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19960005

NTS 74 E/4, 5, 84 H/1, 8

ELLS RIVER RESOURCES INC.

PRECIOUS-BASE METAL EXPLORATION - 1995

ELLS RIVER AREA, NORTHEAST ALBERTA

APEX Geoscience Ltd.

March, 1996

D.J. Besserer
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ELLS RIVER RESOURCES INC.

PRECIOUS-BASE METAL EXPLORATION - 1995

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ELLS RIVER RESOURCES INC.

PRECIOUS-BASE METAL EXPLORATION - 1995

ELLS RIVER AREA, NORTHEAST ALBERTA

SUMMARY

During the period between October 3 to October 8, a total of 17 man-days of field exploration, including mobilization and demobilization, were performed within 3 selected mineral permits at northeast Alberta on behalf of Ells River Resources Inc. (ERRI). The focus of this fieldwork was to delineate precious and/or base metal bearing zones in the Lower to Upper Cretaceous sandstones and shales of the Clearwater, Grand Rapids, Pelican and Shaftesbury formations. The 1995 exploration comprised reconnaissance geological examinations and geochemical sampling of various media in the vicinity of and downstream from Cretaceous exposures. A total of 35 rock grab, 72 rock channel, 28 stream sediment and 25 heavy mineral concentrate (HMC) samples were collected during the fieldwork.

Of the 25 HMC samples that were collected within the ERRI mineral permits, 31 gold grains from one sample and 1 gold grain from two samples were recovered from three separate sites along the Ells River, 3 gold grains were recovered from one sample from Joslyn Creek, and 1 gold grain was recovered from one sample from the Tar River. In addition, an exposure of Shaftesbury Formation shale along the Tar River yielded rock samples with up to 1.3 parts per million (ppm) silver (Ag), 2.3 ppm cadmium (Cd), 272 ppm zinc (Zn), 120 ppm chromium (Cr), 80 ppm vanadium (V), 34 ppm tin (Sn), 26 ppm arsenic (As), 33 ppm tellurium (Te) and 26 ppm bismuth (Bi). These sites within the ERRI mineral permits are of exploration interest.

Based on the overall lack of bedrock exposure and the poor results for gold and platinum obtained from detailed sampling of bedrock along the Ells River to date, the likelihood of discovering a precious metal deposit on the ERRI mineral permits is believed to be low. However, based on the presence of 31 grains of gold in one HMC sample collected from the Ells River and a few geochemical anomalies obtained from Shaftesbury Formation shales along the Tar River, a limited amount of follow-up exploration and/or analytical work may be warranted. That is, future exploration could include: (a) examine and sample any core that might exist at the Energy Resources Conservation Board (ERCB) or Mineral Core Research Facility (MCRF) from past oil drilling within or near the ERRI mineral permits, (b) conduct a minor amount of SEM work to determine the crystallinity, fineness and possible origin of gold grains recovered from HMC samples within the ERRI mineral permits, (c) conduct a limited amount of follow-up HMC sampling along the Ells River, (d) conduct a limited amount of sampling of Shaftesbury and Second White Specks formation shales in the vicinity of the Tar River, and (e) conduct further analytical work on those rock samples that the Edmonton laboratory indicates contain gold, being sure to use certified Canadian Laboratories.

INTRODUCTION

The Ells River Resources Inc. (ERRI) mineral permits are located in the vicinity of the Ells River, northeast Alberta, National Topographic System (NTS) 74 E/4, 5, 84 H/1, and 8. The intent of the 1995 reconnaissance exploration program was to follow-up precious metal anomalies discovered during previous exploration by ERRI and further test the mineral permit areas for their potential to host precious and/or base metal mineralized zones in Lower to Upper Cretaceous sandstones and shales. This report summarizes the results of a 1995 reconnaissance exploration program conducted in the Ells River area, on behalf of ERRI. The results of the rock and stream geochemical and mineralogical data have been synthesized and interpreted along with all relevant regional geological information, in order to assess the potential for economic metallic mineral deposits within the ERRI mineral permits.


Location and Physiography

In total, ERRI hold the metallic mineral rights to three Townships located within NTS 1:50,000 map areas 74E/4, 5, 84H/1 and 8 west of Fort McKay. The area examined by APEX Geoscience Ltd. (APEX) on behalf of ERRI covers segments of the Ells River, Joslyn Creek and Tar River areas. These three mineral permits (93110069 to 0071) covering Townships 95 to 97, Range 13, west of the fourth meridian represent the entire ERRI land holdings north of Fort McMurray. The Ells River is located approximately 450 km northeast of Edmonton and 75 km northwest of the city of Fort McMurray (Figure 1).


The regional physiography in the immediate vicinity of the Ells River, Joslyn Creek and Tar River is generally low lying (from 400 to 550 m above sea level), with open spruce-forested swampy ground. In the northern section of the mineral permits the elevation increases slightly in the vicinity of the Birch Mountains. Here the area becomes more densely forested with a mix of deciduous and coniferous trees.

Access and Infrastructure

The city of Fort McMurray (population 35,000) is located 375 km northeast of Edmonton and can be reached by Provincial Highway 2 and then Highway 63. All food and accommodation were obtained at Fort McMurray, which is the service centre for the Syncrude and Suncor oil sands mining operations. Fort McMurray is served daily by regularly scheduled airline flights from Edmonton.



HELICOPTER FUEL SITES



ELLS RIVER RESOURCES INC. MINERAL PERMITS

ELLS RIVER RESOURCES INC.

NORTHEAST ALBERTA

LOCATION

Scale 0 75 150 225 300 kilometres

APEX Geoscience Ltd.

EDMONTON, ALBERTA

MARCH, 1996

FIGURE 1

The Ells River area cannot be accessed directly by road although there are a number of cut lines in the area which could be used for access by snowmobile in the winter or all-terrain vehicle during the summer. During the 1995 program, the area of interest was accessed daily using a Highland Helicopters Ltd. (Highland) Bell 206B Jet Ranger helicopter from the Fort McMurray airport. Fuel for the helicopter was obtained from both the Fort McMurray airport and the Fort McKay ranger station east of the area of interest, near the Athabasca River (Figure 1).

Pre-Field Compilation

A compilation of publicly available information at or near the ERRI mineral permits in northeast Alberta was initiated during September, 1995, which included geological and geophysical data from the government geological surveys, and unpublished coal, oil sands and metallic mineral exploration data available at the Alberta Geological Survey (AGS).

Previous Mineral Exploration

Previous metallic mineral exploration within the Bitumount map area (NTS 74E) has largely focused on two commodities: uranium and gold. Exploration for these metals was most active during the 1960's and 1970's, although there has been a recent resurgence in exploration for gold and base metals in the area. Dufresne *et al.* (1994) and Olson *et al.* (1994a) provide summaries of the history of metallic mineral exploration for the Bitumount map area, based on a detailed review of all the assessment reports presently on file at the AGS, relevant geological data that is publicly available in scientific journals and theses, and other non-public government information.

The Bitumount map area, which is just south of the Alberta portion of the Athabasca Basin, and which contains, in places, sub-surface drillhole intersections of Athabasca Group sandstones that are known to host uranium deposits in Saskatchewan, has been the focus of uranium exploration by several companies. The economic geology of the Athabasca Group and the underlying basement rocks south of Lake Athabasca is well summarized by Wilson (1985a,b, 1986, 1987a,b). Prior exploration for uranium in the Bitumount map area is summarized by Dufresne *et al.* (1994) and Olson *et al.* (1994a).

Previous gold exploration within the Bitumount map area has been primarily confined to the Fort McKay area. Gold exploration was initially sparked by a report by Allan (1920) in which a drillhole, known as Athabasca Oils Ltd. No. 1, was drilled to a depth of 344.4 m between 1911 and 1912, approximately 8 m into the Precambrian basement. Allan (1920) reported that a sample of this basement granite carried \$13.00 per ton gold, equivalent to 0.63 ounces per ton (opT) based on the price of gold at that time, or 21.6 grams gold per tonne (g Au/t). However, after a careful review of the data in Allan (1920), Ells (1926) and a sworn statement provided by one of the drillers of the Athabasca Oils Ltd. No. 1 well, Halferdahl (1986) concluded that the quartz veins that reportedly yielded the auriferous zone were intersected at a depth of 276.5 m in limestone of the Devonian Methy Formation rather than in the underlying Precambrian basement.

During 1962 to 1963, four holes were drilled by Scurry-Rainbow Oil Ltd. near the approximate location of the Athabasca Oils Ltd. No. 1 well (Elstone, 1963). Three of the four drillholes reached the Precambrian basement, but only trace amounts of gold were found in the samples collected. However, comments by Elstone (1963) give the first hint at the potential for gold in the limestones of the area; *"The possibility of finding gold in the limestones above the Precambrian surface has been an unexplainable enigma to the writer since the first examination of the property. This is not considered any unsurmountable obstacle from finding ore, however, for ore has been found many times in places that have been "firsts" either in types or localities."*

During 1986, Halferdahl and Associates Ltd. drilled two holes on behalf of Kenneth Richardson, on the east side of the Athabasca River south of the Fort McKay bridge, approximately 35 km south of the reported location for the Athabasca Oils Ltd. No. 1 well. Halferdahl (1986) reported that a sample collected from Methy Formation carbonates at a depth of 241 m in one of the two drillholes assayed 0.063 opT gold (2.16 g Au/t). Pyrite with a few specks of chalcopyrite and malachite were noted in argillaceous dolomite immediately above the interval with anomalous gold. Chalcopyrite and malachite were also noted in the Precambrian basement in one of the two drillholes, with assays of up to 60 ppb gold and 2.6 grams silver per tonne (g Ag/t) in the granitic rocks (Halferdahl, 1986). Also in 1986, Tanner Arctic Oil Ltd. drilled one hole approximately 1.3 km south of the site of the Athabasca Oils Ltd. No. 1 well, but all five of the samples that were collected from this drillhole returned low gold results. Lastly, records on file at the AGS indicate that a drillhole, Ells Gold 1, was drilled during 1988 by a numbered Alberta company, near the site of the Athabasca Oils Ltd. No. 1 well. A brief log indicates that the Ells Gold 1 drillhole penetrated the Precambrian at about 272.8 m and ended in quartz with abundant pyrite at about 280 m. Assay certificates from Loring Laboratories Ltd. indicate that nine samples were assayed for gold and silver. One sample assayed 0.032 opT gold (1.10 g Au/t) and 0.22 opT silver (7.54 g Ag/t), two other samples assayed 0.006 opT gold (0.21 g Au/t). The downhole locations of these samples is not provided. However, other than the sample with 1.10 g Au/t, the remaining eight samples were likely collected from Devonian dolomitic carbonates based on the high concentrations of calcium (15.94 to 23.63 wt%) and magnesium (up to 9.75 wt%) that are given in the accompanying geochemical results from Induction Coupled Plasma Spectroscopy (ICP) analysis for all eight samples. The sample with 1.10 g Au/t also contains 2,677 ppm As, 215 ppm Cu, 8 ppm Sb and 5.64 wt% Fe with low values for calcium and magnesium. Although silica is not reported, the low calcium and magnesium values may indicate that this sample was collected from the quartz-rich zone at the bottom of the drillhole or perhaps a quartz-sulphide rich zone within the carbonates. Two of the eight carbonate samples also contain other elevated metals, including up to 56 ppm As, 72 ppm Cu, 406 ppm Pb, 142 ppm Zn, 52 ppm Ni, 17 ppm Co, 12 ppm V, 54 ppm B and 131 ppm W, which are all associated with elevated iron (up to 3.38 wt%).

A few other mineral exploration projects have been conducted within the Bitumount map area. These include: (1) a 1967 to 1968 IP survey by C.C. Huston and Associates as well as a muskeg and soil sampling survey in an area that is approximately 8 km north

of the Firebag River near the Athabasca River. This work identified a weakly anomalous zone with sediment samples that assay up to 10 ppm Pb, 150 ppm Zn and 22 ppm Hg, but these results were interpreted as possibly being due to overburden variations (Sproule and Stuart-Smith, 1966; Goettler, 1969); (2) a 1969 airborne radiometric survey by Radex Minerals Ltd. which identified two weak radiometric anomalies north of Johnson Lake (Paterson, 1969); and (3) a 1977 lake sediment geochemical survey combined with a review of previously drilled oil sands drillholes conducted by Taiga Consultants Ltd. on behalf of E. & B. Explorations Ltd. The Taiga program identified a radioactivity anomaly in oil-stained McMurray sandstone unconformably overlying Precambrian basement and a few lake sediment samples, with up to 200 ppm zinc and up to 17 ppm lead (Allan, 1977). A few other anomalies have been reported in oils sands drilling, including reports of chalcopyrite in the McMurray Formation in three separate drillholes in the vicinity of Fort McKay (Dufresne *et al.*, 1994). Metallic mineral occurrences have also been noted south of the Bitumount map area along the Clearwater River east of Fort McMurray (Carrigy, 1959; La Casse and Roebuck, 1978).

Recent Precious-Base Metal Exploration

Intensive gold exploration has recently been renewed in the Bitumount map area due to the reported discovery of gold, silver and platinum group elements (PGE's) in surface carbonates in the vicinity of Fort McKay. During early 1993, Focal Resources Ltd. (1993) reportedly drilled 14 holes, most of which were less than 30 m in length, and collected surface samples from Devonian Waterways Formation limestone on their Bradley property near Fort McKay. They reported up to 68.6 g Au/t, 40.8 grams platinum per tonne (g Pt/t) and 44.6 grams rhodium per tonne (g Rh/t) from surface samples, and 13.7 g Au/t, 78.5 g Pt/t and 18.5 g Rh/t from drill core samples (Northern Miner, 1993a). These results were obtained using 'non-traditional' assaying techniques (Northern Miner, 1993b), although they reported that standard fire assaying techniques "*provided by a Certified Canadian Laboratory*" were used to obtain values of up to 45.1 g Au/t, 180.3 g Ag/t and 2.5 g Pt/t in surface samples from their South Bradley property (Focal Resources Ltd., 1993). In addition, they reported that fire assays provided by Asarco Inc. yielded up to 46.3 g Au/t across 1.5 m in drill core samples (Focal Resources Ltd., 1993). The high values for gold, silver and PGE's reportedly came from "*Devonian limestone with high silica and commercial values of gold and platinum group metals in salt form*" (Northern Miner, 1993a).

During 1993, the Tintina Mines Limited and NSR Resources Inc. (TML/NSR) joint venture conducted gold exploration on their Fort McKay property northeast of the Fort McKay bridge consisting of geological mapping, prospecting, sampling and diamond drilling. During their 1993 program, 85 surface rock grab samples were collected from Devonian Waterways Formation carbonates and an overlying, well-indurated, siliceous, sandstone named the Beaver River sandstone (Fenton and Ives, 1990) along the east bank of the Athabasca River (Franklin, 1993). Twenty-two of the samples were submitted for gold, silver and PGE analyses. Values of up to 19.38 g Au/t and 18.97 g Ag/t were reported for these samples (Franklin, 1993). Four drillholes were completed by the

TML/NSR joint venture totalling approximately 600 m on their Fort McKay property. Two of these holes were abandoned in major fault zones, and two holes encountered disseminated sulphides, sulphide pods, spheroids and sulphide-healed fractures in collapse breccia zones hosted in Devonian carbonates. Drillholes T2, T3 and T4 from the 1993 drilling program intersected up to 10.0 g Au/t across 0.8 m, 11.0 g Au/t across 1.5 m and 8.1 g Au/t across 1.7 m, respectively (Franklin, 1994a). Elevated gold values are correlated to two near surface, bitumen-rich, muddy, nodular limestone horizons within Upper Devonian Waterways Formation and deeper, sulphide-rich breccia zones within Upper Elk Point Group carbonates. Exploration during 1995 by the TML/NSR joint venture west of the Athabasca River reported elevated levels of nickel, vanadium, zinc and copper, accompanied by lesser amounts of cobalt, cadmium and by traces of gold, platinum and palladium associated with sulphide-bearing carbonaceous Cretaceous shales in the Birch Mountains (Franklin, 1995).

During 1994, the Geological Survey of Canada (GSC) reported values of up to 3.71 g Au/t in Upper Devonian Waterways Formation carbonates using laser ablation coupled with ICP and mass spectrometry (Abercrombie *pers comm.*, 1994; Abercrombie and Feng, 1994). Further work by Feng and Abercrombie (1994) has also documented the presence of anomalous gold in basement granitoids and redbed sandstones and associated mudstones that immediately overlie the basement. Feng and Abercrombie (1994) report that gold exists in native form but also as Au+Si, Au+Ca, Au+Al, Au+Ag, Au+Cd and Au+salts compounds. In the basement rocks, Feng and Abercrombie (1994) report that a variety of lead and silver minerals and/or compounds are widespread along with an alteration assemblage of cerium bearing minerals, carbonates, quartz, hematite and pyrite. In the overlying sedimentary rocks the most common metallic minerals associated with gold include native copper, copper-zinc alloys or compounds and lesser amounts of lead minerals. Secondary alteration minerals include quartz, hematite, calcite and a variety of phosphate and cerium minerals. Silicification, quartz micro-veining and pyrite are common in the limestones but their relationship to gold mineralization is unclear. Recent work by Ballantyne *et al.* (1995a,b) using prolonged cold hydrofluoric acid digestion of Devonian carbonate drill core from the Fort McKay region has confirmed the presence of native iron, copper, zinc, gold, silver, platinum and Au-Ag, Cu-Zn and Cu-Au metallic compounds coexisting with sulphides. The sulphides are dominantly pyrite of various morphologies with lesser amounts of AgS, CuS, Pb-Se-S sulphides, molybdenite and sphalerite. McDonough and Abercrombie (1995) have also documented new copper occurrences in basal Middle Devonian carbonates and the underlying basement rocks north of Fort McKay in the vicinity of Lake Athabasca at Stoney Islands and along the Salt River. Turner and McPhee (1994) report an occurrence of sphalerite and up to 2,816 ppm zinc, 328 ppm copper, 8.7 ppm cadmium and 37 ppb gold in Devonian carbonates from a well in the vicinity of Fort McMurray and up to 100 ppm zinc, 119 ppm copper, 57 ppb gold and extensive alteration and recrystallization of Devonian carbonates in wells in the vicinity of Fort McKay.

During 1994, the GSC and the AGS released information that confirmed the presence of anomalous gold, not only in the Devonian carbonates of the Fort McKay area,

but also in the overlying Jurassic or Early Cretaceous Beaver River sandstone in the Fort McKay area (Abercrombie *pers. comm.*, 1994; Abercrombie and Feng, 1994), and in Cretaceous McMurray Formation oil sands and coal in the vicinity of the Firebag River (Dufresne *et al.*, 1994). The GSC reported gold concentrations of up to 1.08 g Au/t from surface samples of the well-indurated Beaver River sandstone using laser ablation coupled with ICP and mass spectrometry (Abercrombie *pers comm.*, 1994; Abercrombie and Feng, 1994). Fieldwork and laboratory work conducted during 1993 and 1994 under a Canada-Alberta Mineral Development Program (MDA) project by APEX and the AGS resulted in the discovery of up to 1,040 ppb gold (837 ppb when corrected for loss on ignition) by standard fire assay in poorly consolidated, oil impregnated Cretaceous McMurray Formation sands, silts, shales and coal from the Firebag River area. The samples were obtained from drill core that had been stored at the Energy and Resources Conservation Board (ERCB) in Calgary since the late 1970's (Dufresne *et al.*, 1994). In total, 23 core samples were collected from five drillholes that were drilled in the vicinity of the Firebag River during extensive coal exploration performed by Shell Canada Ltd. during the mid 1970's. Anomalous concentrations of gold were discovered in all five drillholes, with eight out of twenty-three samples yielding corrected gold values >100 ppb. Dufresne *et al.* (1994) indicate that those samples with bitumen and/or coal consistently yielded the highest gold values, especially those samples which also contained pyrite (or marcasite). The accompanying ICP results indicate that there are other anomalous trace elements present and that there is a positive correlation between elevated gold and elevated values for chromium (up to 553 ppm) and, to a lesser extent, silver (up to 1.1 ppm) and vanadium (up to 39 ppm). Other elements that were reported to be anomalous in various core samples include up to 61 ppm copper, 97 ppm lead, 211 ppm zinc, 14 ppm arsenic, 951 ppm strontium, 4 ppm antimony, 6 ppm bismuth and 257 ppm boron. Dufresne *et al.* (1994) ruled out the possibility that the anomalous gold concentrations were the result of placer processes due to the fact that anomalous amounts of gold were found in each hole across a wide variety of lithologies including coal and shale. Dufresne *et al.* (1994) suggested that the presence of elevated concentrations of boron, strontium and sodium in many of the samples may lend support to the work of Abercrombie and Feng (1994) and Feng and Abercrombie (1994), who suggest that brine solutions have carried and deposited a diverse suite of trace metals including gold and base metals.

The TML/NSR joint venture and the GSC recently announced the discovery of anomalous concentrations of alluvial gold and sulphides in creeks draining the mid-Cretaceous Shaftesbury Formation south of Wood Buffalo National Park in the McIvor River drainage area, and west of Fort McMurray in the MacKay River drainage area (Franklin, 1994b; Sabag and Dufresne, 1994; Ballantyne *et al.*, 1995b). In addition, the GSC has identified fine grained gold by scanning electron microscope (SEM) in a bedrock sample from sulphidic Shaftesbury Formation in the McIvor River area (Ballantyne *pers comm.*, 1995). At present, there are few publicly available studies about the Shaftesbury Formation and associated sedimentary units in northern Alberta, hence the potential of these units to host important precious metal, base metal or diamond deposits is unknown, despite many seemingly coincidental geological events and anomalies associated with this mid-Cretaceous horizon. Strong evidence exists for widespread volcanic activity in the

Western Canada Sedimentary Basin during Albian to Turonian time, approximately 100 Ma to 90 Ma, which encompasses the depositional span of the Shaftesbury Formation and the underlying Viking Formation (Olson *et al.*, 1994a; Dufresne *et al.*, 1995). For instance, Lehnert-Thiel *et al.* (1992) and Scott Smith *et al.* (1994) reported that diamondiferous kimberlites in the Fort à la Corne area of Saskatchewan date from about 97.5 Ma to 91 Ma. Phonolitic to trachytic volcanics of the Crowsnest Pass area, southwest Alberta have been dated at 96 Ma (Folinsbee *et al.*, 1957). Alkaline volcanics associated with the Steen River Structure in northwest Alberta have been dated at 95 Ma (Carrigy, 1968). Within the sedimentary column of Alberta, increased occurrence of bentonites have also been noted by Bloch *et al.* (1993) in the Fish Scales Formation (about 99 to 96 Ma), and by Tizzard and Lerbekmo (1975) in the Viking Formation (about 100 Ma).

1995 EXPLORATION

Prior to the 1995 field program, APEX acquired the necessary equipment and supplies. Between October 3 and 4, a four-wheel drive Ford truck which was provided by ERRI, Mr. N. Firt (an ERRI geologist), Mr. D. Besserer (an APEX geologist) and field equipment were mobilized to Fort McMurray from Edmonton. The crew was met by Mr. M.B. Dufresne on October 4 at Fort McMurray, who provided the overall project supervision. All food and accommodation were obtained in Fort McMurray (Figure 1). A Highland Bell 206B Jet Ranger helicopter was used during the field program for daily crew deployment and reconnaissance sampling. The fieldwork was conducted between October 4 and October 7. On October 8, the crew demobilized from the field to Edmonton. In total, 17 man-days of field exploration were performed within the ERRI mineral permits (Appendix I).

The 1995 fieldwork performed between October 3 and 8 comprised prospecting, geological examinations and the collection of 35 rock grab, 72 rock channel and 28 stream sediment samples. In addition, 25 heavy mineral concentrates (HMC's) were obtained by sieving and panning stream gravels. The number and the type of samples which were collected during the 1995 reconnaissance sampling program within the ERRI mineral permits, are summarized in Table 1 and shown on Figure 2. The rock grab, rock channel, stream sediment and HMC sample descriptions are summarized in Appendix II and the respective sample cards are in Appendix III.

Previous work by APEX in northern Alberta indicates that regional geochemical sampling techniques such as collecting stream sediment and HMC samples has been effective in delineating areas of polymetallic anomalies, including gold and base metals, in terrane similar to that covered by the ERRI mineral permits. As a result, stream sediment and HMC sampling were employed within the ERRI mineral permits west of Fort McKay along the southern flank of the Birch Mountains and in the low lying area south of the Birch Mountains.

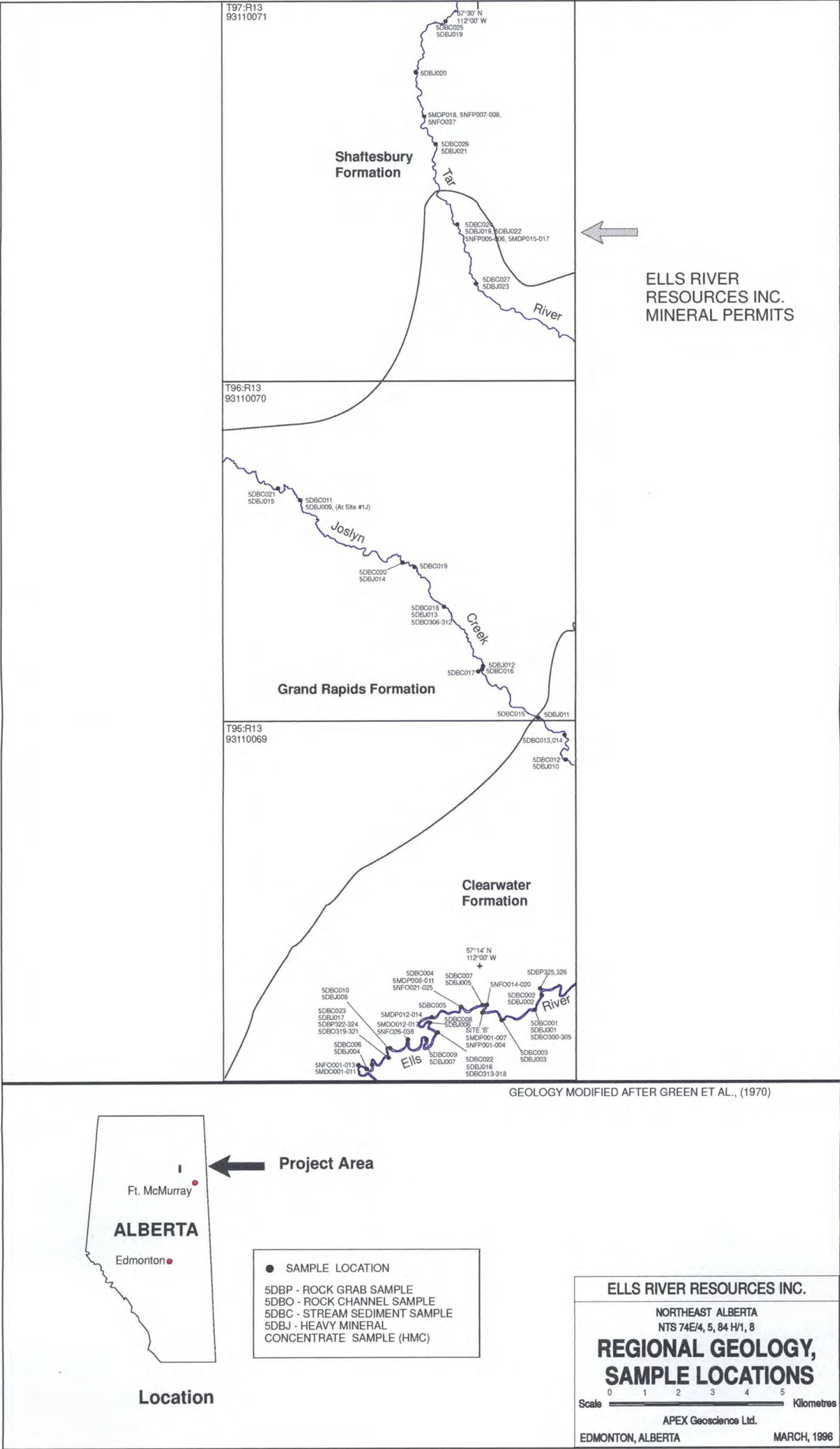


Figure 2

TABLE 1

SAMPLING SUMMARY

	Rock Grab Samples*	Rock Channel Samples*	Stream Sediment Samples	HMC Samples	TOTAL SAMPLES
Samples Collected:	35	72	28	25	160
Sent to:					
-Bondar-Clegg	35	72	28	0	135
-ERRI	35	72	0	0	107
-SRC**	0	0	0	14	0
-Activation***	4	2	0	0	6
Assays Received	39	74	28	0	141

*Any rock grab and rock channel samples which were collected during the 1995 field program were collected in duplicate. The duplicate samples were provided to ERRI and/or used for follow-up analysis. Samples which were re-analyzed by Bondar-Clegg were taken from storage of sample material remaining from the original samples (rejects).

** Samples sent to the Saskatchewan Research Council (SRC) were superpanned to extract the heavy mineral portion of the panned concentrate and examined for precious metals and diamond indicator minerals.

***Duplicate samples that were sent to Activation Laboratories

METHODOLOGY

The 35 rock grab, 72 rock channel and 28 stream sediment samples, which were collected by APEX and ERRI personnel during the 1995 program at the Ells River area, were sent to Bondar-Clegg & Co. Ltd. (Bondar-Clegg), North Vancouver, British Columbia for geochemical analysis. The sample locations are shown on Figure 2. The rock grab and rock channel samples were analyzed for gold and PGE's by standard fire assay (FA) with Directly Coupled Plasma Emission Spectroscopy (DCP) finish and for multi-element geochemistry including base metals by aqua regia digestion with ICP finish. As well, the stream sediment samples were analyzed for gold by standard FA with a DCP finish and for multi-element geochemistry by ICP after being dry sieved through a standard -80 mesh screen. All the standard FA analyses employed 30 gram aliquots. The ICP analyses employed about a 5 gram aliquot and yielded results for 34 elements. The geochemical lab reports and certificates of analysis are in Appendix IV. The elements analyzed and their corresponding detection levels are shown in Appendix V.

After all the initial results were received, 66 rock grab and channel samples were re-analyzed for gold at Bondar-Clegg by a 1 kg bulk cyanide leach (BLEG). As well, 18 rock samples that were believed to have a high carbon content were re-analyzed at Bondar-Clegg by first pre-roasting the samples to remove the carbon followed by a standard FA. Four rock grab samples from site 'B' along the Ells River were re-analyzed at Bondar-Clegg by Neutron Activation (INAA) with Nickel Sulphide Collection for gold, platinum, palladium, iridium, osmium, ruthenium and rhodium.

ERRI had five rock samples collected during the 1995 APEX field program and two samples previously collected by ERRI personnel analyzed at a local Edmonton laboratory for gold using a lead collection FA technique. The Edmonton laboratory used a standard glass flux, granulated assay lead and carbon as the reagents in their analysis. At the request of ERRI the seven beads that resulted from the Edmonton laboratory's fire assaying were umpire assayed by Bondar-Clegg. Only four of the seven beads were large enough to analyze by FA with Atomic Absorption (AA) finish and ICP. The results are in Appendix IV. As well, duplicate samples for each of the five samples collected by APEX and analyzed at the Edmonton laboratory were sent to Activation Laboratories Ltd. (Actlabs), Ancaster, Ontario for geochemical analysis. The samples were analyzed for gold at Actlabs by standard FA with AA finish and by lead collection FA using a similar methodology to that of the Edmonton laboratory. The results are in Appendix IV.

Twenty-five HMC samples were collected from the Ells River, Tar River and Joslyn Creek in order to evaluate the use of detrital heavy mineral samples to search for precious and/or base metal deposits. Due to the high variability in the sedimentological nature of the sites which were sampled, a constant volume sampling technique was employed using a conical pan approximately 60 cm in diameter with three screens. At each site, material from the stream bottom was sieved to a 2 mm size fraction until the pan was about three-quarters full. The material was partially panned in the field and the initial 'heavy mineral concentrates' were brought back to Edmonton. At APEX's Edmonton office, the HMC's were re-panned to further concentrate the heavy mineral fraction. The re-panned concentrates were split into heads and tails in order to separate the silicate minerals, such as quartz and garnet, from the metallic heavy minerals in the heads. The heads were then examined using a WILD M5-91996 50 x 10 power binocular microscope for an initial qualitative analysis of each sample. Based on the initial visual inspection, six samples were sent to the SRC for further processing, examination and picking of any gold and/or other precious metals as well as any potential diamond indicator minerals. The SRC processing procedure consists of; (a) superpan the sample to separate the light and heavy mineral fractions, (b) permroll the light fraction from (a), (c) remove the frantz mag fraction or all paramagnetic minerals from the sample, (d) pick gold grains and/or other precious metals, and (e) pick any possible diamond indicator grains. After the results for the six samples sent to the SRC were received, an additional eight samples were sent to the SRC for superpanning and picking for gold grains and/or other precious metals. The results of the SRC processing and grain picking are in Appendix IV.

The HMC samples are stored at APEX's Edmonton office in plastic 100 ml size, screw top bottles and labelled accordingly. The heads and tails of each sample were stored separately for consistency. The percentage of sulphides in the final HMC was qualitatively estimated by dividing the percentage of sulphides (Sulph column under the Metallic Profile) into the total percentage of heavy minerals (Hvy % column) present in the heads of each sample. The calculated percentage of sulphides are shown in the last column of Appendix VI on the Pan Concentrate Description Sheet.

There are many factors such as the amount and type of bed load sediment, current speed and the direct influence from bedrock on stream bottom topography that affect and can readily change the amount of 'heavy minerals' at a particular stream site. As well, the specific location where a sample can be collected also has a bearing on the heavy mineral content of a particular sample. That is, where the helicopter is able to land during a helicopter reconnaissance program determines the sample location in most instances. As a result, the amount of panned HMC in any sample, and hence the amount of sulphides contained in the HMC, result from several factors that can vary significantly from sample site to sample site. Nonetheless, the sulphide percentages which have been calculated and are tabulated in Appendix VI are, in general, independent of the total weight of HMC in the head. Hence, the calculated percentage sulphides for each sample can be qualitatively compared to identify those sites with a relatively 'more abundant' sulphide content.

REGIONAL GEOLOGY

Precambrian

The only exposure of Precambrian shield rocks south of Lake Athabasca is in the vicinity of the Marguerite River. Villeneuve *et al.* (1993) indicates that this shield exposure and basement underlying the Phanerozoic succession in the Bitumount map area (NTS 74E) belong to the Churchill Province (Rae subprovince) and is thought to represent either Archean crust that has been thermally reworked during Hudsonian (Proterozoic) Orogeny (Burwash *et al.*, 1962; Burwash and Culbert, 1976; Burwash *et al.*, 1994) or an accreted Proterozoic terrane that may or may not have an Archean component (Ross and Stephenson, 1989; Ross *et al.*, 1991; Villeneuve *et al.*, 1993).

The Bitumount map area can be divided into two distinct east and west magnetic terranes (Figure 3) based on government aeromagnetic data (Geological Survey of Canada, 1983; Sprenke *et al.*, 1986; Wilson, 1986). Ross and Stephenson (1989), Ross *et al.* (1989, 1991, 1993), Ross (1991, 1992) and Villeneuve *et al.* (1993) have suggested that the eastern half of the Bitumount map area, with a relatively low background magnetic signature, is part of the Archean Rae subprovince and the western half of the area, with a strong background magnetic signature, is part of the Proterozoic Taltson Magmatic Zone (TMZ). The TMZ, which has been dated between 1,932 Ma and 1,975 Ma from outcrops north of Lake Athabasca and from oil well drill core to the south, is a north-south trending

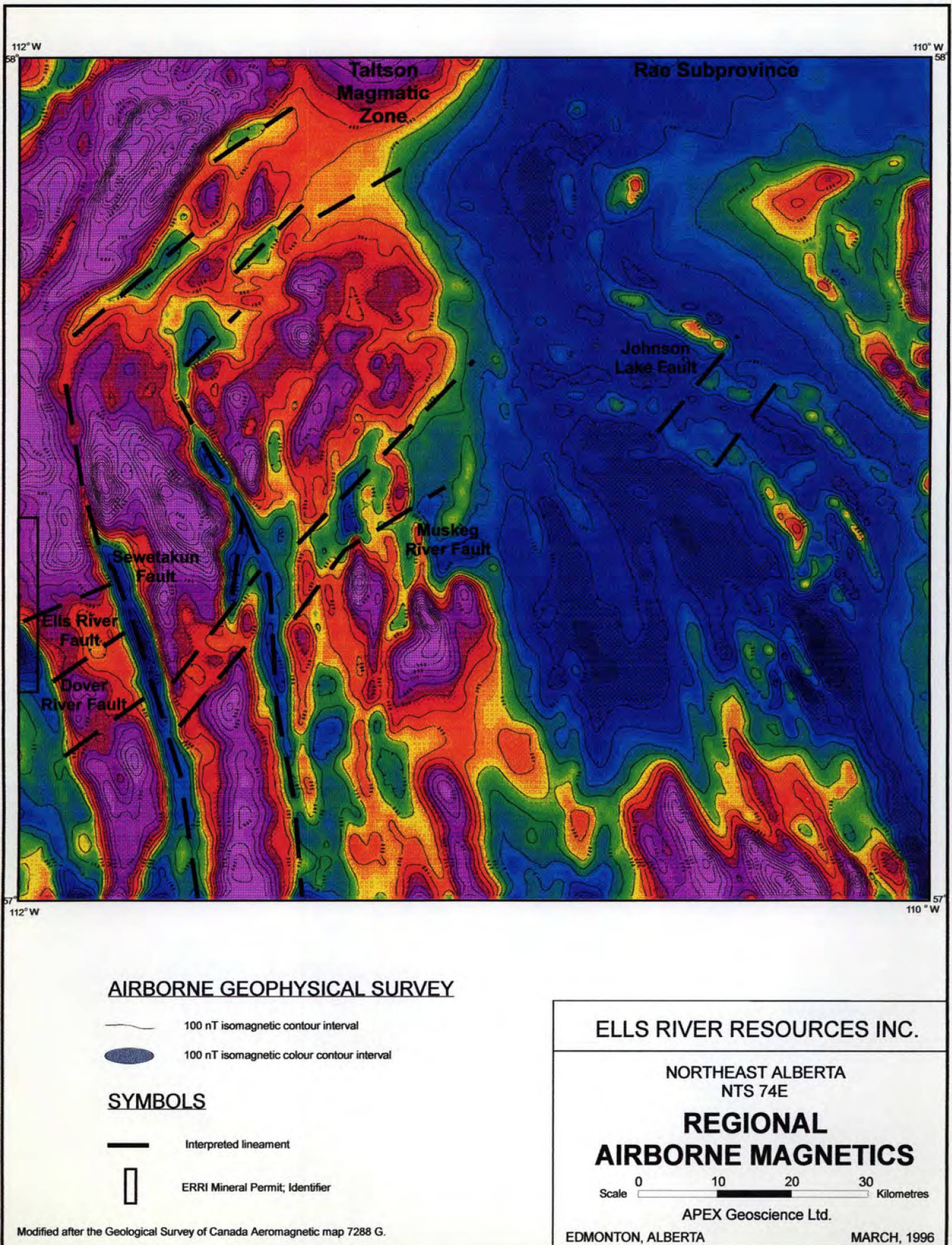


FIGURE 3

magmatic belt that originates near Great Slave Lake, as part of the Thelon Tectonic Zone, and is truncated in east-central Alberta by the Snowbird Tectonic Zone (Ross *et al.*, 1989; McNicoll *et al.*, 1993; Villeneuve *et al.*, 1993). The ERRI mineral permits exist along the west boundary of the Bitumount map area and overlie basement rocks of the TMZ (Figure 3).

Proterozoic rocks occur northeast of the Richardson River in the northeast corner of the Bitumount map area. Their presence is known only from drilling associated with uranium exploration during the 1970's, and their geology is well summarized by Wilson (1985a, 1987a,b). Tremblay (1961) visited one outcrop just outside the Bitumount map area in Saskatchewan and described the rock as a fine-grained white, faintly bedded and crossbedded clastic sediment, with minor colour-banding. Green *et al.* (1970) and Wilson (1985a, 1986, 1987a,b) have attempted to define the extent of Athabasca Group rocks in the northeast corner of the Bitumount map area on their regional maps based on drilling information.

Phanerozoic

The majority of the Bitumount map area is underlain by rocks of Devonian and Cretaceous ages. However, these units are poorly exposed except in some river and creek valleys. The majority of the information about the distribution and character of these units was obtained from the work of Carrigy (1959, 1966, 1973), Norris (1963, 1973), Green *et al.* (1970), Hamilton (1971), Stewart (1963, 1981), Mossop (1980), Mossop and Flach (1983), Flach (1984), Flach and Mossop (1985), Anderson *et al.* (1993) and Dufresne *et al.* (1994), much of which was focussed on well log data and fieldwork. Table 2 shows the generalized stratigraphy for the Bitumount map area, northeast Alberta.

The Middle Devonian Elk Point Group is comprised of marginal clastics, redbeds, evaporites, and anhydritic and fossiliferous carbonates. The base of the Elk Point Group coincides with the pre-Devonian erosional unconformity, while the top is defined by the green to reddish brown shales of the Watt Mountain Formation (Meijer-Drees, 1994). The Elk Point Group is known only from subsurface information in the Bitumount map area.

The Lower Elk Point Group is commonly underlain by basal redbeds, sometimes referred to as 'granite wash' and/or Laloche Formation sandstones that accumulated in a tectonically stable, continental environment. During early Middle Devonian times, ancient seas invaded the large continental sub-basin in northern Alberta and deposited fossiliferous dolomite and anhydrite of the Ernestina Lake Formation. Eventually channels became choked with large accumulations of sediment causing restricted sea water circulation and excessive evaporation, hence the deposition of the Cold Lake Formation salts. Following a major sea level regression, the seas invaded the northern Alberta sub-basin once again, depositing near shore clastics or redbeds of the Contact Rapids Formation and evaporitic carbonates of the Chinchaga Formation. Deposition of Upper Elk Point sediments coincided with a sea level rise, coupled with a reduction in production of carbonate sediment. This resulted in reefal growth of the Keg River Formation (also

known locally as Methy Formation) and a new barrier which limited sea water flow between basins. Subsequent low water levels and excessive evaporation resulted in the accumulation of anhydrite and salt of the Prairie Evaporite Formation. Salts of the Prairie Evaporite Formation are generally restricted to the subsurface west of the Athabasca River. Late Givetian to early Frasnian sea level rises reworked sandy deposits into near shore, deltaic and lagoonal sediments, followed by deposition of shales and dolostones of the Watt Mountain Formation (Meijer-Drees, 1994).

TABLE 2

GENERALIZED STRATIGRAPHY - BITUMOUNT MAP AREA*

SYSTEM	GROUP	FORMATION	MEMBER	DOMINANT LITHOLOGY
UPPER CRETACEOUS	La Biche	La Biche		Shale
		Dunvegan		Sandstone and siltstone
		Shaftesbury		Shale, bentonites, Fish-Scale Fm.
LOWER CRETACEOUS	Mannville	Pelican		Sands
		Joli Fou		Shale
		Grand Rapids		Lithic sands
		Clearwater		Shale and glauconitic sands
		McMurray		Quartzose sands, heavy oil
		Beaver River		Quartzose sandstone
UPPER DEVONIAN	Beaverhill Lake	Waterways	Mildred	Argillaceous limestone
			Moberly	Limestone and shale
			Christina	Shale and limestone
			Calumet	Limestone and shale
			Firebag	Shale, minor limestone
		Slave Point		Limestone, local breccia
MIDDLE DEVONIAN	Upper Elk Point	Watt Mountain		Shale and dolostone
		Prairie Evaporite		Salt, anhydrite (gypsum), and dolomite
		Keg River (locally - Methy)		Dolomite, minor reefs
	Lower Elk Point	Chinchaga		Dolostone, nodular anhydrite
		Contact Rapids or McLean River		Redbeds, clastics and dolomite
		Cold Lake		Salt, minor shale
		Ernestina Lake		Dolostone and anhydrite
		LaLoche		Arkosic sands and conglomerates
		Granite Wash		Basal Redbeds
PRECAMBRIAN				Granitic basement

*Modified after Carrigy (1959, 1973), Norris (1963, 1973), Hamilton (1971), Dufresne *et al.* (1994) and Meijer-Drees (1994).

The Slave Point Formation consists of limestone, siltstone and dolomitic limestone. The unit is bounded on its upper and lower contacts by paraconformities and has been postulated to date between the end of the Middle Devonian and the Upper Devonian (Carrigy, 1973; Norris, 1973).

The Waterways Formation consists of calcareous shale and argillaceous limestone alternating with clastic limestone, and is between 200 m and 230 m thick (Green *et al.*, 1970; Norris, 1973) in the vicinity of Fort McKay. The Waterways Formation is the uppermost Devonian unit exposed in the vicinity of Fort McKay and is well exposed in Wood Buffalo National Park.

