# Summary of Work on the Liberty Fork Project Area, Yukon Territory NTS 116 C/10

for

Yukon Mining Incentive Program Economic Development, Government of Yukon Box 2703, Whitehorse, YT Y1A 2C6

File # 07- 028

by

J. Peter Ross, Prospector

Dated: December 2007

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# **Chapter One: SUMMARY and RECOMMENDATIONS**

## 1.1 Summary

The Liberty Fork Project was chosen because;

- 1. I wanted to diversify my claim groups in the Yukon since they were mostly gold related.
- 2. VMS are polymetallic; some companies are always interested in VMS, even when metal prices are low.
- 3. At present, companies are interested in Cu, Ag and Au projects due to higher metal prices and Kuroko VMS deposits have Cu Au Ag credits (sometimes of high value).
- 4. Road access for development is close, 12 km northwest of the old Clinton Creek minesite road, 22 km southeast of Eagle Alaska and 12 km northeast of the Liberty campsite on the Taylor Highway, Alaska.
- 5. VMS exploration on the US side of the border has been erratic since the 1970's. Lately the USA region to the west of my project has had a lot of exploration (see Ventures Resource Corp. brochure)
- 6. Past work by Cominco Ltd. on the Fan claims.
  - a.1979 Cominco Ltd. soil sampling
  - b.159 Fan claims were staked and recorded on 12 May 1995
  - c.The target was a VMS deposit(s) similar to Kudz Ze Kayah and Wolverine Kuroko deposits (Zn, Pb, Cu, Ag and Au).
  - d.1995 stream / soil samples produces 2 Cu, Pb, Zn, Ag anomalies (600m x 900m) no assays for gold.
  - e.Additional soil sampling, prospecting and geological mapping was recommended to determine the source of the 2 geochemical anomalies.

On the first trip in 2007 Hans Algotsson and J.P. Ross prospected and staked new claims Rhea 17-20, 21, 23, 25-30. No samples were take. There were severe problems with heat and J.P. Ross suffered a sprained ankle injury.

On the second trip in July 2007 J.P. Ross prospected and staked new claims Rhea 31-51. Two float samples were taken.

On the third trip in July/August 2007 J.P. Ross prospected and took 76 soil samples and 4 float samples. J.P. Ross suffered a knee injury and had to end the season early.

Claims posts were located with GPS in UTM NAD 83 and photographed. Soil and rock sample locations were flagged, located with GPS and marked with a lath and aluminum tag.

Soil and rock samples were submitted for 80 mesh -15g 1DX 36 element ICP, Au 0.5 ppb. No results have been received from the lab to date.

## **1.2 Recommendations**

All 49 Rhea claims should be kept. An intensive soil-sampling program should be planned. Map outcrops and float to produce a geology map of the area. Prospecting can be done for sulphide float (steep areas in particular). Bedrock exposure is very rare.

A geophysical survey will not be done as Cominco Ltd. did one in 1995/6 and hopefully I (or a company who options the claims) can obtain Cominco's report.

I feel success in the Finlayson Lake VMS belt will encourage exploration companies to look at other VMS areas or "possibly new" VMS areas. The Target/Regional programs in YMIP will encourage the exploration of these "frontier areas."

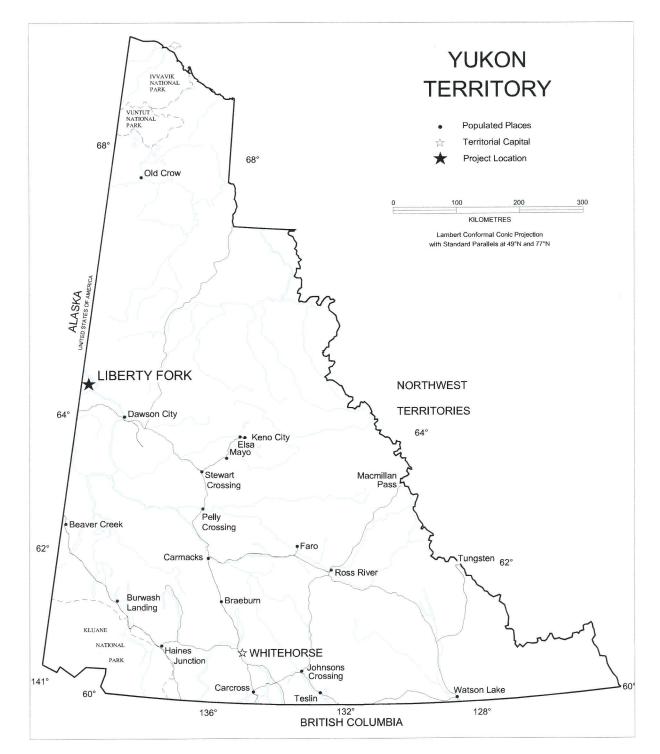
Jaime Light of Full Metal Minerals Corp. gave a talk on the 40 Mile project at the 2007 Yukon Geoscience Forum. He classifies deposits in the area as CRD – carbonate replacement deposits.

Carbonate replacement deposits often occur in clusters or camps, have erratic shape and size, are usually Zn, Pb, Cu,  $Ag \pm Au$  and have been developed successfully in many parts of the world, small granite plugs and stratigraphy are important. They are good targets for small mines because of the gold and silver and the ease of processing.

I had a discussion with Jaime Light about the geology, photos of the area and my samples. J. Light led me to believe I have claims in a new cluster of carbonate replacement deposits.

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At present I am not sure how to proceed but hopefully it can be optioned soon.

