# **EXPLORATION REPORT**

ON A

## MAGNETIC SURVEY

#### WITHIN THE

#### **EL TORO PROJECT**

# HOWSON CREEK, SMITHERS AREA

# OMINECA MINING DIVISION, BRITISH COLUMBIA

| LOCATED:     | 86 km east of the town of Terrace, BC   |
|--------------|---|
|              | 54° 44' 38" N Latitude, and 127° 26' 55" W Longitude  |
|              | NTS: 93L/05, 06, and 11   |
| WRITTEN FOR: | LIONS GATE ENERGY INC.<br>1500 – 675 W. Hastings St.<br>Vancouver, British Columbia, V6B 1N2                                      |
| WRITTEN BY:  | David G. Mark, P.Geo.<br><b>GEOTRONICS CONSULTING INC.</b><br>6204 – 125 <sup>th</sup> Street<br>Surrey, British Columbia V3X 2E1 |
| DATED:       | October 1, 2013   |

BC Geological Survey Assessment Report 34445

# TABLE OF CONTENTS

| 1         | SU   | MMARY  | i                |
|-----------|------|--|------------------|
| 2         | INT  | RODUCTION and GENERAL REMARKS  | 1                |
| 3         | PR   | OPERTY and OWNERSHIP   | 2                |
| 4         | LO   | CATION AND ACCESS  | 3                |
| 4.1       | Р    | HYSIOGRAPHY  | 4                |
| 5         | HIS  | STORY  | 4                |
| 6         | GE   | OLOGICAL SETTING   | 9                |
| 6.1       | R    | egional Geology  | 9                |
| 6.2       | Р    | roperty Geology  | 11               |
| 6.3       | D    | Deposit types  | 12               |
| 6         | .3.1 | Subvolcanic copper-gold-silver (arsenic, antimony)                           | 13               |
| 6         | .3.2 | Porphyry copper 🛛 molybdenum 🖓 gold  | 14               |
| 6         | .3.3 | Epithermal gold-silver veins   | 15               |
| 6.4       | Ν    | /lineralization  | 17               |
| 6         | .4.1 | Hunter Basin (King, Rainbow, Idaho, Hunter, Colorado, Tribune, Hannah)       | 17               |
| 6         | .4.2 | Hankin Basin (Old Tom, Hankin, Hope, Marmot, Lava, Loring, Crater)           | 17               |
| 6         | .4.3 | Dominion (Denys) Basin (Deny North, Deny South, Deny East, Sunset)           | 19               |
| 6         | .4.4 | Houston Tommy Creek (Del, Joe, Loljuh, Rudy)                                 | 19               |
| 6         | .4.5 | Howson Basin (Duchess, Countess, Evening, Silver Heels, Starr, Tom, War, Eag | gle, Princess)20 |
| 6         | .4.6 | Starr Creek (MSJ, Ant, Wolverine)  | 21               |
| 7         | MA   | AGNETIC SURVEY   | 21               |
| 7.1       | h    | nstrumentation   | 21               |
| 7.2       | т    | heory  | 21               |
| 7.3       | S    | urvey Procedure  | 22               |
| 7.4       | D    | Data Reduction   | 22               |
| 8         | DIS  | CUSSION OF RESULTS   | 23               |
| 9         | SEL  | ECTED BIBLIOGRAPHY   | 24               |
| 10        | GE   | OPHYSICIST'S CERTIFICATE   | 27               |
| 11        | AFI  | FIDAVIT OF EXPENSES  | 28               |
| <b>12</b> | AP   | PENDIX –GEOCHEMISTRY DATA  | 29               |

# LIST OF ILLUSTRATIONS

| MAPS   | <u>Scale</u> | Fig /Map # |
|--|--------------|------------|
| At Back  |              |            |
| BC Location Map  | 1:9,000,000  | 1          |
| Regional Location Map  | 1:50,000     | 2          |
| Claim Map  | 1:5,000      | 3          |
| Geology Map  | 1:5,000      | 4          |
| Geology Legend   | n/a          | 4a         |
| <u> At Back – Magnetic Maps</u>                              |              |            |
| Lake Grid  |              |            |
| Magnetic Contour Plan  | n/a          | GP-1       |
| 3D Magnetic Inversion<br>0.0065 Susceptibility               | n/a          | GP-2a      |
| 3D Magnetic Inversion<br>0.004 Susceptibility                | n/a          | GP-2b      |
| 3D Magnetic Inversion<br>0.003 Susceptibility                | n/a          | GP-2c      |
| 3D Magnetic Inversion<br>0.0065 Susceptibility<br>(Top View) | n/a          | GP-2d      |

# 1 <u>SUMMARY</u>

A magnetic survey grid was carried out within the El Toro property in 2012. This property is located on Howson Creek about 86 km east of the town of Smithers, within the Omineca Mining Division of B.C. The purpose of the work was to map geology as well as to locate any possible mineralization perhaps similar to what is known on the property.

The magnetic survey consisted took place on the Lake grid. The grid consisted of 493 readings over 6 lines. Readings were taken every 12.5 meters over a total survey length of 2,712.5 meters. The magnetic survey was carried out with magnetometer unit, model GSM-19, manufactured by GEM Systems of Markham, Ontario. The magnetic survey was carried out with the sensor mounted on a 1.5-meter staff and the diurnal variation was monitored by a 2<sup>nd</sup> magnetometer, model GSM-19.

The magnetic data was diurnally corrected, plotted, and contoured onto a plan map. In addition, inversion was carried out on the data using three different magnetic susceptibilities in order to try to determine the location of the causative sources.

#### **EXPLORATION REPORT**

#### ON A

#### **MAGNETIC SURVEY**

#### WITHIN THE

#### **EL TORO PROJECT**

#### HOWSON CREEK, SMITHERS AREA

#### **OMINECA MINING DIVISION, BRITISH COLUMBIA**

#### 2 INTRODUCTION AND GENERAL REMARKS

This report discusses survey procedure, compilation of data, interpretation methods, and the results of magnetic survey carried out over a portion of the El Toro Property belonging to Lions Gate Energy Inc. The property is located in the Telkwa Range of the Hazelton Mountains with the survey grid occurring near Sunsets Creek. The Property is about 86 km east of the town of Terrace within the Omineca Mining Division, British Columbia.

Fieldwork was carried out on the El Toro Property by a Geotronics crew of seven men between the periods of October 25<sup>th</sup> and November 17<sup>th</sup>, 2012. Work consisted of a magnetic survey carried out within the northern area of the property. Complete analytical results of all sampling may be found in Appendix A.

The Location and Access, Physiography, and History and Geology sections of this report are taken in whole or in part from Jean Pautler's 2009 report prepared for Lions Gate Energy Inc.

# 3 PROPERTY AND OWNERSHIP

The El Toro property presently consists of 15 mineral claims. All are contiguous.

Table 1 lists all the claims which are held in the name of Lions Gate Energy Inc. as the El Toro property. The 15 claims total 34,356.45 hectares in area.

| Tenure Number | Type    | Claim Name | Good Until | <u>Area</u> (ha) |
|---------------|---------|------------|------------|------------------|
| 592347        | Mineral | PRINCESS1  | 20120516   | 470.1239         |
| 592348        | Mineral | PRINCESS2  | 20120516   | 413.9032         |
| 592349        | Mineral | PRINCESS3  | 20120516   | 319.8904         |
| 592351        | Mineral | PRINCESS4  | 20120516   | 451.3433         |
| 602408        | Mineral | LOLJUH 1   | 20120516   | 451.8834         |
| 602409        | Mineral | LOLJUH 2   | 20120516   | 338.9134         |
| 908929        | Mineral | EL TORO 7  | 20120515   | 5443.858         |
| 908949        | Mineral | EL TORO 8  | 20120515   | 6560.107         |
| 908950        | Mineral | EL TORO 9  | 20120515   | 6248.717         |
| 920766        | Mineral | EL TORO 1  | 20120515   | 3758.415         |
| 920767        | Mineral | EL TORO 2  | 20120515   | 3969.9339        |
| 920770        | Mineral | EL TORO 3  | 20120515   | 3105.3547        |
| 920771        | Mineral | EL TORO 4  | 20120515   | 940.9064         |
| 920772        | Mineral | EL TORO 5  | 20120516   | 941.3788         |
| 920773        | Mineral | EL TORO 6  | 20120516   | 941.7206         |

Total Area: 34356.449 ha

# 4 LOCATION AND ACCESS

The El Toro property is situated in the Omineca Mining Division in central British Columbia, 86 kilometres east of the town of Smithers (Figure 2). The property is located on NTS mapsheet 93L/05,06 and 11 (BCGS mapsheets 93L.033 to .035, .043 to .045, and .053 to .055) at a latitude of 54°44'38" N and longitude 127°26'55" W (Figure 3).

Access to the property from Telkwa is via the Coal Mine road, an all-weather gravel road, which initially follows the south side of the Telkwa River. To access the eastern property area (Hunter and Hankin Basins) the road is followed for 7 km to Goathorn Creek, at which point a logging road is taken to the south for 3 km to a junction where the right fork is followed, initially crossing Goathorn Creek, for 11 km to a second junction. The right fork accesses Hunter Basin, and continues for another 4 km at which point ATV access is recommended. The left fork, followed by a right fork, continues for 3.5 km to an ATV trail, which accesses the Old Tom-Hankin showings.

The western property area is accessed by continuing along the Telkwa River for 18 km past Goathorn Creek (to km 25), crossing a bridge to the north side of the river at km 14. At this point a locked gate (key available from the Forest Service) accesses a logging road, which is followed for 7 km, past one junction on the left at km 6.5. At 7 km a second road to the left is followed for 4 km to the end, at which point an ATV trail is followed for 3 km to a junction, then following the right branch for 6 km to the War Eagle area and another 4 km to the closest access to the MSJ showing, and followed another 4.5 km to the Princess. The ATV trail continues beyond this point to the west.

