# Report <br> on a <br> Soil Geochemical Survey 

## Hat Project

Lat. $58^{\circ} 11^{\prime} 38^{\prime \prime} \mathrm{N}$ and Long. $131^{\circ} 37^{\prime} 53^{\prime \prime} \mathrm{W}$
Sheslay Mining District, Atlin Mining Division, British Columbia.

Assessment Report Submitted to:
Mineral Titles Division,
Geological Survey Branch, Ministry of Energy and Mines, Victoria, B.C.

Dates of Work: July 11 to July 20, 2006

## Statement of Work Event No 4098612

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### 0.0 SUMMARY

During August and September 2005, T.E. Lisle, P. Eng. and E.A. Ostensoe, P. Geo. carried out a geochemical soil sampling program on a section of the Hat Project claims located in the Sheslay District of the Atlin Mining Division, northwestern British Columbia. Various mining companies had explored the claim area between 1963 and 1994, and the owners had previously explored the claims intermittently between 1994 and 2001.

Both the 2005 survey work and the 2006 survey was directed to the western section of the Gossan Creek zone, one of three areas in the claims where significant concentrations of copper and gold mineralization had been identified. The 2006 soil survey involved the collection of 91 soil samples and followed up on 95 samples collected in 2005.

The 2006 samples were analyzed at an accredited laboratory in Vancouver. The analytic data, combined with the 2005 data revealed a large ( $>300 \mathrm{ppm}$ ) copper in soil anomaly that correlated with elevated levels of gold, cobalt and nickel.. The anomaly is not fully outlined.

The combined data also showed anomalous levels of arsenic and barium mainly at the lower topographic levels in the south part of the grid. These anomalous zones appear peripheral to the large area of copper-gold interest. It is possible that the high levels of barium and arsenic relate to a late mineralizing event within and near structures along the Hackett River Valley Lineament.

The further exploration of the Gossan Creek area requires a comprehensive program of mapping, geochemistry and geophysics.

This report describes the details of the 2006 geochemical soil survey on the Hat claims, and presents the results of the work on maps accompanying the report.

### 1.0 INTRODUCTION

### 1.1 Introduction.

The Hat property is located in the Sheslay District of northwest British Columbia. The geologic setting here is similar to other areas of the Cordillera that host numerous coppergold and copper-molybdenum porphyry deposits. During the 1970's, porphyry coppergold deposits at Polar Creek, and Dick Creek, and a skarn deposit at Copper Creek in the western part of the district were explored by a variety of geological, geochemical, and geophysical surveys and bulldozer trenching. The mineralized zones at Copper and Polar Creeks, and at the Kid-Grizzley prospect slightly further to the west were also drill tested. During the late 1970's, the area now occupied by the Hat Claims was subjected to similar surveys as above, and by bulldozer trenching.

The Hat claims lie about 9 kilometres to the south of an access road between Telegraph Creek and the Golden Bear Mine. The construction of this road in the 1980's gave better access to the area, and led to the discovery of a high-grade gold occurrence (Wolverine) a few kilometers south of the Hat claims. Significantly, this occurrence saw renewed exploration in 2004 and, the Dick Creek deposit in the western part of the district was drill tested in 2004 and 2005 with significant copper-gold intercepts reported.

The Hat Project area is in Map Sheet 104J that was the subject of a provincial regional geochemical survey in 2000. The results of the RG Survey, released in 2001, included a number of samples in the Sheslay district that are clearly anomalous in gold and base metals. (ref. BC RGS 55/GSC Open File 4011).

Lisle and Ostensoe have extensive experience in the Sheslay District, and have held claims in the Hatchau Lake area since 1994. Since that time, they have carried out small exploration programs that at times were supported by grants from the now defunct BC Prospectors Assistance Program. This work identified three areas within the claims that were considered prospective for copper-gold mineralization, and which warranted followup work.

During August 2005, a partial geochemical survey was carried out on the western part of the Gossan Creek Zone near Hatchau Lake. The data resulting from this work was filed for assessment in 2005. During the period July 11 to July 20, 2006, the geochemical survey in this area was continued on extensions to the 2005 grid mainly to the north and east. The results of the 2006 work are described herein.

### 1.2 Property

E. Ostensoe and T.E. Lisle are the co-owners of the claims that comprise the Hat Project. Recent changes to provincial mining regulations allowed for the conversion of


Legacy claims to the new cell claim designations and this change has resulted in new tenure numbers and claim size. As presently constituted, the following describe the tenures in the Hat Property.

## HAT CLAIMS, ATLIN MINING DIVISION

July, 2006

| Name | Tenure\# | Issue <br> Date | Cells | GTD | Total <br> Hectares | 2006 <br> Assessment | New GTD* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Hat 3 | 511709 | $2005 / \mathrm{Apr} / 26$ |  | $2006 / \mathrm{Sep} / 30$ | 324.014 | $2,592.11$ | $2008 / \mathrm{Sep} / 30$ |
| Bob 2 | 507814 | $2005 / \mathrm{Feb} / 24$ |  | $2006 / \mathrm{Sep} / 30$ | 255.738 | $2,047.03$ | $2008 / \mathrm{Sep} / 30$ |
| Hat | 501290 | $2005 / / \mathrm{Jan} / 12$ |  | $2007 / \mathrm{Jan} / 12$ | 204.528 | $1,636.22$ | $2009 / \mathrm{Jan} / 12$ |
| Hat 4 | 515549 | $2005 / \mathrm{Jun} / 29$ |  | $2006 / \mathrm{Sep} / 30$ | 187.587 | $1,500.70$ | $2008 / \mathrm{sep} / 30$ |
| Bob 1 | 515550 | $2005 / \mathrm{Jun} / 29$ |  | $2006 / \mathrm{Sept} / 30$ | 715.865 | $5,726.92$ | $2008 / \mathrm{Sep} / 30$ |
| Total |  |  |  |  | $1,687.732$ |  |  |

* After filing of 2006 Technical work.