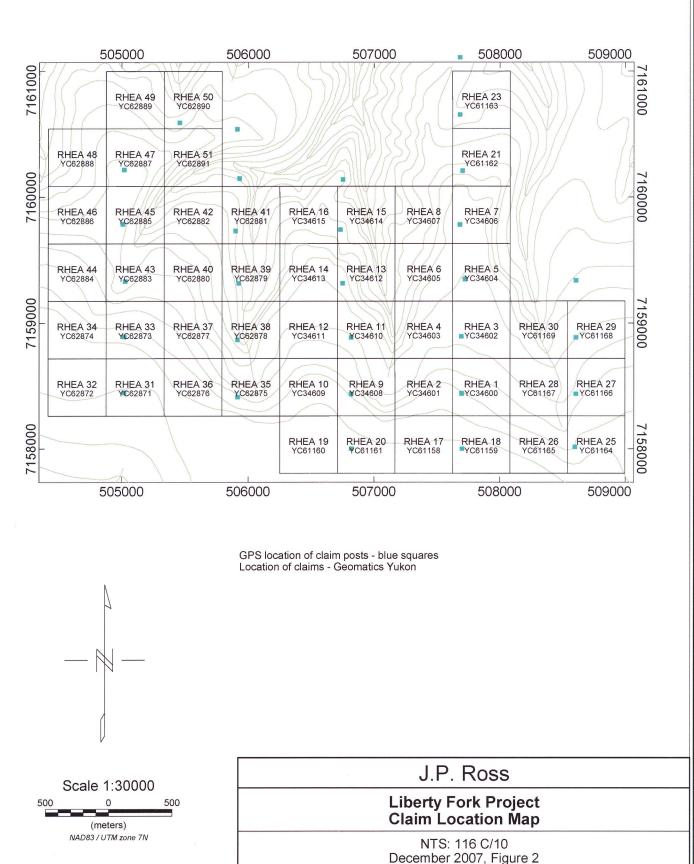


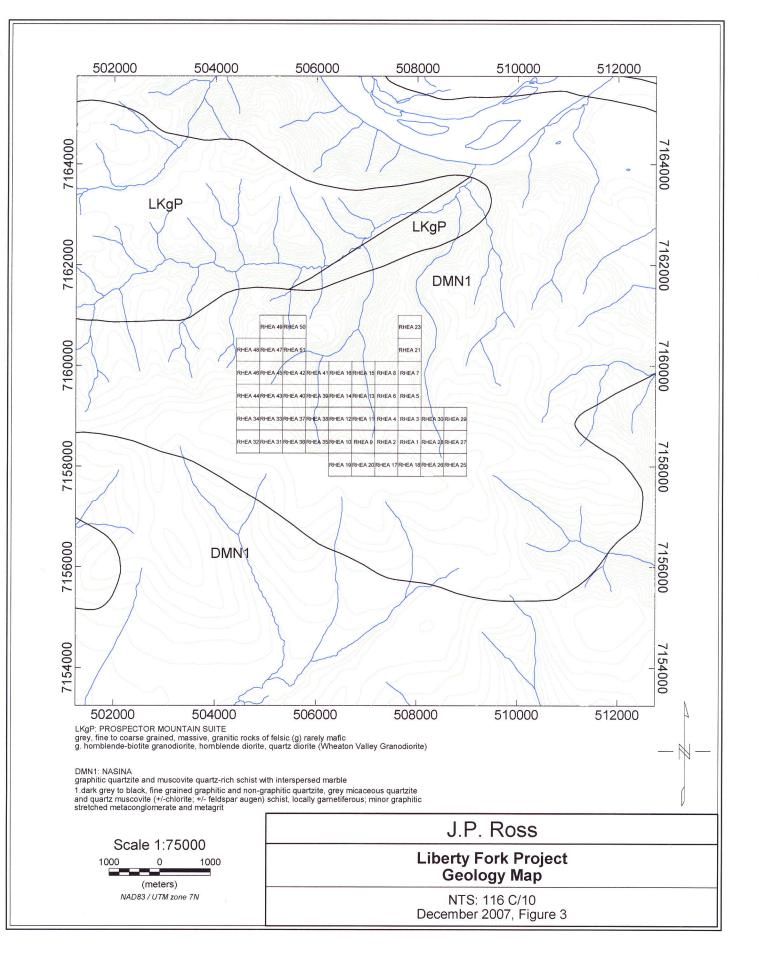


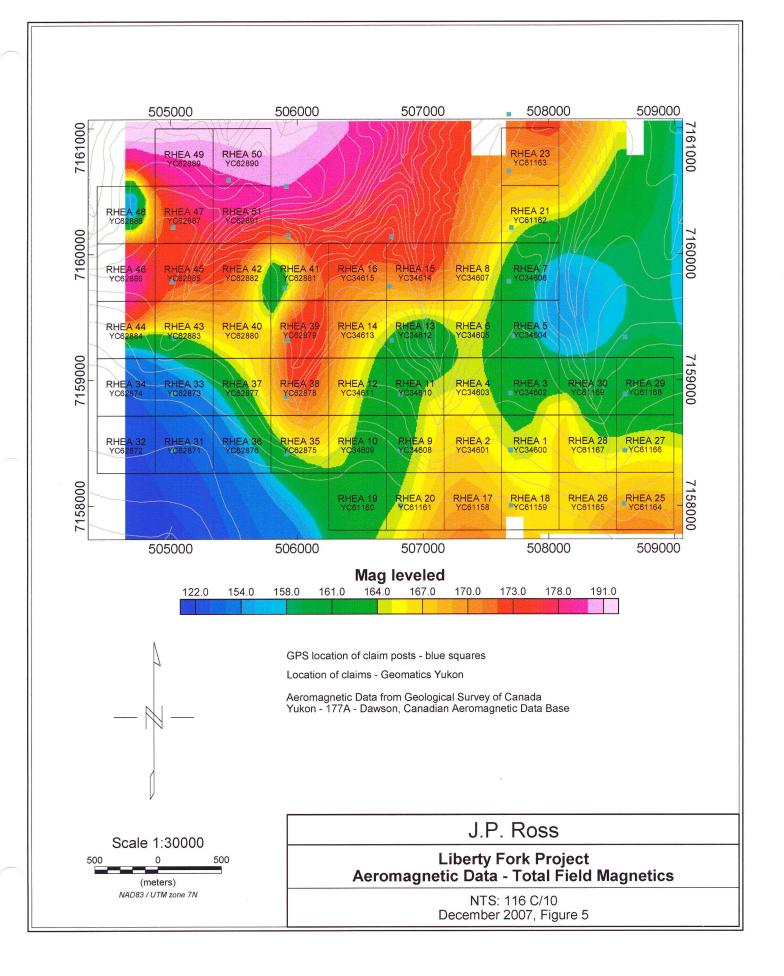
J. Peter Ross

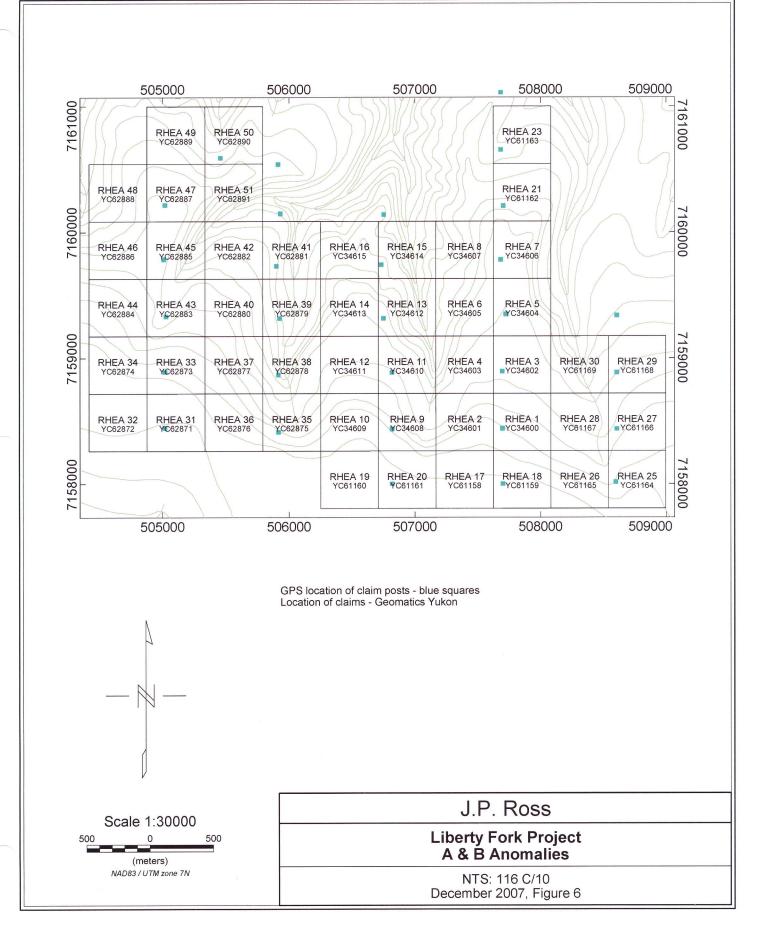
LOCATION MAP LIBERTY FORK PROJECT RHEA 1-21, 23, 25-51 CLAIMS

