to 96.4% for the Campbell Complex.

Although some of the ore could be considered refractory, the majority of gold is free milling. However, the processing within the Campbell–Red Lake Complex effectively treats all of the ore as refractory material, therefore ensuring on a constant basis that a high recovery is achieved on the high-grade ore.

13.3 Metallurgical Variability

Samples selected for metallurgical testing were representative of the various types and styles of mineralization within the different deposits and zones. Samples were selected from a range of locations within the deposit zones. Sufficient samples were taken so that tests were performed on sufficient sample mass.

13.4 Deleterious Elements

There are no significant levels of deleterious elements identified to date, and it is unlikely that deleterious elements will be an issue for future operations at Red Lake.

13.5 Comments on Section 13

In the opinion of the QP, the metallurgical test work conducted to date supports the declaration of Mineral Resources and Mineral Reserves based on the following:

- The metallurgical testwork completed on the Red Lake Complex has been appropriate to establish the optimal processing routes for the gold ores;
- Tests were performed on samples that were representative of the mineralization;
- Recovery factors are appropriate to the mineralization types and selected process routes;
- Recovery factors have been confirmed from production data;
- Testwork on a limited number of samples from the Cochenour Complex indicate that the Campbell mill can be used to treat the mineralization types, and that a gold recovery of about 93% may be achieved;
- Additional testwork and trade-off studies are recommended for the Cochenour Complex deposits.

14.0 MINERAL RESOURCE ESTIMATES

The Red Lake Complex drill hole database contains over 50,000 collar location records with related tables for down hole surveys, lithology, mineralogy, alteration, structure, raw gold assays and various composite gold assay tables. The database for interpretation contains records for grade and stope outlines that represent approximately 12,700 drill hole samples or mined-out areas. The interpretation polygons in the database have a three-dimensional (3D) location and contain information such as zone and drill hole identifiers, cut and uncut composite zone gold grades, horizontal widths and areas. The chip sample database contains over 140,000 records and has related location, geological, assay and other pertinent information.

14.1 Geological Models

Red Lake Complex

Ore solids (wireframes) representing the mineralization envelopes (ore structures) were constructed in 3D, utilizing both plan and section views during the creation process. The building and naming of ore solids are influenced by geology interpretations; lithological units, structures, faults and mineralization. Ore solids are constructed as undiluted in-situ solids.

Mineralized intercepts inside the different wireframes were selected from the drill hole database. Where appropriate, chip samples were also used.

Basic statistics are reviewed using the commercially-available Supervisor software; histograms are used to determine composite lengths from the raw data.

Basic statistics on normalized data are performed; histograms, probability plots and tables of metal loss content are evaluated in order to define the final grade caps to high-grade composites.

A total of 130 projects (zones) were included in the Mineral Resource estimate for 2015. This total changes from year to year as new zones are discovered or as larger zones are split into smaller projects or some projects are archived or depleted.

Cochenour Complex

The 2015 resource model was prepared using solids provided by Goldcorp staff. The solids were typically modelled at 2–3 m widths horizontally across strike (2 m minimum), and grouped into six zones: UMZ, Footwall, BIF zone, Inco, WDZ, and Main.

14.1.1 Block Models

Block models for the Red Lake–Campbell Complex are defined by 2.4 m x 2.4 m x 2.4 m blocks with sub-blocks of 1.2 m x 1.2 m x 1.2 m as a minimum. An inverse distance weighting to the second power (ID2) algorithm was used for estimating block models in the High Grade Zone and some of the zones in the Campbell area. In addition, zones where no mining activity is taking place were estimated by inverse distance weighting.

The block model for the Cochenour Complex uses 1.8 m x 1.8 m x 1.8 m blocks, with 0.91 m x 0.91 m x 0.91 m sub-blocks.

14.2 Density Assignment

Specific gravity values used in estimation are discussed in Section 11.3.

14.3 Grade Capping/Outlier Restrictions

Grade caps were selected for the Red Lake–Campbell Complex after examination of the assay data, and were influenced by mine reconciliation. Typically, the mean plus three standard deviations was used for most sub-zones within the Red Lake Complex High Grade Zone.

Grade caps for the Cochenour Complex are determined in the same manner as for the Red Lake–Campbell Complex.

14.4 Composites

Before cutting the high-grade assay values, the Red Lake–Campbell and Cochenour Complexes data are normalized to equal lengths. The length depends on the approximate average sample length within the mineralized zones, and is typically in the range of 1.5–2 ft (45–60 cm) per sample. Samples below 50% of the total length are excluded.

14.5 Estimation/Interpolation Methods

Mineral Resources for the Red Lake–Campbell Complex were historically estimated using polygonal methods. Since 2008, Goldcorp has undertaken to upgrade the estimation method to a more generally-accepted industry standard of 3D block modelling techniques. For the year-end 2015 Mineral Resource estimate, the Mineral Resource estimates in all zones were estimated from block models.

The current method used for the Red Lake–Campbell Complex is inverse distance weighting to the second power (ID2) without octants. The process also generates nearest-neighbour (NN) and ordinary kriging (OK) results for background checks. Search ellipsoids were defined for each of the Red Lake–Campbell Complex zones.

The composite numbers used varied by zone, from a minimum of three composites to a maximum of 12.

Inverse distance weighting to the third power (ID3) was used for grade estimation at the Cochenour Complex. Composite caps were determined for each zone. Hard contacts were used between zones (i.e., only composites that are within the zone are used to interpolate the blocks within that zone). Estimation was performed in three passes, with differing numbers of samples required to inform each block. For Pass 1, a maximum of 10 and minimum of three samples were required, for Pass 2 maximum was 10 and the minimum was two, and for Pass 3 the maximum was 10 and the minimum was one.

14.6 Block Model Validation

Validation of each of the block models indicated that the models were suitable to support estimation. All block models are validated by visual inspection and reconciled. Additional validation for some models use quantile–quantile (QQ) plots comparing the block model against the composited data.

14.7 Classification of Mineral Resources

Red Lake–Campbell Complex

Classification of the Red Lake–Campbell Complex Mineral Resources comprises:

- Measured Mineral Resources (Proven Mineral Reserves) require at least one or more mine openings to confirm continuity, usually with supporting diamond drill hole information. A Measured Mineral Resource block is projected halfway to the next data point or a maximum of 35 ft (10.7 m) above or below a drift and/or stope, on the basis of chip sampling plus core drill results where available;
- Indicated Mineral Resources (Probable Mineral Reserves) consist of an additional projection of 35 ft (10.7 m) beyond the limits of the Measured Mineral Resources, but are more commonly based on core drilling. An Indicated Mineral Resource should show geological continuity, and each block needs more than one drill hole to be classified as Indicated.

The bulk of the Mineral Resources are drilled at a regular grid spacing of 7.6 m x 7.6 m. Irregularly-spaced drill holes may be grouped and averaged into less regularly-shaped blocks where necessary. Complex zones which are highly irregular are estimated by plan outlines and the calculated tonnage per vertical foot method is applied.

Inferred Mineral Resources have been estimated in various parts of the mine based on sparse drilling or projections beyond the Indicated Mineral Resource limits by an additional 70 ft (21.3 m).

For the High Grade Zone and surrounding areas, a longer search ellipse down the dip of the ore than the strike (greater continuity) was used to classify the Measured Mineral Resources, with a minimum of three samples and two different drill holes required to classify a block. Indicated Mineral Resources are classified on twice the size of the search ellipse and require a minimum of three samples. Inferred Mineral Resources are classified on three times the size of the ellipse and minimum of three samples inside the ellipse.

Cochenour Complex

Inferred Mineral Resources at the Cochenour Complex were defined as all blocks with interpolated gold values that contained at least one composite of the same domain as the block within a 75 m x 55 m x 15 m ellipsoid.

14.7.1 Dilution

Significant sources of dilution within the Red Lake-Campbell Complex are attributed to the following:

- Unexpected irregularities in complex ore geometry;
- Mining very narrow High Grade Zone veins;
- Mining flatter (low-angle) "north–south" oriented structures;
- Failure of structure-parallel dykes.

Higher internal dilution is being encountered in many zones, due to orebody geometries. As a result, the minimum mining width was changed to 8 ft (2.4 m).

14.8 Reasonable Prospects of Eventual Economic Extraction

Reasonable prospects of economic extraction for underground mineralization at the Red Lake–Campbell Complex include consideration of operating costs, mining widths, and cutoff grades. Mineral Resources are declared where the mineralization meets minimum grade and thickness requirements.

Cutoff grades are summarized in Table 14-1.

Table 14-1: Cut-off Grades

Cut off Grades	oz/t Au	g/t Au
Red Lake/Campbell	0.243	8.33
Cochenour	0.175	6.00

The general cutoff grade equation is:

$$Cutoff\ grade = \frac{Operating\ cost}{Gold\ price\ \times 0.03215} \times \frac{1}{Estimated\ recovery}$$

Where:

- The operating cost is US$286.88/t and includes mining, processing and general and administrative (G&A) costs;
- Gold price is US1,300/oz for Mineral Resources and US$1,100/oz for Mineral Reserves;
- Metallurgical estimated recovery is 96.5% for Mineral Resources and 96.0% for Mineral Reserves.

For the Cochenour Complex, blocks which were above a gold cutoff grade of 6.00 g/t gold were considered to display reasonable prospects of eventual economic extraction.

14.9 Mineral Resource Statement

The Mineral Resources for the Red Lake Complex are summarized in Table 14-2; Mineral Resources for the Cochenour Complex are included as Table 14-3.

Mineral Resources are based on drill hole composite and underground chip samples. The closeout date for the database supporting the estimation was October 19, 2015 for Red Lake-Campbell Complex and the closeout date for the Cochenour complex was November 24, 2015. Mineral Resources were estimated using a resource gold price of US$1,300/oz and are reported at various cut-off grades that are dependent on mineralization zone.

Mineral Resources for the Red Lake and Cochenour Complexes have an effective date of 31 December, 2015. The Qualified Person for the estimate is Mr Chris Osiowy, P.Geo., a Goldcorp employee.

Mineral Resources are classified in accordance with the 2014 CIM Definition Standards for Mineral Resources and Mineral Reserves. Mineral Resources are reported exclusive of the Mineral Resources that have been converted to Mineral Reserves and include provision for dilution.

Goldcorp cautions that Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Table 14-2: Mineral Resource Statement, Red Lake–Campbell Complex

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Measured	1.24	21.88	0.87
Indicated	2.48	17.60	1.40
Measured + Indicated	*3.71*	*19.02*	*2.27*
Inferred	3.45	19.86	2.20

Table 14-3: Mineral Resource Statement, Cochenour Complex

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Inferred	4.16	16.36	2.19

Notes to Accompany Mineral Resource Tables:

1. Mr Chris Osiowy, P.Geo., a Goldcorp employee, is the Qualified Person for the estimate. The estimate has an effective date of 31 December, 2015.
2. The Mineral Resources are classified as Measured, Indicated and Inferred Mineral Resources, and are based on the 2014 CIM Definition Standards.
3. Mineral Resources are exclusive of Mineral Reserves. Mineral Resources are not known with the same degree of certainty as Mineral Reserves and do not have demonstrated economic viability.
4. Based on a gold price of $1,300 per ounce and a US$:C$ exchange rate of 1.20.
5. Mineral Resources for the Red Lake–Campbell Complex are reported using a cutoff grade of 8.33 g/t gold. The in-situ block model has been diluted to minimum horizontal widths of 1.2 metres in the High Grade Zone and 2.0 metres in all other zones. Dilution is assigned zero grade.
6. The Inferred Mineral Resources for the Cochenour Complex are estimated using a top cap grade of 70-200 g/t gold depending on the geology and zone, and a cutoff grade of 6.00 g/t gold.
7. Mineral Resources for the Red Lake–Campbell Complex are estimated using 96.5% metallurgical recovery, and 90% metallurgical recovery for the Cochenour Complex.
8. The operating cost assumed is US$286.88/t and includes mining, processing and general and administrative (G&A) costs.
9. Numbers may not sum due to rounding.

14.10 Factors That May Affect the Mineral Resource Estimate

Factors which may affect the geological models and the preliminary stope designs used to constrain the Mineral Resources, and therefore the Mineral Resource estimates include:

- Commodity price assumptions;
- Dilution assumptions in deeper mining areas;
- Changes to geotechnical, mining, and metallurgical recovery assumptions;

- Changes in interpretations of mineralization geometry and continuity of mineralization zones;
- Changes to assumptions made as to the continued ability to access the site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and retain the social licence to operate.

14.11 Comments on Section 14

The QPs are of the opinion that the estimations of Mineral Resources for the Project conform to industry-standard practices, and meet the requirements of CIM (2014).

To the extent known to the QP, there are no known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues that could materially affect the Mineral Resource estimate that are not documented in this Report.

15.0 MINERAL RESERVE ESTIMATES

The Mineral Reserve estimate is based on Measured and Indicated Mineral Resources at the Red Lake–Campbell Complex for which mining plans have been developed. Mineral Reserves are reported using a gold price of US$1,100/oz and an exchange rate (C$/US$) of 1.20. All decisions for inclusion or exclusion of blocks as Mineral Reserves are based on a detailed assessment of costs versus revenues for each mining block. A global cutoff grade was calculated to be 8.4 g/t gold. Individual cutoff grades were used for design purposes and are dependent on mining method and area.

15.1 Mineral Reserves Statement

Mineral Reserves for the Red Lake Operations were prepared by Ms Boi Linh Van, P.Eng., an employee of Goldcorp. The QP for the Mineral Reserve estimate, who supervised the work, is Mr Stephane Blais, P.Eng., an employee of Goldcorp. The Mineral Reserves summarized in Table 15-1 have an effective date of December 31, 2015. All Mineral Reserves are classified as Proven and Probable using the 2014 CIM Definition Standards.

15.2 Factors that May Affect the Mineral Reserves

Areas of uncertainty that may materially impact the Mineral Reserve estimates include:

- Commodity price and exchange rate assumptions used;
- Cost assumptions, in particular cost escalation;
- Geological complexity;
- Stope stability, dilution, and recovery factors;
- Rock mechanics (geotechnical) constraints, and the ability to maintain constant underground access to all working areas.

