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**ASSESSMENT REPORT**

describing

**DIAMOND DRILLING**

at the

**STEEL PROPERTY**

Steel	1	YC10395
	2	YB03021
	3	YC10396
	4	YB03023
	5-18	YC10397-YC10410
	21-28	YC10411-YC10418

NTS 106D/16

Latitude 64°50'N; Longitude 134°17'W

in the

Mayo Mining District  
Yukon Territory

prepared by

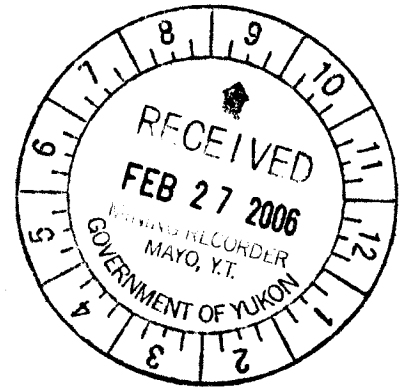
Archer, Cathro & Associates (1981) Limited

for

**CASH MINERALS LTD.**  
and  
**TWENTY-SEVEN CAPITAL CORP.**

by

Matthew R. Dumala, B.A.Sc., EIT  
October 2005



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## SUMMARY

The Steel property is located within the Wernecke Mountains of east-central Yukon, 160 km northeast of the village of Mayo. It is owned by Twenty-Seven Capital Corp. and is under option to Cash Minerals Ltd. The exploration target is an uraniferous iron-oxide copper-gold (IOCG) deposit associated with a large discordant breccia body. Magnetic, gravity and radiometric surveys have defined anomalies on the till- and gravel-covered, approximately 2 km wide floor of the Bear River valley. Specimens of radioactive float located downhill from a prominent massive hematite knob reportedly assayed between 0.178 and 0.244%  $U_3O_8$ .

The property consists of 26 claims totalling about 520 hectares. It covers an area that was extensively explored for iron ore by Pacific Giant Steel Ores Ltd. in the late 1960s. This work included the construction of a winter road and airstrip and the completion of 15 diamond drill holes. Texaco Canada Resources Ltd. restaked the property in the early 1980s and performed radiometric surveys, prospecting and trenching. In 1989 Chevron Canada Ltd. relogged the core and remapped the property.

Archer, Cathro & Associates (1981) Limited purchased the claims from Chevron after it left the mineral industry in 1992 and later sold the claims to Nordac Resources Ltd (now Strategic Metals Ltd). The property was dormant for several years before Strategic performed magnetic and gravity surveys in spring 2004. Twenty-Seven purchased the claims in winter 2005.

Three holes were completed in 2005, totalling 580.65 m. These holes tested some of the geophysical anomalies identified in 2004 by Strategic. The drilling failed to explain the anomalies. Assays returned only background levels of uranium and weakly anomalous copper values. The highest copper assay (0.36% over 1.52 m) came from hole S05-1. Hole S05-3 returned the longest mineralized intersection (0.11% copper over 16.17 m) from sediments adjacent to the breccia body.

## INTRODUCTION

The Steel property is located in the Wernecke Mountains of east-central Yukon Territory. The property covers a large semimassive hematite occurrence discovered in the 1960s and geophysical anomalies identified in 2004. The mineralization and anomalies are associated with a discordant breccia body and are consistent with the iron-oxide copper-gold (IOCG) exploration model. Twenty-Seven Capital Corp. purchased the property in December 2004. It and three other properties owned by Twenty-Seven are under option to Cash Minerals Ltd.

Exploration work in 2005 on the Steel property was conducted between June 20 and July 10 from a tent camp located on the Bond property, 35 km to the southwest. Drill moves and shift changes were done using a Bell 206B helicopter based in the camp. A total of 580.65 m of diamond drilling was completed in three holes. The author participated in the work and his Statement of Qualifications appears in Appendix I.

## PROPERTY, LOCATION AND ACCESS

The property is located in Yukon Territory at latitude 64°50'N and longitude 134°17'W on NTS map sheet 106D/16 (Figure 1). It comprises a total of 26 mineral claims covering approximately 520 hectares. The claims were staked under the Yukon Quartz Mining Act and are registered in the name of Archer Cathro, which holds them in trust for Twenty-Seven. Claim registration data are summarized below while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Steel 1	YC10395	April 12, 2014
2	YB03021	April 12, 2014
3	YC10396	April 12, 2014
4	YB03023	April 12, 2014
5-18	YC10397-YC10410	April 12, 2014
21-28	YC10411-YC10418	April 12, 2014

\*expiry dates include 2005 work which has been filed for assessment credit but not yet accepted.

Claims staked under the Yukon Quartz Mining Act can be maintained in good standing by performing approved exploration work to a dollar value of \$100 per claim per year. Exploration work is subject to Mining Land Use Regulations of the Yukon Quartz Mining Act, which requires permits prior to performing advanced exploration programs.

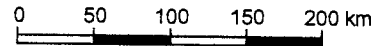
The Steel property is located 160 km northeast of the village of Mayo, which is accessible via the Yukon highway system using the Klondike Highway and Silver Trail. Mayo is situated 407 km by road north of Whitehorse. The closest road access to the property is at McQuesten Lake, which lies 87 km by road northeast of Mayo and 67 km south of the camp on the Bond claims. From McQuesten Lake the Wind River Trail, an abandoned winter road, extends northward to the Peel Basin. A cat trail branches off the winter road and leads to the Bear River airstrip, a gravel airstrip 2 km south of the property.

