

095603

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 -510 West Hastings Street
Vancouver, B.C. V6B 1L8

Telephone: 604-688-2568

Fax: 604-688-2578

ASSESSMENT REPORT

describing

AIRBORNE GEOPHYSICS AND DIGITAL DATA COMPILATION

at the

WIN PROPERTY

Doh 1-464	YC49624-YC50087
467-554	YC50090-YC50177
556-583	YC50178-YC50205
585-586	YC50206-YC50207
Reer 1-126	YC49261-YC49386
Win 1-274	YC42916-YC43189



NTS 106E/02 and /03
Latitude 65°09'N; Longitude 134°54'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
January 2007

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	1
PROPERTY LOCATION, CLAIM STATUS AND ACCESS	1
HISTORY	1
PHYSIOGRAPHY AND GEOMORPHOLOGY	3
REGIONAL GEOLOGY	3
REGIONAL MINERALIZATION	5
PROPERTY GEOLOGY	6
PROPERTY MINERALIZATION AND GEOCHEMISTRY	7
AIRBORNE GEOPHYSICS	8
DISCUSSION AND CONCLUSIONS	10
REFERENCES	11

APPENDICES

- I STATEMENT OF QUALIFICATIONS
- II EXCERPT FROM MCPHAR FINAL REPORT

FIGURES

<u>Number</u>		<u>Following Page</u>
1.	Property Location	1
2.	Claim Location	In Pocket
3.	Tectonic Setting	3
4.	Regional Geology	3
5.	Compilation (TMI) – Total Magnetic Intensity	In Pocket
6.	Compilation (FVD) – First Vertical Derivative	In Pocket

TABLES

Table I: Regional Lithological Descriptions	4
---	---

INTRODUCTION

The core of the Win property was staked by Twenty-Seven Capital Corp. in spring 2006. Additional claims were staked following the completion of an airborne magnetic survey. The Win property and 18 other properties in the Wernecke Mountains owned by Twenty-Seven are under option to Cash Minerals Ltd. as part of the Yukon Uranium Project.

Exploration work on the Win property was done in spring 2006. Data from reconnaissance and property scale exploration done in the 1970s has been compiled with the airborne results. The author supervised the work and his Statement of Qualifications appears in Appendix I.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The property is located in east-central Yukon Territory at latitude 65°09'N and longitude 134°54'W on NTS map sheets 106E/02 and 106E/03 (Figure 1). It comprises a total of 982 mineral claims covering approximately 19640 hectares. The claims were staked under the Yukon Quartz Mining Act and are registered with the Mayo Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited 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>
Doh 1-464	YC49624-YC50087	July 24, 2007
467-554	YC50090-YC50177	July 24, 2007
556-583	YC50178-YC50205	July 24, 2007
585-586	YC50206-YC50207	July 24, 2007
Reer 1-126	YC49261-YC49386	July 24, 2007
Win 1-274	YC42916-YC43189	March 17, 2007

* expiry dates does not include 2006 work which has not yet been filed for assessment credit.

The Win property is located 175 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 115 km southwest of the Win property. From McQuesten Lake an abandoned winter road extends northward to the Peel Basin. This winter road, the Wind River Trail, passes within 4 km of the property. A cat trail branches off the winter road and leads to the Bear River airstrip, a gravel airstrip 45 km southeast of the property.

HISTORY

Regional History

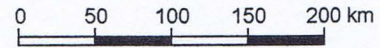
The first report of mineralization in the Wernecke Mountains was the discovery of hematite rich float in river gravels by prospectors enroute to the Klondike Goldfields in 1898. A few copper and gold prospects were identified and staked prior to the 1960s, but no serious exploration was

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

FIGURE 1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

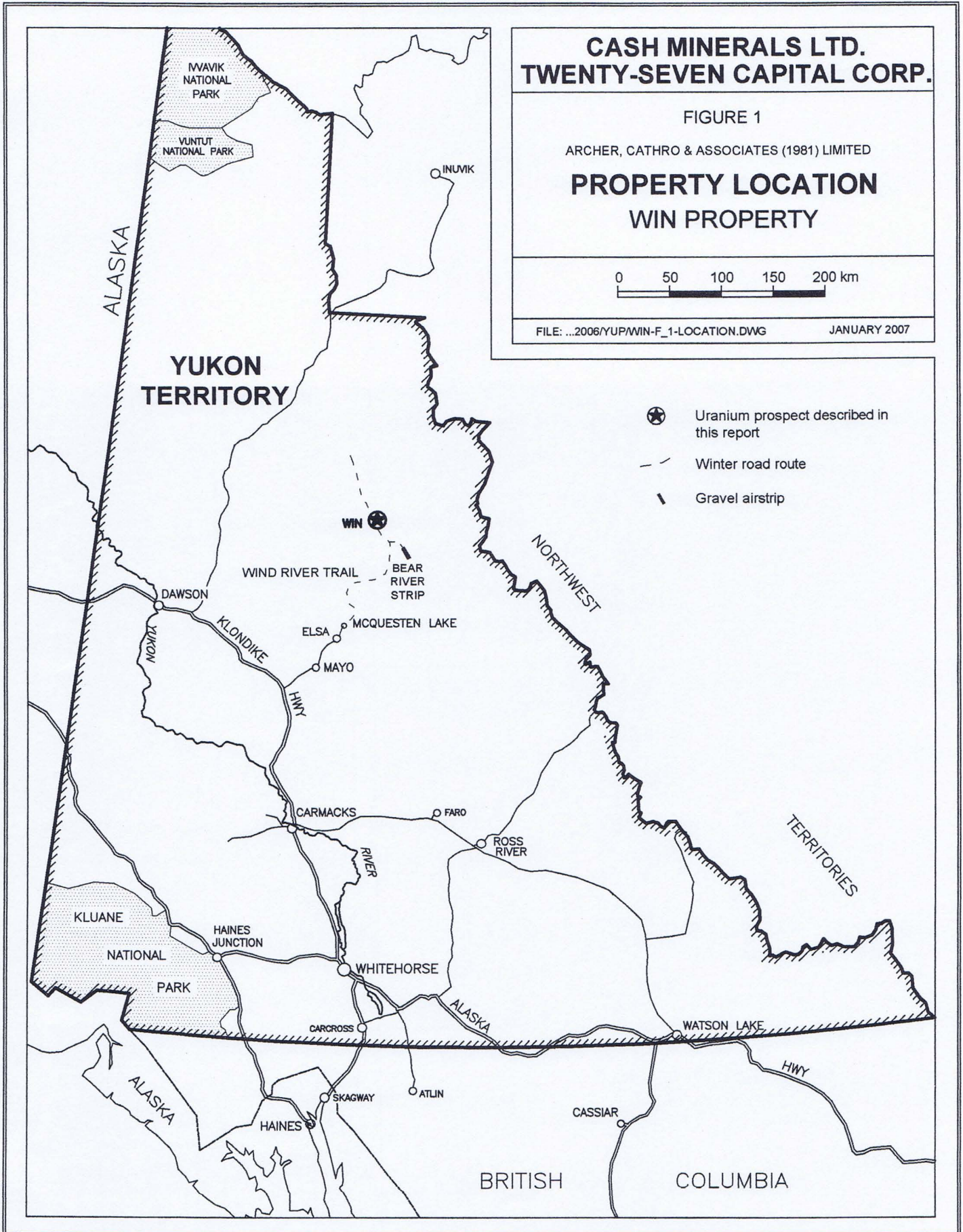
**PROPERTY LOCATION
WIN PROPERTY**



FILE: ...2006/YUP/WIN-F_1-LOCATION.DWG

JANUARY 2007

- Uranium prospect described in this report
- Winter road route
- Gravel airstrip



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 the Wernecke Mountains in 1974 at the Igor property by Ogilvie Joint Venture (OJV) consisting of Chevron Canada Ltd., Marietta Resources International Ltd. and Aquitaine Company of Canada Ltd. The following summer Wernecke Joint Venture (WJV) consisting of 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 Limited optioned WJV 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. WJV resumed exploration in 1978 after Eldorado began to drop its optioned properties. Systematic uranium exploration by various parties continued in the Wernecke Mountains until 1982, when uranium prices fell (Eaton and Wober, 2005).