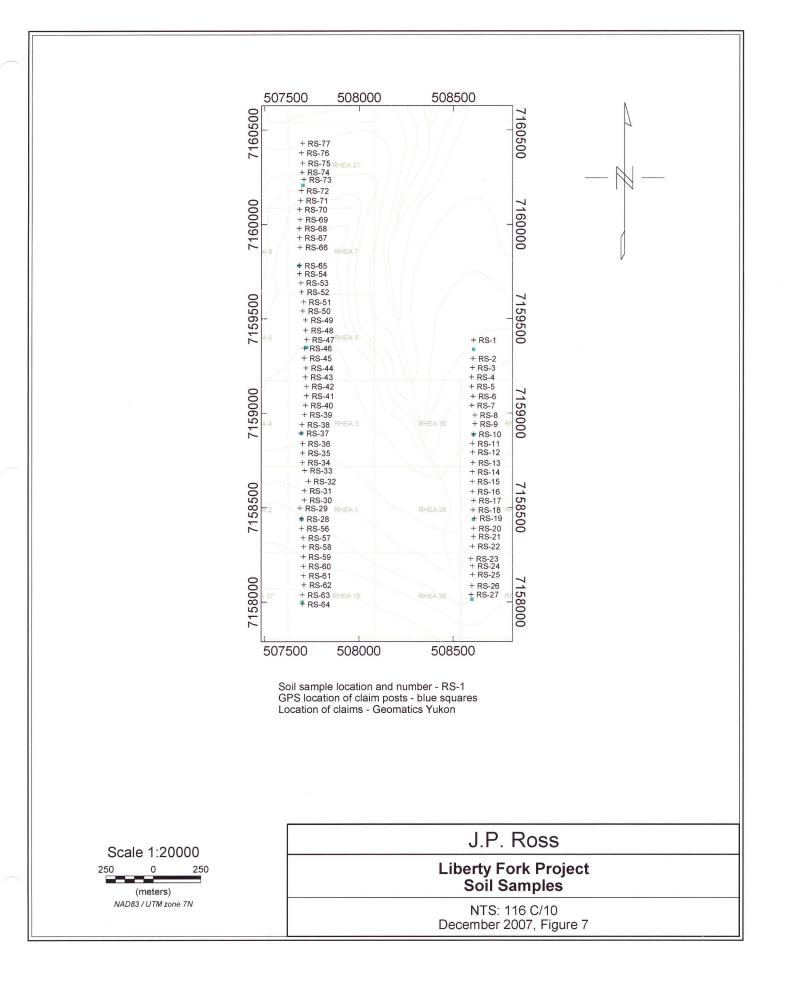
FIGURE 1

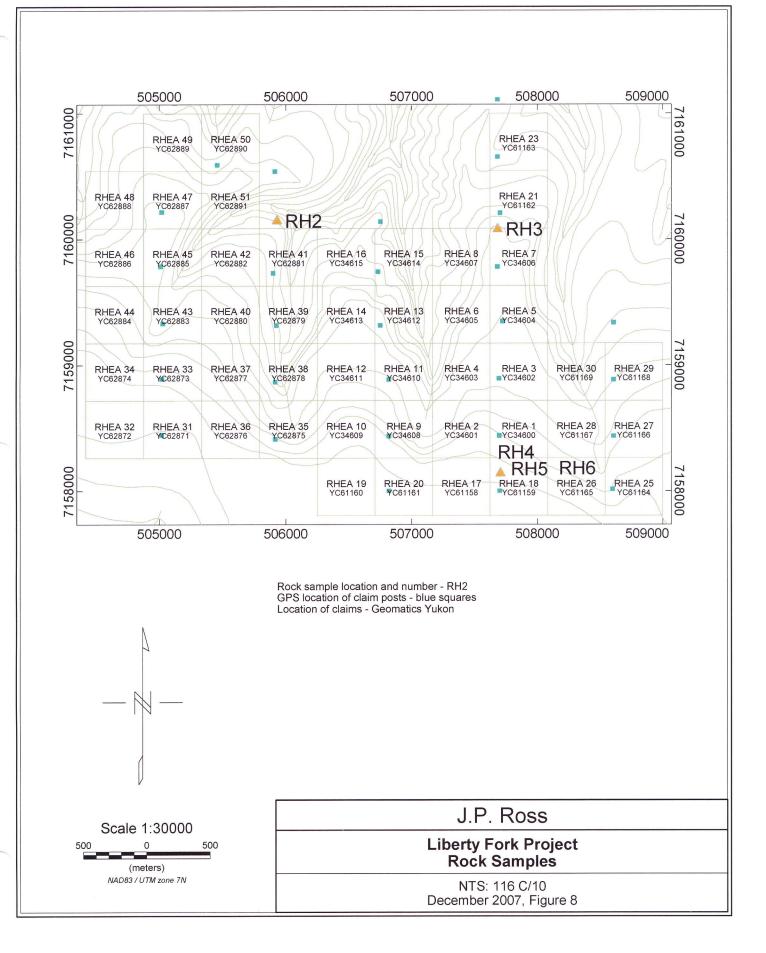












## **Chapter Two: INTRODUCTION**

## 2.1 Introductory Statement

J. Peter Ross and Christian Dingman staked and recorded the Rhea 1-16 claims on the Liberty Fork Project. Prospecting was done while staking and after completion. Seven (7) float samples were taken.

Bedrock was seen in 3 areas; no samples were taken because of darkness and very heavy rain.

Dates worked were:

J. Peter Ross - August 27, 30, 31 and September 1-6, 10. Christian Dingman - August 30, 31 and September 1-6.

A return trip in September was postponed due to weather concerns.

In 2007 on the first trip June 23 - 30<sup>th</sup> J.P. Ross and Hans Algotson staked and recorded the Rhea 17-21, 23, 25-30 claims. Prospecting was done while staking and following completion. No samples were taken. J.P. Ross suffered a sprained ankle injury.

In 2007 on the second trip July 14 - 24<sup>th</sup> J.P. Ross staked and recorded the Rhea 31-51 claims. Prospecting was done while staking and following completion. Two (2) rock samples were taken.

In 2007 on the third trip July 29 - 31<sup>st</sup>, August 1 - 10<sup>th</sup> J.P. Ross prospected and took seventy-six (76) soil samples and four (4) rock samples. J.P. Ross suffered a knee injury and the project was cut short. On the way out J.P. Ross flew around the area and took notes.

## 2.2 Location and Access

The Liberty Fork Project is located 56 miles (90 km) northwest of Dawson City, Yukon in the Dawson Mining District, NTS 116 C/10 latitude 64° 33' N; longitude 140° 51'W.

Access to the Rhea 1-21, 23, 25-51 claims is by helicopter from Dawson City (90km). Also, a person can park and take a helicopter from the old Clinton Creek town-site (~15 km).

Road access comes within 12 km of the old Clinton Creek asbestos mine site or the Liberty campsite (12 km) on the Taylor Highway in the USA (goes to Eagle Alaska). A road and airstrip are north of the old mine site. Conditions are unknown.