15.3 Underground Estimates

The economic analysis used to define Mineral Reserves combines results from long-term and short-term planning. Toward the end of a reporting year, the geology team issues block models that are used by the engineering group to build the long-term plan and support Mineral Reserve estimation. The work consists of analyzing the block model and historic information to create ore blocks which will then be assessed with different mining methods to optimize the orebody extraction and revenue.

Table 15-1: Mineral Reserve Statement

Category	Tonnes (Mt)	Grade (g/t Au)	Contained Metal (Moz Au)
Proven	1.24	12.84	0.51
Probable	5.86	8.31	1.57
Proven + Probable	*7.10*	*9.10*	*2.08*

Notes to accompany Mineral Reserve Table

1. Mr Stephane Blais, P.Eng., an employee of Goldcorp, is the Qualified Person for the estimate. The estimate has an effective date of 31 December 2015 and was prepared by Ms Boi Linh Van, P.Eng., also a Goldcorp employee.
2. The Mineral Reserves are classified as Proven and Probable Mineral Reserves, and are based on the 2014 CIM Definition Standards.
3. Mineral Reserves are estimated using a gold price of US$1,100/oz and an exchange rate (C$/US$) of 1.20. These assume processing costs of US$39.79/t, mining operating costs of US$209.51/t and general and administrative costs of US$37.58/t, for a total life-of-mine estimated operating cost of US$286.88/t.
4. All decisions for inclusion or exclusion of material as Mineral Reserves are based on a detailed assessment of costs versus revenues. A global cutoff grade was calculated to be 8.4 g/t gold. Individual cutoff grades were used for design purposes and are dependent on mining method and area. The following cutoff grades were used: long-hole low cost: 6 g/t gold; long-hole higher cost: 6.4 g/t gold; and cut-and-fill: 17 g/t gold.
5. Mineral Reserves are constrained within mineable shapes, with varying mining widths that vary from 2.4–10.7 m, depending on the geometry of the ore body and mining method used. The operations use 100% mine recovery for scheduling the life-of-mine plan Mineral Reserves, and a metallurgical recovery of 96.0%.
6. Numbers may not sum due to rounding.
7. To date, no Mineral Reserves have been prepared or disclosed for the Cochenour Complex.

The exercise creates mining blocks which have associated costs. The compilation of all costs versus revenues and classification of economic and non-economic blocks allows mine personnel to define the most appropriate mining method and establish the mining plan through sequencing of the various blocks. The economical blocks become Mineral Reserves. As development is completed, new geological data is compiled and analyzed to finalize the short-term mine plan and confirm the extraction decision. Figure 15-1 illustrates an example of a reserve stope design.

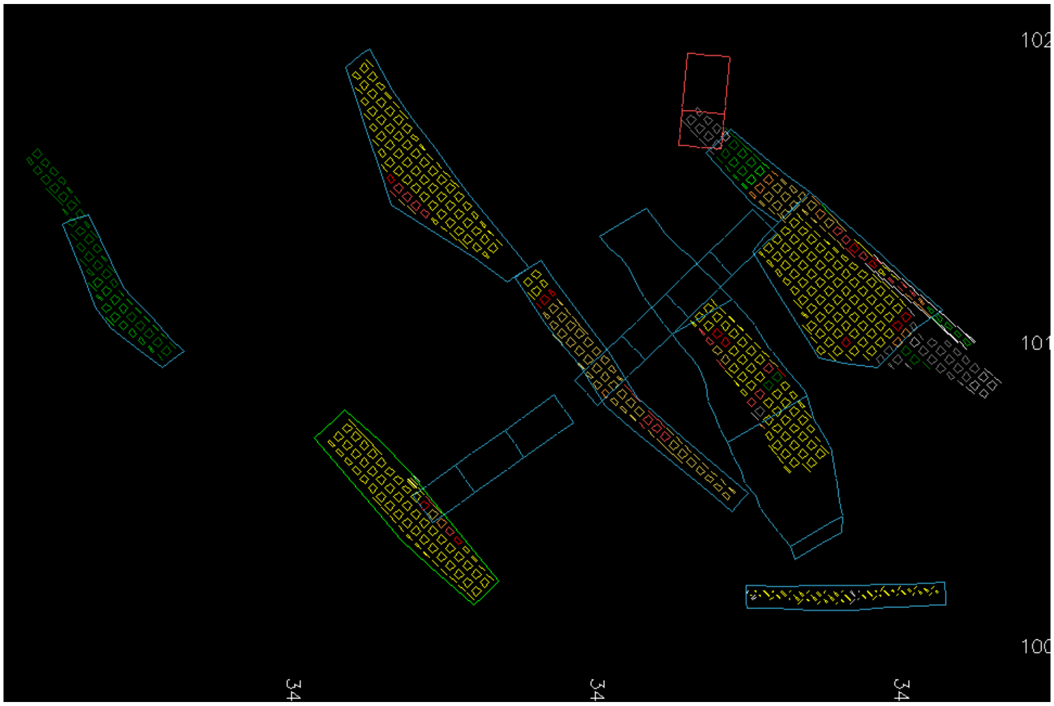
15.3.1 Mining Widths

Mining widths are mainly a function of the geometry of the ore body and mining method used. Considerations include dips, vein widths, vein lengths, depth, and equipment. Mining widths by zone are summarized in Table 15-2.

For the High Grade Zone, the driving factor is the 45º dip, which, when combined with the extreme grade variability, requires a very selective mining method. For the cut-and-fill method, mining widths are usually in the range of 4 m to 6 m. For the weaker sections of the ore body, long-hole mining methods can be applied and allow minimum widths of 2.4 m.

The Sulphide Zone has a relatively higher dip and a very good grade consistency, which allows mining to reach a typical minimum mining width of 3 m using long-hole mining methods.

Figure 15-1: Example of Reserve Stope Design (Plan View)



Note: Figure prepared by Goldcorp, 2015. Figure is approximately 100 m across in the horizontal direction.

Table 15-2: Typical Minimum Mining Widths by Mining Zones

Zone/Area	Width (m)
High Grade Zone	4.0
Campbell	2.4
Footwall Zone	2.4
Sulphides	3.0
Upper Red Lake	2.4

The Footwall Zone, the Campbell Complex and the upper Red Lake zone typically have inconsistent, narrower veins, and steeper dips leading to minimum mining widths of 2.4 m, using long-hole mining methods.

15.3.2 Cutoff Grades

Cutoff considerations are discussed in Section 14.8.

15.3.3 Mining Extraction and Ore Losses

The operations use 100% mine recovery for scheduling the life-of-mine plan Mineral Reserves. Reconciliation data indicate that such recovery levels can be met due to a combination of the high-grade nature of the orebodies and the fact that there is mineralized material on the stope periphery that is not calculated in the Mineral Reserves, but which contributes to gold content.

15.4 Dilution

Each design shape used for Mineral Reserve estimation incorporates the expected dilution, and is dependent on the mining method and geometry of the excavation. The minimum expected dilution for long-hole stopes is 0.6 m and for cut-and-fill is 1.2 m.

15.5 Reconciliation

On a monthly basis, the total mined (broken) tonnage is calculated from excavated volumes. Total ounces are reported from the mill, adjusted for inventory in ore passes, bins, surface stockpile and material remaining in the stopes. Ounces are assigned to the various stopes where mining occurred, based on information gathered during the month. For cut-and-fill and development material, every blast in ore has five random muck samples taken, and the face/walls are chip sampled. For long-hole stopes, the sampling frequency is one sample every 18 t. This assay information is summarized for each blast/block and used as a guide in assigning ounces back to the blocks.

15.6 Comments on Section 15

The QPs are of the opinion that the Mineral Reserves for the Project, which have been estimated using core drill data and underground chip sampling, have been performed to industry best practices, and conform to the requirements of CIM (2014).

16.0 MINING METHODS

16.1 Overview

Currently, the underground operations consist of a single underground operating mine (comprising the Red Lake and Campbell Complexes). In addition, there is one advanced underground exploration project at the Cochenour Complex and one exploration project, HG Young.

Production projections for 2016 are for 1,930 t/d, of which 82% will be provided by the Red Lake Complex and the remaining 18% from the Campbell Complex.

Figure 16-1 show the key shaft infrastructure and mineralized zones to be exploited.

16.2 Geotechnical Considerations

Strength and deformational testing have been carried out over the years at both operations. The basalt and altered ultramafic rock types have a wide range of uniaxial compressive strengths (UCS). For geotechnical modelling purposes, a UCS of 180 MPa is used.

Lithology changes, such fault structures and dykes, are believed to play an important role in stress distribution in both mining complexes. In general, the basalts are competent and bursting tends to concentrate around these contacts.

Most ground problems or potential instabilities are related to unravelling ground conditions caused by localised microseismic activity associated with pre-existing structures and flat, stress-induced structures.

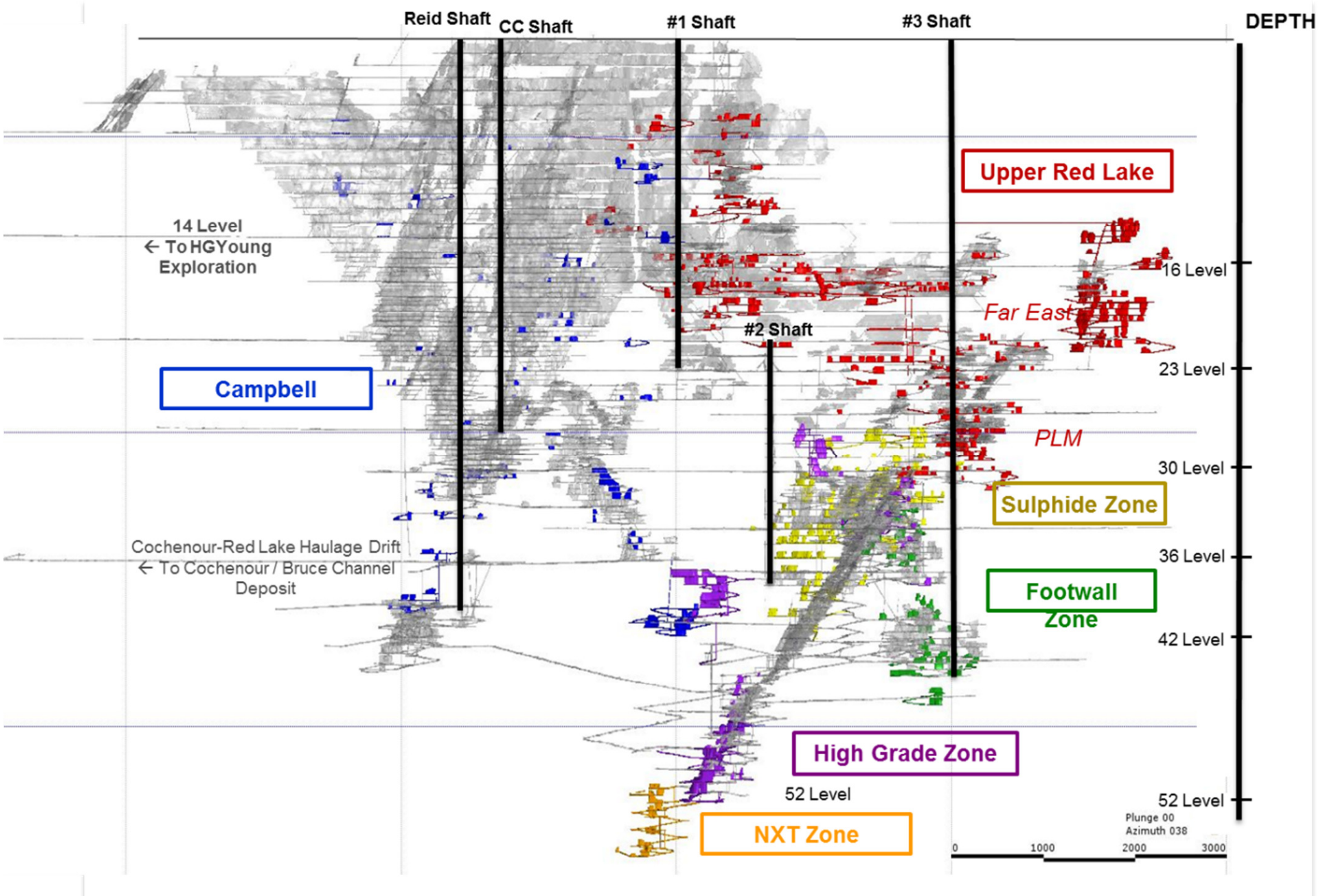
16.2.1 Ground Support

Numerous ground support systems are installed in the Red Lake and Campbell Complexes and vary by zone according to the anticipated seismicity and stresses.

16.3 Hydrogeological Considerations

Both underground complexes maintain independent mine dewatering system with primary sump locations and pumping stations established on key levels at the respective mining complexes. Groundwater and operations (drill) water from the various sublevels, report to the mine drainage systems via air powered diaphragm pumps, drainage boreholes, or in the case of a ramp, a small submersible pump.

Figure 16-1: Existing Red Lake Complex Underground Accesses and Mineralized Zones



Note: Figure prepared by Goldcorp, 2015.

In the case of the Campbell Complex, mine water discharge reports to the Campbell mill process water tank and when the tank is full, the overflow reports to mine tails. Conversely, Red Lake Complex mine discharge water is pumped to tails. Water from the secondary pond (tailing management area) is reclaimed for process water in the paste plant and mill.

16.4 Mining Methods

16.4.1 Red Lake Complex

The Red Lake Complex is serviced by three shafts. The historic Red Lake Complex head frame is set over the #1 Shaft which extends to a depth of 1,023 m and serves the mine from 1 level to 23 level (the Upper Mine area). The Lower Red Lake mine is accessed from the #3 Shaft. Since #3 Shaft completion, #2 Shaft is on care and maintenance.

All levels above level 23 are track access with shaft stations connecting to #1 Shaft at all levels. Below 23 level, a combination of ramp, trackless, and track haulage accesses to the mine exist. From 30 level onwards, primary access to the Red Lake Complex mining horizons and haulage access is via ramp. However, track excavations exist on primary haulage elevations at the 30, 34, 37 and 42 levels, with station connections to #3 Shaft at these levels as well.