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

Property History

In summer 1974 OJV staked the MST and Flunk claims, which were located in the northern part of the current Win property, to protect lead-zinc mineralization discovered during a reconnaissance scale exploration program. The joint venture conducted mapping and geochemical sampling that year (Archer, 1975a).

Also in summer 1974, Great Plains Development Company of Canada Ltd. staked the Windy and Jeanette claims to the north and east of the Flunk claims. It conducted soil sampling and geological mapping later that year (Farion, 1975a and b).

In 1975, OJV completed a total of 404.8 m diamond drilling in four holes at the Flunk Showing. It also discovered uranium occurrences within Cambrian dolomite on the MST property, which was then optioned to Eldorado. In 1976, Eldorado completed three diamond drill holes totalling 83.2 m at the MST property (Riley, 1976).

In 1978, WJV staked the Tar claims after identifying an area of anomalous rock and soil uranium geochemistry located approximately 4 km southeast of the MST claims. These uranium anomalies were discovered during a reconnaissance scale survey (Main and Archer, 1978).

PHYSIOGRAPHY AND GEOMORPHOLOGY

The Win property is located in an alpine setting along the divide between the Bonnet Plume and Wind River drainages. It covers a complex system of ridges, broad glacial valleys and cirques immediately southeast of the Bonnet Plume Plateau. Local elevations range from 580 m near the Bonnet Plume Plateau to 1800 m atop a peak at the southwestern edge of the property. There is no commercial timber on the property. Vegetation consists of grasses, moss and buckbrush with scattered clumps of stunted spruce.

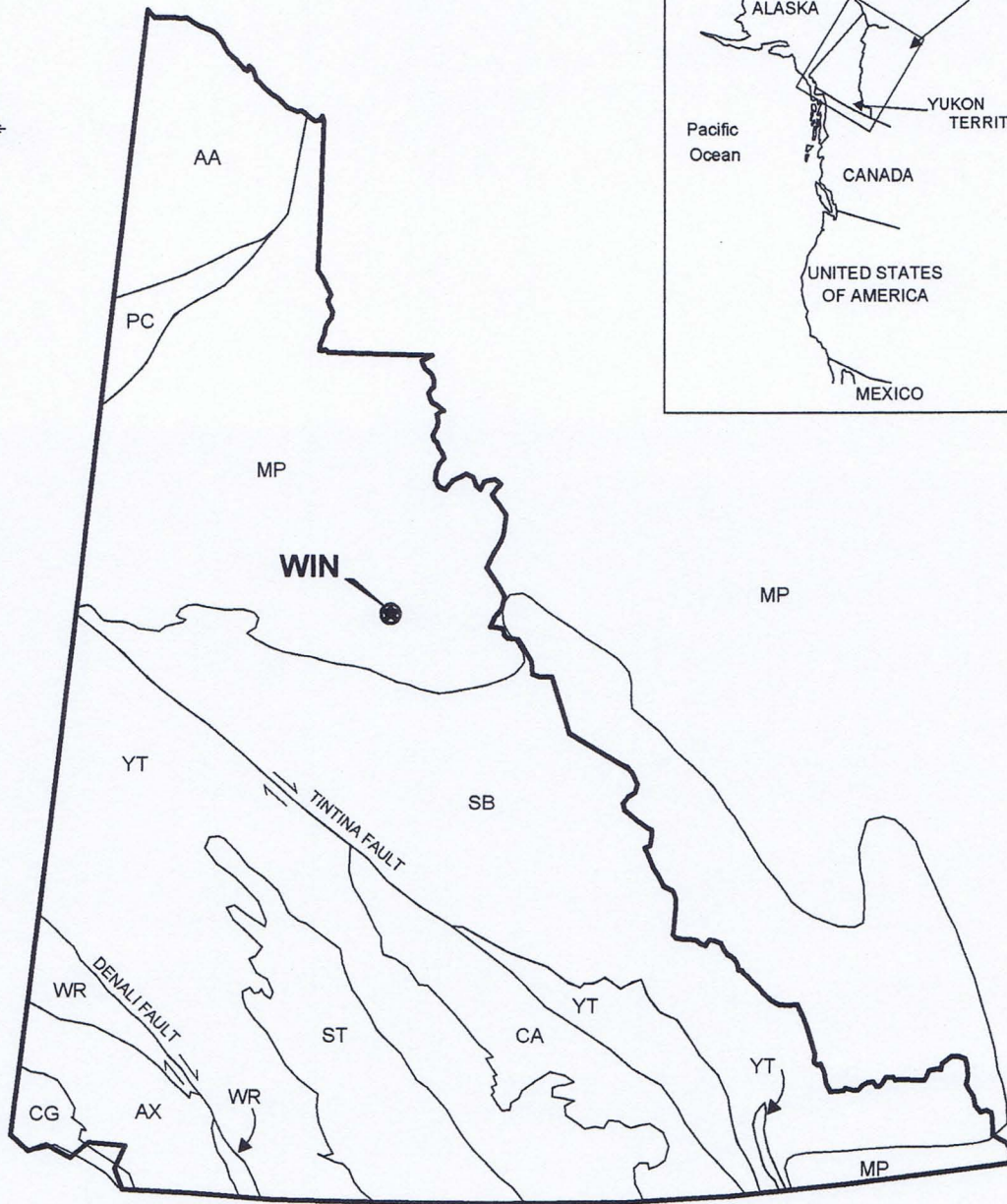
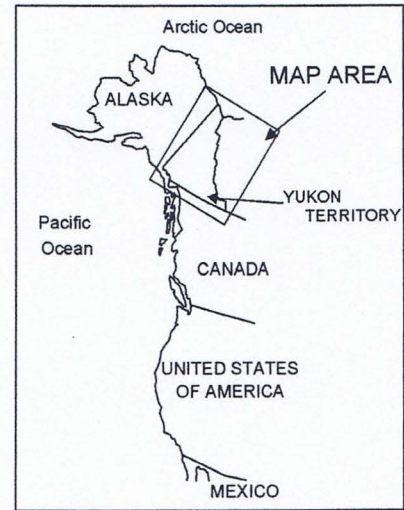
The climate in the Wernecke Mountains is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, cool summers. Average temperatures in January are about -25°C and in July about 10°C . Total annual precipitation is approximately 30 cm, primarily occurring as rain during the summer months. Maximum snow pack averages about 40 cm. Although summers are relatively mild, arctic cold fronts occasionally cover the area and snowfall can happen 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 relatively snow-free from late May until late September.

REGIONAL GEOLOGY

The Win property lies within the Mackenzie Platform tectonic element (Figure 3) along the edge of a 2500 sq km window of Lower Proterozoic age rocks that is the largest in a series of similar exposures stretching westerly across central Yukon from the Northwest Territories to Alaska (Figure 4). The Lower 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 Lower Proterozoic windows are surrounded by Middle 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 Wernecke Breccias 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 (proto 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 Win property is underlain by Cambrian carbonate and clastic sediments. These rocks sit unconformably over Upper Proterozoic marine sediments or Lower Proterozoic Wernecke Supergroup. Along the northern edge of the property, Cambrian strata are in contact with Upper Proterozoic rocks but to the east and southeast they overlie Lower Proterozoic units. Conglomerates and sandstones belonging to the Bonnet Plume Formation lie about 2 km to the northwest.

