Geological Report

on the Rusty Springs Claims

Dawson Mining District
NTS Map Sheets 116K08 and 116K09
Latitude 66° 30' N, Longitude 140° 25' W

Preapared For:

Aben Resources Ltd.
Suite 2230 - 885 West Georgia Street
Vancouver, BC V6C 3E8

Prepared By:

Chris Gallagher, M. Sc.
TerraLogic Exploration Inc.
Suite 200, 14-12th Ave S.
Cranbrook, BC
V1C 2R7

January 13, 2012

Summary

Despite many years of exploration and relatively limited success, the Rusty Springs prospect retains considerable potential for a large-tonnage deposit. The property lies within the east-vergent Taiga-Nahoni foldbelt, occurring in the core of a structural culmination exposing host Lower and Middle Devonian Ogilvie Formation dolostones. Mineralization occurs in stratabound and discordant zones along the contact with the overlying Devono-Mississippian Unnamed shale. Various deposit models, ranging from Mississippi Valley-type to epithermal vein-type have been employed. Poor exposure and relatively deep weathering resulting from the lack of Pleistocene glaciation account for the lack of consensus with regard to genesis, and accumulating evidence points to the potential for a high-temperature, carbonate-hosted massive sulphide deposit (manto-chimney complex). The great extent of mineralized and altered rocks, together with their stratabound nature, common significant thicknesses, local high grades, and potential for supergene enrichment suggest that Rusty Springs remains an attractive drill-oriented exploration target.

The Rusty Springs Property area has seen sporadic exploration since 1975, when rusty ground seeps were recognized during regional oil and gas exploration programs. Subsequent ground examination revealed silver-lead-zinc mineralization nearby. Staking of the area by Rio Alto Exploration followed, with systematic exploration programs carried out over the years by various operators.

High-grade mineralization was discovered in the Orma Hill area in 1978, and the focus of exploration efforts were concentrated in this area. Virtually all drilling was aimed at the Orma Vein since this time. Preliminary work, previous to the Orma discovery however, outlined anomalous soil geochemical values in the Mike Hill area. Limited drilling was carried out to define the nature of this mineralization, but met only limited success.

In 1992, the final core claims comprising the Rusty Springs Property were allowed to lapse. They were subsequently restaked, and optioned to Eagle Plains Resources, who now retain a 100% interest in the property.

Bulldozer trenching of the Mike Hill area in 1994 resulted in the discovery of high grade silver-lead-zinc mineralization within silicified carbonate material. Drilling carried out during 1995 was aimed at evaluating the mineralized zones exposed on the Mike Hill. Trenching and soil geochemical sampling was completed at the Big Onion area to follow-up geochemical work initiated during 1994.

In 1996, a 15 hole diamond drill program defined highly anomalous base metal values over significant widths within an apparently stratabound – stratiform horizon at the Ogilvie - Hart River contact. The 1997 program employed a reverse circulation drill in an attempt to improve penetration problems related to the highly abrasive cap rocks overlying the mineralized horizon. The drilling confirmed the presence of strata bound mineralization over a large area.

The 1998 program consisted of a combined shallow seismic and gravity geophysical survey. The survey defined a coincident positive Bouger gravity anomaly and seismic reflection profile interpreted to be related to a shallow sulphide body at the same stratigraphic horizon as sulphide mineralization defined in 1996 - 97.

Evaluation of the Rusty Springs Property continued in 1999 with a $273,001.81 diamond drilling and geological mapping program undertaken by the Eagle Plains Resources / CanAustra Resources joint venture. CanAustra had an option to earn a 60% interest in the Rusty Springs property by completing $2,000,000 in exploration expenditures, and making $70,000 in cash payments to Eagle Plains by 2003. Diamond drilling was directed toward testing geophysical anomalies defined by the 1998 combined seismic and gravity surveys and geological targets generated by 1999 mapping. A total of 616.9 meters

(2024 feet) of diamond drilling was completed in three holes. None of the holes were completed to target depth due to drilling problems. One of the holes, RS9901, intersected significant base metal mineralization.

Charlie Greig, a noted structural geologist, was retained in 1999 to compile a detailed structural map of the Rusty Springs property and to define a regional framework for the Rusty Springs mineralization. His work forms the basis for much of this report and was published in 2000 as part of the Yukon Exploration and Geology, 1999; Department of Indian and Northern Affairs.

2001 work on the Rusty Springs Property consisted of a short reconnaissance geological program. The total cost of the 2001 program was $16,500.08.

Work completed by Robber Hodder in 2009 and 2011 puts the geology and mineralization of the Rusty Springs deposit in a more modern context involving the presence of imbricate thrust-faults and their control on various forms of mineralization on the property. Total cost of the 2011 exploration program was $67,819.40.

Further exploration work is recommended for the property and surrounding region. But it is apparent that a comprehensive data compilation of all avaialbe data be completed before any significant ground programs are conducted.

Table of Contents

List of Figures

List of Tables

List of Appendices

Introduction

The prime objective of the 2011 exploration program was to define geologic features of the Rusty Springs Zn-Pb-Ag prospect, and how these features may be used to direct future exploration efforts. Gleeson and Reimink focused on outcrop and drill core at Mike Hill and Orma showings. Hodder and Bain did district traverses that included Salmon Fork, Damron, and Big Onion prospects.

Location and Access

The Rusty Springs Ag-Pb-Zn-Cu prospect is situated in the north-westem part of the Yukon Territory at approximately 66" 30' North latitude and 140" 25' West longitude on N.T.S. mapsheet 116 IU8 and 1 16 W9. The property is 8 km south of the Arctic Circle and 29 km east of the Alaska border, near the headwaters of the Salmon Fork of the Yukon River (Figure 1). Relief in the Rusty Springs area is on the order of 1000 metres, with the highest point in the surrounding mountains at about 1500 metres. Summits and ridges are generally rounded and subdued, and the valleys are broad as the area lies in the part of the Yukon that was not glaciated during Pleistocene time.

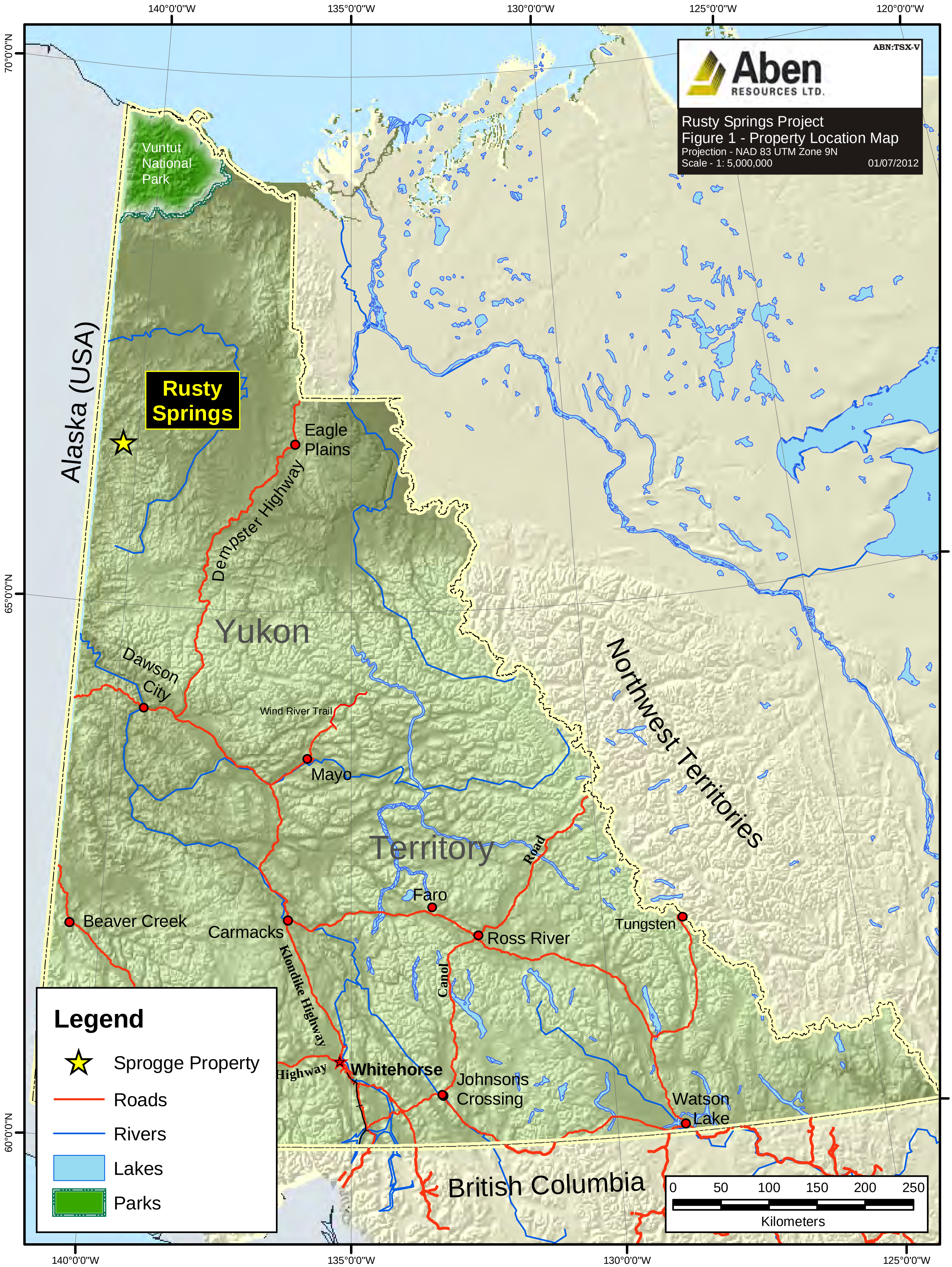
Access to the property is via wheel or ski-equipped aircraft or by winter road. An all-weather, 600m (2000') airstrip was completed in 1996. As part of the 2011 work program a heavy duty mechanic and cat driver were brought in to refurbish the D7 and clear overgrowth on the airstrip. Supply centres are located at Dawson City, Yukon (274km), Circle, Alaska (175km), or Fairbanks, Alaska (365km). Airship staging areas to Rusty Springs are available along the Dempster Highway at Eagle Plains (164kms), or from the "150 Mile" airstrip (137km).

Road access has been previously developed for winter haulage from Mile 123 (Ogilvie Crossing) on the Dempster Highway over a distance of 193 km. The Dempster Highway is a maintained all-weather road providing access from the south. The winter road access traverses gently sloping without any major topographic obstacles.

Ternure Description

The Rusty Springs property consists of two non-contiguous groups of quartz claims; Rusty Springs and Trog (Table 1; Figure 2). The Rusty Springs claim block consists of 50 contiguous quartz units while the Trog consists of 2 quartz claim units for a total area of 1086.17 Ha. The mineral claim boundaries have not yet been legally surveyed. Title to the claims is currently held 100% in the name Eagle Plains Resources Ltd.

On February 15th, 2011 Eagle Plains Resources Ltd. and Aben Resources Ltd. (formerly Consolidated Abaddon Resources Inc.) entered into an agreement whereby Aben may earn a 100% interest in the Rusty Springs Property, located north of Dawson City, Yukon. Under terms of the agreement, Aben has the option to earn a 100% interest in the 1,100 ha property by making $500,000 in cash payments and issuing 1,500,000 common shares to Eagle Plains over 5 years. The property shall be subject to a three percent (3%) net smelter return royalty ("NSR") in favour of Eagle Plains.

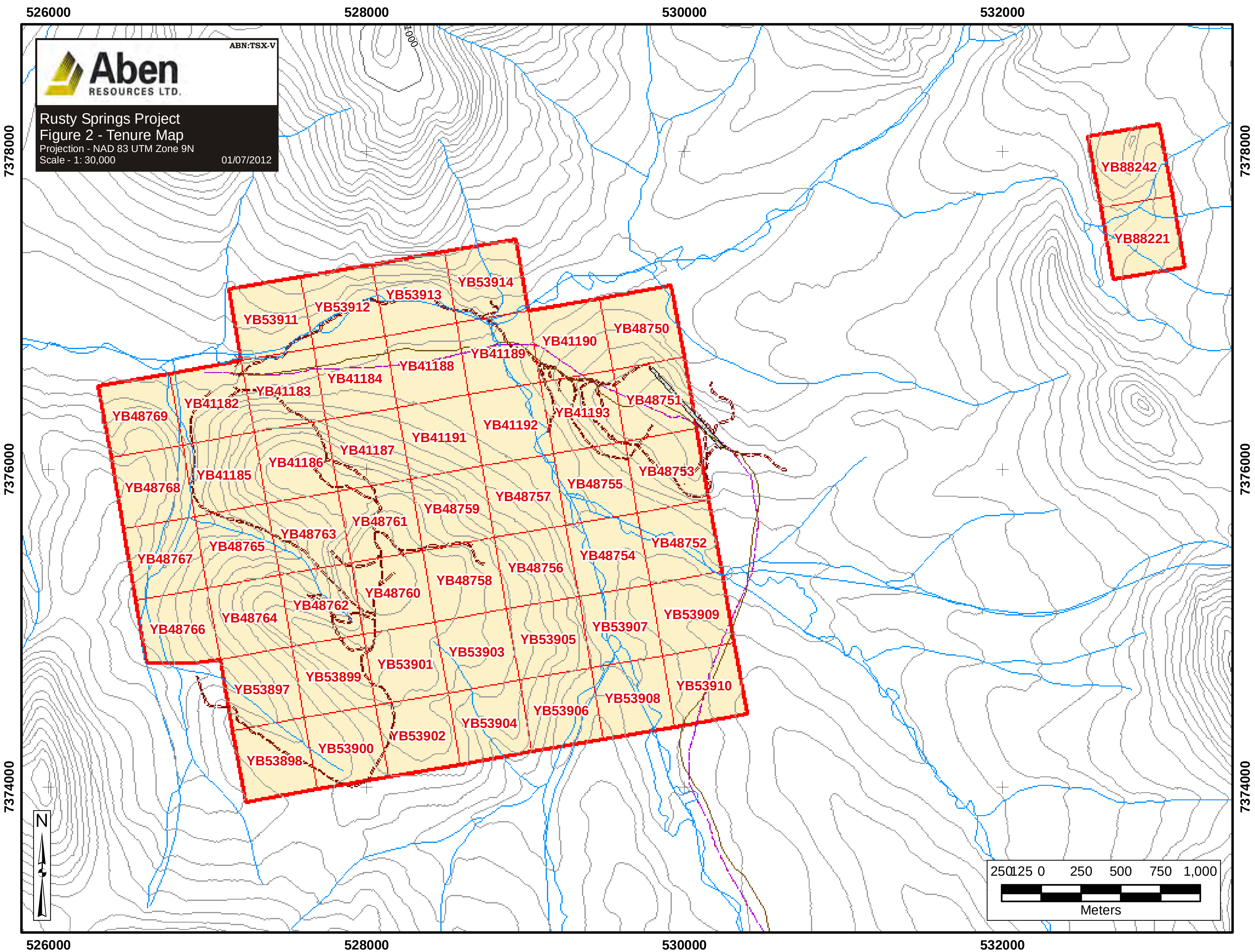


Aben
RESOURCES LTD.
ABN:TSX-V
Rusty Springs Project
Figure 1 - Property Location Map
Projection - NAD 83 UTM Zone 9N
Scale - 1: 5,000,000
01/07/2012
140°0'0"W
135°0'0"W
130°0'0"W
125°0'0"W
120°0'0"W
70°0'0"N
65°0'0"N
60°0'0"N
Vuntut
National
Park
Alaska (USA)
Rusty
Springs
Eagle
Plains
Dempster Highway
Yukon
Dawson
City
Wind River Trail
Mayo
Territory
Road
Faro
Beaver Creek
Carmacks
Ross River
Tungsten
Northwest Territories
Klondike Highway
Canol
Highway
Whitehorse
Johnsons
Crossing
Watson
Lake
British Columbia
Legend
Sprogge Property
Roads
Rivers
Lakes
Parks
0
50
100
150
200
250
Kilometers

<u>*Table 1 – Rusty Springs Tenure*</u>

Grant	Type	Name	Owner	Recorded	Good To	District
YB48750	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB41182	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41184	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41185	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41186	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41187	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41191	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41192	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB48759	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48762	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48764	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48752	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48754	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53900	Quartz	Joel	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB53901	Quartz	Glen	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB53904	Quartz	Katie	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB53905	Quartz	Alecia	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB41193	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB48769	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/12	Dawson
YB53912	Quartz	Ben	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/12	Dawson
YB53913	Quartz	Trevor	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/12	Dawson
YB53909	Quartz	Casey	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB88242	Quartz	Trog	Eagle Plains Resources Ltd. - 100%	07/29/96	12/10/13	Dawson
YB53903	Quartz	Marlo	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB48761	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48765	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48755	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53908	Quartz	Tyler	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB41190	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB48763	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53902	Quartz	Calli	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB41183	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB41188	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB48760	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48767	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/12	Dawson
YB48751	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48756	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53911	Quartz	Kayla	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/12	Dawson

Grant	Type	Name	Owner	Recorded	Good To	District
YB53899	Quartz	Joel	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB48753	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB48758	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53906	Quartz	Kelsey	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB53898	Quartz	Joel	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB53910	Quartz	Lane	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB48766	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/12	Dawson
YB53907	Quartz	Lauren	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB48757	Quartz	Shelly	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/13	Dawson
YB53897	Quartz	Joel	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/11	Dawson
YB48768	Quartz	Eric	Eagle Plains Resources Ltd. - 100%	06/10/94	12/10/12	Dawson
YB41189	Quartz	Jessica	Eagle Plains Resources Ltd. - 100%	07/29/92	12/10/13	Dawson
YB53914	Quartz	James	Eagle Plains Resources Ltd. - 100%	07/07/95	12/10/12	Dawson
YB88221	Quartz	Trog	Eagle Plains Resources Ltd. - 100%	07/29/96	12/10/13	Dawson


ABN:TSX-V
Aben
RESOURCES LTD.
Rusty Springs Project
Figure 2 - Tenure Map
Projection - NAD 83 UTM Zone 9N
Scale - 1: 30,000
01/07/2012
526000
528000
530000
532000
7378000
7376000
7374000
YB88242
YB88221
YB53914
YB53913
YB53912
YB53911
YB48750
YB41190
YB41189
YB41188
YB41184
YB41183
YB41182
YB48769
YB48751
YB41193
YB41192
YB41191
YB41187
YB41186
YB41185
YB48768
YB48753
YB48755
YB48757
YB48759
YB48761
YB48763
YB48765
YB48767
YB48752
YB48754
YB48756
YB48758
YB48760
YB48762
YB48764
YB48766
YB53909
YB53907
YB53905
YB53903
YB53901
YB53899
YB53897
YB53910
YB53908
YB53906
YB53904
YB53902
YB53900
YB53898
N
250 125 0 250 500 750 1,000
Meters

Property History

(After Downie and Greig, 2000)

The Rusty Springs property was first staked in 1975, after investigation of deep red-orange springs and seeps in the valley of Carrol Creek led to the discovery of nearby silver, lead, zinc, and copper mineralization; the rusty seeps were fist noted during petroleum exploration in the area. Since the discovery, the property has been the focus for nearly $5,000,000.00 of exploration, including ten separate drill campaigns in two major phases (1975-83 and 1994-96) totalling over 10,000 metres of drilling in 123 holes. Table 2 is a synopsis of the work history on the property.

Exploration has mainly targeted high-grade silver, lead, copper, and zinc mineralization within brecciated and quartz and carbonate cemented and veined dolomite, and has been based on several genetic models, developed in part by geology students employed on the property and working on Bachelors theses (e.g., Schoel 1978, Hansen 1979, Bankowski 1980a). At various stages of exploration, models used to help guide exploration include: Mississippi Valley-type (MVT); Irish Plains-type (carbonate hosted exhalative, Bankowski 1980a); epithermal-type (veins and(or) hydrothermal replacement along a karsted surface, with supergene enrichment); and manto-chimney-type (high-temperature, carbonate hosted massive sulphides). Direct targeting of drillholes utilized various techniques, including prospecting, geologic mapping, geochemistry and geophysics. Many of the drill programs were plagued by drilling problems, such as poor recoveries in the strongly oxidized and leached mineralized intervals, or loss of water pressure in blocky brecciated zones with abundant open space. Drilling was often slow and costly in resistant siliceous 'chert' horizons that cap the mineralized stratigraphy. Trenching also met with varying success, mainly because of the deep permafrost and the deep, soliflucted overburden which predominates in unglaciated parts of the Yukon.

During the fall of 1975, while investigating an oolitic iron formation, a rusty spring-seep was observed by M.N. Chernoff. Upon investigation, the spring was found to be associated with high-grade silver, lead, zinc, and copper mineralization. A total of 92 quartz claims and 15 iron claims were staked during the fall and winter seasons.

During the 1976 summer season, a preliminary investigation of the property was conducted by Rio Alto Exploration Ltd., under the supervision of M.N. Chernoff. Exploration completed included helicopter-supported geological mapping, prospecting, sampling of mineralized float, and limited soil geochemical sampling. This work established the mineral setting, confirmed the presence of high-grade silver values, and demonstrated the usefulness of soil geochemistry. The mineral occurrences were considered to be hydrothermal vein systems with supergene enrichment possibilities.

Based on encouraging results from this preliminary reconnaissance, a follow-up field program consisting of geological mapping, soil geochemical sampling, and 975 metres (3200 feet) of diamond drilling was conducted in 1977. Again, the results were considered positive, even though poor drill core recoveries were obtained. Additional ground was staked to give a total of 380 quartz claims and 15 iron claims.

A geological thesis by G. Schoel concluded that the mineralization style was probably Mississippi Valley type.

During the winter of 1978, fuel, drill equipment, and supplies were ferried to the property by tractor train. That summer, two picket grids (totalling 67 lime km) were established over the claims. Further geological mapping, soil geochemical sampling, diamond milling (1840 meters), and metallurgical sampling were also completed. Poor drill core recoveries once again hampered the effectiveness of the program.

A geological thesis was undertaken by D. Hansen, again emphasizing a Mississippi Valley type model for the mineralization.

Exploration during the period 1975 to 1978 inclusive was funded by Rio Alto Exploration. In 1979, detailed geological mapping, a soil geochemical survey, an Induced Polarization survey, and a gravity survey were completed. Joint funding of this work was by Rio Alto and E & B Explorations Ltd. of Calgary, Alberta.

A geological thesis by J. Bankowski indicated a hydrothermal exhalative nature.

In 1980, E & B Explorations Ltd. as operator, focused on the widespread mineralization discovered on Orma Hill. Their program saw 1830 metres (6000 feet) of diamond drilling, bulldozer trenching, and some detailed geological mapping completed. Core recoveries were not significantly improved over previous years.

In 1982, Taiga Consultants Ltd was contracted by Kenton Natural Resources to carry out a geological evaluation of the property and subsequently a comprehensive mineral exploration and diamond drilling program. During this period, 510 metres (1673 feet) of diamond drilling was completed, as well as a soil geochemical survey, a geophysical (VLF-EM) survey, detailed geological mapping of the property, and six trenches dug in order to define the style of mineralization.

More recent research work, carried out by Jill Kirker (April 1982), strongly supports a hydrothermal origin for the mineralization.

In 1983, additional geophysical surveying and geochemical sampling were completed by Taiga Consultants Ltd. to detail geophysical conductors and geochemical zones previously outlined. During the fall of 1983,488 metres (1600 feet) of diamond drilling were completed.

In 1986, Kenton Natural Resources Inc., as operator, drilled two holes in the valley bottom between the Mike and Orma Hills in order to test an I.P. anomaly delineated in 1979 by previous operators. This program consisted of 404 m (1326') of drilling, and failed to intersect any significant mineralization. The drill was removed from the property following this short program.

The claims were gradually allowed to lapse, and in the spring of 1992, all claims comprising the property had expired. R.W. Termuende restaked the core area of the property on July 29th, 1992. 12 quartz claims were recorded, consisting of the Eric 1-6 and Jessica 1-6 claims.

A $190,000 exploration program was completed during the 1994 season. The focus of the two-stage program was to carry-out further systematic exploration in the Mike Hill area, as well as undertake initial re work in the region surrounding the claim area. A total of 531 soil, 67 rock, and 36 silt samples were taken, over two separate control grids that were established on the property, covering the Mike Hill and Big Onion areas. Coincident with the geological program, efforts were made to improve the infrastructure of the property, and included construction of a 530m (1800') airstrip, a 3.4km permanent road connecting the airstrip and camp areas, and 10km of drill-tote trails throughout the property. Environmental work was also undertaken in the Orma Hill area, with 8 man days spent collecting some

140 used fuel drums, refuse-burning, and general cleanup activities in areas of past development.

