BC Geological Survey
Assessment Report
30395

NTS 82E/1, 2, 7

ASSESSMENT REPORT FOR GRIZZLY DIAMONDS LTD.'S GREENWOOD PROPERTY

MINERAL CLAIMS

402538-39, 402544, 402546-48, 412317-19, 501332, 501414, 501592, 501648, 502855, 502886, 502895, 502910, 508083-84, 508086, 508145, 508297, 512209, 512318, 513113-14, 513161, 513163-66, 513274-77, 513279, 513767-71, 513775, 516272-73, 516276, 516822, 517002, 517015, 517067, 517077, 517087, 517097, 517117, 517126, 517145, 517161, 517243, 517317, 517943, 522164-65, 522813-16, 523493-97, 523547, 523565, 523672, 523678-79, 524951, 524953, 524988, 526433-35, 529010, 532841, 534268-70, 534397, 534566, 536601-03, 541073, 5420782, 5420784, 546276-78, 546318-19, 546748-49, 546752, 546755, 546764, 546779-81, 546863, 547279-83, 547285, 547991, 547995, 550151, 551512, 552139, 555495, 555515, 555520-21, 555529-30, 555566, 562583, 571133, 571203, 571533, 571544, 571546-47, 575271, 58632-43

Approximate Location:
Latitute: 49° 7' 34" N
Longitude: 118° 44' 2" W
Surrounding Greenwood, BC (NTS 82E/1, 2, 7)
Greenwood Mining Division

Completed By:
APEX Geoscience Ltd.
#200, 9797- 45th Avenue
Edmonton, Alberta T6E 5V8

Completed On Behalf Of:
Grizzly Diamonds Ltd.
#220, 9797- 45th Avenue
Edmonton, Alberta T6E 5V8

October 14 2008
Revised June 10, 2009
Edmonton, Alberta Canada

Michael Dufresne, M.Sc., P.Geol.
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ASSESSMENT REPORT FOR
GRIZZLY DIAMONDS LTD.'S GREENWOOD PROPERTY

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SUMMARY

The Greenwood Property (the Property) is located in south-central British Columbia and is directly north of the Canada – USA border. The property surrounds the municipality of Greenwood to the south and west and the southern portion of the property is located between the municipalities of Grand Forks and Midway. The Property was acquired by Grizzly Diamonds Ltd. (Grizzly) in 2008 under an option agreement with Mineworks Ventures Inc. (Mineworks). The Greenwood Property is comprised of the Copper Mountain, Copper Mountain North, Overlander, Sappho, Attwood, Motherlode and Rock Creek mineral claim blocks. The property encompasses 150 mineral claims covering an area of approximately 43,288.50 hectares.

The Greenwood Property is an exploration stage property with a favourable structural, regional geological and stratigraphic setting that is situated within the Boundary District. This district is a highly mineralized area that has produced in excess of 7.5 million ounces of gold. Several mineralized areas are known on the property. Many of the known showings are structurally controlled gold, silver plus or minus copper, lead and zinc bearing quartz veins that are related to major fault zones and, in some cases, may be related to volcanogenic massive sulphide or skarn-type deposit settings.

The Eocene rocks, which exist within the Toroda graben on the Copper Mountain, Copper Mountain North and Rock Creek claim blocks, are under-explored. Similar type rocks host important gold mineralization in the Republic area, where about 2.5 million ounces of gold, at an average grade of more than 17 grams per tonne gold has been produced from epithermal veins within the Republic graben, parallel to and east of the Toroda graben. Epithermal gold mineralization is also known within the Eocene rocks in the Toroda graben in Washington State, and recently, it has been postulated that gold within the Buckhorn Mountain deposit is Eocene in age, and part of structural and metallogenic event related to the western margin of the Toroda graben. Several examples of mineralization along Eocene structures are known on the Copper Mountain property, and mention is made of alteration and mineralization within the Eocene rocks in several places. Little work has been done to follow-up on these occurrences.

The Attwood claim block is located adjacent to the southeast of the Overlander claim block. The geology in the area is dominated by Triassic sediments unconformably overlying Paleozoic rocks, where the distribution of younger rocks is largely controlled by a series of Jurassic thrust faults and Tertiary extensional and detachment faults. A strong spatial association has been noted in the Boundary District between Jurassic thrust faults and gold (Au) mineralization, where the mineralization is often hosted in the Triassic rocks in close proximity to the Jurassic fault zones.

The Overlander claim block is located 4 km east of the Copper Mountain claim block and adjacent to the northeast to the Sappho claim block. The oldest rocks, the Knob Hill Group, are found on the eastern edge of the claims. The geology is dominated by Attwood Group rocks were are sandwiched between the Mt. Attwood thrust fault to the south and the Lind Creek thrust fault to the north. Both thrust faults are defined by

exposures of serpentine but the Lind Creek Fault in particular has extensive serpentine development in the vicinity of the claim block, and can be the host to mineralisation. Additionally Triassic Brooklyn Formation Rocks occur in the south central and eastern parts of the claim block. Known mineralized zones on the claim block include the Overlander workings, the Keno vein, Evening Star Skarn, Montana, Wellington and Ophir (in the central portion of the property), and the previously operational Athelstan and Jackpot mines. The Athelstan and Jackpot deposits are auriferous massive sulphide lenses that occur along shear zones within listwanite often on or near intrusive contact with Lexington porphyry or with Nelson diorite.

The Motherlode claim block adjoins the Copper Mountain claims to the east, and covers the Motherlode and Sunset copper-gold skarn deposits from which a total of 4.2 million tonnes at a grade of 0.8 percent (%) copper (Cu) and 1.3 g/t Au was produced during the period 1896-1918 and 1956-1962. The Sunset and Motherlode deposits are hosted within the Triassic Brooklyn Formation, in the hanging wall of a low angle, north dipping, detachment type fault. Both zones of mineralization are truncated at depth by the fault. Motherlode type mineralization is a valid, and likely important target for future exploration on Grizzly's Greenwood Property.

On the Sappho mineral claims, adjoining the Copper Mountain claim block to the southeast, massive to semi-massive chalcopyrite-magnetite-pyrite, with associated gold and platinum group elements, occurs in Jurassic syenite and pyroxenite. Limited trenching has shown the mineralization to be poddy and discontinuous (Caron, 2002a). The property has a favorable stratigraphic and structural setting that is dominated by Triassic sediments unconformably overlying Paleozoic rocks, where the distribution of the younger rocks is largely controlled by a series of Jurassic thrust faults and Tertiary extensional and detachment faults. A strong spatial association has been noted in the Boundary District between Jurassic thrust faults and gold (Au) mineralization, where the mineralization is often hosted in the Triassic rocks in close proximity to the Jurassic fault zones. The diverse geology of the area provides an ideal environment for a variety of deposit types. Exploration has been conducted sporadically from the late 1960's through to 2004, with only the most recent work focused towards epithermal Au mineralization while most historical work was directed towards copper + Au skarn type mineralization.

The Greenwood property has an excellent structural and stratigraphic setting for a variety of mineral deposit types, including copper-gold skarn mineralization, auriferous VMS sulphide/oxide mineralization and epithermal or structurally controlled Eocene-aged gold mineralization. Recent work in the Boundary District has resulted in new metallogenic models that are being successfully applied elsewhere in the district. A reevaluation of the Greenwood property, in light of these new models, is strongly recommended.

A helicopter-borne time domain electromagnetic (EM) and magnetic survey was flown over a large portion of the property during 2008. The magnetics are useful in defining the major fault zones on the property. Areas of Eocene volcanics and intrusives were also well defined by the magnetics, due to their high magnetic response. The survey identified several conductors and discreet EM anomalies that require ground follow-up to assess their significance. Several of these conductors are situated along geological contacts or known structures, and are a high priority for follow-up exploration. Prospecting, geological mapping and rock sampling is recommended in the vicinity of each of the conductors, to prioritize them for follow-up excavator trenching and drill testing.

The 2008 heavy mineral concentrate (HMC) sampling has yielded a number of high gold grain counts in streams around the Copper Camp area, and in particular, in the vicinity of a couple of conductors with a number of discreet high quality EM anomalies. A second major area of interest based upon the stream sediment sampling is the Overlander area just south of Merit Mining Ltd.'s Golden Crown property and minesite. This area has yielded a number of high gold grain counts in streams north and south of the easterly trending Overlander target area. There are also a number of spatially associated discreet EM Anomalies along or coincident with the Overlander trend. These anomalies require follow-up exploration.

In addition to the targets identified by the geophysical survey, there are a number of areas resulting from previous work programs on the property that require further exploration. Anomalous gold in stream sediments in Ingram Creek and in a tributary to Wallace Creek should be followed-up. Alteration and mineralization within the Eocene rocks is known on Deadwood and Ingram Ridges and in the vicinity of the Poppy showing. These areas should be thoroughly prospected for epithermal gold mineralization related to the western margin of the Toroda graben. An occurrence of silicification in limestone near the Pen showing should also be located and re-assessed.

Based upon the positive preliminary results of the 2008 helicopter-borne magnetic and time domain EM survey over Grizzly's Greenwood Property, along with the positive results of HMC stream sediment sampling and rock sampling, it is strongly recommended that an aggressive two stage office and field program be implemented. The Stage 1 work should consist of compiling and interpreting the final results of the airborne geophysical survey including a full blown geological and structural interpretation with a view towards identifying potential structural and sulphide targets for precious and base metals. Once this is completed, a Stage 2 fieldwork program should be conducted that consists of an aggressive prospecting, geological mapping, follow-up rock and HMC sampling program leading to some pointed excavator trenching of the high priority targets. The estimated cost to complete the recommended Stage 1 and 2 programs during 2008 and 2009 is $250,000.

INTRODUCTION

The Grizzly Diamonds Ltd.'s ("Grizzly") Greenwood property (the "Property") is located within the Greenwood Mining District in south-central British Columbia (BC). The property is centered on Greenwood with the southern part of the property located between Grand Forks and Midway, BC. The Property is comprised of the contiguous mineral claim blocks Copper Mountain, Copper Mountain North, Overlander, Sappho, Attwood, Motherlode and Rock Creek. The Property encompasses 150 mineral claims with a total land holding for the project of 43,288.50 hectares (106,970.22 acres).

APEX Geoscience Ltd. (APEX) was retained during 2008 as consultants by Grizzly, to conduct an exploration program consisting of an airborne magnetic and electromagnetic geophysical survey and a reconnaissance stream and rock sampling program over the Greenwood property. Field operations were conducted on the Greenwood property from May 12 to 25, 2008, with the airborne survey conducted from June 16 to 27, 2008. The purpose of the reconnaissance fieldwork and airborne survey was to identify the potential of the property to host gold-silver and base metal mineralization. A total of 127 heavy mineral concentrate (HMC) samples and 38 rock grab samples were collected during May. A total of 2,447.1 line-km was flown using a helicopter magnetic and time domain electromagnetic (EM) airborne system known as AeroTEM III. This assessment report documents the results of the 2008 exploration program performed by APEX on behalf of Grizzly on the Greenwood property. During the 2008 field season, Grizzly spent a total of approximately $413,978.05 on exploration on the Greenwood Property.

DISCLAIMER

The author, in writing this report, uses sources of information as listed in the references. The report written by Mr. M. Dufresne, P.Geol., a Qualified Person, is a compilation of proprietary and publicly available information as well as information obtained during several property visits. Government reports were prepared by qualified persons holding post secondary geology, or related university degree(s), and are therefore deemed to be accurate. For those reports, which were written by others, whom are not qualified persons, the information in those reports is assumed to be reasonably accurate, based on the data review and property visit conducted by the author, however, they are not the basis for this report.

PROPERTY DESCRIPTION AND LOCATION

The Greenwood Property is located in south-central British Columbia. The southern part of the property is located between Grand Forks and Midway, BC, as shown in Figure 1. The Property covers an area of approximately 43,288.50 hectares (ha) and is centered at latitude 49° 7' 34" N and longitude 118° 44' 2" W. It is comprised of 150 contiguous claims, located on NTS map sheets 082E/01, 082E/02 and 082E/07 in the Greenwood

GRIZZLY DIAMONDS LTD.

Greenwood Property

PROPERTY LOCATION

0 100 200 300 Km

1:8,000,000

British Columbia, Canada
APEX Geoscience Ltd.

Edmonton, Alberta October, 2008

Legend

- Greenwood Property
- Cities
- Highways

Provincial / National Boundaries

- British Columbia
- Canada
- United States

FIGURE 1

Mining District. The claims are shown on Figure 2. Claim data is summarized below in Table 1 with a detailed claim listing presented in Appendix 1.

Table 1: Greenwood Property Claim Block Summary.

Claim Block Name	Number of Claims	Area (Ha)	Owner
Attwood	6	1,651.50	Rippon, D.
Copper Mountain	54	24,993.27	Rippon, D.
Copper Mountain North	16	6 437.23	Rippon, D.
Motherlode	10	1,078.27	Rippon, D.
Overlander	36	2 646.08	Rippon, D.
Rock Creek	10	5 049.23	Rippon, D.
Sappho	18	1 432.50	Rippon, D.
TOTALS	150	43,288.50	

Ownership of all of the above claims is listed in the name Mr. Donald Rippon, on behalf of Mineworks Venture Inc. (Mineworks), a company owned 50% by Mr. Karl Schindler and 50% by Mr. Donald Rippon. The property is under option to Grizzly Diamonds Ltd., a company registered in Alberta with its registered office at Suite 220, 9797 45th Avenue, Edmonton, AB T6E 5V8 by an option agreement with Mineworks, dated March 1, 2008 and subsequently amended April 9, 2008. Under the terms of the agreement, Grizzly Diamonds Ltd. can acquire a 100% undivided interest in the property, subject to a 1.5% NSR payable to vendor, in consideration for staged cash payments totaling CDN$235,000 over 5 years and by incurring exploration expenses totaling US$2,100,000 over the same 5 year period. The agreement also requires staged share payments to the vendor totaling 325,000 shares over the 5 year period.

Within the boundaries of the Copper Mountain Property, there are several claims and crown grants which are held by other owners and are not part of the Copper Mountain property (Caron, 2006a). These include 9 crown granted mineral claims in the Copper Camp area, in the north-central part of the property that remain in good standing. Although MTO cell claim #501332 covers these crown grants, it does not entitle Grizzly to the rights to minerals on the crown grants (Caron, 2006a). Several small placer claims (held by others) are in good standing along Boundary Creek, near the junction with Norwegian Creek (Caron, 2006b). Title on these placer claims is for surficial material only. Underlying mineral rights are covered by the MTO cell claims that encompass the placer claims and are part of the Copper Mountain property.

ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the property and local infrastructure are both excellent. Highway 3 crosses the southern part of the property, and the community of Midway is located along the

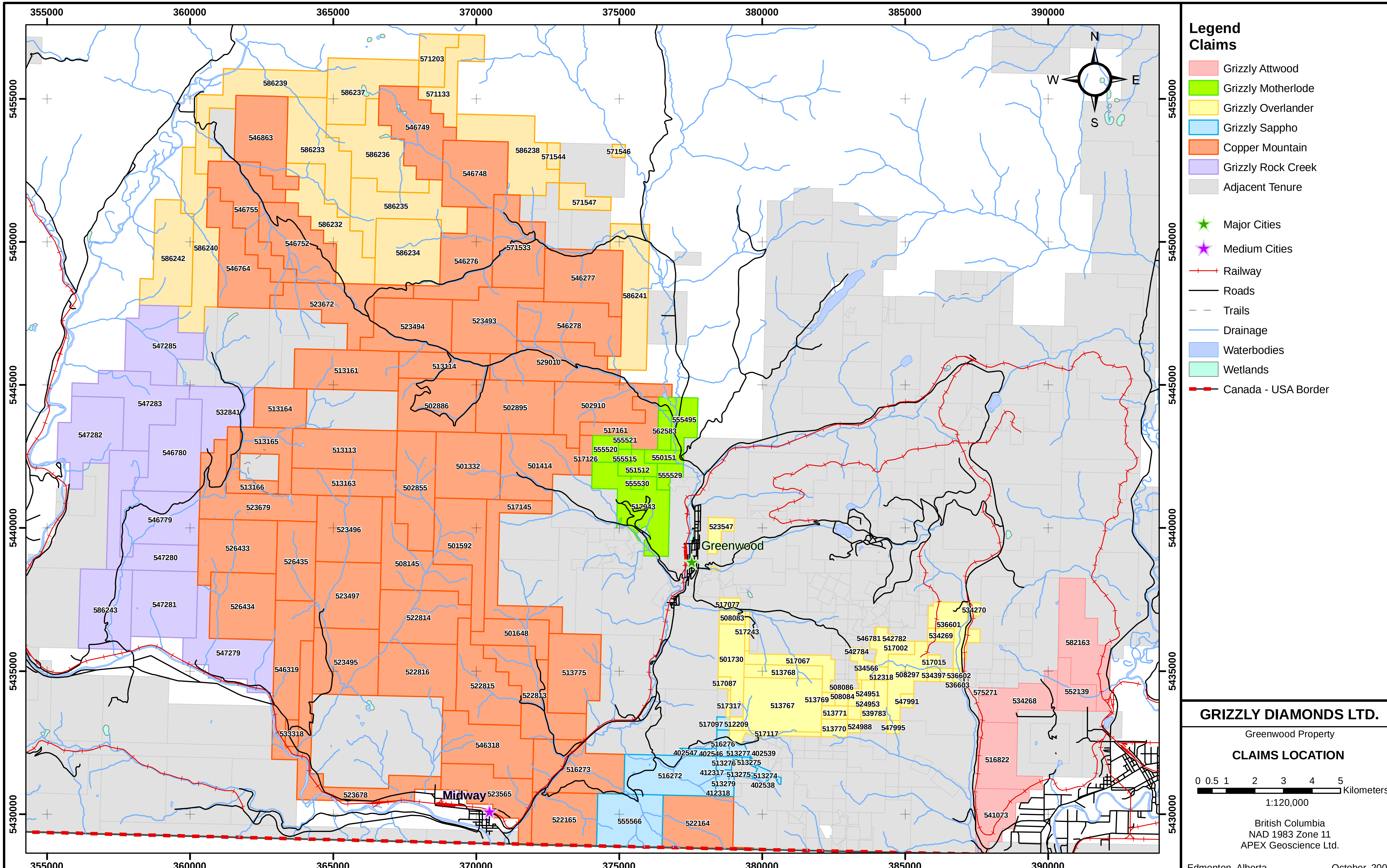

Legend
Claims
Grizzly Attwood
Grizzly Motherlode
Grizzly Overlander
Grizzly Sappho
Copper Mountain
Grizzly Rock Creek
Adjacent Tenure
Major Cities
Medium Cities
Railway
Roads
Trails
Drainage
Waterbodies
Wetlands
Canada - USA Border
N
S
E
W
Greenwood
Midway
GRIZZLY DIAMONDS LTD.
Greenwood Property
CLAIMS LOCATION
0 0.5 1 2 3 4 5
Kilometers
1:120,000
British Columbia
NAD 1983 Zone 11
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008

FIGURE 2

southern property boundary. There is excellent road access to the claims. The northern part of the property is accessed by major logging roads that follow Wallace and Windfall Creeks, and by numerous subsidiary roads that branch off from these roads. The Copper Camp area is reached by following the Motherlode logging road west from Greenwood, for approximately 10 kilometers. This road continues southwest, and connects up with a network of logging/ranching roads in the Ingram Creek area that provide road access to the central part of the property. The Ingram road network can also be accessed from Highway 3, just east of the Ingram Bridge in Kettle Valley. Additional roads in the Kerr Creek, Bubar Creek and Nicholson Creek areas provide further access to the property.

Limited services, including room, board and fuel, are available in the nearby communities of Greenwood or Midway. Grand Forks, 40 kilometers east along Highway 3 from Greenwood and located adjacent to the south east corner of the Attwood claim block, has a population of about 8,000 in the city and immediate surrounding area and is a more major supply centre. Most services needed for exploration are available in Grand Forks. The closest full-service airports are located in Kelowna, Penticton or Castlegar. Power is available at numerous locations in the southern portion of the property.

The property is large and topography, vegetation and rock exposure are variable across the property. In general, the topography of the claims can be described as gentle to moderate. Numerous major creeks that flow south or west into the Kettle River or into Boundary Creek, are present. Typically these creeks are moderately incised, and slopes may be quite steep in the creek valleys. Away from these valleys, slopes are gentler.

Elevation ranges from about 580 meters in the Kettle River valley at Midway, along the southern property boundary, to about 1640 meters at the height of land on Mount Attwood. In places there is good rock exposure while in other areas a thick layer of surficial material obscures the bedrock.

In the southern part of the property, slopes are open, south-facing, grassy areas that are devoid of tree cover. At higher elevations, vegetation consists of open, mixed (fir, pine, larch) second growth forest with minimal undergrowth.

The climate is moderately dry, with hot summers and little rainfall. Snowfall is typically in the order of 2 meters at higher elevations, but less than 0.5 meters on the south facing slopes in the southern part of the property. This southern area is generally free of snow from mid March to early December, while the higher elevations and northern part of the property typically have snow cover from late November through early May. Water for drilling is available from numerous creeks on the property.

EXPLORATION HISTORY

REGIONAL EXPLORATION HISTORY

The Boundary District has a long history of exploration and mining activity. Excellent historical accounts for portions of the district are provided by Peatfield (1978), Church (1986), Fyles (1984, 1990), Parker and Calkins (1964) and Muessig (1967). The reader is referred to these sources for a more thorough discussion on the ownership and exploration history for the area. The following discussion pertains primarily to the regional exploration history in the Greenwood Camp, in the more immediate vicinity of the Property. Much of the following regional history is taken from reports prepared by Caron (2004b, c; 2006a-d).

In the Greenwood Camp exploration dates back to the early 1880's. This first phase of exploration and development focused on high grade gold and silver veins, such as the Skylark, Providence, City of Paris, and Jewel (Dentonia) Mines. Significant producers were the Jewel, with about 124,000 tonnes averaging 9.9 grams per tonne (g/t) gold (Au) produced, the Athelstan (33,000 tonnes @ 5.4 g/t Au), the Winnipeg (56,000 tonnes @ 7.2 g/t Au), and the Providence (10,500 tonnes @ 17.5 g/t Au, 4060 g/t silver [Ag]) (Church, 1986). The Athelstan mine is located in the northeast part of the Overlander claim block.

In 1890, high-grade copper (Cu) skarn mineralization was discovered at Phoenix, about 3 kilometers north of the Property (Figure 3). The Granby Company was formed to work in the Phoenix area in 1896, and in 1900 the Granby Smelter in Grand Forks was completed to process ore from the Phoenix mine. Mining continued until 1919, when the Granby mine and smelter closed due to low copper prices, lower ore grades and a shortage of coking coal for the smelter furnaces. The discovery and development of copper skarn mineralization in the Deadwood Camp (Motherlode mine) in the southern part of the Motherlode claim block, was happening concurrently to the work at Phoenix, with ore processed in the British Columbia Copper Company smelter at Anaconda.

In 1956, Woodgreen Copper Mines renewed mining at the Motherlode mine (Figure 3). A 900 tonne per day mill was constructed to process ore mined via open pit methods, although production had dropped to 450 tonnes per day by 1959. Mining continued until 1962, at which point the mill was dismantled and removed. The total production from the Motherlode mine to 1962, including the early direct smelting ore, is 4.2 million tonnes at a grade of 0.8% Cu and 1.3 g/t Au (Church, 1986).

Similarly, in 1956 the Granby Company re-evaluated the Phoenix property and open pit production at Phoenix began in 1960 at a rate of 900 tons per day, was increased to 2000 tons per day in 1961 and further increased to 3000 tons per day in 1972. Granby terminated mining operations at Phoenix in 1976, and later dismantled and moved the Phoenix mill. Total production at Phoenix during the period 1900 - 1976 is reported at 27 million tonnes at a grade of 0.9% Cu and 1.12 g/t Au, from a number of different ore

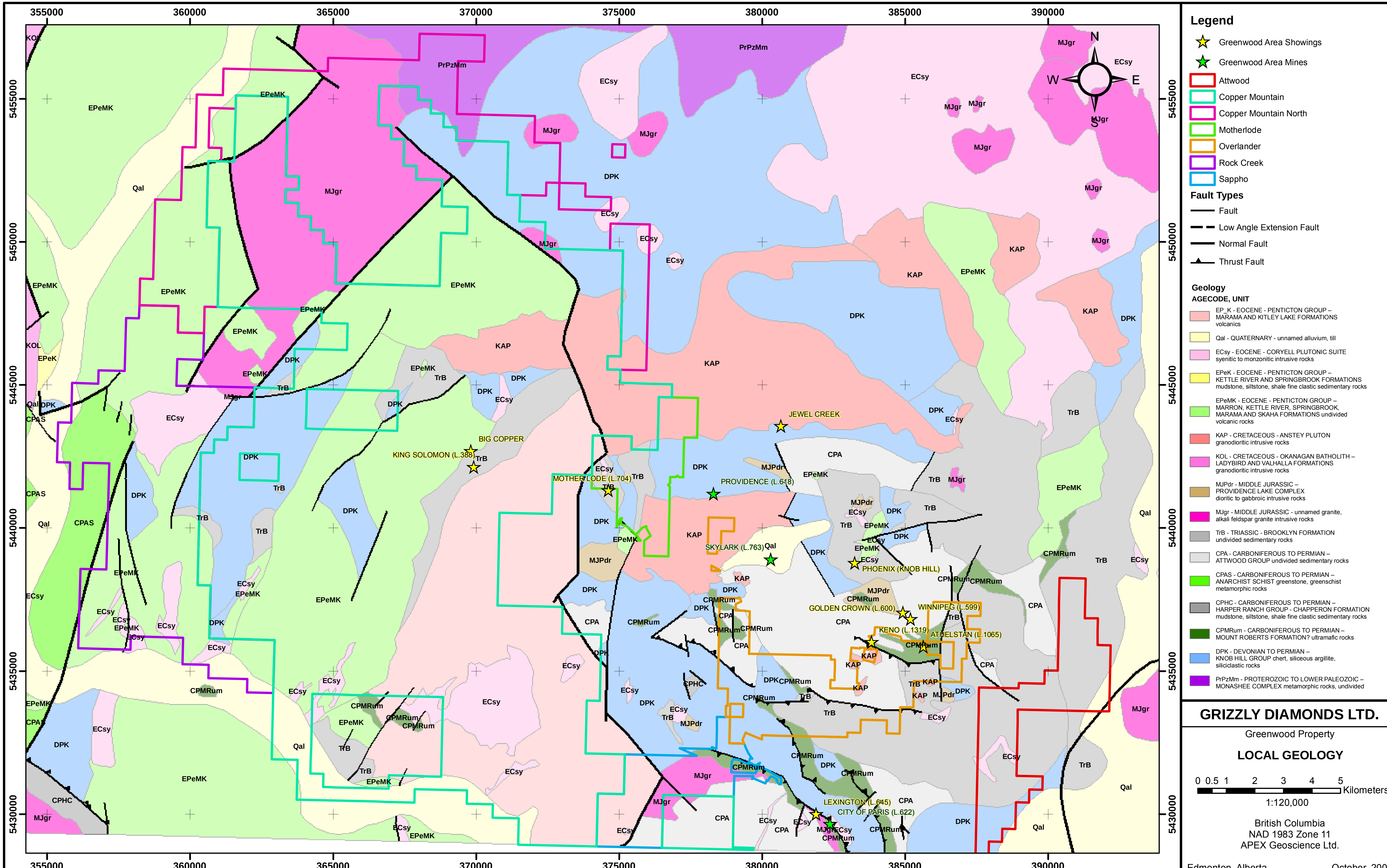

Legend
Greenwood Area Showings
Greenwood Area Mines
Attwood
Copper Mountain
Copper Mountain North
Motherlode
Overlander
Rock Creek
Sappho
Fault Types
Fault
Low Angle Extension Fault
Normal Fault
Thrust Fault
Geology
AGECODE, UNIT
EP_K - EOCENE - PENTICTON GROUP – MARAMA AND KITLEY LAKE FORMATIONS volcanics
Qal - QUATERNARY - unnamed alluvium, till
ECsy - EOCENE - CORYELL PLUTONIC SUITE syenitic to monzonitic intrusive rocks
EPeK - EOCENE - PENTICTON GROUP – KETTLE RIVER AND SPRINGBROOK FORMATIONS mudstone, siltstone, shale fine clastic sedimentary rocks
EPeMK - EOCENE - PENTICTON GROUP – MARRON, KETTLE RIVER, SPRINGBROOK, MARAMA AND SKAHA FORMATIONS undivided volcanic rocks
KAP - CRETACEOUS - ANSTEY PLUTON granodioritic intrusive rocks
KOL - CRETACEOUS - OKANAGAN BATHOLITH – LADYBIRD AND VALHALLA FORMATIONS granodioritic intrusive rocks
MJPdr - MIDDLE JURASSIC – PROVIDENCE LAKE COMPLEX dioritic to gabbroic intrusive rocks
MJgr - MIDDLE JURASSIC - unnamed granite, alkali feldspar granite intrusive rocks
TrB - TRIASSIC - BROOKLYN FORMATION undivided sedimentary rocks
CPA - CARBONIFEROUS TO PERMIAN – ATTWOOD GROUP undivided sedimentary rocks
CPAS - CARBONIFEROUS TO PERMIAN – ANARCHIST SCHIST greenstone, greenschist metamorphic rocks
CPHC - CARBONIFEROUS TO PERMIAN – HARPER RANCH GROUP - CHAPPERON FORMATION mudstone, siltstone, shale fine clastic sedimentary rocks
CPMRum - CARBONIFEROUS TO PERMIAN – MOUNT ROBERTS FORMATION? ultramafic rocks
DPK - DEVONIAN TO PERMIAN – KNOB HILL GROUP chert, siliceous argillite, siliciclastic rocks
PrPzMm - PROTEROZOIC TO LOWER PALEOZOIC – MONASHEE COMPLEX metamorphic rocks, undivided
GRIZZLY DIAMONDS LTD.
Greenwood Property
LOCAL GEOLOGY
0 0.5 1 2 3 4 5 Kilometers
1:120,000
British Columbia
NAD 1983 Zone 11
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008
JEWEL CREEK
BIG COPPER
KING SOLOMON (L.388)
MOTHER LODE (L.704)
PROVIDENCE (L.618)
SKYLARK (L.763)
PHOENIX (KNOB HILL)
GOLDEN CROWN (L.600)
WINNIPEG (L.599)
KENO (L.1319)
ATHELSTAN (L.1065)
LEXINGTON (L.645)
CITY OF PARIS (L.622)
355000
360000
365000
370000
375000
380000
385000
390000
5455000
5450000
5445000
5440000
5435000
5430000

FIGURE 3

bodies (Church, 1986). This amounts to over 1 million ounces of gold production from the deposit.

Exploration in the camp was rekindled in the early 1980's with the discovery of the Sylvester K gold- bearing massive sulphide zone north of the Phoenix. The Sylvester K is contained within a very characteristic, repeatable sequence of Brooklyn sediments and volcanics (the upper portion of the regionally mapped sharpstone unit), sitting just below massive Brooklyn limestone. Complex faulting offsets mineralization and has hampered exploration.

Skylark Resources was active in the area during the mid-late 1980's, on their wholly owned Skylark property and on the adjoining OB property, which they held in a joint venture with Viscount Resources. Skylark discovered and explored the H and Serp Zones, straddling the boundary between the Skylark and OB properties. A 458 meter decline was completed on the H Zone, with drifting onto the Serp Zone. Production from the H Zone started in December 1987, at a rate of 90 tonnes per day. Ore was processed in the Bow Mines (Robert's) mill (situated on the Boundary Falls, adjoining the south-eastern part of the Copper Mountain property) and in the Dankoe Mill near Keremeos. Mining continued through to early 1989, with total production of 33,300 tonnes grading 353 g/t Ag and 2.7 g/t Au. Significant exploration work was also done on the Golden Crown and Lexington properties during the mid-late 1980's.

Numerous gold deposits were discovered in Washington State, south of the Greenwood area, in the late 1980's and early 1990's, which have implications for exploration in the Greenwood area. One such deposit is the yet undeveloped Buckhorn Mountain (Crown Jewel) gold skarn deposit near Chesaw (Hickey, 1992). The deposit is hosted in probable Triassic rocks in a similar geological setting to the major skarn deposits (Phoenix, Motherlode, Oro Denoro) in the Greenwood area, although recent exploration suggests that at least some of the gold may be related to a metallogenic event which post-dates the skarn. Exploration in the late 1980's and early 1990's led to the delineation of an open pittable gold resource; however permitting issues prevented the development of the project. During the winter of 2002-03, Crown Resources carried out a 41 hole infill diamond drill program on the Southwest Zone to define a resource for underground development. Late in 2003, Kinross announced an agreement with Crown Resources whereby Kinross would acquire Crown Resources and the Buckhorn Mountain deposit, with the intention of mining the deposit by underground methods and trucking the ore to the existing Kettle River mill for processing. Kinross recently announced a 43-101 compliant reserve estimate (proven & probable) of 2.8 million tonnes grading 11 g/t Au for the Buckhorn Mountain deposit (Kinross Gold Corporation, 2005).

Crown Resources and Echo Bay Mines Ltd. (Echo Bay) discovered a new style of gold mineralization in the Belcher District, just south of the Canada-USA border, during the late 1980's and early 1990's. Four deposits of this new style were discovered and subsequently mined. The Lamefoot deposit was the largest of these discoveries, and produced 2 million tonnes of ore, at an average grade of 7 g/t Au. Total gold production from the four deposits, all of which were milled at the Kettle River Operations mill, was 1 million ounces. Gold-bearing, magnetite-pyrrhotite-pyrite syngenetic volcanogenic mineralization is hosted within Triassic Brooklyn Formation, with at least part of the gold mineralization attributed to a later stage epigenetic event. Similar host rocks occur in the Greenwood area and in 1997, Echo Bay entered into a joint venture agreement to explore certain claims in the Greenwood camp for this style of mineralization, with little success (Rasmussen, 1993, 2000).

The Kettle epithermal gold-silver vein deposit immediately west of Curlew (discovered by Crown Resources in 1985) was also developed and mined by Echo Bay during the late 1980's, with the ore processed at the Kettle River Operations mill. In 1990, Echo Bay discovered the K2 epithermal deposit 5 kilometers west of Curlew, in follow-up to a gold stream sediment anomaly. Production began in January 1997 and the deposit was mined at a rate of 800 tons per day until mid-2002, with ore trucked to the Kettle River Operations mill and blended with the Lamefoot ore for milling. By late in 2002, with both the Lamefoot and K2 deposits mined out, the mill was placed on a care-and-maintenance basis as exploration in the district continued (Gelber, 2000).

In 2002, Gold City Industries Ltd. (Gold City) acquired the Golden Crown, Lexington and JD properties, three of the more advanced properties in the Greenwood area, located to the north and overlapping the Overlander claims block of the Greenwood Property (together "The Greenwood Gold Project"). During 2003, 47 diamond drill holes were drilled on the Golden Crown property, 4 holes were drilled on the Lexington property and a trenching program was carried out on the JD property. In 2004, an agreement was reached with Merit Mining Corp. (Merit) whereby Merit would acquire the Greenwood Gold project from Gold City. An additional 59 diamond drill holes were drilled on the Lexington project during 2004 and 2005 to test the Grenoble Zone, and an updated 43-101 compliant Indicated Resource of 329,000 tonnes grading 8.3 g/t Au and 1.3% Cu or 11.3 g/t Au equivalent, at a cut-off of 6 g/t Au equivalent was recently announced for the Grenoble Zone (Merit Mining Corp., 2005a). A centralized 200 tonne per day (tpd) gravity/flotation mill and tailings facility No. 1 was completed in the first quarter of 2008 on the Golden Crown Property, commissioning of the mill commenced in March 2008. Processing of the 10,000 tonne bulk sample from the Lexington-Grenoble Mine was completed in the second quarter of 2008. On May 8, 2008 the Company received its Mine and Mill Operating Permits for the Lexington-Grenoble Mine and the Greenwood Mill to operate at a production rate of 72 000 tonnes per annum. The mining and processing of a 10,000 tonne underground bulk sample from the Lexington-Grenoble Mine was completed and commercial production at the Greenwood Mill was reached on June 1, 2008 (Merit Mining, 2008). Alternately, the Bow Mines flotation mill, on the Boundary Falls property, is available for small scale custom milling jobs.

Kinross discovered the Emanuel Creek epithermal gold deposit east of the K2 deposit, near Curlew, Washington in 2003, and then in 2004, discovered a second area of mineralization to the north (Emanuel North). While in production, ore from both Emanuel Creek deposit was trucked to the Kettle River cyanide mill for processing.

Mining has recently been completed at this deposit and the mill has been placed on a care-and-maintenance basis. Kinross expects to begin development of the Buckhorn Mountain deposit later this year, and once the mine is in production then the Kettle River mill will once again be re-opened and additional mining will be done at Emanuel North.

PROPERTY EXPLORATION HISTORY

Copper Mountain, Copper Mountain North and Rock Creek Claim Blocks

Caron (2006a) gives a complete account of previous exploration in the Copper Camp area, which is detailed in the following section, even though a portion of the exploration work was done on valid crown grants that are not part of the Copper Mountain claim block. However, Caron (2006a) considers the work to be relevant because of the complex property boundaries in this area, and the implications to adjoining ground that is part of the current property. Where work was carried out on ground that is not part of the Copper Mountain claim block, this is noted. The following detailed historic account is taken from Caron (2006a).

Mineral exploration on the Copper Mountain claim block dates back to the early 1890's with the discovery of copper mineralization in the Copper Camp area. Exploration and development work continued in the Copper Camp area, through to 1917 and is described in the Minister of Mines Annual Reports. This early work included numerous open cuts, plus several hundred feet of tunneling and shaft sinking, much of which was on crown granted claims not included in the Copper Mountain claim block. Several thousand tons of oxidized ore was produced from the Big Copper and King Solomon showings. No further work is documented on the property until the 1950's, as described below.

1950-4: Diamond drilling and stripping done on the King Solomon and Copper Mine claims, by W.E. McArthur. A total of 102 tons of ore were shipped to the Tacoma smelter, returning an average grade of 0.15 oz/t Au, 1.46 oz/t Ag and 6.0 % Cu.

1954: Noranda Mines drilled 4 holes in the Copper Camp area. The drill holes were located on the Copper King and Copper Queen crown grants (within, but not part of the current Copper Mountain claim block), to test for the extension to known mineralization on the King Solomon/Copper Queen claims.

1955: The Consolidated Mining and Smelting Co. drilled an additional 4 holes on the Copper Queen, King Solomon and Copper King crown grants (within, but not part of the current Copper Mountain claim block) to further test for extensions to known mineralization in this area. W.E. McArthur mined two carloads of oxidized ore from the lower adit on the Copper Queen crown grant. 162 tons of ore were shipped to the Tacoma smelter, and averaged 0.15 oz/t Au, 1.56 oz/t Ag and 5.0% Cu.

1956: The 1956 Minister of Mines Annual Report states that Aztec Exploration Ltd. worked in the Copper Camp area during 1956, completing a geophysical survey and drilling 7 diamond drill holes. Details of the work are unavailable.

1960: The 1960 Minister of Mines Annual Report states that Tombac Exploration Limited carried out work in the Copper Camp area during 1960, including drilling 2 diamond drill holes. Details of the work are unavailable.

1967: McIntyre Porcupine Mines completed geological mapping, soil sampling, induced polarization surveys, bulldozer stripping and diamond drilling in the Copper Camp area. Four diamond drill holes were drilled to test IP anomalies. Three of the drill holes were collared on the current Copper Mountain claim block, while the fourth was situated on the Independence crown grant (Scott, 1967).

1969-70: J. Forshaw discovered massive pyrite-sphalerite mineralization in limestone, south of Wallace Creek at the Pen showing. Claims covering this showing, as well as the area to the west, were optioned to the Orequest Syndicate (Pechiney, Home Oil, Granby). In 1970, Orequest carried out geological mapping, geochemistry, a magnetometer survey and trenching on their claims (MacDonald et al., 1971).

1970: Pechiney Development completed geological mapping, soil sampling and a ground magnetometer survey at the Poppy showing, east of the Copper Camp crown grants (Guelpa, 1970).

A VLF-EM survey was done on the CM claims in the Wallace Creek area by Boundary Exploration Limited (Kermeen, 1970).

DeKalb Mining did soil surveys in the Bubar and Lee Creek areas. Elevated Ni and Co values were obtained in the Bubar Creek area (Haman, 1971a, b).

1974-77: The Rob 1-8 claims were staked near the junction of Kerr and Bauer Creeks, to cover an area of anomalous uranium from a regional stream geochemical survey. In 1975, one percussion hole was drilled, and then in 1976, a single diamond drill hole was drilled. Neither hole was deep enough to reach the base of the Tertiary volcanics. In 1977, the claims were optioned to Zedco Petroleum, who completed reconnaissance scale radiometric and geologic surveys (Hilton, 1975, 1976).

1975-77: During this period, Rio Tinto Canadian Exploration worked in the Wallace Creek area of the current Copper Mountain claim block, in the vicinity of the Pen showing. A limited IP survey was completed, soil sampling and geological mapping was done and two diamond drill holes were drilled (Longe, 1976a, b). Rio Tinto also worked in the Copper Camp area during this period. Regional geological mapping was done, with more detailed mapping and sampling at the Big Copper workings. Approximately 5 line kilometers of IP was completed in the Copper Camp area, and 1 diamond drill hole was drilled just west of the Honolulu crown grant (Longe, 1977).

1977-78: The Arrowhead claims were staked west of Kerr Creek, in the southern part of the Copper Mountain claim block. Four diamond drill holes were drilled to test a regional aeromagnetic anomaly. Ground magnetometer and VLF-EM surveys were also done. Unaltered Tertiary volcanics were intersected throughout the 4 drill holes (Crosby, 1978; von Rosen, 1978).

1979: A small geological mapping and soil sampling program was done on the Deadwood One claim, east of the Copper Camp crown grants for J.C. Stephen Exploration Ltd., to explore for gold mineralization within Eocene sediments. Results were disappointing (Shearer, 1980).

1980: Utah Mines Ltd. drilled 2 diamond drill holes in the Copper Camp area, on the basis of geology. One of the holes was situated approximately 1.1 km southwest of the Honolulu crown grant, on the current Copper Mountain claim block. The second drill hole was a deepening of hole 67-3, on the Independence crown grant (Longe, 1980).

1981: D. Pasco drilled 2 short diamond drill holes to test the Poppy/Pasco showing, east of the Copper Camp crown grants (Shear, 1981).

1982: J. Forshaw did minor prospecting on the FL 1-4 claims, southeast of the Pen showing. Several old pits and trenches were located which tested areas of pyrite, chalcopyrite and sphalerite mineralization in limestone and conglomerate, but no samples were collected (Forshaw, 1982).

1983: McKinney Resources drilled 2 diamond drill holes in the Copper Camp area during 1983. One of the holes was collared on the King Solomon crown grant (not included in the Copper Mountain claim block) while the second hole was drilled on the former Copper Mine crown grant (now covered by MTO claim 501332). Neither intersected any significant mineralization (Waters, 1983).

Waterloo Resources drilled 1 diamond drill hole on the Winedot claim, along Deadwood Ridge in the eastern part of the current Copper Mountain claim block, to test an area of malachite staining in volcanics (Verley, 1983).

Prominent Resources completed soil geochemical and ground magnetometer and VLF-EM surveys on the Rock property, in the Bubar Creek area. Several coincident geochemical and geophysical anomalies were identified (Sookochoff, 1984). Rand Resources did geological mapping, soil sampling and a VLF-EM survey over the Beta claim, in the same area (Tan, 1984).

Also in 1983, Newcoast Silver Mines Ltd. carried out a reconnaissance scale soil survey over their Bruin, Canuck and Hawk claims in the Kerr and Bauer Creek areas. Two areas of interest were identified (Cukor, 1983).

1984: Rex Silver Mines Ltd. completed geological mapping, rock and soil sampling and a VLF-EM survey over the Ridge 1 and Ridge Fractional Claim, situated on Deadwood Ridge and surrounding the (former) Lizzie and Winedot crown grants. The majority of the work was done east of the current Copper Mountain claim block (Wilson, 1984).

1990: Dragoon Resources completed a small program of rock and soil sampling, a ground magnetometer survey and backhoe trenching to test an area of elevated gold in rusty sharpstone conglomerate exposed by recent logging. A low-level gold soil anomaly, about 400 meters long, was defined along the unconformable contact (Copper Camp fault) between Eocene volcanics on the west and Brooklyn limestone and sharpstone conglomerate on the east (Shear, 1991, 1993).

A. Bornowski staked the King and Queen claims, surrounding the Copper Camp crown grants and claims (which were then being explored by Dragoon Resources). Geological mapping and limited rock and soil sampling was completed (Bornowski, 1990).

Also during 1990, Minnova Inc. staked a large block of ground in the Ingram - Kerr Creek area, to explore for epithermal gold mineralization within the Toroda graben. This ground is now largely covered by the Copper Mountain claim block. The focus of Minnova's work was on the Tam O'Shanter property (adjoining the current Copper Mountain claim block to the east) and on the Midway property (within but not part of the current Copper Mountain claim block) both of which they held under option at the time. Apart from limited rock and soil sampling and geological mapping, no work was done on ground which is now included in the Copper Mountain claim block (Lee, 1990a, b).

1990-91: Canamax Resources optioned the Whales property, which covered the Prince of Whales and Mabel-Jenny showings (partially covered by the current Copper Mountain property), but also included parts of the current property in the Wallace Creek area, including Pen showing. During December 1990, Canamax flew a combined helicopter-borne magnetic, electromagnetic, VLF-EM and radiometric survey over the property. During 1990 and 1991, they also completed geological mapping and soil and rock sampling over the property (Johnson, 1991; Harris, 1991).

Teck Corporation optioned a large group of claims in the Bubar-Ingram Creek area (then known as the Midway property, but distinct from the current Midway property held by Merit Mining). A program of geological mapping and rock sampling was done, to explore the property for epithermal gold and copper-gold skarn type mineralization. Follow-up soil sampling and ground magnetometer surveys were done in 3 areas. Elevated gold values were obtained from samples of pyritic, clay altered chert in Bubar Creek, but in general, results were disappointing (Jensen, 1991).

A very small program of geological mapping and rock and soil sampling was done on the Molly property, near the junction of Kerr and Boundary Creeks in the extreme southern part of the Copper Mountain claim block. There were no significant results from the program (Caron, 1991a).

1993: Southern Pacific Developments completed an IP survey in the Copper Camp area, over the area of anomalous gold in soils identified during 1990. One diamond drill hole was drilled to test a chargeability anomaly (Shear, 1993).

1994: Phoenix Gold Resources acquired the Whales property, which covered the Prince of Whales and Mabel-Jenny showings (on Sostad's Princess property and partially part of the Copper Mountain claim block), but also a large area surrounding these showings that is included in the current property. During 1994, Phoenix Gold completed IP and magnetometer surveys and drilled 5 rotary percussion drill holes and 3 diamond drill holes on their claims, all of which fall on Sostad's Princess property (Sookochoff, 1994).

1998: Applied Mine Technologies undertook an analysis of regional aeromagnetic and Landsat TM imagery of the Bubar property, covering the Bubar Minfile occurrence in the south-western part of the Copper Mountain claim block (Campbell, 1998).

E. Bush and F. Rieker completed a small rock sampling program on their Nich claim, near the junction of Lee and Nicholson Creeks, in the northwest portion of the Copper Mountain claim block (Moreau, 1998).

2001: Gold City Industries completed a small geochemical sampling program on their Midway property (within but not part of the Copper Mountain claim block). As part of this program, heavy mineral stream sediment samples were collected from Ingram Creek and from Murray Gulch, both which drain the Copper Mountain claim block. Several of the Ingram Creek samples were collected upstream of Gold City's property boundary, on the Copper Mountain claim block, and returned highly anomalous gold values, as shown on Figure 5 in Caron (2002c).

2004-5: Claims covering the Copper Mountain claim block were acquired by Donald Rippon, for Mineworks, and subsequently vended to 730821 as part of an option agreement on the adjoining Wild Rose property. In December, 2005, 730821 elected to fly an AeroTEM II geophysical survey over a portion of their Greenwood area land holdings in order to test the effectiveness of airborne geophysics in the search for gold and base metal deposits (Caron, 2006a, b, c; Rudd, 2006). The 2005 airborne survey yielded a number of prospective EM and magnetic anomalies on the Wild Rose, Boundary Falls and Copper Mountain properties that have yet to be followed up with any further exploration.

Attwood Claim Block

The Attwood Claim block is located 13 km east of the Copper Mountain claim block and adjacent to the Overlander claim block.

1969 - Granby Mining Company Ltd. established a grid and conducted a cut a magnetic survey over the north part of the Attwood claim block (Wet claims). It was concluded that it is unlikely that massive magnetite (such at that which occurs in the Phoenix area) exists in the survey area but there may be potential for disseminated magnetite (Paxton, 1969).

1979 – Precambrian Shield Resources Ltd. working in the central part of the Attwood claim block ion the hardy Mountain View claims established a small grid (3 320 line meters) over which geological and soil geochemical surveys were conducted. Three areas of interest were delineated with high to anomalous showings of Pb, W and Au (Williams, 1981).

1984-85 – Noranda Exploration Company Ltd. completed a detailed grid geochemical survey and magnetics, EM and induced polarization (IP) surveys in the northern part of the Attwood claim block (on the Eagle Mountain Group claims which partially overlap the previously worked on Wet Claims). The soil sampling was conducted as follow-up to an airborne EM trend. Three isolated readings were found be of interest with 20 ppb Au, 60ppb Au and 240 ppb Au. Contoured copper values produce a broad weak anomalous zone thought to represent a change in rock type or thinning in overburden and hence was considered to be of little significance (Keating, 1984). In 1985, two anomalous zones were identified from the IP survey, follow-up was recommended but none is reported (Bradish, 1985a).

Motherlode Claim Block

The Motherlode property adjoins the Copper Mountain in the east, and covers the Mother Lode and Sunset copper-gold skarn deposits from which a total of 4.2 million tonnes at a grade of 0.8 percent (%) copper (Cu) and 1.3 g/t Au was produced during the period 1896-1918 and 1956-1962.

In 1891, the Mother Lode claim was staked, exploration began in 1896 with an adit crosscut on the claim and followed by an expanded program of shaft sinking. The Mother Lode mineral claim was put into production in 1901 with the completion of a smelter in greenwood. In 1902, underground development totaled 2 360 meters of tunneling (Church, 1986). In 1908 the shaft was deepened to 150 meters forming the basis for mining on four levels. In 1910 it became one of the leading copper producing camps in British Columbia. Operations continued until 1919 when the mine and smelter were closed not due to the shortage of ore but due to a labour strike in the Crowsnest coalfield which cut off the supply of coke for the Greenwood smelter (Singhai, 1970).