#### 2.3 History

"Preliminary mapping by Cominco Ltd. determined that the claims (i.e. project area) are underlain by the Nasina Assemblage, consisting of Devonian-Mississippian black metapelites, quartzites and thin felsic meta-tuffs." "These lithologies have been hornsfelsed by the Cretaceous Fanning Creek Pluton located about 5 km to the north. Contour soil sampling detected 2 areas (i.e. anomaly A & B) anomalous in Cu, Pb, Zn and Ag underlain by black phyllite and carbonaceous siltstone."

(From Assessment Report 093485)

J.P. Ross has located areas with limestone outcrop and float.

# **Chapter Three: GEOCHEMICAL SURVEY and PROSPECTING**

## 3.1 General

Three trips were made to the claims. Claims were staked on trips 1 and 2, samples were taken on trips 2 and 3.

Seventy-six (76) soil samples were taken along the claim lines. The locations were recorded by GPS and notes were taken. A lathe with aluminum tag and flagging on the ground marked sample sites. The sample spacing was 50 metres.

Six (6) rock samples were take and a sample reference kept for each one. Sample sites were marked by a lathe with aluminum tag and flagging on the ground.

The soil samples were dried and submitted for 80 mesh 15g 1DX 36 element ICP, Au 0.5 ppb.

Rock samples were crushed and submitted for 15g 1DX 36 element ICP, Au 0.5 ppb.

The campsite was cleaned up and all garbage taken out.

## 3.2 Interpretation

The 60 Mile area and 40 Mile area to the north have many VMS or VMS-like Minfile occurrences. Work has been done on the USA side of the border by Ventures Resource Corp. who held an option on mineral title land held by the Doyon Corp. (First Nation) of Alaska. According to Gerry Carlson of Copper Ridge Explorations, Ventures Res. Corp. dropped the option, as cash payments became too high.

Across the border about 12 km to the northwest is the Weeno project (Ventures Resource Corp.) – no data, Cu, Pb, Zn, Ag, Au. Also about 8 km to the southwest across the border is the (new) Border Creek project (Ventures Resource Corp.) – Cu, Pb, Zn according to Mike Burke – no data.

The 60 Mile and Forty Mile placer gold areas are quite large and the Liberty Fork project is adjacent to it (or maybe in it). Some gold placers may not be documented. VMS deposits occurring in a gold placer area may possibly be enriched in gold.

However new data and exploration has changed the interpretation of the geology and the potential of the area to the north of the claims.