Upper Hankin Basin, Sunsets Basin, Dominion Basin, Tommy Houston Creek, Starr Creek and the Evening Creek portion of Howson Basin are best accessed by helicopter from Smithers.

Power transmission lines follow the Telkwa River, approximately 10 km north of the property, and the Bulkley River, 10 km to the east. Smithers and Telkwa lie along the Canadian National Rail line linking Prince George with Prince Rupert with freight and passenger service available at Smithers.

The town of Smithers, with a population of approximately 5,414, is the trading centre for the entire Bulkley Valley with an area population of approximately 20,000. It lies along Highway 16, part of the under-utilized Northwest transportation corridor, with Prince George located 370 km to the east and the port of Prince Rupert, 350 km to the west. Smithers has an airport with service to Vancouver and other communities within British Columbia. Facilities include a hospital, RCMP station, post office, government services, motels and hotels, grocery stores, service stations, restaurants, recreation facilities, a college, freight and courier services, bus facilities and helicopter and fixed wing aircraft bases. Smithers has a strong mining oriented labour force.

The village of Telkwa, 11 km southeast of Smithers via Highway 16, is the closest community to the property, and has a population of 1,426. Main industries include

forestry, agriculture, tourism, and mining. Facilities include accommodation (lodges and bed & breakfasts), a gas station/restaurant, recreation facilities, a small mining oriented labour force and some local heavy equipment availability.

# 4.1 PHYSIOGRAPHY

The El Toro Project lies within the Telkwa Range, situated at the south end of the Bulkley Ranges of the Hazelton Mountains of west-central British Columbia.

The eastern and western portions of the property are rugged, separated by the broad and swampy Howson Creek drainage which flows northerly into the Telkwa River, which, in turn, flows easterly into the Bulkley River. Elevations range from approximately 950m along Howson Creek in the north-central property area to 2338m at the headwaters of Sunsets Creek. Vegetation primarily consists of large spruce forests, with some pine, and thickets of willow and alder which gives way to scrub balsam at subalpine elevations. Approximately one-third of the daim area lies above tree line, at approximately 1500m, with grassy highland plateaus and talus filled cirques.

Water is available year round from Howson Creek, its east and west flowing tributaries and easterly flowing tributaries of the Bulkley River, and in the south, the southerly flowing Thautil River and its tributaries. There does not appear to be any topographic or physiographic impediments and suitable lands occur for a potential mine, including mill, tailings storage, heap leach and waste disposal sites.

The area has a moderate climate with temperatures ranging from -10.6 to 18°C in Telkwa. Average annual rainfall is 287 mm, and median snowfall is 197 mm. Temperatures would be cooler at the higher elevations on the property. The exploration season generally extends from mid June to early July (depending on the elevation) to mid September.

# 5 <u>HISTORY</u>

The El Toro Project covers a number of minfile showings. The showings have been grouped by area due to the abundance of showings and similar history for adjacent showings.

Hunter Basin (King, Rainbow, Idaho, Hunter, Colorado, Tribune, Hannah)

<u>1903-04</u> Initial discovery by W. Hunter of King, Rainbow , Hunter, Idaho showings (*BCDM*, 1904-05).

1909-15 Two tunnels were driven on the Colorado and at least one shaft on the Tribune prior to 1915 (*Tompson, 1982*). In 1914 38 tonnes of ore was shipped from the Colorado recovering 155,515 g Ag and 2722 kg Cu (*British Columbia Minfile, 2008*). Several open cuts and a 4.8m adit were cut on the Hunter in 1914 exposing high grade lenses, with 23 tonnes from the dump assaying 1.2% Cu, 2523 g/t Ag and 0.69 g/t 1 0 Au (*British Columbia Minfile, 2008*) and a tunnel was driven on the Hannah, with no significant mineralization encountered (*BCDM, 1915*).

<u>1914-41</u> Combined production f rom the King and Rainbow mines totaled 269 tonnes of hand-sorted ore which produced 8160g Au, 283,366g Ag, and 42,710 kg copper.(*British Columbia Minfile, 2008*).

<u>1962</u> Canadian American Mining Co. Inc. shipped 24.5 tonnes of ore which produced 373g Au, 11,539g Ag, and 1647 kg copper (*BCDM*, 1962).

<u>1967</u> An induced polarization survey in Hunter Basin for Canadian American Mining Co. Inc. identified several conductors that could represent the extensions of known mineralization and additional zones (*Baird*, 1967).

<u>1982</u> The Colorado tunnel w as re-opened by Lloyd Gething and a 020-030º/70Wº quartzcalcite-adularia vein zone was identified with tetrahedrite and electrum (*Tompson*, 1982).

<u>1988</u> Mapping and soil geochemistry on Colorado-Tribune by Atna Resources Ltd. delineating four north trending structures w ith anomalous copper and silver (*Harivel*, *1988*).

<u>1989</u> Old workings in Hunter Basin were located and sampled by Van Alphen (*Ethier, 1989*).

Hankin Basin (Old Tom, Hankin, Hope, Marmot, Lava, Loring, Crater)

<u>1899-20</u> Discovery of copper mineralization in Hankin Basin follow ed by additional discoveries in area and exploration by open cuts and adits (*BCDM, 1900 and 1915*).

<u>1968-69</u> Geochemical and magnet ic and self potential geophysical surveys were completed on Loring Creek area by Falconbridge Nickel Mines with anomalies delineated (*Brown, 1968 and Rutherford, 1981*), which were followed up by 210.6m of diamond drilling in four holes (*BCDM, 1969*).

<u>1973-78</u> Geochemical and geophysical surveys by Maharaja Minerals, with diamond drilling on the Old Tom show ing in 1973 and 1978 (3 holes), and on the Marmot in 1975 and 1978 (Rutherford, 1981). The average assay f rom chip sampling a 24.3m cliff section on the Marmot is 4.3% Cu and 109.71 g/t Ag (*McAndrew et. al., 1973*).

<u>1980-83</u> Magnetic (50 km), short VLF-electromagnet ic and geochemical soil surveys on Crater Lake – Marmot areas and a short induced polarization survey on the Marmot by Mecca Minerals. Know n mineralized zones were detected and additional anomalies delineated by the geophysical and soil surveys (*Rutherford, 1981 and 1983*).

<u>1991</u> Quartz-carbonate vein discovered by Skeena Resources Ltd. returned 39.6 g/t Au, 300 g/t Ag with 7.3% Pb and 8.4% Zn, 500m southwest of Loring showing (*Jamieson, 1991a*). Suggests potential for similar mineralization to Friendly Trench at Deny North. Also Cu-Ag<sup>®</sup>Au skarn mineralization (5.5% Cu, 280 g/t Ag, 0.75 g/t Au) discovered 1 km southwest of Loring, Cu-Zn mineralization 2 km south of Loring (1.8% Cu, 10.3% Zn, 0.6 g/t Au) and significant Cu<sup>®</sup>Ag at Loring (10.6% Cu, 350 g/t Ag) (*Jamieson, 1991a*).

Sunsets Basin (Fog, Fly)

<u>1966-7</u> Copper - molybdenum stream sediment anomalies w ere delineated by Noranda Mines Ltd. in southwest part of the Sunsets Pluton. Mapping, soil geochemistry, trenching and VLF-electromagnetic surveys indicated a typical "porphyry" environment w ith several possible conductors (*Dirom, 1967*).

<u>1968</u> Soil geochemical (200 f t spacing on lines 400 f t apart) and horizontal loop electromagnetic surveys with minor mapping, delineated a western copper (rimming Fly) and eastern copper - molybdenum (Fog) soil anomaly, the latter with a weak conductive zone coincident with previous VLF anomalies. This was followed by 152.4m of diamond drilling in 2 holes on the lower Fly by Whitesail Mines Ltd. but results not reported *(Woolverton, 1969)*.

<u>1970</u> Diamond drilling of 478m in 3 holes (on the upper Fly) by Ducanex Resources Ltd. under option from Whitesail Mines Ltd. but results not reported (*Allen, 1981*).

<u>1980-81</u> Nine spot check grab samples by Canadian Nickel Company Limited for Redfern Resources Ltd. yielded maximum results of 0.645% Mo with 0.08% Cu and 0.25% Mo over 0.5m from the Fog, and 0.102% Mo and 0.11% Cu from the Fly phyllic alteration zones in 1980 (*Kenyon, 1980*). This was followed by mapping, rock and soil geochemistry to confirm previous data, and an evaluation of old drill core stored on site (*Allen, 1981*).

<u>1991</u> Significant copper in rock (up to 0.59% Cu) obtained in north to northeastern Sunsets stock by Skeena Resources Ltd. (*Jamieson, 1991a*).

Dominion (Denys) Basin (Deny North, Deny South, Deny East, Sunset)

<u>1989</u> Discovery w ith rumours of "oldtimers" packing out high-grade gold ore (*Kikuchi,* 1985).

<u>1912-14</u> Discovery of native silver from a narrow 035°/60°SE quartz vein which w as explored by a short adit (1,615m elevation) and several open cuts (Sunset showing) with values up to 18.8% Cu, 27.6 oz/t Ag and 0.03 oz/t Au on cliffs on south side of Sunsets Creek (*BCDM*, 1915).