Nearby, the Sunset claim was initially developed independently from the Mother Lode. In 1897 and 1898 several shallow shaft were sunk and a 120-meter long adit was completed. Underground development up to1902 totaled 2 180 m. The ore was mined from two main pits and processed at a smelter near Boundary Falls until 1918 when the mine closed (Church, 1986).

The Mother Lode mine was put back into production as an open pit in 1956 by Woodgreen Copper Mines Ltd and closed the following year (Singhai, 1970). During this time it supported a 900 tonne per day mill (Church, 1986). It was reopened in 1959 with a reduced rate of 450 tonnes per day, which in 1960 was augmented somewhat with ore from the Sunset mine. In 1962 the mine was closed and the concentrator was removed from the minesite (Church, 1986). In 1968, Aabro Mining and Oils Ltd. acquired the Motherlode and Adjoining Sunset and Greyhound properties. Construction of a 1500-ton mill was completed by early 1970 however operations ceased in 1971 (Little, 1983).

Ore reserves at the Mother Lode mine are based on estimated tonnage remaining n the pillars and sills in the old underground workings and unmined mineralization between the 120 m level and chert basement. The most recent calculations suggest a reserve of 300 000 tonnes grading 0.5 gram per tonne gold, 4.5 grams per tonne silver and 0.65 % Cu (Church, 1986).

To the north of the Mother Lode claim on the current Motherlode property numerous trenches and workings are known from the early 1900's (Konkin and Evans, 1986). In 1968, Copper Hill Mining and Exploration Ltd started a geophysical survey over the area but it was never completed. In 1971, Spokane National Mines carried out limited mapping and geophysical surveys over the area to determine the extent of the Brooklyn Formation and Knob Hill Group. In 1985, Rex Silver Mines Ltd. contracted Taiga Consultants Ltd. to carry out magnetometer, VLF-EM, soil geochemical and geological mapping surveys (Konkin and Evans, 1986).

In the southern portion of the property (south of Greyhound Pit) in 1973 Mapletree Explorations Ltd. carried out an exploration program and concluded that the area was justified further drilling, in an effort to find deep extensions of the Greyhound structure (Glass, 1974).

Overlander Claim Block

The Overlander claim block has a long history of exploration. This following section is a compilation from assessment reports filed on previously held claims located within or overlapping with the Overlander claims block.

Across the Overlander property historical exploration beginning in the late 19^{th} century has left numerous adits, shafts and trenches. Known mineralized zones on the claims block include the Overlander workings, the Keno vein, Evening Star Skarn, Montana, Wellington and Ophir (in the central portion of the property), and the previously operational Athelstan and Jackpot mines in the northeast part of the claims block (Caron,1997a, Christopher, 1989).

The Athelstan and Jackpot mines reported intermittent production from 1901-1912, the mines operated separately in these years. Total production to 1930 is reported as 33,300 tonnes averaging 5.4 g/t Au and 6.3 g/t Ag (Caron, 2004a). In the 1930's further production of 1865 tonnes averaging 19.9 g/t Au, 24.7 g/t Ag and 12.47%

as is listed. By 1942, the total underground development on the property included 91 meters of shaft sinking and 570 meters of tunneling (Caron, 2004a).
At the Keno Vein 150 m of underground workings was completed in the 1890’s and early 1900’s. In 1933 an 11 m inclined shaft was dug on the Keno vein, and a low level adit started 50 m south of the shaft on a 1.2m wide quartz vein (Christopher, 1989). In 1936, 39 tons of ore averaging 0.88 oz Au/ton, 9.9 oz Ag/ton and 1.3% Pb were shipped. Production from the Keno property during the period 1935-1940 was 324 tons at an average grade of 0.125oz/t Au, 10.2 oz/t Ag and 0.9% Zn (Caron, 1997a; Christopher, 1989).

In the western part of the property an unknown quantity of silver-lead-zinc was shipped in 1934 (Sookochoff, 1987a). In 1933 reported workings on the Fanny Joe claim include several open cuts and a shaft sunk on a four inch quartz vein traceable for 300 ft mineralized with pyrite and lesser amounts of Galena. In 1973 it was reported that several prospect pits and shallow inclined shafts have been excavated on the Sunnyside crown grant. The pits are within limestone and impure quartzite in beds 6 inches to 36 inches thick striking 40-45° W and dipping 20-40° northeasterly. A four foot sample across a heavily oxidized lens returned 3.92% lead, 6.63% zinc, 0.13% Cu, 4.14 oz/ton silver and 0.02oz/ton gold. Selected samples from the pile of ore stacked near the portal contained more than 50 oz silver per ton (Sookochoff, 1987a).

More detailed information on exploration activities is available post -1960’s and is detailed below:

1960-70’s - Sabina Mines, Colby Resources and Scurry Rainbow Oil and Gas carried out limited exploration programs including 12 percussion drill holes, of which 8 encountered open stopes on the north eastern Overlander claims (Athelstan – Jackpot area). No significant results were reported from the drilling (Caron, 2004a).

1963 – Bomarc Mining conducted a ground magnetic survey over a north central portion of the Overlander claims (former Bombini claims) and defined a string east – west mag anomaly (Sullivan, 1968). Cat stripping was also done on the Evening Star skarn showings and on the Keno Extension massive sulphide showings at the time (Caron, 1997a; Christopher, 1989).

1965-82 - Several junior resource companies conducted intermittent exploration activites on a small scale on the north central Overlander claims (formerly JD claims) (Kim, 1998).

1969 – Ortega Minerals Inc. conducted an induced polarization survey on the most westerly Overlander claims. The survey revealed that the area is underlain by moderate to high chargeability material which could be caused by a dissemintation of polarizable material such as sulphide mineralization, carbonaceous material, magnetite or serpentine. Follow-up geological mapping was recommended, no follow-up is reported (Baird, 1969).

1973 - Kalco Valley Mines Ltd. conducted stripping and sampling (summarized by Noel, 1980) over the former Bombini claims area. A 230 foot length of the main Ophir vein is reported to have averaged 0.50 oz/t across a width of 1.9 feet (Caron, 1997a; Christopher, 1989).

1978-83 - Arrowhead Resources Ltd. completed significant exploration programs including geological mapping and sampling of surface outcrops and mine workings, soil sampling, and magnetometer and VLF/EM surveys in the Athelstan - Jackpot area. Twenty-eight vertical percussion drill holes over an area of about 200 x 600 meters, to test for a near surface, open-pittable resource were completed. Values were found to be erratic although some good intersections were returned in the vicinity of the Jackpot workings. Additionally, 3 vertical diamond drill holes were completed adjacent to percussion holes near the Jackpot workings (Caron, 2004a).

1979 - On the western Overlander claims (former Sun claim) former exploration included 4.7 km of a geochemical survey. The results indicated a number of anomalous areas (greater than 20ppb) in gold. Several of the anomalous areas were reportedly known to be overlain by veining and fracture fillings. The quartz was often observed to contain pyrite. A localized magnetometer and VLF-EM survey (north central area) returned poor results within an area of considerable quartz veining with some pyrite mineralization (Sookochoff, 1987a).

1980 - Tri Basin Resources carried out detailed sampling on the Ophir vein (in the north central Overlander claims), followed by drilling 9 short holes to test the vein to 100 feet over a strike length of about 900 feet, with encouraging results (Caron, 1997a; Christopher, 1989).

1980s - Granby Resources completed wide spaced ground geophysics and geochemical sampling over the Keno and Ophir areas (Caron, 1997a; Christopher, 1989).

1983 - Over the central Overlander claims (former Set claims) Quadrex Resources carried out geological, geochemical and VLF EM surveys covering 10 lines 1500m in length and spaced 250m apart at a station interval of 25m. A total of 99 samples were analyzed for Cu, Zn, As and Au on the line grids, 100m spacing and 500 m apart (Sookochoff, 1987b).

1983 - On the western Overlander claims Fort Knox Minerals completed a VLF-EM and magnetometer survey and collected a few soil samples (former Golden Spike mineral claim). Six anomalous areas were defined based on variable magnetic responses. Follow-up mapping, sampling and trenching was recommended, no follow-up is reported (Pond, 1984).

1984 - B. Taylor and G. Huizen (P.Engs.) conducted a geological evaluation in an area central to the Overlander claims (former Set claims). A three stage exploration program of geochemical, geophysical and geological surveys and subsequent trenching and diamond drilling was recommended, no follow-up reported (Sookochoff, 1987b).

1983-85 - Rimacan Resources Ltd. in 1983 and Canadian Pawnee in 1985, completed very minor rock sampling with no record of any additional work over the Athelstan - Jackpot area (Caron, 2004a).

1983-1985 Consolidated boundary Exploration Ltd. carried out some exploration programs with limited diamond drilling over a north central area of the Overlander claim block (formerly JD claims) (Kim, 1998).

1986 - Ossa Resources completed geological, geochemical and geophysical surveys over a central portion of the Overlander claims (former Set claims). The exploration program resulted in the location of a number of mineralized areas one of which is termed the Overlander Zone. This specific mineral zone is a structurally related quartz vein hosting gold-bearing sulphides northerly trending zone with significant gold values (Sookochoff, 1987b).

1986-89 - AGP Resources completed about 18 km of gridding, geological mapping, geochemical sampling and ground geophysics over a north central area of the Overlander claim block (former Bombini property). There were a number of areas of interest arising from this work program, however no follow-up was done apart from diamond drilling in the Ophir vein area in 1989 (Caron, 1997a; Christopher, 1989).

1986-87 - Max Minerals completed significant work programs which included detailed geochemical and geophysical programs in the Athelstan – Jackpot area. A very strong Au-As soil anomaly was defined, roughly east-west trending and in the area of the Athelstan and Jackpot workings. The anomaly is in the order of 500 x 150 meters, with numerous values exceeding 1000 ppb Au and 10,000 ppm As. Several strong VLF-EM conductors were identified, coincident with the soil anomalies. A number of old trenches and shallow tunnels on the property were reopened and resampled. Several areas of high grade gold mineralization were identified, including the A and J-34 zones. Thirteen diamond drill holes, totaling 452 meters, were then completed. The most significant result was 0.384 oz/t Au over 6 feet in hole 87-8 (Caron, 2004a).

1986-88 - Noranda Exploration Company conducted exploration in the north central area of the Overlander claims (formerly JD claims) including line cutting (a total of 47 line km of slashing and flagging at 50m to 100 m spacing), geochemical sampling, geophysics (magnetics, VLF-EM and induced polarization), geological mapping, trenching (26 trenches) and drilling (8 diamond drill holes and 10 Rc drill holes). Follow-up was recommended but not pursued by Noranda (Kim, 1998).

1987 – Sunnyside Resources Ltd. conducted geochemical survey in a portion of the western Overlander claims area (former Sun claim). Geochemical survey disclosed a number of silver and lesser arsenic anomalies. Anomalous gold values (up to 400ppb) from soil samples are also reported (Sookochoff, 1987a). No follow-up is reported.

1991 - Minnova Inc. completed a 6 hole diamond drill program, totaling 946 meters in the Athelstan – Jackpot area. The program was designed to test for large, bulk tonnage targets at the intersection of the low angle thrust faults with steeply dipping, later cross faults and was unsuccessful in this regard (Caron, 2004a).

1996 - Rainbow and Sunshine Exploration Service conducted a prospecting and geophysical survey program on a portion of the north central area of the Overlander claims (formerly JD claim group). A 20x50 m grid was established on a marked 300° trending baseline, 2 km long with tagged pickets every 25 m to control their exploration works. A total of 34 line km were slashed and flagged for line grid stations. Additionally, reconnaissance prospecting was conducted in the area from the northern Knob Hill to the southern Mount Attwood. A significant number of old workings (shafts, winzes, adits and trenches) were located and a total of 73 mineralized rock samples were collected. A VLF EM and concurrent radiometric survey were conducted. The VLF-EM survey resulted in the discovery of 7 anomalous zones. Of these, four good conductors were significantly noted to offer a good exploration target (Kim, 1998).

1997 - Kettle River Resources completed a short rock sampling program over the former Bombini property area. Late spring snow prevented a thorough sampling program form being completed however the limited sampling that was done did not reveal any new areas of anomalous gold in rock (Caron, 1997a; Christopher, 1989).

2001 – 2004 In the Athelstan – Jackpot area, R.E. Miller, completed a program of data review, rock chip sampling and preliminary metallurgical testing on behalf of Web Hallauer. The possibility of selective mining of near surface gold ore from the property was suggested and pursued (Caron, 2004a). Two of six target areas were selected for testing. In 2002, field work included establishing the property boundary in several key areas, geological mapping and rock sampling in the target areas, and collecting samples for initial petrographic and metallurgical testing. Trenching was also competed to test oxidized massive arsenopyrite mineralization, with gold, in listwanite at the A and J-34 zones. During 2003, a trenching, mapping and sampling program was completed at the J-34, J-12 and B zones whence the relationship between the different zones of known mineralization on the property and the controls to mineralization remained unresolved (Caron, 2004a). In 2004 a program of line cutting, geological mapping and surveying was completed. During the mapping several areas of polymetallic mineralization were discovered which have little exploration and could potentially be quite different from that in the pyrite-arsenopyrite ores (Caron, 2004a).

Sappho Property

On the Sappho property, adjoining the Copper Mountain property to the southeast, massive to semi-massive chalcopyrite-magnetite-pyrite, with associated gold and platinum group elements, occurs in Jurassic syenite and pyroxenite. Limited trenching has shown the mineralization to be poddy and discontinuous (Caron, 2002a). A significant amount of exploration has been done on the claim group in the past much of which is clustered in 3 areas: the Main Zone, NE Zone and Hayfield Adit in the southern part of the property. The summary is compiled based on previous reporting especially Caron, 1991 and 2002a.

Early 1900's – Small pits, cuts and shafts dug in Sappho area by numerous prospectors.

1916-18 –102 tons of ore was shipped from the Sappho workings (a series of small pits and shafts), grading 1.8 oz/t Ag, 5.6% Cu, yielding a total of 197 oz Ag and 13580 lbs. Cu

1927-28 – a further 9 tonnes of ore were extracted from a short adit constructed to intersect the same mineralization at depth (minister of Mines Annual Reports). A sample of the ore is reported to have assayed 3.2% Cu and 1 g/T Pt AR.

1963-64 – Triform Exploration Ltd. and Coast Exploration Ltd. conducted geophysical surveys (magnetics and EM), completed 2300' of trenching at the NE and Main zones and did 1580' of diamond drilling (5 holes at the NE Zone and 3 at the Main Zone) (Hilchey, 1964, Sullivan, 1964; Seraphim, 1966). Trenching at the NE Zone revealed a mineralized zone, with grades to 1.03% Cu over 6 meters and 0.2% Cu over 15 meters, however the success was limited by the depth of overburden. Drilling results reported generally low copper and precious metals values, with the exception of a short high grade sulphide intersection which returned 28g/T Au (at the Main Zone?) and one 21 meter intercept of 0.2% Cu (Gilmour, 1981).

1967 – Silver Standard Mines Ltd conducted geological mapping, rock sampling and a ground magnetics survey and 550 m of trenching in 5 locations in the southern part of the property. At the NE Zone, a 9.5 meter interval in a trench returned 0.7% Cu, while a 17 meter zone trenched at the Main Zone returned 0.15% Cu (Church and Robertson, 1983).

1970-71 – Granby Mining Co. completed soils and silt geochemistry in the northern part of the property, however results were not encouraging (Paxton, 1971).

1975 – G. Stewart completed trenching and rock geochemistry in the southern part of the Sappho property and confirmed assay results in the 0.02-0.06 oz/t (0.7 to 2 g/T) Pt range.

1978 - McIntyre Mines completed further trenching in the area of the Sappho showings. They obtained high grade copper mineralization within the pyroxenite and this zone also contained 0.044 oz/t Pt.

1981 – Kettle River Resources began geological mapping and sampling in the area of the main Sappho showings.

1984 – Geological and geochemical surveys were carried out by Noranda Exploration Companay (Noranda) in the area of the Sappho showings (Keating and Fyles, 1984). Coincident Cu-Zn soil anomalies were detected in the area of the Main and NE Zones. A further Cu-Zn soil anomaly was indicated south of the known areas of mineralization (Keating and Fyles, 1984).

1985 – Noranda carried out detailed grid geological and geochemical surveys as follow-up of the 1984 program (Gill, 1985). The grid and sampling were extended to the southwest. A large Cu soil anomaly, approximately 300 m x 100-300 m in size, was discovered southwest of the Main Zone and immediately north of the Canada-USA (Gill, 1985). Soil samples were not analysed for Pt or Pd. Noranda also completed ground magnetometer and EM surveys over the 1984 and 1985 grids, without significant results (Bradish, 1985b).

1986 – Heavy mineral sampling was done by Noranda along the McCarren and Gidon Creeks. A follow-up program was completed in the Gidon Creek area which included geological mapping and soil sampling (Keating, 1986).

1987 - Noranda completed a small overburden sampling program in the Gidon Creek area, to test an area of anomalous soil resulting from the 1986 program. In the Boundary Creek area a program of geological mapping, rock and soil sampling was completed (Keating, 1987).

1988 – Geological mapping, soil sampling and magnetometry and VLF/EM surveys were conducted in the Boundary Creek area by Noranda (Bradish and Keating, 1988).

1990-91 – Prospecting, regional and in-fill mapping, and rock sampling was completed in the Gidon and McCarren Creek areas by Kettle River Resources. Work in the Gidon creek area confirmed the presence of a soil anomaly (previously identified by Noranda) with weakly anomalous gold values reported in samples from porphyry in the stockwork veining and pyrite mineralization. Additionally an area of anomalous gold and silver values was recognized. Follow-up was recommended by nothing is reported (Caron, 1991b).

1995-99 – Discovery Consultants on behalf of the Predator II Syndicate completed a limited soil sampling program over a portion of the southern claims covering the Main and NE Zones. The survey did not extend to the southwest to cover the Noranda Cu anomaly. A coincident Au-Pt-Pd anomaly was identified in the vicinity of the Main Zone. Infill soil sampling was completed in 1999 to further define the anomalous zone. Values up to 178 ppb Au, 210 ppb Pt and 1160 ppb Pd were returned.

2001 - Gold City Industries completed a multi-phase exploration program consisting of heavy mineral and conventional silt sampling, prospecting, rock sampling, geological mapping, trenching and a soil sampling grid. Additionally in conjunction with the GSC a geochemical orientation survey was completed consisting of soil, stream, moss matt, rock, till and biogeochemistry to guide geochemical sampling surveys. HMC and soil samples with anomalous to elevated values indicated a few new areas of interest. Results from the soil sampling program confirmed the presence of the Noranda Cu anomaly in the southern portion of the property and indicated the presence of a second Cu anomaly 100-150 m north-northeast of the Main Zone. Rock sampling in areas of known mineralization confirmed the presence of mineralization (Caron, 2002a).

DEPOSIT MODEL

The Greenwood area represents a unique area with diverse geology and, as a result, a number of diverse types of mineral occurrences and potential ore deposits. Based upon the author's review of data and a field visit, the Greenwood area is under-explored and is prospective for a number of different types of precious-base metal deposits. Grizzly's Greenwood Property is prospective for gold plus or minus silver, copper and other metals. The following section outlines a number of the potential deposit types to be explored for on Grizzly's Greenwood Property and is largely taken from Caron (2004b, c; 2006a, b, c, d).

1. Skarn Deposits

Both gold and copper-gold skarn deposits occur within the Boundary District. These deposits are related to Cretaceous-Jurassic intrusive activity into limestone and limey sediments generally belonging to the Triassic Brooklyn Formation. Important examples of this type of deposit include the undeveloped Buckhorn Mtn. (Crown Jewel) deposit at Chesaw, Washington, the historic Phoenix deposit near Greenwood (about 3 kilometers north Overlander claim block of the Greenwood property), and the Motherlode (within the Motherlode claim block of the Greenwood property). Historic production from Phoenix is 27 million tonnes at 0.9% Cu and 1.12 g/t Au and from Motherlode is 4.2 million tonnes at 0.8% Cu and 1.3 g/t Au (Church, 1986).

Recent exploration in the district suggests that some of the metals in the "skarn" deposits (Phoenix, Motherlode) pre-date the skarn event. An iron (+/- copper, gold, zinc) rich volcanogenic massive sulphide horizon (the Lamefoot horizon, discussed below) is recognized within the Brooklyn Formation. All of the major "skarn" deposits in the district occur at the same stratigraphic position within the Brooklyn Formation as the Lamefoot VMS/O horizon. The skarn alteration may simply be a redistribution of earlier syngenetic mineralization on this horizon, with perhaps some additional metals (particularly gold) introduced along structures cutting the horizon (Caron, 2005).

Exploration in the district has traditionally targeted copper (and more recently gold) skarn mineralization in Brooklyn limestone and sharpstone, and less commonly calcareous units in the Knob Hill Complex and Attwood Formation. There has been little exploration for mafic volcanic hosted copper (plus gold) skarns (i.e. QR, Ingerbelle type).

2. Mesothermal Quartz Veins with Gold (+Silver, Lead, Zinc)

Gold-silver mineralization occurs in mesothermal quartz veins related to Cretaceous-Jurassic Nelson intrusives. Polymetallic silver-lead-zinc veins with lesser gold are also included in this type. Veins may be hosted within the intrusives, or within adjacent country rock. Examples are the Jewel (Dentonia) and Providence veins, and the veins at Camp McKinney. At Camp McKinney, gold bearing quartz veins are hosted primarily by Permo-Triassic Anarchist Group greenstones, quartzite, chert and limestone. Past production at Camp McKinney was 124,452 tonnes at an average grade of 20.39 g/t Au (with minor lead, zinc and silver). This production was primarily from one east-west striking, near vertical quartz vein, averaging about 1 meter in width and mined over a strike length of about 750 meters (Caron, 2002b; Minfile 082ESE020).

3. Epithermal Quartz Veins (and Gold along Eocene Structures)

The Republic district has produced almost 2.5 million ounces of gold, at an average grade of better than 17 g/t Au from Eocene-aged low sulphidation epithermal veins (Lasmanis, 1996). The veins formed in a hot spring environment after deposition of the Sanpoil (Marron) volcanics, but before the deposition of the Oligocene Klondike Mountain Formation (Tschauder, 1986, 1989; Muessig, 1967). In the Republic area, the Klondike Mountain Formation has been eroded away in many places, exposing or removing the paleosurface, however a number of the Republic deposits are blind deposits beneath post mineral sediments of the Klondike Mountain Formation. Vein orientation is between about 330° and 030°; dips are typically moderate to steep. The Republic veins commonly extend to depths of 200 – 250 meters, although some have reached depths of up to 500 meters. Ore is not continuous along the veins, but occurs in high grade shoots, ranging from 30 to 180 meters in strike length. Near the contact of the Sanpoil volcanics and the overlying Klondike Mountain Formation, the veins grade into stockwork zones. These stockworks are locally capped by silicified breccias with low grade Au and with locally disseminated pyrite which make potential bulk tonnage gold targets. Gold-sulphide mineralization is also associated with both high and low angle Tertiary faults. A number of new epithermal deposits have been discovered in recent years in the Republic and Curlew areas (i.e. Golden Eagle, Kettle, K2, Emanuel Creek, Emanuel North (Fifarek et al., 1996; Gelber, 2000, Kinross website). The Emanuel Creek vein near Curlew is an impressive new ‘blind' vein discovery, under an average 1250 feet of post-mineral cover, with grades of up to 1.3 oz/t Au over widths in excess of 100 feet (Kinross webcast, April 3, 2003). Kinross has recently completed mining the Emanuel Creek deposit.

4. Jurassic Alkalic Intrusives with Copper, Gold, Silver and/or PGE Mineralization

Jurassic-aged alkalic intrusives host copper-gold and copper-silver-gold-PGE mineralization in several areas within the Boundary District. There is a strong spatial association between Jurassic structures (thrust faults) and Jurassic alkalic intrusives. A low-grade Cu-Au (+ molybdenum) porphyry system occurs at the Lone Star - Lexington property, less than 3 kilometers south of the Overlander claim block, in a Jurassic quartz-feldspar porphyry intrusion (Seraphim et al., 1995).

Massive to semi-massive chalcopyrite-magnetite-pyrite + PGE mineralization, with associated gold, occurs in Jurassic syenite and pyroxenite on the Sappho property near Midway (Caron, 2002a; Nixon, 2002; Nixon and Archibald, 2002), and at the Gold Dyke and Comstock mines near Danville (Tschauder, 1989).

At Rossland, parallel, en echelon, gold-bearing massive pyrrhotite-pyrite-chalcopyrite and quartz veins are related to the intrusion of the multi-phase, Jurassic-aged Rossland monzonite. More than 20 veins are recognized in an area of about 1200 by 600 meters, from which over 5.5 million tonnes of ore grading 16 g/t Au was produced (Höy and Dunne, 2001). Gold bearing massive sulphide veins on the Golden Crown property near Phoenix and at the Wild Rose zone on the Wild Rose property have similarities to Rossland style veins (Caron, 1998a, b, 1999).

5. Gold Mineralization Associated with Serpentinite

A number of gold deposits within the Boundary District are associated with massive sulphide and/or quartz/calcite veins within structurally emplaced serpentinite bodies along regional fault zones. Known ore bodies have traditionally been small, but often very high grade. On the Lexington - Lonestar property adjacent to the north to the Overlander claim block, Merit Mining Corp. has recently announced an updated NI 43-101 compliant Indicated Resource of 329,000 tonnes grading 8.3 g/t Au and 1.3% Cu or 11.3 g/t Au equivalent, at a cut-off of 6 g/t Au equivalent for the Grenoble Zone (Merit Mining Corp., 2005b). Mineralization on the Athelstan-Jackpot and Golden Crown properties southeast of Phoenix (partially on the Overlander claim block), the Snowshoe property west of Phoenix, the California mine near Republic, and the Morning Star mine near Danville are similarly associated with serpentinite.

6. Gold-bearing Volcanogenic Magnetite-Sulphide Deposits (Lamefoot-type)

Crown Resources and Echo Bay Minerals discovered a new style of mineralization within the Boundary District in the late 1980's, described as Au-bearing, magnetite-pyrrhotite-pyrite syngenetic volcanogenic mineralization (Rasmussen 1993, 2000). Mineralization is hosted within the Triassic Brooklyn Formation, and at least part of the gold is attributed to a late stage epigenetic (Jurassic or Tertiary) event. The Au bearing massive magnetite and sulphides at the Overlook, Lamefoot and Key West deposits in Ferry County, Washington all occurs at the same stratigraphic horizon, with a stratigraphic footwall of felsic volcaniclastics and a massive limestone hanging wall, and with auriferous quartz-sulphide and sulphide veinlets in the footwall of the deposits.

In the Greenwood Camp, the Sylvester K occurrence is an example of this style of mineralization (Caron, 1997b). Mineralization occurs within the same stratigraphic position in the Brooklyn Formation as the Lamefoot, Overlook and Key deposits. As discussed above, the Phoenix and Motherlode “skarn” deposits, occur at the same stratigraphic position as the Lamefoot VMS/O horizon, and much of the metal in these deposits is now believed to be unrelated to the skarn event.

GEOLOGICAL SETTING

REGIONAL GEOLOGY

The Property is situated within the Boundary District of southern British Columbia and northern Washington State as shown in Figures 1 to 3. This district is a highly mineralized area straddling the Canada-USA border and includes the Republic, Belcher, Rossland and Greenwood Mining Camps. It has total gold production exceeding 7.5 million ounces, the majority of which has been from the Republic and Rossland areas (Schroeter et al., 1989; Höy and Dunne, 2001; Lasmanis, 1996). At Republic, about 2.5 million ounces of gold, at an average grade of more than 17 g/t Au, has been produced from epithermal veins and high sulphide zones (Lasmanis, 1996). In the Rossland Camp, 2.8 million ounces of gold at an average grade of 16 g/t Au was mined from massive pyrrhotite-pyrite-chalcopyrite veins (Höy and Dunne, 2001). Recent exploration in the Boundary District resulted in the discovery of a number of new deposits, as discussed in the “Regional Exploration History” and “Deposit Types” sections of this report, from which more than 1 million ounces of gold has been produced to date. In 2008 the Lexington-Grenoble mine went into production. Additionally several deposits have been delineated but remain undeveloped.

Portions of the Boundary District have been mapped on a regional basis by numerous people, including Höy and Dunne (1997), Fyles (1984, 1990), Massey (2006), Monger (1967), Little (1957, 1961, 1983), Höy and Jackaman (2005), Church (1986), Parker and Calkins (1964), Muessig (1967) and Cheney and Rasmussen (1996). While different formational names have been used within different parts of the district, the geological setting is similar.

The Boundary District is situated within Quesnellia, a terrain which accreted to North America during the mid-Jurassic. Proterozoic to Paleozoic North American basement rocks are exposed in the Kettle and Okanogan metamorphic core complexes. These core complexes were uplifted during the Eocene, and are separated from the younger overlying rocks by low-angle normal (detachment) faults. The distribution of these younger rocks is largely controlled by a series of faults, including both Jurassic thrust faults (related to the accretionary event), and Tertiary extensional and detachment faults.

The oldest of the accreted rocks in the district are late Paleozoic volcanics and sediments. In the southern and central parts of the district, these rocks are separated into the Knob Hill Complex and overlying Attwood Formation. Rocks of the Knob Hill Complex are of dominantly volcanic affinity, and consist mainly of chert, greenstone and related intrusives, and serpentinite. The serpentinite bodies of the Knob Hill Complex represent part of a disrupted ophiolite suite which have since been structurally emplaced along Jurassic thrust faults. Commonly, these serpentinite bodies have undergone Fe-carbonate alteration to listwanite, as a result of the thrusting event. Serpentinite is also commonly remobilized along later structures. Unconformably overlying the Knob Hill rocks are sediments and volcanics (largely argillite, siltstone, limestone and andesite) of the late Paleozoic Attwood Formation.

The Paleozoic rocks are unconformably overlain by the Triassic Brooklyn Formation, represented largely by limestone, clastic sediments and pyroclastics. Both the skarn deposits and the gold-bearing volcanogenic magnetite-sulphide (VMS) deposits in the district are hosted within the Triassic rocks. Volcanic rocks overlie the limestone and clastic sediments of the Brooklyn Formation and may be part of the Brooklyn Formation, or may belong to the younger (Jurassic) Rossland Group. In the western part of the district, the Permo-Triassic rocks are undifferentiated at present, and are collectively referred to as the Anarchist Group.

At least four separate intrusive events are known regionally to cut the above sequence, including the Jurassic-aged alkalic intrusives (i.e. Lexington porphyry, Rossland monzonite, Sappho alkalic complex), Triassic microdiorite related to the Brooklyn greenstones, Cretaceous-Jurassic Nelson intrusives, and Eocene Coryell (and Scatter Creek) dykes and stocks.

In the Greenwood area, Fyles (1990) has shown that the pre-Tertiary rocks form a series of thrust slices, which lie above a basement high-grade metamorphic complex. A total of at least five thrust slices are recognized to be dipping gently to the north and marked in many places by bodies of serpentine. There is a strong spatial association between Jurassic thrust faults and gold mineralization in the area.

Eocene sediments and volcanics unconformably overlie the older rocks. The oldest of the Tertiary rocks are conglomerate and arkosic and tuffaceous sediments of the Eocene Kettle River Formation. These sediments are overlain by andesitic to trachytic lavas of the Eocene Marron Formation, and locally by rhyolite flows and tuffs (such as in the Franklin Camp). The Marron volcanics are in turn unconformably overlain by lahars and volcanics of the Oligocene Klondike Mountain Formation. In the Greenwood area, three Tertiary fault sets are recognized, an early, gently east-dipping set, a second set of low angle west-dipping, listric normal (detachment-type) faults, and a late, steeply dipping, north to northeast trending set of right or left lateral or west side down normal faults (Fyles, 1990). Epithermal gold mineralization, related to Eocene structural activity, has been an important source of gold in the Boundary District.

The Tertiary rocks are preserved in the upper plates of low-angle listric normal (detachment-type) faults related to the uplifted metamorphic core complexes, in a series of local, fault-bounded grabens (i.e. Republic graben, Toroda graben) (Cheney and Rasmussen, 1996; Fyles, 1990). In the Greenwood area, a series of these low angle faults occur (from east to west, the Granby River, Thimble Mountain, Snowshoe, Bodie

Mountain, Deadwood Ridge, Windfall Creek, and Copper Camp faults). These faults have taken a section of the Brooklyn stratigraphy and sliced it into a series of discrete blocks, each separated by a low angle fault. For example, the Phoenix section is rooted by the Snowshoe fault with about 1 kilometre of offset to the west on the Snowshoe fault. Overlying these rocks were rocks now exposed about 6 kilometers to the west in the Deadwood Camp in a complex zone of faulting. The Deadwood segment was in turn overlain by rocks now situated to the west above the Copper Camp fault. The low angle Tertiary faults have displaced pre-Tertiary mineralization (i.e. the Deadwood camp represents the top of the Phoenix deposit); however current thinking attributes at least some of the gold in the deposits to the low angle Tertiary faults that underlie them.

PROPERTY GEOLOGY

Copper Mountain, Copper Mountain North and Rock Creek Claim Blocks

In general terms, these claims cover a large portion of the northern part of the Toroda Graben (Figures 3). The graben is bounded on the east by the low angle, west dipping Bodie Mountain and Deadwood Ridge faults. The western graben boundary is formed by a complex set of east dipping faults, to the west of the property. Within the graben, large areas of Eocene sediments, volcanics and related intrusives have been down-dropped and preserved from erosion, but locally, widows of pre-Eocene volcanics and sediments are exposed. The older rocks represent both pre-Eocene topographic highs that were never covered by the more recent sediments and volcanics, and windows through the Eocene cover that have resulted from late-stage faulting. Most of the known zones of mineralization on the property occur within the pre-Eocene rocks, however mineralization along Eocene structures also occurs.

The pre-Eocene rocks consist of primarily Permian Knob Hill Complex chert and greenstone, and overlying conglomerate, limestone, siltstone and greenstone of the Triassic Brooklyn Formation (Figure 3). Knob Hill chert, fine grained greenstone, related microdiorite, and lesser argillite and limestone cover a large area in the western part of the property, in the vicinity of Nicholson and Lee creeks. Hornfelsing within the greenstone and argillite is common. A smaller area of Knob Hill rocks occurs east of this, to the south of Wallace Creek.

The unconformably overlying Brooklyn rocks are exposed in two main areas, the Copper Camp area in the central part of these claims, and about 4 kilometers northwest of this, on the south side of Wallace Creek. In these two areas, the Brooklyn Formation is comprised of a north-northeast striking, moderately east dipping, upright and east facing sequence of basal sharpstone conglomerate, overlying limestone and sediments, and finally an upper volcanic unit. The sharpstone conglomerate and the upper sedimentary unit are commonly calcareous. Limestone is typically recrystallized to marble, and locally, calcareous units are altered to calc-silicates and to garnet skarn.

In the southern part of these claims, a third area of Brooklyn rocks is exposed in the “Midway window” on Merit Mining’s Midway property. Isolated lenses of Brooklyn sharpstone conglomerate in the Bubar and Davis creek areas have been interpreted by Fyles (1990) as forming the fillings of shallow channels that developed in areas of Knob Hill chert and greenstone, in pre-Triassic times.

A large stock of medium grained biotite granodiorite (the Wallace Creek pluton) intrudes the Knob Hill and Brooklyn rocks in the north-eastern part of these claim blocks. A second large stock occurs in the Fiva creek area in the north-western part of these claim blocks. The granodiorite is part of the Cretaceous-Jurassic Nelson Plutonic Complex.

The most common rocks on these claim blocks are Eocene sediments and volcanics, of the Penticton Group. In most places on the claim blocks, the basal unit within the Penticton Group is a buff coloured, arkosic and tuffaceous sandstone belonging to the Kettle River Formation. The sandstones grade into buff to grey siltstone, with local narrow coal seams. Local areas of pebble to boulder conglomerate also occur. The conglomerates may be part of the underlying Springbrook Formation, although conglomerates similar in appearance to the basal Springbrook conglomerate do occur at higher levels within the Kettle River Formation.

Overlying the Kettle River sediments is a thick sequence of green to maroon coloured, commonly porphyritic, andesite, trachyte and phonolite volcanic flows that belong to the Marron Formation. Both the Eocene and pre-Eocene rocks are intruded by numerous dykes, sills and plugs of syenite, microdiorite and monzonite composition, which are collectively referred to as Coryell intrusions.

Numerous Tertiary aged faults are present on these claim blocks, and include both low angle east and west dipping “detachment type” faults, as well as steeper, normal and/or strike-slip faults. Most of the faults strike north-northeast.

A more detailed view of the geology in the Copper Camp area is included as Figure 6 in Caron (2006a). Many of the people responsible for the mapped and compiled geology disagree about details regarding rock types and contact locations in this area. Discrepancies are no doubt partly a result of poor location control during previous work programs, and differing interpretations in areas of alluvial cover.

In the Copper Camp area, a window of pre-Eocene rocks is exposed between the low-angle, west-dipping Copper Camp fault on the west, and the low-angle, east-dipping Copper Mountain fault on the east (Figure 3). Southwest of the main workings, Knob Hill chert and greenstone is exposed. The Knob Hill rocks are unconformably overlain to the east-northeast by an upright, east-facing sequence of Triassic Brooklyn Formation sharpstone conglomerate and limestone. The stratigraphy is generally north-northeast trending and moderately east dipping. The area is complexly faulted and details regarding stratigraphic or structural repetitions of various lithologies remain to be deciphered.

Kettle River sediments and Marron volcanics are exposed east-southeast of and in the hanging wall of the Copper Mountain fault (Figure 3). Marron volcanics are similarly exposed west of, and in the hanging wall of the Copper Camp fault. Several isolated areas of Eocene volcanics and sediments sit unconformably above the older rocks, between the Copper Camp and Copper Mountain faults. It is unclear whether these areas represent isolated flows and channel fill deposits, or whether they are remnant fault scabs that remain uneroded.

Attwood Claim Block

The geology in the area of the Attwood claim block is shown on Figure 3, with most of the following description and discussion from taken from Caron (2006d). The oldest rocks on the Property are metamorphic rocks belonging to the Permain Knob Hill Group (unit DPK). These rocks occur in the most southern portion of the property, in the footwall of the Mt. Wright fault. The Mt. Wright fault is a low angle, north dipping Jurassic thrust fault that regionally forms the boundary between Fyles' (1990) second and third thrust slices.

To the west of the property in the immediate hangingwall of the Mt. Wright fault, sediments of the Permain Attwood Formation are exposed (unit CPA). These rocks consist primarily of black, argillaceous siltstones and phyllites. They are in turn overlain by a thick sequence of fine grained greenstone and related microdiorite, believed to be part of the Triassic Brooklyn Formation (unit TrB) which covers the central and north part of the property. The volcanic rocks are typically chloritic greenstones, with fine feldspar textures, which are found to be commonly carbonate altered. Greenstones grade into massive fine grained, equigranular to weakly feldspar porphyritic microdiorite. Approximately in the center of the property, the Triassic Brooklyn Formation is intruded by the Eocence Coryell plutonic Suite (ECsy). The Coryell plutonic Suite is comprised of syenitic to monzonotic intrusive rocks.

Overlander Claim Block

The oldest rocks on the claim block belong to the late Paleozoic Knob Hill Group of dominantly volcanic affinity and consist mainly of chert greenstone and related intrusives and serpentine. Overlying these rocks are sediments and volcanics (largely argillite, siltstone, limestone and andesite) of the late Paleozoic Attwood Group. Rocks of the Knob Hill and Attwood groups are unconformably overlain by the Triassic Brooklyn Formation, represented largely by limestone, clastic sediments and pyroclastics. In many cases evidence for thrusting is seen by the older Knob Hill Group rocks resting over the younger Attwood Group or Brooklyn Formation rocks. The historically important Skarn deposits in the Greenwood area (i.e. Phoenix, Oro Denoro, Motherlode-Greyhound) are hosted within the Triassic rocks (Caron, 1997a).

The Overlander claim block encompasses Mt. Attwood and it's surroundings. On the central and eastern part of the claim block a wedge of Attwood Group rocks is sandwiched between the Mt. Attwood thrust fault to the south and the Lind Creek thrust fault to the north, both of which dip gently to the north. Both thrust faults are defined by exposures of serpentine but the Lind Creek Fault in particular has extensive serpentine development in the vicinity of the property, which can be the host to the mineralisation both on the property and on the adjoining areas. North of the Lind Creek thrust, old diorite of the Knob Hill Group is exposed, and hosts the Ophir veins. South of the Lind Creek fault Fyles' (1990) mapping shows a basal volcanic unit in the Attwood Group, which hosts disseminated and massive sulphide type mineralization at the Keno Extension showing. This is overlain by limestone (locally cherty) which is in turn overlain by a sedimentary package of siltstone, phyllite and conglomerate. Mapping in the Keystone-Montana area, revealed that the Attwood volcanics include a banded, cherty exhalative unit, with which massive sulphides at the Keystone showing are associated. Pyritic argillite is exposed in trenches on the Montana claim. A (K-Ar dated) Jurassic aged hornblende-feldspar porphyritic intrusive occurs at the headwaters of the Skeff Creek near the Keno veins. This same intrusion may cut the Attwood volcanic sequence near the Keystone workings. The older rocks are then intruded by a probable Cretaceous granodiorite intrusive in the Skeff Creek area, with the Evening Star skarn showings related to this intrusive event. The above sequence of rocks is cut by later Tertiary dykes (Caron, 1997a).

Motherlode Claim Block

The Paleozoic Knob Hill Group predominates geology on the Motherlode claim block. It is massive to brecciated pale grey to black chert. Minor contemporaneous andesitic tuff is found to be deposited with siliceous ooze, later flowing into a melange. Rare pods of vuggy, carbonaceous, silicified pale grey limestone occur as well. Bedding is poorly preserved throughout, and minute calcite veinlets are prevalent particularly in the brecciated chert. Minor silicification and alteration occurs as several dykes and sills of the Marron Formation and Nelson Intrusions invade the Knob Hill Group. Significant mineralization occurs as disseminated to massive pyrite, sphalerite arsenopyrite and minor pyrrhotite within the chert units (Konkin and Evans, 1986).

The middle Triassic Brooklyn Formation is found in the central part of the claim block and is divided into two members. The lower member is sharpstone conglomerate with many chert clasts; the upper is limestone with minor chert grains and significant skarn development. The sharpstone conglomerate is believed to be derived from erosional remnants that lie unconformably on the Knob Hill Group. The upper Brooklyn limestone member is the host unit for the auriferous skarn assemblage and outcrops in the north central part of the claims (Little, 1983).

The extreme north and south parts of the claim block are underlain Lower Cretaceous diorite and associated rock types which intrude Paleozoic sediments and volcanics. The sedimentary rocks are mainly argillite, chert and limestone and the volcanic rocks are mainly tuffs and fine pyroclastics. Both the volcanic rocks and the sedimentary units have been altered and silicified by the intrusives which makes field identification extremely difficult at times (Konkin and Evans, 1986; Glass, 1974).

The Sunset and Motherlode deposits are hosted within the conglomerates and limestones of the Triassic Brooklyn Formation, in the hangingwall of a low angle, north dipping, detachment type fault. Both zones of mineralization are truncated at depth by the fault. These rocks are intruded by relatively fresh pulaskite porphyry dykes, feeders to the Marron lavas and older, somewhat altered granodiorite offshoots of the Wallace Creek stock (Church, 1986).

In the southern part of the property the economic copper mineralization discovered to date in the Deadwood camp has been associated with skarnified sediments or skarnified volcanics. Lower grade disseminated copper is seen near diorite stocks and in shear zones associated with diorite stocks and in some instances with andesite pendants (Glass, 1974).

Sappho Claim Block

In the area of the Sappho claims, the oldest rocks are believed to be the Knob Hill Group, a metasedimentary and metavolcanic package of presumed Permian or Carboniferous age, these are located around the northern edges of the property (unit DPK, Figure 4). On the northeast edge of the claim block a thick band of serpentine (largely altered to listwanite) occurs striking westerly across the claims (Caron, 1991b). This alteration is presumed to be a result of a major thrusting event. The serpentine band marks the position of the number 7 fault that separates the first and second thrust slices described by Fyles, (1990). Overlying the serpentine band are the interbedded metasediments and volcanics of the Knob Hill Group, cut by rare dykes of the Marron and Nelson intrusives.

The central portion of the claim block is underlain by Jurassic-Cretaceous diorite-monzodiorite (microdiorite) (unit MJgr, Figure 3), which cuts the Paleozoic Knob Hill Group (and/or possible Triassic Brooklyn Formation) and Attwood Group (unit CPA, Figure 3) greenstone, serpentinite and argillite. The Sappho Alkalic complex, host to the Cu-Ag-PGE (+/- Au) mineralization, intrudes the Jurassic-Cretaceous rocks in the central portion of the property. The Sappho alkaline complex is mainly a hornblende-biotite-clinopyroxenite with minor melanocratic garnet monzonite/syenite. Later potassium feldspar megacrystic syenite dykes cut the earlier phases. These alkalic rocks have previously been categorized as part of the Eocene Coryell suite, however a minimum Ar-Ar age of 156 +/- 3 Ma (on primary amphibole from the pyroxenite) has recently been reported (Nixon and Archibald, 2002). The alkalic intrusive rocks are exposed as two discrete bodies, the largest covering an area of 300 x 100 m. The potassium feldspar megacrystic syenite phase has also been observed in a third area to the southwest, where rock exposure is extremely poor. To the north, the Sappho alkalic complex is truncated by a northeast trending Tertiary fault that places Knob Hill Group chert and Eocene Marron volcanics against older intrusive rocks. Fyles' (1990) mapping identifies this fault as the regional Bodie Mountain fault.

2008 EXPLORATION

Exploration on the Greenwood Property during 2008 consisted of a reconnaissance sampling program and a helicopter-borne time domain electromagnetic and magnetic geophysical survey flown over the property. The locations and details of the samples are presented on Figures 4 and 5, and in Appendices 2 to 4. The preliminary results of the airborne survey are presented on Figures 6 to 8 and in Appendices 5 and 6.

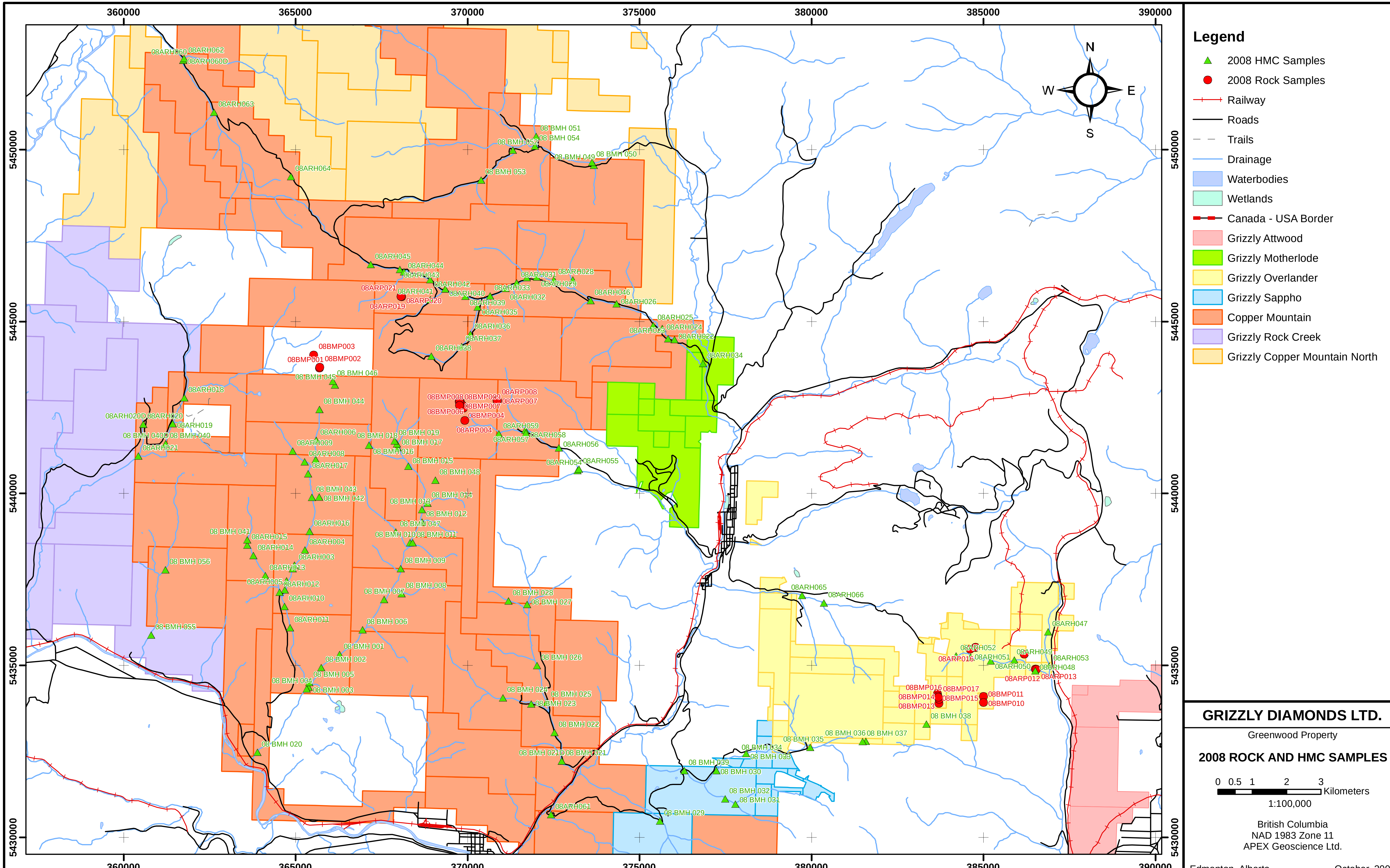
SAMPLING PROGRAM

Between May 12 and 25, 2008, 127 heavy mineral concentrate (HMC) and 38 rock samples were collected on the Greenwood Property (Appendix 2 and Figure 4). The HMC samples were processed by the Saskatchewan Research Council (SRC) of Saskatoon, Saskatchewan (Appendix 3) and the rock samples were processed by TSL Laboratories (TSL) of Saskatoon, Saskatchewan (Appendix 4).

Sampling Method and Approach

During 2008, HMC and rock sampling was conducted by APEX personnel at the Greenwood property under the supervision of Mr. Mike Dufresne, a Qualified Person. A total of 127 HMC samples weighing 3.2-9.6 kg were collected from stream sediments (Figures 4 and 5). Rock grab samples that were collected during the 2008 exploration were collected from either outcrop or boulders. The 38 rock grab samples that were collected on the Property were taken from previously discovered showings in order to verify prior precious and base metal values (Figures 4 and 5). The samples are all considered to be grab samples and therefore do not represent a ‘grade across width’ but do represent the presence of mineralization within the Property.