The Wernecke Breccias, which likely form part of the basement underlying the Cambrian sediments, have attracted considerable academic and economic interest because of their abundance, size and characteristic mineralogy, which in many respects resemble those in similar



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

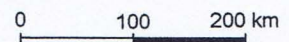
- ST** Stikinia / Cache Creek
- AX** Alexander
- WR** Wrangellia
- CG** Chugach

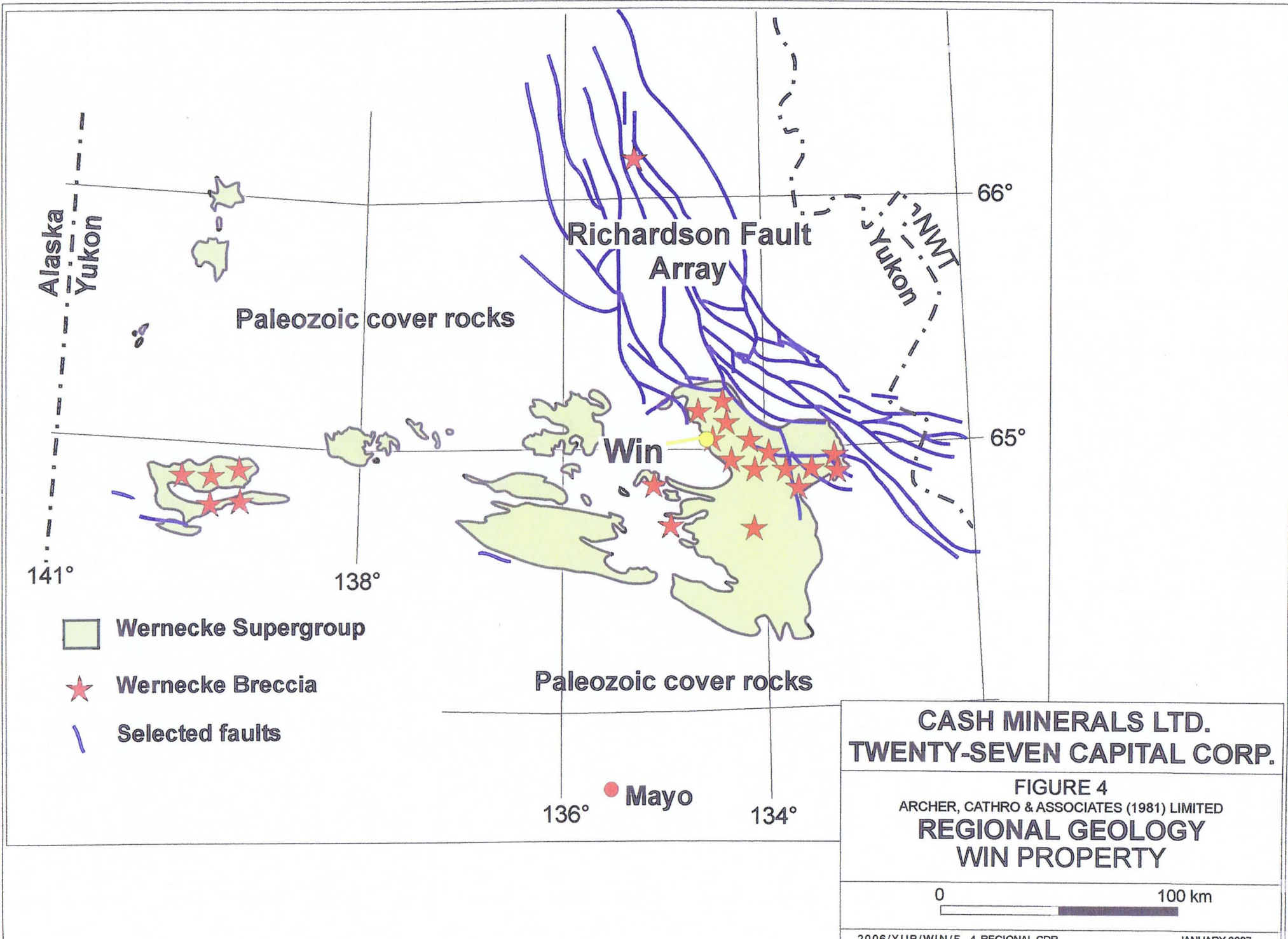
**CASH MINERALS LTD.
TWENTY-SEVEN CAPITAL CORP.**

FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

**TECTONIC SETTING
WIN PROPERTY**





Alaska
Yukon

Paleozoic cover rocks

Richardson Fault
Array

66°
NWT
Yukon

Win

65°

141°

138°

Paleozoic cover rocks

- Wernecke Supergroup
- Wernecke Breccia
- Selected faults

136° Mayo 134°

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

FIGURE 4
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
REGIONAL GEOLOGY
WIN PROPERTY

0 100 km

age breccia bodies found in Australia (Hitzman, et al., 1992). The Wernecke Breccias 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, sericite, hematite and chlorite are the most abundant matrix materials but albite, potassium feldspar, calcite, magnetite, barite, siderite, quartz, pyrite and chalcopyrite are also common. The size of breccia bodies and intensity of alteration generally increases with depth.

The Lower Proterozoic sedimentary rocks typically exhibit greenschist facies regional metamorphism. They were affected by the Racklan, Corn Creek and Laramide Orogenies, while the Upper Proterozoic units were only affected by the latter two orogenies and the Paleozoic rocks by the Laramide Orogeny. 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). 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.

Table I: Regional Lithological Descriptions

STRATIFIED UNITS

QUATERNARY

Alluvium, colluvium and glacial deposits.

QUATERNARY

Continental clastic sediments including coal measures.

-UNCONFORMITY-

UPPER CRETACEOUS

Bonnet Plume Formation: nonmarine conglomerate, sandstone, shale and coal

-UNCONFORMITY-

UPPER CAMBRIAN TO LOWER DEVONIAN

Marine sediments including carbonate, arenite, pebble conglomerate, siltstone and shale.

UPPER CAMBRIAN

Taiga Formation: marine carbonates

-UNCONFORMITY-

LOWER AND MIDDLE CAMBRIAN

Slats Creek Formation: marine conglomerate, sandstone and limestone.

LOWER CAMBRIAN

Iltyd Formation: marine limestone

-UNCONFORMITY-

UPPER PROTEROZOIC

Pinguicula? Group: Marine sediments including carbonate, arenite, pebble conglomerate, siltstone and shale.

-UNCONFORMITY-

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.

DISCORDANT AND INTRUSIVE UNITS

LOWER PROTEROZOIC TO CAMBRIAN

Various narrow dykes of mafic to intermediate composition including lamprophyres.

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.

EARLY PROTEROZOIC

Bonnet Plume River Intrusions: dykes, stocks and megaclasts of fine to medium grained diorite to gabbro.

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 Wernecke Breccias 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) uraniferous carbonate-chalcopyrite-barite-magnetite assemblages within late stage channelways in Wernecke Breccias (Hitzman, 1990 and Eaton and Archer, 1980, 1981, 1982) and (2) much younger structurally controlled uraniferous veins immediately below major unconformities (Eaton and Archer, 1982).