I have concluded that the Rhea claims area has CRD (carbonate replacement deposits) after reading press releases from Full Metal Minerals and listening to the talk given by J. Light at the 2007 Geoscience Forum and discussing photos, geology, rocks and soil results with J. Light.

John Kowalchuck has said in leached terrane to put great weight on soils >40 ppm Cu, >50 ppm Pb and little on zinc because of it's mobility.

Some companies have been interested in the area and Full Metal Minerals seems more interested now.

More claims should be staked, the extent of soil sampling should be increased, the steeper areas should be prospected and a geology map should be compiled. Hopefully the claims will be optioned.

A focused regional program will be applied for on the Rhea claim area and adjacent land.

## **References**

Assessment Report 093485, Geological and Geochemical Report on the FAN Property, by K.R. Pride, Cominco Ltd., 1995

Yukon Mineral Property Update 2004

Yukon MINFILE

Alaska	116C 020
Baldy	116C 133
Clip	116C 115
Fanning	116C 172
Mickey	116C 116
Mort	116C 168
Pub	116C 112
Top of the World	116C 124

Ventures Resource Corp. 2002 Investor package

Geology Map 1284A, Dawson, GSC

Full Metal Minerals Corp. Jamie Light talk at the 2007 Yukon Geoscience Forum.

Full Metal Minerals Corp. web site fullmetalminerals.com, data, press releases and geology.

## Personal Communication

Jamie Light, Full Metal Minerals Corp. John Kowalchuk, Aztec Copper, Vancouver BC Ken Galambos, Geologist, Yukon Geological Survey Don Murphy, Senior Project Geologist, Yukon Geological Survey Steve Traynor, Economic Geologist, Yukon Geological Survey Paul McRobbie, Geologist, Teck Cominco Ltd. Rob Carnes, Geologist, Vancouver

Yukon Minfile References

# Float Sample Descriptions

Sample Number	Description
RH1	At Rhea #42, #1 post. Felsic volcanics, iron rich limonite gossan, kill zone.
RH2	At Rhea #42, #2 post. White limestone, bubbly crusting on side.
RH3	Limestone fractured, brown on fractures, 3" to bedrock.
RH4	Possible epithermal veining, limonite.
RH5	Fractured rock with Mn and limonite (precipitate).
RH6	Fractured rock with Mn and limonite (precipitate). Similar to RH5.

Rock Sample Results

Soil Sample Results

# Claim Posts GPS Data

Claims	East		Post_No	GPS point
Rhea 1	507696	7158441	P1	1
Rhea 3	507695	7158893	P1	2
Rhea 5	507723	7159348	P1	3
Rhea 7	507682	7159781	P1	4
Rhea 7	507703	7160208	P2	5
Rhea 9	506818	7158435	P1	6
Rhea 11	506818	7158885	P1	7
Rhea 13	506750	7159315	P1	8
Rhea 15	506732	7159741	P1	9
Rhea 15	506752	7160139	P2	10
Rhea 17	507698	7158437	P1	11
Rhea 17	507700	7158000	P2	12
Rhea 19	506819	7158435	P1	13
Rhea 19	506820	7158000	P2	14
Rhea 21	507703	7160208	P1	15
Rhea 23	507683	7160654	P1	16
Rhea 23	507683	7161109	P2	17
Rhea 25	508599	7158014	P1	18
Rhea 27	508607	7158437	P1	19
Rhea 29	508607	7158885	P1	20
Rhea 29	508607	7159338	P2	21
Rhea 31	505019	7158445	P1	22
Rhea 33	505020	7158890	P1	23
Rhea 35	505917	7158410	P1	24
Rhea 37	505916	7158866	P1	25
Rhea 39	505925	7159315	P1	26
Rhea 41	505900	7159730	P1	27
Rhea 41	505931	7160147	P2	28
Rhea 43	505028	7159330	P1	29
Rhea 45	505010	7159785	P1	30
Rhea 47	505020	7160216	P2	31
Rhea 50	505458	7160590	P1	32
Rhea 50	505914	7160538	P2	33

# Appendix 8 - Soil Sample GPS Data

nple G	PS Da	ata
Sample	East	North Description
RS-1 RS-2	508607 508604	7159388 very light 7159290 very light
RS-3	508601	7159242 very light
RS-4	508597	7159192 very light
RS-5	508597	7159142
RS-6 RS-7	508604 508598	7159090 7159042
RS-8	508614	
RS-9	508614	7158944
RS-10	508608	
RS-11 RS-12	508601 508602	7158840 7158794
RS-13	508604	
RS-14	508601	7158690
RS-15 RS-16	508600 508601	7158638 7158586
RS-10	508608	7158538
RS-18	508605	7158488
RS-19	508613	7158444
RS-20 RS-21	508608 508606	7158390 no sample 7158347
RS-22	508602	7158295
RS-23	508593	
RS-24	508601	7158191
RS-25 RS-26	508602 508599	7158146 7158086
RS-27	508595	7158040
RS-28	507696	7158441
RS-29	507687	7158498
RS-30 RS-31	507710 507710	7158540 7158590
RS-32	507732	7158640
RS-33	507713	7158697
RS-34	507701	7158740 7158790 black rocks, graphite?
RS-35 RS-36	507702 507702	
RS-37	507694	7158895 black rocks, graphite?
RS-38	507698	7158940 brown soil
RS-39 RS-40	507711 507716	7158993 brown soil 7159043 brown soil
RS-41	507722	7159093 brown soil
RS-42	507721	7159143 orange, on trail
RS-43	507715	7159193 orange, on trail
RS-44 RS-45	507718 507709	7159240 orange, on trail 7159293 orange, on trail
RS-46	507710	7159345 orange, on trail
RS-47	507723	7159390 orange, on trail
RS-48 RS-49	507717 507716	7159440 orange, on trail 7159494 orange, deep
RS-50	507702	7159542 orange
RS-51	507706	7159590 orange
RS-52	507696	
RS-53 RS-54	507692 507684	7159691 orange 7159740 orange
RS-55	507684	7159784 orange
RS-56	507696	7158390
RS-57	507704 507708	7158340 7158293
RS-58 RS-59	507705	7158240
RS-60	507705	7158190
RS-61	507707	7158140
RS-62 RS-63	507709 507700	7158091 7158038
RS-64	507701	7157990
RS-65	507684	7159784 orange
RS-66	507687	7159880 orange 7159930 orange
RS-67 RS-68	507684 507683	7159930 orange 7159980 orange and stony
RS-69	507687	7160027 brown and stony
RS-70	507684	7160080 brown and stony
RS-71 RS-72	507690 507693	7160127 brown and stony 7160180 brown
RS-72 RS-73	507693	7160238 brown, deep
RS-74	507697	7160277 brown, deep
RS-75	507701	7160325 brown, deep
RS-76 RS-77	507694 507700	7160380 brown, deep 7160430 brown, deep
10-11	307700	, isotoo biotti, doop

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**.**...