A two-phase trenching and diamond drilling program was carried out during 1995. Twenty-one drillholes totalling 1658 meters (5440 feet) were completed in the Mike and Orma hill areas, and a total of 400m of bulldozer trenching carried out in the Big Onion area. In addition, a 339-sample soil geochemistry survey was undertaken proximal to the Big Onion showing. A further 35 claim units were added to the existing property, bring the total area to 71 units. In addition, improvements were made to the airstrip, and an all-weather road network was completed to access all areas of the property. The total cost of the 1995 program was $539,000. The most impressive mineralized interval intersected in 1995 occurred in hole RS95-M7, where a 15.3m interval of a hole drilled on the Mike Hill assayed 15.1 oz/ton silver, 3% copper, and 1.3% zinc, from 28.6-43.9m.

A 15-hole, 7600' (2320m) diamond drilling program was carried out on the property in 1996 at a total cost of $560,000. The program was designed to test for the presence of deep-seated manto-type mineralization, which was interpreted to lie beneath high-grade "chimney" veins exposed on surface in the Mike and Orma Hill areas. In addition to geological work, significant improvements were made to property infrastructure, with three km of new roadwork completed, and the airstrip extended to 2000' (600m). Significant to the 1996 program was the discovery of stratabound mineralization, apparently over much of the property area, and beyond. As a result of the new interpretation, 478 quartz claim units were staked in the region, covering all favourable stratigraphy in the immediate area.

The $355,000 1997 program utilized a reverse circulation drill in an attempt to mitigate drilling problems associated with the highly abrasive cap rocks overlying the mineralized horizon. While the drill did perform better in the siliceous ground, there were problems with recovery and sample contamination within the mineralized zone. Two of the holes confirmed the presence of stratabound mineralization at the Hart River - Ogilvie Formation contact over a large area. During 1997, RW. Hodder, Ph.D., P.Eng., visited the property and examined existing drill core, outcrop, trenches and technical data. He concluded that "The limonitic interval at Rusty Springs is a resource of hundreds of millions of tons, but of very subeconomic amounts of base or precious metals ... the limonitic interval and it's enclosed quartz veins and lamellae are however vital symptoms that ore forming processes existed for major deposits of silver-lead-zinc and that deposits of this type cluster in districts of economic potential". Hodder also recommended focusing on locating sulphides below the present and paleo water table.

The $54,000.00 1998 program involved a combined shallow seismic and gravity geophysical survey. The surveys were run from the northeast flank of the airstrip east across the low lying swampy area. The survey defined a coincident positive Bouger gravity anomaly and seismic reflection profile interpreted to be related to a shallow sulphide body at the same stratigraphic horizon as sulphide mineralization defined in 1996 – 97.

Eagle Plains Resources continued mineral exploration at the Rusty Springs property in 1999 with a $273,000.00 field program. A three hole helicopter supported, diamond drill program to test for stratabound mineralization in the area of Orma Hill was carried out concurrently with a property and regional scale geologic mapping program under the direction of Charlie Greig.

Results from the 616.9 m (2024 feet) 1999 diamond drilling program at the Rusty Springs property were largely inconclusive because none of the holes could be completed to target depth. Two of the three holes intersected quartz carbonate crackle breccia within a strongly silicified (cherty?) black mudstone that overlies the mineralized horizon elsewhere on the property. While no massive sulphide or Katshat horizon was intersected, a mineralized breccia zone was encountered between 229.2 and 264.9 meters in hole RS99-01. Mineralization consisted of finely disseminated to patchy orange – red sphalerite associated with fine quartz crackle breccia and coarser collapse type breccia. The host rock was silicified black mudstone. The best mineralized intervals were 226.8 to 233.4 meters which averaged 2819 ppm zinc over 6.6 meters, and 249.8 to 264.9 meters which averaged 3100 ppm zinc over 15.1 meters. The brecciation, strong silicification and mineralization are consistent with the nature of the cap rocks associated with the Katshat horizon elsewhere on the property. Casing was left in all three of the drillholes to facilitate future deepening of the holes to intersect the mineralized horizon.

2001 work on the Rusty Springs Property consisted of a short reconnaissance geological program. The total cost of the 2001 program was $16,500.08.

In 2006 Rusty Springs was revisited by Robber Hodder, Bob Termuende and Lara Lewis of the YGS. The property visit involved 6 hours of showing examinations, minor geologic traverses, core review, aerial observations. Results of the property visit and subsequent data review suggest that although the current geologic dataset is accurate, it could possibly be reinterpreted in a modern geologic context. Specifically, geology / mineralization on the property should be put in a fold and thrust context and the close to 40 showings on the property could be utilized to vector towards larger sulphide or non-sulphide Pb-Zn deposits. Total cost of the 2006 exploration program was $14,473.57.

<u>*Table 2 – Rusty Springs Exploration History*</u>

Year	*Work done*	*Company*	*Interpretations*	*Drilling*	*Significant results*	*Expenditure*	*Reference*
1976	staking, prospecting, mapping, limited soil sampling, hand-pitting	Rio Alto Exploration Ltd.	intrusive-related hydrothermal vein systems with supergene enrichment		Chip samples of float from several localities with 30-40% Zn, 5-15% Cu, and variable Pb and Ag; grab samples commonly averaged 10-70 opt (300-2000 g/t) Ag	$150,000	Chernoff (1976)
1977	prospecting, mapping, grid-soil sampling, diamond drilling, staking, metallurgical sampling	Rio Alto Exploration Ltd.	precious-metalenriched Mississippi Valley-type (MVT) model adopted	3200 ft. (975 m) in 8 holes	High Ag and Pb values in one hole (123 ft. averaging 33.27 opt (947.5 g/t) Ag, 4.72% Pb, 2.36% Cu) but with poor recoveries	$187,000	White (1978); Schoel (1978)
1978	extensive line cutting and soil geochemistry, prospecting, diamond drilling, mapping, construction of winter road and airstrip	Rio Alto Exploration Ltd.	mineralized zones on Orma Hill follow low-angle fault; MVT model still accepted	6035 ft. (1840 m) in 30 holes	stratigraphic control noted on anomalous soil geochem zones following chert–dolomite contacts: Cu-Pb-Ag± Zn on Orma Hill; Zn± Cu± Pb± Ag on Mike Hill; poor recoveries in drilling	$555,000	Beck (1978)
1979	Induced Polarization and gravity surveys, line cutting, prospecting, mapping, soil sampling, hand pitting, trenching	Rio Alto Exploration Ltd.	MVT model still accepted		extent of upper Ogilvie Formation (mineralized showings or float found throughout) and contacts with overlying siliciclastic rocks established	$300,000	Hansen and Bankowski (1979); White (1979)

Year	Work done	Company	Interpretations	Drilling	Significant results	Expenditure	Reference
1980	diamond drilling, cat trenching, detailed mapping	E&B Explorations Inc. and Rio Alto Exploration Ltd. joint venture	mineralization considered to be of hydrothermal origin; Ogilvie-Hart River contact still considered a karsted horizon channelling mineralizing solutions	6,000 ft. (1829 m) in 27 holes	poor recoveries in upper parts of holes; numerous cm-to decimetre-thick tetrahedrite-tennantite veins intersected, which commonly yielded high Ag, Pb, and Cu values; mineralization on Orma Hill in part appears to be vein-related	$1,200,000	Bankowski (1980); Liedtke (1980)
1982	soil geochemistry, VLF-EM surveys, mapping, trenching, diamond drilling	Kenton Natural Resources Corporation	epithermal veins	1673 ft. (510 m) in 7 holes	common WNW-, NW-, and NNW-trending EM conductors outlined; Orma Hill vein systems defined	$116,000	Davis and Aussant (1982)
1983	fill-in soil geochemistry and VLF-EM surveys, diamond drilling	Kenton Natural Resources Corporation	epithermal veins	1600 ft. (488 m) in 2 holes	focussed on Orma Hill vein systems	$350,000	Aussant (1983)
1986	diamond drilling	Kenton Natural Resources Inc.		1326 ft. (404 m) in 2 holes	tested (unsuccessfully) IP anomalies between Orma and Mike hills	$96,000	Chamberlain (1986)
1992	restaking						
1994	regional reconnaissance; trenching, airstrip and road construction; clean-up	Eagle Plains Resources Ltd.	epithermal veins, MVT	None	vein mineralization on 040° -trend discovered using soil geochem and trenching on Mike Hill; new showings discovered SW of Mike Hill	$190,000	Downie (1994)
1995	trenching, diamond drilling, soil geochemistry, staking, airstrip and road construction, GPS survey, claim staking	Eagle Plains Resources Ltd.	manto-chimneytype carbonate-hosted deposits	5440 ft. (1658 m) in 21 holes	15.1 oz/ton (425 g/t) Ag, 3% Cu, and 1.3% Zn over 50 ft. (15.3 m) on Mike Hill	$539,000	Termuende (1996)
1996	diamond drilling; airstrip extension, road construction, staking	Eagle Plains Resources Ltd.	carbonate-hosted manto-type deposits; stratabound hydrothermal mineralization along Ogilvie-Hart River Formation contact	7610 ft (2320 m) in 15 holes	highly anomalous base metal values over significant widths along Ogilvie-Hart River Formation contact	$560,000	Termuende and Downie (1997)
1997	reverse-circulation drilling, surface mapping, prospecting, road and drill pad construction, improvements to airstrip	Eagle Plains Resources Ltd. and Canaustra Resources Ltd.	stratabound hydrothermal mineralization along Ogilvie-Hart River Formation contact	1351 feet (412 m) in 8 holes	two widely spaced holes drilled through Ogilvie-Hart River Formation contact, confirming presence of stratabound mineralization; affirmation of distribution of chert and shale, including in low-lying areas (may cap mineralization preserved beneath the water table)	$356,000	Termuende and Downie (1998); Hodder (1997)

Year	Work done	Company	Interpretations	Drilling	Significant results	Expenditure	Reference
1998	gravity and seismic reflection surveys, property reconnaissance prospecting and mapping	Eagle Plains Resources Ltd. and Canaustra Resources Ltd.	stratabound hydrothermal mineralization along Ogilvie-Hart River Formation contact, below present and paleo-water tables	None	continuation of prospective stratigraphy at shallow depths northeast of Orma Hill; coincident with gravity anomalies	$54,000	Power (1998)
1999	diamond drilling, property-scale mapping, regional reconnaissance mapping, prospecting, and sampling; clean-up	Eagle Plains Resources Ltd. and Canaustra Resources Ltd.	stratabound hydrothermal mineralization along Ogilvie-Hart River Formation contact, below present and paleo-water tables	1040 ft. (317 m) in 3 holes	None	$273,000	Downie and Greig (2000)
2001	Short reconnaissance geological program	Eagle Plains Resources Ltd.	stratabound hydrothermal mineralization along Ogilvie-Hart River Formation contact, below present and paleo-water tables	None	None	$16,500	Downie (2002)
2006	Minor geologic mapping, sampling and showing examinations	Eagle Plains Resources Ltd.	possibly structurally controlled by moderately to steeply dipping thrust faults	None	None	$14,500	Higgs (2006)
2011	Geologic traverses and minor geochemical sampling	Aben Resources Ltd.	possibly structurally controlled by moderately to steeply dipping thrust faults	None	None	$67,800	Gallagher (2011)
				total drill frontage: 36,264 ft. (11,050 m) in 123 holes		total expenditures: $5,024,000	

Regional Geology

(After Downie and Greig, 2000)

The area mapped lies with in the northernmost part of the Cordilleran orogenic belt, known locally as the Taiga -Nahoni foldbelt, where Precambrian to Cretaceous predominantly sedimentary rocks of the eastward and northward tapering North American miogeocline were deformed in latest Cretaceous to Tertiary time (Norris 1996, Lane 1998). The area was first mapped by Norris (1981), who outlined a structural culmination, in part coincident with his Porcupine Anticline, cored by rocks of the Lower and Middle Devonian Ogilvie Formation. Norris (1981) shows stratigraphically lower rocks of Early Paleozoic, Cambrian, and Proterozoic age bounding the west side of the culmination and brought up by mainly west vergent contractional faults.

Property Geology

(After Downie and Greig, 2000)

Nine map units, ranging in age from Proterozoic to Cretaceous, correspond largely with those mapped by previous workers (e.g., Chernoff 1976, Kirker 1980a, Tempelman-Kluit 1981; Fig. 2). Ages of the map units were taken mainly from Norris (1981, 1996). Exposure is generally poor near the valley bottom and consequently the focus for property-scale geologic mapping was on the rocks underlying surrounding ridges. The geology in the immediate vicinity of the mineralized and altered zones at Rusty Springs, which crop out at lower elevations in the vicinity of two lower hills, named the Mike and Orma hills, was examined briefly.

Stratigraphy

Lower to Upper Proterozoic rocks

Rusty weathering he-grained sandstone (quartzite), interbedded with maroon and local green siltstone and silty mudstone (siltite), occurs in a northerly trending belt in the southwesten most corner of the area mapped. The siliciclastic rocks, which were only briefly examined, appear to be conformable with steeply east dipping Lower Paleozoic dolostone and quartz rich sandstone to their east.

Lower Paleozoic rocks

Like the older rocks which they appear to overlie conformably, rocks of probable Late Cambrian through Early Devonian age occur in a northerly trending belt along the west margin of the map area The Lower Paleozoic rocks consist of white weathering dolostone, rusty weathering quartz-rich sandstone (quartzite), and siliceous fine grained clastic rocks, including green and maroon siltstone and silty mudstone (siltite). Rocks of similar general appearance occur to the north, but were neither examined nor differentiated from the older siliciclastic rocks. The Lower Paleozoic rocks are inferred to be in thrust contact with younger Paleozoic and Mesozoic rocks to the west, although a down-to-the-east normal fault was mapped along trend to the south by Norris (1981). The presence of inferred thrust is supported by the marked easterly vergence of folds in the area.

Lower and Middle Devonian Ogilvie Formation

Pale grey weathering dark grey dolostone and subordinate limestone and argillaceous rocks of the Ogilvie Formation underlie the central part of the Rusty Springs property in the core of the Porcupine-Rusty Springs anticlinorium. They form common talus slopes on the flanks of Orma and Mike hills, but outcrop is scarce, even on roads and cat trails. Dolostone is fetid, and commonly brecciated, veined, and(or) vuggy. Breccia cements consist mainly of dolomite and spary calcite with local quartz, vugs are commonly lined with calcite and quartz, and veinlets are of similar mineralogy. Another common constituent of Ogilvie Formation breccias is pyrobitumen-it is commonly intergrown with dolomite cements and always associated with quartz and (or) calcite spar (Kirka 1982); it also locally coats vugs. Dolomite crystals in dolostone are typically fine to medium-grained and locally coarse-grained, with coarser-grained varieties typically weathering a paler grey colour. Locally, weakly dolomitized limestone contains recognizable brachiopods, ostracods, corals, and uinoids (Hansen 1979, Davis and Aussant 1982), although no diagnostic fossils have been reported. Float boulders and the few outcrops of the Ogilvie Formation suggest that it is not well stratified, but bedding is more apparent in diamond drill core, particularly where brecciation is less intense, and bedding to core axis angles typically suggest that the strata in the vicinity of Mike and Orma hills are gently dipping. Mainly on the basis of their contained fauna, Hansen (1979) interpreted the dolostones of the Ogilvie Formation as a shallow water "reefal" unit, while Kirker (1982) suggested a shallow water shelf environment The base of the Ogilvie Formation at Rusty Springs is not exposed, but a drill hole between Mike and Orma hills penetrated about 210 metres (probable true thickness) of dolostone, with local interbedded shale and rare limestone and quartzite (Chamberlain 1986).

At the top of the Ogilvie Formation at Rusty Springs is the informally named "Katshat unit", a recessive, gossanous oxide- and clay-rich unit which corresponds to a significant degree with the mineralized zones on the property. In general the unit appears to be stratabound separating the dolostone from overlying siliciclastic rocks, but in detail its contacts are highly irregular. The Katshat unit most likely represents altered and mineralized Ogilvie Formation limestone-it is discussed in more detail below.

Devonian-Mississippian fine-grained siliciclastic rocks

Disconformably overlying the Ogilvie Formation are siliceous mudstone, slate, shale, siltstone, and rare limestone of probable Devono-Mississippian age. The rocks were assigned by Norris (1981) to the Hart River Formation (Early and Late Carboniferous age), but they are more likely correlative with fine grained clastic rocks, such as the Upper Devonian Canol Formation, the Unnamed shale, the Upper Devonian and Lower Carboniferous Ford Lake shale (Norris 1981, 1996), and the Kayak Formation (Richards et al. 1996), because the Hart River consists mainly of limestone (Norris 1981, 1996). Herein the rocks have been assigned to the Unnamed shale.

The lowermost rocks in the sequence, best exposed on Orma and Mike hills and referred to locally as black 'chert', are perhaps more accurately referred to as a silicified and(or) siliceous mudstone. Thin laminations and recrystallized radiolaria are locally preserved (Hansen 1979). The siliceous rocks are up to 40 metres thick (Hodder 1997) and are commonly veined and brecciated; veins and breccia matrices consist mainly of quartz, calcite, and dolomite. The brecciated siliceous rocks appear in most places to cap the mineralized Katshat unit of the uppermost Ogilvie Formation, and black siliceous(?) fragments are locally a common component of the dolostone breccias that commonly comprise upper

Ogilvie Formation rocks beneath the Katshat unit.

Up-section from the siliceous rocks, and comprising the bulk of the rocks assigned to the Unnamed shale, are relatively recessive pyritic, carbonaceous shale, mudstone, silty mudstone, and local thin- to medium bedded, poorly sorted fine grained litharenite. They are generally thinly bedded, and typically siliceous, although local calcareous shale was also noted. Local slate and rare dark grey, fetid and laminated algal limestone occur not far above its contact with the Ogilvie Formation. Erosion of this part of the unit, which is as much as 500 metres thick, has led to the broad and open drainage basin within which the Rusty Springs property sits.

The transition of the fine grained clastic sequence to the overlying mixed carbonate and clastic unit is commonly marked by the presence of thin to medium bedded siliceous fine sandy siltstone or fine grained sandstone. These rocks are typically pale grey and locally rusty weathering up close, but appear very dark from a distance because of a common covering of black lichen.

Upper Carboniferous and Permian (?) limestone and fine grained calcareous and siliceous clastic rocks.

Medium bedded, pale grey weathering medium to dark grey sandy and locally pebbly fetid limestone and rare dolostone characterize this unit. The limestone commonly contains irregular dark grey chert nodules and occurs in several(?) horizons of amalgamated beds that are up to several tens of metres thick. They form many of the better outcrops in the area and because of their resistant character, they underlie many of the ridges surrounding the broad upper drainage basin of Carrol Creek. The upper limit of the map unit is defined by presence of the uppermost continuous limestone sequence, while the transition from the underlying siliciclastic sequence is commonly marked by scattered float blocks of pebbly limestone. The pebbles are typically round to sub-round and are dominantly chert. Pebbly lithologies are more common to the southwest, whereas to the east, sandy limestone is more common and pebbly limestone occurs only locally. In addition, a limestone horizon containing abundant in situ corals was noted in the east but not to the south or southwest, and composite limestone horizons appear somewhat thicker (up to 50-60 metres) and may contain thicker-bedded to massive layers of upto 15 metres thickness. In spite of the predominance in outcrop of pebbly and cherty limestone, a significant portion of the map unit consists of relatively recessive, variably calcareous fine grained clastic rocks. They include dark weathering thin bedded and laminated siliceous or calcareous silty mudstone, and calcareous to siliceous shale, as well as local fine grained siliceous sandstone and siltstone. The total thickness of the limestone and associated clastic units is about 550-700 metres.

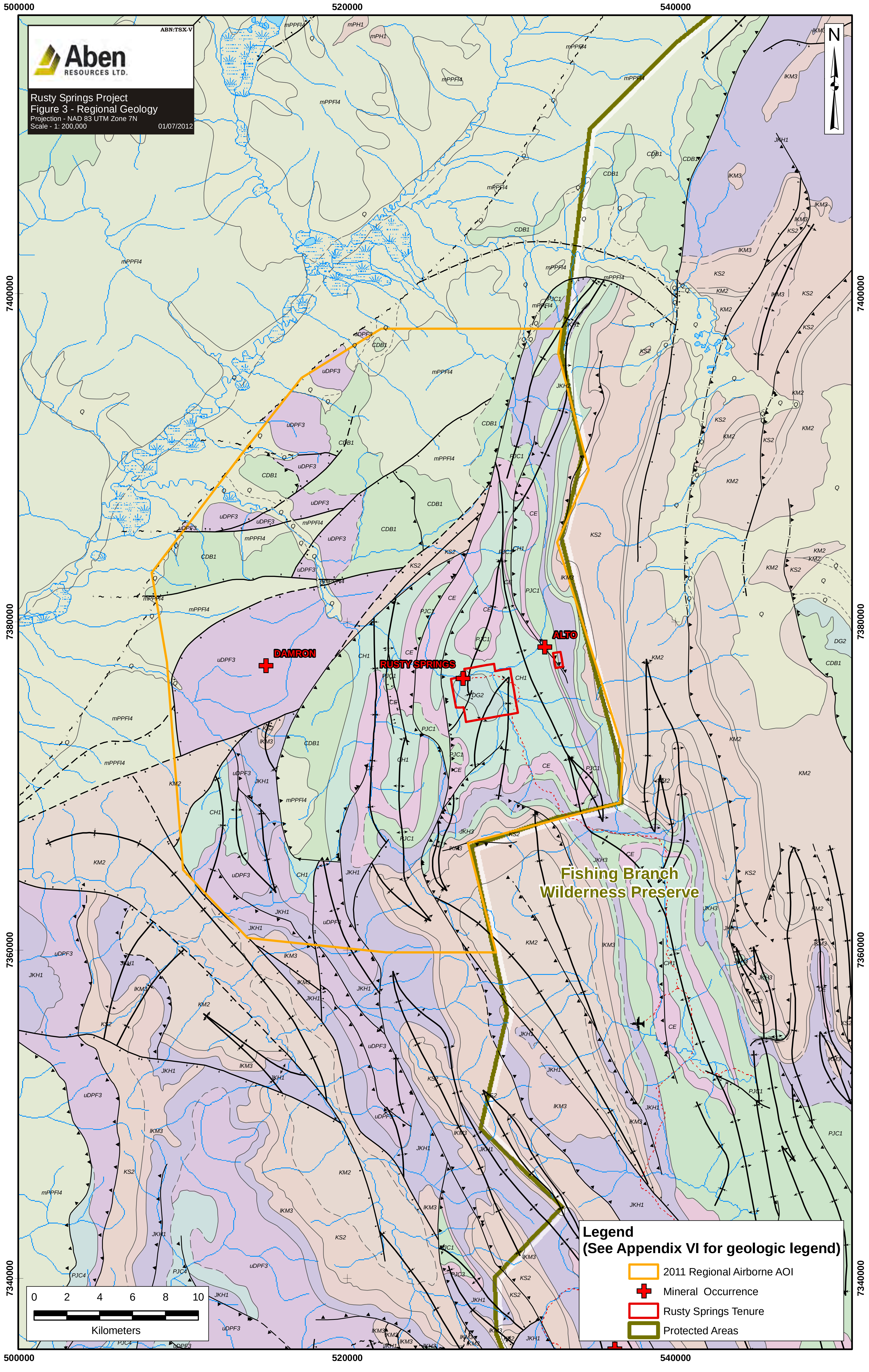
The rocks of this sequence have been included previously in the Upper Carboniferous Ettrain Formation, but Pennsylvanian and Permian fossils have been reported from within the area mapped, and so it is probably longer-ranging and likely includes rocks mapped as Jungle Creek Formation by earlier workers. If so, it is difficult to distinguish Ettrain from Jungle Creek in the field.

