Report on an Airborne Magnetic/Radiometric Survey and Lithogeochemical Sampling

Red Top – Sunrise Property, Clearwater area, British Columbia, Canada

Mineral Tenures: 633845, 833888, 834322, 834327, 834768
836729, 853838, 853840, 867878, 965849, 965889, 965909
NTS 82M/12W - BCGS 82M061
51°38' 20" N Latitude 119°51' 19" W Longitude
UTM 11 302429E, 5724737N (Red Top)
Kamloops Mining Division

Owner:

Craig A. Lynes

Operator:

Montego Resources Inc.
200 – 551 Howe St.
Vancouver, B.C., Canada
V6C 2C2

By:

Don MacIntyre, Ph.D., P. Eng.
D.G. MacIntyre & Associates Ltd.
Victoria, B.C.

December 15, 2012

Table of Contents

List of Tables

List of Figures

List of Photos

1 Summary

The Red Top - Sunrise property covers an east trending ridge between the Raft and North Thompson Rivers, in the Clearwater area of south central British Columbia, Canada. The center of the property is approximately 20 kilometres east of the town of Clearwater and 112 kilometres north of the city of Kamloops. The property consists of twelve (12) contiguous mineral tenures covering 2207.08 hectares in the Kamloops Mining Division. These tenures are held by Craig A. Lynes on behalf of Rich River Exploration Ltd. and are under option to Montego Resources Inc., the property operator. Access to the property is via a network of logging roads that branch off the Cormie Lake Forest Service Road (FSR). This road connects to Interprovincial Highway 5 approximately 16 kilometres east of the town of Clearwater. The property is also close to the CNR rail line and a B.C. Hydro transmission line both of which follow the course of the North Thompson River located a few kilometres south of the property. The claims lie on the south slope of Mount McClennan where elevations range from 880 to 1675 metres above sea level. The area has been extensively logged but there are still stands of mature spruce and fir found on the property.

The Red Top – Sunrise property covers 5 different mineral occurrences – Red Top, Snow, Sunrise, Morrison and Bearsden. The Redtop, Snow and Sunrise showings were first located and hand-trenched in the 1920's but the first drilling did not take place until the 1940's. In the 1960's Crowpat Minerals Ltd. and Calbay Mining Corporation Ltd. did relatively small drilling and trenching programs. Kerr, Dawson and Associates Ltd. restaked the Nimsic Claim Group on Mount McClennan in 1975 and examined the Snow and Sunrise Showings. They were the first to describe the mineralization as being of an exhalative nature. Castlemaine Explorations Ltd. acquired the Nimsic property in 1976 from Kerr, Dawson and optioned it to Canadian Nickel Co. Ltd. Canadian Nickel Co. Ltd. did geological mapping, soil sampling and a magnetometer survey over the entire grid in 1977. A limited VLF-EM survey was conducted over part of the grid at that time. Craigmont Mines Ltd. optioned the ground from Canadian Nickel Co. Ltd. in 1978 and performed further geophysical surveys and drilled five holes totalling 383 meters. The claims were allowed to lapse and the ground remained open until 1983 when Placer Dome Inc. staked the area. Placer worked on the property intermittently between 1983-1988 and again in 1989 doing extensive soil sampling, rock sampling, geophysics and targeted diamond drilling. The claims were allowed to lapse.

The Red Top – Sunrise property is underlain by metasediments and metavolcanics of the Upper Proterozoic-Lower Cambrian Eagle Bay Assemblage. These rocks are deformed into a shallow plunging east trending antiform. The rocks, which occupy the north limb of the structure, include quartzite, chlorite- muscovite-quartz schist, quartz-sericite schist,

limestone, calc-silicate schist and skarn. Stratiform lenses of massive, semi- massive and disseminated pyrite and pyrrhotite with lesser galena, sphalerite and chalcopyrite occur in pyritiferous, siliceous and recrystallized units. These mineral occurrences are classified as Sedimentary-exhalative but have some characteristics more similar to Kuroko volcanogenic type deposits. The Morrison and Bearsden showings appear to be vein occurrences.

Photo 1. View north toward the Sunrise showing, located near the top of the clearcut. Photo taken by the writer, July 2012. Craig Lynes in the foreground.

The Red Top - Sunrise property is a property of merit. In the writers opinion more work is needed to fully evaluate the economic potential of the property. The property is attractive because it is readily accessible and within an area considered prospective for sediment hosted massive sulphide deposits. Previous exploration has located several massive sulphide showings over a strike length of 3.6 kilometres. Sampling by the current and previous operators has returned assay values from surface trenches that grade in excess of 30% Zn. Moderately high Pb and Ag values have also been returned.

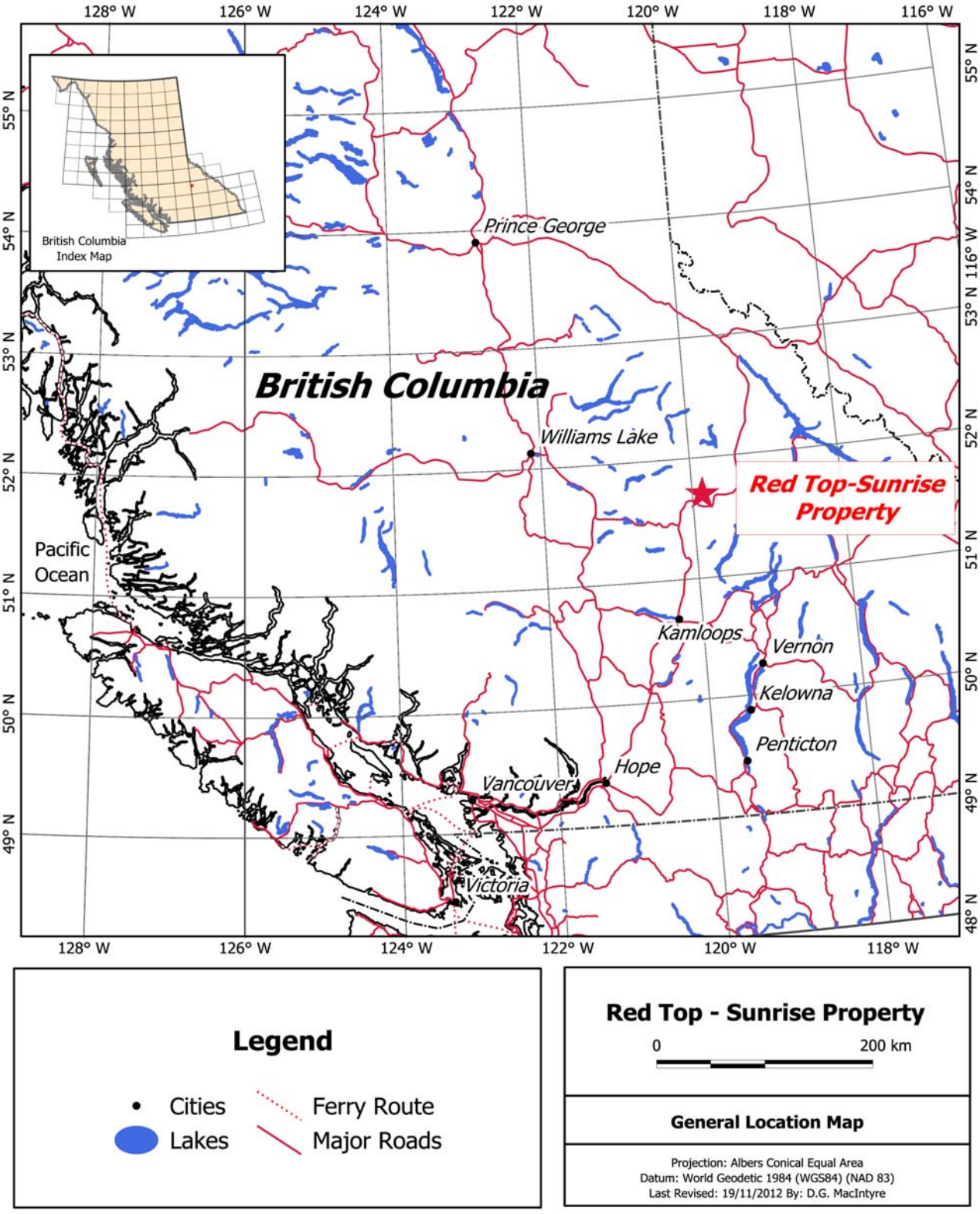


Figure 1. Location map, Red Top - Sunrise Property, southern British Columbia.

The results of the airborne radiometric/magnetic survey described in this report have identified areas of anomalous response that cannot be directly explained on the basis of known geology. Further work is needed to determine the significance of these anomalies, particularly the north trending magnetic anomaly that cross cuts the regional stratigraphy in the center of the property. The elongate westerly trending K radiometric anomaly in the central half of the property may be due to increased concentration of potassic minerals such as K-feldspar or K-bearing mica. Both of these minerals are found in zones of hydrothermal alteration. Conversely, areas of low K radiometric response may represent zones of feldspar destructive hydrothermal alteration.

2 Introduction

This assessment report has been prepared at the request of Robert Coltura, President and CEO of Montego Resources Inc. ("Montego" or the "Company"), the property operators. The writer has been asked to review all data pertaining to the property and to prepare an assessment report that describes historical work completed on the property, reviews the results of recent airborne geophysical and lithogeochemical surveys and makes recommendations for further work if warranted.

The author prepared all sections of this report that interpret the results of the 2012 exploration program. Other sections of the report, in particular the property history and geology are modified from previous assessment reports filed with the B.C. Ministry of Energy, Mines and Petroleum Resources. A summary report describing the methodology and results of an airborne magnetic/radiometric survey completed by Precision Geosurveys Inc. is appended to this report.

In preparing this report, the author has reviewed the geological, geophysical and geochemical reports, maps and miscellaneous papers listed in the References section. Of particular value are a number of publically available assessment reports filed by previous operators on the Red Top - Sunrise property. These reports contain detailed information on the results of work done on the property since its initial discovery.

The author visited the Red Top - Sunrise property on July 27, 2012. During this visit the author collected rock samples from the Sunrise, Snow and Bearsden showings.

Units of measure in this report are metric; monetary amounts referred to are in Canadian dollars.

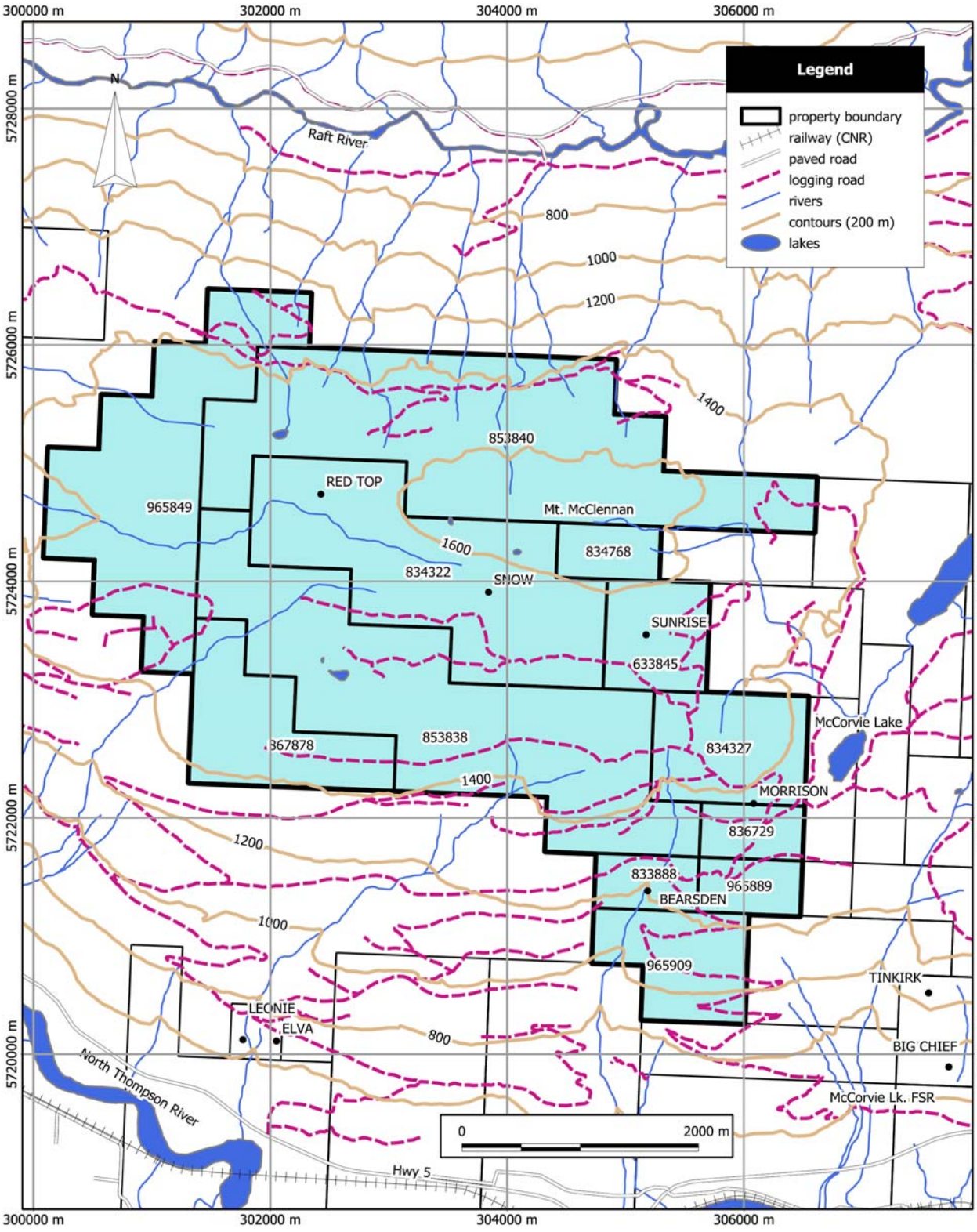


Figure 2. Mineral tenure map, Red Top - Sunrise property.

3 Property Description and Location

The Red Top - Sunrise property is centered at Latitude 51° 37’ 36” North and Longitude 119° 50’ 30” West, and covers an east trending ridge between the Raft and North Thompson Rivers, in the Clearwater area of south central British Columbia, Canada. The center of the property is approximately 20 kilometres east of the town of Clearwater and 112 kilometres north of the city of Kamloops (Figure 1). The property is located on NTS map sheet 082M/12W and on TRIM map sheet 082M 061.

The Red Top - Sunrise property consists of twelve (12) contiguous mineral tenures that are located within the Kamloops Mining Division (Table 1 & Figure 2). The total area of the tenures that comprise the property is calculated to be 2207.08 hectares. These tenures are held by Craig A. Lynes on behalf of Rich River Exploration Ltd. At the time of writing the property was under option to Montego Resources Inc., the property operator.

Table 1. List of Mineral Tenures, Red Top - Sunrise Property

Tenure Number	Claim Name	Issue Date	Good to Date	Area (ha)
633845	RED TOP	Sept. 14, 2009	Sept. 30, 2017	80.26
833888	BEARSDEN	Sept. 19, 2010	Sept. 30, 2017	40.15
834322	RED TOP 2	Sept. 26, 2010	Sept. 30, 2017	341.07
834327	SUNRISE SE	Sept. 26, 2010	Sept. 30, 2017	120.41
834768	RED TOP 2	Oct. 1, 2010	Sept. 30, 2017	40.12
836729	--	Oct. 26, 2010	Sept. 30, 2017	40.14
853838	S-W SUNRISE	May 8, 2011	Sept. 30, 2017	461.55
853840	RED-TOP NORTH	May 8, 2011	Sept. 30, 2017	501.47
867878	SUNSET	July 26, 2011	Sept. 30, 2017	140.48
965849	RED-TOP WEST	March 18, 2012	Sept. 30, 2017	300.90
965889	BEARSDEN	March 18, 2012	Sept. 30, 2017	40.15
965909	SILVER BEAR	March 18, 2012	Sept. 30, 2017	100.38
				2207.08

The mineral tenures comprising the Red Top - Sunrise property are shown in Figure 2 and listed in Table 1. The claim map shown in Figure 2 was generated from GIS spatial data downloaded from the Government of BC, Integrated Land Management Branch (ILMB), Land and Resource Data Warehouse (LRDW) (http://archive.ilmb.gov.bc.ca/lrdw/). These spatial layers are generated by the Mineral-Titles-Online (MTO) electronic staking system that is used to locate and record mineral tenures in British Columbia.

Claim details given in Table 1 were obtained using an online mineral tenure search engine available on the MTO web site.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Access

Access to the property is via the Cormie Lake Forest Service Road (FSR) which connects to Interprovincial Highway 5 approximately 16 kilometres east of the town of Clearwater. Travelling east on Highway 5, the start of the Cormie Lake road is found on the left, approximately 3 kilometres past Birch Island turnoff. This road is followed to the north as it switchbacks up a south facing slope. At approximate kilometre 13.7 there is junction with the 10.22 forest service road. This road is followed 0.95 kilometres north to the 5085 road which accesses the east end of the old mine road to the Sunrise workings.

4.2 Climate and Vegetation

There has been extensive clear cut logging south of Mt. McClennan. Between clearcuts there are stands of mature spruce and fir. Ponds and swamps occur in small depressions and in areas of subdued topography south of Mt. McClennan. Overburden is generally less than one metre, except in swampy areas where it is known to be over three meters. Rainfall is about 1 meter per year. Winters are cold with abundant snowfall.

4.3 Local Resources

The town of Clearwater has good accommodation and logistical support including helicopters and a hospital.

4.4 Infrastructure

The property is well situated with regard to local infrastructure. Paved highway 5, the CNR rail line and a B.C. Hydro transmission line all follow the course of the North Thompson River which is located a few kilometres south of the property (Figure 2).

4.5 Physiography

The Red Top - Sunrise Property is located at the south-eastern end of the Caribou Plateau. The claims lie on the south slope of Mount McClennan where elevations range from 880 to 1675 metres above sea level.

5 History

5.1 Early Exploration Work

The Redtop, Snow and Sunrise showings were first located and hand-trenched in the 1920's. It was not until the 1940's that the first holes were drilled (Assessment Report 6931; Vollo, 1978). H.C.B. Leitch in 1960 (Assessment Report 436; Leitch 1962) examined the showings, and Crowpat Minerals Ltd. in 1966 acquired the ground, and drilled three holes totalling 459 meters. Calbay Mining Corporation Ltd., in 1969, staked the same ground as did Crowpat, and proceeded in doing considerable trenching as well as drilling five holes for a total of 371 meters.

Kerr, Dawson and Associates Ltd. staked the Nimsic Claim Group on Mount McClennan in 1975 and examined the Snow and Sunrise Showings and described the mineralization as being of an exhalative nature (Assessment Report 5813; Dawson, 1976). Castlemaine Explorations Ltd. acquired the Nimsic property in 1976 from Kerr, Dawson and optioned it to Canadian Nickel Co. Ltd.

Canadian Nickel Co. Ltd. established a 98.75 kilometre grid in 1976 and completed a surface exploration program of geological mapping, soil sampling and a magnetometer survey over the entire grid in 1977 (Assessment Report 6603; Hunter and Vincent, 1977). A limited VLF-EM survey was conducted over part of the grid at that time; the results of this survey are reported in Assessment Report 6603. Craigmont Mines Ltd. optioned the ground from Canadian Nickel Co. Ltd. in 1978 and performed further geophysical surveys and drilled five holes totalling 383 meters (Assessment Report 6931; Vollo, 1978). The claims were allowed to lapse and the ground remained open until 1983 when Placer Dome Inc. staked the area.

5.2 Placer Dome Inc. 1983 - 1988

The Noble 1-6 claims were staked by Placer Dome Inc. in 1983. These claims were staked to cover the lead-zinc-silver minor copper gold (Redtop, Snow and Sunrise) mineral prospects, as well as two lead-silver (Bearsden and Tinkirk) showings, and a gold occurrence (Morrison) thought to be near McCorvie Lake.

In 1983 Placer Dome Inc. examined and assessed the Redtop, Snow and Sunrise workings. The extent of work includes 27 kilometres of grid, with VLF-EM and magnetometer surveys. A total of 300 soil samples were also collected. As well, a 3.4 kilometre grid was constructed over the probable site of the Morrison Au showing. A VLF (EM-16) survey was initiated and 71 soil samples were taken. The showing was not located. Bulk silt sediment

samples were also collected on Peavine Creek at 61 metre intervals between the 792 and 1311 metre contours.

During 1984, Placer Dome Inc. gathered 29.5 kilometres of ground magnetometer and VLF (EM-16) data. A limited Crone CEM (shootback EM) survey was performed with the hope that the CEM would better discriminate the massive sulphide showngs than the VLF (EM-16) instrumentation.

A limited field program was designed in 1985 to locate the source of mineralization in Peavine Creek. The program consisted of geological mapping, rock and soil sampling. During 1986 a field program was created to determine the significance of the Peavine Creek mineral occurrence, and to evaluate the Tinkirk showing. The 1986 program entailed refinement of the geological mapping and soil sampling, as well as detailed magnetometer and VLF ground surveys. Silt sampling was also initiated in the adjoining drainages to the west and an examination of the Tinkirk mineral prospect was completed.

The results of the above mentioned Placer Dome programs are described in Assessment Report numbers 12080 (Pinsent, 1984) and 13463 (Thorton, 1985).

Starting in May, 1988, a University of Toronto Electro-Magnetic Survey or U.T.E.M. was conducted over the entire SSR Grid to search for massive sulphides at depth. Geological mapping and rock sampling of the grid with detailed mapping and sampling of known mineral occurrences began in mid-June and continued into July. Regional traverses of the Noble claims during this time period discovered a sulphide replacement zone approximately 1.8 kilometres east of the Sunrise Showing.

Also in July, a detailed soil sampling survey was initiated in selective areas to relocate known, yet untested geochemical anomalies from previous surveys conducted by various mining companies. Continuing in late-July to early-August, 25 units were staked to cover the newly-discovered sulphide replacement zone. An additional 20 kilometres of grid was constructed with soil sampling and magnetometer surveys.

In late September, 953 metres of NQW diamond drilling were completed in four holes. All drill holes, except 88DD001 were intended to determine the stratigraphic continuity and thickness of felsic schists between the showings. Surface as well as downhole induced polarization surveys were completed in early November. The ground survey covered the area from the Snow to the Sunrise showing.

5.3 Placer Dome Inc. 1989

Field work began on the Noble Project on May 12, 1989 and was completed on July 10, 1989. Within this time frame two new grids, the McCorvie and Southern Reconnaissance Grids were constructed, soil sampled, and geologically mapped. Fill-in lines were also constructed on the SSR grid and soil sampled. A total of 3233 soils and 66 rocks were collected and analyzed for copper, lead, zinc, silver, gold and arsenic and mercury. In addition, 11 rock samples were submitted for thin section and 71.85 kilometres of grid line was established.

6 Geological Setting and Mineralization

6.1 Regional Geology

The regional tectonic setting of the Red Top – Sunrise property is shown in Figure 3. The geologic unit that hosts the showings on the property is part of a package of metasedimentary rocks that are assigned to the Eagle Bay Assemblage. These rocks are bounded by the Cretaceous Raft and Baldy batholiths to the north and south respectively. The Eagle Bay Formation is flanked to the west by Devonian-Triassic volcanic and sedimentary rock units of the Fennell Formation. To the east, the Eagle Bay Assemblage is bounded by the Archean Shuswap Metamorphic Complex.

Figure 4 is a geological map of the Vavenby area (Schiarizza and Preto, 1987; Massey et al., 2005). The geology within this map area contains metavolcanic and metasedimentary rocks of the Eagle Bay Assemblage (subdivided into 8 units) and adjacent rocks.

The map area covers a belt of structurally complex low-grade metamorphic rocks that lies along the western margin of the Omineca Belt. It is flanked by high-grade metamorphic rocks of the Shuswap Complex to the east and by rocks of the Intermontane Belt to the west. The area is underlain mainly by Paleozoic metasedimentary and metavolcanic rocks of the Eagle Bay Assemblage and the Fennel Formation. Late Devonian granitic orthogneiss locally intrudes Eagle Bay rocks. The Paleozoic rocks are cut by mid Cretaceous granodiorite and quartz monzonite of the Raft and Baldy batholiths, and by Early Tertiary quartz feldspar porphyry, basalt and lamprophyre dykes. They are locally overlain by Eocene sedimentary and volcanic rocks of the Kamloops Group and by Miocene plateau lavas.

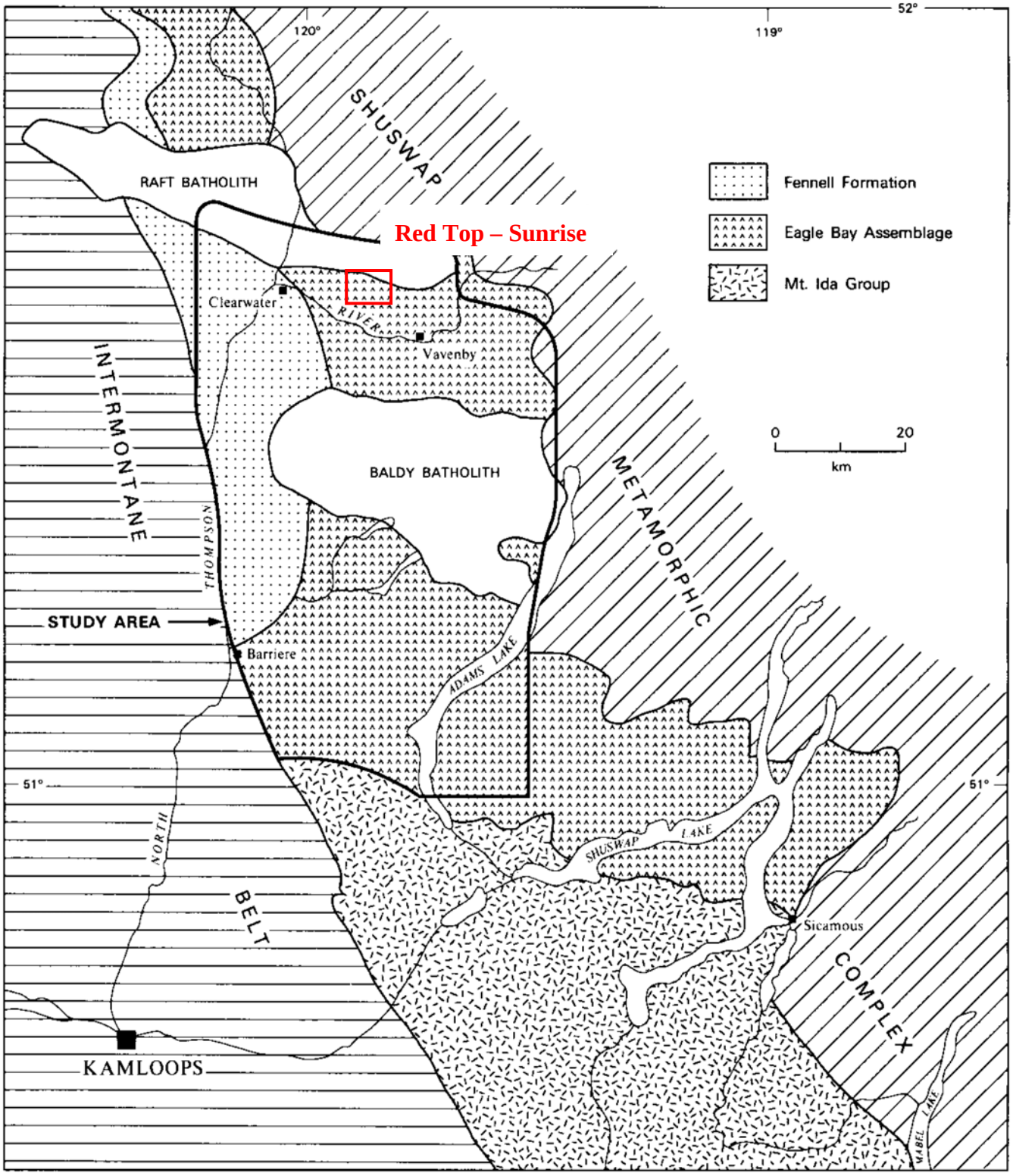


Figure 3. Regional tectonic setting of the Red Top – Sunrise property. Area covered by Schiarizza and Preto, 1987 is also shown (Study Area).

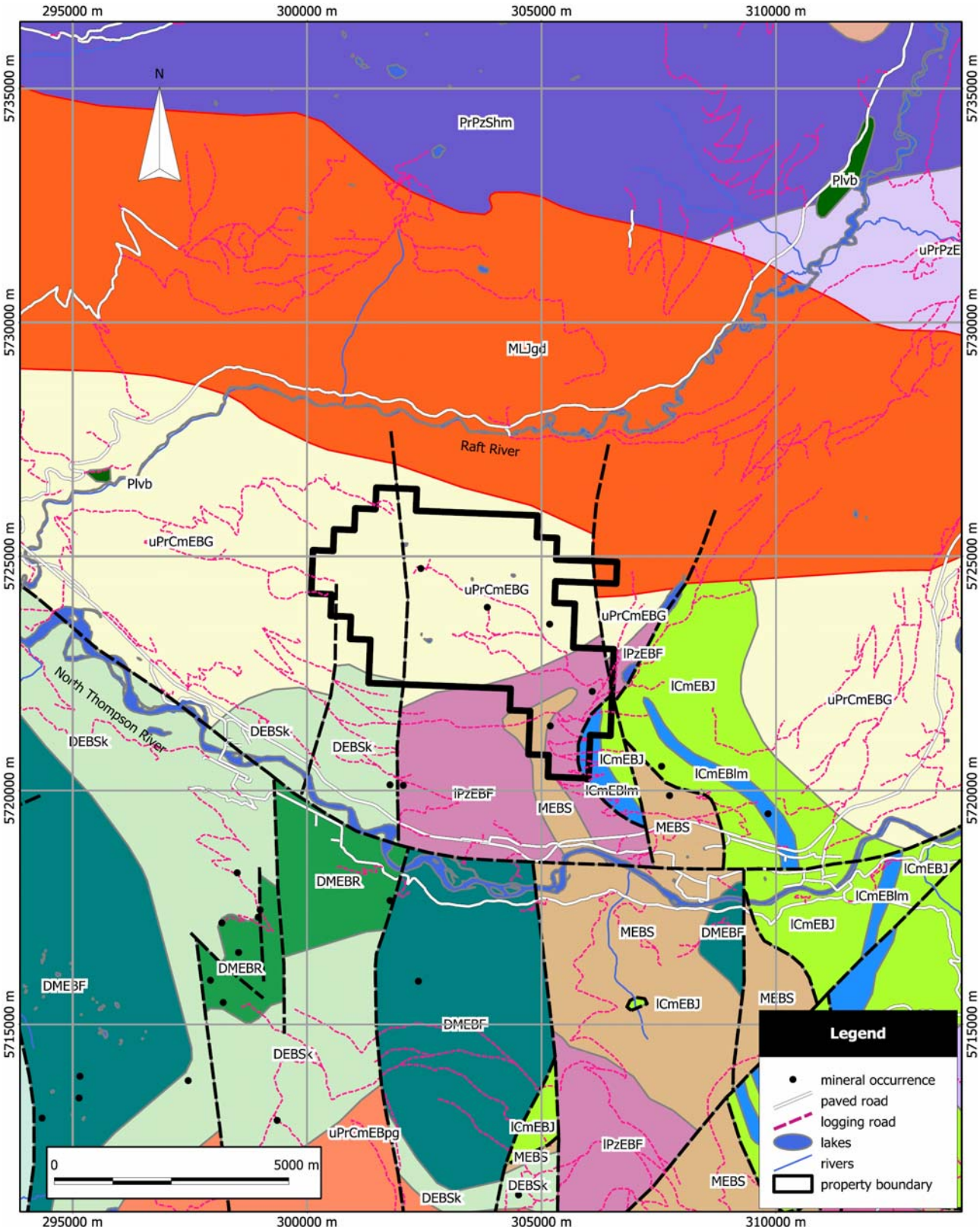


Figure 4. Geology in the vicinity of the Red Top – Sunrise property. Geology after Schiarizza and Preto, 1987; Massey et al., 2005. See Table 2 for description of map units.

The Paleozoic rocks occur in four structural slices separated by southwesterly-directed thrust faults. The upper three fault slices contain only Eagle Bay rocks, while the lowest slice comprises Eagle Bay strata structurally overlain by the Fennell Formation.

Rocks assigned to the Eagle Bay Assemblage range in age from Early Cambrian to Late Mississippian. They are in part correlative with Paleozoic successions in the Kootenay Arc and in the Barkerville-Cariboo River area. The oldest Eagle Bay rocks comprise quartzites and quartzose schists overlain by a unit of predominantly mafic metavolcanic rocks and limestone which, at one locality, contains Lower Cambrian archaeocyathids. An undated package of grit, phyllite, carbonate and metavolcanic rocks overlies the Early Cambrian succession. It is locally overlain by calcareous phyllite and associated calc-silicate schist and skarn or by mafic metavolcanic rocks. The upper part of the Eagle Bay Assemblage comprises a Devono-Mississippian succession consisting of felsic metavolcanic rocks overlain by intermediate, locally alkalic, metavolcanics and fine to coarse-grained clastic metasediments. These Devono-Mississippian rocks may be separated from older portions of the Eagle Bay Assemblage by a significant unconformity. Late Devonian orthogneiss that intrudes Eagle Bay rocks is probably related to the felsic metavolcanics.

The Fennell Formation comprises imbricated oceanic rocks of Slide Mountain terrane that were tectonically emplaced onto Mississippian clastic rocks of the Eagle Bay Assemblage prior to synmetamorphic southwesterly directed folding and thrusting. The formation comprises two major divisions. The lower structural division is a heterogeneous assemblage of bedded chert, gabbro, diabase, pillowed basalt, sandstone, quartz-feldspar-porphyry rhyolite and intraformational conglomerate. Conodonts extracted from bedded chert range in age from Early Mississippian to Middle Permian, while zircons extracted from quartz feldspar porphyry yield a Devonian uranium-lead age. The distribution of dated units indicates that the lower division is segmented into at least three and locally four imbricate thrust slices. The upper division consists almost entirely of pillowed and massive basalt, together with minor amounts of bedded chert and gabbro. Conodonts from two separate chert lenses within the division are respectively Early(?) Pennsylvanian and Middle Permian in age. The two divisions are therefore the same age, at least in part, and are inferred to be separated by a thrust fault.