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FIGURE 1

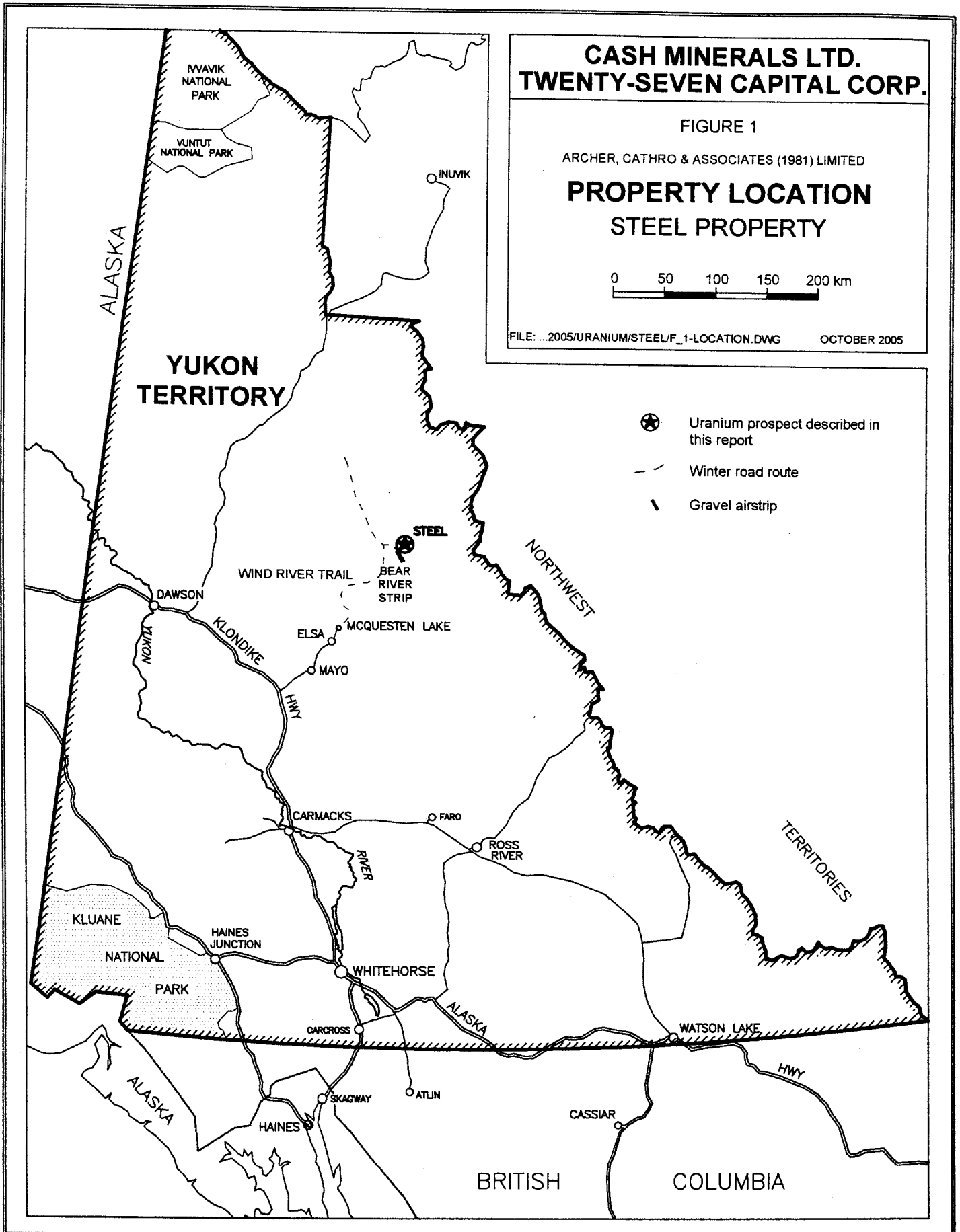
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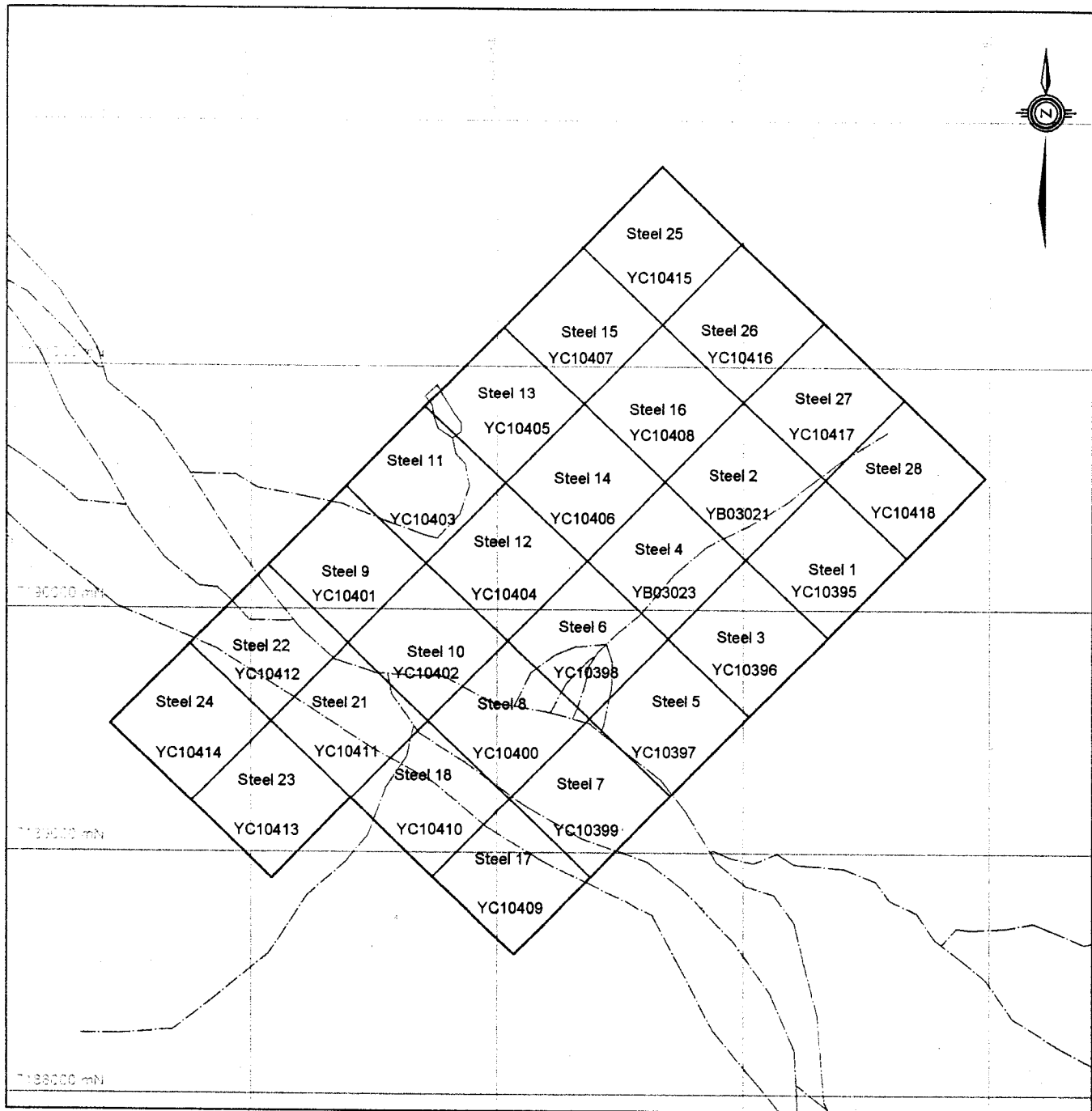
**PROPERTY LOCATION  
STEEL PROPERTY**