Mining is carried out using a combination of long hole and mechanized underhand or overhand cut-and-fill techniques, which allow maximum ore extraction while reducing dilution. Stope sequencing is carefully analyzed and adapted to surrounding conditions to alleviate seismic activity induced by mining. Stope sequencing is based on an amalgamation of elastic/plastic stress modelling, seismic system data analysis and underground observations.

Once mining blocks or lifts are completed, waste rock fill, paste fill, or a combination of both, is employed to fill the open excavation. This not only helps to stabilize the excavation and prevent unraveling but it also reduces surface storage requirements.

The seismic system for the mine consists of about 200 macro and/or micro seismic sensors dispersed through the mine, providing 15–200 ft (7.6–61 m) accuracy in event localization.

Broken muck is dumped into passes located near the ore zones by trucks and load–haul–dump (LHD) equipment. Broken rock above 42 level is carried to the shaft by ore and waste passes. Broken rock below and on 42 level is carried to the shaft by LHD units or trucks. All skipping at the Red Lake Complex is currently accomplished through #3 Shaft and #1 Shaft. The #1 Shaft is in the process of being decommissioned.

The high-grade mineralization and complex geometry of the ore lenses require operating under tight geological and grade control.

16.4.2 Campbell Complex

Shaft sinking began in 1946 with production commencing in 1949 at a rate of 300 t/d, from seven levels at 45 m spacing. Since then, the Campbell shaft has been deepened four times and the four-compartment shaft was completed to below 27 level, a depth of 1,316 m below surface. There are currently 27 levels at 45 m vertical intervals, with an average of 6 km of development per level.

In 1999, the Reid Shaft was built to open up access to the deep underground zones including the DC Zone. The Reid Shaft is located 150 m west of the Campbell Shaft, and extends to a depth of 1,819 m.

Access to the underground operations are achieved through the Campbell Shaft with access to all levels from 1–27, and from the Reid Shaft, with access to levels 7, 9, 11, 14, 17, 21, 23, 27, 30, 33, 36, 39 and the 40 level loading pocket. Below 39 level, a decline is the primary access for all personnel, equipment and materials.

Above 27 level, a combination of mechanized, rubber-tired diesel equipment and conventional track haulage is used in mining. Full track haulage facilities exist on all 27 levels. Below 27 level, all mining is mechanized to provide greater flexibility and productivity. Ramp access is provided from the 27 to 33 levels and from the 36 to 43 levels.

Longhole panel mining is performed on 15 m sublevel intervals with typical widths of 2.4 m to 6 m and typical strike lengths from 15 m to 21 m. Larger stopes may be mined transversely through the use of draw points on 15 m intervals. For long hole mining, block spans are minimized, blast size is kept small and paste fill is placed as required. Ore is hoisted to surface via the Reid Shaft and crushed.

The seismic system for the mine consists of about 150 macro and/or micro seismic sensors dispersed through the mine, providing 30–50 ft (9.1–15 m) accuracy in event localization.

Campbell infrastructure is also being used for accessing and mining the Red Lake Complex orebodies, as well as providing access for the exploration projects at the Cochenour Complex and H.G. Young.

16.4.3 Underground Infrastructure Facilities

Fixed equipment and facilities are also typical for the planned mine layout and include primary ventilation fans, mine air heaters, dewatering pumps, explosive magazines, maintenance shops, fuelling stations and personnel refuge stations.

16.4.4 Backfill

The Campbell and Red Lake pastefill plants began operation in 1999–2000. The paste fill plant at Red Lake Complex uses conventional thickening and vacuum filtration followed by a batch mixing process, whereas the paste fill plant at the Campbell Complex is a continuous closed-system plant.

Pastefill is composed of tailings, water and binding agent (Type 10 Portland cement and Type C flyash). The percentage of binding agent used varies from 2 to15% depending on the strength required. The pastefill is transferred to underground openings via a series of boreholes and pipes. Paste fill is initially trucked on surface for the Far East area and then transferred to underground openings by boreholes and pipes.

Control of the pastefill in the stopes is maintained with cable fences, muck berm fences or reinforced shotcrete walls.

16.5 Ventilation

16.5.1 Red Lake Complex

The ventilation system is a push-pull design, with intake and exhaust fans on surface, and booster fans underground delivering approximately 24,075 m^3/min (850 kcfm) of fresh air. The mine is divided into two ventilation districts, with 37 level to surface as the upper district, and 37 level to the 51-1 sub-level as the lower district.

The upper district is ventilated by two booster fans located on the 16 and 23 levels, and two surface fans. The lower district is ventilated by two booster fans on 37 level and a surface fan at the Balmer Complex. Ramps serves as intake airways to the mine, but there are no dedicated return airways. Many drifts, raises, and ramps, plus the three shafts, make up the main ventilation circuit. Auxiliary fans of varying sizes bring the fresh air from the ramp to the working faces.

16.5.2 Campbell Complex

The ventilation system is a push-pull design, with intake and exhaust fans on surface, and booster fans underground delivering approximately 13,954 m^3/min (500 kcfm) of fresh air. The Campbell ventilation system has three circuits and each is primarily independent of the others. The upper circuit supplies levels 27 to surface, the middle circuit supplies levels 27 to 36, and the bottom circuit supplies below 36 level to the 4999 Connection drift. The middle and upper vent circuits are ventilated by two booster fans on 27 level and two surface fans and the lower circuit is ventilated by two booster fans on 12 level and one surface fan. Air is drawn into the mine primarily by exhaust fans. The system has three intake fans on surface and four surface exhaust fans with eight exhaust underground booster fans.

16.5.3 Cochenour

Exploration activities at the Cochenour Complex are supported by two intake fans on surface with two underground booster fans exhausting air out through Campbell Complex on the 36 level.

16.6 Production Schedule

On the basis of Mineral Reserves only, the life-of-mine production plan is based on seven years of underground production to 2022 and reflects three years of production at an annual rate of approximately 340,000 to 350,000 oz/year, followed by four additional years of decreasing yearly ounce production. The horizontal development is planned for both the Red Lake and Campbell Complexes at 14 m/kt of ore with an additional 1 m/kt of vertical development. Following the cessation of underground activities in 2022, three years of production from reclaimed tailings will continue to the end of 2025.

As any typical underground mine, the quantification of Mineral Reserves is limited by the ability to define ore zones in advance of mining.

The Cochenour Complex does not currently have defined Mineral Reserves, and is therefore not included in the life-of-mine production plan. Deliberate efforts to install exploration drifts in strategic locations of the mines have allowed for the routine exploration of various zones as the mine progresses.

Goldcorp considers that with additional drilling, estimation of additional Mineral Resources, or upgrade in Mineral Resource confidence categories, conversion of some or all of those Mineral Resources to Mineral Reserves, and more than 60 years of mining history, there is very good potential that the underground mine life can be extended beyond 2022.

As part of day-to-day operations, Goldcorp will continue to undertake reviews of the mine plan and consideration of alternatives to and variations within the presented mine plan. Alternative scenarios and reviews can be based on ongoing or future mining considerations, evaluation of different potential input factors, assumptions and corporate directives.

16.7 Blasting and Explosives

Blasting is carried out twice a day when all workers are out of the mine, and is initiated by an electrical central blasting system. On-shift blasting is heavily restricted, and only permitted with proper guarding procedures in place.

Various combinations of static and dynamic ground support systems are employed underground, depending on the requirements of the heading being driven as well as the rock mechanic properties of the surrounding rock.

16.8 Mining Equipment

Conventional percussive drills, long-hole drills, and “jumbo” drilling rigs are used for drilling ore and waste. Mucking machines or LHD units ranging in size from 1 yd^3 to 4.0 yd^3 capacity (ore width determines the size of the LHD units used for mucking stopes), are used in conjunction with trains or haulage trucks to move the broken rock. There are currently three tele-remote LHDs operated from surface.

Additional equipment includes ventilation fans, pumps, rock-breakers, rail-mounted vehicles, jumbo face drills, bolters, mine service and transport vehicles, and a variety of utility vehicles.

As mining progresses, the equipment fleet will change accordingly. Capital has been budgeted for equipment additions, replacements and rebuilds.

16.9 Comments on Section 16

In the opinion of the QPs:

- The mining methods used are appropriate to the deposit style and employ conventional mining tools and mechanization;
- The life of mine underground mine plan has been appropriately developed to maximize mining efficiencies, based on the current knowledge of geotechnical, hydrological, mining and processing information on the Project;
- The equipment and infrastructure requirements required for life-of-mine operations are well understood. Conventional underground mining equipment is used to support the underground mining activities. This equipment is standard to the industry and has been proven on site. The underground equipment fleet is in good working condition and a large percentage has recently been replaced or overhauled as part of the natural equipment rebuild/replacement schedule. Appropriate allocation has been made for overhaul and rebuild of underground equipment, as required. The LOM fleet requirements are appropriate to the planned production rate and methods;
- The predicted mine life to 2025 is achievable based on the projected annual production rate and the Mineral Reserves estimated;
- As any typical underground mine, the quantification of Mineral Reserves is limited by the ability to define ore zones in advance of mining. With additional drilling, estimation of additional Mineral Resources, or upgrade in Mineral Resource

confidence categories, conversion of some or all of those Mineral Resources to Mineral Reserves, and more than 60 years of mining history, there is very good potential that the underground mine life can be extended beyond 2022, and therefore the overall LOM may be able to be extended beyond 2025.

17.0 RECOVERY METHODS

17.1 Process Flow Sheet

Process flow sheets for the Red Lake and Campbell mills are included as Figure 17-1 and Figure 17-2 respectively.

17.2 Red Lake Processing Complex

The original Red Lake mill was built in 1948, but was dismantled in early 2000, making way for a completely new mill. The new process facilities consist of three separate plants: the crushing plant; processing plant; and paste fill plant. Commercial production from the facilities began on January 1, 2001.

The crushing plant is a two-stage process which reduces underground ore from about 30 cm to 1 cm. Underground ore from a coarse ore bin is fed to a jaw crusher and sizing screen. Screen oversize is crushed in a cone crusher and screen undersize is conveyed into a fine ore bin as plant feed material.

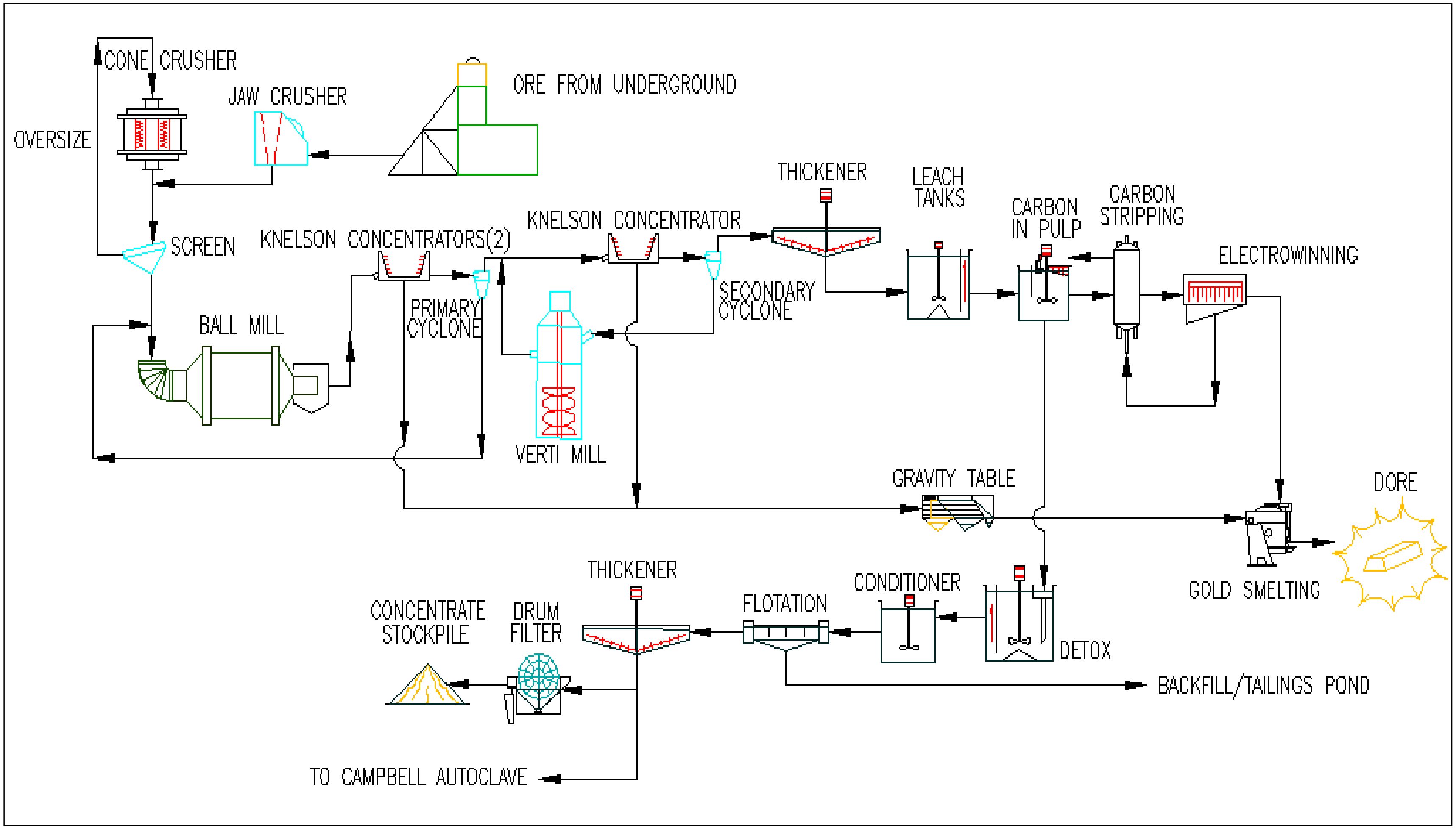
Unit operations in the processing plant include grinding, gravity concentrating, cyanidation, carbon-in-pulp, carbon elution and reactivation, electrowinning, bullion smelting/refining, cyanide destruction, flotation, and concentrate handling. Three types of gold occur in the Red Lake Mine ore requiring these various unit operations.