Rocks of the Fennell and Eagle Bay assemblages are intruded by Middle to Late Jurassic granodiorite of the Raft batholith north of Mt. McClennan. A number of smaller, isolated granitic intrusions of Cretaceous to Tertiary age also cut the older assemblages. (unit KTg).

The youngest rocks in the area are vesicular olivine basalts of Pleistocene age (unit Plvb).

Table 2. Table of Formations

Map code	Age	Unit	Description
Plvb	Pleistocene	Unnamed	vesicular olivine basalt
KTgr	Cretaceous to Tertiary	Unnamed	biotite and muscovite-biotite granite, quartz monzonite, pegmatite and aplite
Kqm	Cretaceous	Unnamed	quartz monzonite, granodiorite
MLJgd	Middle Jurassic to Late Jurassic	Unnamed	granodiorite
DPFL	Devonian to Permian	Fennell Assemblage - Lower Structural Division	bedded chert, cherty argillite, diabase, gabbro, diorite and pillowed to massive metabasalt
MEBS	Mississippian	Eagle Bay Assemblage - Slate Creek Unit	mudstone, siltstone, shale fine clastic sedimentary rocks
DMEBR	Devonian to Mississippian	Eagle Bay Assemblage - Rexspar Unit	calc alkaline volcanic rocks
DMEBF	Devonian to Mississippian	Eagle Bay Assemblage - Foghorn Mountain Unit	andesitic volcanic rocks
DEBSk	Devonian	Eagle Bay Assemblage - Skwaam Bay Unit	calc alkaline volcanic rocks
DEBog	Devonian	Eagle Bay Assemblage	granodioritic orthogneiss
lPzEBF	Lower Paleozoic	Eagle Bay Assemblage - Forest Lake Unit	greenstone, greenschist metamorphic rocks
lCmEBlm	Lower Cambrian	Eagle Bay Assemblage	Tshinakin limestone member: massive, light grey finely crystalline limestone and dolostone
lCmEBJ	Lower Cambrian	Eagle Bay Assemblage - Johnson Lake Unit	greenstone, greenschist metamorphic rocks
lCmEBva	Lower Cambrian	Eagle Bay Assemblage	hornblende-quartz-feldspar-sericite-chlorite schist (intermediate metatuff or meta-intrusive?)
uPrCmEBG	Upper Proterozoic to Lower Cambrian	Eagle Bay Assemblage - Graffunder Lakes Unit	quartzite, quartz arenite sedimentary rocks
uPrPzEB	Upper Proterozoic to Paleozoic	Eagle Bay Assemblage	undivided quartzite, micaceous quartzite, siliceous phyllite, garnet-mica-quartz schist, greenstone, chloritic phyllite, chlorite schist, limestone, argillite, slate and conglomerate
uPrCmEBpg	Upper Proterozoic to Lower Cambrian	Eagle Bay Assemblage	Includes paragneiss, orthogneiss of unit Dog and sericite-quartz phyllite derived from quartz porphyry dikes and sills
PrPzShlm	Proterozoic to Paleozoic	Shuswap Assemblage	marble and diopsidic marble with lesser calc-silicate gneiss and amphibolite
PrPzShm	Proterozoic to Paleozoic	Shuswap Assemblage	undivided quartzofeldspathic gneiss, biotite-quartz schist, amphibolite, quartzite, marble, calc-silicate rock and skarn

6.1.1 Structures

The structure of the Clearwater-Vavenby area is described in Schiarizza and Preto (1987). They state that deformation is predominantly Jura-Cretaceous and early Tertiary in age. The earliest macroscopic structures are the thrust faults which imbricate the Fennell Formation and separate it from Mississippian elastic rocks of the Eagle Bay Assemblage. East-verging, premetamorphic mesoscopic folds within the Fennell Formation probably also formed at this time. Tectonic emplacement of the Fennell Formation was followed by synmetamorphic southwesterly directed folding and associated thrust faulting which gave rise to several large overturned folds and the thrust faults which define the structural/stratigraphic panels which dominate the map pattern. The associated synmetamorphic schistosity is the dominant mesoscopic fabric within the area. These early structures are cut by postmetamorphic northwest-trending mesoscopic folds with associated steeply dipping crenulation cleavage and axial crenulation lineation, and by later west trending macroscopic and mesoscopic folds which are synchronous with intrusion of the mid-Cretaceous Raft and Baldy batholiths. The youngest structures recognized are northeast-trending strike-slip faults and later northerly trending faults and associated folds which are Eocene in age.

6.2 Property Geology

The geology of the Red Top – Sunrise property is shown in Figure 5. This map and the following geological information are modified from Schiarizza and Preto, 1987.

6.2.1 Eagle Bay Assemblage

The oldest Eagle Bay rocks exposed on the property are micaceous quartzite, grit, phyllite and quartz mica schist, accompanied by minor amounts of chlorite schist, limestone, calcareous phyllite, calc-silicate schist and amphibolite of the Upper Proterozoic to Lower Cambrian Graffunder Lakes unit (uPrCmEBG). This unit is stratigraphically overlain by Devono-Mississippian Eagle Bay rocks, and locally by rocks of uncertain age. Locally it is intruded by bodies of orthogneiss and by sills (?) of quartz-eye sericite schist (quartz porphyry) that may be directly related to overlying felsic volcanic rocks of the Skwaam Bay Unit (DEBSk).

The dominant rock type within the Graffunder Lakes Unit is light to medium (rarely dark) grey to brownish grey, fine to medium-grained micaceous quartzite. It is generally well foliated, with a platy aspect due to more or less regularly spaced micaceous partings between plates and lenses of quartz-rich rock that are several millimetres to several centimetres thick. The mica is typically muscovite with minor amounts of chlorite, but includes biotite in higher metamorphic grade exposures where garnet porphyroblasts may also be present. The quartz and mica are generally accompanied by minor amounts of

plagioclase (albite or oligoclase), opaque oxides, tourmaline and apatite. The quartzites are locally calcareous, in which case they contain calcite as evenly scattered microscopic grains or aggregates, or as pods and lenses oriented parallel to the foliation.

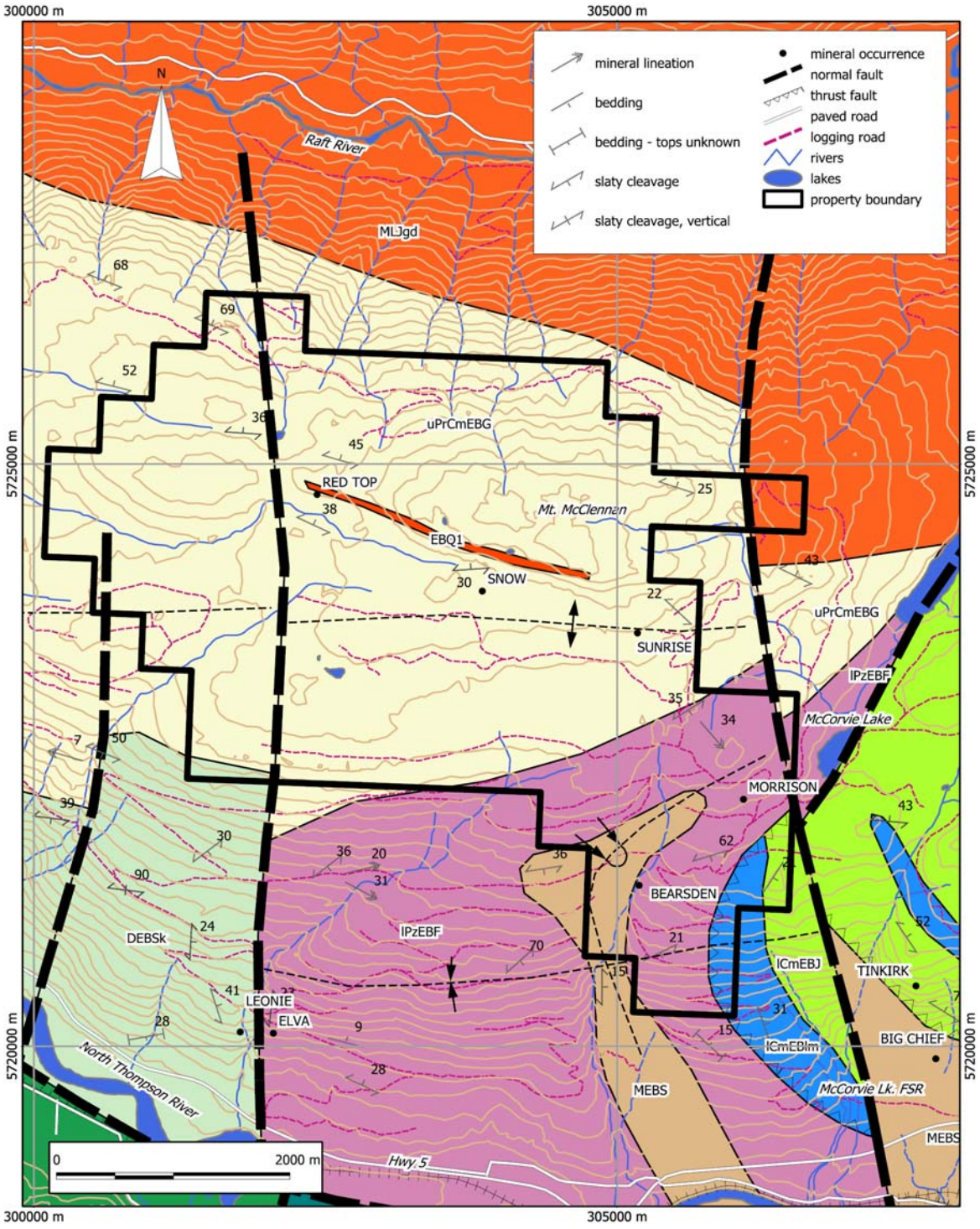


Figure 5. Geology of the Red Top – Sunrise property (Schiarizza and Preto, 1987). See Table 2 for description of map units.

Light grey to white, massive quartzite occurs locally within the Graffunder Lakes Unit, but is not common. Where present it comprises intervals ranging up to several metres thick which are enclosed within typical platy quartzites and quartz mica schists. Limestone (unit EBQ1), marble, calc-silicate schist and calcareous phyllite, together with chlorite schist of mafic metavolcanic origin, dominate the upper part of Graffunder Lakes unit where it is exposed along the slopes south of Mount McLennan. These rocks are intercalated with quartzite and quartz mica schist and are overlain by either Skwaam Bay (DEBSk) or Forest Lake Unit (lPzEBF).

The age of the Graffunder Lake Unit is unknown, other than that it must be older than the mid to late Devonian granitic and volcanic rocks which respectively intrude and overlie it. It is, however, lithologically very similar to rocks of Early Cambrian and/or older age, with which it is tentatively correlated. This correlation suggests that the mafic metavolcanics, limestone and related rocks which comprise the upper part of the Graffunder Lake Unit in the vicinity of Mount McClennan and to the northeast of Granite Mountain may be correlative with lithologically similar Early Cambrian rocks of the Johnson Lake Unit (lCmEBJ).

The Forest Lake Unit (lPzEBF) is a heterogeneous package of rocks dominated by fine to coarse-grained clastic metasediments which are intercalated with carbonate and mafic to felsic volcanic and volcaniclastic horizons. Rocks assigned to this unit occur mainly at the base of the first fault slice, but also locally within the third fault slice where they overlie the Graffunder Lake Unit.

Rocks assigned to the Forest Lake Unit (lPzEBF) consist mainly of schistose chlorite-sericite grit and sandstone, together with chlorite-sericite-quartz schist and relatively pure quartzite. These rocks are intercalated with minor amounts of dark grey phyllite, dark green chlorite schist of probable mafic volcanic origin, and rare thin horizons of limestone and dolostone. They outcrop on the slopes south of Mount McClennan on the north side of the North Thompson River, and south of the river east of Jones Creek. They are apparently restricted to a single fault block, within which they are underlain by the Graffunder Lake Unit and overlain by Mississippian fine-grained sedimentary rocks of the Slate Creek Unit.

The age of the Forest Lake Unit is not known. It is presumed to be Early Cambrian and/or younger as it locally overlies the Graffunder Lake Unit and Middle Devonian and/or older since it lies beneath the Middle Devonian felsic phyllites of the Skwaam Bay Unit. It is lithologically similar to parts of the Lardeau Group in the Kootenay Arc, which is inferred to be Cambro-Ordovician in age. It is also similar to Palaeozoic grit and associated rocks within the Snowshoe Formation of the Barkerville terrane.

The Devonian Skwaam Bay Unit (DEBSk) is dominated by light grey chlorite-sericite-quartz phyllite and schist derived mainly from felsic to intermediate volcanic and volcaniclastic rocks. Green chlorite schist derived from mafic volcanic rocks is present locally. Bands of dark grey phyllite and siltstone comprise approximately 10 per cent of the unit. This unit is host to numerous polymetallic base and precious metal showings within the Clearwater-Vavenby area.

The most abundant and characteristic rock type within the unit is fine-grained, light silvery grey to greenish grey sericite quartz phyllite, grading in places to slightly coarser grained muscovite quartz schist. Chlorite is generally present in amounts subordinate to the sericite, but may be absent. Weathered surfaces are light to medium shades of yellowish brown, reddish brown or grey, but may be dark rusty brown or bright yellow in areas of relatively intense pyrite mineralization. The rocks typically display a very fine and well developed papery fissility, although more platy varieties, comprising millimetre to centimetre-thick siliceous lenses and layers separated by thin sericite partings, also occur.

Roundish "eyes" of clear quartz are commonly present and grains of chalky white feldspar are locally evident. In places the phyllite has a spotted appearance due to the presence of porphyroblasts of rusty brown-weathering siderite, or less commonly chlorite or chloritoid.

Thin veins and lenses of quartz or quartz-carbonate often occur parallel to the schistosity. The phyllites are typically quite homogeneous over large intervals and contacts between individual volcanic or volcaniclastic horizons are not commonly evident. Locally the phyllite is coarsely fragmental and probably derived from coarse pyroclastic rocks although fragmental units are not as common as in overlying Forest Lake Unit. The clasts, comprising sericitic and/or chloritic siliceous lithic fragments, range from less than 1 centimetre to several tens of centimetres in size; they are generally flattened and foliated within the plane of the matrix schistosity but have a higher proportion of chlorite relative to sericite and are usually less quartzose and more feldspathic than their lighter coloured counterparts.

Distinctly more mafic, medium to dark green schists consisting of chlorite, albite, epidote and actinolite or green biotite are also present; these have little or no quartz and sericite. A band of dark green fragmental schist 10 metres thick, exposed along lower Foghorn Creek, contains coarse fragments of both dark green chloritic schist and light grey sericite quartz schist.

Metasedimentary intervals of medium to dark grey phyllite, siliceous phyllite, slate and siltstone are present throughout the Skwaam Bay Unit and are estimated to comprise about 10 per cent of the succession. Individual bands range from a few metres to a few tens of metres in thickness. Contacts with adjacent light-coloured sericite quartz phyllite are

generally sharp but locally are gradational and indistinct. The dark grey phyllite and siltstone are usually pyritic and may contain concordant lenses of pyritic quartz or quartz and rusty carbonate. These dark metasediments are very similar in appearance and composition to the slate, phyllite and siltstone which characterize the Mississippian Slate Creek Unit (MEBS).

The Slate Creek Unit (MEBS) of Mississippian age, is the youngest unit of the Eagle Bay Assemblage exposed within the Clearwater-Vavenby area. It is comprised mainly of dark grey slate, phyllite and siltstone, together with sandstone, granule to pebble conglomerate, limestone, dolostone and intermediate to felsic volcaniclastic rocks. These rocks crop out in several fault blocks on the property. Good exposures in this area are mainly in the lower reaches of Jones and Avery creeks.

Slate, phyllite and siltstone are the most abundant rock types within the Slate Creek Unit. These rocks are typically dark grey to black in colour, although light greenish grey phyllite is present1ocally: Siltstone may be somewhat lighter in colour than the associated slaty rocks and, in places, has a greenish or reddish cast. Cubes of pyrite and/or siderite or ankerite porphyroblasts are commonly present and may cause the rocks to become rusty; elsewhere the rocks are medium to dark grey on weathered surfaces. Siltstone is generally subordinate to slate or phyllite and occurs as horizons ranging up to a few centimetres in thickness. These may comprise persistent tabular layers (on the scale of an individual outcrop) or they may be markedly lenticular in nature. Rare grading, small-scale channels, flame structures and vague crossbedding were observed within the siltstone/slate sequences.

Slate and phyllite typically display a well-defined papery splitting habit; commonly, however, the slaty cleavage is cut by a strongly developed crenulation cleavage. The slaty rocks consist mainly of a fine-grained (0.04 millimetre), well foliated intergrowth of quartz, sericite and chlorite. Trains of fine, dark carbonaceous material may also be present; grains of tourmaline, apatite, plagioclase and zircon are also rarely evident. The coarser grained, less fissile siltstone horizons are similar in composition, but generally display relict clastic textures.

Approximately 30 per cent of the unit exposures contain horizons of sandstone and/or granule to pebble conglomerate, in addition to slate and siltstone. These coarser grained rocks occur in groups of beds intercalated with slate and phyllite over intervals of several tens of metres or more. They comprise mainly fine to coarse-grained sandstone which occurs in beds ranging from several centimetres to more than 1 metre thick. In general, the thicker beds are coarser grained and often include granule-size clasts. The sandstone beds are commonly graded and rare channels, ripups and sole markings were observed at their bases. These features suggest that much of the sandstone was deposited by turbidity currents.

The metasandstones of the Slate Creek Unit were derived mainly from moderately to poorly sorted quartz-rich wackes. Somewhat flattened grains of monocrystalline and polycrystalline

quartz, together with a much smaller amount of chert, plagioclase, lithic grains, and accessory muscovite, tourmaline and zircon, occur within a fine-grained recrystallized and foliated matrix. The matrix typically comprises from 10 to 40 per cent of the rock and consists mainly of quartz, sericite and chlorite; carbonate, opaque oxides and pyrite are minor constituents which may be intergrown with the matrix minerals or occur as relatively large porphyroblasts. The lithic component of the sandstones is largely fine-grained slate and siltstone, possibly derived from underlying beds, but also includes sericitic quartzofeldspathic rock, muscovitic quartzite and graphitic muscovite quartz phyllite or schist.

Foliation within the lithic fragments is, in most cases, continuous with that of the matrix. Rarely, however, lithic grains display a discordant foliation which predates the matrix cleavage. Detrital muscovite grains are invariably present in accessory amounts within the sandstone; these grains are much coarser than the fine-grained foliated sericite of the matrix and are often bent and fractured.

Quartz-pebble conglomerate was noted rarely within the Slate Creek Unit and is similar in composition to the finer grained sandstone and granule conglomerate with which it is associated. Clasts range up to 2 centimetres in size and are set within a dark grey silty or sandy phyllitic matrix.

Bands of rusty weathering light to medium greenish grey metatuff and metavolcanic breccia, similar to those in the Devonian-Mississippian Foghorn Mountain Unit (DMEBF), are intercalated with phyllite and siltstone of Slate Creek unit at a number of places within the area. These metavolcanic layers are typically a few metres or less in thickness and most cannot be traced for any substantial distance.

Pale greenish grey schistose chlorite sericite dolostone was slice. It outcrops along Avery Creek and to a lesser extent along Jones Creek and on the lower slopes of the North Thompson River valley east of Peavine Creek. The dolostone is intercalated with dark grey phyllite, granule to pebble conglomerate and rarely, thin lenses of dark grey limestone. Exposures along Avery Creek indicate that the dolostone locally occurs over intervals that are many tens of metres thick.

Slate Creek rocks exposed in the Vavenby area occur at the top of the third Eagle Bay fault slice. Within this area, which is transected by a number of late, northerly trending faults, the unit is generally thin; it is gradationally underlain by the and structurally overlain by quartzites of the Graffunder Lake Unit of the overlying fault slice.

The abrupt change in Eagle Bay stratigraphy across the bounding faults suggests that they may follow the loci of earlier faults which were active during deposition of the Devono-Mississippian section of the Eagle Bay succession.

6.2.2 Raft River Batholith

The north-central portions of the property are underlain by Early Jurassic, medium to coarse-grained diorite to granodiorite of the Raft River Batholith that weathers to a white to pinkish hue (MLJgd). Border zones, which are from a few metres to over 100 metres in width, are commonly mafic-rich and greenish in colour; they are reported to appear to be altered in composition by the assimilation of Nicola Group rocks during intrusion. Weak sericite alteration is common near intrusive contacts and it is intensely developed in the Silver King area.

Table 3. Mineral occurrences, Red Top - Sunrise property.

Name	Minfile No	Easting	Northing	Commodity	Alteration	Minerals
Red Top	082M 044	302429	5724737	Ag, Pb, Zn, Cu, Au	Sericite, silica, pyrite	Pyrite, pyrrhotite, galena, sphalerite, chalcopyrite
Snow	082M 045	303840	5723909	Ag, Pb, Zn, Cu, Au	Pyrite, silica	Pyrite, pyrrhotite, galena, sphalerite, chalcopyrite
Sunrise	082M 046	305174	5723548	Ag, Pb, Zn, Cu, Au	Silica	Pyrite, pyrrhotite, sphalerite, galena, chalcopyrite, tetrahedrite
Morrison	082M 047	306082	5722121	Au	Quartz	Mariposite
Bearsden	082M 033	305187	5721382	Ag, Pb, Cu, Au	Quartz	Pyrite, galena, chalcopyrite

Note: UTM coordinates - NAD83, Zone 11

6.3 Mineral Occurrences

Lower Cambrian Eagle Bay Formation rocks on Mount McClennan are comprised of metasediments and metavolcanics, which are deformed into a shallow plunging east trending antiform. The rocks, which occupy the north limb of the structure, include quartzite,

chlorite- muscovite-quartz schist, quartz-sericite schist, limestone, calc-silicate schist and skarn. Stratiform lenses of massive, semi- massive and disseminated pyrite and pyrrhotite with lesser galena, sphalerite and chalcopyrite occur in pyritiferous, siliceous and recrystallized units (Table 3). These mineral occurrences are classified as Sedimentary-Exhalative but have some characteristics more similar to Kuroko volcanogenic type deposits.

The Morrison and Bearsden showings appear to be vein occurrences.

6.3.1 Red Top (Minfile #082M 044)

The Redtop prospect is a 300 metre thick section of rusty, pyritic, quartz-sericite schist with intercalated meta-argillite and limestone. The strata strikes 110 degrees and dips 30 to 50 degrees northeast. A 1.5 metre chip sample assayed 0.17 grams per tonne gold, 18.9 grams per tonne silver, 0.08 per cent copper, 2.75 per cent lead and 3.15 per cent zinc (Assessment Report 436; Leitch, 1962). A 2.0 metre thick chip sample of the pyritic unit, close to the base of the limestone assayed 3.4 grams per tonne silver, 0.015 per cent copper, 0.047 per cent zinc and 0.08 per cent lead (Assessment Report 12080; Pinsent, 1984).

6.3.2 Snow (Minfile #082M 045)

The Snow prospect consists of four "semi-conformable", 0.3 to 1.2 metre wide bands of massive sulphide within a 12.2 metre thick, flat-lying unit of carbonate bearing quartz-sericite schist. Zinc rich bands grade upward into copper rich bands and chalcopyrite is partially mobilized into north trending tension fractures. A 0.6 metre sample assayed 1.70 per cent copper, 8.25 per cent lead and 2.57 per cent zinc (Assessment Report 436; Leitch, 1962) and chips from several mineralized blocks assayed 1.18 per cent copper, 0.80 per cent zinc, 2.10 per cent lead, 140 grams per tonne silver and 0.12 grams per tonne gold (Assessment Report 12080; Pinsent 1984).

6.3.3 Sunrise (Minfile #082M 046)

The Sunrise prospect consists of massive sulphide horizons, up to 1.2 metre thick, within flat-lying quartz sericite schist and close to the nose of the antiform. A 2.0 metre chip sample assayed 1.73 grams per tonne gold, 225 grams per tonne silver, 2.62 per cent lead, 18.3 per cent zinc and 0.13 per cent copper (Assessment Report 12080; Pinsent, 1984). The mineralization occurs over a 150 metre length.

6.3.4 Morrison (Minfile #082M 047)

Gold is reported in quartz veins and altered chlorite-sericite-quartz schist. A channel sample is reported to assay 13.7 grams per tonne gold (Assessment Report 436; Leitch, 1962). Mariposite probably occurs in the schist.

6.3.5 Bearsden (Minfile #082M 033)

A quartz vein apparently carries silver, gold, copper and lead mineralization. An unknown sample type assayed 0.34 grams per tonne gold, 295 grams per tonne silver and 11.26 per cent lead (Old Mineral Deposit Inventory Form in Property File).

7 2012 Exploration Program

The 2012 Red Top - Sunrise exploration program involved two components: an airborne geophysical survey with radiometric and magnetic sensors done by Precision Geosurveys and a ground lithogeochemical and prospecting program targeting specific areas on the property done by Rich River Exploration. As part of the prospecting program road access to the main showings was improved by cutting out windfall and removing underbrush. In addition, the author compiled data and did a one day property examination for Rich River on July 27, 2012. The total value of the work done in 2012 was $109,329.32 as documented in Appendix B – Statement of Expenditures. Of this amount, $95,500 was filed for assessment credit (Statement of Work filed September 25, 2012 by C. Lynes, MTO event no. 5407123).

7.1 Airborne Geophysical Survey

The following information is extracted from a report submitted to Montego Resources Ltd., the property operator, by Precision Geosurveys Inc., the contractor engaged to fly an airborne geophysical survey over the Red Top - Sunrise property (Poon, 2012). A copy of this report and accompanying maps and data files are appended to this report (Appendix D). The total pre-tax cost of this survey was $27,000.

The geophysical survey involved the acquisition of high resolution magnetic and radiometric data over the Red Top - Sunrise property. The survey area was approximately 6.0 km by 6.5 km (Figure 6). A total of 260 line kilometres were flown for this survey; this total includes tie lines and survey lines. The survey lines were flown at 100 meter spacing at a $030^{o}/210^{o}$ heading; the tie lines were flown at 1 km spacing at a heading of $120^{o}/300^{o}$. Precision GeoSurveys flew the property using a Bell 206 Jet Ranger helicopter. The average survey elevation was 48 meters vertically above ground.

The base of operations for this survey was in Clearwater, BC. The survey was started on September 7 and completed on September 8, 2012.

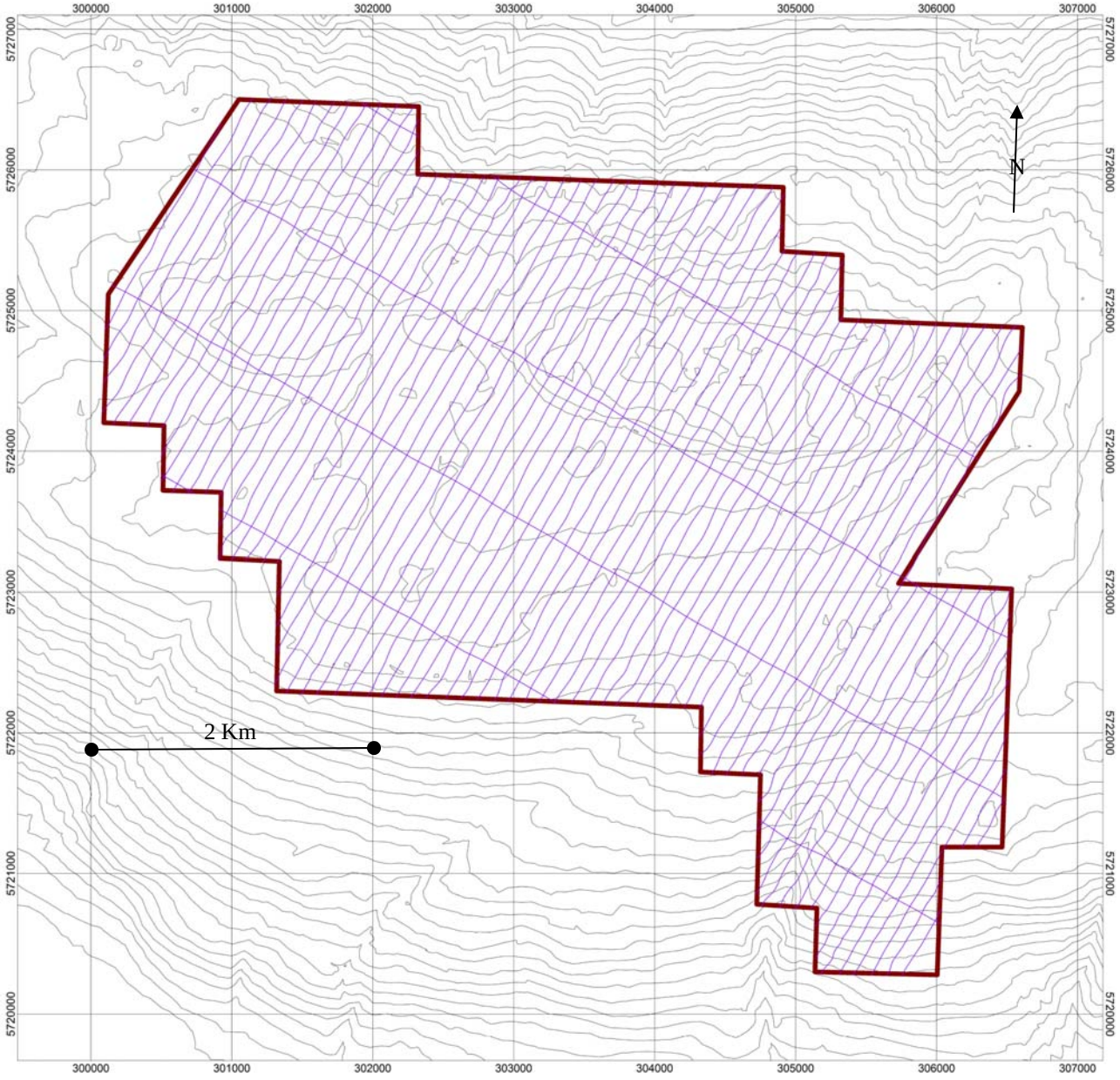


Figure 6. Location of airborne geophysical survey lines(UTM Zone 11, NAD83).

A magnetic base station was set up before every flight to ensure that diurnal activity is recorded during the survey flights. The base station was installed at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines that could affect the survey data. Base station readings were reviewed at regular intervals to ensure that no data was collected during periods with high diurnal activity (greater than 5 nT per minute). The magnetic variations recorded from the stationary base station are removed

from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

For this survey, a magnetometer, spectrometer, base station, laser altimeter, pilot guidance unit, and a data acquisition system were required to carry out the survey and collect quality, high resolution data. Detailed information on these survey components are contained in the appended geophysical report.

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted “stinger”.

The IRIS, or Integrated Radiometric Information System is a fully integrated, gamma radiation detection system containing 16.8 litres of NaI (T1) downward looking crystals and 4.2 litres NaI (T1) upward looking crystals.

For monitoring and recording of the Earth’s diurnal magnetic field variation, Precision GeoSurveys operates two GEM GSM-19T magnetometer base stations continuously throughout the airborne data acquisition survey.

7.1.1 Magnetic Data

Magnetic surveying is probably the most common airborne survey type to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

1. Geological Mapping to aid in mapping lithology, structure and alteration in both hard rock environments and for mapping basement lithology, structure and alteration in sedimentary basins or for regional tectonic studies.
2. Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

Figure 7 shows geology and mineral occurrence locations superimposed on the Total Magnetic Intensity (TMI) base map. This map was produced by the author using Manifold GIS software. The most striking feature visible on this map is a north trending area of positive magnetic response that crosscuts the structure and stratigraphic trends on the property. This north trending feature appears to connect with an easterly trending zone of high magnetic response that occupies the northern part of the property forming a T-shaped anomaly. The easterly trending anomaly corresponds to rocks that are assumed to sit stratigraphically above the mineralized horizons on the property. A similar magnetic response appears to be associated with rocks underlying the Morrison and Bearsden showings. These magnetic highs are probably related to the presence of magnetic minerals

in underlying bedrock. It is unknown whether these minerals are primary or secondary in nature.