The Devonian units are separated from the overlying Lower Cretaceous units by an erosional unconformity (Carrigy, 1959, 1973). This unconformity represents a marked change in lithology and it has been postulated that the pre-Cretaceous units underwent several periods of subaerial erosion and karsting, and that the erosional surfaces resulting from these processes affected the sedimentation of the lowermost Mesozoic units that were subsequently deposited (Carrigy, 1973; Dufresne *et al.*, 1994). A coarse grained and well indurated quartzose sandstone exists east of Fort McKay between the Athabasca and Muskeg Rivers (Carrigy, 1973). The sandstone is silica- and goethite-cemented and may underlie the McMurray Formation unconformably, and as such, possibly represents a remnant of a once more regionally continuous early Cretaceous (or possibly Jurassic) sandstone (Carrigy, 1973). More recent work by Fenton and Ives (1982, 1990) and Ives and Fenton (1983), who have named the unit the Beaver River sandstone (Table 2), has shown it to have a lateral extent of at least 13 km. Fenton and Ives (1990) also suggested that the Beaver River sandstone exists near the top of the lower member of the McMurray Formation based on the work of Flach (1984).

The McMurray Formation is the oldest Lower Cretaceous unit, consisting mainly of deltaic sediments that include thick crossbedded oil-impregnated quartz sands, with interbeds of silt and shale. The McMurray Formation contains much of the oil reserves in the Athabasca Tar Sands deposits (Green *et al.*, 1970). Carrigy (1966, 1973) subdivided the McMurray Formation into (a) pre-McMurray, (b) lower, (c) middle and (d) upper units. The pre-McMurray unit is equivalent to the Beaver River sandstone. Carrigy (1973) suggested that the lower McMurray Formation was predominantly of fluvial origin, the middle McMurray of fluvial to deltaic origin and the upper McMurray of delta platform to brackish water origin. Extensive geological studies related to heavy oil have since been conducted on the McMurray Formation by Stewart (1963, 1981), Mossop (1980), Mossop and Flach (1983), Flach (1984), Flach and Mossop (1985), Anderson *et al.* (1993) and many others. The McMurray Formation is laterally extensive within the Bitumount map area and the Birch Mountains although it tapers out to the northwest as a result of a large Paleozoic topographic high (McPhee, 1994). The McMurray Formation also becomes increasingly muddier and water saturated beneath the Birch Mountains (Anderson *et al.*, 1993).

The McMurray Formation oil sands are conformably overlain by marine shale, laminated siltstone and cherty, glauconitic sandstone of the Clearwater Formation (Carrigy, 1973), which is approximately 100 m thick in the Ells River to Fort McMurray area. The Clearwater Formation underlies a large portion of the ERRI mineral permits but is poorly exposed (Figure 2). The Clearwater Formation crops out along the Ells River within the ERRI mineral permits mainly as a resistant carbonate cemented sandstone unit containing abundant glauconite and carbonaceous material. This resistive sandstone unit occurs at about 370 to 390 m asl and is known as the M20 marker horizon (Cotterill, *pers. comm.*, 1995), which is bounded above and below by poorly exposed shale.

The Grand Rapids Formation underlies much of the drift covered region in the southeast corner of the Bitumount map area, and the central portion of the ERRI mineral permits in the vicinity of Joslyn Creek (Figure 2). The unit is approximately 100 m thick where it is exposed on the eastern flank of the Birch Mountains, but pinches out to the northwest. The Grand Rapids Formation consists of salt and pepper lithic sandstone, laminated siltstone and shale with thin coal beds (Green *et al.*, 1970). The overlying Joli Fou and Pelican formations were not identified in the Bitumount map area by Carrigy (1973), however, recent MDA work by Eccles *et al.* (1996) and Cotterill and Leckie (1996) has successfully delineated thick sequences of Pelican Formation sands along the eastern margin of the Birch Mountains. As well, the Joli Fou and Pelican formations have been noted in numerous well logs in the vicinity of the ERRI mineral permits (Cotterill, *pers. comm.*, 1995).

The Shaftesbury Formation comprises a 250 m to 300 m thick sequence of marine, highly fissile, dark-coloured shales with thin bentonite beds and abundant concretionary ironstone. Sulphide-rich horizons have been identified within the Shaftesbury Formation in the vicinity of the McIvor River along the northeast flank of the Birch Mountains (Franklin, 1994b; Sabag and Dufresne, 1994). The Shaftesbury Formation also contains the Fish Scale marker horizon which is estimated to have been deposited about 96 Ma (Leckie *et al.*, 1992; Bloch *et al.*, 1993; Dufresne *et al.*, 1995). The Shaftesbury Formation is exposed in the Tar River area where it overlies Pelican Formation sandstones on the southern flank of the Birch Mountains. Volcanism from Albian to Turonian time, particularly during deposition of the Shaftesbury Formation, may have been ongoing and extensive because: (a) numerous bentonitic horizons occur throughout the Shaftesbury Formation, especially within and near the Fish Scales horizon across much of Alberta (Leckie *et al.*, 1992; Bloch *et al.*, 1993), (b) the Crowsnest Formation volcanics of southwest Alberta were being deposited at about this time (Olson *et al.*, 1994a; Dufresne *et al.*, 1995), (c) kimberlitic diatreme activity occurred in Saskatchewan at about this time (Lehnert-Thiel *et al.*, 1992; Scott Smith *et al.*, 1994), and finally (d) there is documented igneous activity associated with the Steen River Structure, a possible impact structure, which also formed in northwestern Alberta about this time (Carrigy, 1968; Dufresne *et al.*, 1995).

The Dunvegan Formation is characterized by feldspathic sandstones, silty shales and laminated carbonaceous siltstones. The sequence is believed to be of deltaic origin and occupies narrow strips along the slopes of the Buffalo Head Hills, Caribou Mountains

and may or may not be present in the Birch Mountains.

The Dunvegan Formation is overlain by a dark grey shale to silty shale with ironstone partings and concretions, and in some cases, fish scale-bearing siltstone beds. This unit is given a variety of names in the Fort Vermilion to Fort McKay region including the Labiche Formation (Green *et al.*, 1970). In the Birch Mountains, numerous bentonites, bone beds and sulphidic horizons have been identified in the Second White Specks Formation shale. The bone beds and sulphidic horizons have yielded precious and base metal anomalies (Eccles *et al.*, 1996). It is not clear whether the Second White Specks Formation shale exists within Upper Shaftesbury or Lower Labiche formations. Oil and gas drilling within and near the ERRI mineral permits indicates that the Second White Specks Formation exists in the subsurface.

Quaternary

The surficial geology of the Bitumount map area was investigated and mapped by Bayrock (1971). Field observations from Dufresne *et al.* (1994) and the 1995 exploration program indicate that the Ells River area is primarily blanketed by one to two tills up to a few metres thick. Also present in the area are lesser amounts of lacustrine and outwash sand and gravel deposits. Outwash sand is particularly extensive along the Athabasca River.

Additional information on the bedrock topography and drift thickness in the Bitumount map area comes from the logs of holes drilled for petroleum, coal or ground water exploration. Dufresne *et al.* (1994) published bedrock topography and drift thickness maps using the available unpublished information from various AGS drillhole databases. These maps show that drift thickness in the vicinity of the Ells River, particularly throughout the ERRI mineral permits is generally less than 10 m, and, in many places is less than 2 m. Field observations during this program indicate that drift thickness on the ERRI mineral permits is minimal in the vicinity of the Ells River and Joslyn Creek.

Structural Geology

Little is known about the structural geology in the Bitumount map area, mainly because of the poor outcrop exposure. Most of the work on the structural geology has come from interpretations of the aeromagnetic data, lineament analysis of bedrock jointing and structure contour surfaces created from drillhole information by such workers as Sproule (1938), Hume (1949), Kidd (1951), Carrigy (1959), Garland and Bower (1959), Martin and Jamin (1963), Norris (1963, 1973), Stewart (1963), Martin (1966), Godfrey (1970), Babcock and Sheldon (1976), Langenberg and Nielson (1982), Wilson (1985b), Sprenke *et al.* (1986), Dufresne *et al.* (1994) and Cotterill and Hamilton (1995).

In general, the Precambrian and the Devonian erosional surfaces slope gently to the southwest in the Bitumount map area (Carrigy, 1959; Hackbarth and Nastasa, 1979). However, the topography of the Precambrian surface is poorly constrained due to the

limited number of drillholes that have penetrated Precambrian basement. Precambrian shield in the vicinity of the Marguerite River is probably the only Precambrian basement exposure south of Lake Athabasca in Alberta. Wilson (1985a) and Ramaekers (1979) suggested that the Marguerite River basement exposures are remnants of a once active basement high, the Paterson high, that controlled sedimentation at the southwest end of the Athabasca Basin during the Proterozoic. Perhaps this paleo high was related to Proterozoic uplift associated with the Peace River Arch. Stelck *et al.* (1978), Leckie (1989), Hart and Plint (1990), O'Connell *et al.* (1990) and Ross (1991) have suggested that the Peace River Arch exhibited uplift during Late Proterozoic to Late Devonian and Late Cretaceous to Early Tertiary. Recent work by Burwash (1990), McPhee and Turner (1994) and Cotterill and Hamilton (1995) indicate that the Peace River Arch may have affected basement and the overlying Phanerozoic rocks as far east as the Marguerite River area.

Based on the GSC aeromagnetic data for the Bitumount map area (Figure 3), prominent northeast trending basement faults, one of which is named the Johnson Lake Fault (Dufresne *et al.*, 1994; Geological Survey of Canada, 1983; Wilson, 1985b; Sprenke *et al.*, 1986) exist east of the Athabasca River. Based on structure contours for the top of the Devonian from unpublished data provided by Shell Canada Ltd., and the work of Martin and Jamin (1963) and Hackbarth and Nastasa (1979), the Johnson Lake Fault lines up with a prominent northeast trending scarp on the Devonian surface that exists to the southwest between the Firebag and Muskeg Rivers. The scarp is clearly visible on the Devonian structure contour maps presented by Hackbarth and Nastasa (1979) and unidentified coal geologists for Shell. The presence of this prominent scarp in the present day surface of the Devonian may indicate that some basement structures, such as the Johnson Lake Fault, may have controlled Devonian to post Devonian sedimentation due to reactivation in response to tectonic activity such as uplift associated with the Peace River Arch, or adjustment along these structures due to sediment loading during formation of continental clastic wedges.

Carbonates along the Athabasca and Clearwater Rivers exhibit noticeable flexures with dips up to about 15°. This gentle warping has usually been attributed to gradual removal of Elk Point Group salts. Martin and Jamin (1963) describe a "*major Devonian fault zone*" that extends from as far south as the Athabasca River south of Pelican Mountain (northeast corner Tp 70, R 27W4) and trends northeasterly through the Fort McKay area. This fault lines up fairly well with the southwest extension of the Deranger Creek Fault that is extrapolated as far southwest as the Richardson River (Wilson 1985b). Hackbarth and Nastasa (1979) described a major northwest to north trending basement fault, the Sewetakun Fault, that generally has a similar trace to that of the present day salt dissolution edge of the Prairie Evaporite. This structure overlies the trace of a prominent northwest trending magnetic low immediately west of Fort McKay (Figure 3). Hackbarth and Nastasa (1979) provide evidence that the Sewetakun fault was reactivated during the Devonian. Structure contour maps for the top of the Devonian by Martin and Jamin (1963) and Hackbarth and Nastasa (1979) show that the Devonian erosional surface in the vicinity of Fort McKay is extremely complex with substantive relief and, in fact, has the appearance

of being a highly dissected paleo-landscape, particularly in the area of Tps 94 to 99 and Rs 7 to 11 west of the 4th Meridian. Martin and Jamin (1963) have suggested that this landscape is due to faulting. Perhaps the north, northeasterly and northwesterly trending paleo-valleys and paleo-ridges are a product of reactivation of basement faults, such as the Sewetakun, Deranger Creek and Johnson Lake Faults described above, associated with uplift of the east to northeast trending Peace River Arch. Within or near the ERRI mineral permits, lineaments reflecting Precambrian basement and Devonian surfaces have been identified such as the Ells River Fault. The magnitude and extent of these structures is unclear although they are known to strike Northeast, roughly parallel to the Ells River (Figure 3).

The Pre-Cretaceous topography, which developed on a highly dissected Devonian erosional surface (Martin and Jamin, 1963; Hackbarth and Nastasa, 1979), played a major role in controlling the thickness and extent of the McMurray Formation (Stewart, 1963). Evidence of tectonic deformation affecting the post-Devonian units is limited and is difficult to distinguish from deformation brought about by collapse due to salt dissolution. Stewart (1963) suggested that the McMurray and Clearwater formations are anomalously topographically high in the vicinity of Telegraph Creek (Tp 84, R 12W4) due to reactivation of an underlying Precambrian fault. Kidd (1951) presented evidence that movement took place during the Lower Cretaceous along a northwesterly trending fault that cuts across the Clearwater River east of Fort McMurray, and suggested that the western block was downthrown. Hume (1949) suggested that post-Cretaceous folding, possibly unrelated to salt dissolution, affected Lower Cretaceous units in the Mildred-Ruth Lakes area. Babcock and Sheldon (1976) documented the existence of many lineaments in the Bitumount map area. They suggested that the vast majority of these lineaments are related to the dominant trend of joints and fracture sets in the McMurray and Waterways formations. However, they also stated that fault related lineaments cannot be ruled out.

It is clear that significant regional structures that cut basement and, possibly Devonian and Cretaceous rocks exist in the Fort McKay area. Therefore, those places where Devonian and/or Cretaceous rocks exist in the vicinity of these major structural features or are cut by deep-seated extensional faults, could be geologically favourable for stratabound sediment-hosted precious and/or base metal deposits because such structures may have provided the pathways for precious and base metal bearing fluids (Olson *et al.*, 1994a).

EXPLORATION RESULTS

The geochemical results for the rock grab, rock channel and stream sediment samples are tabulated in Appendix IV and are summarized in Table 3. Geochemical anomalies of interest are displayed on Figure 4. The results from the 1995 geochemical sampling are discussed below by major sampling locality. The sulphide content of the HMC samples are tabulated in Appendix VI and summarized in Table 4.

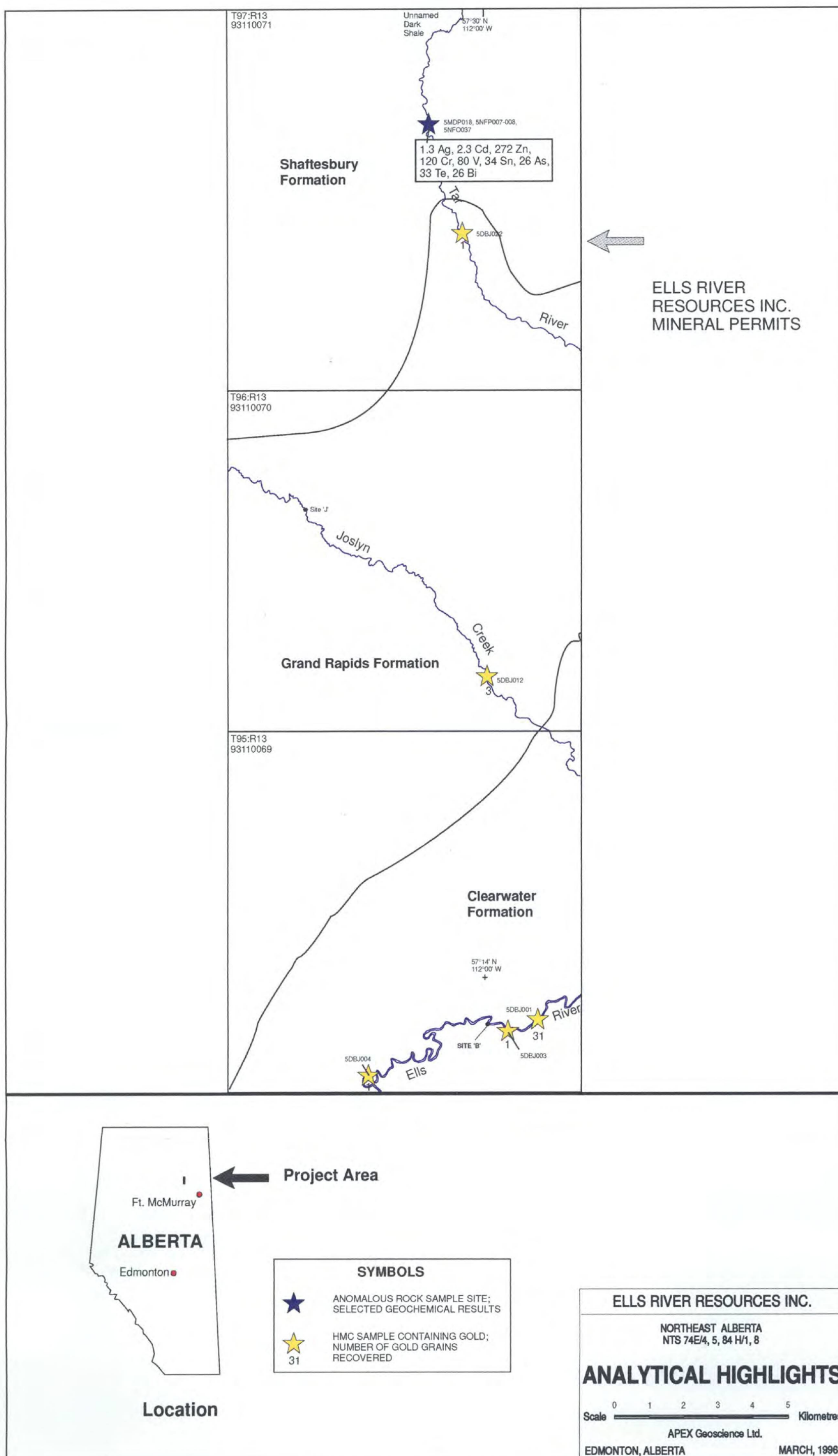


Figure 4

The location of the HMC sampling during the 1995 field program was restricted to the Ells River, Joslyn Creek and Tar Rivers within the boundaries of the ERRI mineral permits. Visual examination of the HMC samples, which were collected from within the ERRI mineral permits, indicates that the majority of the sulphide grains that are present are either crystalline or framboidal pyrite or marcasite, with minor amounts of mineralogically unknown polymetallics. Due to diverse grain surface texture, shape, colour, oxidation, abundance of sulphides and the presence of the unknown polymetallics, definitive identification of specific sulphide minerals and native metals, such as gold, was difficult.

TABLE 3

**ROCK GRAB, ROCK CHANNEL AND STREAM SEDIMENT SAMPLE
GEOCHEMICAL HIGHLIGHTS**

ROCK GRAB AND ROCK CHANNEL SAMPLES		
	Au, Pt, Pd (>5 ppb)	Other Element (s)*
Ells River	7 ppb Au, 8 ppb Pt	0.6 Ag, 55 Cu, 19 Pb, 28 Sn, 150 Zn, 24 Mo, 62 Ni, 20 Co, 799 Sr, 108 As, 4683 Mn, 870 Ba, 157 Cr
Joslyn Creek	none	213 Cr
Tar River	none	1.3 Ag, 272 Zn, 30 Mo, 66 Ni, 36 Co, 2.3 Cd, 315 Ba, 120 Cr, 80 V, 34 Sn, 26 As, 33 Te, 26 Bi, >20000 Mn, 841 Sr
STREAM SEDIMENT SAMPLES		
Ells River	6 ppb Au	12 Cu, 8 Pb, 57 Zn, 8 Mo, 23 Ni, 7 Co, 414 Mn, 112 Ba, 137 Cr, 24 V, 35 Sr
Joslyn Creek	8 ppb Au	24 Cu, 13 Pb, 88 Zn, 14 Mo, 45 Ni, 10 Co, 392 Mn, 316 Ba, 180 Cr, 36 V, 67 Sr
Tar River	none	24 Cu, 20 Pb, 89 Zn, 11 Mo, 30 Ni, 9 Co, 355 Mn, 534 Ba, 182 Cr, 34 V, 104 Sr

*All results for other elements are reported in ppm.

Therefore, after an initial visual examination of the HMC samples, six samples were sent to the SRC for further processing and examination for precious metals and possible diamond indicator minerals. That is, two samples from each of the Ells River, Joslyn Creek and Tar River were chosen for follow-up analysis based on the presence of abundant sulphides, gold and possible diamond indicator minerals such as pyrope garnets and/or chrome diopsides.

TABLE 4

SUMMARY OF SULPHIDE CONTENT OF HMC SAMPLES

Volume Per Cent Sulphide Content	Ells River (NTS 74E/4, 84H/1)	Joslyn Creek (NTS 74E/5, 84H/8)	Tar River (NTS 84H/8, 74E/5)
0 to 9%	6	6	7
10 to 24 %	2	1	1
25 to 40 %	2	0	0
Total Number of Samples	10	7	8

Ells River

In total, 26 rock grab, 65 rock channel, 12 stream sediment and 10 HMC samples were collected along the Ells River which is directly underlain by Lower Cretaceous shale and clastic sedimentary rocks of the Clearwater Formation. During the 1995 exploration program, the bulk of the sampling and geological examinations were focussed along the Ells River at the request of ERRI due to a reported platinum anomaly in carbonate cemented sandstone at what is known as site 'B' (Figures 2 and 4).

At the Ells River, the Clearwater Formation is characterized by coarse lithic to unconsolidated sands, interlayered shaly interbeds and abundant concretions and carbonate cemented sands overlying dark grey marine shales. Exposed sections are often up to 40 vertical metres and crop out as large scars and slumps along the river valley. The section of the Ells River which is within the ERRI mineral permits is underlain by the M20 marker horizon within the Clearwater Formation (Cotterill, *pers. comm.*, 1995). The M20 marker horizon crops out at about 380 m asl as a 5 to 20 m consolidated glauconitic sand unit which is often fossiliferous to carbonaceous and contains up to 40 volume per cent sulphide in places. Unpublished well log data show the M20 horizon as being continuous throughout the Clearwater Formation in the vicinity of the Ells River (Cotterill, *pers. comm.*, 1995). The majority of the rock grab and channel samples were collected from interbedded sandstone and shale of the M20 marker horizon. Throughout the ERRI mineral permits there is little evidence of glacially deposited drift both at the top of sections

and as glacial debris within the river bottom. That is, the river bottom is comprised of angular blocks of local carbonate cemented sandstones and shales which have slumped into the river. At site 'B', the exposed section is characterized by locally derived carbonate cemented blocks of sandstone in colluvium with no visible *in situ* bedrock.

Sections were sampled with contiguous chip samples covering up to 20 metres of vertical section along with selected rock grab samples. Many of the sampled carbonate cemented carbonaceous sandstones contain abundant pyrite and/or marcasite. As well, 12 stream sediment samples were collected near Clearwater Formation exposures along the Ells River within the ERRI mineral permits. The geochemical highlights from rock grab, rock channel and stream sediment samples are summarized in Table 3. All the rock samples were analyzed by FA for Au, Pt, Pd and by ICP for multielement geochemistry. Stream sediment samples were analyzed for Au by FA with DCP finish and by ICP for an additional 34 elements. Follow-up assaying was conducted using pre-roast FA, cyanide leach, nickel sulphide FA and lead collection FA at Bondar-Clegg and Actlabs due to; (a) the carbonaceous nature of some of the rock samples, (b) concentrations of up to 33 ppm Te, and (c) prior ERRI anomalous results. The rock samples yielded up to 7 ppb Au (detection limit of 1 ppb) and 8 ppb Pt (detection limit of 5 ppb). All techniques indicate that the precious metal content of these rocks may be weakly anomalous, but is too low to be of any exploration significance. Anomalous concentrations of up to 0.6 ppm Ag, 108 ppm As and 33 ppm Te in the rock samples indicate the presence of elements that are sometimes used as pathfinders to precious metal deposits. Based on APEX's past exploration experience in similar terrane and stratigraphy, anomalous base metal results for the rock samples include up to 55 ppm Cu, 150 ppm Zn and 157 ppm Cr. The importance of these anomalous geochemical results in the rock samples is unclear. Based on APEX's past experience in conducting stream sediment surveys in similar terranes underlain by similar rocks, few geochemical anomalies were identified in the stream sediment samples. Concentrations of up to 8 ppb Au in the stream sediment samples may or may not be anomalous. The results for all three drainages display high background concentrations for Cr. It is not clear why these samples exhibit high concentrations of Cr. The Cr is higher than most of the bedrock samples with the exception of a few samples from Grand Rapids Formation sands at Joslyn Creek and Shaftesbury Formation shales at the Tar River..

During the course of the 1995 program, ERRI had five rock samples collected by APEX and two rock samples collected during earlier work by ERRI, fire assayed using a lead collection technique at an Edmonton laboratory that processes locally produced placer gold. The resultant beads were brought to APEX and were subsequently sent to Bondar-Clegg for umpire analysis (Appendix IV). Portions of the five samples collected by APEX were also sent to Actlabs for their standard gold analysis by FA and gold analysis using a lead collection technique similar to that employed by the Edmonton laboratory. Of the seven beads, Bondar-Clegg was able to umpire assay only four of the beads due to their small size. Assays for three of the four beads indicate that the beads are predominantly composed of gold (up to 74.42%) with minor amounts of silver and lead (Appendix IV). The Bondar-Clegg assay results for these three beads (5DBO319, 5MDP013 and 5MDP017) indicate that the three samples should contain concentrations

of gold in the parts per million range based on the assumption that a one-half assay ton aliquot of sample yielded the beads. Follow-up assaying to confirm these results was completed at Bondar-Clegg and Actlabs by several different analytical techniques. The follow-up assaying indicates that these three samples (5DBO319, 5MDP013 and 5MDP017) yield gold concentrations at, or less than detection in the few parts per billion range. Because the Edmonton laboratory is not a professional analytical facility designed for the detection of low levels of gold and the fact that the Edmonton laboratory routinely handles large quantities of placer gold, it is believed that the high concentration of gold in the three beads that were umpire assayed at Bondar-Clegg is likely the result of contamination at the Edmonton laboratory.

In total, ten HMC samples were collected along the Ells River within the ERRI mineral permits. Initial visual examination of the ten samples indicates that samples from four sites yielded greater than ten volume percent sulphides in the final panned concentrates. Also during initial visual examinations, one sample from the Ells River (5DBJ001) was noted to contain six visible gold grains. Due to the presence of visible gold and abundant heavy minerals, this sample and one other sample were sent for follow-up processing at the SRC to be superpanned and picked both for precious metals and possible diamond indicator grains. The sample which was known to contain six Au grains, subsequently yielded 31 Au grains. This is the most Au recovered from one HMC sample in all northern Alberta HMC programs conducted by APEX to date. At the request of ERRI, the remaining seven samples collected during the 1995 field program from along the Ells River which contained sulphides, were subsequently sent for processing for precious metals at the SRC. Two of these samples (5DBJ003 and 5DBJ004) yielded one gold grain (Figure 4).

Joslyn Creek

In total, 11 stream sediment, 1 rock grab, 6 rock channel and 7 HMC samples were collected along Joslyn Creek within the ERRI mineral permits. Joslyn Creek appears to be mostly underlain by Lower Cretaceous Grand Rapids Formation. At Joslyn Creek the Grand Rapids Formation is characterized by unlithified well sorted, white, grey to limonitic, bioturbated sands which often contain large metre scale concretionary layers and coaly interbeds. Exposed sections are up to 20 vertical metres in height and crop out as scars along meanders as positive features throughout the somewhat flat terrane.

The 1995 exploration program within the ERRI mineral permits was focussed mainly at the Ells River, therefore only one section of exposed bedrock was sampled along Joslyn Creek. The outcrop was contiguously sampled from top to bottom over a total vertical height of approximately eleven metres. The majority of the time allotted to sampling at Joslyn Creek focussed on the collection of stream sediment and HMC samples. No significant anomalous geochemical results for rock channel, rock grab and stream sediment samples were obtained with the exception of elevated Cr results. The results for both rock and stream sediment samples are summarized in Table 3.

In total, seven HMC samples were collected along Joslyn Creek within the ERRI mineral permits. Initial visual examination of the seven samples indicates that each site yielded abundant heavy minerals in the concentrates yet only one site yielded more than five volume per cent sulphides. Two samples that were known to contain both sulphide and abundant coarse grained garnets were sent for follow-up processing at the SRC to be superpanned and picked both for precious metals and possible diamond indicator grains. No probable diamond indicator grains were identified, but one of the two samples yielded three Au grains (Figure 4). A HMC sample collected by ERRI prior to the APEX exploration program from site 'J' also contained one visible Au grain (Cieszynski, *pers. comm.*, 1995).

Tar River

In total, eight rock grab, one rock channel, five stream sediment and eight HMC samples were collected along the Tar River within the ERRI mineral permits. Within the ERRI mineral permits the Tar River is underlain by the Pelican and Shaftesbury formations. The Pelican Formation is characterized by clean, white, well sorted, cross-bedded sands. The Pelican Formation sands crop out as large scars and faces up to 40 vertical metres in height at the edge of the Birch Mountains within the southeast corner of the northernmost ERRI mineral permit (93110071)(Figures 2 and 4). The Pelican Formation is conformably overlain by dark grey marine shales of the Shaftesbury Formation. Within the ERRI mineral permits the Fish Scale marker horizon is exposed in the northern portions of the mineral permits and it is believed that the Second White Specks Formation is also exposed, but this unit was not sampled due to time and budget constraints.

The 1995 exploration program within the ERRI mineral permits was focussed mainly at the Ells River therefore only two sections of exposed bedrock were sampled along the Tar River. The outcrops were sampled by collecting characteristic rock grab samples from separate sections of Pelican and Shaftesbury formations. Selected rock channel samples were collected from the Fish Scale marker horizon at the Shaftesbury Formation section. The majority of the exploration and time at the Tar River was focussed on the collection of stream sediment and HMC samples. Geochemical anomalies for rock samples from Shaftesbury Formation shales include up to 1.3 ppm Ag, 2.3 ppm Cd, 272 ppm Zn, 120 ppm Cr, 80 ppm V, 34 ppm Sn, 26 ppm As, 33 ppm Te and 26 ppm Bi. Stream sediment samples yielded no geochemical anomalies with the exception of 182 ppm Cr in one sample. It is not clear whether these geochemical anomalies represent normal background for Pelican sands or Shaftesbury shales. However, work in progress by the GSC, AGS and APEX will help in determining what concentrations of these metals can be expected for the Pelican and Shaftesbury formations in the Birch Mountain area. The results for both rock and stream sediment samples are summarized in Table 3.

In total, eight HMC samples were collected along the Tar River within the ERRI mineral permits. Initial visual examination of the eight samples indicates that all samples yielded abundant heavy minerals in the concentrates, yet only one site yielded more than

five volume per cent sulphides. No visible gold was identified by APEX in the Tar River HMC samples. Two samples that were known to contain both sulphide and abundant garnet were sent for follow-up processing at the SRC to be superpanned and picked both for precious metals and possible diamond indicator grains. Gold or possible diamond indicator minerals were not identified in either sample. A third sample was subsequently sent to the SRC for superpanning and yielded one Au grain.

CONCLUSIONS

During 1995, a total of 35 rock grab, 72 rock channel, 28 stream sediment and 25 HMC samples were collected within the ERRI mineral permits in the Ells River area. Geochemical results for rock grab and channel samples are up to 7 ppb Au, 8 ppb Pt, 3 ppb Pd, 1.3 ppm Ag, 55 ppm Cu, 19 ppm Pb, 272 ppm Zn, 66 ppm Ni, 36 ppm Co, 30 ppm Mo, 841 ppm Sr, 157 ppm Cr, 870 ppm Ba, >20,000 ppm Mn, 2.3 ppm Cd, 108 ppm As, 80 ppm V, 34 ppm Sn, 33 ppm Te and 26 ppm Bi. Stream sediment samples yield geochemical results of up to 8 ppb Au, 24 ppm Cu, 20 ppm Pb, 89 ppm Zn, 45 ppm Ni, 14 ppm Mo, 182 ppm Cr and 534 ppm Ba.

Of the 25 HMC samples that were collected within the ERRI mineral permits, 31 gold grains from one sample and 1 gold grain from two samples were recovered from three separate sites along the Ells River, 3 gold grains were recovered from one sample from Joslyn Creek, and 1 gold grain was recovered from one sample from the Tar River. In addition, an exposure of Shaftesbury Formation shale along the Tar River yielded rock samples with up to 1.3 ppm Ag, 2.3 ppm Cd, 272 ppm Zn, 120 ppm Cr, 80 ppm V, 34 ppm Sn, 26 ppm As, 33 ppm Te and 26 ppm Bi (Figure 4). These sites within the ERRI mineral permits are of exploration interest.

The majority of the fieldwork focussed on sampling Lower Cretaceous Clearwater Formation interbedded sands and shales of the M20 marker horizon along portions of the Ells River where ERRI had a preliminary indication of elevated concentrations of both Au and Pt within bedrock. A variety of assaying and analytical techniques at two laboratories yielded no significant Au, Pt or Pd anomalies. Bondar-Clegg confirmed the presence of gold in beads from three APEX samples in fire assays conducted at an Edmonton laboratory. However, the gold in these beads is believed to be the result of contamination at the Edmonton laboratory. No other metals of economic importance were detected in samples from the Ells River outcrops. Thirty-one grains of Au up to 0.22 by 0.3 mm in size were identified in one HMC sample near the east boundary of the ERRI mineral permits from the Ells River. This sample is highly anomalous for any drainage in Northern Alberta. The origin of the gold is uncertain at this time due to the apparent lack of anomalous gold concentrations in bedrock.

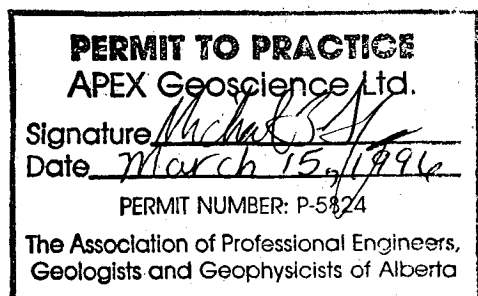
Few geochemical anomalies were obtained from Joslyn Creek or the Tar River based on the limited amount of sampling conducted at these drainages to date. Ongoing work focussing on the Shaftesbury and Second White Specks formations, which crop out

along the Tar River at the north end of the ERRI mineral permits, is the focus of a government and industry funded MDA investigation for precious and base metals. Anomalous concentrations of gold and base metals have been reported for samples of the Shaftesbury and Second White Specks formations in the Birch Mountains by Government agencies (Eccles *et al.*, 1996; Ballantyne, 1995) and by Tintina Mines Ltd. (Franklin, 1995). The details of this information will be publicly available later in 1996 and will further distinguish what the background levels are for metallic elements in shales of the Shaftesbury and Second White Specks formations and the potential for these units to host precious and/or base metal deposits.

RECOMMENDATIONS

Based on the overall lack of bedrock exposure and the poor results for gold and platinum obtained from detailed sampling of bedrock along the Ells River to date, the likelihood of discovering a precious metal deposit on the ERRI mineral permits is believed to be low. However, based on the presence of 31 grains of gold in one HMC sample collected from the Ells River and a few geochemical anomalies obtained from Shaftesbury Formation shales along the Tar River, a limited amount of follow-up exploration and/or analytical work may be warranted. That is, future exploration could include: (a) examine and sample any core that might exist at the ERCB or MCRF from past oil drilling within or near the ERRI mineral permits, (b) conduct a minor amount of SEM work to determine the crystallinity, fineness and possible origin of gold grains recovered from HMC samples within the ERRI mineral permits, (c) conduct a limited amount of follow-up HMC sampling along the Ells River, (d) conduct a limited amount of sampling of Shaftesbury and Second White Specks formation shales in the vicinity of the Tar River, and (e) conduct further analytical work on those rock samples that the Edmonton laboratory indicates contain gold, being sure to use certified Canadian Laboratories.

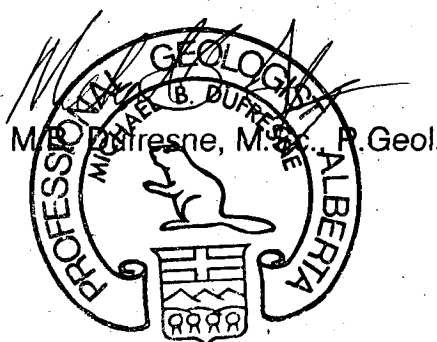
If the results from any follow-up exploration significantly enhance the results to date, a staged field program comprising one or more of detailed prospecting, geological examinations and mapping, geochemical sampling and, possibly, airborne and/or ground geophysical surveys at selected areas, followed by diamond drill testing of selected targets may be warranted.



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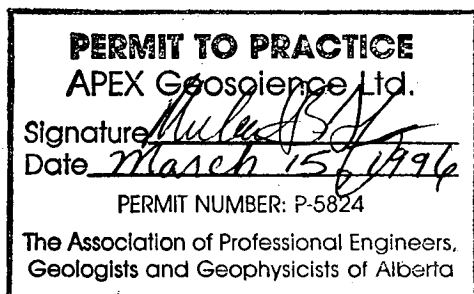
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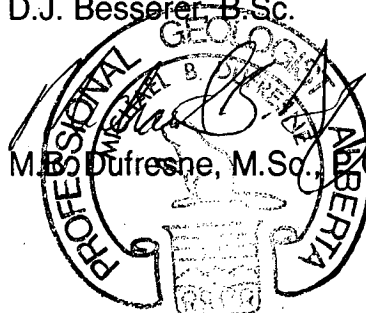
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March, 1996

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



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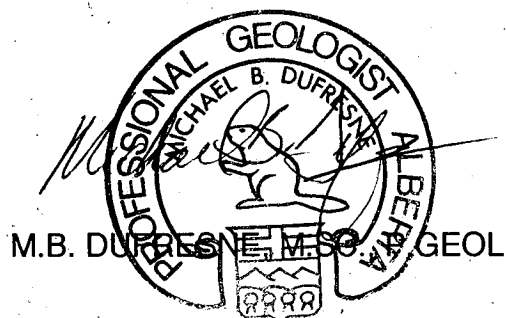
CERTIFICATION

I, M.B. DUFRESNE OF [REDACTED], EDMONTON, ALBERTA, CERTIFY AND DECLARE THAT I AM A GRADUATE OF THE UNIVERSITY OF NORTH CAROLINA AT WILMINGTON WITH A B.SC. DEGREE IN GEOLOGY (1983) AND A GRADUATE OF THE UNIVERSITY OF ALBERTA WITH A M.SC. DEGREE IN GEOLOGY (1987). I AM REGISTERED AS A PROFESSIONAL GEOLOGIST WITH THE ASSOCIATION OF PROFESSIONAL ENGINEERS, GEOLOGISTS AND GEOPHYSICISTS OF ALBERTA.

MY EXPERIENCE INCLUDES SERVICE AS AN EXPLORATION GEOLOGIST WITH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT FROM 1983 TO 1985. FROM 1986 TO 1993, I HAVE CONDUCTED AND DIRECTED PROPERTY EXAMINATIONS, PROPERTY EVALUATIONS AND EXPLORATION PROGRAMS ON BEHALF OF COMPANIES AS A GEOLOGIST IN THE EMPLOY OF R.A. OLSON CONSULTING LTD. AND ITS PREDECESSOR COMPANY, TRIGG, WOOLLETT, OLSON CONSULTING LTD., EDMONTON, ALBERTA. SINCE JANUARY, 1994 I HAVE CONDUCTED AND DIRECTED PROPERTY EXAMINATIONS, PROPERTY EVALUATION AND EXPLORATION PROGRAMS ON BEHALF OF COMPANIES AS A PRINCIPAL IN APEX GEOSCIENCE LTD.

I HAVE NO INTEREST, DIRECT OR INDIRECT, IN THE PROPERTIES HELD BY ELLS RIVER RESOURCES INC.

OUR REPORT ENTITLED "PRECIOUS-BASE METAL EXPLORATION - 1995, ELLS RIVER AREA, NORTHEAST ALBERTA", IS BASED UPON FIELDWORK AND THE STUDY OF PUBLISHED AND UNPUBLISHED DATA.



MARCH, 1996

EDMONTON, ALBERTA

APPENDIX I

FIELD PERSONNEL - 1995

APPENDIX I

FIELD PERSONNEL - 1995

<u>NAME AND ADDRESS</u>	<u>POSITION</u>	<u>TIME IN FIELD</u>	<u>MAN-DAYS</u>
Dean Besserer [REDACTED] Edmonton, AB T5K 2M9	Geologist	October 3 to 8	6
Michael Dufresne [REDACTED] Edmonton, AB T6C 3H7	Consulting Geologist/ Party Leader	October 4 to 8	5
Neil Firt [REDACTED] Edmonton, AB T5S 1E6	Geologist	October 3 to 8	6
			<hr/>
Total field man-days:			17

APPENDIX II

SAMPLE DESCRIPTION SUMMARY

SAMPLE DESCRIPTION SUMMARY
(APEX Project 95210)

Sample ID*	Description
5DBO301	Beige weathered sand; carb lithified; woody frags.
5DBO302	Cross-bedded silt to sandstone; carb cemented
5DBO307	Very limonitic sand; lenses of wood + shale/mud
5DBO308	Grey-white, well sorted sand; lenses of wood
5DBO316	Limonitic; carb cemented, interlayered sandstone
5DBO320	Limonitic brown to orange sand
5DBO321	Sandstone with carb cement; shell fragments
5DBP309	Siderite and calcitic concretions, locally limonitic
5DBP313	Carb cemented sandstone; abundant shelly fauna
5DBP314	Siderite concretion; float
5DBP318	Fissile sandstone; float
5DBP322	Same unit as 321; up to 2% sulphides
5DBP323	Siderite concretion
5DBP324	Fissile cross-bedded sandstone, local shelly fauna
5DBP325	Slumped accumulation; calcareous
5MDO001	Mudstone with wood debris + sulphur + salt crusts
5MDO002	Concretionary layer; calcite + siderite cement
5MDO004	Large concretion in sand; calcareous, glauconitic
5MDO007	Glauconitic sandstone; carb cement, minor ank.
5MDO008	Calcareous mudstone; Cc cement, carbonaceous
5MDO014	Lutitic limestone unit; py/marc halos in fractures
5MDO016	Grey mud
5MDO017	Limestone; rusty, sulphurous
5MDP001	Olive coloured calcareous chert/mudstone; py
5MDP002	Olive coloured calcareous chert/mudstone; py
5MDP003	Calcareous chert/mudstone; Cc veinlets, py/marc
5MDP004	Glauconitic arkosic sandstone; well laminated
5MDP005	Calcareous chert/mudstone; Cc veinlets, py/marc
5MDP006	Cc-cement siltstone, trc py
5MDP007	Carbonaceous Cc-cement Siltstone; py
5MDP008	Siltstone with fine carbonaceous laminations
5MDP009	Siltstone with carbonaceous layers; siderite
5MDP010	Partly lithified sand to silt; calcareous, tr. sulphide
5MDP011	Light olive mudstone; organic debris, py, Cc vnls
5MDP012	Brecciated muddy limestone; Cc-sulphide cement
5MDP013	Brecciated muddy lmst; limonitic w/ py - bldrs
5MDP014	Composite: siderite + limestone + shale material
5MDP015	Oolitic sandstone; phosphatic, very rusty
5MDP016	Calcareous, rusty blocks; sulphidic
5MDP017	Large blocks; py, siderite or ankerite mud
5NFO001	Interbedded mudstone + sandy mudstone
5NFO002	Carb cemented mud, organic matter
5NFO007	Black shale with silt lenses; local shell fragments
5NFO008	Black shale with silt lenses; local shell fragments

SAMPLE DESCRIPTION SUMMARY
(APEX Project 95210)

Sample ID*	Description
5NFO012	Well indurated sand layer
5NFO013	Glauconitic sand and carbonaceous mudstone; py
5NFO014	Grey mud with silt lenses; minor sulphide stain
5NFO015	Brown to orange silty sand lense
5NFO019	Green-grey siltstone with black shale
5NFO021	Glauconitic sand with carbonate mudstone
5NFO022	Fine-grained, orange-stained sand
5NFO023	Green sandstone interbedded with mudstone
5NFO024	Very platy, medium-grained sand
5NFO025	Green sandstone and darker mudstone
5NFO028	Muddy siltstone with shale beds
5NFO032	Interbedded laminated siltstone + black shale
5NFO035	Lithified green to grey sand and silt
5NFO036	Lithified sand; abundant bivalve shells
5NFP001	Black to brown siltstone; carbonate, py
5NFP002	Green-grey, sandy siltstone
5NFP003	Grey mudstone; possible carb cement
5NFP004	Green-grey, sandy siltstone; concretions
5NFP005	Composite: sand with limonitic weathering
5NFP006	Quartz oolitic sand; limonitic, glauconite
5NFP007	Fish scales zone; black carbonaceous shale
5NFP008	Fish scales zone; 80% fish scales, py
5DBC001	Along the Ells River - At 5DBJ001
5DBC002	Along the Ells River - At 5DBJ002
5DBC003	Along the Ells River - At 5DBJ003
5DBC004	Along the Ells River - No pan here
5DBC005	Along the Ells River - No pan here
5DBC006	Along the Ells River - At 5DBJ004
5DBC007	Along the Ells River - At 5DBJ005
5DBC008	Along the Ells River - At 5DBJ006
5DBC009	Along the Ells River - At 5DBJ007
5DBC010	Along the Ells River - At 5DBJ008
5DBC011	Joslyn Creek - At 5DBJ009
5DBC012	Joslyn Creek - At 5DBJ010
5DBC013	Joslyn Creek - No pan here
5DBC014	Joslyn Creek - No pan here
5DBC015	Joslyn Creek - At 5DBJ011
5DBC016	Joslyn Creek - At 5DBJ012
5DBC017	Joslyn Creek - At 5DBJ012
5DBC018	Joslyn Creek - At 5DBJ013
5DBC019	Joslyn Creek - No pan here
5DBC020	Joslyn Creek - At 5DBJ014
5DBC021	Joslyn Creek - At 5DBJ015
5DBC022	Along the Ells River - At 5DBJ016

SAMPLE DESCRIPTION SUMMARY
(APEX Project 95210)

Sample ID*	Description
5DBC023	Along the Ells River - At 5DBJ017
5DBC024	Tar River - At 5DBJ018
5DBC025	Tar River - At 5DBJ019
5DBC026	Tar River - At 5DBJ021
5DBC027	Tar River - At 5DBJ023a,b
5DBC028	Tar River - At 5DBJ024

*5DBP - Rock grab sample; 5DBO - Rock channel sample; 5DBC - Stream sediment sample;
5DBJ - Heavy mineral concentrate sample

APPENDIX III

SAMPLE CARDS

**The Geochemical Sample Cards from
1995 Exploration at Northeast Alberta
are on file at APEX Geoscience Ltd.**

APPENDIX IV

**GEOCHEMICAL LAB REPORTS/
CERTIFICATES OF ANALYSIS**



Bondar Clegg

Inchcape Testing Services

Geochemical Lab Report

REPORT: V95-01431.0 (COMPLETE)

REFERENCE:

CLIENT: APEX GEOSCIENCE LTD.