<u>1953</u> Geological survey by New Jersey Zinc Exploration Ltd. in Dominion Basin with two chip samples from Deny North assaying 1.6% Cu 13% Zn 7.2% Pb 117.0 g/t Ag 3.0 g/t Au and 3.3% Cu 21% Zn 0.4% Pb 156.0 g/t Ag 0.3 g/t Au (*Kikuchi, 1985*).

<u>1968-69</u> Geological and geochemical surveys, 27.6m of pack-sack diamond drilling in 3 holes on Deny North, intersecting minor copper-silver-zinc mineralization, and diamond drilling of several holes northeast of Deny South with the last 5m of core in one hole assaying 2.72% Cu and 25 g/ t Ag, all by Falconbridge Nickel Mines Inc. (*Kikuchi, 1985*).

<u>1973-74</u> Mapping and hand trenching on Deny North and South (*Kikuchi, 1985*) and Sunset (*Pardoe, 1988*) showings by Maharaja Minerals Ltd. A 2 km magnetometer survey over

North showing picked up know n mineralization. Nine holes diamond drilled on Deny South but inconclusive due to core poor recovery (*Kikuchi, 1985*).

<u>1980</u> Mecca Minerals conducted a detailed chip sample survey on the "Friendly Trench" at the North showing yielding an average of 70.2 g/t Ag and 2.21 g/t Au for 34 samples along 8.5m of the vein and maximum values of 342 g/t Ag and21.6 g/t Au (*Kikuchi, 1981*).

<u>1984</u> Discovery and mapping of Deny East showing (Kikuchi, 1985).

<u>1988</u> A program of geological mapping, prospecting and silt sampling on the Sunset showing by Geostar Mining Corporation returned 16.53% Cu, 63.11 oz/t Ag and 0.124 oz/t Au from the ore stockpile of an old adit, which appears to have been driven on a 0.35m wide 025°/55°SE quartz vein and maximum values of 2.73% Cu and 1.22 oz/t Ag and 0.009 oz/t Au from other mineralized stringers (*Pardoe*, 1988).

Houston Tommy Creek (Del, Joe, Loljuh, Rudy)

<u>1967-73</u> Geophysics, geochemistry and 90.2m of diamond dr illing in 7 holes by Noranda Exploration Co. Ltd. targeting porphyry Cu-Mo potential in a monzonite intrusion long Loljuh Creek (*Helgason, 1987 and BCDM, 1969 and 1971*). No results were reported.

<u>1965-69</u> Excavator trenching on Del in conjunction with work to east (*British Columbia Minfile, 2008*).

<u>1969</u> Geophysics, geochemistry and mapping follow ing airborne survey by Summit Oils Ltd in Joe-Loljuh area indicating significant copper-silver-lead-zinc in soil anomalies (*Pacific Geochemical Services Ltd., 1970*).

<u>1970-72</u> Magnetic, electromagnetic and induced polarization geophysical surveys, soil geochemistry and mapping for Lobell Mines Ltd under option in Joe-Loljuh area outlining a strong chargeability anomaly with associated copper in soil geochemistry in southern survey area (*Stevenson, 1970 and White, 1972*).

<u>1973</u> Prospecting, sampling and reconnaissance mapping of the Pete, Rudy area by Maharaja Minerals Ltd with maximum results of 32.8% Cu, 6,460 g/t Ag from a 2.4m wide shear on the Rudy and an average of 5.5% Cu, 191.3 g/t Ag and 1.47 g/t Au from 0.3 to 0.9m wide veins on the Pete (*McAndrew*, 1974a,b).

<u>1987</u> Soil geochemistry (780 samples) and evaluation of showings by Geostar Mining Corp. outlined two significant copper-silver-zinc lead arsenic soil anomalies from Loljuh-Joe area (Helgason, 1987).

<u>1988</u> Follow up of RGS stream anomalies with reconnaissance soil, silt and rock sampling by Noranda Exploration Co. Ltd. outlined a 500m long Pb-Zn soil anomaly and 6.1% Cu, 25 g/t Ag from a quartz-epidote vein from Del area (*Campbell, 1988*).

Howson Basin (Duchess, Countess, Evening, Silver Heels, Starr, Tom, War, Eagle, Princess)

<u>1905-1910</u> Exploration by open cuts, shafts, 2 adits on Duchess, 1 adit (21m) on Evening, and work on War Eagle by Telkw a Mines Ltd. (Jamieson, 1991b and Cuttle, 1990).

<u>1915-1917</u> Exploration by Jefferson-Dockrill Syndicate (Jamieson, 1991b and Cuttle, 1990).

<u>1928-29</u> Extension of adits by Cominco on Duchess w ith only narrow zones of mineralization found (*Jamieson, 1991b*). A total of 1224m of underground workings is reported in 2 adits with the upper adit encountering good mineralization averaging 4-5% Cu in the first 27m after which the zone is cut off by faulting. Only narrow zones of mineralization were encountered in the lower adit (*Price, 1983*).

<u>1952</u> Hand trenching of Princess showing on rim of cirque by Kennecot (*Preto, 1967*).

<u>1966-67</u> An airborne electromagnetic survey followed by induced polarization, electromagnetic and self potential geophysical surveys, a soil geochemical survey, geological mapping, trenching and diamond drilling of 6 holes on the Duchess were completed by Norcan Mines Ltd. Coincident geophysical anomalies were outlined in a drift covered area (*Stevenson, 1970*).

<u>1968</u> Mapping, prospecting, sampling, geophysics and trench rehabilitation by Bethex on the Duchess and Evening (*Jamieson, 1991b*). Bethex drill hole N-1 or Pathfinder? (*Cuttle, 1990*)

<u>1966-70</u> A 2.5 km induced polarization survey, soil geochemical surveys, and in 1968 a deep drill hole, were completed by Pathfinder Resources Ltd. A broad east-west trending magnetic anomaly and copper soil anomalies were outlined associated with a stock at the War Eagle pyrite zone and the drill hole intersected porphyry style alteration (*Sharp, 1970*).

<u>1969-73</u> Access trail construction, minor trenching, followed by mapping and sampling by Maharaja Minerals Ltd. in 1973 on the Tom showing. Two vein/shear zones are reported with maximum values of 16.9% Cu and 6.58 oz/t Ag.(*Cullen and Biss, 1974*).

<u>1983</u> Minor sampling and VLF-electromagnetic geophysics by Joyce Warren returning 7% Cu and 5.74 oz/t Ag on the Duchess (*Jamieson, 1991b*).

<u>1991</u> Minor sampling and examination of Duchess and Evening adits by Skeena Resources Ltd. with the best sample returning 9% Cu and 88 g/t Ag over 1m on the Duchess and 1.9% Cu from the Evening (*Jamieson, 1991b*).

Starr Creek (MSJ, Ant, Wolverine)

(MSJ)

<u>1974</u> A 20 km induced polarization survey (with 1,000 ft line spacings by Hudson's Bay Oil and Gas Co. Ltd delineated a 5,000 by 10,000 f t chargeability high, associated with phyllic alteration in a quartz monzonite intrusion in Trail Creek (MSJ showing) and surrounding overburden covered terrain (*Homeniuk*, 1974).

<u>1989</u> A geochemical evaluation by Placer Dome Inc. on the MSJ show ing for A. Schmidt, found anomalous copper and gold in rock, silt and bulk silt samples (*Schmidt*, 1989).

<u>1991</u> Grid soil samples (201 samples) were collected at 100m intervals on 200-400m spaced lines was undertaken over the 1974 chargeability high by Cominco under option. Higher values were found, especially for zinc, over the western portion of the area (*Pauwels*, 1991).

#### 6.7.2 Ant, Wolverine

<u>1971</u> Geological and soil geochemical (339 samples) surveys and 130m of trenching by Granby Mining Co. Ltd. on the Wolverine showing, delineating breccia veins with chalcopyrite (*BCDM*, 1971).

<u>1987</u> Prospecting, mapping, magnetometer and VLF-electromagnetic surveys, and excavator trenching by Atna Resources Ltd. on Ant showing with discovery of a 3 by 0.6 km epithermal system with values up to 4.1 g/t Au across 0.6m on Lefty 1 (*Hanson, 1991*).

<u>1990</u> Mapping and soil geochemical and induced polarization surveys by Atna Resources Ltd. resulted in discovery of an 800m long shear zone with associated copper-silver-gold mineralization on Ant 1, which was followed by 1100m of diamond drilling in 7 holes. The drill program intersected a phyllic altered zone related to a major northeast trending shear zone with minor chalcopyrite, sphalerite and tetrahedrite (*Hanson, 1991*).

In 1967 Pyramid Mining Co. Ltd. completed Turam electromagnetic and magnetic surveys on a number of claims within the El Toro Project area, including the Phil, John and Dave claims south of Starr Creek, the Al claims near the outlet of Glacis Creek, and on the Mike claims at the headwaters of Glacis and Sunsets Creeks and along Sunset Ridge to the south to delineate drill targets (*Baird, 1968*). In 1969 one hole was diamond drilled on the Phil 6 claim, one on the Al 4 claim, one on the Mike 44 claim (west of Fly) and some holes on the Mike 3, 11, and 12 claims (above Sunset Adit). Results of this program (*BCDM, 1969*) could not be located.

In 2007 Lions Gate Energy Inc. undertook a 629 lie km airborne magnetic and electromagnetic Aerotem 2 geophysical survey over the Sunset stock with 100m line spacing on north-south lines, delineating a strong magnetic low in the southern stock area. A reconnaissance evaluation of some of the showings on the El Toro Project was initiated with significant molybdenum obtained from the Fly showing within the Sunsets stock.