Jurassic and Lower Cretaceous dark weathering siliciclastic rocks

Lying conformably above the sequence containing the resistant grey carbonates is a dark weathering package of shale, silty mudstone, and sandstone of approximately 600 metres thickness. Included in this map unit are rocks that Norris (1981) assigned to the Jurassic and Lower Cretaceous Kigak, Porcupine River, and Husky formations. The lower part in the Rusty Springs area consists of common pale to medium brown weathering silty mudstone with local buff-weathering carbonate layers, and dark brown weathering shale. Near the east-central part of the area mapped, near its base, the sequence includes a thick (up to 46 metres Chernoff 1976) oolitic hematite-magnetite siliceous iron formation. Several kilometres along strike to the north, and at the same stratigraphic level, the base of the unit is marked by massive black carbonaceous and siliceous mudstone and silty mudstone. Similarly resistant siliceous rocks mark the upper part of the unit, which underlies many of the highest ridges in the south and east parts of the area mapped. They are very dark weathering and consist mainly of blocky weathering, medium grained feldspathic cherty quartz arenite and carbonaceous fine grained siliceous litharenite.

Lower Cretaceous shale, siltstone, and quartz arenite

The two units bounding the east side of the map area were taken from the mapping of Chernoff (1976), who shows numerous overturned beds within their bounds. He assigned the shale, siltstone, and quartz arenite comprising the units to the Cretaceous Marten Creek and Goodenough (sic) formations. Norris (1981) assigned them a Lower Cretaceous age, and included them in the his "Kwc" unit and the Mount Goodenough Formation.



ABN:TSX-V
Aben RESOURCES LTD.
Rusty Springs Project
Figure 3 - Regional Geology
Projection - NAD 83 UTM Zone 7N
Scale - 1: 200,000
01/07/2012
N
500000
520000
540000
7400000
7380000
7360000
7340000
DAMRON
RUSTY SPRINGS
ALTO
Fishing Branch
Wilderness Preserve
0 2 4 6 8 10
Kilometers
Legend
(See Appendix VI for geologic legend)
2011 Regional Airborne AOI
Mineral Occurrence
Rusty Springs Tenure
Protected Areas

Structural Geology

Folds are the dominant structural feature in the map area, and wavelengths of the typical east vergent open to tight and locally overturned folds are on the order of 1-5 kilometres . The folds occur across the crest of an approximately 20 kilometre wide, northerly trending and doubly-plunging anticlinorium centered on the mineralized showings at Rusty Springs. The east side of this domal feature corresponds to the Porcupine Anticline of Norris (1981). Brittle faults are common on the property, and have been intersected in drillholes and interpreted from geophysical surveys and surface features (such as shear stream patterns), but none of these faults appears to offset map units at the property scale. The plunge reversal that corresponds with the mineralized area and which has been interpreted by some (e.g., Chernoff 1976) to have been associated with a brittle fault, appears, from the map patterns, to be fold-related and the consequence of some deeper-level structure, such as a lateral ramp.

Several property-scale cross-sections have been prepared previously, beginning with that of Chernoff (1976), and followed by Kirker (1980) and Tempelman-Kluit (1981). Chernoff (1976) shows a large-sale easterly-overturned antifom which is centered on the Rusty Springs showings and which he interprets as being cored by intrusive rocks and floored by north trending, east-directed thrust faults. In contrast Kirker (1980) and Ternpelman-Kluit show inferred, north-trending faults, but interpret them as west-vergent contractional faults. They also show related folds with generally open geometries (Kirker 1980, Tempelman-Kluit 1981). Our cross-sections, based on improved bedding control compiled in part from previous work and benefiting from drillhole control, suggests that the structural setting is somewhat more akin to that shown by Chernoff (1976), in that the transport direction across the anticlinorium is toward the east. An east-directed transport direction is also more in accord with the regional sense of vergence.

Speculatively, the area may be floored by a large-scale east-vergent contractional fault, in part as envisioned by Chernoff (1976). Key to this interpretation are the steeply dipping and overturned Cretaceous rocks along the east side of the area mapped by Chernoff (1976). They may represent the eastern, overturned limb of the northern Porcupine Anticline, and may be floored by an inferred southern continuation of an east-vergent contractional fault shown by Norris (1981) as bounding a panel of Upper Proterozoic to Lower Paleozoic rocks on their east side about 15-20 kilometres to the north-northeast. If this is the case, the doubly plunging anticlmorium underlying the Rusty Springs area may reflect the influence of a deep-seated feature, such as a lateral ramp, along the inferred contractional fault.

Mineralization

Although exploration models utilized at Rusty Springs have tended to exclusively target either stratabound or discordant styles of mineralization (e.g, Mississippi Valley-type or Irish Plains-type for the former, hydrothermal veins for the latter), there appears to be good evidence for both styles on the property, and they appear to be genetically related. Both styles of mineralization are found almost exclusively in the upper Ogilvie Formation and in the vicinity of the Mike and Orma (Hansen and Bankowski 1979), and their spatial association, similar geochemical signatures, and their association with similar brecciated and dolomitized zones, suggests a genetic link. Potential rests mainly with the stratabound mineralization, which may have greater thickness, much greater continuity, and can be much more readily explored for.

Vein-type mineralization: the Orma zone

Mineralization at the Orma zone, on the northwest flank of Orma hill, has been the focus for the bulk of the exploration work at Rusty Springs. Up to the 1990's, virtually all of the drilling on the property occurred there. The zone has yielded many of the highest grades in grab samples, trenches, and drill core (e.g., DDH80-01: 583 gm/t Ag, 8.23% Pb, 1.48% Cu over 6.5 metres) and trenching and drilling have confirmed that it is a discontinuous vein and vein stockwork zone which trends northwest and dips steeply. Vein-type mineralization also appears to be present locally at Mike Hill, with the difference that relatively high Zn and trace Au values commonly accompany the Ag, Pb, and Cu common to mineralization at the Orma zone (Downie 1994; e.g., DDH95-07: 518 gm/t Ag, 0.77% Pb, 3.0%Cu and1.3% Zn over 15.3metres).

Veins consist of massive galena-tetrahedrite (tennantite?), as is suggested by elevated As:Sb ratios in some assays, Liedtke (1980)), locally up to 1.0 m thick, which assay roughly 10-50 ounces per ton Ag. The veins are contained within a broader, commonly oxidized mineralized and altered zone (in part a vein stockwork) of up to 6 or 7 metres thickness. The altered zone typically assays 30 to 60 grams ounces per ton Ag (Davis and Aussant 1982). Alteration within Ogilvie Formation carbonates, as described by Bankowski (1980b), is characterized by silica replacement, dolomitization, local brecciation, sanding (silicic alteration?), and decomposition (supergene alteration), and is manifest in part as a darker grey colour of the host rocks. The margin of the altered zone has a northwest trend, subparallel to that of the mineralized zone, and it appears to terminate, or turn bedding-parallel, to the southeast at the contact with overlying siliciclastic rocks (Bankowski 1980b). Minerals identified from the oxidized zones include smithsonite, cerussite, malachite, azurite, aurichalcite, pyrolusite, hemimorphite, plumbojarosite, gibbsite, valentinite, and natroalunite (Hansen 1979, Kirker 1980b); sphalerite and pyrite are also preserved locally with galena and tetrahedrite in siliceous vein and vein-breccia material.

Stratabound mineralization: the Katshat unit

Near the end of the 1996 exploration program, stratabound mineralization along the contact between the Ogilvie Formation and overlying Devono-Mississippian siliciclastic rocks became the principal exploration target (Termuende and Downie 1997). Almost all holes drilled in footwall Ogilvie Formation dolostone had essentially been barren, and with relatively thick oxidized mineralization cored at the contact in several previous drillholes that were collared in hangingwall siliciclastic rocks, it was realized that substantial potential existed for stratabound mineralization. It was also recognized that the most extensive geochemical anomalies on the property coincided with the contact, and that many drillholes targeting them had been collared in the strongly oxidized mineralized material-these holes had been plagued by poor core recoveries.

The oxidized material common to the upper contact of the Ogilvie Formation was referred to locally as the Katshat unit. It consists of strongly leached, porous limonitic to kaolinitic material with an earthy, gougy consistency, and is similar in appearance to the oxidized material surrounding discordant mineralization. It is typically 20 to 40 metres thick, and although it appears stratabound at the property scale, in detail it is irregular and discordant. Many of the minerals noted above as occurring in the Orma zone are also common in the Katshat unit. X-ray difraction studies indicate that much of the Katshat material consists of granular Fe, Mn, Ag, Pb, An, Cu, Ba, Al, P, and V oxide, carbonate, sulphate, and silicate mineral species, as well as quartz veinlets and laminae locally containing sulphides and sulphosalts like those in Orma zone veins and vein stockworks (Hodder, 1997). The Katshat unit is invariably overlain by brecciated and veined siliceous or silicified mudstone and chert of probable Devono-Mississippian age, which caps and in part has protected it from erosion. It is underlain by Ogilvie Formation dolostone, also typically brecciated and veined. The Katshat unit is strongly anomalous in Ag, Cu, Pb, and Zn over broad intervals and across a wide area (for e.g., 1.1 gm Ag, 881 ppm Cu, 139 ppm Pb, 3301 ppm Zn over 19.1 m in hole RS96-04 from the southwest part of Mike hill, and 1.6 gm Ag, 1475 ppm Cu, 1321 ppm Pb, and 2701 ppm Zn over 22.2m in hole RS96-14 from the south end of the airstrip on Orma hill). Results such as these suggest the possibility of tremendous continuity and potential, but the oxidized nature of the mineralization and the subeconomic grades also suggest that the preferred target be unoxidized portions of the horizon below the present and (or) paleo water table (Hodder 1997). Unoxidized Katshat unit was the target of the latest drill program, which attempted to test the upper Ogilvie Formation to the east and south of Orma hill. Results were mixed. Because of problems penetrating the very resistant siliceous and brecciated rocks which overlie the upper Ogilvie Formation and cap the Katshat horizon, the mineralized horizon was never reached. However, the presence of the siliceous rocks suggests that a strong stratabound mineralizing system existed well away from the surface exposures on Mike and Orma hills, and as such. the new information confirms that the Rusty Springs system is very large, and that it has significant potential remaining to be tested.

Timing of mineralization

The interpretation that Rusty Springs is a Mississippi Valley-type deposit related to karsting along the upper Ogilvie Formation contact suggests that the mineralizing event was likely bracketed by the ages of the Middle Devonian rocks below and the Upper Devonian to Mississippian rocks above. On the other hand, the discordant nature of mineralization and alteration at Rusty Springs indicates that it postdates deposition of the Lower to Middle Devonian Ogilvie Formation and at least the lowermost part of the overlying Devono-Mississippian section. In addition, one can argue that evidence such as the lack of obvious cleavage development in the Ogilvie Formation dolostones, which contrasts sharply with that common to most rocks across the property, including other carbonates, suggests that the mineralizing event may even have postdated much of the latest Cretaceous to Tertiary deformation affecting the area (alternatively, it is possible that this may reflect a contrast in competency between the more competent silica-altered and dolomitized rocks associated with mineralization and other less competent lithologies, or that a more subtle stylolitic cleavage exists in the dolostones - further study is needed). The parallelism of the Orma zone with structural trends (a fold axial plane?) and localization of Katshat - style mineralization in anticlinal hinge zones at Orma and Mike hills may also supports the hypothesis that mineralization post-dated deformation. A relatively young age is also supported by the rare occurrence of discordant metre-scale vein-breccia bodies of quartz or Fe carbonate at higher stratigraphic levels (Carboniferous to Permian) in the area surrounding Rusty Springs, and by limited Pb isotope data suggesting which that approximate those of Cordilleran Ag vein deposits of Late Mesozoic age (Kirker 1982).

Genesis

As mentioned above, several deposit models, including those for MVT and hydrothermal replacement along a karsted surface, have been employed in an effort to aid exploration at Rusty Springs. Poor exposure and consequent lack of local bedding control has hindered the collection of evidence with which to evaluate the various models, as has leaching and oxidation of the mineralized zones and dolomitization of footwall rocks. However, discussion of some of the existing evidence is worthwhile so that some models may be critically evaluated and perhaps ruled out, and others put forward in the hope that they aid exploration.

Mississippi Valley-type

Few, if any, of the textural features distinctive of MVT type deposits (e.g., Leach and Sangster 1993) have been positively identified on the property. For example, although the breccias common on the property have been interpreted as solution collapse features (e.g., Hansen 1979, Hodder 1997), cements and infillings of carbonate and local quartz are either massive or encrusted symmetrically around breccia fragments (e.g., Kiker 1982). There is no evidence for infilling by internal sediment, which would be strongly suggestive of a karst environment. Stratigraphic evidence also appears to argue against a karst environment. No regolith is preserved along the contact between the Ogilvie Formation and the overlying siliciclastic rocks that would indicate subaerial exposure, and even evidence for uplift, such as the presence of coarse grained clastic rocks, is lacking. According to Liedtke (1980), very little relief exists on the contact, and if anything subsidence is indicated: the stratigraphic transition is from a shallow water environment in which platformal carbonate was deposited, to a deeper water environment in which basinal shales were deposited.

Differences from classic MVT deposits also exist in the geochemistry and mineralogy at Rusty Springs, as has been noted by many previous workers. The high copper and silver contents, as well as low Zn:Pb ratios are generally atypical of MVT deposits (Leach and Sangster 1993), as are locally very high As and Sb values and the high Al values occurring in the Katshat unit (Termuende and Downie 1997). A geochemical fingerprint such as this is more consistent with an epithermal origin for metals within the host unit. Similar arguments can be made on mineralogic grounds, with the siliceous character of alteration, particularly in the hangingwall, and the common presence of tetrahedrite and argentiferous galena, which are more diagnostic of vein rather than stratabound Ag-Pb-Zn deposits, in the mineralized zones. Fluid inclusion and sulphur isotope data from quartz, calcite, and sphalerite at Rusty Springs are also more comparable to those from epithermal deposits than from those of MVT (Kirker 1982).

Regionally, the evidence also argues against an MVT setting. As Hodder (1997) notes, it is significant that the Ogilvie Formation at Rusty Springs is comprised largely of dolostone in an area in which limestone generally predominates. Even within the Ogilvie Formation itself, the regional dolomitization common to MVT districts appears to be absent-Norris (1996) describes only local dolomite beds in the lower part of the Ogilvie Formation in measured sections farther south in the Ogilvie Mountains.

In spite of the arguments against the presence of MVT mineralization, it remains possible that the mineralization and alteration evident on the Rusty Springs property may simply be the distal expression of a more typical MVT system with origins lieing in a hydrothermal karst system rather than a meteoric or meteoric-hydrothermal one (c.f. Leach and Sangster 1993).

High-temperature, carbonate-hosted massive sulphides: manto-chimney complexes

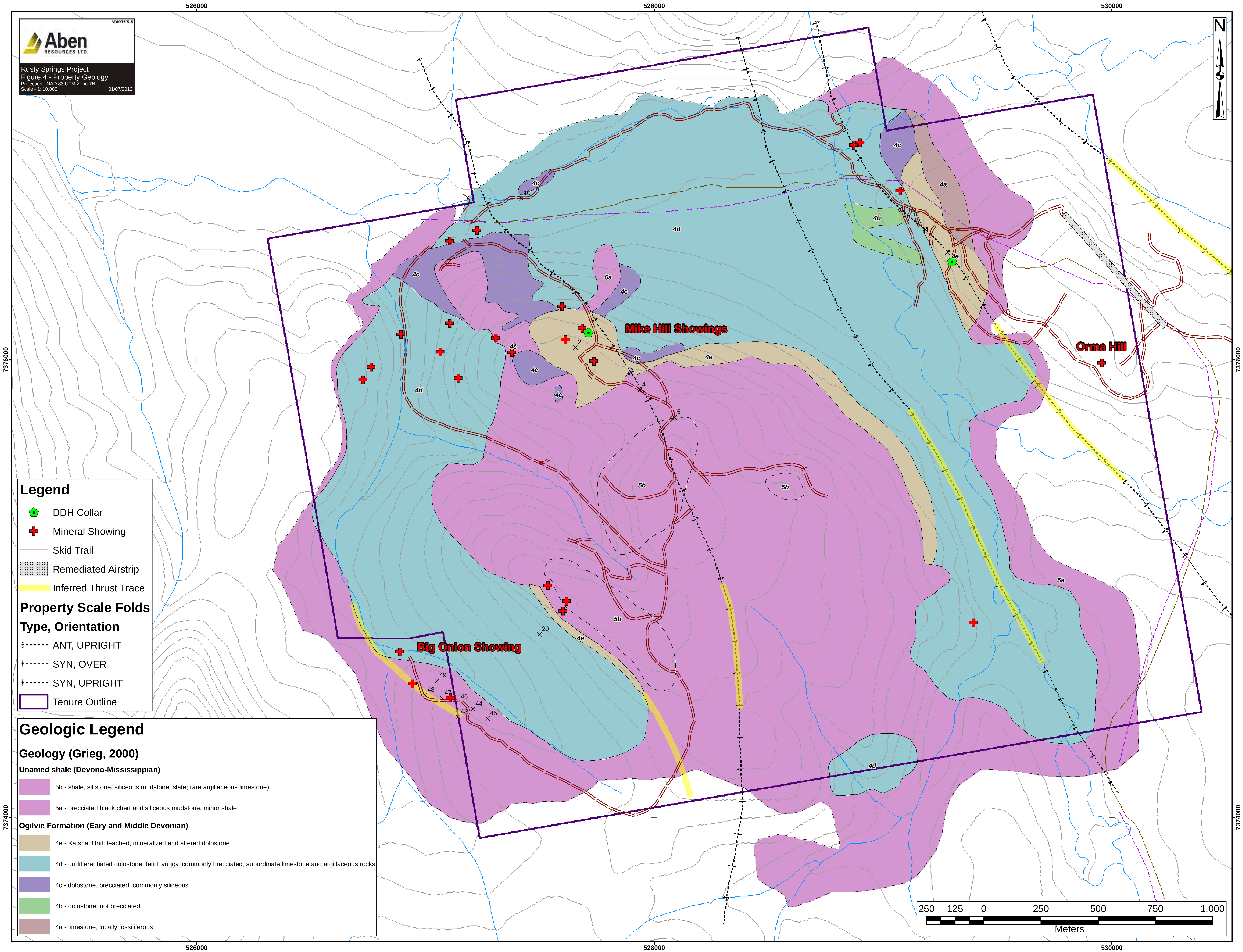
The mineralizing system at Rusty Springs bears some of the features of high-temperature, carbonate-hosted massive sulphide deposits (Titley 1993), which are also commonly referred to as manto-chimney complexes, and are rich sources of base and precious metals. This type of deposit, although occurring in quite varied structural and stratigraphic settings, is typically wholly or partially stratabound, commonly contains abundant pyrite, and contains Pb and significant Ag. Copper and Au can be present but are less common than Ag-Pb-Zn, and enrichment in one or the other of Cu-Pb-Zn can be variable. The deposits are generally thought to occur by replacement processes, initiated by hot fluids and(or) gases, above or near centres of thermal activity, and so intrusions are commonly (though not always) spatially associated. Vein, skarn, and even porphyry copper deposits may be closely associated the manto-chimney ores, and it is generally accepted that all are genetically related to the associated intrusions (Titley 1993).

The potential for manto-chimney deposits at Rusty Springs was initially recognized by Termuende (1996). The few preserved hypogene ore minerals recognized at Rusty Springs, such as galena and tetrahedrite, are common in the manto-chimney class, and the silica alteration common on the property is also commonly peripheral to ore or in this deposit type, or at least to districts in which such deposits occur. In addition, dolomitization is known to play a role in the formation of many high temperature, carbonate hosted deposits, and breccia bodies are also common to these systems (Titley 1993). The apparent controls on mineralization at Rusty Springs, such as the overlying impermeable fine grained siliceous shale cap, and perhaps the anticlinal fold hinges at Mike and Orma hills, also bear similarities to some manic-chimney deposits (e.g., Tombstone, Arizona; Titley 1993). This factor of predictability is an important advantage in exploration for manto-chimney ores, since they are known to be difficult to explore for. One of the main arguments against the application of the manto-chimney model at Rusty Springs is the lack of direct evidence for intrusive rocks, either on the property or in the region, although Chernoff (1976) shows an inferred intrusion at depth below the domal core of the Rusty Springs antiform. The nearest known plutons to Rusty Springs are Devonian (?) in age and outcrop to the north in the vicinity of Old Crow (Woodsworth et al. 1991).

Other economic potential in the vicinity of Rusty Springs

Little in the way of significant mineralization has been found in the immediate area around Rusty Springs, but recent work and a re-evaluation of work done previously indicates that some potential exists and that it should be tested. For example, in the most recent drilling, an interval approximately 40 metres thick within the Devono-Mississippian pyritic shales that overlie the Ogilvie Formation was highly anomalous in zinc; it included intersections of 7 and 15 metres which returned nearly 3000 ppm Zn. Although the hole did not reach its target, it is estimated that the Zn-rich zone lies approximately 100-150 metres up-section from the Ogilvie Formation, at about 250 metres depth. The zone occurs within a siliceous or weakly silicified carbonaceous pyritic mudstone, and sphalerite occurs as fine to medium grained honey brown disseminations, both within mudstone clasts, and within matrix hast rocks to zones of quartz or quartz-carbonate microbreccia. The pyritic and locally zinc-rich shales may be the source for the gossanous springs near the base of the north end of Mike hill which lend their name to the Rusty Springs property and, in fact, sediment issuing from the springs themselves was highly anomalous in zinc (Chernoff 1976). This suggests further that the recessive shale package may have potential for hosting Zn deposits, either similar in character to Rusty Springs, or perhaps of the SEDEX type, much as rocks of similar age, character, and tectonic setting farther southward in the Cordillera do (e.g., Macmillan Pass area, Y.T.; Gataga district, B.C.; Dawson et al. 1991). One might begin to evaluate this potential immediately south-southeast of the area mapped, where rusty creeks and springs, similar in appearance to those at the Rusty Springs property, were noted in the drainage that lies in the recessive core of Norris' (1981) Porcupine Anticline. The springs likely emanate from rocks correlative with the recessive and pyritic Devono-Mississippian rocks that overlie the Ogilvie Formation in the area mapped.

With regard to other possibilities, rare iron carbonate breccia and siliceous veins and vein-breccias were noted in outcrop or float while mapping the surrounding ridges, hut none bore visible sulphides, appeared extensive or was accompanied by significant alteration. About 40 kilometres further south, however, at the Pama (Bern) occurrence, which lies just inside the western boundary of the proposed Fishing Branch Protected area, an impressive, steeply dipping, north-northwest trending quartz-carbonate breccia zone that is hosted by carbonates can be traced for greater than two kilometres. It is outlined by a broad and intense soil geochemical anomaly (O'Donnell 1974) and near its southern end it contains tetrahedrite, copper oxides, and zinc and lead sulphates that bear some similarities to mineralization at Rusty Springs. The Pama property has never been drill-tested, yet smithsonite-rich samples yield assays of up to 47.80% Zn. Although it is hosted in carbonates and has at least some mineralogic similarities to Rusty Springs, no truly convincing evidence was found at the Pama that was suggestive of a significant element of stratigraphic control to mineralization. The breccia zone is hosted by limestone that is probably correlative with the uppermost limestones in the vicinity of Rusty Springs (Upper Carboniferous and Permian(?); considerably younger than the Ogilvie Formation). The breccia appears to dip steeply to the east-northeast, and lies subparallel to the steeply dipping eastern limb of what appears to be a gently southerly plunging, asymmetric, east vergent antiform. The breccia appears to be hosted entirely within limestone, and the limestone is only very locally dolomitized, which is in sharp contrast to Rusty Springs, where the better part of the Ogilvie Formation is dolomitized. Overlying the limestone is a sequence of relatively recessive, fine grained black carbonaceous rocks that appear to be capped by more resistant siliceous sandy beds. The sequence is similar in appearance to the Jurassic and Lower Cretaceous rocks along the east margin of the area mapped at Rusty Springs.