The uranium mineralization in the Cambrian carbonates at the MST and Tar showings on the Win property is unique. In general, the Paleozoic rocks have very low uranium backgrounds. Lead-zinc showings are relatively common in the Paleozoic units and include veins and stockworks, stratabound fractures and breccia and strataform shale hosted occurrences.

PROPERTY GEOLOGY

The Win property is mostly underlain by Cambrian carbonate rocks, which sit unconformably atop Lower to Upper Proterozoic units that are expected to include at various locations Wernecke Supergroup strata, Wernecke Breccia and Pinquicula? Group sediments. Figures 5 and 6 show the compiled results of OJV and WJV geological mapping and geochemical sampling superimposed on airborne magnetic data, which was collected in 2006. The main lithological units in the vicinity of the property, based on the most recent regional mapping (Wallace, 1982), are described in the following paragraphs from oldest to youngest.

Quartet Group (Hs/Hsa) include medium grey to black, interbedded argillite, slate and fine quartzite which are frequently bleached to pale green adjacent to breccia bodies. Contacts between the breccia bodies and sediments are often gradational. This unit crops out immediately northeast and southeast of the property.

Gillespie Lake Group (H1a) consist of orange-brown weathering dolomite that crops out immediately northwest of the property.

Wernecke Breccia (Hb) is subdivided in two types: homoclastic and heteroclastic. The homoclastic breccias exhibit gradational contacts with surrounding wallrocks but show sharp contacts with heteroclastic assemblages. Typical homoclastic breccias consist of angular to subangular fragments with minor carbonate and specular hematite matrix. All of the clasts resemble adjacent wallrocks. Heteroclastic breccias are composed of variably altered

subrounded fragments supported by a matrix of carbonate and hematite with minor quartz and chlorite. Some of the fragments exhibit lithologies and alteration not observed in adjacent wallrocks. No breccia bodies have been mapped on the property but several are located immediately to the northeast and southeast.

Pinquicula? Group (H4) includes buff to brown weathering stromatolitic dolomite, argillite and clastic sediments. This unit is exposed along the northwestern property boundary.

Illytd Formation (C1) contains light grey limestone and dolomite. This formation underlies most of the property. It includes a 6 m thick maroon dolomitic siltstone and shale informally referred to as the Flunk Shale.

Slats Creek Formation (Cwr/Cwr2) comprises light grey cherty carbonates, clastics, brick red sandstone and conglomerate. This unit underlies much of the southern half of the property.

Taiga Formation (Cta) consists of thin bedded recessive weathering carbonate. It unconformably overlies the Slats Creek Formation and forms a narrow band that parallels the southern property boundary.

PROPERTY MINERALIZATION AND GEOCHEMISTRY

The Win property covers a number of uranium, lead and zinc soil geochemical anomalies and three main showings: Flunk, MST and Tar (Figures 5 and 6). Most of the strongly anomalous soil geochemical values are near the main showings.

The Flunk showing occurs in an approximately 60 m thick section of vuggy, Illytd Formation dolomite that is underlain by thin bedded limestone and shaly dolomite, and overlain by a thin horizon of purple shaly dolomite. The showing comprises three mineralized zones. The first zone consists of brecciated dolomite containing pale yellow and yellow-grey sphalerite, galena and minor marcasite (Archer, 1975a). Samples collected from this zone returned a weighted average of 8.19% zinc, 0.46% lead and 39.77 g/t silver across a stratigraphic thickness of 18 m. The second zone exhibits moderately abundant marcasite with lesser pale yellow sphalerite and minor galena in brecciated dolomite. The weighted average grade of samples taken across this zone is 1.11% zinc, 0.14% lead and 4.11 g/t silver across a stratigraphic thickness of 41 m. The third zone is a small outcrop of dolomite breccia with abundant white secondary dolomite veining that is variously mineralized with yellow sphalerite, galena and minor marcasite. A sample collected from this showing returned 3.18% zinc, 0.13% lead and 8.23 g/t silver across 3 m. The best drill intersection was obtained near the first zone. It graded 6.0% zinc, 1.5% lead and 24.0 g/t silver over 6.0 m. The Flunk showing is marked by very high lead and zinc values from soils and stream sediment samples (Archer 1975 c).

The MST showing includes lead-zinc mineralization found in 1974 and uranium mineralization discovered in 1975. Minor amounts of galena, sphalerite and marcasite replace matrix minerals in thin bands within grit horizons. Systematic soil sampling around this showing returned a number of lead and zinc values that exceed the analytical technique's detection limit (4000 ppm). Radioactivity is associated with brecciated dolomite located up section from the lead and zinc

bearing grit. Grab samples of the most radioactive material assayed up to 0.12% U_3O_8 (Archer, 1976). Soil samples collected in the area returned between 2.0 to 21.5 ppm uranium (Archer, 1975b). Three short (less than 30 m) diamond drill holes were completed by Eldorado in 1976. The best intersection assayed 233 ppm uranium over 2.23 m.

The Tar showing is an area of anomalous uranium rock geochemistry located by WJV in 1978. An area of interest approximately 300 m wide by 1500 m long and is hosted by brecciated dolomite similar to that at the MST showing. Rock samples taken from shallow hand pits dug at radiometrically anomalous sites returned 2.5 to 92 ppm uranium. One hand sample assayed 223 ppm uranium. Soil samples collected near the strongest radiometric readings (30 to 70 cps) returned up to 260 ppm uranium.

AIRBORNE GEOPHYSICS

An airborne magnetic survey was conducted over the Win property in spring 2006 by McPhar Geosurveys Ltd. of Newmarket, Ontario, using a Piper Navajo based in Mayo. Excerpts from the final report outlining the methods used in the survey can be found in Appendix II.

A strong magnetic high underlies much of the property (Figure 5). This high is cut by a prominent southeasterly trending linear feature that is best shown by the first vertical derivative of the magnetic response (Figure 6). This feature extends the length of the property and trends onto the adjacent Igor property.

DISCUSSION AND CONCLUSIONS

The linear feature outlined by airborne magnetics approximately corresponds with the contact between the Slats Creek Formation and Illtyd Formation. Although the contact between these formations is shown as an unconformity, it may be controlled in part by an old fault that reactivated during the Cambrian to create a local basin. The MST and Flunk lead-zinc showings are located near the linear feature. Mineralized fluids may have mobilized up a fault and precipitated metals to form these showings.

At the MST and Tar showings, radioactive anomalies and anomalous soil samples occur south of the linear feature, within Slats Creek Formation. Elsewhere in the Wernecke Mountains, the Slats Creek Formation does not contain any anomalous radioactivity or uranium geochemistry. Again, the radioactive and geochemical anomalies suggest that uranium bearing fluids may have migrated from a buried source to surface along structural conduits that are marked by the linear magnetic anomaly.

Detailed mapping and prospecting should be carried out over the property in conjunction with gravity and radiometric surveys. Drilling should be done in the area of known showings as well as any new targets outlined by the geophysical surveys and prospecting.

Respectfully submitted,

Archer, Cathro & Associates (1981) Limited

A handwritten signature in black ink, appearing to read 'Matt Dumala', written in a cursive style.