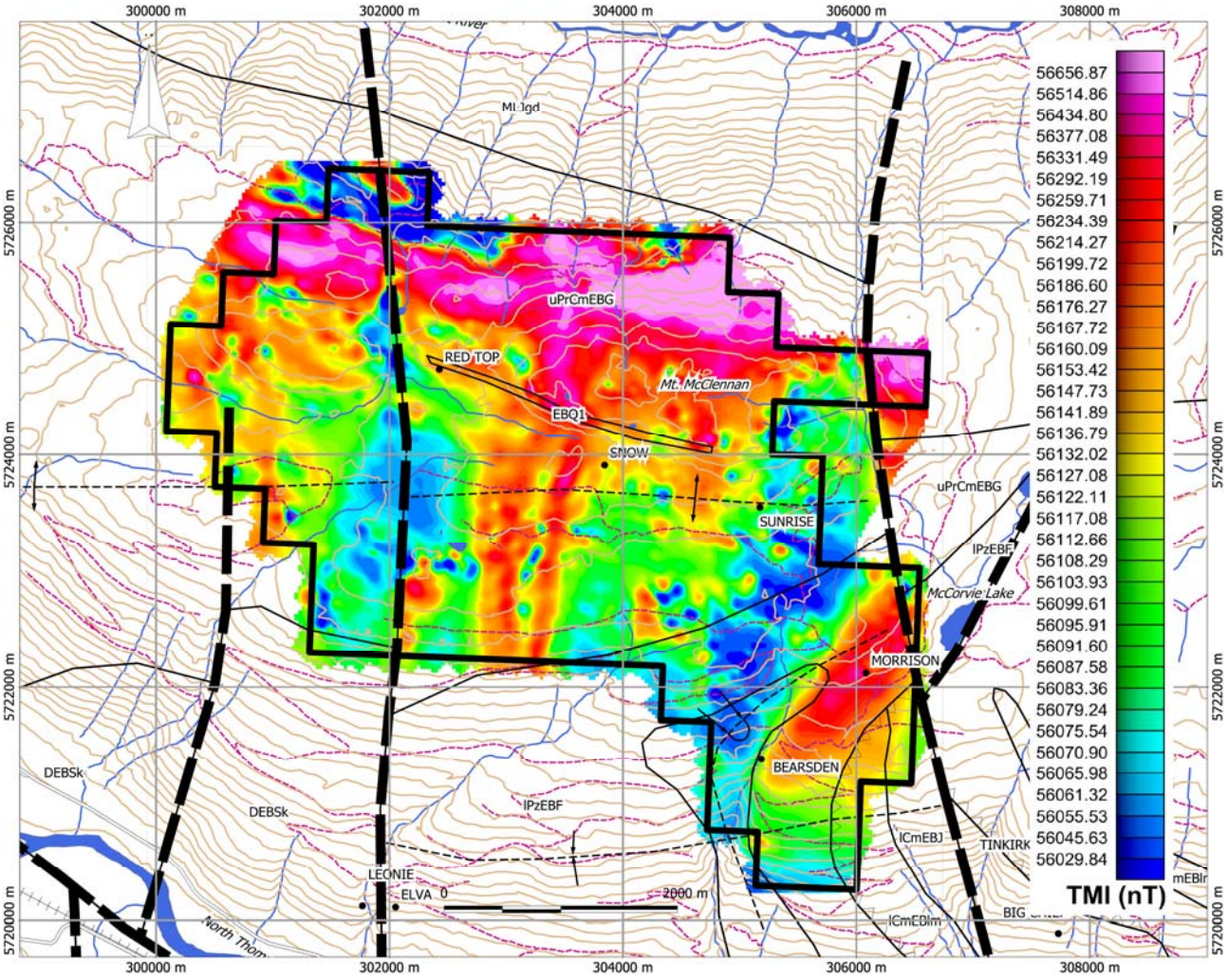


Figure 7. Geology contacts and mineral showings superimposed on Total Magnetic Intensity (TMI). See Table 2 for geology legend.

7.1.2 Radiometric Data

Radiometric surveys detect and map natural radioactive emanations, called gamma rays, from rocks and soils. All detectable gamma radiation from earth materials come from the natural decay products of three primary elements; uranium, thorium, and potassium. The purpose of radiometric surveys is to determine either the absolute or relative amounts of U, Th, and K in surface rocks and soils.

Figure 8 shows geology and mineral occurrences superimposed on the K equivalent radiometric base map. This map was produced by the author using Manifold GIS software. The K concentration was deemed to be the most useful radiometric measurement as K alteration is a common feature of hydrothermal systems. Areas of K enrichment correspond

to the potassic zone; removal of K (plus Na, Ca, Mg) occurs as a result of intense and pervasive argillic (clay) alteration.

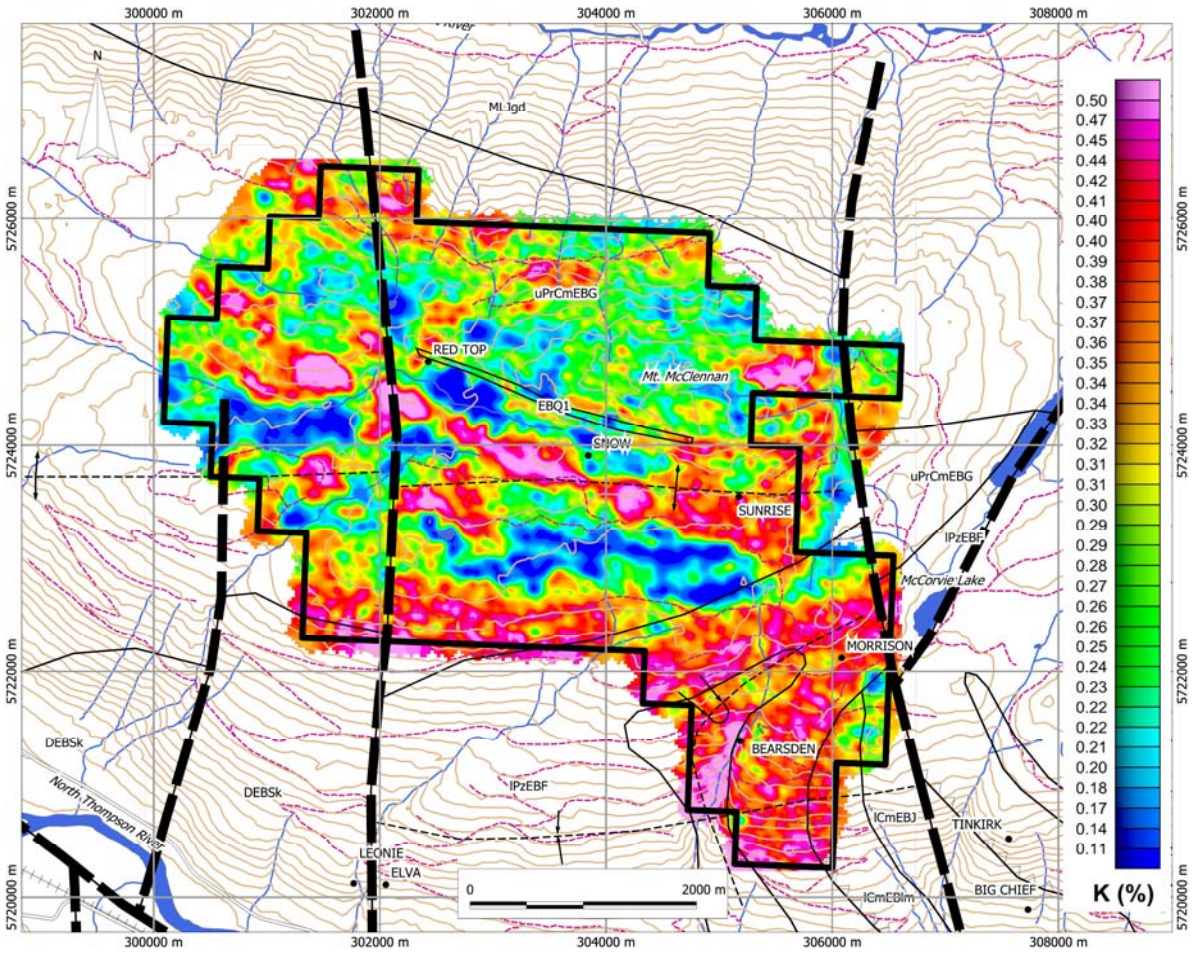


Figure 8. Geology and mineral showings superimposed on airborne radiometric data showing potassium equivalent concentration. Map prepared by D.G. MacIntyre.

The most striking feature visible on Figure 8 is a northwest elongate high in the central portion of the property. This anomaly is at a slightly oblique angle to what is assumed to be the east trending axis of a major antiform. Other areas of anomalous K response occur in the southeast corner of the property. The significance of these anomalies is unknown. Some of the K lows shown on Figure 8 may be due to feldspar destructive hydrothermal alteration or to the presence of rocks with low K content.

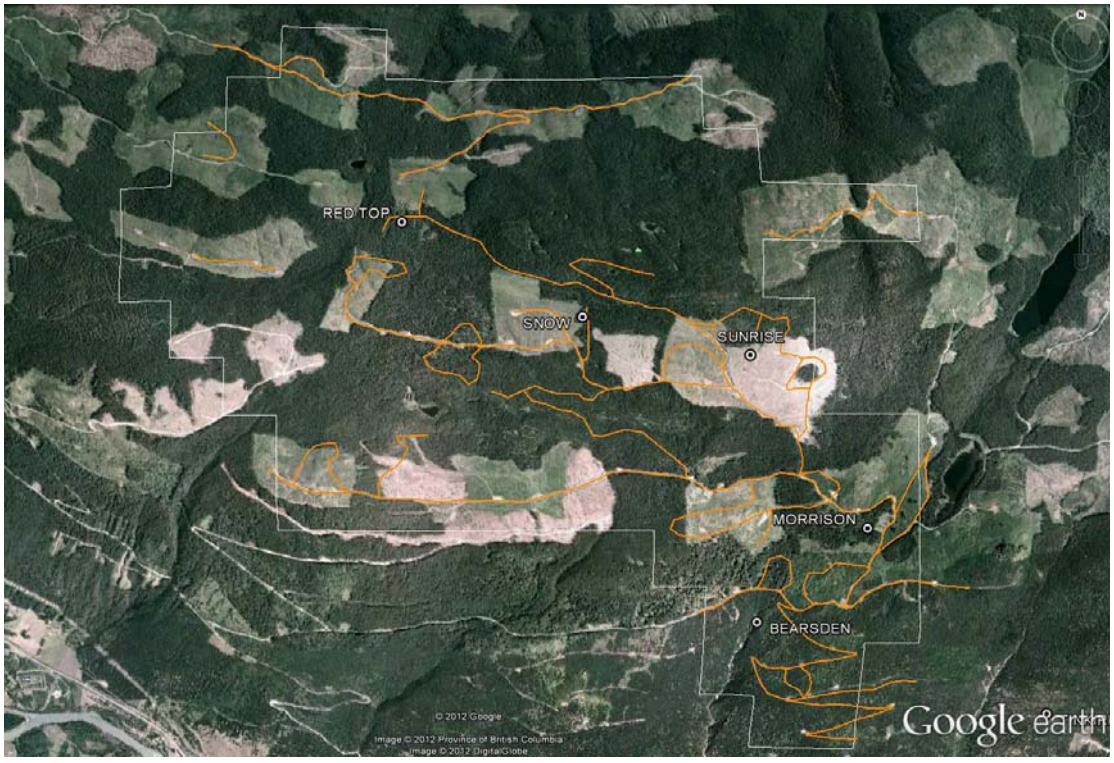


Figure 9. Traverse lines (orange) superimposed on a Google Earth image of the property.

7.2 Lithogeochemical Sampling

A program of lithogeochemical sampling and prospecting was undertaken by Craig Lynes, the property owner. This work was done by Mr. Lynes's company, Rich River Exploration in the time period July 24th to 30th and August 10th to 24th, 2012. A total of 22 rock samples were collected. Figure 9 shows the location of prospecting traverses on a Google Earth image of the property. A total of 52.6 traverse kilometres were done in 2012. Where mineralization was observed, samples were collected for lithogeochemical analyses. Figure 10 shows the location of samples collected in 2012. Analytical results are summarized in Table 4. In addition, the writer collected 7 lithogeochemical samples during a property visit on July 27, 2012. These samples were collected from the Sunrise, Snow and Bearsden showings (Figure 11). A description of these samples is given in Table 5; analytical results are given in Tables 6 and 7.

Samples collected in 2012 by C. Lynes were sent to ALS Laboratories in Kamloops for analysis. The analytical method used was conventional Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES). A standard Fire Assay with Atomic Absorption finish on a 30g sample was used to determine Au concentrations. For the ICP-AES technique, sample decomposition was done by nitric agua regia digestion. A prepared sample is digested with aqua regia in a graphite heating block. After cooling, the resulting

solution is diluted to 12.5 mL with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry. The analytical results are corrected for inter-element spectral interferences. It should be noted that in the majority of geological matrices, data reported from an aqua regia leach should be considered as representing only the leachable portion of the particular analyte. ALS runs standards and provides re-samples at varying intervals for each sample shipment analysed.

Samples collected by the writer were submitted to the Acme preparation laboratory in Smithers. A 250 gram sample at -200 mesh was prepared and shipped to Acme's Vancouver laboratory. A full suite of 53 elements were determined by ICP Mass Spectrometry following an Aqua Regia digestion. For well mineralized samples, Cu, Pb, Zn and Ag were determined by a hot Aqua Regia digestion and ICP Emission Spectrometry while Au, Pt and Pb were determined by Fire Assay fusion and ICP-MS analysis.

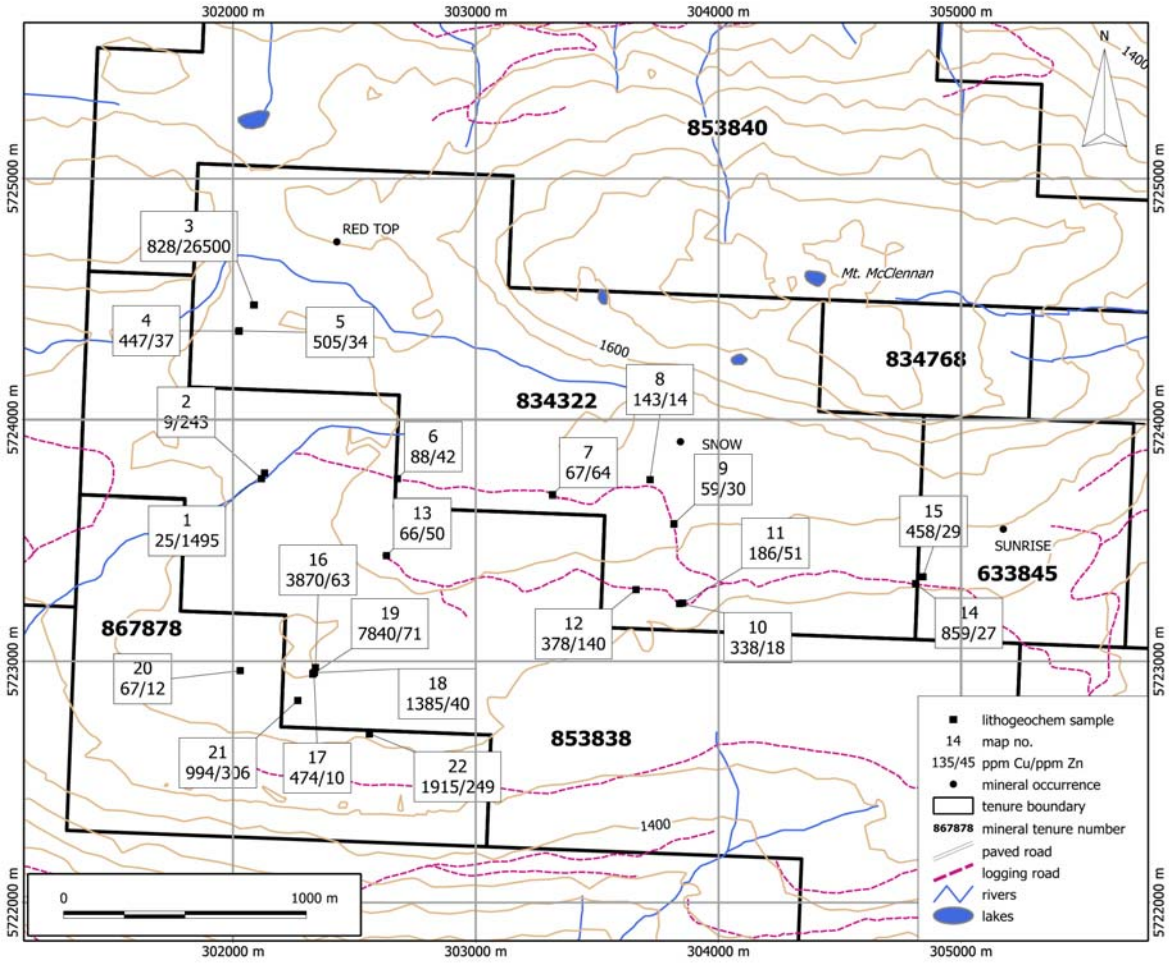


Figure 10. Location of 2012 lithogeochemical samples collected by C. Lynes.

Table 4. Summary of analytical results for grab samples collected by C.Lynes, 2012.

Map No.	Sample	Easting	Northing	Description	Cu ppm	Zn ppm	Pb ppm	Au ppm	Ag ppm	Fe %	S %
1	708932	302130	5723778	rusty quartz vein material - subcrop and end of logging spur	25	1495	**4090**	0.057	76.3	1.88	0.92
2	708933	302117	5723755	quartz-carb. vein material with py,	9	243	137	0.134	0.9	3.65	1.14
3	708934	302086	5724475	40cm angular quartz subcrop with sph., cpy., py.	**828**	**26500**	175	<0.005	**3.9**	9.85	>10.0
4	708935	302024	5724367	quartz with massive po in roadcut… old trench?	447	37	4	<0.005	**1.2**	22.8	>10.0
5	708936	302025	5724368	massive po with minor cpy same trench area	**505**	34	3	0.02	**1.3**	39.4	>10.0
6	708937	302677	5723755	quartz subcrop in road cut	88	42	27	<0.005	<0.2	3.2	0.53
7	708938	303316	5723689	sucrosic quartz subcrop with py	67	64	17	<0.005	0.4	5.04	3.3
8	708939	303718	5723750	quartz with massive po and minor cpy	143	14	7	<0.005	0.4	7.94	4.8
9	708940	303816	5723570	mineralised outcrop in road bed	59	30	14	<0.005	0.3	6.19	4.11
10	708941	303841	5723240	epidote rich skarn with diss py minor cpy?	338	18	7	0.007	0.3	8.91	1.05
11	708942	303852	5723241	epidote skarn with blebs semi massive pyrite	186	51	298	0.02	0.4	9.33	6.28
12	708943	303661	5723298	epidote skarn with minor diss. cpy and mal. in outcrop	378	140	14	0.009	<0.2	3.02	0.36
13	708944	302632	5723439	0.5m quartz vein in outcrop rusty and micaceous	66	50	9	0.017	<0.2	4.15	0.28

Map No.	Sample	Easting	Northing	Description	Cu ppm	Zn ppm	Pb ppm	Au ppm	Ag ppm	Fe %	S %
14	708945	304813	5723322	massive po in outcrop in road bed	**859**	27	3	<0.005	0.7	33	>10.0
15	708946	304843	5723351	quartz with massive po minor cpy in old trench	458	29	6	<0.005	0.5	11.05	8.52
16	708947	302340	5722975	quartz vein in outcrop with py and cpy - malachite stained	**3870**	63	6	**0.652**	**6.2**	3.7	1.29
17	708948	302333	5722954	40cm quartz vein in outcrop vuggy with magnetite cpy	474	10	3	0.025	**1.7**	2.14	0.7
18	708949	302334	5722953	same vein with mal. stain in area of epidote alt zone	**1385**	40	3	0.028	**1.2**	1.43	0.14
19	708950	302329	5722948	angular quartz subcrop with mal.	**7840**	71	12	0.097	**7.6**	5.52	1.39
20	14701	302029	5722961	massive py. near skarn zone with epidote	67	12	23	<0.005	0.3	20.4	>10.0
21	14702	302267	5722838	semi-massive py with magnetite in road bed	**994**	306	16	0.023	0.9	26.9	>10.0
22	14703	302561	5722700	massive magnetite minor py - subcrop float	**1915**	249	10	<0.005	0.4	32.9	>10.0

7.2.1 Rock Samples

A total of 22 rock samples were collected and analyzed as part of Rich River's targeted geochemical program. Analytical results for Cu, Zn, Pb, Au, Ag, As, Fe and S are given in Table 4. Several samples returned anomalous results. The best result was for sample 708934 (No. 3, Figure 10) which returned 828 ppm Cu and 2.65% Zn and 3.9 ppm Ag. This sample is described as a 40 centimetre wide subcrop of quartz with visible sphalerite, chalcopyrite and pyrite. A total of 8 of the 22 samples collected contained greater than 500 ppm Cu, one sample contained 4090 ppm Pb (No 1, Figure 10).

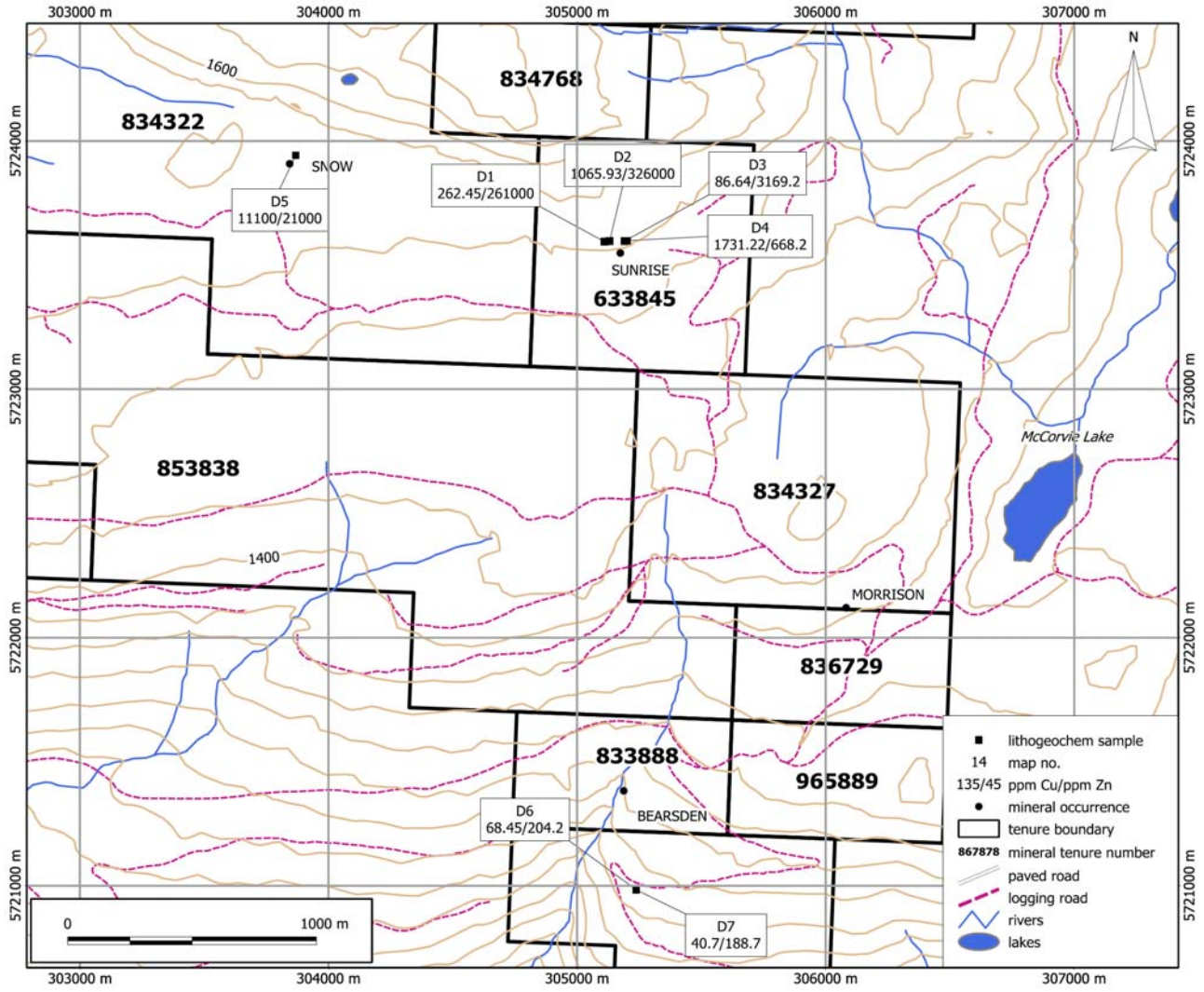


Figure 11. Location of 2012 lithogeochemical samples collected by D. MacIntyre

Table 5. Description and location information for grab samples collected by D. MacIntyre, July 2012. Sample locations are shown on Figure 11.

Map No.	Sample	Easting	Northing	Showing	Description
D1	SR12-001	305110	5723594	Sunrise	massive sulphide float from end of trench
D2	SR12-002	305131	5723597	Sunrise	massive sulphide float from bottom of trench
D3	SR12-003	305190	5723596	Sunrise	rusty quartz-sericite-schist
D4	SR12-004	305200	5723598	Sunrise	massive sulphide float on surface near trenches
D5	SR12-005	303868	5723942	Snow	quartz-muscovite schist float with mass. sulphide bands
D6	SR12-006	305238	5720983	Bearsden	quartz float with galena
D7	SR12-007	305238	5720983	Bearsden	schist with quartz, mariposite, galena

Note: coordinates are in UTM zone 11, datum NAD83

Samples of massive sulphide collected by the writer from the Sunrise showing returned high values for Zn (26.1% and 32.6%), Pb (9.57% and 4.34%) and Ag (104 and 227 grams per tonne) and moderately anomalous values in Cu (D1,D2, Table 7) . Sample D2 also contained

anomalous Au (823 ppb). A sample of quartz-muscovite schist with massive sulphide bands from the Snow showing contained 4.72% Pb, 2.1% Zn, 1.11% Cu and 259 grams per tonne (GM/T) Ag (D5, Table 7). These results are comparable to results reported by previous operators on the property and confirm the presence of high grade massive sulphide mineralization at the Sunrise and Snow showings. A sample collected from the Bearsden showing (D6, Table 7) contained 1.14% Pb and 33 GM/T Ag.

Table 6. ICP-MS analytical results for samples listed in Table 4.

Map No.	Cu PPM	Zn PPM	Pb PPM	Au PPB	Ag PPB	As PPM	Ni PPM	Co PPM	Fe %	S %	Hg PPB
D1	262.45	>10000.0	>10000.00	107	>100000	0.6	54.2	44	14.93	9.76	22259
D2	1065.93	>10000.0	>10000.00	1221	>100000	<0.1	92.1	47.4	17.59	9.09	15041
D3	86.64	3169.2	781.13	<100	3102	0.2	29.3	4.9	3.05	0.74	112
D4	1731.22	668.2	176.23	<100	1700	0.7	112.9	93.4	>40.00	>10.00	51
D5	>10000.0	>10000.0	3952.65	133	>100000	49.4	23.4	22.9	28.48	>10.00	525
D6	68.45	204.2	>10000.00	<100	33670	32.2	172	29.6	4.72	0.65	16
D7	40.7	188.7	6937.55	<100	13994	11.4	68.4	9.9	4.48	0.26	19

Table 7. Assay results for high grade samples listed in Table 5.

Map No.	Cu %	Zn %	Pb %	Au PPB	Ag GM/T
D1	0.022	26.1	9.57	68	104
D2	0.109	32.6	4.34	823	227
D5	1.11	2.1	4.72	78	259
D6	0.004	0.02	1.14		33

Note: Cu, Zn, Pb, Ag by ICP-ES; Au by fire assay/ICP-MS

8 Conclusions and Recommendations

The Red Top - Sunrise property is a property of merit. In the writers opinion more work is needed to fully evaluate the economic potential of the property. The property is attractive because it is readily accessible and within an area considered prospective for sediment hosted massive sulphide deposits. Previous exploration has located several massive sulphide showings over a strike length of 3.6 kilometres. Sampling by the current and previous operators has returned assay values from surface trenches that grade in excess of 30% Zn. Moderately high Pb and Ag values have also been returned.

The results of the airborne radiometric/magnetic survey described in this report have identified areas of anomalous response that cannot be directly explained on the basis of

known geology. Further work is needed to determine the significance of these anomalies, particularly the north trending magnetic anomaly that cross cuts the regional stratigraphy in the center of the property. The elongate westerly trending K radiometric anomaly in the central half of the property may be due to increased concentration of potassic minerals such as K-feldspar or K-bearing mica. Both of these minerals are found in zones of hydrothermal alteration. Conversely, areas of low K radiometric response may represent zones of feldspar destructive hydrothermal alteration.

There does not appear to be any direct correlation between elevated magnetic response and the known bedrock geology. More follow up work is needed to determine what is causing the magnetic anomalies on the property. Some of these magnetic highs could be due to the presence of magnetic minerals associated with massive sulphide mineralization. Additional prospecting, targeted soil sampling and a close spaced ground EM survey should be done in the vicinity of known showings and areas of anomalous magnetic and radiometric response adjacent to these showings. Depending on the results of these follow up surveys, a program of diamond drilling could be done to further test the best targets.

9 References

Cannon, R. 1988: Geophysical Survey Report, "Surface and Downhole Induced Polarization And Resistivity Surveys, Noble Claims".

Cannon, R.W. 1990: Geophysical Survey Report on the Noble 1-12 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 200191 (Part 3), 25 pages.

Dawson, J. M. 1976: Geological and Geochemical Report on the Nimsic Claim Group, Mount McClennan Area; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 5813, 32 pages.

Galley, A. 2001: A Review of the Characteristics of Volcanogenic Massive Sulphide (VMS) Deposits. 35pages, plus attachments. In Alldrick, et al., 2001: Massive Sulphides -A Practical Review. Kamloops Exploration Group Short Course.

Hunter, E.N. and Vincent, J.S., 1977: Report on the Nimsic Claim Group, Mount McClennan B.C.; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 6603, 59 pages.

Leitch, H.C.B. 1962: Report on the Sinbad-Roc Group McLennan Mountain, North Thompson River Area; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 436, 38 pages.

Lindinger, L. J. 2006: Geochemical Assessment Report on the Sunrise, Snow and Redtop Zinc-Lead-Silver-Gold-Copper Prospects; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 28345, 30 pages.

Lindinger, L. J. 2011: Geochemical, Geological and Prospecting Assessment Report on the Sunrise East Property; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 32037, 36 pages.

Pinsent, R. 1984: Geological, Geochemical and Geophysical Assessment Report Noble 1-6 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 12080, 67 pages.

Pinsent, R. 1988: Geological, Geochemical and Geophysical Report on the Noble Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 15817, 60 pages.

Poon, J. 2012: Airborne Geophysical Report, Red Top – Sunrise Property, report for Montego Resources Inc. by Precision Geosurveys Inc.

Schiarizza P. and Preto, V.A. 1987: Geology of the Adams Plateau-Clearwater-Vavenby Area, B.C. Ministry of Energy, Mines and Petroleum Resources Paper 1987-2.

Schiarizza, P. 1985: Geology of the Eagle Bay Formation between the Raft and Baldy Batholiths (82M/5, 11, 12) Ministry of Energy, Mines and Petroleum Resources., Geological Fieldwork, 1985, Paper 1986-1, pp 89-94.

Thorton, J. M. 1985: Geophysical Assessment Report Noble 1-6 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 13463, 52 pages.

Vollo, N., 1978: Diamond Drilling Report on the Nimsic Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 6931, 15 pages.

Warner, L. 1989: Geological, Geochemical, Geophysical and Diamond Drilling Report of the Noble 1-12 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 18647, 142 pages.

Warner, L. 1990: Geological and Geochemical Assessment Report of the Noble 1-12 Claims; B.C. Ministry of Energy, Mines and Petroleum Resources Assessment Report 200191, 144 pages (Part 1) and 36 pages (Part 2).

Appendix A. Statement of Qualifications

I, Donald George MacIntyre, Ph.D., P.Eng., do hereby certify that:

1. I am an independent consulting geologist providing services through D.G. MacIntyre and Associates Ltd. a wholly owned company incorporated December 10, 2004 in the Province of British Columbia (registration no. BC0710941). My residence and business address is 4129 San Miguel Close, Victoria, British Columbia, Canada, V8N 6G7.
2. I graduated with a B.Sc. degree in geology from the University of British Columbia in 1971. In addition, I obtained M.Sc. and Ph.D. degrees specializing in Economic Geology from the University of Western Ontario in 1975 and 1977 respectively.
3. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since September, 1979, registration number 11970.
4. I have practiced my profession as a geologist, both within government and the private sector, in British Columbia and parts of the Yukon for over 40 years. Work has included detailed geological investigations of mineral districts, geological mapping, mineral deposit modeling and building of geoscientific databases. I have directly supervised and conducted geologic mapping and mineral property evaluations, published reports and maps on different mineral districts and deposit models and compiled and analyzed data for mineral potential evaluations.

Dated this 15th day of December, 2012

D.G. MacIntyre, Ph.D. P.Eng.