### 1.3 Location and Access

The Hat claims are located in Northwest British Columbia in Map sheet 104J/4E (104J012/104J013/104J022 and 104J023), and are centered approximately on Coordinates $131^{\circ} 37^{\prime} 53^{\prime \prime} \mathrm{W}$, and $58^{\circ} 11^{\prime} 38^{\prime \prime} \mathrm{N}$. The property is adjacent to Hatchau Lake that is situated 95 km west of Dease Lake and 50 km northwest of Telegraph Creek.

The claims lie mainly north of the Hackett River Lineament that drains Hatchau Lake northwest to the Sheslay River. Elevations in the claim area range from about 625 to 1300 metres above sea level. The slope to the north of the main Hackett River valley is relatively steep to about the 1000 metre elevation, but becomes flatter to the north towards Level Mountain. Some of the creeks are deeply incised into the south escarpment, and the area is thinly forested with poplar and spruce, and locally by bushy marshes and muskegs.

An all weather road connects Dease Lake to Telegraph Creek, and a limited access mine service road** branches from the main road near Telegraph Creek and passes about 8-10 km . south of the Hat claims. There is a useable gravel airstrip located at the confluence of the Hackett River and the Sheslay River some 13 km west of the Hat claims. For practical purposes, the easiest current access is by float-equipped aircraft to Hatchau Lake, or by helicopter from the Golden Bear Mine Road. Helicopter access would be preferable and necessary to establish camps on the upper slopes.

[^0]
### 1.4 References.

1) Gabrielse, H. 1998. Geology of the Cry Lake and Dease Lake Map Areas, North Central British Columbia, GSC Bulletin 504.
2) Jackman, W. and Friske, PWB. (2001). Regional Stream Sediment and Water Data, Dease Lake, British Columbia (NTS 104J) BC RGS 55/GSCC Open File 4011
3) Lisle, T.E. (1997) Geological and Geochemical Report on the Hat, Bob and Ken mineral claims, Atlin Mining Division, B.C. Assessment Report 24935
4) Ostensoe, E, and Lisle, T. E. 1996 Report of Work, Hat Project, Atlin MD, BC, Assessment Report 24388
5) Lisle, T.E., and Ostensoe, E. 2005 Geochemical Report on the HAT claims. Assessment Report filed September 2005.
6) Panteleyev, A. McMillan, W.J. Preto, V.A, -1974 Geological Fieldwork,. Geochemical Sampling, Geology and Magnetics of the Kaketsa Stock. 104J/4W

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1988. GAC. The Gangue, MDD. Ore Deposit Models: Epithermal Au-Ag Low Sulphidation.
7) Schmidt, A. 1978 Linecutting and Geochemical Surveys, Ski Property, Atlin M.D., B.C. Assessment Report 6835
8) Vyselaar, J. 1979. Combined Linecutting, Geochemical and Geophysical Report, Ski Property, Atlin M.D., B.C. Assessment Report 7482.
9) Miscellaneous Private file notes and reports on the geology and exploration of the Hat claim area assembled from various sources between 1976 and 2005

### 2.0 GEOLOGY

### 2.1 Regional Setting

The Hatchau Lake area is in the Intermontaine belt where the Stikine Plateau merges with the Coast Mountains. This area is coincident with the northern margin of tectonic terrain Stikinia where structural trends are dominantly west-northwest and northerly.

The claim area is within a zone of crustal rifting, marked by northerly trending belt of Miocene to Recent aged volcanoes (TQw) including the Level Mountain volcano. This zone crosses the Nahlin and King Salmon Faults, regional northwest structures related to terrain boundaries. An important epithermal gold-silver occurrence, located at Heart Peak, to the west of the Level Mountain volcano, and an epithermal gold-copper occurrence at the Hat property near the southern boundary of Level Mountain, indicates that these young volcanic complexes may have potential for the development of precious metal deposits.

The Hat property is in the Sheslay district where the Level Mountain basalts intrude and overlie sections of the Stuhini Group (TrJt), an arc assemblage of andesitic to basaltic volcanic and related sedimentary rocks of upper Triassic age. The Stuhini Group is similar to, and correlative with, the Nicola and Takla formations mainly to the east and southeast that host a significant number of productive porphyry copper ( + -Au, Mo) deposits of both the alkaline and calc-alkaline suites. The Hat property is located in a central area where a north-south trending section of the Stuhini formation abuts the Nahlin-King Salmon faults, and where the formational trend swings northwest-southeast sub parallel to these faults.

The region is marked by a number of intrusions that range in size from batholiths to dykes. The intrusions are commonly late Triassic to early Jurassic in age, are calc-alkalic to alkalic in composition ( $\mathrm{Ejg} / \mathrm{Ejd}$ ) and, in part, coeval with the Stuhini volcanic rocks. The large Moosehorn batholith to the south of the Sheslay district is largely diorite in composition but ranges from gabbro to quartz monzonite.

A surprisingly large number of mineral occurrences are present in the Sheslay District and many are spatially related to the Kaketsa Stock and other smaller intrusions. Exhalative sulphide mineralization is present in volcanic sedimentary rocks near Copper and Dick Creeks, and porphyry-style copper-gold mineralization has been investigated at Kaketsa Mountain, at the Kidd-Grizzley, and at Dick Creek in the west section of the district.