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

REFERENCES

- Archer, A.R.
1975a Final Report, Ogilvie Joint Venture, 1974.
- 1975b Final Report; Wernecke Joint Venture.
- 1975c Final Report Ogilvie Joint Venture.
- 1976 Report on Radiometric Survey, Geology and Rock Sampling, MST 1-40 Mineral Claims, prepared for Eldorado Nuclear Limited.
- Archer, A.R., Bell, R.T., Delaney, G.D. and Godwin, C.I.
1977 Mineralized breccias at the Wernecke Mountains, Yukon (abstract); *in* Geological Association of Canada, Program of Abstracts; v.2; p.5.
- Bell, R.T.
1986 Megabreccias in northeastern Wernecke Mountains, Yukon Territory; *in* Current Research Part B; GSC Paper 1986-1A; pp. 279-284.
- Bell, R.T. and Jefferson, C.W.
1987 A hypothesis for an Australian-Canadian connection in the late Proterozoic and the birth of the Pacific Ocean; *in* Proceedings of the Pacific Rim Congress '87, Parksville, Victoria, Australia; Australasian Institute of Mining and Metallurgy; pp. 39-50.
- Brown, D.C.
1989 Bonnet Plume's Gold; Klein Publishing; p. 178.
- Deklerk, R. and Traynor, S. (compilers)
2004 Yukon MINFILE 2004 - A database of mineral occurrences; Yukon Geological Survey, CD-ROM.
- Delaney, G.D.
1981 The mid-Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory; *in* Proterozoic Basins of Canada; edited by F.H.A. Campbell; GSC Paper 81-10; pp. 1-23.
- Eaton, W.D. and Archer, A.R.
1980 Final Report, Wernecke Joint Venture.
- 1981 Final Report, Wernecke Joint Venture.
- 1982 Final Report, Wernecke Joint Venture.

- Eaton, W.D. and Wober, H.H.
2005 Technical Report describing the Geology, Geochemistry, Geophysics and Diamond Drilling at the Bond, Igor, Steel and Pterd Properties, Mayo Mining District, Yukon Territory, prepared for Cash Minerals Ltd.
- Farion, B.D.
1975a Geological and Geochemical Evaluation of the Jeanette Claims, Yukon Territory, Assessment Report prepared for Great Plains Development Company of Canada, Ltd.
1975b Geological and Geochemical Evaluation of the Windy Claims, Yukon Territory, Assessment Report prepared for Great Plains Development Company of Canada, Ltd.
- Hitzman, M.W.
1990 Wernecke Mountains Olympic Dam-Type Deposit Project prepared for Chevron Minerals Ltd., p. 31.
- Hitzman, M.W., Oreskes, N. and Einaudi, M.T.
1992 Geological characteristics and tectonic setting of Proterozoic iron oxide (Cu-U-Au-REE) deposits, *in* Precambrian Metallogeny Related to Plate Tectonics; edited by G. Gail and K. Schulz; Precambrian Research; vol. 58; pp. 241-287.
- Main, C.A., Archer, A.R.
1978 Final Report, Wernecke Joint Venture.
- Riley, C.J.
1976 Report on Diamond Drilling Program, MST 1-40 Claims, prepared for Eldorado Nuclear Limited.
- Thorkelson, D.J., Mortensen, J.K., Davidson, G.J., Creaser, R.A., Perez, W.A. and Abbott, G.J.
2001a Early Mesoproterozoic intrusive breccia in Yukon, Canada: the role of hydrothermal systems in reconstructions of North America and Australia; Precambrian Research III; pp. 31-53.
- Thorkelson, D.J., Mortensen, J.K., Creaser, R.A., Davidson, G.J., and Abbott, G.J.
2001b Early Proterozoic magmatism in Yukon, Canada: constraints on the evolution of northwestern Laurentia; Canadian Journal of Earth Sciences; vol. 38; no. 10; pp. 1479-1494.
- Wallace, M.D.
1982 Geology, Wind River (106E), Yukon Territory; Geological Survey of Canada, Open File 1528.

APPENDIX I
STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Matthew R. Dumala, geological engineer, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address in Vancouver, British Columbia, do hereby certify that:

1. I graduated from the University of British Columbia in 2002 with a B.A.Sc in Geological Engineering, Option 1, mineral and fuel exploration.
2. I am registered as an Engineer in Training in the Province of British Columbia.
3. From 2003 to present, I have been actively engaged in mineral exploration in the Yukon Territory.
4. I have personally participated in the fieldwork reported herein.



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

APPENDIX II
EXCERPT FROM MCPHAR FINAL REPORT

SUMMARY

An airborne geophysical survey program was completed over the Wernecke Properties, northern Yukon, situated approximately 200 km to the north east of Mayo, Yukon Territories under contract to Archer, Cathro & Associates (1981) Ltd., signed October 24, 2005 and amendments were made on March 06, 2006. The project consisted of a fixed-wing magnetic survey.

Data acquisition was initiated on November 2005 and was completed June 2006. Mobilization of the equipment and personnel to the survey area was completed on November 09, 2005 and 11% of the area with production flights was completed by December 09, 2005. The data acquisition of remaining 89% area was carried out, again during the period of April 11, 2006 to June 13, 2006.

First tests and calibrations flight was completed on November 20, 2005 and remaining tests and calibrations flights were completed on April, May & June 2006 respectively. The final survey flight was completed on June 12, 2006. A total of 13,092 line-kilometres of data were acquired. The survey was flown over five blocks; Block 'A', Block 'A' Infill, Block 'B' Block 'B' south extension and Block 'B'; west extension with a nominal mean terrain clearance of 100 metres. The flight lines were oriented at specific directions and spacing explained in the table 1.



Figure 1: Aerial photograph of survey area

1. INTRODUCTION

A detailed fixed-wing magnetic survey was carried out during the period of November 09, 2005 to June 13, 2006 on behalf of Archer, Cathro & Associates (1981) Ltd., hereinafter referred to as “Archer, Cathro”, by McPhar Geosurveys Ltd, hereinafter referred to as “McPhar”, over five blocks situated Wernecke Properties, northern Yukon, situated approximately 200 km to the north east of Mayo, Yukon Territories, Canada.

The purpose of the survey was to acquire high-resolution geophysical data to map the geophysical characteristics of the geology and structure in an effort to provide an insight into geologic and geophysical settings conducive to (Au) mineralization.

Table 1: Archer, Cathro Project, Yukon Territories, Survey Areas Descriptions

AREA NAME	LINE /T.L. SPACING	FLIGHT LINE-KM	TIE LINE-KM	TOTAL LINE-KM	MAIN FLIGHT DIRECTION
Wernecke Block A	350 x 4,000 m	7,898	724	8,622	NE - SW
Infill Block A	150 m	230	0	230	N - S
Wernecke Block B	350 x 3,500 m	1,303	148	1,451	ENE - WSW
Extension Block B West	350m x 3,650m	1,359	155	1,514	345.5° / 255°
Extension Block B South	350 x 3,500 m	1,119	117	1,236	255° / 344°
Totals		11,909	1,144	13,053	

Magnetic data acquisition involved the use of GPS positioning and one high sensitivity magnetometer installed in the tail stinger of a fixed-wing aircraft to measure the Earth’s magnetic field. In this instance the aircrafts used were PA-31 Piper Navajo aircraft with Canadian registration C-FFRY supplied by Aries Aviation of Calgary, Alberta and C-GPVN Bruce land Air of Wiarton, Ontario, Canada respectively.

Installation of the survey equipment into aircraft C-FFRY was completed in Calgary prior to mobilization. Pre-survey test and calibration flights were undertaken over the period of November 20, 2005 and data acquisition was initiated on November 27, 2005. The last survey flight was conducted on December 09, 2005 and then the client stopped the survey due to poor weather.

Remobilization of aircraft C-GPVN, equipment and personnel to Mayo was accomplished on April 13, 2006. Installation of the survey equipment into the aircraft and pre-survey test flight was undertaken on April 11, 2006 at Norman Wells, NWT, Canada. The final survey flight was completed on June 12, 2006. This report describes the data acquisition and processing procedures, parameters and delivery products for this survey.