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OCTOBER 2005





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FIGURE 2

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**CLAIM LOCATION  
STEEL PROPERTY**



Access to the property in 2005 was accomplished using a Bell 206B helicopter based out of the Bond camp and operated by Fireweed Helicopters Ltd. of Whitehorse. Fuel was flown from Mayo to the Bear River airstrip or Quartet Lakes (32 km north of the property) using an Islander on wheels operated by Sifton Air or a turbo modified Otter on floats operated by Black Sheep Cattle and Aviation Co. Ltd., both of Whitehorse.

## **HISTORY**

### **Regional**

The first report of mineralization in the Wernecke Mountains was the discovery of hematite rich float in river gravels by prospectors on route to the Klondike Goldfields in 1898. A few copper and gold prospects were identified and staked prior to the 1960s, but no serious exploration was undertaken.

Following discovery of the Crest Iron Deposit by California Standard Company Ltd. in 1961 several hematite bodies were staked and briefly explored. This wave of exploration coupled with improved access spurred by construction of the Wind River Trail led to new copper discoveries in the mid 1960s, some of which were drilled or bulldozer trenched (Deklerk and Traynor, 2004).

Uranium was first discovered in 1974 at the Igor property, located 28 km northwest of the Steel property, within a hematitic and locally copper rich breccia body by Ogilive Joint Venture (Chevron Canada Ltd., Marietta Resources International Ltd. and Aquitaine Company of Canada Ltd.). The following summer Wernecke Joint Venture (Chevron and Aquitaine) conducted helicopter borne radiometric reconnaissance throughout the district and staked a number of other properties based on ground radiometric follow up. Most of these occurrences are associated with large iron oxide rich breccia bodies that are informally known as the Wernecke Breccias. Eldorado Nuclear optioned Wernecke Joint Venture's properties and regional exploration rights in 1976. It conducted property and regional exploration in 1976 and 1977 along with a number of other companies, notably Noranda Minerals Ltd. and Pan Ocean Oil Ltd. Wernecke Joint Venture resumed exploration in 1978 after Eldorado Nuclear began to drop its optioned properties. Systematic uranium exploration by various parties continued in the Wernecke Mountains until 1982, when uranium prices fell.

Another wave of regional and property exploration occurred in the mid 1990s when Westmin Resources Ltd. and Newmont Mining Corp. explored selected Wernecke Breccias for gold and copper using the IOCG model.

### **Property**

Although abundant hematite rich float was noted at the mouth of Bear River in 1898, the source was not staked until 1962. Pacific Giant Steel Ores Ltd. was formed to explore the prospect. In 1967 it constructed a winter road and airstrip and the following summer explored for iron ore with an airborne magnetic survey and 15 diamond drill holes totalling 1448.7 m (Williamson, 1967 and Everard, 1967). The claims expired after it was determined that the iron is hosted in a



discordant breccia body and not in a sedimentary horizon like the Crest Iron Deposit, 110 km to the northeast.