### 2.2 Geology of the Hat Claims

The Hat claim area is underlain by a large dioritic stock that trends generally east west. The stock intrudes Stuhini volcanic and related sedimentary rocks near the south contact
of Level Mountain. Mapping and regional magnetic surveys indicates that a large section of the intrusion is a magnetite-rich medium to coarse-grained gabbro. Phases of the intrusion are similar to the more common Kaketsa-type medium-grained diorite found mainly to the west, but neither the size nor architecture of the intrusion has been fully defined. Monzonite to syenite dykes are scattered throughout the Hat claims.

The intrusion is of interest due to extensive areas of alteration that occur around the northwest and southeast contacts, and to widespread copper and gold mineralization found in its vicinity. To the northwest, a wide zone described as light gray or green-gray to cream coloured fine-grained diopside-plagioclase-silicate hornfels is reported. To the south of the stock, a very large conspicuous bright-orange gossan marks an area of extensive carbonate-silica-argillic? alteration and zones of breccia centered over an area of intense faulting and fracturing along Gossan Creek, and to the west of Hatchau Lake.

### 2.3 Mineralization

Significant concentrations of copper and gold mineralization have been extensively explored at a number of prospects in the Sheslay District (Copper Ck., Dick Ck., KiddGrizzley, Kaketsa Mtn., and Wolverine). The style of mineralization is varied and includes porphyry, exhalative, vein and skarn zones.

Work at the Hat property indicates that copper and gold mineralization is widely scattered within the claims, and three areas appear to have high potential for hosting significant concentrations of mineralization. These include:
a) Hoey Prospect.

A northerly trending cluster of veins and lenses of specular hematite with subordinate pyrite and chalcopyrite occur immediately northeast of Hatchau Lake. Sampling by the writers yielded assays up to 8.1 ppm Au and $23,530 \mathrm{ppm} \mathrm{Cu}$. Of interest is the presence of elevated levels of cobalt +-As, and Ni., and slightly elevated levels of Ag and W . Written descriptions (A Panteleyev) suggest a similarity with mineralization at the PET prospect located further west along the south Level Mountain contact north of Sheslay.
b) Hat North.

A very large $\mathrm{Cu}+-\mathrm{Au}$ gold in soil anomaly is present about 3 km north of Hoey. The area is largely drift covered, but limited outcrop and trenches expose limited magnetite, pyrite and chalcopyrite in weak to moderately altered dioritic rocks. Assays ranged up to about $0 .!\% \mathrm{Cu}$. A sample of float collected from a drift covered area to the east of the trenches showed significantly higher concentrations of Cu and Au . Insufficient work has been completed to determine either the size or grade of this zone.
c) Gossan Creek.

The large alteration zone noted above immediately northwest of Hatchau Lake is characterized low sulphide concentrations including finely disseminated chalcopyrite, pyrite and a very fine unidentified dark gray sulphide. Well banded and comb textures, are present but not common. Breccias and adjacent rocks show evidence of multiple brecciation and deposition. Background soil and rock geochemistry show that the alteration zones are variably anomalous in copper, gold, arsenic and barium, and locally in zinc, lead and antimony. Silver content is mainly low. Of interest is a selected sample of silicified (chalcedonic) breccia from the area west of Gossan Creek that assayed 966 ppb Au.; 4,951ppm Cu.; 2,752ppm As.; 2.8 ppm Ag.; 21 ppb Sb., and 213 ppm Co.

These characteristics appear to suggest the presence of a 'Low sulphidation epithermal system' where narrower discrete mineralized conduits may be obscured by broad alteration haloes. The presence of elevated levels of cobalt and nickel, elements not commonly associated with these types of deposits, indicates that the mineralization may be more complex, and may have a relationship to the Hoey mineralization noted above.

### 3.0 WORK PROGRAM

### 3.1 Introduction.

The owners drove to Dease Lake with camp, groceries and exploration equipment and chartered a fixed-wing aircraft to Hatchau Lake about 90 kilometres to the west of Dease Lake. Hatchau Lake lies on the southern perimeter of the Hat property and a camp was established near the northwest corner of the lake. A radiotelephone was set up at the camp for communication with the aircraft company. Travel and fieldwork occupied 10 days, from July 11 through July 20, 2006.

Prior to leaving Dease Lake for the property, the owners met with representatives of the Tahltan First Nation at the band office in Dease Lake. The purpose of the meeting was to advise them of our claims and to apprise them of our work plans.

Some of the previous work at the property by the present owners had been directed to the main Gossan Creek area with a few long traverse lines extended to the west section of the property (Formerly HAT 4 claim before conversion to cell claims). The soil chemistry from samples on the westerly lines had shown a few sites with anomalous levels of copper, gold etc., and both the 2005 and 2006 survey work was directed expanding the data in this area.
3.2 Sampling Procedure.

The 2005 grid was extended to the north and to the east and a total of 91 soil samples were collected. For reference, the 2005 grid was tied into a 1995 traverse west from

Gossan Creek. Station $19+00 \mathrm{~W}$ on line $8+00 \mathrm{~S}$ on the 1995 grid was located and a line run easterly for 185 metres then northerly for 100 metres to establish a reference point at $7+00 \mathrm{~N}$ and $17+00 \mathrm{~W}$. From this point, a grid was established by running a sub baseline northerly on $17+00 \mathrm{~W}$ between $7+00$ s to $4+00 \mathrm{~S}$ in 2005 , and between $4+00 \mathrm{~S}$ and $2+00 \mathrm{~S}$ in 2006. A total of 95 soil samples were collected in 2005 from six east-west grid lines spaced 50 metres apart with 50 metre spacing mainly between $13+50 \mathrm{~W}$ and $21+00 \mathrm{~W}$. A further 91 soil samples were collected in 2006 from grid extensions to the north and to the east. Currently the grid covers an area approximately 500 M north-south by 1000 metres east-west. ( $2+00 \mathrm{~S}$ to $7+00 \mathrm{~S}$ and $11+00 \mathrm{~W}$ to $21+00 \mathrm{~W}$ ).