SUBMITTED BY: (D. BESSERER

PROJECT: 95210

DATE PRINTED: 24-NOV-95

ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD
1	AU GOLD FIRE ASSAY	135	1 PPB	FIRE ASSAY	FIRE ASSAY-DCP
2	Au Wt1 Test Weight	135	0.01 GM	FIRE ASSAY	FIRE ASSAY-AA
3	PT PLATINUM	107	5 PPB	FIRE ASSAY	FIRE ASSAY-DCP
4	PD PALLADIUM	107	1 PPB	FIRE ASSAY	FIRE ASSAY-DCP
5	Ag Silver	135	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
6	Cu Copper	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
7	Pb Lead	135	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
8	Zn Zinc	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
9	Mo Molybdenum	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
10	Ni Nickel	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
11	Co Cobalt	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
12	Cd Cadmium	135	0.2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
13	Bi Bismuth	135	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
14	As Arsenic	135	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
15	Sb Antimony	135	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
16	Fe Iron	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
17	Mn Manganese	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
18	Te Tellurium	135	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
19	Ba Barium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
20	Cr Chromium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
21	V Vanadium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
22	Sn Tin	135	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
23	W Tungsten	135	20 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
24	La Lanthanum	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
25	Al Aluminum	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
26	Mg Magnesium	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
27	Ca Calcium	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
28	Na Sodium	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
29	K Potassium	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
30	Sr Strontium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
31	Y Yttrium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
32	Ga Gallium	135	2 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
33	Li Lithium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
34	Nb Niobium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
35	Sc Scandium	135	5 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
36	Ta Tantalum	135	10 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD
37	Ti Titanium	135	0.01 PCT	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA
38	Zr Zirconium	135	1 PPM	HCL:HNO3 (3:1)	INDUC. COUP. PLASMA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
T STREAM SED, SILT	28	1 -80	28	DRY, SIEVE -80	28
R ROCK	107	2 -150	107	CRUSH/SPLIT & PULV.	107

REPORT COPIES TO: MR. M.B. DUFRESNE
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Bondar Clegg

Inchcape Testing Services

Geochemical Lab Report

CLIENT: APEX GEOSCIENCE LTD.

REPORT: V95-01431.0 (COMPLETE)

PROJECT: 95210

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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au GM	Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5DBC001		4	30.29				<0.2	8	5	47	5	15	6	<2	<5	<5	<5	1.34	259	<10	93	70	17	<20	<20	14	0.60	0.81	0.95	0.03	0.14	31	8	<2	11	<1	<5	<10	<.01
5DBC002		4	30.26				<0.2	7	6	48	4	12	5	<2	<5	<5	<5	1.30	257	<10	89	68	17	<20	<20	14	0.61	0.82	0.95	0.02	0.14	28	8	<2	10	<1	<5	<10	<.01
5DBC003		3	30.19				<0.2	6	5	34	5	14	4	<2	<5	<5	<5	1.03	258	<10	79	92	13	<20	<20	11	0.44	0.48	0.59	0.02	0.11	23	6	<2	7	<1	<5	<10	<.01
5DBC004		5	30.15				<0.2	7	7	43	6	13	6	<2	<5	<5	<5	1.29	328	<10	91	109	16	<20	<20	13	0.55	0.62	0.72	0.14	0.13	29	8	<2	10	<1	<5	<10	<.01
5DBC005		3	30.40				<0.2	7	6	42	5	13	5	<2	<5	<5	<5	1.21	243	<10	83	78	16	<20	<20	13	0.54	0.70	0.80	0.04	0.13	34	8	<2	9	<1	<5	<10	<.01
5DBC006		3	30.19				<0.2	7	6	44	6	12	5	<2	<5	<5	<5	1.32	254	<10	88	98	16	<20	<20	13	0.58	0.65	0.77	0.02	0.13	29	7	<2	10	<1	<5	<10	<.01
5DBC007		5	30.31				<0.2	12	8	57	8	23	7	<2	<5	<5	<5	1.67	251	<10	112	137	24	<20	<20	15	0.91	0.93	1.02	0.04	0.21	41	9	<2	15	<1	<5	<10	<.01
5DBC008		4	30.40				<0.2	7	6	48	5	13	6	<2	<5	<5	<5	1.32	193	<10	88	92	18	<20	<20	13	0.61	0.69	0.79	0.02	0.13	25	8	<2	10	<1	<5	<10	<.01
5DBC009		<1	30.32				<0.2	8	7	45	8	18	6	<2	<5	<5	<5	1.27	146	<10	89	130	18	<20	<20	15	0.62	0.64	0.73	0.02	0.15	29	8	<2	10	<1	<5	<10	<.01
5DBC010		2	30.38				<0.2	7	7	44	5	12	6	<2	<5	<5	<5	1.34	201	<10	86	89	18	<20	<20	13	0.62	0.78	0.90	0.04	0.15	31	8	<2	11	<1	<5	<10	<.01
5DBC011		5	30.22				0.2	24	11	88	10	30	10	0.5	<5	<5	<5	2.37	392	<10	279	83	32	<20	<20	13	0.83	0.27	0.39	0.02	0.20	66	11	<2	14	<1	<5	<10	<.01
5DBC012		6	30.39				0.2	17	8	71	9	19	7	0.2	<5	<5	<5	1.94	197	<10	283	106	27	<20	<20	13	0.70	0.22	0.30	0.02	0.16	49	9	<2	10	<1	<5	<10	<.01
5DBC013		5	30.40				<0.2	18	8	76	11	27	9	<2	<5	<5	<5	2.12	234	<10	285	121	29	<20	<20	13	0.73	0.21	0.28	0.02	0.16	50	11	<2	11	<1	<5	<10	<.01
5DBC014		3	30.22				<0.2	21	10	82	10	26	10	<2	<5	<5	<5	2.17	283	<10	239	98	32	<20	<20	14	0.85	0.31	0.38	0.02	0.19	56	11	<2	13	<1	<5	<10	<.01
5DBC015		3	30.23				<0.2	14	9	64	9	22	7	<2	<5	<5	<5	1.75	206	<10	286	118	25	<20	<20	14	0.68	0.21	0.28	0.02	0.15	45	9	<2	10	<1	<5	<10	<.01
5DBC016		6	30.25				<0.2	24	13	73	9	20	5	<2	<5	<5	<5	2.31	130	<10	214	62	35	<20	<20	13	0.95	0.32	0.18	0.02	0.24	58	7	<2	15	<1	<5	<10	<.01
5DBC017		3	30.36				<0.2	14	10	56	9	22	7	<2	<5	<5	<5	1.70	157	<10	163	109	29	<20	<20	15	0.95	0.27	0.30	0.02	0.17	43	9	<2	14	<1	<5	<10	<.01
5DBC018		5	30.13				<0.2	15	9	62	11	20	7	<2	<5	<5	<5	1.89	233	<10	316	134	26	<20	<20	13	0.67	0.20	0.26	0.03	0.15	50	8	<2	11	<1	<5	<10	<.01
5DBC019		8	30.06				<0.2	21	11	79	14	45	9	0.6	<5	<5	<5	2.21	274	<10	281	180	36	<20	<20	14	0.90	0.27	0.26	0.03	0.20	53	10	<2	13	<1	<5	<10	<.01
5DBC020		4	30.25				<0.2	22	11	79	12	26	9	0.2	<5	<5	<5	1.96	268	<10	301	150	32	<20	<20	15	0.87	0.29	0.40	0.03	0.20	58	10	<2	15	<1	<5	<10	<.01
5DBC021		3	30.19				<0.2	24	11	86	13	29	8	0.5	<5	<5	<5	2.36	219	<10	316	132	34	<20	<20	13	0.83	0.24	0.36	0.02	0.20	67	11	<2	14	<1	<5	<10	<.01
5DBC022		2	30.26				<0.2	10	7	51	5	15	7	<2	<5	<5	<5	1.65	414	<10	103	78	19	<20	<20	13	0.67	0.84	0.96	0.02	0.15	33	8	<2	12	<1	<5	<10	<.01
5DBC023		3	30.16				<0.2	8	6	40	6	16	5	<2	<5	<5	<5	1.22	242	<10	90	94	17	<20	<20	13	0.56	0.75	0.88	0.04	0.13	35	8	<2	10	<1	<5	<10	<.01
5DBC024		2	30.35				<0.2	5	4	20	9	10	3	0.3	<5	<5	<5	0.57	134	<10	123	182	10	<20	<20	11	0.29	0.04	0.08	0.01	0.07	25	6	<2	3	<1	<5	<10	<.01
5DBC025		4	30.23				<0.2	19	12	89	9	30	9	0.3	<5	<5	<5	1.71	355	<10	234	132	34	<20	<20	16	0.92	0.35	0.65	0.02	0.19	45	11	<2	14	<1	<5	<10	<.01
5DBC026		4	30.14				<0.2	24	20	63	11	20	6	<2	<5	<5	<5	2.48	100	<10	534	67	27	<20	<20	24	1.36	0.51	0.84	0.03	0.26	104	21	2	13	<1	5	<10	<.01
5DBC027		1	30.36				<0.2	10	7	47	6	16	5	<2	<5	<5	<5	1.17	278	<10	156	89	17	<20	<20	12	0.52	0.13	0.28	0.01	0.12	39	8	<2	8	<1	<5	<10	<.01
5DBC028		4	30.23				<0.2	8	6	42	6	13	5	<2	<5	<5	<5	1.18	197	<10	167	107	15	<20	<20	12	0.49	0.13	0.23	0.05	0.10	39	7	<2	7	<1	<5	<10	<.01
5DBC300		5	30.08	<5	<1	<0.2	21	12	54	5	26	9	<2	<5	<5	<5	<5	1.55	343	<10	117	71	31	<20	<20	17	1.28	1.37	1.87	0.02	0.25	44	10	<2	18	<1	<5	<10	<.01
5DBC301		2	30.04	<5	<1	<0.2	4	4	41	3	9	2	<2	<5	<5	<5	<5	1.85	592	<10	351	32	14	<20	<20	12	0.41	1.01	>10.00	0.02	0.12	381	5	<2	7	<1	<5	<10	<.01



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Inchcape Testing Services

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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
5DBC001	4
5DBC002	4
5DBC003	3
5DBC004	4
5DBC005	4
5DBC006	4
5DBC007	5
5DBC008	5
5DBC009	6
5DBC010	4
5DBC011	6
5DBC012	3
5DBC013	4
5DBC014	5
5DBC015	4
5DBC016	4
5DBC017	4
5DBC018	5
5DBC019	3
5DBC020	4
5DBC021	6
5DBC022	3
5DBC023	4
5DBC024	4
5DBC025	3
5DBC026	7
5DBC027	2
5DBC028	3
5DBC300	11
5DBC301	5



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5DB0302	<1	30.12	<5	<1	<0.2	4	5	43	3	9	2	<2	<5	<5	<5	1.47	183	<10	156	33	18	<20	<20	13	0.53	1.16	>10.00	0.02	0.16	710	7	<2	7	<1	<5	<10	<0.01	
5DB0303	3	30.23	<5	<1	<0.2	6	6	48	5	14	4	<2	<5	<5	<5	1.11	143	<10	86	110	25	<20	<20	14	0.72	1.32	1.71	0.02	0.23	41	8	<2	9	<1	<5	<10	<0.01	
5DB0304	4	30.34	<5	<1	<0.2	12	7	62	4	20	6	<2	<5	<5	<5	1.75	238	<10	120	33	27	<20	<20	15	0.99	1.50	1.76	0.03	0.25	52	10	<2	16	<1	<5	<10	<0.01	
5DB0305	4	30.17	<5	<1	<0.2	10	8	69	3	20	6	<2	<5	<5	<5	2.36	337	<10	122	21	28	<20	<20	15	0.78	1.67	2.40	0.02	0.21	57	10	<2	14	<1	<5	<10	<0.01	
5DB0306	1	30.27	<5	<1	<0.2	6	8	70	8	19	6	<2	<5	10	<5	0.88	110	<10	106	96	23	<20	<20	11	0.66	0.30	0.23	0.02	0.15	28	6	2	14	<1	<5	<10	<0.01	
5DB0307	2	30.14	<5	<1	<0.2	7	12	44	9	24	7	<2	<5	74	<5	2.67	217	<10	140	115	35	<20	<20	13	0.80	0.36	0.38	0.03	0.23	83	7	<2	12	<1	<5	<10	0.02	
5DB0308	4	30.27	<5	<1	<0.2	5	6	34	11	15	5	<2	<5	<5	<5	1.00	104	<10	81	213	24	<20	<20	13	0.81	0.33	0.17	0.04	0.17	27	6	3	12	<1	<5	<10	0.01	
5DB0310	2	30.35	<5	<1	<0.2	4	3	35	6	16	6	<2	<5	<5	<5	1.72	250	<10	72	108	23	<20	<20	17	0.68	0.28	0.27	0.03	0.13	31	8	<2	10	<1	<5	<10	0.01	
5DB0311	<1	30.17	<5	<1	<0.2	7	5	49	6	18	9	<2	<5	<5	<5	0.97	127	<10	69	118	28	<20	<20	22	0.84	0.35	0.20	0.03	0.15	23	10	3	14	<1	<5	<10	0.02	
5DB0312	2	30.38	<5	<1	<0.2	4	5	32	7	14	6	<2	<5	<5	<5	0.78	127	<10	59	142	24	<20	<20	21	0.67	0.25	0.21	0.02	0.12	22	8	2	10	<1	<5	<10	0.02	
5DB0315	4	30.36	<5	<1	0.2	18	15	82	8	35	8	<2	<5	<5	<5	2.52	192	<10	138	105	31	<20	<20	15	1.44	1.89	1.93	0.17	0.38	96	11	3	25	<1	<5	<10	<0.01	
5DB0316	3	30.26	<5	<1	0.3	10	3	59	9	13	2	<2	7	<5	<5	7.96	614	<10	224	34	17	<20	<20	18	0.66	1.80	>10.00	0.11	0.18	519	11	<2	16	1	<5	<10	<0.01	
5DB0317	5	30.36	<5	<1	<0.2	18	12	81	6	46	9	<2	<5	<5	<5	3.03	261	<10	115	59	33	<20	<20	17	1.41	1.52	1.49	0.15	0.30	126	12	<2	27	<1	5	<10	<0.01	
5DB0319	5	30.38	<5	2	<0.2	39	12	84	5	46	10	<2	<5	<5	<5	2.81	235	<10	166	52	29	<20	<20	16	1.26	1.77	1.99	0.13	0.32	202	11	<2	25	<1	<5	<10	<0.01	
5DB0320	7	30.16	<5	<1	<0.2	8	10	62	9	34	5	<2	<5	<5	<5	2.18	211	<10	91	157	30	<20	<20	13	1.14	1.95	2.46	0.12	0.33	55	9	2	16	<1	<5	<10	<0.01	
5DB0321	<1	30.17	<5	<1	0.4	8	2	49	8	10	1	<2	7	<5	<5	7.89	1131	<10	322	32	14	<20	<20	18	0.59	1.87	>10.00	0.06	0.17	306	7	<2	13	1	<5	<10	<0.01	
5DBP309	3	30.21	<5	<1	0.3	5	<2	38	10	16	4	<2	8	<5	<5	6.82	764	<10	87	84	28	<20	<20	13	0.62	0.34	0.87	0.02	0.12	81	10	<2	8	1	8	<10	<0.01	
5DBP313	2	30.17	6	2	0.2	8	2	52	7	10	2	<2	7	<5	<5	6.43	505	<10	204	42	15	<20	<20	15	0.65	2.07	>10.00	0.03	0.19	523	8	<2	13	<1	<5	<10	<0.01	
5DBP314	2	30.20	<5	<1	0.6	13	<2	54	18	13	1	<2	19	<5	<5	>10.00	1747	28	207	5	9	26	<20	55	0.69	2.64	3.10	0.04	0.16	311	10	<2	19	3	<5	<10	<0.01	
5DBP318	1	30.14	<5	<1	<0.2	4	6	54	3	7	2	<2	<5	<5	<5	2.05	295	<10	154	29	16	<20	<20	12	0.63	1.71	>10.00	0.06	0.18	749	6	<2	11	<1	<5	<10	<0.01	
5DBP322	<1	30.30	<5	<1	<0.2	11	5	46	3	11	2	<2	<5	<5	<5	2.58	846	<10	364	22	15	<20	<20	13	0.60	1.42	>10.00	0.07	0.18	405	5	<2	11	<1	<5	<10	<0.01	
5DBP323	1	30.22	<5	<1	0.3	18	2	51	6	12	2	<2	6	8	<5	7.11	1406	<10	489	8	13	<20	<20	17	0.47	1.18	>10.00	0.07	0.12	289	5	<2	12	<1	<5	<10	<0.01	
5DBP324	4	30.27	<5	<1	<0.2	10	6	47	3	9	2	<2	<5	<5	<5	1.68	341	<10	148	27	13	<20	<20	11	0.55	1.65	>10.00	0.03	0.16	650	6	<2	9	<1	<5	<10	<0.01	
5DBP325	3	30.22	<5	<1	0.4	18	<2	56	14	18	1	<2	17	<5	<5	>10.00	1190	17	176	13	16	22	<20	32	0.61	2.90	4.08	0.03	0.15	141	13	<2	17	2	5	<10	<0.01	
5DBP326	3	30.31	<5	<1	0.3	20	11	84	6	32	9	0.4	<5	<5	<5	2.20	177	<10	107	63	31	<20	<20	13	1.32	2.24	2.94	0.09	0.30	98	9	3	26	<1	<5	<10	<0.01	
5MDO001	4	30.13	<5	2	0.3	16	4	63	13	30	3	<2	8	29	<5	8.93	287	<10	19	35	57	<20	<20	26	1.58	0.76	4.64	0.43	0.39	609	40	<2	22	2	6	<10	0.01	
5MDO002	3	30.21	<5	<1	0.5	15	<2	57	18	15	<1	<2	20	<5	<5	>10.00	1403	28	38	6	11	28	<20	56	0.48	2.95	2.55	0.05	0.12	129	14	<2	19	3	10	<10	<0.01	
5MDO003	4	30.11	<5	<1	<0.2	16	10	72	5	23	6	<2	<5	<5	<5	1.99	254	<10	146	52	27	<20	<20	13	1.10	1.40	1.74	0.27	0.30	127	10	<2	23	<1	<5	<10	<0.01	
5MDO004	<1	30.34	<5	<1	<0.2	6	3	45	5	9	2	<2	<5	<5	<5	3.78	850	<10	231	34	14	<20	<20	14	0.48	1.42	>10.00	0.10	0.15	361	8	<2	12	<1	<5	<10	<0.01	
5MDO005	2	30.26	<5	<1	<0.2	22	12	83	3	27	10	<2	<5	<5	<5	1.87	164	<10	145	38	28	<20	<20	17	1.39	1.18	0.94	0.41	0.29	144	12	3	30	<1	<5	<10	<0.01	



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SAMPLE NUMBER	ELEMENT UNITS PPM	Zr
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5DBQ302	9	
5DBQ303	6	
5DBQ304	8	
5DBQ305	8	
5DBQ306	5	

5DBQ307	17	
5DBQ308	6	
5DBQ310	7	
5DBQ311	9	
5DBQ312	8	

5DBQ315	10	
5DBQ316	9	
5DBQ317	9	
5DBQ319	10	
5DBQ320	6	

5DBQ321	5	
5DBP309	6	
5DBP313	7	
5DBP314	5	
5DBP318	9	

5DBP322	4	
5DBP323	7	
5DBP324	7	
5DBP325	6	
5DBP326	10	

5MD0001	4	
5MD0002	6	
5MD0003	11	
5MD0004	5	
5MD0005	11	



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	AU Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5MD0006		1	30.18	<5	<1	<0.2	14	12	76	5	23	7	<2	<5	<5	<5	2.08	261	<10	127	48	31	<20	<20	16	1.24	1.99	2.77	0.49	0.31	115	11	<2	24	<1	<5	<10	<.01
5MD0007		2	30.29	<5	<1	<0.2	6	7	53	5	12	3	<2	7	<5	<5	3.53	443	<10	144	44	20	<20	<20	14	0.71	1.75	>10.00	0.19	0.20	547	8	<2	14	<1	<5	<10	<.01
5MD0008		3	30.10	<5	<1	0.5	14	<2	52	17	11	<1	<2	16	<5	<5	>10.00	1657	25	240	6	13	28	<20	51	0.53	2.88	3.25	0.16	0.15	176	12	<2	20	2	5	<10	<.01
5MD0009		3	30.33	<5	<1	<0.2	15	11	74	5	22	7	<2	<5	<5	<5	2.29	249	<10	112	60	26	<20	<20	15	1.28	1.87	2.35	0.32	0.35	126	10	2	25	<1	<5	<10	<.01
5MD0010		5	30.15	<5	<1	<0.2	21	12	79	3	26	10	<2	<5	<5	<5	1.46	113	<10	92	23	18	<20	<20	17	1.29	1.46	1.39	0.47	0.33	165	11	3	32	<1	<5	<10	<.01
5MD0011		<1	30.33	<5	<1	<0.2	23	15	88	3	30	10	<2	<5	<5	<5	1.89	141	<10	148	51	32	<20	<20	19	1.68	1.30	1.04	0.29	0.41	142	14	4	36	<1	5	<10	<.01
5MD0012		3	30.29	<5	<1	<0.2	25	15	61	2	27	10	<2	<5	<5	<5	1.17	142	<10	168	20	17	<20	<20	17	1.40	1.08	1.07	0.55	0.37	166	11	3	36	<1	<5	<10	<.01
5MD0013		4	30.40	<5	<1	0.2	26	16	47	6	25	10	<2	<5	<5	<5	4.88	403	<10	119	14	15	<20	<20	18	1.42	0.66	0.78	0.57	0.36	98	13	<2	38	<1	6	<10	<.01
5MD0014		<1	30.28	<5	<1	0.2	9	<2	35	9	6	<1	<2	6	<5	<5	9.98	1145	<10	334	7	8	<20	<20	23	0.79	1.70	>10.00	0.16	0.20	430	8	<2	20	1	<5	<10	<.01
5MD0015		4	30.24	<5	<1	<0.2	26	17	50	3	24	11	<2	<5	<5	<5	2.53	298	<10	138	17	18	<20	<20	19	1.71	0.69	0.46	0.41	0.43	123	13	<2	39	<1	6	<10	<.01
5MD0016		6	30.33	<5	2	<0.2	28	18	52	3	27	12	<2	<5	<5	<5	2.15	392	<10	176	17	19	<20	<20	21	1.76	0.80	0.38	0.41	0.45	163	14	<2	39	<1	6	<10	<.01
5MD0017		3	30.16	<5	2	0.4	14	<2	42	17	6	<1	<2	18	<5	<5	>10.00	1655	22	232	6	8	26	<20	50	0.99	2.67	2.79	0.10	0.22	277	10	<2	27	3	<5	<10	<.01
5MDP001		4	30.37	<5	2	0.2	9	<2	35	11	5	<1	<2	12	<5	<5	>10.00	1099	16	331	4	8	<20	<20	34	0.82	2.18	>10.00	0.08	0.20	373	8	<2	23	2	<5	<10	<.01
5MDP002		5	30.38	<5	1	0.3	9	2	41	9	7	1	<2	8	<5	<5	>10.00	1435	<10	457	7	13	<20	<20	26	0.88	1.54	>10.00	0.06	0.22	300	9	<2	21	1	<5	<10	<.01
5MDP003		3	30.32	8	2	<0.2	7	4	33	5	5	2	<2	<5	<5	<5	5.29	1834	<10	508	6	9	<20	<20	17	0.93	0.81	>10.00	0.05	0.23	344	6	<2	19	<1	<5	<10	<.01
5MDP004		6	30.19	<5	1	<0.2	7	6	50	3	9	2	<2	<5	<5	<5	3.15	372	<10	151	22	20	<20	<20	13	0.68	1.74	>10.00	0.06	0.19	644	7	<2	12	<1	<5	<10	<.01
5MDP005		3	30.40	<5	2	<0.2	8	3	36	7	6	1	<2	9	<5	<5	7.58	2072	<10	132	7	10	<20	<20	19	1.01	0.97	>10.00	0.06	0.24	339	5	<2	21	<1	<5	<10	<.01
5MDP006		5	30.44	<5	2	<0.2	5	6	53	2	9	3	<2	<5	<5	<5	1.36	266	<10	154	30	19	<20	<20	12	0.73	1.59	>10.00	0.05	0.21	692	6	<2	13	<1	<5	<10	<.01
5MDP007		5	30.23	<5	3	<0.2	5	7	77	24	7	2	<2	<5	<5	<5	1.65	894	<10	406	21	15	<20	<20	11	0.55	1.08	>10.00	0.03	0.17	268	4	<2	15	<1	<5	<10	<.01
5MDP008		4	30.13	<5	2	<0.2	5	7	43	2	7	2	<2	<5	<5	<5	1.82	939	<10	300	26	15	<20	<20	11	0.58	1.23	>10.00	0.04	0.17	254	3	<2	10	<1	<5	<10	<.01
5MDP009		4	30.32	<5	3	<0.2	6	5	44	3	7	2	<2	<5	<5	<5	2.41	1159	<10	495	15	15	<20	<20	12	0.57	1.00	>10.00	0.07	0.16	318	4	<2	11	<1	<5	<10	<.01
5MDP010		<1	30.26	<5	<1	0.3	8	4	47	8	10	1	<2	6	<5	<5	7.08	662	<10	171	23	19	<20	<20	16	0.67	1.94	>10.00	0.12	0.19	451	7	<2	16	1	<5	<10	<.01
5MDP011		3	30.28	<5	1	0.2	8	4	36	8	8	3	<2	9	14	<5	9.33	1143	<10	109	7	14	<20	<20	24	1.03	0.92	>10.00	0.13	0.24	389	8	<2	25	1	5	<10	<.01
5MDP012		2	30.12	<5	3	0.2	6	<2	36	15	12	5	<2	13	96	<5	>10.00	4683	15	24	4	5	21	<20	30	0.44	0.62	>10.00	0.08	0.11	470	9	<2	13	2	5	<10	<.01
5MDP013		3	30.46	<5	1	0.2	6	<2	42	18	14	6	<2	20	108	<5	>10.00	4245	15	20	3	3	26	<20	31	0.36	0.36	>10.00	0.07	0.10	553	8	<2	11	2	5	<10	<.01
5MDP014		<1	30.39	<5	<1	0.5	10	2	36	10	7	<1	<2	11	<5	<5	>10.00	1305	13	442	5	12	<20	<20	32	0.91	1.72	>10.00	0.06	0.21	343	9	<2	22	2	6	<10	<.01
5MDP015		<1	30.39	<5	<1	0.3	6	3	93	13	15	3	0.8	12	<5	<5	>10.00	14607	<10	315	76	33	<20	<20	23	0.43	0.40	5.19	0.07	0.06	436	22	<2	4	2	<5	<10	<.01
5MDP016		3	30.13	<5	1	0.6	5	<2	31	16	7	<1	<2	19	<5	<5	>10.00	15426	17	115	45	<1	23	<20	29	0.39	1.39	1.96	0.03	0.08	125	5	<2	7	3	<5	<10	<.01
5MDP017		3	30.34	<5	2	0.6	9	3	115	20	22	5	<2	26	11	<5	>10.00	11420	33	289	20	80	34	<20	60	0.45	0.87	2.60	0.05	0.11	180	12	<2	13	3	<5	<10	<.01
5MDP018		5	30.35	<5	1	<0.2	12	9	43	4	17	5	0.3	<5	<5	<5	0.58	144	<10	85	62	12	<20	<20	21	1.03	0.33	1.59	0.20	0.31	328	13	<2	10	<1	<5	<10	<.01



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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
5MD0006	10
5MD0007	11
5MD0008	6
5MD0009	9
5MD0010	10
5MD0011	11
5MD0012	10
5MD0013	10
5MD0014	5
5MD0015	9
5MD0016	11
5MD0017	4
5MDP001	4
5MDP002	3
5MDP003	2
5MDP004	6
5MDP005	3
5MDP006	5
5MDP007	3
5MDP008	4
5MDP009	4
5MDP010	6
5MDP011	2
5MDP012	7
5MDP013	8
5MDP014	3
5MDP015	2
5MDP016	2
5MDP017	1
5MDP018	7



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5NF0001		6	30.29	<5	2	<0.2	17	11	85	4	28	7	<2	<5	<5	<5	2.12	260	<10	117	35	33	<20	<20	15	1.30	1.87	2.18	0.20	0.32	108	11	<2	27	<1	<5	<10	<0.01
5NF0002		4	30.22	<5	2	0.5	14	<2	60	19	12	<1	<2	16	<5	<5	>10.00	1533	24	151	9	23	24	<20	46	0.63	3.13	2.43	0.08	0.16	145	15	<2	22	3	11	<10	<0.01
5NF0003		3	30.22	<5	<1	<0.2	13	10	73	5	26	6	<2	<5	<5	<5	1.60	211	<10	112	67	36	<20	<20	15	1.28	1.90	2.24	0.10	0.34	89	10	<2	22	<1	<5	<10	<0.01
5NF0004		1	30.33	<5	<1	<0.2	15	13	74	3	24	7	<2	<5	<5	<5	1.68	182	<10	131	48	33	<20	<20	15	1.50	1.85	2.17	0.13	0.39	106	9	3	29	<1	<5	<10	<0.01
5NF0005		<1	30.24	<5	<1	0.2	11	6	63	8	21	4	<2	<5	<5	<5	4.66	411	<10	132	61	36	<20	<20	15	1.10	1.99	2.04	0.09	0.30	91	10	<2	19	<1	5	<10	<0.01
5NF0006		3	30.34	<5	<1	<0.2	16	9	73	4	24	6	<2	<5	<5	<5	2.11	264	<10	127	47	35	<20	<20	14	1.26	1.59	1.70	0.10	0.32	92	10	<2	24	<1	<5	<10	<0.01
5NF0007		6	30.17	<5	<1	<0.2	43	14	129	5	43	15	<2	<5	<5	<5	2.61	344	<10	137	42	69	<20	<20	16	2.07	1.62	1.04	0.28	0.32	100	12	4	44	<1	7	<10	0.01
5NF0008		5	30.27	<5	<1	<0.2	49	14	136	6	44	16	<2	<5	<5	<5	2.68	320	<10	142	44	73	<20	<20	17	2.21	1.63	1.01	0.29	0.36	99	12	5	46	<1	7	<10	0.01
5NF0009		5	30.21	<5	<1	0.3	28	11	95	8	30	9	<2	<5	<5	<5	4.88	381	<10	138	41	48	<20	<20	16	1.54	2.19	2.13	0.21	0.32	110	12	2	32	<1	8	<10	<0.01
5NF0010		5	30.21	<5	<1	<0.2	17	11	82	4	25	7	<2	<5	<5	<5	1.59	178	<10	122	48	34	<20	<20	15	1.36	2.06	2.64	0.22	0.35	97	10	3	26	<1	<5	<10	<0.01
5NF0011		3	30.17	<5	<1	<0.2	14	12	71	4	24	7	<2	<5	<5	<5	1.53	172	<10	118	44	30	<20	<20	15	1.38	1.94	2.41	0.23	0.34	97	10	2	25	<1	<5	<10	<0.01
5NF0012		5	30.22	<5	<1	0.5	15	<2	60	12	17	2	<2	11	<5	<5	>10.00	882	<10	161	20	24	<20	<20	20	0.98	2.54	4.75	0.17	0.24	218	12	<2	21	2	6	<10	<0.01
5NF0013		1	30.43	<5	2	<0.2	9	6	50	3	9	2	<2	<5	<5	<5	2.78	1141	<10	473	17	19	<20	<20	13	0.68	1.08	>10.00	0.12	0.18	333	5	<2	13	<1	<5	<10	<0.01
5NF0014		7	30.24	<5	2	<0.2	55	17	150	5	62	20	<2	<5	<5	<5	3.23	368	<10	191	45	79	<20	<20	24	2.79	1.55	0.63	0.11	0.43	111	22	5	59	<1	8	<10	0.02
5NF0015		3	30.24	<5	<1	0.3	43	8	118	8	56	18	<2	<5	<5	<5	5.10	222	<10	126	48	66	<20	<20	16	2.44	1.09	0.84	0.10	0.29	84	12	4	54	<1	11	<10	0.01
5NF0016		2	30.19	<5	<1	<0.2	24	14	86	4	22	8	<2	<5	<5	<5	2.66	172	<10	139	36	51	<20	<20	18	2.09	0.99	0.39	0.20	0.39	137	8	5	33	<1	6	<10	<0.01
5NF0017		4	30.17	<5	<1	<0.2	29	19	79	5	21	9	<2	<5	<5	<5	2.83	120	<10	162	32	34	<20	<20	18	2.44	0.90	0.39	0.18	0.55	216	8	5	33	<1	7	<10	<0.01
5NF0018		6	30.26	<5	<1	<0.2	42	15	122	5	33	15	<2	<5	<5	<5	3.08	229	<10	187	43	69	<20	<20	21	2.29	1.16	0.50	0.05	0.33	62	13	3	37	<1	7	<10	<0.01
5NF0019		4	30.30	<5	<1	<0.2	30	12	112	4	36	13	<2	<5	<5	<5	3.11	244	<10	131	49	61	<20	<20	18	2.18	1.15	0.54	0.16	0.35	89	14	4	39	<1	8	<10	0.01
5NF0020		<1	30.26	<5	<1	<0.2	26	17	72	4	18	9	<2	<5	<5	<5	2.32	110	<10	171	23	25	<20	<20	18	2.18	1.07	0.38	0.23	0.52	189	8	4	31	<1	6	<10	<0.01
5NF0021		1	30.26	<5	<1	<0.2	6	7	50	4	9	2	<2	<5	<5	<5	3.23	1023	<10	393	18	18	<20	<20	13	0.62	1.20	>10.00	0.04	0.17	275	4	<2	11	<1	<5	<10	<0.01
5NF0022		2	30.33	<5	<1	<0.2	4	4	48	5	10	2	<2	<5	<5	<5	4.33	644	<10	175	30	26	<20	<20	16	0.86	1.62	8.45	0.04	0.25	244	11	<2	11	<1	<5	<10	<0.01
5NF0023		3	30.12	<5	<1	<0.2	6	7	46	3	7	2	<2	<5	<5	<5	2.80	971	<10	348	19	17	<20	<20	13	0.62	1.19	>10.00	0.05	0.17	273	5	<2	11	<1	<5	<10	<0.01
5NF0024		2	30.34	<5	<1	<0.2	4	8	50	2	6	2	<2	<5	<5	<5	1.71	301	<10	161	26	17	<20	<20	11	0.77	1.65	>10.00	0.03	0.21	651	5	<2	11	<1	<5	<10	<0.01
5NF0025		<1	30.44	<5	<1	<0.2	7	6	51	3	9	2	<2	<5	<5	<5	2.64	925	<10	523	15	18	<20	<20	12	0.62	1.05	>10.00	0.07	0.16	311	5	<2	12	<1	<5	<10	<0.01
5NF0026		2	30.33	<5	<1	<0.2	15	11	71	4	24	7	<2	<5	<5	<5	1.53	159	<10	106	53	31	<20	<20	15	1.51	1.64	1.64	0.15	0.39	77	9	3	27	<1	<5	<10	<0.01
5NF0027		<1	30.13	<5	<1	<0.2	10	8	59	3	17	5	<2	<5	<5	<5	1.43	168	<10	108	37	29	<20	<20	14	1.07	1.58	1.80	0.14	0.29	91	9	<2	18	<1	<5	<10	<0.01
5NF0028		3	30.38	<5	<1	0.3	13	2	64	10	20	3	<2	6	<5	<5	8.38	637	<10	138	30	31	<20	<20	15	0.98	1.83	1.80	0.19	0.24	135	12	<2	19	2	7	<10	<0.01
5NF0029		4	30.21	<5	<1	0.2	43	17	122	5	39	13	<2	<5	<5	<5	2.64	330	<10	151	43	62	<20	<20	16	2.02	1.81	1.30	0.19	0.35	90	11	3	42	<1	6	<10	<0.01
5NF0030		4	30.22	<5	<1	<0.2	45	15	131	5	42	15	<2	<5	<5	<5	2.51	327	<10	141	41	70	<20	<20	17	2.14	1.71	1.06	0.21	0.34	74	11	4	44	<1	7	<10	0.01



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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
5NF0001	10
5NF0002	6
5NF0003	8
5NF0004	8
5NF0005	9
5NF0006	7
5NF0007	7
5NF0008	7
5NF0009	9
5NF0010	8
5NF0011	7
5NF0012	7
5NF0013	5
5NF0014	10
5NF0015	8
5NF0016	8
5NF0017	9
5NF0018	8
5NF0019	7
5NF0020	7
5NF0021	4
5NF0022	4
5NF0023	4
5NF0024	4
5NF0025	4
5NF0026	8
5NF0027	6
5NF0028	6
5NF0029	10
5NF0030	8



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5NFO031		4	30.14	<5	<1	<0.2	48	14	136	5	46	16	<.2	<5	<5	<5	2.50	295	<10	136	41	72	<20	<20	17	2.11	1.66	0.92	0.20	0.33	74	12	4	44	<1	7	<10	<.01
5NFO032		4	30.31	<5	<1	<0.2	27	13	98	4	30	11	<.2	<5	<5	<5	1.96	266	<10	121	41	49	<20	<20	15	1.59	1.81	2.00	0.19	0.32	97	11	3	32	<1	5	<10	<.01
5NFO033		4	30.40	<5	<1	<0.2	21	12	88	4	26	8	<.2	<5	5	<5	1.75	191	<10	131	30	35	<20	<20	15	1.38	2.04	2.59	0.18	0.33	124	10	3	27	<1	<5	<10	<.01
5NFO034		5	30.26	<5	1	0.2	19	14	82	5	29	8	<.2	<5	<5	<5	1.84	197	<10	109	40	35	<20	<20	16	1.63	1.88	2.29	0.22	0.39	102	11	3	29	<1	<5	<10	<.01
5NFO035		3	30.20	<5	<1	<0.2	8	5	49	4	8	2	<.2	<5	<5	<5	4.26	1031	<10	526	19	20	<20	<20	16	0.67	1.34	>10.00	0.10	0.19	346	5	<2	14	<1	<5	<10	<.01
5NFO036		4	30.27	<5	<1	0.3	10	4	67	7	12	2	<.2	<5	<5	<5	6.38	566	<10	404	33	28	<20	<20	21	1.14	2.03	>10.00	0.11	0.30	799	15	<2	20	<1	<5	<10	<.01
5NFO037		1	30.30	<5	<1	<0.2	20	13	58	7	23	8	0.3	<5	<5	<5	1.40	150	<10	105	24	17	<20	<20	19	1.49	0.28	0.44	0.07	0.37	215	8	<2	11	<1	<5	<10	<.01
5NFP001		<1	30.33	<5	<1	0.6	17	<2	63	16	12	<1	0.3	20	6	<5	>10.00	1396	33	184	9	20	23	<20	62	0.62	2.99	2.95	0.03	0.15	167	11	<2	20	3	<5	<10	<.01
5NFP002		<1	30.10	<5	<1	<0.2	7	6	44	4	8	2	<.2	<5	<5	<5	3.90	1084	<10	326	18	18	<20	<20	17	0.92	1.28	>10.00	0.03	0.24	584	9	<2	17	<1	<5	<10	<.01
5NFP003		2	30.31	<5	<1	<0.2	10	7	37	4	7	3	<.2	<5	<5	<5	4.93	1131	<10	870	7	13	<20	<20	22	1.13	0.81	>10.00	0.03	0.29	387	6	<2	25	<1	<5	<10	<.01
5NFP004		<1	30.07	<5	<1	0.6	15	<2	68	14	11	<1	<.2	14	9	<5	>10.00	1483	26	225	10	30	22	<20	58	0.86	2.21	4.81	0.07	0.20	444	13	<2	22	2	11	<10	<.01
5NFP005		2	30.36	<5	<1	0.3	11	<2	45	12	6	1	0.3	8	<5	<5	>10.00	1603	10	80	79	23	<20	<20	9	0.48	0.09	0.19	0.01	0.08	24	6	<2	3	2	<5	<10	<.01
5NFP006		<1	30.30	<5	<1	1.3	7	<2	67	14	19	4	0.9	13	<5	<5	>10.00	>20000	<10	97	120	24	<20	<20	20	0.48	0.67	1.70	0.03	0.04	89	13	<2	5	2	<5	<10	<.01
5NFP007		4	30.28	<5	<1	<0.2	24	11	90	10	26	13	2.3	<5	8	<5	4.57	508	<10	27	30	26	<20	<20	72	2.46	0.27	5.25	0.11	0.41	590	134	<2	9	<1	7	<10	<.01
5NFP008		5	30.32	<5	<1	0.3	12	7	272	30	66	36	1.8	<5	69	<5	8.30	1171	<10	14	70	15	<20	<20	93	1.79	0.09	>10.00	0.17	0.25	841	144	<2	5	<1	<5	<10	<.01



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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
5NFO031	7
5NFO032	8
5NFO033	9
5NFO034	10
5NFO035	4
5NFO036	<1
5NFO037	10
5NFP001	10
5NFP002	2
5NFP003	2
5NFP004	7
5NFP005	2
5NFP006	2
5NFP007	1
5NFP008	4



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STANDARD	ELEMENT	AU	Au	Wt1	PT	PD	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	
NAME	UNITS	PPB		GM	PPB	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
ANALYTICAL BLANK		3	-		14	3	<0.2	<1	<2	<1	<1	<1	<1	<2	<5	<5	<5	<0.01	<1	<10	<1	<1	<1	<20	<20	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<2	<1	<1	<5	<10	<0.01
ANALYTICAL BLANK		<1	-		<5	<1	<0.2	<1	<2	<1	<1	<1	<1	<2	<5	<5	<5	<0.01	<1	<10	<1	<1	<1	<20	<20	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<2	<1	<1	<5	<10	<0.01
ANALYTICAL BLANK		-	-	-	-	-	<0.2	<1	<2	<1	<1	<1	<1	<2	<5	<5	<5	<0.01	<1	<10	<1	<1	<1	<20	<20	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<2	<1	<1	<5	<10	<0.01
ANALYTICAL BLANK		-	-	-	-	-	<0.2	<1	<2	<1	<1	<1	<1	<2	<5	<5	<5	<0.01	<1	<10	<1	<1	<1	<20	<20	<1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<1	<1	<2	<1	<1	<5	<10	<0.01
Number of Analyses		2	-		2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Mean Value		2	-		8	2	0.1	0.5	1	0.5	0.5	0.5	0.5	0.1	3	3	3	0.005	0.5	5	0.5	0.5	0.5	10	10	0.5	.005	.005	0.005	.005	.005	0.5	0.5	1	0.5	0.5	3	5	.005	
Standard Deviation		2	-		8	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		1	0.005		5	1	0.2	1	2	1	1	1	1	0.1	2	5	5	0.05	1	.01	.01	1	1	.01	.01	.01	<0.01	<0.01	<.0001	<0.01	<0.01	.01	.01	.01	.01	.01	.01	.01	<0.01	
BCC GEOCHEM STD 3		-	-	-	-	28.4	876	232	520	555	535	40	2.0	9	280	50	4.42	875	<10	200	123	27	<20	<20	11	4.91	3.77	4.21	0.33	0.20	79	4	<2	16	1	<5	<10	0.02		
BCC GEOCHEM STD 3		-	-	-	-	6.5	861	227	509	539	528	41	2.2	8	272	48	4.42	867	<10	204	130	29	<20	<20	12	4.95	3.72	4.31	0.34	0.20	79	4	<2	16	1	<5	<10	0.03		
Number of Analyses		-	-	-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Mean Value		-	-	-	-	17.5	869	229	514	547	531	41	2.1	8	276	49	4.42	871	5	202	127	28	10	10	11	4.93	3.74	4.26	0.33	0.20	79	4	1	16	1	3	5	0.03		
Standard Deviation		-	-	-	-	15.5	11	4	8	11	5	0.4	0.2	0.3	6	2	-	6	-	3	5	0.9	-	-	0.5	0.03	0.04	0.07	.001	.005	0.2	.03	-	0.3	<.1	-	-	.002		
Accepted Value		-	-	-	-	5.8	820	250	500	600	600	40	2.0	4	310	50	5.00	850	1	220	150	34	16	8	6	4.64	4.90	5.13	0.30	0.20	78	6	2	14	11	12	1	0.03		
HI AU,PT,PDSTD		1820	-	1573	1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HI AU,PT,PDSTD		1801	-	1936	1865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Number of Analyses		2	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Mean Value		1810	-	1755	1910	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Standard Deviation		13	-	257	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		1667	-	1667	1667	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	