Texaco Canada Resources Ltd. restaked the iron occurrences for uranium potential in 1980 and explored with radiometric surveys, rock sampling, prospecting and hand trenching in 1981 and 1982 (Hajek and Munday, 1981 and Lhotka and Olson, 1983).

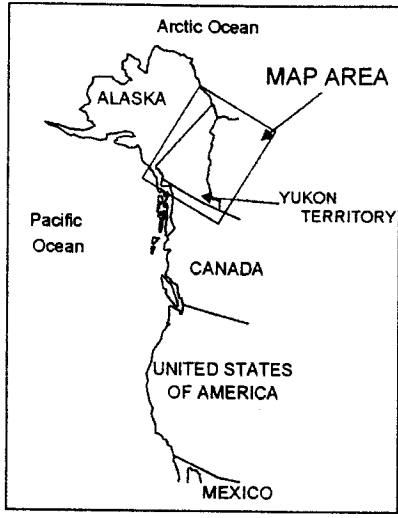
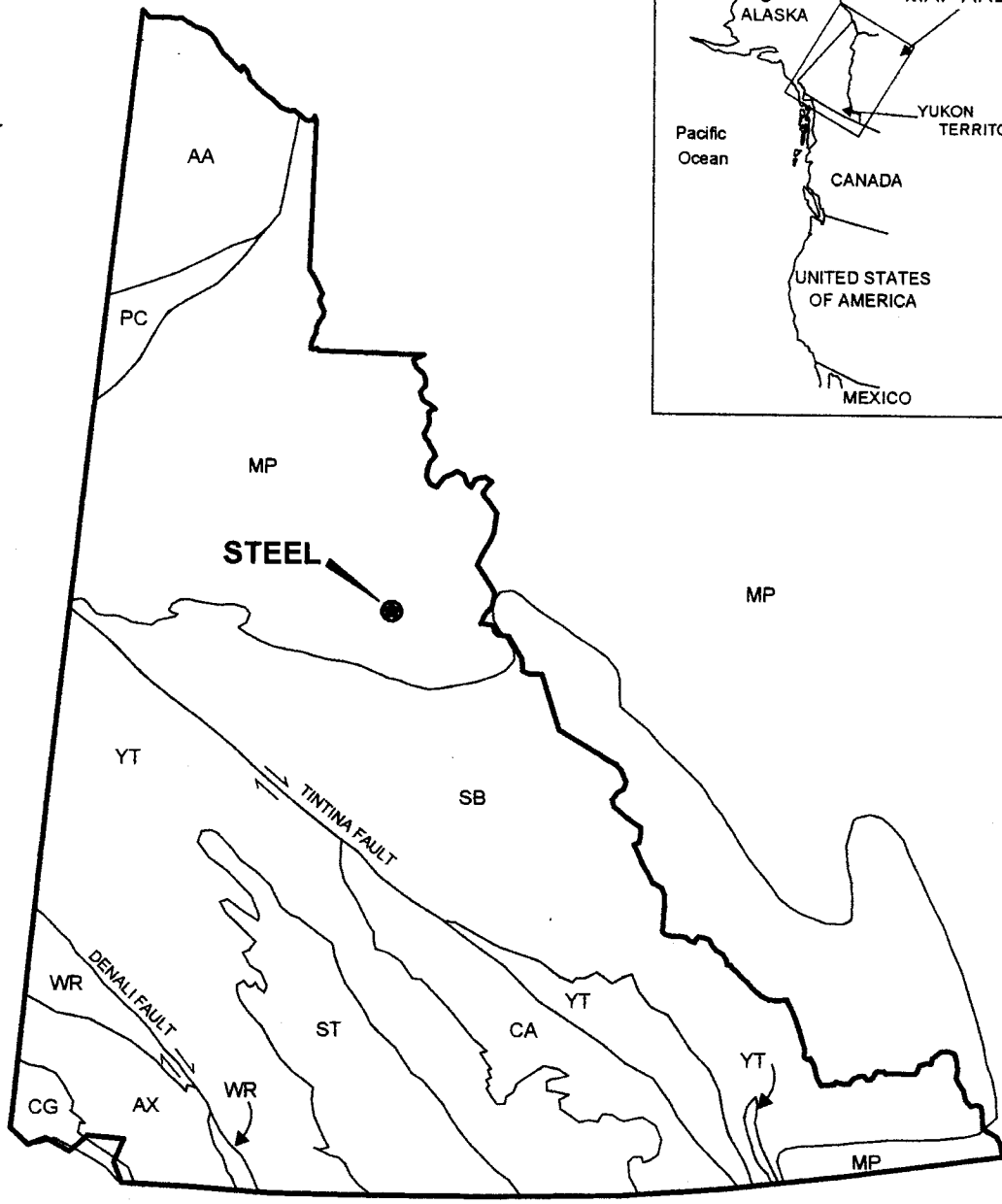
The Steel property was staked in 1989 by Chevron which mapped and relogged drill core that year (Hitzman, 1990a) before adding more claims in 1990. Archer Cathro purchased the property in 1992 when Chevron terminated its mineral exploration activities in Canada. Archer Cathro later sold the claims to Nordac Resources Ltd. which subsequently became Strategic. In early spring 2004, Strategic conducted ground magnetic and gravity surveys over much of the property (Eaton, 2004 and Hildes, 2004). Cash optioned the property in fall 2004 along with three other properties in the Wernecke Mountains. In December 2004, Strategic sold its interest in the properties to Twenty-Seven.