ABN/TSX-V
Aben
RESOURCES LTD.
Rusty Springs Project
Figure 4 - Property Geology
Projection - NAD 83 UTM Zone 7N
Scale - 1: 10,000
01/07/2012
526000
528000
530000
7376000
7374000
N
Mike Hill Showings
Orma Hill
Big Onion Showing
4a
4b
4c
4d
4e
5a
5b
Legend
DDH Collar
Mineral Showing
Skid Trail
Remediated Airstrip
Inferred Thrust Trace
Property Scale Folds
Type, Orientation
ANT, UPRIGHT
SYN, OVER
SYN, UPRIGHT
Tenure Outline
Geologic Legend
Geology (Grieg, 2000)
Unamed shale (Devono-Mississippian)
5b - shale, siltstone, siliceous mudstone, slate; rare argillaceous limestone)
5a - brecciated black chert and siliceous mudstone, minor shale
Ogilvie Formation (Eary and Middle Devonian)
4e - Katshat Unit: leached, mineralized and altered dolostone
4d - undifferentiated dolostone: fetid, vuggy, commonly brecciated; subordinate limestone and argillaceous rocks
4c - dolostone, brecciated, commonly siliceous
4b - dolostone, not brecciated
4a - limestone; locally fossiliferous
250 125 0 250 500 750 1,000
Meters

2011 Exploration Program

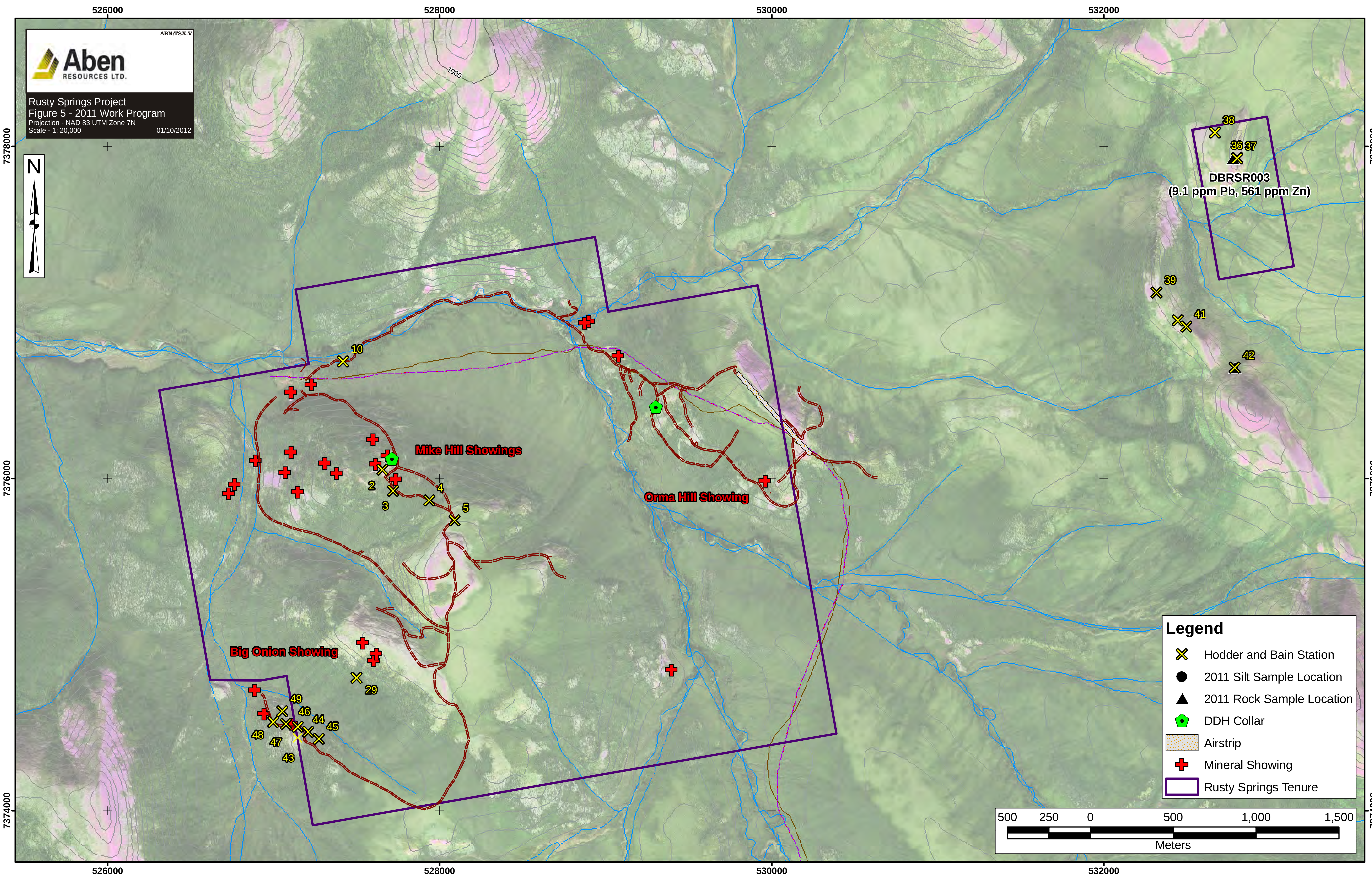
The 2011 Rusty Springs exploration program consisted of a regional heliborne magnetic survey and a 5 day field program designed to rehabilitate the existing airstrip and attempt to place Rusty Springs mineralization in a modern, regional context. A 2.5m SPOT colour satellite image of the Rusty Springs area was also purchased from PhotoSat of Vancouver BC (Figure 5).

The field crew consisted of R.W. Hodder and D.J. Bain of London, Ont. Sara Gleeson and Jesse Reimink of the University of Alberta and Geoff Garcia provided mechanical expertise and conducted rehabilitation of the airstrip. Geologic stations are delineated on Figure 5 of this report.

Crews were based out of Eagle Plains Lodge on the Dempster Highway and were flown to the property on a daily basis via Bell 204 Long Ranger provided by Fireweed Helicopters.

The prime objective of the field program was to revisit geologic features of the Rusty Springs Zn-Pb-Ag prospect, and to consider how these features may be used to aid in further exploration. Gleeson and Reimink focused on outcrop and drill core at Mike Hill and Orma showings. Hodder and Bain did district traverses that included Salmon Fork, Damron, and Big Onion prospects. There was no intent to remap or resample the known showings, but rather to use past and current observations to assess potential and express new interpretations.

Total expenditures for the 2011 exploration program were $67,819.40; see Appendix II for a detailed description of costs incurred during the exploration program.



Aben RESOURCES LTD.
ABN:TSX-V
Rusty Springs Project
Figure 5 - 2011 Work Program
Projection - NAD 83 UTM Zone 7N
Scale - 1: 20,000
01/10/2012
N
526000
528000
530000
532000
7378000
7376000
7374000
1000
DBRSR003
(9.1 ppm Pb, 561 ppm Zn)
38
36
37
39
41
42
10
2
3
4
5
29
43
44
45
46
47
48
49
Mike Hill Showings
Orma Hill Showing
Big Onion Showing
Legend
Hodder and Bain Station
2011 Silt Sample Location
2011 Rock Sample Location
DDH Collar
Airstrip
Mineral Showing
Rusty Springs Tenure
500
250
0
500
1,000
1,500
Meters

Geology and Mineralization

The geologic obeservations and interpretations presented in this report are the result of a 5 day field program conducted by Hodder and Bain. There are two types of metal concentrations within the fold and thrust belt of the greater Rusty Springs area (after Hodder and Bain, 2011). See Appendix IV for a complete list of geologic stations.

One type, of which the Orma, Mike and Big Onion (Figure 4) are examples, has appreciable zinc, lead and silver as sulphide and other mineral species, is epigentic and structurally controlled by regional-scale thrust faults, and accompanied by silicification and dolomitization of limestone. This type may have economic potential. The challenge is to find the coincidence of structure and appreciable hydrothermal fluid flow, perhaps spatially related to intrusion into the fold and thrust belt.

The other type is secondary iron oxide, the product of weathering pyrite in black shale. The original Rusty Springs occurrence, Salmon Fork, Damron and several sites along the Dempster Highway are examples. These are gossans around seeps and in creeks and are essentially controlled by the intersections of the water table with black shale. The secondary iron oxide contains anomalous abundances of the many metals that occur in trace amounts in pyritic black shales. They have no association with silicification or dolomitization and hence have no evidence of hydrothermalism. They do not have economic potential.

Common Features of the, Orma, Mike Hill and Big Onion Showings

The Orma showing is exposed in trenches along the moderately dipping southwest slope of Orma Hill (Figure 4). One showing on Mike Hill contours along the steep northeast side of Mike Hill and the other showing outcrops on the more gently southwest side of the hill. The Big Onion showing is near the crest of a moderately southwest slope (Figure 4).

Each of the three prospects has:

i) A hanging wall of black silicic, chert-like, rock that appears to be tens of meters thick and overlain in turn by gray to black shale. These rocks have fine planar fractures coated with calcite, quartz, and in some instances iron oxides.

ii) A middle two to three meters of breccia and quartz veins that contain fragments of black shale, black criniodal thin-bedded limestone, and coarse, even-grained gray rock that appears to be a silicified limestone, and dolostone (Figure 4). Fragments are commonly elongate with a long axis averaging 10 cm and roughly aligned with the long axis of trenches exposing the prospect. Matrix to fragments is mostly a dull white crystalline quartz accompanied by minor white calcite. Where distance between fragments is less than two cm, quartz and calcite form a massive matrix. Where distance between fragments is more than two cm, there generally is a medial open vug into which protrude clear quartz crystals with terminating faces. In a few instances coarse galena, generally close to the footwall of cohesive dolostone, or close to discordant quartz veins, occupy the vugs. There are drops of bitumen in vuggs as well. Vein quartz is generally coarse, crystalline, white to slightly cream in colour. This quartz is cracked and those cracks are filled with fine-grained, crystalline white quartz with coarse galena and fine-grained, less abundant, tetrahedrite and sphalerite.

iii) A footwall of white to gray, equigranular dolostone. Its base has not been observed in trenches, but drill holes have penetrated it for hundreds of meters.

iv) The sulphide mineral assemblage is within the latest quartz of a paragenesis beginning with a) dissolution and silicification of dolostone by a dull white quartz, followed by b) brecciation and recementation by white quartz and calcite, c) clear crystals of quartz in dissolution cavities (vugs), d) planar fracturing and filling of those fractures by a creamy quartz veins, and e) cracking of these quartz veins with subsequent filling of cracks by clear, fine-grained quartz, galena, tetrahedrite, and sphalerite. Some of this latest quartz and sulphide minerals also fill vugs.

Structural setting of Rusty Springs Mineralization

It is our hypothesis that the brecciated, metal-bearing, rock of the Rusty Springs showings is in a series of imbricate, detachment-related thrust faults. These faults have been physical and chemical traps for epigenetic metallizing fluids that also have a hydrocarbon content. This hypothesis is consistent with conclusions from most recent stratigraphic and structural studies in the Northern Cordillera and, consistent with the shift away from a wholly syngenetic genesis for sedimentary-hosted stratabound base metal deposits.

Greig's (1999) published maps and sections do not reflect the change in thinking as to type of deformation in the Northern Cordillera and the resulting family of structures. His mapping of rock distribution is, in our opinion, correct. However his interpretation of this distribution as a series of isoclinal folds is not. Distribution as a result of imbricate thrust faults is consistent with the observed rock distribution and the family of structure currently recognized as fundamental to fold and thrust belts.

Greig's cross-sections are not normal to the thrust faults, but rather are oblique thereto. His stratigraphic entities 4c through 5a (Figure 4), in our hypothesis are parts of a thrust surface - a base of dolostone breccia, a middle tectonite of gouge and alteration products induced by fluid flow along the faults, and a hanging wall of silicified mudstone.

In this hypothesis the Alto iron occurrence is along the upturned edge of a thrust fault. The steep side of the hill is the upturned edge, the moderately southwest-dipping side is the plane of the thrust fault. It is essentially a repetition of similar faults at Rusty Springs although involving rocks higher in the stratigraphic sequence. Similar thrust faults are even more obvious within the carbonate succession east of Rusty Springs (Figure 3).

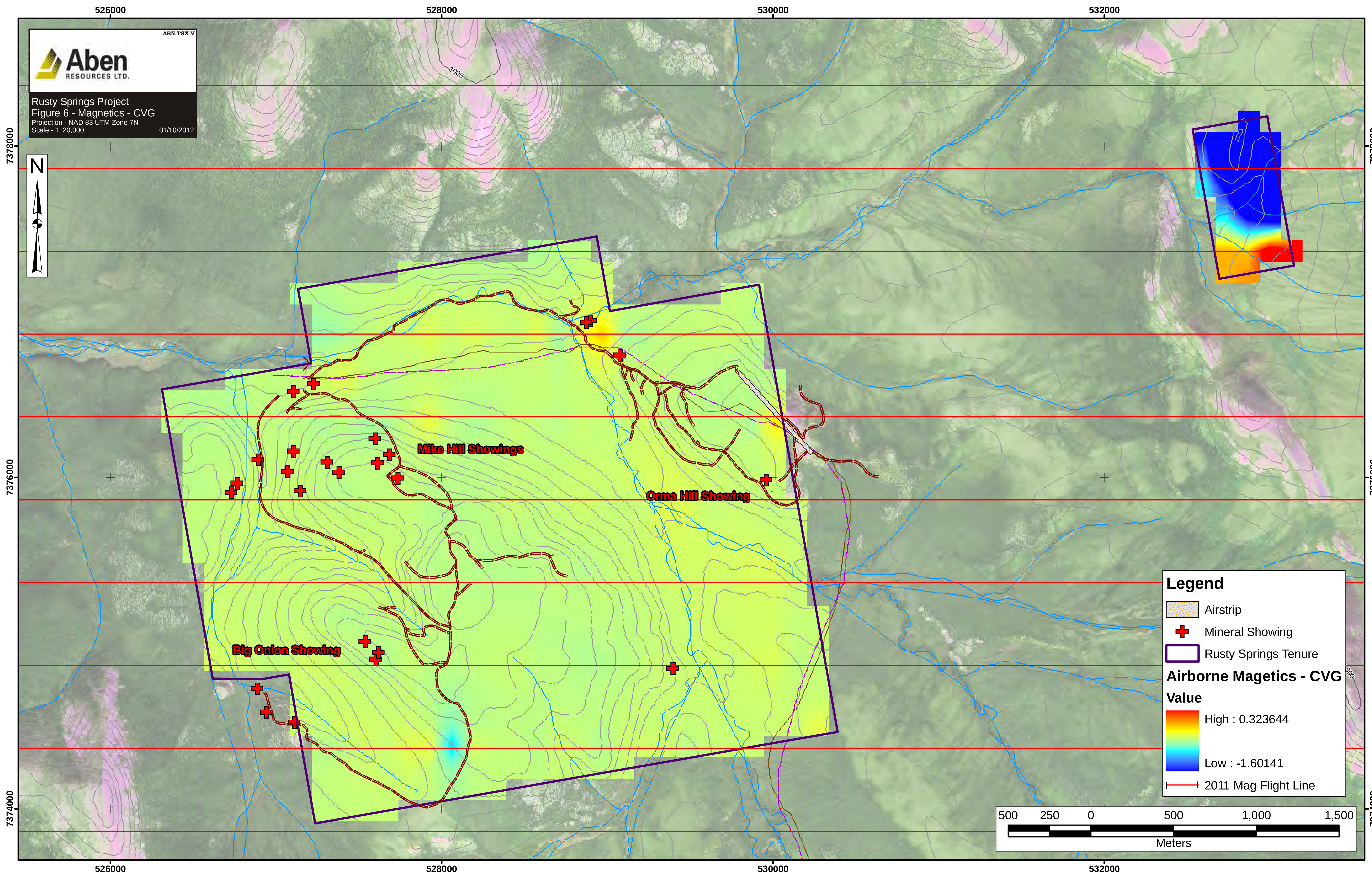
Geochemistry

A total of 1 rock sample (DBRSR003; Figure 5) was collected from the Rusty Springs (Trog) property during the field work (Figure 5). The sample returned 9.1 ppm Pb and 561 ppm Zn. See Appendix III for a detailed description of analytic techniques utilized on the program and Appendix IV for sample locations and descriptions.

GEOPHYSICS

A regional geophysical survey was flown over the Rusty Springs Property by Precision GeoSurveys of Vancouver, BC, between October 2nd and October 21st 2011 (Figure 6). The purpose of the survey was to aid in regional geologic interpretation with an emphasis on identifying regional structures and possible buried intrusives. The survey was based out of Eagle Plains, YT and involved the acquisition of high resolution magnetic data over a 25 km by 37.5 km area. The survey lines were flown at a 500 meter spacing at 090 / 270 degrees; tie lines were flown at a 5000 meter spacing at a heading of 000 / 180 degrees.

Results of the survey are presented as the Calculated Vertical Gradient of the total magnetic field (Figure 6). Note that only the portions of the survey that fall on the Rusty Springs property have been included in the figure. The geophysical report by Precision Geosurveys can be found in Appendix VII.


ABN:TSX-V
Aben
RESOURCES LTD.
Rusty Springs Project
Figure 6 - Magnetics - CVG
Projection - NAD 83 UTM Zone 7N
Scale - 1: 20,000
01/10/2012
N
Mike Hill Showings
Orma Hill Showing
Big Onion Showing
1000
Legend
Airstrip
Mineral Showing
Rusty Springs Tenure
Airborne Magetics - CVG
Value
High : 0.323644
Low : -1.60141
2011 Mag Flight Line
500 250 0 500 1,000 1,500
Meters
526000
528000
530000
532000
7378000
7376000
7374000

Conclusions

1. The base metal and silver showings at Orma, Mike Hill, and Big Onion are structurally controlled, epigenetic, hydrothermal metal concentrations. The first order structural control is moderately to steep-dipping thrust faults, not stratigraphy. The second order structural control is brecciation along these thrust faults. A third order control is transverse tear faults across the thrust faults.
2. There is appreciable hydrothermal alteration in the four showings. This is represented by silicification of a hanging wall black, thin-bedded crinoidal limestone and a shale, initially interpreted as chert, and dolomitization of a footwall gray massive limestone, initially interpreted as a primary dolostone.
3. The exploration target is lead and silver in epigenetic quartz veins within the structural controls listed in 1 and accompanied by silicification and dolomitization. Quartz in veins and matrix to breccia, from morphology and previous analytical work, appears to be of moderate temperature and to have an igneous affiliation.
4. The rusty black pyritic shale of regional extent, and attendant gossans about seeps are common throughout the Paleozoic and Mesozoic stratigraphic section of the Northern Cordillera. The rusty areas lack a suite of hydrothermal elements, including quartz, common to the significant base and precious metal showings and, are not targets for further exploration.
5. The Total Magnetic Intensity or Calculated Vertical Gradient data from the geophysical survey did not delineate any obvious buried intrusives / discordant magnetic anomalies on the property.

Recommendations

1) Since discovery of Rusty Springs in the 1970's much work has been done on the four showings. Now is the time to put these showings, and several others, in the current context of fold and thrust belts on the continent side of the Cordilleran orogeny. The showings in geologic context can possibly provide vectors to a prospect of economic significance. This should be done concurrently with development of both a sulphide and an oxide zinc target.

2) A large amount of past work has been completed on the property (Table 2) but it has never been incorporated into one single geologic / geochemical database. Such an exercise would significantly aid in any future exploration / drilling campaigns and help put the controls on mineralization into a modern light. Integration of the downhole drill data with surficial data should help vector and predict where individual structures intersect in the subsurface.

3) 3rd party interpretation of the relatively flat magnetic data involving geologic integration would also be recommended.

References

Aussant, C., 1983. Geological Report on the Rusty Springs Property, Yukon Territory. Unpublished report for Kenton Natural Resources Corporation, 12 p.

Bankowski, J., 1980a. Genesis of Base Metal Sulphide Occurrence, Rusty Springs Prospect, Ogilvie Mountains, Yukon Territory. Unpublished B.Sc. thesis, University of Western Ontario, London, 70 p.

Bankowski, J., 1980b. Report of Exploration Programme conducted 19 May–1 August, 1980 for Rio Alto Exploration Ltd., Rusty Springs Prospect, N.T.S. Map Sheet 116K/8 and 9, Porcupine Ranges, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd. 16 p.

Beck, F.M., 1978. Rusty Springs Prospect, Yukon Territory, 1978 Exploration Summary. Unpublished report for Rio Alto Exploration Ltd. 16 p.

Chamberlain, J.A. 1986. Drill logs for holes 86-1 and 86-2, Rusty Springs Property. Unpublished report for Kenton Natural Resources Corp., 5 p.

Chernoff, M.N., 1976. Geology of the Rusty Springs Mineral Prospect, Porcupine Ranges, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd. 14 p.

Davis, J.W., and Aussant, C.H., 1982. Report on Geochemical, Geophysical, Geological, and Trenching programs on the Rusty Springs Property, Yukon Territory. Unpublished report for Kenton Natural Resources Corporation, 27p.

Dawson, K.M., Panteleyev, A., Sutherland-Brown, A., and Woodsworth, G.J., 1991. Regional Metallogeny, Chapter 19 of Geology of the Cordilleran Orogen in Canada, H. Gabrielse and C.J. Yorath (ed.); Geological Survey of Canada, Geology of Canada, no.4, p.707-768.

Downie, C.C., 1994. Geological Report on the Rusty Springs Property, Yukon Territory. Unpublished report for Eagle Plains Resources Ltd., 24 p.

Downie, C.C. and Greig, C.J. 2000. Diamond Drilling Report on the Rusty Springs Property. Unpublished report for Eagle Plains Resources Ltd., 24 p.

Hansen, D., 1979. A Geological Model of the Rusty Springs Prospect, Porcupine Range, Yukon Territory. Unpublished B.Sc. thesis, University of Western Ontario, London, 32 p.

Hansen, D., and Bankowski, J., 1979. Report of Geological Program, Rusty Springs Prospect, Porcupine Ranges, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd., 21 p.

Hodder, R.W., 1997. Rusty Springs Prospect, Yukon Territory, Observations and Interpretations. Unpublished report for Eagle Plains Resources Ltd., 27 p.

Hodder, R.W., 2009. Rusty Springs: Observations and a Hypothetical Target. Unpublished report for Eagle Plains Resources Ltd., 59 p.

Hodder R.W. And Bain, D.J., 2011 Rusty Springs Revisited. Unpublished report for Eagle Plains Resources Ltd., 27 p.

Kirker, J., 1980a. Petrology and Ground Preparation of Rusty Springs Base Metal Deposit, Yukon Territory: a Thesis Proposal. Unpublished report for Rio Alto Exploration Ltd., 8 p.

Kirker, J., 1980b. Summary of '80 Field Work , Rusty Springs, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd., 3 p.

Kirker, J.K., 1982. Geology, Geochemistry and Origin of Rusty Springs Lead-Zinc-Silver Deposit, Yukon Territory. Unpublished M.Sc. thesis, University of Calgary, Calgary, 159 p.

Lane, L.S., 1998. Latest Cretaceous-Tertiary Tectonic Evolution of Northern Yukon and Adjacent Arctic Alaska. American Association of Petroleum Geologists Bulletin, v.82, no.7, p. 1353-1371.

Leach, D.L., and Sangster, D.F., 1993. Mississippi Valley-type lead-zinc deposits. In Kirkham, R.V., Sinclair, W.D., Thorpe, R.I., and Duke, J.M., eds., Mineral Deposit Modeling: Geological Association of Canada, Special Paper 40, p. 289-314.

Liedtke, G.J., 1980. Report on Exploration Results, 1980, Rusty Springs Prospect, Yukon Territory. Unpublished report for E & B Explorations Inc., 31 p.

Norris, D.K., 1981. Geology, Porcupine River, Yukon Territory. Geological Survey of Canada, Map 1522A, scale 1:250,000.

Norris, D.K. (Editor), 1996. The Geology, Mineral and Hydrocarbon Potential of Northern Yukon Territory and Northwestern District of Mackenzie. Geological Survey of Canada, Bulletin 422, 401 p.

O'Donnell, J.R. 1974. Geological, Geochemical and Geophysical Report on the Mink Claim Group. Unpublished report for Inexco Mining Corporation, 53 p.

Power, M.A., 1998. Gravity and Reflection Seismic surveys on the Rusty Springs Property, Northern Yukon Territory. Unpublished report for Eagle Plains Resources Ltd., 23 p.

Richards, B.C., Bamber, E.W., and Utting, J., 1996. In The Geology, Mineral and Hydrocarbon Potential of Northern Yukon Territory and Northwestern District of Mackenzie. Geological Survey of Canada, Bulletin 422, p. 201-251.

Schoel, G., 1978. Geology and Genesis of the Rusty Springs Zn-Pb-Cu-Ag Prospect, Porcupine Range, Yukon Territory. Unpublished B.Sc. thesis, University of Western Ontario, London.

Tempelman-Kluit, D.J., 1981. Termuende (Rusty Springs), in: Yukon Geology and Exploration, 1979-80. Geology Section, Department of Indian and Northern Affairs, Whitehorse, pp. 301-304.

Termuende, T.J., 1996. Diamond Drilling Report on the Rusty Springs Property, Yukon Territory. Unpublished report for Eagle Plains Resources Ltd., 24 p.