Sample numbers and locations were noted in field books. Sample identifiers were written on the outside of each bag (on both sides) and part of the sample card was placed in the bag with the HMC or rock sample number written on it. All sample bags were closed using zip ties. The samples were then all placed in double bagged rice bags with SRC or TSL and APEX addresses and phone numbers. The rock samples were sent to TSL Laboratories in Saskatoon, Saskatchewan. The HMC samples were sent to SRC Laboratories in Saskatoon, Saskatchewan. TSL and SRC laboratories reported nothing unusual with respect to the shipments, once received. The author did not have control over the samples and therefore can not personally verify what happened to the samples from the time they left the field to the time they were received at Laboratories. However, the author has no reason to believe that the security of the samples was compromised.


Legend
2008 HMC Samples
2008 Rock Samples
Railway
Roads
Trails
Drainage
Waterbodies
Wetlands
Canada - USA Border
Grizzly Attwood
Grizzly Motherlode
Grizzly Overlander
Grizzly Sappho
Copper Mountain
Grizzly Rock Creek
Grizzly Copper Mountain North
N
S
E
W
GRIZZLY DIAMONDS LTD.
Greenwood Property
2008 ROCK AND HMC SAMPLES
0 0.5 1 2 3 Kilometers
1:100,000
British Columbia
NAD 1983 Zone 11
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008
FIGURE 4

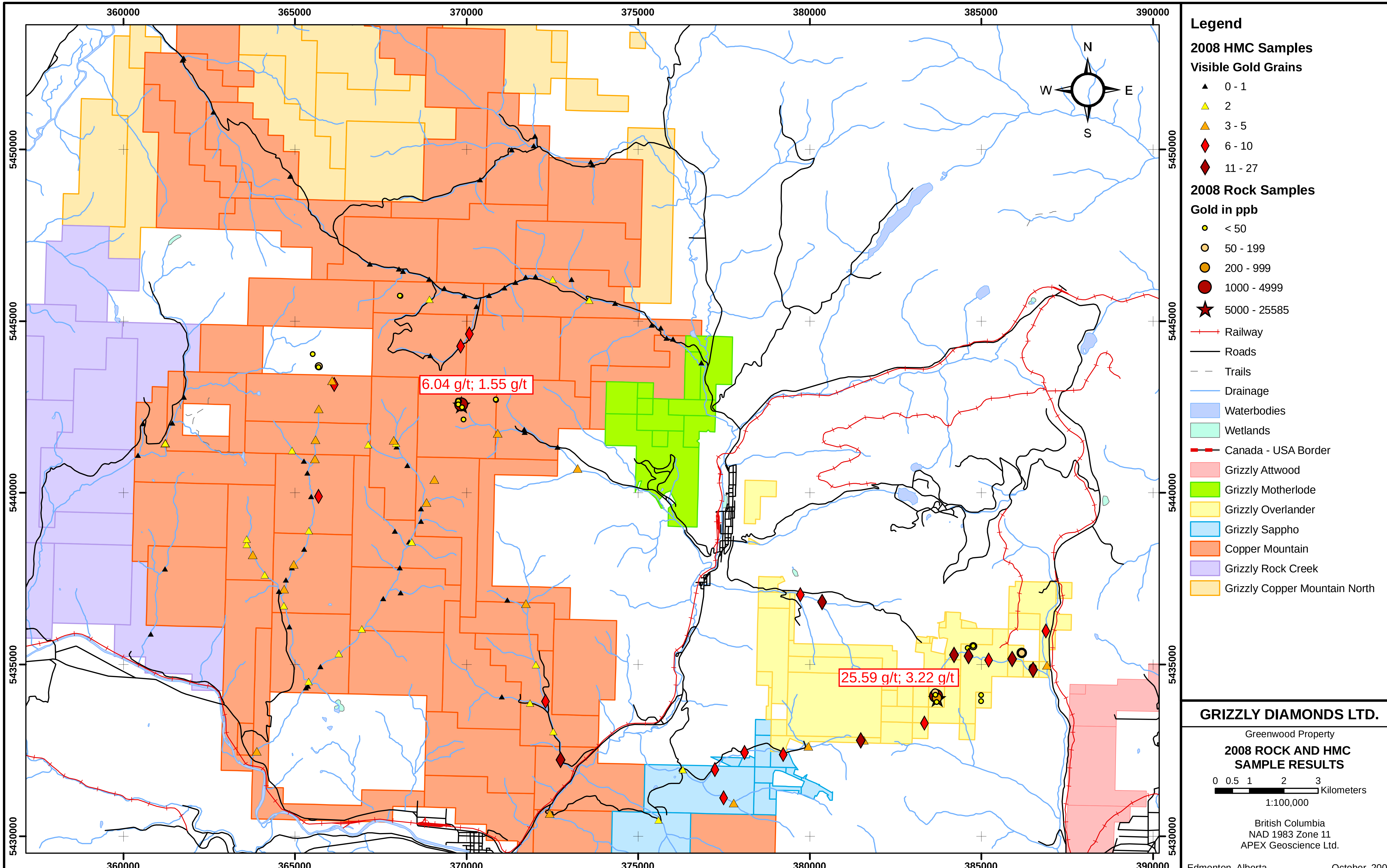

6.04 g/t; 1.55 g/t
25.59 g/t; 3.22 g/t
N
S
E
W
360000
365000
370000
375000
380000
385000
390000
5450000
5445000
5440000
5435000
5430000
Legend
2008 HMC Samples
Visible Gold Grains
0 - 1
2
3 - 5
6 - 10
11 - 27
2008 Rock Samples
Gold in ppb
< 50
50 - 199
200 - 999
1000 - 4999
5000 - 25585
Railway
Roads
Trails
Drainage
Waterbodies
Wetlands
Canada - USA Border
Grizzly Attwood
Grizzly Motherlode
Grizzly Overlander
Grizzly Sappho
Copper Mountain
Grizzly Rock Creek
Grizzly Copper Mountain North
GRIZZLY DIAMONDS LTD.
Greenwood Property
2008 ROCK AND HMC SAMPLE RESULTS
0 0.5 1 2 3 Kilometers
1:100,000
British Columbia
NAD 1983 Zone 11
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008

FIGURE 5

Sample Preparation and Analyses

The HMC samples were submitted to SRC for physical gold grain recovery. The rock samples were submitted to TSL for a 30 element Aqua Regia ICP analysis and for fire assay (FA) for gold.

The HMC samples were sent to SRC for gold grain recovery. The samples are screened at 1.7mm. The + 1.7mm fraction is bagged, weighed and stored. The -1.7mm fraction is separated into lights and a concentrate using a Knelson concentrator. The light material is bagged. The concentrate material is then screened at 0.85 mm (the +0.85mm fraction is separated and bagged) and the minus 0.85mm fraction is demagnetized and processed using a Mozely separator. The Mozley light material is put to the side and the gold grains are picked from the concentrate and counted. The picked gold grains are then put back into original Knelson concentrate (-0.85mm fraction). The sample is then dried and weighed in preparation for further processing.

The rock samples are first dried and then are pulverized using a ring and puck crushing system, usually and LM5 or equivalent. Once crushed the samples are screened through an 80 mesh sieve. A 30 gram charge is then taken from the minus 80 mesh fraction and the entire plus fraction is retained. The gold is then analyzed using fire assay (FA) with an Atomic Absorption (AA) wet chemical finish. Assay values greater than 3000 ppb are re-assayed using FA with a gravimetric finish. Gold detection limits for FA by AA is 5 ppb and for FA by gravimetric is 30 ppb. The minus fraction was sent for multi-acid Inductively Coupled Plasma Spectrometry (ICP). The ICP analysis detects 30 elements and the use of the multi-acid (HNO3-HCLO4-HF-HCL) digestion liberates more elements than the Aqua Regia partial leaching process. The elements are then detected by their characteristic wavelength specific light, which can then be measured by the ICP Spectrometer.

All SRC and TSL Laboratories employees are required to sign a Confidentiality Agreement and only management and supervisory personnel have access to results.

Results and Interpretation

Of the 127 HMC samples collected, a total of 86 samples yielded visible gold with no gold was recovered from 41 samples (Figure 5 and Appendix 3). The highest grain count was 27 with an estimated weight of 84.27 ɥg (Sample 08ARH066 with a starting weight of 5.5kg). The highest gold weight recovered was 199.7 ɥg for 15 picked Au grains in sample 08BMH021D with a starting weight of 5.1kg. The gold pick results for the HMC samples are presented on Figure 5 and in Appendix 3.

From the 38 rock samples, Au values of <5 to >3000 ppb were recovered. Fourteen samples had ≥30 ppb Au and 6 samples returned gold values >1000 ppb. Three samples had >3000 ppb Au. Of these 2 are located in the central Overlander property and sampled quartz vein outcrops in an adit and trench. The third sample is a boulder from the Copper Camp area on the Copper Mountain Property. The rock sample results are presented in Figure 5 and Appendix 4.

AIRBORNE GEOPHYSICAL SURVEY

A helicopter-borne airborne geophysical survey consisting of magnetics and time domain electromagnetics (EM) was conducted by Aeroquest Limited (Aeroquest) on behalf of Grizzly from June 16 to June 27, 2008. A total of 2,447.1 line-km was flown over the majority of the property using a standard magnetic and a proprietary time domain electromagnetic (EM) airborne system known as AeroTEM III (Appendices 5 and 6). The survey was oriented east-west, with a line spacing of 150 m and tielines at a line spacing of approximately 1.4 km. The survey was conducted out of Grand Forks using a Eurocopter AStar 350B2. The survey specifications and an operations report are presented in Appendix 5. The results of the airborne survey are presented on Figures 6 to 8.

In conducting the airborne survey, the principal geophysical sensor is Aeroquest's exclusive AeroTEM III time domain electromagnetic system, which is employed in conjunction with a high-sensitivity cesium vapour magnetometer. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer. Full-waveform streaming EM data is recorded at 38,400 samples per second. The streaming data comprise the transmitted waveform, and the X component and Z component of the resultant field at the receivers. A secondary acquisition system (RMS) records the ancillary data.

Survey Specifications and Procedures

The survey coverage was calculated by adding up the along-line distance of the survey lines and control (tie) lines as presented in the final Geosoft database. The control (tie) lines were flown perpendicular to the survey lines with a spacing of 10 times the line spacing. The nominal EM bird terrain clearance is 30m, but in areas of rugged terrain and where tall trees are present, the terrain clearance is more typically 40 m to 45 m for safety considerations. The magnetometer sensor is located in a smaller bird connected to the tow rope 17 meters above the EM bird. Nominal survey speed over relatively flat terrain is 75 km/hr but is significantly lower in rougher terrain. Scan rates for ancillary data acquisition is 0.1 second for the magnetometer and altimeter, and 0.2 second for the GPS determined position. The EM data is acquired as a data stream at a sampling rate of 38,400 samples per second and is processed to generate final data at 10 samples per second. The 10 samples per second translate to a geophysical reading about every 1.5 to 2.5 meters along the flight path.

Navigation is carried out using a GPS receiver, an AGNAV system for navigation control, and an RMS DGR-33A data acquisition system which records the GPS coordinates. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.2 second intervals. The system has a published accuracy of less than 5 meters. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 meters and for z under 1.5 meters over a two-hour period.

Unlike frequency domain electromagnetic systems, the AeroTEM III system has negligible drift due to thermal expansion. The operator is responsible for ensuring the instrument is properly warmed up prior to departure and that the instruments are operated properly throughout the flight. The operator maintains a detailed flight log during the survey noting the times of the flight and any unusual geophysical or topographic features. Each flight included at least two high elevation 'background' checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

On return of the pilot and operator to the base, usually after each flight, the AeroDAS streaming EM data and the RMS data are carried on removable hard drives and FlashCards, respectively and transferred to the data processing work station. At the end of each day, the base station magnetometer data on FlashCard is retrieved from the base station unit. Data verification and quality control includes a comparison of the acquired GPS data with the flight plan; verification and conversion of the RMS data to an ASCII format XYZ data file; verification of the base station magnetometer data and conversion to ASCII format XYZ data; and loading, processing and conversion of the steaming EM data from the removable hard drive. All data is then merged to an ASCII XYZ format file which is then imported to an Oasis database for further QA/QC and for the production of preliminary EM, magnetic contour, and flight path maps. Survey lines which show excessive deviation from the intended flight path are re-flown. Any line or portion of a line on which the data quality did not meet the contract specification was noted and reflown.

Aircraft and Equipment

A Eurocopter AStar (Aerospatiale) AS350B2 helicopter was used as survey platform. The helicopter was owned and operated by HiWood Helicopters from Okotoks AB. The survey aircraft was flown at a nominal terrain clearance of 220 ft (70 m).

The Aeroquest airborne survey system employs the Geometrics G-823A cesium vapour magnetometer sensor installed in a two meter towed bird airfoil attached to the main tow line, 17 meters below the helicopter. The sensitivity of the magnetometer is 0.001 nanoTesla (nT) at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird is 35 meters. The magnetic data is recorded at 10Hz by the RMS DGR-33.

The electromagnetic system is an Aeroquest AeroTEM III time domain towed-bird system. The current AeroTEM transmitter dipole moment is 38.8 kNIA. The AeroTEM bird is towed 37 m (125 ft) below the helicopter. More technical details of the system are listed in Appendix 5. The wave-form is triangular with a symmetric transmitter on-time pulse of 1.10 ms and a base frequency of 150 Hz (Figure 6). The current alternates polarity every ontime pulse. During every Tx on-off cycle (300 per second), 128 contiguous channels of raw x and z component (and a transmitter current monitor, itx) of the received waveform are measured. Each channel width is 26.04 microseconds starting at the beginning of the transmitter pulse. This 128 channel data is referred to as the raw streaming data. The AeroTEM© system has two separate EM data recording streams, the conventional RMS DGR-33A and the AeroDAS system which records the full waveform.

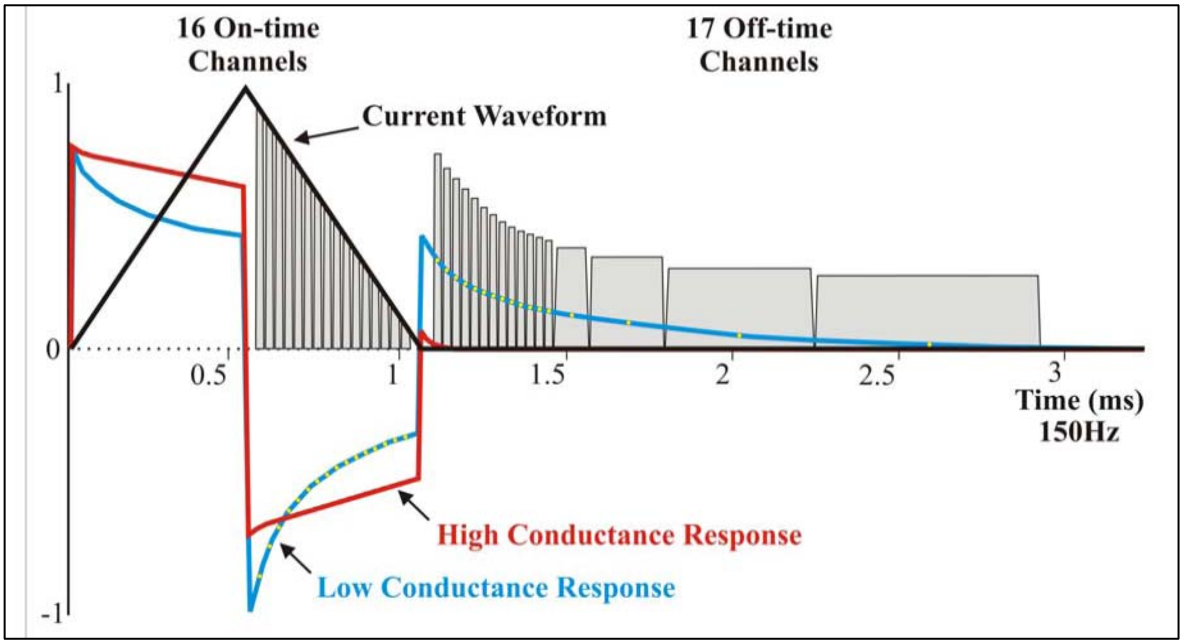


Figure 6: Schematic of Transmitter and Receiver Waveforms

The 128 channels of raw streaming data are recorded by the AeroDAS acquisition system onto a removable hard drive. The streaming data are processed post-survey to yield 33 stacked and binned on-time and off-time channels at a 10 Hz sample rate.

In addition to the magnetics, altimeter and position data, six channels of real time processed off-time data from the Z component and channel from the X component are recorded by the RMS DGR-33A acquisition system at 10 samples per second and plotted real-time on the analogue chart recorder, These channels are derived by a binning, stacking and filtering procedure on the raw streaming data. The primary use of the RMS EM data is to provide for real-time QA/QC on board the aircraft.

The base magnetometer was a Geometerics G-858 cesium vapour magnetometer. Data logging and UTC time synchronization was carried out within an external data logging computer, with an external GPS providing the timing signal. That data logging was configured to measure at 0.1 second intervals (10Hz). Digital recording resolution was 0.001 nT. The sensor was placed on a tripod in an area free of cultural noise sources. A continuously updated display of the base station values was available for viewing and regularly monitored to ensure acceptable data quality and diurnal levels.

A Terra TRA 3500/TRI-30 radar altimeter is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. The recorded data represents the height of the antenna, i.e. helicopter, above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 meters.

A high resolution colour digital video camera is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

The navigation system consists of an Ag-Nav Incorporated AG-NAV2 GPS navigation system comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations, located on the east and west coasts, collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of less than 3 meters. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of under 0.6 meters and for z under 1.5 meters over a two-hour period. Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was WGS84 [World] using the UTM zone 11N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 second intervals.

The AeroTEM received waveform sampled during on and off-time at 128 channels per decay, 300 times per second, was logged by the proprietary AeroDAS data acquisition system. The channel sampling commences at the start of the Tx cycle and the width of each channel is 26.04 microseconds. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field-processing computer. The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channel EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128Mb capacity FlashCard. The RMS output was also directed to a thermal chart recorder.

Deliverables

Typically, four geophysical products are presented by Aeroquest including a coloured Total Magnetic Intensity (TMI) with line contours and EM anomalies; AeroTEM Off-Time Z1 colour grid with line contours and EM anomalies; AeroTEM Off-Time Profiles (Z2-Z12) and EM anomalies; and a Tilt Derivative of TMI with line contours and EM anomalies. The final digital data has been received from Aeroquest along with an operations report. A coloured TMI map with EM anomalies and a coloured Off Time Z1 EM map with EM anomalies are presented as Figures 7 and 8 at the back of the report. The coordinate and projection system for the maps is NAD83 Universal Transverse Mercator Zone 11 (for Canada; Central America; Mexico; USA (ex Hawaii Aleutian Islands)). Both Figures show EM anomaly picks represented by an anomaly symbol classified according to calculated on-time conductance. The anomaly symbol is accompanied by postings denoting the calculated ontime conductance, a thick or thin classification and an anomaly identifier label. The anomaly symbol legend is given in the margin of the figures.

Data Processing and Presentation

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The terrain clearance was maintained with reference to the radar altimeter. The raw Digital Terrain Model (DTM) was derived by taking the GPS survey elevation and subtracting the radar altimeter terrain clearance values. The calculated topography elevation values are relative to WGS84 (GPS) altitude and are not tied in to surveyed geodetic heights.

Each flight included at least two high elevation ‘background’ checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

Magnetic Data

Prior to any leveling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using a random grid technique with a grid cell size of 25 meters. The final leveled grid provided the basis for threading the presented contours which have a minimum contour interval of 10 nT.

In order to enhance subtle magnetic trends a ‘tilt’ derivative product was calculated from the total magnetic intensity (TMI) grid. The Tilt Derivative (TDR) of the

TMI enhances low amplitude and small wavelength magnetic features which define shallow basement structures as well as potential mineral exploration targets. The TILT derivative can be though of as a combination of the first vertical derivative and the total horizontal derivative of the total magnetic intensity. The TDR digital grid and maps have not been received as of the date of this report. Figure 7 presents TMI with EM anomalies superimposed on the colored TMI map.

Electromagnetic Data

The raw streaming data, sampled at a rate of 38,400 Hz (128 channels, 300 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, leveled and split up into the individual line segments. Further base level adjustments may be carried out at this stage.

The final field processing step was to merge the processed EM data with the other data sets into a Geosoft GDB file. The EM fiducial is used to synchronize the two datasets. The processed channels are merged into ‘array format; channels in the final Geosoft database as Zon, Zoff, Xon, and Xoff.

The filtering of the stacked data is designed to remove or minimize high frequency noise that can not be sourced from the geology. Apparent bedrock EM anomalies were interpreted with the aid of an auto-pick from positive peaks and troughs in the on-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between thin and thick conductor types. Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centers on the maps.

At each conductor pick, estimates of the off-time conductance have been generated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Some of the EM anomaly picks do not display a tau value; this is due to the inability to properly define the decay of the conductor usually because of low signal amplitudes. Each conductor pick was then classified according to a set of seven ranges of calculated off-time conductance values. For high conductance sources, the on-time conductance values may be used, since it provides a more accurate measure of high-conductance sources. Each symbol is also given an identification letter label, unique to each flight line. Conductor picks that did not yield an acceptable estimate of off-time conductance due to a low amplitude response were classified as a low conductance source. Please refer to the anomaly symbol legend located at the base of the maps. The EM anomalies are displayed on both Figures 7 and 8. Contoured conductivity is also presented as a coloured image of ZOff2 (off time conductance channel 2) along with the picked EM anomalies on Figure 8. The details of the individual EM anomalies are presented in a table format in Appendix 6.

Results and Interpretation

The survey was successful in identifying a number of distinct formational and structural magnetic features that will aid in the geological mapping of the area (Figures 7 and 8). As an example, the magnetics, in particular northeast trending magnetic lows, are useful in defining the major fault zones on the property. Areas of Eocene volcanics and intrusives also appear to be well defined by the aeromagnetics, due to their high magnetic response. A large east trending strongly magnetic complex in the western portion of the property does however, contradict the known geological mapping. This zone along with a number of east-trending spatially related conductive zones will require follow up and further geological mapping (Figures 3, 7 and 8).

The survey also yielded a number of poor quality to high quality EM anomalies across the property (Figures 7 and 8). There appear to be a number of high quality EM anomalies in the western, southern and eastern portion of the property. Some of the high quality EM anomalies are coincident with linear magnetic lows, particularly northeast trending lows in the western and southern portion of the property. These anomalies likely represent graphite bearing faults and structures although they could also be the result of structurally controlled sulphidic zones. There are a number of EM anomalies that are coincident with linear magnetic highs, particularly in the western portion of the property. This type of association is likely indicative of a formational anomaly such as graphitic mudstone. Some of these anomalies need to be prospected and sampled as they could also be the result of sulphidic zones. There are a number of coincident isolated magnetic and EM anomalies that are of high interest for exploration that could represent intrusions with coincident skarn mineralization of pyrrhotite rich sulphidic zones, which could be prospective for precious and base metal mineralization. These types of anomalies are present in the western, southern and eastern portion of the property.

As the final airborne geophysical results have not been received, a full interpretation looking at historical metal occurrences in conjunction with the 2008 stream and rock sampling along with the results of the airborne geophysical survey has not yet been conducted. This work will be need to be performed over the coming months prior to the 2009 field season.

EXPLORATION EXPENDITURES

The 2008 exploration program conducted by APEX resulted in a total expenditure of approximately $413,978.05 on the Greenwood Property. A breakdown of expenses is presented in Appendix 7.

CONCLUSIONS

The Greenwood property has an excellent structural and stratigraphic setting for a variety of mineral deposit types, including copper-gold skarn mineralization, auriferous VMS sulphide/oxide mineralization and epithermal or structurally controlled Eocene-aged gold mineralization. Recent work in the Boundary District has resulted in new metallogenic models that are being successfully applied elsewhere in the district. A reevaluation of the Greenwood property, in light of these new models, is strongly recommended.

There are a number of known mineral occurrences on the property that represent several styles of mineralization. Most of the previous exploration has been at the Copper Camp showing and has focused on copper mineralization within the Triassic Brooklyn Formation. The Eocene rocks on the property are under-explored.

A helicopter-borne time domain EM and magnetometer survey was flown over a large portion of the property during 2008. Aeromagnetics was useful in defining the major fault zones on the property. Areas of Eocene volcanics and intrusives were also well defined by the aeromagnetics, due to their high magnetic response. The survey identified several conductors and discreet EM anomalies that require ground follow-up to assess their significance. Several of these conductors are situated along geological contacts or known structures, and are a high priority for follow-up exploration. Prospecting, geological mapping and rock sampling is recommended in the vicinity of each of the conductors, to prioritize them for follow-up excavator trenching and drill testing.

The 2008 HMC sampling has yielded a number of high gold grain counts in streams around the Copper Camp area, and in particular, in the vicinity of a couple of conductors with a number of discreet high quality EM anomalies (Figures 3, 5, 7 and 8). A second major area of interest based upon the stream sediment sampling is the Overlander area just south of Merit's Golden Crown property and minesite (Figures 3, 5, 7 and 8). This area has yielded a number of high gold grain counts in streams north and south of the easterly trending Overlander target area. There are also a number of spatially associated discreet EM Anomalies along or coincident with the Overlander trend. These anomalies require follow-up exploration.

In addition to the targets identified by the geophysical survey, there are a number of areas resulting from previous work programs on the property that require further exploration. Anomalous gold in stream sediments in Ingram Creek and in a tributary to Wallace Creek should be followed-up. Alteration and mineralization within the Eocene rocks is known on Deadwood and Ingram Ridges and in the vicinity of the Poppy showing. These areas should be thoroughly prospected for epithermal gold mineralization related to the western margin of the Toroda graben. An occurrence of silicification in limestone near the Pen showing should also be located and re-assessed.

RECOMMENDATIONS

Based upon the positive preliminary results of the 2008 helicopter-borne magnetic and time domain EM survey over Grizzly's Greenwood Property, along with the positive results of HMC stream sediment sampling and rock sampling, it is strongly recommended that an aggressive two stage office and field program be implemented. The Stage 1 work should consist of compiling and interpreting the final results of the airborne geophysical survey including a full blown geological and structural interpretation with a view towards identifying potential structural and sulphide targets for precious and base metals. Once this is completed, a Stage 2 fieldwork program should be conducted that consists of an aggressive prospecting, geological mapping, follow-up rock and HMC sampling program leading to some pointed excavator trenching of the high priority targets. The estimated cost to complete the recommended Stage 1 and 2 programs during 2008 and 2009 is $250,000.

APEX Geoscience Ltd.

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Edmonton, Alberta, Canada

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CERTIFICATE OF AUTHOR

Michael B. Dufresne, M.Sc., P.Geol., do hereby certify that:

1. I am President of: APEX Geoscience Ltd.
   Suite 200, 9797 – 45th Avenue
   Edmonton, Alberta T6E 5V8
   Phone: 780-439-5380

2. I graduated with a B.Sc. Degree in Geology from the University of North Carolina at Wilmington in 1983 and with a M.Sc. Degree in Economic Geology from the University of Alberta in 1987.

3. I am and have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) since 1989 and I am a 'Qualified Person' in relation to the subject matter of this report.

4. I have worked as a geologist for more than 20 years since my graduation from university.

5. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

6. I have visited the property that is the subject of this Report during October, 2007 and June, 2008.

June 10th, 2009
Edmonton, Alberta, Canada

Michael B. Dufresne, M.Sc., P.Geol.

CERTIFICATE OF AUTHOR

I, Anetta Banas, residing at #413, 10717-83 Ave, Edmonton, Alberta, Canada do hereby certify that:

1. I am a graduate of the University of Alberta with a BSc Degree in Geology (2002) and a MSc degree in Earth and Atmospheric Sciences (2005) and have practiced my profession continuously since January, 2006.

2. I am a Geologist-in-Training registered with APEGGA (Association of Professional Engineers, Geologists and Geophysicists of Alberta).

3. I have not received, nor do I expect to receive, any interest directly or indirectly, in the Greenwood.

4. I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report of the omission to disclose which makes the Report misleading.

5. I have not visited the properties that are the subject of this Report.

Edmonton, Alberta
October 14, 2008

Anetta Banas, MSc., G.I.T.

Appendix 1

Greenwood Property
Mineral Claims Listing

GRIZZLY DIAMONDS LTD. GREENWOOD MINERAL CLAIMS - SEPTEMBER 2008

ORIGINAL MINEWORKS GREENWOOD LANDS - OPTIONED TO GRIZZLY DIAMONDS LTD.												
Tenure Number	**Block name**	**Tenure Type**	**Claim Name**	**Owner**	**Owner Name**	**Map Number**	**Issue Date**	**Good To Date**	**Status**	**Mining Division**	**Area (ha)**	**Acres**
516822	Attwood	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/jul/11	2009/sep/19	Good	GREENWOOD	360.0470	
534268	Attwood	Mineral	EAGLE2006	137109 (100%)	Rippon, Donald John	082E	2006/may/21	2009/sep/30	Good	GREENWOOD	317.5670	
541073	Attwood	Mineral	VIEW-07-1000	137109 (100%)	Rippon, Donald John	082E	2006/sep/11	2009/aug/31	Good	GREENWOOD	275.4300	
552139	Attwood	Mineral	GRANDBY 2007	137109 (100%)	Rippon, Donald John	082E	2007/feb/16	2009/jul/30	Good	GREENWOOD	169.3610	
575271	Attwood	Mineral	EAGLE 2008	137109 (100%)	Rippon, Donald John	082E	2008/feb/04	2009/feb/04	Good	GREENWOOD	21.1700	
582163	Attwood	Mineral	GRANBY NORTH	137109 (100%)	Rippon, Donald John	082E	2008/apr21	2009/apr21	Good	GREENWOOD	507.9291	
517943	Motherlode	Mineral	DEADWOOD RIDGE	137109 (100%)	Rippon, Donald John	082E	2005/jul/18	2017/jul/18	Good	GREENWOOD	486.3840	
550151	Motherlode	Mineral	DEADWOOD RIDGE 2000	137109 (100%)	Rippon, Donald John	082E	2007/jan/24	2010/feb/06	Good	GREENWOOD	63.4210	
551512	Motherlode	Mineral	GREENWOOD 1000	137109 (100%)	Rippon, Donald John	082E	2007/feb/09	2010/feb/09	Good	GREENWOOD	84.5660	
555495	Motherlode	Mineral	DEADWOOD NORTH	137109 (100%)	Rippon, Donald John	082E	2007/apr/01	2009/jul/31	Good	GREENWOOD	169.0810	
555515	Motherlode	Mineral	MOTHERLODE	137109 (100%)	Rippon, Donald John	082E	2007/apr/01	2010/jul/31	Good	GREENWOOD	21.1400	
555520	Motherlode	Mineral	MOTHERLODE 1000	137109 (100%)	Rippon, Donald John	082E	2007/apr/02	2010/jul/31	Good	GREENWOOD	84.5570	
555521	Motherlode	Mineral	MOTHERLODE 2000	137109 (100%)	Rippon, Donald John	082E	2007/apr/02	2010/jul/31	Good	GREENWOOD	21.1380	
555529	Motherlode	Mineral	MOTHERLODE 3000	137109 (100%)	Rippon, Donald John	082E	2007/apr/02	2010/jul/31	Good	GREENWOOD	63.4280	
555530	Motherlode	Mineral	MOTHERLODE 4000	137109 (100%)	Rippon, Donald John	082E	2007/apr02	2010/jul/31	Good	GREENWOOD	21.1440	
562583	Motherlode	Mineral	MOTHERLODE NORTH 2000	137109 (100%)	Rippon, Donald John	082E	2007/jul/09	2009/jul/16	Good	GREENWOOD	63.4100	
508083	Overlander	Mineral	LIND CREEK	137109 (100%)	Rippon, Donald John	082E	2005/feb/28	2010/feb/28	Good	GREENWOOD	42.3230	
508084	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/feb/28	2010/jun/04	Good	GREENWOOD	42.3420	
508086	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/feb/28	2010/jun/04	Good	GREENWOOD	42.3420	
508297	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/mar/06	2010/apr/10	Good	GREENWOOD	232.8540	
512209	Overlander	Mineral	POWERLINE	137109 (100%)	Rippon, Donald John	082E	2005/may/08	2009/sep/30	Good	GREENWOOD	21.1760	
512318	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/10	2010/apr/30	Good	GREENWOOD	21.1680	
513767	Overlander	Mineral	ATTWOOD	137109 (100%)	Rippon, Donald John	082E	2005/jun/01	2009/sep/30	Good	GREENWOOD	508.1520	
513768	Overlander	Mineral	ATTWOOD-NORTH	137109 (100%)	Rippon, Donald John	082E	2005/jun/01	2009/jun/01	Good	GREENWOOD	127.0120	
513769	Overlander	Mineral	ATTWOOD--EAST	137109 (100%)	Rippon, Donald John	082E	2005/jun/01	2010/jun/01	Good	GREENWOOD	21.1720	
513770	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/jun/02	2009/may/15	Good	GREENWOOD	84.7060	
513771	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/jun/02	2010/may/15	Good	GREENWOOD	42.3480	
517002	Overlander	Mineral	JACKPOT	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2010/jul/12	Good	GREENWOOD	126.9880	
517015	Overlander	Mineral	JC3	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2010/jul/12	Good	GREENWOOD	21.1660	
517067	Overlander	Mineral	ATTWOOD-NORTH	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/aug/31	Good	GREENWOOD	190.5070	
517077	Overlander	Mineral	ATTWOOD-NORTH2	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	42.3200	
517087	Overlander	Mineral	ATTWOOD--WEST	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	21.1700	
517117	Overlander	Mineral	ATTWOOD-SOUTH 2	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	148.2420	
517243	Overlander	Mineral	GOLD2005	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	63.4900	
517317	Overlander	Mineral	ATTWOOD FRACTION	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	42.3460	
523547	Overlander	Mineral	GREENWOOD	137109 (100%)	Rippon, Donald John	082E	2005/dec/06	2009/feb/06	Good	GREENWOOD	105.7570	
524951	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2006/jan/09	2009/jul/19	Good	GREENWOOD	42.3420	
524953	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2006/jan/09	2009/sep/30	Good	GREENWOOD	21.1740	
524988	Overlander	Mineral		137109 (100%)	Rippon, Donald John	082E	2006/jan/10	2009/apr/20	Good	GREENWOOD	21.1760	
534269	Overlander	Mineral	JC 2006	137109 (100%)	Rippon, Donald John	082E	2006/may/21	2009/sep/30	Good	GREENWOOD	42.3250	
534270	Overlander	Mineral	JC NORTH	137109 (100%)	Rippon, Donald John	082E	2006/may/21	2009/sep/30	Good	GREENWOOD	21.1590	
534397	Overlander	Mineral	SKEFF CREEK FR	137109 (100%)	Rippon, Donald John	082E	2006/may/26	2009/sep/30	Good	GREENWOOD	21.1680	
534566	Overlander	Mineral	SKEFF 1000	137109 (100%)	Rippon, Donald John	082E	2006/may/29	2009/sep/30	Good	GREENWOOD	84.6710	
536601	Overlander	Mineral	JACKPOT 2000	137109 (100%)	Rippon, Donald John	082E	2006/jul/04	2009/jul/30	Good	GREENWOOD	211.6160	
536602	Overlander	Mineral	JACKPOT 3000	137109 (100%)	Rippon, Donald John	082E	2006/jul/04	2009/jul/19	Good	GREENWOOD	21.1680	
536603	Overlander	Mineral	JACKPOT 4000	137109 (100%)	Rippon, Donald John	082E	2006/jul/04	2009/jul/30	Good	GREENWOOD	21.1680	
539783	Overlander	Mineral	OVERLANDER 2006	137109 (100%)	Rippon, Donald John	082E	2006/aug/23	2009/sep/30	Good	GREENWOOD	84.6890	
542782	Overlander	Mineral	SKEFF 1000	137109 (100%)	Rippon, Donald John	082E	2006/oct/08	2009/oct/08	Good	GREENWOOD	21.1630	
542784	Overlander	Mineral	SKEFF 2000	137109 (100%)	Rippon, Donald John	082E	2006/oct/08	2009/oct/08	Good	GREENWOOD	21.1650	
546781	Overlander	Mineral	JACKPOT 6000	137109 (100%)	Rippon, Donald John	082E	2006/dec/06	2008/dec/22	Good	GREENWOOD	21.1630	

547991	Overlander	Mineral	JIM 1000	137109 (100%)	Rippon, Donald John	082E	2006/dec/26	2009/dec/26	Good	GREENWOOD	21.1720	
547995	Overlander	Mineral	MAY 1000	137109 (100%)	Rippon, Donald John	082E	2006/dec/26	2008/dec/26	Good	GREENWOOD	21.1750	
402538	Sapho	Mineral	GOLD #2	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
402539	Sapho	Mineral	GOLD #3	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
402544	Sapho	Mineral	GOLD #8	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
402546	Sapho	Mineral	GOLD #10	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
402547	Sapho	Mineral	GOLD #11	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
402548	Sapho	Mineral	GOLD #12	137109 (100%)	Rippon, Donald John	082E007	2003/may/17	2008/may/11	Good	GREENWOOD	25.0000	
412317	Sapho	Mineral	GOLD401	137109 (100%)	Rippon, Donald John	082E007	2004/jul/03	2010/jul/03	Good	GREENWOOD	25.0000	
412318	Sapho	Mineral	GOLD402	137109 (100%)	Rippon, Donald John	082E007	2004/jul/03	2010/jul/03	Good	GREENWOOD	25.0000	
412319	Sapho	Mineral	GOLD403	137109 (100%)	Rippon, Donald John	082E007	2004/jul/03	2010/jul/03	Good	GREENWOOD	25.0000	
513274	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/25	2010/jul/31	Good	GREENWOOD	63.5460	
513275	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/25	2010/jul/31	Good	GREENWOOD	63.5460	
513276	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/25	2010/jul/31	Good	GREENWOOD	42.3620	
513277	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/25	2010/jul/31	Good	GREENWOOD	42.3580	
513279	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/may/25	2011/jul/03	Good	GREENWOOD	63.5510	
516272	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/jul/07	2011/jul/03	Good	GREENWOOD	444.8340	
516276	Sapho	Mineral		137109 (100%)	Rippon, Donald John	082E	2005/jul/07	2009/jul/30	Good	GREENWOOD	42.3560	
517097	Sapho	Mineral	ATTWOOD-SOUTH	137109 (100%)	Rippon, Donald John	082E	2005/jul/12	2009/jul/19	Good	GREENWOOD	21.1760	
555566	Sapho	Mineral	SAPPHO	137109 (100%)	Rippon, Donald John	082E	2007/apr/03	2010/sep/30	Good	GREENWOOD	423.7730	
			70 Mineral claims								**6,808.35**	**15,568.68**
											Hectares	Acres

MINEWORKS COPPER MOUNTAIN CLAIM LIST - OPTIONED TO GRIZZLY DIAMONDS LTD.

Tenure Number	Block name	Tenure Type	Claim Name	Owner	Owner Name	Map Number	Issue Date	Good To Date	Status	Mining Division	Area (ha)	Acres
501332	Copper Mountain	Mineral	Copper Camp 2	137109 (100%)	D.Rippon	082E	2005/jan/12	2009/Jan/12	Good	GREENWOOD	528.5300	
501414	Copper Mountain	Mineral	Copper Camp 2	137109 (100%)	D.Rippon	082E	2005/jan/12	2009/Jan/12	Good	GREENWOOD	528.5310	
501592	Copper Mountain	Mineral	Copper Camp 3	137109 (100%)	D.Rippon	082E	2005/jan/12	2009/Jan/12	Good	GREENWOOD	528.8010	
501648	Copper Mountain	Mineral	Copper Camp 4	137109 (100%)	D.Rippon	082E	2005/jan/12	2008/Dec/31	Good	GREENWOOD	253.9760	
502855	Copper Mountain	Mineral	Copper Camp 5	137109 (100%)	D.Rippon	082E	2005/jan/13	2009/Jan/13	Good	GREENWOOD	528.6020	
502886	Copper Mountain	Mineral	Copper Camp 6	137109 (100%)	D.Rippon	082E	2005/jan/13	2009/Jan/13	Good	GREENWOOD	507.1920	
502895	Copper Mountain	Mineral	Copper Camp 7	137109 (100%)	D.Rippon	082E	2005/jan/13	2010/jan/13	Good	GREENWOOD	507.2000	
502910	Copper Mountain	Mineral	Copper Camp 8	137109 (100%)	D.Rippon	082E	2005/jan/13	2008/Dec/31	Good	GREENWOOD	528.3300	
508145	Copper Mountain	Mineral	Copper Camp South	137109 (100%)	D.Rippon	082E	2005/mar/01	2008/July/06	Good	GREENWOOD	528.8640	
513113	Copper Mountain	Mineral	Wales-South	137109 (100%)	D.Rippon	082E	2005/may/20	2009/May/20	Good	GREENWOOD	507.3510	
513114	Copper Mountain	Mineral	Wallace-Pen	137109 (100%)	D.Rippon	082E	2005/may/20	2009/May/20	Good	GREENWOOD	295.7870	
513161	Copper Mountain	Mineral	Wales-North	137109 (100%)	D.Rippon	082E	2005/may/21	2009/May/21	Good	GREENWOOD	507.0970	
513163	Copper Mountain	Mineral	Wales-Southwest	137109 (100%)	D.Rippon	082E	2005/may/21	2009/May/21	Good	GREENWOOD	338.3050	
513164	Copper Mountain	Mineral	Wales-West	137109 (100%)	D.Rippon	082E	2005/may/21	2009/May/21	Good	GREENWOOD	253.6140	
513165	Copper Mountain	Mineral	Wales.West2	137109 (100%)	D.Rippon	082E	2005/may/21	2009/May/21	Good	GREENWOOD	232.5410	
513166	Copper Mountain	Mineral	Wales-Western	137109 (100%)	D.Rippon	082E	2005/may/21	2009/May/21	Good	GREENWOOD	169.1420	
513775	Copper Mountain	Mineral		137109 (100%)	D.Rippon	082E	2005/jun/02	2009/May/11	Good	GREENWOOD	486.8950	
516273	Copper Mountain	Mineral		137109 (100%)	D.Rippon	082E	2005/jul/07	2010/Jul/03	Good	GREENWOOD	529.5500	
517126	Copper Mountain	Mineral	Deadwood	137109 (100%)	D.Rippon	082E	2005/jul/12	2009/Jul/12	Good	GREENWOOD	63.4200	
517145	Copper Mountain	Mineral	Copper-Ingram	137109 (100%)	D.Rippon	082E	2005/jul/12	2008/Jul/12	Good	GREENWOOD	401.9460	
517161	Copper Mountain	Mineral	Wallace-East	137109 (100%)	D.Rippon	082E	2005/jul/12	2008/July/12	Good	GREENWOOD	232.4960	
522164	Copper Mountain	Mineral	Mt. McLaren 2006	137109 (100%)	D.Rippon	082E	2005/nov/10	2008/Nov/10	Good	GREENWOOD	529.7200	
522165	Copper Mountain	Mineral	Midway 2006	137109 (100%)	D.Rippon	082E	2005/nov/10	2008/Nov/10	Good	GREENWOOD	423.7720	
522813	Copper Mountain	Mineral	Jolly Jack 1000	137109 (100%)	D.Rippon	082E	2005/nov/27	2008/Nov/27	Good	GREENWOOD	529.3160	
522814	Copper Mountain	Mineral	Jolly Jack 2000	137109 (100%)	D.Rippon	082E	2005/nov/27	2009/Nov/27	Good	GREENWOOD	529.0590	
522815	Copper Mountain	Mineral	Jolly Jack 3000	137109 (100%)	D.Rippon	082E	2005/nov/27	2009/nov/27	Good	GREENWOOD	529.2920	

522816	Copper Mountain	Mineral	Jolly Jack 3000	137109 (100%)	D.Rippon	082E	2005/nov/27	2009/nov/27	Good	GREENWOOD	529.2460	
523493	Copper Mountain	Mineral	Wallace 2000	137109 (100%)	D.Rippon	082E	2005/dec/05	2008/Dec/05	Good	GREENWOOD	528.0510	
523494	Copper Mountain	Mineral	Wallace 3000	137109 (100%)	D.Rippon	082E	2005/dec/05	2008/Dec/05	Good	GREENWOOD	528.0680	
523495	Copper Mountain	Mineral	Ingram 1000	137109 (100%)	D.Rippon	082E	2005/dec/05	2010/dec/05	Good	GREENWOOD	529.2130	
523496	Copper Mountain	Mineral	Ingram 2000	137109 (100%)	D.Rippon	082E	2005/dec/05	2009/dec/05	Good	GREENWOOD	528.7560	
523497	Copper Mountain	Mineral	Ingram 3000	137109 (100%)	D.Rippon	082E	2005/dec/05	2009/dec/05	Good	GREENWOOD	528.9920	
523565	Copper Mountain	Mineral	Midway 2000	137109 (100%)	D.Rippon	082E	2005/dec/06	2009/jun/06	Good	GREENWOOD	444.9180	
523672	Copper Mountain	Mineral	Whales 1000	137109 (100%)	D.Rippon	082E	2005/dec/09	2008/Dec/09	Good	GREENWOOD	528.0390	
523678	Copper Mountain	Mineral	Midway 3000	137109 (100%)	D.Rippon	082E	2005/dec/09	2008/Dec/09	Good	GREENWOOD	529.5290	
523679	Copper Mountain	Mineral	Whales 2000	137109 (100%)	D.Rippon	082E	2005/dec/09	2009/dec/09	Good	GREENWOOD	528.6560	
526433	Copper Mountain	Mineral	Bubar 1000	137109 (100%)	D.Rippon	082E	2006/jan/26	2010/jul/19	Good	GREENWOOD	528.8270	
526434	Copper Mountain	Mineral	Bubar 2000	137109 (100%)	D.Rippon	082E	2006/jan/26	2010/jul/19	Good	GREENWOOD	529.0440	
526435	Copper Mountain	Mineral	Bubar 3000	137109 (100%)	D.Rippon	082E	2006/jan/26	2010/jul/19	Good	GREENWOOD	380.7900	
529010	Copper Mountain	Mineral	Copper Mtn North	137109 (100%)	D.Rippon	082E	2006/feb/27	2009/jul/18	Good	GREENWOOD	528.1880	
546276	Copper Mountain	Mineral	Wallace 6000	137109 (100%)	D.Rippon	082E	2006/dec/01	2008/Dec/05	Good	GREENWOOD	527.8736	
546277	Copper Mountain	Mineral	Wallace 7000	137109 (100%)	D.Rippon	082E	2006/dec/01	2008/Dec/05	Good	GREENWOOD	527.9192	
546278	Copper Mountain	Mineral	Wallace 8000	137109 (100%)	D.Rippon	082E	2006/dec/01	2008/Dec/05	Good	GREENWOOD	528.0635	
546318	Copper Mountain	Mineral	Boundary 1000	137109 (100%)	D.Rippon	082E	2006/dec/01	2009/dec/05	Good	GREENWOOD	529.5022	
546319	Copper Mountain	Mineral	Copper Mtn 1000	137109 (100%)	D.Rippon	082E	2006/dec/01	2009/dec/05	Good	GREENWOOD	529.2408	
523492	Copper Mountain	Mineral	Wallace 1000	137109 (100%)	Lapsed	082E	2005/dec/05	Lapsed	Lapsed	GREENWOOD		
523510	Copper Mountain	Mineral	Wallace 4000	137109 (100%)	Lapsed	082E	2005/dec/06	Lapsed	Lapsed	GREENWOOD		
523511	Copper Mountain	Mineral	Wallace 5000	137109 (100%)	Lapsed	082E	2005/dec/06	Lapsed	Lapsed	GREENWOOD		
523563	Copper Mountain	Mineral	Midway 1000	137109 (100%)	Lapsed	082E	2005/dec/06	Lapsed	Lapsed	GREENWOOD		
523937	Copper Mountain	Mineral	Midway 4000	137109 (100%)	Lapsed	082E	2005/dec/15	Lapsed	Lapsed	GREENWOOD		
			45 Mineral claims								**20,812.25**	**51,429.14**
											Hectares	Acres

MINEWORKS COPPER MOUNTAIN ADDITIONAL CLAIM LIST - OPTIONED TO GRIZZLY DIAMONDS LTD.