2. SURVEY AREA

The survey consisted of five blocks identified as Block 'A', Block 'A' Infill, Block 'B' Block 'B' south extension and Block 'B'; west extension approximately 200 km north east of Mayo, Yukon Territories. The primary objective of the survey was to acquire geophysical data in support of (mineral) exploration.

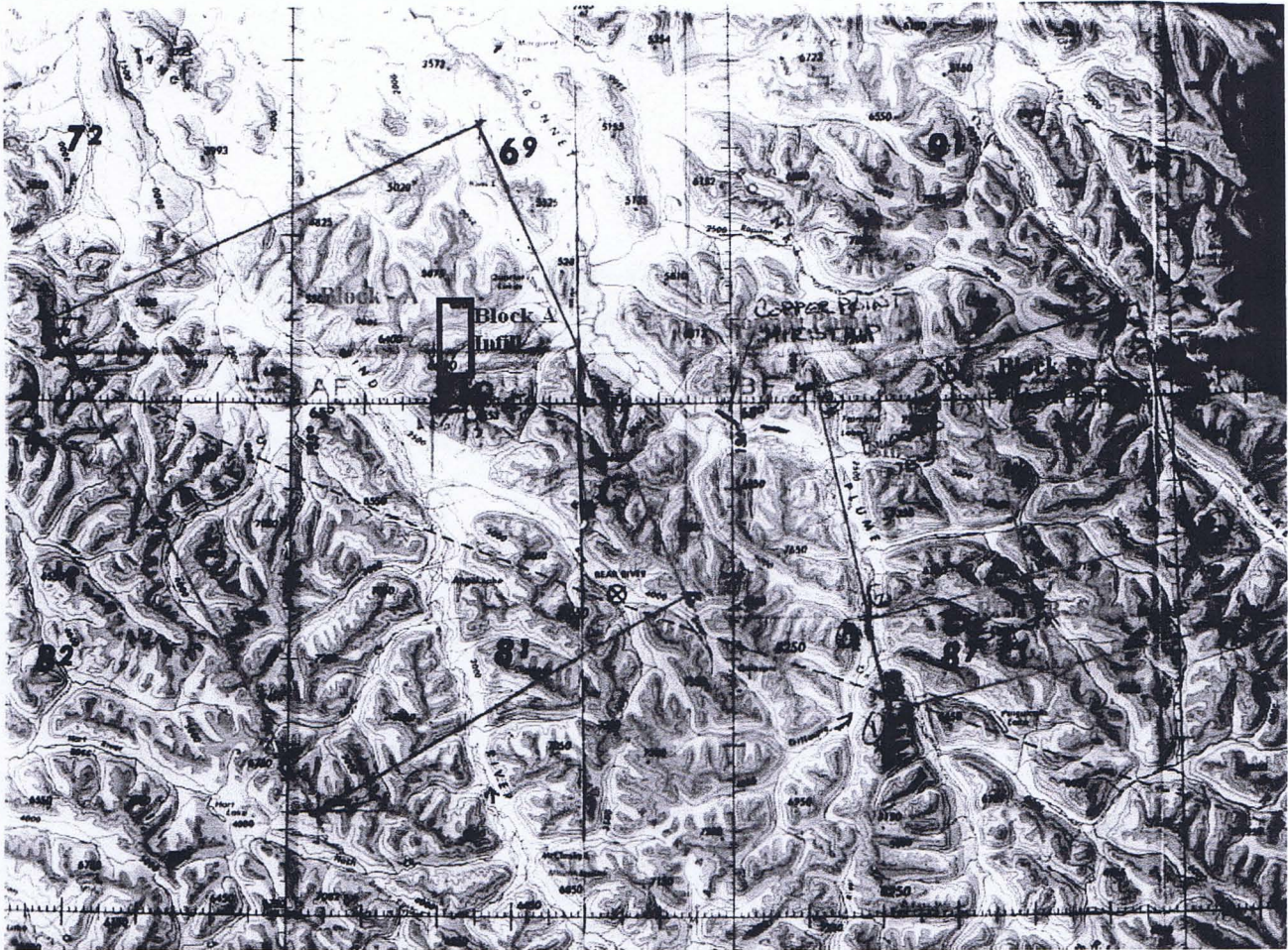


Figure 2: Location of survey areas

The topography of the Wernecke survey areas is variable, from narrow valleys to steep mountain slopes with incised river valleys with steep cliffs. The elevation ranged from approximately 150 metres to over 2800 metres above sea level. Weather conditions during the survey were typically in the -35°C to $+16^{\circ}\text{C}$. Conditions varied from clear to cloudy, freezing rain, snow showers, and at times windy. More often than not, these poor weather conditions kept the survey crew grounded and thus the number of standby days accumulated.

The corner coordinates of the blocks were provided by Archer Cathro, and are presented in the following table. All coordinates are NAD83, UTM Zone 8N.

Table 2: Project Survey Areas Coordinates

Wernecke Block A		
UTM Zone 8, NAD 83		
Corner	Easting	Northing
NE corner	513590E	7239650N
NW corner	473600E	7218000N
SW corner	503600E	7164300N
SE corner	542850E	7188300N

INFILL Area - Wernecke Block A		
UTM Zone 8, NAD 83		
Corner	Easting	Northing
NE corner	515060	7217960
NW corner	518360	7217960
SW corner	515060	7207960
SE corner	518360	7207960

Wernecke Block B - West		
UTM Zone 8, NAD 83		
Corner	Easting	Northing
SE corner	579275	7190075
SW corner	562000	7185500
NW corner	556200	7210750
NE corner	572800	7215125

Wernecke Block B		
UTM Zone 8, NAD 83		
Corner	Easting	Northing
NE corner	590750E	7219400N
NW corner	573200E	7215500N
SW corner	578750E	7190500N
SE corner	596000E	7194500N

Wernecke Block B - South		
UTM Zone 8, NAD 83		
Corner	Easting	Northing
SE corner	599495	7185050
SW corner	564310	7175565
NW corner	562000	7185500
NE corner	596500	7194800