Termuende, T.J., and Downie, C.C., 1997. Diamond Drilling Report on the Rusty Springs Property, Yukon Territory. Unpublished report for Eagle Plains Resources Ltd., 23 p.

Termuende, T.J., and Downie, C.C., 1998. Reverse-circulation Drilling Report on the Rusty Springs Property, Yukon Territory. Unpublished report for Eagle Plains Resources Ltd., 19 p.

Titley, S.R., 1993. Characteristics of High-temperature, Carbonate-hosted Massive Sulphide Ores in the United States, Mexico, and Peru. In Kirkham, R.V., Sinclair, W.D., Thorpe, R.I., and Duke, J.M., eds., Mineral Deposit Modeling: Geological Association of Canada, Special Paper 40, p. 585-516.

White, P.S., 1978. Report of 1977 Exploration of the Rusty Springs Mineral Prospects, Porcupine Ranges, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd., 10 p.

White, P.S., 1979. Report of 1979 Exploration of the Rusty Springs Mineral Prospect, Porcupine Ranges, Yukon Territory. Unpublished report for Rio Alto Exploration Ltd., 11 p.

Woodsworth, G.J., Anderson, R.G., and Armstrong, R.L., 1991. Plutonic regimes, Chapter 15 in Geology of the Cordilleran Orogen in Canada, H. Gabrielse and C.J. Yorath (ed.); Geological Survey of Canada, Geology of Canada, no.4, p.491-531.

Appendix I – Statement of Qualifications

I, Christopher S. Gallagher of 616 Nelson Street, in the city of Kimberley in the Province of British Columbia hereby certify that:

1) I am currently employed as Manager of Exploration Technology for TerraLogic Exploration Inc. with a business address: Suite 200 44-12th Ave South, Cranbrook, BC, V1C2R7.

2) I am a graduate of the Carleton University with the degree of Master of Science in Geology (2001).

3) I am a graduate of Carleton University with the degree of Bachelor of Science in Geology (1997).

4) I have never applied for, nor committed conduct preventing designation within the Association of Professional Engineers and Geoscientists of British Columbia.

5) I have practiced my profession in North America since 1999, having worked for various Junior Resource Companies and government surveys.

6) This report is based upon a personal examination of all available company and government reports pertinent to the Rusty Springs Property, located 180km west of Eagle Plains, YT

7) For the writing of this report, the author has reviewed and accepts the quality and comprehensiveness of exploration data provided by Precision Geophysical Surveys.

8) I own no Common Shares of Bethpage Capital Corp.

9) I am an insider with Eagle Plains Resources Ltd since December 2004 and currently hold 0 shares and options to purchase 295,000 shares of the company at $0.25 - $1.00 per share.

Dated this 13th day of January, 2012, in Cranbrook, British Columbia.

Christopher Gallagher, M.Sc.

Manager – Exploration Technology

TerraLogic Exploration Inc.

Appendix II – Statement of Expenditures

Wages						
Personnel / Position	Field Days	Days	Rate	Subtotal	Total	Notes
Field Work						
T. Termuende	June 19th to June 24th	2.5	$750.00	$1,875.00		
C. Downie	June 19th to June 24th	2.5	$750.00	$1,875.00		
Office / Project Management						
C. Gallagher (Project Management)		2.18	$725.00	$1,580.50		
B Robison (GIS Specialist)		0.14	$525.00	$73.50		
F Katay (Project Geologist)		0.05	$525.00	$26.25		
J Kolcun (GIS Tech)		1.22	$360.00	$439.20		
L Block (Tech)		0.33	$275.00	$90.75		
N Taylor (GIS Tech)		0.2	$360.00	$72.00		
				$6,032.20	**$6,032.20**	
Contractors and SubContractors						
Hodder and Bain (Geological Consulting)	June 19th to June 24th			$12,786.21		
Robert Termuende (Logistics)	June 19th to June 24th			$1,200.00		
Garcia Consultants (Airstrip construction)	June 19th to June 24th			$6,327.00		
Frank Enns (Mechanic)	June 19th to June 24th			$1,500.00		
				$21,813.21	**$21,813.21**	
Geophysics					$2,991.21	1.32% of total Airborne Survey
Analytical					$42.67	1 Rock Sample
Geological					$2,731.53	Satellite imagery plotting
Equipment Rental					$570.00	Field gear
Frieght / Shipping					$199.86	
Accomodation					$5,164.18	Whitehorse / Eagle Plains Hotels
Food / Meals					$2,780.15	
Repair and Maint					$3,087.21	Parts for Cat
Airfaire					$0.00	
Fuel					$1,889.72	For Vehicles
Fuel - Aircraft					$4,866.03	
Helicopter Charter					$4,866.03	Eagle Plains Hotel to property; field crew setout
Transp - Other					$106.91	Parking, taxi, xtra baggage, ect.
Transp - Truck Rental					$900.80	
TerraLogic Handling Fee					$9,777.73	
				Total	**$67,819.40**	

Appendix III – Analytic Techniques

Eco Tech Laboratory Limited
10041 Dallas Drive
Kamloops, British Columbia
V2C 6T4
Tel + 250 573 5700
Tel + 1 877 573 5755
Fax + 250 573 4557
www.stewartgroupglobal.com

StewartGroup
Geochemical & Assay

Analytical Procedure Assessment Report

Eco Tech Laboratory Ltd. is registered for ISO 9001:2008 by KIWA International (TGA-ZM-13-96-00) for the "provision of assay, geochemical and environmental analytical services". Eco Tech also Participates in the annual Canadian Certified Reference Materials Project (CCRMP) and Geostats Pty bi-annual round robin testing programs. The laboratory operates an extensive quality control/quality assurance program, which covers all stages of the analytical process from sample preparation through to sample digestion and instrumental finish and reporting.

GOLD FIRE ASSAY: GEOCHEM (Au2-15,30,50)

A 15/30/50 g sample size is fire assayed along with certified reference materials using appropriate fluxes. The flux used is pre-mixed, purchased from Anachemia which contains Cookson Granular Litharge. (Silver and Gold Free). The ratios are 66% Litharge, 24% Sodium Carbonate, 2.7% Borax, 7.3% Silica. (The charges may be adjusted based on the sample). Flux weight per fusion is 150g. Purified Silver Nitrate or inquarts for the necessary silver addition is used for inquartation. The resultant dore bead is parted and then digested with nitric acid followed by hydrochloric acid solutions and then analyzed on an atomic absorption instrument (Perkin Elmer/Thermo S-Series AA instrument).
Over-range geochem values (Detection limit 5-1000ppb) for rocks are re-analyzed using gold assay methods (see below).
Appropriate certified reference material and repeat/re-split samples (Quality Control Components) accompany the samples on the data sheet for quality control assessment.
Results are collated by computer and are printed along with accompanying quality control data (repeats and standards). Results are emailed, faxed or mailed to the clients.

GOLD FIRE ASSAY: ASSAYS (Au3-15,30,50)

A 15/30/50 g sample size is fire assayed along with certified reference materials using appropriate fluxes. The flux used is pre-mixed, purchased from Anachemia which contains Cookson Granular Litharge. (Silver and Gold Free). The ratios are 66% Litharge, 24% Sodium Carbonate, 2.7% Borax, 7.3% Silica. (The charges may be adjusted based on the sample). Flux weight per fusion is 150g. Purified Silver Nitrate or inquarts for the necessary silver addition is used for inquartation. The resultant dore bead is parted and then digested with nitric acid followed by hydrochloric acid solutions and then analyzed on an atomic absorption instrument (Perkin Elmer/Thermo S-Series AA instrument). Gold detection limit on AA is 0.03-100 g/t. Any gold samples over 100g/t will be run using a gravimetric analysis protocol.
Appropriate certified reference material and repeat/re-split samples (Quality Control Components) accompany the samples on the data sheet for quality control assessment.
Results are collated by computer and are printed along with accompanying quality control data (repeats and standards). Results are emailed, faxed or mailed to the clients.

ICP-AES AQUA REGIS DIGESTION (AR-ES)

A 0.5 gram sample is digested with a 3:1:2 ($HCl: HN0_3: H_20$) solution in a water bath at 95°C. The sample is then diluted to 10ml with water. All solutions used during the digestion process contain beryllium, which acts as an internal standard for the ICP run. The sample is analyzed on a Thermo IRIS Intrepid II XSP ICP unit. Certified reference material is used to check the performance of the machine and to ensure that proper digestion occurred in the wet lab. QC samples are run along with the client samples to ensure no machine drift occurred or instrumentation issues occurred during the run procedure. Repeat samples (every batch of 10 or less) and re-splits (every batch of 35 or less) are also run to ensure proper weighing and digestion occurred.
Results are collated by computer and are printed along with accompanying quality control data (repeats, re-splits, and standards). Any of the base metal elements (Ag, Cu, Pb, Zn) that are over limit (>1.0%) are immediately run as an ore grade assay (see protocol below).
Results are emailed, faxed or mailed to the clients.

Detection Limits:

Element	Unit	LDL	Element	Unit	LDL
Ag	ppm	0.5	**Mn**	ppm	5
Al *	%	0.01	**Mo**	ppm	1
As	ppm	5	**Na ***	%	0.01
Ba *	ppm	2	**Ni**	ppm	1
Be *	ppm	1	**P**	%	0.001
Bi	ppm	5	**Pb**	ppm	3
Ca *	%	0.01	**S ***	%	0.01
Cd	ppm	1	**Sb ***	ppm	5
Co	ppm	1	**Sn ***	ppm	5
Cr *	ppm	2	**Sr ***	ppm	2
Cu	ppm	2	**Ti ***	ppm	10
Fe *	%	0.01	**U**	ppm	5
Hg	ppm	5	**V**	ppm	2
K *	%	0.01	**W ***	ppm	5
La *	ppm	2	**Y ***	ppm	1
Li *	ppm	2	**Zn**	ppm	2
Mg *	%	0.01			

***Elements marked with an asterisk* may not be totally digested**

BASE METAL ASSAY (BM2/A)

Samples and standards undergo an oxidizing digestion in 200 ml phosphoric flasks with final solution in aqua regia solution. Appropriate standards and repeat/re-split samples (Quality Control Components) accompany the samples on the data sheet.

The digested solutions are made to volume with RO water and allowed to settle. An aliquot of the sample is analyzed on a Perkin Elmer/Thermo S-Series AA instrument. (Detection limit 0.01 % AA)

Instrument calibration is done by verified synthetic standards, which have undergone the same digestion procedure as the samples. Standards used narrowly bracket the absorbance value of the sample for maximum precision.

Results are collated and are printed along with accompanying quality control data (repeats, re-splits, and standards). Results are emailed, faxed or mailed to the clients.

Appendix IV – Sample Locations and Descriptions

Appendix 4.1

Rock Sample Descriptions

Sample Number	***Date***	***Type***	***Location Method***	***Easting****	***Northing****	***Description***
DBRSR003	06-Jan-11	GRAB	GPS	532780	7377927	ALTO magnetite horizon; photo joints in oolitic layer; dip slope on W face of massive green f.gr. mudstone overlies sheared shale

* Co-Ordinate System is UTM NAD83 Zone 07N

Appendix 4.2

Geologic Stations

WP #	***Easting****	***Northig****	***Notes***
2	527656	7376053	core pile on Mike Hill
3	527719	7375926	"Upper Siliceous" type, black cherty Upper Katchat; is pseudotachylite low angle fault rock
4	527938	7375868	climbing uphill on drill road but have moved back into dolostone, sometimes "sandy" textured from recrystll. Followed by silicification of dolostone
5	528090	7375748	photo large clast chert brxx on low bench just before sharp rise to top of dome; possible fault at break in slope, with brxx below (downslope)
10	527419	7376705	Regional Stream Sed sample site 116K052040, Mike Hill site
29	527500	7374800	Big Onion showing and trenches, core present
36	532805	7377931	ALTO magnetite horizon; photo joints in oolitic layer; dip slope on W face of massive green f.gr. mudstone overlies sheared shale; sample DBRSR003
37	532805	7377927	here magnetite appears coarser gr., higher density, slight color change to more steely grey; mag is in structural contact against underlying sheared shale of Jungle Creek Fm.(?)
38	532671	7378083	on flat, Lst layers interbedded with strongle sheared contorted grey-brown shale
43	527144	7374439	pseudotachylite on hill; fault surface
44	527209	7374474	W end of trench, dolodtone float with vein qtz-carb brxx; photos; note host greyish dolomite rexstll. To rough weathering surface, spotty reaction to acid, semi-alignment of veining with limestone bedding
45	527273	7374432	end of trench started at WP044
46	527145	7374505	into chert/pseudotachylite

* Co-Ordinate System is UTM NAD83 Zone 07N

Appendix V – Analytic Certificates

Eco Tech Laboratory Ltd.
10041 Dallas Drive
Kamloops, BC
V2C 6T4 Canada
Tel + 250 573 5700
Fax + 250 573 4557
Toll Free + 1 877 573 5755
www.stewartgroupglobal.com

StewartGroup
Geochemical & Assay

CERTIFICATE OF ANALYSIS AW 2011-8104

TerraLogic Exploration Inc.
#200, 44-12th Ave S.
Cranbrook, BC
V1C 2R7

4-Aug-11

No. of samples received: 7
Sample Type: Rock
Project: RS
Shipment #: RS11-01
Submitted by: D. Bain

ET #.	Tag #	Au (ppb)
1	DBRSR001	5
2	DBRSR002	20
3	DBRSR003	5
4	DBRSR004	<5
5	DBRSR005	5
6	RHRSR001	5
7	RHRSR002	<5

QC DATA:

Repeat:

1	DBRSR001	5
2	DBRSR002	20

Resplit:

1	DBRSR001	<5

Standard:

OXG84	920

FA Geochem/AA Finish

ECO TECH LABORATORY LTD.
Norman Monteith
B.C. Certified Assayer

NM/EL
XLS/11

4-Aug-11

Stewart Group
ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

Phone: 250-573-5700
Fax : 250-573-4557

ICP CERTIFICATE OF ANALYSIS AW 2011-8104

TerraLogic Exploration Inc.
#200, 44-12th Ave S.
Cranbrook, BC
V1C 2R7

No. of samples received: 7
Sample Type: Rock
Project: RS
Shipment #: RS11-01
Submitted by: D. Bain

Values in ppm unless otherwise reported

Et #.	Tag #	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm
1	DBRSR001	0.3	0.03	2.5	16.5	<0.1	0.02	>10	0.06	0.8	0.4	10.0	2.0	0.21	<0.1	0.1	<5	0.02	1.0	0.5	0.15	111	0.09
2	DBRSR002	<0.1	0.01	2.7	7.5	0.2	<0.02	>10	0.02	0.3	0.1	7.5	7.6	0.16	<0.1	<0.1	<5	0.02	<0.5	0.4	0.16	116	0.05
3	DBRSR003	<0.1	>10	15.9	30.0	0.3	0.22	0.09	0.19	19.9	15.5	119.0	5.3	>10	24.6	19.1	10	0.02	10.5	341.1	2.88	476	1.01
4	DBRSR004	0.1	0.23	1.4	41.5	<0.1	0.04	0.01	<0.01	2.6	0.6	227.0	5.7	0.70	0.8	0.3	20	0.06	1.5	4.1	0.04	24	1.25
5	DBRSR005	0.1	0.73	10.6	100.0	0.9	0.20	0.01	0.16	3.4	1.3	115.5	22.1	1.52	1.9	0.8	95	0.13	2.0	10.8	0.08	11	1.09
6	RHRSR001	0.3	0.11	1.5	50.5	0.2	0.04	<0.01	0.01	1.3	1.2	606.0	9.9	0.83	0.4	0.4	5	0.03	1.0	4.3	<0.01	46	1.25
7	RHRSR002	0.2	0.27	5.3	91.0	<0.1	0.04	0.01	0.03	1.6	8.7	42.5	16.0	>10	0.9	30.8	15	0.06	1.0	1.0	<0.01	46	2.65

Et #.	Tag #	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
1	DBRSR001	0.055	0.04	2.4	76	1.1	0.5	0.08	0.02	0.4	<0.1	<0.1	750.5	<0.05	0.10	0.1	<0.001	<0.02	0.3	4	0.2	3.6	4.4	0.90
2	DBRSR002	0.053	<0.02	1.0	17	<0.1	0.1	0.08	<0.02	0.2	<0.1	<0.1	701.5	<0.05	0.08	<0.1	<0.001	<0.02	<0.1	<2	<0.1	0.6	3.0	0.61
3	DBRSR003	0.055	0.02	92.1	383	9.1	0.3	0.06	0.26	13.8	0.4	0.6	23.0	<0.05	0.14	4.8	0.015	<0.02	4.7	136	<0.1	11.5	560.7	29.83
4	DBRSR004	0.059	0.06	4.8	43	1.9	2.9	0.08	0.12	0.5	0.4	0.2	9.5	<0.05	0.02	0.6	0.001	<0.02	0.2	6	<0.1	1.0	8.8	3.85
5	DBRSR005	0.066	0.02	18.0	266	11.2	7.5	0.10	0.48	2.8	0.9	0.3	10.0	<0.05	0.12	1.8	<0.001	0.04	0.5	26	<0.1	2.3	48.0	3.04
6	RHRSR001	0.055	0.10	10.9	51	2.5	1.1	0.04	0.28	0.5	0.2	0.4	1.5	<0.05	<0.02	0.2	0.001	0.02	0.2	10	<0.1	1.0	7.1	1.14
7	RHRSR002	0.057	0.16	111.9	619	1.6	3.1	0.46	0.76	0.7	1.2	0.1	3.0	<0.05	0.02	0.4	0.006	0.06	2.4	178	<0.1	1.4	1137.0	2.73

QC DATA:

Et #.	Tag #	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm
Repeat: 1	DBRSR001	<0.1	0.03	2.2	16.0	<0.1	<0.02	>10	0.05	0.7	0.3	9.5	1.7	0.21	<0.1	<0.1	<5	0.02	1.0	<0.1	0.15	108	0.10
Resplit: 1	DBRSR001	0.1	0.03	2.1	16.0	<0.1	<0.02	>10	0.07	0.8	0.3	9.0	1.6	0.20	<0.1	<0.1	<5	0.02	1.0	0.2	0.15	109	0.08
Standard:	Pb129a	11.9	0.80	5.4	70.5	<0.1	0.42	0.47	57.89	9.8	4.7	11.5	1401.0	1.61	2.3	0.9	70	0.10	4.5	1.6	0.68	375	1.88

Et #.	Tag #	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
Repeat: 1	DBRSR001	0.054	<0.02	2.3	73	<0.1	0.5	0.06	<0.02	0.4	<0.1	<0.1	750.5	<0.05	0.08	0.1	<0.001	<0.02	0.3	2	<0.1	3.6	4.2	0.80
Resplit: 1	DBRSR001	0.053	<0.02	2.1	70	1.0	0.5	0.06	<0.02	0.4	<0.1	<0.1	750.5	<0.05	0.12	0.1	<0.001	<0.02	0.3	2	<0.1	3.8	4.0	0.84
Standard:	Pb129a	0.050	0.24	5.5	419	6212.0	2.9	0.78	15.38	0.7	0.1	0.9	28.5	<0.05	0.30	0.4	0.042	0.04	<0.1	18	0.1	2.1	>10000	1.76

Aqua Regia Digest/ICPMS Finish

NM/EL
df/msr8104checksS
XLS/11

ECO TECH LABORATORY LTD.
Norman Monteith
B.C. Certified Assayer

22-Jul-11
Stewart Group
ECO TECH LABORATORY LTD.
10041 Dallas Drive
KAMLOOPS, B.C.
V2C 6T4

ICP CERTIFICATE OF ANALYSIS AW 2011-8105

TerraLogic Exploration Inc.
#200, 44-12th Ave S.
Cranbrook, BC
V1C 2R7

Phone: 250-573-5700
Fax : 250-573-4557

No. of samples received: 3
Sample Type: Silt/Soil
Project: RS
Shipment #: RS11-01
Submitted by: D.Bain

Values in ppm unless otherwise reported

Et #.	Tag #	Au ppb	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Ce ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Ge ppm	Hg ppb	K %	La ppm	Li ppm	Mg %	Mn ppm	Mo ppm
1	DBRSS001	2	<0.1	0.85	19.6	172.5	0.9	0.18	0.81	0.52	9.3	16.6	23.0	30.4	3.94	2.2	6.8	55	0.06	5.5	20.1	0.40	335	2.53
2	RHRSS001	1	0.4	0.15	5.2	18.5	<0.1	0.08	0.01	0.02	0.9	1.0	3.0	13.1	>10	0.7	52.0	55	0.06	<0.5	1.0	<0.01	20	0.80
3	RHRSR001	1	<0.1	0.02	1.0	28.5	<0.1	<0.02	0.70	0.78	0.9	48.2	<0.5	0.3	>10	0.2	60.3	20	<0.01	1.0	0.7	0.08	467	0.36
QC DATA:																								
Repeat:																								
2	RHRSS001	1	0.4	0.16	5.3	19.5	<0.1	0.08	0.02	0.03	0.9	1.1	3.0	13.4	>10	0.8	53.7	55	0.06	<0.5	1.4	<0.01	21	0.85
Standard:																								
Pb129a			11.6	0.85	5.6	60.5	<0.1	0.50	0.50	58.43	9.7	5.4	11.0	1415.0	1.57	2.5	2.1	70	0.11	4.5	1.1	0.67	371	2.09
OXE86		635																						

Et #.	Tag #	Na %	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	S %	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm	Th ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Y ppm	Zn ppm	Zr ppm
1	DBRSS001	0.057	0.08	56.0	954	18.1	5.0	0.16	1.30	2.2	2.9	0.2	51.5	<0.05	0.16	2.0	0.003	0.10	2.3	38	<0.1	8.8	193.2	2.52
2	RHRSS001	0.032	0.10	1.3	264	22.9	3.5	1.02	0.36	0.9	0.8	0.1	15.0	<0.05	0.06	0.4	0.001	0.08	<0.1	16	<0.1	1.9	95.5	1.43
3	RHRSR001	0.025	0.06	704.1	48	2.6	0.4	0.08	0.02	0.3	<0.1	<0.1	63.0	<0.05	0.02	<0.1	0.001	0.12	5.4	<2	<0.1	5.3	1565.0	0.59
QC DATA:																								
Repeat:																								
2	RHRSS001	0.033	0.12	1.6	274	24.5	3.5	1.08	0.42	0.9	0.9	0.1	16.0	<0.05	0.04	0.5	0.001	0.08	0.1	16	<0.1	2.0	98.9	1.45
Standard:																								
Pb129a		0.048	0.14	4.7	410	6155.0	3.2	0.80	15.12	0.6	0.2	1.1	29.0	<0.05	0.38	0.4	0.042	<0.02	<0.1	18	0.2	2.1	>10000	1.87
OXE86																								

Aqua Regia Digest/ICPMS Finish

NM/mb/el
df/ms_848AuS
XLS/11

ECO TECH LABORATORY LTD.
Norman Monteith
B.C. Certified Assayer

Appendix VI – Yukon Digital Bedrock Geology - Legend

LEGEND INDEX MAP

BEDROCK GEOLOGY

LEGEND: COLUMN F

(Alphabetical Index)

QUATERNARY

Q

Q: QUATERNARY
unconsolidated glacial, glaciofluvial and glaciolacustrine deposits; fluviatile silt, sand, and gravel, and local volcanic ash, in part with cover of soil and organic deposits

TERTIARY

TF

TF: FISH RIVER
fine to medium grained sandstone, siltstone and mudstone (1) and (2) deposited in foredeep of Cordilleran orogen **(equivalent to Moose Channel (1) and Reindeer (2) tectonic assem.s of Wheeler and McFeely (1991))**

1. fine to medium grained sandstone with planar and hummocky cross-stratification, and ripple and horizontal lamination; upper light grey mudstone with thin interbeds of siltstone and very fine grained sandstone; alluvial grading upward to marine **(Moose Channel)**
2. weakly cemented to unconsolidated interbedded sandstone, pebbly sandstone, conglomerate, mudstone and some lignite; fluvial to deltaic **(Reindeer)**

UPPER CRETACEOUS TO TERTIARY

KTB: BONNET PLUME
sandstone, shale and coal, marine and non-marine (1) and (2) deposited in foredeep of

KTB

Cordilleran Orogen **(equivalent to "Brazeau foredeep clastic wedge" tectonic assem. of Wheeler and McFeely (1991))**

1. medium to coarse grained sandstone with minor thin lenses and layers of fine pebble conglomerate separated by layers of grey fissile shale; lignite; fluviatile and lacustrine **(Bonnet Plume (upper))**
2. banded, feldspathic sandstone, coal **(Wapiti)**