Tenure Number	Block name	Tenure Type	Claim Name	Owner	Owner Name	Map Number	Issue Date	Good To Date	Status	Mining Division	Area (ha)	Acres
571533	Copper Mountain	Mineral	Wallace 2008-1	137109 (100%)	D.Rippon	082E	2007/Dec/10	2008/Dec/10	Good	GREENWOOD	506.7105	
533318	Copper Mountain	Mineral	Midway 7000	137109 (100%)	D.Rippon	082E	2006/May/02	2009/Jul/18	Good	GREENWOOD	42.3560	
546319	Copper Mountain	Mineral	Copper Mountain 1000	137109 (100%)	D.Rippon	082E	2006/Dec/01	2009/dec/05	Good	GREENWOOD	529.2408	
546748	Copper Mountain	Mineral	Wallace 20000	137109 (100%)	D.Rippon	082E	2006/dec/06	2008/Dec/06	Good	GREENWOOD	506.4819	
546749	Copper Mountain	Mineral	Wallace 21000	137109 (100%)	D.Rippon	082E	2006/dec/06	2008/Dec/06	Good	GREENWOOD	527.4492	
546764	Copper Mountain	Mineral	Wallace 24000	137109 (100%)	D.Rippon	082E	2006/dec/06	2008/Dec/06	Good	GREENWOOD	527.9141	
546752	Copper Mountain	Mineral	Wallace 22000	137109 (100%)	D.Rippon	082E	2006/dec/06	2008/Dec/06	Good	GREENWOOD	506.7387	
546755	Copper Mountain	Mineral	Wallace 23000	137109 (100%)	D.Rippon	082E	2006/dec/06	2008/Dec/06	Good	GREENWOOD	527.7378	
546863	Copper Mountain	Mineral	Wallace 25000	137109 (100%)	D.Rippon	082E	2006/dec/08	2008/Dec/08	Good	GREENWOOD	506.3972	
			9 Mineral claims		**Total Hectares**						**4,181.03**	**10,331.73**
											Hectares	Acres

OTHER MINEWORKS GREENWOOD CLAIMS INCLUDED AS PART OF COPPER MOUNTAIN DEAL

Existing

Tenure Number	Block name	Tenure Type	Claim Name	Owner	Owner Name	Map Number	Issue Date	Good To Date	Status	Mining Division	Area (ha)	Acres
532841	Rock Creek	Mineral	Wales 1000	137109 (100%)	Rippon, Donald John	082E	21-Apr-06	19-Jul-09	Good	GREENWOOD	338.1610	
546779	Rock Creek	Mineral	Copper Mountian 2000	137109 (100%)	Rippon, Donald John	082E	6-Dec-06	6-Dec-08	Good	GREENWOOD	528.7387	
546780	Rock Creek	Mineral	Copper Mountian 3000	137109 (100%)	Rippon, Donald John	082E	6-Dec-06	6-Dec-08	Good	GREENWOOD	528.5203	
547279	Rock Creek	Mineral	Copper Mountian 4000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	529.1951	
547280	Rock Creek	Mineral	Copper Mountian 5000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	528.7535	
547281	Rock Creek	Mineral	Copper Mountian 6000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	529.0467	

547282	Rock Creek	Mineral	Copper Mountian 7000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	502.7885	
547283	Rock Creek	Mineral	Copper Mountian 8000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	528.3674	
547285	Rock Creek	Mineral	Copper Mountian 9000	137109 (100%)	Rippon, Donald John	082E	13-Dec-06	13-Dec-08	Good	GREENWOOD	528.1747	
571133	Copper North	Mineral	Wallace 2007	137109 (100%)	Rippon, Donald John	082E	1-Dec-07	1-Dec-08	Good	GREENWOOD	274.1807	
571203	Copper North	Mineral	Wallace 2007 - 2	137109 (100%)	Rippon, Donald John	082E	3-Dec-07	3-Dec-08	Good	GREENWOOD	189.7936	
571544	Copper North	Mineral	Wallace 2008 - 2	137109 (100%)	Rippon, Donald John	082E	10-Dec-07	10-Dec-08	Good	GREENWOOD	42.2023	
571546	Copper North	Mineral	Wallace 2008 - 4	137109 (100%)	Rippon, Donald John	082E	10-Dec-07	10-Dec-08	Good	GREENWOOD	126.6392	
571547	Copper North	Mineral	Wallace 2008 - 3	137109 (100%)	Rippon, Donald John	082E	10-Dec-07	10-Dec-08	Good	GREENWOOD	21.1000	
			14 Mineral claims								**5,195.6617**	
New												
Tenure Number	**Block name**	**Tenure Type**	**Claim Name**	**Owner**	**Owner Name**	**Map Number**	**Issue Date**	**Good To Date**	**Status**	**Mining Division**	**Area (ha)**	**Acres**
586232	Copper North	Mineral	Copper 1000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.7900	
586233	Copper North	Mineral	Copper 2000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.5397	
586234	Copper North	Mineral	Copper 3000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.8557	
586235	Copper North	Mineral	Copper 4000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.7223	
586236	Copper North	Mineral	Copper 5000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.5422	
586237	Copper North	Mineral	Copper 6000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	506.2279	
586238	Copper North	Mineral	Copper 7000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.5037	
586239	Copper North	Mineral	Copper 8000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.3752	
586240	Copper North	Mineral	Copper 9000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.8705	
586241	Copper North	Mineral	Copper 10000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.9661	
586242	Copper North	Mineral	Copper 11000	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	527.9206	
586243	Rock Creek	Mineral	RC 2008	137109 (100%)	Rippon, Donald John	082E	11-Jun-08	11-Jun-09	Good	GREENWOOD	507.9070	
			12 Mineral claims								**6,291.2209**	
											11,486.88	**28,385.24**
											Hectares	Acres

150 Mineral Claims	**GRAND TOTAL GREENWOOD LANDS**	**43,288.50** Hectares	**106,970.22** Acres

Appendix 2

Sample Locations

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08BMH001	366275	5435321	E Ingram	13-May-08	4	Sample taken behind log in slow moving shallow stream.	cldy	con	wf	wet	low	lower slope	95	90,10,0	med gry-blk		med-well	5	1 to 5	mix	gr	sa-sr
08BMH002	365746	5434938	E Ingram	13-May-08	4	~5% organics, 6 shovels, moderate flow, up of organics and stream sampled behind fallen log.	cldy	dec	mod	wet	high		75	50,40,10	med gry		med	25	0.3 to 3	mafic basalt	dk gry	sr
08BMH003	365379	5434375	E Ingram	13-May-08	3	Higher flow- upstream from where east and west rivers merge, lots organic matter.	cldy	dec	mod-wf	wet	low	level	70	50,40,10	med gry		med	30	1 to 5	mix	brn-gry	sr-r
08BMH004	365321	5434327	M Ingram	13-May-08	3	Sampled on point bar, shallow water N 10%, ~6 shovels	cldy	dec	mod	wet	med		60	50,40,10	med gry		med	40	0.3 to 3			sa-sr
08BMH005	365393	5434513	W Ingram	14-May-08	4	Sampled just below rock very slow ~ 20cm deep creek	cldy	con	mod	wet	med	mid slope	80		med-drk gry		med	20	0.2 to 1			sa
08BMH006	366949	5436041	E Ingram	14-May-08	3	Taken beside a fence where creek forms an S. Little bits of organics found here.	cldy	con	mod	wet	low	lower slope	30	95,5,0	med brn	poor	med	70	1 to 10	mix	gr-br	sa
08BMH007	367572	5436920	E Ingram	14-May-08	4	At a fork in the road along point bar, organics present	cldy	con	mod	wet	low	level	25	80,20,0	med brn	med		75	1 to 10	mix	gr-br	sa-sr
08BMH008	368078	5437095	E Ingram	14-May-08	3	Small creek off main. Slow moving, low flow. Snd pocket in front of down tree.	cldy	con	wf	wet	low	level	20	80,20,0	med brn			80	1 to 5	mix	gr	a-sa
08BMH009	368052	5437822	E Ingram	14-May-08	4	East Ingram. Point bar at a S in the creek.	cldy	con	mod	wet	low	level	60	85,15,0	med brn	poor	med-well	40	1 to 5	mix	gr	sa-sr
08BMH010	368324	5438577	E Ingram	14-May-08	4	Longitudonal bar in the middle of creek. As road passes overstream sample taken on upstream section.	cldy	con	mod	wet	low	lower slope	70	90,10,0	med brn	poor	med	30	1 to 5	mix	gr-br	
08BMH011	368401	5438572	E Ingram	14-May-08	3	Tributary on east Ingram. Small low flow creek. Sample taken from middle behind cobble.	cldy	con	mod	wet	low	mid slope	60	85,15,0	med brn	poor	med	40	1 to 5	mix	gr-br	sa-sr
08BMH012	368671	5439172	E Ingram	14-May-08	3	Tributary onto east Ingram. Close by clear cut. Downstream from road 10m. Sand pocket on side of small creek.	cldy	con	sprs-mod	wet	low	mid slope	65	80,20,0	med brn	poor	med	35	1 to 10	mix	gr-br	sa-sr
08BMH013	368676	5439537	E Ingram	14-May-08	3	longitudinal bar down stream form fallen tree.	cldy	con	mod	wet	low	lower slope	60	80,20,0	med brn	poor	poor	40	1 to 10	mix	gr-br	sa
08BMH014	368836	5439726	E Ingram	14-May-08	3 1/2	Tributary on east Ingram. Down stream 10m from where it crosses road by clear cut. Low flow creek with deposit behind down tree limb.	cldy	con	mod	mst	low	mid slope	80	85,15,0	med brn	med	med	20	1 to 5	mix	gr-br	sa-sr
08BMH015	368272	5440796	E Ingram	14-May-08	4	Point bar on main east Ingram. Drainage.	cldy	con	mod-wf	wet	low	mid slope	65	90,10,0	med brn	poor-med	med	35	1 to 10	mix		sa
08BMH016	367133	5441406	E Ingram	14-May-08	2 1/2	Just before down tree. Lots of vegitation in water. Replanted clear cut area. Poor sample.	clr	con	sprs	wet	low	lower slope	60		med brn	med	med	40	1 to 4	mix	gr-br	sa
08BMH017	367964	5441341	E Ingram	14-May-08	4	Well forested, bend in stream.	cldy	con	mod	wet	low	level	65		med brn	med	med	35	1 to 5	mix	brn	sa
08BMH018	367942	5441453	E Ingram	14-May-08	2 1/2	Small stream connects up to main stream, well forested.	clr	con	mod	wet	low	level	70		med brn	med	well	30	1 to 5	mix	brn	a
08BMH019	367880	5441533	E Ingram	14-May-08	2 1/2	Well forested, faster moving, harder to sample. Transverse Bar	clr-cldy	con	mod	wet	low	level	60		med brn-gry	med	well	40	1 to 10	mix	gr-br	a-sa
08BMH020	363888	5432480	E Ingram	14-May-08	3	Farm yard, in the vegitation, fast moving. Point Bar	clr	dec	sprs	wet	low	lower slope	90		dk brn	well	well	10	1 to 2	mix	dk brn	sr
08BMH021	372734	5432227	Kerr Creek	15-May-08	3	Close to Kerr Creek Rd. Small sand gravel pocket behind lrg rock	clr	con-dec	sprs	wet	low	lower slope	55	75,25,0	med-dk brn	poor	poor	45	1 to 10	mix	gr	sa-sr
08BMH021D	372734	5432227	Kerr Creek	15-May-08	3	Close to Kerr Creek Rd. Small sand gravel pocket behind lrg rock									med brn							
08BMH022	372525	5433053		15-May-08	2	Hard Sample. Creek next to road and sample taken where stream comes out of culvert.	clr	con-dec	mod	wet	low	level	25	90,10,0	med brn	med	poor	75	1 to 15	mix	gr-br	sa
08BMH023	371846	5433880	Bauer	15-May-08	3 1/2	Bauer Creek. West side of road. Stream comes out of culvert and seds. trapped here by rocks.	clr	con	mod	wet	low	lower slope	90	85,15,0	dk brn	med	well	10	1 to 5	mix	gr-br	sa
08BMH024	371025	5434063		15-May-08	4	Very slow foot wide creek. Sample from below fallen tree. Upstream from what looks like a dammed area. Silts is organic rich.	clr	con	wf	mst	low	level	95	60,40,0	med-dk brn	well	well	5	.5 to 1	?	br	r
08BMH025	372296	5433932		15-May-08	2	Dry sample Taken. Stream no longer flowing. Used large screen	clr	con	mod-wf	dry	low	level	80	95,5,0	dk brn	med	well	20	1 to 5			
08BMH026	372017	5435001	Jolly Jack	15-May-08	4	Point bar on small Jolly Jack creek on Greg Lee Property	clr	con	sprs	wet	low	level	40	75,25,0	med-dk brn	med	med	60	1 to 10	mix	gr-br	sa-sr
08BMH027	371732	5436779		15-May-08	3 1/2	Small stream. Quicker moving then downstream. Abundant grass in and around creek. Sample collected from middle.	clr	con-dec	sprs		low	level	70	85,15	dk red-brn	poor	poor	30	1 to 5	mix	br	sr
08BMH028	371189	5436877	Jolly Jack	15-May-08	2	Small trib onto Jolly Jack past 2 old cabins. S in creek sand where sand and gravel deposits	clr	con-dec	wf	wet	low	mid slope	50	60,40,0	dk brn			50	1 to 5	mix	br	sa
08BMH029	375588	5430482	Norweigan	16-May-08	4	Sample collected behind down tree north of where the road crosses Norweigan Creek.	clr	con	wf	wet	low	mid slope-level	60	70,30,0	med brn	poor	med	40	1 to 10	mix	br	sr
08BMH030	377235	5431943	Gidon	17-May-08	4	Sample taken where sand collects along side of bank behind rock west of Gidon Creek Road.	clr	con-dec	wf	wet	low	mid-slope	60	80,20,0	med brn	med	med	40	1 to 10	mix	gr-br	sa
08BMH031	377782	5430970	Gidon	17-May-08	2 1/2	Gidon Creek upstream from trib with no sands.Sample taken behind fallen tree. Trib had high organic silts.	clr	con	wf	wet	low	mid slope	55	95,5,0				45	1 to 20	mix	gr	sr
08BMH032	377484	5431121		17-May-08		Bank eroded forming sand pocket. Downstream from trib with no sample and 08BMH031	clr	con-dec	wf	wet	low	mid slope	85	80,20,0	med brn	poor	med-well	15	1 to 5	mix	gr-br	sa
08BMH033	378097	5432441		17-May-08	2 1/2	Hard Sample. Taken from behind fallen tree	clr	con-dec	mod	wet	low	lower slope	40	90,10,0	med brn	med	poor	60	1 to 15	mix	gr	sa
08BMH034	379221	5432386		17-May-08	4	Sand pocket formed infront of small downtree. High organic silts. To organic for sample.	clr	con-dec	sprs	mst	low	mid slope	95	70,30,0	med red		well	5	1 to 5	mix	gr-br	sr
08BMH035	379955	5432618		17-May-08	3	Upstream 150m from where road crosses creek. Sandpocket behind trees	clr	con	mod	wet	low	mid slope	75	75,25,0	med brn	poor	med	25	1 to 10	mix	gr	sa

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08BMH036	381577	5432798		17-May-08	3.5	Sample on clear cut for pipeline. Appears rocks have been placed along edge of creek but have created a good trap	clr	con	sprs	wet	low	mid slope	65		med brn			35	1 to 15	mix	gr-br	sr
08BMH037	381480	5432791		17-May-08	3.5	Downstream from snowmelt entering main creek. Sample from behind a rock still on pipeline	clr		sprs	wet-mst	low	mid slope	70	85,15,0	med brn	med	med	30	1 to 15	mix	gr-br	sa-sr
08BMH038	383335	5433298		17-May-08	2	Trap behind large boulder on upstream side of road. Ore rocks from mine around location	clr	con	mod	wet	low	mid slope	50	80,20,0	med brn	med	poor	50	1 to 20	mix	gr	sa
08BMH039	376302	5431946	Mcarron	17-May-08	3	Downstream from where Mcaron creek goesunder road. Sample from behind fallen tree.	clr	con-dec	sprs	wet	low	lower slope	75	85,15,0	med brn	poor	med	25	1 to 10	mix	gr-br	sa
08BMH040	361221	5441448	Nicholson	18-May-08	4	Bend in Nicholson creek where downed logs trapped a lot of seds. 100m walk from road	cldy	con	wf	wet	low	lower slope	75	85,15,0	med brn	poor	well	25	1 to 10	mix	gr-br	sr
08BMH040D	361221	5441448	Nicholson	18-May-08	4	Bend in Nicholson creek where downed logs trapped a lot of seds. 100m walk from road																
08BMH041	363594	5438655	W Ingram	19-May-08	3	Low flow stream north of where the road crosses. Lots of fine seds deposited along bottom. Abundant organics	cldy	con	mod	wet	low	mid slope	75	65,35,0	med brn	poor	well	25	1 to 5	mix		sa
08BMH042	365688	5439905	W Ingram	19-May-08	3	Trib onto west ingram taken off west side of road. Seds trapped behind boulder	cldy	con	mod-wf	wet	low	mid slope	70	65,35,0	med brn			30	1 to 10	mix	br	sa
08BMH043	365469	5439897	W Ingram	19-May-08	4	Great location. Down tree with good trap behind. Close to old non accessible road	cldy	con	wf	wet	low	mid slope	95	95,5,0	med brn	poor	well	5	1 to 5	mix	br	sa
08BMH044	365696	5442455	W Ingram	19-May-08	4	Tree slowing down water. Seds depositing in slower water on the side	cldy	con-dec	wf	wet	low	ridge crest-mid slope	90	95,5,0	med brn	poor	well	10	1 to 5	mix	br	sa
08BMH045	366143	5443165	W Ingram	19-May-08	4	Good sample. Down tree catching seds upstream big deposit. Some clasts showed oxide staining	cldy	con-dec	wf	wet	low	ridge crest-mid slope	90	95,5,0	med brn			10	1 to 5	mix	br	sa
08BMH046	366079	5443275		19-May-08	3	Sample collected upstream in poplar trees from road. Sediment deposited below branches slowing water. Some clasts showed oxide staining.	cldy	dec	wf	wet	low	ridge crest	40		med brn	poor	med	60	1 to 15	mix	gr-br	a
08BMH047	367914	5438890		20-May-08	3	Low flow creek near clear cut. Seds deposited along bottom. Some organics.	cldy	con	wf	wet	low	mid slope	80	85,15,0	med	med	med	20	1 to 5	mix		sa
08BMH048	369061	5440394		20-May-08	3	Sample taken upstream from where road crosses. Low flow. Seds deposited behind small cobble	cldy	con	mod	wet	low	mid slope	85	75,25,0	med-dk brn			15	1 to 5	mix	br	sr
08BMH049	373669	5449554		21-May-08	3.5	Trib onto west ingram taken off west side of road. Good seds along bottom	cldy	con-dec	wf	wet	low	lower slope	85	95,5,0	med brn	poor	med	15	1 to 10	mix	br	sa
08BMH050	373617	5449641		22-May-08	4.5	Tree down on good creek, sand pocket	clr	con		wet	low	lower slope	99	98,2,0	med brn	poor	well	1	1 to 15	mix	br	sr
08BMH051	371992	5450392		23-May-08	2	downstream of where road crosses trib. Single rusty boulder in stream with pyrite. No other rocks like it around.	clr	con	mod	wet	low	mid slope	75	90,10,0	dk brn			25	1 to 15	mix	gr-br	sa
08BMH052	371317	5449993		23-May-08	4	Upstream side of creek where road crosses it. Sand pocket behind tree	clr	con-dec	mod	wet			85	99,1,0	med brn			15	1 to 2	mix	br	sr
08BMH053	370395	5449126		23-May-08	4	fast flowing sand pocket behind boulders in middle	cldy	con	wf	wet	low	mid slope	75	90,10,0	med brn	poor	well	25	1 to 15	mix	br	sa
08BMH054	371956	5450112		23-May-08	4	fast flowing creek with sand pocket along side	cldy	con-dec	wf	wet	low	lower slope	95	95,5,0	med brn	poor	well	5	1 to 5	mix	br	sa
08BMH055	360798	5435889		23-May-08	3	Bubar creek. Low flow with lots of seds along bottom	clr	dec	mod	wet	low	lower slope	95	55,45,0	light brn	poor	well	5	1 to 5	sed?	tan	sa
08BMH056	361216	5437783		23-May-08	4	low flow creek. Seds deposited appear to be from till cover. Some fine organics	clr	dec	mod	wet	low	mid slope	95	65,35,0	light brn			5	1 to 5	sed	tan	sa
08ARH001	364740	5437468	Ingram West	14-May	4	3 shovels, lots of organics, coarse grained creek no silt	Cloudy	Con	Mod	Wet	Med	Mid Slope	40	60,30,10	Dark Brown		Poor	60	0.5-5.0	Mix Volc	Gry, Grn	SA-SR
08ARH002	364909	5437820	Ingram West	14-May	4	4 shovels, lots of fallen trees, no silt, ~10% organics, very low flow, sampled on creek side,depth 30c, thickness 100cm	Cloudy	Con	Mod	Wet	Med	Mid Slope	60	60,25,15	Dark Brown		Med	40	0.2-3.0	Mix Volc	Grn, Gry	SR
08ARH003	364966	5437922	Ingram West	14-May	3	lots of organics in stream, very low flow almost dry, 10 shovels, lots of fallen trees, Depth 10 cm, Thickness 40 cm	Cloudy	Con	Mod	Wet	Med	Mid Slope	25	40,20,10	Dark Brown		Poor	75	1.0-4.0	Mix Volc	Grn, Gry	SR
08ARH004	365272	5438365	Ingram West	14-May	3	~20% organics, lots of fallen debris, intermittent stream, sampled from bank, Depth 10 cm, Thickness 15 cm	Cloudy	Con		Wet	Med	Mid Slope	95	65,25,10	Med Brn		Well	5	0.2-1.0			SR
08ARH005	364686	5437203	Ingram West	14-May	5	sampled just below fallen tree, lots of fallen trees, ~ 15% organics (bark & leaves), Depth 50 cm, Thickness 100 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	75	70,25,5	Med Brn		Med	25	1.0-5.0	Mix Volc	Gry	SR
08ARH006	365597	5441550	Ingram West	14-May	5	sampled from point bar, lots of fallen trees some ice upstream, Depth 40 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	40	70,25,5	Med, Brn		Poor	60	2.0-15.0	Mix Volc	Gry	SR
08ARH007	365578	5440994	Ingram West	14-May	4	just beside road, lots of cattle, sampled at point bar above fallen tree, ~5% organics, Depth 50 cm, Thickness 100 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	60	70,20,10	Med, Brn		Med	40	1.0-4.0	Mix Volc	Grn	SA-SR
08ARH008	365261	5440926	Ingram West	14-May	4	sampled just above fallen log, ~10% organics, Depth 25cm, Thickness 75 cm,	Cloudy	Dec		Wet	Med	Mid Slope	60	75,20,5	Med, Brn		Med	40	0.5-3.0	Mixed	Grn	SA
08ARH009	364913	5441237	Ingram West	14-May	4	cow crossing?, hardly any sediment, ~25% organics,	Clear	Dec	Mod	Wet	Med	Mid Slope	90	50,30,20	Dark Brown		Well	10	0.2-1.0	Andestite	Grn	SA

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH010	364677	5436715	Ingram West	15-May	5	sampled on point bar, lots of alders in stream and fallen trees, no large boulders, Thickness 100 cm	Clear	Con	Mod	Wet	High	Mid Slope	40	70,25,5	Med Gry		Med	60	1.0-5.0		Gry	SA-SR
08ARH011	364836	5436097	Ingram West	15-May	4	~5% organics, sampled just below fallen log, sampled below water intake for Peter & Anna's,	Clear	Con, Dec		Wet	Med	Mid Slope	30	75,20,5	Med Gry		Med	70	2.0-9.0	Mix Volc	Gry, Grn	SR
08ARH012	364530	5437134	Ingram West	15-May	4	sampled behind lrg boulder, lots of grass/organics in creek and vegetation, ~10% organics, Depth 40 cm, Thickness 150 cm	Clear	Con, Grs	Mod	Wet	Med	Mid Slope	40				Poor	60	1.0-4.0	Mix Volc	Grn	SA
08ARH013	364120	5437620	Ingram West	15-May	4	sampled in low flat spot, cutblock, ~15% organics in stream, low flow, <5% large (50-100) boulders,Depth 30 cm, Thickness 100 cm,	Clear	Con	Mod	Wet	Low	Mid Slope	50	75,20,5	Med Gry		Med	50	1.0-9.0	Mix Volc	Gry, Grn	SR
08ARH014	363771	5438197	Ingram West	15-May	4	sampled just below fallen tree, ~30% organics, low flow, lots of fallen trees, very few clasts and boulders, depth 25 cm, thickness 90 cm	Clear	Con	Mod	Wet	Low	Mid Slope	90	70,25,5	Med Gry		Well	10	0.5-1.0	Andestite	Grn	SR
08ARH015	363591	5438507	Ingram West	15-May	3	very, very low flow, ~40% organics marshy area, no boulders in stream, Depth 10 cm, thickness 100 cm	Clear	Con	Mod	Wet	Low	Mid Slope	90		Dark Brown, Grey		Well	10	0.2-0.5			SR
08ARH016	365405	5438902	Ingram West	15-May	5	very few large boulders in stream, sampled behind fallen log, mod-fast flow, depth 50 cm, thickness 150	Clear	Con	Mod	Wet	High	Mid Slope	40	75,20,5	Med Gry		Med	60	1.0-7.0	Mixed Volc	Grn, Red, Gry	SA-SR
08ARH017	365359	5440583	Ingram West	15-May	5	mod-fast flow, sampled behind rock in stream, lots of fallen trees, <5% organics, depth 50 cm, thickness 120 cm	Clear	Con		Wet	High	Mid Slope	35	70,25,5	Med Brown		Med	65	1.0-5.0	Mix Volc	Grn, Gry	SA
08ARH018	361762	5442790	Nicholson	15-May	5	sampled just below fallen log, forced to take downstream from culvert because of "go away sign" lots of fallen trees and cows, depth 60 cm, Thickness 175 cm	Clear	Con	Mod	Wet	Med	Mid Slope	30	75,20,5	Med Gry		Med	70	1.0-7.0	Mix Volc	Grn, Gry	SA
08ARH019	361427	5442036	Nicholson	15-May	4	sampled from behind boulder, fast flow, some large boulders in stream, Depth 70 cm, Thickness 200cm	Clear	Con	Mod	Wet	High	Mid Slope	40	75,20,5	Med Brn		Med	60	1.0-5.0	Mix Volc	Gr, Red	SA
08ARH020	360568	5442023	Nicholson	15-May	4	~10% large boulders, sampled in low flow area, ~20% organics, Depth 20 cm, Thickness 50		Con	Mod	Wet	Med	Mid Slope	30	70,25,5	Dark Blk		Med	70	1.0-3.0			SA
08ARH020D	360568	5442023	Nicholson	15-May	4	~10% large boulders, sampled in low flow area, ~20% organics, Depth 50 cm, Thickness 175cm		Con	Mod	Wet	Med	Mid Slope	30	70,25,5	Dark Blk		Med	70	1.0-3.0			SA
08ARH021	360428	5441097	Nicholson	15-May	5	sampled at point bar, mod-fast flow, some larger boulders up to 70 cm basaltic clast with oxidized qtz vein,	Clear	Con, Dec	Mod	Wet	High	Lower Slope	65	75,20,5	Med Brown		Med	35	1.0-5.0	Mix Volc	Grn	SA
08ARH022	376010	5444485	Wallace	16-May	5	fast flowing creek sampled at point bar,good sandy, just downstream from trib, lots of macro organics, 7 shovels	Clear	Con	Mod	Wet	High	Mid Slope	75	75,20,5	Med Brown		Poor	25	1.0-7.0	Volc	Gry	SR
08ARH023	375828	5444507	Wallace	16-May	3	very steep tributary, lots of clasts, sampled out of small pool, Depth 5 cm, Thickness 20 cm	Clear	Con	Mod	Wet	High	Mid Slope	20	80,20	Med Gry		Poor	80	2.0-8.0	Granite, Granodior	Gry, wht	A-SA
08ARH024	375658	5444804	Wallace	16-May	5	very fast flow sampled @ side of creek, 8 shovels, sampled at bend in creek and back eddy,	Clear	Con	Mod		High	Lower Slope	90	75,25	Med Gry		Med	10	0.5-1.0	Mix volc	Gry, Grn	SR
08ARH025	375398	5444885	Wallace	16-May	5	3 shovels, sampled just below small waterfall @ side, ~5% organics in stream, moderate flow, Depth 40 cm, Thickness 90 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5	Med Gry		Med	40	0.3-7.0	Mix grand	Gry, wht	SA-SR
08ARH026	374327	5445527	Wallace	16-May	5	mod-fast flow, flat area around creek, sampled behind fallen tree, water is murky, Depth 125cm, thickness 400cm	Clear			Wet	Med	Lower Slope	40	70,25,5	Med Brown		Well	60	0.5-4.0	Mix Volc	Gry	SR
08ARH027	373062	5446217	Wallace	16-May	5	sampled below fallen log, moderate flow 6 shovels, nice open creek, Depth 30 cm, Thickness 75 cm	Clear			Wet	Med	Mid Slope	40	70,25,5	Med Brown		Med	60	0.3-5.0	Granite, Granodior	Gry, Wht, Pink	SA-SR
08ARH028	372509	5446217	Wallace	16-May	5	nice river flat, sampled @ small bend in the creek, fast flow, Depth 100cm, Thickness 300cm	Clear	Con	Mod	Wet	Med	Lower Slope	60	80,20	Med Brown		Med	40	0.3-5.0	Mix int	Gry, Red	SA-SR
08ARH029	372010	5446304	Wallace	16-May	5	sampled @ point bar, fast flow, Depth 75 cm, Thickness 200 cm	Clear	Con, Dec	Mod	Wet	Med	Lower Slope	90	70,25,5,	Med, Brn		Med	10	0.3-5.0	Mix Volc	Gry	SR
08ARH030	371721	5446283	Wallace	16-May	4	sampled from small pool in creek, moderate flow, ~10% organics (leaves, bark, sticks), depth 15 cm, thickness 50 cm	Clear	Con, Dec		Wet	Med	Mid Slope	40	70,25,5	Med, Brn		Poor	10	0.5-1.0	Mix Volc	Gry, Brn	SA-SR
08ARH031	371425	5446131	Wallace	16-May	5	snow next to creek, sampled at point bar, fast flow, Depth 100 cm, Thickness 450 cm	Clear	Con, Dec		Wet	Med	Mid Slope	40	80,20	Med, Brn		Poor	60	1.0-10.0	Mix int	Brn, Wht	SA-SR
08ARH032	371104	5445973	Wallace	16-May	5	sampled just below small waterfall, fast flow and lots of snow, depth 100cm, thickness 250 cm	Clear	Con, Dec	WF	Wet	Med	Mid Slope	30	80,20	Brn, Med		Med	70	1.0-10.0			SR
08ARH033	370654	5445752	Wallace	16-May	5	sampled behind fallen tree, ~10% organics, fast flow and lots of snow, Depth 100 cm, Thickness 275 cm,	Clear		Mod	Wet	Med	Mid Slope	85	70,25,5	Med, Brn		Med	15	0.3-4.0	Granite, mix volcanic	Brn Wht	SR
08ARH034	376841	5443787	Wallace	16-May	5	sampled on gravel bar, farmers field, mod-fast flow, Depth 75 cm, thickness 400 cm	Clear	GRS	WF	Wet	Low	Level	90	70,25,5	Med, Brn		Med	10	0.5-3.0	Mix Int	Gry, Wht	SR
08ARH035	370289	5445428	Wallace	17-May	5	sampled just below fallen log, fast flow, <5% organics, depth 75 cm, thickness 150 cm	Clear	Con, Dec	WF	Wet	Med	Mid Slope	60	75,20,5	Med, Brn		Med	40	0.5-6.0	Mix Volc	Brn , Gry	SA-SR

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH036	370078	5444639	Wallace	17-May	5	sampled just behind tree root, moderate flow, ~5% organics, low lying creek bed, Depth 40cm, thickness 125cm	Clear		Mod	Wet	Med	Mid Slope	60	70,25,5	Light Brown		Med	30	0.3-2.0	Mix Volc	Brn, Red	SA
08ARH037	369821	5444282	Wallace	17-May	5	sampled below small waterfall, mod-fast flow, ~10% organics, Depth 40, Thickness 100 cm	Clear	Con	Mod	Wet	Low	Mid Slope	75	60,30,10	Light Brown		Med	25	0.5-4.0	Mix Volc	Brn, Pink	SA-SR
08ARH038	368942	5443997	Wallace	17-May	5	sampled sand bar above log jam, moderate flow, <5% organics, Depth 50 cm, Thickness 125 cm	Clear	Con	Mod	Wet	Med	Mid Slope	90	65.30,5	Brn		Med	10	0.3-3.0	Mix Volc	Brn, Red	SR
08ARH039	369933	5445741	Wallace	17-May	5	sampled behing rock, fast flow, Depth 75 cm, Thickness 200 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	60,35,5	Med Brn		Med	40	1.0-7.0	Mix Volc	Brn, Red	SA
08ARH040	369347	5445959	Wallace	17-May	5	5 shovels, sampled above fallen log, moderate flow, Depth 50 cm, Thickness 75 cm	Clear	Con		Wet	Med	Mid Slope	40	60,35,5	Med Brn		Med	60	1.0-7.0	Mix Volc	Brn Gry	SA-SR
08ARH040D	369347	5445959	Wallace	17-May	5	duplicate	Clear	Con		Wet	Med	Mid Slope	40	60,35,5	Med Brn		Med	60	1.0-7.0	Mix Volc	Brn Gry	SA-SR
08ARH041	368921	5445643	Wallace	17-May	5	sampled on gravel bar, moderate flow, Wallace tributary, Depth 45cm, Thickness 100 cm	Clear	Con		Wet	Med	Mid Slope	40	70,25,5	Med Brn		Med	60	1.0-5.0	Mix Int	Gry Wht	SA
08ARH042	368912	5446229	Wallace	17-May	5	sampled behind fallen tree, moderate flow, Depth 55 cm, Thickness 150 cm	Clear	Con	Mod	Wet	Med	Mid Slope	40				Med	60	1.0-9.0	Mix Int	Brn Gry	SA-SR
08ARH043	368025	5446526	Wallace	17-May	5	sampled from small pool, mod-low flow, ~5% organics, Depth 5o cm, Thickness 75 cm	Clear	Con		Wet	Low	Mid Slope	60	65,30,5	Med Brn		Med	40	1.0-5.0	Mix Vol		SA
08ARH044	368145	5446458	Wallace	17-May	3	sampled behind log, fast flow, lots of fallen logs, lots of organics, really difficult to get a sample, low sediments, Depth 70, Thickness 100 cm	Clear		Mod	Wet	High	Mid Slope	20	80,20	Med Brn		Poor	80	2.0-12.0	Porphry mix volc	Brn Gry	SA-SR
08ARH045	367183	5446669	Wallace	17-May	5	sampled at point bar, low flow, Depth 30cm, Thickness 75cm	Clear	Con	Mod	Wet	Low	Level	70	65,30,5	Light Brown		Well	30	0.5-3.0	Mixed	Brown, Grey	SA
08ARH046	373571	5445619	Wallace	17-May	5	low-mod flow, ~10% organics, sampled from small pool, Wallace trib well established, Depth 50 cm, Thickness 75 cm	Clear	Con	Mod	Wet	Med	Mid Slope	80	70,25,5	Med Brown		Well	20	0.5-2.0	Mixed Volc	Brn, Red	SR
08ARH047	386874	5435985	July	18-May	4	sampled behind tree, sampled close to house, very nice man, low flow, lots of organics, Depth 150 cm, Thickness 200 cm	Clear	Con		Wet	Low	Level	90	65,30,5	Dark Brown		Well	10	0.3-1.0	?	Brown, Grey	SR
08ARH048	386505	5434850	Skeff	18-May	5	close to old pit, sampled on rocky terraced area, fast flow, 9 shovels, Depth 40 cm, Thickness 150 cm	Clear	Con	Mod	Wet	Med	Med Slope	40	70,25,5	Med Brn		Med	60	1.0-6.0	Mixed Volc	Brn, Grey	SA-SR
08ARH049	385891	5435163	Skeff	18-May	5	sampled in small pool, mod-fast flow, lots of organics (macro), 5 shovels, Depth 60 cm, Thickness 100 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5	Med Brown		Med	40	0.5-3.0	Mixed Volc		SA-SR
08ARH050	385212	5435136	Skeff	18-May	5	6 shovels, sampled at point bar, lots of fallen trees, mod-fast flow, Depth 50cm, Thickness 75 cm	Clear	Con	Med	Wet	High	Med Slope	40	70,25,5	Med Brown		Med	60	0.5-7.0	Mixed Volc	Brn, Blk	SA-SR
08ARH051	384621	5435245	Skeff	18-May	4	sampled behind fallen log, low flow, lots of macro organics, 6 shovels, large flat area all flooded, Depth 75 cm, Thickness 125 cm,	Clear	Con, Swamp	Mod	Wet	Low	Level	70	60,30,10	Med,Grn,Gry,		Well	30	0.3-2.0	Mixed Volc	Grn Brn	SR
08ARH052	384201	5435278	Skeff	18-May	5	end of road, sampled @ point bar, 4 shovels, low-mod flow, limestone clasts, Depth 55cm, Thickness 100cm	Clear	Con	Mod	Wet	Low	Mid Slope	90	60,30,10	Med, Gry		Well	10	0.3-2.0	SS?	Wht	SA
08ARH053	386908	5434985	July	18-May	5	mod-low flow, sampled behind fallen log, 5 shovels, lots of organics, Depth 100 cm, Thickness 175 cm	Clear	Con	Mod	Wet	Med	Lower Slope	95	70,20,10	Med, Brn		Well	5	0.3-1.0	?	Brn	SR
08ARH054	373193	5440669	Motherlode	22-May	5	mod flow, sampled behind fallen log, Depth 30 cm, Thickness 50 cm	Clear	Con	Mod	Wet	Med	Mid Slope	40	60,30,10	Med, Brn		Med	60	0.5-1.0	Mix volc	Brn, Gry	SA
08ARH055	373234	5440716	Motherlode	22-May	5	fast-mod flow, sampled behind rock, Depth 40, Thickness 75 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5			Med	40	0.5-3.0	Mix Voloc	Brn, Grn,Red	SR
08ARH056	372654	5441331	Motherlode	22-May	5	mod flow, lots of organics, 4 shovels, sampled at flat area,	Clear	Con	Mod	Wet	Low	Mid Slope	40	65,30,5	Brn			60	0.5-6.0	Porphry mix volc		SA
08ARH057	371679	5441851	Motherlode	22-May	4	low flow, sampled in flat area, lots of organics, 4 shovels, Depth 30 cm, Thickness 75 cm	Clear	Con	Mod	Wet	Low	Level	50	70,25,5	Brn		Med	50	0.5-3.0	Porphry mix volc	Brn,Grn	SR
08ARH058	371694	5441763	Motherlode	22-May	5	low flow, sampled low flat area, 6 shovels, Depth 25 cm, Thickness 100 cm	Clear	Con	Mod	Wet	Low	Level	50	60,30,10	Brn		Med	50	0.5-4.0	Mix Volc	Brn, Wht	SA
08ARH059	370909	5441739	Motherlode	22-May	5	low-mod flow, 4 shovels, Depth 40 cm, Thickness 100 cm	Clear	Con	Mod	Wet	High		40	60,30,10	Brn		Med	60	0.5-6.0	Mix Volc	Brn, Wht	SA-SR
08ARH060	361727	5452609	Fiva	23-May	5	some larger boulders in stream (up to 50cm) ~5%, sampled behind fallen log, moderate flow, 4 shovels, Depth 45 cm, Thickness 150 cm	Cloudy	Con	WF	Wet	Med	Lower Slope	75	65,25,10	Brn		Med	25	0.5-4.0	Mixed Volc	Brn, Grn	SA-SR
08ARH060D	361727	5452609	Fiva	23-May	5	duplicate	Cloudy	Con	Wf	Wet	Med	Lower Slope	75	65,25,10	Brn		Med	25	0.5-4.0	Mixed Volc	Brn, Grn	SA-SR
08ARH061	372426	5430667	No Name	23-May	4	dry creek sample, 12 shovels, sampled in low flat area, ~10% organics, 12 shovels looks like the creek has not ran for sometime	Cloudy	Con	Sprs	Dry	Med	Mid Slope	70	60,30,10	Brn		Med	30	0.5-4.0	Mixed Volc	Grn, Wht, Brn	SR
08ARH062	361757	5452659	Fiva	23-May	4	sampled small pool @ base of ~150ft waterfall, 9 shovels fast flow, Depth 20 cm, Thickness 100 cm,	Cloudy	Con	Mod	Wet	High	Lower Slope	40	75,25	Brn		Poor	60	0.7-5.0	Granite, Granodior	Blck, Wht, Grn	A
08ARH063	362626	5451098	Fiva	23-May	5	low-mod flow, 5 shovels, ~5% organics sampled low flat area, Depth 30 cm, Thickness 125 cm	Cloudy	Con	Mod	Wet	Med	Level	60	60,30,10	Brn		Med	40	0.5-7.0	Mixed Volc	Brn, grn	SA-SR

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH064	364867	5449221	Fiva	23-May	5	low flow, swampy area, sampled above log, ~10% organics (leaves ect), 3 shovels, Depth 30 cm, Thickness 75 cm	Cloudy	Con	Mod	Wet	Low	Level	80	60,30,10	Brn		Well	20	0.5-1.0	Mixed Volc	Brn	SR
08ARH065	379720	5437039	Lind	24-May	5	6 shovels, fast-mod flow, sampled behind rock, Depth 50 cm, Thickness 150 cm	Clear	Con,Dec	WF	Wet	High	Lower Slope	40	90,25,5	Brn		Poor	60	1.0-9.0	Mixed Volc	Brn	SR
08ARH066	380357	5436819	Lind	24-May	5	mod- flow, lots of organics, sampled behind tree, through farmland, Depth 50 cm, Thickness 125 cm	Clear	Con,Dec	Mod	Wet	Med	Lower Slope	50	60,30,10	Brn		Well	50	0.5-4.0	Mixed Volc	Brn, Grn	SR

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08BMH001	366275	5435321	E Ingram	13-May-08	4	Sample taken behind log in slow moving shallow stream.	cldy	con	wf	wet	low	lower slope	95	90,10,0	med gry-blk		med-well	5	1 to 5	mix	gr	sa-sr
08BMH002	365746	5434938	E Ingram	13-May-08	4	~5% organics, 6 shovels, moderate flow, up of organics and stream sampled behind fallen log.	cldy	dec	mod	wet	high		75	50,40,10	med gry		med	25	0.3 to 3	mafic basalt	dk gry	sr
08BMH003	365379	5434375	E Ingram	13-May-08	3	Higher flow- upstream from where east and west rivers merge, lots organic matter.	cldy	dec	mod-wf	wet	low	level	70	50,40,10	med gry		med	30	1 to 5	mix	brn-gry	sr-r
08BMH004	365321	5434327	M Ingram	13-May-08	3	Sampled on point bar, shallow water N 10%, ~6 shovels	cldy	dec	mod	wet	med		60	50,40,10	med gry		med	40	0.3 to 3			sa-sr
08BMH005	365393	5434513	W Ingram	14-May-08	4	Sampled just below rock very slow ~ 20cm deep creek	cldy	con	mod	wet	med	mid slope	80		med-drk gry		med	20	0.2 to 1			sa
08BMH006	366949	5436041	E Ingram	14-May-08	3	Taken beside a fence where creek forms an S. Little bits of organics found here.	cldy	con	mod	wet	low	lower slope	30	95,5,0	med brn	poor	med	70	1 to 10	mix	gr-br	sa
08BMH007	367572	5436920	E Ingram	14-May-08	4	At a fork in the road along point bar, organics present	cldy	con	mod	wet	low	level	25	80,20,0	med brn	med		75	1 to 10	mix	gr-br	sa-sr
08BMH008	368078	5437095	E Ingram	14-May-08	3	Small creek off main. Slow moving, low flow. Snd pocket in front of down tree.	cldy	con	wf	wet	low	level	20	80,20,0	med brn			80	1 to 5	mix	gr	a-sa
08BMH009	368052	5437822	E Ingram	14-May-08	4	East Ingram. Point bar at a S in the creek.	cldy	con	mod	wet	low	level	60	85,15,0	med brn	poor	med-well	40	1 to 5	mix	gr	sa-sr
08BMH010	368324	5438577	E Ingram	14-May-08	4	Longitudonal bar in the middle of creek. As road passes overstream sample taken on upstream section.	cldy	con	mod	wet	low	lower slope	70	90,10,0	med brn	poor	med	30	1 to 5	mix	gr-br	
08BMH011	368401	5438572	E Ingram	14-May-08	3	Tributary on east Ingram. Small low flow creek. Sample taken from middle behind cobble.	cldy	con	mod	wet	low	mid slope	60	85,15,0	med brn	poor	med	40	1 to 5	mix	gr-br	sa-sr
08BMH012	368671	5439172	E Ingram	14-May-08	3	Tributary onto east Ingram. Close by clear cut. Downstream from road 10m. Sand pocket on side of small creek.	cldy	con	sprs-mod	wet	low	mid slope	65	80,20,0	med brn	poor	med	35	1 to 10	mix	gr-br	sa-sr
08BMH013	368676	5439537	E Ingram	14-May-08	3	longitudinal bar down stream form fallen tree.	cldy	con	mod	wet	low	lower slope	60	80,20,0	med brn	poor	poor	40	1 to 10	mix	gr-br	sa
08BMH014	368836	5439726	E Ingram	14-May-08	3 1/2	Tributary on east Ingram. Down stream 10m from where it crosses road by clear cut. Low flow creek with deposit behind down tree limb.	cldy	con	mod	mst	low	mid slope	80	85,15,0	med brn	med	med	20	1 to 5	mix	gr-br	sa-sr
08BMH015	368272	5440796	E Ingram	14-May-08	4	Point bar on main east Ingram. Drainage.	cldy	con	mod-wf	wet	low	mid slope	65	90,10,0	med brn	poor-med	med	35	1 to 10	mix		sa
08BMH016	367133	5441406	E Ingram	14-May-08	2 1/2	Just before down tree. Lots of vegitation in water. Replanted clear cut area. Poor sample.	clr	con	sprs	wet	low	lower slope	60		med brn	med	med	40	1 to 4	mix	gr-br	sa
08BMH017	367964	5441341	E Ingram	14-May-08	4	Well forested, bend in stream.	cldy	con	mod	wet	low	level	65		med brn	med	med	35	1 to 5	mix	brn	sa
08BMH018	367942	5441453	E Ingram	14-May-08	2 1/2	Small stream connects up to main stream, well forested.	clr	con	mod	wet	low	level	70		med brn	med	well	30	1 to 5	mix	brn	a
08BMH019	367880	5441533	E Ingram	14-May-08	2 1/2	Well forested, faster moving, harder to sample. Transverse Bar	clr-cldy	con	mod	wet	low	level	60		med brn-gry	med	well	40	1 to 10	mix	gr-br	a-sa
08BMH020	363888	5432480	E Ingram	14-May-08	3	Farm yard, in the vegitation, fast moving. Point Bar	clr	dec	sprs	wet	low	lower slope	90		dk brn	well	well	10	1 to 2	mix	dk brn	sr
08BMH021	372734	5432227	Kerr Creek	15-May-08	3	Close to Kerr Creek Rd. Small sand gravel pocket behind lrg rock	clr	con-dec	sprs	wet	low	lower slope	55	75,25,0	med-dk brn	poor	poor	45	1 to 10	mix	gr	sa-sr
08BMH021D	372734	5432227	Kerr Creek	15-May-08	3	Close to Kerr Creek Rd. Small sand gravel pocket behind lrg rock									med brn							
08BMH022	372525	5433053		15-May-08	2	Hard Sample. Creek next to road and sample taken where stream comes out of culvert.	clr	con-dec	mod	wet	low	level	25	90,10,0	med brn	med	poor	75	1 to 15	mix	gr-br	sa
08BMH023	371846	5433880	Bauer	15-May-08	3 1/2	Bauer Creek. West side of road. Stream comes out of culvert and seds. trapped here by rocks.	clr	con	mod	wet	low	lower slope	90	85,15,0	dk brn	med	well	10	1 to 5	mix	gr-br	sa
08BMH024	371025	5434063		15-May-08	4	Very slow foot wide creek. Sample from below fallen tree. Upstream from what looks like a dammed area. Silts is organic rich.	clr	con	wf	mst	low	level	95	60,40,0	med-dk brn	well	well	5	.5 to 1	?	br	r
08BMH025	372296	5433932		15-May-08	2	Dry sample Taken. Stream no longer flowing. Used large screen	clr	con	mod-wf	dry	low	level	80	95,5,0	dk brn	med	well	20	1 to 5			
08BMH026	372017	5435001	Jolly Jack	15-May-08	4	Point bar on small Jolly Jack creek on Greg Lee Property	clr	con	sprs	wet	low	level	40	75,25,0	med-dk brn	med	med	60	1 to 10	mix	gr-br	sa-sr
08BMH027	371732	5436779		15-May-08	3 1/2	Small stream. Quicker moving then downstream. Abundant grass in and around creek. Sample collected from middle.	clr	con-dec	sprs		low	level	70	85,15	dk red-brn	poor	poor	30	1 to 5	mix	br	sr
08BMH028	371189	5436877	Jolly Jack	15-May-08	2	Small trib onto Jolly Jack past 2 old cabins. S in creek sand where sand and gravel deposits	clr	con-dec	wf	wet	low	mid slope	50	60,40,0	dk brn			50	1 to 5	mix	br	sa
08BMH029	375588	5430482	Norweigan	16-May-08	4	Sample collected behind down tree north of where the road crosses Norweigan Creek.	clr	con	wf	wet	low	mid slope-level	60	70,30,0	med brn	poor	med	40	1 to 10	mix	br	sr
08BMH030	377235	5431943	Gidon	17-May-08	4	Sample taken where sand collects along side of bank behind rock west of Gidon Creek Road.	clr	con-dec	wf	wet	low	mid-slope	60	80,20,0	med brn	med	med	40	1 to 10	mix	gr-br	sa
08BMH031	377782	5430970	Gidon	17-May-08	2 1/2	Gidon Creek upstream from trib with no sands.Sample taken behind fallen tree. Trib had high organic silts.	clr	con	wf	wet	low	mid slope	55	95,5,0				45	1 to 20	mix	gr	sr
08BMH032	377484	5431121		17-May-08		Bank eroded forming sand pocket. Downstream from trib with no sample and 08BMH031	clr	con-dec	wf	wet	low	mid slope	85	80,20,0	med brn	poor	med-well	15	1 to 5	mix	gr-br	sa
08BMH033	378097	5432441		17-May-08	2 1/2	Hard Sample. Taken from behind fallen tree	clr	con-dec	mod	wet	low	lower slope	40	90,10,0	med brn	med	poor	60	1 to 15	mix	gr	sa
08BMH034	379221	5432386		17-May-08	4	Sand pocket formed infront of small downtree. High organic silts. To organic for sample.	clr	con-dec	sprs	mst	low	mid slope	95	70,30,0	med red		well	5	1 to 5	mix	gr-br	sr
08BMH035	379955	5432618		17-May-08	3	Upstream 150m from where road crosses creek. Sandpocket behind trees	clr	con	mod	wet	low	mid slope	75	75,25,0	med brn	poor	med	25	1 to 10	mix	gr	sa