Coarse gold is recovered from the ore via the gravity concentrating circuit. A portion of the ground slurry from the ball mill is fed to two Knelson concentrators which produce a gravity concentrate that is upgraded on a Diester table to a concentration of approximately 75% gold, and directly smelted into bullion. Bullion is then shipped to a refinery for later sale into the spot market.

There is an additional Knelson concentrator operating from a portion of the verti-mill product. The verti-mill was installed in 2007 to increase the grinding capacity of the mill. During 2010, the gravity circuit recovered 51% (265,641 ounces) of the gold from the processing plant feed.

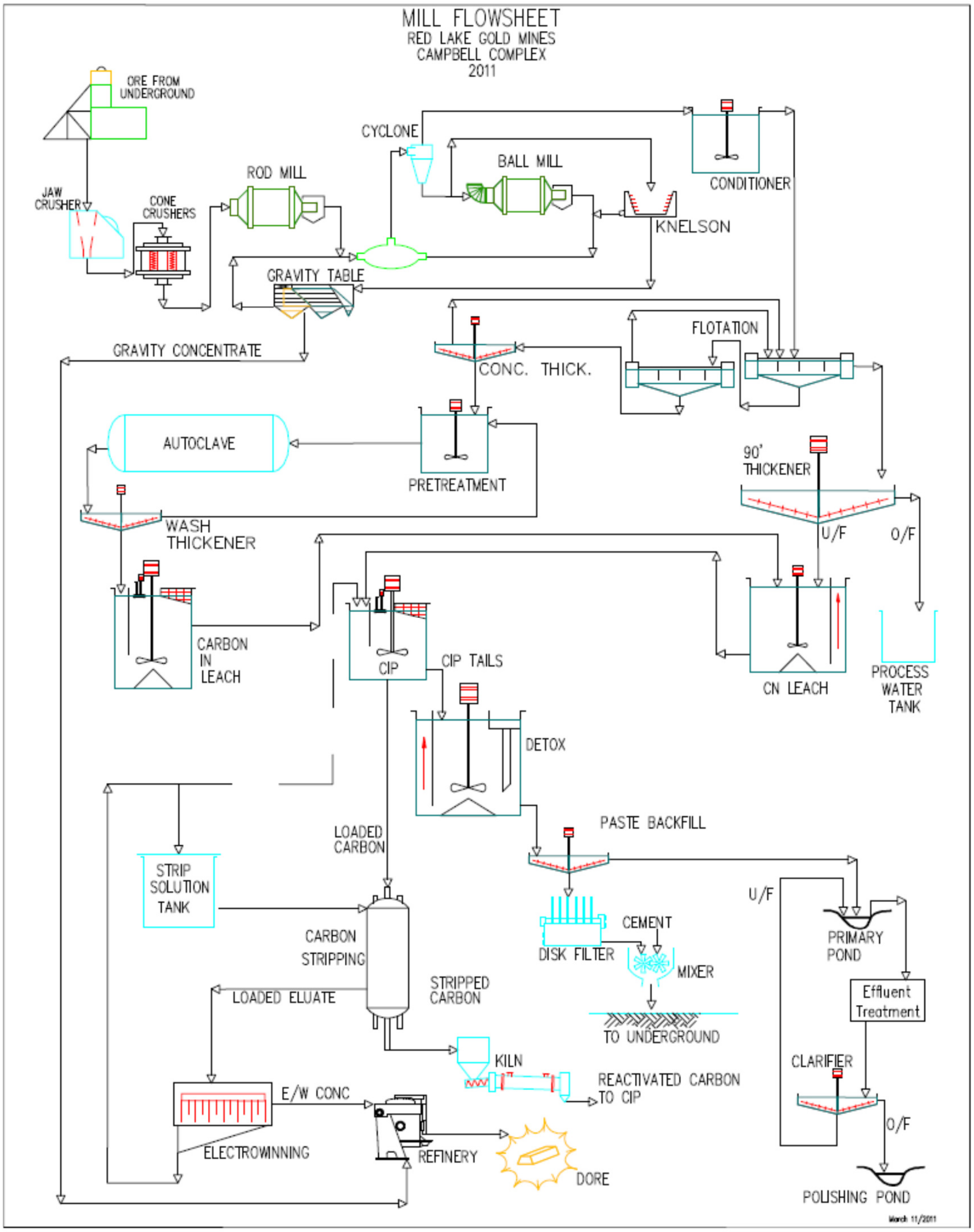
Finer-grained gold is dissolved in the cyanidation or leach circuit in which sodium cyanide is introduced to the process stream. The leach circuit consists of four tanks each overflowing from one to the next. In the leach tanks the gold is dissolved from a solid state into solution. Gold is removed from solution and onto granular carbon particles in the carbon-in-pulp (CIP) tanks. Values from the carbon are removed in the carbon strip plant, in which a high-grade gold-bearing solution (loaded eluate) is generated. This loaded eluate, or pregnant solution, reports to two electrowinning cells where, under an applied voltage and current density, gold precipitates out of solution and back into its solid state as “cathode sludge”. This sludge is also directly smelted into bullion for subsequent shipment to the refinery.

Figure 17-1: Red Lake Complex Flowsheet



Note: Figure prepared by Goldcorp, 2010.

Figure 17-2: Campbell Lake Complex Flowsheet



Note: Figure prepared by Goldcorp, 2010.

The pulp discharging from the CIP circuit is pumped to the detox or Inco SO_2 circuit for cyanide destruction. The circuit consists of two tanks with mechanical agitation where air, copper sulphate and sulphur dioxide are added to rapidly oxidize the cyanide and convert it to a non-toxic cyanate that hydrolyses to ammonia. Only one tank is in use at any one time.

The refractory component of the ore is gold that is extremely fine and locked in arsenopyrite and pyrite minerals (sulphides). Conventional milling methods are not capable of recovering this type of gold. The Red Lake Complex processing plant employs a typical sulphide flotation circuit generating a bulk sulphide concentrate. This concentrate is pumped as a slurry to the Campbell Complex for processing in the autoclave.

The process stream (tailings) reports to the paste fill plant where most of the water is removed and the pulp is stored in a large stock tank. This material is either discharged to the tailings management area or sent underground for use as backfill. The paste fill plant is a semi-batch process, which implies that all aspects of the plant are continuous with the exception of the discharge of paste to the underground distribution system. In the paste fill plant a tailings filter cake is generated, binder (cement and fly ash) and water is added and mixing occurs. Once the proper consistency is achieved, the paste is discharged underground to flow by gravity to mined-out areas.

17.2.1 Red Lake Mill Performance

During 2001 and 2002 improvements were made in the flotation circuit to increase the plant recovery to the 97% range. This was achieved in 2003, and has been maintained at higher grades since.

At monthly peaks, the mill produced over 70,000 gold ounces which would equate to a production rate of approximately 850,000 ounces on an annualized basis. Normal recoveries of gold were achieved during those months. Such production numbers require a very high grade supply to the mill (>103 g/t gold or >3.0 oz/t gold) and are not achievable on a sustainable basis with the current Mineral Reserves and mine plan.

The Red Lake Complex mill was originally designed to process no more than 700 t/d. Levels of over 750 t/d have been achieved with no noticeable effect on gold recovery. However, at levels above 800 t/d, negative impacts were observed, consisting of a coarser grind and a resultant lower gold recovery. In 2007, an expansion to the mill was completed, which consisted of a reclaim facility to receive ore from the #3 Shaft, a new verti-mill, and upgrades to mill pumps and tanks. As a result, plant capacity is currently 1,250 t/d.

17.3 Campbell Complex

The Campbell Complex mill was designed to treat free-milling and refractory gold ore at a rate of 360 t/d in 1949. The throughput has been gradually increased over the years to the current 1,800 t/d.

Conventional crushing and grinding is followed by gravity concentration to recover free milling gold. Refractory gold, finely disseminated in the arsenopyrite and pyrite matrix, is recovered by flotation followed by pressure oxidation, neutralization and carbon-in-leach (CIL). This stream joins the non-refractory flotation tails and is recovered by cyanidation/CIP processing.

17.3.1 Crushing

The ore is hoisted from the Reid Shaft to a 1,500 t coarse ore bin. From there, it is transferred to a 250 t coarse ore bin located in the Campbell Mine head frame. The crushing plant consists of two Ross feeders, jaw crusher, standard cone crusher, short head cone crusher, Tyler double deck screen, variable speed short feeder belt, and six conveyors.

A 19 mm product is produced in three stages of crushing at an average rate of 140 t/hr. A jaw and standard cone crusher operates in open circuit and a short head cone crusher operates in closed circuit with an 18 mm vibrating screen. The closed side setting of the standard and short head cone crusher is approximately 19 mm and 15 mm, respectively.

Fine ore is conveyed to the mill by inclined conveyor discharging, via a conveyor, to a 3,100 t fine ore bin.

17.3.2 Grinding and Gravity Circuit

Grinding is achieved in a two-stage rod/ball mill circuit. The ore from the fine ore bin is fed to the rod mill via two slot feeders and a conveyor. The grinding circuit consists of a 2.74 m x 3.8 m rod mill and 3.8 m x 4.7 m ball mill discharging, through trommel screens, into a common primary pump box. The slurry is pumped to a cyclo-pac with the cyclone overflow and underflow reporting to the flotation and ball mill, respectively. Two cyclones, one feeding each Knelson concentrator, are mounted on independent underflow boxes away from the cyclo-pac. These boxes are equipped with a concentrator feed inlet and an overflow return line to the primary pump box. The concentrator cyclones are fed from the cyclo-pac distribution manifold and the overflow returning to the cyclo-pac overflow launder.

The grinding circuit produces flotation feed with an average p80 size of 65 µm (84% passing 200 mesh) and pulp density of 35% solids by weight.

Shaking table concentration is carried out on the Knelson concentrate. The final gravity concentrate assaying 72–75% gold by weight is refined into bullion.

17.3.3 Flotation Circuit

The cyclone overflow is pumped to a conditioner tank. The slurry reports to a seven cell bank of Denver DR-500 rougher/scavenger cells. Concentrate reports to a four cell bank of Denver DR-100 cleaner cells. Cleaner tails are recycled back to the DR-500 cells and the final concentrate assays approximately 15% sulphur and is pumped to a 9 m concentrate thickener. The overflow from the concentrate thickener is recycled to the conditioner. The flotation tailing is transferred to a 27 m diameter thickener with the underflow sent to the flotation tails leaching circuit and the overflow to the process water tank. The reagents are stage added to the conditioner and junction box. A Courier 30XP on-stream analyzer is used to monitor and control the flotation performance.

17.3.4 Pressure Oxidation Circuit

The pressure oxidation circuit that replaced the roaster circuit in July 1991 was designed to treat 71 t/d of flotation concentrate or approximately 12.7 t/d of sulphide sulphur. Carbonate destruction prior to pressure oxidation improves the oxygen utilization in the autoclave. The thickened flotation concentrate (at 55% solids) is contacted with acidic solution (recycled first counter-current decant (CCD) wash thickener overflow) in the pre-treatment circuit consisting of six pre-treatment tanks with a total retention time of six hours. The recycled acid is generated by the oxidation of sulphides and reacts with the carbonates in the concentrate, evolving carbon dioxide. Fresh acid, 93% concentration by weight, can be added as required to maintain a discharge pH of not higher than 3.0.

The pre-treated slurry is transferred to an 11 m thickener with the overflow reporting to the waste treatment circuit. The underflow is mixed with recycled 1st wash thickener underflow before being pumped to the autoclave. The recycling of solids provides a heat sink for the exothermic heat of oxidation to assist in temperature control and prevents the agglomeration of elemental sulphur. Pressure oxidation is carried out in a five-compartment autoclave, the first large compartment having two agitators.

The slurry within the autoclave cascades from compartment to compartment. The level is controlled in the last compartment by regulating slurry discharge to an atmospheric pressure brick lined flash tower through a ceramic choke. Flashing of steam reduces the slurry temperature to about 100°C. The slurry flows by gravity into a seal tank into which second wash thickener overflow is added to control the slurry temperature to 75°C. The slurry is then pumped to a two-stage CCD wash circuit. The overflow from the first wash thickener is recycled to the pre-treatment circuit. The underflow is split, with a portion being recycled to the autoclave feed and the reminder pumped to the second wash thickener for washing with fresh water. The second wash underflow is neutralized with lime and transferred to an oxide carbon in leach circuit.

Cyanidation and carbon adsorption of the oxidised concentrate takes place in two CIL tanks with a retention time of 48 hrs each. The slurry is in contact with carbon at a concentration of 35 g/L. The leaching and carbon adsorption are not completed in this single stage circuit therefore the tails of the second CIL tank is combined with the flotation leach and CIP circuit.

17.3.5 Flotation Tails Leaching and Carbon-In-Pulp Circuit

Thickened flotation tailing (50% solids) is leached for 20–28 hrs. The leached slurry, a combination of oxide and flotation tails, is pumped into a train of six CIP tanks; each has a slurry retention time of 50 min. Carbon is transferred from the CIP #1 tank to the CIL tank to increase the carbon grade to approximately 9,000 g/t. Acid washing is performed using 5% by weight hydrochloric acid on every second batch of stripped carbon. The loaded carbon is stripped using 40 bed volumes of 1% caustic solution and 0.1% cyanide at 140°C and 480 kPa. The stripped solution is pumped to the electrowinning cell for gold plating. The barren solution is recycled to the strip solution tank.

17.3.6 Cyanide Destruction

CIP tails flow to a cyanide destruction circuit, consisting of two mechanically agitated tanks where oxygen, copper sulphate, and sulphur dioxide are added to rapidly oxidize the cyanide and convert it to a non-toxic cyanate that hydrolyses to ammonia.

17.3.7 Paste Fill and Waste Treatment Circuit

After cyanide destruction, slurry is sent directly to the paste thickener. From there, it is pumped to two disc filters and mixed with cement and fly-ash to form a paste. The paste is pumped underground via a high-pressure piston pump. Any material which is not used to make the paste combines with acidic overflow from the pre-treatment thickener in the waste treatment circuit, which consists of a series of four agitated tanks. Lime is added to control the final discharge pH that is set at 8.5 to 9.0. At this pH, the formerly complexed metals precipitate out along with the other dissolved metals as hydroxides. The final tailings discharge to the main tailings pond.