UPPER CRETACEOUS

KT

KT: TENT ISLAND

shale with local siltstone, sandstone and conglomerate (1) and (2) **(equivalent to "Smoky foredeep marine shales" tectonic assem. of Wheeler and McFeely (1991))**

1. basal unit of massive sandstone to conglomerate in medium to thick beds succeeded by medium to dark grey, soft mudstone with thin interbeds of siltstone and very fine grained sandstone; submarine fan coarse clastics succeeded by marine shelf deposits **(Tent Island)**
2. dark grey concretionary shale; mudstone; grey sandstone; marine **(Kotaneelee)**

LOWER CRETACEOUS AND (MOSTLY) UPPER CRETACEOUS

KM

KM4

KM6

KM: MONSTER

diverse assemblage of fine to coarse clastics, marine and non-marine (1) to (7) deposited in foredeep of Cordilleran orogen **(equivalent to "Trevor southwesterly derived clastic wedge" tectonic assem. of Wheeler and McFeely (1991))**

1. interbedded sandstone and shale; sandstone is generally fine grained, locally pebbly and occurs in thin to medium beds; ripple cross lamination and load casts common; carbonaceous debris common; marine **(Trevor)**
2. medium to dark grey shale and mudstone; rare bentonite; very fine to medium grained sandstone with hummocky cross-stratification, horizontal lamination and thin interbeds of mudstone; bioturbation; marine to locally fluvial at top **(Eagle Plain)**
3. sandstone and shale; marine
4. dominantly resistant massive pebble to cobble, and locally boulder conglomerate with lesser sandstone and shale; alluvial **(Bonnet Plume (lower member))**
5. lower part: brown weathering, fine grained arkosic sandstone (marine?); middle part: silty mudstone and carbonaceous and conglomeratic sandstone (non-marine?); upper part: mesa-forming chert- quartz- sandstone-pebble conglomerate (fluviatile?) **(Monster)**
6. soft, light grey to black fissile shale with scattered cm-thick beds of white to yellow bentonite and ironstone concretions; marine **(Boundary Creek)**
7. carbonaceous sandstone and pebble conglomerate; dark grey shale, siltstone **(Dunvegan)**

LOWER CRETACEOUS

KS

KS1

KS: SHARP MOUNTAIN

fine and coarse clastic assemblage, mostly marine (1) to (7) deposited in foredeep of Cordilleran orogen **(equivalent to "Blairmore foredeep clastic wedge" tectonic assem. of Wheeler and McFeely (1991))**

1. basal interbedded siltstone and silty shale with concretionary horizons overlain by interbedded glauconitic fine grained sandstone, siltstone and shale; marine **(Martin**

KS2
KS3
KS7

House)

2. thin bedded dark grey to brown or black shale and interbeds of siltstone; concretions and clay (bentonite?) beds; locally basal beds are silty or sandy to conglomeratic; marine **(Arctic Red)**
3. massive sandstone and pebble conglomerate; rare ripple cross-lamination in sandstone; shale-dominant units with thin beds of siltstone and very fine grained sandstone; local mud-supported conglomerate; marine sediment gravity flow deposits **(Sharp Mountain Conglomerate)**
4. sandstone, conglomerate and shale; flyschoid
5. concretionary dark grey and rusty weathering shale, gypsiferous in part; greenish grey sandstone, siltstone and shale **(Fort St. John Gp. including Garbutt, Scatter, Sikanni, Sully, and Lepine)**
6. dark grey weathering massive to poorly bedded chert sandstone and chert pebble conglomerate; fluvial(?) **(Big Timber)**
7. basal member of shale with thin interbeds of sandstone and pebbly sandstone; upper member of generally massive sandstone and conglomerate with normal and some inverse grading; conglomerate clasts to boulder size; marine sediment gravity flow deposits **(Kathul Greywacke)**

LOWER CRETACEOUS

lKM
lKM1
lKM2
lKM5
lKM6

lKM: MOUNT GOODENOUGH
shale, siltstone, and sandstone (1) to (6) comprising alternating fine and coarse clastic units **(equivalent to upper part of "Parsons continental margin clastics" tectonic assem. of Wheeler and McFeely (1991))**

1. dominated by fine grained quartz arenite with hummocky cross-stratification, swaley bedding, plane lamination, ripple lamination and bioturbation; members and interbeds of shale; marine inner shelf to upper shoreface **(Martin Creek ; may include McGuire)**
2. shale with thin beds of siltstone and very fine grained argillaceous bioturbated sandstone; ironstone concretions in lower beds; marine **(McGuire)**
3. shale, siltstone, sandstone and coal; marine and non-marine
4. basal interbedded sandstone, siltstone, shale and locally conglomerate, with bioturbation, lamination and cross-stratification; upper beds are bioturbated dark grey shale, interbedded with thin siltstone and silty sandstone; marine **(Mount Goodenough)**
5. dark grey to black argillite, siltstone and sandstone; turbiditic **(Biederman Argillite)**
6. interbedded units of sandstone and shale; hummocky cross stratification and plane lamination; marine **(Rat River)**

JURASSIC AND LOWER CRETACEOUS

JKH
JKH2
JKH4

JKH: HUSKY
shale and siltstone (1) and (3) and laterally equivalent coarser grained siltstone and sandstone (2) and (4) and undivided clastic strata (5) deposited on a marine shelf **(equivalent to lower part of "Parsons continental margin clastics" tectonic assem. of Wheeler and McFeely (1991))**

1. dark grey siltstone and shale **(Kingak (upper), may include Porcupine River and Husky and Bug Creek Gp.)**
2. siltstone and light grey fine to very fine grained sandstone; marine and nonmarine **(Porcupine River)**

JKH5

3. dark grey shale, siltstone and ironstone; marine **(Husky)**
4. light grey glauconitic conglomeratic sandstone, shale and siltstone; marine **(North Branch)**
5. shale, siltstone, sandstone; minor conglomerate; limonitic nodules; marine and nonmarine **(undivided Jurassic and Lower Cretaceous clastics)**

JURASSIC

JB

JB: BUG CREEK
several cycles of shale and shelf sandstone in northern Yukon (2), fining generally to the northwest (3), and including equivalent generally fine clastic strata in central Yukon (1) **(equivalent to upper part of "Spray River continental margin prism" tectonic assem. of Wheeler and McFeely (1991))**

1. dark grey argillite, slate, and phyllite, commonly graphitic, thin-bedded dark grey quartzite, platy to phyllitic quartzite; minor phyllite and limy quartzite **(Lower Schist)**
2. succession of alternating coarse and fine clastic formations; rock types include soft, fissile shale, siltstone, fine to medium grained sandstone with thin argillaceous interbeds and sandstone with low-angle cross-bedding and bioturbation; marine **(Bug Creek Gp.: includes Aklavik, Richardson Mountains, Murray Ridge, Almstrom Creek, Manuel Creek and Richardson Mountains)**
3. dark grey siltstone and shale with local thin basal sandstone, conglomerate and ironstone **(Kingak (lower), may include Porcupine River and Husky and Bug Creek Gp.)**

TRIASSIC

TrS

TrS: SHUBLIK
commonly bioturbated calcareous shale, siltstone and sandstone; silty bioclastic limestone; local hummocky cross stratification **(Shublik)**

PERMIAN

PF

PF: FANTASQUE
grey to black chert in medium to very thick beds separated by thin beds of shale; grey sandstone and mudstone **(Fantasque)**

LOWER AND MIDDLE PERMIAN

PJC

PJC: JUNGLE CREEK
clastic assemblage with some carbonate (1) but including undifferentiated clastics and carbonates of mostly(?) equivalent age (2) and a separately mappable partly equivalent carbonate (3) and conglomerate (4)

1. consists upward of chert pebble conglomerate, sandstone and shale overlain by mixed calcareous or cherty mudstone, silty limestone and prominent resistant lentils of sandstone in turn overlain by yellow orange weathering, fine grained, grey sandstone **(Jungle Creek, Longstick)**
2. undivided Lower and Middle Permian strata including shale, siltstone, and limestone **(Sadlerochit (in part), Echooka)**
3. rusty to light grey weathering, grey to white, crystalline skeletal limestone; partially silicified

and dolomitized (upper part); interbedded black chert (middle part); calcitic sandstone, chert-pebble conglomerate, and sandy limestone (basal part) **(Tahkandit)**

4. chert pebble conglomerate and fossiliferous sandstone with units of sandy to conglomeratic skeletal limestone **(Step Conglomerate)**

UPPER DEVONIAN TO PERMIAN

uDPF

uDPF: FORD LAKE
generally fine to coarse grained clastic succession equivalent to Canol, Imperial and(?) Tuttle assemblages (1) or including these and younger formations undivided (2) and (3)

1. dark grey to black, silty pyritic shale and siltstone with subordinate sandstone, conglomerate and silty limestone **(Ford Lake Shale)**
2. shale, siltstone, limestone, sandstone, conglomerate, chert undivided **(Canol, Ford Lake, Hart River, and Ettrain undivided)**
3. shale, siltstone, limestone, sandstone, conglomerate, chert undivided **(Ford Lake, Hart River, Ettrain, and Jungle Creek undivided)**

UPPER CARBONIFEROUS

CE

CE: ETTRAIN
cherty, echinoderm-bryozoan and ooid lime grainstone and mixed-skeletal lime packstone; glauconitic sandy carbonate; local quartz-chert siltstone and sandstone; marine **(Ettrain)**

LOWER AND UPPER CARBONIFEROUS

CH

CH: HART RIVER
dominantly carbonate assemblage (1) with equivalent local clastics (2) **(Hart River)**

1. thinly laminated, cherty spiculite and spicule lime packstone with subordinate sandstone, siltstone and calcareous shale; local lime grainstone; local members of lenticular to shoe-string sandstone grading into chert rich conglomerate **(Hart River)**
2. brown weathering sandstone, conglomerate and skeletal limestone; equivalent to upper part of Hart River **(Hart River)**

LOWER CARBONIFEROUS

lCF

lCF: FLETT
thin bedded limestone, crinoidal limestone and calcareous shale; members of sandstone in upper part; minor dolomite near top **(Flett)**

CARBONIFEROUS

CL

CL: LISBURNE
lime mudstone and wackestone, mixed skeletal lime packstone and grainstone; fine crystalline, sandy to silty dolostone; siltstone and shale; lime grainstone and packstone; ooid- and skeletal-ooid grainstone **(Lisburne Gp. undivided; Alapah and Wahoo)**

CARBONIFEROUS AND PERMIAN

CPM

CPM: MATTSON
generally divisible to lower thinly bedded grey sandstone, shale and coal overlain by massive bedded, grey to brown sandstone, in turn overlain by grey sandstone, limestone and shale **(Mattson)**

CARBONIFEROUS

CKY

CKY: KAYAK
basal dark grey to black shale and siltstone with lesser thin bedded, locally conglomeratic sandstone grading upward to dark grey, calcareous shale with minor argillaceous, silty lime packstone and wackestone; basal parts coal bearing **(Kayak)**

CARBONIFEROUS

lCK

lCK: KEKIKTUK
pebble-to-boulder conglomerate with subordinate conglomeratic sandstone and minor shale; clasts dominantly chert, but include white vein quartz, grit, sandstone, siltstone and scattered granitic clasts **(Kekiktuk)**

LOWER CARBONIFEROUS

lCT

lCT: TUTTLE
chert granule to pebble conglomerate and conglomeratic sandstone with subordinate siltstone and shale; minor coal; includes unnamed partly correlative light grey medium grained sandstone and dark grey shale; pro-deltaic, deltaic and fluvial **(Tuttle)**

DEVONIAN

MLDO

MLDO: OLD CROW SUITE
Paleozoic granitic rocks in northern Yukon of mostly granitic (q) but including some of syenitic (y) composition

y. leucocratic syenite to hornblende nepheline syenite; medium crystalline equigranular to porphyritic and trachytic (362 Ma) **(Dave Lord syenodiorite)**

q. medium to coarsely crystalline leucocratic biotite granite, variably altered (372-382 Ma) **(Old Crow, Schaeffer, Sedgwick, Ammerman, and Fitton granites)**

UPPER DEVONIAN

uDI

uDI: IMPERIAL
rusty-weathering dark grey shale and siltstone generally in lower part of succession overlain by dark grey fine grained lithic sandstone and siltstone; siltstone and sandstone commonly as sharp-based graded beds **(Imperial)**

UPPER DEVONIAN

uDC: CANOL
dark grey to black non-calcareous, soft to very hard shale with scattered, orange-weathering,

uDC

carbonate nodules and minor chert **(Canol and minor Hare Indian)**

DEVONIAN AND MISSISSIPPIAN

DMBR

DMBR: BESA RIVER
fine grained clastic assemblage (1); in southeastern Yukon, sandstone (2) and shale (3) units at the top of this succession are separately recognized

1. black shale and argillite; brown and green shale and argillite; cherty argillite; fine grained, quartzose sandstone; may locally include undivided black shale and chert of Ordovician to Devonian age **(Besa River and minor Fort Simpson)**
2. thin bedded, dark coloured sandstone with various amounts of interbedded black shale **(Yohin)**
3. thinly laminated, non-calcareous black shale with rare calcareous layers and some beds of more resistant black mudstone **(Clausen)**

MIDDLE DEVONIAN

DH

DH: HUME
assemblage of fossiliferous limestone (3) and similar, laterally equivalent units (1) and (2) and (4)

1. buff-brown weathering argillaceous to silty, dark grey, fine-grained limestone, platy to thin-bedded; minor intercalated irregularly banded orange weathering dolomite and thin beds of resistant; orange-brown weathering limestone; richly fossiliferous **(Headless)**
2. massive, thick bedded, fine to medium grained light grey weathering limestone **(Nahanni)**
3. dark grey, finely crystalline fossiliferous limestone and minor shale **(Hume)**
4. buff-orange weathering thin to medium bedded silty limestone **(Funeral)**

MIDDLE DEVONIAN

DL

DL: LANDRY
thin to very thick bedded, resistant, light grey weathering, medium to light grey and brownish crypto-grained limestone; massive and thick-bedded bioclastic, locally reefoid limestone; black, platy limestone **(Landry)**

UPPER LOWER TO LOWER MIDDLE DEVONIAN

DB

DB: GRIZZLY BEAR
limestone, white grey weathering, cliff forming, blocky partings, massive, fine to medium crystalline; scattered corals, brachiopods, bryozoans and twin canal echinoderm ossicles **(Grizzly Bear)**

MIDDLE DEVONIAN

DN

DN: NATLA
dark grey weathering, platy, thin bedded, recessive sooty limestone, in part crinodal; uncommon beds of massive crinoidal limestone **(Natla)**

MIDDLE DEVONIAN

DA

DA: ARNICA
thin- and thick-bedded dark grey to black commonly laminated dolomite; minor light grey dolomite and light grey to medium grey weathering dark grey to black limestone; striped dolomite; local massive vuggy breccia **(Arnica)**

MIDDLE DEVONIAN

DM

DM: MANETOE
dolomite, coarsely crystalline, vuggy **(Manetoe)**

LOWER AND MIDDLE DEVONIAN

DG

DG: GOSSAGE
assemblage consists of limestone and dolostone (1) and partly equivalent black limestone (2) and shale (3)

1. black, calcareous shale; black richly fossiliferous limestone; orange brown weathering dolomite **(Michelle)**
2. dark grey and black, fine grained limestone; recessive light grey, thick bedded argillaceous limestone,limestone, black, argillaceous; shale, calcareous; marine **(Ogilvie)**
3. limestone and dolostone, light grey and dark brownish grey, fine to medium grained, mostly alternating dark and light coloured medium to thick beds **(Gossage)**

LOWER DEVONIAN

lDS

lDS: SOMBRE
light and medium grey, even bedded, fine grained dolomite; silver-grey dolomite; locally three members of light grey dolostone (lower); dark grey dolostone, in part crinodal (middle); alternating light and dark grey dolostone (upper) **(Sombre)**

LOWER DEVONIAN

lDC

lDC: CAMSELL
grey, black, and white weathering dolostone; light grey and buff weathering, massive, porous limestone breccia **(Camsell)**

UPPER SILURIAN TO LOWER DEVONIAN

SDD

SDD: DELORME
buff to orange weathering, well bedded, buff, light grey, brownish grey and dark grey, very fine grained dolomite; platy to flaggy, wavy banded blue-grey silty limestone with rare thin beds of buff weathering dolomite **(Delorme)**

UPPER CAMBRIAN TO LOWER DEVONIAN

CDB

CDB: BOUVETTE
lower Paleozoic undivided carbonate (1) with locally named tongues(?) (2) and (3)

1. grey-and buff-weathering dolomite and limestone, medium to thick bedded; white to light grey weathering, massive dolomite; minor platy black argillaceous limestone, limestone conglomerate, and black shale; massive bluish-grey weathering dolostone **(Bouvette, unit CDb)**
2. biogenic, oolitic, siliceous, massive limestone; marine **(Jones Ridge)**
3. light grey, thick bedded, pelletoidal limestone **(Vunta)**

UPPER CAMBRIAN TO SILURIAN

CSH

CSH: HAYWIRE
undivided medium to thick bedded, white to dark-grey dolostone, locally cherty; rare amygdaloidal basalt and tuff; basal member of grey-white dolostone, quartz arenite, and maroon mudstone **(Haywire)**

CAMBRIAN TO DEVONIAN

CDR

CDR: ROAD RIVER - RICHARDSON
black graptolitic shale, limestone and minor chert with mappable subdivisions (1) through (5) in Richardson Mtns.; correlations with Selwyn Mtns. include: lower (2) with COR, upper (2) with OSR1, (4) with OSR2 and (5) with lower DME2 **(Road River)**

1. calcareous black shale and limestone **(CDR0 of Norris)**
2. lower: pale yellow to grey weathering, thin- to medium-bedded, shaly limestone with minor shale interbeds; minor chert and intraclast conglomerate; upper: black chert, graptolitic shale, silicified limestone and minor intraclast conglomerate **(CDR1 of Norris)**
3. sharpstone breccia, heterogeneous, commonly with limestone and chert clasts; turbiditic **(CDR2 of Norris)**
4. interstratified, yellowish to orange weathering argillite and yellowish to grey weathering shaly limestone and dolomite; minor black, calcareous shale, intraclast conglomerate and breccia **(CDR3 of Norris)**
5. graptolitic, black shale and shaly limestone; minor limestone, intraclast conglomerates and breccia **(CDR4 of Norris)**
6. black and grey chert, locally bioturbated; black and blue-black, siliceous, graptolitic shale; minor limestone; includes conformably to unconformably overlying early Devonian black silty shale, sandstone and chert-quartzite pebble conglomerate

UPPER ORDOVICIAN AND SILURIAN

OSK

OSK: KINDLE
dolomite succession includes mostly two laterally equivalent and lithologically similar formations (1) and (2), a partially equivalent local clastic-carbonate assemblage (3) and locally undivided carbonate of similar age (4)

1. thick bedded, dark grey to black and minor light grey weathering dolomite; locally massive, vuggy and reefoid; minor chert **(Mt. Kindle)**
2. thick-bedded, black, coarse-grained dolomite and interbedded grey weathering laminated dolomite with nodules and bands of black chert; medium grey weathering, platy, grey argillaceous limestone with minor chert shale; massive and reefoid dolomite **(Whittaker , Nonda)**

3. well bedded siltstone, sandstone, dolomite and shale
4. thick bedded to massive light grey dolostone and limestone; dark grey, fetid limestone; includes undifferentiated beds as young as Lower Devonian

MIDDLE ORDOVICIAN

OS

OS: SUNBLOOD
mainly buff, rouge and light grey weathering platy dolomite and limestone; local interbedded light and dark grey fine crystalline and white coarse crystalline dolomite at base; rare thick beds of light blue-grey limestone **(Sunblood)**

UPPER CAMBRIAN AND ORDOVICIAN

COF

COF: FRANKLIN MOUNTAIN
dolomite succession with local basal quartzite and red bed member; includes two laterally equivalent and lithologically similar formations (1) and (2)

1. grey, argillaceous, sandy and silty dolomite; basal red beds member consists of sandstone, red shale, conglomerate, dolomite and chert **(Franklin Mountain)**
2. well banded, rhythmically bedded, grey and buff-orange dolomite; includes grey to black dolostone and dark grey to black limestone; local basal member of maroon dolostone and sandstone, silver-grey sandstone and sandy dolomite **(Broken Skull)**

UPPER CAMBRIAN

uCT

uCT: TAIGA
striped yellow and orange weathering fine crystalline, light grey limestone; light grey weathering, thick bedded and massive dolostone; minor brown and green shale **(Taiga)**

MIDDLE CAMBRIAN

mCA

mCA: AVALANCHE
light grey, buff, yellow, and orange weathering, crypto grained dolomite, silty dolomite, dolomitic siltstone and dolomitic mudstone; **(Avalanche)**

MIDDLE CAMBRIAN

mCH

mCH: HESS RIVER
shale, black, pyritic, unfossiliferous; occurs as interstratified thick units of black calcareous shale and rusty black shale **(Hess River)**

MIDDLE CAMBRIAN

mCR

mCR: ROCKSLIDE
recessive, dark grey weathering, laminated, platy calcareous shale and silty, dark grey fine- to crypto-grained limestone; minor thin beds of light brown to grey weathering platy dark crypto-

grained limestone and rare bands of buff dolomite **(Rockslide)**

LOWER AND MIDDLE CAMBRIAN

lmCS

lmCS: SLATS CREEK
siltstone, sandstone and shale (1) and partly(?) correlative clastic rocks (2)

1. rusty brown weathering, turbiditic, quartz sandstone with minor shale and siltstone; pale red weathering siltstone, sandstone, quartzite pebble and cobble conglomerate and limestone; maroon with green argillite with minor quartzite and limestone **(Slats Creek)**
2. grey, green and red argillite with laminated quartzite and siltstone; light brown quartzite at base; locally with grey-green chloritic shale and siltstone interbeds; trace fossil "Oldhamia" trilobites and archaeocyatha in basal conglomerate unit **(Adams Argillite)**

LOWER CAMBRIAN

lCI

lCI: ILTYD
limestone assemblage (1) (2), (3); also includes carbonate strata of uncertain Proterozoic to Cambrian age (4)

1. fine crystalline, dark grey limestone; light grey, medium crystalline biohermal dolomite **(Iltyd)**
2. fine-grained, yellow brown limestone, limy conglomerate-breccia; locally chert and chalcedony replacements; uncommon archaeocyathid and trilobite fossils **(Hillard)**
3. massive, light grey limestone, locally dolomitic; in places oolitic or contains dark grey chert; includes secondary silicification and chalcedony vugs **(Funnel Creek)**
4. light grey, medium bedded dolostone; massive, pale grey limestone

LOWER CAMBRIAN

lCS

lCS: SEKWI
limestone, locally wavy bedded and nodular; limestone conglomerate slope breccia; massive grey dolostone; medium- to thick-bedded quartz sandstone; purple siltstone; bright orange weathering, fine crystalline dolostone **(Sekwi)**

UPPER PROTEROZOIC TO LOWER CAMBRIAN

uPCV

uPCV: VAMPIRE
dark brown weathering. thin-bedded, argillaceous fine-grained sandstone and siltstone, minor interbedded medium- to coarse grained white to light grey orthoquartzite; phyllite, slate, and argillite **(Vampire)**

UPPER PROTEROZOIC TO LOWER CAMBRIAN

PCB
PCB2

PCB: BACKBONE
massive quartzite (1) with regionally extensive carbonate member (2) and local mafic volcanic rocks (3)

1. light grey, red-brown, white, and pink, thick-bedded, medium- to coarse grained orthoquartzite; minor brown or maroon phyllite, platy siltstone, silty shale, thin-bedded fine-grained quartzite, grey limestone and sandy to pebbly limestone **(Backbone Ranges)**

PCB3

2. crypto grained, mottled, mauve, pink, banded limestone and dolomite, locally silty, sandy or pebbly; massive light cream to pink weathering dolomite; massive grey limestone; minor quartzitic sandstone and brick red to purple shale **(Backbone Ranges "middle" carbonate member)**
3. vesicular and amygdaloidal, blocky, green, purple, volcanic flows and breccias; minor buff dolomite

UPPER PROTEROZOIC TO CAMBRIAN(?)

uPCN

uPCN: NERUOKPUK
turbiditic sandstone, quartzite, grit, and pebble conglomerate interbedded with siltstone and lesser argillite; probably largely equivalent and similar to the Proterozoic to Cambrian Hyland and/or Backbone assemblages **(Neruokpuk)**