# Float Sample GPS Data

Sample RH1	East 505900	North 7159730	Description At Rhea #42, #1 post. Felsic volcanics, iron rich
RH2	505931	7160147	limonite gossan, kill zone. At Rhea #42, #2 post. White limestone, bubbly
			crusting on side.
RH3	507684	7160080	Limestone fractured, brown on fractures, 3" to bedrock.
RH4	507707	7158140	Possible epithermal veining, limonite.
RH5	507707	7158140	Fractured rock with Mn and limonite (precipitate).
RH6	507707	7158140	Fractured rock with Mn and limonite (precipitate). Similar to RH5.

#### YUKON MINFILE YUKON GEOLOGICAL SURVEY WHITEHORSE

MINFILE: 116C 020 NAME: ALASKA STATUS: ANOMALY TECTONIC ELEMENT: YUKON-TANANA TERRANE DEPOSIT TYPE: PLUTONIC RELATED AU **NTS MAP SHEET:** 116C\2 **LATITUDE:** 64° 3' 4" N **LONGITUDE:** 140° 59' 45" W

OTHER NAME(S): MAJOR COMMODITIES: MINOR COMMODITIES: TRACE COMMODITIES:

#### **CLAIMS (PREVIOUS & CURRENT)**

CICI, CREEK, PK, SIXTY, UNI

#### WORK HISTORY

Investigated in May/70 by the Dawson Range Joint Venture (Straus Explorations Inc, Martin Marietta Corporation, Molybdenum Corporation of America, Trojan Consolidated Mines and Great Plains Development Corporation of Canada Ltd) following the release of stream sediment geochemical results from samples collected the previous year in Alaska.

\* The exact location of the anomaly appears unknown.

R. Beckett staked Pk cl 1-4 (YB54253) in the general area in Sept/95. J.P. Ross surrounded the PK claims on three sides with Uni cl 1-13 (YB67499) in Oct/95. In 1996 Ross optioned the Uni claims and the neighboring Cici claims (Minfile Occurrence #116C 146) to Madrona Mining Ltd. Madrona carried out airborne electromagnetic, magnetic and radiometric surveying over the claim blocks in Jul/96 and staked Uni cl 14-17 (YB88049) in Jun/96 and Uni cl 18-40 (YB88681) in Aug/96 forming a contiguous claim block joining the two occurrences.

In Sep/97 Madrona carried out an extensive soil sampling program over the combined claim block and staked Uni cl 41 (YC04559) to cover ground that had been staked in Jun/96 by S. Moldum as Claim cl 1 (YB88048). In Jun/98 the company staked Cici cl 35-47 (YC07248) to the east, Creek cl 31-38 (YC07263) to the southeast and Uni cl 42-53 (YC07371) to the north covering geochemical anomalies located the previous year which were on open ground.

Following a property visit in Jul/98 Kennecott Canada Exploration Inc optioned the property from Madrona and carried out prospecting, geological mapping, geochemical sampling and gravity surveying that year. Kennecott staked Sixty cl 1-143 (YC12289) to the south in Aug/98. In 1999 after optioning Bud and Mac claims located to the east (Minfile Occurrence # 116C 166) and other claims to the southeast (Minfile Occurrences #116C 019 and 082), from their respective owners, Kennecott carried out prospecting, geochemical sampling and airborne geophysical surveying over their combined claim holding. The following year Kennecott dropped all of its options in the area.

MINFILE: 116C 020 PAGE: 2 of 3 UPDATED: 6/3/2003

#### GEOLOGY

The occurrence is located within the Yukon-Tanana Terrane west of Dawson City, Yukon. The region escaped glaciation and thus there is very little exposed outcrop in the area. Preliminary mapping by Madrona Mining Ltd indicates that the occurrence is underlain by Late Devonian (?) to mid-Mississippian Nasina assemblage rocks consisting of quartz carbonaceous and quartz muscovite schist (quartzite). A large unit of Nasina assemblage metavolcanics, exposed in a thrust panel, cuts diagonally northeast-southwest across the neighboring Cici and Creek claim blocks. A Late Cretaceous aged unit of volcanic rock consisting of massive andesitic flows and breccias, that correlates with Carmacks Group volcanics, unconformably overlies the other units in the northeast corner of the Cici claim block.

A stream sediment sampling program by the Alaska Department of National Resources returned anomalous copper (50-180 ppm) and zinc (450-550 ppm) values from streams originating on the Yukon side of the border. No mineralization was found.

The airborne geophysical survey identified 15 anomalies of which 6 are conductive signatures having possible potential for reflecting sulphide mineralization. The interpretation and mineral potential of the anomalies was hampered by the lack of geological mapping and other field observations. Follow-up field investigations were recommended to accurately define the source of the anomalies.

Madrona's soil survey utilized four grids located around the headwaters of Glacier Creek and identified 12 geochemical anomalies of which 5 were base metal anomalies consisting of Zn, +/-Cu and +/- Pb. The remaining 7 anomalies consisted of As +/- Zn, Cu and Pb and occasionally W. The company did not report threshold values but the deep overburden overlying the area masked the response of the survey with the highest Zn result returning 304 ppm. The association of As and occasionally W with many of the anomalies is thought to reflect the possible presence of intrusive-related Au mineralization, although none of the gold results were above the 1 ppm detection limit of the analytical technique used in the testing.