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STANDARD NAME	ELEMENT Zr	UNITS PPM
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ANALYTICAL BLANK	<1	
ANALYTICAL BLANK	<1	
ANALYTICAL BLANK	<1	
ANALYTICAL BLANK	<1	
Number of Analyses	4	

Mean Value	0.5	
Standard Deviation	-	
Accepted Value	.01	

BCC GEOCHEM STD 3	1	
BCC GEOCHEM STD 3	2	
Number of Analyses	2	
Mean Value	1	
Standard Deviation	.08	

Accepted Value	2	
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HI AU,PT,PDSTD	-	
HI AU,PT,PDSTD	-	
Number of Analyses	-	
Mean Value	-	
Standard Deviation	-	

Accepted Value	-	
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STANDARD	ELEMENT	AU	Au	Wt1	PT	PD	Ag	Cu	Pb	Zn	Mo	Ni	Co	Cd	Bi	As	Sb	Fe	Mn	Te	Ba	Cr	V	Sn	W	La	Al	Mg	Ca	Na	K	Sr	Y	Ga	Li	Nb	Sc	Ta	Ti	
NAME	UNITS	PPB		GM	PPB	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT	PCT
UMT-1 CANMET STD		64	-		129	122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
UMT-1 CANMET STD		59	-		160	119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses		2	-		2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Value		62	-		145	121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation		4	-		22	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Accepted Value		48	-		128	104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCC GEOCHEM STD 5		-	-	-	-	1.0	89	11	83	7	38	18	<2	6	<5	<5	4.46	795	<10	169	43	112	<20	<20	8	3.04	2.10	0.94	0.05	0.28	32	6	<2	26	<1	8	<10	0.18		
Number of Analyses		-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mean Value		-	-	-	-	1.0	89	11	83	7	38	18	0.1	6	3	3	4.46	795	5	169	43	112	10	10	8	3.04	2.10	0.94	0.05	0.28	32	6	1	26	0.5	8	5	0.18		
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		-	-	-	-	0.7	90	11	80	2	40	18	0.1	1	8	1	4.74	720	0.2	200	54	133	4	2	5	3.09	1.83	1.08	0.06	0.32	39	9	4	-	1	18	1	-		
LOW PT,PD,AUSTD		72	-		63	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Analyses		1	-		1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mean Value		72	-		63	73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Standard Deviation		-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		67	-		67	67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCC GEOCHEM STD 4		-	-	-	-	0.4	230	25	201	5	36	8	0.8	<5	20	<5	2.12	568	<10	49	55	6	<20	<20	5	0.69	1.38	1.28	0.04	0.12	36	2	<2	5	<1	<5	<10	<.01		
Number of Analyses		-	-	-	-	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mean Value		-	-	-	-	0.4	230	25	201	5	36	8	0.8	3	20	3	2.12	568	5	49	55	6	10	10	5	0.69	1.38	1.28	0.04	0.12	36	2	1	5	0.5	3	5	.005		
Standard Deviation		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Accepted Value		-	-	-	-	0.5	290	33	255	4	42	9	0.8	1	30	0.5	2.40	600	0.1	55	80	9	5	1	4	0.77	1.34	1.43	0.04	0.14	39	4	2	7	1	12	1	0.01		



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STANDARD NAME	ELEMENT Zr	UNITS PPM
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UMT-1 CANMET STD	-	
UMT-1 CANMET STD	-	
Number of Analyses	-	
Mean Value	-	
Standard Deviation	-	
Accepted Value	-	

BCC GEOCHEM STD 5	9	
Number of Analyses	1	
Mean Value	9	
Standard Deviation	-	
Accepted Value	9	

LOW PT,PD,AUSTD	-	
Number of Analyses	-	
Mean Value	-	
Standard Deviation	-	
Accepted Value	-	

BCC GEOCHEM STD 4	7	
Number of Analyses	1	
Mean Value	7	
Standard Deviation	-	
Accepted Value	8	



Bondar Clegg

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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5DBC002		4	30.26			<0.2	7	6	48	4	12	5	<.2	<5	<5	<5	1.30	257	<10	89	68	17	<20	<20	14	0.61	0.82	0.95	0.02	0.14	28	8	<2	10	<1	<5	<10	<.01
Duplicate		2				<0.2	7	5	47	4	12	5	<.2	<5	<5	<5	1.26	249	<10	86	67	17	<20	<20	13	0.60	0.80	0.92	0.02	0.14	27	8	<2	10	<1	<5	<10	<.01
5DBC020		4	30.25			<0.2	22	11	79	12	26	9	0.2	<5	<5	<5	1.96	268	<10	301	150	32	<20	<20	15	0.87	0.29	0.40	0.03	0.20	58	10	<2	15	<1	<5	<10	<.01
Duplicate						0.2	21	11	77	12	26	9	<.2	<5	<5	<5	1.98	268	<10	304	154	34	<20	<20	15	0.94	0.30	0.40	0.03	0.22	59	10	<2	15	<1	<5	<10	<.01
5DBC025		4	30.23			<0.2	19	12	89	9	30	9	0.3	<5	<5	<5	1.71	355	<10	234	132	34	<20	<20	16	0.92	0.35	0.65	0.02	0.19	45	11	<2	14	<1	<5	<10	<.01
Duplicate		2																																				
5DB0303		3	30.23	<5	<1	<0.2	6	6	48	5	14	4	<.2	<5	<5	<5	1.11	143	<10	86	110	25	<20	<20	14	0.72	1.32	1.71	0.02	0.23	41	8	<2	9	<1	<5	<10	<.01
Prep Duplicate		<1	10.16	<5	<1	<0.2	7	5	51	5	18	4	<.2	<5	<5	<5	1.24	149	<10	98	100	26	<20	<20	13	0.78	1.72	2.13	0.03	0.22	42	8	<2	12	<1	<5	<10	<.01
5DB0311		<1	30.17	<5	<1	<0.2	7	5	49	6	18	9	<.2	<5	<5	<5	0.97	127	<10	69	118	28	<20	<20	22	0.84	0.35	0.20	0.03	0.15	23	10	3	14	<1	<5	<10	0.02
Duplicate						<0.2	7	5	49	6	18	9	<.2	<5	<5	<5	0.97	127	<10	69	118	29	<20	<20	22	0.85	0.35	0.20	0.03	0.16	23	10	2	14	<1	<5	<10	0.02
5DBP309		3	30.21	<5	<1	0.3	5	<2	38	10	16	4	<.2	8	<5	<5	6.82	764	<10	87	84	28	<20	<20	13	0.62	0.34	0.87	0.02	0.12	81	10	<2	8	1	8	<10	<.01
Duplicate		3		<5	<1																																	
5DBP326		3	30.31	<5	<1	0.3	20	11	84	6	32	9	0.4	<5	<5	<5	2.20	177	<10	107	63	31	<20	<20	13	1.32	2.24	2.94	0.09	0.30	98	9	3	26	<1	<5	<10	<.01
Duplicate						<0.2	19	11	81	5	32	8	<.2	<5	<5	<5	2.08	168	<10	106	65	32	<20	<20	12	1.31	2.17	2.78	0.08	0.30	93	9	2	25	<1	<5	<10	<.01
5MD0010		5	30.15	<5	<1	<0.2	21	12	79	3	26	10	<.2	<5	<5	<5	1.46	113	<10	92	23	18	<20	<20	17	1.29	1.46	1.39	0.47	0.33	165	11	3	32	<1	<5	<10	<.01
Prep Duplicate		4	30.20	<5	2	<0.2	22	15	81	4	28	10	<.2	<5	<5	<5	1.74	121	<10	113	55	27	<20	<20	18	1.99	1.45	1.26	0.47	0.48	166	11	4	39	<1	<5	<10	<.01
5MD0015		4	30.24	<5	<1	<0.2	26	17	50	3	24	11	<.2	<5	<5	<5	2.53	298	<10	138	17	18	<20	<20	19	1.71	0.69	0.46	0.41	0.43	123	13	<2	39	<1	6	<10	<.01
Duplicate		<1		<5	1																																	
5MDP003		3	30.32	8	2	<0.2	7	4	33	5	5	2	<.2	<5	<5	<5	5.29	1834	<10	508	6	9	<20	<20	17	0.93	0.81	>10.00	0.05	0.23	344	6	<2	19	<1	<5	<10	<.01
Duplicate						<0.2	8	6	35	5	6	2	<.2	<5	<5	<5	5.42	1858	<10	520	7	10	<20	<20	18	1.07	0.84	>10.00	0.05	0.26	349	6	<2	21	<1	<5	<10	<.01
5NFO001		6	30.29	<5	2	<0.2	17	11	85	4	28	7	<.2	<5	<5	<5	2.12	260	<10	117	35	33	<20	<20	15	1.30	1.87	2.18	0.20	0.32	108	11	<2	27	<1	<5	<10	<.01
Duplicate						<0.2	16	12	82	4	27	7	<.2	<5	<5	<5	2.05	248	<10	115	34	33	<20	<20	14	1.32	1.75	2.06	0.19	0.32	105	10	<2	27	<1	<5	<10	<.01
5NFO002		4	30.22	<5	2	0.5	14	<2	60	19	12	<1	<.2	16	<5	<5	>10.00	1533	24	151	9	23	24	<20	46	0.63	3.13	2.43	0.08	0.16	145	15	<2	22	3	11	<10	<.01
Duplicate		<1		<5	<1																																	



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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
------------------	-------------------------

5DBC002	4
Duplicate	4

5DBC020	4
Duplicate	4

5DBC025	3
Duplicate	

5DBO303	6
Prep Duplicate	6

5DBO311	9
Duplicate	8

5DBP309	6
Duplicate	

5DBP326	10
Duplicate	10

5MD0010	10
Prep Duplicate	9

5MD0015	9
Duplicate	

5MDP003	2
Duplicate	2

5NFO001	10
Duplicate	8

5NFO002	6
Duplicate	



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5NF0019		4	30.30	<5	<1	<0.2	30	12	112	4	36	13	<2	<5	<5	<5	3.11	244	<10	131	49	61	<20	<20	18	2.18	1.15	0.54	0.16	0.35	89	14	4	39	<1	8	<10	0.01
Prep Duplicate		4	30.08	<5	<1	<0.2	29	12	111	5	33	13	<2	<5	<5	<5	3.08	237	<10	129	50	60	<20	<20	18	2.15	1.11	0.59	0.16	0.35	89	14	5	38	<1	7	<10	0.01
5NF0021		1	30.26	<5	<1	<0.2	6	7	50	4	9	2	<2	<5	<5	<5	3.23	1023	<10	393	18	18	<20	<20	13	0.62	1.20	>10.00	0.04	0.17	275	4	<2	11	<1	<5	<10	<.01
Duplicate						<0.2	8	6	56	4	10	2	<2	<5	<5	<5	3.57	1150	<10	451	19	21	<20	<20	16	0.71	1.27	>10.00	0.05	0.20	313	4	<2	13	<1	<5	<10	<.01
5NF0025		<1	30.44	<5	<1	<0.2	7	6	51	3	9	2	<2	<5	<5	<5	2.64	925	<10	523	15	18	<20	<20	12	0.62	1.05	>10.00	0.07	0.16	311	5	<2	12	<1	<5	<10	<.01
Duplicate		<1		<5	<1																																	
5NF0028		3	30.38	<5	<1	0.3	13	2	64	10	20	3	<2	6	<5	<5	8.38	637	<10	138	30	31	<20	<20	15	0.98	1.83	1.80	0.19	0.24	135	12	<2	19	2	7	<10	<.01
Prep Duplicate		2	30.39	<5	<1	0.3	16	3	74	10	22	4	<2	9	<5	<5	8.56	672	<10	167	42	38	<20	<20	20	1.19	1.86	1.91	0.24	0.30	135	14	<2	24	1	8	<10	<.01
5NF0037		1	30.30	<5	<1	<0.2	20	13	58	7	23	8	0.3	<5	<5	<5	1.40	150	<10	105	24	17	<20	<20	19	1.49	0.28	0.44	0.07	0.37	215	8	<2	11	<1	<5	<10	<.01
Duplicate						0.3	21	15	59	7	24	8	0.2	<5	<5	<5	1.47	155	<10	92	26	18	<20	<20	19	1.58	0.31	0.46	0.08	0.39	221	8	<2	11	<1	<5	<10	<.01



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SAMPLE NUMBER	ELEMENT UNITS	Zr PPM
5NF0019		7
Prep Duplicate		7
5NF0021		4
Duplicate		4
5NF0025		4
Duplicate		
5NF0028		6
Prep Duplicate		7
5NF0037		10
Duplicate		10



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5DBC002		4	30.26			<0.2	7	6	48	4	12	5	<2	<5	<5	<5	1.30	257	<10	89	68	17	<20	<20	14	0.61	0.82	0.95	0.02	0.14	28	8	<2	10	<1	<5	<10	<.01
Duplicate		2				<0.2	7	5	47	4	12	5	<2	<5	<5	<5	1.26	249	<10	86	67	17	<20	<20	13	0.60	0.80	0.92	0.02	0.14	27	8	<2	10	<1	<5	<10	<.01
5DBC020		4	30.25			<0.2	22	11	79	12	26	9	0.2	<5	<5	<5	1.96	268	<10	301	150	32	<20	<20	15	0.87	0.29	0.40	0.03	0.20	58	10	<2	15	<1	<5	<10	<.01
Duplicate						0.2	21	11	77	12	26	9	<2	<5	<5	<5	1.98	268	<10	304	154	34	<20	<20	15	0.94	0.30	0.40	0.03	0.22	59	10	<2	15	<1	<5	<10	<.01
5DBC025		4	30.23			<0.2	19	12	89	9	30	9	0.3	<5	<5	<5	1.71	355	<10	234	132	34	<20	<20	16	0.92	0.35	0.65	0.02	0.19	45	11	<2	14	<1	<5	<10	<.01
Duplicate		2																																				
5DB0303		3	30.23	<5	<1	<0.2	6	6	48	5	14	4	<2	<5	<5	<5	1.11	143	<10	86	110	25	<20	<20	14	0.72	1.32	1.71	0.02	0.23	41	8	<2	9	<1	<5	<10	<.01
Prep Duplicate		<1	10.16	<5	<1	<0.2	7	5	51	5	18	4	<2	<5	<5	<5	1.24	149	<10	98	100	26	<20	<20	13	0.78	1.72	2.13	0.03	0.22	42	8	<2	12	<1	<5	<10	<.01
5DB0311		<1	30.17	<5	<1	<0.2	7	5	49	6	18	9	<2	<5	<5	<5	0.97	127	<10	69	118	28	<20	<20	22	0.84	0.35	0.20	0.03	0.15	23	10	3	14	<1	<5	<10	0.02
Duplicate						<0.2	7	5	49	6	18	9	<2	<5	<5	<5	0.97	127	<10	69	118	29	<20	<20	22	0.85	0.35	0.20	0.03	0.16	23	10	2	14	<1	<5	<10	0.02
5DBP309		3	30.21	<5	<1	0.3	5	<2	38	10	16	4	<2	8	<5	<5	6.82	764	<10	87	84	28	<20	<20	13	0.62	0.34	0.87	0.02	0.12	81	10	<2	8	1	8	<10	<.01
Duplicate		3		<5	<1																																	
5DBP326		3	30.31	<5	<1	0.3	20	11	84	6	32	9	0.4	<5	<5	<5	2.20	177	<10	107	63	31	<20	<20	13	1.32	2.24	2.94	0.09	0.30	98	9	3	26	<1	<5	<10	<.01
Duplicate						<0.2	19	11	81	5	32	8	<2	<5	<5	<5	2.08	168	<10	106	65	32	<20	<20	12	1.31	2.17	2.78	0.08	0.30	93	9	2	25	<1	<5	<10	<.01
5MD0010		5	30.15	<5	<1	<0.2	21	12	79	3	26	10	<2	<5	<5	<5	1.46	113	<10	92	23	18	<20	<20	17	1.29	1.46	1.39	0.47	0.33	165	11	3	32	<1	<5	<10	<.01
Prep Duplicate		4	30.20	<5	2	<0.2	22	15	81	4	28	10	<2	<5	<5	<5	1.74	121	<10	113	55	27	<20	<20	18	1.99	1.45	1.26	0.47	0.48	166	11	4	39	<1	<5	<10	<.01
5MD0015		4	30.24	<5	<1	<0.2	26	17	50	3	24	11	<2	<5	<5	<5	2.53	298	<10	138	17	18	<20	<20	19	1.71	0.69	0.46	0.41	0.43	123	13	<2	39	<1	6	<10	<.01
Duplicate		<1		<5	1																																	
5MDP003		3	30.32	8	2	<0.2	7	4	33	5	5	2	<2	<5	<5	<5	5.29	1834	<10	508	6	9	<20	<20	17	0.93	0.81	>10.00	0.05	0.23	344	6	<2	19	<1	<5	<10	<.01
Duplicate						<0.2	8	6	35	5	6	2	<2	<5	<5	<5	5.42	1858	<10	520	7	10	<20	<20	18	1.07	0.84	>10.00	0.05	0.26	349	6	<2	21	<1	<5	<10	<.01
5NF0001		6	30.29	<5	2	<0.2	17	11	85	4	28	7	<2	<5	<5	<5	2.12	260	<10	117	35	33	<20	<20	15	1.30	1.87	2.18	0.20	0.32	108	11	<2	27	<1	<5	<10	<.01
Duplicate						<0.2	16	12	82	4	27	7	<2	<5	<5	<5	2.05	248	<10	115	34	33	<20	<20	14	1.32	1.75	2.06	0.19	0.32	105	10	<2	27	<1	<5	<10	<.01
5NF0002		4	30.22	<5	2	0.5	14	<2	60	19	12	<1	<2	16	<5	<5	>10.00	1533	24	151	9	23	24	<20	46	0.63	3.13	2.43	0.08	0.16	145	15	<2	22	3	11	<10	<.01
Duplicate		<1		<5	<1																																	



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SAMPLE NUMBER	ELEMENT Zr UNITS PPM
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5DBC002	4
Duplicate	4

5DBC020	4
Duplicate	4

5DBC025	3
Duplicate	

5DB0303	6
Prep Duplicate	6

5DB0311	9
Duplicate	8

5DBP309	6
Duplicate	

5DBP326	10
Duplicate	10

5MD0010	10
Prep Duplicate	9

5MD0015	9
Duplicate	

5MDP003	2
Duplicate	2

5NFO001	10
Duplicate	8

5NFO002	6
Duplicate	



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SAMPLE NUMBER	ELEMENT UNITS	AU PPB	Au Wt1 GM	PT PPB	PD PPB	Ag PPM	Cu PPM	Pb PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	Bi PPM	As PPM	Sb PPM	Fe PCT	Mn PPM	Te PPM	Ba PPM	Cr PPM	V PPM	Sn PPM	W PPM	La PPM	Al PCT	Mg PCT	Ca PCT	Na PCT	K PCT	Sr PPM	Y PPM	Ga PPM	Li PPM	Nb PPM	Sc PPM	Ta PPM	Ti PCT
5NF0019		4	30.30	<5	<1	<0.2	30	12	112	4	36	13	<2	<5	<5	<5	3.11	244	<10	131	49	61	<20	<20	18	2.18	1.15	0.54	0.16	0.35	89	14	4	39	<1	8	<10	0.01
Prep Duplicate		4	30.08	<5	<1	<0.2	29	12	111	5	33	13	<2	<5	<5	<5	3.08	237	<10	129	50	60	<20	<20	18	2.15	1.11	0.59	0.16	0.35	89	14	5	38	<1	7	<10	0.01
5NF0021		1	30.26	<5	<1	<0.2	6	7	50	4	9	2	<2	<5	<5	<5	3.23	1023	<10	393	18	18	<20	<20	13	0.62	1.20	>10.00	0.04	0.17	275	4	<2	11	<1	<5	<10	<.01
Duplicate						<0.2	8	6	56	4	10	2	<2	<5	<5	<5	3.57	1150	<10	451	19	21	<20	<20	16	0.71	1.27	>10.00	0.05	0.20	313	4	<2	13	<1	<5	<10	<.01
5NF0025		<1	30.44	<5	<1	<0.2	7	6	51	3	9	2	<2	<5	<5	<5	2.64	925	<10	523	15	18	<20	<20	12	0.62	1.05	>10.00	0.07	0.16	311	5	<2	12	<1	<5	<10	<.01
Duplicate		<1		<5	<1																																	
5NF0028		3	30.38	<5	<1	0.3	13	2	64	10	20	3	<2	6	<5	<5	8.38	637	<10	138	30	31	<20	<20	15	0.98	1.83	1.80	0.19	0.24	135	12	<2	19	2	7	<10	<.01
Prep Duplicate		2	30.39	<5	<1	0.3	16	3	74	10	22	4	<2	9	<5	<5	8.56	672	<10	167	42	38	<20	<20	20	1.19	1.86	1.91	0.24	0.30	135	14	<2	24	1	8	<10	<.01
5NF0037		1	30.30	<5	<1	<0.2	20	13	58	7	23	8	0.3	<5	<5	<5	1.40	150	<10	105	24	17	<20	<20	19	1.49	0.28	0.44	0.07	0.37	215	8	<2	11	<1	<5	<10	<.01
Duplicate						0.3	21	15	59	7	24	8	0.2	<5	<5	<5	1.47	155	<10	92	26	18	<20	<20	19	1.58	0.31	0.46	0.08	0.39	221	8	<2	11	<1	<5	<10	<.01



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SAMPLE NUMBER	ELEMENT	Zr UNITS PPM
5NF0019		7
Prep Duplicate		7
5NF0021		4
Duplicate		4
5NF0025		4
Duplicate		
5NF0028		6
Prep Duplicate		7
5NF0037		10
Duplicate		10



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Inchcape Testing Services

Certificate of Analysis

CLIENT: APEX GEOSCIENCE LTD.
REPORT: V95-01431.4 (COMPLETE)

PROJECT: 95210
DATE PRINTED: 25-JAN-96 PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM	SAMPLE NUMBER	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM
R2 5DB0301		0.4	<5	10.13	R2 5NF0001		1.3	<5	30.15
R2 5DB0302		0.9			R2 5NF0002		0.6	<5	30.36
R2 5DB0307		1.1			R2 5NF0007		2.2		
R2 5DB0308		0.5	<5	30.21	R2 5NF0008		2.9		
R2 5DB0316		0.7			R2 5NF0012		1.8		
R2 5DB0320		2.9			R2 5NF0013		0.1	<5	30.21
R2 5DB0321		0.9	<5	30.29	R2 5NF0014		2.7		
R2 5DBP309		0.9			R2 5NF0015		1.1		
R2 5DBP313		1.9			R2 5NF0019		0.8		
R2 5DBP314		0.3			R2 5NF0021		0.9	<5	30.23
R2 5DBP318		0.6			R2 5NF0022		1.5		
R2 5DBP322		0.6	<5	30.36	R2 5NF0023		0.7	<5	30.36
R2 5DBP323		1.0			R2 5NF0024		0.3		
R2 5DBP324		0.6			R2 5NF0025		0.7		
R2 5DBP325		0.4			R2 5NF0028		0.6		
R2 5MD0001		1.3	<5	30.46	R2 5NF0032		1.4		
R2 5MD0002		1.2	<5	30.08	R2 5NF0035		0.7		
R2 5MD0004		0.4	<5	30.37	R2 5NF0036		0.7		
R2 5MD0007		0.4			R2 5NFP001		0.6		
R2 5MD0008		3.5			R2 5NFP002		0.8		
R2 5MD0014		1.8			R2 5NFP003		1.7		
R2 5MD0016		4.1			R2 5NFP004		1.3		
R2 5MD0017		1.6			R2 5NFP005		0.8		
R2 5MDP001		0.5			R2 5NFP006		0.7		
R2 5MDP002		0.8			R2 5NFP007		0.8	<5	30.20
R2 5MDP003		0.7			R2 5NFP008		0.5	<5	30.42
R2 5MDP004		0.9							
R2 5MDP005		1.2							
R2 5MDP006		0.9							
R2 5MDP007		0.6	<5	30.49					
R2 5MDP008		1.3	<5	30.21					
R2 5MDP009		0.4	<5	30.36					
R2 5MDP010		0.6							
R2 5MDP011		0.6	<5	30.18					
R2 5MDP012		2.3							
R2 5MDP013		0.4							
R2 5MDP014		0.3							
R2 5MDP015		0.7							
R2 5MDP016		0.7							
R2 5MDP017		0.4							



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Certificate of Analysis

CLIENT: APEX GEOSCIENCE LTD.
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STANDARD NAME	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM	STANDARD NAME	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM
HIGH GOLD STANDARD		-	514	-					
Number of Analyses		-	1	-					
Mean Value		-	514.0	-					
Standard Deviation		-	-	-					
Accepted Value		-	500	-					



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Certificate of Analysis

CLIENT: APEX GEOSCIENCE LTD.
REPORT: V95-01431.4 (COMPLETE)

PROJECT: 95210
DATE PRINTED: 25-JAN-96
PAGE 3

SAMPLE NUMBER	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM	SAMPLE NUMBER	ELEMENT UNITS	BLEG PPB	Au30 PPB	Au Wt1 GM
5DB0308		0.5	<5	30.21					
Duplicate			<5	30.36					



Bondar Clegg

Inchcape Testing Services

Geochemical Lab Report

CLIENT: APEX GEOSCIENCE LTD.

REPORT: V95-01431.1 (COMPLETE)

PROJECT: 95210

DATE PRINTED: 25-JAN-96

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Pt PPB	Pd PPB	Rh PPB	Os PPB	Ir PPB	Ru PPB
R2 5MDP003		4	<20	<20	<5	<10	<1	<50
R2 5MDP004		2	<20	<20	<5	<10	<1	<50
R2 5NFP001		2	<20	<20	<5	<10	<1	<50
R2 5NFP003		7	<20	<20	<5	<10	<1	<50

Bondar-Clegg & Company Ltd.

130 Pemberton Avenue, North Vancouver, B.C., V7P 2R5, Canada

Tel: (604) 985-0681, Fax: (604) 985-1071

CLIENT: APEX GEOSCIENCE LTD.
REPORT: V96-00005.4 (COMPLETE)

PROJECT: 95210
DATE PRINTED: 31-JAN-96 PAGE 1C

[illegible]

Activation Laboratories Ltd.

Work Order: 9663

Report: 9588

SAMPLE DESCRIPTION	AU PPB	*AU PPB
5DBO 319	5	<50
5MDP 003	<5	<50
5MDP 009	10	<50
5MDP 013	10	<50
5MDP 017	10	<50
5NFO 002	5	<50

*THIS IS THE SPECIAL FIRE ASSAY USING LEAD SHOT. BACKGROUND IS ELEVATED
DUE TO HIGH BLANK LEVELS IN THE LEAD SHOT.

SASKATCHEWAN RESEARCH COUNCIL GEOCHEMICAL LAB

=====

60 BESSERER APEX GEOSCIENCE FEB 27/96 (6) [HEAVY MINERALS]
 1 SAMPLE WEIGHT IN GRAMS OT96.15

2 VISIBLE GOLD GRAIN COUNT

3
4
5
6
7
8
9

SWT V.G.

5DBJ 1	19.63	31
5DBJ 9	7.06	0
5DBJ 12	18.32	3
5DBJ 17	3.20	0
5DBJ 20	12.06	0
5DBJ 23	4.57	0

REPORT

=====

125.31= ESTIMATED WEIGHT OF Au IN MICROGRAMS

160 BESSERER APEX GEOSCIENCE FEB 27/96 (6) [GOLD GRAIN COUNT] (31) 5DBJ 1

- 1 GOLD GRAIN WIDTH IN MICRONS
- 2 GOLD GRAIN LENGTH IN MICRONS
- 3 GOLD GRAIN DESCRIPTION
- 4 GOLD GRAIN WIDTH IN MICRONS
- 5 GOLD GRAIN LENGTH IN MICRONS
- 6 GOLD GRAIN DESCRIPTION
- 7 GOLD GRAIN WIDTH IN MICRONS
- 8 GOLD GRAIN LENGTH IN MICRONS
- 9 GOLD GRAIN DESCRIPTION

W	L	D
40	100	A
40	140	A
40	80	A
60	60	A
60	80	A
80	120	A
80	100	A
80	100	A
80	160	A
80	140	A
80	80	A
80	120	A
80	140	A
80	100	A
100	140	A
100	180	A
100	100	A
120	140	A
120	160	A
120	180	A
120	140	A
120	120	A
120	120	A
140	240	A
140	160	A
160	160	A
160	180	A
160	160	A
160	240	A
200	200	A
220	300	A

REPORT

=====

13.64= ESTIMATED WEIGHT OF Au IN MICROGRAMS

160 BESSERER APEX GEOSCIENCE FEB 27/96 (6) [GOLD GRAIN COUNT] (3) 5DBJ 12

- 1 GOLD GRAIN WIDTH IN MICRONS
- 2 GOLD GRAIN LENGTH IN MICRONS
- 3 GOLD GRAIN DESCRIPTION
- 4 GOLD GRAIN WIDTH IN MICRONS
- 5 GOLD GRAIN LENGTH IN MICRONS
- 6 GOLD GRAIN DESCRIPTION
- 7 GOLD GRAIN WIDTH IN MICRONS
- 8 GOLD GRAIN LENGTH IN MICRONS
- 9 GOLD GRAIN DESCRIPTION

	W	L	D
	80	140	A
	100	160	A
	160	200	A

SASKATCHEWAN RESEARCH COUNCIL GEOCHEMICAL LAB

=====

M61 BESSERER APEX GEOSCIENCE FEB 27/96 (6) [INDICATER MINERALS]

1 SAMPLE WEIGHT IN GRAMS OT96.15

2 MAGSTREAM MID FRACTION IN GRAMS

3 MAGSTREAM HEAVY FRACTION IN GRAMS

4 VISIBLE PYROPIC GARNET GRAIN COUNT

5 VISIBLE Cr-DIOPSIDE GRAIN COUNT

6

7

8

9

	SWT	MID	HEAVY	PG	CD
--	-----	-----	-------	----	----

5DBJ 1	19.63	9.24	10.38	0	0
--------	-------	------	-------	---	---

5DBJ 9	7.06	1.85	5.21	0	0
--------	------	------	------	---	---

5DBJ 12	18.32	3.69	14.63	0	0
---------	-------	------	-------	---	---

5DBJ 17	3.20	2.40	0.80	0	0
---------	------	------	------	---	---

5DBJ 20	12.06	1.60	10.46	0	0
---------	-------	------	-------	---	---

5DBJ 23	4.57	0.97	3.59	0	0
---------	------	------	------	---	---

SASKATCHEWAN RESEARCH COUNCIL GEOCHEMICAL LAB

=====

80 BESSERER APEX GEOSCIENCE MAR. 8/96 (8) [HEAVY MINERALS]

1 SAMPLE WEIGHT IN GRAMS

OT96.18

2 VISIBLE GOLD GRAIN COUNT

3
4
5
6
7
8
9

SWT V.G.

5DBJ 2	119.49	0
5DBJ 3	111.60	1
DBJ 4	66.28	1
5DBJ 5	84.82	0
5DBJ 7	65.07	0
DBJ 8	63.22	0
DBJ 16	30.30	0
5DBJ 22	50.09	1

REPORT

=====

.71= ESTIMATED WEIGHT OF Au IN MICROGRAMS

M80 BESSERER APEX GEOSCIENCE MAR. 8/96 (8) [GOLD GRAIN COUNT] (1) 5DBJ 3

- 1 GOLD GRAIN WIDTH IN MICRONS
- 2 GOLD GRAIN LENGTH IN MICRONS
- 3 GOLD GRAIN DESCRIPTION
- 4 GOLD GRAIN WIDTH IN MICRONS
- 5 GOLD GRAIN LENGTH IN MICRONS
- 6 GOLD GRAIN DESCRIPTION
- 7 GOLD GRAIN WIDTH IN MICRONS
- 8 GOLD GRAIN LENGTH IN MICRONS
- 9 GOLD GRAIN DESCRIPTION

W L D

60 100 A

REPORT

=====

1.05= ESTIMATED WEIGHT OF Au IN MICROGRAMS

180 BESSERER APEX GEOSCIENCE MAR. 8/96 (8) [GOLD GRAIN COUNT] (1) 5DBJ 4

- 1 GOLD GRAIN WIDTH IN MICRONS
- 2 GOLD GRAIN LENGTH IN MICRONS
- 3 GOLD GRAIN DESCRIPTION
- 4 GOLD GRAIN WIDTH IN MICRONS
- 5 GOLD GRAIN LENGTH IN MICRONS
- 6 GOLD GRAIN DESCRIPTION
- 7 GOLD GRAIN WIDTH IN MICRONS
- 8 GOLD GRAIN LENGTH IN MICRONS
- 9 GOLD GRAIN DESCRIPTION

W L D

80 100 A/I

REPORT

=====

29.62= ESTIMATED WEIGHT OF Au IN MICROGRAMS

M80 BESSERER APEX GEOSCIENCE MAR. 8/96 (8) [GOLD GRAIN COUNT] (1) 5DBJ 22

- 1 GOLD GRAIN WIDTH IN MICRONS
- 2 GOLD GRAIN LENGTH IN MICRONS
- 3 GOLD GRAIN DESCRIPTION
- 4 GOLD GRAIN WIDTH IN MICRONS
- 5 GOLD GRAIN LENGTH IN MICRONS
- 6 GOLD GRAIN DESCRIPTION
- 7 GOLD GRAIN WIDTH IN MICRONS
- 8 GOLD GRAIN LENGTH IN MICRONS
- 9 GOLD GRAIN DESCRIPTION

W L D

200 360 A

APPENDIX V

SUMMARY OF ELEMENTS ANALYZED DURING 1995

APPENDIX V

SUMMARY OF ELEMENTS ANALYZED DURING 1995

(APEX Project 95210)

Elements Analyzed by ICP/FA/AAS/FA/DCP/INAA*

Element Symbol	Element	Detection	Element Symbol	Element	Detection
Ag	Silver	0.2 ppm	Nb	Niobium	1 ppm
Al	Aluminum	0.01 %	Ni	Nickel	1 ppm
As	Arsenic	5 ppm	Os***	Osmium	10 ppb
Au***	Gold	1 ppb	Pb	Lead	2 ppm
Au*****	Gold	5 ppb	Pd**	Palladium	1 ppb
Au****	Gold	50 ppb	Pd***	Palladium	20 ppb
Ba	Barium	2 ppm	Pt**	Platinum	5 ppb
Bi	Bismuth	5 ppm	Pt***	Platinum	20 ppb
Ca	Calcium	0.01 %	Rh***	Rhodium	5 ppb
Co	Cobalt	1 ppm	Ru***	Ruthenium	50 ppb
Cd	Cadmium	0.2 ppm	Sb	Antimony	5 ppm
Cr	Chromium	1 ppm	Sc	Scandium	5 ppm
Cu	Copper	1 ppm	Sn	Tin	20 ppm
Fe	Iron	0.01 %	Sr	Strontium	1 ppm
Ga	Gallium	2 ppm	Ta	Tantalum	10 ppm
Ir***	Iridium	1 ppb	Te	Tellurium	10 ppm
K	Potassium	0.01 %	Ti	Titanium	0.01 %
La	Lanthanum	1 ppm	V	Vanadium	1 ppm
Li	Lithium	1 ppm	W	Tungsten	20 ppm
Mg	Magnesium	0.01 %	Y	Yttrium	1 ppm
Mn	Manganese	1 ppm	Zn	Zinc	1 ppm
Mo	Molybdenum	1 ppm	Zr	Zirconium	1 ppm
Na	Sodium	0.01 %			

NOTE: *ppm denotes parts per million, ppb denotes parts per billion, % denotes weight per cent; ** Analysis by FA with DCP finish; *** Analysis by INAA; **** Analysis at Activation using special methodology; All other elements by ICP; *****FA/AA

APPENDIX VI

PAN CONCENTRATE DESCRIPTION SHEET

Legend

- Hvy** - Denotes the visually estimated total amount of heavy minerals in the panned concentrate
- Grnt** - Denotes the visually estimated total amount of garnets as a subtotal of the Hvy column
- Mtlc** - Denotes the visually estimated total amount of metallic minerals as a subtotal of the Hvy column
Denotes the visually estimated total amount of metallic rods
Denotes the visually estimated total amount of metallic balls
- Mag** - Denotes the visually estimated total amount of magnetic minerals as a subtotal of the Mtlc column
- non-M** - Denotes the visually estimated total amount of non magnetic minerals as a subtotal of the Mtlc column
Denotes the visually estimated total amount of non metallic rods
Denotes the visually estimated total amount of non metallic balls
- Sulph** - Denotes the visually estimated total amount of sulphides as a subtotal of the Mtlc column
- Au grains** - Denotes the total amount of gold grains recovered per sample by the SRC:
- the number of grains present
pkd. - the number of gold grains picked

PAN CONCENTRATE DESCRIPTION SHEET

Ells River Resources Inc.

(APEX Project 95210)

Sample Number	UTM		NTS	Hvy %	Grnt %	Mtlc %	Metallic Profile			Au grains		Equivalent Silt Sample	Percentage Sulphides
	Easting	Northing					Mag	non-M	Sulph	#	pkd.		
5DBJ001	441300	6342435	74E/4	35	5	30	10	5	15	31	31	5DBC001	43
5DBJ002	441500	6343050	74E/4	10	7	3	2.5	0.5	trc	0	0	5DBC002	trc
5DBJ003	436442	6349887	74E/4	6	3	3	1	1	1	1	1	5DBC003	17
5DBJ004	421482	6356672	84H/1	25	10	15	8	5	2	1	1	5DBC006	8
5DBJ005	427055	6356909	74E/4	5	2	3	2	1	trc	0	0	5DBC007	trc
5DBJ006	438402	6342125	84H/1	trc	trc	trc	trc	trc	0	0	0	5DBC008	0
5DBJ007	438310	6341569	84H/1	3	1	2	1	1	trc	0	0	5DBC009	trc
5DBJ008	437369	6341460	84H/1	3	1	2	1	1	trc	0	0	5DBC010	trc
5DBJ009	434334	6357312	84H/8	30	5	25	10	10	5	0	0	5DBC011	17
5DBJ010	442341	6349026	74E/5	3	1	2	1	1	0	0	0	5DBC012	0
5DBJ011	441041	6350622	74E/5	15	2	13	6	7	trc	0	0	5DBC015	trc
5DBJ012	439533	6351665	74E/5	70	30	40	15	24	1	3	3	5DBC016/17	1.5
5DBJ013	439173	6353340	84H/8	25	10	15	10	5	trc	0	0	5DBC018	trc
5DBJ014	437869	6354566	84H/8	80	20	60	40	20	trc	0	0	5DBC020	trc
5DBJ015	434077	6356945	84H/8	70	30	40	25	13	2	0	0	5DBC021	3
5DBJ016	436465	6344876	84H/1	20	2	18	7	5	6	0	0	5DBC022	30
5DBJ017	437325	6341230	84H/1	25	10	15	9	3	3	0	0	5DBC023	12
5DBJ018	439085	6364321	84H/8	30	10	20	10	10	0	0	0	5DBC024	0
5DBJ019	438856	6370201	84H/8	40	10	30	15	15	0	0	0	5DBC025	0
5DBJ020	438100	6367930	84H/8	80	50	30	15	5	0	0	0	none	0
5DBJ021	437968	6366564	84H/8	10	2	8	7	1	trc	0	0	5DBC026	trc
5DBJ022	439085	6364321	84H/8	10	2	8	4	2	2	1	1	5DBC024	20
5DBJ023a	439885	6363072	84H/8	20	5	15	5	10	0	0	0	5DBC027	0
5DBJ023b	439885	6363072	84H/8	60	25	35	15	20	0	0	0	5DBC027	0
5DBJ024	441387	6360730	74E/5	50	20	30	20	10	trc	0	0	5DBC028	trc

17760002

FEB 16 1996

ELLS RIVER RESOURCES INC.

17424 - 106A Ave.,

Edmonton, Alberta

T5S 1E6

Phone: (403) 484-3842, Fax: (403) 486-0039

February 16, 1996

Mr. Brian Hudson, P. Geol.
Manager, Mineral Agreements
Alberta Energy, Mineral Resources
9915 - 108 St.,
Edmonton, Alberta
T5K 2C9

Dear Mr. Hudson:

RE: Metallic and Industrial Minerals Permits

Please find enclosed two (2) copies of the Assessment Report for the five (5) permits we hold in northeastern Alberta.

With reference to Appendix "G", the Apex Geoscience report, the final report is not included as it has not yet been completed. We have inserted a letter from Apex Geoscience as an interim measure.

As you are aware, the assessment report for the Northern Block is due on February 18, 1996, whereas the Western Block is not due until March 29, 1996. Since we have combined the Northern and Western Blocks into one report, the Northern Block due date took precedent.

When we receive the final copy of the Apex Geoscience report, we will immediately forward two (2) copies for insertion in Appendix "G".

Trusting this to be satisfactory. If you have any questions or concerns, please contact me at your convenience.

Yours truly,

ELLS RIVER RESOURCES INC.

Mr. Maurice Keylor
President

enclosure: 2 copies of Assessment Report

ASSESSMENT REPORT
FOR
METALLIC AND INDUSTRIAL MINERALS PERMITS

9393100086
9393100087
9393110069
9393110070
9393110071

HELD BY
ELLS RIVER RESOURCES INC.

Submitted February 14, 1996

on behalf of
Ells River Resources Inc.

by
Mr. Henry Cieszynski, C.E.O.
Mr. Maurice Keylor, President
Mr. Raymond Caron, Director

with contributions by:
Mr. Colin Cieszynski
Mr. Tony Cowan
Mr. Neil Firt
Mr. Kelly Keylor
Mr. Kris Keylor

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(1)

I. SUMMARY

This report is being submitted by Ells River Resources Inc. for assessment work performed on the five (5) Metallic and Industrial Minerals permits as described in Section III. These permits involve two (2) properties we have defined as the "Western Block" and the "Northern Block" located in the Fort McMurray/Fort MacKay region of northeastern Alberta.

An exploration program was developed consisting of:

- a) information gathering - researching published reports, examination of maps, et cetera,
- b) area reconnaissance - mapping, examination of terrain, et cetera,
- c) accessing permits area - cutting access routes onto permitted lands,
- d) sample collection - outcrops, stream sediments, etc.,
- e) sample analysis - panning, detailed microscopic work, assaying, consultant input,
- f) documentation.

While in the field, rock samples and panned concentrates were collected. Rock samples from both areas have been assayed by certified Canadian laboratories for gold and other minerals. In addition, multi-element analysis was done on several of the samples. The panned concentrates were visually examined with the aid of a microscope to detect sulphides, gold and other heavy minerals. From this detailed examination selected concentrates were sent to assay laboratories for further analysis.

Ells River Resources will continue to explore the Western Block in order to carry out further analytical work. However, the Northern Block will be surrendered back to the Crown.

II. INTRODUCTION

There have been reports of gold and other precious metals being found in Alberta for over one hundred (100) years. These finds tended to small in comparison to the more promising discoveries in British Columbia and the Yukon. Consequently activity was centered in those areas drawing attention away from Alberta's potential. In addition, oil and gas finds, and the vast tar sands in northeastern Alberta overshadowed and exceeded any known metallic mineral potential.

In the 1990s Alberta's potential for producing gold and other precious metals was re-discovered. Individuals and companies began submitting applications to the Government of Alberta for permits to explore for metallic and industrial minerals throughout the province.

Mr. Henry Cieszynski, a financial analyst and prospector from Toronto, Ontario, began to investigate certain regions of northeastern Alberta with the intent of securing metallic and mineral permits. Eventually he secured several permits in this region thus allowing him to explore the Cretaceous and Devonian stratigraphy, on the properties, for economic mineral deposits. Cretaceous rocks present in the Western Block include the Clearwater, Grand Rapids, Shaftesbury, Dunvegan, and LaBiche Formations as well as the Smoky Group. The Middle Devonian rocks are found on the Northern Block (Green, 1970).

Shortly after receiving the permits, Mr. Cieszynski formed a partnership with Mr. Maurice Keylor, an Edmonton businessman. The mandate of the partnership was to explore the newly acquired properties and identify regions with anomalous metal concentrations for more detailed follow-up work. This work has included prospecting, examining heavy mineral concentrates, geochemical analysis on both rock and stream silt samples and basic research.

On December 9, 1994, Ells River Resources Inc. (formerly 635216 Alberta Ltd.) was incorporated pursuant to the Business Corporations Act (Alberta). The company named Mr. Cieszynski as Chief Executive Officer and Mr. Keylor as President. On July 7, 1995 the permits held by Mr. Cieszynski were transferred to Ells River Resources Inc. with Memorandums of Registration completed August 9, 1995.

This report is being submitted by Ells River Resources Inc. for assessment work related to five (5) mineral permits described in Section III. For assessment purposes, the work completed is for the following periods:

- A. Northern Block: October 20, 1993 to October 20, 1995
- B. Western Block : November 29, 1993 to November 29, 1995.