The sample grid was completed with belt chain and compass and lines were commonly tied off at both ends. Attempts were made to tie the grid to earlier work but this was only partly successful. GPS readings were collected at a number of grid points on the survey, and these points are noted on Figure 3 to this report.

The Sheslay area has been glaciated, and bedrock is partly obscured by a thin veneer of glacial till. In some areas, the till may be up to a few or several metres thick. Within the grid, outcropping was noted scattered over a limited area mainly between $15+50 \mathrm{~W}$ and $17+50 \mathrm{~W}$, but the areas to the east and west are largely Poplar slopes devoid of outcrop. Drainages in the eastern section of the grid are locally greater that 10 metres deep without outcrop, suggesting relatively deep overburden.

A typical soil profile includes a few centimeters of dark organic material that is commonly underlain by a brown clayey soil that varies to dark brown, or to red brown and in some areas yellow brown with depth. Experience in the area has shown that the clay-rich tills can significantly mask bedrock and subcrop mineralization, therefore when sampling, there is a need to penetrate the surficial cover as deep as possible.

Outcropping and talus slopes are locally evident, and are mainly composed of green volcanic or volcanic sedimentary rocks of the Stuhini Group. Near Lines 2+00S and $3+00 \mathrm{~S}$ between $16+50 \mathrm{~W}$ and $17+00 \mathrm{~W}$, volcanic breccias with interstitial fillings of diorite to monzonite are present, and malachite was noted. Highly altered limonitic carbonate-silica rock (breccia)? is also evident mainly near the south sections of the grid. Notes on the presence of these rock units are added to sample data sheets where space permitted.

All samples were dug with a shovel or a soil-sampling pick. At some locations, the samples were collected with a screw auger. The collection of samples with the augur is thought to yield a better sample, particularly in areas of muskeg and thick overburdenl, however, the process is slow and very time consuming. Commonly, the samples were taken at depths of 15 to 30 cm . and details on location, colour, content etc were recorded on data sheets that form Appendix 3 to this report. The samples were air dried for several days then packed in boxes and delivered to Acme Analytical Laboratory in Vancouver.

### 3.3 Laboratory Procedure.

On delivery to the laboratory, the samples were further dried at $60^{\circ} \mathrm{C}$ and screened to obtain the -80 mesh fraction. 15 gram splits were then leached with $90 \mathrm{ml} 2-2-2 \mathrm{HCl}-$ $\mathrm{HNO} 3-\mathrm{H} 2 \mathrm{O}$ at $95^{\circ} \mathrm{C}$ for one hour, diluted to 300 ml , then analyzed by ICP-MS for 36 elements. The analytic data from the laboratory are included as Appendix 2 to this report.

### 4.0 PROGRAM RESULTS.

For purposes of display, six of the elements ( $\mathrm{Cu} . \mathrm{Au}$. As. Ba. $\mathrm{Co} . \mathrm{Ni}$ ) have been plotted and are included as figures 4 a to 4 f to this report. This data should be viewed in conjunction with the 2005 soil data that was filed for assessment purposes with the Ministry in 2005. The data has not been statistically analyzed, however, areas of possible interest for these elements are highlighted by simple contours.
a) A large irregular zone with anomalous copper in the soils is indicated in an area centered at about $4+00 \mathrm{~S}$ and $17+00 \mathrm{~W}$. Assays range up to 1325 ppm copper. The zone is not uniformly anomalous. It occurs generally in the area where malachite was noted in talus associated with the narrow rib of outcrop trending northerly through the grid. Small anomalous zones are also located throughout the grid, mainly to the east in areas thought to be underlain by thicker overburden. Their relationship to the central zone is uncertain.
b) Gold assays ranged up to 50.1 ppb gold. (2005 assays ranged up to 179 ppb gold). The 15 ppb contour indicates a weaker anomalous zone that roughly approximates the central copper zone. The zone is not uniformly anomalous. There are also a number of smaller, one to four station, anomalies scattered throughout the grid, a few of which do not correlate with the copper.
c) Cobalt assays ranged up to 129.3 ppm . ( 2005 assays ranged up to 159.6 ppm ). Contoured at 50 ppm , the data shows a central zone with elevated levels of cobalt that roughly correlates with the central copper zone. As with the copper and gold, a few small anomalous sites are widely scattered in the grid, mainly to the west.
d) Nickel assays ranged up to 217.8 ppm . (2005 assays ranged up to 238.8 ppm ). The 120 ppm contour shows elevated levels of Nickel that roughly correlate with the central copper zone. Elsewhere, only three small, one to two site, anomalies are evident in the grid.
e) Arsenic assays ranged up to 83 ppm . (2005 assays ranged up to 205.2 ppm ). Contoured at 50 ppm , the 2006 survey work showed only two sites with elevated levels of arsenic. The 2005 data showed a number of sites in the southern part of the grid with higher levels of arsenic, however only a few appear to correlate with the central copper zone.
f) Barium assays ranged up to 171 ppm ( 2005 assays ranged up to 290 ppm ). Contoured at 150 ppm , only two widely spaced sites in the 2006 work yielded assays of interest. The 2005 work showed a number of sites in the southern part of the grid ( $4+50 \mathrm{~S}$ to $7+00 \mathrm{~S}$ ) that; while locally coincident with central copper zone elements, partly flank that zone. The barium data shows a spatial relationship with Arsenic, but site correlation is weak.
g) Other elements. (Not plotted). Zinc assays ranged up to 323 ppm . (2005 assays ranged up to 363 ppm ). Some of the higher results from the 2006 work occur in the central anomalous copper-rich area near $17+00 \mathrm{~N}$.