1. interbedded limestone, chert, and slaty argillite, siltstone and sandstone; highly strained; limestone is dark grey to black and clastic; clastics have common bouma cycles, load and flute casts, and silty to muddy carbonate interbeds
2. fine to coarse sandstone, grit and pebble conglomerate, poorly sorted, turbiditic, locally feldspathic; siltstone and slaty argillite interbeds; local maroon, green and Oldhamia bearing slate in upper part; equivalent to Hyland Group, Yusezyu Formation **(Neruokpuk (senso stricto))**
3. slate and argillite, dark grey, maroon, red and green; minor grey limestone, light grey chert, white weathering grey quartzite and siliceous ripple-cross laminated siltstone; Oldhamia trace fossils; correlative with Hyland Group, Narchilla Formation

UPPER PROTEROZOIC TO LOWER CAMBRIAN

uPCI

uPCI: INGTA
varicoloured quartzite, siltstone and shale, minor silty and sandy dolomite **(Ingta)**

UPPER PROTEROZOIC

uPRI

uPRI: RISKY
buff grey to buff yellow weathering poorly bedded, in part pisolitic dolomite, in part porous fine grained dolomite; varicoloured quartzite, siltstone and shale, minor silty and sandy dolomite **(Risky)**

UPPER PROTEROZOIC

uPS

uPS: SHEEPBED
recessive, black weathering shale and siltstone; minor quartzite and limestone **(Sheepbed)**

UPPER PROTEROZOIC

uPK

uPK: KEELE
orange and brown weathering, commonly silty and sandy dolomite, in part well-laminated and

flaggy; limestone, cross-bedded pebbly quartzite and conglomerate; local minor brown weathering diamictite at base; distinct white dolostone member at top **(Keele)**

UPPER PROTEROZOIC

uPR

uPR: RAPITAN
basal rift conglomerates (1) overlain by glacial diamictite (2) in turn succeeded by fine to coarse siliclastic rocks (3) and equivalent dolostone (4)

1. maroon mudstone with interbeds of sandy mud-matrix-conglomerate and pebbles of limestone, mudstone, sandstone and chert; thick bedded to massive, sandstone and pebble to boulder conglomerate with clasts of carbonate, siltstone and quartz arenite **(Rapitan Gp., Sayunei)**
2. brown, orange brown, and green weathering massive diamictite with rounded to subrounded pebbles and cobbles of carbonate, sandstone, (?)greenstone, chert, mudstone, igneous and metamorphic rocks; highly ferruginous dark red siltstone; iron formation **(Rapitan Gp., Shezal)**
3. thin bedded, brown weathering siltstone interbedded with sandstone, granule to pebble conglomerate, and light grey weathering dolostone **(Rapitan Gp., Twitya , Knorr Range (P1) succession)**
4. massive to thick bedded, light grey weathering dolostone commonly containing vugs, stromatolites, oncolites, oolites and micritic intraclasts; commonly fetid; minor siltstone, sandstone and grit **(Rapitan Gp., Profeit , Knorr Range (P2,P3) succession)**

UPPER PROTEROZOIC

uPH

uPH: HARPER
a volcanic and coarse clastic rift succession; intercalated between the lower and upper parts of the clastics (1) is a volcanic pile with lower mafic and upper more silicic members (2)

1. lower: grey dolostone, dolostone conglomerate and dolomitic mudstone redbeds; upper: volcanic and carbonate clast conglomerate; rare basalt, volcanic tuff, and pyroclastic bombs; intercalated dolomitic mudstone and dolostone conglomerate **(Mt. Harper Gp.)**
2. lower: dark green basaltic flows, lapilli tuff, breccia, epiclastic(?) tuff, basaltic feeder dykes and sills; upper: rhyolitic flows, breccia and ignimbrite; locally quartz- and plagioclase-phyric; andesitic basalt flows, breccia and tuff **(Mt. Harper Gp.)**

UPPER PROTEROZOIC

uPL

uPL: LITTLE DAL
thin-bedded, light grey to buff and orange weathering fine-grained dolomite; rare shale and argillite; upper part dominated by orange weathering stromatolitic dolomite and massive vuggy and craggy dolomite and includes gypsum **(Little Dal Gp.)**

MIDDLE TO UPPER PROTEROZOIC

muPK

muPK: KATHERINE
mature, very fine grained, thin to very thick bedded, brown, greenish grey and white orthoquartzitic sandstone with recessive intervals of dark grey to black shale; rare stromatolitic dolomite **(Katherine and Tigonkweine)**

MIDDLE PROTEROZOIC

mPTZ

mPTZ: TSEZOTENE
grey, greenish grey or brown shale with interbeds of very fine grained, thin to medium bedded, immature, grey and greenish grey sandstone or quartzite and orange weathering dolomite; hosts many gabbroic dykes and sills **(Tsezotene)**

UPPER PROTEROZOIC

uPC

uPC: CALLISON
dolostone assemblage comprising two regionally correlated units (1) and (2)

1. resistant, light creamy grey weathering, well bedded dolostone characterized by algal laminations, ooliths, lenses of grey to black chert and stromatolites **(Callison Lake Dolostone)**
2. cryptalgal dolostone; medium to light grey fine crystalline,laminated to thinly bedded and stromatolitic dolostone; includes chert and dolomitic breccia; craggy, medium to dark grey, massive, medium crystalline dolostone with abundant silicification **(Fifteen Mile Gp. (upper))**

MIDDLE TO UPPER PROTEROZOIC

muPPFu

muPPFu: PINGUICULA/FIFTEEN MILE (UPPER)
siliclastic-carbonate assemblage comprising two regionally correlated units (1) and (2)

1. rusty weathering black shale with limestone laminates and stromatolite bioherms; dolostone with mudcracks and cryptalgal laminate, chert, teepee and molartooth structure; hematitic quartzite and dolostone; thin bedded particulate limestone **(Pinguicula Gp. (upper: units D-F))**
2. light-grey, finely crystalline dolomite; shale; pebbly mudstone; gritty mudstone; stromatolitic limestone; quartz sandstone **(Fifteen Mile Gp. (upper))**

MIDDLE PROTEROZOIC

mPPFl

mPPFl: PINGUICULA/FIFTEEN MILE (LOWER)
dominantly carbonate assemblage with basal clastics comprising two regionally correlated units (1) and (2); includes possible other correlative carbonate, clastic and volcanic rocks (3) and (4)

1. basal siliclastic red laminates; thin bedded laminated and flasered limestone; laminated dolosiltite; massive white dolostone with wavy cryptalgal lamination, cross bedding, tepee structures, extensive dolomite veinlets and chert **(Pinguicula Gp.(lower: units A-C))**
2. basal shale to silty dolomite; medium to thick bedded dolomitic mudstone and dolostone breccia, massive dolostone; medium-bedded dolostone with mudstone interbeds; dolostone breccia, oolitic packstone and uncommon stromatolitic dolostone **(Fifteen Mile Gp. (lower))**
3. greyish black shale; limestone; dolomite; diabase sills and dykes; undivided **(Lower Tindir Gp.)**
4. red, green and grey slaty argillite; fine grained, light grey quartzite; dolomite; assignment tentative, may include Gillespie Lake and upper Pinguicula groups

MIDDLE PROTEROZOIC

mPH

mPH: HART RIVER
mafic volcanic flows (1) and (3) and their possible intrusive equivalents (2)

1. mafic volcanic flows, generally massive and fine-grained, locally pillowed **(Hart River Volcanics)**
2. resistant dark weathering diorite and gabbro sills and dikes **(Hart River Sills)**
3. basic to intermediate volcanic flows and aquagene tuffs **(Khose Creek Volcanics)**

MIDDLE PROTEROZOIC

mPW

mPW: WERNECKE BRECCIAS
hematitic and dolomitic breccia and related metasomatized country rock; breccia contains variably altered rotated siliceous and carbonate clasts (Wernicke Supergroup) and minor dyke rock; breccia and metasomatites enriched in Cu, Co, U, Ag and Au **(Wernicke Breccias)**

LOWER PROTEROZOIC

lPG

lPG: GILLESPIE LAKE
dolostone and silty dolostone, locally stromatolitic, locally with chert nodules and sparry karst infillings, interbedded with lesser black siltstone and shale, laminated mudstone, and quartzose sandstone; local dolomite boulder conglomerate **(Gillespie Lake Gp.)**

LOWER PROTEROZOIC

lPQ

lPQ: QUARTET
black weathering shale, finely laminated dark grey weathering siltstone, and thin to thickly interbedded planar to cross laminated light grey weathering siltstone and fine grained sandstone; minor interbeds of orange weathering dolostone in upper part **(Quartet Gp.)**

LOWER PROTEROZOIC

lPFL

lPFL: FAIRCHILD LAKE
lower: greenish grey weathering calcareous laminated siltstone, grey weathering fine grained sandstone, and minor brown weathering carbonate, ripple cross-laminated; upper: siltstone, dolomitic siltstone, and dolostone **(Fairchild Lake Gp.)**

Location Index for Legend

GO TO COLUMN

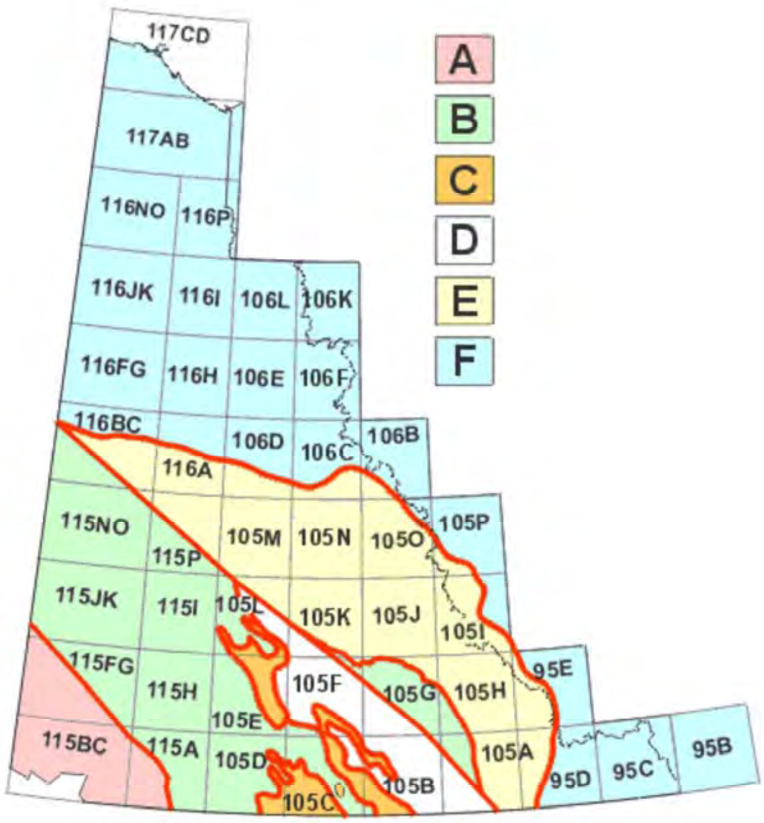
A

B

C

D

E



F

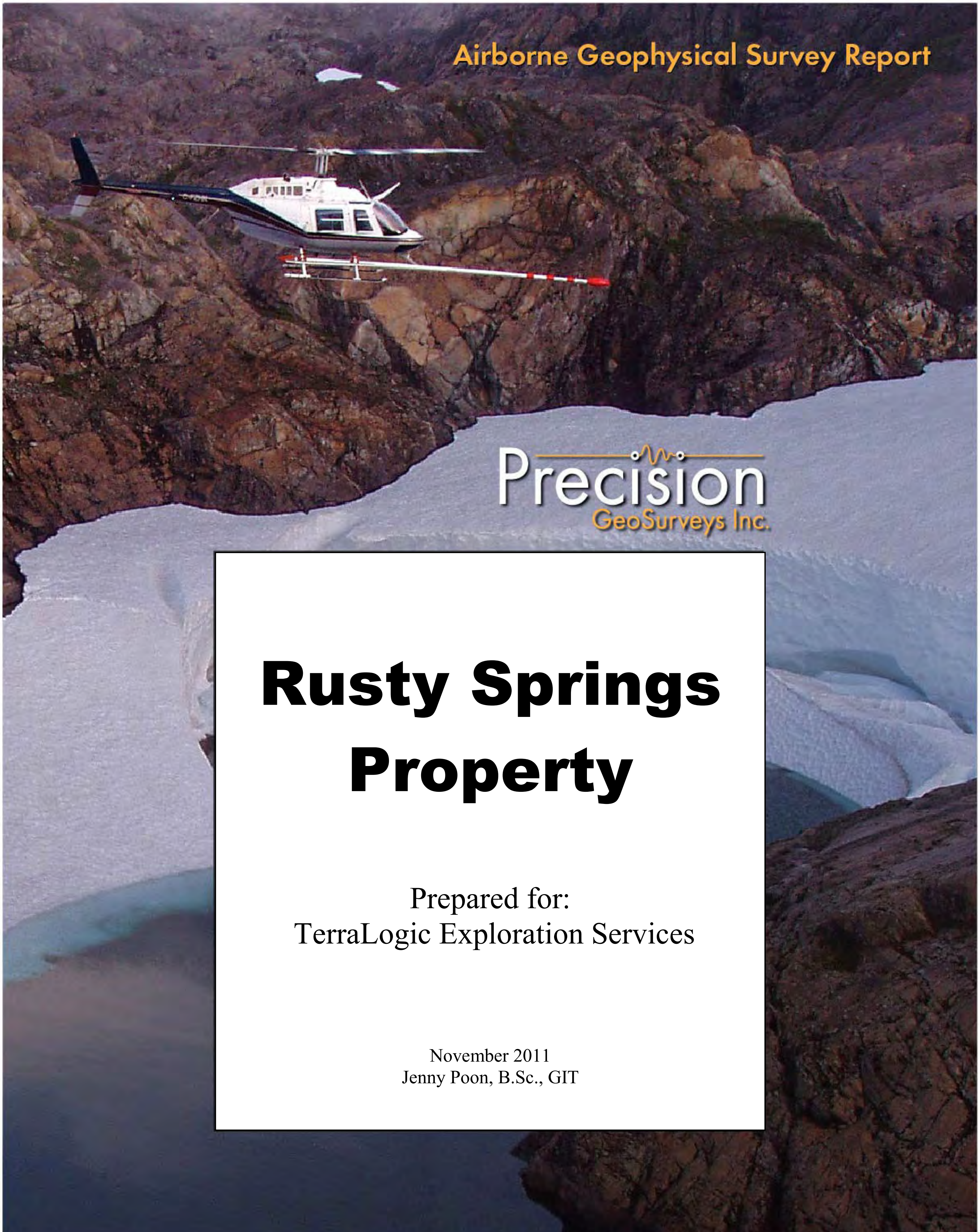
MISC

The legend consists of several columns, referenced by colour to one of the general regions indicated (A to F). Together, if placed side by side, these columns comprise a single legend for the map; legend units are not duplicated, but are placed in the column for the area in which they are most widely found. To find units that overlap several regions it may therefore be necessary to search more than one column. For example, some of the units represented in COLUMN C (orange in figure) underlie small areas within the region of COLUMN B (green in figure).

TOP

Appendix VII – Precision Airborne Mag Survey Report (Edited)

Airborne Geophysical Survey Report



Precision GeoSurveys Inc.

Rusty Springs Property

Prepared for:
TerraLogic Exploration Services

November 2011
Jenny Poon, B.Sc., GIT

www.precisiongeosurveys.com • 520–355 Burrard Street • Vancouver, B.C. • Canada V6C 2G8 • T: 604.484.9402

Table of Contents

Introduction:

This report outlines the survey operations and data processing actions taken during the airborne geophysical survey flown at the Rusty Springs property, located northwest of the Yukon Territory (Figure 1). The airborne geophysical survey was flown by Precision GeoSurveys Inc. for TerraLogic Exploration Services. The geophysical survey, carried out between October 02, 2011 and October 21, 2011, saw the acquisition of high resolution magnetic data.

Figure 1: Rusty Springs property area location relative to Eagle Plains, YT.

The Rusty Springs property is located approximately 169 kilometers west of Eagle Plains, YT and is approximately 278 kilometers north west of Dawson, YT. The survey area of Rusty Springs property is approximately 25 km by 37.5 km (Figures 2 and 3). A total of 1822 line kilometers of magnetic data were flown for this survey; this total includes tie lines and survey lines. The survey lines were flown at 500 meter spacings at a $090^{o}/270^{o}$ heading; the tie lines were flown at 5 km spacings at a heading of $000^{o}/180^{o}$ (Figures 4).

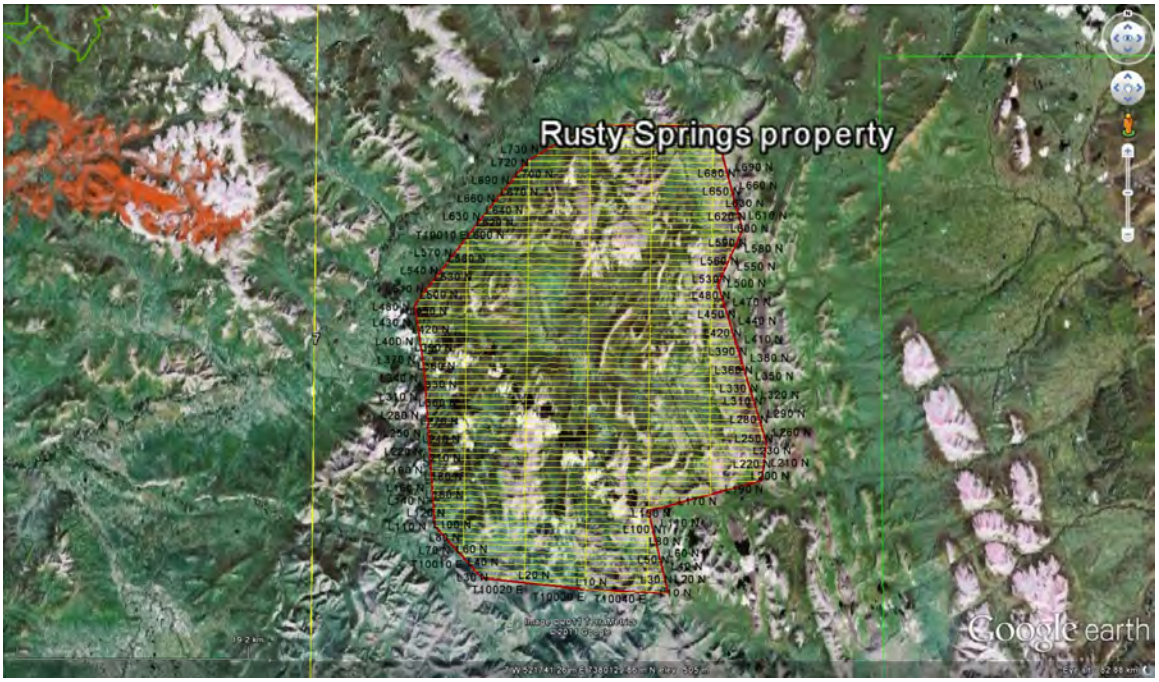


Figure 2: Plan View - Rusty Springs property with survey and tie lines outlined in yellow and the boundary in red.

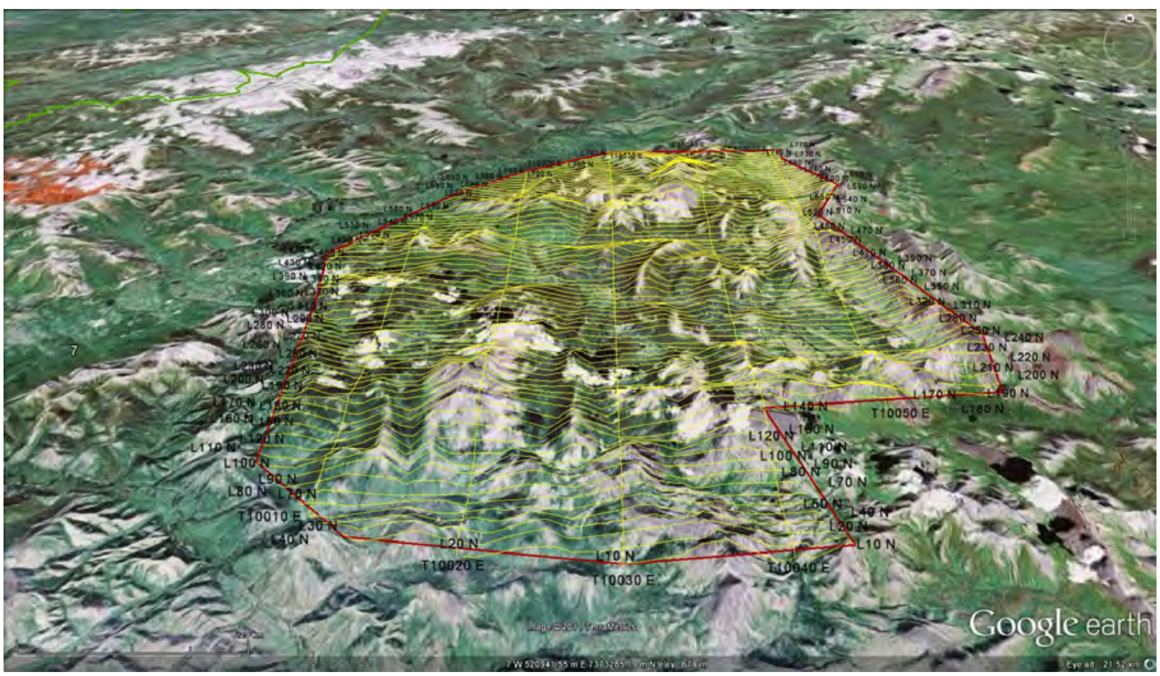


Figure 3: Terrain View - Rusty Springs property with survey and tie lines outlined in yellow and the boundary in red.

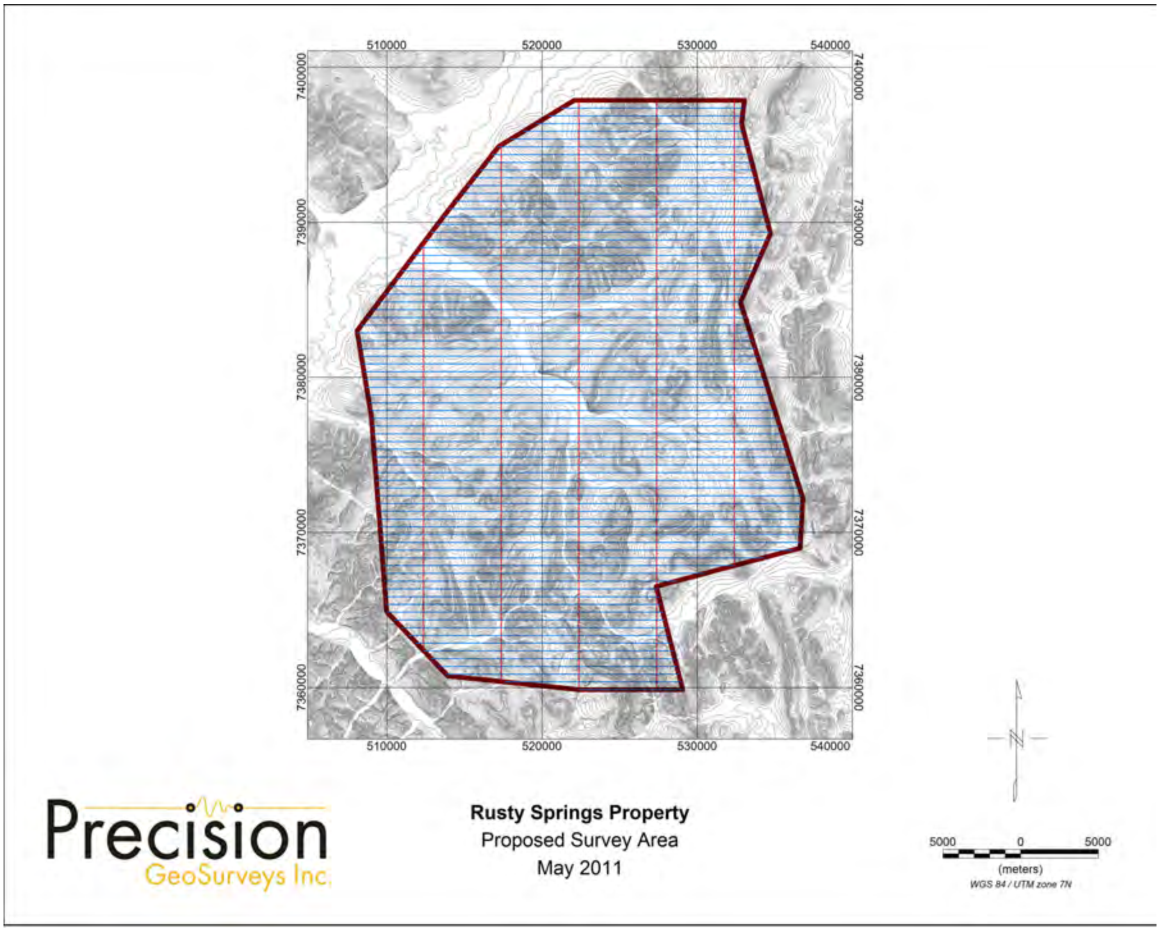


Figure 4: Proposed survey basemap of Rusty Springs property showing survey and tie lines and the boundary in red.