III. PERMIT TABULATION

The properties held by Ells River Resources Inc. are covered by five (5) Metallic and Industrial Minerals permits. The properties have been divided into two distinct areas which we have defined as the "Northern Block" and the "Western Block" (Figure 1). A tabulation of the permits follows:

<u>Location</u>	<u>Permit #</u>	<u>Date Issue</u>	<u>Legal</u>	<u>Area (Ha)</u>
Northern	9393100086	Oct 20/93	East Sec, 105-9-W East Sec, 106-9-W4	6,348
Northern	9393100087	Oct 20/93	East Sec, 107-9-W4	8,816
Western	9393110069	Nov 29/93	Sec 1-36, 95-13-W4	9,216
Western	9393110070	Nov 29/93	Sec 1-36, 96-13-W4	9,216
Western	9393110071	Nov 29/93	Sec 1-36, 97-13-W4	9,216

(4)

IV. PROPERTIES

This section will describe the location, physiography, access, general work completed, field activity, rock samples, panned concentrates, analysis conducted, and an overall conclusion for both the Northern and Western Blocks.

A. NORTHERN BLOCK

1. Location

The Northern Block is situated in northeastern Alberta centered near 58 degrees 15'N latitude and 111 degrees 25'W longitude. It is located one hundred ten (110) kilometers north of Fort MacKay and is directly east of Wood Buffalo National Park. The area consists of approximately fifteen thousand one hundred sixty-three (15,163) hectares bounded on the west by the Athabasca River in Townships 105, 106, and 107 of Range 9.

2. Physiography

The permits are situated on the vast Athabasca Delta Plain, a sand plain that is generally flat. Elevations range from two hundred twenty (220) meters along the Athabasca River up to two hundred sixty (260) meters above the river. The area is forest covered with muskeg in places.

3. Access

The Northern Block can be accessed either by air (fixed wing or helicopter) or by water directly from the Athabasca River.

Alberta Lands and Forests own a registered airport at Embarras. This turf facility, identified as Runway 1129, is four thousand four hundred (4,400) feet long by two Hundred (200) feet wide with limited maintenance and no winter operations.

The Athabasca River can be readily navigated by jet boat. These can be rented or leased in Fort McMurray.

4. Work Completed

The work completed on the Northern Block consisted of preliminary research, prospecting, sample collection, and sample analysis.

5. Field Activity

The field activity on the Northern Block consisted of a single site inspection at which time prospecting, and sample collection was completed.

i) July 9-10, 1994

The Northern block was accessed via jet boat from Fort McMurray. Two (2) days were spent prospecting and collecting samples. Rock samples R5 to R7, R10, and R11 and panned concentrates R2 to R4, R8, R9, R12, R15, R16, and R19 were collected from the property (Figure 2). In

addition, two (2) water samples of spring water were collected.

6. Sample Analysis

The outcrops along the Athabasca River, on the permits, consist of thick sand beds with some clay. These exposures are likely post-glacial deltaic and aeolian sediments (Rhine and Smith, 1988). All of the rock samples collected consisted of non-consolidated sands. The panned concentrates were derived from the same sands that are exposed along the banks of the Athabasca River.

Samples R5, R7, R11, and the spring water were analyzed by Instrumental Neutron Activation Analysis (INAA) at the University of Alberta's Slowpoke Reactor Facility for gold and several other elements (Appendix F). The panned concentrates were analyzed in great detail by Henry Cieszynski with a twenty (20) power microscope. (Appendix C).

7. Conclusion

The analysis done on samples from the Northern Block did not show any mineralization. Due to this and the unfavorable geology, the permits that comprise the Northern Block (9393100086 and 9393100087) are being surrendered back to the Crown.

All of the expenses incurred in completing the previously described assessment work on this property is being applied as assessment credit to the permits for the Western Block as per our discussions with the Department of Mines and Minerals (Appendix D).

B. WESTERN BLOCK

1. Location

The Western Block is situated in northeastern Alberta centered near 57 degrees 20'N latitude and 112 degrees 00'W longitude. It is located eighty (80) kilometers northwest from the city of Fort McMurray, consisting of approximately twenty-seven thousand six hundred forty-eight (27,648) hectares within Townships 95, 96 and 97 in Range 13.

2. Physiography

The permits are situated on the eastern flank of the Birch Mountains. The southern two thirds of the property is fairly flat and dominated by areas of muskeg. In the northern part of the permits, the Birch Mountains rise to the northwest, providing more relief where mixed deciduous and coniferous forest is prevalent. Elevation ranges from three hundred forty (340) metres in the southeast, along the Ells River, up to seven hundred sixty (760) metres in the northwest corner of the property.

Three (3) streams and several of their tributaries flow across the permits. The largest of these is the Ells River which cuts the south east corner of the permits and flows to the east. The other two (2) streams are the Joslyn Creek and Tar River which generally run southeast through the property. The streams are sourced in the Birch Mountains and drain into the Athabasca River which is located approximately eighteen (18) kilometers to the east of the permits. The Tar and Ells Rivers have distinct valleys where Cretaceous rocks outcrop.

3. Access

The property can be accessed by either helicopter or all-terrain vehicles (eg. quads, snowmobiles, etc.).

A helicopter can be used to access several landing sites which have been identified on Figures 3 and 4. It takes approximately twenty-five (25) minutes to fly from Fort McMurray.

Access to the southeast corner of the property is gained by driving fifty-two (52) kilometers from Fort McMurray to Fort MacKay on paved highway No. 63. Off road vehicles are then used on cutlines, seismic lines, quad trails, trapper trails, et cetera that lead from Fort MacKay to the permits, approximately twenty-three (23) kilometers to the west.

4. Work Completed

Assessment work performed includes research, cutting a trail into the permits, prospecting, sample collection, and sample analysis. Samples include rocks, stream silts and heavy mineral concentrates. The heavy mineral concentrates were visually examined using a twenty (20) power microscope by Henry Cieszynski in our own facility (Appendix C). The rock and stream silt samples were analyzed by several certified Canadian assay laboratories using various methods, including fire assay and ICP. Cores, from oil and gas wells, were also examined at the E.R.C.B. facility in Calgary.

Locations of the samples collected are shown in Figures 3 and 4.

5. Field Activity

Several trips were made to gather data relating to the site over an eighteen month (18) period.

i) May 16-19, 1994

We attempted to gain access to the permits via seismic cutlines west of Fort MacKay. As the terrain was inaccessible by four-wheel drive vehicles, quads were used on existing seismic cutlines. A quad trail was cut to a point on the Ells River approximately two hundred (200) metres inside the eastern boundary of the property. Two (2) stream sediment samples were collected along with a

rock sample from shale outcrops at Location N. A rock sample was also collected from Location O. The stream sediments were panned down to heavy mineral concentrates.

ii) May 25 to June 1, 1994

On May 26, a fly-over of the permits was made using a fixed wing aircraft from Fort McMurray. This was done to determine the topography and conditions that exist on the permits as well as to check for alternate access. The remainder of the time was spent extending the quad trail further west within the permits. A heavy mineral concentrate and rock sample was collected from a dry stream at Location Y.

iii) June 6-11, 1994

One and a half (1 1/2) days were spent completing the quad trail to Location H on the Ells River. River sediments were panned to heavy mineral concentrates and rock samples were collected over two and a half (2 1/2) days. The panned concentrates were collected from Locations A, B, D, G, H, J, and M along the Ells River, while rock samples were collected from Locations B, D and H.

iv) June 21-24, 1994

Cores from three (3) wells previously drilled on the permits were examined and logged at the E.R.C.B. facility in Calgary. Samples were obtained from the cores for more detailed analysis.

v) November 16-17, 1994

Representatives from Noranda toured the Western Block. The property was accessed by helicopter and one (1) day was spent prospecting and sampling.

vi) January 24-25, 1995

The property was accessed by snowmobile from Fort MacKay. A total of thirty-nine and a half (39 1/2) kilograms of material was collected from Location B.

vii) May 18, 1995

A helicopter was used to gain access to rock exposures on the Tar River. Rock samples Tar95-02, 03, 05, 06, 07, and 08 were collected along with heavy mineral concentrates Tar95-01, 04, and 09. The heavy mineral concentrates were from panned stream sediments.

vii) August 14-15, 1995

A representative from Royal Oak Mines toured the Western Block. Rock samples and heavy mineral concentrates were collected across the permits with the aid of a helicopter. The rock samples are identified as RO-ELLS-1 to RO-ELLS-4, RO-TAR-7, 9, and 10. The heavy mineral concentrates are

RO-ELLS-5, RO-JOS-6, and RO-TAR-8.

ix) October 3-8, 1995

A program to map and sample the permits was carried out under the supervision of Apex Geosciences Ltd. Rock samples, channel samples, stream silts, and panned concentrates were collected along the Ells River, Joslyn Creek, and Tar River. All access was via helicopter from Fort McMurray. We have made no attempt to document locations of samples, sample description, or sample analysis in this report. The details of this program are included in the Apex Geoscience Report (Appendix G).

6. Description of Rock Samples

Numerous rock samples were taken from several locations on the three (3) main streams in the area, the Ells River, Joslyn Creek, and Tar River.

i) Ells River

a) Location B

There seems to be three (3) distinct sandstones in this area. We have divided them into three (3) groups, described as follows:

LB - Well lithified, buff colored sandstone from the Clearwater Formation. Located in the colluvium on a cut-bank on the Ells River. Samples were collected approximately ten (10) meters above river level.

AB - Well lithified dark colored sandstone-siltstone from the Clearwater Formation. Samples from cut-bank on Ells River slightly higher up than LB. AB is finer grained than LB.

RR - Well lithified dark colored sandstone boulders in the Ells River.

b) Location D

Well lithified dark colored sandstone, from the Clearwater Formation, was sampled at Location D. This was from slumped outcrop on the bank of the Ells River.

c) Location H

Samples from outcrop of Clearwater formation on the Ells River. Well lithified dark colored sandstone. Some of the samples from this location contained disseminated and fracture filling sulphides (pyrite).

d) Location N

Sample from a shale outcrop exposed on the bank of the Ells River.

e) Location O

Sample with abundant sulphides (pyrite) found in float along the Ells River.

f) Location Y

Well lithified dark colored sandstone of the Clearwater Formation. Samples from float along small intermittent creek bed.

g) Location 1E

The Clearwater Formation is exposed on a large cutbank of the Ells River. The exposure consists dominantly of dark grey slumped shale with a couple of resistant sandstone beds. Three (3) different samples were taken at this point:

RO-ELLS-1 - Lithified, grey colored, fine grained sandstone from a two and a half (2 1/2) foot thick laminated layer. Sample is from near the bottom of the section.

RO-ELLS-2 - Friable, laminated, grey colored, fine grained sandstone from a two (2) foot thick resistant section. Sample is from near the top of the section.

RO-ELLS-3 - Well lithified, very fine grained sandstone from the rubble at the base of the section. Weathered to a red and purple color.

h) Location 2E

Exposure of Clearwater shales on a cut-bank, on the south side of the Ells River. The outcrop consists of slumped and weathered shale with some ironstone nodules. The sample was noted as:

RO-ELLS-4 - Well cemented, dark grey, sandy siltstone that weathers to a red color. Sample was taken from a slumped ironstone boulder.

ii) Tar River

The Tar River was sampled at three (3) different sites.

a) Site 1

This is the most northerly point explored on the Western Block.

Tar95-02 - Dark grey shale with some silt laminations and occasional orange-red colored nodules. Sample from a cut bank of slumped shale on the Tar River.

Tar95-03 - Grey to yellow to orange colored zone in grey shale. This sample is from the same

outcrop as Tar95-02 and weathers red.

b) Site 2

- Tar95-05 - Composite sample of forty (40) meter thick sandstone outcrop on north side of Tar River. Consists mostly of fine to coarse grained unconsolidated sand.
- Tar95-06 - Yellow stained black shale from an eight (8) foot thick bed within sandstone from Tar95-05.
- Tar95-07 - Ironstone nodules from top of sandstone outcrop, that are in the scree at the base of the cliff. These are composed of red-brown colored sandstone that is cemented by an iron cement. From the top of the sandstone in Tar95-05.
- Tar95-08 - Sandstone as in Tar95-05, but collected from the lower sixty (60) feet of the outcrop.
- RO-TAR-10 - Light grey fine grained sandstone with brown to black carbonaceous streaks. Sample is from large outcrop on Tar River where samples Tar95-05 to Tar95-08 were also collected.

c) Site 3

- RO-TAR-7 - Sample from outcrop of black shale on the Tar River.
- RO-TAR-9 - Ironstone boulder in the Tar River. Sample contains abundant sulphides.

iii) Joslyn Creek

No significant rock samples were taken here.

7. Description of Panned Concentrates

In order to gain a better understanding of the material being observed at a particular location, our policy was to pan small samples down to obtain a heavy mineral concentrate. This procedure was conducted at several locations either on site or in our facility.

i) Ells River

a) Location B

The sulphides found were surprisingly coarse with few fine grains. There was little black sand and most rock grains had a lighter brown oxide coating. There was quite a bit of material that resembled a lava flow but on

closer examination was all "brassy" sulphides. One piece found during panning measured three (3) inches across and one half (1/2) inch thick with many pieces up to one quarter (1/4) inch across. A flake of gold measuring approximately three hundred (300) microns was found.

ii). Tar River

Six (6) panned concentrates were collected at three (3) sites (Figure 4) along the Tar River as follows:

a) Site 1:

Tar95-01 - Point bar gravel material showed a low concentration of black sand. Quartz was abundant in two (2) forms; rounded to well rounded, clear to yellow grains and less abundant well-formed, elongated, clear quartz crystals. Massive and cubic yellow/gold as well as orangey and reddish colored sulfides are common. There are also occasional pink and orange-brown garnets.

Tar95-04 - This sample was panned in our facility not the field. The results were very similar to those of Tar95-01.

b) Site 2

Tar95-05P - This panned sample showed an abundance of angular quartz and quartz crystals with some magnetite. The occasional garnet was also evident.

Tar95-08P - Similar to Tar95-05P.

Tar95-09 - Similar to Tar95-01 at Site 1 but with less sulphides.

c) Site 3

RO-TAR-8 - Visually appeared as a lighter colored black sand. Microscopic examination indicated that the black sand grains were approximately seventy-five (75) per cent replaced with sulphides. They were very similar to the sulphides noted on the Joslyn but somewhat coarser. This may indicate proximity to the Shaftesbury Formation.

iii) Joslyn Creek

Visually this sample looked like normal black sand with the possibility there may be a small amount of metallics. Microscopic examination indicated there was about a twenty (20) per cent replacement of the black sand grains

with fine sulphides. There was a wide variety of sulphides such as "brassy" cubes, balls, irregular "silvery" pieces, and "coppery" pieces. A flake of gold measuring approximately two hundred fifty (250) microns was found.

8. Sample Analysis

a) Rock Samples

Numerous assays were carried out on a total of forty-eight (48) rock samples which were sent out to eleven (11) different facilities for analysis. The analytical methods included fire assay (several varying procedures) and cyanide leaching for precious metals while Inductively Coupled Plasma (ICP) and neutron activation (INAA) was used for multi-element analysis. The samples sent out, assay labs, and gold results are summarized in Appendix E, Tables 1 to 5. All of the analytical results are included in Appendix F.

b) Panned Concentrates

The heavy mineral concentrates were all derived from stream sediments. The sediments were panned down to a heavy mineral concentrate in the field and then again in our facility to obtain what we call a "super concentrate." These concentrates were then examined by Henry Cieszynski with a twenty (20) power microscope in our facility. Some of these concentrates contain abundant sulphides while gold grains were observed in two samples. Selected rock fragments from sample Location B were sent to Sherritt for identification by scanning electron microscope. One of these samples assayed Two point one (2.1) grams per ton when analyzed by ICP. Appendix E, Table 6 is a summary of the analysis on the concentrates.

8. Conclusion

We feel that the exploration program developed and deployed by Ells River Resources Inc. was successful in identifying areas of potential mineralization.

The presence of abundant pyrite and gold values in the panned concentrates seems to indicate that mineralization exists on the property. A maximum value, for gold, of two thousand one hundred (2100) parts per billion [also expressed as two point one (2.1) grams per ton] was obtained by fire assay, on selected rock fragments from the panned concentrates found at Location B.

Though some assay results, on samples taken from the areas of potential mineralization, indicate the presence of gold, the results were widely varied and in some instances could not be duplicated.

The rock samples collected at Locations B and H were tested for gold using a variety of assay methods. Some of the results obtained indicate gold values at above economic recovery levels.

To confirm these results, additional samples were forwarded to other laboratories, who could not duplicate the results. The reason or reasons for these discrepancies have not been accurately identified. However, there is speculation that due to the nature of the rock materials in this region, conventional assay procedures may not accurately measure mineralization levels.

The stratigraphy of the two (2) northerly areas under permit (9393110070 and 9393110071) indicate the presence of the Whitespecks Zone which can potentially host sulphide - base metal style mineralization. These areas require further detailed examination and analysis to exploit the Whitespeck potential.

It is the intention of Ells River Resources Inc. to maintain the three (3) permits held for the Western Block (9393110069, 9393110070, and 9393110071) in their entirety.

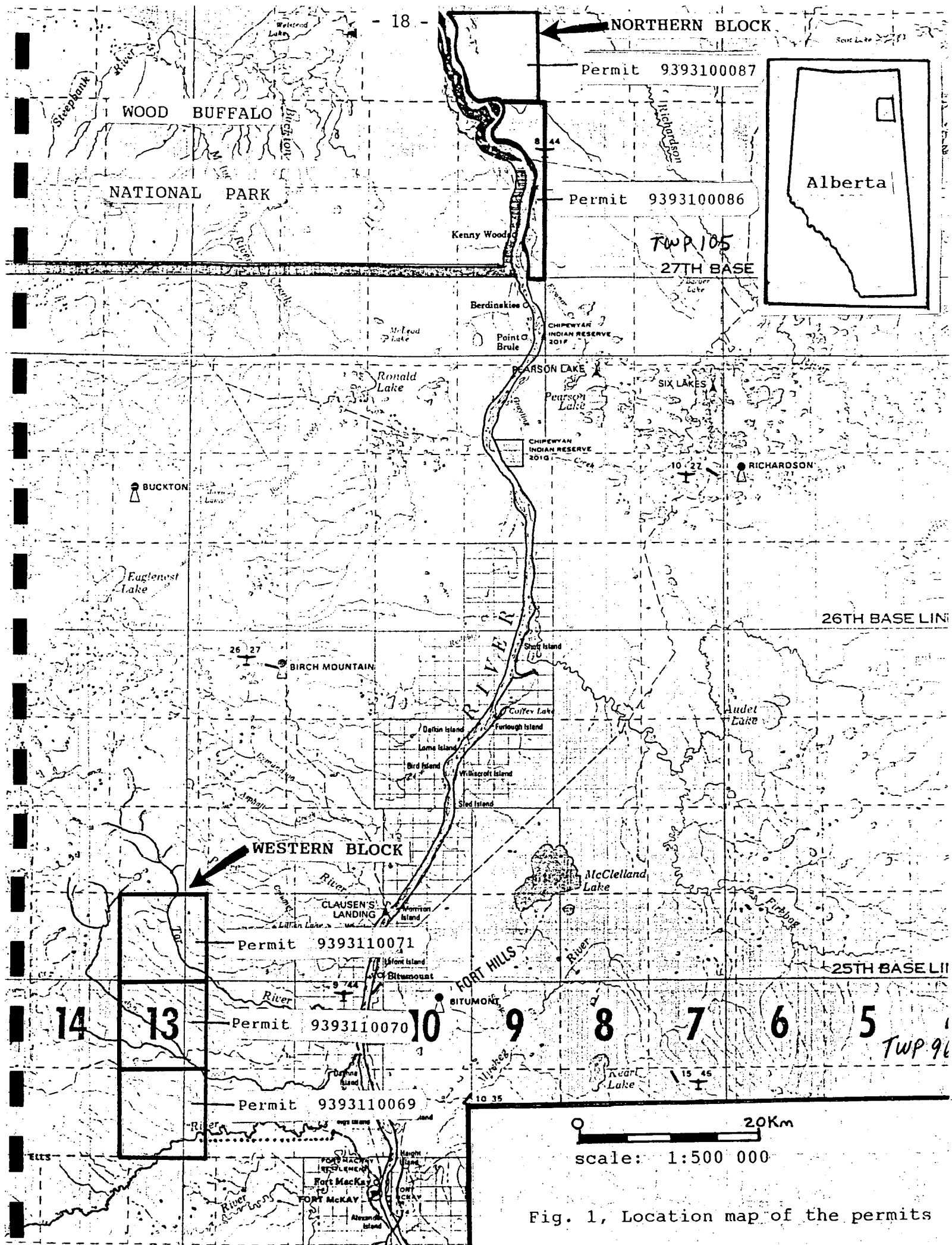
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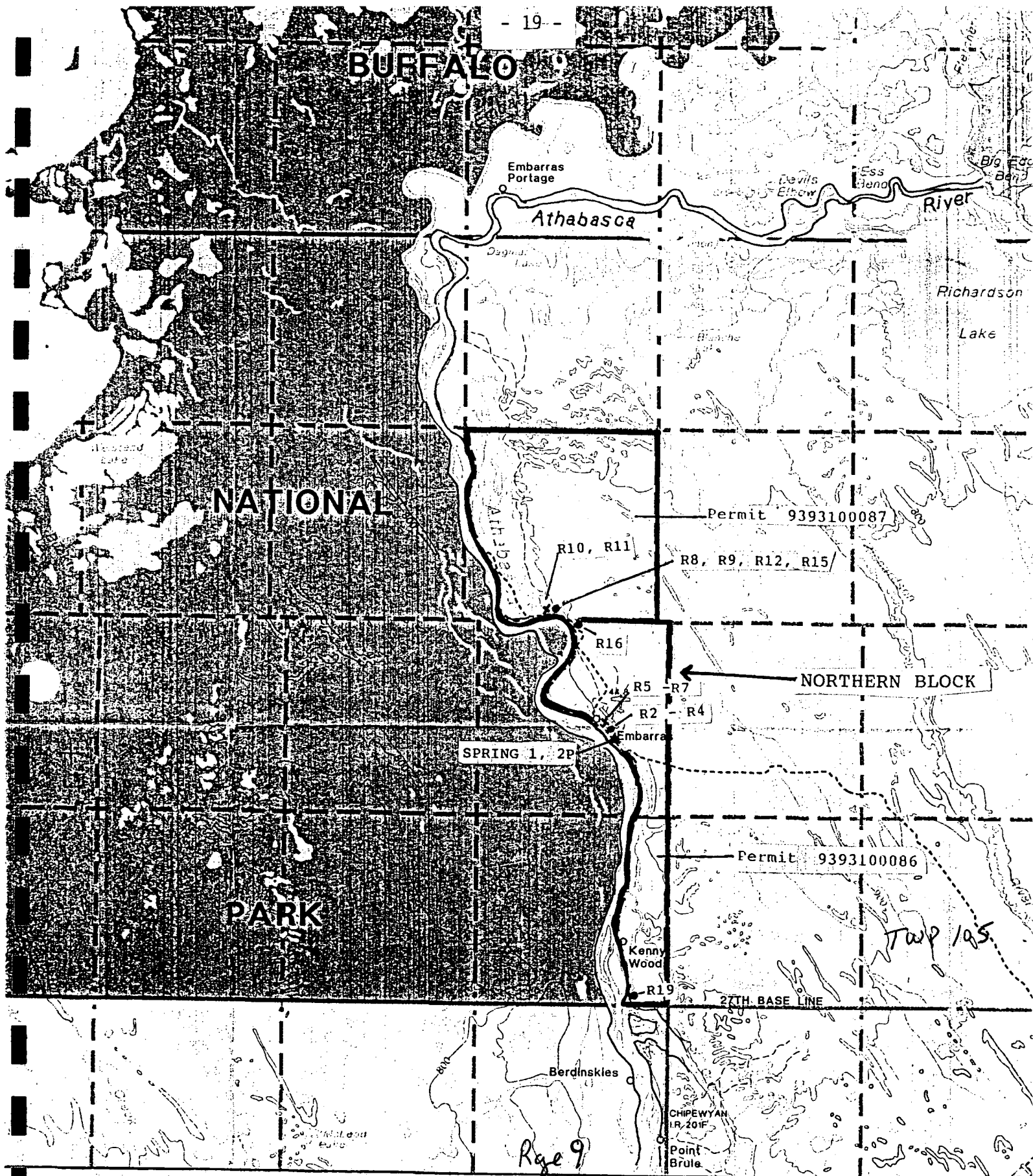
V. BIBLIOGRAPHY

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Rhine, J.L., and Smith, D.G. (1988): The late Pleistocene Athabasca braid delta of northeastern Alberta, Canada: a Paraglacial drainage system affected by aeolian sand supply. in: Fan deltas: Sedimentary and tectonic settings, eds. W. Nemec and R.J. Steele, Blackie and Son. p 158-169.

APPENDIX A
ILLUSTRATIONS





rock sample.....✕
panned concentrate...•

spring water sample.....▲

0 10 Km

scale: 1:250 000

Fig. 2, Location map of Northern Block permits and samples



Permit Boundary

57°25'

Twp 9N

TAR 95-1
RO-TAR-7,9
RO-TAR-8
TAR 95-4
TAR 95-2,3

Tar River

RO-TAR-10
TAR 95-05, 06, 07, 08
TAR 95-05P, 08P, 09

Rge 13W4

Permit 9393110070

LEGEND

- rock sample.....▲
- panned concentrate...●
- stream.....
- contour.....600
- helicopter landing..H
- permit boundary.....

scale:

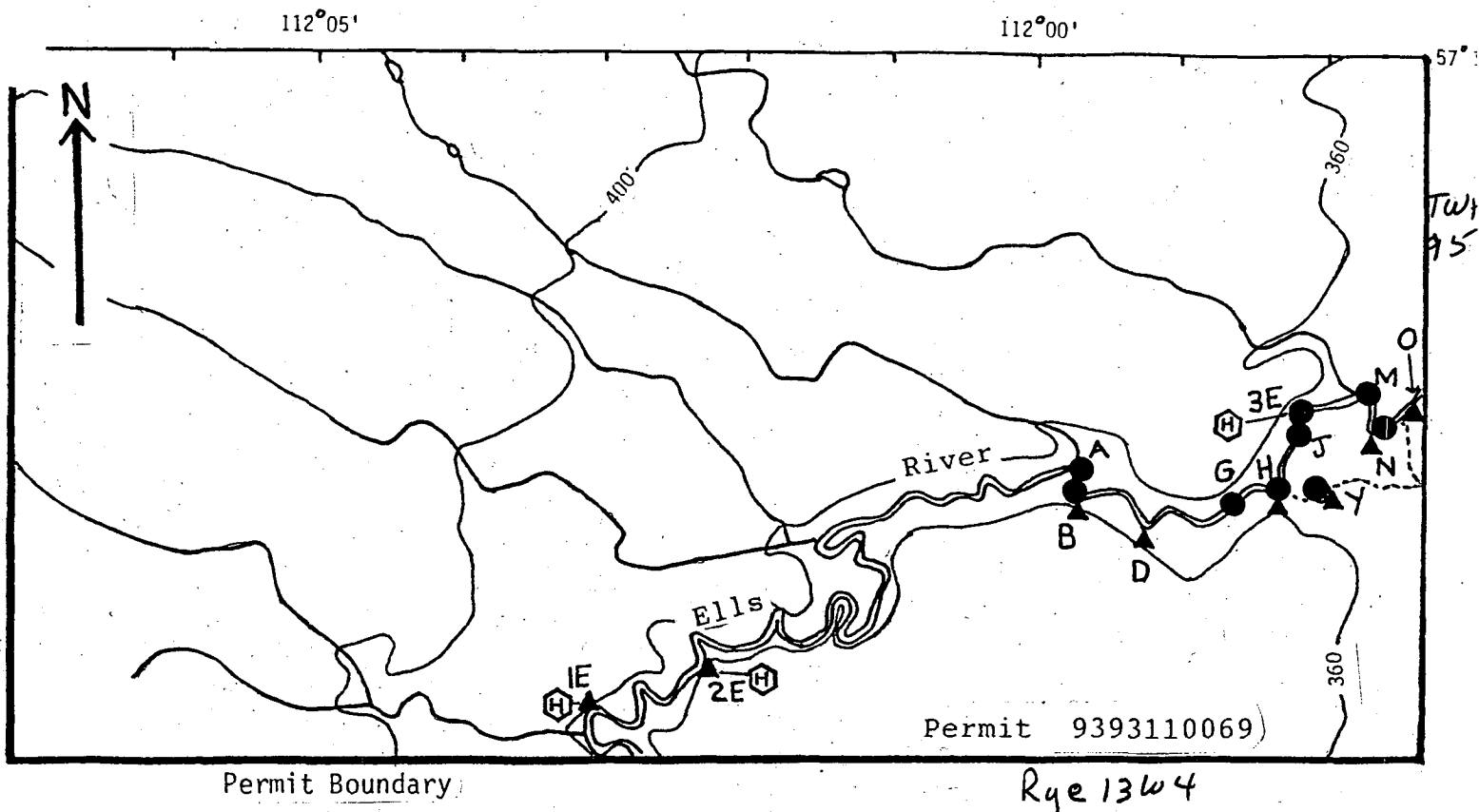


1:50 000

C.I. = 50 meters

Joslyn Creek
RO-JOS-6

Fig. 4, sample locations along the Tar River



LEGEND

- location of rock sample.....▲
- location of panned concentrate.....●
- helicopter landing....H
- quad trail.....---
- contour.....400
- stream.....

0 2 Km

1:50 000

C.I. = 40 meters

Fig. 3, Sample locations along the Ells River

①

APPENDIX B
AUTHORS' QUALIFICATIONS

- 23 -

I, HENRY CIESZYNSKI, of the City of Toronto, in the Province of Ontario; state the following to be true:

I have received a Bachelor of Commerce degree from the University of Alberta, Edmonton, in 1965.

I have been engaged in mineral exploration for over thirty (30) years.

I hold a Prospector's License, Number A 51688, in the Province of Ontario.

I am the Chief Executive Officer of Ellis River Resources Inc.

I am a co-author of this Assessment Report.

Dated this the 9th day of February, 1996; in the City of Toronto, in the Province of Ontario.

Witnessed by:

BRIAN CHRISTIE

Henry Cieszynski

I, MAURICE KEYLOR, of the City of Edmonton, in the Province of Alberta; state the following to be true:

I have received a Telecommunications Electrician diploma from the Northern Alberta Institute of Technology in 1969.

I have been interested in mineral exploration for over thirty (30) years.

I am the President of Ells River Resources Inc.

I am a co-author of this Assessment Report.

Dated this the 13th day of February, 1996; in the City of Edmonton, in the Province of Alberta.

Witnessed by:

KEUN DAVID

Maurice Keylor

I, RAYMOND CARON, of the City of Edmonton, in the Province of Alberta; state the following to be true:

I have received a Bachelor of Commerce degree from the University of Alberta, Edmonton, in 1978.

I have held the position of Vice-President, Finance for Caron Services Ltd., for over fifteen (15) years.

I am a Director of Ells River Resources Inc.

I am a co-author of this Assessment Report.

Dated this the 13th day of February, 1996; in the City of Edmonton in the Province of Alberta.

Witnessed by:

KEVIN DAVID

Raymond Caron

The co-authors of this Assessment Report, Mr. Henry Cieszynski, Mr. Maurice Keylor, and Mr. Raymond Caron would like to thank the following for their contributions:

Mr. Colin Cieszynski
Mr. Tony Cowan
Mr. Kelly Keylor
Mr. Kris Keylor
Mr. Neil Firt

Much of the material contained within this report was obtained from field notes, observations, and/or research conducted by these individuals.

Their kind assistance has been of great benefit to Ells River Resources Inc., for which we are grateful.

APPENDIX C

MR. HENRY CIESZYNSKI

MR. H. CIESZYNSKI

Mr. Henry Cieszynski has played a key role in the activities conducted on these permits since their original acquisition. To provide the reader with a better understanding of Mr. Cieszynski's background, we have submitted the following description of his education, interest in minerals, experience, memberships, approach, and reference materials used regarding these permits.

His interest in prospecting extends back to the early 1960s when he would spend his weekends panning and sluicing for gold on the North Saskatchewan River in the Edmonton area.

Upon graduating from the University of Alberta, with a Bachelor of Commerce degree in 1965, he moved to Toronto; where he became a financial analyst specializing in the mining sector. This work exposed him to a tremendous amount of technical information which has allowed him evaluate mining companies, their processes, and procedures on both a domestic and international scale.

Mr. Cieszynski continued to pursue his prospecting hobby in Toronto and has become a licensed prospector in the province of Ontario. In addition he is a member of The Prospectors and Developers Association of Canada and the Canadian Institute of Mining and Metallurgy.

Over the past few years he has attended numerous geological conferences and seminars. In addition, he has had the opportunity to travel to several mining fields in Canada, the United States, and Mexico. Examples include Inco at Sudbury, Kidd Creek at Timmins, various placer operations in British Columbia, and Sonora Mines in California.

All his experiences have provided him with the expertise concerning how mining prospects should be evaluated at each stage of development.

The approach he has used in assessing and evaluating these permits has been methodical, yet simple. Initially, prospective sites were researched for favorable geological potential using a variety of resources for information (see REFERENCES following). Once the permits were obtained a strategy was developed for initial exploration, which involved prospecting, sampling, and sample analysis.

Samples that were obtained were meticulously analyzed by Mr. Cieszynski using a twenty (20) power microscope. Though extremely time consuming, he worked through many pounds of material grain by grain. The painstaking efforts he made gave him a thorough understanding of the changes occurring between sample locations. In addition, this minute examination provided him with the

knowledge which allowed him to direct the efforts the corporation to target specific areas for further sampling.

In conjunction with this detailed analytical work Mr. Cieszynski was also consulting various authorities regarding his observations for their comments and advice. Again, adding further to his knowledge of the area.

It is obvious the Mr. Cieszynski's hobby has evolved, over a period of thirty (30) years, into a serious, calculated, and methodical business that has now been expressed in this project through Ells River Resources Inc.

REFERENCES

Along with maps, aeromagnetic data, and air photos the following reports have been reviewed by Mr. H. Cieszynski.

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A. W. Norris, 1963

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APPENDIX D
STATEMENT OF EXPENDITURES
and
DECLARATION OF EXPENDITURES

STATEMENT OF EXPENDITURES

Equipment (includes F/A & Rentals)	\$ 58,800.18 ✓
Exploration Costs (includes Assays, Maps, Supplies, License & Permits)	48,981.39 ✓
Travel and Accommodation (includes, Hotel, Fuel & Food)	6,467.35 ✓
Office (includes Professional Fees)	11,641.63 ✓
Salaries & Wages	10,159.64
Directors' Soft Costs (Note 1)	53,200.00
Northern Property (Note 2)	<u>3,087.07</u>
TOTAL CLAIM FOR ASSESSMENT PURPOSES	\$ 192,337.26
REQUIRED TO MAINTAIN WESTERN BLOCK PERMITS (27,648 hectares @ \$ 5 / hectare)	<u>138,240.00</u>
BALANCE TO BE APPLIED TO NEXT REPORTING PERIOD, November 30, 1995 to November 29, 1997	\$ 54,097.26 =====

This balance is to be applied to our Metallic
and Industrial Minerals Permit # 9393110071
for the next reporting period.

NOTES

1. Directors' Soft Costs

A considerable amount of time has been expended by the founders
and other directors in this project. They have received a total
of "zero" remuneration from the corporation. However to
accurately reflect the time they have expended in assessment work
the following charges have been levied as "soft costs":

233.600 days @ \$ 150/day	\$ 35,040.00
60.000 days @ \$ 200/day	12,000.00
28.133 days @ \$ 200/day	5,626.67
5.333 days @ \$ 100/day	<u>533.33</u>

TOTAL DIRECTORS' SOFT COSTS	\$ 53,200.00 =====
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2. Northern Block Expenditures

Equipment	\$ 1,572.72
Exploration Costs	938.26
Travel and Accommodation	146.09
Salaries & Wages	<u>430.00</u>

TOTAL NORTHERN BLOCK EXPENDITURES	\$ 3,087.07
	=====

DECLARATION OF EXPENDITURES

We, RAYMOND CARON, of the City of Edmonton, in the Province of Alberta; and DALE ROBERTS, of the City of St. Albert, in the Province of Alberta; hereby certify and declare that the financial information contained in the "STATEMENT OF EXPENDITURES" found in Appendix D of this Assessment Report pertaining to the Metallic and Industrial Minerals Permits (9393100086, 9393100087, 9393110069, 9393110070, and 9933110071) held by Ells River Resources Inc., are true and correct to the best of our knowledge.

The receipts substantiating these expenses have duly logged and are available for inspection upon request.

Dated this the 9th day of February, 1996 in the City of Edmonton,
in Province of Alberta

Witnessed by:

KEVIN DAVID

Witnessed by:

M. P. KEYLER

Raymond Caron

Director

Ells River Resources Inc.

Dale Roberts

Director

Ells River Resources Inc.

APPENDIX E
SUMMARY OF ASSAYS

SUMMARY OF ASSAY RESULTS

Table 1. Location B - LB (Light Buff Sandstone)

<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (oz/t or ppb)
Acme	Apr 12/95	Rock 1	Fire Assay	11 ppb
Acme	May 4/95	Sample 1	Fire Assay	5 ppb
Acme	May 4/95	Slag	Fire Assay	< 2 ppb
Activation	Jun 12/95	HB1	INAA	< 5 ppb
Activation	Jun 12/95	HB2	INAA	< 5 ppb
Activation	Jun 12/95	HB3	INAA	< 5 ppb
Canmet	Dec 5/95	Sandstone	Pb-Ag F.A.	60 ppb
Canmet	Dec 5/95	Sandstone	Tin - Te F.A.	130 ppb
Chauncey	Dec 5/95	Sample 5	Standard Geochem	200 ppb
Chauncey	Dec 5/95	Sample 5	Combination	0.089
Chauncey	Jan /95	#2	Sinter 800 C (a)	0.044
Chauncey	Jan /95	#2	Sinter 60-800 (a)	0.029
Chauncey	Jan /95	#2	Sinter 800 C (b)	0.053
Chauncey	Jan /95	#2	Sinter 60-800 (b)	0.044
Chauncey	Jan /95	#2	Sinter 800 C (c)	0.019
Chauncey	Jan /95	#2	Sinter 60-800 (c)	0.034
Chauncey	Jan /95	#2	Fire Assay (HCl)	0.166
Chauncey	Jan /95	#2	Roast	0.054
Chauncey	Jan /95	CH-1	Fire Assay	0.010
Chauncey	Jan /95	CH-1	Roast	0.041
Chauncey	Jan /95	#2	Roast	0.039
Chauncey	Jan /95	#2	Sintering	0.45
Chauncey	Jan /95	#2	Fire Assay (HCl)	0.20
Chauncey	Jan /95	#2	Roast (HCl)	0.107
Chauncey	Jan /95	#2	Sinter (HCl)	0.62
Chauncey	Jan /95	CH-1 fine	Fire Assay	0.044
Chauncey	Jan /95	CH-1 fine	Roast	0.068
Chauncey	Jan /95	CH-1 fine	Sintering	0.058
Chauncey	Jan /95	CH-1 fine	Fire Assay (Acid)	0.042
Chauncey	Jan /95	CH-1 fine	Roast (Acid)	0.085
Chauncey	Jan /95	CH-1 fine	Sinter (Acid)	0.097
Chauncey	Jan 27/95	CH-1 fine	Sinter (Bicarb A)	0.073
Chauncey	Jan 27/95	CH-1 fine	Sinter (Bicarb B)	0.087
Chauncey	Jan 27/95	CH-1 coarse	Sinter (Bicarb A)	0.083
Chauncey	Jan 27/95	CH-1 coarse	Sinter (Bicarb B)	0.102
Chauncey	Jan 25/95	HC-1 fine	Acid-pretreat	0.024
Chauncey	Jan 25/95	HC-1 fine	Acid / CN-L	0.098
Chauncey	Jan 25/95	HC-1 coarse	Acid-pretreat	0.024
Chauncey	Jan 25/95	HC-1 coarse	Acid / CN-L	0.073

Chauncey	Mar	2/95	CH-1 fine	CN-L (1 hr)	0.092
Chauncey	Mar	2/95	CH-1 fine	CN-L (16 hr)	0.234
Chauncey	Mar	2/95	CH-1 fine	CN-L (88 hr)	0.049
Chauncey	Mar	2/95	CH-1 fine	CN-L (132 hr)	0.039
Chauncey	Mar	2/95	CH-1 fine	CN-L (154 hr)	0.030
Chauncey	Mar	2/95	CH-1 fine	CN-L (178 hr)	0.010
Chauncey	Mar	2/95	CH-1 fine	CN-L (202 hr)	0.019
Chauncey	Mar	2/95	CH-1 fine	CN-L (203 hr)	1.46 Autogenic
Chauncey	Mar	2/95	#4A	Standard Geochem	< 10 ppb
Chauncey	Mar	3/95	#4A	CN-L (1 hr)	0.023
Chauncey	Mar	3/95	#4A	CN-L (17 hr)	0.015
Chauncey	Mar	3/95	#4A	CN-L (25 hr)	0.025
Chauncey	Mar	3/95	#4A	CN-L (36 hr)	0.023
Chauncey	Mar	3/95	#4A	CN-L/slag 18hr	0.056
Chauncey	Mar	3/95	#4A	Autogene (CN-L)	0.473
Chauncey	Mar	3/95	#4A	Roast (CN-L)	0.15
Chemex	Apr	21/95	Pulp # 1	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 2	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 3	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 4	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 5	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 6	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 7	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 8	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp # 9	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Pulp #10	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 1	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 2	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 3	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 4	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 5	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 6	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 7	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Slag # 8	Fire Assay	< 5 ppb
Chemex	Apr	21/95	Crucible wash	Fire Assay	< 5 ppb
Geoscience	Feb	14/95	HC-1	Fire Assay	< 3 ppb
Geoscience	Feb	14/95	HC-1 D	Fire Assay	< 3 ppb
Loring	Apr	26/95	Sandstone	Fire Assay	< 5 ppb
Loring	Apr	26/95	Slag	Fire Assay	< 5 ppb
Murox	Jun	10/95	LB	Fire Assay	0.02 *
Murox	Aug	25/95	LB	Fire Assay	0.18 *
Sherritt	Jun	26/95	2	Fire Assay	0.11
Xral	Aug	08/94	1	Fire Assay	< 1 ppb
Xral	Aug	08/94	1	Fire Assay	< 1 ppb

" * " - Prills believed to contain Gold, Platinum, & Palladium

Table 2. Location B - AB (Dark colored sandstone-siltstone above LB)

<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (oz/t or ppb)
Activation	Jun 12/95	DM1	INAA	6 ppb
Activation	Jun 12/95	DM2	INAA	< 5 ppb
Activation	Jun 12/95	DM3	INAA	6 ppb
Chauncey	Mar 3/95	#6A	CN-L (1hr)	0.007
Chauncey	Mar 3/95	#6A	CN-L (17hr)	0.015
Chauncey	Mar 3/95	#6A	CN-L (25hr)	0.018
Chauncey	Mar 3/95	#6A	CN-L (36hr)	0.008
Chauncey	Mar 3/95	#6A	CN-L/slag 18hr	0.15
Chauncey	Mar 3/95	#6A	O-CN-L (36 hr)	0.84
Chauncey	Mar 3/95	#6A	Autogene (CN-L)	0.570
Chauncey	Mar 3/95	#6A	Roast (CN-L)	0.19
Murox	Jun 10/95	AB	Fire Assay	0.4 *
Murox	Jun 10/95	AB	Fire Assay	0.42 *
Sherritt	Jun 26/95	3	Fire Assay	< 0.01

" * " - Prills believed to contain Gold & Platinum

Table 3. Location B - RR (Dark colored sandstone from the Ells River)

<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (oz/t or ppb)
Activation	Jun 12/95	RR1	INAA	< 5 ppb
Activation	Jun 12/95	RR2	INAA	< 5 ppb
Activation	Jun 12/95	RR3	INAA	< 5 ppb
Chauncey	Jan /95	# 1A	Sinter 800 C (a)	0.063
Chauncey	Jan /95	# 1A	Sinter 60-800 (a)	0.029
Chauncey	Jan /95	# 1A	Sinter 800 C (c)	0.044
Chauncey	Jan /95	# 1A	Sinter 60-800 (c)	0.029
Chauncey	Jan /95	# 1A	Fire Assay	0.082
Chauncey	Jan /95	# 1A	Roast	0.090
Chauncey	Jan /95	# 1A	Fire Assay	0.039
Chauncey	Jan /95	# 1A	Roast	0.044
Chauncey	Jan /95	# 1A	Sintering	0.063
Chauncey	Jan /95	# 1A	F.A. (Acid)	0.146
Chauncey	Jan /95	# 1A	Roast (Acid)	0.168
Chauncey	Jan /95	# 1A	Sinter (Acid)	0.116
Chauncey	Mar 2/95	# 5A	Standard Geochem	< 10 ppb
Chauncey	Mar 2/95	# 5A	CN-L (1 hr)	0.014
Chauncey	Mar 2/95	# 5A	CN-L (17 hr)	0.020
Chauncey	Mar 2/95	# 5A	CN-L (25 hr)	0.017
Chauncey	Mar 2/95	# 5A	CN-L (36 hr)	0.025
Chauncey	Mar 3/95	# 5A	CN-L/slag 18hr	0.040
Chauncey	Mar 3/95	# 5A	Autogene (CN-L)	0.289
Chauncey	Mar 3/95	# 5A	Roast (CN-L)	0.21
Sherritt	Jun 26/95	1	Fire Assay	< 0.01

Table 4. Location H - RR (Dark Marine Sandstone from the Ells River)

<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (oz/t or ppb)
Chauncey	Jul 12/94	Rock # 3	O-CN-L	0.099
Chauncey	Aug 26/94	#2	Fire Assay	0.044
Chauncey	Aug 26/94	#2	O-CN-L	2.49
Chauncey	Sep 07/94	#2	O-CN-L	0.063
Chauncey	Dec 5/94	Sample 1	Standard Geochem	320 ppb
Chauncey	Dec 5/94	Sample 2	Standard Geochem	360 ppb
Chauncey	Dec 5/94	Sample 3	Standard Geochem	320 ppb
Chauncey	Dec 5/94	Sample 4	Standard Geochem	240 ppb
Chauncey	Dec 5/94	Sample 1	O-CN-L	0.15
Chauncey	Dec 5/94	Sample 3	O-CN-L	0.082
Chauncey	Dec 5/94	Sample 4	O-CN-L	0.073
Chauncey	Dec 5/94	Sample 1	O-CN-L (Ratio 1)	0.27
Chauncey	Dec 5/94	Sample 1	O-CN-L (Ratio 2)	0.18
Chauncey	Dec 5/94	Sample 1	O-CN-L (Ratio 3)	0.15
Chauncey	Dec 5/94	Sample 4	O-CN-L (Ratio 1)	0.17
Chauncey	Dec 5/94	Sample 4	O-CN-L (Ratio 2)	0.19
Chauncey	Dec 5/94	Sample 4	O-CN-L (Ratio 3)	0.13
Xral	Aug 8/94	Sandstone	Fire Assay	< 1 ppb
Xral	Jan 18/95	2	Fire Assay	1 ppb

Table 5. Other Areas

<u>Location</u>	<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (oz/t or ppb)
D	Chauncey	Aug 26/94	# 1	Fire Assay	0.023
D	Chauncey	Aug 26/94	# 1	O-CN-L	0.065
D	Chauncey	Sep 07/94	# 1	O-CN-L	0.081
O	Xral	Aug 8/94	2	Fire Assay	< 1 ppb
Y	Chauncey	Aug 26/94	# 3	Fire Assay	0.015
Y	Chauncey	Aug 26/94	# 3	O-CN-L	0.125
E 1	Loring	Sep 7/95	RO-ELLS-3	Fire Assay	0.001
E 1	Loring	Sep 7/95	RO-ELLS-1	Fire Assay	< 0.001
Tar Site 1	Loring	Sep 7/95	RO-TAR-7	Fire Assay	0.001
Tar Site 1	Murox	Jun 10/95	TAR95-03		-
Tar Site 2	Murox	Jun 10/95	TAR95-05		trace
Tar Site 2	Murox	Jun 10/95	TAR95-07		-
Northern	U. of Alta	Jul 28/94	R 11	INAA	< 20 ppb
Northern	U. of Alta	Jul 28/94	R 5	INAA	< 24 ppb
Northern	U. of Alta	Jul 28/94	R 7	INAA	< 24 ppb
Northern	U. of Alta	Jul 28/94	Water	INAA	< 0.3ppb

Table 6. Panned Concentrates (1)

<u>Location</u>	<u>Lab</u>	<u>Assay Date</u>	<u>Sample</u>	<u>Method</u>	<u>Au Result</u> (ppb or oz/t)
Many (2)	Chauncey	Aug 26/94	PCC #1	Fire Assay	0.52 oz/ton
B	Sherritt	Jun 26/95	Vial #1	SEM/EDS+ICP	< 1000
B	Sherritt	Jun 26/95	Vial #2	SEM/EDS+ICP	1600
B	Sherritt	Jun 26/95	Vial #3	SEM/EDS+ICP	2100
B	Activation	May 31/95	HC-1	INAA	8
B	Activation	May 31/95	HC-2	INAA	< 5
B	Activation	May 31/95	HC-3	INAA	< 5
B	Activation	May 31/95	HC-4	INAA	9
B	Activation	May 31/95	HC-5	INAA	81
B	Activation	May 31/95	HC-6	INAA	< 5
B	Activation	May 31/95	HC-7	INAA	< 5
B	Activation	May 31/95	HC-8	INAA	< 5
B	Activation	May 31/95	HC-9	INAA	8
Tar Site 2	Murox	Jun 10/95	Tar95-09	Fire Assay	trace

- (1) - Samples sent to Sherritt and Activation consisted of hand picked grains. The results contained cannot be extrapolated back to raw tonnage.
- (2) - A composite sample containing grains from Locations A, B, D, G, H, J, and N.