### **PHYSIOGRAPHY AND GEOMORPHOLOGY**

The Steel property extends across a broad river valley and up the adjacent hillsides. The Bear River, a major tributary of the Wind River, bisects the property and occupies a 50 to 200 m wide braided channel. The river gravels are flanked by 200 to 1500 m wide benches comprised of glacial and glaciofluvial deposits. On the edges of the valley, the benches give way to glacially scoured outcrops of resistant weathering units surrounded by talus. Slopes on the valley margins gradually increase from 5 to 35°. The floor of the valley is about 1100 m above sea level, while the ridges to the east and west of the property reach elevations of 1850 m. Outcrops are restricted to the resistant hummocks and creek cuts in the transition zone between glacial benches and talus slopes.

There are suitable campsites on the property and water is available on a year round basis from the Bear River. There is no commercial timber on the property. Vegetation on the glacial benches typically consists of grasses, moss and buckbrush with scattered clumps of stunted spruce. Open rock predominates on talus slopes while the river channel exhibits gravel bars locally stabilized by alder.

The climate in the Wernecke Mountains is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, cool summers. Average temperatures in January are about -25°C and in July about 10°C. Total annual precipitation is approximately 30 cm, mainly occurring as rain during the summer months. Maximum snow pack averages about 40 cm. Although summers are relatively mild, arctic cold fronts often cover the area and snowfall can occur in any month. Sunlight ranges from 22 hours per day in late June to approximately six hours per day in late December. The property is usually explorable from mid May until mid November.



**ANCESTRAL NORTH AMERICA**

- MP** Mackenzie Platform
- SB** Selwyn Basin

**TERRANES**  
Displaced Continental Margin

- AA** Arctic Alaska
- CA** Cassiar
- PC** Porcupine

**Pericratonic Terranes**

- YT** Yukon-Tanana / Slide Mountain

**ACCRETED TERRANES**

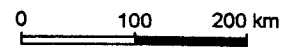
- ST** Stikinia / Cache Creek
- AX** Alexander
- WR** Wrangellia
- CG** Chugach

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FIGURE 3

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**TECTONIC SETTING  
STEEL PROPERTY**