Appendix B. Statement of Expenditures

Exploration Work type	Comment	Days			Totals
Personnel/ Position	**Field Days**	**Days**	**Rate**	**Subtotal**	
D. MacIntyre / geologist	July 27, 2012 (plus 2 X 0.5 travel)	2.0	$650.00	$1,300.00	
C. Lynes / prospector	July 24-30 plus Aug 10-26 + 4 travel	28.0	$500.00	$14,000.00	
Kevin Shaw/ T. Lynes field techs	July 24-30 plus Aug 10-24 + 4 travel	26.0	$400.00	$10,400.00	
Dusty Ruggles/Field technician	July 24-30 plus Aug 10-24 + 4 travel	26.0	$400.00	$10,400.00	
Kurtis Elliot/labourer	Aug 12-18th	7.0	$350.00	$2,450.00	
Mason Romeo/labourer	Aug 12-18th	7.0	$350.00	$2,450.00	
S. Butrenchuk/geologist	July25-29; Aug. 21-26, 2012	7.5	$600.00	$4,500.00	
				$45,500.00	**$45,500.00**
Office Studies	**Personnel**				
Report writing, GIS, cartography	D. MacIntyre	10.0	$650.00	$6,500.00	
				$6,500.00	**$6,500.00**
Airborne Exploration Surveys	**Line Kilometres / total invoiced amount**				
Mobilization	Precision Geosurveys Inc.			$5,000.00	
Aeromagnetics/radiometrics	Precision Geosurveys -259 line-km	259.0	$84.94	$22,000.00	
				$27,000.00	**$27,000.00**
Ground Exploration Surveys	**Area in Hectares/Personnel**				
Geological mapping/mineral deposits	50ha / MacIntyre, Butrenchuk				
Geochemical	200 ha / Lynes, Shaw, Ruggles				
Prospect	200 ha / Lynes				
Road rehabilitation	Elliot, Romeo				
Geochemical Surveying	**Number of Samples**	**No.**	**Rate**	**Subtotal**	
Rock - Acme Labs.	7 rock samples	7.0	$54.68	$382.73	
Rock - ALS labs	22 rock samples	22.0	$39.26	$863.83	
				$1,246.56	**$1,246.56**
Transportation		**No.**	**Rate**	**Subtotal**	
truck mileage	D. MacIntyre	1400.00	$0.30	$420.00	
truck mileage	S. Butrenchuk	1576.00	$0.30	$472.80	
truck rental - Jeep	Rich River	28.00	$150.00	$4,200.00	
truck rental - 4X4 truck	Rich River	24.00	$150.00	$3,600.00	
fuel	Rich River - 2 trucks			$455.84	
				$9,148.64	**$9,148.64**
Accommodation & Food	**Rates per day**				
Travel trailers - Rich River	$150/day X2 for 24 days	48.00	$150.00	$7,200.00	
Hotel - MacIntyre	$160.82/day	1.00	$160.82	$160.82	
Hotel & Meals - Butrenchuk	$149.27/day	7.50	$149.27	$1,119.50	
Hotel - Rich River				$561.92	
Meals - D. MacIntyre	$115.88/day	1.00	$115.88	$115.88	
Meals – Rich River	$100/day - 76 man days	76.00	$100.00	$7,600.00	
				$16,758.12	**$16,758.12**
Miscellaneous					
sampling supplies - Rich River	flagging tags & bags, batteries etc.			$116.00	
Telephone	Satellite phone standby charges	28.00	$35.00	$980.00	
				$1,096.00	**$1,096.00**
Equipment Rentals					
Field Gear - Rich River	tools, chainsaws, radios	26.00	$80.00	$2,080.00	
				$2,080.00	**$2,080.00**
TOTAL Expenditures					**$109,329.32**

Appendix C. Analytical Certificates

AcmeLabs
Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Submitted By: Robert Coltura
Receiving Lab: Canada-Smithers
Received: August 01, 2012
Report Date: September 18, 2012
Page: 1 of 2

CERTIFICATE OF ANALYSIS SMI12000163.1

CLIENT JOB INFORMATION

Project: SUNRISE-REDTOP
Shipment ID:
P.O. Number
Number of Samples: 7

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	7	Crush, split and pulverize 250 g rock to 200 mesh			SMI
XWSH	7	Extra Wash with Glass between each sample			VAN
1F04	7	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN
7AR	4	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.4	Completed	VAN
3B03	3	Fire assay fusion Au Pt Pd by ICP-MS	30	Completed	VAN
7AR.1	1	1:1:1 Aqua Regia Digestion ICP-ES Finish	0.1	Completed	VAN

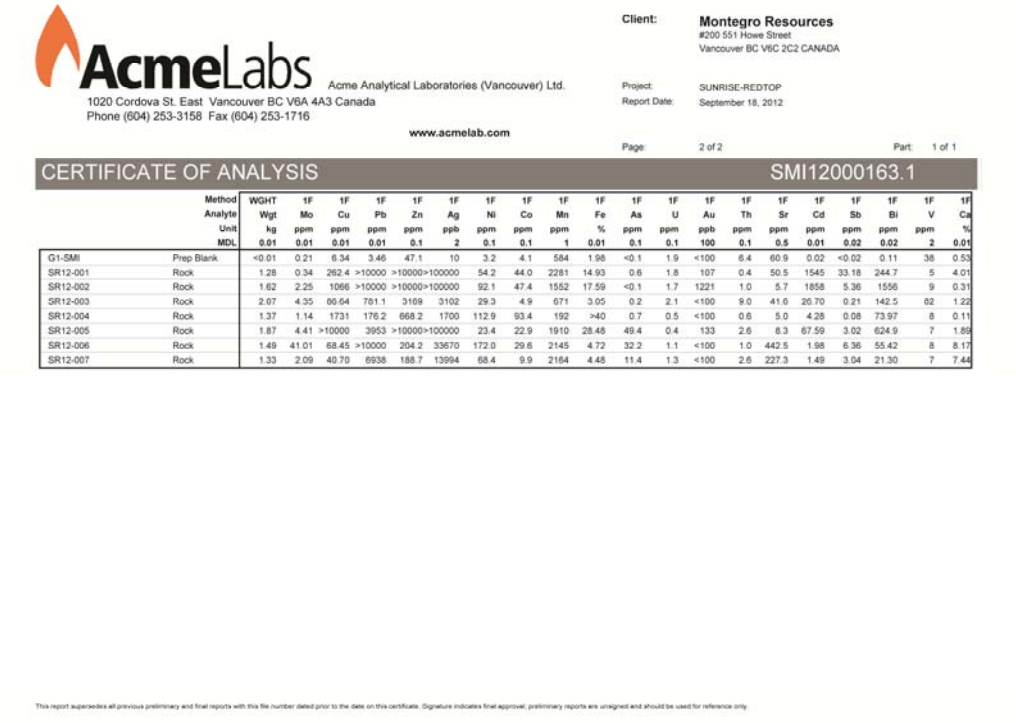
ADDITIONAL COMMENTS

Invoice To: Montegro Resources
#200 551 Howe Street
Vancouver BC V6C 2C2
CANADA

CC: Craig Lynes
Don MacIntyre

BRITISH COLUMBIA CERTIFIED ASSAYER
CLARENCE LEONG
GENERAL MANAGER

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



AcmeLabs
Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012
Page: 2 of 2 Part: 1 of 1

CERTIFICATE OF ANALYSIS SMI12000163.1

Method		WGHT	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	100	0.1	0.5	0.01	0.02	0.02	2	0.01
G1-SMI	Prep Blank	<0.01	0.21	6.34	3.46	47.1	10	3.2	4.1	584	1.98	<0.1	1.9	<100	6.4	60.9	0.02	<0.02	0.11	38	0.53
SR12-001	Rock	1.28	0.34	262.4	>10000	>10000	>100000	54.2	44.0	2281	14.93	0.6	1.8	107	0.4	50.5	1545	33.18	244.7	5	4.01
SR12-002	Rock	1.62	2.25	1066	>10000	>10000	>100000	92.1	47.4	1552	17.59	<0.1	1.7	1221	1.0	5.7	1858	5.36	1556	9	0.31
SR12-003	Rock	2.07	4.35	86.64	781.1	3169	3102	29.3	4.9	671	3.05	0.2	2.1	<100	9.0	41.6	26.70	0.21	142.5	82	1.22
SR12-004	Rock	1.37	1.14	1731	176.2	668.2	1700	112.9	93.4	192	>40	0.7	0.5	<100	0.6	5.0	4.28	0.08	73.97	8	0.11
SR12-005	Rock	1.87	4.41	>10000	3953	>10000	>100000	23.4	22.9	1910	28.48	49.4	0.4	133	2.6	8.3	67.59	3.02	624.9	7	1.89
SR12-006	Rock	1.49	41.01	68.45	>10000	204.2	33670	172.0	29.6	2145	4.72	32.2	1.1	<100	1.0	442.5	1.98	6.36	55.42	8	8.17
SR12-007	Rock	1.33	2.09	40.70	6938	188.7	13994	68.4	9.9	2164	4.48	11.4	1.3	<100	2.6	227.3	1.49	3.04	21.30	7	7.44

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 2 of 1

CERTIFICATE OF ANALYSIS SMI12000163.1

Method		1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
MDL		0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
G1-SMI	Prep Blank	0.078	14.8	8.4	0.53	170.6	0.141	<20	0.96	0.088	0.50	0.1	2.7	0.32	0.02	8	<0.1	<0.02	4.7	2.91	<0.1
SR12-001	Rock	0.018	1.0	1.3	1.38	8.4	<0.001	<20	0.17	0.002	<0.01	<0.1	1.1	1.13	9.76	22259	8.9	1.63	14.2	0.03	<0.1
SR12-002	Rock	0.036	3.3	3.6	0.34	9.9	0.004	<20	0.32	0.004	0.03	<0.1	1.0	2.04	9.09	15041	24.3	25.12	12.4	0.07	<0.1
SR12-003	Rock	0.056	13.4	34.4	1.64	203.6	0.068	<20	2.47	0.056	0.36	0.2	4.9	0.33	0.74	112	1.9	0.94	8.4	0.91	<0.1
SR12-004	Rock	0.046	1.3	5.7	0.14	15.4	0.013	<20	0.17	0.003	0.04	0.2	1.2	0.10	>10	51	30.5	30.22	2.7	0.71	0.2
SR12-005	Rock	0.008	0.9	4.7	0.60	<0.5	0.003	<20	0.41	0.009	0.06	<0.1	1.0	1.81	>10	525	16.2	9.05	2.2	0.12	0.1
SR12-006	Rock	0.113	3.6	20.0	2.88	22.5	0.002	<20	0.12	0.036	0.04	0.1	7.7	0.04	0.65	16	4.2	8.86	0.6	0.05	<0.1
SR12-007	Rock	0.133	3.8	15.9	1.47	41.0	0.002	<20	0.18	0.037	0.08	<0.1	5.3	0.03	0.26	19	2.0	4.27	0.6	0.07	<0.1

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 3 of 1

CERTIFICATE OF ANALYSIS SMI12000163.1

Method		1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	7AR	7AR	7AR	7AR	3BMS	3BMS
Analyte		Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Pb	Zn	Ag	Au	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%	%	%	gm/t	ppb	ppb
MDL		0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	100	100	0.001	0.01	0.01	2	1	0.1
G1-SMI	Prep Blank	0.10	0.25	44.5	0.6	<0.05	1.5	5.62	26.8	0.02	<1	0.2	31.4	<100	<100						
SR12-001	Rock	<0.02	<0.02	0.2	11.5	<0.05	0.4	1.94	1.6	103.3	<1	<0.1	1.8	<100	<100	0.022	>10	26.10	104	68	0.8
SR12-002	Rock	<0.02	0.05	1.3	8.7	<0.05	0.3	1.74	5.1	241.2	<1	<0.1	4.5	<100	<100	0.109	4.34	32.60	227	823	0.7
SR12-003	Rock	0.04	0.00	19.9	1.4	<0.05	1.3	0.00	24.0	1.33	0	0.4	10.4	<100	<100						
SR12-004	Rock	<0.02	0.19	2.6	1.1	<0.05	0.5	1.45	2.6	0.59	2	<0.1	0.7	<100	<100						
SR12-005	Rock	<0.02	0.06	3.4	2.8	<0.05	0.4	1.52	2.6	7.38	17	0.1	2.9	<100	<100	1.110	4.72	2.10	259	78	0.9
SR12-006	Rock	0.09	0.03	1.7	0.1	<0.05	4.3	6.16	7.9	0.09	<1	0.2	1.0	<100	<100	0.004	1.14	0.02	33		
SR12-007	Rock	0.15	0.04	2.9	<0.1	<0.05	6.3	4.93	8.2	0.05	<1	0.2	0.9	<100	<100						

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 4 of 1

CERTIFICATE OF ANALYSIS SMI12000163.1

Method		3BMS	7AR.1
Analyte		Pd	Pb
Unit		ppb	%
MDL		0.5	0.01
G1-SMI	Prep Blank		
SR12-001	Rock	1.7	9.57
SR12-002	Rock	3.9	
SR12-003	Rock		
SR12-004	Rock		
SR12-005	Rock	1.8	
SR12-006	Rock		
SR12-007	Rock		

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 1 of 2 Part: 1 of 1

QUALITY CONTROL REPORT SMI12000163.1

Method		WGHT	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	100	0.1	0.5	0.01	0.02	0.02	2	0.01
Pulp Duplicates																					
SR12-001	Rock	1.28	0.34	262.4	>10000	>10000	>100000	54.2	44.0	2281	14.93	0.6	1.8	107	0.4	50.5	1545	33.18	244.7	5	4.01
REP SR12-001	QC																				
SR12-005	Rock	1.87	4.41	>10000	3953	>10000	>100000	23.4	22.9	1910	28.48	49.4	0.4	133	2.6	8.3	67.59	3.02	624.9	7	1.89
REP SR12-005	QC																				
SR12-006	Rock	1.49	41.01	68.45	>10000	204.2	33670	172.0	29.6	2145	4.72	32.2	1.1	<100	1.0	442.5	1.98	6.36	55.42	8	8.17
REP SR12-006	QC																				
SR12-007	Rock	1.33	2.09	40.70	6938	188.7	13994	68.4	9.9	2164	4.48	11.4	1.3	<100	2.6	227.3	1.49	3.04	21.30	7	7.44
REP SR12-007	QC		2.13	39.49	6435	187.2	14008	67.2	9.0	2100	4.39	11.3	1.2	<100	2.5	228.3	1.40	2.97	20.28	7	7.20
Reference Materials																					
STD CCU-1C	Standard																				
STD CZN-3	Standard																				
STD DS9	Standard		14.85	119.5	130.1	318.5	1697	40.7	8.3	623	2.39	26.9	2.8	110	6.7	69.4	2.54	3.87	6.70	40	0.74
STD GBM997-6	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OREAS45CA	Standard		0.78	514.0	21.66	64.1	274	254.0	97.0	967	16.65	3.0	1.3	<100	7.7	14.4	0.12	0.08	0.22	222	0.42
STD PD1	Standard																				
STD PTC-1A	Standard																				
STD OREAS45CA Expected			1	494	20	60	275	240	92	943	15.69	3.8	1.2	43	7	15	0.1	0.13	0.19	215	0.4265
STD DS9 Expected			12.84	108	126	317	1830	40.3	7.6	575	2.33	25.5	2.69	116	6.38	69.6	2.4	4.94	6.32	40	0.7201
STD GC-7 Expected																					
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD PD1 Expected																					
BLK	Blank		<0.01	0.07	0.39	0.9	2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<100	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01
BLK	Blank																				
BLK	Blank																				

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 1 of 2 Part: 2 of 1

QUALITY CONTROL REPORT SMI12000163.1

Method		1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
MDL		0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
Pulp Duplicates																					
SR12-001	Rock	0.018	1.0	1.3	1.38	8.4	<0.001	<20	0.17	0.002	<0.01	<0.1	1.1	1.13	9.76	22259	8.9	1.63	14.2	0.03	<0.1
REP SR12-001	QC																				
SR12-005	Rock	0.008	0.9	4.7	0.60	<0.5	0.003	<20	0.41	0.009	0.06	<0.1	1.0	1.61	>10	525	16.2	9.05	2.2	0.12	0.1
REP SR12-005	QC																				
SR12-006	Rock	0.113	3.6	20.0	2.88	22.5	0.002	<20	0.12	0.036	0.04	0.1	7.7	0.04	0.65	16	4.2	8.86	0.6	0.05	<0.1
REP SR12-006	QC																				
SR12-007	Rock	0.133	3.8	15.9	1.47	41.0	0.002	<20	0.18	0.037	0.08	<0.1	5.3	0.03	0.26	19	2.0	4.27	0.6	0.07	<0.1
REP SR12-007	QC	0.136	3.9	14.7	1.46	40.3	0.002	<20	0.19	0.037	0.08	<0.1	5.0	0.03	0.25	17	2.0	3.90	0.6	0.06	<0.1
Reference Materials																					
STD CCU-1C	Standard																				
STD CZN-3	Standard																				
STD DS9	Standard	0.081	13.9	120.4	0.64	322.7	0.118	<20	0.97	0.082	0.41	3.0	2.8	5.45	0.18	208	5.7	4.76	4.5	2.35	<0.1
STD GBM997-6	Standard																				
STD GC-7	Standard																				
STD GC-7	Standard																				
STD OREAS45CA	Standard	0.038	17.3	684.1	0.15	171.5	0.149	<20	3.54	0.010	0.07	<0.1	46.6	0.07	0.03	44	0.3	<0.02	18.8	1.11	<0.1
STD PD1	Standard																				
STD PTC-1A	Standard																				
STD OREAS45CA Expected		0.0385	15.9	709	0.1358	164	0.128		3.592	0.0075	0.0717		39.7	0.07	0.021	30	0.5	0.06	18.4	1.03	0.11
STD DS9 Expected		0.0819	13.3	121	0.6165	330	0.1108		0.9577	0.0853	0.395	2.89	2.5	5.3	0.1615	200	5.2	5.02	4.59	2.37	0.1
STD GC-7 Expected																					
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD PD1 Expected																					
BLK	Blank	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	0.1	<0.02	<0.02	8	<0.1	<0.02	<0.1	<0.02	<0.1
BLK	Blank																				
BLK	Blank																				

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 1 of 2 Part: 3 of 1

QUALITY CONTROL REPORT SMI12000163.1

Method		1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	7AR	7AR	7AR	7AR	3BMS	3BMS
Analyte		Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	Cu	Pb	Zn	Ag	Au	Pt
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	%	%	%	gm/t	ppb	ppb
MDL		0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	100	100	0.001	0.01	0.01	2	1	0.1
Pulp Duplicates																					
SR12-001	Rock	<0.02	<0.02	0.2	11.5	<0.05	0.4	1.94	1.6	103.3	<1	<0.1	1.8	<100	<100	0.022	>10	26.10	104	68	0.8
REP SR12-001	QC																				
SR12-005	Rock	<0.02	0.06	3.4	2.8	<0.05	0.4	1.52	2.6	7.38	17	0.1	2.9	<100	<100	1.110	4.72	2.10	259	78	0.9
REP SR12-005	QC																			80	1.5
SR12-006	Rock	0.09	0.03	1.7	0.1	<0.05	4.3	6.16	7.9	0.09	<1	0.2	1.0	<100	<100	0.004	1.14	0.02	33		
REP SR12-006	QC															0.004	1.10	0.02	33		
SR12-007	Rock	0.15	0.04	2.9	<0.1	<0.05	6.3	4.93	8.2	0.05	<1	0.2	0.9	<100	<100						
REP SR12-007	QC	0.14	0.03	2.9	<0.1	<0.05	6.2	4.72	7.9	0.05	<1	0.3	0.9	<100	<100						
Reference Materials																					
STD CCU-1C	Standard																				
STD CZN-3	Standard																				
STD DS9	Standard	0.08	0.83	34.5	6.7	<0.05	2.0	5.52	25.7	2.33	70	5.2	24.2	109	356						
STD GBM997-6	Standard																				
STD GC-7	Standard															0.543	>10	21.46	>300		
STD GC-7	Standard															0.541	>10	21.33	>300		
STD OREAS45CA	Standard	0.62	0.29	8.5	1.9	<0.05	22.0	7.76	37.4	0.09	<1	0.8	6.8	<100	<100						
STD PD1	Standard																			478	438.6
STD PTC-1A	Standard																				
STD OREAS45CA Expected		0.5	0.22	8.2	1.8		21.6	7.84	35	0.09			6.2	36	61						
STD DS9 Expected		0.08	0.96	33.8	6.4	0.004	2	5.97	25.4	2.2	61	5.4	25.2	120	350						
STD GC-7 Expected																0.555	10.44	22.06	619		
STD CZN-3 Expected																					
STD CCU-1C Expected																					
STD GBM997-6 Expected																					
STD PD1 Expected																				542	456
BLK	Blank	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<100	<100						
BLK	Blank															<0.001	<0.01	<0.01	<2		
BLK	Blank																				

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 1 of 2 Part: 4 of 1

QUALITY CONTROL REPORT SMI12000163.1

	Method	3BMS	7AR.1
	Analyte	Pd	Pb
	Unit	ppb	%
	MDL	0.5	0.01
Pulp Duplicates			
SR12-001	Rock	1.7	9.57
REP SR12-001	QC		9.36
SR12-005	Rock	1.8	
REP SR12-005	QC	2.6	
SR12-006	Rock		
REP SR12-006	QC		
SR12-007	Rock		
REP SR12-007	QC		
Reference Materials			
STD CCU-1C	Standard		0.32
STD CZN-3	Standard		0.10
STD DS9	Standard		
STD GBM997-6	Standard		21.40
STD GC-7	Standard		
STD GC-7	Standard		
STD OREAS45CA	Standard		
STD PD1	Standard	523.9	
STD PTC-1A	Standard		0.05
STD OREAS45CA Expected			
STD DS9 Expected			
STD GC-7 Expected			
STD CZN-3 Expected			0.113
STD CCU-1C Expected			0.34
STD GBM997-6 Expected			23.75
STD PD1 Expected		563	
BLK	Blank		
BLK	Blank		
BLK	Blank		<0.01

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 1 of 1

QUALITY CONTROL REPORT SMI12000163.1

		WGHT	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F	1F
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	100	0.1	0.5	0.01	0.02	0.02	2	0.01
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	<0.01	0.21	6.34	3.46	47.1	10	3.2	4.1	584	1.98	<0.1	1.9	<100	6.4	60.9	0.02	<0.02	0.11	38	0.53

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 2 of 1

QUALITY CONTROL REPORT SMI12000163.1

		1F P % 0.001	1F La ppm 0.5	1F Cr ppm 0.5	1F Mg % 0.01	1F Ba ppm 0.5	1F Ti % 0.001	1F B ppm 20	1F Al % 0.01	1F Na % 0.001	1F K % 0.01	1F W ppm 0.1	1F Sc ppm 0.1	1F Tl ppm 0.02	1F S % 0.02	1F Hg ppb 5	1F Se ppm 0.1	1F Te ppm 0.02	1F Ga ppm 0.1	1F Cs ppm 0.02	1F Ge ppm 0.1
BLK	Blank																				
Prep Wash																					
G1-SMI	Prep Blank	0.078	14.8	8.4	0.53	170.6	0.141	<20	0.96	0.088	0.50	0.1	2.7	0.32	0.02	8	<0.1	<0.02	4.7	2.91	<0.1

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 3 of 1

QUALITY CONTROL REPORT SMI12000163.1

		1F Hf ppm 0.02	1F Nb ppm 0.02	1F Rb ppm 0.1	1F Sn ppm 0.1	1F Ta ppm 0.05	1F Zr ppm 0.1	1F Y ppm 0.01	1F Ce ppm 0.1	1F In ppm 0.02	1F Re ppb 1	1F Be ppm 0.1	1F Li ppm 0.1	1F Pd ppb 100	1F Pt ppb 100	7AR Cu % 0.001	7AR Pb % 0.01	7AR Zn % 0.01	7AR Ag gm/t 2	3BMS Au ppb 1	3BMS Pt ppb 0.1
BLK	Blank																			3	0.1
Prep Wash																					
G1-SMI	Prep Blank	0.10	0.25	44.5	0.6	<0.05	1.5	5.62	26.8	0.02	<1	0.2	31.4	<100	<100						

Acme Analytical Laboratories (Vancouver) Ltd.
1020 Cordova St. East Vancouver BC V6A 4A3 Canada
Phone (604) 253-3158 Fax (604) 253-1716
www.acmelab.com

Client: **Montegro Resources**
#200 551 Howe Street
Vancouver BC V6C 2C2 CANADA

Project: SUNRISE-REDTOP
Report Date: September 18, 2012

Page: 2 of 2 Part: 4 of 1

QUALITY CONTROL REPORT SMI12000163.1

		3BMS Pd ppb 0.5	7AR.1 Pb % 0.01
BLK	Blank	<0.5	
Prep Wash			
G1-SMI	Prep Blank		

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.

ALS Minerals
ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 1
Finalized Date: 3-NOV-2012
Account: RCHRIV

CERTIFICATE KL12233230

Project: Red Top Snow Sun Rise Bag #1

P.O. No.:

This report is for 11 Rock samples submitted to our lab in Kamloops, BC, Canada on 2-OCT-2012.

The following have access to data associated with this certificate:

CRAIG LYNES		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES
Zn-OG46	Ore Grade Zn - Aqua Regia	VARIABLE
Au-AA23	Au 30g FA-AA finish	AAS

To: RICH RIVER EXPLORATION LTD.
ATTN: CRAIG LYNES
PO BOX 131
GRINDROD BC V0E 1Y0

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 2 - A
Total # Pages: 2 (A - C)
Finalized Date: 3-NOV-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise Bag #1

CERTIFICATE OF ANALYSIS KL12233230

Sample Description	Method	WEI-21	Au-AA23	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
	Analyte	Recvd Wt.	Au	Ag	Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%
	LOR	0.02	0.005	0.2	0.01	2	10	10	0.5	2	0.01	0.5	1	1	1	0.01
708932		1.33	0.057	76.3	0.06	41	<10	10	<0.5	238	0.04	14.7	3	12	25	1.88
708933		1.34	0.134	0.9	0.93	64	<10	250	<0.5	3	3.82	1.0	7	8	9	3.65
708934		1.27	<0.005	3.9	0.02	21	<10	20	<0.5	42	0.01	203	189	8	828	9.85
708935		1.59	<0.005	1.2	0.17	2	<10	10	<0.5	<2	0.12	1.1	170	5	447	22.8
708936		1.39	0.020	1.3	0.28	5	<10	10	<0.5	<2	0.07	1.6	250	4	505	39.4
708937		1.44	<0.005	<0.2	0.75	3	<10	70	<0.5	2	0.14	<0.5	9	10	88	3.20
708938		1.79	<0.005	0.4	1.07	3	<10	20	<0.5	4	0.16	<0.5	34	9	67	5.04
708939		1.42	<0.005	0.4	0.14	2	<10	10	<0.5	2	1.15	<0.5	55	14	143	7.94
708940		1.64	<0.005	0.3	0.48	2	<10	50	<0.5	2	0.04	<0.5	64	25	59	6.19
708941		1.25	0.007	0.3	1.79	8	<10	10	<0.5	<2	12.2	<0.5	1	11	338	8.91
708942		1.20	0.020	0.4	0.63	2	<10	30	<0.5	2	1.84	<0.5	12	7	186	9.33

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 2 - B
Total # Pages: 2 (A - C)
Finalized Date: 3-NOV-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise Bag #1

CERTIFICATE OF ANALYSIS KL12233230

Sample Description	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
	Analyte	Ga	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr
	Units	ppm	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm
	LOR	10	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1
708932		<10	<1	0.01	<10	0.02	181	<1	0.01	1	10	4090	0.92	2	<1	3
708933		<10	<1	0.41	20	0.67	2010	<1	0.03	2	1000	137	1.14	<2	4	146
708934		<10	<1	0.01	<10	0.01	129	<1	<0.01	11	<10	175	>10.0	2	<1	1
708935		<10	<1	0.02	<10	0.10	228	217	0.03	132	10	4	>10.0	2	1	10
708936		<10	<1	0.02	<10	0.18	278	71	0.02	195	100	3	>10.0	<2	1	2
708937		<10	<1	0.21	10	0.30	277	<1	0.05	3	300	27	0.53	<2	1	19
708938		<10	<1	0.10	<10	0.82	344	<1	0.05	9	350	17	3.30	<2	3	14
708939		<10	<1	0.03	10	0.19	809	<1	<0.01	101	60	7	4.80	<2	1	48
708940		<10	<1	0.06	<10	0.35	143	<1	0.07	60	130	14	4.11	<2	1	10
708941		10	<1	0.01	<10	0.17	2370	<1	0.01	39	270	7	1.05	<2	2	14
708942		<10	<1	0.01	<10	0.12	436	<1	<0.01	21	320	298	6.28	<2	1	50

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 2 - C
Total # Pages: 2 (A - C)
Finalized Date: 3-NOV-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise Bag #1

CERTIFICATE OF ANALYSIS KL12233230

Sample Description	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	Zn-OG46
	Analyte	Th	Tl	Tl	U	V	W	Zn	Zn
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%
	LOR	20	0.01	10	10	1	10	2	0.001
708932		<20	<0.01	<10	<10	2	<10	1495	
708933		<20	0.02	<10	<10	23	<10	243	
708934		<20	<0.01	<10	<10	1	<10	>10000	2.65
708935		<20	<0.01	10	<10	1	<10	37	
708936		<20	0.01	10	10	4	<10	34	
708937		<20	0.01	<10	<10	7	<10	42	
708938		<20	0.04	<10	<10	36	<10	64	
708939		<20	0.01	<10	<10	3	<10	14	
708940		<20	0.01	<10	<10	14	<10	30	
708941		<20	0.09	<10	<10	41	<10	18	
708942		<20	0.08	<10	<10	12	<10	51	

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglcbal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 1
Finalized Date: 29-OCT-2012
Account: RCHRIV

CERTIFICATE KL12230029

Project: Red Top Snow Sun Rise

P.O. No.: Montego Resources

This report is for 11 Rock samples submitted to our lab in Kamloops, BC, Canada on 2-OCT-2012.

The following have access to data associated with this certificate:

CRAIG LYNES

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES

To: RICH RIVER EXPLORATION LTD.
ATTN: CRAIG LYNES
PO BOX 131
GRINDROD BC V0E 1Y0

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:
Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 2 - A
Total # Pages: 2 (A - C)
Finalized Date: 29-OCT-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise

CERTIFICATE OF ANALYSIS KL12230029

Sample Description	Method / Analyte / Units / LOR	WEI-21 Recvd Wt. kg 0.02	ME-ICP41 Ag ppm 0.2	ME-ICP41 Al % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1	ME-ICP41 Fe % 0.01	ME-ICP41 Ga ppm 10
708943		1.89	<0.2	1.79	2	<10	40	<0.5	<2	1.55	<0.5	6	21	378	3.02	<10
708944		1.43	<0.2	1.08	<2	<10	60	<0.5	3	0.08	<0.5	11	62	66	4.15	<10
708945		1.35	0.7	0.18	3	<10	10	<0.5	<2	0.03	0.9	253	9	859	33.0	<10
708946		1.24	0.5	0.18	4	<10	20	<0.5	<2	0.06	<0.5	88	10	458	11.05	<10
708947		1.65	6.2	0.03	33	<10	10	<0.5	2	2.67	1.3	14	12	3870	3.70	<10
708948		1.82	1.7	0.05	6	<10	<10	<0.5	4	0.13	<0.5	3	16	474	2.14	<10
708949		2.00	1.2	0.34	4	<10	<10	<0.5	3	0.83	<0.5	2	13	1385	1.43	<10
708950		1.89	7.6	0.38	6	<10	10	<0.5	2	1.27	1.9	6	19	7840	5.52	<10
14701		2.19	0.3	0.65	23	<10	10	<0.5	21	0.93	0.8	68	8	67	20.4	<10
14702		1.99	0.9	2.74	38	<10	20	1.0	4	0.71	0.9	157	25	994	26.9	10
14703		1.50	0.4	0.23	6	<10	10	<0.5	2	0.86	1.7	5	5	1915	32.9	10

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

Page: 2 - B
Total # Pages: 2 (A - C)
Finalized Date: 29-OCT-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise

CERTIFICATE OF ANALYSIS KL12230029

Sample Description	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41
	Analyte	Hg	K	La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th
	Units	ppm	%	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOR	1	0.01	10	0.01	5	1	0.01	1	10	2	0.01	2	1	1	20
708943		<1	0.23	10	1.40	666	1	0.03	19	310	14	0.36	<2	2	113	<20
708944		<1	0.13	10	0.79	494	<1	0.09	25	270	9	0.28	<2	4	23	<20
708945		<1	0.03	<10	0.05	478	<1	<0.01	687	60	3	>10.0	<2	1	2	<20
708946		<1	0.03	10	0.11	204	<1	0.01	201	30	6	8.52	<2	1	4	<20
708947		<1	0.02	<10	0.01	660	<1	<0.01	7	30	6	1.29	<2	<1	15	<20
708948		<1	0.01	<10	0.01	112	<1	0.01	3	40	3	0.70	<2	<1	2	<20
708949		<1	<0.01	<10	0.29	371	<1	<0.01	2	10	3	0.14	<2	<1	4	<20
708950		<1	0.03	<10	0.07	654	<1	0.02	4	350	12	1.39	<2	1	35	<20
14701		<1	0.03	<10	0.03	123	<1	<0.01	131	150	23	>10.0	<2	1	56	<20
14702		<1	0.21	<10	2.09	1225	<1	0.01	4	320	16	>10.0	<2	3	42	<20
14703		<1	<0.01	<10	0.05	545	<1	<0.01	22	410	10	>10.0	<2	<1	14	<20

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: 604 984 0221 Fax: 604 984 0218 www.alsglobal.com

To: RICH RIVER EXPLORATION LTD.
PO BOX 131
GRINDROD BC V0E 1Y0

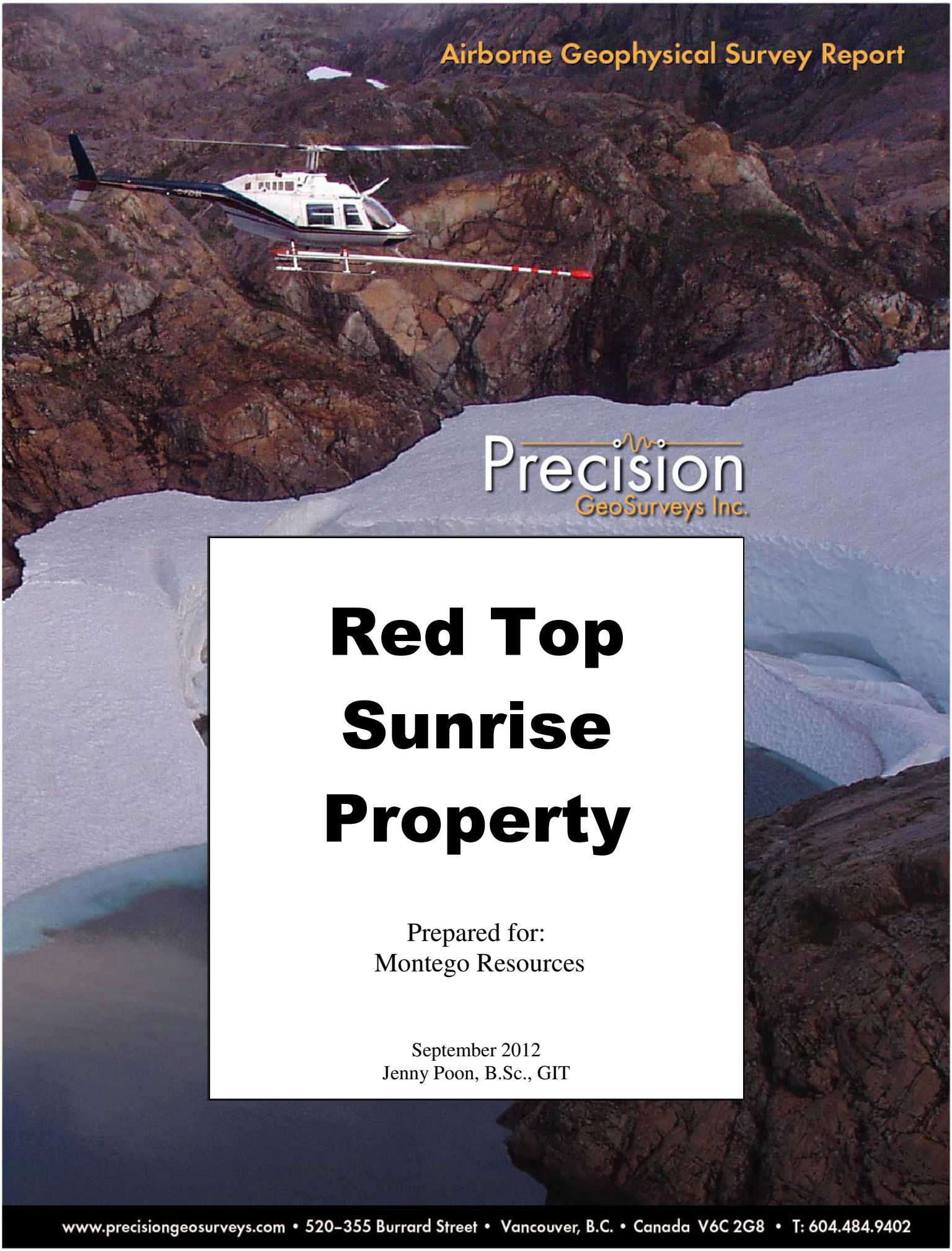
Page: 2 - C
Total # Pages: 2 (A - C)
Finalized Date: 29-OCT-2012
Account: RCHRIV

Project: Red Top Snow Sun Rise

CERTIFICATE OF ANALYSIS KL12230029

Sample Description	Method	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	ME-ICP41	Au-AA23
	Analyte	Tl	Tl	U	V	W	Zn	Au
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOR	0.01	10	10	1	10	2	0.005
708943		0.17	<10	<10	20	<10	140	0.009
708944		0.02	<10	10	19	<10	50	0.017
708945		0.01	10	<10	61	<10	27	<0.005
708946		<0.01	<10	<10	49	<10	29	<0.005
708947		<0.01	<10	<10	1	<10	63	0.652
708948		<0.01	<10	<10	1	<10	10	0.025
708949		<0.01	<10	<10	2	<10	40	0.028
708950		0.05	<10	<10	13	<10	71	0.097
14701		0.07	10	<10	6	<10	12	<0.005
14702		0.08	10	<10	24	10	306	0.023
14703		0.01	<10	10	10	110	249	<0.005

Appendix D. Geophysical Report



Red Top Sunrise Property

Prepared for:
Montego Resources

September 2012
Jenny Poon, B.Sc., GIT

www.precisiongeosurveys.com • 520–355 Burrard Street • Vancouver, B.C. • Canada V6C 2G8 • T: 604.484.9402

Table of Contents

List of Figures

List of Tables

1.0 Introduction:

This report outlines the survey operations and data processing actions taken during the airborne geophysical survey flown at the Red Top Sunrise property. The survey area is located east of Clearwater, British Columbia, Canada and north of Thompson River (Figure 1). The airborne geophysical survey was flown by Precision GeoSurveys Inc. for Montego Resources. The geophysical survey, carried out from September 07, 2012 to September 08, 2012 saw the acquisition of high resolution magnetic and radiometric data.