APPENDIX F
ASSAYS

1. Acme Analytical Laboratories Ltd.

ACME A

TICAL LABORATORIES LTD.

852 E. HASTINGS ST.

COUVER BC V6A 1R6

PHONE (604) 253-5158

FAX (604) 253-1111

AA
LL

GEOCHEM PRECIOUS METALS ANALYSIS

Henry Cieszynski File # 95-0978

201 - 1 Royal Orchard Blv, Thornhill ON L3T 3C1

AA
LL

LB, LOCB SAMPLE#

Au**
ppb

ROCK SAMPLE

11

30 GRAM SAMPLE FIRE ASSAY AND ANALYSIS BY ICP/GRAPHITE FURNACE.
- SAMPLE TYPE: ROCK

DATE RECEIVED: APR 7 1995

DATE REPORT MAILED:

Apr 12/95

SIGNED BY

D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

ACME A

TICAL LABORATORIES LTD.

852 E. HASTINGS ST.

COUVER BC V6A 1R6

PHONE(604)253-3138 FAX(604)253-1710

GEOCHEM PRECIOUS METALS ANALYSIS
Henry Cieszynski File # 95-0978R

SAMPLE#

Au**
ppb

LB, LOC B

ROCK SAMPLE
#1 SLAG5
<230 GRAM SAMPLE FIRE ASSAY AND ANALYSIS BY ICP/GRAPHITE FURNACE.
- SAMPLE TYPE: ROCK PULP/SLAGS

DATE RECEIVED: APR 25 1995

DATE REPORT MAILED:

May 4/95

SIGNED BY



.D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

2. Activation Laboratories Ltd.

Sample description	U PPM	W PPM	ZN PPM	LA PPM	CE PPM	ND PPM	SM PPM	EU PPM	TB PPM	YB PPM	LU PPM	Mass g
B-RR1	2.9	<4	<50	18	35	11	2.3	0.9	<0.5	1.82	0.30	20.85
B-RR2	<0.5	<4	<50	16	34	17	2.3	0.8	<0.5	1.81	0.36	25.95
B-RR3	2.3	<4	69	17	35	22	2.2	0.8	<0.5	1.82	0.25	22.20
B HB1	2.4	<4	56	16	33	12	2.4	0.8	<0.5	1.82	0.31	28.12
B HB2	2.3	<4	60	14	30	12	2.0	0.7	0.6	1.65	0.28	28.10
B HB3	2.2	<4	61	16	33	12	2.3	0.8	0.7	1.75	0.30	28.81
B DM1	3.5	<4	71	20	37	17	2.6	0.8	<0.5	2.27	0.36	29.47
B DM2	1.5	<4	57	20	35	13	2.3	0.7	<0.5	2.25	0.33	29.46
B DM3	<0.5	<4	55	20	40	16	2.4	0.9	<0.5	2.16	0.37	29.45

ACTLABS

ACTIVATION LABORATORIES LTD

Invoice No.: 8104
Work Order: 8207
Invoice Date: 31-MAY-95
Date Submitted: 16-MAY-95
Your Reference: LETTER
Account Number: 143

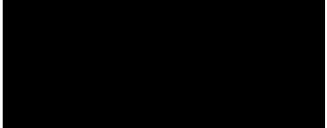
JAMES E. TILSLEY & ASSOCIATES
1000 E. PEEPLECHASE AVE.
GROUP BOX 115, RR2
LORRAINE, ON
L4Y 3G8
TTN: JAMES E. TILSLEY

CERTIFICATE OF ANALYSIS

MA package, elements and detection limits:

AV	5.	PPB	AG	5.	PPM	AS	2.	PPM	BA	100.	PPM
E	1.	PPM	CA	1.	%	CO	5.	PPM	CR	10.	PPM
CS	2.	PPM	FE	0.02	%	HF	1.	PPM	HG	1.	PPM
IR	5.	PPB	MO	5.	PPM	NA	500.	PPM	NI	50.	PPM
F	30.	PPM	SB	0.2	PPM	SC	0.1	PPM	SE	5.	PPM
S	0.01	%	SR	0.05	%	TA	1.	PPM	TH	0.5	PPM
U	0.5	PPM	W	4.	PPM	ZN	50.	PPM	LA	1.	PPM
CE	3.	PPM	ND	5.	PPM	SM	0.1	PPM	EU	0.2	PPM
T	0.5	PPM	YB	0.05	PPM	LU	0.05	PPM			

CERTIFIED BY :


per DR. ERIC L. HOFFMAN

Activation Laboratories Ltd. Work Order: 8207 Report: 8104

Sample description	AU PPB	AG PPH	AS PPH	BA PPH	BR PPH	CA %	CO PPH	CR PPH	CS PPH	FE %	HF PPH	HG PPH	IR PPB	MO PPH	NA PPH	NI PPH	RB PPH	SB PPH	SC PPH	SE PPH	SN %	SR %	TA PPH	TH PPH
HC 1	8	<5	160	560	<1	2	36	40	<2	26.8	<1	<1	<5	10	1590	<50	<30	6.6	11	<5	<0.02	<0.05	<1	2.3
HC 2	<5	<5	180	700	<1	2	41	48	2	28.3	2	<1	<5	<5	1760	<50	<30	5.7	10	<5	<0.02	0.07	<1	2.5
HC 3	<5	<5	32	120	11	15	6	<10	<2	4.30	1	<1	<5	<5	607	<50	<30	0.6	2.6	<5	<0.01	<0.05	<1	0.8
HC 4	9	<5	100	740	<1	3	26	45	5	19.0	3	1	<5	<5	5320	<53	50	3.9	19	<5	<0.02	<0.05	<1	2.6
HC 5	81	<5	380	<100	12	<3	35	<10	<2	48.6	<1	<1	<5	96	938	<200	<30	8.6	2.1	<5	<0.05	<0.05	<1	<0.5
HC 6	<5	<5	50	390	<1	4	18	39	<2	33.8	2	<1	<5	<5	1250	<52	<30	1.2	13	<5	<0.02	<0.05	<1	3.9
HC 7	<5	<5	110	530	<1	<3	39	45	<2	41.5	<1	<1	<5	<5	1750	<77	<30	2.1	16	<5	<0.03	<0.05	<1	5.7
HC 8	<5	<5	170	680	<1	<3	27	49	<2	46.3	<1	<1	<5	<5	1430	<77	<30	3.3	13	<5	<0.03	<0.05	<1	2.7
HC 9	8	<5	140	310	<1	4	28	260	3	14.9	2	<1	<5	6	6870	<60	<30	3.7	19	<5	<0.01	<0.05	<1	1.0

Activation Laboratories Ltd. Work Order: 8207 Report: 8104

Sample description	U PPH	W PPH	ZN PPH	LA PPH	CE PPH	ND PPH	SH PPH	EU PPH	TB PPH	YB PPH	LU PPH	Mass g
HC 1	2.2	<4	<50	16	31	<5	12	3.1	3.4	2.82	0.44	9.301
HC 2	2.3	<4	71	15	28	12	2.5	0.8	<0.5	1.76	0.34	9.528
HC 3	<0.5	<4	<50	6	12	<5	1.0	0.2	<0.5	0.59	0.14	7.230
HC 4	<0.5	<4	<50	17	37	18	3.3	0.9	<0.5	3.08	0.38	7.999
HC 5	<0.7	<4	210	3	16	<5	0.4	<0.2	<0.5	<0.2	<0.05	0.2671
HC 6	<0.5	<4	<50	23	57	17	3.3	0.9	<0.5	2.35	0.56	19.24
HC 7	3.8	<4	<50	31	66	26	4.9	1.4	<0.5	3.80	0.75	11.85
HC 8	<0.6	<4	102	24	57	19	4.4	1.3	1.4	3.14	0.64	11.60
HC 9	<0.5	<4	90	7	18	<5	2.1	0.7	0.6	1.60	0.24	1.784

James E. Tilsley & Associates Ltd.

INFORMATION AND INSTRUCTIONS TO ASSAYERS

To: ACTIVATION LABS

From: JIM TILSLEY
James E. Tilsley & Associates Ltd.

Enclosed find 9 samples of

- | | | |
|--------------------------------------|--|--|
| <input type="checkbox"/> Rock | <input type="checkbox"/> Drill core | <input checked="" type="checkbox"/> Crushed rock |
| <input type="checkbox"/> Ground rock | <input type="checkbox"/> Pulverized rock | <input type="checkbox"/> Tailings |
| <input type="checkbox"/> Middlings | <input type="checkbox"/> Concentrates | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Soil | <input type="checkbox"/> Till | <input type="checkbox"/> Alluvium |
| <input type="checkbox"/> Humus | <input type="checkbox"/> Vegetation | <input type="checkbox"/> Water |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

wt/g

B-RR1 20.84
RR2 25.94
RR3 22.19
B HB1 28.12
HB2 28.10
HB3 28.81
B DM1 29.47
DM2 29.45
DM3 29.45

LOCB
RR
LB
LOCB
AB
LOCB

Packing Details:

These samples are packed in 1 ☒ box(es) ☐ bags ☐ _____
which are marked as follows: YOUR ADDRESS

Please assay for:

- | | | | | | |
|--|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| <input checked="" type="checkbox"/> Au +34 | <input type="checkbox"/> Ag | <input type="checkbox"/> Pt | <input type="checkbox"/> Pd | <input type="checkbox"/> U | <input type="checkbox"/> Th |
| <input type="checkbox"/> Cu | <input type="checkbox"/> Pb | <input type="checkbox"/> Zn | <input type="checkbox"/> Ni | <input type="checkbox"/> Co | <input type="checkbox"/> Cr |
| <input type="checkbox"/> As | <input type="checkbox"/> Sb | <input type="checkbox"/> Ba | <input type="checkbox"/> Br | <input type="checkbox"/> Fe | <input type="checkbox"/> Mo |
| <input type="checkbox"/> Se | <input type="checkbox"/> Ta | <input type="checkbox"/> W | <input type="checkbox"/> Sn | <input type="checkbox"/> V | <input type="checkbox"/> Sr |
| <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ | <input type="checkbox"/> _____ |

Method:

- | | | |
|--|---------------------------------------|--|
| <input type="checkbox"/> Lead Fire Assay | <input type="checkbox"/> Wet chemical | <input checked="" type="checkbox"/> Neutron Activation |
| <input type="checkbox"/> XRF | <input type="checkbox"/> ICP | <input type="checkbox"/> _____ |

☐ SEE SPECIAL INSTRUCTIONS ATTACHED

Invoices and first copies of Certificates to:

James E. Tilsley & Associates Ltd. AND
5 Steeplechase Avenue
Aurora, Ontario, Canada L4G 6W5
Ph. (905) 727 6822
Fax (905) 841 3820

second copies of Certificate to:

Date 25/04/95

Signed _____

JAMES E. TILSLEY & ASSOCIATES LTD.

CONSULTING GEOLOGISTS AND ENGINEERS

Mr. Henry Cieszynski
201 - 1 Royal Orchard Blvd
Thornhill, Ontario
L3T 3C1

Inv. 95 - 1537
Date 12 - 06 - 95
Project: Alberta Gold

G. S. T. #R102571072

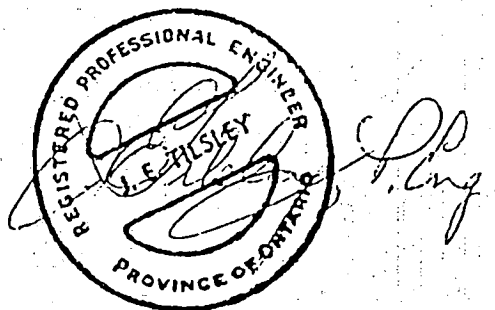
Re: Testing samples from Alberta properties
Review of data supplied

Fees and expenses:

As agreed 500.00

GST 35.00

TOTAL 535.00



JAMES E. TILSLEY & ASSOCIATES LTD.

36 9 ACTIVATION LABS LTD. WOH 8088 REPORT # 7974 1DLARPOS15

HENRY CIESZYNSKI - ALBERTA GOLD PROJECT

Elements	AU	AG	AS	BA	BR	CA	CO	CR	CS	FE	HF	HG	IR	MO
Units	PPB	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	%	PPM	PPM	PPB	PPM
Detection Limits	5.000	5.000	2.000	100.000	1.000	1.000	5.000	10.000	2.000	0.020	1.000	1.000	5.000	5.000
B RR1	<5.000	<5.000	5.000	1100.000	3.000	32.000	<5.000	44.000	2.000	3.690	4.200	<1.000	<5.000	6.000
B RR2	<5.000	<5.000	5.000	1100.000	<1.000	29.000	5.000	33.000	3.000	3.450	3.100	<1.000	<5.000	<5.000
B RR3	<5.000	<5.000	6.000	1200.000	2.000	32.000	<5.000	38.000	3.000	3.490	4.500	<1.000	<5.000	<5.000
B HB1	<5.000	<5.000	3.000	500.000	<1.000	16.000	<5.000	41.000	<2.000	2.790	5.100	<1.000	<5.000	<5.000
B HB2	<5.000	<5.000	2.000	460.000	1.000	15.000	<5.000	34.000	<2.000	2.460	4.800	<1.000	<5.000	<5.000
B HB3	<5.000	<5.000	3.000	540.000	<1.000	14.000	<5.000	39.000	<2.000	2.950	4.600	<1.000	<5.000	<5.000
B DM1	6.000	<5.000	3.000	540.000	<1.000	16.000	<5.000	40.000	2.000	4.260	3.600	<1.000	<5.000	<5.000
B DM2	<5.000	<5.000	17.000	290.000	<1.000	4.000	6.000	47.000	2.000	25.600	2.200	<1.000	<5.000	<5.000
B DM3	6.000	<5.000	12.000	380.000	2.000	4.000	<5.000	43.000	4.000	27.400	1.900	<1.000	<5.000	7.000

Elements	NA	NI	RB	SB	SC	SE	SN	SR	TA	TH	U	W	ZN	LA
Units	PPM	PPM	PPM	PPM	PPM	PPM	%	%	PPM	PPM	PPM	PPM	PPM	PPM
Detection Limits	500.000	50.000	30.000	0.200	0.100	5.000	0.010	0.050	1.000	0.500	0.500	4.000	50.000	1.000
B RR1	3080.000	<50.000	44.000	0.300	6.000	<5.000	<0.020	<0.050	<1.000	5.300	2.900	<4.000	<50.000	18.000
B RR2	2500.000	<50.000	<30.000	0.300	6.400	<5.000	<0.010	<0.050	<1.000	4.500	<0.500	<4.000	<50.000	16.000
B RR3	2830.000	<50.000	52.000	0.400	5.500	<5.000	<0.010	<0.050	<1.000	5.300	2.300	<4.000	69.000	17.000
B HB1	4740.000	<50.000	49.000	0.400	4.200	<5.000	<0.010	0.120	<1.000	5.800	2.400	<4.000	56.000	16.000
B HB2	4060.000	<50.000	<30.000	0.300	3.900	<5.000	<0.010	0.100	<1.000	5.100	2.300	<4.000	60.000	14.000
B HB3	4180.000	<50.000	43.000	0.300	4.200	<5.000	<0.010	0.080	<1.000	5.700	2.200	<4.000	61.000	16.000
B DM1	4310.000	<50.000	50.000	0.300	6.000	<5.000	<0.010	0.070	<1.000	4.500	3.500	<4.000	71.000	20.000
B DM2	1570.000	<50.000	30.000	0.400	7.400	<5.000	<0.010	<0.050	<1.000	5.300	1.500	<4.000	57.000	20.000
B DM3	1320.000	<50.000	46.000	0.600	7.600	<5.000	<0.020	<0.050	<1.000	5.300	<0.500	<4.000	55.000	20.000

Elements	CE	ND	SM	EU	TB	YB	LU	Mass
Units	PPM	PPM	PPM	PPM	PPM	PPM	PPM	g
Detection Limits	3.000	5.000	0.100	0.200	0.500	0.050	0.050	0.000
B RR1	35.000	11.000	2.300	0.900	<0.500	1.820	0.300	20.850
B RR2	34.000	17.000	2.300	0.800	<0.500	1.810	0.360	25.950
B RR3	35.000	22.000	2.200	0.800	<0.500	1.820	0.250	22.200
B HB1	33.000	12.000	2.400	0.800	<0.500	1.820	0.310	28.120
B HB2	30.000	12.000	2.000	0.700	0.600	1.650	0.280	28.100
B HB3	33.000	12.000	2.300	0.800	0.700	1.750	0.300	28.810
B DM1	37.000	17.000	2.600	0.800	<0.500	2.270	0.360	29.470
B DM2	35.000	13.000	2.300	0.700	<0.500	2.250	0.330	29.460
B DM3	40.000	16.000	2.400	0.800	<0.500	2.160	0.370	29.450

THIS WAS THE SULPHIDES, JAMES E. TILSLEY & ASSOCIATES LTD.

ONLY IN PLACES AS POINT ^P ON SAMPLE RECORD

PROJECT: H.C.

ELL'S RIVER

DATE / /

AMPLER:

ASSAY LAB: ACTIVATION

ASSAY FOR: ALL + 34 - SAMPLE OF PANKED CONCENTRATES

[illegible]

3. C A N M E T



Natural Resources
Canada

Canada Centre for
Mineral and Energy
Technology

CANMET

555 Booth Street
Ottawa, Canada
K1A 0G1

Ressources naturelles
Canada

Centre canadien de la
technologie des minéraux
et de l'énergie

555 rue Booth
Ottawa, Canada
K1A 0G1

December 5, 1995

Mr. Henry Cieszynski
201-1 Royal Orchard Blvd
Thornhill, Ontario
L3T 3C1

Subject: Samples for Analysis

Dear Mr. Cieszynski

Jean Cloutier, our fire assayer, has completed the two samples that you submitted for analysis for gold and platinum using the following 2 different fire assay techniques:

1. Lead collection using silver as a carrier for the precious metals; and
2. Tin collection using tellurium as carrier.

In both cases, the gold was determined by Flame AAS and the platinum by Graphite furnace AAS.

The results are:

	Lead-Silver		Tin-tellurium	
	Au (ppm)	Pt (ppm)	Au (ppm)	Pt (ppm)
Sandstone	0.06, 0.10	<0.02	0.13	<0.02
SARM-7	0.27 (0.31*)	3.45 (3.74*)	0.38 (0.31*)	3.73 (3.74*)

* Certified value

Canada

A comparison of the results for gold and platinum by the two different techniques indicates that neither technique has an analytical advantage. This comparison together with the good agreement for the reference material, SARM-7, points to a high level of credibility in the accuracy of the fire assay results. Jean Cloutier did however indicate to me that your samples were somewhat inhomogeneous and this could potentially impact the results.

I hope that these results for gold and platinum prove of value to you.

Yours sincerely,



Henry F. Steger
Manager, MPSL, MMSL

cc. J. Cloutier

4. Chauncey Assay Laboratories Ltd.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

REPORT NO.: MI-3456-01

DATE: JULY 12, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: JUNE 6, 1994


SAMPLE OF: ROCK

SAMPLE WAS IDENTIFIED AS: ROCK #3 ← LOC. H

THE ENTIRE SAMPLE WAS CRUSHED AND PULVERIZED.

SCREEN ANALYSIS FOR ROCK #3

+20	1.04 %
-20 +120	6.22 %
-120 +140	17.21 %
-140 +230	41.12 %
-230	34.41 %


J. van Engelen Mgr

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

FX041 - HENRY CIESZYNSKI

(416) 239-7296

WORK PROGRESS REPORT

REPORT NO.: MI-3456-02

DATE: JULY 12, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: JUNE 6, 1994

SAMPLE OF: ROCK

SAMPLE NUMBER: ROCK SAMPLE #3

O-CN-L METHOD (OXIDIZING-CYANIDE LEACH)

2 GRAMS OF SAMPLE WERE ROASTED AND SUBMITTED TO OXIDIZING CYANIDE LEACH TEST WITH RESIN IN PULP.

THE RESIN, RESIDUE AND SOLUTION OF THE SAMPLE WERE ASSAYED FOR Au AND Ag. THE RESULTS FROM THE THREE STAGES WERE ADDED TOGETHER AND THE RESULT IS AS FOLLOWS:

	Au oz/ton	Ag oz/ton
#3	.099	.36

**THE MATERIAL ON THE FILTER PAPER IS THE REMAINDER OF 2 GRAMS OF SAMPLE, AFTER THE CARBONATES AND MOST OF THE ORGANICS HAVE BEEN REMOVED.

THIS WAS THE
FIRST ASSAY
OF THE SANDSTONE -
IT WAS SURPRISINGLY
HIGH -

CHAUNCEY ASSAY LABORATORIES LTD.
33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

REPORT NO.: MI-3486-01

DATE: AUGUST 26, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: AUGUST 17, 1994

SAMPLES OF: N.E. ALBERTA ORE

5 SAMPLES WERE SUBMITTED ON AUGUST 17, 1994:

LOC. D → #1. SANDSTONE = 1050 GRAMS

LOC. H → #2. SANDSTONE = 1040 GRAMS

LOC. Y → #3. SANDSTONE = 885 GRAMS

PCC #1 → #4. RIVER PEBBLES = 27 GRAMS

#5. CORE SANDSTONE = 114 GRAMS

THESE WERE 3 SEPARATE
SAMPLES ALONG TWO
MILES OF RIVER -

THIS WAS THE SLIDING
LIMESTONE FROM 700 FEET
DOWN BEYOND OIL SANDS CORE.

ALL 5 SAMPLES WERE PULVERIZED TO PASS THROUGH 80 MESH SCREEN.

*SAMPLE #4 HAD TO BE HAND GROUND.

SCREEN ANALYSIS

	#1	#2	#3
-80 +120	9.38 %	13.53 %	7.87 %
-120 +140	11.06 %	7.00 %	5.14 %
-140 +230	21.97 %	16.24 %	22.93 %
-230	57.59 %	63.23 %	64.06 %

*NOTE: SAMPLES #4 AND #5 WERE TOO SMALL
FOR SCREEN ANALYSIS.

J. van Engelen Mgr

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

CERTIFICATE OF ANALYSIS

REPORT NO.: MI-3486-02

DATE: AUGUST 26, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: AUGUST 17, 1994

SAMPLES OF: N.E. ALBERTA ORE

STANDARD FIRE ASSAY METHOD

	SANDSTONE			SULPHIDES	LIMESTONE
	#1	#2	#3	#4	#5
Au oz/ton	.023	.044	.015	.52	.038
Ag oz/ton	.17	.05	.04	1.60	.06
Pt oz/ton	<.01	<.01	<.01	<.01	<.01
Pd oz/ton	<.01	<.01	<.01	<.01	<.01

THE ASSAYER SAID HE FELT THE LEACH
WAS MORE INDICATIVE OF THE VALUES.

J. van Engelen Mgr.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

REPORT NO.: M1-3486-03

DATE: AUGUST 26, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: AUGUST 17, 1994

SAMPLES OF: N.E. ALBERTA ORE

	O-CN-L METHOD				
	SANDSTONE			SULPHIDES	SULPHIDES IN LIMESTONE
	#1	#2	#3	#4	#5
Au oz/ton	.065	2.49	.125	**	.122
Ag oz/ton	.13	.10	.13	**	.07

** THERE WAS NOT ENOUGH OF SAMPLE #4 FOR O-CN-L.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario MBZ 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

REPORT NO.: MI-3486-04

DATE: SEPTEMBER 7, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: AUGUST 17, 1994

SAMPLES OF: N.E. ALBERTA ORE

O-CN-L METHOD

SAMPLE NO.:

AU OZ/TON

1

.081

2

.063

THIS WAS A
RECHECK OF
SAMPLES #1 AND #2
AS #2 HAD
SHOWN 2.49 OZ
GOLD PER TON

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

REPORT NO.: MI-3486-05

DATE: SEPTEMBER 21, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI

ATTENTION: MR. HENRY CIESZYNSKI

DATE RECEIVED: AUGUST 17, 1994

SAMPLES OF: N.E. ALBERTA ORE

MI-3486

THE TWO SAMPLES ARE THE FILTERS #1 AND # 2.

THE PURPOSE IS TO DETERMINE WHAT THE WHITE MATERIAL
WAS AFTER HF TREATMENT.

THE MATERIAL IS FELDSPAR (AL AND NA WITH SMALL AMOUNTS
OF FE AND K.)

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3518-01 DATE: DECEMBER 5, 1994
SUBMITTED BY: MR. HENRY CIESZYNSKI
DATE RECEIVED: NOVEMBER 28, 1994 SAMPLES OF: NORTHERN ALBERTA
SANDSTONES

RECEIVED NOVEMBER 28, 1994
5 SANDSTONE SAMPLES IDENTIFIED AS:

- Loc. H {
- 1) DARK MARINE SANDSTONE WITH DISSEMINATED SULPHIDES (160 GRAMS).
 - 2) SANDSTONE REPLACEMENT WITH MASSIVE SULPHIDES (10 GRAMS).
 - 3) DARK MARINE SANDSTONE WITH DISSEMINATED SULPHIDES (300 GRAMS).
 - 4) DARK MARINE SANDSTONE WITH DISSEMINATED SULPHIDES (300 GRAMS).
- LB
Loc. B → 5) GREY BEDDED SANDSTONE WITH BROWN MICRO PLATES (375 GRAMS).

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3518-02 DATE: DECEMBER 5, 1994

SUBMITTED BY: MR. HENRY CIESZYNSKI,

DATE RECEIVED: NOVEMBER 28, 1994 SAMPLES OF: NORTHERN ALBERTA
SANDSTONES

STANDARD GEOCHEM METHODS *
IN g/t

SAMPLE NO.:	AU	AG	CU	PB	ZN	NI
1	.32	3.4	52	200	55	90
2	.36	2.8	23	1723	44	129
3	.32	3.2	70	800	40	53
4	.24	5.0	46	100	32	36
5	.20	4.0	20	75	53	40

* A.R. ATTACK, A.A. FINISH.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3518-03 DATE: DECEMBER 5, 1994
SUBMITTED BY: MR. HENRY CIESZYNSKI.
DATE RECEIVED: NOVEMBER 29, 1994 SAMPLES OF: NORTHERN ALBERTA
SANDSTONES

SEMI-QUANTITATIVE *

COMBINATION ASSAY:

INVOLVING PRE-ROASTING (SINTERING)
F.A. ASSAY, INQUARTED WITH AG

CYANIDE LEACH ON SLAG.
RESIN F.A.

CN-SOL - MISC. EXTRACTION WITH A.A. FINISH

RESULTS:

		AU OZ/TON
SAMPLE:	1	.15
	2	Not sufficient sample.
	3	.082
	4	.073
	5	.089

* RESULTS VARY DEPENDING WHAT METHOD IS APPLIED.

CHAUNCEY ASSAY LABORATORIES LTD.
33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3518-04 DATE: DECEMBER 5, 1994
SUBMITTED BY: MR. HENRY CIESZYNSKI.
DATE RECEIVED: NOVEMBER 26, 1994 SAMPLES OF: NORTHERN ALBERTA
SANDSTONES

SAMPLE #1 AND # 4 ONLY.

RATIO 1:	#1	#4
F.A.	48 ug	32 ug
RESIN	5 ug	1 ug
SOLUTION	3 ug	2.64 ug
	-----	-----
	56 ug	35.64 ug
ON 6 GRAM SAMPLE (AU):	9.33 g/t	5.94 g/t
	.27 oz/ton	.17 oz/ton

RATIO II:	#1	#4
F.A.	29 ug	30 ug
RESIN	6 ug	7 ug
SOLUTION	1.2 ug	1.3 ug
	-----	-----
	36.2 ug	38.3 ug
ON 6 GRAM SAMPLE (AU):	4.03 g/t	6.38 g/t
	.18 oz/ton	.19 oz/ton

RATIO III:	#1	#4
F.A.	25 ug	22 ug
RESIN	4 ug	4 ug
SOLUTION	1.1 ug	1.6 ug
	-----	-----
	30.1 ug	27.6 ug
ON 6 GRAM SAMPLE (AU):	5.01 g/t	4.6 g/t
	.15 oz/ton	.13 oz/ton

* ug = micrograms.

Henry
Report # 3526

Jan. 1995.

Sample submitted :

LOC. B { Sample #1A Dark marine Sandstone (250 grms)
Sample # 2 Very soft Sandstone. (75 grms)

FIRST
TEST

(Test 1) using 3 sintering chemicals a) Sodiumbicarbonate
b) Lithiumtetraborate
c) Potassiumcarbonate

(Test 2) starting from room temp. to 800 C, versus introduction
at 800 C.

Lithiumborate fuses under both conditions and only one lot could be
removed from the clay dishes.

The sinters were each mixed with fluxes and fire-assayed.

Results:

	800C	60-800C
#1A a)	.063 oz/ton Au	.029 oz/ton Au
c)	.044 oz/ton Au	.029 oz/ton Au
# 2 a)	.044 oz/ton Au	.029 oz/ton Au
b)	.053 oz/ton Au	.044 oz/ton Au
c)	.019 oz/ton Au	.034 oz/ton Au

THIS
WAS
A
PRE-HEATING,

THESE
RESULTS
WERE
LOW BUT
WERE PROVING
THE SANDSTONE WAS
ABUNDANT IN GOLD -

THESE ARE THE
LATEST RESULT
FROM THE ALBER
PROPERTY-

THERE WERE 366
TAKEN ON VARIOUS
TESTS OF SANDSTONE
THAT HAD SHOWN 62
IN EARLY SAMPLING
PREVIOUS TESTING HAD
SHOWN TRACES TO
0.12 OZ/TON GOLD.

A SANDSTONE NORMALLY
CARRIES MINIMAL
OVERALL 3.3550.

THE LAB HAS DONE
NUMEROUS TESTS AND
DETERMINED THE
GOLD IS IN
ZEOLITE. THIS

MINERAL IS ALTERED
VOLCANIC ROCK AND
IS AN ALUMINUM SILICATE
IT HAS ION EXCHANGE
PROPERTIES, IS POROUS
AND HOLDS HEAVY METALS

THE DARK MARINE
SANDSTONE
RUNS 9% ZEOLITE

THE LIGHT BUFF
SANDSTONE
RUNS 50% ZEOLITE

THIS EXPLAINS THE
UNUSUAL GOLD
CONTENT. THE
FOCUS IS NOW
ON OPTIMIZING
GOLD RECOVERY.

Report # MI 3526 - A

Jan. 1995.

Tests done on samples # 1A and # 2

In this test the samples are treated with acid, the solution and any light material is decanted and the insoluble material left in the beaker. The solution is filtered and the filter is dried and ashed. The insoluble residue is also dried and ashed.

Both are then subjected to standard fire-assay, with addition of silver-inquart.

The results of the fire-assay were:

Sample #	1A	2	
Insoluble residue	.053	.010	oz/ton Au
Filter	.029	.156	oz/ton Au
Total	.082	.166	oz/ton Au

NOTE
HOW
THE
VALVES
INCREASED
WITH
ACID
TREATMENT, PARTICULARLY

ON 2. THIS IS ENCOURAGING.

HYDROCHLORIC

Report # MI 3529

Jan. 1995.

CH-1 IS AN
UMPIRE ASSAY
DONE BY
THE ONTARIO
GEOLOGICAL
SURVEY
IN
SUDBURY,
ONTARIO.

Sample # CH-1 Received Jan. 16, 1995.

L.B. from Loc. 0

Sample was prepared in Sudbury at the Laboratory of OGS.

They send 650 gms of pulverized as well as 345 gms of crushed sample.

Test 1 standard fire-assay on sample as received.

Result: .010 oz/ton Au.

NOTE
BACKGROUND
ON STANDARD FIRE ASSAY

Test 2

On samples # 1 A and # 2 MI 3526

CH-1 MI 3529

ANOTHER
TEST

Samples were roasted at 800 C without any chemicals, cooled, treated with acid, solution decanted, and filtered. Filter and insoluble residue dried and ashed. Those are then submitted to regular fire-assay.

Results:

Sample #:	1A	2	CH-1
-----------	----	---	------

Au oz/ton	.090	.054	.041
-----------	------	------	------

ENCOURAGING
RESULTS,
RECOGNIZING
THE SANDSTONE
IS ON SURFACE.
THIS COULD BE
LOW COST
MINING

Report MI 3529 A

Jan. 1995\

Test 3 is done on the same Samples as test 2.

- a) Samples as is
- b) Samples roasted at 800 C
- c) Samples sintered with bicarbonate at 800 C

50% Z

After cooling the samples were submitted to regular fire-assay.

Results:

Sample #	1A	2	LOC. B # L.B. CH-1 (Fine)
As is : Au oz/ton	.039	-----	.044
Roasting : Au oz/ton	.044	.039	.068
Sintering : Au oz/ton	.063	.45	.058

NOTE HIGH
VALUE IN
2.

Test 4.

Same as Test 3, with this difference, that after cooling the samples, they were treated with ^{INTOLUBLE} acid and the insoluble residue, filter and solution were fire-assayed.

Results:

Sample#	1A	2	CH-1 (Fine)
As is Au oz/ton	.146	.20	.042
Roasted Au oz/ton	.168	.107	.085
Sintered Au oz/ton	.116	.62	.097

DECK MARINE
SANDSTONE
97% ZEOCLITE

LIGHT BUFF
SANDSTONE
50% ZEOCLITE

MIXTURE

LAST
TEST

THESE
RESULTS
ARE
MUCH
BETTER

TESTING
CONTINUES

HENRY CIESZYNSKI

(416) 869-7299

CHAUNCEY ASSAY LABORATORIES LTD.33 CHAUNCEY AVE. TORONTO, ON. M8Z 2Z2
(416) 239-3527 FAX: (416) 239-4012**REPORT: MI3529 B****JAN. 27, 1995.**

ATTENTION: MR. HENRY CIESZYNSKI.

Samples: MI 3529 CH-1 fine and CH-1 coarse.

- a) Sintering with sample/bicarbonate = 6/1 GRAM OF SODIUM BICARBONATE
 b) Sintering with sample/bicarbonate = 6/2 GRAMS OF SODIUM BICARBONATE

The sinters are treated with acid. Insoluble resin, filter and solution submitted to CN-leach and filtered. Filters ashed and fire-assayed.

Results:

Sample #	Ratio a	Ratio b
CH-1 fine	.073 oz/ton Au	.087 oz/ton Au
CH-1 coarse	.083 oz/ton Au	.102 oz/ton Au

HYDROCHLORIC
ACID WAS INITIAL
 USED TO
 STABILIZE ANY
 CARBONACEOUS
 MATTER

SOME
HYDROFLUORIC
ACID IS
 ALSO USED
 TO GET
 RID OF
 THE
 SILICA

INDEPENDENT LABORATORY.

GOLD EXTRACTION
WITH CYANIDE
LEACH IS VERY

NORMAL IN MINING
 AND IS THE LOWEST
 COST

THIS WAS A
 TEST OF THE
 UNPIRE SAMPLE
 TRYING THE
 SODIUM
 BICARBONATE
 AND
 USING
 CYANIDE
 LEACH

UNPIRE
SAMPLEUNPIRE
SANDSTONE
MIXTURE
FINEUNPIRE
SANDSTONE
MIXTURE
COARSE

NOTE
 THE
 IMPROVED
 VALUES
 WITH
 CYANIDE
 LEACH

CHAUNCEY ASSAY LABORATORIES LTD.

33 CHAUNCEY AVE, TORONTO, ON. M8Z 2Z2
(416) 239-3527 FAX: (416) 239-4012

Report: MI 3531

Jan 25, 1995.

ATTENTION: MR. HENRY CIESZYNSKI.

Received 340 gms of sample #3, which should be similar to sample # 2 (MI 3526).

CH-1(Coarse) from CH-1rejects and hand-pulverized to pass 80 mesh.

JMPIRE SAMPLE

~~# 3 MI 3525 Black Sand sample.~~ --- REMOTE THIS, IT IS FROM ANOTHER PROPERTYSamples are not roasted:Test 1: Samples as is, treated with ^{HYDROCHLORIC} acid. Insoluble residue, filter and sol. fire-assayed.Test 2: Samples as is, treated with ^{HYDROCHLORIC} acid. In soluble residue, filter and sol. submitted to CN-leach, filtered. Filters ashed and fire-assayed.Results:

Sample #

Test 1

Test 2

~~#3 MI3531~~~~.219 oz/ton Au~~~~.136 oz/ton Au~~

HC-1 fine

.024 oz/ton Au

.098 oz/ton Au

HC-1 coarse

.024 oz/ton Au

.073 oz/ton Au

~~#3 MI3525~~~~<.005 oz/ton Au~~~~.053 oz/ton Au~~TEST 1THIS SUGGESTS THE
LIGHT SANDSTONE WITH
HIGHER ZEOLITE CAN
BE READILY TREATED
WITH HClTEST 2NOTE THE INCREASE
IN VALUES WITH
CYANIDE LEACH

INDEPENDENT LABORATORY.

HENRY CIESZYNSKI

(416) 269-7299

ANOTHER
SEPARATE
TEST
NOT
ROASTINGLIGHT BUFF
SANDSTONE WITH
50% ZEOLITE
(1) 3531

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3529

DATE: MARCH 2, 1995

SUBMITTED BY: MR. HENRY CIESZYNSKI.

DATE RECEIVED: JANUARY 12, 1995 SAMPLES OF: NORTHERN ALBERTA MATERIAL

CN- LEACH TEST FEB. 2. 95.

LOC. B → SAMPLE: CH-1 FINE

L.B.

NO ROASTING. START 6 GRAMS OF SAMPLE IN BEAKER.

100 MLS OF WATER
2 GRAMS OF NaOH
2 GRAMS OF N-1
SAMPLE
1 GRAMS RESIN
2 GRAMS NaCN
1 GRAM $Fe(NH_4)_2(SO_4)_2$

DIGEST FOR 1/2 HR. IN
BEAKER AT 90 DEG. C.

THEN TRANSFER INTO BOTTLES AND SHAKE.

TEST	DATE	DIGEST	AU OZ/TON
#1	08/95	1 HOUR	.082
#2	09/95	16 HR	.234
#3	13/95	88 HR	.049
#4	14/95	132 HR	.039
#5	15/95	154 HR	.030
#6	16/95	178 HR	.010
#7	17/95	202 HR	.019
#8	17/95	203 HR	1.46

AUTOGENIC *

AFTER THE TEST, RESIDUE + RESIN, IS FILTERED OFF,
DRIED AND F.A.

* SELF-SUSTAINING COMBUSTION.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3936 DATE: MARCH 2, 1995
SUBMITTED BY: MR. HENRY CIESZYNSKI.
DATE RECEIVED: FEBRUARY 9, 1995 SAMPLES OF: NORTHERN ALBERTA MATERIAL.

STANDARD GEOCHEM METHODS
IN PPM

	LOC B, L.B. #4A PPM	LOC B, DAA R.R. #5A PPM
AU	<.01	<.01
AG	4	13
CU	9	22
NI	17	25
CR	9	13
CO	9	13
CD	< 1	< 1
PB	44	28
ZN	80	60
AL	3000	4000
FE	18000	24000
CA	H	H
MG	34000	35000
MN	270	2500

J. van Engelen Mgr.

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3536-02 DATE: MARCH 3, 1995
MI-3538

SUBMITTED BY: MR. HENRY CIESZYNSKI.

DATE RECEIVED: JANUARY 12, 1995 SAMPLES OF: NORTHERN ALBERTA MATERIAL

CN- LEACH TEST + 1 GRAM FES04. (NH4)2S04
NO ROASTING.

#A 1 HOUR CN- LEACH
#B 17 HOURS "
#C 25 HOURS "
#D 36 HOURS "

#E NO ROAST - F.A. - SLAG CN- LEACH 18 HOURS

#F ROAST 6-1 NAHCO3 - FA - SLAG CN- LEACH 36 HOURS

	MI-3536	MI-3536	MI-3538
TEST	#4A AU OZ/TON	#5A AU OZ/TON	#6A AU OZ/TON
A	.023	.014	.007
B	.015	.020	.015
C	.025	.017	.018
D	.023	.025	.008
E	.056	.040	.15
F			.84

← Loc B, AB

CHAUNCEY ASSAY LABORATORIES LTD.

33 Chauncey Avenue, Toronto, Ontario M8Z 2Z2
Tel: (416) 239-3527 FAX: (416) 239-4012

WORK PROGRESS REPORT

CERTIFICATE NO.: MI-3536-03 DATE: MARCH 3, 1995
MI-3538-02

SUBMITTED BY: MR. HENRY CIESZYNSKI.

DATE RECEIVED: JANUARY 12, 1995 SAMPLES OF: NORTHERN ALBERTA MATERIAL

SPECIAL TREATMENT

METHOD: AUTOGENE — A HIGH TEMPERATURE TECHNIQUE TRIED BY THE LAB TO DETERMINE WHAT THE SANDSTONE MIGHT CONTAIN.