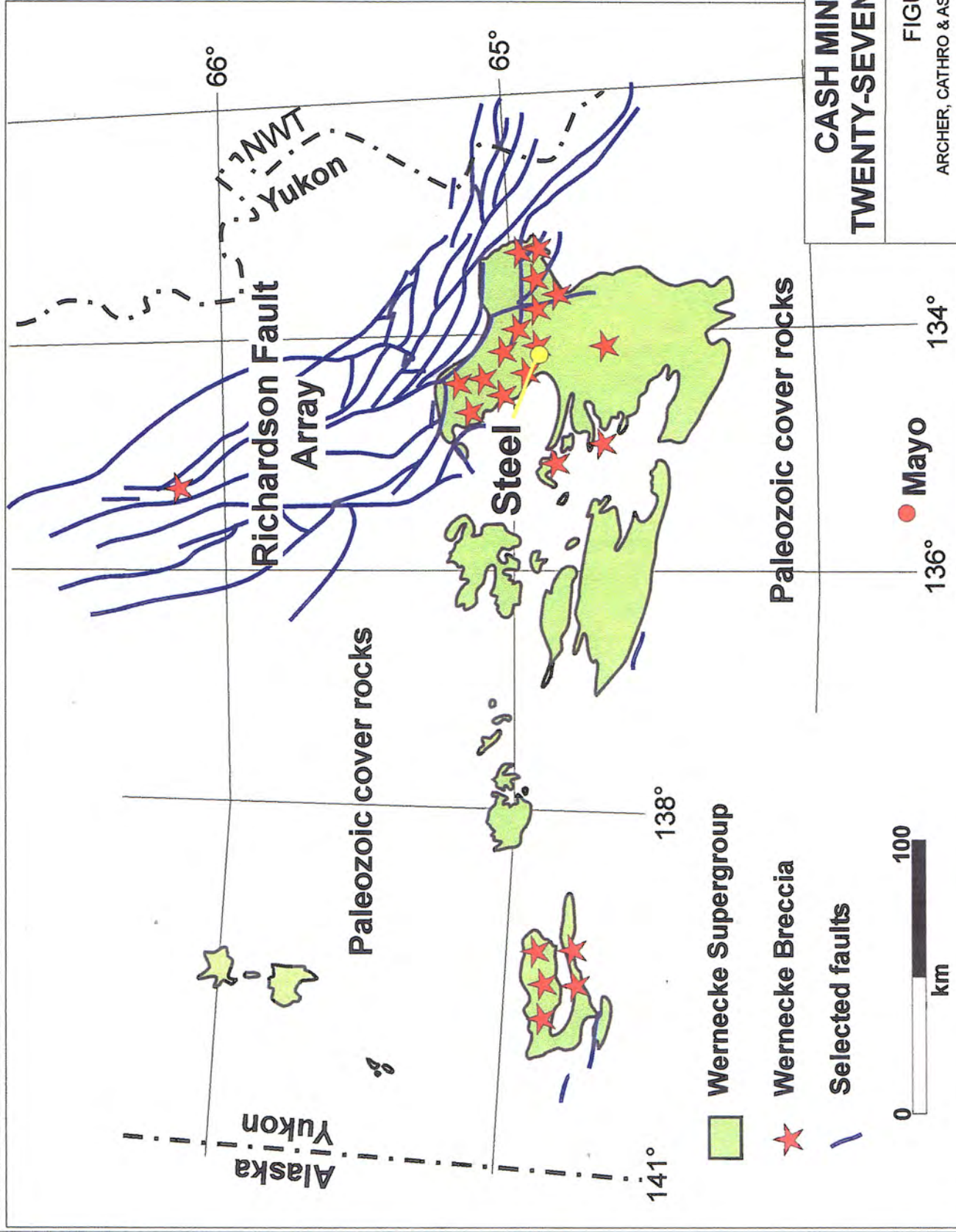
## REGIONAL GEOLOGY

The Steel property lies within the Mackenzie Platform tectonic element inside a 2500 sq km window of Proterozoic age rocks (Figure 3). This window is the largest in a series of similar windows that stretch westerly across central Yukon from the Northwest Territories to Alaska (Figure 4). The Proterozoic rocks are predominantly fine grained clastic sedimentary rocks with lesser carbonate rich units, rare volcanic flows, scattered intrusive dykes of varying ages and widespread, discordant breccia bodies (Wernecke Breccias), which comprise about 3 to 5% of the rocks in each window (Delaney, 1981). The Proterozoic windows are surrounded by Paleozoic platform carbonates and shales. Recent mapping and age determinations suggest that the Proterozoic sedimentary rocks are about 1850 to 1750 million years old and that the breccia bodies were formed about 1600 Ma (Thorkelson, et al., 2001a). These ages closely resemble those of similar units in Australia, which has led to speculation that Laurentia (North America) and Australia were once joined and that the breccia bodies were formed during initial rifting (Bell and Jefferson, 1987 and Thorkelson, et al., 2001a). The various intrusive dyke sets in the Wernecke Mountains have been dated at 1710, 1380, 1270 and 613 Ma (Thorkelson, et al., 2001b and Delaney, 1981).

The Wernecke Breccias have attracted considerable academic and economic interest because of their abundance, size and characteristic mineralogy, which in many respects resemble those in similar age breccia bodies found in Australia (Hitzman, et al., 1992). The breccia bodies are closely related to large scale faults. They vary from irregularly shaped pipes up to 5000 m in diameter to tabular bodies a few metres wide. Their composition typically ranges from: clast supported phases dominantly comprised of angular homolithic clasts; through matrix supported phases with subangular to rounded, variously altered clasts; and, to occasional clast deficient phases that are thought to have been channelways with high fluid flow. The breccia clasts are usually derived from adjacent sedimentary units but also include rare intrusive fragments. Up to 100 m diameter blocks of unbrecciated sediment occur in some breccia bodies. Dolomite, ankerite, siderite, hematite and chlorite are the most abundant matrix materials, but albite, calcite, magnetite, barite, quartz, pyrite and chalcopyrite are also common. The size of breccia bodies and intensity of alteration generally increases with depth.

The sedimentary rocks typically exhibit greenschist facies regional metamorphism and were affected by the Racklan, Corn Creek and Laramide Orogenies. Several generations of faults are present, many of which are associated with a very old set of westerly, northwesterly and northerly trending structures called the Richardson Fault Array (Delaney, 1981). In the immediate vicinity of the Steel property the strongest faults exhibit northeasterly strikes with steep northerly dips or easterly strikes with near vertical dips. Some researchers have suggested that faults played important roles in breccia formation (Delaney, 1981 and Bell, 1986). However, many of the structures are clearly much younger or reactivated later because they juxtapose Proterozoic and Paleozoic units.

Table I briefly describes the major lithological units in vicinity of the property.



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**FIGURE 4**

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**REGIONAL GEOLOGY  
STEEL PROPERTY**

**Table I: Regional lithological descriptions**

Age	Description
Quaternary	Alluvium, colluvium and glacial deposits.
Cretaceous	Continental clastic sediments including shale, conglomerate and coal measures.
Upper Paleozoic-Proterozoic	Marine sediments including carbonate, arenite, pebble conglomerate, siltstone and shale.
Middle Proterozoic	Wernecke Breccia – discordant hematitic breccia largely comprised of variably metasomatized country rock fragments. Contacts can be sharp or gradational. Breccias can include three gradational phases – homoclastic, heteroclastic or clast deficient. Homoclastic breccias consist of angular, lithologically similar fragments with minor carbonate- and hematitic-rich matrix. Heteroclastic breccias consist of rounded, lithologically diverse fragments supported by a more complex matrix commonly containing carbonate, hematite, magnetite, chlorite, pyrite, chalcopyrite and/or barite. Clast deficient breccias are found in late tabular zones or pipes and are comprised of typical heteroclastic matrix minerals with only a few small wallrock fragments.
Lower Proterozoic	Wernecke Supergroup – a conformable marine sequence approximately 13 km thick consisting of basal Fairchild Lake Group, middle Quartet Group and upper Gillespie Lake Group. Fairchild Lake Group is predominantly siltstone and limy siltstone with minor slate and dolostone. Quartet Group is deeper water shale, siltstone and very fine sandstone. Gillespie Lake Group is dolostone and silty dolostone with minor shale and siltstone.