Figure 1: Block location map.

1.1 Survey Area

The Red Top Sunrise property is approximately 11 km east of Clearwater, British Columbia, Canada (Figure 2).

Figure 2: Red Top Sunrise property location relative to Clearwater, British Columbia on Google Earth.

The survey property is approximately 6 km by 6.5 km (Figure 3). A total of 260 line kilometers of magnetic and radiometric data were flown for this survey; this total includes tie lines and survey lines.

Figure 3: Red Top Sunrise property survey boundary in red.

The Red Top Sunrise property survey lines were flown at 100 meter spacing at a 030°/210° heading; the tie lines were flown at 1 km spacing at a heading of 120°/300° (Figures 4 and 5).

Figure 4: Plane View - Red Top Sunrise property with survey and tie lines outlined in yellow and the boundary in red.

Figure 5: Terrain View - Red Top Sunrise property with survey and tie lines outlined in yellow and the boundary in red.

1.2 Survey Specifications:

The geodetic system used for this survey is WGS 84 and the area is contained in zone 11N (Figure 6). The survey data acquisition specifications and coordinates for Red Top Sunrise property survey are specified as followed (Tables 1 to 2).

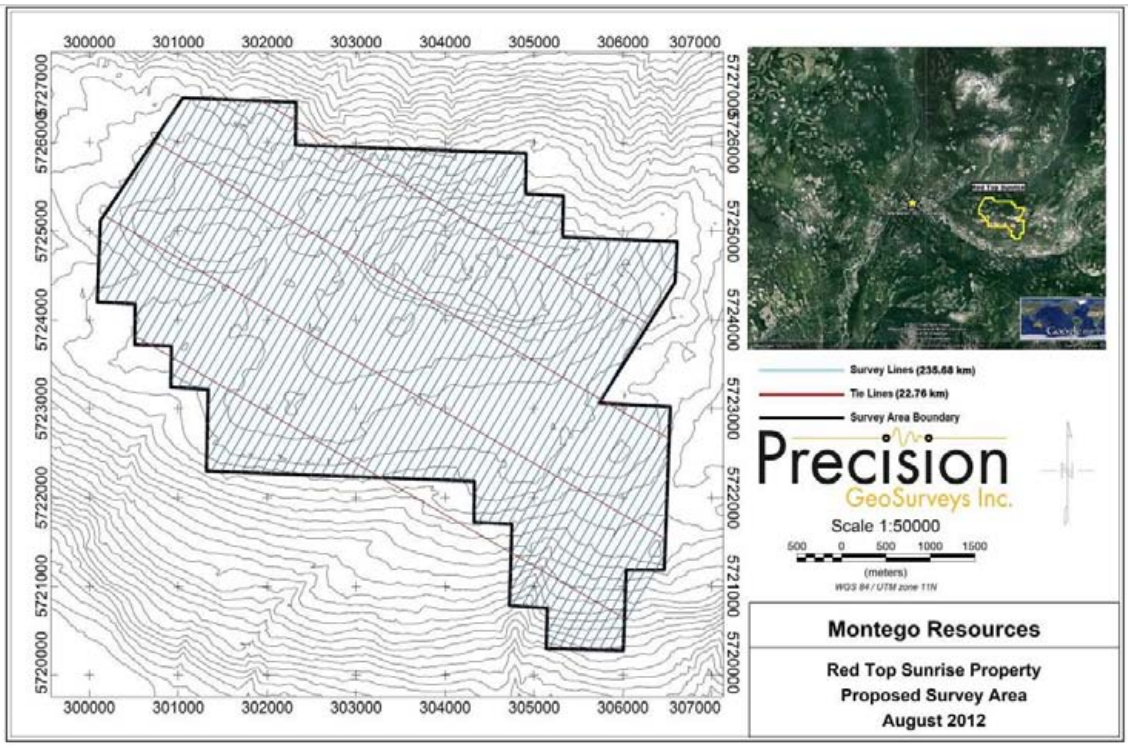


Figure 6: Proposed survey map of Red Top Sunrise property showing survey lines, tie lines and the block boundary.

Survey block	Line Spacing m	Planned Survey Line km	Planned Tie Line km	Total Planned Line km	Total Actual Flown km	Survey Line Orientation	Nominal Survey Height m
Red Top Sunrise	100	239	23	259	260	030°/210°	40
Total				259	260		

Table 1: Red Top Sunrise property survey acquisition specifications.

Longitude	Latitude	Easting	Northing
119.88876159	51.64147662	300124	5725116
119.87618355	51.65423345	301050	5726500
119.85773319	51.65423450	302326	5726450
119.85756240	51.64991251	302319	5725969
119.82006186	51.64997426	304913	5725875
119.81995305	51.64589359	304903	5725421
119.81377415	51.64579908	305330	5725394
119.81364760	51.64165588	305321	5724933
119.79504099	51.64161488	306608	5724879
119.79509323	51.63753037	306587	5724425
119.80670655	51.62500334	305730	5723063
119.79509805	51.62492070	306533	5723023
119.79506538	51.60840851	306465	5721187
119.80122426	51.60826161	306038	5721187
119.80121243	51.60009532	306004	5720279
119.81372696	51.59998467	305137	5720300
119.81377670	51.60405778	305151	5720753
119.81995048	51.60416137	304724	5720781
119.82007391	51.61244192	304751	5721702
119.82622994	51.61247365	304325	5721722
119.82640073	51.61661579	304331	5722183
119.86994421	51.61659297	301317	5722298
119.87017786	51.62487084	301337	5723219
119.87624951	51.62491102	300917	5723240
119.87641393	51.62910725	300924	5723707
119.88238057	51.62907774	300511	5723720
119.88254217	51.63322007	300518	5724181
119.88871536	51.63324812	300091	5724201

Table 2: Red Top Sunrise property survey polygon coordinates using WGS 84 in zone 11N.

2.0 Geophysical Data:

Geophysical data are collected in a variety of ways and are used to aid in the exploration and determination of geology, mineral deposits, oil and gas deposits, contaminated land sites and UXO detection.

For the purposes of this survey, airborne magnetic and radiometric data were collected to serve in the exploration of the Red Top Sunrise property.

2.1 Magnetic Data:

Magnetic surveying is probably the most common airborne survey type to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

1. Geological Mapping to aid in mapping lithology, structure and alteration in both hard rock environments and for mapping basement lithology, structure and alteration in sedimentary basins or for regional tectonic studies.
2. Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

2.2 Radiometric Data:

Radiometric surveys detect and map natural radioactive emanations, called gamma rays, from rocks and soils. All detectable gamma radiation from earth materials come from the natural decay products of three primary elements; uranium (U), thorium (Th), and potassium (K). The purpose of radiometric surveys is to determine either the absolute or relative amounts of U, Th, and K in surface rocks and soils.

3.0 Survey Operations:

Precision GeoSurveys operated out of the Yellowhead Helicopters base in Clearwater, British Columbia. The experience of the pilot helped to ensure that the data quality objectives were met and that the safety of the flight crew was never compromised given the potential risks involved in airborne surveying. Field processing and quality control checks were done daily.

3.1 Operations Base and Crew:

The base of operations for this survey was at the Clearwater, British Columbia, Canada. The Precision crew consisted of two members:

Harmen Keyser– Pilot
Jenny Poon - Operator / On-site Geophysicist

The survey was started on August 07, 2012 and completed on August 08, 2012. It did not encounter any delays.

3.2 Base Station Specifications:

A magnetic base station was set up before every flight to ensure that diurnal activity was recorded during the survey flights. In this case, a GEM GSM 19T base station was set up adjacent to an old logging road (Figure 7) hidden from sight and well within the survey area (see Table 3).

Station name	Easting/ Northing	Longitude/ Latitude	Datum/ Projection
GEM 1	0301295E, 5723886N	119° 52' 16.184" W 51° 37' 50.846" N	WGS84, Zone 11N

Table 3: Base station specifications.

Base station readings were reviewed at regular intervals to ensure that no data were collected during periods with high diurnal activity (greater than 5 nT per minute). The base station was installed at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines (Figure 7) that could affect the survey data.

Figure 7: GEM 1 base station location.

The diurnal magnetic variations recorded from the stationary base stations are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

3.3 Field Processing and Quality Control:

On a flight-by-flight basis, the survey data were transferred from the helicopter's data logger onto a USB flash drive and copied onto a field data processing laptop. The raw data files are in PEI binary data format and are converted into Geosoft GDB database format. Using Geosoft Oasis Montaj 7.5, the quality of the data is inspected to see if it meets the contract specifications (see Table 4). If survey and tie lines exhibit excessive navigational deviation (left/right or up/down) from the contract specifications, or were considered to be inferior quality, the lines were re-flown. Any suspicious anomalies, especially those found on a single flight line, were re-flown. All re-flights were a minimum of 2000 m long and survey line re-flights crossed at least two tie lines, and tie line re-flights will crossed at least 7 survey lines where applicable. For this survey project, no re-flights were required due to navigational error, excessive diurnal activity, or equipment malfunction.

Specification	Technology	Details
Line Spacing	Position	Flight lines deviate from flight path by more than +/- 15 m left/ right for 1 km or more.
Height		Flight lines deviate from height by more than +/- 10 up/down (with a nominal flight height of 40 m above ground) for 1 km or more.
Diurnal Variations	Magnetics	Non-linear magnetic diurnal variations exceed 10nT from a linear chord of length one (1) minute
Normalized 4th Difference		Magnetic data exceeding 0.30 nT peak to peak for distances greater than 1 km or more (provided noise is not due to geological or cultural features).
Test Line Data	Radiometrics	If signals from the four spectrometer windows (K, Th, U, and TC) over the test line exceed by more than 12%, the flights shall be re-flown or suspended.

Table 4: Contract re-flight specifications.

Due to tall trees (of more than 40 m in height), the survey pilot could not maintain a nominal height of 40 m without compromising the safety of the flight crew. Hence, the Red Top Sunrise flew at a mean height of 48 m.

4.0 Aircraft and Equipment:

All geophysical and subsidiary equipment are carefully installed on Precision GeoSurvey's aircraft. For this survey, a magnetometer, spectrometer, a data acquisition system, a base station, a laser altimeter, a pilot guidance unit (PGU), and a GPS navigation system were required to carry out the survey and collect quality, high resolution data. The survey magnetometer was carried in an approved "stinger" configuration to enhance flight safety and improve data quality in this mountainous terrain.

4.1 Aircraft:

Precision GeoSurveys flew the Red Top Sunrise property using a Bell 206 Jet Ranger helicopter (Figure 8), registration C-FZHK. The survey lines were flown at a nominal line spacing of one hundred (100) meters and the tie lines were flown at 1 km spacing for both the magnetometer and spectrometer. The average survey elevation was 48 meters vertically above ground.

Figure 8: Bell 206 Jet Ranger equipped with mag stinger for magnetic data acquisition, and internal spectrometer crystals for radiometric data acquisition.

4.2 Equipment:

4.2.1 AGIS:

The Airborne Geophysical Information System, AGIS, (Figure 9), is the main computer used in data recording, data synchronizing, displaying real-time QC data for the geophysical operator, and the generation of navigation information for the pilot and operator display system.

Figure 9: AGIS installed in the Bell 206.

The AGIS was manufactured by Pico Envirotec; therefore the system uses standardized Pico software and external sensors are connected to the system via RS-232 serial communication cables. The AGIS data format is easily converted into Geosoft or ASCII file formats by a supplied conversion program called PEIView. Additional Pico software allows for post real time magnetic compensation and survey quality control procedures.

4.2.2 Magnetometer:

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted "stinger" (Figure 10). The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is +/- 0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference, aircraft position, and the survey altitude for immediate QC of the magnetic data. The magnetic data are recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth's geomagnetic field.

Figure 10: View of the mag stinger.

4.2.3 Spectrometer:

The IRIS, or Integrated Radiometric Information System is a fully integrated, gamma radiation detection system containing 8.4 litres of NaI (T1) downward looking crystals (Figure 11). The IRIS is equipped with upward-shielding high density RayShield® gamma-attenuating material to minimize cosmic and solar gamma noise. Real time data acquisition, navigation and communication tasks are integrated into a single unit that is installed in the rear of the aircraft as indicated below. Information such as total count, counts of various radioelements (K, U, Th, etc.), temperature, cosmic radiation, barometric pressure, atmospheric humidity and survey altitude can all be monitored on the AGIS screen for immediate QC. All the radiometric data are recorded at 1 Hz.

Figure 11: IRIS strapped into the cargo box of the helicopter.

4.2.4 Base Station:

For monitoring and recording of the Earth's diurnal magnetic field variation, Precision GeoSurveys operates a magnetometer base station continuously throughout the airborne data acquisition survey. Precision GeoSurveys operates a GEM GSM-19T magnetometer base station. The base station is installed mounted within the survey block, and in an area with low magnetic gradient, as possible to give accurate magnetic field data. It is located in an area away from electric transmission power lines and moving ferrous objects, such as aircraft and motor vehicles that could affect the survey data integrity.

The GEM GSM-19T magnetometer with GPS (Figure 12) uses the proton precession technology sampling at a rate of 0.5 Hz. The GSM-19T has an accuracy of +/- 0.2 nT at 1 Hz. Base station data recorded in the solid-state memory of the base station, are downloaded onto a field laptop using GEMLink 5.0 software. Profile plots of the base station readings are generated and updated at the end of each survey day.

Figure 12: GEM GSM-19T proton precession magnetometer.

4.2.5 Laser Altimeter:

The pilot is provided with terrain guidance and clearance information from an Acuity AccuRange AR3000 laser altimeter (Figure 13). This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly-modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off special reflectors. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and digital outputs, the ground clearance data are transmitted and collected by the AGIS at 10 Hz.

Figure 13: Acuity AccuRange AR3000 laser altimeter.

4.2.6 Pilot Guidance Unit:

The PGU (Pilot Guidance Unit) is a graphical display type unit that provides continuous steering and elevation information to the pilot (Figure 14). It is mounted remotely from the data system on top of the instrument panel. The PGU assists the pilot to keep the helicopter on the flight path and at the desired ground clearance.

Figure14: Pilot Guidance Unit.

The LCD monitor measures 7 inches, with a full VGA 800 x 600 pixel display. The CPU for the PGU is housed in the PC-104 console and uses Windows XP Embedded operating system control, with input from the GPS antenna, laser altimeter, and AGIS.

4.2.7 GPS Navigation System:

A Garmin GPS 16x-HVS navigation system integrated with the pilot display (PGU) and AGIS provided navigational information and control. The GPS 16x is a complete GPS sensor with integrated receiver and antenna (Figure 15). It is capable of tracking multiple satellites while providing fast time-to-first-fix, one-second navigation updates, and at low power consumption. This GPS sensor includes the capability of FAA Wide Area Augmentation System (WAAS) differential GPS to enhance 3D positional accuracy.

Figure 15: Garmin GPS 16x navigation system.

The survey flight lines (coordinates) were programmed to the AGIS prior to the start of the survey and information were be displayed onto the pilot display interface (PDI) to provide airborne navigation.

5.0 Data Acquisition Equipment Checks and Calibration:

At the start of the survey, airborne equipment tests were conducted. There are three tests conducted for the airborne magnetometer: compensation flight, lag test, and the heading error test (clover leaf test). Gamma ray spectrometer checks and calibrations are also conducted prior to the start of the survey. The three tests conducted were the calibration pad test, cosmic flight test, and the Brekenridge test range.

5.1 Magnetometer Checks:

5.1.1 Compensation Flight Test:

During aeromagnetic surveying noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey where the aircraft flies in the four orthogonal headings required for the survey ($030^o/210^o$ and $120^o/300^o$ in the case of this survey) at an altitude (typically > 1,500 m AGL) where there is no ground effect in the magnetic data. In each heading, three specified roll, pitch,

and yaw maneuvers are performed by the pilot; these maneuvers provide the data that are required to calculate the necessary parameters for compensating the magnetic data.

5.1.2 Lag Test:

A lag test was performed to determine the relationship between the time the digital reading was recorded by the instrument and the time for the position fix that the fiducial of the reading was obtained by the GPS system.

The test was flown in the four orthogonal headings over an identifiable magnetic anomaly (ie.Truck, Trailer, etc.) at survey speed and height. A lag of 19 fiducials (1.9 seconds) was determined from the lag test.

5.1.3 Heading Error Test:

To determine the magnetic heading effect a cloverleaf pattern flight test was conducted. The cloverleaf test was flown in the same heading as the survey and tie lines at 1000 m AGL in area with low magnetic gradient. For each direction, it must fly over a recognizable feature on the ground in order to calculate the heading error. For all four directions it must pass over the same mid-point all four times.

5.2 Gamma-ray Spectrometer Checks and Calibrations:

Pre-survey calibrations and testing of the GRS-10 airborne gamma-ray spectrometry system were carried out prior to the start of the survey. The calibration of the spectrometer system involved three tests which enabled the conversion of airborne data to ground concentration of natural radioactive elements. These tests were the calibration pad test, cosmic flight test, and the Breckenridge test range. The measurements were made in accordance with IAEA technical report series No. 323, "Airborne Gamma Ray Spectrometer Surveying", and AGSO Record 1995/60, "A Guide to the Technical Specification for Airborne Gamma-Ray Surveys".

5.2.1 Calibration Pad Test:

The calibration pad test was conducted by Pico Envirotec at the GSC (Geological Survey of Canada) testing facility in Ottawa, Ontario over the approved GSC calibration pad. It is a slab of concrete containing known concentrations of the radioelements (K, Th, and U) and is ideally used to stimulate a geological source of radiation. The measurements collected from the calibration pad test are used to determine the Compton scattering and Grasty Backscatter (spectral overlap between element windows) coefficients.

5.2.2 Cosmic Flight Test:

As the height of the aircraft increases, radiation in each spectral window increases exponentially due to the radiation of cosmic origin. Also, the background source of radiation from the aircraft itself is constant. The cosmic flight test is conducted to determine the aircraft background attenuation coefficients for the detector crystal packs and the cosmic coefficients.

The pilot is required to fly over the same location repeatedly in opposite directions starting from 1,500 m to 3,000 m at every 500 m interval for approximately 2 minutes each. Due to extremely high elevation in the survey area and low cloud cover, the test was not carried out within the survey area for safety reasons. Therefore, the standard values recommended for a single crystal pack were obtained from the IAEA Technical report.

5.2.3 Brekenridge Test Range:

The Brekenridge test range is very similar to the cosmic flight test but is conducted at lower elevations (from ground level). The pilot is required to fly over the same location at the following elevations in meters above ground; 30, 50, 100, 150, 200, 250, and 300. As the distance of the aircraft increases away from the radioactive source, the source signature exponentailly degrades. As a result, this test is used to determine the altitude attenuation coefficients and the radio-element sensitivity of the airborne spectrometer system.

6.0 Data Processing:

After all the data are collected from a survey flight several procedures are undertaken to ensure that the data meet a high standard of quality. All data were processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

6.1 Magnetic Processing:

Before any processing and editing of the raw magnetic data, the data obtained from the compensation flight test must be applied to the raw magnetic data. A computer program called PEIComp is used to create a model from the compensation flight test for each survey to remove the noise induced by aircraft movement; this model is applied to each survey flight so the data can be further processed.

Filtering is applied to the laser altimeter data to remove vegetation clutter and to show the actual ground clearance. To remove vegetation clutter a Rolling Statistic filter is applied to the laser altimeter data and a low pass filter is used to smooth out the laser altimeter profile to remove isolated noise. As a result, filtering the data will yield a more uniform surface in close conformance with the actual terrain.

The processing of the magnetic data involved the correction for diurnal variations. The base station data were edited, plotted and merged into a Geosoft (.gdb) database daily. The airborne magnetic data are corrected for diurnal variations by subtracting the

observed magnetic base station deviations. Following the diurnal correction, a lag correction is applied. A lag correction of 1.9 seconds was applied to the total magnetic field data to compensate for the lag in the recording system as the magnetometer sensor flies 5.70 m ahead of the GPS antenna. Lastly, a heading correction was applied to the data.

Some filtering of the magnetic data is also required. A Non Linear filter was used for spike removal. The 1D Non-Linear Filter is ideal for removing very short wavelength, but high amplitude features from data. It is often thought of as a noise spike-rejection filter, but it can also be effective for removing short wavelength geological features, such as signals from surficial features. The 1D Non-Linear Filter is used to locate and remove data that is recognized as noise. The algorithm is 'non- linear' because it looks at each data point and decides if that datum is noise or a valid signal. If the point is noise, it is simply removed and replaced by an estimate based on surrounding data points. Parts of the data that are not considered noise are not modified. The combination of a Non-Linear filter for noise removal and a low pass trend enhancement filter resulted in level data as indicated in the results section of this report. The low pass filter smooths out the magnetic profile to remove isolated noise.

The corrected magnetic data from the survey and tie lines were used to level the entire survey dataset. Two forms of leveling are applied to the corrected data: conventional leveling and micro-leveling. There are two components to conventional leveling; the first involves statistical leveling of magnetic data to correct miss ties (intersection errors) followed by specific patterns or trends. For the second component, tie lines are brought to a common regional base value using the mean value of the cross-level error. To obtain the best possible leveled data, individual corrections are edited at selected intersections. Lastly, micro-leveling is applied to the corrected conventional leveled data. This will remove any residual noise related to flight line direction, and any low amplitude component of flight line noise, that still remains in the data after tie line leveling.

6.2 Radiometric Processing:

Calibrating the spectrometer system in the helicopter is the first and vital step before the airborne radiometric data can be processed. Once calibration of the system has been complete, the radiometric data are processed by windowing the full spectrum to create channels for U, K, Th and total count. A 5-point Hanning filter was applied to the Cosmic window before going any further with processing the radiometric data.

Aircraft background and cosmic stripping corrections were applied to all three elements, and total count using the following formula:

$$C_{ac} = C_{lt} - (a_c + b_c * \mathrm{Cos}_f)$$

where: C_{ac} is the background and cosmic corrected channel
C_{lt} is the live time corrected channel
a_c is the aircraft background for this channel
b_c is the cosmic stripping coefficient for this channel
Cos_f is the filtered cosmic channel

The radon backgrounds are first removed followed by Compton stripping. Spectral overlap corrections are applied on to potassium, uranium, and thorium as part of the Compton stripping process. This is done by using the striping ratios that have been calculated for the spectrometer by prior calibration, this breaks the corrected elemental values down into the apparent radioelement concentrations. Lastly, attenuation corrections are applied to the data which involves nominal survey altitude corrections, in this case 48 metres is applied to total count, potassium, uranium, and thorium data.

With all corrections applied to the radiometric data, the final step is to convert the corrected potassium, uranium, and thorium to apparent radioelement concentrations using the following formula:

$$eE = C_{cor} / s$$

where: eE is the element concentration K(%) and equivalent element concentration of U(ppm) & Th(ppm)
s is the experimentally determined sensitivity
Ccor is the fully corrected channel

Finally, the natural air absorption dose rate is determined using the following formula:

$$E = 13.08 * K + 5.43 * eU + 2.69 * eTh$$

where: E is the absorption dose rate in nG/h
K is the concentration of potassium (%)
eU is the equivalent concentration of uranium (ppm)
eTh is the equivalent concentration of thorium (ppm)

To calculate for radiometric ratios it follows the guidelines in the IAEA report. Due to statistical uncertainties in the individual radioelement measurements, some care was taken in the calculation of the ratio in order to obtain statistically significant values. Following IAEA guidelines, the method of determining ratios of the eU/eTh, eU/K and eTh/K was as follows:

1. Any data points where the potassium concentration was less than 0.25 were neglected.

2. The element with the lowest corrected count rate was determined.
3. The element concentrations of adjacent points on either side of each data point were summed until they exceeded a certain threshold value. This threshold was set to be equivalent to 100 counts of the element with the lowest count rate. Additional minimum thresholds of 1.6% for Potassium, 20 ppm for thorium, and 30 ppm for uranium were set up to insure meaningful ratios.
4. The ratios were calculated using the accumulated sums.

With this method, the errors associated with the calculated ratios will be similar for all data points.

7.0 Deliverables:

All digital data will be presented on a compact disc (CD) and a copy of the logistic report and maps will be printed out. The survey data are presented as digital databases, maps, and report.

7.1 Digital Data:

The file format will be provided in two (2) formats, the first will be a .GDB file for use in Geosoft Oasis Montaj, the second format will be a .XYZ file, this is text file. A complete file provided in each format will contain both magnetic and radiometric data. Full description of the digital data and contents are included into the report (Appendix B).

The digital data are represented into grids. The following grids prepared for the Red Top Sunrise property are listed below:

- Digital terrain model (DTM)
- Leveled total magnetic intensity (TMI)
- Calculated vertical gradient (CVG) - first vertical derivative
- Potassium (Kcor) - radiometric data in concentrations
- Thorium (Thcor) - radiometric data in concentrations
- Uranium (Ucor) - radiometric data in concentrations
- Total count (TCcor) – radiometric data in concentrations
- Total count (TCexp) – radiometric data in Exposure rate
- Thorium over Potassium ratio (eTh/%K ratio) – radiometric ratios
- Uranium over Potassium ratio (eU/%K ratio) – radiometric ratios
- Uranium over Thorium ratio (eU/%Th ratio) – radiometric ratios

7.2 KMZ Grids:

The digital data represented into grids are exported into kmz files which can be displayed using Google Earth. The grids are laid overtop topography and rendered to give a 3D view.

7.3 Maps:

Maps were created for the Red Top Sunrise property at a scale of 1:22600. The following map products prepared are listed below:

Magnetic Maps (colour images with elevation contour lines):

- Digital terrain model
- Flight lines
- Total magnetic intensity
- Total magnetic intensity with plotted flight lines
- Calculated vertical gradient

Gamma-ray Spectrometry Maps (colour images with elevation contour lines):

- Potassium – equivalent concentration
- Thorium – equivalent concentration
- Uranium – equivalent concentration
- Total Count – equivalent dose rate
- Total Count (exp) – Exposure rate of SUM(%k, eU, eTh) * determined factors
- Thorium over Potassium ratio
- Uranium over Potassium ratio
- Uranium over Thorium ratio

All maps created were in prepared in World Geodetic System 84 (WGS 84) datum, and UTM zone 11N.

7.4 Report:

The report provides information about the acquisition, procedures, magnetic and radiometric processing, and presentation of the Red Top Sunrise property survey data. A pdf copy of the report is included along with the digital data and maps that are provided on the CD report.

.

Appendix A

Equipment Specifications

- GEM GSM-19T Proton Precession Magnetometer (Base Station)
- Garmin GPS 16x-HVS
- Scintrex CS-3 Survey Magnetometer
- Bartington Mag-03 three-axis fluxgate magnetic field sensor
- Pico Envirotec GRS-10 Gamma Spectrometer
- Pico Envirotec AGIS data recorder system (for Navigation, Gamma spectrometer, VLF-EM and Magnetometer Data Acquisition)

GEM GSM-19T Proton Precession Magnetometer (Base Station)

Configuration Options	15
Cycle Time	999 to 0.5 sec
Environmental	-40 to 60 ° Celsius
Gradient Tolerance	7,000 nT/m
Magnetic Readings	299,593
Operating Range	10, 000 to 120,000 nT
Power	12 V @ 0.62 A
Sensitivity	0.1 nT @ 1 sec
Weight (Console/ Sensor)	3.2 Kg
Integrated GPS	Yes

Garmin GPS 16x-HVS

Receiver	WAAS enabled GPS receiver continuously tracks and uses multiple satellites to compute and update position	
Acquisition Times	Reacquisition: Less than 2 secs Hot: Approx. 1 sec (all data known) Warm: Approx. 38 secs (initial position, time, and almanac known; ephemeris unknown Cold: Approx 45 secs	
Sentence Rate	1 sec default; NMEA 0183 output interval configurable from 1 to 900 secs in 1-sec increment	
Interfaces	True RS-232 output, asynchronous serial input compatible with RS-232 or TTL voltage levels, RS-232 polartiy. User selectable baud rate: 4800, 9600, 19200, or 38400	
Accuracy	GPS Standard Positioning Service (SPS)	Position: <15 meters, 95% typical Velocity: 0.1 knot RMS steady state
	DGPS (USCG/RTCM)	Position: 3-5 meters, 95% typical Velocity: 0.1 knot RMS steady state
	DGPS (WAAS)	Position: <3 meters, 95% typical Velocity: 0.1 knot RMS steady state
	PPS Time	± Microsecond at rising edge of PPS pulse
	Dynamic	999 knots velocity (only limited at altitude greater than 60,000 feet, 3g dynamics

Scintrex CS-3 Survey Magnetometer

Operating Principal	Self-oscillation split-beam Cesium Vapor (non-radioactive Cs-133)
Operating Rage	15,000 to 105,000 nT
Gradient Tolerance	40,000 nT/metre
Operating Zones	10° to 85° and 95° to 170°
Hemisphere Switching	a) Automatic b) Electronic control actuated by the control voltage levels (TTL/CMOS) c) Manual
Sensitivity	0.0006 nT √Hz rms.
Noise Envelope	Typically 0.002 nT P-P, 0.1 to 1 Hz bandwidth
Heading Error	+/- 0.25 nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)
Absolute Accuracy	<2.5 nT throughout range
Output	a) continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) square wave signal at the I/O connector, TTL/CMOS compatible
Information Bandwidth	Only limited by the magnetometer processor used
Sensor Head	Diameter: 63 mm (2.5”) Length: 160 mm (6.3”) Weight: 1.15 kg (2.6 lb)
Sensor Electronics	Diameter: 63 mm (2.5”) Length: 350 mm (13.8”) Weight: 1.5 kg (3.3 lb)
Cable, Sensor to Sensor Electronics	3m (9’ 8”), lengths up to 5m (16’ 4”) available
Operating Temperature	-40°C to +50°C
Humidity	Up to 100%, splash proof
Supply Power	24 to 35 Volts DC
Supply Current	Approx. 1.5A at start up, decreasing to 0.5A at 20°C
Power Up Time	Less than 15 minutes at -30°C

Bartington Mag-03 three-axis fluxgate magnetic field sensor

Number of axes	3
Bandwidth	0 to 3kHz at 50µT peak
Internal Noise: **Basic version** **Standard version** **Low Noise version**	 >10 to 20pTrms/√Hz at 1Hz 6 to ≤10pTrms/√Hz at 1Hz <6pTrms/√Hz at 1Hz
Scaling error (DC)	<±0.5%
Orthogonality error	<0.1°
Alignment error (Z axis to reference face)	<0.1°
Linearity error	<0.0015%
Frequency response	0 to 1kHz maximally flat, ±5% maximum at 1kHz
Input voltage	±12V to ±17V
Supply current	+30mA, -10mA (+1.4mA per 100µT for each axis)
Power supply rejection ratio	5µV/V (-106dB)
Analog output	±10V (±12V supply) swings to within 0.5V of supply voltage
Output impedance	10 Ω
Operating temperature range	-40°C to +70°C
Environmental protection	IP51
Dimensions (W x H x L)	32 x 32 x 152mm
Weight	160g
Enclosure material	Reinforced epoxy
Connector	ITT Cannon DEM-9P-NMB
Mating connector	ITT Cannon DEM-9S-NMB
Mounting	2 x M5 fixing holes

Pico Envirotec GRS-10 Gamma Spectrometer

Crystal volume	8.4 liters downward crystals
Resolution	256/512 channels
Tuning	Automatic using peak determination algorithm
Detector	Digital Peak
Calibration	Fully automated detector
Real Time	Linearization and gain stabilization
Communication	RS232
Detectors	Expandable to 10 detectors and digital peak
Count Rate	Up to 60,000 cps per detector
Count Capacity per channel	65545
Energy detection range:	36 KeV to 3 MeV
Cosmic channel	Above 3 MeV
Upward Shielding	RayShield® non-radioactive shielding on downward looking crystals
Spectra	Collected spectra of 256/512 channels, internal spectrum resolution 1024
Software	**Calibration:** High voltage adjustment, linearity correction coefficients calculation, and communication test support **Real Time Data Collection:** Automatic Gain real time control on natural isotopes, and PC based test and calibration software suite
Sensor	Each box containing two (2) gamma detection NaI(Tl) crystals – each 4.2 liters. (256 cu in.) (approx. 100 x 100 x 650 mm) Total volume of approx 8.4 litres or 512 cu in with detector electronics
Spectra Stabilization	Real time automatic corrections on radio nuclei: Th, Ur, K. No implanted sources.