Survey Specifications:

The geodetic system used for this survey is WGS 84 and the area is contained in zone 7N. The survey data acquisition specifications and coordinates for Rusty Springs property are specified as followed (Tables 1 and 2).

Survey	Line Spacing m	Survey Line km	Tie Line km	Total Line km	Survey Line Orientation	Nominal Survey Height m
Rusty Springs property	500	1655	167	1822	$090^o/270^o$	35
Total				1822		

Table 1: Rusty Springs property survey acquisition specifications.

Longitude	Latitude	Easting	Northing
140.4999740	66.35764908	522375.57	7359865.20
140.6887432	66.36614295	513923.88	7360757.47
140.7764194	66.40338930	509986.71	7364891.50
140.7975522	66.51702818	509002.42	7377556.06
140.8178399	66.56590916	508083.75	7383002.48
140.6928300	66.63105887	513595.78	7390286.24
140.6106475	66.67208949	517204.85	7394879.60
140.4999922	66.69855542	522071.13	7397865.20
140.2516751	66.69757155	533033.21	7397865.20
140.2559990	66.68413506	532860.30	7396365.20
140.2161109	66.62032521	534710.92	7389273.89
140.2608072	66.58085231	532783.53	7384849.87
140.1739532	66.46681143	536803.99	7372187.23
140.1789114	66.43819989	536624.53	7368995.27
140.3872805	66.41705061	527354.34	7366530.94
140.3505308	66.35709774	529063.99	7359865.20

Table 2: Rusty Springs property survey polygon coordinates using WGS 84 in zone 7N.

2.0 Geophysical Data:

Geophysical data are collected in a variety of ways and are used to aid in the exploration and determination of geology, mineral deposits, oil and gas deposits, contaminated land sites and UXO detection.

For the purposes of this survey, airborne magnetic data were collected to serve in the exploration of Rusty Springs property which contains rocks that are prospective for gold mineralization.

2.1 Magnetic Data:

Magnetic surveying is probably the most common airborne survey type to be conducted for both mineral and hydrocarbon exploration. The type of survey specifications, instrumentation, and interpretation procedures, depend on the objectives of the survey. Typically magnetic surveys are performed for:

1. Geological Mapping to aid in mapping lithology, structure and alteration in both hard rock environments and for mapping basement lithology, structure and alteration in sedimentary basins or for regional tectonic studies.
2. Depth to Basement mapping for exploration in sedimentary basins or mineralization associated with the basement surface.

3.0 Survey Operations:

Precision GeoSurveys flew the Rusty Springs property using a Bell 206 BIII Jet Ranger (Figure 5). The survey lines were flown at a nominal line spacing of five hundred (500) meters and the tie lines were flown at 5 km spacing for the magnetometer. The average survey elevation was 31 meters vertically above ground for the Rusty Springs property. The experience of the pilot helped to ensure that the data quality objectives were met and that the safety of the flight crew was never compromised given the potential risks involved in airborne surveying.

Figure 5: Bell 206 Jet Ranger equipped with mag stinger for magnetic data acquisition.

The base of operations for this survey was in Eagle Plains lodge, YT. The Precision crew consisted of four members:

Don Plattel and Ola Vaage - Pilots
Christina Larocque - Operator
Shawn Walker - On-site Geophysicist/Operator

The survey was started on October 02, 2011 and completed on October 21, 2011.

4.0 Equipment:

For this survey, a magnetometer, base station, laser altimeter, and a data acquisition system were required to carry out the survey and collect quality, high resolution data. The survey magnetometer is carried in an approved "stinger" configuration to enhance flight safety and improve data quality in this mountainous terrain.

4.1 AGIS:

The Airborne Geophysical Information System, AGIS, (Figure 6), is the main computer used in data recording, data synchronizing, displaying real-time QC data for the geophysical operator, and generation of navigation information for the pilot display system.

Figure 6: AGIS installed in the Bell 206.

The AGIS was manufactured by Pico Envirotec; therefore the system uses standardized Pico software and external sensors are connected to the system via RS-232 serial communication cables. The AGIS data format is easily converted into Geosoft or ASCII file formats by a supplied conversion program called PEIView. Additional Pico software allows for post real time magnetic compensation and survey quality control procedures.

4.3 Magnetometer:

The magnetometer used by Precision GeoSurveys is a Scintrex cesium vapor CS-3 magnetometer. The system was housed in a front mounted “stinger” (Figure 7). The CS-3 is a high sensitivity/low noise magnetometer with automatic hemisphere switching and a wide voltage range, the static noise rating for the unit is +/- 0.01 nT. On the AGIS screen the operator can view the raw magnetic response, the magnetic fourth difference and the survey altitude for immediate QC of the magnetic data. The magnetic data are recorded at 10 Hz. A magnetic compensator is also used to remove noise created by the movement of the helicopter as it pitches, rolls and yaws within the Earth’s geomagnetic field.

Figure 7: View of the mag stinger.

4.4 Base Station:

For monitoring and recording of the Earth's diurnal magnetic field variation, Precision GeoSurveys uses two base stations: Scintrex proton precession Envi Pro magnetometer and GEM GSM-19T magnetometer. Both base stations are mounted as close to the survey blocks as possible to give accurate magnetic field data. The Envi Pro base station (Figure 8), uses the well proven precession technology to sample at a rate of 0.5 Hz. A GPS is integrated with the system to record real GPS time that is used to correlate with the GPS time collected by the airborne CS-3 magnetometer.

Figure 8: Scintrex Envi Pro proton precession magnetometer.

The GEM GSM-19T magnetometer (Figure 9) also uses the proton precession technology sampling at a rate of 0.5 Hz. The GSM-19T has an accuracy of +/- 0.2 nT at 1 Hz.

Figure 9: GEM GSM-19T proton precession magnetometer.

4.5 Laser Altimeter:

The pilot is provided with terrain guidance and clearance with an Acuity AccuRange AR3000 laser altimeter (Figure 10). This is attached at the aft end of the magnetometer boom. The AR3000 sensor is a time-of-flight sensor that measures distance by a rapidly-modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 300 m off of natural surfaces with 90% reflectance and 3 km off special reflectors. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and analog outputs, the distance data are transmitted and collected by the AGIS at 10 Hz.

Figure 10: Acuity AccuRange AR3000 laser altimeter.

5.0 Data Processing:

After all the data are collected after a survey flight several procedures are undertaken to ensure that the data meet a high standard of quality. All data were processed using Pico Envirotec software and Geosoft Oasis Montaj geophysical processing software.

5.1 Magnetic Processing:

During aeromagnetic surveying noise is introduced to the magnetic data by the aircraft itself. Movement in the aircraft (roll, pitch and yaw) and the permanent magnetization of the aircraft parts (engine and other ferric objects) are large contributing factors to this noise. To remove this noise a process called magnetic compensation is implemented. The magnetic compensation process starts with a test flight at the beginning of the survey where the aircraft flies in the four orthogonal headings required for the survey (090°/270° and 180°/360° in the case of this survey) at an altitude where there is no ground effect in the magnetic data. In each heading, three specified roll, pitch, and yaw maneuvers are performed by the pilot; these maneuvers provide the data that are required to calculate the necessary parameters for compensating the magnetic data. A computer program called PEIComp is used to create a model for each survey to remove the noise induced by aircraft movement; this model is applied to each survey flight so the data can be further processed.

Followed by the compensation flight, a lag test is conducted. A lag correction of 1.0 seconds was applied to the total magnetic field data to compensate for the lag in the recording system as the magnetometer sensor flies 5.70 m ahead of the GPS antenna.

A magnetic base station is set up before every flight to ensure that diurnal activity is recorded during the survey flights. In this case, the base station was located in the bushes close to the Rusty Springs property. Base station readings were reviewed at regular intervals to ensure that no data were collected during periods with high diurnal activity (greater than 5 nT per minute). The base station was installed within the survey blocks at a magnetically noise-free area, away from metallic items such as steel objects, vehicles, or power lines. The magnetic variations recorded from the stationary base station are removed from the magnetic data recorded in flight to ensure that the anomalies seen are real and not due to solar activity.

Filtering is applied to the laser altimeter data as to remove vegetation clutter and to show the actual ground clearance. To remove vegetation clutter a Rolling Statistic filter was applied to the laser altimeter data and a low pass filter was used to smooth out the laser altimeter profile to remove isolated noise. As a result, filtering the data will yield a more uniform surface in close conformance with the actual terrain.

Some filtering of the magnetic data is also required. A Non Linear filter was used for spike removal. The 1D Non-Linear Filter is ideal for removing very short wavelength, but high amplitude features from data. It is often thought of as a noise spike-rejection filter, but it can also be effective for removing short wavelength geological features, such as signals from surficial features. The 1D Non-Linear Filter is used to locate and remove data that are recognized as noise. The algorithm is 'non- linear' because it looks at each data point and decides if that datum is noise or a valid signal. If the point is noise, it is simply removed and replaced by an estimate based on surrounding data points. Parts of the data that are not considered noise are not modified. The combination of a Non-Linear filter for noise removal and a low pass trend enhancement filter resulted in level data as indicated in the results section of this report. The low pass filters simply smoothes out the magnetic profile to remove isolated noise.

5.3 Final Data Format

Abbreviations used in the GDB files are listed in the following table:

Channel	Units	Description
X	m	UTM Easting - WGS84 Zone 7 North
Y	m	UTM Northing - WGS84 Zone 7 North
Galt	m	GPS height - WGS84 Zone 7 North
DTM	m	Digital Terrain Model
Lalt	m	Laser Altimeter readings
GPStime	Hours:min:secs	GPStime
basemag	nT	Base station diurnal data
mag	nT	Total Magnetic Intensity

Table 3: Rusty Springs property survey channel abbreviations.

The file format will be provided in two (2) formats, the first will be a .GDB file for use in Geosoft Oasis Montaj, the second format will be a .XYZ file, this is text file. A complete file provided in each format will contain only magnetic data.

Appendix A

Equipment Specifications

Scintrex Envi Pro Proton Magnetometer with Integrated GPS (Base Station)

Total Field Operating Range	23,000 to 100,000 nT (gamma)
Total Field Absolute Accuracy	±1 nT (gamma)
Sensitivity	0.1 nT (gamma) at 2 second sampling rate
Tuning/ Sampling	Fully solid state. Manual or automatic, keyboard selectable Cycling (Reading) Rates 0.5, 1, 2, or 3 seconds
Gradiometer Option	Includes a second sensor, 0.5m (20 inch) staff extender and processor module
Gradient Tolerance	> 7000 nT (gamma)/m
'Walking' Mode	Continuous reading, cycling as fast as 0.5 seconds
Supplied GPS Accuracy	+/- 1m (Autonomous), < 1m WAAS Connects to most external GPS receivers with NMEA & PPS output
Standard Memory	Total Field Measurements: 84,000 readings Gradiometer Measurements: 67,000 readings Base Station Measurements: 500,000 readings
Real-Time Clock	1 second resolution, ± 1 second stability over 24 hours or GPS time
Digital Data Output	RS-232C, USB Adapter
Power Supply	Rechargeable, 2.9 Ah, lead-acid dry cell battery 12 Volts External 12 Volt input for base station operations
Operating Temperature	40°C to +60°C (-40°F to 140°F)
Kodiaknsions and Weight	Console: 250mm x 152mm x 55mm (10" x 6" x 2.25") 2.45 kg (5.4 lbs) with rechargeable battery Magnetic 70mm d x 175mm (2.75"d x 7") Sensor: 1 kg (2.2 lbs) Gradiometer 70mm d x 675mm (2.75"d x 26.5") Sensor: (with staff extender) 1.15 kg (2.5 lbs) Sensor Staff: 25mm d x 2m (1"d x 76") 0.8 kg (1.75 lbs)

GEM GSM-19T Proton Precession Magnetometer (Base Station)

Configuration Options	15
Cycle Time	999 to 0.5 sec
Environmental	-40 to +60 ° Celsius
Gradient Tolerance	7,000 nT/m
Magnetic Readings	299,593
Operating Range	10, 000 to 120,000 nT
Power	12 V @ 0.62 A
Sensitivity	0.1 nT @ 1 sec
Weight (Console/ Sensor)	3.2 Kg
Integrated GPS	Yes

Scintrex CS-3 Survey Magnetometer

Operating Principal	Self-oscillation split-beam Cesium Vapor (non-radioactive Cs-133)
Operating Rage	15,000 to 105,000 nT
Gradient Tolerance	40,000 nT/metre
Operating Zones	10° to 85° and 95° to 170°
Hemisphere Switching	a) Automatic b) Electronic control actuated by the control voltage levels (TTL/CMOS) c) Manual
Sensitivity	0.0006 nT √Hz rms.
Noise Envelope	Typically 0.002 nT P-P, 0.1 to 1 Hz bandwidth
Heading Error	+/- 0.25 nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)
Absolute Accuracy	<2.5 nT throughout range
Output	a) continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) square wave signal at the I/O connector, TTL/CMOS compatible
Information Bandwidth	Only limited by the magnetometer processor used
Sensor Head	Diameter: 63 mm (2.5") Length: 160 mm (6.3") Weight: 1.15 kg (2.6 lb)
Sensor Electronics	Diameter: 63 mm (2.5") Length: 350 mm (13.8") Weight: 1.5 kg (3.3 lb)
Cable, Sensor to Sensor Electronics	3m (9' 8"), lengths up to 5m (16' 4") available
Operating Temperature	-40°C to +50°C
Humidity	Up to 100%, splash proof
Supply Power	24 to 35 Volts DC
Supply Current	Approx. 1.5A at start up, decreasing to 0.5A at 20°C
Power Up Time	Less than 15 minutes at -30°C

Pico Envirotec GRS-10 Gamma Spectrometer

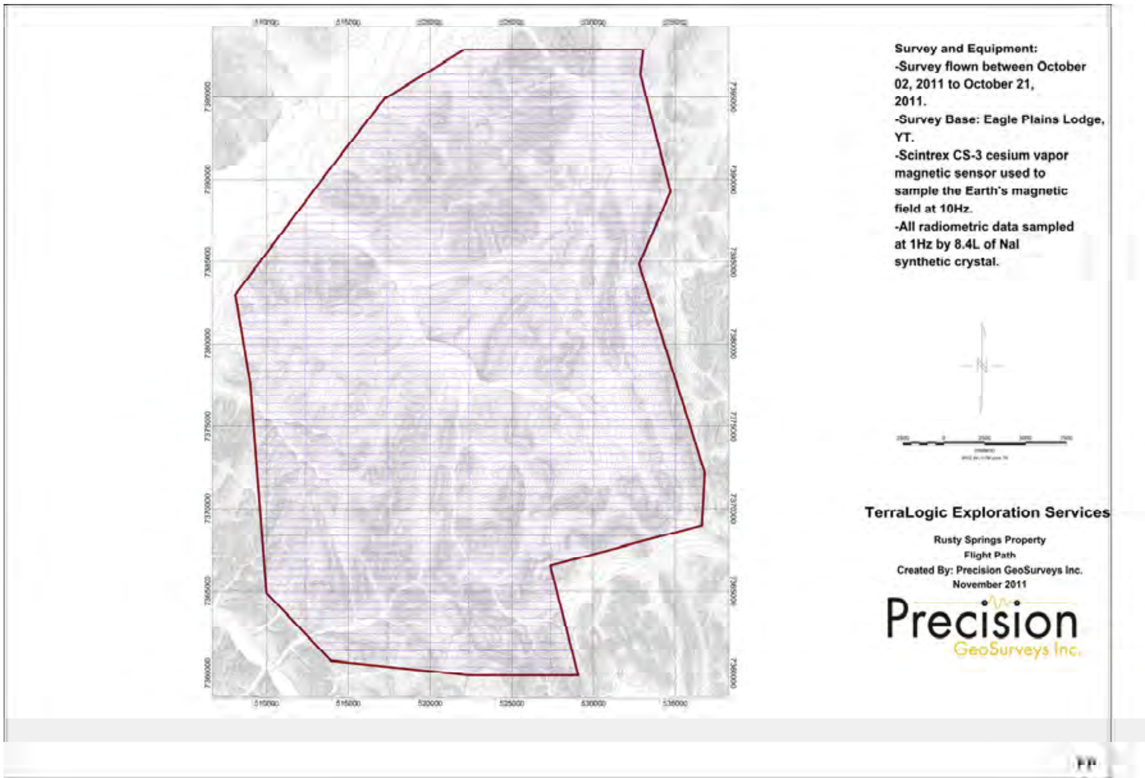
Crystal volume	2 x 4.2 litres (total 8.4 liters)
Resolution	256/512 channels
Tuning	Automatic using peak determination algorithm
Detector	Digital Peak
Calibration	Fully automated detector
Real Time	Linearization and gain stabilization
Communication	RS232
Detectors	Expandable to 10 detectors and digital peak
Count Rate	Up to 60,000 cps per detector
Count Capacity per channel	65545
Energy detection range:	36 KeV to 3 MeV
Cosmic channel	Above 3 MeV
Upward Shielding	RayShield® non-radioactive shielding
Spectra	Collected spectra of 256/512 channels, internal spectrum resolution 1024
Software	**Calibration:**High voltage adjustment, linearity correction coefficients calculation, and communication test support **Real Time Data Collection:** Automatic Gain real time control on natural isotopes, and PC based test and calibration software suite
Sensor	Each box containing two (2) gamma detection NaI(Tl) crystals – each 4.2 liters. (256 cu in.) (approx. 100 x 100 x 650 mm) Total volume of approx 8.4 litres or 512 cu in with detector electronics
Spectra Stabilization	Real time automatic corrections on radio nuclei: Th, Ur, K. No implanted sources.

Pico Envirotec AGIS data recorder system
(for Navigation, Gamma spectrometer, VLF-EM and Magnetometer Data Acquisition)

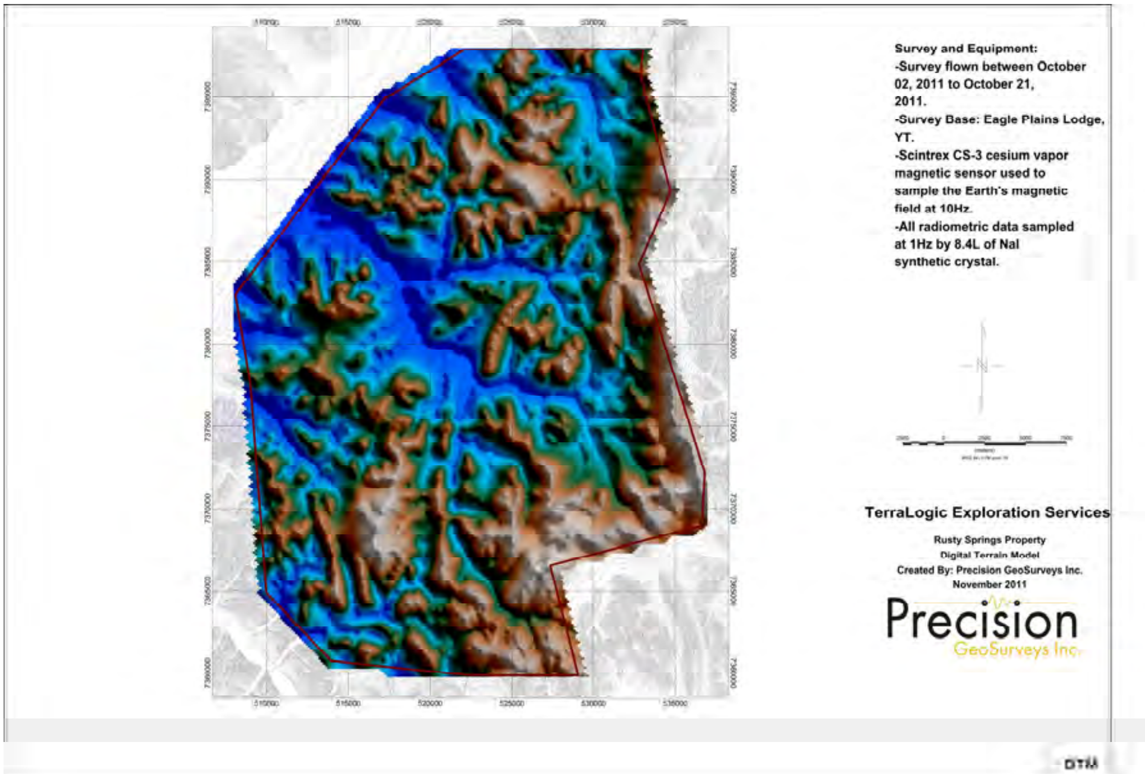
Functions	Airborne Geophysical Information System (AGIS) with integrated Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10, MMS4 Magnetometer, Totem 2A EM, A/D converter, temperature probe, humidity probe, barometric pressure probe, and laser altimeter. Output for the 2 line Pilot Indicator
Display	Touch screen with display of 800 x 600 pixels; customized keypad and operator keyboard. Multi-screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator.
GPS Navigation	Garmin 12-channel, WAAS-enabled
Data Sampling	Sensor dependent
Data Synchronization	Synchronized to GPS position
Data File	PEI Binary data format
Storage	80 GB
Supplied Software	**PEIView:** Allows fast data Quality Control (QC) **Data Format:** Geosoft GBN and ASCII output **PEIConv**: For survey preparation and survey plot after data acquisition
Software	**Calibration:** High voltage adjustment, linearity correction coefficients calculation, and communication test support **Real Time Data Collection:** Automatic Gain real time control on natural isotopes and PC based test and calibration software suite
Power Requirements	24 to 32 VDC
Temperature	Operating:-10 to +55 deg C; storage:-20 to +70 deg C

Appendix B

Maps



Map 1: Rusty Springs property flight path.



Map 2: Rusty Springs property digital terrain model.

095967

Yukon
Energy, Mines and Resources

Claim Status Report

27 August 2012

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	NTS #'s
Alecia	YB53905	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Ben	YB53912	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Calli	YB53902	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08
Casey	YB53909	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Eric 1 - 6	YB41182 - YB41187	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Eric 7 - 8	YB48768 - YB48769	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Glen	YB53901	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
James	YB53914	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Jessica 1 - 6	YB41188 - YB41193	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Jessica 7 - 8	YB48750 - YB48751	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Joel 5 - 8	YB53897 - YB53900	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Katie	YB53904	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Kayla	YB53911	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Kelsey	YB53906	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Lane	YB53910	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Lauren	YB53907	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Marlo	YB53903	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Shelly 1 - 14	YB48752 - YB48765	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K08
Shelly 15 - 16	YB48766 - YB48767	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K08
Trevor	YB53913	2012/12/10	Eagle Plains Resources Ltd.	100.00	116K09
Trog 29	YB88221	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Trog 50	YB88242	2013/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09
Tyler	YB53908	2011/12/10	Eagle Plains Resources Ltd.	100.00	116K08, 116K09

Criteria(s) used for search:

CLAIM DISTRICT: 1000002 CLAIM STATUS: ACTIVE & PENDING OWNER(S): EAGLE PLAINS RESOURCES LTD.
REGULATION TYPE: QUARTZ

Total claims selected : 52

Left column indicator legend:

R - Indicates the claim is on one or more pending renewal(s).
P - Indicates the claim is pending.

Right column indicator legend:

L - Indicates the Quartz Lease.
F - Indicates Full Quartz fraction (25+ acres)
P - Indicates Partial Quartz fraction (<25 acres)
D - Indicates Placer Discovery
C - Indicates Placer Codiscovery
B - Indicates Placer Fraction