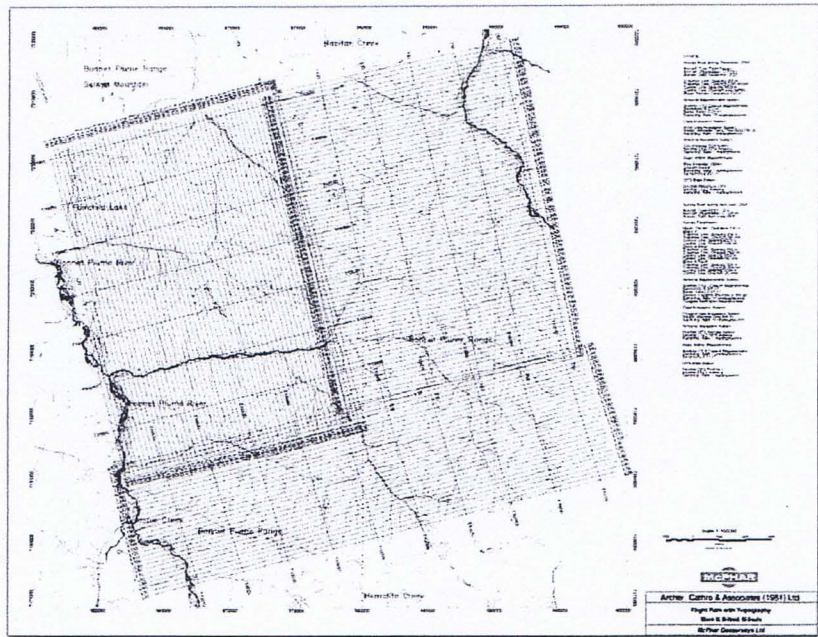
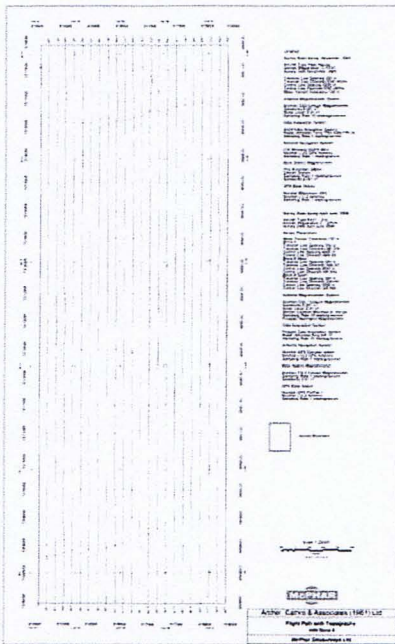
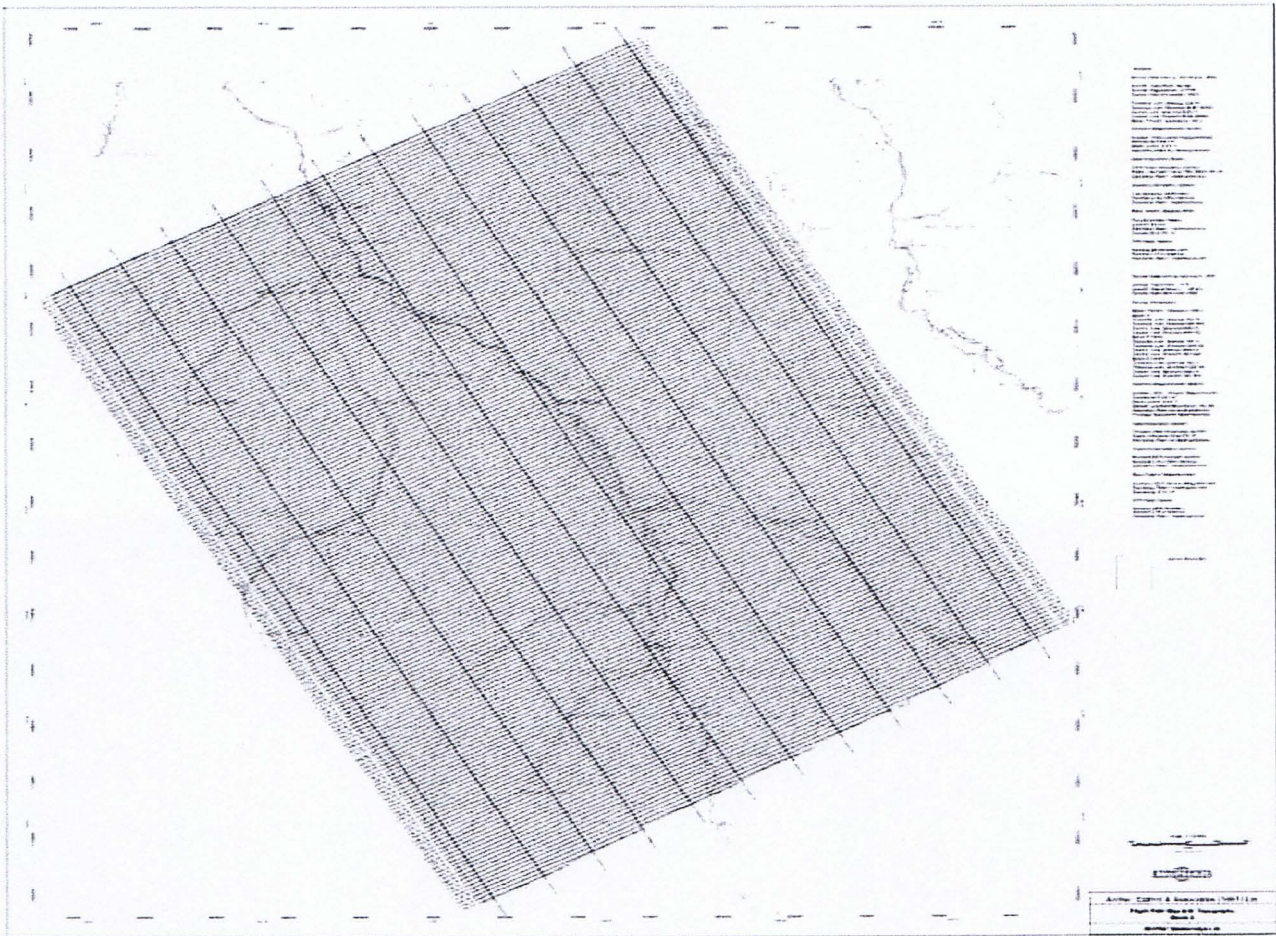


Figure 3: Flight Path with topography, all Blocks

3. SURVEY OPERATIONS

3.1 Operations Base

Survey operations were based out of the airport of the Mayo. Permission was obtained to operate, park and refuel the aircraft at the airport. The GPS base station antenna and the magnetic base station sensor was positioned approximately 5 kilometres from the airport.



Figure 4: Base Station system with Antenna (2005)



Figure 5: GPS Base Station system with Antenna (2006)



Figure 6: Magnetic Base Station system with sensor

Initial Quality Control and Preliminary data processing was undertaken at a temporary data processing centre set up at the Bed Rock Motel in the town of Mayo.

3.2 Survey Conditions

Weather conditions during the survey were varied, ranging from occasionally good with clear skies and cloud cover, to low clouds overcast, freezing rain, snow showers and windy. The temperature ranged from a low -35° Celsius to $+16^{\circ}$ Celsius. During the whole survey, a total of sixty days were lost as the result of bad weather.

Sunspot activity, and hence diurnal geomagnetic activity, varied from quiet to active during the data acquisition period. No data were lost due to the geomagnetic activity being out of contract specification.

3.3 Navigation

The nominal data acquisition speed was 220 kilometres per hour. Scan rates for the magnetic data acquisition was 0.05 second, 0.1 second for the radar altimeter, and 1.0 second for the GPS navigation/positioning system. Therefore, there is a magnetic value recorded at an approximate interval of 3.25 metres and a position fix at an approximate interval of 60 metres along the flight track.

Navigation was assisted through use of a GPS receiver system that reported GPS co-ordinates in WGS-84 latitude and longitude, directing the pilot over a pre-programmed two-dimensional (2-D) survey grid. The x-y position of the aircraft reported by the GPS system was recorded together with the terrain clearance as reported by the radar altimeter. For surveying purposes, the coordinates of the survey area were transformed from WGS84 latitude and longitude to the NAD83, UTM 8N coordinates system.

Vertical navigation along flight lines was enabled by using the radar altimeter. The optimum terrain clearance during normal survey flying was 100 metres for the aircraft and geophysical instrumentation. However, due to rugged terrain in some areas, and the pilot's judgment of safe flying conditions in these areas, these terrain clearances were not possible 100% of the time. The final vertical and horizontal survey positions were differentially corrected in real-time to a precision of approximately +/- 1.5 metres.

Projection information:

Projection type: NAD83, UTM Zone 8N

Spheroid: Transverse Mercator

Base latitude: 0 degree

Base longitude: -135 degree

Scaling factor: 0.9996

False easting: 0

False northing: 500000

Local Transform: World Geodetic System

3.4 Field Processing & Quality Control

The survey data was transferred to portable magnetic media on a flight-by-flight basis, and then copied to the field data processing workstation. In-field data processing included: reduction of the data to Geosoft GDB database format, post-flight compensation of the magnetometer data using McPhar's CCMAG software, and inspection of all data for adherence to contract specifications. Survey lines which showed excessive deviation, or which were considered to be of inferior quality, for whatever reason, were reflown.