Pico Envirotec AGIS data recorder system
(for Navigation, Gamma spectrometer, VLF-EM and Magnetometer Data Acquisition)

Functions	Airborne Geophysical Information System (AGIS) with integrated Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10, MMS4 Magnetometer, Totem 2A EM, A/D converter, temperature probe, humidity probe, barometric pressure probe, and laser altimeter. Output for the 2 line Pilot Indicator
Display	Touch screen with display of 800 x 600 pixels; customized keypad and operator keyboard. Multi-screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator.
GPS Navigation	Garmin 12-channel, WAAS-enabled
Data Sampling	Sensor dependent
Data Synchronization	Synchronized to GPS position
Data File	PEI Binary data format
Storage	80 GB
Supplied Software	**PEIView:** Allows fast data Quality Control (QC) **Data Format:** Geosoft GBN and ASCII output **PEIConv**: For survey preparation and survey plot after data acquisition
Software	**Calibration:** High voltage adjustment, linearity correction coefficients calculation, and communication test support **Real Time Data Collection:** Automatic Gain real time control on natural isotopes and PC based test and calibration software suite
Power Requirements	24 to 32 VDC
Temperature	Operating:-10 to +55 deg C; storage:-20 to +70 deg C

Appendix B

Digital File Descriptions

- Magnetic database description
- Radiometric database description
- Grids
- Maps

Magnetic Database:

Abbreviations used in the GDB files listed below:

Channel	Units	Description
X	m	UTM Easting - WGS84 Zone 11 North
Y	m	UTM Northing - WGS84 Zone 11 North
Long	deg	Longitude
Lat	deg	Latitude
Date	yyyy/mm/dd	Dates of the survey flight(s)
FLT		Flight Line numbers
Line		Line numbers
Galt	m	GPS height – WGS84 Zone 11 North
Lalt	m	Laser Altimeter readings
DTM	m	Digital Terrain Model
GPStime	Hours:min:secs	GPS time (UTC)
basemag	nT	Base station diurnal data
Mag	nT	Total Magnetic Intensity

Radiometric Database:

Abbreviations used in the GDB files listed below:

Channel	Units	Description
X	m	UTM Easting – WGS84 Zone 11 North
Y	m	UTM Northing – WGS84 Zone 11 North
Galt	m	GPS height – WGS84 Zone 11 North
Lalt	m	Laser Altimeter readings
DTM	m	Digital Terrain Model
BaroSTP_Kp	KiloPascal	Barometric Altitude (Pres and Temp Corrected)
Press_kP	KiloPascal	Atmospheric Pressure
Temp_degC	Degrees C	Air Temperature
COSFILT	counts/sec	Spectrometer - Filtered Cosmic
Tccor	µR	Dose Rate Equivalent
TCexp	µR/hour	Exposure Rate – SUM(%k, eU, eTh) * determined factors
Kcor	%	Equivalent Concentration – Potassium
Ucor	ppm	Equivalent Concentration – Uranium
Thcor	ppm	Equivalent Concentration – Thorium
THKratio		Spectrometer – eTh/%K ratio
Ukratio		Spectrometer – eU/%K ratio
UTHratio		Spectrometer – eU/eTh ratio
Date	yyyy/mm/dd	Dates of the survey flight(s)
FLT		Flight numbers
Line		Line numbers

Grids: WGS84 Datum, Zone 11N

File Name	Description
RedTopSunriseProperty_DTM	Red Top Sunrise Property digital terrain model
RedTopSunriseProperty_TMI.grd	Red Top Sunrise Property total magnetic intensity
RedTopSunriseProperty_CVG.grd	Red Top Sunrise Property calculated vertical gradient
RedTopSunriseProperty_Kcor.grd	Red Top Sunrise Property potassium (Kcor) equivalent concentration
RedTopSunriseProperty_Thcor.grd	Red Top Sunrise Property Thorium (Thcor) equivalent concentration
RedTopSunriseProperty_Ucor.grd	Red Top Sunrise Property Uranium (Ucor) equivalent concentration
RedTopSunriseProperty_TCcor.grd	Red Top Sunrise Property Total Count (TCcor) equivalent dose rate
RedTopSunriseProperty_TCexp.grd	Red Top Sunrise Property Total Count (TCexp) exposure rate
RedTopSunriseProperty_THKratio.grd	Red Top Sunrise Property thorium over potassium ratio (eTh/%K)
RedTopSunriseProperty_UKratio.grd	Red Top Sunrise Property uranium over potassium ratio (eU/%K)
RedTopSunriseProperty_UThratio.grd	Red Top Sunrise Property uranium over thorium ratio (eU/eTh)

Maps: WGS84 Datum, Zone 11N

File Name	Description
RedTopSunriseProperty_DTM.pdf	Red Top Sunrise Property digital terrain model
RedTopSunriseProperty_FlightLines.pdf	Red Top Sunrise Property flight lines flown
RedTopSunriseProperty_TMI.pdf	Red Top Sunrise Property total magnetic intensity
RedTopSunriseProperty_TMI_with_Flightlines.pdf	Red Top Sunrise Property total magnetic intensity with flight lines flown
RedTopSunrisePropert _CVG. pdf	Red Top Sunrise Property calculated vertical gradient
RedTopSunriseProperty_Potassium_EquivalentConcentration_Radiometrics.pdf	Red Top Sunrise Property potassium (Kcor) equivalent concentration
RedTopSunriseProperty_Thorium_EquivalentConcentration_ Radiometrics.pdf	Red Top Sunrise Property Thorium (Thcor) equivalent concentration
RedTopSunriseProperty_Uranium_EquivalentConcentration_ Radiometrics.pdf	Red Top Sunrise Property Uranium (Ucor) equivalent concentration
RedTopSunriseProperty_TotalCount_EquivalentDoseRate_Radiometrics.pdf	Red Top Sunrise Property Total Count (TCcor) equivalent dose rate
RedTopSunriseProperty_TotalCount_HornsureRate_Radiometrics.pdf	Red Top Sunrise Property Total Count (TCexp) exposure rate
RedTopSunriseProperty_Thorium_over_Potassium_Ratio_Radiometrics.pdf	Red Top Sunrise Property thorium over potassium ratio
RedTopSunriseProperty_Uranium_over_Potassium_Ratio_Radiometrics. pdf	Red Top Sunrise Property uranium over potassium ratio
RedTopSunriseProperty_Uranium_over_Thorium_Ratio_Radiometrics. pdf	Red Top Sunrise Property uranium over thorium ratio

Appendix C

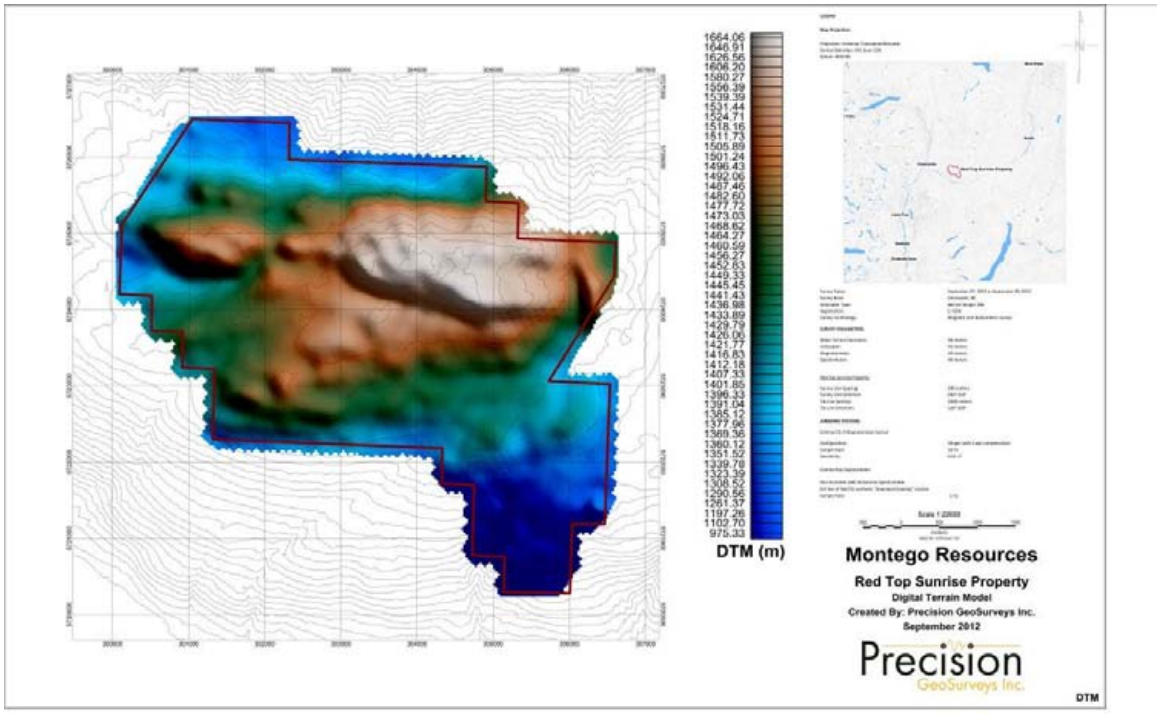
Red Top Sunrise Property Maps

Magnetic Maps (colour image with elevation contour lines):

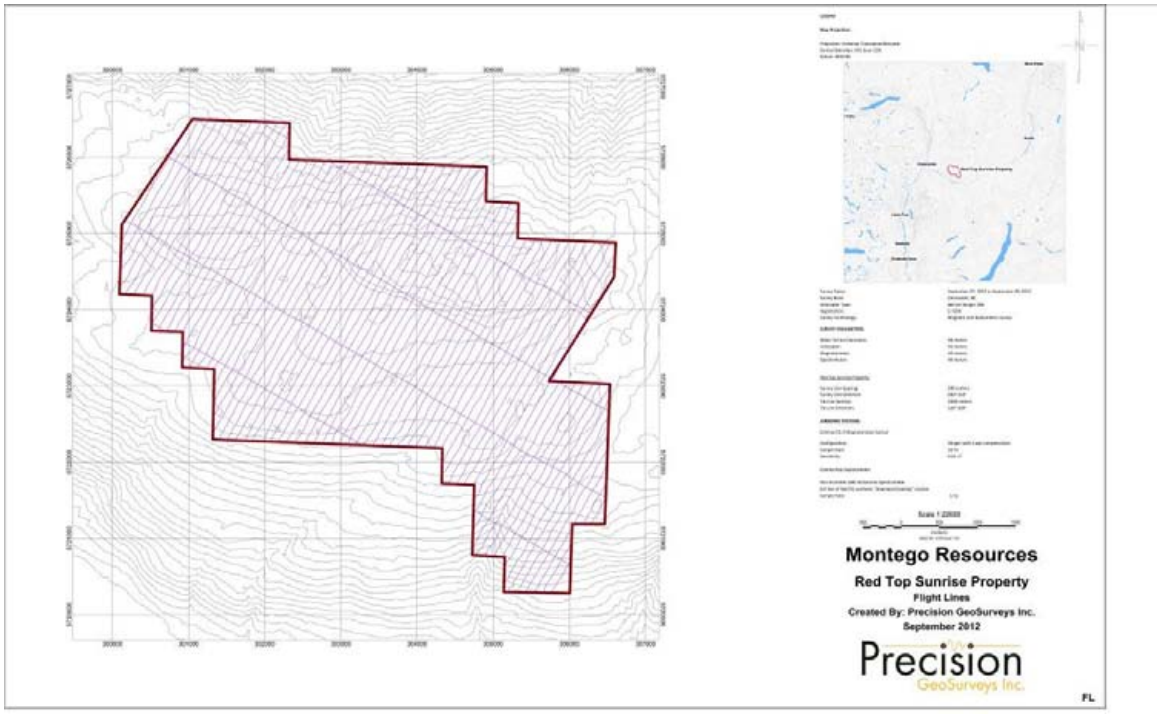
- Digital Terrain Model (DTM)
- Flight lines map
- Total Magnetic Intensity (TMI)
- Total Magnetic Intensity (TMI) with flight lines
- Calculated Vertical Gradient (CVG)

Gamma-Ray Spectrometry Maps (colour image with elevation contour lines):

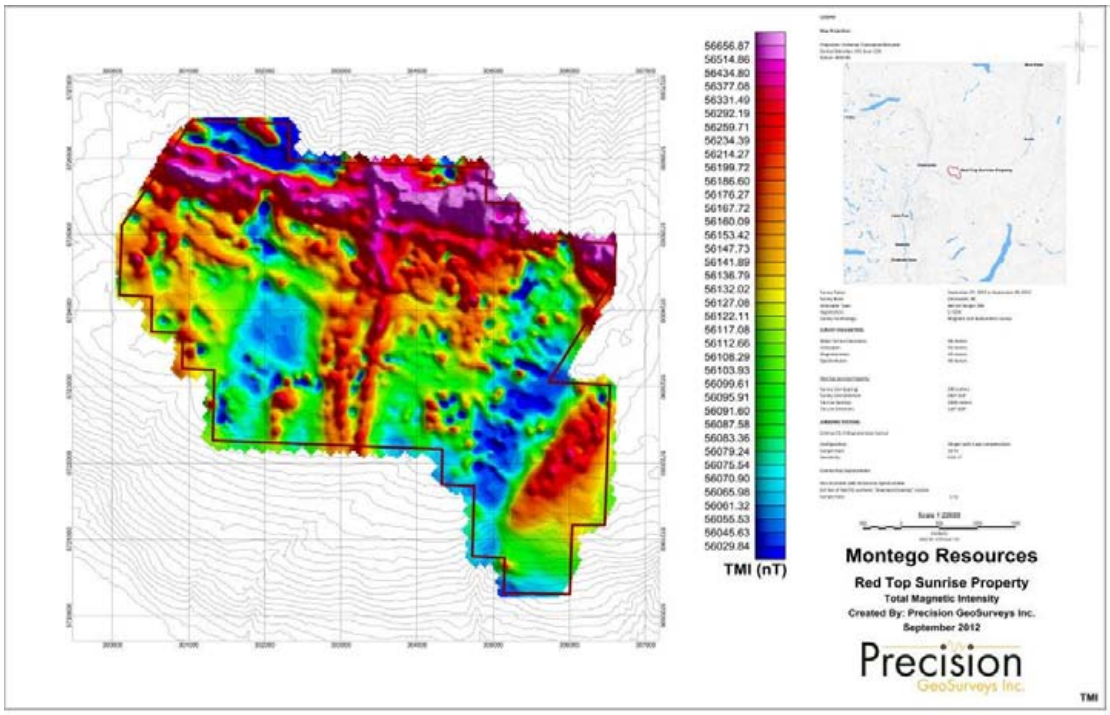
- Potassium – Equivalent Concentration (% K)
- Thorium – Equivalent Concentration (eTh)
- Uranium – Equivalent Concentration (eU)
- Total Count – Dose Rate Equivalent (TC)
- Total Count - Exposure Rate - SUM(%k, eU, eTh) * determined factors
- Thorium over Potassium Ratio - Spectrometer - eTh/%K ratio
- Uranium over Potassium Ratio - Spectrometer - eU/%K ratio
- Uranium over Thorium Ratio - Spectrometer - eU/eTh ratio



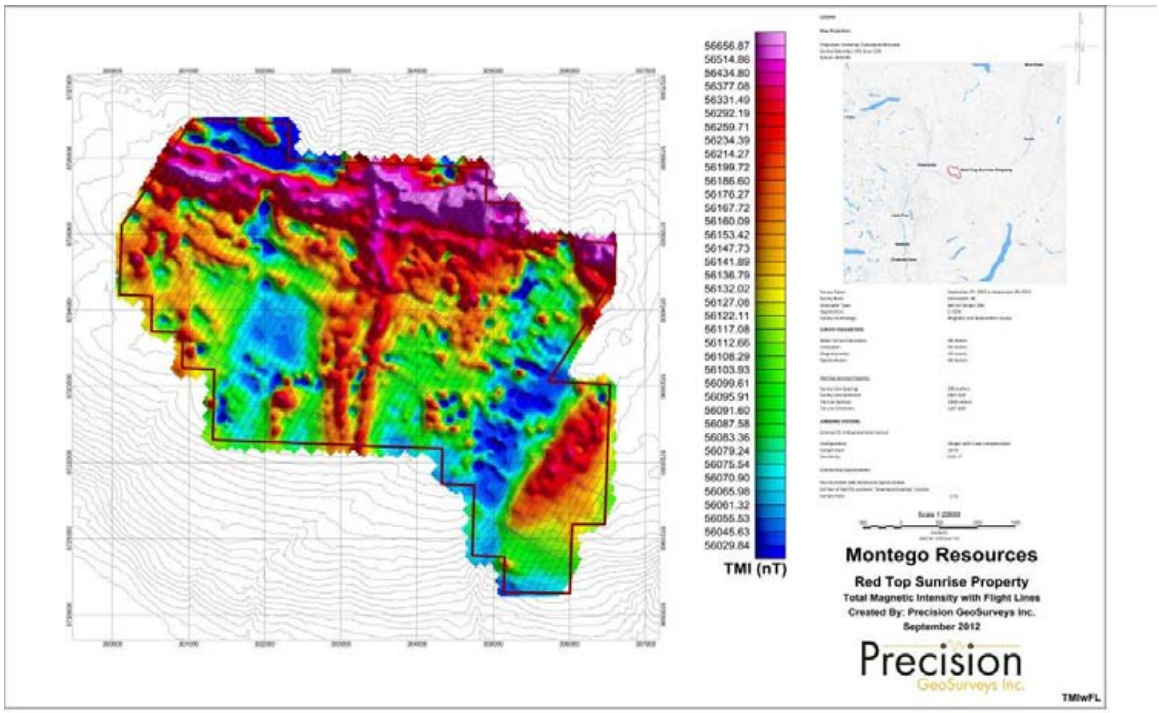
Map 1: Red Top Sunrise Property digital terrain model.



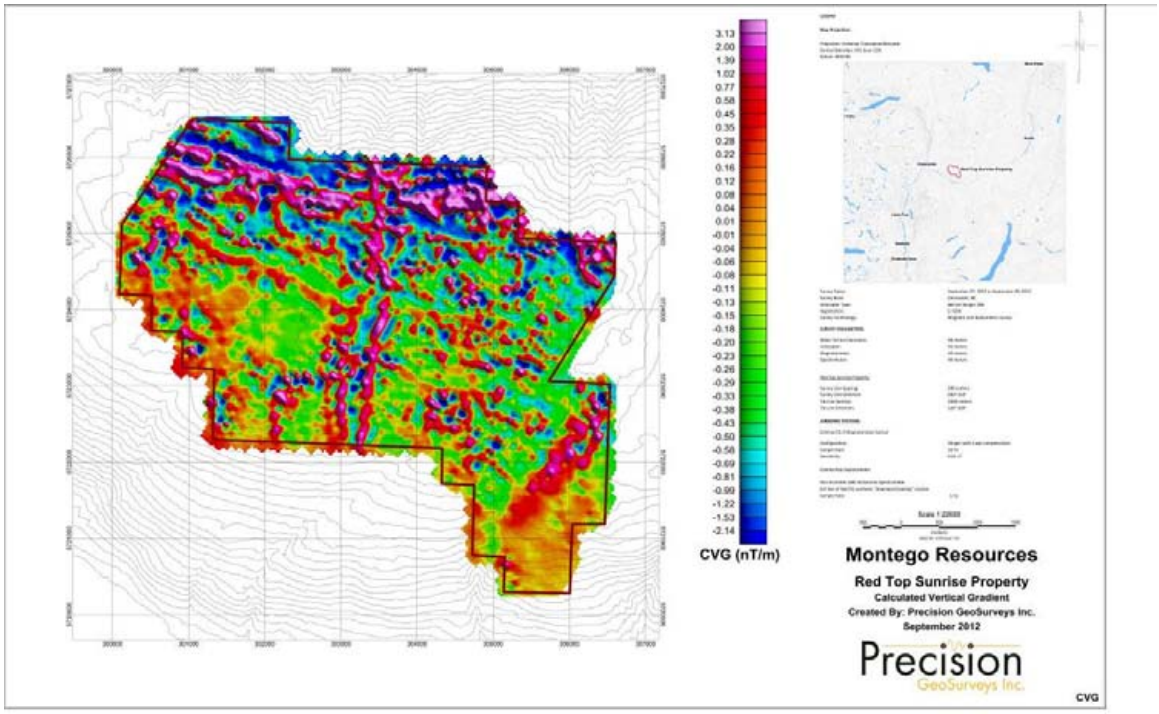
Map 2: Red Top Sunrise Property flight lines.



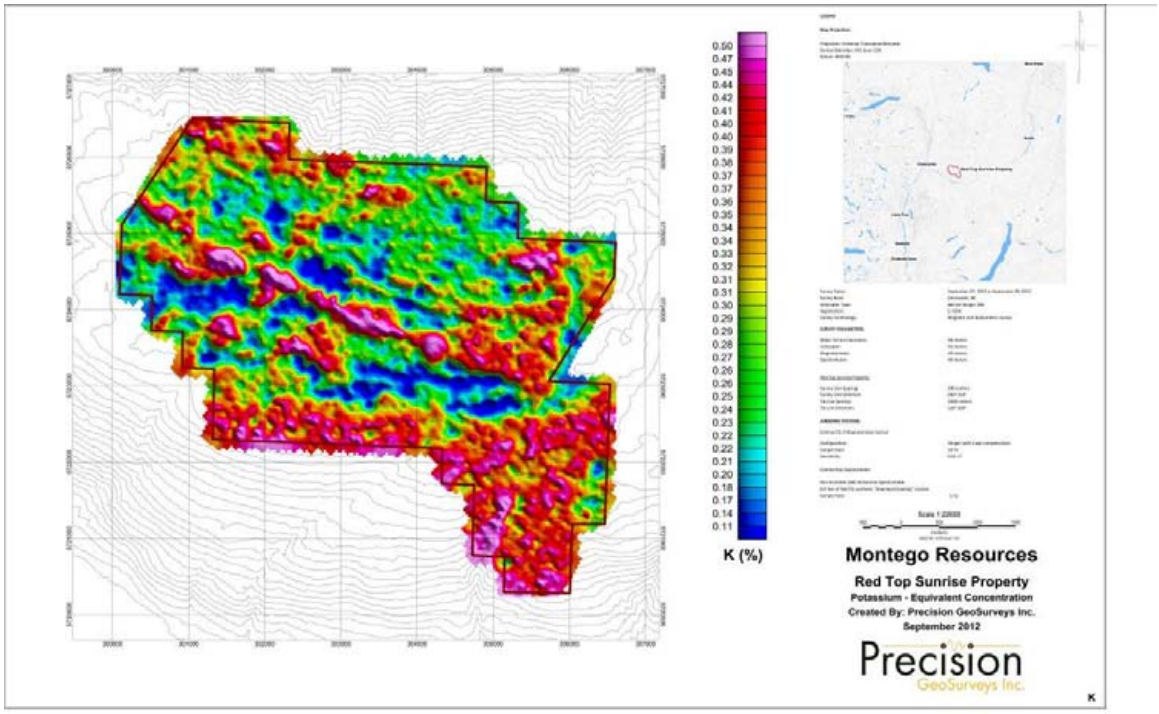
Map 3: Red Top Sunrise Property total magnetic intensity.



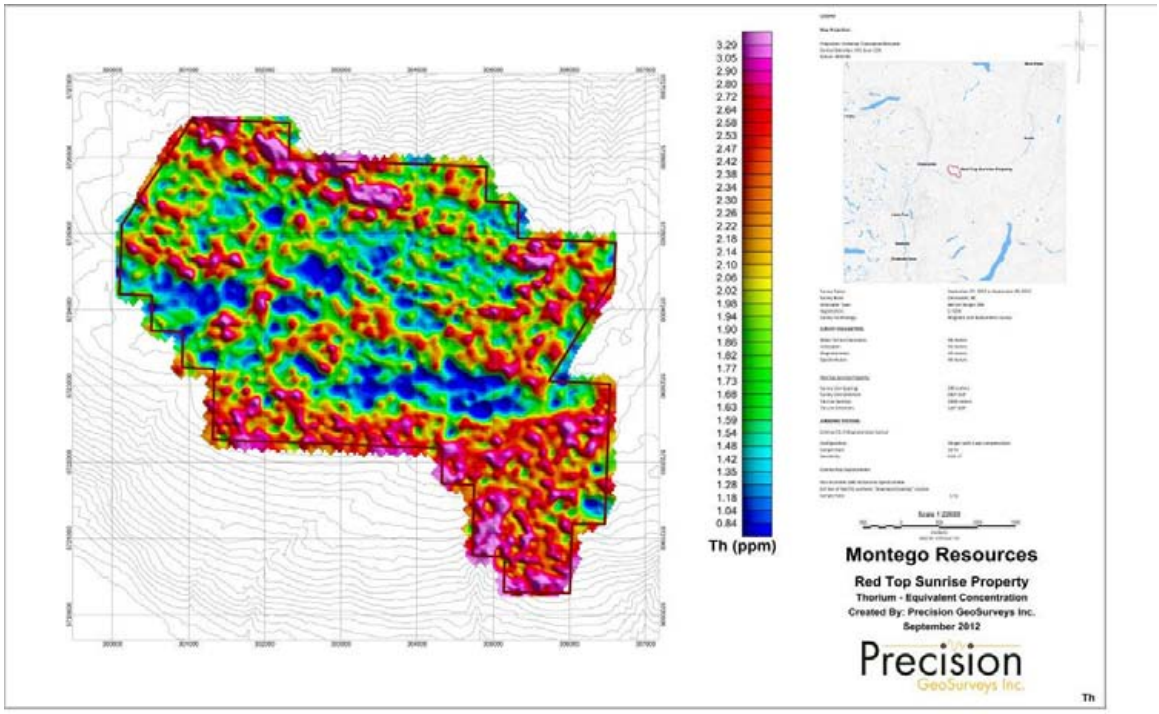
Map 4: Red Top Sunrise Property total magnetic intensity with plotted flight lines.



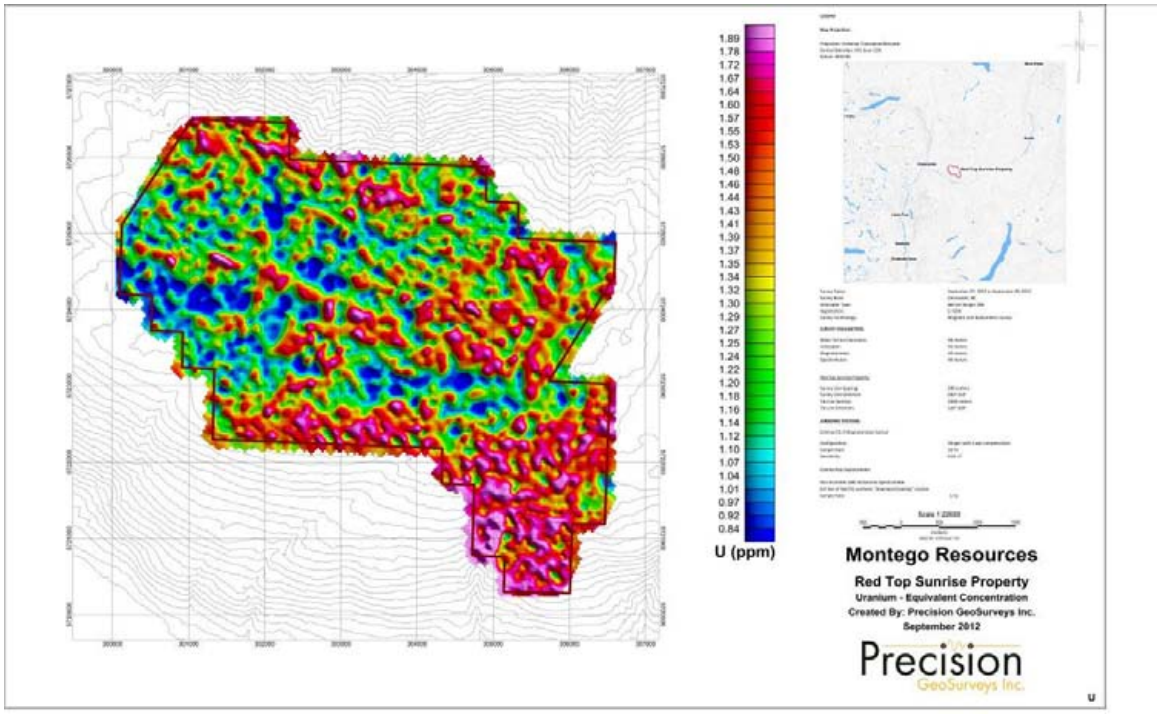
Map 5: Red Top Sunrise Property calculated vertical gradient.



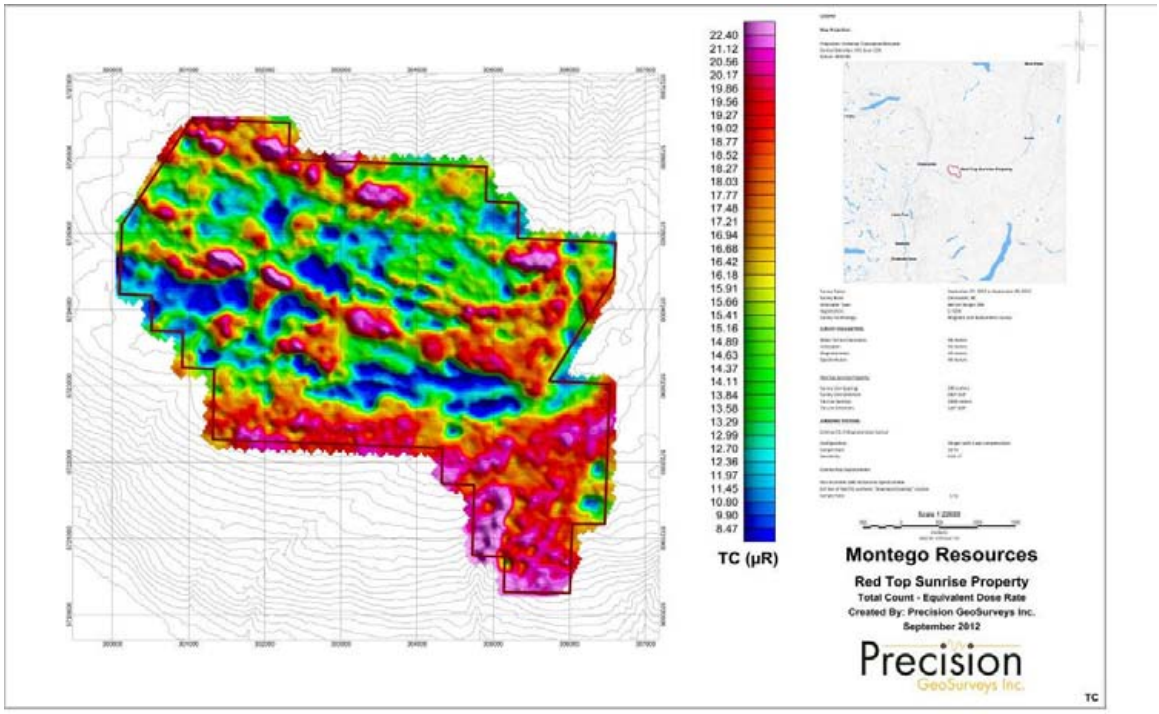
Map 6: Red Top Sunrise Property potassium – equivalent concentration.



Map 7: Red Top Sunrise Property thorium – equivalent concentration.

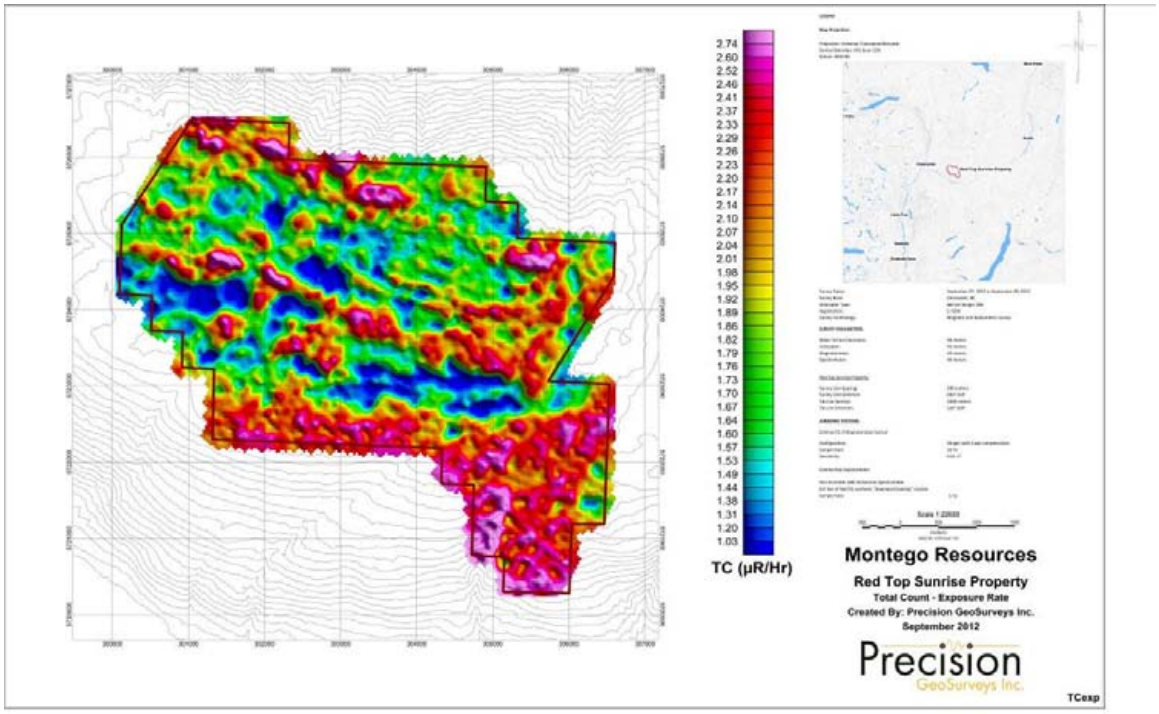


Map 8: Red Top Sunrise Property uranium – equivalent concentration.