#### 6 **GEOLOGICAL SETTING**

#### 6.1 <u>REGIONAL GEOLOGY</u>

The El Toro Project is underlain by arc volcanic rocks of the Upper Paleozoic to Middle Mesozoic Stikine Terrane, allochthonous rocks accreted to North America in the Jurassic. The Stikine Terrane is intruded by post-accretionary stocks and plutons of

Jurassic to Tertiary age and overlain by overlap assemblages of the Bowser Basin in the north and the Nechako Basin in the south.

Within the regional map area (93L and north 93E) the Stikine Terrane consists of the Lower Jurassic Hazelton Group, predominantly calc-alkaline volcanic rocks of the Lower Jurassic Telkwa Formation with minor volcaniclastic rocks of the Eagle Peak Formation. Subaerial andesitic to dacitic crystal and lithic tuffs predominate over rhyolitic flows, breccia and vesicular basalt. The Hazelton Group is underlain by intermediate to mafic marine volcanic and sedimentary rocks of the Upper Triassic Takla Group, the oldest rocks in the region, which are exposed in the northeastern map area around Babine Lake.

The Stikine Terrane is overlain by marine shale, greywacke, breccia, tuff and conglomerate of the Middle Jurassic Smithers and Ashman Formations, and by coarse clastic rocks of the Upper Cretaceous Skeena Group, primarily the Red Rose Formation, which consists of shale, greywacke, conglomerate and coal.

The above lithologies are cut by intrusions of three main plutonic suites. The oldest are the Topley plutonic suite, of primarily Early Jurassic age consisting of quartz monzonite and granodiorite stocks arrayed in a northeast trending belt in the eastern regional map area. Small equant stocks and bosses of the Late Cretaceous Bulkley Intrusions, composed of quartz monzonite, granodiorite and quartz diorite, occur in a northwest trending belt that extends from the Huckleberry Mine area through the El Toro Project area and into the north Smithers area. The youngest and most abundant intrusions are small stocks and bosses of the Eocene Nanika Intrusions, consisting of quartz monzonite, granodiorite and quartz diorite compositions that form a wide northwest trending belt across the Smithers map area (93L), coincident with that of the Bulkley Suite.

Early Tertiary sedimentary rocks are exposed near the perimeter of the Bowser and Nechako Basins. Eocene basalts extensively overlie much of the southeastern map area, within the Nechako Basin, with felsic volcanic rocks dominating generally south of Francois Lake.

Extensional basin and range type block faulting characterizes the area. More penetrative north-northwest and north trending faults are evident with less continuous east-northeast trending faults.

Economically, the Huckleberry copper±molybdenum±gold porphyry Mine, 70 km south of the El Toro Project, is associated with a stock of the Late Cretaceous Bulkley plutonic suite, with mineralization occurring within both the stock and the hornfelsed Telkwa Formation volcanic rocks of the Hazelton Group, both of which underlie the El Toro Project. Huckleberry opened in 1997 with a mineable reserve of 90 million tonnes of 0.51% Cu, 0.062 g/t Au and 2.8 g/t Ag. The Granisle and Bell copper±molybdenum past producing mines in the Babine Lake area are hosted by Eocene Babine intrusions of quartz diorite and biotite feldspar porphyry compositions.

The Equity Silver past producing mine, 60 km southeast of El Toro, is a subvolcanic silver-gold-copper or transitional type deposit which has similar characteristics to mineralization observed on the El Toro Project. Equity Silver produced 33.8 million tonnes of 0.4% copper, 64.9 g/t Ag, and 0.46 g/t Au.

#### 6.2 PROPERTY GEOLOGY

The El Toro Project (figure 4 and 4a) is primarily underlain by the Telkwa Formation of the subaerial to locally submarine Lower Jurassic Hazelton Group, dominated by bedded maroon and green subaerial andesitic to dacitic crystal and lithic tuffs and lesser breccia, with minor flow interbeds including vesicular basalt. Rhyolitic flows and tuffs occur in the southwest property area (Ant-Wolverine showings) and in the southeast at the Del and Rudy showings. Minor volcaniclastic rocks of the Eagle Peak Formation, which overlies the Telkwa Formation, locally underlie part of Hunter Basin in the northeast property area, along southern Starr Creek and just east of its junction with the Thautil River in the southwest property area and just north of the Loljuh showing, south of the bend in Denys Creek.

Thin beds of fine clastic sedimentary rocks of the Lower Cretaceous to Jurassic Hazelton Group Nitwitka Formation are exposed in the eastern property area, primarily in the southeast. A small exposure of the Nitwitka Formation and coarse clastic rocks of the Late Cretaceous Skeena Group underlies the south-central property area.

Small bosses, stocks and related dykes and sills of the Late Cretaceous Bulkley plutonic suite, primarily of quartz monzonite, monzonite and granodiorite compositions intrude the Hazelton Group across the El Toro Project. The best exposed stock, located above tree line in Sunsets Basin and referred to as the Sunsets stock, is approximately 2 by 3 km in size and has been radiometrically dated at 70 Ma (*Carter, 1974*). Two distinct phases of the Sunsets stock have been recognized and mapped, grey quartz monzonite porphyry with feldspar and quartz phenocrysts in a fine grained potassium feldspar rich matrix and a later coarser grained porphyritic quartz monzonite (*Allen, 1981*). The stock has domed the surrounding pyroclastic sequence, which dips away from the stock in all directions (*Sutherland Brown, 1967*). A hornfels zone up to 300 m wide surrounds the Sunsets stock, (*Allen, 1981*).

An incompletely exposed Bulkley quartz monzonite stock, possibly similar in size to the Sunsets stock, is exposed in the Starr Creek area which will be referred to as the MSJ stock. A poorly exposed quartz monzonite to granodiorite stock of the Bulkley plutonic suite, possibly of similar size, is exposed in the Houston Tommy Creek area near Loljuh Creek and will be informally referred to as the Loljuh stock. A smaller, 1km diameter Bulkley feldspar porphyry stock is exposed at the War Eagle Pyrite zone, which will be referred to as the War Eagle stock. A 1 by 2 km quartz monzonite stock has been mapped proximal to the Ant showing. A buried intrusion is suggested by alteration and dykes below Joker Ridge in the Howson Basin area. A Bulkley quartz porphyry stock is mapped to the west of the Del showing. An Early Cretaceous aged quartz monzonite pluton, of the McCauley Island plutonic suite, lies just east of the southeastern property area. A number of small diorite intrusions have been identified in the property area, which may represent subvolcanic intrusions associated with the Telkwa Formation volcanic rocks.

Abundant dykes primarily associated with the Bulkley plutonic suite, including granodiorite, quartz diorite, feldspar porphyry and quartz-feldspar porphyry compositions, intrude the Hazelton Group throughout the property.

Eocene basalts of the Buck Creek Formation of the Endako Group overlie the above lithologies in the southern property area, just west of the Thautil River and occur as dykes throughout the property area.

A prominent north trending fault trends through the Mooseskin Johnny Valley. Two through-going north-northeast trending faults bisect the central property area, one of which extends through Hunter Basin. Extensional basin and range type block faulting, which characterizes the regional area, is evident across the property.

#### 6.3 DEPOSIT TYPES

The principal deposit type present on the El Toro Project is the subvolcanic coppergold-silver (arsenic, antimony) type, also referred to as transitional or intrusion related polymetallic stockwork and vein types. The Equity Silver past producing mine, 60 km southeast of El Toro, is an example of this type of deposit. The three past producing mines and developed prospect on the El Toro Project (King, Rainbow, Colorado and Hunter) and the remaining Hunter Basin showings, and the Hankin, Dominion and Howson Basin showings, and possibly the Rudy, Pete and Joe also belong to this class of deposit.

Mineralization of the calc-alkaline porphyry copper±molybdenum±gold(silver) deposit type, commonly related to the subvolcanic type, is less abundant in the project area but is associated with the Bulkley plutonic suite which occur as stocks and dykes across the property. The Huckleberry Mine, 70 km south of the El Toro Project, is a calc-alkaline copper±molybdenum±gold porphyry type deposit associated with a stock of the Late Cretaceous Bulkley plutonic suite, with mineralization occurring within both the stock and the hornfelsed Telkwa Formation volcanic rocks of the Hazelton Group. Mineralization at the Fog and Fly fall into this category and the MSJ, War Eagle Pyrite and Loljuh SE exhibit porphyry characteristics.

Epithermal veins are commonly associated with subvolcanic and porphyry deposit types with mineralization on the Ant, Wolverine and possibly the Del of this type. Several occurrences of copper-silver-zinc skarn mineralization with calc-silicatemagnetite skarn assemblages are recorded adjacent to dyke and plutonic contacts, in association with vein and porphyry style mineralization, e.g. Duchess, Fog-Fly, Princess, War Eagle, Tom, Deny North and Loring. The host Telkwa Formation

rocks are generally lacking in carbonate members, and extensive or economic concentrations of skarn type mineralization are not likely to occur (Dawson, 2006).

#### 6.3.1 Subvolcanic copper-gold-silver (arsenic, antimony)

The following characteristics of the subvolcanic copper-gold-silver (arsenic, antimony) deposit model are primarily summarized from Panteleyev, (1995). Examples include the Equity Silver past producing mine in British Columbia, the Rochester District in Nevada, Kori Kollo in Bolivia, and the epithermal gold zones at Lepanto, Phillippines. Commodities are copper, gold and silver with associated arsenic and antimony.

Mineralization typically occurs as sulphide and sulphide-quartz veins, stockworks and breccias in subvolcanic intrusions with stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal breccias in country rocks, located near or above porphyry copper hydrothermal systems. They commonly contain pyritic auriferous polymetallic mineralization with silver sulphosalt and other arsenic and antimony bearing minerals and occur in volcano-plutonic belts in island arcs and continental margins as well as continental volcanic arcs. Extensional tectonic regimes are favourable, allowing high level emplacement of the intrusions. Ages of mineralization are variable, although Tertiary deposits are most abundant.