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08BMH036	381577	5432798		17-May-08	3.5	Sample on clear cut for pipeline. Appears rocks have been placed along edge of creek but have created a good trap	clr	con	sprs	wet	low	mid slope	65		med brn			35	1 to 15	mix	gr-br	sr
08BMH037	381480	5432791		17-May-08	3.5	Downstream from snowmelt entering main creek. Sample from behind a rock still on pipeline	clr		sprs	wet-mst	low	mid slope	70	85,15,0	med brn	med	med	30	1 to 15	mix	gr-br	sa-sr
08BMH038	383335	5433298		17-May-08	2	Trap behind large boulder on upstream side of road. Ore rocks from mine around location	clr	con	mod	wet	low	mid slope	50	80,20,0	med brn	med	poor	50	1 to 20	mix	gr	sa
08BMH039	376302	5431946	Mcarron	17-May-08	3	Downstream from where Mcaron creek goesunder road. Sample from behind fallen tree.	clr	con-dec	sprs	wet	low	lower slope	75	85,15,0	med brn	poor	med	25	1 to 10	mix	gr-br	sa
08BMH040	361221	5441448	Nicholson	18-May-08	4	Bend in Nicholson creek where downed logs trapped a lot of seds. 100m walk from road	cldy	con	wf	wet	low	lower slope	75	85,15,0	med brn	poor	well	25	1 to 10	mix	gr-br	sr
08BMH040D	361221	5441448	Nicholson	18-May-08	4	Bend in Nicholson creek where downed logs trapped a lot of seds. 100m walk from road																
08BMH041	363594	5438655	W Ingram	19-May-08	3	Low flow stream north of where the road crosses. Lots of fine seds deposited along bottom. Abundant organics	cldy	con	mod	wet	low	mid slope	75	65,35,0	med brn	poor	well	25	1 to 5	mix		sa
08BMH042	365688	5439905	W Ingram	19-May-08	3	Trib onto west ingram taken off west side of road. Seds trapped behind boulder	cldy	con	mod-wf	wet	low	mid slope	70	65,35,0	med brn			30	1 to 10	mix	br	sa
08BMH043	365469	5439897	W Ingram	19-May-08	4	Great location. Down tree with good trap behind. Close to old non accessible road	cldy	con	wf	wet	low	mid slope	95	95,5,0	med brn	poor	well	5	1 to 5	mix	br	sa
08BMH044	365696	5442455	W Ingram	19-May-08	4	Tree slowing down water. Seds depositing in slower water on the side	cldy	con-dec	wf	wet	low	ridge crest-mid slope	90	95,5,0	med brn	poor	well	10	1 to 5	mix	br	sa
08BMH045	366143	5443165	W Ingram	19-May-08	4	Good sample. Down tree catching seds upstream big deposit. Some clasts showed oxide staining	cldy	con-dec	wf	wet	low	ridge crest-mid slope	90	95,5,0	med brn			10	1 to 5	mix	br	sa
08BMH046	366079	5443275		19-May-08	3	Sample collected upstream in poplar trees from road. Sediment deposited below branches slowing water. Some clasts showed oxide staining.	cldy	dec	wf	wet	low	ridge crest	40		med brn	poor	med	60	1 to 15	mix	gr-br	a
08BMH047	367914	5438890		20-May-08	3	Low flow creek near clear cut. Seds deposited along bottom. Some organics.	cldy	con	wf	wet	low	mid slope	80	85,15,0	med	med	med	20	1 to 5	mix		sa
08BMH048	369061	5440394		20-May-08	3	Sample taken upstream from where road crosses. Low flow. Seds deposited behind small cobble	cldy	con	mod	wet	low	mid slope	85	75,25,0	med-dk brn			15	1 to 5	mix	br	sr
08BMH049	373669	5449554		21-May-08	3.5	Trib onto west ingram taken off west side of road. Good seds along bottom	cldy	con-dec	wf	wet	low	lower slope	85	95,5,0	med brn	poor	med	15	1 to 10	mix	br	sa
08BMH050	373617	5449641		22-May-08	4.5	Tree down on good creek, sand pocket	clr	con		wet	low	lower slope	99	98,2,0	med brn	poor	well	1	1 to 15	mix	br	sr
08BMH051	371992	5450392		23-May-08	2	downstream of where road crosses trib. Single rusty boulder in stream with pyrite. No other rocks like it around.	clr	con	mod	wet	low	mid slope	75	90,10,0	dk brn			25	1 to 15	mix	gr-br	sa
08BMH052	371317	5449993		23-May-08	4	Upstream side of creek where road crosses it. Sand pocket behind tree	clr	con-dec	mod	wet			85	99,1,0	med brn			15	1 to 2	mix	br	sr
08BMH053	370395	5449126		23-May-08	4	fast flowing sand pocket behind boulders in middle	cldy	con	wf	wet	low	mid slope	75	90,10,0	med brn	poor	well	25	1 to 15	mix	br	sa
08BMH054	371956	5450112		23-May-08	4	fast flowing creek with sand pocket along side	cldy	con-dec	wf	wet	low	lower slope	95	95,5,0	med brn	poor	well	5	1 to 5	mix	br	sa
08BMH055	360798	5435889		23-May-08	3	Bubar creek. Low flow with lots of seds along bottom	clr	dec	mod	wet	low	lower slope	95	55,45,0	light brn	poor	well	5	1 to 5	sed?	tan	sa
08BMH056	361216	5437783		23-May-08	4	low flow creek. Seds deposited appear to be from till cover. Some fine organics	clr	dec	mod	wet	low	mid slope	95	65,35,0	light brn			5	1 to 5	sed	tan	sa
08ARH001	364740	5437468	Ingram West	14-May	4	3 shovels, lots of organics, coarse grained creek no silt	Cloudy	Con	Mod	Wet	Med	Mid Slope	40	60,30,10	Dark Brown		Poor	60	0.5-5.0	Mix Volc	Gry, Grn	SA-SR
08ARH002	364909	5437820	Ingram West	14-May	4	4 shovels, lots of fallen trees, no silt, ~10% organics, very low flow, sampled on creek side,depth 30c, thickness 100cm	Cloudy	Con	Mod	Wet	Med	Mid Slope	60	60,25,15	Dark Brown		Med	40	0.2-3.0	Mix Volc	Grn, Gry	SR
08ARH003	364966	5437922	Ingram West	14-May	3	lots of organics in stream, very low flow almost dry, 10 shovels, lots of fallen trees, Depth 10 cm, Thickness 40 cm	Cloudy	Con	Mod	Wet	Med	Mid Slope	25	40,20,10	Dark Brown		Poor	75	1.0-4.0	Mix Volc	Grn, Gry	SR
08ARH004	365272	5438365	Ingram West	14-May	3	~20% organics, lots of fallen debris, intermittent stream, sampled from bank, Depth 10 cm, Thickness 15 cm	Cloudy	Con		Wet	Med	Mid Slope	95	65,25,10	Med Brn		Well	5	0.2-1.0			SR
08ARH005	364686	5437203	Ingram West	14-May	5	sampled just below fallen tree, lots of fallen trees, ~ 15% organics (bark & leaves), Depth 50 cm, Thickness 100 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	75	70,25,5	Med Brn		Med	25	1.0-5.0	Mix Volc	Gry	SR
08ARH006	365597	5441550	Ingram West	14-May	5	sampled from point bar, lots of fallen trees some ice upstream, Depth 40 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	40	70,25,5	Med, Brn		Poor	60	2.0-15.0	Mix Volc	Gry	SR
08ARH007	365578	5440994	Ingram West	14-May	4	just beside road, lots of cattle, sampled at point bar above fallen tree, ~5% organics, Depth 50 cm, Thickness 100 cm	Cloudy	Dec	Mod	Wet	Med	Mid Slope	60	70,20,10	Med, Brn		Med	40	1.0-4.0	Mix Volc	Grn	SA-SR
08ARH008	365261	5440926	Ingram West	14-May	4	sampled just above fallen log, ~10% organics, Depth 25cm, Thickness 75 cm,	Cloudy	Dec		Wet	Med	Mid Slope	60	75,20,5	Med, Brn		Med	40	0.5-3.0	Mixed	Grn	SA
08ARH009	364913	5441237	Ingram West	14-May	4	cow crossing?, hardly any sediment, ~25% organics,	Clear	Dec	Mod	Wet	Med	Mid Slope	90	50,30,20	Dark Brown		Well	10	0.2-1.0	Andestite	Grn	SA

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH010	364677	5436715	Ingram West	15-May	5	sampled on point bar, lots of alders in stream and fallen trees, no large boulders, Thickness 100 cm	Clear	Con	Mod	Wet	High	Mid Slope	40	70,25,5	Med Gry		Med	60	1.0-5.0		Gry	SA-SR
08ARH011	364836	5436097	Ingram West	15-May	4	~5% organics, sampled just below fallen log, sampled below water intake for Peter & Anna's,	Clear	Con, Dec		Wet	Med	Mid Slope	30	75,20,5	Med Gry		Med	70	2.0-9.0	Mix Volc	Gry, Grn	SR
08ARH012	364530	5437134	Ingram West	15-May	4	sampled behind lrg boulder, lots of grass/organics in creek and vegetation, ~10% organics, Depth 40 cm, Thickness 150 cm	Clear	Con, Grs	Mod	Wet	Med	Mid Slope	40				Poor	60	1.0-4.0	Mix Volc	Grn	SA
08ARH013	364120	5437620	Ingram West	15-May	4	sampled in low flat spot, cutblock, ~15% organics in stream, low flow, <5% large (50-100) boulders,Depth 30 cm, Thickness 100 cm,	Clear	Con	Mod	Wet	Low	Mid Slope	50	75,20,5	Med Gry		Med	50	1.0-9.0	Mix Volc	Gry, Grn	SR
08ARH014	363771	5438197	Ingram West	15-May	4	sampled just below fallen tree, ~30% organics, low flow, lots of fallen trees, very few clasts and boulders, depth 25 cm, thickness 90 cm	Clear	Con	Mod	Wet	Low	Mid Slope	90	70,25,5	Med Gry		Well	10	0.5-1.0	Andestite	Grn	SR
08ARH015	363591	5438507	Ingram West	15-May	3	very, very low flow, ~40% organics marshy area, no boulders in stream, Depth 10 cm, thickness 100 cm	Clear	Con	Mod	Wet	Low	Mid Slope	90		Dark Brown, Grey		Well	10	0.2-0.5			SR
08ARH016	365405	5438902	Ingram West	15-May	5	very few large boulders in stream, sampled behind fallen log, mod-fast flow, depth 50 cm, thickness 150	Clear	Con	Mod	Wet	High	Mid Slope	40	75,20,5	Med Gry		Med	60	1.0-7.0	Mixed Volc	Grn, Red, Gry	SA-SR
08ARH017	365359	5440583	Ingram West	15-May	5	mod-fast flow, sampled behind rock in stream, lots of fallen trees, <5% organics, depth 50 cm, thickness 120 cm	Clear	Con		Wet	High	Mid Slope	35	70,25,5	Med Brown		Med	65	1.0-5.0	Mix Volc	Grn, Gry	SA
08ARH018	361762	5442790	Nicholson	15-May	5	sampled just below fallen log, forced to take downstream from culvert because of "go away sign" lots of fallen trees and cows, depth 60 cm, Thickness 175 cm	Clear	Con	Mod	Wet	Med	Mid Slope	30	75,20,5	Med Gry		Med	70	1.0-7.0	Mix Volc	Grn, Gry	SA
08ARH019	361427	5442036	Nicholson	15-May	4	sampled from behind boulder, fast flow, some large boulders in stream, Depth 70 cm, Thickness 200cm	Clear	Con	Mod	Wet	High	Mid Slope	40	75,20,5	Med Brn		Med	60	1.0-5.0	Mix Volc	Gr, Red	SA
08ARH020	360568	5442023	Nicholson	15-May	4	~10% large boulders, sampled in low flow area, ~20% organics, Depth 20 cm, Thickness 50		Con	Mod	Wet	Med	Mid Slope	30	70,25,5	Dark Blk		Med	70	1.0-3.0			SA
08ARH020D	360568	5442023	Nicholson	15-May	4	~10% large boulders, sampled in low flow area, ~20% organics, Depth 50 cm, Thickness 175cm		Con	Mod	Wet	Med	Mid Slope	30	70,25,5	Dark Blk		Med	70	1.0-3.0			SA
08ARH021	360428	5441097	Nicholson	15-May	5	sampled at point bar, mod-fast flow, some larger boulders up to 70 cm basaltic clast with oxidized qtz vein,	Clear	Con, Dec	Mod	Wet	High	Lower Slope	65	75,20,5	Med Brown		Med	35	1.0-5.0	Mix Volc	Grn	SA
08ARH022	376010	5444485	Wallace	16-May	5	fast flowing creek sampled at point bar,good sandy, just downstream from trib, lots of macro organics, 7 shovels	Clear	Con	Mod	Wet	High	Mid Slope	75	75,20,5	Med Brown		Poor	25	1.0-7.0	Volc	Gry	SR
08ARH023	375828	5444507	Wallace	16-May	3	very steep tributary, lots of clasts, sampled out of small pool, Depth 5 cm, Thickness 20 cm	Clear	Con	Mod	Wet	High	Mid Slope	20	80,20	Med Gry		Poor	80	2.0-8.0	Granite, Granodior	Gry, wht	A-SA
08ARH024	375658	5444804	Wallace	16-May	5	very fast flow sampled @ side of creek, 8 shovels, sampled at bend in creek and back eddy,	Clear	Con	Mod		High	Lower Slope	90	75,25	Med Gry		Med	10	0.5-1.0	Mix volc	Gry, Grn	SR
08ARH025	375398	5444885	Wallace	16-May	5	3 shovels, sampled just below small waterfall @ side, ~5% organics in stream, moderate flow, Depth 40 cm, Thickness 90 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5	Med Gry		Med	40	0.3-7.0	Mix grand	Gry, wht	SA-SR
08ARH026	374327	5445527	Wallace	16-May	5	mod-fast flow, flat area around creek, sampled behind fallen tree, water is murky, Depth 125cm, thickness 400cm	Clear			Wet	Med	Lower Slope	40	70,25,5	Med Brown		Well	60	0.5-4.0	Mix Volc	Gry	SR
08ARH027	373062	5446217	Wallace	16-May	5	sampled below fallen log, moderate flow 6 shovels, nice open creek, Depth 30 cm, Thickness 75 cm	Clear			Wet	Med	Mid Slope	40	70,25,5	Med Brown		Med	60	0.3-5.0	Granite, Granodior	Gry, Wht, Pink	SA-SR
08ARH028	372509	5446217	Wallace	16-May	5	nice river flat, sampled @ small bend in the creek, fast flow, Depth 100cm, Thickness 300cm	Clear	Con	Mod	Wet	Med	Lower Slope	60	80,20	Med Brown		Med	40	0.3-5.0	Mix int	Gry, Red	SA-SR
08ARH029	372010	5446304	Wallace	16-May	5	sampled @ point bar, fast flow, Depth 75 cm, Thickness 200 cm	Clear	Con, Dec	Mod	Wet	Med	Lower Slope	90	70,25,5,	Med, Brn		Med	10	0.3-5.0	Mix Volc	Gry	SR
08ARH030	371721	5446283	Wallace	16-May	4	sampled from small pool in creek, moderate flow, ~10% organics (leaves, bark, sticks), depth 15 cm, thickness 50 cm	Clear	Con, Dec		Wet	Med	Mid Slope	40	70,25,5	Med, Brn		Poor	10	0.5-1.0	Mix Volc	Gry, Brn	SA-SR
08ARH031	371425	5446131	Wallace	16-May	5	snow next to creek, sampled at point bar, fast flow, Depth 100 cm, Thickness 450 cm	Clear	Con, Dec		Wet	Med	Mid Slope	40	80,20	Med, Brn		Poor	60	1.0-10.0	Mix int	Brn, Wht	SA-SR
08ARH032	371104	5445973	Wallace	16-May	5	sampled just below small waterfall, fast flow and lots of snow, depth 100cm, thickness 250 cm	Clear	Con, Dec	WF	Wet	Med	Mid Slope	30	80,20	Brn, Med		Med	70	1.0-10.0			SR
08ARH033	370654	5445752	Wallace	16-May	5	sampled behind fallen tree, ~10% organics, fast flow and lots of snow, Depth 100 cm, Thickness 275 cm,	Clear		Mod	Wet	Med	Mid Slope	85	70,25,5	Med, Brn		Med	15	0.3-4.0	Granite, mix volcanic	Brn Wht	SR
08ARH034	376841	5443787	Wallace	16-May	5	sampled on gravel bar, farmers field, mod-fast flow, Depth 75 cm, thickness 400 cm	Clear	GRS	WF	Wet	Low	Level	90	70,25,5	Med, Brn		Med	10	0.5-3.0	Mix Int	Gry, Wht	SR
08ARH035	370289	5445428	Wallace	17-May	5	sampled just below fallen log, fast flow, <5% organics, depth 75 cm, thickness 150 cm	Clear	Con, Dec	WF	Wet	Med	Mid Slope	60	75,20,5	Med, Brn		Med	40	0.5-6.0	Mix Volc	Brn , Gry	SA-SR

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH036	370078	5444639	Wallace	17-May	5	sampled just behind tree root, moderate flow, ~5% organics, low lying creek bed, Depth 40cm, thickness 125cm	Clear		Mod	Wet	Med	Mid Slope	60	70,25,5	Light Brown		Med	30	0.3-2.0	Mix Volc	Brn, Red	SA
08ARH037	369821	5444282	Wallace	17-May	5	sampled below small waterfall, mod-fast flow, ~10% organics, Depth 40, Thickness 100 cm	Clear	Con	Mod	Wet	Low	Mid Slope	75	60,30,10	Light Brown		Med	25	0.5-4.0	Mix Volc	Brn, Pink	SA-SR
08ARH038	368942	5443997	Wallace	17-May	5	sampled sand bar above log jam, moderate flow, <5% organics, Depth 50 cm, Thickness 125 cm	Clear	Con	Mod	Wet	Med	Mid Slope	90	65.30,5	Brn		Med	10	0.3-3.0	Mix Volc	Brn, Red	SR
08ARH039	369933	5445741	Wallace	17-May	5	sampled behing rock, fast flow, Depth 75 cm, Thickness 200 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	60,35,5	Med Brn		Med	40	1.0-7.0	Mix Volc	Brn, Red	SA
08ARH040	369347	5445959	Wallace	17-May	5	5 shovels, sampled above fallen log, moderate flow, Depth 50 cm, Thickness 75 cm	Clear	Con		Wet	Med	Mid Slope	40	60,35,5	Med Brn		Med	60	1.0-7.0	Mix Volc	Brn Gry	SA-SR
08ARH040D	369347	5445959	Wallace	17-May	5	duplicate	Clear	Con		Wet	Med	Mid Slope	40	60,35,5	Med Brn		Med	60	1.0-7.0	Mix Volc	Brn Gry	SA-SR
08ARH041	368921	5445643	Wallace	17-May	5	sampled on gravel bar, moderate flow, Wallace tributary, Depth 45cm, Thickness 100 cm	Clear	Con		Wet	Med	Mid Slope	40	70,25,5	Med Brn		Med	60	1.0-5.0	Mix Int	Gry Wht	SA
08ARH042	368912	5446229	Wallace	17-May	5	sampled behind fallen tree, moderate flow, Depth 55 cm, Thickness 150 cm	Clear	Con	Mod	Wet	Med	Mid Slope	40				Med	60	1.0-9.0	Mix Int	Brn Gry	SA-SR
08ARH043	368025	5446526	Wallace	17-May	5	sampled from small pool, mod-low flow, ~5% organics, Depth 5o cm, Thickness 75 cm	Clear	Con		Wet	Low	Mid Slope	60	65,30,5	Med Brn		Med	40	1.0-5.0	Mix Vol		SA
08ARH044	368145	5446458	Wallace	17-May	3	sampled behind log, fast flow, lots of fallen logs, lots of organics, really difficult to get a sample, low sediments, Depth 70, Thickness 100 cm	Clear		Mod	Wet	High	Mid Slope	20	80,20	Med Brn		Poor	80	2.0-12.0	Porphry mix volc	Brn Gry	SA-SR
08ARH045	367183	5446669	Wallace	17-May	5	sampled at point bar, low flow, Depth 30cm, Thickness 75cm	Clear	Con	Mod	Wet	Low	Level	70	65,30,5	Light Brown		Well	30	0.5-3.0	Mixed	Brown, Grey	SA
08ARH046	373571	5445619	Wallace	17-May	5	low-mod flow, ~10% organics, sampled from small pool, Wallace trib well established, Depth 50 cm, Thickness 75 cm	Clear	Con	Mod	Wet	Med	Mid Slope	80	70,25,5	Med Brown		Well	20	0.5-2.0	Mixed Volc	Brn, Red	SR
08ARH047	386874	5435985	July	18-May	4	sampled behind tree, sampled close to house, very nice man, low flow, lots of organics, Depth 150 cm, Thickness 200 cm	Clear	Con		Wet	Low	Level	90	65,30,5	Dark Brown		Well	10	0.3-1.0	?	Brown, Grey	SR
08ARH048	386505	5434850	Skeff	18-May	5	close to old pit, sampled on rocky terraced area, fast flow, 9 shovels, Depth 40 cm, Thickness 150 cm	Clear	Con	Mod	Wet	Med	Med Slope	40	70,25,5	Med Brn		Med	60	1.0-6.0	Mixed Volc	Brn, Grey	SA-SR
08ARH049	385891	5435163	Skeff	18-May	5	sampled in small pool, mod-fast flow, lots of organics (macro), 5 shovels, Depth 60 cm, Thickness 100 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5	Med Brown		Med	40	0.5-3.0	Mixed Volc		SA-SR
08ARH050	385212	5435136	Skeff	18-May	5	6 shovels, sampled at point bar, lots of fallen trees, mod-fast flow, Depth 50cm, Thickness 75 cm	Clear	Con	Med	Wet	High	Med Slope	40	70,25,5	Med Brown		Med	60	0.5-7.0	Mixed Volc	Brn, Blk	SA-SR
08ARH051	384621	5435245	Skeff	18-May	4	sampled behind fallen log, low flow, lots of macro organics, 6 shovels, large flat area all flooded, Depth 75 cm, Thickness 125 cm,	Clear	Con, Swamp	Mod	Wet	Low	Level	70	60,30,10	Med,Grn,Gry,		Well	30	0.3-2.0	Mixed Volc	Grn Brn	SR
08ARH052	384201	5435278	Skeff	18-May	5	end of road, sampled @ point bar, 4 shovels, low-mod flow, limestone clasts, Depth 55cm, Thickness 100cm	Clear	Con	Mod	Wet	Low	Mid Slope	90	60,30,10	Med, Gry		Well	10	0.3-2.0	SS?	Wht	SA
08ARH053	386908	5434985	July	18-May	5	mod-low flow, sampled behind fallen log, 5 shovels, lots of organics, Depth 100 cm, Thickness 175 cm	Clear	Con	Mod	Wet	Med	Lower Slope	95	70,20,10	Med, Brn		Well	5	0.3-1.0	?	Brn	SR
08ARH054	373193	5440669	Motherlode	22-May	5	mod flow, sampled behind fallen log, Depth 30 cm, Thickness 50 cm	Clear	Con	Mod	Wet	Med	Mid Slope	40	60,30,10	Med, Brn		Med	60	0.5-1.0	Mix volc	Brn, Gry	SA
08ARH055	373234	5440716	Motherlode	22-May	5	fast-mod flow, sampled behind rock, Depth 40, Thickness 75 cm	Clear	Con	Mod	Wet	Med	Mid Slope	60	70,25,5			Med	40	0.5-3.0	Mix Voloc	Brn, Grn,Red	SR
08ARH056	372654	5441331	Motherlode	22-May	5	mod flow, lots of organics, 4 shovels, sampled at flat area,	Clear	Con	Mod	Wet	Low	Mid Slope	40	65,30,5	Brn			60	0.5-6.0	Porphry mix volc		SA
08ARH057	371679	5441851	Motherlode	22-May	4	low flow, sampled in flat area, lots of organics, 4 shovels, Depth 30 cm, Thickness 75 cm	Clear	Con	Mod	Wet	Low	Level	50	70,25,5	Brn		Med	50	0.5-3.0	Porphry mix volc	Brn,Grn	SR
08ARH058	371694	5441763	Motherlode	22-May	5	low flow, sampled low flat area, 6 shovels, Depth 25 cm, Thickness 100 cm	Clear	Con	Mod	Wet	Low	Level	50	60,30,10	Brn		Med	50	0.5-4.0	Mix Volc	Brn, Wht	SA
08ARH059	370909	5441739	Motherlode	22-May	5	low-mod flow, 4 shovels, Depth 40 cm, Thickness 100 cm	Clear	Con	Mod	Wet	High		40	60,30,10	Brn		Med	60	0.5-6.0	Mix Volc	Brn, Wht	SA-SR
08ARH060	361727	5452609	Fiva	23-May	5	some larger boulders in stream (up to 50cm) ~5%, sampled behind fallen log, moderate flow, 4 shovels, Depth 45 cm, Thickness 150 cm	Cloudy	Con	WF	Wet	Med	Lower Slope	75	65,25,10	Brn		Med	25	0.5-4.0	Mixed Volc	Brn, Grn	SA-SR
08ARH060D	361727	5452609	Fiva	23-May	5	duplicate	Cloudy	Con	Wf	Wet	Med	Lower Slope	75	65,25,10	Brn		Med	25	0.5-4.0	Mixed Volc	Brn, Grn	SA-SR
08ARH061	372426	5430667	No Name	23-May	4	dry creek sample, 12 shovels, sampled in low flat area, ~10% organics, 12 shovels looks like the creek has not ran for sometime	Cloudy	Con	Sprs	Dry	Med	Mid Slope	70	60,30,10	Brn		Med	30	0.5-4.0	Mixed Volc	Grn, Wht, Brn	SR
08ARH062	361757	5452659	Fiva	23-May	4	sampled small pool @ base of ~150ft waterfall, 9 shovels fast flow, Depth 20 cm, Thickness 100 cm,	Cloudy	Con	Mod	Wet	High	Lower Slope	40	75,25	Brn		Poor	60	0.7-5.0	Granite, Granodior	Blck, Wht, Grn	A
08ARH063	362626	5451098	Fiva	23-May	5	low-mod flow, 5 shovels, ~5% organics sampled low flat area, Depth 30 cm, Thickness 125 cm	Cloudy	Con	Mod	Wet	Med	Level	60	60,30,10	Brn		Med	40	0.5-7.0	Mixed Volc	Brn, grn	SA-SR

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Rating	Comments	Weather	Vegetation	Vegetation Int	Moisture	Relief	Topo Position	Matrix %	Texture (%) Sand, Slit, Clay	Matrix Colour	Compaction	Sorting	Clast%	Clast size Min-Max	Lithology	Colour	Modal Shape
08ARH064	364867	5449221	Fiva	23-May	5	low flow, swampy area, sampled above log, ~10% organics (leaves ect), 3 shovels, Depth 30 cm, Thickness 75 cm	Cloudy	Con	Mod	Wet	Low	Level	80	60,30,10	Brn		Well	20	0.5-1.0	Mixed Volc	Brn	SR
08ARH065	379720	5437039	Lind	24-May	5	6 shovels, fast-mod flow, sampled behind rock, Depth 50 cm, Thickness 150 cm	Clear	Con,Dec	WF	Wet	High	Lower Slope	40	90,25,5	Brn		Poor	60	1.0-9.0	Mixed Volc	Brn	SR
08ARH066	380357	5436819	Lind	24-May	5	mod- flow, lots of organics, sampled behind tree, through farmland, Depth 50 cm, Thickness 125 cm	Clear	Con,Dec	Mod	Wet	Med	Lower Slope	50	60,30,10	Brn		Well	50	0.5-4.0	Mixed Volc	Brn, Grn	SR

Appendix 3

HMC Sample Results

APPENDIX 3. Grizzly Diamonds Ltd. 2008 Heavy Mineral Concentrate Gold Results

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Laboratory Report	Sample Weight in Kg	Visible Gold Grain Count	Estimated Weight of Gold in µg
08BMH001	366275	5435321	E Ingram	13-May-08	G-08-791	5.4	2	4.71
08BMH002	365746	5434938	E Ingram	13-May-08	G-08-791	6.25	1	1.46
08BMH003	365379	5434375	E Ingram	13-May-08	G-08-791	5.3	1	8.43
08BMH004	365321	5434327	M Ingram	13-May-08	G-08-791	6.15	0	0
08BMH005	365393	5434513	W Ingram	14-May-08	G-08-791	5.55	2	5.12
08BMH006	366949	5436041	E Ingram	14-May-08	G-08-791	6.15	2	0.87
08BMH007	367572	5436920	E Ingram	14-May-08	G-08-791	6.6	1	6
08BMH008	368078	5437095	E Ingram	14-May-08	G-08-791	6.15	0	0
08BMH009	368052	5437822	E Ingram	14-May-08	G-08-791	5.75	1	3.25
08BMH010	368324	5438577	E Ingram	14-May-08	G-08-791	7.05	1	1.96
08BMH011	368401	5438572	E Ingram	14-May-08	G-08-791	6	2	5.51
08BMH012	368671	5439172	E Ingram	14-May-08	G-08-791	5.9	0	0
08BMH013	368676	5439537	E Ingram	14-May-08	G-08-791	6.95	0	0
08BMH014	368836	5439726	E Ingram	14-May-08	G-08-791	5.85	4	11.45
08BMH015	368272	5440796	E Ingram	14-May-08	G-08-791	6.9	0	0
08BMH016	367133	5441406	E Ingram	14-May-08	G-08-791	5.05	2	0.38
08BMH017	367964	5441341	E Ingram	14-May-08	G-08-791	4.95	0	0
08BMH018	367942	5441453	E Ingram	14-May-08	G-08-791	6.25	2	13.57
08BMH019	367880	5441533	E Ingram	14-May-08	G-08-791	5.5	5	0.92
08BMH020	363888	5432480	E Ingram	14-May-08	G-08-791	4.8	5	3.92
08BMH021	372734	5432227	Kerr Creek	15-May-08	G-08-791	5.9	14	34.24
08BMH021D	372734	5432227	Kerr Creek	15-May-08	G-08-791	5.1	15	199.7
08BMH022	372525	5433053		15-May-08	G-08-791	5.95	2	5.12
08BMH023	371846	5433880	Bauer	15-May-08	G-08-791	8.95	2	22.21
08BMH024	371025	5434063		15-May-08	G-08-791	5.55	0	0
08BMH025	372296	5433932		15-May-08	G-08-791	5.25	7	4.58
08BMH026	372017	5435001	Jolly Jack	15-May-08	G-08-791	5.35	2	3.61
08BMH027	371732	5436779		15-May-08	G-08-791	5.55	3	6.11
08BMH028	371189	5436877	Jolly Jack	15-May-08	G-08-791	5.65	1	1.46
08BMH029	375588	5430482	Norweigan	16-May-08	G-08-792	6	2	16.38
08BMH030	377235	5431943	Gidon	17-May-08	G-08-792	5.7	6	16.31
08BMH031	377782	5430970	Gidon	17-May-08	G-08-792	4.95	4	22.26
08BMH032	377484	5431121		17-May-08	G-08-792	7.8	8	14.53
08BMH033	378097	5432441		17-May-08	G-08-792	6	7	94.79

APPENDIX 3. Grizzly Diamonds Ltd. 2008 Heavy Mineral Concentrate Gold Results

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Laboratory Report	Sample Weight in Kg	Visible Gold Grain Count	Estimated Weight of Gold in µg
08BMH034	379221	5432386		17-May-08	G-08-792	8.5	6	28.91
08BMH035	379955	5432618		17-May-08	G-08-792	5.4	3	58.51
08BMH036	381577	5432798		17-May-08	G-08-792	5.85	4	51.81
08BMH037	381480	5432791		17-May-08	G-08-792	6.55	15	193.89
08BMH038	383335	5433298		17-May-08	G-08-792	5.25	8	25.59
08BMH039	376302	5431946	Mcarron	17-May-08	G-08-792	6.55	2	17.69
08BMH040	361221	5441448	Nicholson	18-May-08	G-08-792	8.65	3	25.8
08BMH040D	361221	5441448	Nicholson	18-May-08	G-08-792	8.15	2	11.81
08BMH041	363594	5438655	W Ingram	19-May-08	G-08-792	6.65	2	3.42
08BMH042	365688	5439905	W Ingram	19-May-08	G-08-792	6.2	6	7.6
08BMH043	365469	5439897	W Ingram	19-May-08	G-08-792	6.8	0	0
08BMH044	365696	5442455	W Ingram	19-May-08	G-08-792	5.85	5	14.6
08BMH045	366143	5443165	W Ingram	19-May-08	G-08-792	8	7	47.01
08BMH046	366079	5443275		19-May-08	G-08-792	5.75	5	33.29
08BMH047	367914	5438890		20-May-08	G-08-792	8.7	0	0
08BMH048	369061	5440394		20-May-08	G-08-792	8.4	3	5.56
08BMH049	373669	5449554		21-May-08	G-08-792	7.1	0	0
08BMH050	373617	5449641		22-May-08	G-08-792	8.7	1	7.15
08BMH051	371992	5450392		23-May-08	G-08-792	6.6	0	0
08BMH052	371317	5449993		23-May-08	G-08-792	7.15	0	0
08BMH053	370395	5449126		23-May-08	G-08-792	7.7	0	0
08BMH054	371956	5450112		23-May-08	G-08-792	8	0	0
08BMH055	360798	5435889		23-May-08	G-08-792	6.3	0	0
08BMH056	361216	5437783		23-May-08	G-08-792	5.45	0	0
08ARH001	364740	5437468	Ingram West	14-May-08	G-08-789	5.15	0	0
08ARH002	364909	5437820	Ingram West	14-May-08	G-08-789	8.5	1	1.96
08ARH003	364966	5437922	Ingram West	14-May-08	G-08-789	5.5	3	1.67
08ARH004	365272	5438365	Ingram West	14-May-08	G-08-789	7.65	0	0
08ARH005	364686	5437203	Ingram West	14-May-08	G-08-789	7.8	3	4.97
08ARH006	365597	5441550	Ingram West	14-May-08	G-08-789	5	4	30.67
08ARH007	365578	5440994	Ingram West	14-May-08	G-08-789	4.7	3	13.27
08ARH008	365261	5440926	Ingram West	14-May-08	G-08-789	4.9	1	1.96
08ARH009	364913	5441237	Ingram West	14-May-08	G-08-789	3.2	2	16.01
08ARH010	364677	5436715	Ingram West	15-May-08	G-08-789	6.15	2	0.71

APPENDIX 3. Grizzly Diamonds Ltd. 2008 Heavy Mineral Concentrate Gold Results

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Laboratory Report	Sample Weight in Kg	Visible Gold Grain Count	Estimated Weight of Gold in µg
08ARH011	364836	5436097	Ingram West	15-May-08	G-08-789	5.25	1	2.56
08ARH012	364530	5437134	Ingram West	15-May-08	G-08-789	4.95	1	1.05
08ARH013	364120	5437620	Ingram West	15-May-08	G-08-789	7.75	2	2.67
08ARH014	363771	5438197	Ingram West	15-May-08	G-08-789	5.7	3	5.38
08ARH015	363591	5438507	Ingram West	15-May-08	G-08-789	6.8	2	0.28
08ARH016	365405	5438902	Ingram West	15-May-08	G-08-789	6.25	2	4.33
08ARH017	365359	5440583	Ingram West	15-May-08	G-08-789	6.1	0	0
08ARH018	361762	5442790	Nicholson	15-May-08	G-08-789	5.65	1	11.41
08ARH019	361427	5442036	Nicholson	15-May-08	G-08-789	6.3	0	0
08ARH020	360568	5442023	Nicholson	15-May-08	G-08-789	5.8	0	0
08ARH020D	360568	5442023	Nicholson	15-May-08	G-08-789	5.05	0	0
08ARH021	360428	5441097	Nicholson	15-May-08	G-08-789	6.05	1	2.56
08ARH022	376010	5444485	Wallace	16-May-08	G-08-789	6	0	0
08ARH023	375828	5444507	Wallace	16-May-08	G-08-789	4.35	0	0
08ARH024	375658	5444804	Wallace	16-May-08	G-08-789	9.6	0	0
08ARH025	375398	5444885	Wallace	16-May-08	G-08-789	4.75	0	0
08ARH026	374327	5445527	Wallace	16-May-08	G-08-789	5.85	0	0
08ARH027	373062	5446217	Wallace	16-May-08	G-08-789	4.05	0	0
08ARH028	372509	5446217	Wallace	16-May-08	G-08-789	6.9	2	4.33
08ARH029	372010	5446304	Wallace	16-May-08	G-08-789	6.6	1	3.25
08ARH030	371721	5446283	Wallace	16-May-08	G-08-789	4.8	0	0
08ARH031	371425	5446131	Wallace	16-May-08	G-08-789	7.7	0	0
08ARH032	371104	5445973	Wallace	16-May-08	G-08-789	5.45	1	2.56
08ARH033	370654	5445752	Wallace	16-May-08	G-08-789	4.8	1	2.56
08ARH034	376841	5443787	Wallace	16-May-08	G-08-790	6.9	1	1.46
08ARH035	370289	5445428	Wallace	17-May-08	G-08-790	6.05	1	0.71
08ARH036	370078	5444639	Wallace	17-May-08	G-08-790	6.45	6	25.3
08ARH037	369821	5444282	Wallace	17-May-08	G-08-790	5.75	7	3.24
08ARH038	368942	5443997	Wallace	17-May-08	G-08-790	8.95	0	0
08ARH039	369933	5445741	Wallace	17-May-08	G-08-790	6.7	0	0
08ARH040	369347	5445959	Wallace	17-May-08	G-08-790	4.85	1	0.71
08ARH040D	369347	5445959	Wallace	17-May-08	G-08-790	5.45	0	0
08ARH041	368921	5445643	Wallace	17-May-08	G-08-790	6.15	2	7.53
08ARH042	368912	5446229	Wallace	17-May-08	G-08-790	5.25	0	0

APPENDIX 3. Grizzly Diamonds Ltd. 2008 Heavy Mineral Concentrate Gold Results

Sample ID	X_Nad83z11	Y_Nad83z11	Location	Date	Laboratory Report	Sample Weight in Kg	Visible Gold Grain Count	Estimated Weight of Gold in µg
08ARH043	368025	5446526	Wallace	17-May-08	G-08-790	6.35	0	0
08ARH044	368145	5446458	Wallace	17-May-08	G-08-790	4.1	1	0.71
08ARH045	367183	5446669	Wallace	17-May-08	G-08-790	5.05	0	0
08ARH046	373571	5445619	Wallace	17-May-08	G-08-790	4.75	2	3.96
08ARH047	386874	5435985	July	18-May-08	G-08-790	5.05	10	9.42
08ARH048	386505	5434850	Skeff	18-May-08	G-08-790	4.1	12	111.22
08ARH049	385891	5435163	Skeff	18-May-08	G-08-790	4.7	18	96.43
08ARH050	385212	5435136	Skeff	18-May-08	G-08-790	4.2	8	77.04
08ARH051	384621	5435245	Skeff	18-May-08	G-08-790	5.25	21	55.68
08ARH052	384201	5435278	Skeff	18-May-08	G-08-790	4.05	12	16.18
08ARH053	386908	5434985	July	18-May-08	G-08-790	3.85	5	12.28
08ARH054	373193	5440669	Motherlode	22-May-08	G-08-790	5.25	0	0
08ARH055	373234	5440716	Motherlode	22-May-08	G-08-790	5.1	4	8.97
08ARH056	372654	5441331	Motherlode	22-May-08	G-08-790	6.55	1	1.46
08ARH057	371679	5441851	Motherlode	22-May-08	G-08-790	8.35	0	0
08ARH058	371694	5441763	Motherlode	22-May-08	G-08-790	7.1	1	11.41
08ARH059	370909	5441739	Motherlode	22-May-08	G-08-790	5.4	3	33.78
08ARH060	361727	5452609	Fiva	23-May-08	G-08-790	5.65	0	0
08ARH060D	361727	5452609	Fiva	23-May-08	G-08-790	5.17	1	4.05
08ARH061	372426	5430667	No Name	23-May-08	G-08-790	5.4	5	15.75
08ARH062	361757	5452659	Fiva	23-May-08	G-08-790	6.8	0	0
08ARH063	362626	5451098	Fiva	23-May-08	G-08-790	6.1	1	0.1
08ARH064	364867	5449221	Fiva	23-May-08	G-08-790	6.45	0	0
08ARH065	379720	5437039	Lind	24-May-08	G-08-790	6.45	9	42.41
08ARH066	380357	5436819	Lind	24-May-08	G-08-790	5.5	27	84.27

Appendix 4

Rock Sample Results

Sample ID	X_Nad83z11	Y_Nad83z11	Showing	Date	Au Ave ppb	Au ppb	Au1 ppb	Au g t	Au1 g t	File Name	Ag PPM	Al %	As PPM	Au PPM	Ba PPM	Be PPM	Bi PPM
08BMP001	365693	5443653	Mabel Jenny	19-May	40	40				S28898	0.3	7.24	30	<0.1	241	<1	0.7
08BMP002	365705	5443681	Mabel Jenny	19-May	65	65				S28898	0.2	8.20	63	0.1	754	<1	0.9
08BMP003	365525	5444038	Mabel Jenny	19-May	-5	<5				S28898	<0.1	4.43	3	<0.1	761	2	0.2
08BMP004	369872	5442486	Big Copper	20-May	-5	<5	<5			S28898	<0.1	0.10	<1	<0.1	14	<1	0.3
08BMP005	369766	5442666	Big Copper	20-May	-5	<5				S28898	<0.1	2.50	23	<0.1	59	<1	<0.1
08BMP006	369766	5442666	Big Copper	20-May	-5	<5				S28898	0.1	3.39	11	<0.1	26	<1	<0.1
08BMP007	369768	5442572	Big Copper	20-May	10	10				S28898	10.8	2.39	27	<0.1	39	1	13.2
08BMP008	369768	5442572	Big Copper	20-May	-5	<5				S28898	24.5	2.67	46	<0.1	19	1	32.1
08BMP009	369768	5442572	Big Copper	20-May	-5	<5				S28898	1.6	3.59	23	<0.1	20	<1	17.3
08BMP010	384996	5434105	Overlander	22-May	-5	<5				S28898	0.3	5.21	17	<0.1	179	<1	1.2
08BMP011	384996	5433926	Overlander	22-May	10	10				S28898	0.6	2.01	10	<0.1	96	<1	19.6
08BMP012	383699	5433903	Overlander	22-May	5	5				S28898	0.6	3.00	52	<0.1	692	1	0.6
08BMP013	383710	5434015	Overlander	22-May	25585	>3000		25.86	25.31	S28898	21.5	0.38	278	28.4	8	<1	16.2
08BMP014	383710	5434015	Overlander	22-May	705	720	690			S28898	2.3	3.00	140	0.6	549	<1	3.7
08BMP015	383655	5434178	Overlander	23-May	60	60				S28898	0.3	4.42	5	<0.1	553	<1	0.3
08BMP016	383671	5434114	Overlander	24-May	40	40				S28898	0.4	4.35	54	<0.1	157	<1	0.7
08BMP017	383681	5434077	Overlander	24-May	3220	>3000		3.22		S28898	9.0	0.70	9537	2.7	41	<1	25.0
08ARP001	369790	5442666	Big Copper	19-May	-5	<5				S28898	<0.1	1.48	141	<0.1	8	<1	<0.1
08ARP002	369768	5442682	Big Copper	19-May	-5	<5				S28898	<0.1	0.31	15	<0.1	9	<1	<0.1
08ARP003	369756	5442681	Big Copper	19-May	-5	<5				S28898	0.4	1.03	12	<0.1	16	1	0.2
08ARP004	369916	5442131	King Soloman	19-May	-5	<5				S28898	0.1	0.22	<1	<0.1	28	<1	<0.1
08ARP005	370861	5442715	Poppy	20-May	-5	<5				S28898	<0.1	3.65	12	<0.1	9	<1	<0.1
08ARP006	370859	5442709	Poppy	20-May	-5	<5				S28898	<0.1	4.27	15	<0.1	7	<1	<0.1
08ARP007	370867	5442700	Poppy	20-May	-5	<5	<5			S28898	<0.1	3.53	9	<0.1	3	<1	<0.1
08ARP008	370860	5442713	Poppy	20-May	-5	<5				S28898	<0.1	6.58	7	<0.1	1	<1	<0.1
08ARP009	369852	5442569	Big Copper	20-May	1550	1550				S28898	91.5	1.56	24	1.3	16	<1	6.8
08ARP009 Re	369852	5442569	Big Copper	20-May						S28898	91.4	1.59	23	2.4	18	<1	7.0
08ARP010	369849	5442569	Big Copper	20-May	6040	>3000		6.04		S28898	97.6	2.75	17	3.9	43	<1	4.0
08ARP011	386524	5434896	Pit	21-May	-5	<5				S28898	0.4	6.13	3	<0.1	87	1	0.2
08ARP012	386504	5434898	Pit	21-May	60	60				S28898	3.2	5.33	35	<0.1	35	<1	1.0
08ARP013	386541	5434890	Pit	21-May	-5	<5				S28898	0.1	6.59	<1	<0.1	45	<1	0.1
08ARP014	384766	5435525	Skeff Crk	21-May	50	50				S28898	5.8	5.20	46	<0.1	105	1	0.2
08ARP015	384768	5435530	Skeff Crk	21-May	30	30				S28898	0.4	9.72	31	<0.1	1609	2	<0.1
08ARP016	384605	5435471	Skeff Crk	21-May	10	10				S28898	0.3	6.74	3	<0.1	81	<1	2.8
08ARP017	386182	5435333	Skeff Adit	21-May	100	100				S28898	3.4	0.90	332	0.1	24	<1	1.2
08ARP018	386186	5435331	Skeff Adit	21-May	230	230				S28898	16.7	1.13	492	0.2	16	<1	2.1
08ARP019	368061	5445732	Pen	22-May	-5	<5				S28898	0.2	8.99	4	<0.1	759	<1	0.2
08ARP020	368077	5445727	Pen	22-May	10	10				S28898	0.2	8.66	3	<0.1	1270	<1	0.2
08ARP021	368064	5445734	Pen	22-May	-5	<5				S28898	<0.1	8.97	3	<0.1	599	<1	0.3

Sample ID	Ca %	Cd PPM	Ce PPM	Co PPM	Cr PPM	Cu PPM	Fe %	Hf PPM	K %	La PPM	Li PPM	Mg %	Mn PPM	Mo PPM	Na %	Nb PPM	Ni PPM
08BMP001	6.88	0.3	10	39.1	270	220.7	8.73	1.7	0.88	4.0	18.4	3.99	2174	7.4	1.912	5.0	109.7
08BMP002	5.35	5.9	10	45.8	239	204.1	8.73	1.5	0.55	4.1	43.0	3.53	2495	0.8	2.694	5.3	134.1
08BMP003	1.03	<0.1	33	16.5	298	115.1	3.78	1.3	1.28	16.0	14.9	1.30	3951	2.4	0.887	9.6	62.4
08BMP004	37.92	0.4	<1	0.3	3	3.0	0.10	<0.1	0.01	0.3	0.9	0.24	658	0.7	0.005	0.3	<0.1
08BMP005	24.19	0.2	7	6.7	92	4.4	8.04	0.6	0.04	2.5	8.5	0.80	3795	0.3	0.028	2.5	7.9
08BMP006	21.26	0.4	154	11.4	84	4.7	6.52	1.6	0.02	115.8	7.2	1.88	5346	0.2	0.034	6.5	23.2
08BMP007	18.87	0.3	17	31.7	155	>10000.0	13.99	1.0	0.01	4.9	4.8	1.40	4314	3.0	0.027	5.6	40.5
08BMP008	19.78	2.1	10	14.3	130	3646.1	14.12	0.8	0.01	2.2	9.6	1.17	4082	5.0	0.018	3.7	31.0
08BMP009	19.02	0.1	9	23.8	146	742.6	10.98	1.5	0.02	3.4	18.9	1.79	4234	3.1	0.018	9.1	46.1
08BMP010	0.38	<0.1	19	9.5	552	288.6	4.61	1.7	0.42	8.5	8.8	0.78	252	5.8	3.036	2.3	12.4
08BMP011	0.43	<0.1	38	10.9	1183	295.6	4.62	0.7	0.72	22.8	5.8	0.39	184	6.2	0.379	1.7	26.5
08BMP012	0.06	0.4	24	3.4	441	50.1	2.79	1.5	1.47	13.5	4.1	0.30	85	13.9	0.035	5.5	22.2
08BMP013	0.05	<0.1	3	76.9	1701	110.8	17.20	0.3	0.14	1.8	3.3	0.03	144	6.3	0.019	0.9	37.1
08BMP014	0.05	<0.1	7	3.8	1335	191.4	8.73	0.8	2.11	3.0	5.1	0.06	178	11.0	0.221	1.9	18.8
08BMP015	4.41	0.3	34	6.3	802	89.6	4.28	1.1	1.28	17.9	1.2	0.66	1239	3.9	0.268	5.0	20.7
08BMP016	0.11	0.1	27	7.1	241	88.6	3.92	1.1	1.39	13.1	16.9	0.36	301	1.5	0.593	3.0	8.9
08BMP017	0.04	1.4	2	51.6	301	389.1	14.26	0.2	0.24	1.4	6.0	0.08	131	1.8	0.007	0.8	15.9
08ARP001	21.92	0.2	13	7.0	105	5.8	14.13	0.4	<0.01	4.2	3.4	0.81	4382	1.0	0.017	2.2	11.0
08ARP002	20.64	0.2	5	10.6	120	22.7	1.35	0.2	0.01	1.9	4.2	0.96	2589	0.5	0.022	0.8	21.4
08ARP003	1.76	1.7	19	21.2	345	56.5	9.34	0.5	0.02	10.9	13.6	0.39	4431	3.8	0.010	2.0	33.0
08ARP004	37.73	0.1	<1	1.5	11	9.8	0.40	<0.1	0.05	0.5	3.2	0.27	1208	3.3	0.008	0.3	3.6
08ARP005	17.79	0.8	7	5.2	214	3.8	4.85	1.1	0.04	4.4	9.1	1.04	>10000	1.7	0.021	3.9	24.4
08ARP006	20.84	0.8	5	9.6	175	2.8	5.51	1.2	0.02	4.0	11.0	0.62	>10000	1.5	0.009	4.0	32.3
08ARP007	19.14	0.3	3	3.5	184	3.1	4.50	0.7	<0.01	1.8	13.6	0.61	6398	0.7	0.008	2.2	15.3
08ARP008	23.95	0.2	1	7.9	180	3.5	8.61	0.8	<0.01	0.9	4.0	0.36	5519	0.9	0.006	3.4	15.3
08ARP009	2.48	1.3	18	20.4	352	9991.3	12.61	0.9	0.04	11.2	4.7	0.78	888	2.2	0.016	6.1	35.6
08ARP009 Re	2.44	1.3	19	20.0	366	9885.1	12.39	0.8	0.04	10.7	3.6	0.77	874	2.4	0.016	6.3	35.9
08ARP010	5.04	8.1	7	58.6	102	>10000.0	22.96	0.6	0.17	3.1	13.0	1.93	2381	41.2	0.042	4.0	32.9
08ARP011	4.17	0.3	44	39.6	323	548.0	6.63	2.1	1.65	23.0	13.8	2.69	751	133.7	1.148	28.7	117.5
08ARP012	1.00	0.2	15	37.1	158	2280.4	16.19	0.6	1.27	6.8	17.8	1.21	785	12.6	0.242	5.4	13.6
08ARP013	3.25	<0.1	<1	50.0	205	358.5	6.81	0.3	0.36	0.3	14.2	3.02	603	0.7	1.259	0.3	50.5
08ARP014	0.11	0.4	24	8.8	190	70.9	2.90	0.7	2.40	11.6	21.8	0.64	141	19.7	0.028	5.9	24.3
08ARP015	0.09	0.2	74	6.3	72	51.8	2.98	3.4	5.47	36.1	14.0	0.55	122	40.2	0.064	18.1	13.6
08ARP016	1.35	<0.1	3	64.1	162	682.4	7.62	0.4	2.09	1.4	8.6	1.23	295	0.9	2.365	0.4	31.4
08ARP017	13.24	0.2	2	82.9	1589	519.0	6.15	<0.1	0.03	1.0	15.7	7.40	1534	17.7	0.017	0.3	1169.9
08ARP018	0.20	0.4	2	116.2	1159	3972.0	11.81	<0.1	0.02	1.6	12.5	0.66	496	67.3	0.011	0.6	441.5
08ARP019	3.65	0.1	13	11.8	114	27.3	4.21	0.7	1.36	6.0	22.2	1.57	911	0.8	2.608	4.0	23.1
08ARP020	3.17	<0.1	12	15.7	139	49.6	4.25	0.6	1.88	6.2	29.9	1.83	1087	0.6	2.457	3.8	43.1
08ARP021	3.44	0.3	15	10.0	102	10.2	3.90	0.3	0.89	6.9	26.5	1.24	811	0.6	2.650	4.1	18.1