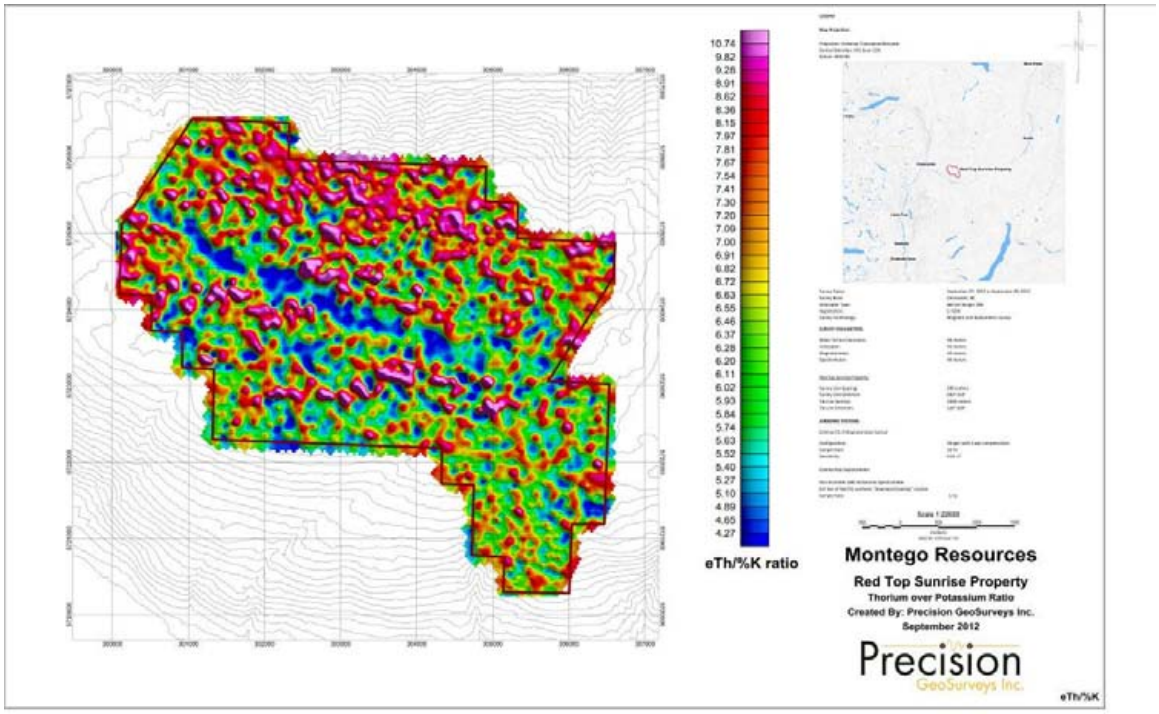
Map 9: Red Top Sunrise Property total count – equivalent dose rate.

.



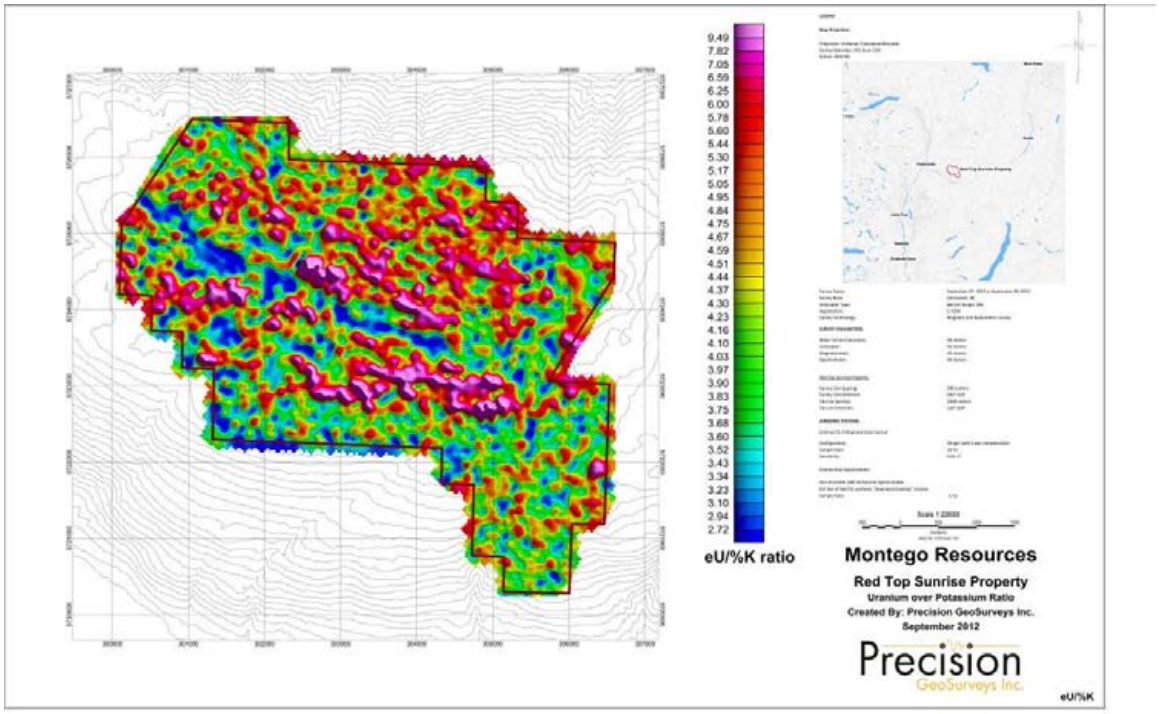
Map 10: Red Top Sunrise Property total count – Exposure rate.

.

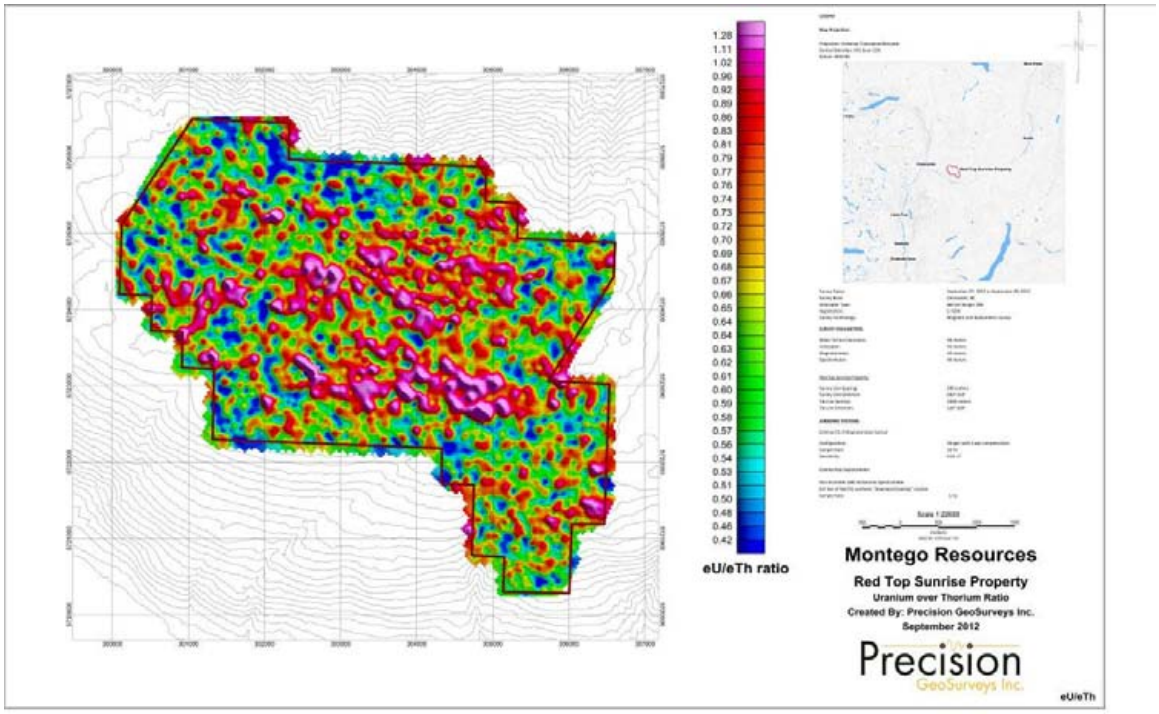


Map 11: Red Top Sunrise Property thorium over potassium ratio.

.

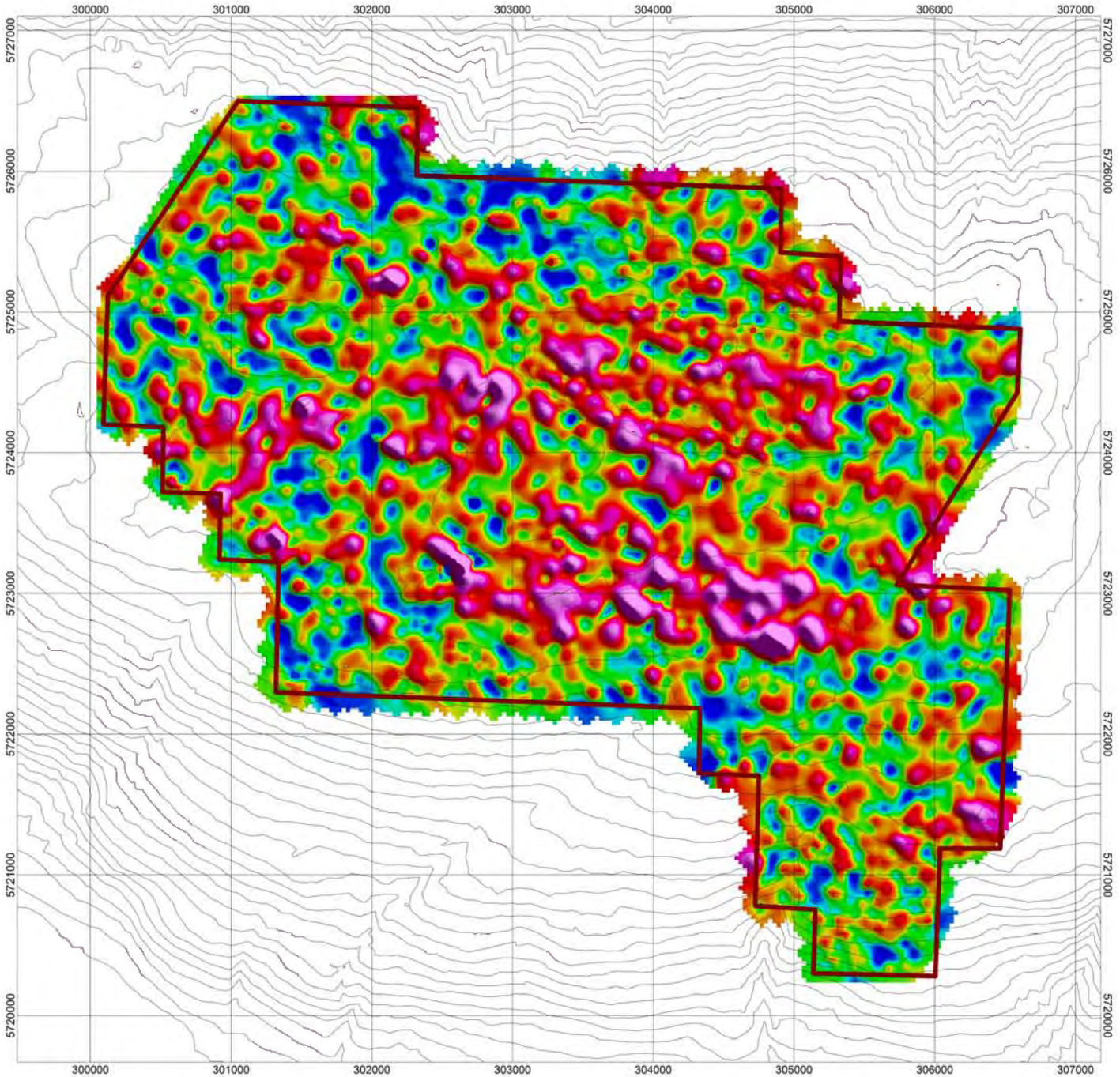


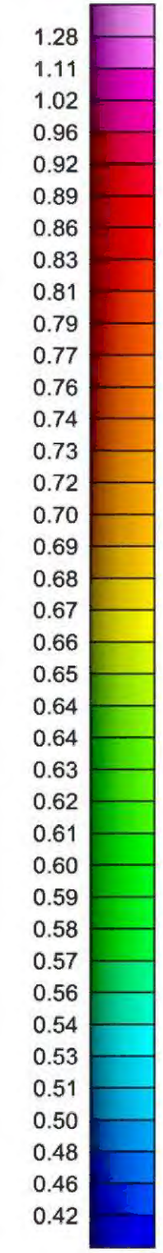
Map 12: Red Top Sunrise Property uranium over potassium ratio.



Map 13: Red Top Sunrise Property uranium over thorium ratio.

.





eU/eTh ratio

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI[T1] synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

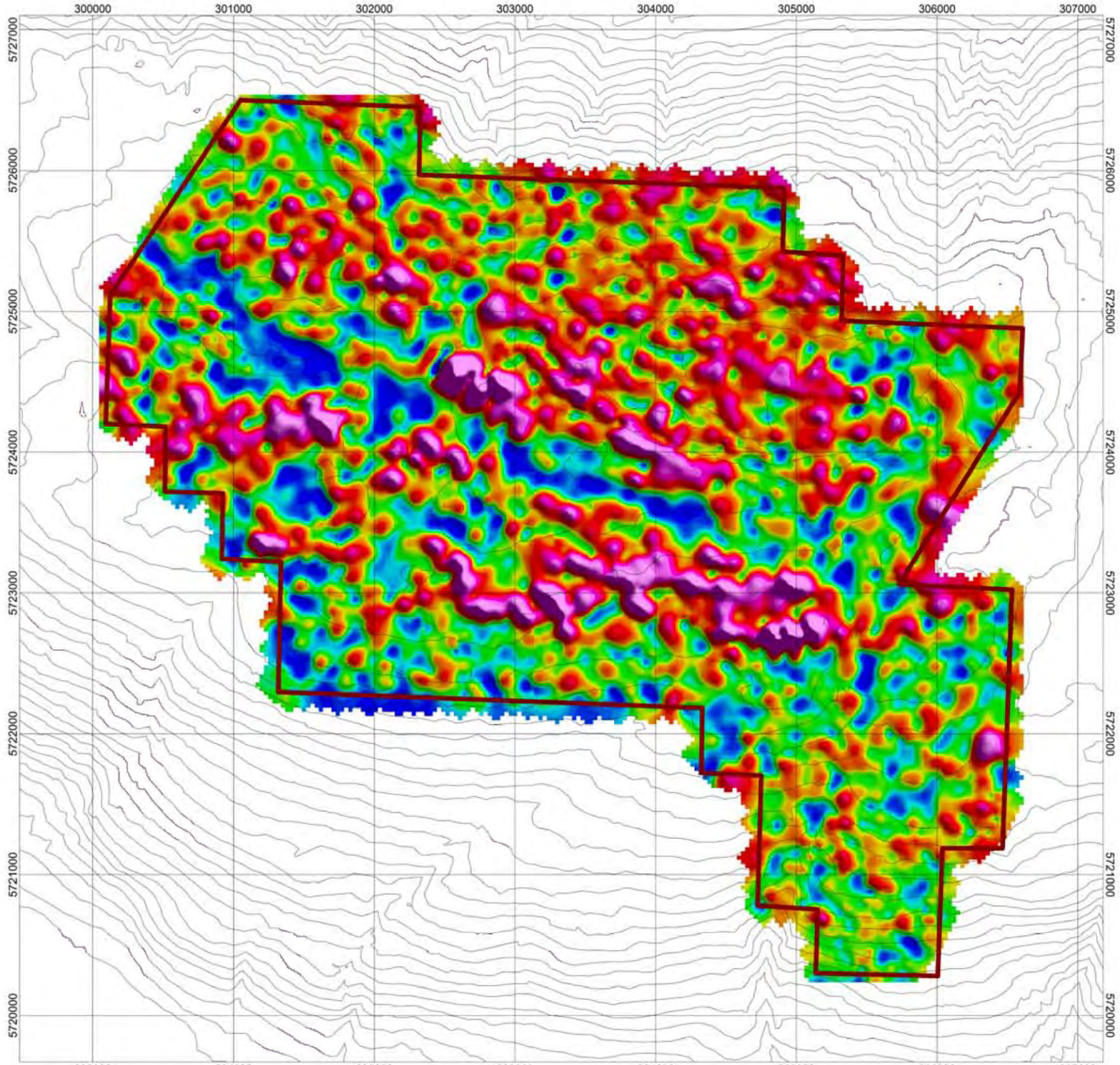
Red Top Sunrise Property

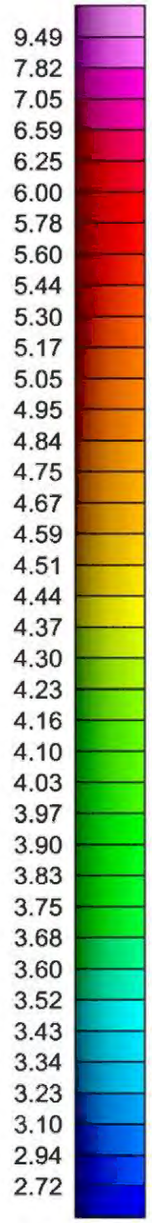
Uranium over Thorium Ratio

Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.





eU/%K ratio

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

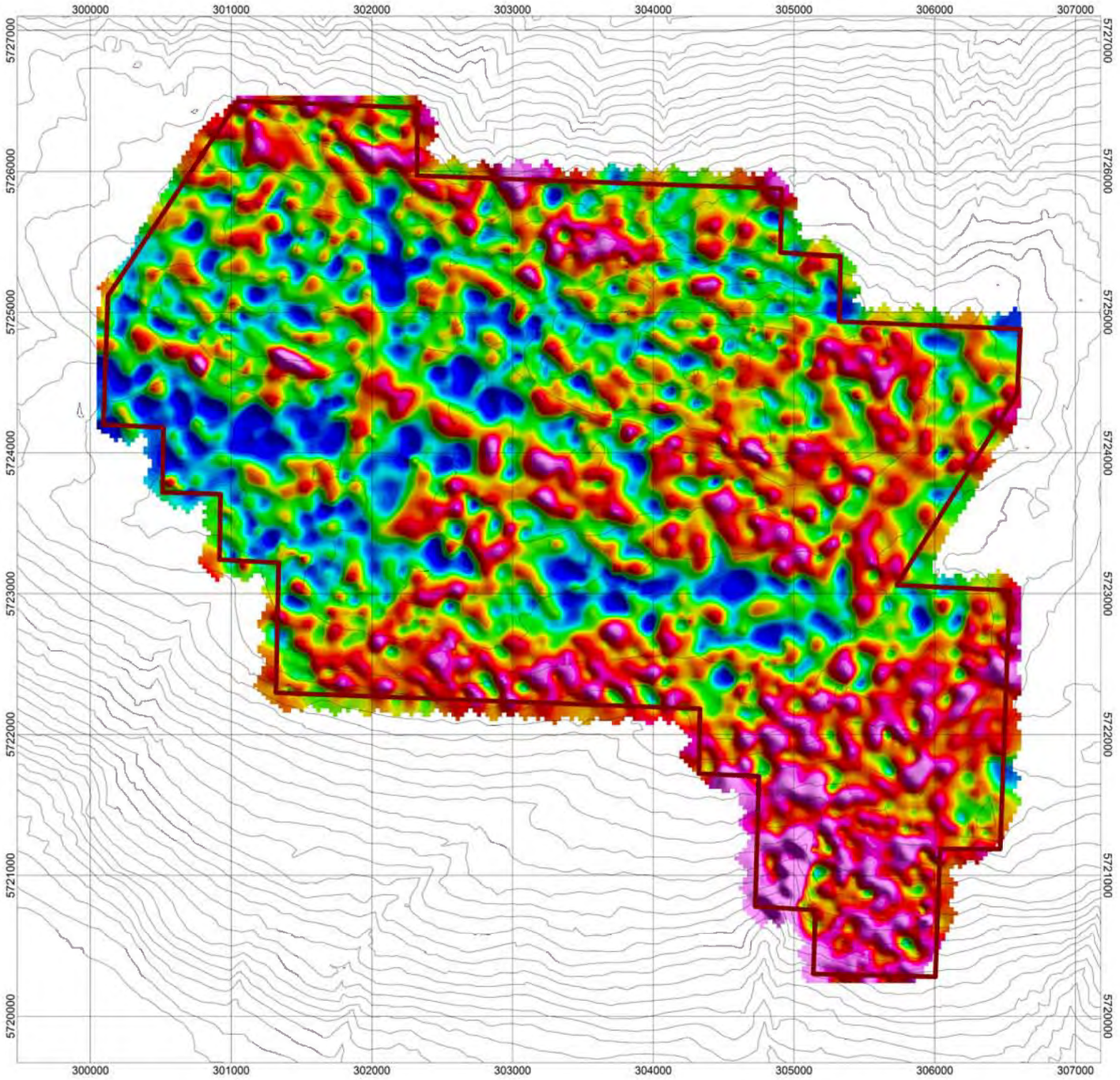
Uranium over Potassium Ratio

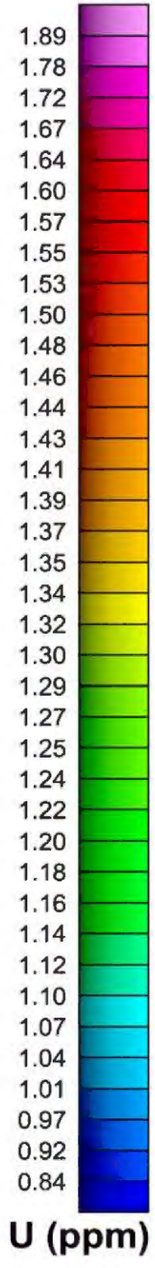
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

eU/%K





LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

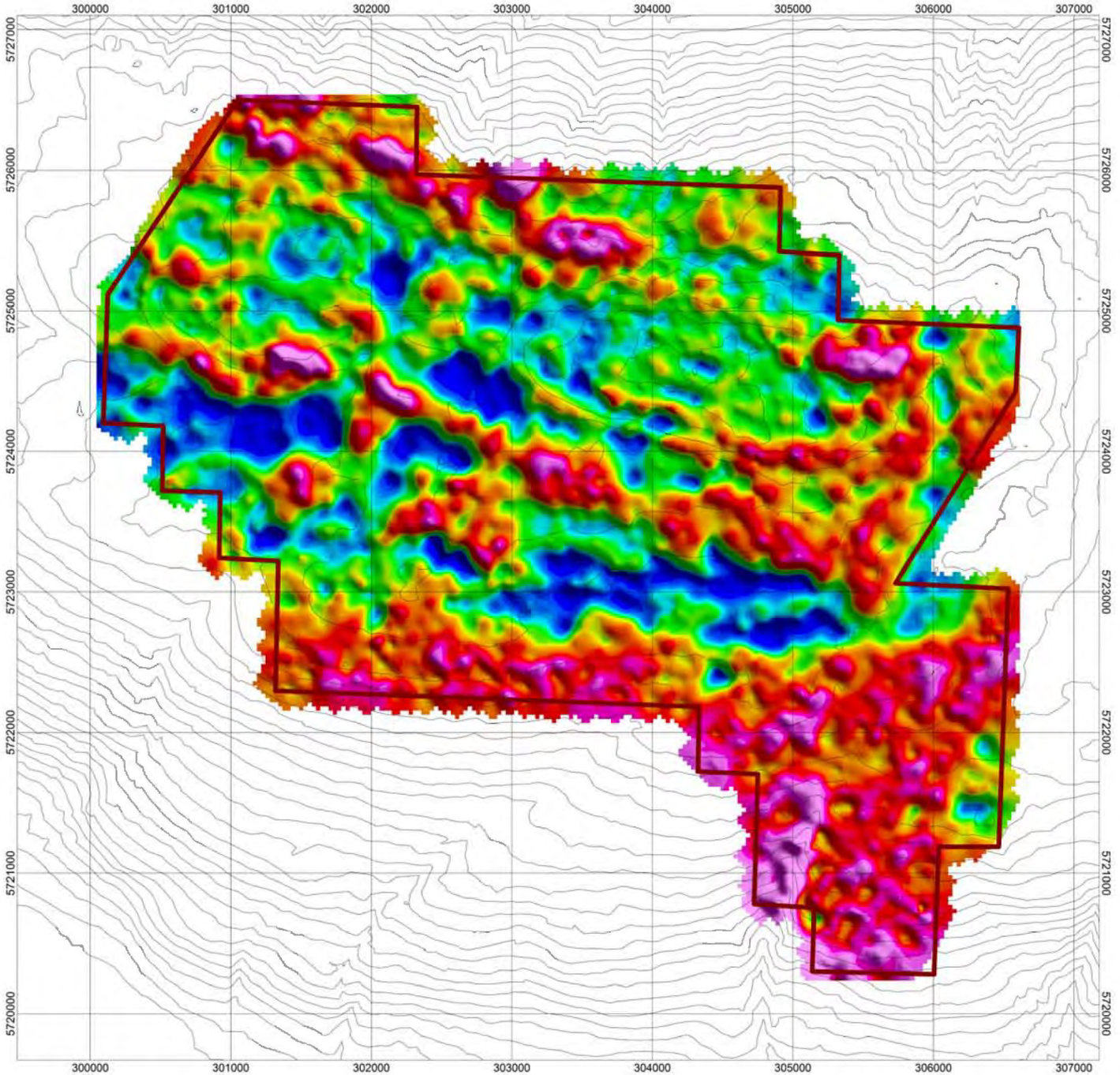
Uranium - Equivalent Concentration

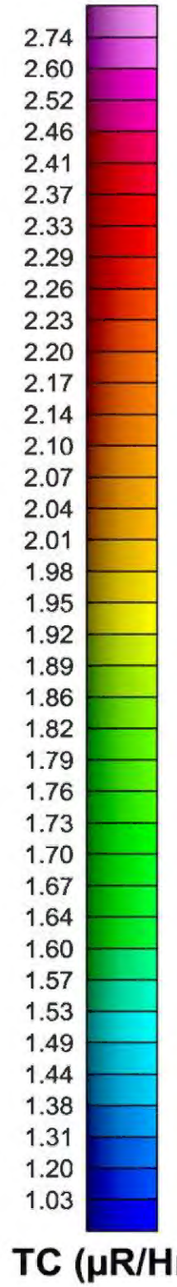
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

U





LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

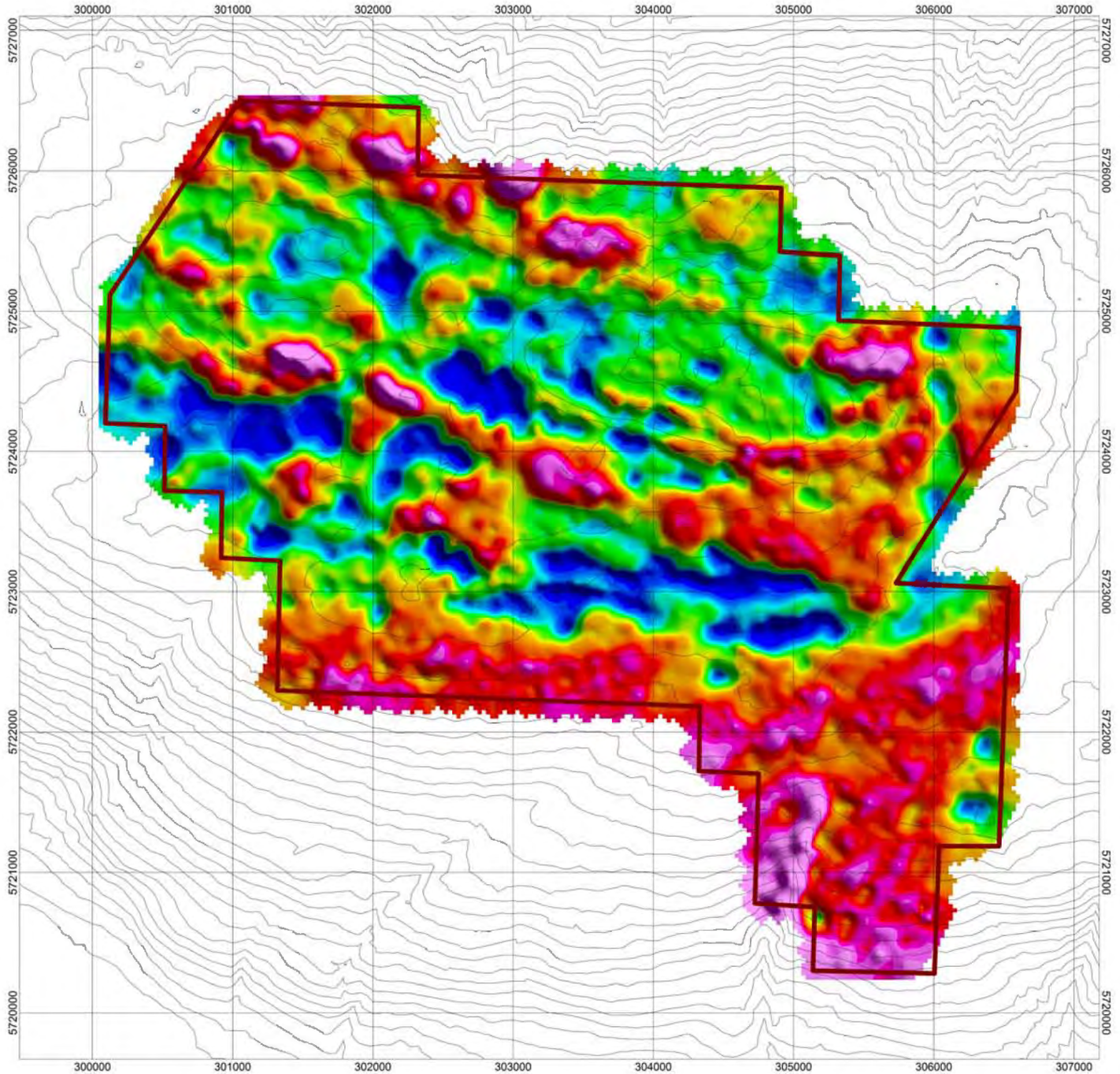
Total Count - Exposure Rate

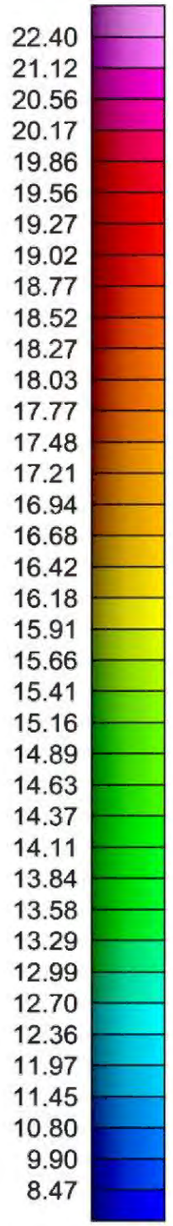
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

TCexp





TC (µR)

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

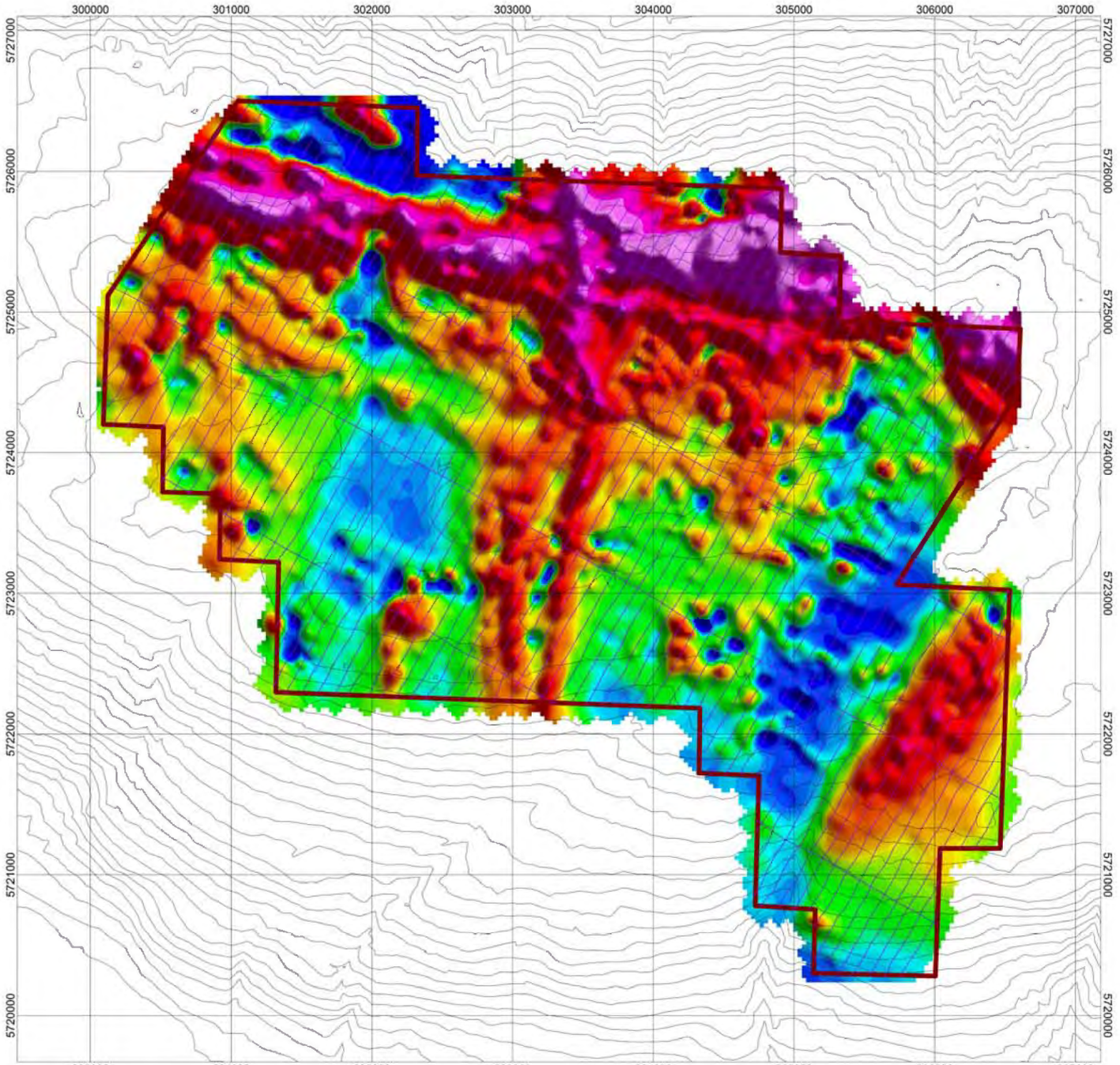
Montego Resources

Red Top Sunrise Property

Total Count - Equivalent Dose Rate
Created By: Precision GeoSurveys Inc.
September 2012

Precision GeoSurveys Inc.