THE SAMPLES ARE FROM THE FARTHEST INTO THE PROPERTY	IN PLACE	IN RIVER	IN PLACE
	MI-3536	MI-3536	MI-3538
	LIGHT BUFF	DARK MARINE	DARKER, ABOVE LIGHT BUFF
	#4A	#5A	#6A
	AU OZ/TON	AU OZ/TON	AU OZ/TON
F.A.	.284	.199	.270
CN- RES	.153	.037	.249
CN- SOL	.036	.033	.051
TOTAL	.473	.269	.57

S WAS METHOD: ROASTING, 1 GRAM NaClO₃ / 6 GRAMS SAMPLE

TEST WITH SODIUM CHLORATE

	MI-3536	MI-3536	MI-3538
	#4A	#5A	#6A
	AU OZ/TON	AU OZ/TON	AU OZ/TON
F.A.			
CN- RES			
CN- SOL			
PRE-TREATMENT TOTAL	.15	.21	.19

SODIUM RATE

CHAUNCEY ASSAY METHODS

Chauncey Assay Laboratories Ltd., oxidizing-cyanide leach for gold/silver: Six grams of sample is roasted and then submitted to a fire assay. fire assay entails mixing sample with 37 grams of flux and 10 milligram inquart of silver. This is fired for one hour at 1050 C. The lead button is cupelled at 950 C and the resulting silver bead is parted with warm nitric acid and then hydrochloric acid. The solution is then measured by AA or ICP for gold. The slag from the fire assay is then treated with solutions of sodium hydroxide, hydrogen peroxide, ammonium ferrous sulfate, sodium cyanide and then filtered. The residue is fire assayed as above. The cyanide solution is treated with aqua regia and the gold is extracted with methyl iso-butyl ketone. The sum of the three assays is then combined.

Chauncey Assay Laboratories Ltd., standard fire assay for gold: The fire assay procedure is described in Chauncey's oxidizing-cyanide leach method above.

Chauncey Assay Laboratories Ltd., Acid pre-treatment for gold: Samples are treated with hydrochloric acid prior to fire assay.

5. Chemex Labs Ltd.



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

5175 Timberlea Blvd., Mississauga
Ontario, Canada L4W 2S3
PHONE: 905-624-2806 FAX: 905-624-6163

CIESZYNSKI, HENRY

APT. 201, 1 ROYAL ORCHARD BLVD.
THORNHILL, ON
L3T 3C1

Project :
Comments :

Page : 1
Total Pages : 1
Certificate Date: 21-APR-95
Invoice No. : 19515443
P.O. Number :
Account : LTD

CERTIFICATE OF ANALYSIS

A9515443

SAMPLE	PREP CODE	Au ppb FA+AA									
PULP #1	205	226	< 5								
PULP #2	225	--	< 5								
PULP #3	225	--	< 5								
PULP #4	225	--	< 5								
PULP #5	225	--	< 5								
PULP #6	225	--	< 5								
PULP #7	225	--	< 5								
PULP #8	225	--	< 5								
PULP #9	225	--	< 5								
PULP #10	225	--	< 5								
SLAG WASH #1	225	--	< 5								
SLAG WASH #2	225	--	< 5								
SLAG WASH #3	225	--	< 5								
SLAG WASH #4	225	--	< 5								
SLAG WASH #5	225	--	< 5								
SLAG WASH #6	225	--	< 5								
SLAG WASH #7	225	--	< 5								
SLAG WASH #8	225	--	< 5								
CRUCIBLE WASH	225	--	< 5								

SAMPLE LB, LOC.B

CERTIFICATION

6. Geoscience Laboratories



Ontario

Ministry of
Northern Development
and Mines
Ministère du
Développement du Nord
et des Mines

Geoscience Laboratories
Willet Green Miller Centre
933 Ramsey Lake Road
Sudbury, Ontario
P3E 6B5
Phone: (705) 670-5637
Fax: (705) 670-3047

Geoscience
Laboratories
Report D94- 0197

Issued to:

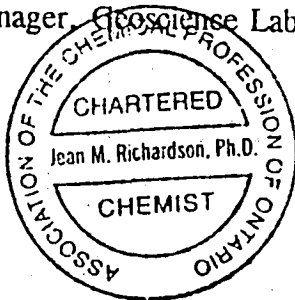
Mr. Henry Cieszynski
201-1 Royal Orchard Blvd.
Thornhill, ON
L3T 3C1
Tel : (416)-869-7299

Date issued: February 14, 1995

This completes the analytical work (Au) on samples submitted in your name on January 5, 1995.

Please refer to certificate number D94-0197 if you have any questions.

Dr. Jean Richardson, C. Chem.
Q.C. Manager, Geoscience Laboratories



It is by special permission reproduction of these results must include any qualifying remarks made by this ministry with references to any sample.

SAMPLE NO. HC IS FROM LB at LOC. B

[illegible]



Ontario

Ministry of
Northern Development
and Mines
Ministère du
Développement du Nord
et des Mines

Geoscience Laboratories
Willet Green Miller Centre
933 Ramsey Lake Road
Sudbury, Ontario
P3E 6B5
Phone: (705) 670-5637
Fax: (705) 670-3047

LB point B

Geoscience
Laboratories
Report D94- 0197

Issued to:

Mr. Henry Cieszynski
201-1 Royal Orchard Blvd.
Thornhill, ON
L3T 3C1
Tel : (416)-869-7299

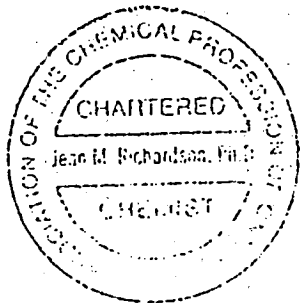
Date issued: March 31, 1995

This completes the analytical work (Pt, Pd) on samples submitted in your name on January 5, 1995.

Please refer to certificate number D94-0197 if you have any questions.

Michael

Dr. Jean Richardson, C. Chem.
Q.C. Manager, Geoscience Laboratories



Except by special permission reproduction of these results must include any qualifying remarks made by this ministry with references to any sample.

ICP-AES REPORT		CODE: ICP-OES-2			
		Procedure No. MS14 with ICP finish			
JOB / DAILIES NO.	D94-0197-A	All values in ppb			
CLIENT:	CIESZYNSKI	APPROVED			
DATE REPORTED:	31-Mar-95	Dr. Jean M. Richardson, C. Chem.			
DATE APPROVED:	3/31/95	Q.A. Manager			
ANALYST:	P.PRINCE	Geoscience Laboratories			
		705-870-6645			
Job/Assay #	Sample #	Au	Pd	Pt	COMMENTS
D94-0197	HC-1	-	<5	<10	
	HC-1D	-	<5	<10	
QUALITY CONTROL	WGB-1	<3	14	<10	
	RBLK	<3	<5	<10	
	PM1	397	1255	395	
	PM2	651	1614	541	



Ministry of
Northern Development
and Mines
Ministère du
Développement du Nord
et des Mines

Geoscience Laboratories
Willet Green Miller Centre
933 Ramsey Lake Road
Sudbury, Ontario
P3E 6B5
Phone: (705) 670-5637
Fax: (705) 670-3047

Geoscience
Laboratories
Report D95- 0004

Issued to:

Mr. H. Cieszynski
201-1 Royal Orchard Blvd.
Thornhill, ON
L3T 3C1

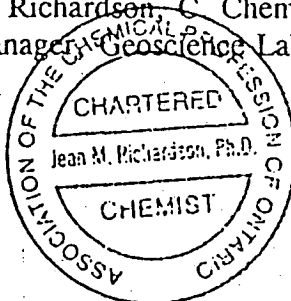
Date issued: May 5, 1995

This completes the analytical work (CO₂) on samples submitted in your name on March 30, 1995.

Please refer to certificate number D95-0004 if you have any questions.

Michael

Dr. Jean Richardson, C. Chem.
Q.C. Manager, Geoscience Laboratories



Except by special permission reproduction of these results must include any qualifying remarks made by this ministry with references to any sample.

GEOSCIENCE LABORATORIES REPORT

MAJOR 1 ANALYSIS WORKSHEET

Client: Cieszynski
 Job/Daily #: D95-0004
 Date Received: May-09-95
 Date Completed: May-11-95
 Date Reported: May-11-95
 Date Approved: 5/11/95
 Analyst: L Sylvestri
 Reported By: L Sylvestri

APPROVED
 Dr. Jean M. Richardson, C. Chem.
 Q.A. Manager
 Geoscience Laboratories
 705-670-5645

Proc. Code
 EA-6 : XRFR
 EA-13 : C/S

MULTIPLY X 0.273 FOR
 CARBON RESULT.
 EL - 16.60 X 0.273 = 4.53% CARBON

Lab #	Sample	Rock Type	CO2	Lab #
1	4-AA	SANDSTONE	16.60	1
2	5-AA	SANDSTONE	25.60	2
3	6-AA	SANDSTONE	30.70	3

Lab	Standards	Rock Type	CO2	Lab #
1	MRB-29	BASALT	0.48	1
2	MRB-29	BASALT	0.51	2
3	MRB-32	PERIDOTITE	1.38	3
4	MRB-32	PERIDOTITE	1.37	4
5	MRB-11	CARB. U/MAF.	19.60	5
6	MRB-11	CARB. U/MAF.	19.60	6

QC NOTES:

- 1) C is expressed as Total Combustible Carbon at 1450 deg. C, in the form of CO2.
- 2) Oxide conversion factors are listed in the Capabilities Handbook.

4AA - LB, LOC B
 5AA - AB, LOC B
 6AA - RM, LOC B

GEOSCIENCE LABORATORIES ASSAY METHODS

Geoscience Laboratories, Fire Assay for gold:

10 grams of sample is mixed with 120 grams of flux and one drop of silver nitrate. This is put into a crucible and placed in a furnace at 1025 C for 35 minutes. Lead button is removed, cubed with a hammer, and placed on a pre heated cupel. Cupel is heated in furnace at 950 C for approximately 30 minutes. Silver prill is removed and analyzed by ICP method. Detection limit for gold is 3 parts per billion.

File No. 37293-1

Date April 26, 1995

Samples _____



of Assay
TORIES LTD.

GOLD

above results are those
herein described samples....



Assayer

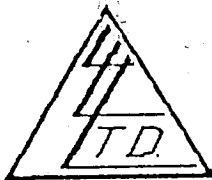
7. Loring Laboratories Ltd.

To: MR. HENRY CIESZYNSKI,
201, 1 Royal Orchard Blvd.,
Thornhill, Ontario L3T 3C1

File No. 37293-1

Date April 26, 1995

Samples _____



Certificate of Assay LORING LABORATORIES LTD.

SAMPLE NO.

PPB
GOLD

"Assay Analysis"

Sandstone (LB, LOC B)

<5

Slag

<5

I Hereby Certify that the above results are those
assays made by me upon the herein described samples....

Rejects retained one month.
Pulps retained one month
unless specific arrangements
are made in advance.

Assayer

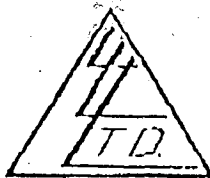
To: ELLS RIVER RESOURCES INC.,

17424 - 106A Avenue,

Edmonton, Alberta T5S 1E6

FN: M.P. (Maurice) Keylor

274-2177



TO 14034860039 P.01

File No. 37634

Date September 7, 1995

Samples Rock/Mud

Certificate of Assay LORING LABORATORIES LTD.

SAMPLE NO.

OZ./TON
GOLD

OZ./TON
SILVER

Assay Analysis

1 RO-ELLS-3

0.001

<0.01

2 RO-ELLS-2

<0.001

<0.01

(Bag Marked # 2
RO-ELLS 1)

3 RO-ELLS 7

0.001

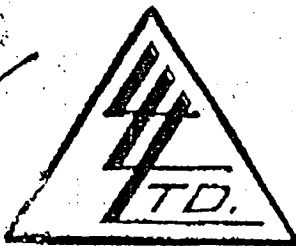
<0.01

#3 RO-ELLS 7 IS #3 RO-TAR 7

I Hereby Certify that the above results are those
assays made by me upon the herein described samples....

acts retained one month.
ps. retained one month
unless specific arrangements
are made in advance.

Assayer



629 Beaverdam Rd. N.E.
Calgary, Alberta T2K 4W2

LORING LABORATORIES LTD.

Phone 274-2777

Fire Assay Procedure

- 1) 1 Assay Ton of pulp in a 40 gm crucible.
- 2) Flux with 140 gm of a mixture consisting of:
 - 77.6% Litharge
 - 16.0% Soda Ash
 - 3.2% Silica
 - 3.2% Borax GlassExcess litharge where required (i.e. high sulfides)
1 Silver inquart also added.
- 3) Crucibles are placed into the furnace at 1100°C and fused for 40-45 minutes and poured into molds.
- 4) Lead buttons are then cleaned of slag.
- 5) Cupels are preheated in the furnace. Lead buttons are then placed into the cupels. The lead is driven off at the rate of 1 gm per minute.
- 6) Cupels are then removed and cooled.
- 7) Silver beads are then removed and cleaned, then placed into parting cups.
- 8) 1:7 Nitric Acid is added to all parting cups. They are then placed on a medium-heat hot plate. Silver is dissolved, leaving a gold bead, which is then washed & dried. The beads are then annealed, cooled, and then weighed in mgs. Mgs of gold on 1 assay ton is ounces per ton.

N.B.:

If gold beads appear too small in the parting solution, the sample is transferred to a volumetric flask and treated with aqua regia until solution of sample is obtained. The samples are then cooled to room temperature and M.I.B.K. is added. The samples are then shaken for a set period of time and then read on the A.A. for the detection of the lower limits of gold in the sample. The highest we go on the A.A. is .029 o.p.t. Our detection limits are 5 ppb.

8. Murox Industries

Samples submitted to Murox Industries Ltd., a gold refinery for fire assay:

DISCUSSION: WE PROVIDED GDRTH WITH SAMPLE MATERIAL ON 2 SEPARATE OCCASSIONS. THE FOLLOWING ARE THE RESULTS.

SAMPLE DESCRIPTION	DATE /	RESULTS	NOTES
ELLS RIVER SANDSTONE LIGHT BLUFF / SITE B	JUNE 10/95 AUG. 25/95	. 202/TON . 1802/TON	PLATINUM / PALLADIUM PLATINUM IN A PRICE.
ELLS RIVER SANDSTONE IRON MATERIAL ABOVE LIGHT BLUFF / SITE B	JUNE 10/95 AUG. 25/95	. 402/TON . 4202/TON	GOLD / PLATINUM BEAD IN A PRICE. PLATINUM IN A PRICE.
TDR 95-03	JUNE 10/95	Ø	ZINC
TDR 95-05	JUNE 10/95	TRACE	PLATINUM / PALLADIUM
TDR 95-07	JUNE 10/95	Ø	ZINC
TDR 95-09 PIONEER	JUNE 10/95	TRACE	PLATINUM / PALLADIUM

NOTE: These results were provided during a telephone conversation at no cost to ELLS RIVER RESOURCES.

MUROX INDUSTRIES ASSAY METHODS

Murox Industries Ltd., Fire Assay for gold/silver/PGMs:
One half assay ton of crushed sample is fired in a gas furnace with flux, at a temperature between 1037 C and 1148 C. The resulting lead button is heated in a cupel until all the lead is removed and a precious metal prill remains. The diameter of the prill is measured to the nearest thousands of an inch.

9. Sherritt Technologies

sherritt

Our Telephone: (403) 992-5003

Our Telefax: (403) 992-5110

June 26, 1995

Mr. Henry Cieszynski
201 - 1 Royal Orchard Blvd.
Thornhill, ON
L3T 3C1

Dear Henry:

As you are aware, we have looked at the samples provided to us by Maurice Keylor, and although the substance of our findings has been passed along verbally, I felt you may wish to have a short report for your files.

In early February 1995, we were provided with three bulk samples of about 2.5 kg each, from a property in the Fort McMurray area of Northern Alberta. Also included were small samples of hand picked material, contained in three vials.

The bulk samples were pulverized to <200 mesh; and were submitted to a commercial laboratory for gold analysis by fire analysis followed by atomic adsorption. The small samples in the vials were analyzed for their mineralogy, then were pulverized and analyzed for gold content by ICP-Mass Spectrometry.

The analytical results for the bulk samples are summarized below.

LOC.B

Sample	Label	Gold (g/t)
1	RA Dark grey marine	<0.01
2	LB Light buff	0.11
3	AB Above light buff	<0.01

Two of the samples did not contain gold at a concentration which could be detected, while sample 2, the light buff material, contained 0.11 g/t of gold.

The hand picked material in the three vials was analyzed using SEM/EDS and the report on the findings is attached. Most of the individual pieces contained pyrite, with variable amounts of gangue minerals such as quartz and clays. The single piece, which was quite different from all the others in appearance (piece 10, vial 3) turned out to be apatite.

17571.DOC

Page 1 of 2

Sherritt Technologies

Sherritt Inc. Fort Saskatchewan, Alberta, Canada T8L 3W4

Telephone (403) 992-5300 / Fax (403) 992-5301 External Technology Fax (403) 992-5110 / Telex 037-2290

Finally, the contents of each vial was pulverized, yielding three small samples. As the material provided was insufficient for a normal fire analysis, each sample was dissolved and analyzed by ICP-Mass Spectrometry. The results are summarized as follows.

Vial	Weight (g)	Gold (g/t)
1	2.9	<1
2	1.8	1.6
3	2.5	2.1

OT GREAT
ELECTION
MITS.

The ICP-Mass Spectrometry method, as practiced here, has a detection limit of 1 g/t for gold (1 ppm Au). Gold was not detected in the vial 1 material, but was present in vials 2 and 3. These results should be viewed as indicative only, and should be confirmed by fire analysis on larger samples.

The unused portion of the bulk samples have been returned to Maurice Keylor, but the small samples in the vials were consumed by the analysis.

Should you wish to have further work done, we would be pleased to quote the costs based on our standard commercial rates. We do not do fire analysis, as the volume of analyses generated by us is insufficient to justify the cost of maintaining the equipment and skills. Therefore, for fire analysis, you would be better off to submit samples directly to a commercial laboratory. We use several commercial labs, and could provide contacts if you wish, but all the well established labs should give good results if they do regular fire analyses.

Yours truly

Gerry L. Bolton
Manager, SI Consultants

/klf

Attachment

c.c. M.G. Weedon
W.G. Bacon
R. Raudsepp/R. Kofluk
M. Keylor Fax: 486-0039

CID Number: 17571
File Number: 9230000095
Project Number: 9751

sherritt**REQUESTED WORK REPORT**

REQUESTED BY: G.L. Bolton for Henry Cieszynski 33 distribution:
CID Number: 11514
PROJECT: 11314 File Number: 2601131495
R. Raudscpp 83
DATE REQUESTED: February 7, 1995
DATE ISSUED: March 13, 1995
INTERIM OR FINAL: Final
CONTACTS: M. Johnston, S. Launspach
SAMPLE: 3 Vials of Heavy Fraction of Panned
Sediments from N.W. Alberta
REQUEST: Determine the Mineralogy of the Heavies

1.0 TEST DESCRIPTION

Three vials of heavy fraction material from N.W. Alberta were submitted for mineralogical analysis, especially looking for the presence of gold.

Each rock fragment was identified and mounted on an SEM sample stub. The fragments were analyzed using SEM/EDS to determine the composition.

2.0 RESULTS

The description of each heavy rock fragment is given in the Table 1.

3.0 CONCLUSION

Heavy mineral grains collected from N.W. Alberta were composed of pyrite with various siliceous gangue materials (quartz, feldspar, amphibole, clay). One apatite grain was also identified (a shiny black botryoidal grain).

No free gold was observed.

/dmp

M. Johnston

Table 1 Mineralogy of Heavy Rock Fragments

	Vial #1	Vial #2	Vial #3
1	Pyrite + K-Al-Silicate	Pyrite + Fe Oxide + K-Al-Silicate	Pyrite, K-Al-Silicate Quartz
2	Pyrite + Mg-Al-Fe Silicate	Pyrite + Quartz	Pyrite
3	Pyrite + Fe Oxide	Pyrite	Pyrite, K-Al-Silicate
4	Pyrite	Pyrite + Fe Oxide	Pyrite, Fe Oxide, Quartz, Al-Silicate
5	Pyrite + Fe Oxide + Ca-K-Al-Silicate	Pyrite + Na-Al-Silicate + Quartz + K-Al-Silicate	Pyrite, Quartz, Al-Silicate
6	Pyrite + Quartz	Pyrite + Na-Ca-Al-Silicate + Quartz	Pyrite, Al-Silicate, Mg-Al-Fe Silicate
7	Pyrite + Quartz + K-Al-Silicate	Pyrite + Na-Ca-Al Silicate + Quartz	Pyrite
8	Pyrite + Fe Oxide	Pyrite + K-Ca-Al-Silicate + Quartz	Pyrite
9	Pyrite + Al-Silicate	Pyrite + K-Ca-Al-Silicate + Quartz	Fe Oxide
10	Pyrite	Pyrite + Fe Oxide + K-Na-Al-Silicate	Ca-F-PO ₄ (Apatite)
11	Pyrite	Pyrite + K-Ca-Mg-Al Silicate + Na-Al-Silicate + Quartz	
12	Pyrite + Quartz + Fe oxide + Fe-Mg-Al-Silicate	Pyrite + Fe Oxide	
13	Pyrite + Quartz + Na-K-Al-Silicate	Pyrite + Fe Oxide	
14	Pyrite + Quartz	Pyrite + Quartz + K-Mg-Fe-Al-Silicate	
15	Pyrite + Quartz + K-Al-Silicate		
16	Pyrite		

No gold was detected in any of the particles examined.

* PYRITE IN NEARLY ALL SAMPLES.

10. University of Alberta, Slowpoke Reactor

SLOWPOKE Reactor Facility,
University of Alberta,
Edmonton, Alberta.

T6G 2N8.

Tel: (403) 492-0754/4978

Fax: (403) 492-1217/8241

28th July 1994.

Re: Elemental analyses of geological samples.

Dear Tony,

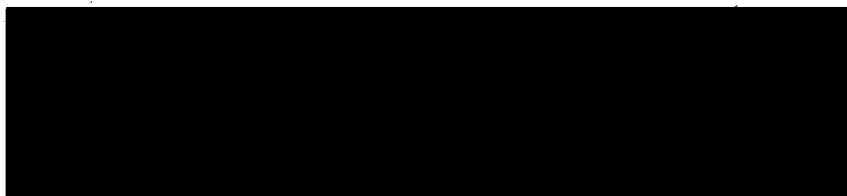
Please find attached the results of the four samples (3 solid and 1 water) that you delivered to me last week of gold analysis (plus any other elements that I might determine during their analysis).

As with your previous 12 samples the induced radioactivity in each of your samples was individually measured using a 20% hyperpure Ge detector in a 10 cm Pb cave at a sample-to-detector distance of 6 cm (for solid samples) and 1 cm (water sample). The results for gold and an additional eleven elements (for the solid samples) are attached. Gold in the water sample was below the detection limit which was calculated to be 300 parts per trillion (ppt).

The cost per sample is \$20 for the solid samples and \$10 for the water sample, to a total of \$70.

If you have any questions regarding the results please call me at 492-0754.

Yours sincerely,



M. John M. Duke, Ph.D.

ID	R11 RNA-2	R5 RNA-3	R7 RNA-4
As	15 ppm	4.7 ppm	≤ 1.5 ppm
Au	≤ 20 ppb	≤ 24 ppb	≤ 24 ppb
Br	≤ 1.6 ppm	≤ 1.4 ppm	≤ 1.9 ppb
Co	18 ppm	≤ 17 ppm	≤ 16 ppm
Fe	1.8 %	≤ 0.8 %	≤ 0.9 %
K	0.26 %	0.31 %	0.55 %
La	7.9 ppm	13 ppm	6.9 ppm
Na	0.17 %	0.21 %	0.28 %
Sb	0.5 ppm	≤ 0.5 ppm	≤ 0.6 ppm
Sc	0.6 ppm	1.6 ppm	≤ 0.9 ppm
Sm	1.1 ppm	1.8 ppm	0.9 ppm
Th	≤ 5 ppm	5.5 ppm	≤ 5 ppm
mass	11.127 g	11.806 g	10.611 g

[Elemental concentrations in parts per million (ppm), parts per billion (ppb) or weight percent (%) as noted; As with previous samples uncertainties associated with the elemental concentrations are generally better than ± 10%].

From NORTHERN BLOCK

11. Xral Laboratories



XRAL Laboratories
A Division of SGS Canada Inc.

1885 Leslie Street
Don Mills, Ont.
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152
Telex 06986947

CERTIFICATE OF ANALYSIS

REPORT 28402

TO: HENRY CIESZYNSKI
1 ROYAL ORCHARD BLVD.
APT. 201
THORNHILL, ONTARIO
L3T 3C1

CUSTOMER No. 2718

DATE SUBMITTED
13-Jul-94

WORKORDER 19105-V3

TOTAL PAGES 5

4 ROCKS

	METHOD	DETECTION LIMIT	METHOD CODE
AU-1AT PPB	FADCP	1.	2-1, 1AT
BE PPM	ICP	.5	70-1
NA %	ICP	.01	70-1
MG %	ICP	.01	70-1
AL %	ICP	.01	70-1
P %	ICP	.01	70-1
K %	ICP	.01	70-1
CA %	ICP	.01	70-1
SC PPM	ICP	.5	70-1
TI %	ICP	.01	70-1
V PPM	ICP	2.	70-1
CR PPM	ICP	1.	70-1
MN PPM	ICP	2.	70-1
FE %	ICP	.01	70-1
CO PPM	ICP	1.	70-1
NI PPM	ICP	1.	70-1
CU PPM	ICP	.5	70-1

	METHOD	DETECTION LIMIT	METHOD CODE
ZN PPM	ICP	.5	70-1
AS PPM	ICP	3.	70-1
SR PPM	ICP	.5	70-1
Y PPM	ICP	.1	70-1
ZR PPM	ICP	.5	70-1
MO PPM	ICP	1.	70-1
AG PPM	ICP	.1	70-1
CD PPM	ICP	1.	70-1
SN PPM	ICP	10.	70-1
SB PPM	ICP	5.	70-1
BA PPM	ICP	1.	70-1
LA PPM	ICP	.5	70-1
W PPM	ICP	10.	70-1
PB PPM	ICP	2.	70-1
BI PPM	ICP	3.	70-1
PT-1AT PPB	FADCP	10.	2-1, 1AT
PD-1AT PPB	FADCP	1.	2-1, 1AT

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS ***
AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 08-AUG-94

CERTIFIED BY



Member of the SGS Group (Société Générale de Surveillance)

Jean H. Opdebeek, General Manager

XRAL

08-AUG-94

REPORT 28402

WORKORDER 19105-V3

SAMPLE	AU-1AT PPB	BE PPM	NA %	MG %	AL %	P %	K %
	FADCP	ICP	ICP	ICP	ICP	ICP	ICP
	2-1,1AT	70-1	70-1	70-1	70-1	70-1	70-1
LB 1	<1	10.2	.14	.11	.65	3.75	.17
LOC D 2	<1	7.8	.02	.03	.11	.02	.05
3	13	8.0	.02	<.01	.08	<.01	.04
DC H SANDSTONE	<1	1.1	.05	.77	.31	.10	.13
D 1	<1	10.1	.14	.11	.66	3.71	.18

AU-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT
D - QUALITY CONTROL DUPLICATE



08-AUG-94

REPORT 28402

WORKORDER 19105-V3

SAMPLE	CA %	SC PPM	TI %	V PPM	CR PPM	MN PPM	FE %
	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	70-1	70-1	70-1	70-1	70-1	70-1	70-1
1	8.42	<.5	<.01	34	96	5380	18.0
2	.07	<.5	<.01	34	175	244	31.7
3	.03	<.5	<.01	38	117	119	33.6
SANDSTONE	15.0	1.6	<.01	21	40	567	2.32
D 1	8.42	<.5	<.01	34	98	5360	18.0

D - QUALITY CONTROL DUPLICATE



08-AUG-94

REPORT 28402

WORKORDER 19105-V3

SAMPLE	CO PPM	NI PPM	CU PPM	ZN PPM	AS PPM	SR PPM	Y PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	70-1	70-1	70-1	70-1	70-1	70-1	70-1
1	54	76	15.9	124	226	849	17.4
2	80	91	23.1	42.6	797	10.3	3.2
3	52	186	20.6	26.0	5	4.0	1.8
SANDSTONE	6	11	4.0	27.0	5	289	6.4
D 1	53	76	15.9	124	231	841	17.6

D - QUALITY CONTROL DUPLICATE

XRAL

08-AUG-94

REPORT 28402

WORKORDER 19105-V3

SAMPLE	ZR PPM	MO PPM	AG PPM	CD PPM	SN PPM	SB PPM	BA PPM
	ICP	ICP	ICP	ICP	ICP	ICP	ICP
	70-1	70-1	70-1	70-1	70-1	70-1	70-1
1	13.4	7	1.0	<1	<10	23	73
2	4.6	58	1.1	<1	<10	24	12
3	9.4	9	1.1	<1	<10	12	11
SANDSTONE	5.8	5	<1	<1	<10	<5	761
D 1	15.0	7	1.1	<1	<10	21	73

D - QUALITY CONTROL DUPLICATE



08-AUG-94

REPORT 28402

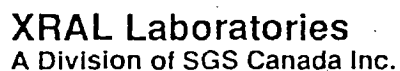
WORKORDER 19105-V3

SAMPLE	LA PPM	W PPM	PB PPM	BI PPM	PT-1AT PPB	PD-1AT PPB
	ICP	ICP	ICP	ICP	FADCP	FADCP
	70-1	70-1	70-1	70-1	2-1, 1AT	2-1, 1AT
1	8.6	<10	32	<3	<10	4
2	2.9	<10	78	28	40	4
3	3.9	<10	75	30	<10	1
SANDSTONE	5.5	<10	6	<3	17	<1
D 1	8.7	<10	35	<3	<10	<1

PT-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

PD-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

D - QUALITY CONTROL DUPLICATE



1885 Leslie Street
Don Mills, Ont.
Canada M3B 3J4
Telephone (416) 445-5755
Fax (416) 445-4152

CERTIFICATE OF ANALYSIS
REPORT 30904

TO: HENRY CIESZYNSKI
1 ROYAL ORCHARD BLVD.
APT. 201
THORNHILL, ONTARIO
L3T 3C1

CUSTOMER No. 2718

DATE SUBMITTED
23-Dec-94

WORKORDER 26183-A5

TOTAL PAGES 1

1 GRAVEL, 1 SANDSTONE SAMPLE

	METHOD	DETECTION	METHOD		METHOD	DETECTION	METHOD
		LIMIT				LIMIT	
			CODE				CODE
AU-1AT PPB	FADCP	1.		ZN PPM	ICP	.5	
BE PPM	ICP	.5		AS PPM	ICP	3.	
NA %	ICP	.01		SR PPM	ICP	.5	
MG %	ICP	.01		Y PPM	ICP	.1	
AL %	ICP	.01		ZR PPM	ICP	.5	
P %	ICP	.01		MO PPM	ICP	1.	
K %	ICP	.01		AG PPM	ICP	.1	
CA %	ICP	.01		CD PPM	ICP	1.	
SC PPM	ICP	.5		SN PPM	ICP	10.	
TI %	ICP	.01		SB PPM	ICP	5.	
V PPM	ICP	2.		BA PPM	ICP	1.	
CR PPM	ICP	1.		LA PPM	ICP	.5	
MN PPM	ICP	2.		W PPM	ICP	10.	
FE %	ICP	.01		PB PPM	ICP	2.	
CO PPM	ICP	1.		BI PPM	ICP	3.	
NI PPM	ICP	1.		PT-1AT PPB	FADCP	10.	
CU PPM	ICP	.5		PD-1AT PPB	FADCP	1.	

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS ***
AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 18-JAN-95

CERTIFIED BY

Jean H. Opdebeeck, General Manager

THIS WAS THE SECOND NEUTRON ACTIVATION REPORT ON
THE SULPHIDES

XRAL

18-JAN-95

REPORT 30904

WORKORDER 26183-A5

PAGE 1 of 1

ELEMENT METHOD METHOD 1 ^{LOC. H}₂ 1-D
CODE

AU-1AT PPB FADCP		2	1	1
BE PPM	ICP	.6	<.5	.5
NA %	ICP	.05	.07	.05
MG %	ICP	.16	1.20	.16
AL %	ICP	.79	.39	.81
P %	ICP	.04	.08	.04
K %	ICP	.11	.14	.11
CA %	ICP	.18	18.0	.19
SC PPM	ICP	1.9	2.0	2.0
TI %	ICP	<.01	<.01	<.01
V PPM	ICP	22	18	23
CR PPM	ICP	221	40	224
MN PPM	ICP	156	882	157
FE %	ICP	1.91	2.68	1.93
CO PPM	ICP	9	3	10
NI PPM	ICP	21	11	20
CU PPM	ICP	15.2	5.7	14.7
ZN PPM	ICP	37.7	31.3	39.7
AS PPM	ICP	9	<3	5
SR PPM	ICP	16.9	321	17.1
Y PPM	ICP	12.8	8.1	12.8
ZR PPM	ICP	10.7	8.7	11.3
MO PPM	ICP	1	<1	1
AG PPM	ICP	<.1	<.1	<.1
CD PPM	ICP	<1	<1	<1
SN PPM	ICP	<10	<10	<10
SB PPM	ICP	<5	<5	<5
BA PPM	ICP	279	407	279
LA PPM	ICP	19.5	5.6	20.2
W PPM	ICP	<10	<10	<10
PB PPM	ICP	3	<2	<2
BI PPM	ICP	<3	<3	<3
PT-1AT PPB FADCP		<10	<10	<10
PD-1AT PPB FADCP		3	1	1

AU-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

PT-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

PD-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

D - QUALITY CONTROL DUPLICATE



31

Acid Extraction, determination by ICP Spectroscopy ~~36~~ elements

Description:

A quarter gram sample is digested with 2 ml of nitric acid for one half hour in a water bath, then 1 ml of hydrochloric acid is added and the digestion continues for another 2 hours. Test tubes are shaken at regular intervals.

In house standards and previously analysed samples are run to monitor proper digestion procedures. Synthetic standards are used to calibrate the instrument.

Technique analyses liquids by vaporizing them in the very hot flame of an argon plasma

Limitations:

The nitric aqua regia extraction will not completely extract difficultly soluble elements such as Ba, Cr, Sb, Sn, Ta, W, V and Zr. The multi-acid extraction (Method code 80-1) will ensure better extraction, though some refractory minerals may remain incompletely attacked. Volatile elements such as As may be lost from solution in the multi-acid attack.

Elements:

Al	0.01%	Fe	0.01%	Na	0.01%
Sb	5ppm	Pb	2ppm	Sr	.5ppm
As	5ppm	Li	1ppm	Ag	.1ppm
Ba	1ppm	Mg	.01%	Sn	10ppm
Be	.5ppm	Mn	.01%	Ti	.01%
Bi	3ppm	Mo	1ppm	W	10ppm
Cd	1ppm	Ni	1ppm	V	2ppm
Ca	.01%	P	.01%	Y	.1ppm
Cr	1ppm	K	.01%	Zr	.5ppm
Co	1ppm	Sc	.5ppm	Zn	.5ppm
Cu	.5ppm				

prepared by

Approved by

Date



Member of the SGS Group (Société Générale de Surveillance)

XRAL

LES LABORATOIRES XRAL LABORATORIES
 Une Division de / Division of SGS Inc.

150, 13e rue
 Rouyn-Noranda, Québec
 Canada J9X 2H6
 Téléphone (819) 764-9108
 Fax (819) 764-4670

From: JOE LANDERS
 OPERATIONS MANAGER

To: FIRE ASSAYERS
 XRAL ROUYN-NORANDA

Date: March 2, 1994

Copies:

Subject: FIRE ASSAY FOR GOLD, SILVER, PLATINUM & PALLADIUM

MEMO

MIX SAMPLES WITH THE APPROPRIATE FLUX.
 ADD 2MG. OF SILVER FOR GEOCHEM OR 3MG. SILVER FOR GRAVIMC
 ANALYSIS. IN THE CASE OF SILVER ANALYSIS, DO NOT ADD SILVER. IN
 THE CASE OF PLATINUM AND PALADIUM ANALYSIS ADD DOUBLE THE
 NORMAL SILVER. FUSE FOR 45-60 MINUTES DEPENDING ON YOUR
 FURNACE HEAT.
 POUR AND ALLOW TO COOL.
 COLLECT THE LEAD BUTTON AND CLEAN OFF ANY SLAG ADHERING TO
 THE LEAD.
 PLACE LEAD BUTTONS IN PRE HEATED CUPELS UNTIL LEAD IS DRIVEN
 OFF. IN THE CASE OF SILVER ANALYSIS, THE CUPELS SHOULD BE
 REMOVED FROM THE FURNACE AFTER THE BEAD FLASHES, SILVER
 LOSSES INCREASE IF THEY ARE LEFT IN THE FURNACE. IN THE CASE OF
 PLATINUM AND PALADIUM, LET THE SAMPLES CUPEL FOR 10 MINUTES
 EXTRA AFTER THE LEAD IS DRIVEN OFF. THIS IS TO ENSURE THAT ALL
 LEAD IS INDEED DRIVEN OFF.

THIS METHOD IS VERY VAGUE DUE TO THE MANY DIFFERENT TYPES OF
 SAMPLES ENCOUNTERED DAILY IN FIRE ASSAY. FIRE ASSAY REALLY
 DEPENDS ON THE EXPERIENCE OF THE ASSAYER AND CANNOT BE LAID
 OUT IN DETAIL.



Member of the SGS Group (Société Générale de Surveillance)

XRAL LABORATORIES ASSAY METHODS

XRAL Laboratories, Inductively Coupled Plasma for 31 elements: A quarter gram of sample is digested with 2 ml of nitric acid for one half hour in a water bath, then 1 ml of hydrochloric acid is added and the digestion continues for another 2 hours. Test tubes are shaken at regular intervals. Solution is then vaporized in the flame of an argon plasma. In house standards and duplicate samples are run to monitor proper digestion procedures. Detection limits are shown along with results.

XRAL Laboratories, Fire Assay for gold/platinum/palladium: Samples are mixed with the appropriate flux along with 2 mg of silver for gold, or 4mg of silver for platinum and palladium. This is fused in a furnace for 45-60 minutes, poured and cooled. The lead button is cleaned and placed in pre heated cupels until all of the lead is driven off. For platinum and palladium analysis the sample is left in the cupel for an extra 10 minutes after the lead is driven off.

APPENDIX G
APEX GEOSCIENCE REPORT

APEX Geoscience Ltd.

#18, 10509 - 81st Avenue
Edmonton, Alberta, Canada T6E 1X7
Bus: (403) 439-5380
Fax: (403) 439-9789
E-Mail: apexgeo@compusmart.ab.ca

February 14, 1996

Mr. Maurice Keylor
Ells River Resources Inc.
17424 - 106A Avenue
EDMONTON, Alberta
T5S 1E6
Fax: (403) 486-0039; 1 Page

Dear Maurice:

Final Report On Exploration of Ells River Resources Inc.'s
Ells River Property, Northeast Alberta

Further to our meeting of January 30, 1996, this advises you that we expect to complete our final report entitled "Precious And Base Metal Exploration Of Townships 95 to 97, Range 13, Ells River Area, Northeast Alberta" on behalf of Ells River Resources Inc. (ERRI) by about February 23, now that most or all of the analytical results are in hand.

If you should have any questions please contact me as soon as possible at my office (403) 439-5380.