**REGIONAL MINERALIZATION**

The Wernecke Breccias are notably enriched in iron, copper, uranium, gold, cobalt, barium and molybdenum and slightly enriched in rare earth elements. Iron oxide mineralization is ubiquitous in the Wernecke Breccias. Magnetite is most abundant in prograding alteration sequences. It normally occurs as disseminated euhedral grains but locally forms semi massive bands up to 5 m thick. Hematite is found in all breccia phases but is best developed in retrograde alteration assemblages where it appears as specular hematite and as martite replacing magnetite.

Pyrite can occur with the iron oxide minerals but becomes more abundant deeper in the system, particularly within breccia bodies cutting Fairchild Lake Group strata. Iron bearing carbonate minerals such as ferroan dolomite and siderite are also common.

Copper is present in most Wernecke Breccias. Disseminated chalcopyrite is found in breccias cutting Fairchild Lake Group rocks, where it is associated with intense albite alteration, and in those cutting Quartet Group rocks, where it is found in strongly carbonate altered zones. Semi

massive chalcopyrite occurs with breccia matrix minerals in late stage channelways within some breccia bodies. Quartz-carbonate veins are reported within the Fairchild Lake Group, Quartet Group and Gillespie Lake Group. These veins often contain chalcopyrite and pyrite. Other copper minerals (chalcocite, bornite and copper carbonate minerals) have been reported in weathered rocks but no significant supergene enrichment has been identified.

Uranium occurs in three main forms in the Wernecke Mountains. Brannerite appears as scattered blebs within most breccia bodies and in quartz veins and fractures peripheral to them. Although pockets of coarse crystals up to 40 cm across have been discovered, no economically significant brannerite occurrence has been identified. Pitchblende is the main uranium mineral in the other two types of showings: (1) locally uraniferous carbonate-chalcopyrite-barite-magnetite assemblages within late stage channelways in Wernecke Breccias (Hitzman, 1990b and Eaton and Archer, 1982) and (2) much younger structurally controlled zones that host uraniferous veins immediately below major unconformities (Eaton and Archer, 1982).