Sample ID	P %	Pb PPM	Rb PPM	S %	Sb PPM	Sc PPM	Sn PPM	Sr PPM	Ta PPM	Th PPM	Ti %	U PPM	V PPM	W PPM	Y PPM	Zn PPM	Zr PPM
08BMP001	0.046	5.5	26.7	3.2	5.9	34	6.1	332	0.2	0.2	0.657	0.3	301	1.3	24.7	96	45.7
08BMP002	0.045	5.8	17.0	2.7	14.2	34	4.9	783	0.2	0.3	0.745	0.2	294	2.6	26.2	199	40.3
08BMP003	0.086	5.5	40.6	0.2	1.6	12	1.6	100	0.4	2.7	0.380	1.8	119	1.4	20.6	98	52.8
08BMP004	0.028	2.3	0.6	<0.1	0.1	<1	<0.1	2022	<0.1	<0.1	0.003	0.9	<1	0.2	1.1	11	0.7
08BMP005	0.049	34.1	1.4	0.4	3.6	2	1.6	187	0.1	0.9	0.108	3.6	23	33.7	8.7	57	25.5
08BMP006	0.049	31.7	0.3	<0.1	8.6	7	1.8	114	0.3	1.4	0.285	4.7	95	7.9	10.1	133	44.7
08BMP007	0.046	36.0	0.3	1.5	10.5	3	0.6	31	0.3	1.2	0.274	3.5	47	42.1	10.2	93	36.6
08BMP008	0.034	11.5	0.3	0.1	50.4	3	0.4	32	0.2	0.8	0.171	3.6	36	47.9	7.6	95	27.1
08BMP009	0.074	12.3	0.8	<0.1	10.2	7	1.0	55	0.4	2.6	0.458	3.7	71	14.7	14.5	130	56.2
08BMP010	0.034	2.6	14.1	2.1	0.8	12	1.0	149	<0.1	1.5	0.212	1.3	59	8.0	11.2	24	53.7
08BMP011	0.178	3.6	17.1	1.9	0.7	5	0.7	31	<0.1	0.9	0.078	2.2	63	2.5	30.8	19	25.2
08BMP012	0.045	56.1	48.7	0.1	8.4	6	0.7	10	0.2	3.3	0.176	4.1	127	1.9	8.0	122	44.9
08BMP013	0.004	43.0	4.5	>10.0	7.2	1	0.8	8	<0.1	0.2	0.019	0.5	6	10.2	2.5	13	11.8
08BMP014	0.024	26.8	37.0	0.6	4.4	5	1.2	28	<0.1	0.6	0.152	0.9	46	8.7	6.6	31	31.5
08BMP015	0.052	3.2	24.4	0.7	3.5	11	2.2	355	0.2	2.9	0.226	1.7	95	5.4	28.6	101	30.5
08BMP016	0.012	5.3	38.3	1.3	2.4	7	1.2	44	0.2	2.3	0.098	0.7	32	5.3	16.9	65	43.4
08BMP017	0.005	125.1	7.0	9.9	8.9	1	0.5	4	<0.1	0.3	0.025	0.2	10	26.3	2.1	74	8.6
08ARP001	0.034	3.7	0.6	<0.1	2.4	2	0.4	48	<0.1	0.8	0.080	5.0	19	104.6	6.5	67	16.3
08ARP002	0.026	4.6	0.5	<0.1	1.4	1	0.1	142	<0.1	0.3	0.027	0.7	7	<0.1	4.4	57	6.1
08ARP003	0.061	12.3	1.2	<0.1	12.3	3	0.5	36	<0.1	0.5	0.082	2.5	90	81.2	10.4	299	18.5
08ARP004	0.035	7.3	2.2	<0.1	0.2	1	<0.1	651	<0.1	<0.1	0.022	2.6	15	0.5	1.8	14	2.7
08ARP005	0.072	11.6	0.3	<0.1	6.4	5	0.9	72	0.2	0.8	0.176	2.4	120	1.8	22.4	219	48.0
08ARP006	0.065	4.9	0.3	<0.1	4.7	5	1.3	75	0.1	0.8	0.191	2.1	130	2.5	20.9	165	42.4
08ARP007	0.066	34.3	<0.1	<0.1	10.3	3	0.8	33	0.1	0.4	0.115	1.3	84	0.9	11.2	82	26.3
08ARP008	0.045	33.4	<0.1	<0.1	2.0	3	1.6	11	0.1	0.5	0.113	1.3	120	1.8	14.6	34	35.9
08ARP009	0.038	34.5	0.5	0.9	12.7	3	0.4	175	0.2	0.9	0.288	2.0	35	4.2	4.7	77	25.6
08ARP009 Re	0.037	39.8	1.3	0.9	12.1	3	0.4	171	0.2	0.9	0.281	1.9	36	4.1	4.8	70	25.7
08ARP010	0.186	111.6	8.8	9.7	7.4	4	0.2	111	0.1	0.8	0.164	1.4	40	2.9	12.2	880	22.8
08ARP011	0.125	0.8	78.4	1.9	0.3	17	1.2	170	1.3	2.1	1.276	3.6	233	1.3	27.1	46	92.0
08ARP012	0.044	6.9	57.9	6.8	0.9	13	2.2	71	0.3	1.6	0.403	1.3	238	6.0	11.1	53	40.9
08ARP013	0.007	0.3	13.2	2.7	0.4	28	0.3	61	<0.1	<0.1	0.141	<0.1	225	0.9	7.3	22	4.7
08ARP014	0.036	9.8	93.9	1.5	2.9	9	0.9	16	0.2	3.0	0.221	1.6	121	3.0	6.9	58	23.9
08ARP015	0.039	4.8	184.7	0.8	2.8	4	1.1	20	0.7	10.8	0.302	5.2	66	8.7	11.8	42	129.4
08ARP016	0.015	1.2	97.5	4.2	2.2	34	1.2	78	<0.1	0.2	0.396	<0.1	308	6.1	16.3	18	4.1
08ARP017	0.003	28.9	0.7	3.3	4.1	5	1.7	382	<0.1	<0.1	0.016	0.1	34	1.1	1.8	140	1.8
08ARP018	0.008	32.1	0.7	0.2	20.1	2	0.3	10	<0.1	0.1	0.018	0.2	39	1.9	3.6	61	2.5
08ARP019	0.104	14.7	31.6	<0.1	2.2	11	0.7	610	0.2	1.1	0.316	0.7	150	0.4	11.8	93	15.2
08ARP020	0.081	14.3	53.3	<0.1	1.8	10	0.7	648	0.2	0.9	0.333	0.6	125	0.5	11.1	99	19.3
08ARP021	0.089	13.1	24.2	<0.1	1.9	11	0.7	551	0.2	1.1	0.330	0.7	137	0.4	13.2	81	7.7

Appendix 5

AeroTEM Operations Report

Report on a Helicopter-Borne AeroTEM System Electromagnetic & Magnetic Survey

Aeroquest Job # 08115

Greenwood Project
Greenwood, BC, Canada
NTS 082E01, 02

For

Grizzly Diamonds Ltd.

by

AEROQUEST

7687 Bath Road,
Mississauga, ON, L4T 3T1
Tel: (905) 672-9129
Fax: (905) 672-7083
www.aeroquest.ca

Report date: October 2008

Report on a Helicopter-Borne AeroTEM System Electromagnetic & Magnetic Survey

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Greenwood, BC, Canada
NTS 082E01, 02

For

Grizzly Diamonds Ltd.

Suite 220-9797 45 Ave.
Edmonton, AB
T6E 5V8, Canada

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The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channels EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128 Mb capacities FlashCard. The RMS output was also directed to a thermal chart recorder.

4. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Duncan Wilson
- Manager of Data Processing: Gord Smith
- Field Data Processor: Tim Moore, Thomas Wade
- Field Operator: Mark Andrews
- Data Interpretation and Reporting: Geoff Plastow, Sandro Camilli

The survey pilot, Kerslake McLeod, was employed directly by the helicopter operator – VIH Helicopters Ltd.

5. DELIVERABLES

5.1. HARDCOPY DELIVERABLES

The report includes a set of two 1:35,000 maps (Figures 7 and 8) and the following three geophysical data products are delivered:

- TMI – Coloured Total Magnetic Intensity (TMI) with line contours and EM anomaly symbols displayed as Figure 7 in the Report.
- ZOFF2 – AeroTEM Z2 Off-time with line contours, and EM anomaly symbols (Figure 8).
- EM – AeroTEM EM anomaly details provided in Appendix 6.

The coordinate/projection system for the maps is NAD83 – UTM Zone 11N. For reference, ta grid of NAD83 Zone 11 is provided on the maps.

All the maps show conductor picks represented by an anomaly symbol classified according to calculated off-time conductance. The anomaly symbol is accompanied by postings denoting the calculated off-time conductance, a thick or thin classification and an anomaly identifier label. The anomaly symbol legend and survey specifications are displayed on the left margin of the maps. The details, including location, for each anomaly are provided in Appendix 6.

5.2. DIGITAL DELIVERABLES

5.2.1. Final Database of Survey Data (.GDB)

The geophysical profile data is archived digitally in a Geosoft GDB binary format database. A description of the contents of the individual channels in the database can be found in Appendix 3. A copy of this digital data is archived at the Aeroquest head office in Mississauga.

5.2.2. Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images. All grids have a 30 m cell size.

1. INTRODUCTION

This report describes a helicopter-borne geophysical survey carried out on behalf of Grizzly Diamonds Ltd. for the Greenwood Property in the area of Greenwood, British Columbia.

The principal geophysical sensor is Aeroquest's exclusive AeroTEM III (Mike) time domain helicopter electromagnetic system which is employed in conjunction with a high-sensitivity caesium vapour magnetometer. Ancillary equipment includes a real-time differential GPS navigation system, radar altimeter, video recorder, and a base station magnetometer. Full-waveform streaming EM data is recorded at 36,000 samples per second. The streaming data comprise the transmitted waveform, and the X component and Z component of the resultant field at the receivers. A secondary acquisition system (RMS) records the ancillary data.

The total survey coverage is 2447.1 line-km, of which 2355.1 line-km fell within the defined project area (Appendix 1). The survey was made up of a single block flown at 150 metre line spacing and with a flight direction of 90º/270º (Table 1). The survey flying described in this report took place from June 16th – 27th, 2008. This report describes the survey logistics, the data processing, presentation, and provides the specifications of the survey.

2. SURVEY AREA

The project area is located in southern British Columbia in the area of Greenwood. The survey consisted of one large block (324.4 km²), and can be located on NTS map sheets 082E01 and 082E02. There are 303 mining claims either wholly or partially covered by the survey lines. Full details are in Appendix 2. The base of survey operations was at Grand Forks, BC.

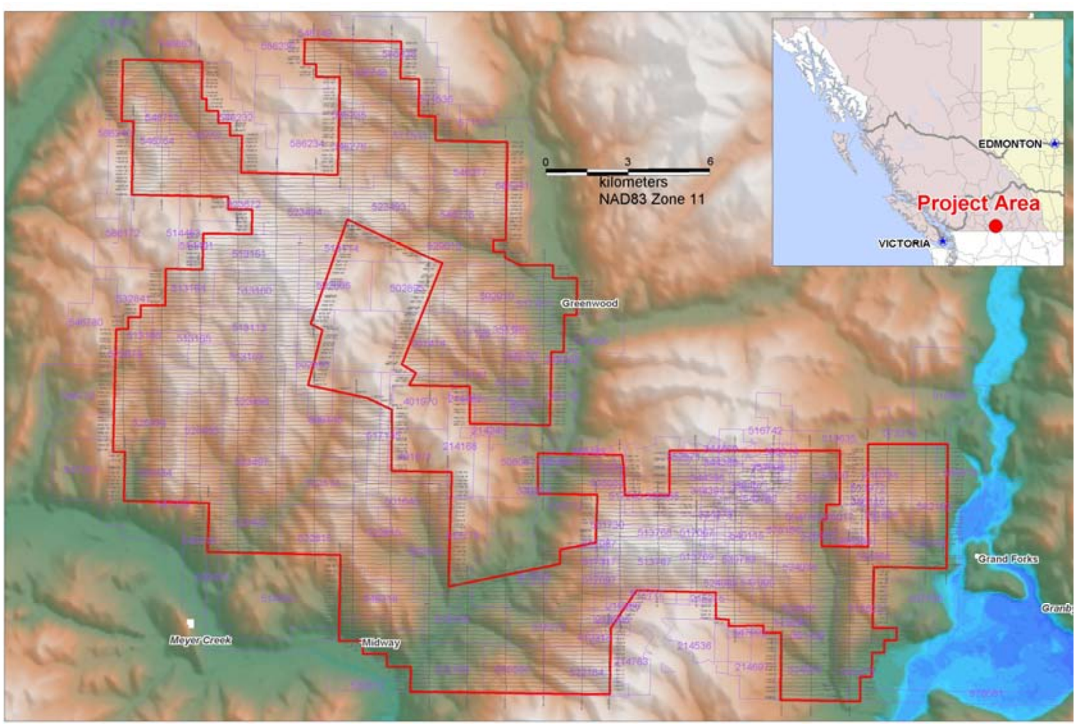


Figure 1. Flight path and mining claims overlain on shaded topography.

SURVEY SPECIFICATIONS AND PROCEDURES

The survey specifications are summarised in the following table:

Project Name	Line Spacing (metres)	Line Direction	Survey Coverage (line-km)	Date flown
Greenwood Property	150	90º/270º	2447.1	June 16 - 27, 2008

Table 1. Survey specifications summary.

The survey coverage was calculated by adding up the along-line distance of the survey lines and control (tie) lines as presented in the final Geosoft database. The survey was flown with a line spacing of 200 metres. The control (tie) lines were flown perpendicular to the survey lines with various tie line spacing.

The nominal EM bird terrain clearance is 30 metres, but can be higher in more rugged terrain due to safety considerations and the capabilities of the aircraft. The magnetometer sensor is mounted in a smaller bird connected to the tow rope 33 metres above the EM bird and 21 metres below the helicopter (Figure 3). Nominal survey speed over relatively flat terrain is 75 km/hr and is generally lower in rougher terrain. Scan rates for ancillary data acquisition is 0.1 second for the magnetometer and altimeter, and 0.2 second for the GPS determined position. The EM data is acquired as a data stream at a sampling rate of 36,000 samples per second and is processed to generate final data at 10 samples per second. The 10 samples per second translate to a geophysical reading about every 1.5 to 2.5 metres along the flight path.

2.1. Navigation

Navigation is carried out using a GPS receiver, an AGNAV2 system for navigation control, and an RMS DGR-33 data acquisition system which records the GPS coordinates. The x-y-z position of the aircraft, as reported by the GPS, is recorded at 0.2 second intervals. The system has a published accuracy of less than 3 metres. A recent static ground test of the Mid-Tech WAAS GPS yielded a standard deviation in x and y of less than 0.6 metres and for z less than 1.5 metres over a two-hour period.

2.2. System Drift

Unlike frequency domain electromagnetic systems, the AeroTEM III system has negligible drift due to thermal expansion. The operator is responsible for ensuring the instrument is properly warmed up prior to departure and that the instruments are operated properly throughout the flight. The operator maintains a detailed flight log during the survey noting the times of the flight and any unusual geophysical or topographic features. Each flight included at least two high elevation ‘background’ checks. During the high elevation checks, an internal 5 second wide calibration pulse in all EM channels was generated in order to ensure that the gain of the system remained constant and within specifications.

2.3. Field QA/QC Procedures

On return of the pilot and operator to the base, usually after each flight, the AeroDAS streaming EM data and the RMS data are carried on removable hard drives and Flashcards, respectively and transferred to the data processing work station. At the end of each day, the base station magnetometer data on FlashCard is retrieved from the base station unit.

Data verification and quality control includes a comparison of the acquired GPS data with the flight plan; verification and conversion of the RMS data to an ASCII format XYZ data file; verification of the base station magnetometer data and conversion to ASCII format XYZ data; and loading, processing and conversion of the steaming EM data from the removable hard drive. All data is then merged to an ASCII XYZ format file which is then imported to an Oasis database for further QA/QC and for the production of preliminary EM, magnetic contour, and flight path maps.

Survey lines which show excessive deviation from the intended flight path are re-flown. Any line or portion of a line on which the data quality did not meet the contract specification was noted and reflown.

3. AIRCRAFT AND EQUIPMENT

3.1. AIRCRAFT

A Eurocopter (Aerospatiale) AS350B2 "A-Star" helicopter - registration C-GPHM was used as survey platform. The helicopter was owned and operated by VIH Helicopters Ltd. Installation of the geophysical and ancillary equipment was carried out by Aeroquest Limited personnel in conjunction with a licensed aircraft. The survey aircraft was flown at a nominal terrain clearance of 275 ft (83metres).

Figure 2. Eurocopter (Aerospatiale) AS350B2.

3.2. MAGNETOMETER

The AeroTEM III airborne survey system employs the Geometrics G-823A caesium vapour magnetometer sensor installed in a two metre towed bird airfoil attached to the main tow line, 21 metres below the helicopter (Figure 3). The sensitivity of the magnetometer is 0.001 nanoTesla at a 0.1 second sampling rate. The nominal ground clearance of the magnetometer bird is 51 metres (170 ft.). The magnetic data is recorded at 10 Hz by the RMS DGR-33.

3.3. ELECTROMAGNETIC SYSTEM

The electromagnetic system is an Aeroquest AeroTEM III time domain towed-bird system (Figure 3). The current AeroTEM III transmitter dipole moment is 183 kNIA. The AeroTEM bird is towed 53 metres (175 ft) below the helicopter. More technical details of the system may be found in Appendix 6.

The wave-form is triangular with a symmetric transmitter on-time pulse of 1.10 ms and a base frequency of 90 Hz (Figure 4). The current alternates polarity every on-time pulse. During every Tx on-off cycle (180 per second), 200 contiguous channels of raw X and Z component (and a transmitter current monitor, itx) of the received waveform are measured. Each channel width is 27.78 microseconds starting at the beginning of the transmitter pulse. This 200 channel data is referred to as the raw streaming data. The AeroTEM system has two separate EM data recording streams, the conventional RMS DGR-33 and the AeroDAS system which records the full waveform (Figure 5).

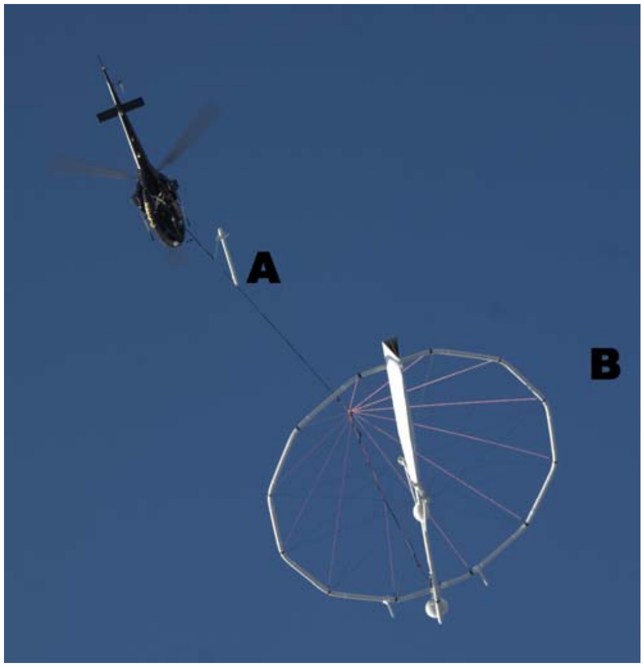


Figure 3. The magnetometer bird (A) and AeroTEM III EM bird (B)

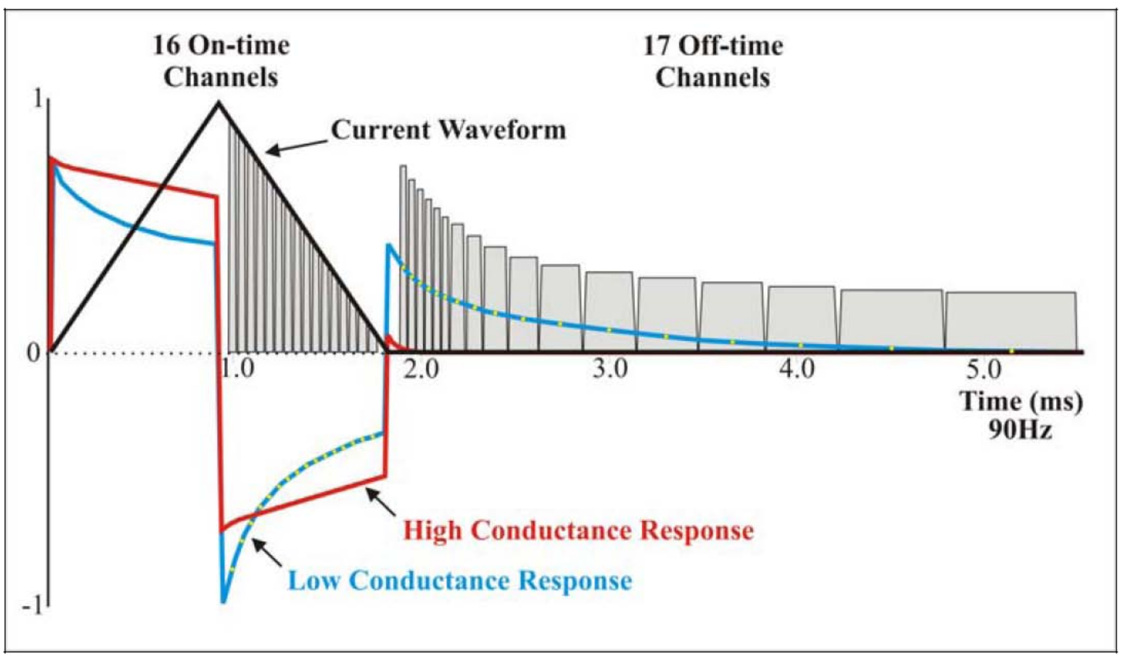


Figure 4. Schematic of Transmitter and Receiver waveforms

3.4. AERODAS ACQUISITION SYSTEM

The 200 channels of raw streaming data are recorded by the AeroDAS acquisition system (Figure 5) onto a removable hard drive. The streaming data are processed post-survey to yield 33 stacked and binned on-time and off-time channels at a 10 Hz sample rate. The timing of the final processed EM channels is described in the following table:

```
Average TxOn      5.0191 us
Average TxSwitch  930.3563 us
Average TxOff     1779.9321 us
```

Channel	Sample Range	Time Width (us)	Time Center (us)	Time After TxOn (us)
On1	5 - 5	27.778	125.000	119.981
On2	6 - 6	27.778	152.778	147.759
On3	7 - 7	27.778	180.556	175.536
On4	8 - 8	27.778	208.333	203.314
On5	9 - 9	27.778	236.111	231.092
On6	10 - 10	27.778	263.889	258.870
On7	11 - 11	27.778	291.667	286.648
On8	12 - 12	27.778	319.444	314.425
On9	13 - 13	27.778	347.222	342.203
On10	14 - 14	27.778	375.000	369.981
On11	15 - 15	27.778	402.778	397.759
On12	16 - 16	27.778	430.556	425.536
On13	17 - 17	27.778	458.333	453.314
On14	18 - 18	27.778	486.111	481.092
On15	19 - 19	27.778	513.889	508.870
On16	20 - 20	27.778	541.667	536.648

Channel	Sample Range	Time Width (us)	Time Center (us)	Time After TxOff (us)
Off0	69 - 69	27.778	1902.778	122.846
Off1	70 - 70	27.778	1930.556	150.623
Off2	71 - 71	27.778	1958.333	178.401
Off3	72 - 72	27.778	1986.111	206.179
Off4	73 - 73	27.778	2013.889	233.957
Off5	74 - 74	27.778	2041.667	261.735
Off6	75 - 77	83.333	2097.222	317.290
Off7	78 - 80	83.333	2180.556	400.623
Off8	81 - 83	83.333	2263.889	483.957
Off9	84 - 86	83.333	2347.222	567.290
Off10	87 - 91	138.889	2458.333	678.401
Off11	92 - 96	138.889	2597.222	817.290
Off12	97 - 102	166.667	2750.000	970.068
Off13	103 - 112	277.778	2972.222	1192.290
Off14	113 - 127	416.667	3319.444	1539.512
Off15	128 - 150	638.889	3847.222	2067.290
Off16	151 - 186	1000.000	4666.667	2886.735

3.5. RMS DGR-33 ACQUISITION SYSTEM

In addition to the magnetics, altimeter and position data, six channels of real time processed off-time EM decay in the Z direction and one in the X direction are recorded by the RMS DGR-33 acquisition system at 10 samples per second and plotted real-time on the analogue chart recorder. These channels are derived by a binning, stacking and filtering procedure on the raw streaming data. The primary use of the RMS EM data (Z1 to Z6, X1) is to provide for real-time QA/QC on board the aircraft.

The channel window timing of the RMS DGR-33 6 channel system is described in the table below.

RMS Channel	Start time (µs)	End time (µs)	Width (µs)	Streaming Channels
Z1, X1	1269.8	1322.8	52.9	48-50
Z2	1322.8	1455.0	132.2	50-54
Z3	1428.6	1587.3	158.7	54-59
Z4	1587.3	1746.0	158.7	60-65
Z5	1746.0	2063.5	317.5	66-77
Z6	2063.5	2698.4	634.9	78-101

Figure 5. AeroTEM III Instrument Rack., including AeroDAS and RMS DGR-33 systems, AeroTEM power supply, data acquisition computer and AG-NAV2 navigation system.

3.6. MAGNETOMETER BASE STATION

The base magnetometer was a Geometrics G-859 caesium vapour magnetometer system with integrated GPS. Data logging and UTC time synchronisation was carried out within the magnetometer, with the GPS providing the timing signal. The data logging was configured to measure at 1.0 second intervals. Digital recording resolution was 0.001 nT. The sensor was placed on a tripod in an area of low magnetic gradient and free of cultural noise sources. A continuously updated display of the base station values was available for viewing and regularly monitored to ensure acceptable data quality and diurnal variation.

3.7. RADAR ALTIMETER

A Terra TRA 3500/TRI-30 radar altimeter is used to record terrain clearance. The antenna was mounted on the outside of the helicopter beneath the cockpit. Therefore, the recorded data reflect the height of the helicopter above the ground. The Terra altimeter has an altitude accuracy of +/- 1.5 metres.

3.8. Video Tracking and Recording System

A high resolution digital colour 8 mm video camera is used to record the helicopter ground flight path along the survey lines. The video is digitally annotated with GPS position and time and can be used to verify ground positioning information and cultural causes of anomalous geophysical responses.

Figure 6. Digital video camera typical mounting location.

3.9. GPS Navigation System

The navigation system consists of an Ag-Nav Incorporated AG-NAV2 GPS navigation system comprising a PC-based acquisition system, navigation software, a deviation indicator in front of the aircraft pilot to direct the flight, a full screen display with controls in front of the operator, a Mid-Tech RX400p WAAS-enabled GPS receiver mounted on the instrument rack and an antenna mounted on the magnetometer bird. WAAS (Wide Area Augmentation System) consists of approximately 25 ground reference stations positioned across the United States that monitor GPS satellite data. Two master stations located on the east and west coasts collect data from the reference stations and create a GPS correction message. This correction accounts for GPS satellite orbit and clock drift plus signal delays caused by the atmosphere and ionosphere. The corrected differential message is then broadcast through one of two geostationary satellites, or satellites with a fixed position over the equator. The corrected position has a published accuracy of less than 3 metres.

Survey co-ordinates are set up prior to the survey and the information is fed into the airborne navigation system. The co-ordinate system employed in the survey design was NAD83 [World] using the UTM zone 10N projection. The real-time differentially corrected GPS positional data was recorded by the RMS DGR-33 in geodetic coordinates (latitude and longitude using WGS84) at 0.2 s intervals.

3.10. Digital Acquisition System

The AeroTEM received waveform sampled during on and off-time at 200 channels per decay, 180 times per second, was logged by the proprietary AeroDAS data acquisition system. The streaming data was recorded on a removable hard-drive and was later backed-up onto DVD-ROM from the field-processing computer.

The RMS Instruments DGR33A data acquisition system was used to collect and record the analogue data stream, i.e. the positional and secondary geophysical data, including processed 6 channels EM, magnetics, radar altimeter, GPS position, and time. The data was recorded on 128 Mb capacities FlashCard. The RMS output was also directed to a thermal chart recorder.

4. PERSONNEL

The following Aeroquest personnel were involved in the project:

- Manager of Operations: Duncan Wilson
- Manager of Data Processing: Gord Smith
- Field Data Processor: Tim Moore, Thomas Wade
- Field Operator: Mark Andrews
- Data Interpretation and Reporting: Geoff Plastow, Sandro Camilli

The survey pilot, Kerslake McLeod, was employed directly by the helicopter operator – VIH Helicopters Ltd.

5. DELIVERABLES

5.1. Hardcopy Deliverables

The report includes a set of two 1:35,000 maps (Figures 7 and 8) and the following three geophysical data products are delivered:

- TMI – Coloured Total Magnetic Intensity (TMI) with line contours and EM anomaly symbols displayed as Figure 7 in the Report.
- ZOFF2 – AeroTEM Z2 Off-time with line contours, and EM anomaly symbols (Figure 8).
- EM – AeroTEM EM anomaly details provided in Appendix 6.

The coordinate/projection system for the maps is NAD83 – UTM Zone 11N. For reference, ta grid of NAD83 Zone 11 is provided on the maps.

All the maps show conductor picks represented by an anomaly symbol classified according to calculated off-time conductance. The anomaly symbol is accompanied by postings denoting the calculated off-time conductance, a thick or thin classification and an anomaly identifier label. The anomaly symbol legend and survey specifications are displayed on the left margin of the maps. The details, including location, for each anomaly are provided in Appendix 6.

5.2. Digital Deliverables

5.2.1. Final Database of Survey Data (.GDB)

The geophysical profile data is archived digitally in a Geosoft GDB binary format database. A description of the contents of the individual channels in the database can be found in Appendix 3. A copy of this digital data is archived at the Aeroquest head office in Mississauga.

5.2.2. Geosoft Grid files (.GRD)

Levelled Grid products used to generate the geophysical map images. All grids have a 30 m cell size.

- Total Magnetic Intensity from Mag sensor on the tow cable (*MagUf.grd*)
- AeroTEM Z Offtime Channel 1 (*zoff2_ml.grd*)

5.2.3. Digital Versions of Final Maps (.MAP)

Map files in Geosoft .map format.

5.2.4. Google Earth Files (.kmz)

Flight navigation lines, EM Anomalies and geophysical grids in Google Earth kmz format. Double click to view in Google Earth.

5.2.5. Free Viewing Software (.EXE)

- Geosoft Oasis Montaj Viewing Software
- Adobe Acrobat Reader
- Google Earth Viewer

5.2.6. Digital Copy of this Document (.PDF)

Adobe PDF format of this document.

6. DATA PROCESSING AND PRESENTATION

All in-field and post-field data processing was carried out using Aeroquest proprietary data processing software and Geosoft Oasis Montaj software. Maps were generated using 36-inch and 42-inch wide Hewlett Packard ink-jet plotters.

6.1. BASE MAP

The geophysical maps accompanying this report are based on positioning in the NAD83 datum. The survey geodetic GPS positions have been projected using the Universal Transverse Mercator projection in Zone 11 North. A summary of the map datum and projection specifications is given following:

- Ellipse: GRS 1980
- Ellipse major axis: 6378137m eccentricity: 0.081819191
- Datum: North American 1983 - Canada Mean
- Datum Shifts (x,y,z) : 0, 0, 0 metres
- Map Projection: Universal Transverse Mercator Zone 101(Central Meridian 117ºW)
- Central Scale Factor: 0.9996
- False Easting, Northing: 500,000m, 0m

For reference, the latitude and longitude in WGS84 are also noted on the maps.

The background vector topography was sourced from Natural Resources Canada 1:250000 National Topographic Data Base data and the background shading were derived from NASA Shuttle Radar Topography Mission (SRTM) 90 metre resolution DEM data.

6.2. FLIGHT PATH & TERRAIN CLEARANCE

The position of the survey helicopter was directed by use of the Global Positioning System (GPS). Positions were updated five times per second (5 Hz) and expressed as WGS84 latitude and longitude calculated from the raw pseudo range derived from the C/A code signal. The instantaneous GPS flight path, after conversion to UTM co-ordinates, is drawn using linear interpolation between the x/y positions. The terrain clearance was maintained with reference to the radar altimeter. The raw Digital Terrain Model (DTM) was derived by taking the GPS survey elevation and subtracting the radar altimeter terrain clearance values. The calculated topography elevation values are relative and are not tied in to surveyed geodetic heights.

Each flight included at least two high elevation ‘background’ checks. These high elevation checks are to ensure that the gain of the system remained constant and within specifications.

6.3. Electromagnetic Data

The raw streaming data, sampled at a rate of 36,000 Hz (200 channels, 180 times per second) was reprocessed using a proprietary software algorithm developed and owned by Aeroquest Limited. Processing involves the compensation of the X and Z component data for the primary field waveform. Coefficients for this compensation for the system transient are determined and applied to the stream data. The stream data are then pre-filtered, stacked, binned to the 33 on and off-time channels and checked for the effectiveness of the compensation and stacking processes. The stacked data is then filtered, levelled and split up into the individual line segments. Further base level adjustments may be carried out at this stage. The filtering of the stacked data is designed to remove or minimize high frequency noise that cannot be sourced from the geology.

The final field processing step was to merge the processed EM data with the other data sets into a Geosoft GDB file. The EM fiducial is used to synchronize the two datasets. The processed channels are merged into ‘array format; channels in the final Geosoft database as Zon, Zoff, Xon, and Xoff.

Apparent bedrock EM anomalies were interpreted with the aid of an auto-pick from positive peaks and troughs in the off-time Z channel responses correlated with X channel responses. The auto-picked anomalies were reviewed and edited by a geophysicist on a line by line basis to discriminate between thin and thick conductor types. Anomaly picks locations were migrated and removed as required. This process ensures the optimal representation of the conductor centres on the maps.

At each conductor pick, estimates of the off-time conductance have been generated based on a horizontal plate source model for those data points along the line where the response amplitude is sufficient to yield an acceptable estimate. Some of the EM anomaly picks do not display a Tau value; this is due to the inability to properly define the decay of the conductor usually because of low signal amplitudes. Each conductor pick was then classified according to a set of seven ranges of calculated off-time conductance values. For high conductance sources, the on-time conductance values may be used, since it provides a more accurate measure of high-conductance sources. Each symbol is also given an identification letter label, unique to each flight line. Conductor picks that did not yield an acceptable estimate of off-time conductance due to a low amplitude response were classified as a low conductance source. Please refer to the anomaly symbol legend located in the margin of the maps.

6.4. Magnetic Data

Prior to any levelling the magnetic data was subjected to a lag correction of -0.1 seconds and a spike removal filter. The filtered aeromagnetic data were then corrected for diurnal variations using the magnetic base station and the intersections of the tie lines. No corrections for the regional reference field (IGRF) were applied. The corrected profile data were interpolated on to a grid using a bi-directional grid technique with a grid cell size of 30 metres. The final levelled grid provided the basis for threading the presented contours which have a minimum contour interval of 10 nT.

7. GENERAL COMMENTS

The survey was successful in mapping the magnetic and conductive properties of the geology throughout the survey area. Below is a brief interpretation of the results. For a detailed interpretation please contact Aeroquest Limited.

7.1. MAGNETIC RESPONSE

The magnetic data provide a high resolution map of the distribution of the magnetic mineral content of the survey area. This data can be used to interpret the location of geological contacts and other structural features such as faults and zones of magnetic alteration. The sources for anomalous magnetic responses are generally thought to be predominantly magnetite because of the relative abundance and strength of response (high magnetic susceptibility) of magnetite over other magnetic minerals such as pyrrhotite.

7.2. EM ANOMALIES

The EM anomalies on the maps are classified by conductance (as described earlier in the report) and also by the thickness of the source. A thin, vertically orientated source produces a double peak anomaly in the z-component response and a positive to negative crossover in the x-component response (Figure 7). For a vertically orientated thick source (say, greater than 10 metres), the response is a single peak in the z-component response and a negative to positive crossover in the x-component response (Figure 8). Because of these differing responses, the AeroTEM system provides discrimination of thin and thick sources and this distinction is indicated on the EM anomaly symbols (N = thin and K = thick). Where multiple, closely spaced conductive sources occur, or where the source has a shallow dip, it can be difficult to uniquely determine the type (thick vs. thin) of the source (Figure 9). In these cases both possible source types may be indicated by picking both thick and thin response styles. For shallow dipping conductors the ‘thin’ pick will be located over the edge of the source, whereas the ‘thick’ pick will fall over the downdip ‘heart’ of the anomaly.

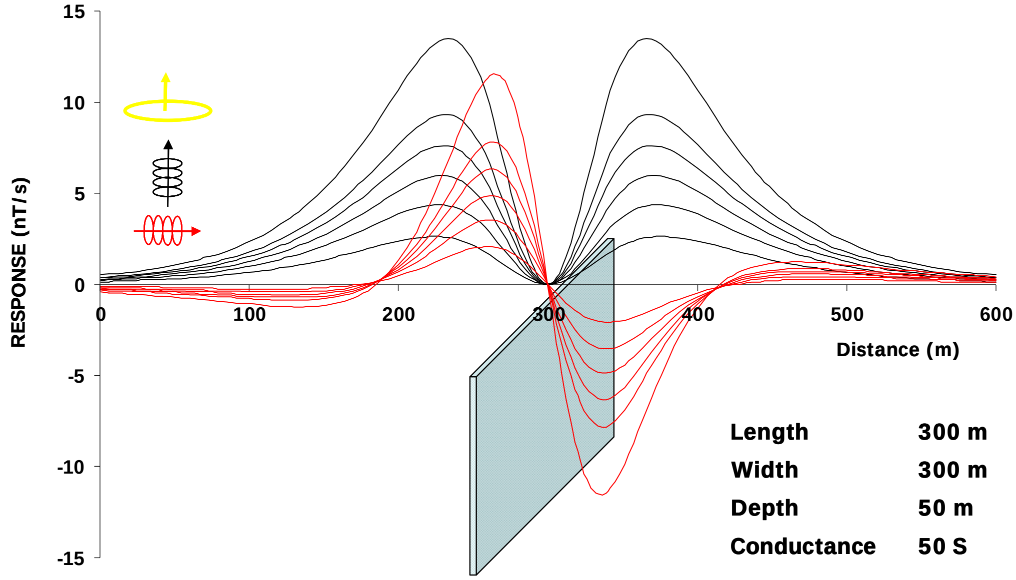


Figure 7. AeroTEM response to a ‘thin’ vertical conductor.

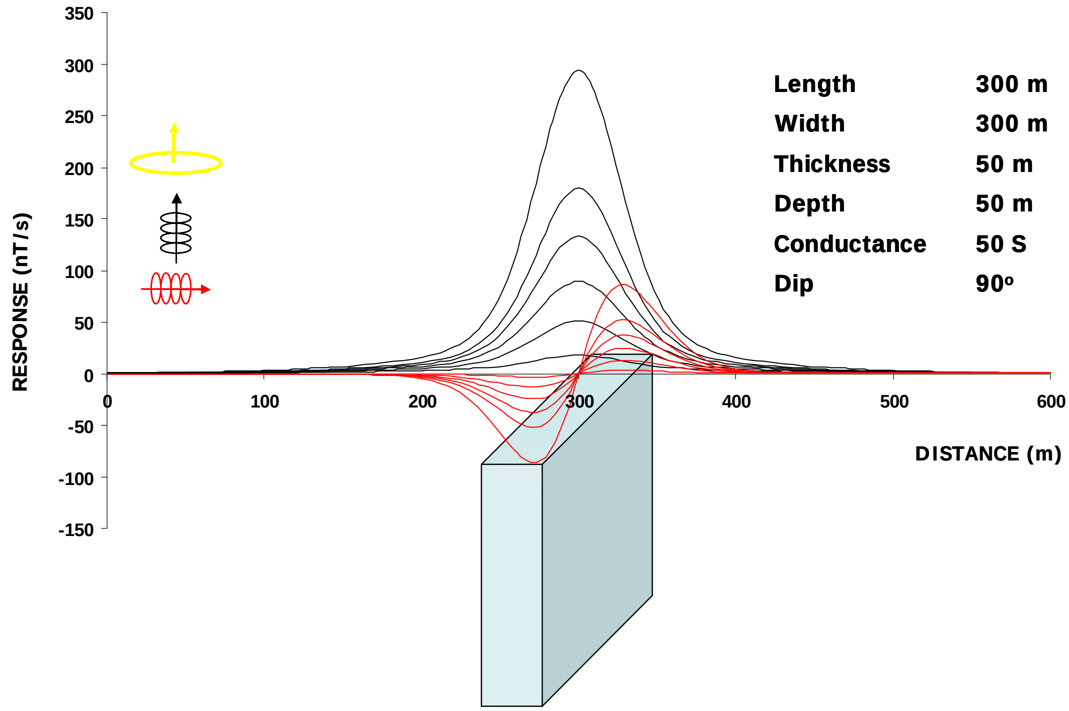


Figure 8. AeroTEM response for a ‘thick’ vertical conductor.

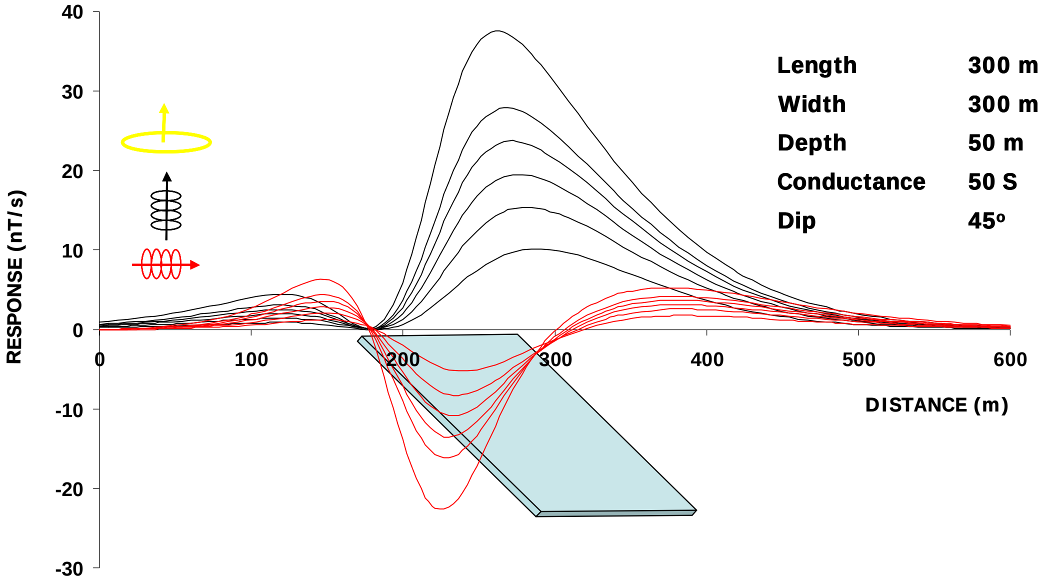


Figure 9. AeroTEM response over a 'thin' dipping conductor.

All cases should be considered when analyzing the interpreted picks and prioritizing for follow-up. Specific anomalous responses which remain as high priority should be subjected to numerical modeling prior to drill testing to determine the dip, depth and probable geometry of the source.

Respectfully submitted,

Chris Brown
Aeroquest Limited
October 2008

Reviewed By:

Gord Smith
Aeroquest Limited
October 2008

APPENDIX 1: SURVEY BOUNDARIES

The following table presents the Extension block boundaries. All geophysical data presented in this report have been windowed to 100m outside of these boundaries. X and Y positions are in metres: NAD83 UTM Zone 11N.