Kennecott's sampling was regional in nature and was completed at a reconnaissance scale across a much larger area encompassing most of their accumulated holdings. The company's program which targeted the gold potential of the area successfully identified five mineralized anomalies, one of which is related to this occurrence.

The Porker Creek anomaly which is located 2.2 km east-northeast of this occurrence location, covers the Porker Creek drainage basin and includes a 500 by 1 000 m gold in soil anomaly. Kennecott identified three different types of mineralization in the area:

1) Vein type mineralization in the northeast part of the basin, coincident with the soil anomaly, which is comprised of numerous, predominately east trending, steeply south dipping quartz veinlets containing traces of fine grained disseminated pyrite in locally silicified and/or graphitic, rusty weathering Nasina assemblage quartzites which returned 105 ppb Au from grab samples;

2) A second type of vein mineralization, collected as float in the northwestern part of the drainage basin, consisting of quartz vein breccia in silicified quartzite with trace disseminated pyrite and kaolinite clay alteration, samples of which returned up to 270 ppb Au and 203 ppm As;

3) Intense bleaching and quartz-pyrite-sericite alteration (metasomatism) of muscovite quartzite in a 5 by 5 m outcrop near the eastern fork of Poker Creek, described by Kennecott as possible VMS style alteration/mineralization, a grab sample of which returned 80 ppb Au and 1.54 ppm Ag.

#### MINFILE: 116C 020 PAGE: 3 of 3 UPDATED: 6/3/2003

#### REFERENCES

ALASKA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF MINES AND GEOLOGY, May/70. Preliminary Report, No. 23.

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MADRONA MINING LTD, Nov/96. Assessment Report #093559 by R.W. Woolham.

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MORTENSEN, J.K., 1988. Geology of Southwestern Dawson Map Area, scale 1:250 000, Geological Survey of Canada, Open File 1927.

MORTENSEN, J.K., 1990. Geology and U-Pb geochronology of the Klondike District, west central Yukon Territory. Canadian Journal of Earth Sciences, v. 27, p. 903-914.

MORTENSEN, J.K., 1996. Geological Compilation Maps of the Northern Stewart River map area Klondike and Sixtymile Districts (115N/15,16; 115O/13,14 and parts of 115O/15,16), scale 1:50 000. Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, Open File 1996-1 (G).

YUKON EXPLORATION AND GEOLOGY 1997, p. 21, 36; 1999, p. 15.

MINFILE: 116C 133 PAGE: 1 of 2 UPDATED: 5/8/1998

#### YUKON MINFILE YUKON GEOLOGICAL SURVEY WHITEHORSE

MINFILE: 116C 133 NAME: BALDY STATUS: SHOWING TECTONIC ELEMENT: YUKON-TANANA TERRANE DEPOSIT TYPE: BESSHI MASSIVE SULPHIDE CU (ZN)

**NTS MAP SHEET:** 116C\2 **LATITUDE:** 64° 6' 8" N **LONGITUDE:** 140° 59' 9" W

OTHER NAME(S): MAJOR COMMODITIES: COPPER, LEAD, SILVER, ZINC MINOR COMMODITIES: GOLD, COPPER TRACE COMMODITIES:

#### **CLAIMS (PREVIOUS & CURRENT)**

#### WORK HISTORY

Staked as Baldy cl (YA49765) in May/80 by Cominco, which performed mapping and geochem sampling later in the year.

YGC Res L restaked the property as Bal cl (YB30599) in Jun/90, and carried out limited prospecting and soil sampling in Aug/90 and Jun/91, and added more Bal claims (YB41400) to the northeast in Aug/92.

Kennecott Canada Inc. optioned the property in 1992 and carried out a small reconnaissance program. In early 1995 YGC optioned 5 properties including the Bal claims to Atna Resources Ltd. In Aug/95 Atna carried out a property examination and collected 3 lines of soil samples.

#### **GEOLOGY**

Disseminated sphalerite, galena, chalcopyrite and minor pyrite occur in metavolcanic rocks assigned to the mid-Permian Klondike Schist. Similar mineralization occurs on the Pub property (Minfile 116C 112) 4 km along strike to the northeast. The Klondike Schist forms a 2 km thick sequence which dips northwest at about 25. Chlorite schist forms the lower part of the sequence, and the upper part consists of quartz-muscovite schist. The mineralization appears to be confined to a narrow siliceous interval at the approximate boundary between the chlorite schist and the quartz muscovite schist. In 1990 J. Mortensen (GSC) obtained an Upper Permian zircon age from a sample of quartz-muscovite augen schist collected 2 km north of the property. Lead isotope analysis of galena from the showing returned a Middle to Upper Permian model age, concordant with the age of the host rocks.

Extensive soil sampling by Cominco in 1980 outlined a 1 300 by 100-500 m area of anomalous Pb, Zn and Cu around the showing, and subsequent prospecting uncovered disseminated sphalerite, chalcopyrite, galena and minor pyrite in the slumped bank of Hall Creek. The sulphides occur along the foliation in the host schist. A specimen collected by YGC in 1991 contained 3.43% Pb, 8.09% Zn, 0.20% Cu, 41.0 g/t Ag and 195 ppb Au.

Atna collected 3 lines of soil samples from between lines previously sampled by YGC. The results outlined coincident geochemical Cu, Pb and Zn soil anomalies on the west side of the claims near the USA/Canada border.

MINFILE: 116C 133 PAGE: 2 of 2 UPDATED: 5/8/1998

#### REFERENCES

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GEORGE CROSS NEWSLETTER, 8 Jun/92.

MORTENSEN, J.K., 1990. Geology and U-Pb geochronology of the Klondike District, West-Central Yukon. Canadian Journal of Earth Sciences, Vol. 27, p. 903-914.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 292; 1992, p. 3.

YUKON EXPLORATION AND GEOLOGY 1992, p. 2-3.

YUKON EXPLORATION & GEOLOGY 1995, p. 12, 17.

YGC RESOURCES LTD, 1993. Assessment Report #093098 by R.C. Carne.