17.3.8 Effluent Treatment Circuit

The effluent treatment circuit consists of two reaction tanks, a clarifier feed tank and hopper (double-V) clarifier. Between May and December each year, decant from the main tailings pond is pumped back to the mill for metals precipitation.

The treated solution is then transferred to a hopper clarifier with the overflow reporting to the settling pond. The sludge recovered from the bottom of the cone is partly recycled to the clarifier feed tank and the remaining material is sent to the waste treatment circuit.

17.3.9 Polishing Pond and Wetland

The polishing pond, commissioned in November 1995, consists of a 400,000 m^3 settling pond and 730,000 m^3 holding pond. A centre dyke separates these ponds. At a feed rate of 15,000 m^3 per day, the ponds have a retention time of 75 days. The hopper clarifier overflow discharges into the settling pond where the residual ultra-fine precipitates (complexed hydroxides) are settled before progressing to the holding pond. The pond is operated on a seasonal basis. During the warmer months, the water level is allowed to rise to the operating level at which time the discharge rate from the polishing pond is matched to the inflows to the pond. Natural degradation in the holding pond improves the quality of the water.

Since 2001, the discharge of the polishing pond is directed to a series of cells that are heavily vegetated with cattails. The water residence time is approximately two to three days in the wetland. The effluent quality is further improved with an 85% reduction in ammonia and 50% reduction in copper concentrations. The effluent meets all acute toxicity tests for rainbow trout and daphnia magna.

17.4 Energy, Water, and Process Materials Requirements

The process plants consume approximately 74 kWh/t of underground ore processed.

Major consumables include grinding balls, gold recovery reagents (sodium cyanide, lime, sodium hydroxide), cyanide destruction reagents (sulphuric acid, hydrogen peroxide) and liquid petroleum gas.

17.5 Comments on Section 17

In the opinion of the QPs, the mill throughput, process and associated recovery factors are considered appropriate to support Mineral Resource and Mineral Reserve estimation, and mine planning.

18.0 PROJECT INFRASTRUCTURE

Together with multiple shaft accesses to the underground workings, the Red Lake Operations maintain administrative, technical, operations support, and processing facilities on the active sites. Figure 18-1 shows the location of the tailings facility, the four main shafts, the coarse ore stockpile and the building infrastructure in the Red Lake Complex, together with the outline of the mineralization projected to surface.

18.1 Road and Logistics

The Town of Red Lake is an administrative, transportation, communication, and supply centre for this region of northwestern Ontario. Local businesses offer most goods and services required for mineral exploration and development. Additional supplies can be sourced as needed from Thunder Bay, or from larger Provincial centres such as Winnipeg and Toronto.

18.2 Personnel and Accommodation

To support the required permanent workforce for operations and construction, the Red Lake Operations runs modern camp facilities for rotational personnel that do not live in and around the Red Lake area.

18.3 Power and Electrical

Power is supplied to the Red Lake Operations through the Hydro One transmission network via a radial line that taps into the 230kV grid at the Dryden transformer station where it is stepped down to 115 kV, the line continues up to the Ear Falls transformer station and finally terminates at the Red Lake transformer station.

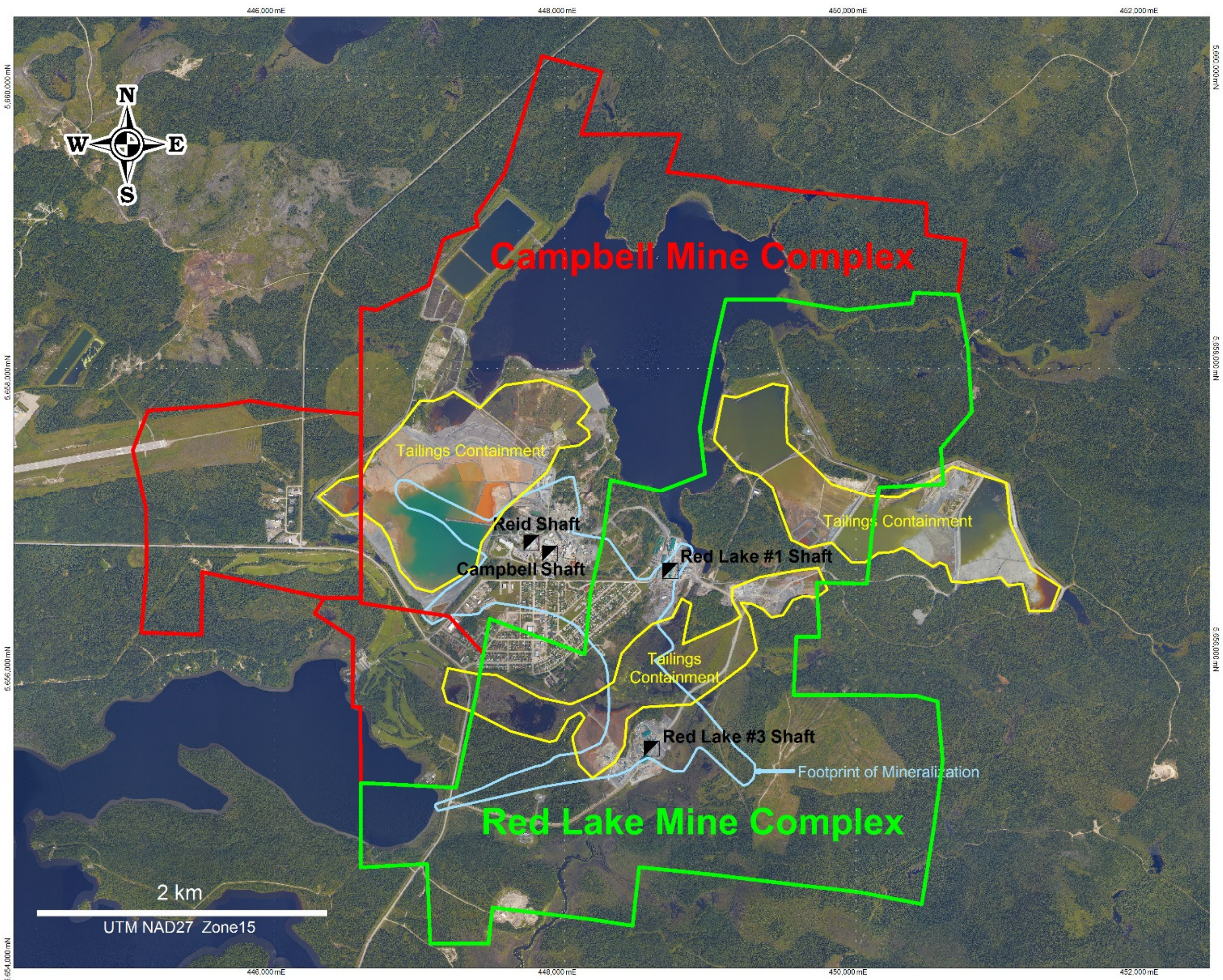
The Balmer Complex is supplied by the M3 Hydro One feeder from the Red Lake TS with an approximate load of 10 MW.

The Red Lake Operations have been transferred off of the Hydro One M6 feeder over to the RLGM Balmer transformer station (CTS), which is directly fed from the 115 KV E2R line from Ear Falls, with an approximate load of 26 MW.

The Cochenour Complex remains on the M6 feeder with a load of approximately 2 MW.

Diesel-powered generators provide emergency power to critical areas within the Red Lake Operations in the event of a major electrical disruption.

Figure 18-1: Existing Red Lake and Campbell Complex Infrastructure in Relation to Near-Mine Claim Boundary Map



Note: Figure prepared by Goldcorp, 2015.

18.4 Communications

Site communications include satellite service, voice over internet protocols (VoIP for telephones) and Internet protocols (for regular computer business). Communication is enabled throughout most active mine headings by leaky feeder radio. Telephone service is provided in all shaft and refuge stations. Underground fibre optics networks are also utilized to transfer data from remote sensors and video feed from required areas.

18.5 Comments on Section 18

In the opinion of the QPs, the existing infrastructure is appropriate to support the current life-of-mine plan.

Should additional Mineral Reserves be defined that can support an extended mine life, a review of the tailings storage capacity will be required.

19.0 MARKET STUDIES AND CONTRACTS

19.1 Market Studies

Goldcorp's bullion is sold on the spot market by Goldcorp's in-house marketing experts. The terms contained within the sales contracts are typical of and consistent with standard industry practices, and are similar to supply contracts elsewhere in the world.

19.2 Commodity Price Projections

Commodity prices used for Mineral Resource and Mineral Reserve estimates are set by Goldcorp Corporate.

19.3 Comment on Section 19

The QP notes that doré production from the Red Lake Operations is marketed in a similar manner to, and use similar sales contracts to, that of existing Goldcorp operations.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

20.1 Baseline Studies

Goldcorp's Red Lake Operations are a conglomeration of a number of mines and processing operations, some dating back to the early- to mid-1900s, at a time when baseline studies were not considered relevant to a mining operation.

20.2 Environmental Considerations

Environmental permits are required by various Federal, Provincial, and municipal agencies, and are in place for Project operations. The Red Lake Operations maintain a list of active environmental permits covering operation of the Campbell, Red Lake and Balmer Complexes. No new permits are currently required, but existing permit amendments are required from time to time, and in 2016, applications for amendments may be made for tailings management area upgrades (i.e. dam raises), air/noise permit amendments, permit to take water renewals, and exploration permitting.

The environmental management system and environmental and social management plans were developed in accordance with the appropriate Canadian regulations.

Arsenic remains a focus in most environmental programs for all Project operations. Arsenopyrite is a main element in the local geology, contained in ore and waste rock and requires specific management in environmental programs.

Waste rock and ore are routinely sampled for acid rock drainage (ARD) potential as per the internal programs for ARD and metal leaching. Since there are no significant ARD issues related to the waste and ore from the Red Lake, Campbell, and Balmer Complexes, waste rock materials can be used for construction purposes.

Active tailings facilities for the operations were designed by third-party consultants. Annual geotechnical and facility inspections are conducted by these firms. In addition, engineering assessments and investigations to enhance tails storage strategies are performed as required.

Water treatment processes are in place at both milling/tailings facilities to address the destruction of cyanide and metals in solution. Both the Campbell and Red Lake operations utilize passive wetland treatment technologies to assist with the reduction of ammonia from mining and milling processes. All effluent discharges to the environment are in compliance with all applicable laws.

Long-term development of site-specific water quality objectives for closure, the Campbell Complex West Dam groundwater program, and the long term stabilization of underground arsenic storage facilities continue to be the focus of ongoing research and closure planning.

20.3 Waste Storage Facilities

Waste rock is stored in designated areas at both the Red Lake and Campbell Complexes. The waste pads are located in a historic tailings area east of the site at the Red Lake Complex and on the northeast side of the main tailings pond at the Campbell Complex. Due to the non-acid generating potential of the waste rock, a large majority is used in on-site construction projects such as tailings dam raises. Significant portions of the waste are also expected to be used for reclamation following mine closure.

Overall there is not an operational concern for available storage of waste rock from the underground operations.

20.4 Tailings Storage Facilities

The tailings storage facilities at the Campbell and Red Lake Complexes are currently permitted for dam raises that will provide storage to 2020 and 2019 respectively. Additional design and permitting is in progress and will increase the storage capacity within the existing facilities beyond these dates.

20.5 Water Management

Potable water is supplied by the municipality, and paid for on a usage basis. Process water for the mills is predominantly reclaimed from the tailings areas or underground mine. Additional fresh water is taken from Balmer Lake as required.

Process water for underground operations is taken from Sandy Bay–Red Lake.

20.6 Closure Plan

At the effective date of this Report, Goldcorp is satisfied that all environmental liabilities are identified in the existing closure plans for the operations. Environmental liabilities are limited to those that would be expected to be associated with gold mines that have been operating for 60+ years, and where production is from underground sources, including roads, site infrastructure, and waste and tailings disposal facilities.

Two closure plans exist for these operations: one for the Cochenour Complex, and one comprehensive plan that includes the Campbell Complex, Red Lake and Balmer Complexes. These documents have been created and/or updated by independent consultants Lorax Environmental Inc. (Lorax) and BGC Engineering Inc. (BGC) on behalf of Goldcorp or predecessor companies.

In 2014, the Cochenour Closure Plan was filed and accepted, bringing the site into a production phase. The Comprehensive Closure Plan amendment for the Red Lake, Campbell, and Balmer Complexes was filed in 2015.

Long-term development of site-specific water quality objectives for closure, the Campbell Complex West Dam groundwater program and the long-term stabilization of underground arsenic storage facilities, continue to be the focus of ongoing research and closure planning. The closure plans outline the use of current best-available technology to decommission, reclaim and restore the mine sites to states that are as close to pre-development condition as it is technically feasible. Goldcorp personnel, and external consultants contracted by Goldcorp regularly review the closure plans to ensure that the plans incorporate the most up-to-date scientific assessments, and provide standardized approaches to potential issue management and financial assurance.

Reclamation activities are ongoing processes that run concurrently with production activities at the operations. Progressive reclamation initiatives include activities such as re-vegetating select areas or completing shaft/raise capping on sites that are inactive.

As sites progressively reach final closure, additional activities can include:

- Decommissioning of process plant and mine site;
- Characterization studies;
- Demolition of site infrastructure;
- Sealing mine access points;
- Mine site re-contour and re-vegetate;
- Tailings stabilization.

The post-closure environmental and long-term monitoring program for the Project is planned to last a minimum of 20 years and the asset retirement obligation recorded for Red Lake is US$43 million as at December 31, 2015. Closure bonds are established with the Ontario government and exist as a line of credit with Goldcorp Inc. The Goldcorp Vancouver office assumes the responsibility for ensuring these funds are available.

20.7 Permitting

Goldcorp holds the appropriate permits under local, Provincial, and Federal laws to allow current exploration activity and mining operations.

Permit amendments are routinely applied for and obtained to accurately reflect ongoing operational needs of the mining facilities.