Host rocks include subvolcanic (hypabyssal) stocks, rhyodacite and dacite flow-dome complexes with fine to coarse-grained quartz-phyric intrusions common. Dyke swarms and other small subvolcanic intrusions are likely to be present. Where coeval volcanic rocks are present, they range from andesite to rhyolite in composition and occur as flows, breccias and pyroclastic rocks with related epiclastic rocks (as observed at El Toro).

pyrite, Ore mineralogy includes commonly auriferous, chalcopyrite and tetrahedritetennantite, with subordinate enargite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulphosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar, hematite, tin and bismuth minerals. (Ore minerals observed on the El Toro Project include pyrite, chalcopyrite and tetrahedrite-tennantite, with subordinate chalcocite, bornite, sphalerite, galena, possible arsenopyrite and stibnite, molybdenite, pyrrhotite, and hematite.) Gangue and alteration minerals include pyrite, sericite and quartz (typically observed at El Toro) with minor kaolinite, alunite and jarosite primarily in supergene zones. Weathering of the pyritic zones can produce limonitic blankets with jarosite, goethite and locally alunite.

Ore zones are typically localized in strongly fractured to crackled zones in cupolas and internal parts of intrusions and flow-dome complexes, along faulted margins of high level intrusive bodies in permeable lithologies (primary and secondary) in the country rocks. Primary controls are structural features such as faults, shears, fractured and crackled zones and breccias. Secondary controls are porous volcanic units (as is the case in the Hankin Basin area of the El Toro Project), bedding plane contacts and unconformities. Breccia pipes provide channelways for hydrothermal fluids originating from porphyry copper systems and commonly carry elevated values of gold and silver (Marmot showing may be an example).

Vertical zonation and superimposition of different ore types is common. Pyrite rich deposits contain enargite near surface, passing downwards into tetrahedrite/tennantitechalcopyrite and then chalcopyrite in porphyry intrusions at depth. The vein and replacement mineralization can be separated from the deeper porphyry mineralization by 200 to 700m. Geochemical signature includes gold, copper, silver, arsenic, antimony, zinc, cadmium, lead, iron and fluorine, with molybdenum, bismuth, tungsten, and locally tin at depth.

Equity Silver , 60 km southeast of El Toro, produced 33.8 million tonnes of 0.4% copper, 64.9 g/t Ag, and 0.46 g/t Au primarily from bulk mineable tetrahedrite bearing zones. Kollo, Bolivia contained 10 million tonnes of oxide ore grading 1.62 g/t Au, 23.6 g/t Ag with 64 million tonnes of sulphide ore grading 2.26 g/t Au, 13.8 g/t Ag from closely spaced fracture and vein systems. Associated deposit types include high and low sulphidation epithermal gold-silver, porphyry copper±molybdenum±gold and related polymetallic veins.

#### 6.3.2 Porphyry copper Imolybdenum IIgold

The following characteristics of the calc-alkaline porphyry copper<sup>®</sup> molybdenum<sup>®</sup> gold deposit model are primarily summarized from Panteleyev, (1995). Examples of the classic morphologic type of calc-alkaline porphyry include Brenda and Huckleberry in British Columbia, Bingham in Utah, USA and El Salvador in Chile. Commodities are copper, molybdenum and gold in varying quantities with minor silver in most deposits.

Classic type deposits, which appear to be the morphologic type on the El Toro Project, are stock related with multiple emplacements at shallow depths (1-2 km) of generally equant, cylindrical porphyritic intrusions, modified by numerous associated dykes and breccias. Orebodies occur along margins and adjacent to intrusions as annular ore shells. Lateral outward zoning of alteration and sulphide minerals from a weakly mineralized potassic/propylitic core is usual. Surrounding ore zones with potassic(commonly biotite-rich) or phyllic alteration contain molybdenite-chalcopyrite, then chalcopyrite and a generally widespread propylitic, barren pyritic aureole.

Mineralization typically occurs as sulfide-bearing veinlets, fracture fillings and lesser disseminations in large hydrothermally altered zones (up to 100 ha in size) with quartz veinlets and stockworks, commonly wholly or partially coincident with intrusion or hydrothermal breccias and dyke swarms, hosted by porphyritic intrusions and related breccia bodies. Sulfide mineralogy includes pyrite, chalcopyrite, with lesser molybdenite, bornite and magnetite. Two main ages of mineralization are evident in the Canadian Cordillera, Triassic to Jurassic (210-180 Ma) and Cretaceous to Tertiary (85-45 Ma).

Alteration generally consists of an early central potassic zone that can be variably overprinted by potassic (potassium feldspar and biotite), phyllic (quartz-sericite-pyrite), less commonly argillic and rarely, advanced argillic (kaolinite-pyrophyllite) in the uppermost zones.

Regional faults are important in localizing the porphyry stocks with fault and fracture sets (especially coincident and intersecting multiple sets) an important ore control. Other ore controls include internal and external igneous contacts, cupolas, dyke swarms and intrusive and hydrothermal breccias.

British Columbia porphyry copper<sup>D</sup>molybdenum<sup>D</sup>gold deposits contain 115 million tonnes of 0.37% Cu, 0.01% Mo, 0.3 g/t Au and 1.3 g/t Ag, from median values for 40 deposits with reported reserves. Porphyry deposits contain the largest reserves of copper, almost 50% of the gold reserves in British Columbia and significant molybdenum resources and are primarily mined by open pit methods. Associated deposit types include skarn, porphyry gold, low and high sulfidation epithermal systems, polymetallic veins and sulfide mantos and replacements.

#### 6.3.3 Epithermal gold-silver veins

The following characteristics of the low sulphidation epithermal gold deposit model are primarily summarized from Panteleyev, (1996). Examples include the Midas Mine of Franco Nevada in Nevada, the El Penon Mine of Meridian Minerals in Chile, and the former Baker and Cheni Mines in the Toodoggone District of British Columbia. Commodities are gold and silver with minor copper, lead and zinc.

Mineralization typically occurs as quartz veins, stockworks and breccias carrying gold, silver, electrum, argentite and pyrite with lesser and variable amounts of sphalerite, chalcopyrite, galena, rare tetrahedrite and sulphosalt minerals in high level (epizonal) to near surface environments. The ore commonly exhibits open space filling textures and is associated with volcanic-related hydrothermal to geothermal systems in volcanic island and continent margin magmatic arcs and continental volcanic fields with extensional structures.

Host rocks include most types of volcanic rocks with calcalkaline andesitic compositions predominating. Some deposits occur in areas with bimodal volcanism and extensive subaerial ashflow deposits. A less common association is with alkalic intrusive rocks and shoshonitic volcanic rocks. Clastic and epiclastic sedimentary rocks host deposits in intra-volcanic basins and structural depressions.

Gangue minerals include quartz, amethyst, chalcedony, quartz pseudomorphs after calcite and calcite, with minor adularia, sericite, barite, fluorite, calciummangnesiummanganese-iron carbonate minerals such as rhodochrosite, hematite and chlorite. Alteration generally consists of extensive silicification occurring as multiple generations of quartz and chalcedony, commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite-kaolinite assemblages. Intermediate argillic alteration (kaolinite-illite-montmorillonite ☑smectite) forms adjacent to some veins. Advanced argillic alteration (kaolinitealunite) may form along the tops of mineralized zones. Propylitic alteration dominates at depth and peripherally. Weathered outcrops are often characterized by resistant quartz ± alunite 'ledges' and flanking extensive, bleached, clay-altered zones with supergene alunite, jarosite and other limonite minerals.

The deposits occur in high-level hydrothermal systems from depths of approximately 1 km to surficial hotspring settings. They are associated with regional-scale fracture systems related to grabens, Dresurgent calderas, flow-dome complexes and rarely, maar diatremes. Extensional structures in volcanic fields (normal faults, fault splays, ladder veins and cymoid loops, etc.) are common; locally graben or caldera-fill clastic rocks are present. High-level (subvolcanic) stocks and/or dikes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are related to underlying intrusive bodies.

Ore zones are typically localized in structures, but may occur in permeable lithologies. Upward-flaring ore zones centred on structurally controlled hydrothermal conduits are typical. Large (greater than 1m wide and hundreds of metres in strike length) to small veins and stockworks are common with lesser disseminations and replacements. Vein systems can be laterally extensive but ore shoots have relatively restricted vertical extent. High-grade ores are commonly found in dilational zones in faults at flexures, splays and in cymoid loops.

Deposits are commonly zoned vertically over 250 to 350m from a base metal poor, gold-silver rich top to a relatively silver rich base metal zone and an underlying base metal rich zone grading at depth into a sparse base metal, pyritic zone. From surface to depth, metal zones contain gold-silver-arsenic-antimony-mercury, gold-silver-lead-zinccopper, silver-lead-zinc. In alkalic hostrocks tellurides, roscoelite (vanadium mica) and fluorite may be abundant, with lesser molybdenite.

Ages of mineralization are variable although Tertiary deposits are most abundant. The age is closely related to the associated volcanic rocks but invariably slightly younger in age (0.5 to 1 Ma, more or less).

Typical grade and tonnage figures for the median low sulphidation epithermal gold deposits, based on worldwide mines and U.S.A. models, include 0.77 million tonnes of 7.5 g/t Au, 110 g/t Ag and minor copper, zinc and lead for 41 Comstock-type 'bonanza' deposits and 0.3 million tonnes of 1.3 g/t Au, 38 g/t Ag and >0.3% Cu from 20 Sadotype gold-copper deposits. Associated deposit types include high sulphidation epithermal gold-silver, hotspring gold-silver, porphyry copper±molybdenum±gold and related polymetallic veins and placer gold.