X	Y
360372.71	5442639.12
360828.73	5442627.65
360840.41	5443090.78
361296.4	5443079.31
361308.03	5443542.45
362219.93	5443519.66
362254.61	5444909.08
363622.12	5444875.2
363656.47	5446264.64
365479.35	5446219.97
365501.95	5447146.27
364590.66	5447168.52
364602.03	5447631.67
360957.19	5447722.18
361027.12	5450501.24
360571.74	5450512.68
360630.22	5452828.55
363627.99	5452747.4
363599.6	5451349.23
363782.2	5451359.54
363770.78	5450896.37
364226.11	5450885.13
364214.73	5450421.94
364670.1	5450410.78
364658.76	5449947.6
365114.17	5449936.44
365080.25	5448547.37
367813.34	5448480.92
368724.36	5448459.25
368812.38	5452164.8
367901.99	5452186.46
367913.06	5452649.65
367457.91	5452660.57
367480.15	5453586.96
371120.86	5453500.89
371088.4	5452111.31
371802.73	5452092.55
371770.9	5450712.2
372421.91	5450690.07
372409.66	5449764.93
375126.38	5449706.12
375049.11	5445995.88
374593.41	5446006.2
374582.89	5445543.03
375038.63	5445532.71
375033.58	5445320.1
375588.75	5445052.88
376851.29	5445028.71
376840.97	5444565.53
377752.62	5444545.34
377721.9	5443155.81
377265.95	5443165.91

377235.12	5441776.38
376779.06	5441786.48
376719.14	5439007.3
373713.5	5439074.86
373713.19	5440458.04
371419.51	5440510.26
371668.42	5440975.65
371140	5441303
372670.02	5445123.26
372031.36	5445388.64
369088	5446782.01
367707.92	5442837.2
368147.04	5442605.21
367604.35	5440513.19
369837.22	5440024.36
370768	5439585
370742.16	5437289.85
373024.38	5437237.13
372904.08	5432911.21
377103	5433757.18
377111.6	5434291.64
378446.01	5434573.68
378511.64	5436369.64
376276.82	5436415.61
376280.01	5437957.99
379450.24	5437891.82
379504.75	5437438.03
379551.47	5436348.99
381230.34	5436350.05
381236.91	5438061.68
387665.92	5438048.51
387646.2	5435994.56
387155.23	5436004.8
387143.7	5435438.27
386983.64	5435435.74
386963.72	5434435.95
388723.24	5434403.26
388716.03	5438292.62
391726.07	5438295.54
391675.21	5433597.86
388934.94	5433652.04
388888.63	5431336.17
389802.45	5431317.95
389793.26	5430854.79
389336.32	5430863.85
389327.1	5430400.68
388870.11	5430409.83
388851.6	5429483.47
388427.55	5429493.45
388426.38	5428564.29
385415.16	5428625.41
385457.03	5431138.5
384770.88	5431148.8
384776.51	5431419.98
383462.08	5431395
383467.11	5431635.26
382967.41	5431684.7
382989.45	5432684.47
379992.28	5432756.09
379024.14	5431338.1
378970.44	5428838.64
371462.12	5428931.63

371483.55	5429857.96
370569.39	5429879.18
370580.19	5430342.35
369666.11	5430363.72
369676.99	5430826.88
368762.99	5430848.4
368839.67	5434090.53
363815.82	5434211.52
363871.21	5436058.13
360665.46	5436143.61
360712.05	5437996.25
360255.64	5438007.73
360372.71	5442639.12

APPENDIX 2: MINING CLAIMS

TEN_NUM	Tenure_Type	Claim_Name	Owner	Status	Good_To_Date
547279	Mineral	COPPER MOUNTAIN 4000	137109 (100%)	GOOD	2008/dec/13
547281	Mineral	COPPER MOUNTAIN 6000	137109 (100%)	GOOD	2008/dec/13
334273	Mineral	JOE #5	112993 (100%)	GOOD	2012/dec/02
352571	Mineral	MICRO #2	112993 (100%)	GOOD	2012/dec/02
214697	Mineral	IRON KING	112993 (100%)	GOOD	2019/jan/12
389457	Mineral		216131 (100%)	GOOD	2008/dec/04
578156	Placer	SKEFFY	146953 (100%)	GOOD	2009/mar/09
215215	Mineral	OR-11	112993 (100%)	GOOD	2019/jan/12
395610	Mineral	ZIP 1	112993 (100%)	GOOD	2012/dec/02
216283	Mineral		214171 (100%)	GOOD	2009/jul/21
523293	Placer	RCMP	144349 (50%)	GOOD	2010/dec/01
344398	Mineral	JD #14	112993 (100%)	GOOD	2012/dec/02
517067	Mineral	ATTWOOD-NORTH	137109 (100%)	GOOD	2009/aug/31
517077	Mineral	ATTWOOD-NORTH2	137109 (100%)	GOOD	2009/jul/19
517087	Mineral	ATTWOOD--WEST	137109 (100%)	GOOD	2009/jul/19
517097	Mineral	ATTWOOD-SOUTH	137109 (100%)	GOOD	2009/jul/19
517117	Mineral	ATTWOOD-SOUTH 2	137109 (100%)	GOOD	2009/jul/19
517126	Mineral	DEADWOOD	137109 (100%)	GOOD	2010/jul/12
215213	Mineral	OR-9	112993 (100%)	GOOD	2019/jan/12
390485	Mineral	ME TOO	113908 (100%)	GOOD	2011/jan/30
517317	Mineral	ATTWOOD FRACTION	137109 (100%)	GOOD	2009/jul/19
390756	Mineral	BIT	112993 (100%)	GOOD	2012/dec/02
357698	Mineral	CROWN 2	112993 (100%)	GOOD	2011/dec/02
526433	Mineral	BUBAR 1000	137109 (100%)	GOOD	2010/jul/19
526434	Mineral	BUBAR 2000	137109 (100%)	GOOD	2010/jul/19

526435	Mineral	BUBAR 3000	137109 (100%)	GOOD	2010/jul/19
344390	Mineral	JD #6	112993 (100%)	GOOD	2012/dec/02
539783	Mineral	OVERLANDER 2006	137109 (100%)	GOOD	2009/sep/30
334271	Mineral	JOE #3	112993 (100%)	GOOD	2012/dec/02
344388	Mineral	JD #4	112993 (100%)	GOOD	2012/dec/02
214517	Mineral	REFER TO LOT TABLE	119359 (100%)	GOOD	2008/dec/02
521499	Placer		117436 (100%)	GOOD	2009/mar/05
522164	Mineral	MT MCLAREN 2006	137109 (100%)	GOOD	2010/nov/10
522165	Mineral	MIDWAY 2006	137109 (100%)	GOOD	2010/nov/10
214132	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
534566	Mineral	SKEFF 1000	137109 (100%)	GOOD	2009/sep/30
214168	Mineral	SHANTER	114017 (100%)	GOOD	2014/jul/07
346144	Mineral	JD 26	112993 (100%)	GOOD	2012/dec/02
410734	Mineral	RRJJ	137442 (100%)	GOOD	2010/may/01
361604	Mineral	COME BY CHANCE 1	137442 (100%)	GOOD	2010/may/14
352574	Mineral	MICRO #5	112993 (100%)	GOOD	2012/dec/02
508297	Mineral		137109 (100%)	GOOD	2010/apr/10
524938	Mineral		137109 (100%)	GOOD	2013/apr/21
524951	Mineral		137109 (100%)	GOOD	2009/jul/19
524953	Mineral		137109 (100%)	GOOD	2009/sep/30
524955	Mineral		137109 (100%)	GOOD	2012/apr/20
524956	Mineral		137109 (100%)	GOOD	2009/apr/20
524963	Mineral		137109 (100%)	GOOD	2009/apr/20
523672	Mineral	WHALES 1000	137109 (100%)	GOOD	2008/dec/09
523678	Mineral	MIDWAY 3000	137109 (100%)	GOOD	2008/dec/09
523679	Mineral	WHALES 2000	137109 (100%)	GOOD	2009/dec/09

388389	Mineral	LADY M 5	137443 (100%)	GOOD	2010/jul/28
519635	Mineral		114017 (100%)	GOOD	2017/dec/30
356484	Mineral	TRILBY 2	214171 (100%)	GOOD	2010/jan/30
214518	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
357030	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
356486	Mineral	TRILBY 4	214171 (100%)	GOOD	2010/jan/30
214246	Mineral	REFER TO LOT TABLE	114017 (100%)	GOOD	2014/jun/11
397812	Mineral	SLOW	138390 (100%)	GOOD	2008/nov/12
536601	Mineral	JACKPOT 2000	137109 (100%)	GOOD	2009/jul/30
536602	Mineral	JACKPOT 3000	137109 (100%)	GOOD	2009/jul/19
536603	Mineral	JACKPOT 4000	137109 (100%)	GOOD	2009/jul/30
536604	Mineral	JACKPOT 5000	137109 (100%)	GOOD	2009/jul/19
522813	Mineral	JOLLY JACK 1000	137109 (100%)	GOOD	2009/nov/27
522814	Mineral	JOLLY JACK 2000	137109 (100%)	GOOD	2010/nov/27
522815	Mineral	JOLLY JACK 3000	137109 (100%)	GOOD	2009/nov/27
522816	Mineral	JOLLY JACK 3000	137109 (100%)	GOOD	2009/nov/27
216665	Mineral	NO. 7.-7	112993 (100%)	GOOD	2019/jan/12
357027	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
214519	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
565742	Mineral	GREENWOOD	139085 (100%)	GOOD	2008/nov/09
344397	Mineral	JD #13	112993 (100%)	GOOD	2012/dec/02
344469	Mineral	JD #3	112993 (100%)	GOOD	2012/dec/02
357031	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
357024	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
215207	Mineral	OR-2	112993 (100%)	GOOD	2019/jan/12
346142	Mineral	JD 24	112993 (100%)	GOOD	2012/dec/02

534268	Mineral	EAGLE2006	137109 (100%)	GOOD	2009/sep/30
534269	Mineral	JC 2006	137109 (100%)	GOOD	2009/sep/30
534270	Mineral	JC NORTH	137109 (100%)	GOOD	2009/sep/30
334270	Mineral	JOE #2	112993 (100%)	GOOD	2012/dec/02
352573	Mineral	MICRO #4	112993 (100%)	GOOD	2012/dec/02
402279	Mineral	2 SLOW	138390 (100%)	GOOD	2009/may/14
347775	Mineral	KEY	214171 (100%)	GOOD	2009/jul/12
357029	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
214482	Mineral	REFER TO LOT TABLE	114017 (100%)	GOOD	2014/jun/05
546863	Mineral	WALLACE 25000	137109 (100%)	GOOD	2008/dec/08
537114	Mineral	JOLLY'S	137442 (50%)	GOOD	2010/jul/13
215208	Mineral	OR-3	112993 (100%)	GOOD	2019/jan/12
393363	Mineral	ELK #1	113908 (100%)	GOOD	2018/dec/30
345930	Mineral	JD 23	112993 (100%)	GOOD	2012/dec/02
404019	Placer	CSIS	144349 (50%)	GOOD	2010/dec/01
388361	Mineral	LADY M 3	137443 (100%)	GOOD	2010/jul/26
386116	Mineral	JOLLY JACK 1865 1	137442 (100%)	GOOD	2010/may/09
215209	Mineral	OR-5	112993 (100%)	GOOD	2019/jan/12
394735	Mineral	BUD 6	113908 (100%)	GOOD	2018/dec/30
344389	Mineral	JD #5	112993 (100%)	GOOD	2012/dec/02
339814	Mineral	HAAS #1	114017 (100%)	GOOD	2014/sep/13
216666	Mineral	NO. 7.-8 FR.	112993 (100%)	GOOD	2019/jan/12
356485	Mineral	TRILBY 3	214171 (100%)	GOOD	2010/jan/30
334275	Mineral	JOE #7	112993 (100%)	GOOD	2012/dec/02
388390	Mineral	LADY M 6	137443 (100%)	GOOD	2010/jul/28
523565	Mineral	MIDWAY 2000	137109 (100%)	GOOD	2009/jun/06

395614	Mineral	ZIP 5	112993 (100%)	GOOD	2012/dec/02
521910	Mineral	D.W.DAVIS	147199 (100%)	GOOD	2008/nov/04
517145	Mineral	COPPER-INGRAM	137109 (100%)	GOOD	2009/jul/18
517161	Mineral	WALLACE-EAST	137109 (100%)	GOOD	2010/jul/16
517243	Mineral	GOLD2005	137109 (100%)	GOOD	2009/jul/19
393112	Mineral	ELK	113908 (100%)	GOOD	2018/dec/30
216303	Mineral		135139 (100%)	GOOD	2010/jun/03
354871	Mineral	TIPTOP 2	137109 (100%)	GOOD	2010/jan/30
410738	Mineral	RRJJ 5	137442 (100%)	GOOD	2010/may/01
395615	Mineral	ZIP 6	112993 (100%)	GOOD	2012/dec/02
516822	Mineral		137109 (100%)	GOOD	2009/sep/19
386117	Mineral	JOLLY JACK 1865 2	137442 (100%)	GOOD	2010/may/09
334276	Mineral	JOE #8	112993 (100%)	GOOD	2012/dec/02
395611	Mineral	ZIP 2	112993 (100%)	GOOD	2012/dec/02
344396	Mineral	JD #12	112993 (100%)	GOOD	2012/dec/02
532841	Mineral	WALES-1000	137109 (100%)	GOOD	2009/jul/19
215211	Mineral	OR-7	112993 (100%)	GOOD	2019/jan/12
357026	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
395613	Mineral	ZIP 4	112993 (100%)	GOOD	2012/dec/02
356487	Mineral	TRILBY 5	214171 (100%)	GOOD	2010/jan/30
344393	Mineral	JD #9	112993 (100%)	GOOD	2012/dec/02
529010	Mineral	COPPER MOUNTAIN NORTH	137109 (100%)	GOOD	2009/jul/18
540104	Placer	GOLD MINE 1	202400 (100%)	GOOD	2009/aug/30
540109	Placer	GOLD MINE 3	202400 (100%)	GOOD	2009/aug/30
540115	Placer	ROLLED GOLD	202400 (100%)	GOOD	2009/aug/30
334269	Mineral	JOE #1	112993 (100%)	GOOD	2012/dec/02

344394	Mineral	JD #10	112993 (100%)	GOOD	2012/dec/02
412318	Mineral	GOLD402	137109 (100%)	GOOD	2010/jul/03
351222	Mineral	TIM	135139 (100%)	FORF 2008/sep/30	2008/sep/30
352572	Mineral	MICRO #3	112993 (100%)	GOOD	2012/dec/02
344387	Mineral	JD #2	112993 (100%)	GOOD	2012/dec/02
354870	Mineral	TIPTOP 1	137109 (100%)	GOOD	2010/jan/30
524988	Mineral		137109 (100%)	GOOD	2009/apr/20
214247	Mineral	REFER TO LOT TABLE	114017 (100%)	GOOD	2014/jun/11
214906	Mineral	BEAU 1	112993 (100%)	GOOD	2009/may/29
344395	Mineral	JD #11	112993 (100%)	GOOD	2012/dec/02
351185	Mineral	WENDY	135139 (100%)	FORF 2008/sep/30	2008/sep/30
534397	Mineral	SKEFF CREEK FR	137109 (100%)	GOOD	2009/sep/30
388357	Mineral	LADY M 2	137443 (100%)	GOOD	2010/jul/26
395612	Mineral	ZIP 3	112993 (100%)	GOOD	2012/dec/02
357028	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
334272	Mineral	JOE #4	112993 (100%)	GOOD	2012/dec/02
523493	Mineral	WALLACE 2000	137109 (100%)	GOOD	2008/dec/05
523494	Mineral	WALLACE 3000	137109 (100%)	GOOD	2008/dec/05
523495	Mineral	INGRAM 1000	137109 (100%)	GOOD	2010/dec/05
523496	Mineral	INGRAM 2000	137109 (100%)	GOOD	2009/dec/05
523497	Mineral	INGRAM 3000	137109 (100%)	GOOD	2009/dec/05
412317	Mineral	GOLD401	137109 (100%)	GOOD	2010/jul/03
357032	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
334274	Mineral	JOE #6	112993 (100%)	GOOD	2012/dec/02
357033	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
404246	Mineral	REFER TO LOT TABLE	113908 (100%)	GOOD	2010/jan/30

337876	Mineral	C. B. CHANCE 5	137442 (100%)	GOOD	2010/jul/24
216443	Mineral	NO.7-4	112993 (100%)	GOOD	2019/jan/12
214536	Mineral	BING	112993 (100%)	GOOD	2019/jan/12
361428	Placer	CIA	114961 (100%)	GOOD	2010/jan/30
388356	Mineral	LADY M.1.	137443 (100%)	GOOD	2010/jul/26
541073	Mineral	VIEW-07-1000	137109 (100%)	GOOD	2009/aug/31
411705	Mineral	DALE'S RUBY RUBY	140876 (100%)	GOOD	2009/jun/29
344392	Mineral	JD #8	112993 (100%)	GOOD	2012/dec/02
356483	Mineral	TRILBY 1	214171 (100%)	GOOD	2010/jan/30
368085	Mineral	BO	113908 (100%)	GOOD	2010/jan/30
517646	Mineral	GOLDEN CROWN FR.	112993 (100%)	GOOD	2011/dec/02
334436	Mineral	WIN FR.	112993 (100%)	GOOD	2012/dec/02
215216	Mineral	OR-12	112993 (100%)	GOOD	2019/jan/12
540428	Placer	GOLD MINE 4	202400 (100%)	GOOD	2009/sep/05
214763	Mineral	DANDY	112993 (100%)	GOOD	2019/jan/12
394733	Mineral	BUD 4	113908 (100%)	GOOD	2018/dec/30
411704	Mineral	DALE'S LAST CHANCE	140876 (100%)	GOOD	2009/jun/29
368086	Mineral	BO #3	113908 (100%)	GOOD	2010/jan/30
412319	Mineral	GOLD403	137109 (100%)	GOOD	2010/jul/03
501414	Mineral	COPPER CAMP 2	137109 (100%)	GOOD	2009/jan/12
501592	Mineral	COPPER CAMP 3	137109 (100%)	GOOD	2010/jan/12
501648	Mineral	COPPER CAMP 4	137109 (100%)	GOOD	2008/dec/31
501730	Mineral	GOLD 2005	137109 (100%)	GOOD	2009/jan/12
550151	Mineral	DEADWOOD RIDGE 2000	137109 (100%)	GOOD	2010/feb/06
502855	Mineral	COPPER CAMP 5	137109 (100%)	GOOD	2009/jan/13
502886	Mineral	COPPER CAMP 6	137109 (100%)	GOOD	2009/jan/13

502895	Mineral	COPPER CAMP 7	137109 (100%)	GOOD	2010/jan/13
502910	Mineral	COPPER CAMP 8	137109 (100%)	GOOD	2008/dec/31
547991	Mineral	JIM 1000	137109 (100%)	GOOD	2009/dec/26
547993	Mineral	GAS 3000	137109 (100%)	GOOD	2008/dec/26
571533	Mineral	WALLACE -2008 -1	137109 (100%)	GOOD	2008/dec/10
571536	Mineral		146571 (100%)	GOOD	2008/dec/10
571537	Mineral		146571 (100%)	GOOD	2008/dec/10
571543	Mineral		146571 (100%)	GOOD	2008/dec/10
571549	Mineral		146571 (100%)	GOOD	2008/dec/10
571550	Mineral		146571 (100%)	GOOD	2008/dec/10
514463	Mineral	GOLDEN RIBBON	137442 (50%)	GOOD	2011/jun/13
514401	Mineral	GOLDEN RIBBON	137442 (50%)	GOOD	2012/jun/13
401971	Mineral	CLODAGH 2	114017 (100%)	GOOD	2014/may/04
504058	Mineral		137442 (100%)	GOOD	2009/dec/01
542782	Mineral	SKEFF 1000	137109 (100%)	GOOD	2009/oct/08
542784	Mineral	SKEFF 2000	137109 (100%)	GOOD	2009/oct/08
504709	Mineral		146056 (50%)	GOOD	2014/jul/16
504710	Mineral		146056 (50%)	GOOD	2014/jul/16
546276	Mineral	WALLACE 6000	137109 (100%)	GOOD	2008/dec/05
546277	Mineral	WALLACE 7000	137109 (100%)	GOOD	2008/dec/05
546278	Mineral	WALLACE 8000	137109 (100%)	GOOD	2008/dec/05
546318	Mineral	BOUNDARY 1000	137109 (100%)	GOOD	2009/dec/05
546319	Mineral	COPPER MOUNTAIN 1000	137109 (100%)	GOOD	2009/dec/05
506017	Mineral		137442 (100%)	GOOD	2010/jul/26
507638	Mineral	Yankee Boy	109470 (100%)	GOOD	2009/feb/06
508067	Mineral		123906 (100%)	GOOD	2014/nov/27

508083	Mineral	LIND CREEK	137109 (100%)	GOOD	2010/feb/28
508084	Mineral		137109 (100%)	GOOD	2010/jun/04
508086	Mineral		137109 (100%)	GOOD	2010/jun/04
508145	Mineral	COPPER CAMP SOUTH	137109 (100%)	GOOD	2009/jul/19
517002	Mineral	JACKPOT	137109 (100%)	GOOD	2010/jul/12
517015	Mineral	JC3	137109 (100%)	GOOD	2010/jul/12
546748	Mineral	WALLACE 20000	137109 (100%)	GOOD	2008/dec/06
546749	Mineral	WALLACE 21000	137109 (100%)	GOOD	2008/dec/06
546752	Mineral	WALLACE 22000	137109 (100%)	GOOD	2008/dec/06
546755	Mineral	WALLACE 23000	137109 (100%)	GOOD	2008/dec/06
546764	Mineral	WALLACE 24000	137109 (100%)	GOOD	2008/dec/06
546779	Mineral	COPPER MOUNTAIN 2000	137109 (100%)	GOOD	2008/dec/06
546780	Mineral	COPPER MOUNTAIN 3000	137109 (100%)	GOOD	2008/dec/06
546781	Mineral	JACKPOT 6000	137109 (100%)	GOOD	2008/dec/22
547995	Mineral	MAY 1000	137109 (100%)	GOOD	2008/dec/26
547998	Mineral	GAS 4000	137109 (100%)	GOOD	2008/dec/26
401970	Mineral	CLODAGH 1	114017 (100%)	GOOD	2014/may/04
512208	Mineral	Q1	127236 (100%)	GOOD	2016/may/08
512209	Mineral	POWERLINE	137109 (100%)	GOOD	2009/sep/30
512318	Mineral		137109 (100%)	GOOD	2010/apr/30
512558	Mineral		137109 (100%)	GOOD	2014/jul/23
513113	Mineral	WALES-SOUTH	137109 (100%)	GOOD	2010/may/20
513114	Mineral	WALLACE-PEN	137109 (100%)	GOOD	2009/may/20
513141	Mineral		113908 (100%)	GOOD	2018/dec/30
513160	Mineral	PRINCESS	130503 (100%)	GOOD	2009/jun/03
513161	Mineral	WALES-NORTH	137109 (100%)	GOOD	2009/may/21

513163	Mineral	WALES-SOUTHWEST	137109 (100%)	GOOD	2010/may/21
513164	Mineral	WALES-WEST	137109 (100%)	GOOD	2009/may/21
513165	Mineral	WALES.WEST2	137109 (100%)	GOOD	2009/may/21
513166	Mineral	WALES-WESTERN	137109 (100%)	GOOD	2009/may/21
513275	Mineral		137109 (100%)	GOOD	2010/jul/31
513276	Mineral		137109 (100%)	GOOD	2010/jul/31
513277	Mineral		137109 (100%)	GOOD	2010/jul/31
513279	Mineral		137109 (100%)	GOOD	2011/jul/03
513418	Placer	JOLLY JACKS PLACER	131784 (50%)	GOOD	2009/dec/27
513767	Mineral	ATTWOOD	137109 (100%)	GOOD	2009/sep/30
513769	Mineral	ATTWOOD--EAST	137109 (100%)	GOOD	2010/jun/01
513768	Mineral	ATTWOOD-NORTH	137109 (100%)	GOOD	2009/jun/01
513770	Mineral		137109 (100%)	GOOD	2009/may/15
513771	Mineral		137109 (100%)	GOOD	2010/may/15
513772	Mineral		137109 (100%)	GOOD	2009/may/11
513773	Mineral		137109 (100%)	GOOD	2009/may/11
513774	Mineral		137109 (100%)	GOOD	2009/may/11
513775	Mineral		137109 (100%)	GOOD	2009/may/11
513972	Mineral		137442 (100%)	GOOD	2010/jul/25
513974	Mineral		137442 (100%)	GOOD	2010/may/14
514582	Mineral		112993 (100%)	GOOD	2008/nov/01
516272	Mineral		137109 (100%)	GOOD	2011/jul/03
516273	Mineral		137109 (100%)	GOOD	2011/jul/03
516276	Mineral		137109 (100%)	GOOD	2009/jul/30
348707	Mineral	ENTERPRIZE 2	137109 (100%)	GOOD	2014/jul/23
350326	Mineral	ENTERPRIZE 3	137109 (100%)	GOOD	2014/jul/23

514198	Mineral		108043 (100%)	GOOD	2009/jun/09
516683	Mineral		114017 (100%)	GOOD	2017/dec/30
516736	Mineral		114017 (100%)	GOOD	2017/dec/30
516737	Mineral		114017 (100%)	GOOD	2017/dec/30
516742	Mineral		114017 (100%)	GOOD	2017/dec/30
517943	Mineral	DEADWOOD RIDGE	137109 (100%)	GOOD	2017/jul/18
576081	Mineral	GF BORDER -2008-2	137109 (100%)	GOOD	2009/feb/13
551512	Mineral	GREENWOOD 1000	137109 (100%)	GOOD	2010/feb/09
554892	Mineral	YVONNE	109470 (100%)	GOOD	2009/mar/22
555495	Mineral	DEADWOOD NORTH	137109 (100%)	GOOD	2009/jul/31
555515	Mineral	MOTHERLODE	137109 (100%)	GOOD	2010/jul/31
555520	Mineral	MOTHERLODE 1000	137109 (100%)	GOOD	2010/jul/31
555521	Mineral	MOTHERLODE 2000	137109 (100%)	GOOD	2010/jul/31
555529	Mineral	MOTHERLODE 3000	137109 (100%)	GOOD	2010/jul/31
555530	Mineral	MOTHERLODE 4000	137109 (100%)	GOOD	2010/jul/31
555566	Mineral	SAPPHO	137109 (100%)	GOOD	2010/sep/30
357023	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
344386	Mineral	JD #1	112993 (100%)	GOOD	2012/dec/02
357025	Mineral	REFER TO LOT TABLE	112993 (100%)	GOOD	2012/dec/02
214288	Mineral	REFER TO LOT TABLE	114017 (100%)	GOOD	2014/jul/09
394737	Mineral	BUD 8	113908 (100%)	GOOD	2018/dec/30
394738	Mineral	BUD 9	113908 (100%)	GOOD	2018/dec/30
586978	Mineral	GRANBY 2008	137109 (100%)	GOOD	2009/jun/27
562583	Mineral	MOTHERLODE NORTH 2000	137109 (100%)	GOOD	2009/jul/16
591495	Mineral	HOP	146571 (100%)	GOOD	2009/sep/17
573098	Placer	GIBBS CREEK	122483 (100%)	GOOD	2009/jan/04

573216	Mineral		127981 (100%)	GOOD	2009/jan/07
574405	Mineral	COMBO GOLD	111754 (100%)	GOOD	2009/jan/24
575271	Mineral	EAGLE 2008	137109 (100%)	GOOD	2009/feb/04
576500	Placer	THE DUTCHMEN	200788 (100%)	GOOD	2009/feb/17
552139	Mineral	GRANBY 2007	137109 (100%)	GOOD	2009/jul/30
579109	Placer	LAMB 35	123115 (100%)	GOOD	2009/mar/25
582163	Mineral	GRANBY NORTH	137109 (100%)	GOOD	2009/apr/21
586171	Mineral	GOLDEN RIBBON	137443 (100%)	GOOD	2009/jun/10
586172	Mineral	THE DIAMOND	137443 (100%)	GOOD	2009/jun/10
586232	Mineral	COPPER 1000	137109 (100%)	GOOD	2009/jun/11
586234	Mineral	COPPER 3000	137109 (100%)	GOOD	2009/jun/11
586235	Mineral	COPPER 4000	137109 (100%)	GOOD	2009/jun/11
586236	Mineral	COPPER 5000	137109 (100%)	GOOD	2009/jun/11
586238	Mineral	COPPER 7000	137109 (100%)	GOOD	2009/jun/11
586239	Mineral	COPPER 8000	137109 (100%)	GOOD	2009/jun/11
586240	Mineral	COPPER 9000	137109 (100%)	GOOD	2009/jun/11
586241	Mineral	COPPER 10000	137109 (100%)	GOOD	2009/jun/11
588812	Mineral	MIDWAY - BORDER 2	137109 (100%)	GOOD	2009/jul/23

APPENDIX 3: DESCRIPTION OF DATABASE FIELDS

The GDB file is a Geosoft binary database. In the database, the Survey lines and Tie Lines are prefixed with an "L" for "Line" and "T" for "Tie".

COLUMN	UNITS	DESCRIPTOR
line		Line number
flight		Flight #
emfid		AERODAS Fiducial
utctime	hh:mm:ss.ss	UTC time
x	m	UTM Easting (NAD83, Zone 11)
y	m	UTM Northing (NAD83, Zone 11)
galt	m	GPS elevation of magnetometer bird
bheight	m	Terrain clearance of EM bird
Basemag	nT	Base station total magnetic intensity
magUF	nT	Final levelled total magnetic intensity from upper magnetometer sensor (installed on the tail of the EM bird).
dtm	m	Digital Terrain Model
Zon	nT/s	EM On-Time Z component Channels 1-16
Zoff	nT/s	EM Off-Time Z component Channels 0-16
Xon	nT/s	EM On-Time X component Channels 1-16
Xoff	nT/s	EM Off-Time X component Channels 0-16
pwrline		powerline monitor data channel
Grade		Classification from 1-7 based on conductance of conductor pick
Anom_Labels		Letter label of conductor pick (Unique per flight line)
Off_Con	S	Off-time conductance at conductor pick
Off_Tau	µs	Off-time decay constant at conductor pick
Anom_ID		EM Anomaly response style (K= thicK, N = thiN)
Off_AllCon	S	Off-time conductance
Off_AllTau	µs	Off-time decay constant
TranOff	s	Transmitter turn off time
TranOn	s	Transmitter turn on time
TranPeak	A	Transmitter peak current
TranSwitch	s	Transmitter peak current time
Off_Pick		Anomaly pick channel

APPENDIX 4: AEROTEM ANOMALY LISTING

Please see the accompanying DVD for a full listing of EM anomalies.

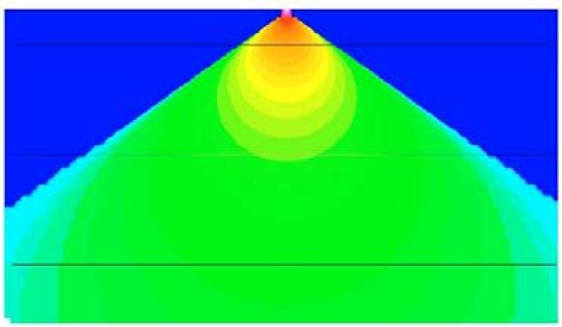
APPENDIX 5: AEROTEM DESIGN CONSIDERATIONS

Helicopter-borne EM systems offer an advantage that cannot be matched from a fixed-wing platform. The ability to fly at slower speed and collect dat

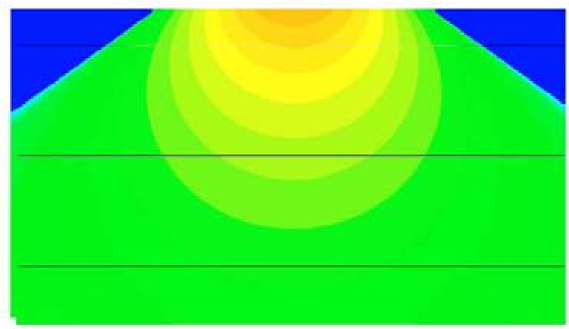
3a with high spatial resolution, and with great accuracy, means the helicopter EM systems provide more detail than any other EM configuration, airborne or ground-based. Spatial resolution is especially important in areas of complex geology and in the search for discrete conductors. With the advent of helicopter-borne high-moment time domain EM systems the fixed wing platforms are losing their *only* advantage – depth penetration.

Advantage 1 – Spatial Resolution

The AeroTEM system is specifically designed to have a small footprint. This is accomplished through the use of concentric transmitter-receiver coils and a relatively small diameter transmitter coil (5 m). The result is a highly focused exploration footprint, which allows for more accurate “mapping” of discrete conductors. Consider the transmitter primary field images shown in Figure 1, for AeroTEM versus a fixed-wing transmitter.



The footprint of AeroTEM at the earth’s surface is roughly 50m on either side of transmitter



The footprint of a fixed-wing system is roughly 150 m on either side of the transmitter

Figure 1. A comparison of the footprint between AeroTEM and a fixed-wing system, highlights the greater resolution that is achievable with a transmitter located closer to the earth’s surface. The AeroTEM footprint is one third that of a fixed-wing system and is symmetric, while the fixed-wing system has even lower spatial resolution along the flight line because of the separated transmitter and receiver configuration.

At first glance one may want to believe that a transmitter footprint that is distributed more evenly over a larger area is of benefit in mineral exploration. In fact, the opposite is true; by energizing a larger surface area, the ability to energize and detect discrete conductors is reduced. Consider, for example, a comparison between AeroTEM and a fixed-wing system over the Mesamax Deposit (1,450,000 tonnes of 2.1% Ni, 2.7% Cu, 5.2 g/t Pt/Pd). In a test survey over three flight lines spaced 100 m apart, AeroTEM detected the Deposit on all three flight lines. The fixed-wing system detected the Deposit only on two flight lines. In exploration programs that seek to expand the flight line spacing in an effort to reduce the cost of the airborne survey, discrete conductors such as the Mesamax Deposit can go undetected. The argument often put forward in favour of using fixed-wing systems is that because of their larger footprint, the flight line spacing can indeed be widened. Many fixed-wing surveys are flown at 200 m or 400 m. Much of the survey work performed by Aeroquest has been to survey in areas that were previously flown at these wider line spacings. One of the reasons for AeroTEM’s impressive discovery record has been the strategy of flying closely spaced lines and finding all the discrete near-surface conductors. These higher resolution surveys are being flown within existing mining camps, areas that improve the chances of discovery.

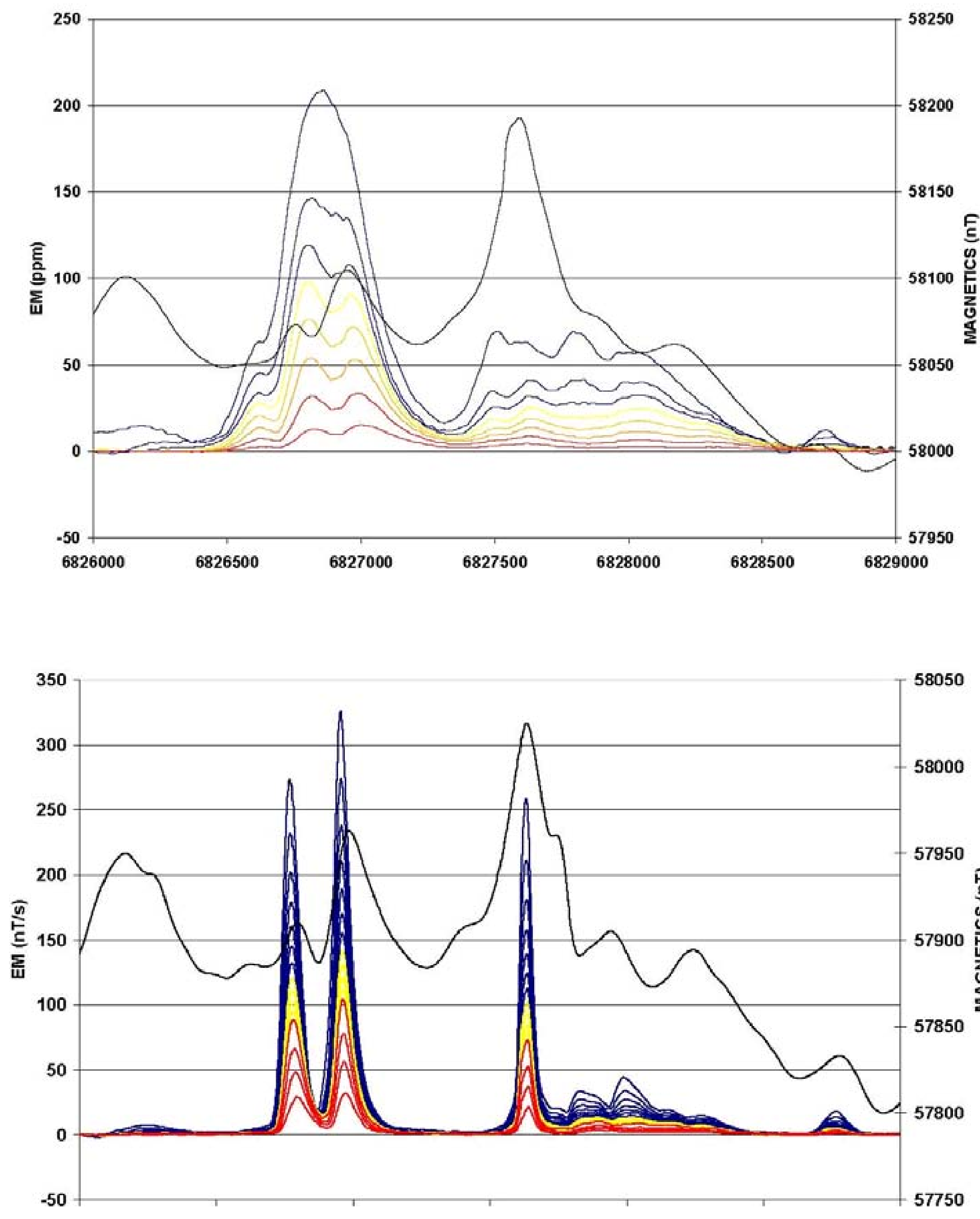


Figure 2. Fixed-wing (upper) and AeroTEM (lower) comparison over the eastern limit of the Mesamax Deposit, a Ni-Cu-PGE zone located in the Raglan nickel belt and owned by Canadian Royalties. Both systems detected the Deposit further to the west where it is closer to surface.

The small footprint of AeroTEM combined with the high signal to noise ratio (S/N) makes the system more suitable to surveying in areas where local infrastructure produces electromagnetic noise, such as power lines and railways. In 2002 Aeroquest flew four exploration properties in the Sudbury Basin that were under option by FNX Mining Company Inc. from Inco Limited. One such property, the Victoria Property, contained three major power line corridors.

The resulting AeroTEM survey identified all the known zones of Ni-Cu-PGE mineralization, and detected a response between two of the major power line corridors but in an area of favourable geology. Three boreholes were drilled to test the anomaly, and all three intersected sulphide. The third borehole encountered 1.3% Ni, 6.7% Cu, and 13.3 g/t TPMs over 42.3 ft. The mineralization was subsequently named the Powerline Deposit.

The success of AeroTEM in Sudbury highlights the advantage of having a system with a small footprint, but also one with a high S/N. This latter advantage is achieved through a combination of a high-moment (high signal) transmitter and a rigid geometry (low noise). Figure 3 shows the Powerline Deposit response and the response from the power line corridor at full scale. The width of power line response is less than 75 m.

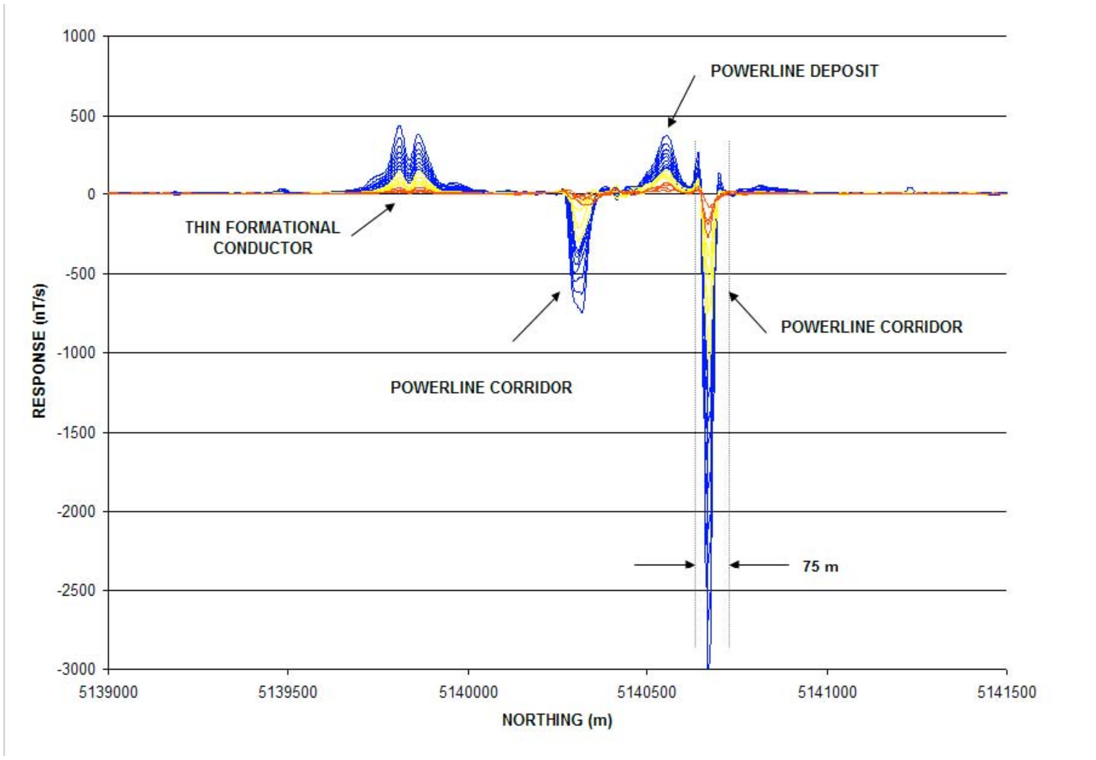


Figure 3. The Powerline Deposit is located between two major power line corridors, which make EM surveying problematic. Despite the strong response from the power line, the anomaly from the Deposit is clearly detected. Note the thin formational conductor located to the south. The only way to distinguish this response from that of two closely spaced conductors is by interpreting the X-axis coil response.

Advantage 2 – Conductance Discrimination

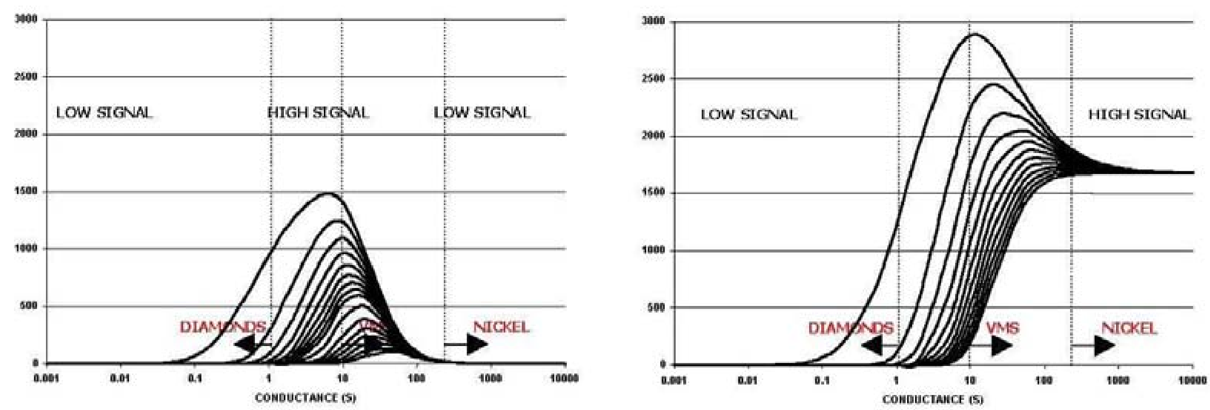
The AeroTEM system features full waveform recording and as such is able to measure the on-time response due to high conductance targets. Due to the processing method (primary field removal), there is attenuation of the response with increasing conductance, but the AeroTEM on-time measurement is still superior to systems that rely on lower base frequencies to detect high conductance targets, but do not measure in the on-time.

The peak response of a conductive target to an EM system is a function of the target conductance and the EM system base frequency. For time domain EM systems that measure only in the off-time, there is a drop in the peak response of a target as the base frequency is lowered for all conductance values below the peak system response. For example, the AeroTEM peak response occurs for a 10 S conductor in the early off-time and 100 S in the late off-time for a 150 Hz base frequency. Because base frequency and conductance form a linear relationship when considering the peak response of any EM system, a drop in base frequency of 50% will double the conductance at which an EM system shows its peak response. If the base frequency were lowered from 150 Hz to 30 Hz there would be a fivefold increase in conductance at which the peak response of an EM occurred.

However, in the search for highly conductive targets, such as pyrrhotite-related Ni-Cu-PGM deposits, a fivefold increase in conductance range is a high price to pay because the signal level to lower conductance targets is reduced by the same factor of five. For this reason, EM systems that operate with low base frequencies are not suitable for general exploration unless the target conductance is more than 100 S, or the target is covered by conductive overburden.

Despite the excellent progress that has been made in modeling software over the past two decades, there has been little work done on determining the optimum form of an EM system for mineral exploration. For example, the optimum configuration in terms of geometry, base frequency and so remain unknown. Many geophysicists would argue that there is no single ideal configuration, and that each system has its advantages and disadvantages. We disagree.

When it comes to detecting and discriminating high-conductance targets, it is necessary to measure the pure in phase response of the target conductor. This measurement requires that the measured primary field from the transmitter be subtracted from the total measured response such that the secondary field from the target conductor can be determined. Because this secondary field is in-phase with the transmitter primary field, it must be made while the transmitter is turned on and the transmitter current is changing. The transmitted primary field is several orders of magnitude larger than the secondary field. AeroTEM uses a bucking coil to reduce the primary field at the receiver coils. The only practical way of removing the primary field is to maintain a rigid geometry between the transmitter, bucking and receiver coils. This is the main design consideration of the AeroTEM airframe and it is the only time domain airborne system to have this configuration.



The off-time AeroTEM response for the 16 channel configuration.

The on-time response assuming 100% removal of the measured primary field.

Figure 4. The off-time and on-time response nomogram of AeroTEM for a base frequency of 150 Hz. The on-time response is much stronger for higher conductance targets and this is why on-time measurements are more important than lower frequencies when considering high conductance targets in a resistive environment.

Advantage 3 – Multiple Receiver Coils

AeroTEM employs two receiver coil orientations. The Z-axis coil is oriented parallel to the transmitter coil and both are horizontal to the ground. This is known as a maximum coupled configuration and is optimal for detection. The X-axis coil is oriented at right angles to the transmitter coil and is oriented along the line-of-flight.

This is known as a minimum coupled configuration, and provides information on conductor orientation and thickness. These two coil configurations combined provide important information on the position, orientation, depth, and thickness of a conductor that cannot be matched by the traditional geometries of the HEM or fixed-wing systems. The responses are free from a system geometric effect and can be easily compared to model type curves in most cases. In other words, AeroTEM data is very easy to interpret. Consider, for example, the following modeled profile:

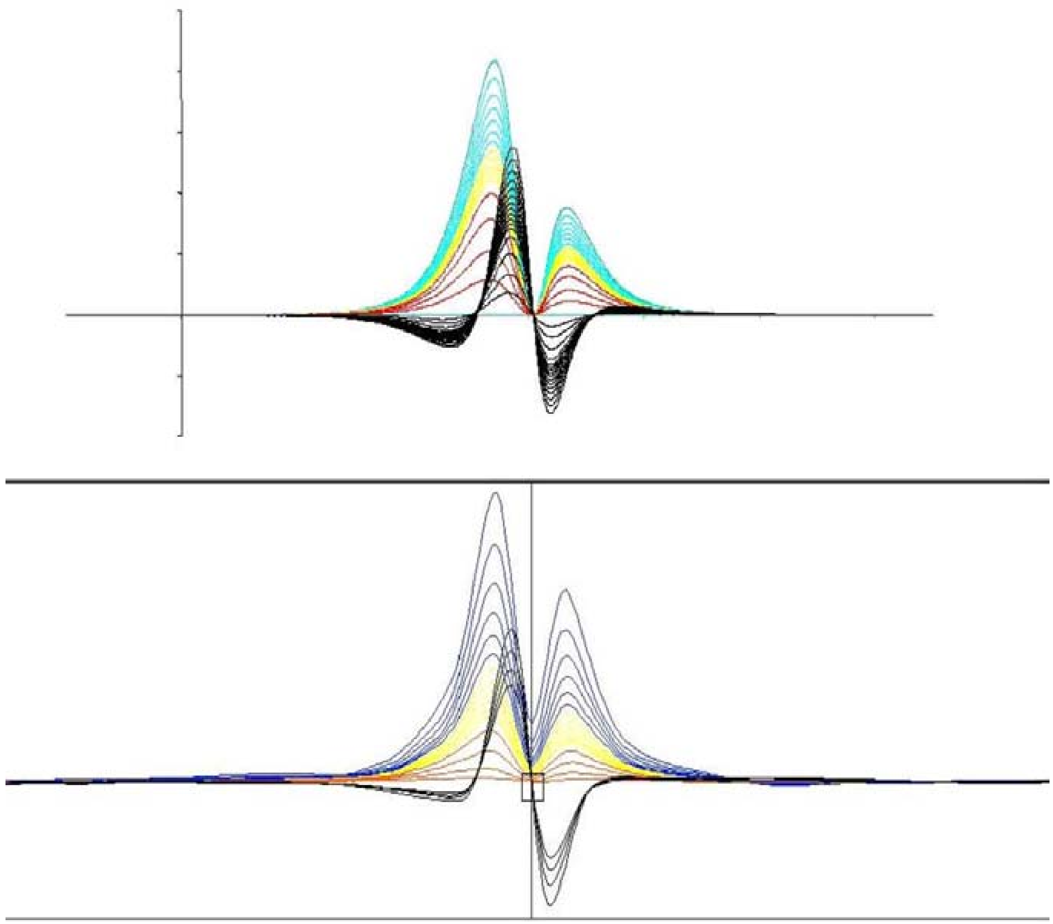


Figure 5. Measured (lower) and modeled (upper) AeroTEM responses are compared for a thin steeply dipping conductor. The response is characterized by two peaks in the Z-axis coil, and a cross-over in the X-axis coil that is centered between the two Z-axis peaks. The conductor dips toward the higher amplitude Z-axis peak. Using the X-axis cross-over is the only way of differentiating the Z-axis response from being two closely spaced conductors.

HEM versus AeroTEM

Traditional helicopter EM systems operate in the frequency domain and benefit from the fact that they use narrowband as opposed to wide-band transmitters. Thus all of the energy from the transmitter is concentrated in a few discrete frequencies. This allows the systems to achieve excellent depth penetration (up to 100 m) from a transmitter of modest power. The Aeroquest Impulse system is one implementation of this technology.

The AeroTEM system uses a wide-band transmitter and delivers more power over a wide frequency range. This frequency range is then captured into 16 time channels, the early channels containing the high frequency information and the late time channels containing the low frequency information down to the system base frequency. Because frequency domain HEM systems employ two coil configurations (coplanar and coaxial) there are only a maximum of three comparable frequencies per configuration, compared to 16 AeroTEM off-time and 12 AeroTEM on-time channels.

Figure 6 shows a comparison between the Dighem HEM system (900 Hz and 7200 Hz coplanar) and AeroTEM (Z-axis) from surveys flown in Raglan, in search of highly conductive Ni-Cu-PGM sulphide. In general, the AeroTEM peaks are sharper and better defined, in part due to the greater S/N ratio of the AeroTEM system over HEM, and also due to the modestly filtered AeroTEM data compared to HEM. The base levels are also better defined in the AeroTEM data. AeroTEM filtering is limited to spike removal and a 5-point smoothing filter. Clients are also given copies of the raw, unfiltered data.

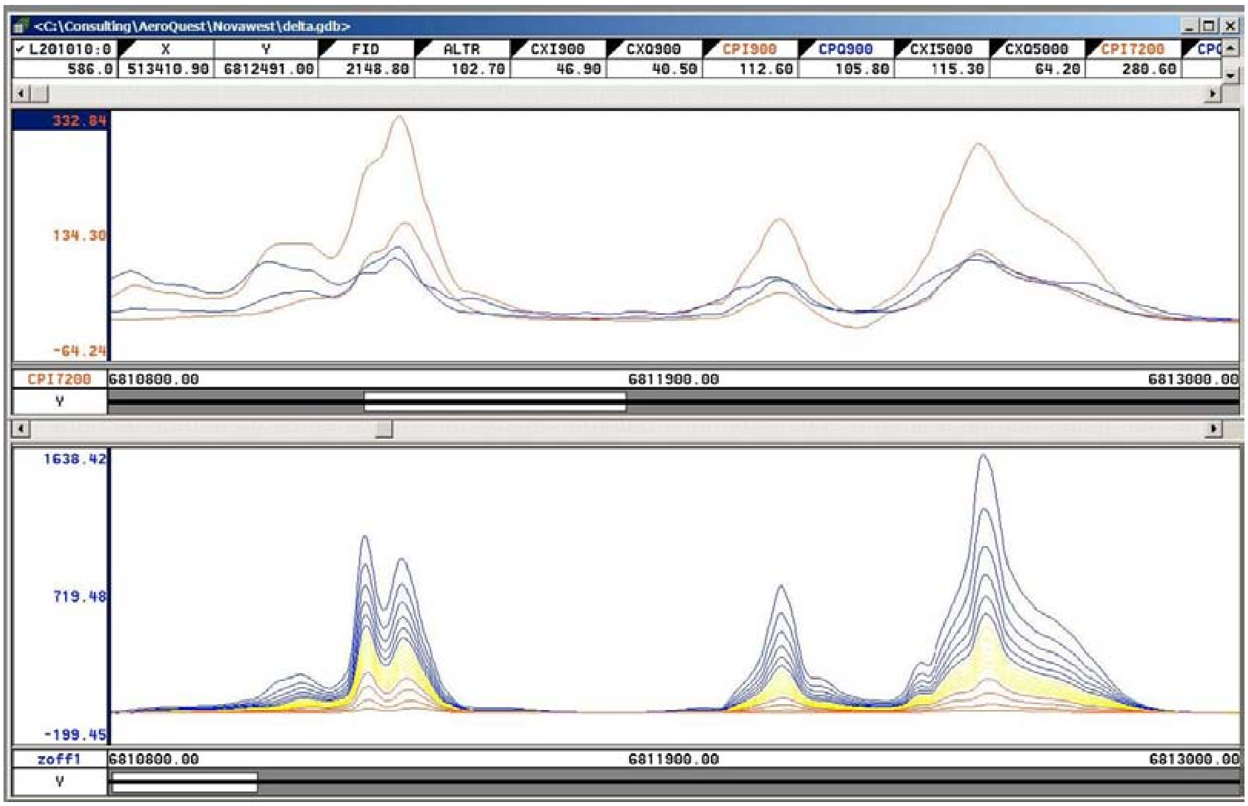


Figure 6. Comparison between Dighem HEM (upper) and AeroTEM (lower) surveys flown in the Raglan area. The AeroTEM responses appear to be more discrete, suggesting that the data is not as heavily filtered as the HEM data. The S/N advantage of AeroTEM over HEM is about 5:1.

Aeroquest Limited is grateful to the following companies for permission to publish some of the data from their respective surveys: Wolfden Resources, FNX Mining Company Inc, Canadian Royalties, Nova West Resources, Aurogin Resources, Spectrem Air. Permission does not imply an endorsement of the AeroTEM system by these companies.