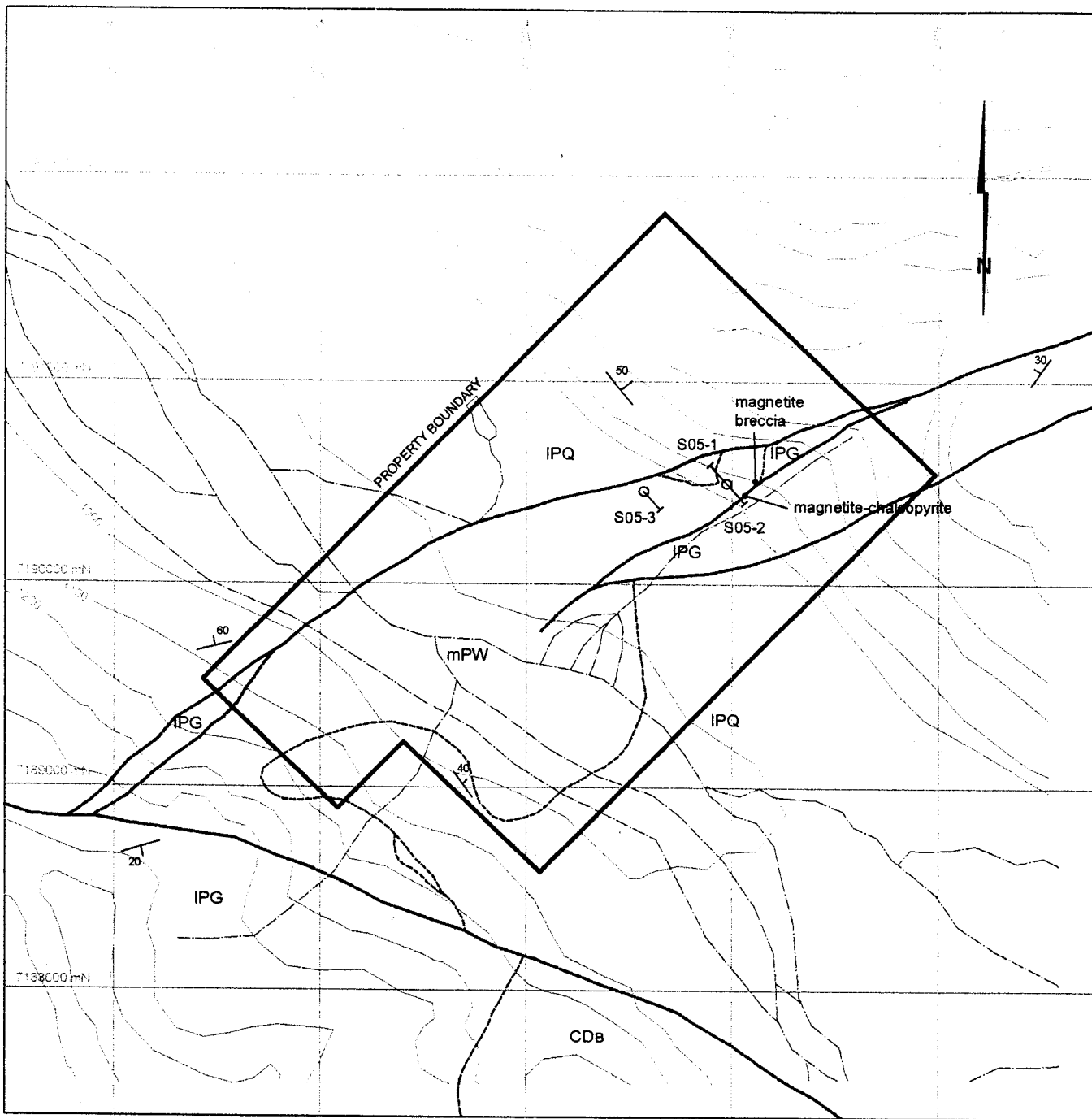
### **PROPERTY GEOLOGY**

The centre of the Steel property is underlain by Wernecke Breccias that are mainly blanketed by an unknown thickness of glacial and glaciofluvial overburden. The shape of the breccia is poorly defined but it appears to form a 3 km long, up to 1 km wide body that is largely fault bounded (Figure 5). At its northeast end, the breccia pinches out between two splays of an anastomosing, northeasterly trending fault system that forms a graben. Thin slivers of Gillespie Lake Group carbonates also occur within the graben and abut the breccia. To the northwest and southeast of the graben are Quartet Group siltstone and fine sandstone. A major east-southeasterly trending high angle fault truncates the graben at its southwesterly end and juxtaposes breccia against a package containing Gillespie Lake Group carbonates and unconformably overlying Cambrian to Devonian carbonates. Only in its southeastern corner does the breccia appear to be in non-fault contact with Quartet Group strata. Principal lithologies on the Steel property are described in the following paragraphs from oldest to youngest (Hitzman, 1990a, Eaton and Wober, 2005).

**Quartet Group** comprises medium grey to black siltstone and brownish fine quartzite that are bleached adjacent to the breccia along its non-faulted, southeastern contact. There the contact appears to be gradational ranging from fresh sediments to disrupted sediments to true breccia.

**Gillespie Lake Group** is composed of orange-brown weathering dolomite with minor siltstone interbeds.

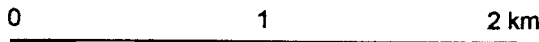
**Wernecke Breccia** typically consists of rounded, variously altered clasts in a quartz-sericite-chlorite-carbonate matrix. The clasts range from millimetres to 5 m in diameter but most are less than 5 cm across. They are matrix supported and are predominantly derived from the Quartet Group. In two areas, breccia outcrops consist of semi massive to massive hematite. The largest is about 300 m long by 180 m wide. These zones contain sparse, less than 2 cm diameter wallrock clasts.



- CDB Cambrian-Devonian carbonates
- mPW Wernecke Breccia
- IPG Gillespie Lake Group dolostone and minor siltstone
- IPQ Quartet Group siltstone and fine sandstone
- Semi massive to massive hematite
- Contact
- Fault
- 60° Bedding orientation
- 2005 diamond drill hole

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FIGURE 5  
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED  
**PROPERTY GEOLOGY**  
**STEEL PROPERTY**



UTM ZONE 8, NAD 83

## **PROPERTY MINERALIZATION AND GEOCHEMISTRY**

Most of the Steel property is covered by glacial till, river gravel or talus; thus, mineral distribution is not well understood. The most prominent features are the semi massive to massive hematite outcrops that form a series of low hummocks in a 300 m long by 180 m wide area on the north side of the river valley (Iron Knob Showing). Drilling conducted by Pacific Giant in 1967 focussed on this showing, exploring for iron ore. This zone is the largest concentration of semi massive to massive iron oxide recognized to date in the Wernecke Breccias. The hematite occurs as specular hematite intergrown with martite and minor residual magnetite. Geophysical surveys indicate other areas of higher magnetic susceptibility that are blanketed by glacial till (Figure 6). These areas could represent larger hematite masses or zones where magnetite has not undergone retrograde alteration. Some of the magnetic anomalies coincide with gravity anomalies (Figure 7).

Radiometric prospecting has not been systematically conducted across the property because of the overburden cover. However, limited work has identified radioactive float occurrences immediately south of the hematite outcrops. Specimens of this material assayed between 0.178 and 0.244%  $U_3O_8$ . Most of these specimens also returned elevated gold values, ranging up to 610 ppb (Hajek, 1981).

Copper mineralization has been discovered wherever breccia is exposed but it has not been systematically sampled or mapped. Chalcopyrite is the most common copper mineral, occurring as weak disseminations in hematite or carbonate-rich breccias. Chalcocite has been noted in a few specimens.

In 2005, only limited mapping and prospecting was done in the area of the drilling. A 2 by 2 m, massive magnetite outcrop was found along a creek bank to the east of the drill area while minor disseminated magnetite and chalcopyrite were seen 50 m further downstream (Figure 5).

### **2005 DIAMOND DRILLING**

#### **General**

Drilling was done between June 21 and July 9 and was contracted to Superior Diamond Drilling Ltd. of Kelowna. The work was done with a custom made, helicopter portable diesel powered drill using BTW equipment. Three holes totalling 580.65 m were drilled from hand made drill pads, as illustrated on Figures 5, 6 and 7.

The drill core was transported from the drill sites to logging areas at the Bond and Igor properties, where recovery was measured, geological and geotechnical logging were performed and splitting was done. Geologically and mineralogically favourable intervals from each hole were split with one-half bagged and sent for analysis, and the other half returned to the core box. The core boxes from holes S05-1 and S05-2 are stored at the Bond property, while the core boxes from S05-3 are stored at the Igor property. Appendix II contains the geological and geotechnical logs, while synoptic logs are contained in Appendix III.