Best Regards,



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

SURVEY TYPE: Rock CLIENT & PROJECT: 45210 AREA &/or PHOTO: 84H18 E18 R COLLECTOR(S): MD DATE: Oct 7 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																
84H895MDP01712				43906				56364155																																																																															
Qtz				Feld				Mica				AmPy				Gar				Carb				R.F.				Acc				Fine				Med				Gr				Porph				2-4				4-8				8-16				16-32				32-64				>64				None				Weak				Mod				Str			
Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				D/C				Fels				Talus				Blkr				Other																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																																			

REMARKS: On west side of creek (Tar River) on gravel bar ± lots of rusty blocks
large subangular blocks with trace to 1% py - look like siderite or
ankerite mud with granular leucite
trace glauconite to trace oolites

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 45210 AREA &/or PHOTO: 84H18 Tar R COLLECTOR(S): MD DATE: Oct 7 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																
84H895MDP01812				438295				6366790																																																																															
Qtz				Feld				Mica				AmPy				Gar				Carb				R.F.				Acc				Fine				Med				Gr				Porph				2-4				4-8				8-16				16-32				32-64				>64				None				Weak				Mod				Str			
Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				D/C				Fels				Talus				Blkr				Other																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																																			

REMARKS: Absolutely excellent section at Westgate Fish scale fm

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/8 Tar R COLLECTOR(S): MD DATE: Oct 7 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
FROM				TO				WIDTH				WEATHERING ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																							

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
84H895MDP01512								4390656364155																																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

REMARKS: Rusty oolitic sandstone from top of Pelican section. Very difficult to access
- appears to make contact with overlying Westgate - Phosphatic oolites
probably Fe rich as extremely rusty
- this is likely upper part of Pelican in contact with silty Westgate
but difficult to look at contact.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/8 Tar R COLLECTOR(S): MD DATE: Oct 7 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
FROM				TO				WIDTH				WEATHERING ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																							

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
84H895MDP01612								4390656364155																																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

REMARKS: Rusty unit that is at a just below Westgate contact
- 0.5m to 0.75m thick. Oolites coming down the slope
- sampled at bottom of this slope
Note s. profile at edge of limestone fringes. Sample calcareous
Side to part of unit with trace sulphides. Sample is composite of several
blocks at foot of slope.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R COLLECTOR(S): MD DATE: Oct 6 1994

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS																							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		Cl		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str		Radioactivity		Strike		Dip	
FROM				TO		WIDTH		WEATHERING / ALTERATION		Feld		Minor		Mod		Int		Txt		Mnrl		Col		Strk		Acid		Hdms		S.G.		Other		D/C		Fels		Talus		Blck		Other		Original Sample No.		Orig. Dup. Rep.									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40														
84H195MDP01312				437830		6341530																																															
Qtz				Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		Cl		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str		Radioactivity		Strike		Dip	
FROM				TO		WIDTH		WEATHERING / ALTERATION		Feld		Minor		Mod		Int		Txt		Mnrl		Col		Strk		Acid		Hdms		S.G.		Other		D/C		Fels		Talus		Blck		Other		Original Sample No.		Orig. Dup. Rep.							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																									

REMARKS:

Boulders from 3-4 m down from P012 - but same unit

- material must be locally derived as no visible till or glacial fluvial

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R COLLECTOR(S): MD DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS																							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		Cl		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str		Radioactivity		Strike		Dip	
FROM				TO		WIDTH		WEATHERING / ALTERATION		Feld		Minor		Mod		Int		Txt		Mnrl		Col		Strk		Acid		Hdms		S.G.		Other		D/C		Fels		Talus		Blck		Other		Original Sample No.		Orig. Dup. Rep.									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40														
84H195MDP01412				437830		6341530																																															
Qtz				Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		Cl		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str		Radioactivity		Strike		Dip	
FROM				TO		WIDTH		WEATHERING / ALTERATION		Feld		Minor		Mod		Int		Txt		Mnrl		Col		Strk		Acid		Hdms		S.G.		Other		D/C		Fels		Talus		Blck		Other		Original Sample No.		Orig. Dup. Rep.							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																									

REMARKS:

Top of gray middle bench about 100m north of SNP0036 - composite grab about 20m of granitic siltstone ± inst ± shale material → sampled interval (all rubble) is at same level as unit sampled by Neil as 0036.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H11 Ellis R COLLECTOR(S): MO DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MDP01112				4392956342750																																			
Mudstone																																							
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: Similar to light olive mudstone sampled yesterday at Site B
 Heavily to Unconformable fracture. Olive colored with trace organic debris
 calcite veinlets and py in patterns + veinlets
 Py/more = L190 to 190 - nice py halos along veinlets
 Note metal tag 15m downhole in wellbore pattern - Site 15 is
 east of SMDP010 and 4m west of SNFO025

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, D - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H11 Ellis R COLLECTOR(S): MO DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MDP01212				4378306341530																																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: Top of section - several beds coming out of alluvium or it is just
 above last level. Unconformable mudst but with sharp to replacement contact
 on the east side (py/more) +
 by the way - mudstone

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, D - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R COLLECTOR(S): MD DATE: Oct 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MDP00912				439295		6342750																																	
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: 20-25m below SNF0021 on upper slope. Site @ about 375m asl
Sample site about 20m west of 010 - note - probably sheared
equivalent of what Nalk is sampling - dark grey finely laminated
siltstone with carbonaceous layers - also some siderite rich layers
Sampled center of block 0.5x0.5m. Contains 2-3% disseminated
fine pyrite - Brown to slightly rusty weathering, calcareous

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, D - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R COLLECTOR(S): MD DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MDP01012				439295		6342750																																	
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: Platy green weathering partly lithified sand to silt. The sulphide
calcareous. Note also sampled 2-3 cm muddy unit and 2-3 cm
siderite concentrating layer below platy sandstone
block 0.5m lithified - chipped block is calcareous derived from
up the hill

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, D - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: CLIENT & PROJECT: 95210 AREA &/or PHOTO: S. 13 COLLECTOR(S): MD, DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM				(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS					
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
95MDP006				12				439945				6342335																											
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS:

Location below P005

95MDP007 - Location below P006 - inside at water level

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: Review CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ells R COLLECTOR(S): MD DATE: Oct 6

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM				(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS					
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95MDP008				12				439295				6342750																							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS:

block 5m below SNF0021

-hard siltstone with fine subhorizontal laminations - light green

rock with light green tint due to ① siliceous ② calcareous

matrix and ③ glauconite with trace to minor fgr pyrite

some siliceous material rock can give

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: <i>Recon</i>				CLIENT & PROJECT: <i>95210</i>				AREA &/or PHOTO: <i>Site B Ellis R</i>				COLLECTOR(S): <i>MD, DB</i>				DATE: <i>Oct 5 1995</i>																																																																																																																																																																																																																																																																																															
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NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID				UTM COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS																																																																																																																																																																																																																																																															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																																																																																																																																																																																																																																																																																			
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FROM				TO				WIDTH				WEATHERING ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																																																																																																																																																																																																																																																																															
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Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																																																																																																																																																																																																																																																																																											
<div> <div>ROCK SAMPLE CARD</div> <div>APEX Geoscience Ltd.</div> <table border="1"> <thead> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th><th>25</th><th>26</th><th>27</th><th>28</th><th>29</th><th>30</th><th>31</th><th>32</th><th>33</th><th>34</th><th>35</th><th>36</th><th>37</th><th>38</th><th>39</th><th>40</th></tr> </thead> <tbody> <tr> <td>7</td><td>4</td><td>E</td><td>4</td><td>5</td><td>M</td><td>D</td><td>P</td><td>0</td><td>0</td><td>4</td><td>1</td><td>2</td><td></td><td></td><td>4</td><td>3</td><td>9</td><td>9</td><td>4</td><td>5</td><td>6</td><td>3</td><td>4</td><td>2</td><td>3</td><td>3</td><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td colspan="4">SST</td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td></tr> <tr> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th><th>12</th><th>13</th><th>14</th><th>15</th><th>16</th><th>17</th><th>18</th><th>19</th><th>20</th><th>21</th><th>22</th><th>23</th><th>24</th><th>25</th><th>26</th><th>27</th><th>28</th><th>29</th><th>30</th><th>31</th><th>32</th><th>33</th><th>34</th><th>35</th><th>36</th><th>37</th><th>38</th><th>39</th><th>40</th></tr> <tr> <td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td></tr> <tr> <td colspan="4">Copper (%)</td><td colspan="4">Lead (%)</td><td colspan="4">Zinc (%)</td><td colspan="4">Silver (g/t)</td><td colspan="4">Gold (g/t)</td><td colspan="4">U3O8 (%)</td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td><td colspan="4"></td></tr> </tbody> </table> <div> <div>REMARKS:</div> <div> <p><i>Well laminated rippled glauconitic arkosic sst - upper half moderate</i></p> <p><i>with fine: lower half well lithified - pale green - note weather burrows</i></p> <p><i>excellent wave ripples, large block 1m x 30cm in colluvium</i></p> <p><i>about 10m below 003 and 20-25m east of 002</i></p> </div> </div> </div>																																								1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	7	4	E	4	5	M	D	P	0	0	4	1	2			4	3	9	9	4	5	6	3	4	2	3	3	5													SST																																																1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																	Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																											
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SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: <u>Recon</u>												CLIENT & PROJECT: <u>95210</u>												AREA &/or PHOTO: <u>Site B E1/R COLLECTOR(S): MD, DB</u>												DATE: <u>Oct 5 1995</u>																																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS																																															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																																															
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str					Degrees				Direction																																												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
FROM				TO								WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																																															
																Fresh				Miner	Mod	Int	Txt	Mnri	Col	Strk	Acid	Hdms	S.G.	Other	D/C	Fels	Tales	Bldr	Other																																												
Copper (%)				Lead (%)								Zinc (%)				Silver (g/t)				Gold (g/t)				ANALYTICAL RESULTS				U ₃₀₈ (%)																																																			
ROCK SAMPLE CARD																																								APEX Geoscience Ltd.																																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
7	4	E	4	9	5	M	D	P	O	O	5	1	2		4	3	9	9	4	5	6	3	4	2	3	3	5																																																				
SST				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str					Degrees				Direction																																												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
																Fresh				Miner	Mod	Int	Txt	Mnri	Col	Strk	Acid	Hdms	S.G.	Other	D/C	Fels	Tales	Bldr	Other																																												
Copper (%)				Lead (%)								Zinc (%)				Silver (g/t)				Gold (g/t)				ANALYTICAL RESULTS				U ₃₀₈ (%)																																																			
REMARKS: Similar to 001 002 + 003 about 6-7m east and 6-7m down slope from 002 - distinct 0.5 cm veinlet with calcite and py/marc.																																																																															

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

74E14

SURVEY TYPE: Recon CLIENT & PROJECT: 95210 AREA &/or PHOTO: SITE B ELKR COLLECTOR(S): MD DB DATE: Oct 5

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DRG. DUP. REP.																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				95MDP		001		12		43		99		45		63		42		33		5																	
CHERT				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DRG. DUP. REP.																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: Olive colored calcareous chert/mudstone - light gray fine crystalline to bedding controlled by seams or laminations
Note 1 cone in cone structure boulder in colluvium
95MDP002 - similar to 001 - lies 5m to the east of 001

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

74E14

SURVEY TYPE: Recon CLIENT & PROJECT: 95210 AREA &/or PHOTO: SITE B ELKR COLLECTOR(S): MD DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DRG. DUP. REP.																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				95MDP		003		12		43		99		45		63		42		33		5																	
				Qtz		Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DRG. DUP. REP.																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: Similar to 001 and 002 except distinct calcite veins with patches of py/mar. near top of left sandstone
25-30m east of 002

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

84H195NF0036

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: Lithified fine grained sand similar to that in 95NF0035. Sand is buff-orange weathering and has a slightly platy texture. ABUNDANT bivalve and gastropod shells with iridescent color are concentrated along some beds. This sample is ~3 meters above 95NF0035

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

84H/8

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: TAR RIVER COLLECTOR(S): NF DATE: OCT 7/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

84H895MF0037

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: Sample of BLACK shales immediately above Fish scales bed. Shale has yellow sulfur staining and silty grey interbeds. Immediately above 5NF007. Not well lithified.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str	28	29	30	31	32	33	34	35	36	37	38	39	40								
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
												Fresh				Minor	Mod	Int	Txt	Mnrl	Col	Strk	Acid	Hdms	S.G.	Other	O/C	Fels	Talus	Blk	Other	73	74	75	76	77	78	79	80								
																Analytical Results																															
																Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
84H1				95NF				0034																																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str	28	29	30	31	32	33	34	35	36	37	38	39	40								
7.8				8.8				1.0m				Fresh				Minor	Mod	Int	Txt	Mnrl	Col	Strk	Acid	Hdms	S.G.	Other	O/C	Fels	Talus	Blk	Other	73	74	75	76	77	78	79	80								
																Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)											

REMARKS: Unlithified siltstone beds up to 10cm thick interbedded with less black shale. similar to sample 95NF0033. Above this is grey clay running into colluvium.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str	28	29	30	31	32	33	34	35	36	37	38	39	40								
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
												Fresh				Minor	Mod	Int	Txt	Mnrl	Col	Strk	Acid	Hdms	S.G.	Other	O/C	Fels	Talus	Blk	Other	73	74	75	76	77	78	79	80								
																Analytical Results																															
																Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
84H1				95NF				0035																																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str	28	29	30	31	32	33	34	35	36	37	38	39	40								
1.0m												Fresh				Minor	Mod	Int	Txt	Mnrl	Col	Strk	Acid	Hdms	S.G.	Other	O/C	Fels	Talus	Blk	Other	73	74	75	76	77	78	79	80								
																Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)											

REMARKS: VERY WELL lithified green to grey colored fine grained sand and silt. THIS layer pinches and swells and is equivalent to unlithified material at 95NF0028.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84 H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID		UTM COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP													
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.													
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																					

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
84 H/1				95		NF		0030																																					
3.8				4.8				1.0m																																					
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																									

REMARKS: UNLITHIFIED black shale with some silty brown lenses.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84 H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID		UTM COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP													
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.													
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																					

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
84 H/1				95		NF		0031																																					
4.8				5.8				1.0m																																					
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																									

REMARKS: UNLITHIFIED black shale with rusty color on fracture surfaces.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

84 H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
Qtz				Feld				Mica				AmPy				Gor				Carb				R.F.				Acc				Fine				Med				Crs				Porph			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.															
Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																				
84H195				NF0028																																																							
41				42				43				44				45				46				47				48				49				50				51				52															
Qtz				Feld				Mica				AmPy				Gor				Carb				R.F.				Acc				Fine				Med				Crs				Porph															
1.8				2.8				1.0m				Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																							

REMARKS: UNLITHIFIED Fine sand and muddy siltstone with some shale beds.
Green-yellow-brown color. Near the top is 2 lithified rusty
weathering fine grained mudstones (each x 5cm thick). This is
along strike with thicker concretionary bands.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

84 H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
Qtz				Feld				Mica				AmPy				Gor				Carb				R.F.				Acc				Fine				Med				Crs				Porph			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.															
Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																				
84H195				NF0029																																																							
41				42				43				44				45				46				47				48				49				50				51				52															
Qtz				Feld				Mica				AmPy				Gor				Carb				R.F.				Acc				Fine				Med				Crs				Porph															
2.8				3.8				1.0m				Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																							

REMARKS: unlithified black shale with some silty brown colored
lenses.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/9

NTS				YEAR	INIT.	NUMBER				ZONE	UTM	(or EAST GRID	UTM COORDINATES	NORTH	WTHR	RELIEF	CONTAMINATION				HARDNESS																		
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str													
				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

ROCK SAMPLE CARD

APEX Geoscience Ltd.

84H/1 95 NF 0026																																															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80								
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																					
				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								

REMARKS: Unlithified dark green sand, fine grained with some silt and some black shale. Top 50cm is primarily black shale

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

NTS				YEAR	INIT.	NUMBER				ZONE	UTM	(or EAST GRID	UTM COORDINATES	NORTH	WTHR	RELIEF	CONTAMINATION				HARDNESS																		
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str													
				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

ROCK SAMPLE CARD

APEX Geoscience Ltd.

84H/1 95 NF 0027																																											
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80				
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Crs	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																	
				5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				

REMARKS: UNLITHIFIED Fine grained laminated silty sand with some shale laminations and pockets.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

APEX Geoscience Ltd.

[illegible]

REMARKS: Sample from blocks lying withing colluvium at the same elevation. MODERATLY indurated, very platy, medium grained sand. green-grey color and laminated with small scale cross beds. maximum thickness OF BLOCKS IS 10 cm.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

APEX Geoscience Ltd.

[illegible]

REMARKS: From block sticking out of COLLUVIUM Near bottom of slump. VERY well indurated green sandstone and finer grained darker mudstone

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS									
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195				NF0022								439295				6342700																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: Fine grained, orange stained sand that is not well indurated.
this unit becomes more lithified towards its lower contact with
underlying hard green sandstone. lower contact is gradational, sample
is from top 15cm of a couple of blocks that are not in place. lower
part of blocks are 95NF0-023.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or)		EAST GRID		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS									
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195				NF0023								439295				6342700																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: From lower part of Blocks not in place that are very well indurated.
Fine grained green sandstone that becomes interbedded with
mudstone towards bottom. Bottom is green carbonate mud with
organic fragments and a layer of PELECYPOD shells. Top part of
blocks are sample 95NF0022.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

74E/4

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT. 5/9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E495				NF0020				440000				6342600																											
Shale																																							
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: Black sulfur stained shale. Some orange-brown sandy silt near top of channel.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 6/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195				NF0021				439295				6342700																											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REF.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: VERY WELL INDURATED. Fine grained, massive, green-grey glauconitic sand. Small dark mud laminations near bottom with abundant shells. Top 3cm's is Brown carbonate clay with mudstone with many organic fragments (wood and/or coal?) and some pyrite. TAKEN From a block that ~~was~~ is possibly slumped and rotated from its original position. BUFF weathering

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 ELL R COLLECTOR(S): NF DATE: Oct 4 1995

NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

018

APEX Geoscience Ltd.

74E495NF0016				4399806342480																											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)											

REMARKS: 1.0m grey sulphur stained mud immediately above 015 - minor silt lenses - bioturbated?

017 - fissile sulphur stained grey mud = 70 cm

018 - interbedded mud + silt to sand - mud is immediately below about 0.3m chaotic disturbed box which in turn is below glacial fluvial gravel - 70cm - note upper 50cm - hardened mud - paleosol for

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define) Sample is 1.5m above 017 due to covered interval

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

74E495NF0019				440000				6342600																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)											

REMARKS: Poorly indurated, sandy, green-grey colored siltstone with thin beds of black shale. yellow sulfur staining on shale.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1
ELLS RIVER

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
84H195				NF0013				436620				6341170																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																							

REMARKS: WELL INDURATED (very hard) buff to orange weathering layer.
Fine grained glauconitic sand and carbonaceous mudstone. mudstone
has pockets and laminations with organic fragments (BLACK color) where
pyrite also occurs (~5% pyrite). This indurated rock ends abruptly
along strike where non-lithified sand and mud are present.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

74E/14
ELLS R

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/14 COLLECTOR(S): NF DATE: OCT 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
74E495				NF0014				439980				6342480																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																							

REMARKS: 80 cm gray mud with minor silt lenses, minor sulphide stain

0.15 - 10 cm brown to orange silty sand lense

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																				
84H195NF0011								436620				6341170																																																																															
Qtz				Feld				Mica				AmPy				Gar				Corb				R.F.				Acc				Fine				Med				Crk				Porph				<2				2-4				4-8				8-16				16-32				32-64				>64				None				Weak				Mod				Str			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																																																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																																							

REMARKS: Predominantly fine grained silty sand. green brown color and laminated. Interbedded with black shale. Sand beds are up to 25cm thick. (Poorly indurated)

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																				
84H195NF0012								436620				6341170																																																																															
Qtz				Feld				Mica				AmPy				Gar				Corb				R.F.				Acc				Fine				Med				Crk				Porph				<2				2-4				4-8				8-16				16-32				32-64				>64				None				Weak				Mod				Str			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																																																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																																							

REMARKS: WELL INDURATED (Hard) sand layer. MODULE layer. Discontinuous as it turns to unlithified sand and silt along strike. This layer is EQUIVALENT to the sand at the bottom of sample SNFO-011. (taken ~ 1 metre to the west of SNFO-011.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 4/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
FROM				TO								WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195NF0009												436620												6341170															
SHALE				✓								✓				✓				✓				✓				✓				✓				✓			
FROM				TO								WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: poorly indurated black shale as in SNFO-007 and 008.
5cm thick ironstone bed in center of this channel. (discontinuous)
Fine grained sand is present at top of this sample.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
FROM				TO								WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195NF0010												436620												6341170															
SHALE				✓								✓				✓				✓				✓				✓				✓				✓			
FROM				TO								WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: laminated fine grained sand and silt with green-brown color.
interbedded with equal amount of black shale. small hummocky
cross beds (cm's) in sandy-silty layers. mudstone is moderately
bioturbated. shale and silt-sand beds are up to 5cm thick.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 4/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID		UTM COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
84H195NF0007				436620				6341170																																			
Shale				✓				✓				✓				✓				✓				✓				✓				✓											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																							

REMARKS: Poorly indurated black shale with some silty brown colored lenses. Occasional pelecypod shell in shale with iridescent appearance.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

84H/1

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): N.F. DATE: OCT 4/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID		UTM COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
84H195NF0008				436620				6341170																																			
Shale				✓				✓				✓				✓				✓				✓				✓				✓											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																							

REMARKS: Poorly indurated black shale with some silty brown lenses. Occasional pelecypod shell.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

APEX Geoscience Ltd.

[illegible]

REMARKS: green colored, laminated silt and fine sand (black lamination? present). Small scale trough cross-bedding (couple of cm's). Interbedded with black shale beds up to 8cm thick. Some harder nodules in the shale.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

APEX Geoscience Ltd.

[illegible]

REMARKS: green colored, laminated silt and fine sand with shale interbeds
similar to sample SNFO-005.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R. COLLECTOR(S): NF DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H/1				95NF		0001								4366		20		634		1170																			
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

REMARKS: 001 - 45cm interbedded mudstone and for sand to silt mudst beds
1-2 cm Some minor organic material

002 - 6 to 7 cm lens of carbonate cemented mud or silty mud
- brown with ~~concreted~~ breakage - some very for silt lenses
and organic material - cement = siderite and/or dolomite
very weak fizz

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R. COLLECTOR(S): NF DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
84H/1				95NF		0003								4366		20		634		1170																					
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																													

REMARKS: 003 + 004 - same unit - similar to 001 = interbedded sandy silt + mudstone
interbedded light green to grey - weakly glauconitic - some bivalves
(probably?) shell
- sampled on 1m intervals

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/8

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: TAR RIVER COLLECTOR(S): NF DATE: OCT 7/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Co	Porph	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
												Fresh Minor Mod Int Txt				Mnrl Col Strk				Acid Hdns S.G. Other				D/C Fels Tolu Blr Other															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H/8				95NFP				007																															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Co	Porph	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
								0.15																															
												Fresh Minor Mod Int Txt				Mnrl Col Strk				Acid Hdns S.G. Other				D/C Fels Tolu Blr Other															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: Fish scales ZONE. Black carbonaceous shale with Fish debris. NOT well indurated.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/8

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: TAR RIVER COLLECTOR(S): NF DATE: OCT 7/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Co	Porph	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
												Fresh Minor Mod Int Txt				Mnrl Col Strk				Acid Hdns S.G. Other				D/C Fels Tolu Blr Other															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H/8				95NFP				008																															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz	Feld	Mica	AmPy	Gar	Carb	R.F.	Acc	Fine	Med	Co	Porph	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
								0.20																															
												Fresh Minor Mod Int Txt				Mnrl Col Strk				Acid Hdns S.G. Other				D/C Fels Tolu Blr Other															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U308 (%)																			

REMARKS: From slumped block of outcrop. Sample of Fish scales ZONE. Fine grained rock with ~80% organic debris (Fish scales etc) well lithified with brown color to Fish debris. Some fine grained, disseminated pyrite present (~1% or less)

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

84H/8

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: TAR RIVER COLLECTOR(S): NF DATE: OCT 7/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)						NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H895NFP005																																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: COMPOSITE grab sample From several small blocks on slope. TAKEN OVER AREA OF X 5m X 10m. MODERATELY INDURATED, medium to coarse grained sand, orange colored with rusty, limonitic & weathering. Some harder concretions present, ON LEDGE ABOVE COAL UNIT.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

84H/8

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: TAR RIVER COLLECTOR(S): NF DATE: OCT 7/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)						NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H895NFP006																																							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: grab sample From boulder on stream bank opposite the outcrop face. boulder appears to have come down the slope. WELL INDURATED limonitic weathering quartz sand with oolites and some glauconite. Some pyrite. Fine grained pyrite is present. large boulder at least 70cm wide.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

74E/4

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				95		NF		P003				43		99		00		63		42		38		0															
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Qtz				Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		<2		2-4		4-8		8-16		16-32		32-64		>64	
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: well indurated (Hard). Light grey colored mudstone. BUFF to orange brown weathering with possible carbonate cement. Sample is from 2 boulders in colluvium.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

74E/4

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
74E4				95		NF		P004				43		99		00		63		42		38		0																	
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80		
Qtz				Feld		Mica		AmPy		Gar		Carb		R.F.		Acc		Fine		Med		Gr		Porph		<2		2-4		4-8		8-16		16-32		32-64		>64			
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																													

REMARKS: well indurated (Hard). Fine sand and siltstone that is green-grey in color. some finer grained laminations present. Small round darker colored concretions are present. Sample from blocks in colluvium.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

74E/4

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT. 5/9

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

ROCK-SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				95		NF		P001				439900		6342380																									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

REMARKS: WELL INDURATED (HARD) . Black to greyish brown siltstone .
Carbonate present (weak reaction with acid) . some organic
debris present (black spots) . fine grained pyrite occurs near
the organic bits . From several small blocks in colluvium .

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

74E/4

SURVEY TYPE: Grab CLIENT & PROJECT: 95210 AREA &/or PHOTO: ELLS RIVER COLLECTOR(S): NF DATE: OCT 5/95

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
74E4				95		NF		P002				439900		6342380																											
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U ₃₀₈ (%)																													

REMARKS: well indurated (hard) . Green-gray colored sandy siltstone .
From large block sticking out of colluvium in small slumped
gully . Block is at least 1.5 meters long and 20 cm thick .

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 5 Ells R COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gor		Carb		R.F.		Acc		GRAIN SIZE		CLAST SIZE				MAGNETISM				RADIOACTIVITY		STRIKE		DIP					
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		ANALYTICAL RESULTS				U308 (%)																									

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				9508P		325		12		4415		0063		4305																									
Qtz				Feld		Mica		AmPy		Gor		Carb		R.F.		Acc		Fine		Med		Gr		Porph		2-4		4-8		8-16		16-32		32-64		>64			
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		ANALYTICAL RESULTS				U308 (%)																									

REMARKS:

Silting & accumulation
- resistin unit
- calcareous

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 5 Ells R COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Gor		Carb		R.F.		Acc		GRAIN SIZE		CLAST SIZE				MAGNETISM				RADIOACTIVITY		STRIKE		DIP					
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		ANALYTICAL RESULTS				U308 (%)																									

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4				9508P		326		12		4415		0063		4305																									
Qtz				Feld		Mica		AmPy		Gor		Carb		R.F.		Acc		Fine		Med		Gr		Porph		2-4		4-8		8-16		16-32		32-64		>64			
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DIP													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		ANALYTICAL RESULTS				U308 (%)																									

REMARKS:

Black / grey shale
- mass with of interbedded yellow to white (to - siltstone?)
Location 4415006

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 4 Ells COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
				9508P323																																			
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS:

Siderite formation

- burrows and possibly relief flood fragments appear to be capped by siderite

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 4 Ells COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS															
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
				9508P324																																					
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.																									
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																													

REMARKS:

Fissile sst (in a conc of ss)

- mud grain

- x-bedding

- lower shelly fin

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: _____ COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				Qtz		Feld		Mica		AmPy		Car		Corb		R.F.		Acc		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ANALYTICAL RESULTS																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
				95		DB		03		21																													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz		Feld		Mica		AmPy		Car		Corb		R.F.		Acc		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ANALYTICAL RESULTS																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: 50 cm channel - wouldn't reach bottom of unit. Appears sideritic near top then looks like a finegrained sst with carb. cement
- Trc sulphides noticeable around small fragments that are possibly wood.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 4 Ells R COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES)				NORTH				WTHR		RELIEF		CONTAMINATION				HARDNESS					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				Qtz		Feld		Mica		AmPy		Car		Corb		R.F.		Acc		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ANALYTICAL RESULTS																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
				95		DB		P3		22																													
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
				Qtz		Feld		Mica		AmPy		Car		Corb		R.F.		Acc		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP									
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD		IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ANALYTICAL RESULTS																					
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

REMARKS: Same unit as 321 - now a lower bank in float
- sulphides up to 270

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 3 Ellis COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID)		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95210		BP318		10		43646		56364321																											
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

REMARKS:

Fissile sst - float

- resistant unit

- approx. all over slope

lat 57° 13' 100

long 112° 01' 130

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER		ZONE		UTM		(or EAST GRID)		UTM COORDINATES		NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS													
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
				95210		BP319																																	
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

REMARKS:

Later dated unconsolidated brown sand and grey black shales

- limonitic in places, 0.3m channel, calcified near top

- pedogenic zone

320 - 35cm channel, limonitic brown to orange, unconsolidated sand

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: *Channel* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *84H/1 Ells R* COLLECTOR(S): *DB* DATE: *Oct 6 1995*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
84H1				95DB				0315				12				436				465				636				4321															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																							

REMARKS: *Interbedded shales + sands (unconsolidated)*

- sands well layered up to 25 cm thick

- shales - black grey blocky

- pedogenic zone

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: *Channel* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *84H/1 Ells R* COLLECTOR(S): *DB* DATE: *Oct 6 1995*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
84H1				95DB				0316				12				436				465				636				4321															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP															
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																							

REMARKS: *- limonitic, 30 cm channel (also cemented resistive unit (red to brown))*
- interlayered with fine, hard carb cemented sst
- abundant shales. Some natural & soft sediment deformation
- possibly unconformity
317-6m channel, interlayered sands (unconsolidated to some - consolidated) and shales
- sands usually thicker than shales

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 3 COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95DB				P313				1243				6465				5636				4321															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: On upper bench - float gr. of resistive unit - carbonate cemented sst
- assumed + shaly sandstone
- fine to med grained carb cemented sst
- breccias

Int 57° 13' 100
Long 112° 01' 130

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 3 Ells R. COLLECTOR(S): DB DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95DB				P313				1243				6465				5636				4321															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: float - siderite uncertain
same as seen as P313

Int 57° 13' 100
Long 112° 01' 130

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: Site 10 COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E495DBP30912				43917				36353340																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: Sample 74E495DBP30912 - 43917 36353340
Siderite and calcite concretions
- extensive limonite / rusty in places
fragments of various pieces
Lat 57° 19' 15"
Long 112° 00' 36"

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E495DBP30912				43917				36353340																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U3O8 (%)																			

REMARKS: 0.5m channel of well sorted some - coarse limonite sand directly in contact
(below) large concretions - gradually it becomes less limonitic
and less consolidated channel beds
311 - 6m channel - white to grey, homogeneous, well-sorted sands as above
312 - 1m channel - white to grey sand with unconsolidated sections that are
slightly calcareous & weather resistant. Not limonitic. - concretions?

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		COMPOSITION		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																	
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
74E4				95D		B03		0712				439		173		635		3340		Clr		Cldy		Low		Med		High		Camp		Trench		Drill		Gosh		Other							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Carb		R.F.		Acc		Fine		Med		Gr		Porph		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str	
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																	

REMARKS: Very limonitic sands. Lenses of wood and shale/mud throughout
0.4m channel. Some side ite and white concretions
- gradational contact between grey sands above & below
- sulphurous staining / some tiny iridescent shells

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
ROCK TYPE				Qtz		Feld		Mica		COMPOSITION		Grain Size		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																	
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
74E4				95D		B03		0812				439		173		635		3340		Clr		Cldy		Low		Med		High		Camp		Trench		Drill		Gosh		Other							
ROCK TYPE				Qtz		Feld		Mica		AmPy		Carb		R.F.		Acc		Fine		Med		Gr		Porph		2-4		4-8		8-16		16-32		32-64		>64		None		Weak		Mod		Str	
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																													
Copper (%)				Lead (%)		Zinc (%)		Silver (g/t)		Gold (g/t)		U308 (%)																																	

REMARKS: Grey to white well sorted sands, semi-consolidated
2m channel
- some lenses of wood, possible evidence of bioturbation / ichnofossils

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E14 Ellis COLLECTOR(S): DB DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS																																																	
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																																															
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Gr	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																																																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																																															
												Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				O/C				Fels				Talus				Bldr				Other			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																												
74E4				95DB				004				12				4413				0063				4243				5																																																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																												
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Gr	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																												
																Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				O/C				Fels				Talus				Bldr				Other			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																												
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																															

REMARKS: Darker green(?) sand with 3-4 layers of mud / bentonite - weakly Fe stained, particularly around mud / bentonite layers.

305 Similar green-grey sand to 304 with no mud / bent. Leases - contains a few iridescent shell remains

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E14 COLLECTOR(S): DB DATE: Oct 5 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS																																																	
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																																															
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Gr	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																																																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																								
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																																															
												Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				O/C				Fels				Talus				Bldr				Other			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																								
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																												
74E4				95DB				0306				1243				9173				6353				3340																																																											
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																												
				Qtz	Feld	Mica	AmPy	Gor	Carb	R.F.	Acc	Fine	Med	Gr	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																												
																Fresh				Minor				Mod				Int				Txt				Mnrl				Col				Strk				Acid				Hdms				S.G.				Other				O/C				Fels				Talus				Bldr				Other			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																												
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																																																															

REMARKS: Semi to unconsolidated grey to white / well sorted sand
- in contact with till
- 1m channel

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 Ells R COLLECTOR(S): DB DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DIP																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4950B				30112				441300				6342435				Clr		Cldy		Low		Med		High		Camp		Trench		Drill		Gosh		Other					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DIP																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

REMARKS: Carbonate lithified, beige weathering sand - HSSV looking but fine lamination bedding. Visible
 - about 60 cm - green with glauconite, waxy fragments - note 2-3% pyritous in some portions of this unit. Very well lithified
 - fine lamination = carbonate + early organic material + sulphide

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: Rock CLIENT & PROJECT: 95210 AREA &/or PHOTO: 74E/4 Ells R COLLECTOR(S): DB DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		(or EAST GRID)		UTM COORDINATES				NORTH		WTHR		RELIEF		CONTAMINATION				HARDNESS							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
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FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DIP																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E4950B				30212				441300				6342435				Clr		Cldy		Low		Med		High		Camp		Trench		Drill		Gosh		Other					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		DIP																							
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U308 (%)																											

REMARKS: Carbonate cemented, x-bedded silt to sandstone - green + glauconite, poor to med. consolidated - can break with a hand - coarser than overlying unit - will bedded
 P303 green friable sand - pale and light coloured 40 cm

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, D - Other (define)

SURVEY TYPE: *Sediment* CLIENT & PROJECT: *ERRI 95010* AREA &/or PHOTO: *74E/4* COLLECTOR(S): *DB* DATE: *Oct 4/95*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40							
NTS			YEAR				INIT.		SAMP		TYPE		NUMBER		ZONE		UTM		EAST (or GRID COORDINATES)				UTM (COORDINATES)		NORTH		ROCK TYPE		WTHR		WTR SURF. or FLOW				VEGETATION											
																													Clr		Cldy		Gs/S		Rp/M		Ch/F		Con		Dec		Grss		Moss	
RELIEF			CONTAMINATION				BOTTOM		AREA or WIDTH		DEPTH		WATER COLOUR		SUSP.		SEDIMENT COLOUR				COMPOSITION				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																	
Low	Med	High	Work	Camp	Fuel	Goss	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Cl	Yel	Bm	Hvy	Light	Wht	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	71	72	73	74	75	76	77	78	79	80						

GEOCHEMICAL SEDIMENT AND WATER SAMPLE CARD APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
74E/4				95				DB				C001				441300				6342435				Sed				Sed				Or				Clay	X	Gs/S	X	Rp/M	Ch/F	V	Dec	X	Moss																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
X							X	X		Clay	Org	<1	1-5	X	1m		X		Bm	Hvy	X	Light	Wht	Yel	Gm	Red	Bm	Blk	Crae	Sand	X	2	57																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			

REMARKS: *At 5DBO 300-305 - E11C River - 1st sample*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40						
74E/4				95				DBCC				2				441500		6343050		Sed										Dr		G/S		Rp/M		Ch/F		Con		Dec		Gr		Moas	
X	Med	High	Work	Camp	Fuel	Goss	Rock	Sand	Clay	Org	<1	1-5	>5			Cl	Yel	Bm	Hvy	Light	Wht	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80					
REMARKS:																																													

REMARKS: *1st sample from 5DBO 300-305 - E11C River - 1st sample*

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REMARKS: *E11C River - 1st sample*

SAMPLE TYPES: A/B - Lake sed./water; C/D - Stream sed./water; E/F - Bog sed./water; G/H - Spring sed./water; I,J,K,L - Other

SURVEY TYPE: *Rock* CLIENT & PROJECT: *ERRI 95010* AREA &/or PHOTO: *74E/4* COLLECTOR(S): *DB* DATE: *Oct 4/95*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR				INIT.		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)				UTM NORTH				WTHR		RELIEF				CONTAMINATION				HARDNESS					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
				Qtz	Feld	Mica	AmPy	Gr	Corb	R.F	Acc	Fine	Med	Crs	Porph	<	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str									Degrees Direction				
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FROM				TO								WIDTH				WEATHERING ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.							
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41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				ANALYTICAL RESULTS				U308 (%)															

ROCK SAMPLE CARD APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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REMARKS: *Rock sample from 5DBO 300-305 - E11C River - 1st sample*

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Groy, Q - Other (define)

SURVEY TYPE: *Stream* CLIENT & PROJECT: *95010* AREA &/or PHOTO: *84H* COLLECTOR(S): *DB* DATE: *Oct 5/95*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
NTS			YEAR			INIT.		SAMPLE TYPE		NUMBER		ZONE		UTM		EAST (or GRID COORDINATES)			UTM		NORTH			ROCK TYPE			WTHR		WTR SURF. or FLOW			VEGETATION								
RELIEF			CONTAMINATION					BOTTOM				AREA or WIDTH		DEPTH		WATER COLOUR		SUSP.		SEDIMENT COLOUR						COMPOSITION						ORIGINAL SAMPLE NO.			ORIG. DUP. REP.					
Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80

GEOCHEMICAL SEDIMENT AND WATER SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
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REMARKS: *John Creek - at 50EJCO4*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
8	4	H		9	5	0	2	6	0	1	2			5	7	16	57	"	111	57	23	"									X	Clay	X	Gs/S	Rp/M	Ch/F	Con	Dec	Gra	Mosa	
X																																									
Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80	
																																									LOG- DUP- REP.

REMARKS:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
8	4	H		9	5	0	P	C	0	1	3	/	0	1	4		5	7	'	2	4	"	1	1	1	1	1	1	1	1	1	1	X		X						
X																																Cl	Clay	Gs/S	Rp/M	Ch/F	Con	Dec	Gr	Moss	
Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5			Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80	
																																									Owner DUP REPR

REMARKS:

REMARKS:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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REMARKS:

SAMPLE TYPES: A/B - Lake sed./water; C/D - Stream sed./water; E/F - Bog sed./water; G/H - Spring sed./water; I,J,K,L - Other

SURVEY TYPE: *Stream* CLIENT & PROJECT: *95010* AREA &/or PHOTO: *74E/5* COLLECTOR(S): *DB* DATE: *Oct 11/95*

SURVEY TYPE:								PROJECT:					AREA &Z OF PHOTO:															COLLECTOR(S):					DATE:							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
NTS			YEAR			INIT.			NUMBER			ZONE			UTM			EAST (or GRID COORDINATES)			UTM			NORTH			ROCK TYPE			WTHR		WTR SURF. or FLOW			VEGETATION					
RELIEF			CONTAMINATION			BOTTOM			AREA or WIDTH			DEPTH			WATER COLOUR			SUSP.			SEDIMENT COLOUR			COMPOSITION			ORIGINAL			SAMPLE NO.			ORG. DUP. REF.							
Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	

GEOCHEMICAL SEDIMENT AND WATER SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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REMARKS: *N. pan hole - rocky - where water flows - Hy. rock exposed at edge*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
7	4	E	5	9	5	D	R	C	O	C	K			5	7	10	53"		112°02'42"												Or	Gr	Gs/S	Rp/M	Ch/F						
X								X	X											X																					
Low 41	Med 42	High 43	Work 44	Comp 45	Fuel 46	Gosn 47	Rock 48	Sand 49	Clay 50	Org 51	<1 52	1-5 53	>5 54	55	56	Clr 57	Yel 58	Bm 59	Hvy 60	Light 61	Whl 62	Yel 63	Gm 64	Red 65	Bm 66	Blk 67	Crae 68	Sand 69	Fines 70	Org 71	Gel 72	73	74	75	76	77	78	79	80		

REMARKS: *Little River - at 50EJCO4*

Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80

REMARKS:

Low	Med	High	Work	Comp	Fuel	Gosn	Rock	Sand	Clay	Org	<1	1-5	>5	55	56	Clr	Yel	Bm	Hvy	Light	Whl	Yel	Gm	Red	Bm	Blk	Crae	Sand	Fines	Org	Gel	72	73	74	75	76	77	78	79	80

REMARKS:

SAMPLE TYPES: A/B - Lake sed./water; C/D - Stream sed./water; E/F - Bog sed./water; G/H - Spring sed./water; I,J,K,L - Other

SURVEY TYPE: *Channel* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *84H/1 Ells 12* COLLECTOR(S): *MD* DATE: *Oct 6 1945*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		EAST GRID COORDINATES						NORTH		WTHR		RELIEF		CONTAMINATION		HARDNESS									
ROCK TYPE				COMPOSITION		GRAIN SIZE		CLAST SIZE		MAGNETISM		RADIOACTIVITY		STRIKE		DIP																							
FROM				TO		WIDTH		WEATHERING / ALTERATION		FIELD IDENTIFICATION		MATERIAL SAMPLED		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																							
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U3O8 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MD				000612				437830				6341530				Clr		Cldy		Low		Med		High		Comp		Trench		Drill		Gosh		Other					
Qtz				Feld		Mica		AmPy		Gor		Carb		R.F.		Acc		Fine		Med		Grs		Porph		2-4		4-8		8-16		16-32		32-64		>64			
Copper (%)				Lead (%)		Zinc (%)		Silver (g/l)		Gold (g/l)		U3O8 (%)																											

REMARKS: *0016 - grey mud same as 012, 013, 015*

- channel = 1.7m

*0017 - 15cm limestone unit - very close to collection - believe in place
- very rusty, sulphurous. Looks like siderite - concretion rather than intell.*

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: *Stream* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *74E/84H* COLLECTOR(S): *DB* DATE: *Oct 5/95*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		NUMBER				ZONE		UTM		EAST GRID COORDINATES						NORTH		ROCK TYPE		WTHR		VEGETATION											
RELIEF				CONTAMINATION		BOTTOM		AREA or WIDTH		DEPTH		WATER COLOUR		SUSP		SEDIMENT COLOUR		COMPOSITION		ORIGINAL SAMPLE NO.		ORIG. DUP. REP.																	
WTR SURF. or FLOW				Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss																							

GEOCHEMICAL SEDIMENT AND WATER SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E/5				950BC007				57°13'48"				111°59'30"				X		Cldy		Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss							
WTR SURF. or FLOW				Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss																							

REMARKS: *Ells River - at 50BJ005 -*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E/5				950BC008				57°13'12"				112°01'12"				X		Cldy		Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss							
WTR SURF. or FLOW				Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss																							

REMARKS: *Ells River - at 50BJ006 - small run off from lake*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E/5				950BC009				57°12'54"				112°01'17"				X		Cldy		Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss							
WTR SURF. or FLOW				Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss																							

REMARKS: *Ells River - at 50BJ007*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
74E/5				950BC010				57°12'50"				112°02'13"				X		Cldy		Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss							
WTR SURF. or FLOW				Ga/S		Rp/M		Ch/F		Con		Dec		Grs		Moss																							

REMARKS: *Ells River - at 50BJ007*

SAMPLE TYPES: A/B - Lake sed./water; C/D - Stream sed./water; E/F - Bog sed./water; G/H - Spring sed./water; I,J,K,L - Other

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84 H/1 Ellis R COLLECTOR(S): MD DATE: Oct 6 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
NTS				YEAR		INIT.		<div style="writing-mode: vertical-rl; transform: rotate(180deg);">TYPE</div>		NUMBER		ZONE		UTM		(or EAST GRID COORDINATES)				NORTH		WTHR		RELIEF		CONTAMINATION								HARDNESS					
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
ROCK TYPE				COMPOSITION								GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP							
Qlz Feld Mica Ampy Car Corb R.F. Acc												Fine Med Crs Porph < 2-4 8-16 16-32 32-64 >64				None Weak Mod Str												Degrees Direction											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
FROM				TO				WIDTH				WEATHERING ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				DRUG REP											
												Fresh Minor Mod Int Txt Mnri Col Strk Acid Hdns S.G. Other D/C Fels Talus Bdr Other																											
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				ANALYTICAL RESULTS				U ³⁰⁸ (%)																			

ROCK SAMPLE CARD

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
8	4	H	1	9	S	M	0	0	0	1	3	1	2		4	3	7	8	3	0	6	3	4	1	5	3	0		Clr	Cldy	Low	Med	High	Camp	Trench	Drill	Coast	Other	
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
				Qlz	Feld	Mica	AmPy	Cor	Carb	R.F.	Acc	Fine	Med	Gr	Porph	<2	2-4	4-8	8-16	16-32	32-64	>64	None	Weak	Mod	Str													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
					</																																		

REMARKS: About 30 - 35m above the creek bottom and 7m above 1st lithified zone = sample of grey bentonitic mud - minor Fe stain sample 0.8 channel from green silt contact & mud bioturbated

013 - same as 0012 - 0.80m in length up to limestone unit.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 952.0 AREA &/or PHOTO: 84411 Ells R COLLECTOR(S): MD DATE: Oct 6, 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																																
NTS				YEAR		INIT.		TYPE		NUMBER			ZONE		UTM		(or EAST GRID		UTM COORDINATES)						NORTH			WTHR		RELIEF		CONTAMINATION				HARDNESS																																																																			
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																																																
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																																																																											
Qtz				Field				Mica				Ampy				Gar				Corb				R.F.				Acc				Fine				Med				Grs				Porph				< 2-4				4-8				8-16				16-32				32-64				>64				None				Weak				Mod				Str												Degrees				Direction			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40																																																																
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.																																																																											
												Fresh				Minor				Mod				Int				Txt				Mnri				Col				Strk				Acid				Hdns				S.G.				Other				D/C				Fels				Istos				Eor				Other																											
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80																																																																
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)								Gold (g/t)				U3O8 (%)																																																																															

ROCK SAMPLE CARD

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[illegible]

REMARKS: going to light grey to brown carbonaceous limestone unit. 0.15m thick. Exhibits
irregular bedding. Fine mass with pyritic halos bleeding off.

0015 - grey mud (bentonite?) above limestone layer
- 1.6m channel.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

DATE: Oct 4 1995

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REMARKS: 0.50m glauconitic sand with no cement that fines upward into dominantly shaley unit ~ sand slightly wet

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

DATE: Oct 4 1945

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REMARKS: 010 and 011 - interbedded 2-3 cm scale mud + silt
~ note bivalve shells - polychaete? in mud layers
each sample ~ 1 in.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: *Channel* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *84H/1 Ellis R* COLLECTOR(S): *MD* DATE: *Oct 4 1995*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U ₃₀₈ (%)																											

ROCK SAMPLE CARD

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195M0000712				436620				6341170																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U ₃₀₈ (%)																			

REMARKS: Well lithified to med. lithified glaucous sst - chert cement, minor
ankerite (?) (Fe) - stratified to x bedded - 007 may be coarser than
006 but essentially same lithological unit - cementation =
principal difference.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: *Channel* CLIENT & PROJECT: *95210* AREA &/or PHOTO: *84H/1 Ellis R* COLLECTOR(S): *MD* DATE: *Oct 4 1995*

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U ₃₀₈ (%)																											

ROCK SAMPLE CARD

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195M0000812				436620				6341170																															
Copper (%)				Lead (%)				Zinc (%)				Silver (g/l)				Gold (g/l)				U ₃₀₈ (%)																			

REMARKS: 10 cm thick carbonaceous calcareous mudstone - calcite cemented - chert cap?
and source for chert litho sst? Contains trace to few % py
a warm burrows visible.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, Q - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: Ells R. 84H/1 COLLECTOR(S): MD DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40												
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID				UTM COORDINATES				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																							
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																															

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MD000312				436620				6341170																															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: 80 cm samples of sand + mud cap in between 2 consecutive layers

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ells R COLLECTOR(S): MD DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40												
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID				UTM COORDINATES				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																							
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																															

ROCK SAMPLE CARD

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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H195MD000412				436620				6341170																															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD				IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORIG. DUP. REP.							
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: Large ovoid 2.5 m x 0.7m concavities in sand above mud lens - fill of
glauconite where brown siderite lenses present also carbonaceous material
0 ± py/mace - unit tan to light brown weathering
lots of these lenses/concavities at base of slope and in the river.
Consist predominantly calcite ± siderite.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, O - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: 84H/1 Ellis R COLLECTOR(S): MD DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95MD				0001				12				4366				20634				1170															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: 5 cm unit of mudstone with wood debris and sulphur + salt concretions + ironite stain - organic debris - partially calcy.

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)

SURVEY TYPE: Channel CLIENT & PROJECT: 95210 AREA &/or PHOTO: Ellis River COLLECTOR(S): MD DATE: Oct 4 1995

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40								
NTS				YEAR				INIT.				NUMBER				ZONE				UTM				(or EAST GRID COORDINATES)				NORTH				WTHR				RELIEF				CONTAMINATION				HARDNESS			
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP																			
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORG. DUP. REP.																			
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																											

ROCK SAMPLE CARD

APEX Geoscience Ltd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
84H1				95MD				0002				12				4366				20634				1170															
ROCK TYPE				COMPOSITION				GRAIN SIZE				CLAST SIZE				MAGNETISM				RADIOACTIVITY				STRIKE				DIP											
FROM				TO				WIDTH				WEATHERING / ALTERATION				FIELD IDENTIFICATION				MATERIAL SAMPLED				ORIGINAL SAMPLE NO.				ORG. DUP. REP.											
Copper (%)				Lead (%)				Zinc (%)				Silver (g/t)				Gold (g/t)				U308 (%)																			

REMARKS: 5 cm sandy concretary layer, calcareous + siderite cement - lower 1-2 cm contains 3-4% pyrite in blotches + layers - particularly with organic material + siderite - very fine - likely muddy silt host

SURVEY TYPES: M - Rock, N - Drill core or percussion chips, O - Channel chip, P - Grab, 0 - Other (define)