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

There are a variety of mineral deposits in the Sheslay area that contain anomalous concentrations of copper and gold mineralization, and this relationship is evident on the Hat claims. Previous work in the Gossan Creek area of the Hat claims, immediately east and south of the present grid, has also shown a scattering of other anomalous elements in the rocks and soils including $\mathrm{Ba} ; \mathrm{Co}$; As; Ni ; and locally Sb , and Zn . Based on mineral assemblages and textures; soil and rock geochemistry; and the intensely altered and fractured areas in and around breccia zones, the owners suggested that mineralization in and around Gossan Creek could include Low sulphidation epithermal gold-copper deposits.

The exploration work completed in 2005 and 2006 in the west Gossan Creek area has resulted in two areas that are of economic interest.
First, a large copper-gold-cobalt-nickel +- zinc anomaly is centrally located in the grid, in an area where some malachite has been noted on limited outcrop. The size of the anomaly was not fully defined. The survey also indicated other nearby zones of anomalous copper in the soils that could relate to the main zone, but the relationship is presently uncertain due to thick overburden. This target is sufficiently large to warrant a comprehensive exploration program.

Second, there are a number of areas in the south part of the grid, at the lower elevations, that show elevated levels of Arsenic and Barium. These zones appear spatially related to highly coloured and altered rocks found south of the grid and in Gossan Creek. The zones generally appear peripheral to the large copper anomaly up slope to the north. If our proposal of a low sulphidation epithermal copper-gold target is valid, it could be argued that the mineralization in the southern part of the grid, and to the south of the grid, might relate to a late mineralizing event along structures within and near the Hackett River Lineament.

It is recommended that the grid area be extended to the north, and east to Gossan Creek . The area should be mapped in detail. Further geochemical soil surveys should be completed where overburden is deemed to be relatively thin. Consideration should be given to Induced Polarization surveys.

## 2006 GPS Observations, Hat Project



* Old Grid Point is about $20 \mathrm{M} @ 352^{\circ}$ from 2006 grid point $3+00 \mathrm{~S}, 12+50 \mathrm{~W}$
** Old Grid. Unmarked Station, is 27 Metres south of $3+50 \mathrm{~S}, 11+00 \mathrm{~W}$, and 25 Metres east of Creek

| Garmin $\mathbf{4 5}$ GPS. |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Line | 2+00S, $17+00 \mathrm{~W}$ | 856 | 345,343 | $6,453,381$ |
| Old Stn. Line 2S, 11W | 879 | 345,892 | $6,453,377$ |  |
| Line | 4+50S, $11+00 \mathrm{~W}$ | $916(+-36)$ | 345,931 | $6,453,196$ |
| Line | 5+00S, 13+00W | $?$ | 345,675 | $6,453,115$ |
| Line | 5+00S, 11+00W |  | 345,929 | $6,453,153$ |
| Line | 6+50S, 12+50W |  | 345,793 | $6,453,005$ |

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+2006 Sample Siites
$0 \quad$ GPS Observation Sites
nom


HAT PROJECT, ATLIN MINING DIVISION
Geochemical Survey, West Gossan Creek Area 2006 GPS Observations



+ 2006 Sample Siles
o $\Delta \quad 2005$ and Previous Sample Sites

6,453,200

$+\quad 2006$ Sample Sites



## APPENDIX 1

 CERTIFICATIONThis report was prepared by T.E. Lisle, P. Eng., and E.A. Ostensoe, P.Geo., and is based in part on the work carried out by the authors in 1995, 1996, 2001, 2005 and 2006, and in part on background data as described in the section of References.

Thomas E. Lisle, P. Eng. certifies that:

1) He is a qualified consulting geologist with residence in North Vancouver, British Columbia.
2) He is a graduate in geology of the University of British Columbia, and is a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia. He is also a member in good standing of the Geological Association of Canada.
3) He has worked in the mineral exploration sector of the mining industry for more than forty years in western and northern Canada, the United States and Mexico.
4) He, in cooperation with Erik Ostensoe, P. Geo., completed the field work that is the basis for the accompanying report, and he is the principal author of that report.

Erik A. Ostensoe, P. Geo. certifies that:

1) He is qualified consulting geologist with residence in the city of Vancouver, British Columbia,
2) He is a graduate in Honours Geology of the University of British Columbia, and has studied at Queens University, Kingston, Ontario and is a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
3) He has worked in the mineral exploration sector of the mining industry for more than thirty-five years.
4) He , in cooperation with T.E. Lisle, P. Eng. completed the field work that is the basis of the accompanying report and collaborated in the preparation of the report.