20.8 Considerations of Social and Community Impacts

20.8.1 First Nations Considerations

Red Lake Mines has collaboration agreements with two First Nations that are signatory to Treaty No. 3 and have treaty rights which they assert within the operations area of the Red Lake Mines region:

- The Obishikokaang Collaboration Agreement executed August 16, 2013 with Lac Seul First Nation (LSFN) and Goldcorp Canada Ltd.;
- A second Collaboration Agreement which became effective on January 29, 2015 with the Wabauskang First Nation (WFN) and Goldcorp Canada Ltd.

The LSFN is located to the southeast of Red Lake with a band membership of 3,200 and the WFN is located to the south of Red Lake with a band membership of 315.

These agreements provide a framework for strengthened collaboration in the development and operations of Red Lake Mines and outline tangible benefits for the individual First Nations, including skills training and employment, opportunities for business development and contracting, and a framework for issues resolution, regulatory permitting and Goldcorp's future financial contributions.

20.8.2 Social Considerations

The mining complexes are situated on the edges of the Red Lake district communities which make them a part of the community landscapes. Given these proximities, operational and environmental considerations are paramount, as are Goldcorp's commitments to social, cultural, and community support. Goldcorp currently has representation on various local organizations such as the local municipal planning boards, hospital boards, economic development board, and maintains an open dialogue with the community.

20.8.3 Sustainability Considerations

RLGM operates under Goldcorp's sustainability policy, which commits the operation to a defined standard of environmental stewardship. Sustainability is an important issue for every department. This involves protecting human health, reducing the impact of mining on the ecosystem(s), and returning the site to a state compatible with a healthy environment. RLGM has developed a Sustainability Excellence Management System (SEMS) which includes a series of management programs for environmental activities, occupational health and safety, and social activities that enable the company to reach its commitments.

20.9 Comment on Section 20

In the opinion of the QP, the permitting, environmental and social licence requirements to operate the Red Lake Operations and develop and operate the planned mining activities are well understood and Mineral Resource and Mineral Reserve estimates can be supported.

21.0 CAPITAL AND OPERATING COSTS

21.1 Capital Cost Estimates

For the current life-of-mine, capital costs are based on experience gained from current operations, 2016 budget data, and quotes received from manufacturers during 2015. Capital cost estimates include funding for infrastructure, mobile equipment replacement, development, drilling, and permitting as well as miscellaneous expenditures required to maintain production. Infrastructure requirements are incorporated in the estimates as appropriate. Mobile equipment is scheduled for replacement when operating hours reach threshold limits. Sustaining capital costs reflect current price trends.

Exploration expenditure has not been included in the financial forecasts because the expenditure does not relate to the current mining reserve and project being considered. Exploration drilling will be carried out in the future with this expenditure targeting additional mineralization that may be able to be converted to Mineral Resources.

Costs are summarized in Table 21-1, and include both development and sustaining capital.

21.2 Operating Cost Estimates

Operating costs were developed by Goldcorp, based on 2016 budget and 2015 actual costs, factored as appropriate. Operating cost breakdowns shown in Table 21-2. Similar costs (US$286.88/t) were used to establish Mineral Reserves and ore cut-offs.

Allocated mining costs include mining, engineering, and geology. General and administrative costs include surface/plant, administration, environmental, and inventory.

The QPs note that the grades of the deposits allow Goldcorp to deliver a high mill head grade and to be a low-cost gold producer on a per ounce basis. High unit costs per tonne are due to:

- A mixture of long hole stoping and cut and fill method used in the high-grade areas);
- Seismicity considerations and ground support required for deep underground mining;
- The remnant mining occurring at Campbell and into Upper Red Lake;
- Geometry of ore bodies, which comprise narrow veins, low dipping;
- The remoteness of the operation.

Table 21-1: Capital Cost Estimate

Area	Life-of-Mine (US$ million)
Sustaining	202.6
Expansionary	—
Grand Total	***202.6***

Note: totals may not sum due to rounding.

Table 21-2: Operating Cost Estimate

Area	Life-of-Mine (US$/t)
Process Plant	39.79
Mining Operations	209.51
General & Administration	37.58
Grand Total	***286.88***

Note: totals may not sum due to rounding.

The decision process for each block is driven by economic analysis of costs versus revenue. Cutoff grade is used as a guideline for the operations, instead of a driving factor. The site cutoff grade is defined as the break-even grade required to cover cash costs. The global cutoff for mining purposes is approximately 8.40 g/t gold.

21.3 Comments on Section 21

The QPs have reviewed the capital and operating cost provisions for the LOM plan that supports Mineral Reserves, and consider that the basis for the estimates that include mine budget data, vendor quotes, and operating experience, is appropriate to the known mineralization, mining and production schedules, marketing plans, and equipment replacement and maintenance requirements.

Appropriate provision has been made in the estimates for the expected mine operating usages including labor, fuel and power and for closure and environmental considerations.

Capital cost estimates include appropriate sustaining capital estimates.

22.0 ECONOMIC ANALYSIS

Goldcorp is using the provision for producing issuers, whereby producing issuers may exclude the information required under Item 22 for technical reports on properties currently in production.

Goldcorp notes that Mineral Reserve declaration is supported by a positive cashflow.

23.0 ADJACENT PROPERTIES

This section is not relevant to this Report.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not relevant to this Report.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Introduction

In the opinion of the responsible QPs, the following interpretations and conclusions are appropriate to the current status of the Project.

25.2 Mineral Tenure, Surface Rights, Agreements, and Royalties

- Information provided by Goldcorp legal experts supports a conclusion that the mining tenure held is valid and is sufficient to support declaration of Mineral Resources and Mineral Reserves;
- Goldcorp holds sufficient surface rights to support mining operations over the underground planned life-of-mine that was developed based on the year-end 2015 Mineral Reserves.

25.3 Geology and Mineralization

- Knowledge of the deposit settings and lithologies, as well as the structural and alteration controls on mineralization and the mineralization style and setting, is sufficient to support Mineral Resource and Mineral Reserve estimation;
- The Red Lake Operations deposits are considered to be examples of Archean greenstone belt-hosted gold deposits.

25.4 Exploration, Drilling and Data Analysis

- The exploration programs completed to date are appropriate for the Project mineralization styles;
- Sampling methods are acceptable, meet industry-standard practice, and can be used in support of Mineral Resource estimation. Data collected for the Red Lake–Campbell Complex are also suitable to support Mineral Reserve estimation and for mine planning purposes;
- The quality of the gold analytical data is reliable;
- The quantity and quality of the lithological, geotechnical, collar and down-hole survey data collected are sufficient to support Mineral Resource and Mineral Reserve estimation. The collected sample data adequately reflect deposit dimensions, true widths of mineralization, and the style of the deposits. Sampling is representative of the gold grades in the deposits, reflecting areas of higher and lower grades;

- The QA/QC programs adequately address issues of precision, accuracy and contamination. Drilling programs typically included blanks, duplicates and reference samples. QA/QC submission rates meet industry-accepted standards. The QA/QC programs did not detect any material sample biases;
- The data verification programs concluded that the data collected from the Project adequately support the geological interpretations and constitute a database of sufficient quality to support the use of the data in Mineral Resource and Mineral Reserve estimation;
- The Project area retains excellent exploration potential.

25.5 Metallurgical Testwork

- Metallurgical testwork completed on the Red Lake and Campbell Complexes has been appropriate to establish the optimal processing routes, and was performed using samples that are typical of the mineralization styles found within the Project;
- Recovery factors estimated have, following more than 60^+ years of production, been confirmed. As a result, the recovery factors are considered appropriate to support Mineral Resource and Mineral Reserve estimation, and mine planning;
- Initial testwork performed on the Cochenour Complex indicate acceptable average recoveries of about 90%, and that mineralization can be treated through the Campbell mill. Additional testwork and studies are required to support more detailed evaluation of the mineralization to assess whether plant modifications are required;
- There are no known deleterious elements.

25.6 Mineral Resource Estimation

- The Mineral Resource estimation for the Project conforms to industry best practices and meets the requirements of CIM (2014);
- Drill data are typically verified prior to the Mineral Resource (and Mineral Reserve) estimation by running a software program check;
- Factors which may affect the geological models and the preliminary stope designs used to constrain the Mineral Resources, and therefore the Mineral Resource estimates include commodity price assumptions; dilution assumptions in deeper mining areas; changes to geotechnical, mining, and metallurgical recovery assumptions; changes in interpretations of mineralization geometry and continuity of mineralization zones; changes to assumptions made as to the continued ability to access the site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and retain the social licence to operate.

25.7 Mineral Reserve Estimation

- The Mineral Reserve estimation for the Project incorporates industry best practices and meets the requirements of CIM (2014);
- Mineral Reserves include considerations for dilution, mining widths, ore losses, mining extraction losses, appropriate underground mining methods, metallurgical recoveries, permitting and infrastructure requirements;
- Factors which may materially affect the Mineral Reserve estimates include: commodity price and exchange rate assumptions used; rock mechanics (geotechnical) constraints; the ability to maintain constant underground access to all working areas; geological variability; and cost escalation.

25.8 Mine Plan

- Mining operations can be conducted year-round;
- The underground mine plans are appropriately developed to maximize mining efficiencies, based on the current knowledge of geotechnical, hydrological, mining and processing information on the Project;
- Production forecasts are achievable with the current equipment and plant, replacements have been acceptably scheduled;
- There is some upside for the Project if the Inferred Mineral Resources that are identified within the LOM underground production plan can be upgraded to higher confidence Mineral Resource categories;
- The predicted mine life to 2025 (which includes three years of tailings processing) is achievable based on the projected annual production rate and the Mineral Reserves estimated;
- With additional drilling, estimation of additional Mineral Resources, or upgrade in Mineral Resource confidence categories, conversion of some or all of those Mineral Resources to Mineral Reserves, and more than 60 years of mining history, there is very good potential that the underground mine life can be extended beyond 2022, and therefore the overall LOM can be extended beyond 2025.

25.9 Process Plan

- The assumptions used in developing the LOM plan are consistent with previous plant operating experience. Previous production throughputs and recoveries and the Project background history provide supporting data for the proposed LOM production profile;

- Mill process recovery factors are based on more than 65 years of production data, are considered appropriate to support Mineral Resource and Mineral Reserve estimation and mine planning;
- Ore hardness, reagent consumptions and process conditions are based on production data, and are appropriate to the process operating cost assumptions;
- There is sufficient tailings storage remaining for the current life-of-mine. A review of storage capacities would be required if the mine life can be extended.

25.10 Infrastructure Considerations

- The existing infrastructure is appropriate to support the current life-of-mine plan.

25.11 Markets and Contracts

- Goldcorp's bullion is sold on the spot market by Goldcorp's in-house marketing experts;
- The terms contained within the existing sales contracts are typical and consistent with standard industry practices, and are similar to contracts for the supply of doré elsewhere in the world.

25.12 Permitting, Environmental and Social Considerations

- Permits held by Goldcorp for the Red Lake Operations are sufficient to ensure that mining activities within the Project are conducted within the regulatory framework required by the Canadian municipal, Provincial and Federal Governments and that Mineral Resources and Mineral Reserves can be declared;
- Goldcorp has sufficiently addressed the environmental impact of the Red Lake Complex operation, and subsequent closure and remediation requirements that Mineral Resources and Mineral Reserves can be declared, and that the mine plan is appropriate and achievable. Closure provisions are appropriately considered in the mine plan;
- The Red Lake Operations are subject to Goldcorp's sustainability policy, which commits the operation to a defined standard of environmental stewardship.

25.13 Capital and Operating Cost Estimates

- The capital and operating cost provisions for the LOMP that supports Mineral Reserves have been reviewed. The basis for the estimates that include mine budget data, vendor quotes, and operating experience, is appropriate to the known mineralization, mining and production schedules, marketing plans, and equipment replacement and maintenance requirements. Appropriate provision has been made in the estimates for the expected mine operating usages including labor, fuel and power and for closure and environmental considerations. Capital cost estimates include appropriate sustaining estimates.

- Under the assumptions in this Report, the Red Lake Operations have positive Project economics until the end of mine life, which supports the Mineral Reserve estimates.

25.14 Conclusions

- Review of the environmental, permitting, legal, title, taxation, socio-economic, marketing, and political information on the Project shows that the economic analysis that supports the Mineral Reserves is positive under the sets of assumptions used;
- To the extent known, there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the property.

26.0 RECOMMENDATIONS

26.1 Introduction

Recommendations are put forward for a five-year period, and comprise a single-phase work program, comprising infill and exploration drilling and concurrent test stoping, bulk sampling, specific gravity data collection, and metallurgical testwork.

The infill and exploration drilling will comprise approximately US$100 million at the Red Lake–Campbell complex, about US$40–50 million at the Cochenour Complex and US$40–50 million at H.G. Young. The complete drilling budget would be about US$180–200 million.

In addition, test stoping, bulk sampling, specific gravity data collection, and metallurgical testwork are recommended during this time-frame for the Cochenour Complex and H.G. Young, for a combined budget estimate totalling about US$47–53 million.

26.2 Red Lake–Campbell Complex

It is recommended that the recent drilling budgets of approximately US$20 million per year continue for the next five-year period. With expenditures focussed on replacing Mineral Reserves, drilling should target areas of Mineral Resources that have been assigned lower confidence categories, in an effort to convert part or all of this material to higher-confidence Mineral Resources, and potentially, eventual conversion to Mineral Reserves. The budget would support about 390–400 drill holes annually (a maximum of about 80,000 m).

A portion of the budget, up to US$2 million (12,000 m), should be allocated to explore areas where exploration potential has been identified, with the goal of discovering new zones of mineralization within or near the current underground infrastructure.

26.3 Cochenour Complex

Over the next five years, underground exploration at Cochenour/Bruce Channel will focus on a combination of upgrading lower-confidence category Mineral Resources to higher-confidence categories, and potentially, eventual conversion to Mineral Reserves, and on exploration target generation. Approximate drill budgets of US$8–10 million would be required to support an approximate 300–400 drill holes (70,000–80,000 m) per year.

Near-term development and mining should continue to focus on sill development on the upper levels as well as test stoping on mineralization from both the lower and upper mining horizons. The focus of this work will be to generate sufficient data to validate the resource model.

The development and test-stoping material should be processed through the mill as bulk samples, which may range from 10,000–25,000 t in size. Additional metallurgical testing, mimicking the Campbell Mill flowsheet, should be conducted, and should be aimed at evaluating processing parameters, optimizing recoveries, and determining sulphide contents in order to maximize mill and autoclave productivity.