Economic low sulphidation epithermal deposits are usually mined by a combination of open pit mining and underground operations with conventional cyanide milling processing, with moderate daily tonnage production. They typically contain high-grade

sections, often with significant silver content, high silver to gold ratios, "clean" metallurgy, and good recoveries.

#### 6.4 MINERALIZATION

The El Toro Project covers a well-mineralized area southwest of Telkwa that includes 36 Minfile occurrences, including 3 past producers, 1 developed prospect, 6 prospects and 26 showings, as documented by the British Columbia Geological Survey Branch *(Minfile, 2008.) (Refer to Figure 2 and Table 2 on pages 5 and 6.)* 

#### 6.4.1 Hunter Basin (King, Rainbow, Idaho, Hunter, Colorado, Tribune, Hannah)

The Hunter Basin occurrences consist of fissure veins, fracture fillings and disseminations, primarily hosted by andesitic pyroclastic rocks, interbedded flows and epiclastic rocks. Vein mineralogy consists of bornite, chalcopyrite, ±tetrahedrite, chalcocite, specularite, lesser pyrite, pyrrhotite, galena and magnetite in quartz with lesser calcite gangue. Veins primarily trend northeast to easterly, dipping steeply southeast and commonly follow dyke, fracture and shear zones in the volcanic host rocks, accompanied by an alteration assemblage that includes intense silicification, calcite, epidote and sericite.

Electrum has been noted at the Colorado vein which trends 022°/75°NW. The Tribune appears to cover the northerly strike extension of the Colorado. The King, Rainbow and Colorado were small past producing mines, operating primarily between 1914 and 1941. The King covers a 070°/90° trending fissure vein that was traced for 150m. The Upper West showing, approximately 250m along strike to the west, appears to represent the strike extension of the King. Approximately 600m along strike to the east of the King, a gossan occurs in a cliff face, which could represent the strike extension of this vein.

Individual vein assay values include 1.0 g/t Au, 164.5 g/t Ag, 2.0% Cu over 1.2m from the King and 2.7 g/t Au, 706.3 g/t Ag, 5.4% Cu over 1.0m from the Mohock zone on the Idaho (*BCDM*, 1915).

In addition to high grade mineralized lenses in veins at the Hunter, disseminated mineralized is also reported over widths of 15-90 cm within a volcanic bed trending 090/25°N. Only minor quartz stringers with occasional malachite stain have been reported from the Hannah showing.

#### 6.4.2 Hankin Basin (Old Tom, Hankin, Hope, Marmot, Lava, Loring, Crater)

At the Old Tom, Hankin, Lava and Loring showings pyrite, chalcopyrite, chalcocite, pyrrhotite and magnetite with lesser, tetrahedrite and sphalerite occur as disseminations, aggregates and fracture fillings within 1-3m wide beds in the gently dipping andesite tuff host rocks. Mineralization within the beds is commonly enhanced adjacent to quartz porphyry dykes, trending 025°/50-70°E, which cut the stratigraphy. Alteration includes silicification, with epidote, chlorite and sericite. Grades are commonly in the 0.1-1% Cu range with 5-20 g/t Ag and minor gold, locally

with several percent copper, and up to 100 g/t Ag and 1.5 g/t Au . A sample from the Loring for example returned 1.0% Cu, 41.1 g/t Ag with trace gold across 1.8m (*BCDM*, 1915). Many of the exposures occur in cliffs which have been riddled with short adits. At the Loring three mineralized horizons, up to 1.5m wide, occur within a 20m wide zone with assays averaging 65.14 g/t Ag with 0.45 to 3.12% Cu (*McAndrew et. al., 1973*).

Mineralization at Crater Lake may be similar to the strataform mineralization described above with disseminated chalcocite reported from an andesite band in the cirque wall which returned 1.55% Cu and 101.8 g/t Ag over 3m (*Rutherford, 1983*). At the Marmot showing a sulphide fracture filling quartz-calcite-sulphide stringer-stockwork zone was traced for 30.5m. Sulphide mineralization consists of bornite, chalcopyrite, chalcocite, and tetrahedrite. The average assay from chip sampling a 24.4m cliff section on the Marmot is 4.3% Cu and 108.7 g/t Ag (*McAndrew et. al., 1973*).

At the Lava showing quartz-molybdenite stockwork mineralization with disseminated chalcopyrite fracture fillings is associated with granodiorite and quartz porphyry dykes, which are probably related to the Sunsets stock to the south. Anomalous molybdenum also occurs within the strataform mineralization described above suggesting proximity to the porphyry environment.

A quartz-carbonate vein 500m southwest of the Loring showing returned 39.6 g/t Au, 300 g/t Ag with 7.3% Pb and 8.4% Zn (Jamieson, 1991a), suggesting potential for a zonation to more gold rich veins, similar to mineralization at the Friendly Trench at Deny North (*Jamieson, 1991a*).

At the Hope showing a 0.75m wide 320<sup>o</sup>/steep NE quartz vein is mineralized with chalcopyrite and pyrite with a select sample assaying 1.4 g/t Au, 171 g/t Ag and 10% Cu (*BCDM*, 1933).

Minor quartz-garnet-epidote±magnetite skarn with chalcopyrite occurs 1 km southwest of the Loring showing returning 5.5% Cu, 280 g/t Ag, 0.75 g/t Au, and 2 km south of the Loring mineralization carrying up to 1.8% Cu, 10.3% Zn, 0.6 g/t Au was reported (*Jamieson, 1991a*).

Sunsets Basin (Fog, Fly)

The Fog and Fly prospects are hosted by two quartz-sericite-pyrite (phyllic altered) zones within the southern part of the Sunsets stock, a Bulkley intrusion immediately south of Hunter Basin in the northeastern project area. Quartz-pyrite±molybdenite ±chalcopyrite veins 2 to 5 cm wide and trending predominantly northeasterly and dipping southeast are associated with the alteration zones (*Allen, 1981*). Potassic alteration, suggested by pink feldspar alteration envelopes along fractures and quartz veins, is reported at a lower vertical level beneath the phyllic zones.

Vein abundance in general is sparse but the western alteration zone (Fly), measuring 300-600m by 1000m, contains between 10 and 25 veins per metre and is flanked by a copper in soil anomaly. Ma ximum results of 0.102% Mo and 0.11% Cu were reported in 1980 (*Kenyon, 1980*).

The eastern phyllic zone (Fog) is 300m in diameter and lies near the eastern edge of a larger copper-molybdenum soil anomaly (maximum 1900 ppm Cu and 125 ppm Mo) at the contact between two phases of the stock. A 0.5m channel sample assayed 0.252 % Mo and 0.01 % Cu with maximum results of 0.645% Mo with 0.08% Cu (*Kenyon, 1980*).

Significant copper in rock anomalies (up to 0.59% Cu) were subsequently obtained in the north to northeastern Sunsets stock by Skeena Resources Ltd. (Jamieson, 1991a).

#### 6.4.3 Dominion (Denys) Basin (Deny North, Deny South, Deny East, Sunset)

The Sunset showing covers a zone of narrow quartz veins and stringers mineralized with malachite, azurite, tetrahedrite, bornite, chalcopyrite pyrite, native copper and possible native silver. The largest vein, explored by an adit in cliffs on the south side of Sunsets Creek is 0.35m wide and trends 030°/60°SE with values up to 18.8% Cu, 946 g/t Ag and 1.03 g/t Au (*BCDM, 1915, Pardoe, 1988*).

At the Friendly Trench on the Deny North showing a 1m wide north trending, 35°W dipping quartz-carbonate-sulphide vein is exposed which yielded an average of 70.2 g/t Ag and 2.21 g/t Au for 34 samples along 8.5m of the vein with maximum values of 342 g/t Ag and 21.6 g/t Au (*Kikuchi, 1981*). Sulphide minerals include chalcopyrite, pyrite, sphalerite, galena and bornite. Quartz-diopside-epidote-magnetite garnet skarn with minor chalcopyrite and sphalerite mineralization is exposed above the vein.

Mineralization at Deny South is reported as disseminations and predominantly northwest trending, steep northeast dipping fracture fillings of chalcopyrite, chalcocite, bornite and specularite hosted by a basalt flow.

The Deny East showing (not located in 2008) is reported to consist of a 320<sup>o</sup> trending quartz vein zone traced for 70m with malachite staining and limonite boxworks within a 20m wide contact zone between andesite and pink basalt (*Kikuchi, 1985*). No assay values were reported.

#### 6.4.4 Houston Tommy Creek (Del, Joe, Loljuh, Rudy)

On Loljuh Creek chalcopyrite, bornite and molybdenite occur as disseminations in granodiorite and volcanic rocks of the Telkwa Formation (*BCDM, 1971*). At the Loljuh showing, minor galena, sphalerite and chalcopyrite occur in quartz-siderite veins cutting andesite proximal to a carbonate unit within the sedimentary sequence.

Chalcopyrite, ±sphalerite, pyrite, pyrrhotite, bornite, galena, magnetite, chalcocite and molybdenite occur as north to northeast trending fracture fillings and quartz veins at the Joe, Pete and Rudy showings, generally hosted by andesitic volcanic rocks. At the

Pete showing the veins are hosted by a northerly trending feldspar porphyry dyke, possibly related to the Loljuh stock.

Mineralization at the Del showing consists of disseminated chalcopyrite, pyrite, bornite, malachite and azurite, primarily in northerly trending quartz-epidote veins (a grab sample reported from one returned 6.1% Cu, 25 g/t Ag – *Campbell, 1988*), but also in andesite, quartz diorite and rhyolitic host rocks.