## APPENDIX 2

## SOIL GEOCHEMISTRY ANALYTIC DATA



$\qquad$ DATE RECEIVED: JUL 212006 DATE REPORT MAILED:

G-1 $13+00 S 17+50 \mathrm{~W}$ L3+00S $17+00 \mathrm{~W}$ $-13+00516+50 \mathrm{~W}$ L3+00S $16+00 \mathrm{~W}$

L3+00S $15+50 \mathrm{~W}$ L3+00S $15+00 \mathrm{~W}$ $13+00 S 14+50 \mathrm{~W}$ L3+00S $14+00 \mathrm{~W}$ L3+00S $13+50 \mathrm{w}$

L3+00S $13+00 \mathrm{~W}$ 13+00S $12+50 \mathrm{~W}$ 13+00S $12+00 \mathrm{~W}$ $13+00511+50 \mathrm{~W}$ $\mathrm{L} 3+00 \mathrm{~S} \quad 11+00 \mathrm{~W}$

L3+50S 21+00W $13+50 \mathrm{~S} 20+50 \mathrm{~W}$ L3+50S $20+00 \mathrm{~W}$ L3+50S 19+50W L3+50S $\quad 19+00 \mathrm{~W}$
$13+50 \mathrm{~S} \quad 18+50 \mathrm{~W}$ L3+50S $18+00 \mathrm{~W}$ L3+50S $17+50 \mathrm{~W}$ L3+50S $17+00 \mathrm{~W}$ $13+50 \mathrm{~S} \quad 16+50 \mathrm{~W}$

13+50S $16+00 \mathrm{~W}$ $L 3+50 \mathrm{~S} \quad 15+50 \mathrm{~W}$ $13+50515+00 \mathrm{~W}$ $13+50 S 15+00 \mathrm{~W}$
$13+50 S$
$14+50 \mathrm{~W}$ L3+50S $14+00 \mathrm{~W}$

RE $\operatorname{L} 3+50 S 14+00$ $13+50 \mathrm{~S} 13+50 \mathrm{~W}$ L3+50S $13+00 \mathrm{~W}$ L3+50S $12+50 \mathrm{~W}$ $13+505 \quad 12+00 \mathrm{~W}$

[^1]Sample type: 501 L S 58060 C . Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.
Mo Cu Pb 2n Ag

G-1
$13+50511+50 \mathrm{~W}$ $13+50511+00 \mathrm{~W}$ $14+00513+00 \mathrm{~W}$ L4+00S $12+50 \mathrm{~W}$
$\begin{array}{llllllllllllllllllllllll}.3 & 2.0 & 2.0 & 44<.1 & 5.1 & 4.2 & 522 & 1.81 & <.5 & 2.4 & <.5 & 3.7 & 52 & <.1 & <.1 & .1 & 37 & .48 & 080 & 6 & 41 & 58 & 521\end{array}$




 RE L4+00S $12+00 \mathrm{~W}$ $14+00511+50 \mathrm{~W}$ 14+00S $11+00 \mathrm{~W}$ $14+50 \mathrm{~S} \quad 13+00 \mathrm{~W}$ $\begin{array}{lll}5 & 2.60 .018 .32\end{array}$ $\begin{array}{llll}6 & 2.63 & .019 .33 \\ 5 & 2.94 & .016 .21\end{array}$

$\qquad$ $\begin{array}{llll}1.07 & 8.7 & .1 \\ 1.07 & 8.6 & \end{array}$ $\begin{array}{lll}.1<.05 & 10 & .8\end{array}$ | 6 | 2.94 | 016 | .21 | .1 | 02 | 13.1 | $.1<05$ | 9 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | $\begin{array}{llllllllll}5 & 2.56 & .030 & .10 & .1 & .04 & 9.7 & .2<.05 & 8 & 1.1 \\ 5 & 2.41 & .014 & .24 & .1 & .03 & 12.4 & .2<.05 & 8 & 8\end{array}$ $\begin{array}{lllllll}6 & 2.63 & .017 & .35 & .1 & .0511 .0\end{array}$ . $1<.05$ $14+50 \mathrm{~S} \quad 12+50 \mathrm{~W}$ $14+505 \quad 12+00 \mathrm{~W}$ $L 4+50 S$

$L 4+50 S$
$11+50 \mathrm{~W}$

$11+00 \mathrm{~W}$ L.5+00S $13+00 \mathrm{~W}$
$\begin{array}{llllllllll}4 & 3.01 & .014 & .42 & .1 & .01 & 12.6 & .2<.05 & 10 & .6\end{array}$
$\begin{array}{rrrrrrrrr}4 & 3.11 & .016 & .21 & .1 & 03 & 13.6 & .2<.05 & 9 \\ 2 & 4.18 & 007 & 27 & < & .6\end{array}$
$\begin{array}{rlrrrrr}24.18 & 007 & .27<.1 & 03 & 10.2 & .3<.05 & 116.8\end{array}$
$\begin{array}{lllllllrr}4 & 2.71 & .015 & .37 & <.1 & .02 & 13.4 & .2<.05 & 9\end{array} .5$
$\begin{array}{llllllllll}1.3 & 65.7 & 5.9 & 69 & .1 & 63.3 & 27.9 & 821 & 5.47 & 14.7\end{array}$ $\begin{array}{lllllllllll}1.2 & 68.4 & 6.0 & 71 & .1 & 65.1 & 27.6 & 823 & 5.45 & 15.0\end{array}$ $\begin{array}{lllllllllllllll}1.2 & 68.4 & 6.0 & 71 & .1 & 65.1 & 27.6 & 823 & 5.45 & 15.0 & .5 & 2.9 & 2.1 & 23\end{array}$ $\begin{array}{llllllllllllllll}1.1 & 188.8 & 8.3 & 75 & .2 & 94.7 & 31.7 & 827 & 5.46 & 21.5 & .9 & 5.1 & 1.6 & 26\end{array}$ $\begin{array}{llllllllllllll}1.2 & 594.9 & 13.9 & 112 & .2 & 116.2 & 29.2 & 678 & 5.10 & 12.7 & .7 & 10.1 & 1.2 & 47\end{array}$ $\begin{array}{llllllllllllllll}9 & 146.5 & 9.6 & 58 & 1 & 82.6 & 34.2 & 908 & 5.57 & 17.2 & 6 & 12.7 & 1.5 & 30\end{array}$
$\begin{array}{lllllllllllllll}1.1 & 102.6 & 8.2 & 101 & .2 & 75.3 & 32.5 & 1017 & 5.56 & 22.0 & .5 & 8.2 & 1.7 & 28\end{array}$
$\begin{array}{llllllllllllll}4.1 & 134.4 & 5.7 & 80 & .2 & 68.7 & 39.0 & 1041 & 5.64 & 16.2 & .6 & 4.0 & 1.5 & 30\end{array}$
$.8166 .7 \quad 8.5 \quad 70<.1111 .137 .410185 .8923 .5 \quad .622 .01 .6$
$\begin{array}{lllllllllllllllllllllll}.8 & 382.4 & 3.4 & 56 & .2 & 33.2 & 46.3 & 747 & 6.67 & 11.1 & .5 & 26.4 & 1.2 & 134\end{array}$
$\begin{array}{llllllllllllllllllll}1.0 & 146.8 & 8.1 & 83 & .2 & 106.8 & 36.6 & 1098 & 5.84 & 22.3 & .6 & 5.9 & 1.7 & 30\end{array}$
$\begin{array}{ll}.1 & .3 \\ .1 & .3 \\ .1 & . \\ .1 & \\ 1 & \end{array}$
$\begin{array}{lllllllllll}0 & 150.7 & 6.6 & 60 & 2 & 81 & 8 & 31.0 & 8625 & 42 & 19.9\end{array}$