The budget estimate to complete the development, test stoping, bulk sampling, and metallurgical testwork is approximately US$26–28 million.

26.4 H.G. Young

Exploration and definition drilling is planned over a five-year period in support of upgrading lower-confidence category Mineral Resources to higher-confidence categories, and potentially, eventual conversion to Mineral Reserves, and on exploration target generation. Drilling will be conducted from underground and surface positions. Approximate drill budgets of US$10–12 million would be required to support an approximate 200–250 drill holes (75,000–80,000 m) per year.

In the short term, underground exploration development is required to validate the geological interpretation, orientation, and continuity of the mineralization. Specific gravity data should be collected and metallurgical studies be performed to ensure that the expected metallurgical recovery in the mill is well understood.

The budget estimate for the development, geological interpretation confirmation, specific gravity samples, and metallurgical testwork is about US$21–25 million.

27.0 REFERENCES

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APPENDIX A

Red Lake – Campbell Complex Claims

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	304	14779	3683	Patented MR & SR	0.61			
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	CLM	383	108950	2074LKP	Lease MR & SR	215.97	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	6534	10462	1595	Patented MR	16.19	30-Nov-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	6536	10464	1597	Patented MR & SR	12.99	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8139	10465	1598, 6980	Patented MR & SR	17.07	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8140	10466	1599, 6980	Patented MR & SR	15.50	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8141	10467	1600, 6980	Patented MR & SR	12.16	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8142	10468	1601, 6980	Patented MR & SR	13.35	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8143	10473	1606, 6980	Patented MR & SR	14.69	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8144	10469	1602, 6980	Patented MR & SR	14.95	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8145	10470	1603	Patented MR & SR	9.46	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8146	10471	1604	Patented MR & SR	8.51	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	8147	10472	1605	Patented MR & SR	12.23	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	10013-LO	10720		Lic of Occupation	23.39	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	18598	106878	444LKP	Lease MR & SR	20.84	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	18600	106878	444LKP	Lease MR & SR	22.68	30-Sep-2035		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	18602	106878	444LKP	Lease MR & SR	28.27	30-Sep-2035		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	18682	106878	444LKP	Lease MR & SR	24.59	30-Sep-2035		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	18683	106878	444LKP	Lease MR & SR	28.13	30-Sep-2035		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19206	10596	1651, 7502	Patented MR & SR	15.50	30-Sep-2035		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19207	10597	1652, 7502	Patented MR & SR	14.91	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19208	10598	1653, 7502	Patented MR & SR	18.37	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19211	10600	1655, 7502	Patented MR & SR	15.94	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19212	11876	2364, 7502	Patented MR & SR	9.90	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19213	10590	1647, 7502	Patented MR & SR	18.01	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19216	10602	1657, 7502	Patented MR & SR	12.32	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19219	10591	1648, 7502	Patented MR & SR	14.04	*		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19222	10593	1650, 7502	Patented MR & SR	16.11	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19493	10781	1764	Patented MR & SR	13.93	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19494	10782	1765	Patented MR & SR	21.38	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19495	10783	1766	Patented MR & SR	16.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19496	10769, 10772	1754, 2619, 3004, 6232	Patented MR & SR	15.25	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19497	10770	1755, 2621	Patented MR & SR	23.06	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19498	10771	1756	Patented MR & SR	12.14	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19499	10772	1757, 2617, 6232, 6760, 6761, 6762, 6763, 6151, 6346, 6177	Patented MR & SR	15.51	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19500	10773	1758, 6232	Patented MR & SR	18.37	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19501	10774	1759	Patented MR & SR	14.98	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19502	10990	2615, 2969, 5844, 5857, 5913	Patented MR & SR	18.02	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19503	10978	1888	Patented MR & SR	17.69	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19504	10982	1889	Patented MR & SR	18.45	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19505	10983	2944	Patented MR & SR	33.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19506	10984	1891	Patented MR & SR	23.19	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19507	10985	1892	Patented MR & SR	21.13	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19508	10993	2946, 3521, 3522	Patented MR & SR	12.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19509	10994	2947	Patented MR & SR	16.96	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19510	10995	1902	Patented MR & SR	16.35	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19511	10775	1760	Patented MR & SR	15.01	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19512	10766	1753	Patented MR & SR	15.10	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19513	10776	1761	Patented MR & SR	11.85	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19514	10986	1893	Patented MR & SR	14.08	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19643	10991	2945	Patented MR & SR	7.54	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19644	10992	1899	Patented MR	26.31	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19645	10987	1894	Patented MR	14.16	*		

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Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19646	10988	1895	Patented MR & SR	12.22	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19647	10989	1896	Patented MR & SR	12.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19656	12442	2474	Patented MR & SR	10.16	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19656-LO	11130		Lic of Occupation	5.70	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19657	12462	2483	Patented MR & SR	16.92	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19657-LO	11131		Lic of Occupation	1.06	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19658	12443	2475	Patented MR & SR	10.60	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19658-LO	11132		Lic of Occupation	3.80	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19659	12444	2476	Patented MR & SR	15.18	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19660	12445	2477	Patented MR & SR	15.18	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19661	12446	2478	Patented MR & SR	2.61	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19661-LO	11133		Lic of Occupation	11.49	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19662-LO	11134		Lic of Occupation	21.32	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19663	12447	2479	Patented MR & SR	10.53	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19663-LO	11135		Lic of Occupation	17.16	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19664	12448	2480	Patented MR & SR	7.61	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19664-LO	11136		Lic of Occupation	10.12	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19666	12388	2459	Patented MR & SR	15.76	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19667	12389	2460	Patented MR & SR	18.54	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19668	12390	2461	Patented MR & SR	11.43	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19668-LO	11122		Lic of Occupation	4.15	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19669	10656	1709	Patented MR & SR	18.78	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19670	10657	1710	Patented MR & SR	18.07	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19671	10663	1713	Patented MR & SR	10.57	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19689	10969	1879	Patented MR & SR	7.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19689-LO	10813		Lic of Occupation	8.22	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19690	10972	1882	Patented MR & SR	10.52	*		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19690-LO	10814		Lic of Occupation	11.98	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19691	10975	1885	Patented MR & SR	9.71	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19691-LO	10812		Lic of Occupation	4.69	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19692	10976	1886	Patented MR & SR	12.59	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19693	10777	1762	Patented MR & SR	2.15	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19694	10785	1768	Patented MR & SR	16.30	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19695	10786	1769	Patented MR & SR	11.50	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19696	10970	1880	Patented MR & SR	17.73	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19697	10971	1881	Patented MR & SR	21.73	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19698	10973	1883	Patented MR & SR	17.85	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19699	10974	1884	Patented MR & SR	16.88	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19700	10977	1887	Patented MR & SR	13.64	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19701	10965	1876	Patented MR & SR	15.78	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19702	10966	1877	Patented MR & SR	11.33	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19703	12449	2481	Patented MR & SR	1.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19703-LO	11128		Lic of Occupation	17.08	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19704	12450	2482	Patented MR & SR	2.89	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	19704-LO	11129		Lic of Occupation	29.95	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19721	12391	2462	Patented MR & SR	11.95	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19722	12392	2463, 4127	Patented MR & SR	25.71	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19723	12393	2464, 4127	Patented MR & SR	16.65	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19724	12394	2465, 4127	Patented MR & SR	25.88	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19724-LO	11123		Lic of Occupation	6.13	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19725	12395	2466	Patented MR & SR	18.19	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19726	12396	2467	Patented MR & SR	6.99	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19726-LO	11124		Lic of Occupation	5.67	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19973	11023	1913	Patented MR	16.59	*		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19974	11040	1921	Patented MR & SR	15.46	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19975	11041	1922	Patented MR & SR	12.14	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19976	11047	1928	Patented MR & SR	15.78	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19977	11044	1925	Patented MR & SR	7.37	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19978	11043	1924	Patented MR & SR	12.26	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19979	11042	1923	Patented MR & SR	14.00	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19980	11045	1926	Patented MR & SR	21.17	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	19981	11046	1927	Patented MR & SR	21.89	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20018	12141	2421	Patented MR	5.33	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20018-LO	11062		Lic of Occupation	8.66	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20019	12142	2422	Patented MR	8.32	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20020	12143	2423	Patented MR	10.46	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20020-LO	11059		Lic of Occupation	9.63	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20021	12144	2424	Patented MR	12.03	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20026			Patented MR	37.39	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20068	15135	1711	Patented MR & SR	22.60	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20069	10664	1714	Patented MR & SR	22.28	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20070	10665	1715	Patented MR & SR	10.79	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20071	10666	1716, 2601	Patented MR & SR	16.09	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20072	10667	1717, 2603	Patented MR & SR	10.87	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20073	10668	1718	Patented MR & SR	20.63	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20074	10669	1719	Patented MR & SR	20.33	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20075	10695	1721, 4127	Patented MR & SR	19.89	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20076	10670	1720	Patented MR & SR	16.33	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20141	10935	1867	Patented MR & SR	19.30	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20142	10936	1868	Patented MR & SR	7.39	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20143	10937	1869	Patented MR & SR	10.45	*		

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Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20252	10951	1870, 2605	Patented MR & SR	11.73	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20253	10952	1871	Patented MR & SR	29.72	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20254	10953	1872	Patented MR & SR	23.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20255	10954	1873, 2607, 5813	Patented MR & SR	12.49	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20256	10955	1874, 2609, 4269, 6380, 7232, 7302	Patented MR & SR	22.09	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20303	11076	4988	Patented SR	15.41	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20304	11077	4988	Patented SR	21.74	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20305	11078	4988	Patented SR	15.42	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20345	11153	1987	Patented MR & SR	19.02	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20346	11154	1988	Patented MR & SR	18.50	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20437	11079	4988	Patented SR	7.01	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20438	11080	4988	Patented SR	14.69	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20439	11081	4988	Patented SR	12.91	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20440	11082	4988	Patented SR	27.17	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20459	11155	1989	Patented MR & SR	13.48	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20460	11156	1990	Patented MR & SR	18.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20461	11157	1991	Patented MR & SR	17.07	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20462	11075	1943	Patented MR & SR	11.34	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20485	11083	4988	Patented SR	27.17	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20486	11086	4988	Patented SR	11.61	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20487	11087	4988	Patented SR	16.39	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20488	11088	4988	Patented SR	17.05	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20516	11089	4988	Patented SR	7.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20517	11090	4988	Patented SR	16.40	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20518	11091	4988	Patented SR	13.65	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20519	11092	4988	Patented SR	12.60	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20520	11093	4988	Patented SR	15.80	*		

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Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20553	11094	4988	Patented SR	18.40	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20554	11095	4988	Patented SR	24.22	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20555	11096	4988	Patented SR	21.73	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20556	11097	4988	Patented SR	23.45	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20603	11165	1992	Patented MR & SR	11.70	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20604	11166	1993	Patented MR & SR	8.43	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20604-LO	10871		Lic of Occupation	6.34	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20605-LO	10870		Lic of Occupation	15.88	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20606-LO	10869		Lic of Occupation	16.60	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20607-LO	10868		Lic of Occupation	12.74	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20731	11167	1994	Patented MR & SR	0.73	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20731-LO	10867		Lic of Occupation	14.75	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20748	11098	4988	Patented SR	16.88	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20749	11099	4988	Patented SR	29.94	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20750	11100	4988	Patented SR	12.97	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20751	11101	4988	Patented SR	14.71	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20752	11102	4988	Patented SR	17.13	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20753	11103	4988	Patented SR	14.66	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20754	11104	4988	Patented SR	10.32	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20755	11363	2132	Patented MR & SR	4.21	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20755-LO	10919		Lic of Occupation	11.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20779	12613	2501	Patented MR & SR	16.86	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20780	12614	2505	Patented MR & SR	12.38	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20781	12615	2503	Patented MR & SR	21.23	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20782	12616	2504	Patented MR & SR	16.99	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20783	12617	2505	Patented MR & SR	21.30	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20793	12618	2506	Patented MR & SR	21.54	*		

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Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20794	12619	2507	Patented MR & SR	24.20	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20795	12620	2508	Patented MR & SR	25.08	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20796	12621	2509	Patented MR & SR	25.37	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20797	12622	2510	Patented MR & SR	19.90	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20798	12645	2521	Patented MR & SR	27.22	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20799	12646	2522	Patented MR & SR	19.07	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20824-LO	10863		Lic of Occupation	11.91	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20825-LO	10862		Lic of Occupation	11.30	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20826-LO	10861		Lic of Occupation	5.01	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20829-LO	10866		Lic of Occupation	20.19	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20830-LO	10865		Lic of Occupation	16.99	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20831-LO	10864		Lic of Occupation	13.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20840	10931	1860, 2611	Patented MR & SR	14.29	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20841	10932	1861, 2613	Patented MR & SR	25.03	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20842	10933	1862, 3520	Patented MR & SR	25.10	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20842-LO	10805		Lic of Occupation	3.39	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20843	10934	1863	Patented MR & SR	14.00	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20843-LO	10806		Lic of Occupation	6.63	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20861-LO	11008		Lic of Occupation	18.65	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20862	11126	1976	Patented MR & SR	16.59	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20863	11125	1975	Patented MR & SR	23.88	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20864	11134	1979	Patented MR & SR	14.16	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20865	11135	1980	Patented MR & SR	8.09	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20866	11136	1981	Patented MR & SR	12.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20867	11138	1983	Patented MR & SR	12.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20868	11139	1984	Patented MR & SR	12.95	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20869	11141	1986	Patented MR & SR	19.02	*		