# 6.4.5 Howson Basin (Duchess, Countess, Evening, Silver Heels, Starr, Tom, War, Eagle, Princess)

The main vein type occurrence in this area is the Duchess prospect which covers a northerly trending (170°/80°E) shear hosted quartz-sulphide vein with chalcopyrite, pyrite, tetrahedrite, and minor sphalerite and galena, at the contact between an andesite flow and tuff unit. Good mineralization averaging 4-5% Cu in the first 27.5m is reported with mineralization occurring over widths up to 3.7m after which the zone is cut off by faulting. More recent sampling from the Duchess returned 9% Cu and 88 g/t Ag over 1m (Jamieson, 1991b). The Countess, 400 m north of the Duchess covers its northern strike extension.

The Duchess and Countess appear to be localized by a 170°/70°W trending fault which has been traced 2.8 km to the south to the Princess where minor mineralization is exposed over a width of 60m, and 1.4 km north of the Duchess to the Silver Heels. At the Silver Heels showing mineralization, which assayed 34.3 g/t Ag and 2.3% Cu over 3.6m, is associated with a north/80°E trending dyke (*BCDM*, 1917).

The Princess, Evening, Tom and main War Eagle showings cover minor, irregular small quartz-sulphide and sulphide vein and shear occurrences, with minor associated northerly trending disseminated mineralization also noted at the Evening, Silver Heels and War Eagle. Mineralization at the Evening generally trends northeast to east, dipping moderately north. Mineralization on the Tom trends northerly, dipping 40-80°E, is exposed over a 500m area, is commonly associated with dykes and locally contains maximum values of 16.9% Cu and 6.58 oz/t Ag (*Cullen and Biss, 1974*).

Minor quartz-garnet-epidote±magnetite skarn with ±chalcopyrite and sphalerite occurs just west of the Duchess vein, and at the Tom and Princess showings.

The War Eagle Pyrite, 800m southeast of the main War Eagle showing, consists of a 15-25m wide iron oxide zone coincident with an induced polarization anomaly and associated with a 305<sup>o</sup> trending shear zone mineralized with pyrite and minor chalcopyrite with quartz stockworks, stringers and local breccias evident (*Sharp, 1970*). The zone occurs within a felsic feldspar porphyry plug, 500m by 700m in size with copper soil anomalies. A drill hole in the southern part of the stock intersected porphyry style alteration but no significant mineralization. Joker Ridge, 5 km northwest of the War Eagle, consists of an extensive iron oxide-pyrite-silica zone that lies along the same northwesterly trending structure identified at the War Eagle Pyrite zone and may suggest proximity to porphyry or subvolcanic type mineralization.

The Starr showing covers minor disseminated chalcopyrite, bornite, tetrahedrite, pyrite, sphalerite and galena mineralization as disseminations in a granitic intrusion and as fracture fillings within the adjacent contact zone with intermediate volcanic rocks.

#### 6.4.6 Starr Creek (MSJ, Ant, Wolverine)

The MSJ showing covers a roughly concentric zone of propylitic, argillic and phyllic alteration within a quartz monzonite stock (*Preto, 1967*), possibly 2 by 3 km in size. The intense quartz-sericite-pyrite (phyllic) alteration forms a prominent gossan along Trail Creek which flows easterly into the Thautil River. Quartz feldspar porphyry dykes occur along the western margin of the stock, associated with pyrite-chalcopyrite mineralization in propylitically altered volcanic tuffs (*Pauwels, 1991*). Mineralization of this type occurs along Lone Chasm Creek which was investigated in 2008. Minor quartz-molybdenite veinlets are reported, associated with argillic alteration in the western stock area (*Pauwels, 1991*). A large hornfels alteration zone was observed in 2008 within epiclastic rocks along lower Starr Creek, which may be related to proximity to the MSJ stock.

West of Starr Creek, in the southwest El Toro Project area, epithermal style mineralization occurs within Telkwa Formation rhyolite flows, pyroclastics and andesites. At the Ant prospect a phyllic altered 800m long northeast trending shear zone with minor disseminated chalcopyrite, sphalerite and tetrahedrite was delineated (*Hanson, 1991*). Approximately 1.5 km to the west a 3 by 0.6 km epithermal system was outlined (Lefty showing) with values up to 4.1 g/t Au across 0.6m. Mineralization occurs as 020-060<sup>o</sup> trending quartz veins, stockwork and breccia zones with minor pyrite, chalcopyrite and sphalerite, locally with more massive pyrite and chalcopyrite zones (*Hanson, 1990*). The Wolverine showing reportedly consists of chalcopyrite bearing breccia veins hosted by Telkwa Formation volcanic rocks and dykes (*BCDM, 1971*) and may represent the northeast strike extension of the Lefty.

## 7 MAGNETIC SURVEY

#### 7.1 INSTRUMENTATION

The magnetic survey was carried out with two model G-856 proton precession magnetometers manufactured by Geometrics of San Jose, California. One was used as a base station and the other was used as the field unit. This instrument reads out directly in nanoTeslas (nT) to an accuracy of  $\pm 1$  nT, over a range of 20,000 - 100,000 nT. The operating temperature range is -40° to +50° C, and its gradient tolerance is up to 3,000 gammas per meter.

## 7.2 <u>Theory</u>

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite and therefore magnetic surveys are used to detect the presence of these minerals in varying concentrations, as follows:

Magnetite and pyrrhotite may occur with economic mineralization on a specific property and therefore a magnetic survey may be used to locate this mineralization.

Different rock types have different background amounts of magnetite (and pyrrhotite in some rare cases) and thus a magnetic survey can be used to map lithology. Generally, the more basic a rock-type, the more magnetite it may contain, though this is not always the case. In mapping lithology, not only is the amount of magnetite important, but also the way it may occur. For example, young basic rocks are often characterized by thumbprint-type magnetic highs and lows.

Magnetic surveys can also be used in mapping geologic structure. For example, the action of faults and shear zones will often chemically alter magnetite and thus these will show up as lineal-shaped lows. Or, sometimes lineal-shaped highs or a lineation of highs will be reflecting a fault since a magnetite-containing magmatic fluid has intruded along a zone of weakness, being the fault.

#### 7.3 SURVEY PROCEDURE

Readings of the earth's total magnetic field were taken over the Lake grid, a total of 493 readings every 12.5 meters along six survey lines covering 2,712.5 meters.

The diurnal variation was monitored in the field by a base station.

#### 7.4 DATA REDUCTION

The data was input into a computer. Using Geosoft software, it was next plotted with 56,000 nT subtracted from each posted value and contoured at an interval of 100 nT on a base map for Lake grid (GP-1), with a scale of 1:5,000.

Also, using Geosoft software a 3D magnetization vector inversion (MVI) was run on the dataset. This process inverts for the magnitude and direction of the magnetization vector and incorporates both remanent and induced magnetization without requiring any prior knowledge of the direction or strength of remanent magnetization. MVI removes the constraint imposed in conventional susceptibility inversion that the magnetization direction is strictly parallel or anti-parallel to the inducing field direction. Both the direction and the magnitude of the magnetization vector are modeled in the earth.

Three different inversions were carried out using three different magnetic susceptibilities, respectively, at 0.0065, 0.004, and 0.003. The lower susceptibilities reflect the magnetic material, usually magnetite, occurring in lower amounts but over a wider area. This usually reflects magnetic rock-types such as more basic intrusives or volcanics. The higher susceptibilities reflect more concentrated magnetic material over a smaller area. The interpretation could still be a rock type, but with a higher concentration of magnetite, or if the susceptibility is high enough, massive magnetite. The three interpretations are shown on three maps, namely, GP2a to GP2c. In addition, a top-view map was made with the susceptibility of 0.0065, namely, GP2d.

# 8 DISCUSSION OF RESULTS

The magnetic susceptibility maps show the causative sources at different levels of susceptibility with lower susceptibility having causative sources larger.

# 9 SELECTED BIBLIOGRAPHY

Archer, A.R. (1972): Report on Diamond Drilling Program on the Mike 1-32 Claims, Mount Lester Jones Area, Cordero Mining Company; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 3670.

Aspinall, N.C. (1991). Final Report on the 1991 Geological, Geochemical and Geophysical Program on the Taku Project, Stow Resources Ltd.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 22037.

British Columbia Minister of Mines Annual Report 1930, p. 121; 1931, p. 63

Buckle, J. (2006): Compilation of Previous Exploration Data on The Tatsamenie Prospect, Nakina Resources Inc., Internal Company Report.

Canarc Resource Corp.; New Polaris Project – British Columbia;

http://www.canarc.net/projects/new\_polaris/

Clouthier, G.A. (1980): A Geochemical Report Concerning a Soil Sample Survey on the Tatsamenie Property, Omni Resources Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 8959.

Clouthier, G.A. and Elliott, T.M., (1981): A Diamond Drilling Report on the Tatsamenie Property, Omni Resources Inc; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 9246.

Davis, J.W., and Jamieson, M.D. (1999): Diamond Drilling Report for Drilling Completed on the Tatsamenie Property, Kap 3 and Kap 4 Mineral Claims, Xplorer Gold Corp.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 25970.

DuPre, D.G. (1995): Technical Report on the Drilling Program on the Zo Property, Firesteel Resources Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 23858.

Elliott, T.M., (1982): Diamond Drilling on the Tatsamenie Claims, Omni Resource Inc.; B.C. Ministry of Energy, Mines and Petroleum Resources, Assessment Report 10452.

Juras, S. (2005): Technical Report – Tulsequah Chief Project, British Columbia; *Redfern Resources Limited*.