APPENDIX 6: AEROTEM INSTRUMENTATION SPECIFICATION SHEET

AEROTEM Helicopter Electromagnetic System

System Characteristics

- Transmitter: Triangular Pulse Shape Base Frequency 90 Hz
- Tx On Time – 1,833 (90 Hz) µs
- Tx Off Time – 3,667 (90 Hz) µs
- Loop Diameter - 10 m
- Peak Current - 455 A
- Peak Moment – 183,131 NIA
- Typical Z Axis Noise at Survey Speed = 5 nT/s peak to peak
- Sling Weight: 1000 lb
- Length of Tow Cable: 53 m
- Bird Survey Height: 30 m nominal

Receiver

- Two Axis Receiver Coils (x, z) positioned at centre of transmitter loop
- Selectable Time Delay to start of first channel 21.3 , 42.7, or 64.0 ms

Display & Acquisition

- AERODAS Digital recording at 200 samples per decay curve at a maximum of 180 curves per second (27.778 µs channel width)
- RMS Channel Widths: 52.9,132.3, 158.7, 158.7, 317.5, 634.9 µs
- Recording & Display Rate = 10 readings per second.
- On-board display - six channels Z-component and 1 X-component

System Considerations

Comparing a fixed-wing time domain transmitter with a typical moment of 500,000 NIA flying at an altitude of 120 m with a Helicopter TDEM at 30 m, notwithstanding the substantial moment loss in the airframe of the fixed wing, the same penetration by the lower flying helicopter system would only require a sixty-fourth of the moment. Clearly the AeroTEM system with nearly 183.131 NIA has more than sufficient moment. The airframe of the fixed wing presents a response to the towed bird, which requires dynamic compensation. This problem is non-existent for AeroTEM since transmitter and receiver positions are fixed. The AeroTEM system is completely portable, and can be assembled at the survey site within half a day.

Appendix 6

Preliminary Electromagnetic Anomalies

Line	Anomaly ID Label	X NAD83 Zone 11	Y NAD83 Zone 11	Anomaly Thickness	EM Bird Height	Flight	UTC Time	Off Time Conductance	Off Time Deacy
L10241	A	372218.3	5450110	K	19.76234	29	22.14065	0.848	92.075
L10271	A	373908.7	5449677	K	20.81453	29	22.30947	1.29	113.566
L10271	B	373798.2	5449677	N	19.52063	29	22.31058	1.29	113.566
L10470	A	367350.2	5446670	K	37.50759	24	18.64422	4.575	213.889
L10611	A	373483	5444566	K	7.425945	29	23.21181	0.444	66.654
L10620	A	362582.7	5444414	K	13.27114	23	0.900722	3.503	187.163
L10621	A	373460.5	5444427	K	19.72352	29	23.33436	1.347	116.049
L10630	C	363701	5444266	K	28.09069	23	0.869361	5.608	236.806
L10630	D	363164.2	5444273	K	43.73191	23	0.874278	9.614	310.069
L10630	E	362862.1	5444248	N	18.38725	23	0.877333	13.758	370.919
L10630	F	362723.5	5444254	K	18.68447	23	0.878722	13.758	370.919
L10630	G	362520.2	5444266	K	37.62291	23	0.880611	22.806	477.553
L10630	H	362193.5	5444277	K	35.68518	23	0.883556	17.193	414.641
L10631	A	373419.8	5444269	K	12.96321	29	23.38625	1.763	132.783
L10640	A	362246.6	5444103	K	23.46831	23	0.7545	47.749	691.006
L10640	B	362727.7	5444120	K	21.27937	23	0.760611	32.26	567.978
L10640	C	363044.3	5444135	K	30.85532	23	0.764528	48.054	693.207
L10640	D	363426.9	5444126	K	42.56849	23	0.768241	47.48	689.06
L10640	E	363863.2	5444106	K	24.50603	23	0.773111	19.565	442.326
L10640	F	364069.2	5444107	K	49.33893	23	0.774963	15.78	397.241
L10641	A	373383.7	5444103	K	6.218254	29	23.49731	8.943	299.051
L10650	C	363955.3	5443969	K	26.49543	23	0.639472	19.469	441.236
L10650	D	363086.4	5443973	K	30.25064	23	0.6485	90.581	951.738
L10650	E	362954.4	5443970	N	25.28933	23	0.64987	90.581	951.738
L10650	F	362595	5443973	K	36.8247	23	0.653361	83.545	914.029
L10650	G	362231.1	5443973	K	30.3676	23	0.656639	91.549	956.812
L10651	A	373415.5	5443963	K	24.42553	29	23.53672	3.73	193.128
L10660	A	362298.8	5443828	K	19.82915	23	0.529333	132.554	1151.32
L10660	B	362657.5	5443818	N	28.39474	23	0.533083	93.481	966.858
L10660	C	362972.3	5443813	K	22.32759	23	0.536222	78.247	884.574
L10660	D	363309	5443797	N	31.3983	23	0.539361	70.899	842.017
L10660	E	363365.8	5443798	K	35.34606	23	0.539889	70.899	842.017
L10670	B	363505.4	5443659	K	25.21653	23	0.506083	39.217	626.237
L10670	C	363095.5	5443673	K	31.85572	23	0.509889	58.743	766.439
L10670	D	363013.5	5443674	N	31.29116	23	0.510667	58.743	766.439
L10670	E	362895.2	5443671	K	29.5906	23	0.511778	107.487	1036.76
L10670	F	362702.5	5443671	K	33.97538	23	0.513556	85.792	926.237
L10670	G	362263.6	5443663	K	30.7389	23	0.517583	55.554	745.348
L10680	A	361585	5443503	K	35.83036	23	0.392639	37.677	613.816
L10680	B	362049.4	5443501	K	13.06929	23	0.396694	82.852	910.233
L10680	C	362158.3	5443501	N	21.00438	23	0.397806	82.852	910.233
L10680	D	362477.4	5443503	K	24.3749	23	0.401278	62.507	790.616
L10680	E	362850.2	5443501	K	24.59342	23	0.405361	88.238	939.352
L10690	A	365268.6	5443351	K	21.12727	23	0.338556	1.642	128.149
L10690	B	364144.6	5443370	K	24.12017	23	0.348722	8.351	288.987
L10690	C	362785.5	5443375	K	31.10469	23	0.361444	135.43	1163.745
L10690	D	361963.2	5443364	K	39.5914	23	0.368778	42.005	648.111
L10690	E	361670.7	5443350	K	22.01175	23	0.371667	113.255	1064.212
L10690	F	361237.5	5443365	K	19.40432	23	0.377722	39.379	627.531
L10700	A	361579.1	5443218	K	26.74634	23	0.242222	23.905	488.923
L10700	B	362798.9	5443215	K	30.09275	23	0.253472	37.681	613.848
L10700	C	364198.4	5443216	K	31.735	23	0.268	3.711	192.634
L10710	A	367061.4	5443060	K	19.38562	23	0.156028	1.472	121.327
L10710	B	361796.8	5443074	N	36.62162	23	0.20725	30.247	549.974

Line	Anomaly ID Label	X NAD83 Zone 11	Y NAD83 Zone 11	Anomaly Thickness	EM Bird Height	Flight	UTC Time	Off Time Conductance	Off Time Deacy
L10720	A	362141.5	5442922	N	26.91607	22	22.70106	17.752	421.328
L10720	B	367056.5	5442929	K	33.04033	22	22.76139	1.555	124.691
L10730	A	366932.6	5442761	N	44.55304	22	22.61111	2.375	154.096
L10740	A	367038.3	5442611	K	55.9771	22	22.57372	3.388	184.058
L10750	A	367103.9	5442461	K	46.61591	22	22.41769	5.626	237.199
L10760	A	367071.5	5442315	K	50.97453	22	22.378	6.209	249.187
L10770	A	367089.6	5442170	K	56.55614	22	22.20594	3.267	180.755
L10780	A	366976.9	5442009	K	51.42133	22	22.12067	3.002	173.271
L10781	A	374827	5442015	K	34.46754	30	1.350111	3.375	183.709
L10781	B	371757.7	5442031	N	25.39075	30	1.388361	3.375	183.709
L10791	A	371816.2	5441859	N	30.01869	30	1.446389	6.154	248.065
L10791	B	372717.9	5441881	N	21.33797	30	1.456472	6.799	260.751
L10791	C	374836.4	5441895	K	27.46132	30	1.479306	2.664	163.204
L10801	A	372616.6	5441722	N	27.42596	30	1.577361	3.566	188.832
L10811	A	372648.8	5441571	N	13.27761	30	1.613083	13.491	367.299
L10821	A	374437.8	5441424	N	31.56726	30	1.696833	83.297	912.674
L10821	B	372546.4	5441430	N	15.58825	30	1.721833	11.542	339.739
L10830	A	360581.2	5441271	K	39.45475	22	21.58556	11.534	339.621
L10831	A	372669.8	5441268	N	32.78475	30	1.764861	6.155	248.083
L10831	C	376248.9	5441272	K	12.48939	30	1.808889	0.577	75.975
L10840	A	360375.5	5441176	K	34.28868	22	21.40681	97.136	985.576
L10840	B	360871.1	5441102	N	28.63959	22	21.41219	79.201	889.952
L10841	B	372620.6	5441122	N	10.11494	30	1.880667	3.341	182.798
L10850	A	365175.2	5440958	K	36.67696	22	21.34358	7.935	281.695
L10850	B	360945.1	5440926	K	30.75267	22	21.38675	46.596	682.612
L10850	C	360417.4	5440967	K	27.46383	22	21.39286	166.391	1289.925
L10860	A	361119.9	5440814	K	19.96155	21	19.67947	46.921	684.988
L10860	B	364453.2	5440823	N	50.08889	21	19.71669	5.248	229.078
L10870	A	364432.2	5440660	N	26.99907	21	19.61119	21.271	461.205
L10870	B	362929.3	5440687	N	45.25234	21	19.62663	6.937	263.383
L10870	C	362395.9	5440668	K	25.0534	21	19.63193	6.937	263.383
L10870	D	362245.8	5440653	N	33.27089	21	19.63333	6.937	263.383
L10870	E	361544.7	5440682	K	59.123	21	19.64056	37.414	611.67
L10880	A	361789.7	5440546	K	30.98833	21	19.47406	29.658	544.594
L10880	B	364207.2	5440539	N	40.01001	21	19.50769	29.658	544.594
L10890	A	366777.2	5440352	N	33.78456	21	19.37772	59.304	770.09
L10890	B	364130.8	5440380	N	39.07016	21	19.40447	59.304	770.09
L10900	A	361918.8	5440234	K	24.42173	21	19.25194	4.118	202.94
L10900	B	364122.2	5440207	N	29.0092	21	19.27869	28.726	535.97
L10900	C	366650.3	5440232	N	31.53051	21	19.31411	28.726	535.97
L10910	A	365988.2	5440066	N	39.08196	21	19.12983	7.726	277.951
L10910	B	364131.7	5440073	N	35.12149	21	19.14992	6.339	251.778
L10920	A	366033.4	5439918	N	41.72574	21	19.02542	21.6	464.759
L10930	A	365811.3	5439769	K	26.7322	21	18.87219	78.668	886.949
L10940	A	361430.5	5439610	K	43.62391	21	18.69828	47.755	691.048
L10940	B	365822.8	5439614	N	28.54609	21	18.75158	47.755	691.048
L10950	A	365716.4	5439459	N	30.81455	21	18.54253	9.907	314.759
L10950	B	361558.5	5439464	K	59.56562	21	18.58847	9.907	314.759
L10960	A	361110.8	5439313	N	30.79847	21	18.36364	5.474	233.956
L10960	B	361495.4	5439313	N	26.14418	21	18.36781	5.474	233.956
L10960	C	361622.5	5439327	K	41.64087	21	18.369	5.474	233.956
L10960	D	365855.2	5439327	N	26.49171	21	18.41936	5.474	233.956
L10970	A	365807.2	5439163	N	27.33262	21	18.28572	9.691	311.306
L10970	B	360992.3	5439180	K	35.09607	21	18.33567	9.691	311.306

Line	Anomaly ID Label	X NAD83 Zone 11	Y NAD83 Zone 11	Anomaly Thickness	EM Bird Height	Flight	UTC Time	Off Time Conductance	Off Time Deacy
L10980	A	360888.9	5439019	K	40.5538	20	17.24503	6.57	256.327
L10980	B	365734.9	5439008	N	29.31152	20	17.30236	6.57	256.327
L10990	A	365736.7	5438858	K	31.15718	20	17.16964	1.427	119.439
L11000	A	365637.9	5438708	N	31.45845	20	17.00889	8.301	288.113
L11010	A	365662.8	5438570	K	31.66499	20	16.86096	1.546	124.331
L11020	A	365392.7	5438416	N	29.02125	20	16.72289	7.345	271.017
L11030	A	365504.7	5438250	N	34.37546	20	16.55172	3.559	188.66
L11041	A	365397.8	5438101	K	36.97998	20	16.40439	1.966	140.215
L11091	A	363287.6	5437378	K	33.40336	19	0.426806	6.857	261.866
L11093	A	386115	5437372	K	24.25738	27	16.69686	7.433	272.637
L11101	A	386045.9	5437223	N	41.04268	16	23.04661	0	0
L11103	A	363245.2	5437236	N	46.29685	19	0.204407	10.424	322.868
L11113	A	363338.8	5437065	K	34.72615	19	0.101944	10.038	316.827
L11120	A	363396	5436923	K	45.17089	19	23.88506	5.356	231.424
L11133	A	363536.2	5436778	K	28.8871	18	22.38817	1.671	129.258
L11143	A	363585.5	5436648	K	21.98314	18	22.28356	1.406	118.563
L11151	A	363605.3	5436475	K	39.41918	13	0.622556	1.527	123.586
L11163	A	363618	5436313	K	31.94081	13	0.749056	2.094	144.694
L11163	B	367050.2	5436295	K	45.68376	13	0.7845	1.988	140.982
L11170	A	370074.7	5436184	K	37.03387	8	19.07481	2.159	146.938
L11170	B	367021.5	5436172	K	51.20697	8	19.11361	2.532	159.135
L11180	A	366027.9	5436010	K	38.28158	8	19.29272	3.963	199.067
L11180	B	366878.7	5436022	K	48.20834	8	19.30217	6.108	247.14
L11180	C	369953.9	5436021	K	36.55373	8	19.34233	2.577	160.523
L11182	A	378764.1	5436023	N	39.62252	13	23.98675	2.095	144.748
L11190	A	369746.5	5435869	K	38.2099	8	19.4375	1.972	140.441
L11190	B	366874.4	5435883	K	59.0877	8	19.47592	4.112	202.781
L11190	C	365977.9	5435860	K	55.00864	8	19.48903	3.262	180.613
L11192	A	378713.5	5435879	K	44.62885	13	23.96803	15.732	396.641
L11200	A	365987	5435708	K	41.32361	8	19.58881	2.269	150.647
L11200	B	366776	5435701	K	59.13834	8	19.59733	6.103	247.043
L11200	C	369771.8	5435727	K	34.25042	8	19.63706	1.76	132.669
L11200	D	372082.4	5435731	N	43.87597	8	19.66747	1.76	132.669
L11203	A	378628	5435724	N	31.97377	12	22.68233	8.589	293.077
L11203	B	378772.6	5435719	K	35.5393	12	22.68417	8.589	293.077
L11210	A	366023.7	5435556	K	39.50582	9	0.347722	2.663	163.195
L11210	B	366487.8	5435565	N	66.64534	9	0.352583	2.663	163.195
L11210	C	372030.4	5435570	N	46.71873	9	0.425889	2.663	163.195
L11213	A	379734.5	5435575	K	23.5689	12	22.65128	1.512	122.965
L11220	A	372031.9	5435424	K	39.0966	9	0.458222	1.839	135.612
L11220	B	371895.3	5435421	N	50.48658	9	0.459556	1.839	135.612
L11220	C	366069.3	5435419	K	34.25882	9	0.538611	2.952	171.823
L11222	A	379749.4	5435402	K	27.49982	12	22.37472	0.525	72.48
L11232	A	380210	5435278	K	48.93495	12	22.29072	14.15	376.161
L11232	B	378664	5435274	K	52.4243	12	22.30786	6.415	253.27
L11242	A	378755.4	5435132	N	15.76794	12	21.96717	3.721	192.89
L11242	B	379413.5	5435098	K	43.60102	12	21.97964	3.721	192.89
L11242	C	380305.7	5435132	K	48.67392	12	21.98872	2.901	170.336
L11250	A	363749.4	5435053	N	29.57198	9	0.896361	7.652	276.629
L11250	B	363803.5	5435036	K	30.14257	9	0.897194	7.652	276.629
L11252	A	380963.8	5434969	K	36.28331	12	21.91372	8.15	285.481
L11252	B	380736.3	5434963	K	24.75434	12	21.91747	13.675	369.797
L11252	C	380385.4	5434946	K	47.55127	12	21.92253	22.248	471.683
L11252	D	379501.9	5434960	K	28.15709	12	21.93394	8.178	285.98

Line	Anomaly ID Label	X NAD83 Zone 11	Y NAD83 Zone 11	Anomaly Thickness	EM Bird Height	Flight	UTC Time	Off Time Conductance	Off Time Deacy
L11252	E	379002.2	5434969	K	25.32778	12	21.94003	9.775	312.645
L11262	A	378520.2	5434790	K	30.27994	12	21.54331	14.529	381.165
L11262	B	378738.8	5434831	K	54.67044	12	21.54644	17.761	421.441
L11262	C	378944.9	5434835	K	25.67752	12	21.54933	14.317	378.379
L11262	D	379694.3	5434801	K	36.21432	12	21.56353	9.371	306.114
L11262	E	380465.4	5434836	K	36.03434	12	21.57139	59.826	773.47
L11272	A	381155.6	5434675	K	39.53952	12	21.49194	6.732	259.47
L11272	B	380660.8	5434667	K	24.16256	12	21.49767	84.171	917.445
L11272	C	380432	5434674	K	32.25821	12	21.50019	50.446	710.25
L11272	D	380233.2	5434672	K	32.8643	12	21.50233	65.811	811.241
L11272	E	379753.1	5434677	K	20.018	12	21.50911	1.679	129.585
L11272	F	378841.4	5434676	K	43.33695	12	21.51989	13.119	362.205
L11272	G	378605.6	5434672	K	31.40166	12	21.52219	20.87	456.832
L11281	A	390879.3	5434512	N	32.84179	11	20.02683	123.18	1109.864
L11281	B	391480.3	5434515	K	57.02843	11	20.04469	138.873	1178.443
L11282	A	378526.7	5434508	K	46.76237	11	19.87031	2.266	150.545
L11282	B	378750.8	5434512	K	43.2035	11	19.87447	11.313	336.345
L11282	C	379020.6	5434507	K	36.21214	11	19.87852	8.586	293.013
L11282	D	380381.6	5434516	K	36.46363	11	19.89444	41.941	647.621
L11282	E	380543.1	5434521	K	32.64099	11	19.89652	27.595	525.311
L11291	A	391324	5434355	K	21.95607	11	19.62319	137.408	1172.213
L11291	B	391012	5434414	K	42.30322	11	19.63125	105.226	1025.796
L11291	C	388323.4	5434361	K	55.61673	11	19.67214	4.045	201.128
L11291	D	380528.4	5434362	K	36.8835	11	19.78003	35.816	598.468
L11291	E	379112.5	5434363	K	28.09875	11	19.7965	0.872	93.375
L11301	A	380621.1	5434218	K	44.24195	11	19.48533	14.201	376.838
L11301	B	384336.9	5434220	K	35.16031	11	19.52922	0.186	43.138
L11301	C	388412.9	5434221	K	52.88235	11	19.57289	7.617	275.988
L11301	D	391150.9	5434210	K	48.95393	11	19.60561	97.273	986.273
L11311	A	391059.4	5434065	K	84.11475	11	19.22372	333.63	1826.553
L11311	B	390718.9	5434067	K	41.3278	11	19.22919	36.065	600.542
L11311	C	390207	5434069	K	25.034	11	19.23825	79.13	889.548
L11311	D	389730.9	5434080	K	37.44432	11	19.24464	107.559	1037.107
L11311	E	389245.1	5434073	K	31.51241	11	19.25036	24.366	493.614
L11311	F	388806	5434059	K	33.77831	11	19.25517	15.269	390.754
L11311	G	388419	5434065	K	55.77051	11	19.25944	5.344	231.164
L11311	H	384587	5434052	K	41.20621	11	19.30772	0.915	95.66
L11311	I	384338.4	5434057	K	30.81271	11	19.31083	4.707	216.952
L11311	J	383102.9	5434065	K	42.25733	11	19.32456	3.579	189.194
L11321	A	383272.4	5433918	K	24.00702	11	19.06544	3.799	194.902
L11321	C	388419.6	5433898	K	44.75889	11	19.12075	0.773	87.932
L11321	D	388931	5433909	K	18.33348	11	19.12583	14.364	379.002
L11321	E	389438.4	5433912	K	42.09349	11	19.13172	36.014	600.114
L11321	F	390047.2	5433910	K	53.68727	11	19.13831	115.997	1077.02
L11321	G	390630	5433918	N	61.76736	11	19.14781	79.731	892.92
L11321	H	390985.1	5433902	K	50.50731	11	19.15304	79.731	892.92
L11331	A	390940.1	5433778	N	72.34372	11	18.79919	121.478	1102.171
L11331	B	390527.8	5433770	K	41.09809	11	18.80878	121.478	1102.171
L11331	C	390308.9	5433794	K	24.80439	11	18.81931	92.173	960.065
L11331	D	389472.5	5433762	K	35.51639	11	18.83139	54.894	740.903
L11331	E	388438.5	5433745	K	37.91473	11	18.84139	8.222	286.747
L11342	A	384454.6	5433626	K	57.24298	10	17.74364	0.547	73.975
L11342	B	384745.8	5433614	K	29.62006	10	17.74633	0.683	82.667
L11342	G	388433.1	5433616	K	27.72727	10	17.78922	5.339	231.064

Line	Anomaly ID Label	X NAD83 Zone 11	Y NAD83 Zone 11	Anomaly Thickness	EM Bird Height	Flight	UTC Time	Off Time Conductance	Off Time Deacy
L11343	A	389693	5433620	K	53.22239	10	17.8985	82.41	907.799
L11343	B	390184.3	5433619	K	60.28702	10	17.90447	95.798	978.764
L11343	C	390337.8	5433623	K	51.6428	10	17.90708	105.981	1029.473
L11343	D	390714.3	5433621	K	67.50342	10	17.91469	110.889	1053.039
L11343	E	391007.8	5433622	K	50.93358	10	17.9185	44.855	669.737
L11351	A	388386.1	5433470	K	43.03675	10	16.52539	8.573	292.792
L11361	C	378461.9	5433316	K	35.24826	9	1.315972	0.406	63.735
L11361	D	379055.4	5433303	K	39.72517	9	1.32225	0.548	74.043
L11361	E	380573.9	5433295	K	43.92434	9	1.336694	74.65	864.003
L11361	K	388436.5	5433309	K	32.65113	9	1.410972	22.531	474.668
L11370	A	388331.2	5433154	K	34.18925	9	0.012194	4.417	210.168
L11371	A	369160.8	5433164	K	68.41375	9	0.230861	12.17	348.848
L11380	A	369110.4	5433026	K	50.18451	8	19.74917	12.463	353.035
L11381	F	388503.3	5432997	K	45.46679	8	19.96769	13.026	360.911
L11390	D	369006.3	5432858	K	43.57806	8	18.65644	2.559	159.983
L11400	A	369009.5	5432720	K	41.0309	7	17.43067	17.706	420.785
L11400	D	379235	5432714	K	23.89941	7	17.55294	34.799	589.907
L11400	E	379823.6	5432733	K	55.00365	7	17.559	1.008	100.389
L11400	F	380079	5432722	K	38.81783	7	17.56167	6.561	256.141
L11400	G	380883.5	5432722	K	40.3428	7	17.56933	7.769	278.721
L11400	H	381826.2	5432723	N	34.92897	7	17.58011	4.101	202.521
L11400	I	381911.1	5432721	K	35.14474	7	17.58108	4.101	202.521
L11400	P	388929.2	5432715	K	33.59233	7	17.6705	9.425	307.001
L11410	B	368983	5432570	K	35.41062	7	16.5895	83.016	911.133
L11411	A	388877.8	5432566	K	38.64406	7	16.34253	4.721	217.271
L11411	B	388688.5	5432567	K	40.04109	7	16.34497	5.082	225.427
L11421	E	388622.3	5432409	K	39.94814	6	1.148611	3.973	199.334
L11431	A	388583.9	5432266	K	39.58194	6	0.075056	2.588	160.885
L11431	B	388370.8	5432261	K	42.88408	6	0.078083	0.906	95.187
L11441	A	388682.7	5432124	K	55.13434	5	23.02389	0.957	97.806
L11450	A	376490.6	5431978	K	66.00601	5	21.85081	10.231	319.855
L11450	B	375551.9	5431967	K	47.7007	5	21.86067	2.177	147.549
L11460	A	375660.3	5431813	K	75.79301	4	20.57153	34.247	585.211
L11460	B	376639.9	5431826	K	34.41568	4	20.58417	6.596	256.819
L11471	A	376706.1	5431652	K	39.77485	4	19.85058	91.455	956.32
L11471	B	376110	5431663	K	53.59095	4	19.85617	1057.99	3252.677
L11471	C	375659.7	5431677	N	32.3711	4	19.86092	1057.99	3252.677
L11480	A	375248.7	5431516	N	60.73791	4	20.15111	1.223	110.572
L11480	B	376737.9	5431523	K	42.43483	4	20.16424	1.223	110.572
L11491	A	376886.5	5431373	N	44.91165	4	20.29274	6.458	254.133
L11491	B	376485.2	5431370	K	30.17186	4	20.29833	6.458	254.133
L11491	C	375956.4	5431378	N	30.8604	4	20.30558	6.458	254.133
L11491	D	374952.5	5431362	N	31.01274	4	20.31828	6.458	254.133
L11500	A	374781.3	5431233	N	33.47847	5	22.13206	4.996	223.517
L11500	B	375926.6	5431212	N	50.09515	5	22.14719	4.996	223.517
L11500	C	376651.7	5431219	K	30.34821	5	22.15514	2.66	163.088
L11500	D	377005.3	5431202	K	44.89615	5	22.15839	1.344	115.916
L11501	A	389580.8	5431221	K	52.97667	3	18.17528	7.605	275.777
L11510	A	374857.2	5431076	K	32.04802	5	22.24494	4.434	210.578
L11511	A	387748.1	5431064	K	39.12422	3	18.00308	0.243	49.317
L11520	A	374103.5	5430919	N	42.40157	5	22.51683	9.261	304.324
L11520	B	374892.6	5430913	K	65.42119	5	22.5243	9.261	304.324
L11522	A	387725.8	5430908	K	39.26619	3	17.92244	0.633	79.584
L11530	A	374747.1	5430772	K	40.65139	5	22.63581	6.066	246.289

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L11530	B	373740.8	5430771	N	53.28378	5	22.64753	10.249	320.147
L11530	C	373538	5430772	K	45.5581	5	22.64981	10.249	320.147
L11530	D	369758.6	5430783	N	76.13565	5	22.71264	10.249	320.147
L11531	A	387719.4	5430769	K	62.46363	3	17.78733	0.76	87.161
L11541	A	369869.5	5430601	N	64.81395	6	0.383278	21.286	461.368
L11541	B	373418.6	5430618	K	37.88275	6	0.437694	21.286	461.368
L11541	C	374581.9	5430628	K	52.4339	6	0.4505	7.321	270.583
L11541	D	378918.7	5430610	K	38.93476	6	0.497194	2.502	158.189
L11550	A	387781.1	5430465	K	50.22437	3	17.57939	25.834	508.276
L11551	A	378826	5430479	K	48.24492	6	0.511028	1.818	134.846
L11551	B	374277.8	5430460	K	45.80454	6	0.566972	5.962	244.167
L11551	C	373008.3	5430452	K	53.45323	6	0.581	58.566	765.282
L11551	D	371926.3	5430470	K	72.63295	6	0.592611	64.974	806.063
L11551	E	370329	5430473	K	44.07823	6	0.615861	108.08	1039.613
L11551	F	369815.6	5430463	N	64.74844	6	0.623028	108.08	1039.613
L11561	A	387548.6	5430305	K	51.36889	3	17.52186	23.481	484.574
L11561	B	387890.2	5430332	K	35.4292	3	17.52775	37.908	615.695
L11562	B	371798	5430327	K	49.3022	6	0.656889	78.757	887.449
L11562	C	373196.7	5430319	N	60.17357	6	0.676167	8.112	284.824
L11562	D	374141.4	5430320	K	38.33553	6	0.685917	8.112	284.824
L11562	E	375364.9	5430304	K	41.06925	6	0.699667	4.371	209.077
L11562	F	378794.1	5430324	K	43.00477	6	0.739667	0.572	75.639
L11570	A	387857	5430179	K	34.13153	3	17.44536	113.335	1064.588
L11570	B	387557.4	5430159	K	61.34429	3	17.45158	79.952	894.156
L11571	A	375317	5430158	K	36.40902	6	0.798778	5.047	224.661
L11571	B	373707.4	5430154	K	55.78353	6	0.818278	3.842	196.004
L11571	C	371849.5	5430179	N	75.62459	6	0.839444	3.842	196.004
L11580	B	387485.1	5430022	K	60.71177	3	17.39197	119.66	1093.894
L11580	C	387791.5	5430013	N	29.03643	3	17.39642	119.66	1093.894
L11581	A	373550.9	5430013	K	51.93607	7	16.69022	5.114	226.141
L11581	B	375462.2	5430025	K	46.08722	7	16.72556	1.306	114.271
L11590	A	387843.5	5429879	K	19.96711	3	17.32219	60.955	780.735
L11590	B	387680.2	5429869	K	37.65019	3	17.32533	88.432	940.385
L11590	C	387515.3	5429864	K	51.84766	3	17.32864	103.818	1018.911
L11591	A	375444.4	5429861	K	28.2549	7	16.83597	1.362	116.687
L11591	B	373430.9	5429872	K	31.48449	7	16.87567	6.919	263.041
L11600	B	387506.2	5429720	K	35.37202	3	17.27756	66.66	816.454
L11600	C	387710.9	5429703	K	32.91175	3	17.28103	113.302	1064.436
L11600	D	387888.8	5429732	K	28.48281	3	17.28489	55.914	747.76
L11601	A	373366.2	5429725	K	30.791	7	16.96131	3.469	186.264
L11610	A	388005.2	5429575	K	18.50991	3	17.19403	19.547	442.12
L11610	B	387812.2	5429581	K	33.57501	3	17.1985	77.286	879.122
L11610	C	387550.8	5429573	K	43.10009	3	17.20303	73.506	857.356
L11611	A	373272.3	5429580	K	42.48503	7	17.12483	3.698	192.304
L11620	B	387852.6	5429414	K	33.54513	3	17.13525	62.749	792.144
L11621	A	373169.3	5429422	K	36.34789	7	17.17436	2.866	169.279
L11621	B	378513.2	5429422	K	29.57862	7	17.25056	11.707	342.159
L11630	A	388079.8	5429255	N	12.27678	3	17.04617	72.347	850.573
L11630	B	387733.6	5429286	K	33.36425	3	17.05181	72.347	850.573
L11631	A	378344.7	5429265	K	63.64472	7	17.27728	1.074	103.644
L11631	B	373084.6	5429282	K	40.09829	7	17.34117	3.082	175.561
L11641	A	387684.6	5429116	K	44.93992	2	2.765444	25.852	508.446
L11642	A	372913.2	5429121	K	31.20756	8	18.73128	2.947	171.66
L11642	B	378206.4	5429127	K	39.48146	8	18.8025	2.787	166.951

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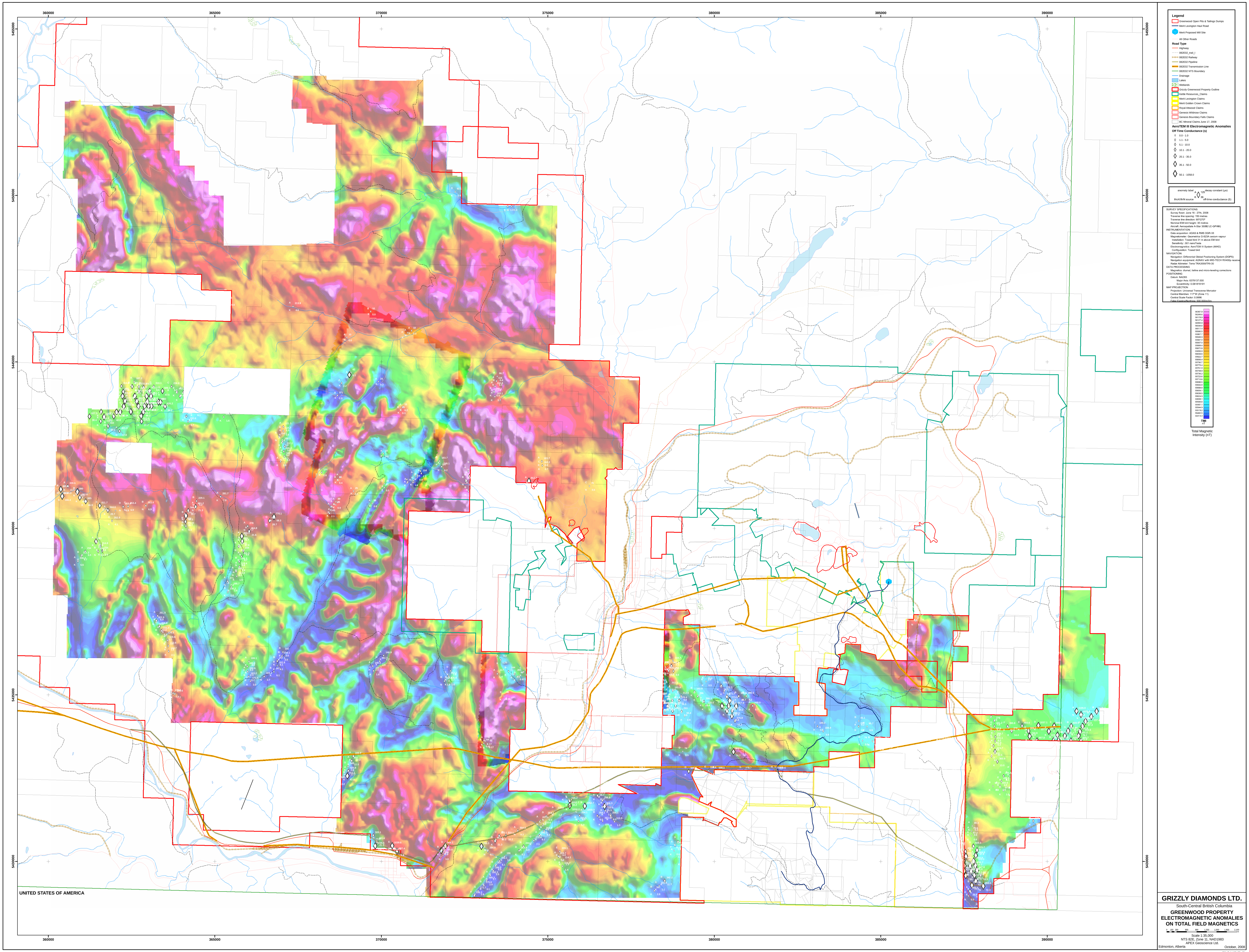
L11651	A	387633.7	5428967	N	28.12175	2	2.682389	0	0
L11652	A	372791.3	5428978	K	51.50093	8	18.90128	11.307	336.252
L20070	A	373180.9	5433522	K	45.09		23.87422	0.27	52
L20080	A	373118.5	5433616	K	41.02		23.88906	0.17	42
L20200	E	373681.8	5434971	K	58.96		21.90447	0.36	40
L20250	A	374107.8	5435560	K	38.33		22.86397	0.97	98
L20261	C	374281.1	5435701	K	54.7		23.02483	1.1	106
L20261	D	374009.9	5435634	K	61.23		23.02781	4.2	205
L20270	A	373489	5435639	K	51.08		23.05842	1.4	117
L20270	B	373826.7	5435712	K	56.87		23.06236	2.1	144
L20310	A	373584.5	5436062	K	72.71		23.37206	1.25	112
T29060	A	373079.9	5433544	N	32.35		18.05986	0.41	64
L10010	A	370908.5	5445939	K	61.68459		16.83683	0.01	10
L10010	B	369679.1	5446514	K	46.97576		16.86275	0.01	10
L10020	A	370795.8	5445876	K	65.90906		16.9125	0.01	10
L10030	A	370700.9	5445813	K	72.73521		16.99136	0.01	10
L10110	A	368966.5	5445735	K	43.97247		17.56967	0.01	10
L10190	A	369918.2	5444408	K	61.34924		18.14269	0.25	25
L10200	A	369085.6	5444685	K	39.16964		18.18317	0.19	43
L10210	A	369039.1	5444611	K	48.07135		18.27919	60	0.37
L10230	A	370646.1	5443636	K	43.42643		18.37694	0.15	15
L10240	A	368810.5	5444369	K	48.84964		18.43267	2.2	148
L10240	B	370577.4	5443551	K	43.758		18.46147	0.25	25
L10280	A	368683.5	5443994	K	54.05584		19.60289	2.93	171
L10380	A	370068.1	5442248	K	45.6583		20.23383	0.01	10
L10380	B	371179.7	5441724	K	48.15183		20.24797	1.18	108
L10385	A	371203.4	5441653	K	50.78221		22.62133	2.5	158
L10395	A	371090	5441602	K	41.69483		22.71631	1.37	117
L10400	A	370990.4	5441602	K	50.90529		20.35969	0.79	89
L10400	B	371093.8	5441549	K	44.82012		20.36131	0.75	86
L10415	A	370964	5441444	K	49.2527		22.82864	3.6	190
L10420	A	370770.3	5441477	K	57.46316		20.48108	1.17	108
L10420	B	370953	5441388	K	49.35073		20.48353	1.58	126
L10425	A	370793.3	5441401	K	65.73647		22.84756	4.3	207
L10430	A	370773.1	5441367	K	58.17942		20.51456	0.57	75
L10460	A	370096.5	5441339	K	44.0355		20.74744	0.08	28
L10470	A	370093.4	5441232	K	49.64028		20.79989	0.04	20
L10500	A	368754	5441533	K	52.01031		20.98039	0.39	62
L10510	A	368685.6	5441456	K	49.03704		21.06078	0.44	66
L10510	B	368211.2	5441683	K	49.10732		21.06728	1.83	135
L10520	A	369163.2	5441121	K	47.15237		21.09575	0.09	29
L10531	A	369720.9	5440753	K	54.49555		21.21386	0.78	89
L10570	A	368685.8	5440778	K	50.48566		21.43094	0.8	89
L10570	A	368640.7	5440801	N	48.62688		21.4315	0.8	89
L10580	A	368575.6	5440731	N	48.58544		21.45892	0.93	96
L10580	A	368633.6	5440706	K	50.11586		21.45967	0.93	96
L10591	A	368490.7	5440654	K	50.31211		22.28506	1.37	117
L11600	A	368475.5	5440562	K	66.04495		20.30831	3.4	184
L11610	A	368446.5	5440456	K	67.70796		20.25394	2.12	145

Appendix 7

2008 Exploration Expenditures

APPENDIX 7. Detailed Greenwood Exploration Costs To September 1, 2008

No.		ITEM				AMOUNT	TOTALS
1. APEX Geological Staff Costs - October 2007 - August 2008			Position	Rate	Days		
		Principals directly involved - Field and Office Work					
		Michael Dufresne (Oct 22/07-Aug 21/08)	Principal Consultant	675	20.0	$13,487.25	
		Dean Besserer (April 22/08-May 21/08)	Principal Consultant	675	0.3	$175.50	
						$13,662.75	
		Geological Staff - Field Work					
		Fallon Clarke (April 22-June 21/08)	Staff Technician	300	14.7	$4,410.00	
		Melissa Nizinkevich (April 22-June 21/08)	Staff Technician	275	14.7	$4,042.50	
		Amber Stroeder (April 22-June 21/08)	Staff Technician	300	14.7	$4,410.00	
		Cook - Rich Services (April 22-May 21/08)	Cook	475	10.0	$4,750.00	
		Andrea Ross (April 22-June 21/08)	Staff Geologist	400	14.7	$5,880.00	
		Brenden Mock (April 22-June 21/08)	Staff Geologist	400	14.7	$5,880.00	
						$29,372.50	
		Geological Staff - Office Work					
		Cory Gunson (Jan 22-July 21/08)	Staff Technician	250	1.0	$250.00	
		Robyn Mann (Jan 22-July 21/08)	Staff Technician	300	2.5	$759.00	
		Fallon Clarke (Jan 22-July 21/08)	Staff Technician	250	7.0	$1,750.00	
		Amber Stroeder (Jan 22-July 21/08)	Staff Technician	250	1.0	$250.00	
		Dave Toni (Jan 22-July 21/08)	Staff Technician	250	0.4	$100.00	
		Mark Hanki (Jan 22-July 21/08)	Staff Technician	300	0.3	$81.00	
		Peter Whyte (Jan 22-July 21/08)	Staff GIS Technician	450	5.4	$2,443.50	
		Rachelle Huppelschoten (Jan 22-July 21/08)	Staff Geologist	300	4.1	$1,239.00	
		Tara Gunson (Jan 22-July 21/08)	Staff Geologist	300	0.1	$21.00	
		Andrea Ross (Jan 22-July 21/08)	Staff Geologist	300	1.7	$501.00	
		Brenden Mock (Jan 22-July 21/08)	Staff Geologist	300	13.1	$3,918.00	
		Rob L'Heureux (Jan 22-July 21/08)	Senior Project Geologist	500	0.4	$200.00	
		Kris Raffle (Jan 22-July 21/08)	Senior Project Geologist	500	0.1	$50.00	
						$11,562.50	
		Clerical (Aid Report Preparation)				$32.00	
		APEX Rentals					
		Consumables & Accommodation				$350.00	
		Miscellaneous Field Equipment				$640.00	
		Trucks				$2,800.00	
		APEX Consultants Fees				$1,326.93	
						$5,148.93	
			Subtotal APEX Direct Costs				**$59,746.68**
2. APEX Third Party Reimburseable Expenses							
		Accommodation - Including field accommodation and some food				$4,558.57	
		Analytical - TSL Geochemical Analyses: 39 Samples				$1,593.45	
		- SRC Gold Grain Analyses: 127 Samples				$10,047.12	
		Miscellaneous Field Supplies				$572.93	
		Food - Camp and Field Travel				$2,585.89	
		Fuel - Trucks & Quads etc				$1,839.81	
		Maps & Publications includes QuickBird Satellite Data				$17,978.19	
		Airfare and other travel expenses				$3,191.36	
		Subcontract - Geophysics consulting - Intrepid				$1,000.00	
		Freight				$864.05	
			Subtotal 3rd Party Reimburseable Costs				**$44,231.37**
		TOTAL APEX PROJECT COSTS TO SEPTEMBER 1, 2008					**$103,978.05**
3. AeroTEM III Airborne Geophysical Survey							
		2355.1 Ln-kms @ $140/Ln-km = $329,714 plus Mob/Demob of $12,000 = $341,714				$310,000.00	
		Remove portion of survey for other client ($31,714) = $310,000					**$310,000.00**
		TOTAL GREENWOOD ASSESSMENT EXPENSE TO SEPTEMBER 1, 2008					**$413,978.05**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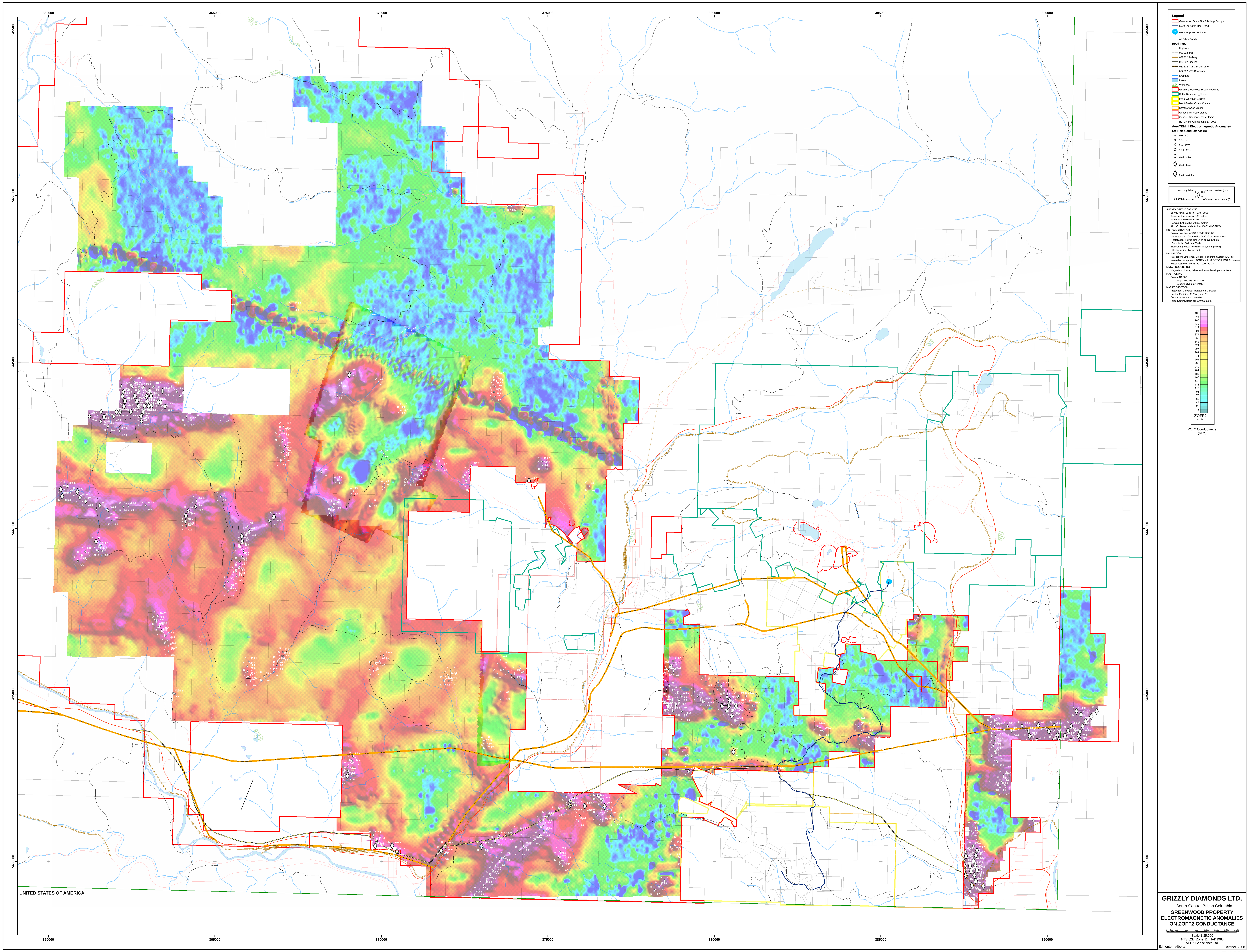
UNITED STATES OF AMERICA
Legend
Greenwood Open Pits & Tailings Dumps
Merit Lexington Haul Road
Merit Proposed Mill Site
All Other Roads
Road Type
Highway
082E02_trail_l
082E02 Railway
082E02 Pipeline
082E02 Transmission Line
082E02 NTS Boundary
Drainage
Lakes
Wetlands
Grizzly Greenwood Property Outline
Kettle Resources_Claims
Merit Lexington Claims
Merit Golden Crown Claims
Royal Attwood Claims
Genesis Wildrose Claims
Genesis Boundary Falls Claims
BC Mineral Claims June 17, 2008
AeroTEM III Electromagnetic Anomalies
Off Time Conductance (s)
0.0 - 1.0
1.1 - 5.0
5.1 - 10.0
10.1 - 20.0
20.1 - 35.0
35.1 - 50.0
50.1 - 1058.0
anomaly label A 125 decay constant (μs)
thicK/thiN source K 36 off-time conductance (S)
SURVEY SPECIFICATIONS:
Survey flown: June 16 - 27th, 2008
Traverse line spacing: 150 metres
Traverse line direction: 90º/270º
Nominal EM bird height: 30 metres
Aircraft: Aerospatiale A-Star 350B2 (C-GPHM)
INSTRUMENTATION:
Data acquisition: ADAS & RMS DGR-33
Magnetometer: Geometrics G-823A cesium vapour
Installation: Towed bird 31 m above EM bird
Sensitivity: .001 nanoTesla
Electromagnetics: AeroTEM III System (MIKE)
Configuration: Towed bird
NAVIGATION:
Navigation: Differential Global Positioning System (DGPS)
Navigation equipment: AGNAV with MID-TECH RX400p receive
Radar Altimeter: Terra TRA3000/TRI-30
DATA PROCESSING
Magnetics: diurnal, tieline and micro-leveling corrections
POSITIONING
Datum: NAD83
Major Axis: 6378137.000
Eccentricity: 0.081819191
MAP PROJECTION
Projection: Universal Transverse Mercator
Central Meridian: 117°W (Zone 11)
Central Scale Factor: 0.9996
False Easting/Northing: 500,000m/0m
Total Magnetic Intensity (nT)
GRIZZLY DIAMONDS LTD.
South-Central British Columbia
GREENWOOD PROPERTY
ELECTROMAGNETIC ANOMALIES
ON TOTAL FIELD MAGNETICS
Scale 1:35,000
NTS 82E, Zone 11, NAD1983
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008

FIGURE 7.



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UNITED STATES OF AMERICA
Legend
Greenwood Open Pits & Tailings Dumps
Merit Lexington Haul Road
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082E02_trail_l
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5.1 - 10.0
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20.1 - 35.0
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50.1 - 1058.0
anomaly label
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125
decay constant (μs)
thicK/thiN source
K
36
off-time conductance (S)
SURVEY SPECIFICATIONS:
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Traverse line direction: 90º/270º
Nominal EM bird height: 30 metres
Aircraft: Aerospatiale A-Star 350B2 (C-GPHM)
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POSITIONING
Datum: NAD83
Major Axis: 6378137.000
Eccentricity: 0.081819191
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482
465
447
430
412
394
377
359
342
324
307
289
271
254
236
219
201
183
166
148
131
113
96
78
60
43
25
8
ZOFF2
nT/s
ZOff2 Conductance
(nT/s)
GRIZZLY DIAMONDS LTD.
South-Central British Columbia
GREENWOOD PROPERTY
ELECTROMAGNETIC ANOMALIES
ON ZOFF2 CONDUCTANCE
0 150 300 600 900 1,200 1,500 1,800 2,100
m
Scale 1:35,000
NTS 82E, Zone 11, NAD1983
APEX Geoscience Ltd.
Edmonton, Alberta
October, 2008

FIGURE 8.