| 8 | 181.4 | 8.9 | 69 | 1 | 124.7 | 37 | 2 | 1040 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | .0534 .8 $\begin{array}{llllllllll}9 & 164.3 & 6.1 & 78 & <.1 & 69.4 & 38.1 & 1219 & 5.78 & 25.4\end{array}$

$\begin{array}{llllllllll}.7 & 199.8 & 7.7 & 82 & 1 & 62.3 & 37.2 & 1194 & 5.42 & 20.4\end{array}$
$\begin{array}{lllllllllllllll} & 193.7 & 82 & 1 & 62.3 & 37.2 & 1194 & 5.42 & 20.4 & .7 & 12.2 & 1.8 & 77\end{array}$

$\begin{array}{lllllllllllllll}8 & 140.8 & 6.3 & 87 & 1 & 84.9 & 33.4 & 1086 & 5.78 & 20.3 & .6 & 6.5 & 1.7 & 40\end{array}$

| 6 | 134.3 | 6.2 | 72 | 1 | 84 | 30.8 | 877 | 5 | 44 | 20 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$\begin{array}{llllllllll} & 84.1 & 30.8 & 877 & 5.44 & 20.3 & 6 & 4.9 & 1.7 & 39\end{array}$ $\begin{array}{lllllllllllllll}8 & 122.3 & 7.7 & 113 & 2 & 86.6 & 32.3 & 974 & 5.67 & 17.3\end{array}$ $\begin{array}{llllrrrrrrr}7 & 180.1 & 6.9 & 76 & <.1 & 89.7 & 30.4 & 913 & 5.81 & 22.6\end{array}$
$\begin{array}{llll}4 & 10.1 & 1.5 & 34\end{array}$ $\begin{array}{lllllllllllllll}6 & 10 & 6 & 1 & 5 & 31 & 1 & 3 & .1 & 146 & 1.13 & .081 & 10 & 98 & 1.17 \\ 72 & 120\end{array}$

$\begin{array}{llllll}11 & 84 & 1.08 & 68 & .276 \\ 11 & 87 & 1.09 & 66 & .287\end{array}$ $\begin{array}{rrrrrrrrrr}1 & 133 & .73 & .067 & 11 & 87 & 1.09 & 66 & .287 \\ 1 & 149 & 88 & 055 & 10 & 125 & 1.44 & 65 & 151\end{array}$
$\begin{array}{lllllllll}.1 & 148 & .84 & .092 & 11 & 102 & 1.09 & 86 & .156\end{array}$
$\begin{array}{lllllrlll}1 & 158 & .90 & .058 & 9 & 96 & 1.31 & 78 & .176\end{array}$
$15+00512+50 \mathrm{~W}$ L5+00S $12+00 \mathrm{~W}$ L5+00S $11+50 \mathrm{~W}$ $15+00511+00 \mathrm{~W}$ $16+00512+50 \mathrm{~W}$

L6+00S $12+00 \mathrm{~W}$ L6+005 $11+50 \mathrm{~W}$ L6+00S $11+00 \mathrm{~W}$ L6+50S $12+50 \mathrm{~W}$ L6+50S $12+00 \mathrm{~W}$
$L 6+50 S \quad 11+50 \mathrm{w}$
$16+50 S \quad 11+00 \mathrm{~W}$ L6+50S $11+00 \mathrm{~W}$
STANDARD OS7
$7203112.284 \quad 2410.078 \quad 31025 \quad 546134 \quad 3 \quad 5.6$
$\begin{array}{llllllllllllllllllll}7 & 203.1 & 12.2 & 84 & .2 & 410.0 & 78.3 & 1025 & 5.46 & 13.4 & .3 & 5.6 & .7 & 25\end{array}$
STANDARD OS7


Sample type: SOIL SS80 60C. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

## APPENDIX 3

## SOIL DATA FORMS.

GEOCHEMICAL DATA
$\underset{\substack{\text { PROLET } \\ \text { OENENLLOCATION }}}{\text { HAT }}$



SURVEY TYPE: S=Solt; SS-Sim; R-Rlock Chlp
DEPTH: Monaured in metern.