Holcapek, F. (1981): Report on Geological Investigations Conducted on the Cap #6 Mineral Claim, Island Mining and Exploration Co. Ltd.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 9592

Kerr, F.A. (1931a): Some of the Mineral Properties of the Taku District, British Columbia; *Geological Survey of Canada*, Summary Report 1930, Part A, pp. 17-40.

Kerr, F.A. (1931b): Explorations between Stikine and Taku Rivers, B.C.; *Geological Survey of Canada*, Summary Report 1930, Part A, pp. 41-55.

Kerr, F.A. (1948): Taku River Map Area, British Columbia, *Geological Survey of Canada*, Memoir 248.

Lee, C. (1998): Ground Total Magnetic Survey at the Kap Block, Tatsamenie Property, Tulsequah Area, Northwestern British Columbia, Amerok Geosciences Ltd. for Xplorer Gold Corp.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 25459.

McClintock, J. (2006): Technical Report on the 2003 to 2005 Exploration Program on the New Polaris Mine Site, North Western British Columbia for Canarc Resource.

Mihalynuk, M.G., Smith, M.T., Hancock, K.D. and Dudka, S. (1994a): Regional and Economic Geology of the Tulsequah River and Glacier Areas (104K/12 & 13); *in* Geological Fieldwork 1993, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1994-I, pp. 171-197.

Mihalynuk, M.G., Smith, M.T., Hancock, K.D., Dudka, S. and Payne, J. (1994b): Geology of the Tulsequah River and Glacier Creek Area (104K/12 & 13), *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1994-3.

Mihalynuk, M.G., Meldrum, D., Sears, S. and Johannson, G. (1995a): Geology and Mineralization of the Stuhini Creek Area (104K/11); *in* Geological Fieldwork 1994, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1995-I, pp. 321-342.

Mihalynuk, M., Meldrum, D.G., Sears, W.A., Johannson, G.G., Madu, B.E., Vance, S., Tipper, H.W. and Monger, J.W.H. (1995b): Geology and Geochemistry of the Stuhini Creek Map Area (104K/11); *B.C. Ministry of Energy, Mines and Petroleum Resources*, Open File 1995-5.

Mihalynuk, M.G., McMillan, W.J., Mortensen, J.K., Childe, F.C. and Orchard, M.J. (1996): Age of Host Strata Versus Mineralization at Ericksen-Ashby: A Skarn Deposit, *in* Geological Fieldwork 1995, *B.C. Ministry of Energy, Mines and Petroleum Resources*, Paper 1996-I, pp. 175-179.

Murton, J.C. and Woods, D.V. (1988): Geophysical Report on an Airborne Magnetic and VLF-EM Survey, Cap 2, 3, 4 and Goat 1 Claims, Omni Resources Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 17839.

Payne, J.G. (1979): Geology Report for Semco Mining Corporation on the Ericksen-Ashby Claims, Taku River Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 7707.

Power, M. A. (1998): Ground Total Magnetic Field and VLF-EM Surveys at the Tatsamenie Property, Tulsequah Area, Atlin Mining Division, Amerok Geosciences Ltd. for Xplorer Gold Corp.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 25745.

Redfern Resources Ltd.; Tulsequah Project;

http://www.redfern.bc.ca/redfernTusequahProject.htm

Rayner, G.H., (1983): Diamond Drill Report on the Cap 4 Claim, Berglynn Resources Inc. and Omni Resources Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 11089.

Rye, K.A. (1991): Geological and Geochemical Report on the Tatsamenie Prospect, Omni Resource Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 21687.

Sinclair, W.D. (1995): Porphyry Mo (Low-F-type), in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, *B.C. Ministry of Energy of Employment and Investment*, Open File 1995-20, pp. 93-96.

Souther, J.G. (1971): Geology and Mineral Deposits of the Tulsequah Map Area, British Columbia; *Geological Survey of Canada*, Memoir 362.

Wahl, H. (1980): Preliminary Evaluation Report for Omni Resources Inc., Internal Company Report.

Wahl, H. (1982): Review of 1980-81 Work Programs and Recommendations of the Tatsamenie Property, Omni Resources Inc., Internal Company Report.

Wahl, H. (1997): 1997 Evaluation Report, Tatsamenie Project, Tulsequah, B.C., Xplorer Gold Corp., Internal Company Report.

Wesa, G.L. (1990): Geological and Geochemical Report on the Red Claims, Taku River Area; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 20325.

Wilkins, A.L. and MacKinnon, H.F. (1989): Geological and Geochemical Report on the Tatsamenie Prospect, Omni Resource Inc.; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 18803.

#### 10 **GEOPHYSICIST'S CERTIFICATE**

I, DAVID G. MARK, of the City of Surrey, in the Province of British Columbia, do hereby certify that:

I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at  $6204 - 125^{th}$  Street, Surrey, British Columbia.

I further certify that:

I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.

I have been practicing my profession for the past 42 years, and have been active in the mining industry for the past 45 years.

This report is compiled from data obtained from a magnetic survey over a portion of the El Toro Property from October 25<sup>th</sup> to November 17<sup>th</sup>, 2012.

I do not hold any interest in Lions Gate Energy Inc., nor in the El Toro Property, nor in any other property of Lions Gate Energy Inc., nor do I expect to be receiving any interest as a result of writing this report.

David G. Mark, P.Geo. 2013 Geophysicist October 1,

## 11 AFFIDAVIT OF EXPENSES

Magnetic surveying as well as tree bark sampling were carried out over a portion of the El Toro Property, which occurs on Mooseskin Johnny Lake, located 12 km south of the town of Smithers, B.C, from October 22<sup>nd</sup> to November 17<sup>th</sup> 2012, to the value of the following:

| MOB/DEMOB:  |                 |             |
|---|-----------------|-------------|
| Wages   | \$8,400.00      |             |
| Room and board  | 2,280.00        |             |
| Truck rental and gas                                    | <u>1,050.00</u> |             |
| TOTAL   |                 | \$11,730.00 |
|   |                 |             |
| FIELD:  |                 |             |
| Field work, 3-man crew, 5 days @ \$1,900/day            | \$9,500.00      |             |
| Field work, 4-man crew, 7 days @ \$2,400/day            | 16,800.00       |             |
| Standby, due to bad weather, 4 days @\$800/day          | 3,200.00        |             |
| Helicopter  | 3,450.00        |             |
| ATV(2), skidoo(2) & trailer rentals, 18 days @\$250/day | <u>4,500.00</u> |             |
| TOTAL   |                 | \$37,450.00 |
|   |                 |             |
| LABORATORY:   |                 |             |
| Laboratory testing of 104 samples @ \$40/sample         | \$4,160.00      | \$4,160.00  |
|   |                 |             |
| <b>REPORT and DATA REDUCTION:</b>                       |                 |             |
| Data organizing and reduction                           | \$4,500.00      |             |
| Interpretive report                                     | \$1,450.00      |             |
| Report compilation, photocopying, etc.                  | 150.00          |             |
|   | \$6,100.00      | \$6,100.00  |
| GRAND TOTAL   |                 | \$59,440.00 |

Respectfully submitted, Geotronics Consulting Inc.

David G. Mark, P.Geo, Geophysicist

October 1, 2013

# 12 APPENDIX – GEOCHEMISTRY DATA











HOWSON CREEK, SMITHERS AREA, OMINECA MD, BC

# GEOLOGY LEGEND

| DRAWN BY: | JOB NO.: | NTS:         | DATE:   | FIG NO.: |
|-----------|----------|--------------|---------|----------|
| CAM       | 11-23    | 93L/05,06,11 | APR '12 | 4a       |

Geotronics Consulting Inc Surrey B.C.





| L         | IONS GA | TE E | ENE | RGY INC | <b>)</b> .     |
|-----------|---------|------|-----|---------|----------------|
| EL<br>HOV | TORO PR |      |     | - LAKE  | GRID<br>MD, BC |
| 14401     | ETIO OL | 1000 |     |         | 0 000          |
| MAGN      | Encsu   | 3D V | IEW | BILITY: | 0.003          |







| L                | IONS GA           | TE EN                   | ERGY INC                  | C.                |
|------------------|-------------------|-------------------------|---------------------------|-------------------|
| EL<br>HOV        | TORO PR           | ROPERT<br>SMITHERS A    | Y - LAKE                  | GRID<br>MD, BC    |
| MAGN             | ETIC SU           | JSCEP<br>3D VIEW        | TIBILITY.                 | : 0.004           |
| DRAWN BY:<br>CAM | JOB NO.:<br>12-23 | NTS: 93U<br>93U<br>93L/ | 05<br>DATE:<br>11 JUL '13 | FIG NO.:<br>GP-2b |



Geotronics Consulting Inc Surrey B.C.





|   |  | EL               | IONS GA           | ROPE | ENE                        | RGY INC          | GRID              |
|---|--|------------------|-------------------|------|----------------------------|------------------|-------------------|
|   |  | MAGN             | ETIC SU           | SCE  |                            | BILITY:          | 0.0065            |
| 9 | Geotronics Consulting Inc<br>Surrey B.C. | DRAWN BY:<br>CAM | JOB NO.:<br>12-23 | NTS: | 831,00<br>831,00<br>831,11 | DATE:<br>JUL '13 | FIG NO.:<br>GP-2a |



| EL<br>HOV         |         |             |     |         | GRID                 |
|-------------------|---------|-------------|-----|---------|----------------------|
| 15.50 Act 22.00 T |         | 102000200   | a   |         | CALCEN LANDING AND A |
| MAGN              | ETIC SU | SCE<br>3D V | IEW | BILITY: | 0.0065               |



Geotronics Consulting Inc Surrey B.C.