TC



56656.87
56514.86
56434.80
56377.08
56331.49
56292.19
56259.71
56234.39
56214.27
56199.72
56186.60
56176.27
56167.72
56160.09
56153.42
56147.73
56141.89
56136.79
56132.02
56127.08
56122.11
56117.08
56112.66
56108.29
56103.93
56099.61
56095.91
56091.60
56087.58
56083.36
56079.24
56075.54
56070.90
56065.98
56061.32
56055.53
56045.63
56029.84

TMI (nT)

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

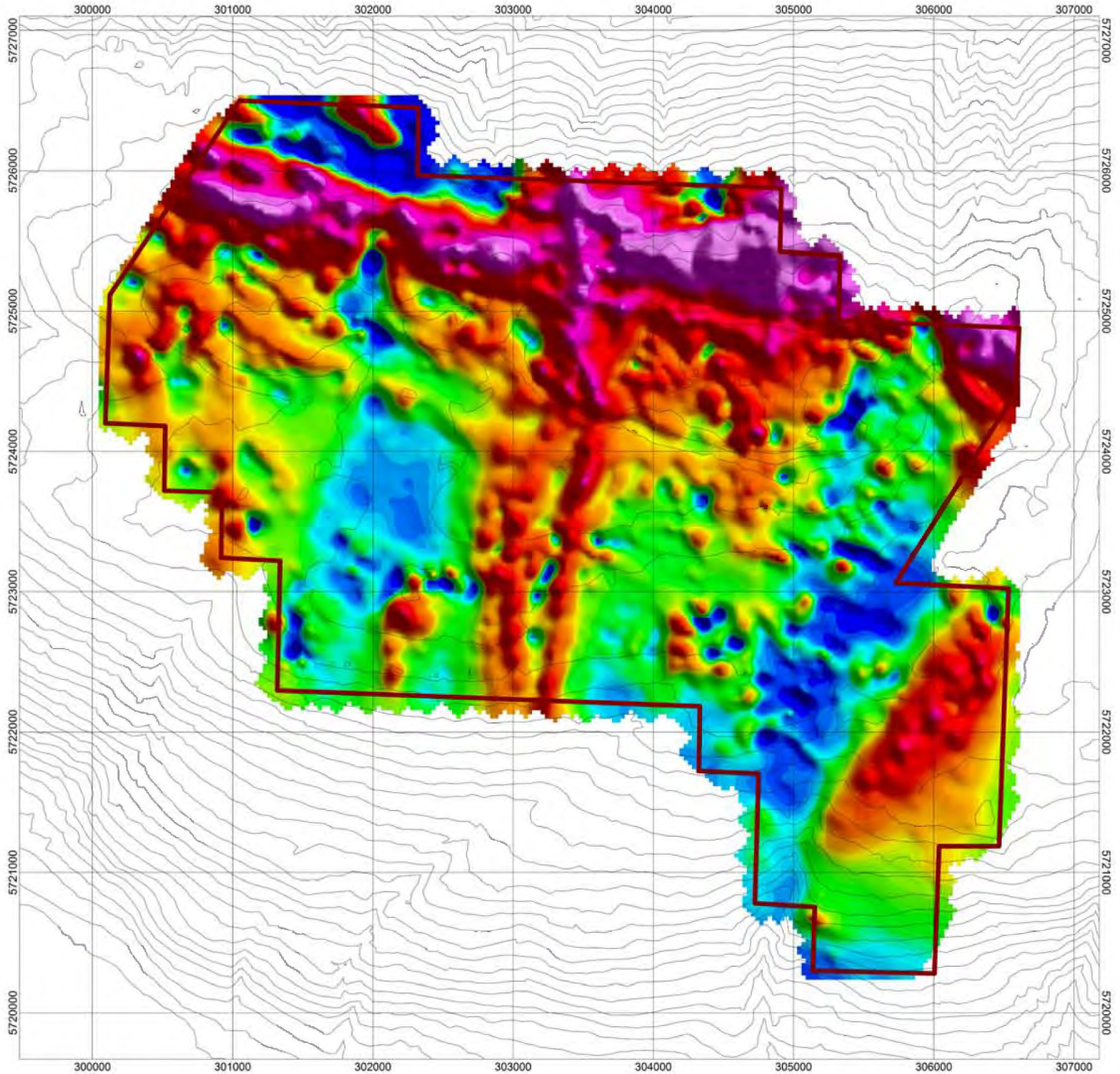
Montego Resources

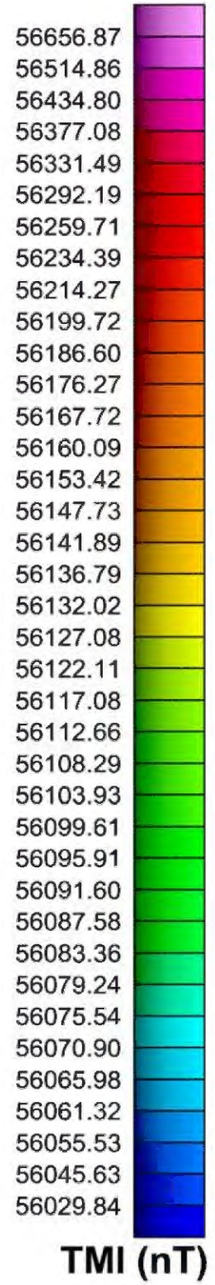
Red Top Sunrise Property

Total Magnetic Intensity with Flight Lines
Created By: Precision GeoSurveys Inc.
September 2012

Precision GeoSurveys Inc.

TMIwFL





LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

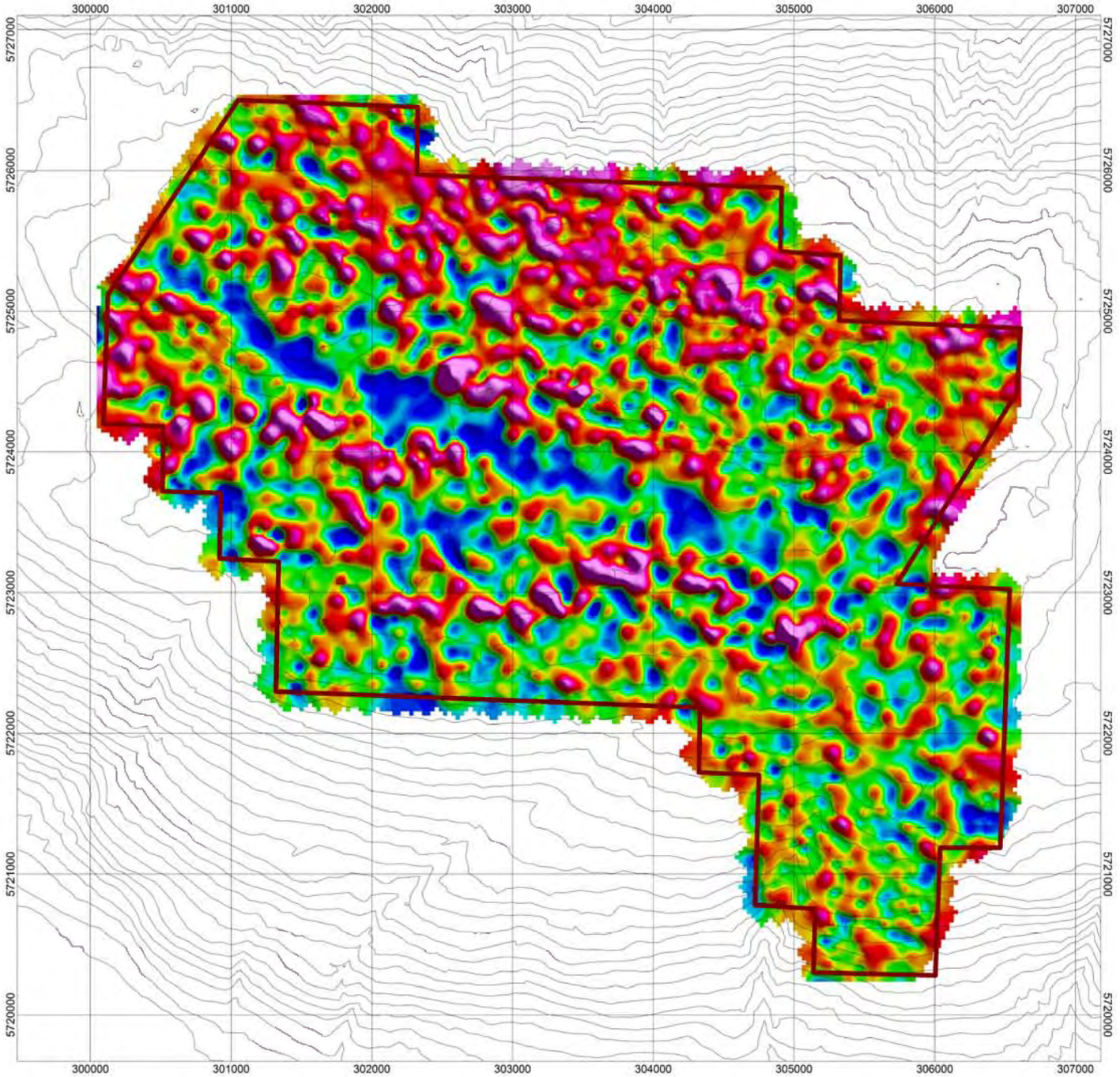
Total Magnetic Intensity

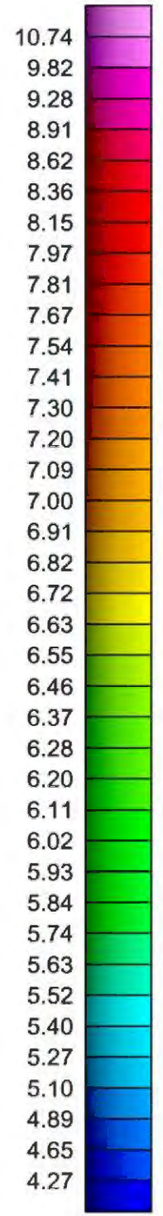
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

TMI





eTh/%K ratio

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

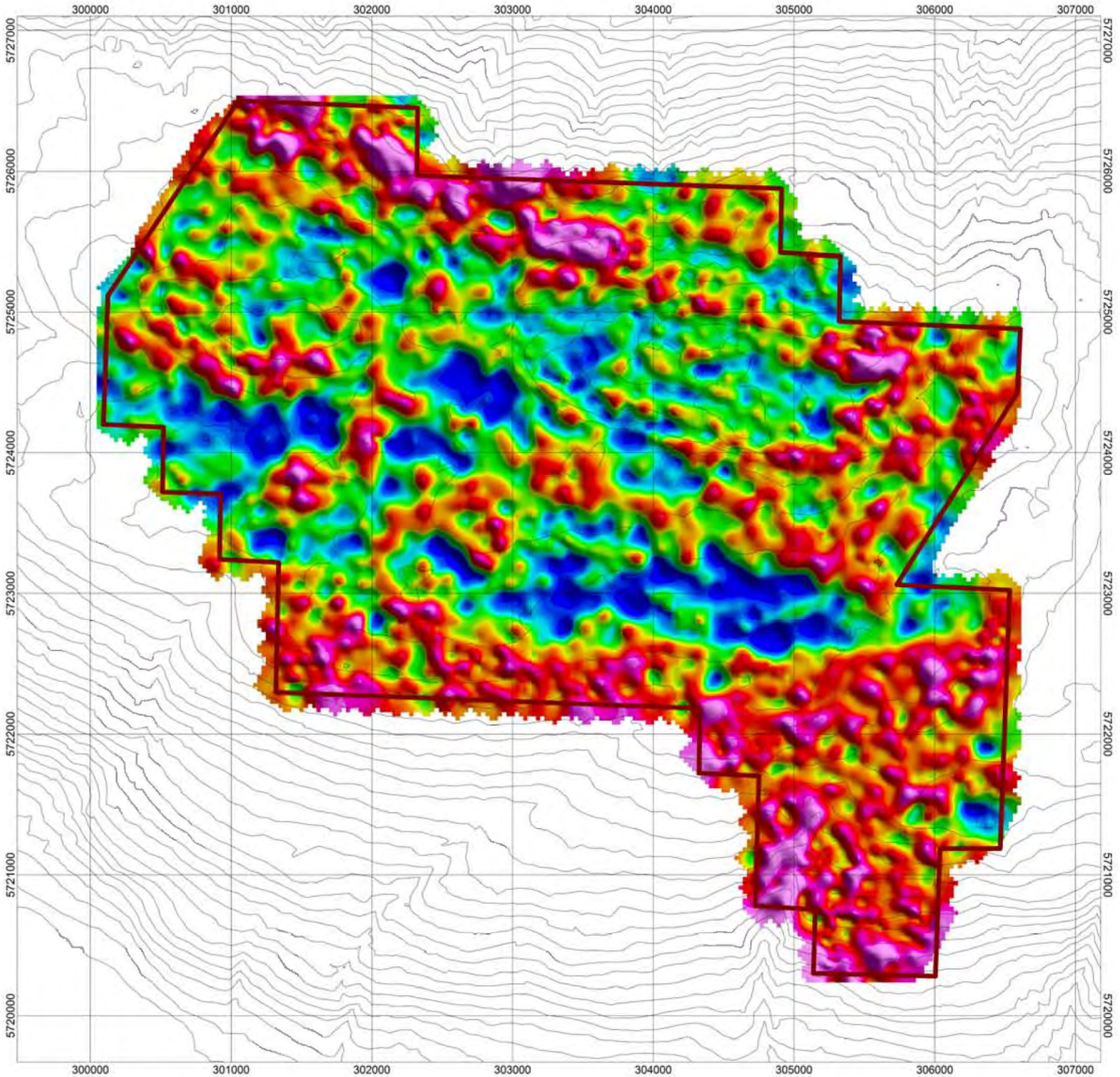
Red Top Sunrise Property

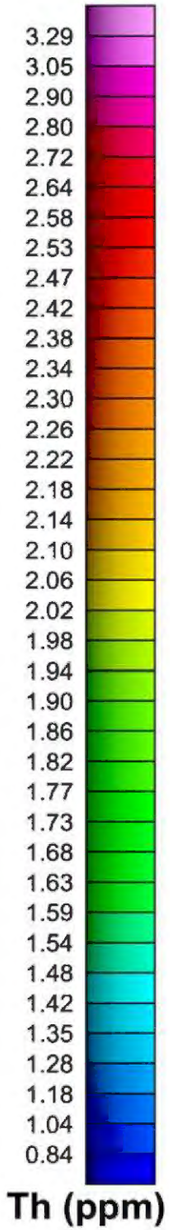
Thorium over Potassium Ratio

Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.





LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI[T1] synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

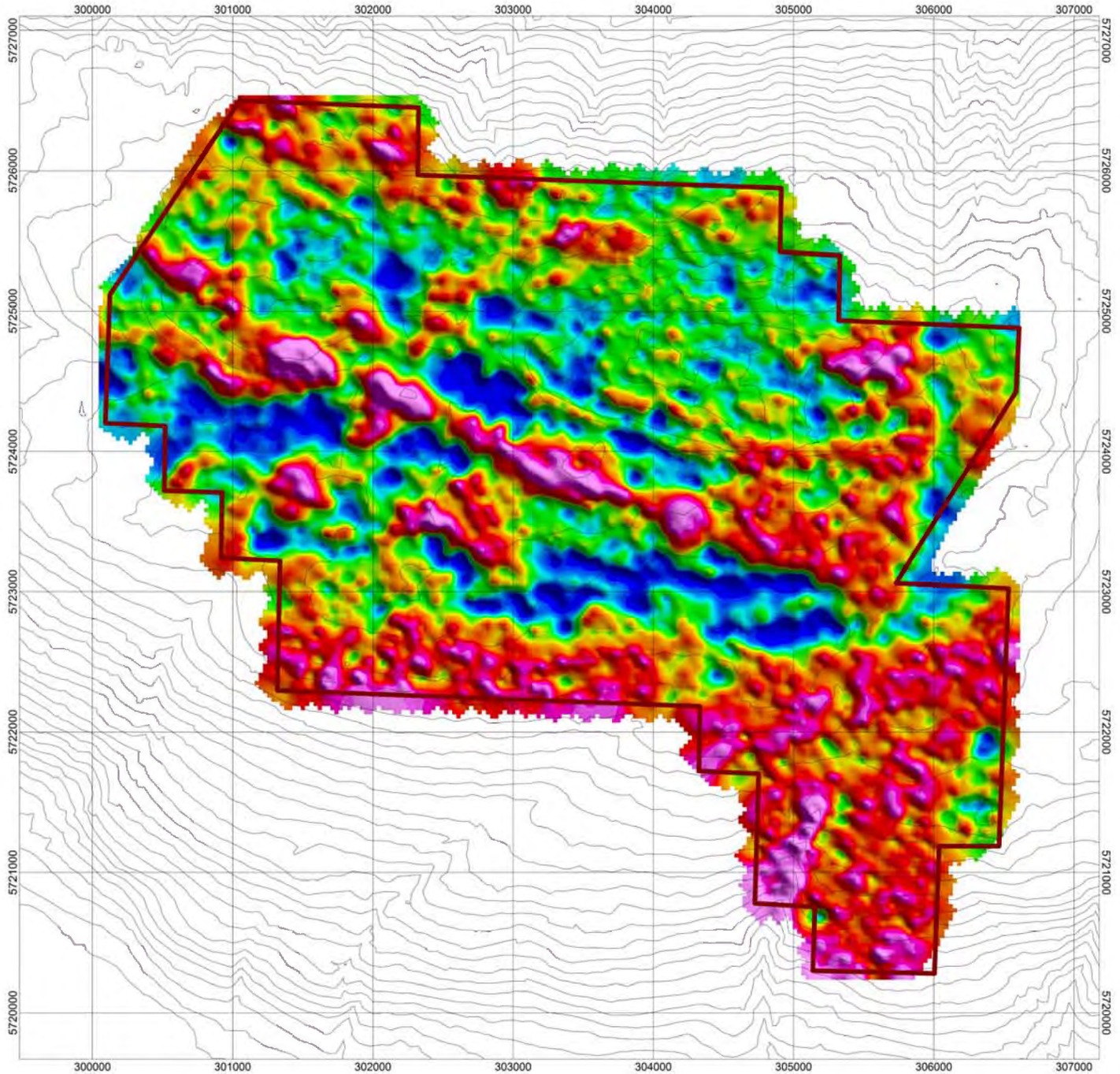
Thorium - Equivalent Concentration

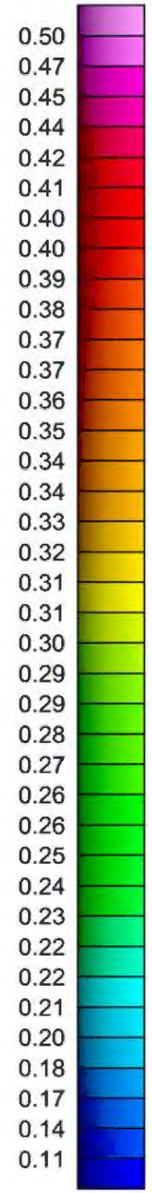
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

Th





K (%)

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

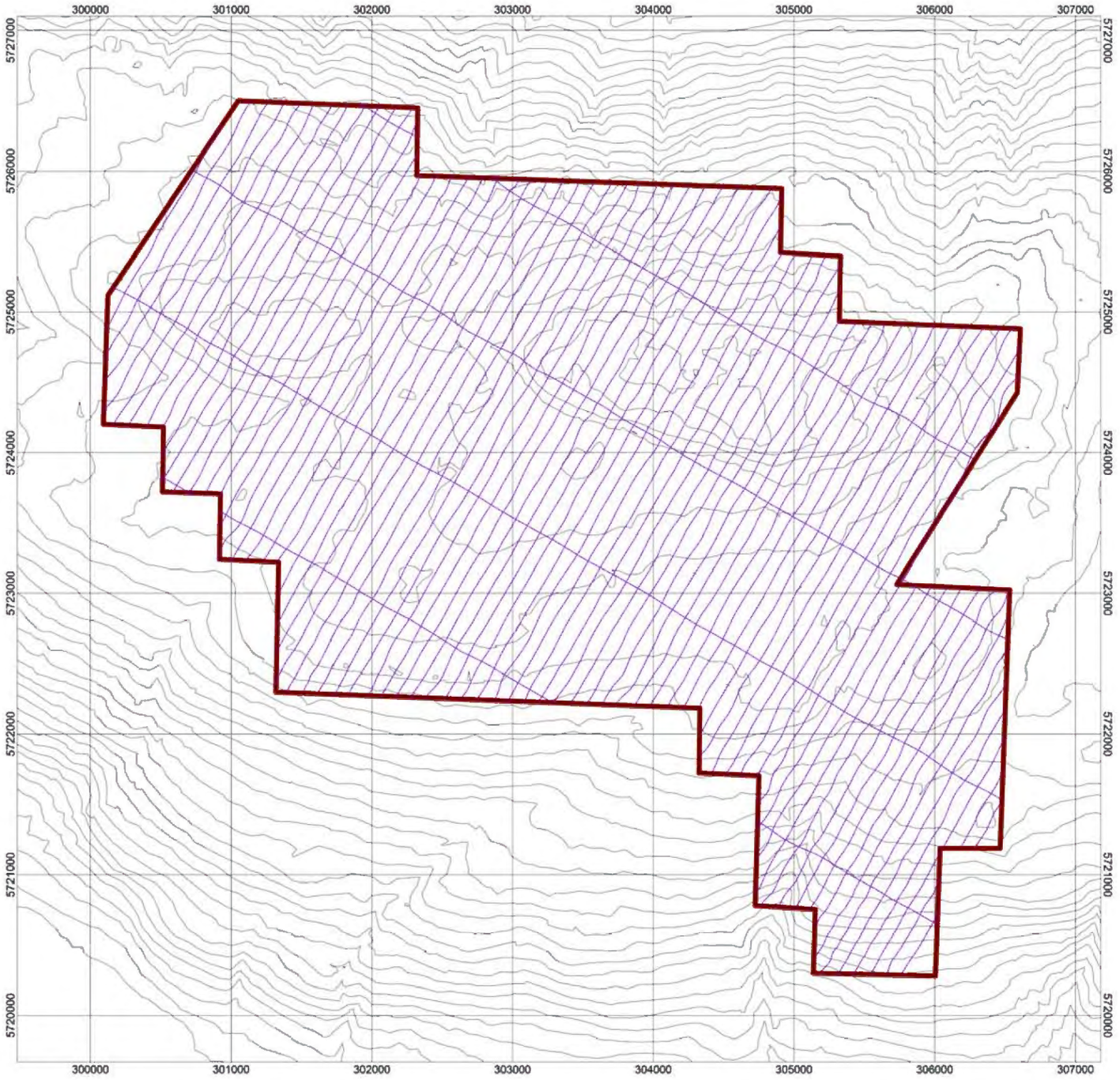
Potassium - Equivalent Concentration

Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

K



LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

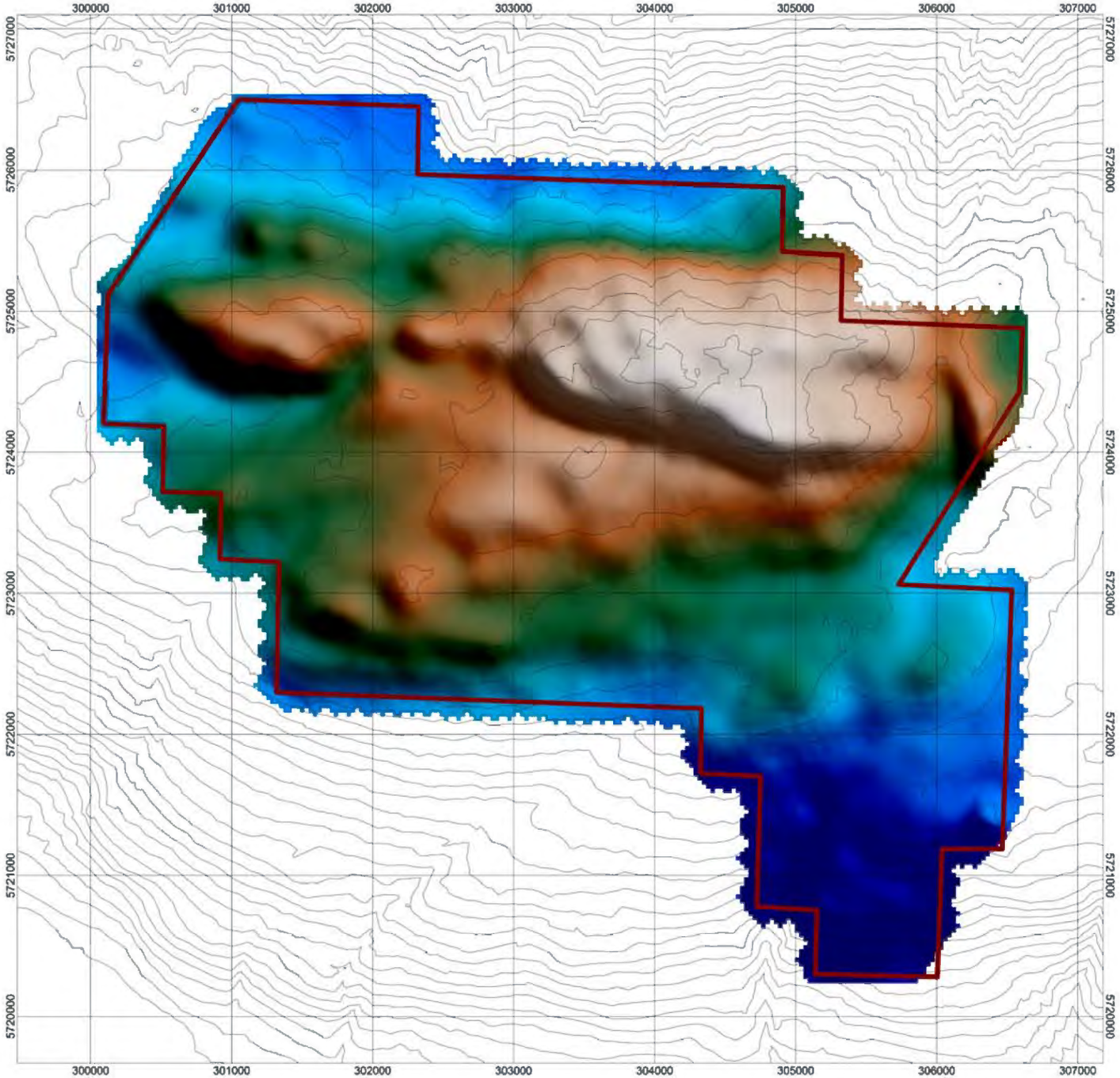
Flight Lines

Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

FL



1664.06
1646.91
1626.56
1606.20
1580.27
1556.39
1539.39
1531.44
1524.71
1518.16
1511.73
1505.89
1501.24
1496.43
1492.06
1487.46
1482.60
1477.72
1473.03
1468.62
1464.27
1460.59
1456.27
1452.83
1449.33
1445.45
1441.43
1436.98
1433.89
1429.79
1426.06
1421.77
1416.83
1412.18
1407.33
1401.85
1396.33
1391.04
1385.12
1377.96
1369.36
1360.12
1351.52
1339.78
1323.39
1308.52
1290.56
1261.37
1197.26
1102.70
975.33

DTM (m)

LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	48 meters
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

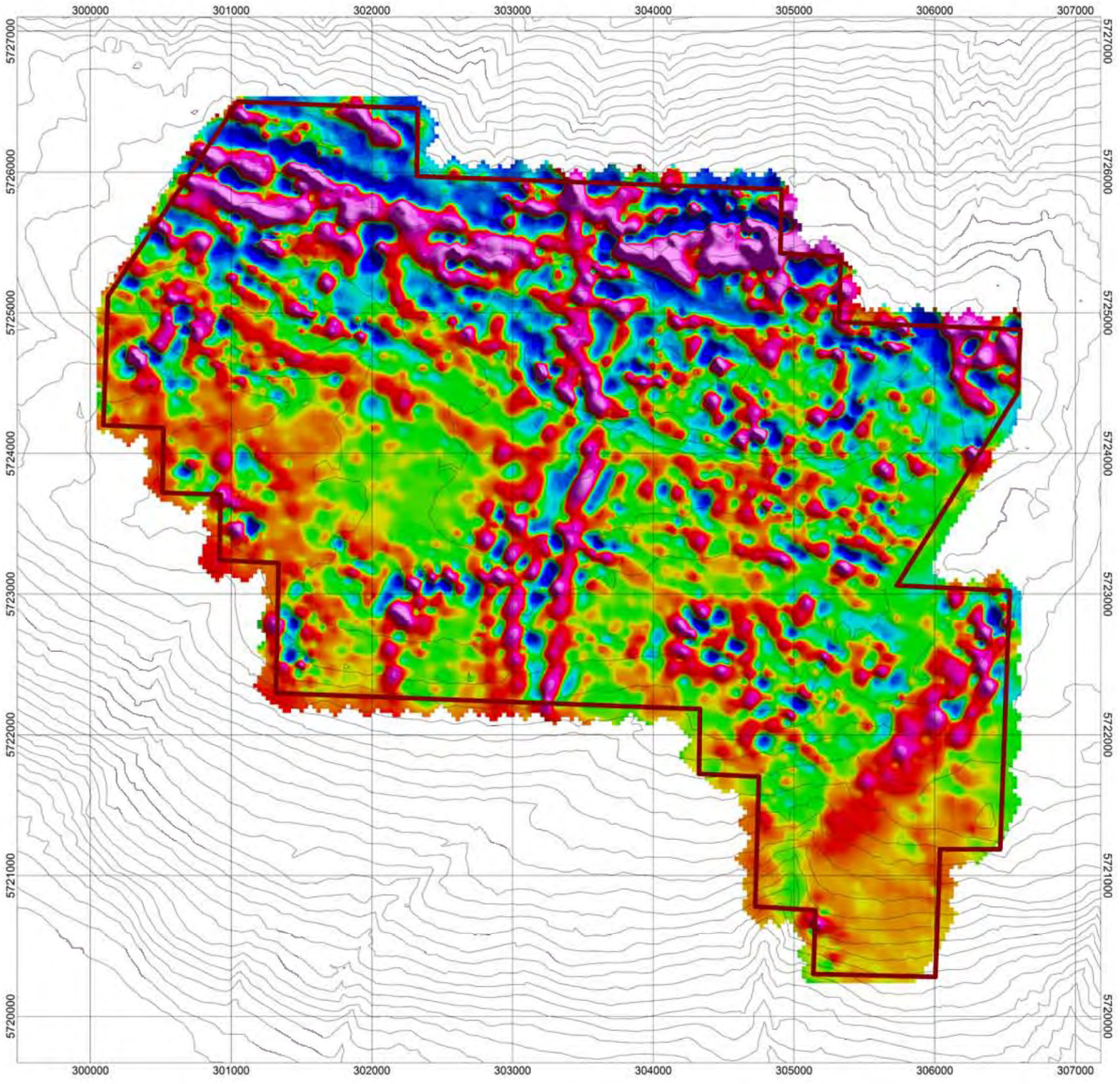
Digital Terrain Model

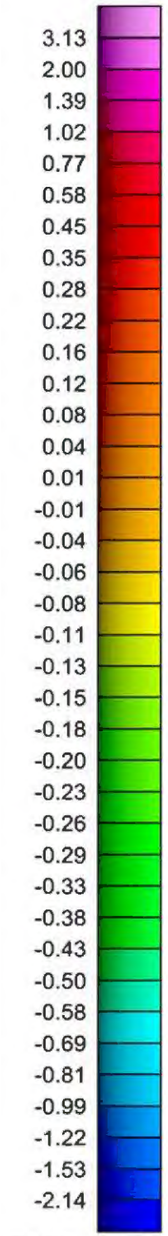
Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

DTM





LEGEND

Map Projection:

Projection: Universal Transverse Mercator
Central Meridian: 231 Zone 11N
Datum: WGS 84

Survey Dates:	September 07, 2012 to September 08, 2012
Survey Base:	Clearwater, BC
Helicopter Type:	Bell Jet Ranger 206
Registration:	C-FZHK
Survey Technology:	Magnetic and Radiometric survey

SURVEY PARAMETERS:

Mean Terrain Clearance:	
Helicopter:	40 meters
Magnetometer:	40 meters
Spectrometer:	40 meters

Red Top Sunrise Property:

Survey Line Spacing:	100 meters
Survey Line Direction:	030°-210°
Tie Line Spacing:	1000 meters
Tie Line Direction:	120°-300°

AIRBORNE SYSTEMS:

Scintrex CS-3 Magnetometer Sensor

Configuration:	Stinger with 3 axis compensation
Sample Rate:	10 Hz
Sensitivity:	0.01 nT

Gamma Ray Sepctrometer

Pico Envirotec GRS-10 Gamma Spectrometer
8.4 liter of NaI(T1) synthetic "downward looking" crystals
Sample Rate: 1 Hz

Scale 1:22600

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 11N

Montego Resources

Red Top Sunrise Property

Calculated Vertical Gradient

Created By: Precision GeoSurveys Inc.

September 2012

Precision GeoSurveys Inc.

CVG