ORGANICS: Msuel estrmate of orgaric content.
GRAVEL: Estmala of Gravil alzed freomentu.
CLAY-SLLT-SAND: Low to moderale to hidh esilmatea.
geOCHEMICAL DATA
$\qquad$



SURVEY TYPE: S^Soll; SS=Sit; R -Rock CHIP
DEPTH: Measured in meters.
HORIZON: Marked AB, or C
COLOUR: Br. Brown. Gi. Black. R. Red. G. Gray. O. Oman. Dk. Dark. Lh. Light. Y/e/e/e/ oed
MATERIAL: T THI; Co. Collyrium. A. Aluritm. F. Fluvial. GF. Giactonumial. O. Organic.
ORGANICS: Visual estimate of orperic content.
GRAVEL: Estimate of Gravel sized fragments.
CLAY-SILT-SAND: Low to moderato to high intimates.

GEOCHEMICAL DATA
$\qquad$



SURVEY TYPE: S=Sol; SS=S欮:R-Rock CW/
DEPTH: Massacred ha meters.
COLOUR: Br. Brown. bu. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lu Light. ye/. Ye/ous

ORGANICS: Visual esismata of organic content.
GRAVEL: Estimate of Gravel sled treamentu.
CLAY-SILT-SAND: Low to moderate to ing h estimates.

GEOCHEMICAL DATA


SURVEY TYPE: S=Soll; SSuSt; R=Rock CNp
DEPTH: Moasured in moters.

MATERAML: T THi; Co. Colluvium. A Aluvim. F. Fiuvil. GF. Giactolivial. O. Orpanic.
ORGANICS: Visuei estimate of orgenic contenl.
GRAVEL: Estimate of Graved ized tramerts.
CLAY-SILT-SAND: LOw to moderato to thlgh estimales.

GEOCHEMICAL DATA




SURVEY TYPE: S=Soll; SS=8w; ReRock Chip DEPTH: Mensursd in meters.
COLOUR: Br. Brownt, Bi. Blect. R. Red. G. Grey. O. Ormge. Dk. Dark Li thph Yef. Ye//ow

ORGANICS: Vieual etimele of orpentc content
GRAVEL: Eatimete of Gravel dred frapenenls.
CLAY-SILT-SAAD: Low to moderate to hidh azlimales.

GEOCHEMICAL DATA



SURVEY TYPE: S=Soll; SSeSim; Refock Chip
OEPTH: Meapured In musters.
HORIZON: Maked AB, or C
COLOUR: Br. Brown. Bi. Black. R. Rad. G. Croy. O. Ormag. Dh. Derk. th. Lphth Yef. Yeffome .

ORGANICS: Vitual estimete of onpentc comimot.
CLAY-SILT-SAND: Low to moderale to high edimavet.

* Aeresutaper affusfedto total $100 \%$.

GEOCHEMICAL DATA




SURVEY TYPE: Sa Soil; SS=Silt; R=Rock Chip DEPTH: Measured in meters.
HORIZON:
HORIZON: Marked A, B. or C
COLOUR: Br. Brown. Bi. B tack. R. Red. G. Grog. O. Orange. Dr. Dark. Lt Light. Ye/. Ye/feen
MATERLAL: T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glacioduvial. O. Organic
ORGANICS: Visual estimate of organic content.
GRAVEL: Estimate of Gravel sized fragments:
CLAY-SILT-SAND: Low to moderate to high estimates:


SURVEY TYPE: S=Solt: SSESHt: RuRock Chip
DEPTH: Maasured in metert.
HORIZON: Marked AB, or C
COLOUR: Br. Brown. Bi. Bleck. R. Red. G. Groy. O. Ormone. Dk. Dark. Le Lipht Ye/. Y/e/oed
MATERIAL: T TII: Co. Cottundurn. A Alurdem.
ORGANICS: Visued estimate of organk cortent.
GRAVEL: Extimate of Gravel slied tragmenta.
CLAY-SILT-SAND: LOw to modiertio to high extimaten.

GEOCHEMICAL DATA



DEPTH: Maaurned in metern.
HOfIZON: Manked A, B, or C
COLOUR: Br. Brown. Bi. Black. R. Red. G. Gry. O. Ormag. Dk. Dark. Li. Lhph. Y/. Ye//ow -

ORGANICS: Visual asilinata of organte conient.
CLAY-SILT-SAND: Low to moderate to high extmetes.

* Not Recorled on Firlal Notes


## APPENDIX 4 EXPLORATION EXPENDITURES.

## Hat Claims, Geochemical Survey, July 10 to July 20, 2006

Wages, 2 @ \$300.00/day x 10days ..... \$6,000.00
Analyses: 91 soil samples: Acme laboratory. ..... \$1,615.71
Fixed-Wing Aircraft. Dease Lake-Hatchau Lake Return. ..... \$1,708.72
Camp Costs. 2@ \$60.00/day x 10 ..... \$1,200.00
Vehicle Rental. ..... \$ 508.95
Gasoline ..... \$ 273.70
Radiotelephone: ..... \$ 100.00
Report: ..... \$ 800.00
Total: ..... \$12,207.08
T.E. Lisle, P.Eng.
E. 0 Ostensoe, P. Geo.


[^0]:    ** The Golden Bear Mine Road is now locked and special permission has to be obtained from Telegraph Creek for access. It has been suggested that this road may be decommissioned in the future.

[^1]:    STANDARD DS7