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Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20870	11124	1974	Patented MR & SR	12.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20871	11137	1982	Patented MR & SR	17.00	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20872	11140	1985	Patented MR & SR	25.50	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20873	11813	2340	Patented MR	26.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20874	11814	2341	Patented MR	19.01	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20875	11815	2342	Patented MR	19.38	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20876	11816	2343	Patented MR	19.47	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20877	11817	2344	Patented MR	13.22	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20878	11818	2345	Patented MR	10.55	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20879	11819	2346	Patented MR	14.82	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20880	11820	2347	Patented MR	11.14	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20881	11821	2348	Patented MR	15.44	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20978	2904, 108960	394LKP	Lease MR	11.76	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	20979	2905, 108961	395LKP	Lease MR	10.59	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21049	108863	2062LKP	Lease MR	24.16	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21050	108863	2062LKP	Lease MR	11.62	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21051	108863	2062LKP	Lease MR	19.13	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21052	108863	2062LKP	Lease MR	13.33	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21053	108863	2062LKP	Lease MR	16.07	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21054	108863	2062LKP	Lease MR	28.35	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21055	108863	2062LKP	Lease MR	8.43	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21056	108863	2062LKP	Lease MR	14.60	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21057	108863	2062LKP	Lease MR	20.90	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21136	11796	2329	Patented MR	15.48	31-Jul-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21137	11797	2330	Patented MR	14.89	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21138	11798	2331	Patented MR	16.29	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21139	11799	2332	Patented MR	20.97	*		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21140	11800	2333	Patented MR	19.53	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21141	11801	2334	Patented MR	16.58	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21142	11802	2335	Patented MR	14.98	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21143	11803	2336	Patented MR	21.51	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21144	11804	2337	Patented MR	24.30	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21199	11762	2305, 4860	Patented MR & SR	22.62	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21200	11763	2306, 4860	Patented MR & SR	15.36	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21201	11764	2307, 4860	Patented MR & SR	18.05	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21202	11765	2308, 4860	Patented MR & SR	11.83	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21203	11766	2309, 4860	Patented MR & SR	16.59	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21204	11767	2310, 4860	Patented MR & SR	9.25	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21205	11768	2311, 4860	Patented MR & SR	6.06	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21206	11769	2312, 4860	Patented MR & SR	9.36	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21207	11770	2313, 4860	Patented MR & SR	12.00	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21237	11229	2033	Patented MR & SR	28.69	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21238	11228	2032	Patented MR & SR	20.72	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21239	11343	2114	Patented MR & SR	24.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21286	11342	2113	Patented MR & SR	25.09	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21287	11227	2031	Patented MR & SR	17.81	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21288	11345	2116	Patented MR & SR	13.11	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21289	11226	2030	Patented MR & SR	11.13	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21290	11344	2115	Patented MR & SR	13.92	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21291	11632	2228	Patented MR & SR	19.98	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21292	11346	2117	Patented MR & SR	11.21	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21408	11805	2338	Patented MR	24.11	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21409	11822	2349	Patented MR	19.98	*		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21953	12009	2385	Patented MR & SR	9.03	*	Estate of Diana Margaret Ballentine $0.25/ton mined ore	Ballentine Royalty Agreement with Campbell Mine (1984)
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21954	12010	2386	Patented MR & SR	16.86	*	Estate of Diana Margaret Ballentine $0.25/ton mined ore	Ballentine Royalty Agreement with Campbell Mine (1984)
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21957	18912	2569	Patented MR & SR	4.62	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	21957-LO	14903		Lic of Occupation	5.03	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Dome	KRL	21961	10967	1878	Patented MR & SR	7.77	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	22687	11761	2304, 4860		7.03	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	23059	12397	2468	Patented MR & SR	1.02	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	23105	10784	1767	Patented MR & SR	7.06	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	27179	12802	2533	Patented MR & SR	4.07	*	Estate of Diana Margaret Ballentine $0.25/ton mined ore	Ballentine Royalty Agreement with Campbell Mine (1984)
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	38903	107806	11LKP	Lease MR	12.12	*		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	38904	107807	12LKP	Lease MR	18.83	31-Jan-2027		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	38905	107808	13LKP	Lease MR	18.94	31-Jan-2027		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	38906	107809	14LKP	Lease MR	16.53	31-Jan-2027		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	38907	107810	15LKP	Lease MR	14.82	31-Jan-2027		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	41784	108962	396LKP	Lease MR	14.65	31-Jan-2027		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	41785	108959	393LKP	Lease MR	21.81	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	41802	108963	397LKP	Lease MR	9.29	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47087	106140	398LKP	Lease MR	15.02	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47088	106141	399LKP	Lease MR	11.86	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47089	108966	400LKP	Lease MR	13.67	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47090	108967	401LKP	Lease MR	8.19	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47091	106144	402LKP	Lease MR	19.51	30-Apr-2032		

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties	Agreements
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47092	106145	403LKP	Lease MR	18.85	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	47093	106146	404LKP	Lease MR	6.98	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368480	108072	931LKP	Lease MR & SR	10.68	30-Apr-2032		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368481	108072	931LKP	Lease MR & SR	11.36	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368482	108072	931LKP	Lease MR & SR	22.25	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368483	108072	931LKP	Lease MR & SR	11.34	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368485	108072	931LKP	Lease MR & SR	18.77	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368486	108072	931LKP	Lease MR & SR	15.32	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368487	108072	931LKP	Lease MR & SR	12.61	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	368488	108072	931LKP	Lease MR & SR	14.21	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	390171	108072	931LKP	Lease MR & SR	16.66	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer	KRL	390172	108072	931LKP	Lease MR & SR	12.80	31-Jul-2028	William Bruce Dunlop 2.5%	
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer		828439			Unpatented	16.00	31-Jul-2028		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer		1209978			Unpatented	80.00	13-Jun-2018		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer		1209979			Unpatented	32.00	17-Oct-2016		
Goldcorp Inc. (72.00%), Goldcorp Canada Ltd (28.00%)	Red Lake	Kenora	Balmer		1209980			Unpatented	96.00	25-Oct-2016		

Note: * indicates leases which have no expiry date as long as the required annual taxes are paid. Lic of Occupation = licence of occupation; Patented MR & SR = patented mineral rights and surface rights.

Mining Taxes at $4/ha are paid annually on patented mineral rights;

Mining Taxes at $3/ha are paid annually on lease mineral rights;

Mining Taxes at $5/ha are paid annually on Licences of Occupation;

Provincial Taxes (at a rate of 0.00039189 of the Assessed Land Value) are paid annually on leased surface rights;

Municipal Taxes (at various rates of the Assessed Land Value) are paid in four installments (March, May, August, October) on patented surface rights;

An Expenditure Commitment of $400/16ha is required annually on unpatented claims.

Appendix B

Cochenour Complex Claims

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	82	8000	206	Patented MR & SR	12.30		1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	83	8001	207	Patented MR & SR	18.09	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	84	8002	208	Patented MR & SR	18.2	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	85	8003	209	Patented MR & SR	15.50	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	86	8004	210	Patented MR & SR	17	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	87	8005	211	Patented MR & SR	22.4	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	88-LO	3029		Lic. of Occupation	4.58	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	88	8006	212	Patented MR & SR	7.97	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	89-LO	3029		Lic. of Occupation	2.00	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	89	8007	213	Patented MR & SR	7.97	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	90	8370, 113562	450, 5075, 5373, 6328	Patented MR & SR	12.6	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	91	8371	451, 4388, 4395, 5178	Patented MR & SR	24.5	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	93	8378	455, 4389, 4395, 5376	Patented MR & SR	41.80	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	320	8120	282, 6963, 7502	Patented MR & SR	4.65	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	321-LO	2868		Lic. of Occupation	5.83	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	321	8121	283, 6963, 7502	Patented MR & SR	3.60	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	322-LO	2869		Lic. of Occupation	10	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	322	8122	284, 6963, 6328, 7502	Patented MR & SR	8.22	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	411	8123	285, 3700, 4667, 6135, 7502	Patented MR & SR	14.1	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	412-LO	2870		Lic. of Occupation	13.2	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	412	8124	286, 6135, 7502, 7765	Patented MR & SR	1.25	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	462	9181	1056, 5270, 5714, 5724, 6963, 7502	Patented MR & SR	11.1	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	463	9182	1057, 5270, 5714, 5724, 6963, 7502	Patented MR & SR	10.8	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	464	9183	1058, 7502	Patented MR & SR	9.67	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	465	9184	1059, 6963, 7502	Patented MR & SR	20.4	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	466	9185	1060, 7502	Patented MR & SR	16.8	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	645	9186	1061, 7502	Patented MR & SR	12.7	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	1029	8179	325	Patented MR & SR	13.50	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	1030	8180	326	Patented MR & SR	13.4	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	1031	8237	372	Patented MR & SR	5.99	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	6685	866	8902	Patented MR	14.6	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	6686	867	8903, 7502	Patented MR & SR	15.7	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7027	1071	9214, 7502	Patented MR & SR	14.5	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7028	9215	1072, 7502	Patented MR & SR	13.1	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7460	9006	939, 4667, 6517, 6963, 7502	Patented MR & SR	10.2	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7461	9007	940, 7502	Patented MR & SR	14.8	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7462	9008	941, 7502	Patented MR & SR	16.6	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7594	8365	447, 4667, 5375, 5376	Patented MR & SR	10.9	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7602-LO	2916		Lic. of Occupation	12.6	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7603-LO	2917		Lic. of Occupation	16.2	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7604-LO	2918		Lic. of Occupation	12.9	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7605-LO	2919		Lic. of Occupation	13.8	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7606	8181	327, 4667, 6963, 7502	Patented MR & SR	12.7	*	

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7607	8182	328, 7502	Patented MR & SR	11.3	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7634-LO	2920		Lic. of Occupation	15.9	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7635	9408	1179	Patented MR & SR	0.20	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7635-LO	2921		Lic. of Occupation	10.1	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7696	8904	868, 7502	Patented MR & SR	13.3	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	7741	8365A	3696, 5373, 5374	Patented MR & SR	9.79	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	9992	8785	780, 5377, 5378	Patented MR & SR	20.7	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	9993	8786	781, 5377	Patented MR & SR	13.7	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10138	8783	778	Patented MR	19.4	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10139	8782	777	Patented MR	21.5	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10140	8781	776, 7502	Patented MR & SR	17.00	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10722-LO	3471		Lic. of Occupation	30.2	*	1% NSR to Royal Gold Inc.
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10895	8788	5373, 5374	Patented MR & SR	12.8	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	10896	8789	784, 5375, 5376, 6020	Patented MR & SR	14.4	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19205	10589	1646, 7502	Patented MR & SR	12.9	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19214	10628	1677	Patented MR	8.94	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19215	10601	1656	Patented MR	11.5	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19217	10629	1678	Patented MR	8.22	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19218	10603	1658	Patented MR	16.2	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19220	10630	1679, 7502	Patented MR & SR	7.08	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	19221	10592	1649, 7502	Patented MR & SR	9.21	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	509679	108346	987LKP	Lease MR	13.90	*	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	509680	108346	987LKP	Lease MR	8.08	31-Dec-2029	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome	KRL	509681	108346	987LKP	Lease MR	8.40	31-Dec-2029	
Goldcorp Inc. (72%), Goldcorp Canada Ltd. (28%)	Red Lake	Kenora	Dome		999966			Unpatented	16.00	31-Dec-2029	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	914	8145	299	Patented MR & SR	6.77	9-Nov-2020	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	915-LO	2897		Lic. of Occupation	1.78	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	915	8147	300	Patented MR & SR	16.5	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	5273-LO	3814		Lic. of Occupation	15.90	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	5273	8801	796	Patented MR & SR	15.7	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	9907-LO	3508		Lic. of Occupation	16.5	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10019-LO	3791		Lic. of Occupation	10.1	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10583	8987	925	Patented MR & SR	9.15	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10631	8988	926	Patented MR & SR	11	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10632	8989	927	Patented MR & SR	5.20	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10633	9044	967	Patented MR & SR	13.4	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10634	9045	968	Patented MR & SR	12.6	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10635-LO	10036		Lic. of Occupation	2.11	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10640	9046	969	Patented MR & SR	18	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10641	9047	970	Patented MR & SR	11.9	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10642-LO	10037		Lic. of Occupation	21.5	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10642	9048	971	Patented MR & SR	2.06	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10643	8990	928	Patented MR & SR	11.5	*	

Recorded Owner	Mining Division	Land Registry Office	Township Name	Tenure	Number	Patent/ Licence/ Lease	Parcel	Tenure Type	Size (Ha)	Expiry Date	Royalties
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10644	8991	929	Patented MR & SR	10.8	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10651-LO	10035		Lic. of Occupation	16.8	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10652-LO	10034		Lic. of Occupation	4.99	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10653	9059	977	Patented MR & SR	12.40	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10660-LO	10039		Lic. of Occupation	6.92	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10660	9060	978	Patented MR & SR	20.8	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10661-LO	10040		Lic. of Occupation	7.86	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10661	9061	979	Patented MR & SR	14.4	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10662	9062	980	Patented MR & SR	13.8	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10670	9063	981	Patented MR & SR	6.05	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10671-LO	10046		Lic. of Occupation	13.6	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10671	9064	982	Patented MR & SR	4.24	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10841-LO	3813		Lic. of Occupation	2.51	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10841	8802	797	Patented MR & SR	15.7	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10842-LO	3812		Lic. of Occupation	4.61	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10842	8803	798	Patented MR & SR	26.1	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10916	8992	930	Patented MR & SR	17.5	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10918	9560	1261	Patented MR & SR	24.7	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10921	9561	1262	Patented MR & SR	15.70	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10922	9562	1263	Patented MR & SR	14.9	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	10923	9563	1264	Patented MR & SR	12.7	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	11247-LO	10047		Lic. of Occupation	6.76	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	12180-LO	10038		Lic. of Occupation	13.9	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	12180	9065	983	Patented MR & SR	2.99	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	12181-LO	10091		Lic. of Occupation	6.87	*	
Goldcorp Inc. (100.00%)	Red Lake	Kenora	Dome	KRL	12307	9564	1265	Patented MR & SR	15.10	*	

Note: Note: * indicates leases which have no expiry date as long as the required annual taxes are paid. Lic of Occupation = licence of occupation; Patented MR & SR = patented mineral rights and surface rights.

Mining Taxes at $4/ha are paid annually on patented mineral rights;

Mining Taxes at $3/ha are paid annually on lease mineral rights;

Mining Taxes at $5/ha are paid annually on Licences of Occupation;

Provincial Taxes (at a rate of 0.00039189 of the Assessed Land Value) are paid annually on leased surface rights;

Municipal Taxes (at various rates of the Assessed Land Value) are paid in four installments (March, May, August, October) on patented surface rights;

An Expenditure Commitment of $400/16ha is required annually on unpatented claims.