#### YUKON MINFILE YUKON GEOLOGICAL SURVEY WHITEHORSE

# MINFILE: 116C 115NTS MAP SHEET: 116C\1NAME: CLIPLATITUDE: 64° 13' 50" NSTATUS: SHOWINGLONGITUDE: 140° 23' 53" WTECTONIC ELEMENT: YUKON-TANANA TERRANEDEPOSIT TYPE: SEDIMENTARY EXHALATIVE ZN-PB-AG (SEDEX)

OTHER NAME(S): MAJOR COMMODITIES: ZINC, LEAD MINOR COMMODITIES: SILVER, COPPER, BARITE TRACE COMMODITIES:

#### **CLAIMS (PREVIOUS & CURRENT)**

CLI, CLIP, SWDE

#### WORK HISTORY

Staked as Clip cl 1-10 (YA31481) in Jul/78 by Cominco Ltd, which explored with mapping and soil sampling in 1978 and 1979.

YGC Resources Ltd restaked the property as Cli cl 1-6 (YB30541) and prospected briefly in 1991. Kennecott Canada Inc optioned the property in 1992, and explored with soil sampling, geological mapping and hand trenching in 1993. Archer, Cathro and Associates (1981) Ltd added more Cli claims in Aug/93. The claims were transferred to YGC Resources Ltd in Apr/94. In early 1995 YGC optioned 5 properties including the Cli claims to Atna Resources Ltd. In Jul/95 Atna carried out soil sampling, trenching and prospecting on the claims and staked Cli cl 45-46 (YB53394).

Cominco Ltd staked Swde cl 1-24 (YB53482) 5 km to the west in May/95. In Jun/95 Cominco commissioned a helicopter-borne magnetic and electromagnetic survey over their claims.

## GEOLOGY

The property is located within the Yukon-Tanana Terrane and is underlain by Late Devonian to Middle Mississippian Nasina assemblage (formerly called Nasina Series) quartzite and phyllite rocks. Mineralized talus occurs in two areas. At one location, micaceous quartzite contains banded sphalerite, barite and pyrite and in the other area, bands and stringers of galena. Cominco's soil sampling outlined a 600 x 150 m area of anomalous lead and zinc.

YGC's sampling detected anomalous Pb and Zn in soil 1 km along strike to the southeast.

Kennecott's soil sampling in 1993 returned anomalous Zn, Pb and Ag in the previously delineated areas of mineralized float and another smaller Zn-Pb anomaly in an area where no mineralized float has been found.

Atna extended both Cominco's original grid and Kennecott's grid and trenched around Zone B. Soil sampling better defined the known areas of mineralization and outlined a new anomaly in the southeast corner of the property. Atna staked Cli cl 45-46 to cover this new area. Prospecting failed to determine the source of the anomaly.

#### MINFILE: 116C 115 PAGE: 2 of 2 UPDATED: 3/20/2000

Cominco's geophysical program outlined large areas of multiple conductivity which do not show much variation along and across line. These values were thought to reflect typical formational conductivity and were judge to be of no economic interest. One EM conductor, labeled Zone "C" crosses three grid lines and was flanked by a magnetic high on one side. It was judged a low priority target.

#### REFERENCES

ATNA RESOURCES LTD, May/96. Assessment Report #093459 by Uwe Schimidt.

COMINCO LTD, Jul/79. Assessment Report #090491 by E.G. Olfert.

COMINCO LTD, Jun/97. Assessment Report #093479 by R.W. Woolham.

KENNECOTT CANADA INC., Mar/94. Assessment Report #093188 by R. Hulstein.

YGC RESOURCES LTD, Jan/92. Assessment Report #092999 by R.C. Carne.

YUKON EXPLORATION & GEOLOGY 1995, p. 12, 17.

YUKON GEOLOGY AND EXPLORATION 1979-80, p. 288.

MINFILE: 116C 172 PAGE: 1 of 1 UPDATED: 2/8/2000

#### YUKON MINFILE YUKON GEOLOGICAL SURVEY WHITEHORSE

MINFILE: 116C 172 NAME: FANNING STATUS: ANOMALY TECTONIC ELEMENT: YUKON-TANANA TERRANE DEPOSIT TYPE: UNKNOWN **NTS MAP SHEET:** 116C\10 **LATITUDE:** 64° 34' 0" N **LONGITUDE:** 140° 52' 58" W

OTHER NAME(S): MAJOR COMMODITIES: MINOR COMMODITIES: TRACE COMMODITIES:

#### **CLAIMS (PREVIOUS & CURRENT)**

Fan

1.

#### WORK HISTORY

Staked as Fan cl 1-31 (YB53506) and Fan cl 32-159 (YB53354) by Cominco Ltd in May/95. The company carried out geological mapping and silt and contour soil sampling later in the season.

#### GEOLOGY

Geological mapping by Cominco determined that the claims are underlain by the Nasina Assemblage, consisting of Devonian to Mississippian black meta-pellites, quartzites and thin felsic meta-tuffs. These lithologies have been hornfelsed by the Cretaceous Fanning Creek pluton located about 5 km to the north.

Cominco staked their claim block to follow-up Cu-Zn-Pb silt anomalies detected by an unpublished, in-house, 1979 regional geochemical survey. The company's 1995 program was geared towards discovering polymetallic massive sulphide deposits similar to the recently discovered Kudz Ze Kayah (Minfile Occurrence #105G 117) and Wolverine deposits( Minfile Occurrence #105G 032).

Contour soil sampling detected two areas anomalous in Cu-Zn-Pb-Ag underlain by black phyllite and carbonaceous siltstone. Anomaly "A" (occurrence location) is 900 m long and returned maximum values of 114 ppm Cu, 146 ppm Pb, 373 ppm Zn and 1.1 ppm Ag. Anomaly "B" is 600 m long and is comprised of stream silt and bank samples which returned maximum values of 80 ppm Cu, 500 ppm Pb, 906 ppm Zn and 1.1 ppm silver. The company recommended a follow up program but the claims were allowed to lapse.

#### REFERENCES

COMINCO LTD, Jul/96. Assessment Report #093485 by K.R. Pride.

GEOLOGICAL SURVEY OF CANADA, Geology Map 1284A.

GEOLOGICAL SURVEY OF CANADA, 1988, Open File 1927.

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