3.5 Survey Statistics and Project Diary

The survey entailed a total of 40 flights; of which 26 flights were production flights. The first production flight was Flt #2 on November 20, 2006, with the last production flight, Flt #32 on June 12, 2006.

McPhar Geosurveys Ltd. of Newmarket, Ontario, Canada, was responsible for the field operations, all geophysical matters and the overall coordination and management of the survey.

Table 3: Project Diary

Date 2006	Flt #	Hours Flown	Line-Km Accepted	Comments
10-11-05				Crew arrived at Mayo, Yukon Territories
11-11-05				Waiting for the plane from Whitehorse
12-11-05				Plane arrived from Whitehorse, setup base station And program AGIS
13-11-05				Waiting for drape file from office
14-11-05				Installed drape file and ready for survey, Poor weather
15-11-05				Poor weather, snow storm, Standby Day
16-11-05				Poor weather, snow storm, Standby Day
17-11-05				Poor weather low ceiling, snow storm, Standby Day
18-11-05				Poor weather low ceiling, snow, Standby Day
19-11-05				Poor weather low ceiling, freezing rain, Standby Day
20-11-05	1	1:28		Flight aborted due to bad weather, Back to Mayo and performed the Tests
21-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
22-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
23-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
24-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
25-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
26-11-05				Poor weather low ceiling, freezing rain and snow Standby Day
27-11-05	2	5:25	506	Flown at block 'B'. Production flight
28-11-05	3	1:22		Flight aborted due to high turbulence, Standby Day
29-11-05	4	5:30	751	Flown at block 'B'. Production flight
30-11-05				Low ceiling, less visibility, snow showers and freezing drizzel, Standby Day
01-12-05				Low ceiling, less visibility, snow showers, Standby Day
02-12-05	5	2:05		Flight aborted due to RAD Alt problems
03-12-05				Diurnal active, Standby Day
04-12-05	6	5:37	194	Finished Block 'B' and also started Block 'A'
05-12-05	7	1:17		Flight aborted due to high turbulence, Standby Day
06-12-05				Low ceiling, less visibility, snow showers and gusty wind, Standby Day
07-12-05				Low ceiling, less visibility, snow showers and gusty wind, Standby Day
08-12-05	8	0:31		Flight aborted due to bad weather, Standby Day
09-12-05				Demobilization, project stopped by client and will be started next year
11-04-06				Test and calibration flight at Norman Wells, NWT
12-04-06				Mobilizing to Mayo, QA /QC Geophysicist stuck in Whitehorse and remaing crew in Norman Wells due to bad weather

13-04-06				QA /QC Geophysicist arrived at Mayo, Setup the base station, remaing crew stuck in Norman Wells due to bad weather
14-04-06				Crew stuck in Norman Wells due to bad weather
15-04-06				Crew stuck in Norman Wells due to bad weather
16-04-06				Crew stuck in Norman Wells due to bad weather
17-04-06				Crew arrived at Mayo, couldnt have production flight at afternoon due to low ceiling, Standby Day
18-04-06				Low ceiling, less visibility, Standby Day
19-04-06				Low ceiling, less visibility, snow showers, Standby Day
20-04-06	1	1:26		Flight aborted due to bad weather, Standby Day
21-04-06	2	1:04		Flight aborted due to bad weather, Standby Day
22-04-06	3	2:38	182	Flown on Block 'A', Flight aborted due to high turbulence, Production flight
23-04-06				Cloudy with wet snow and light rain, Standby Day
24-04-06				Cloudy with wet snow, rain & high wind, Standby Day
25-04-06				Cloudy with light rain & high wind, Standby Day
26-04-06	4	3:00	152	Flown at Block 'B' south, Flight aborted due to bad weather, Standby Day
27-04-06				Overcast all day, Standby Day
28-04-06				Cloudy with light rain & snow, Standby Day
29-04-06				Overcast all day, Standby Day
30-04-06	5	2:28		Flight aborted due to bad weather, Performed Heading Test, Standby Day
01-05-06	6	4:42	568.2	Flown at Block 'B' south & Block 'B' west, Production flight
02-05-06	7	2:40	241	Flown on Block 'A', Flight aborted due to high turbulence and low ceiling, Production flight
03-05-06				Overcast all day, Standby Day
04-05-06				Overcast all day, Standby Day
05-05-06				Overcast & diurnal active all day, Standby Day
06-05-06				Diurnal stormy to active all day, Standby Day
07-05-06				Overcast & diurnal active all day, Standby Day
08-05-06	8	4:55		Block 'B' south is completed, Production flight
09-05-06	9	0:36	652.5	Second flight aborted due to bad weather
10-05-06				Overcast all day, Standby Day
11-05-06	10	3:03	232.5	Flown at Block 'B' west, Flight aborted due to bad weather, Production flight
12-05-06				Overcast all day, Standby Day
13-05-06				Overcast & diurnal active all day, Standby Day
14-05-06	11	5:06		Two production flights
15-05-06	12	4:09	1126.1	Block 'B' west is completed
16-05-06	13	4:29	640.8	Flown at Block 'A'. Production flight
17-05-06				Heavy rain at AM and low ceiling at PM, Standby Day
18-05-06	14	0:45		Flight aborted due to bad weather, Standby Day
19-05-06				Overcast all day, Standby Day
20-05-06	15	4:54	826.9	Flown at Block 'A'. Production flight
21-05-06	16	5:12	917.7	Flown at Block 'A'. Production flight
21-05-06	17	2:22		Flight aborted due to bad weather, FOM test

				performed for Block'B'. Standby Day
22-05-06				Overcast all day, Standby Day
23-05-06				Overcast all day, Standby Day
24-05-06	18	2:08		Flight aborted due to bad weather, FOM test performed for Block'B'. Standby Day
25-05-06	19	3:57	641.7	Flown at Block 'A'. Production flight
26-05-06	20	2:00	91	Flight aborted due to high turbulence, Standby Day
27-05-06				Overcast all day, Standby Day
28-05-06	21	1:25	91	Flight aborted due to high turbulence, Standby Day
29-05-06	22	4:49	756	Flown at Block 'A'. Production flight
30-05-06	23	1:00		Flight aborted due to bad weather, Standby Day
31-05-06				Overcast all day, Standby Day
01-06-06				Overcast all day, Standby Day
02-06-06	24	4:49	822.4	Flown at Block 'A'. Production flight
03-06-06	25	5:09	915.1	Flown at Block 'A'. Production flight
04-06-06				Overcast all day, Standby Day
05-06-06	26	4:03	366.6	Flown at Block 'A' & Infill 'A'. Production flight
06-06-06	27	2:32	273.8	Flown on Block 'A', Flight aborted due to high turbulence and low ceiling, Production flight
07-06-06	28	0:45		Flight aborted due to bad weather, Radar Test performed, Standby Day
08-06-06	29	4:36	731	Flown at Block 'A'. Production flight
09-06-06				High winds and turbulence all day, Standby Day
10-06-06	30	1:27	45.7	Flight aborted due to high turbulence, Standby Day
11-06-06	31	5:23	593	Flown at Block 'A'. Production flight
12-06-06	32	5:16	735	Flown at Block 'A' & Block 'B' west added tie line Production flight
13-06-06				Demobilization
Totals:		128:05	13,053	

The following personnel comprised the onsite crew for the project at Mayo in 2005 & 2006:

Table 4: Onsite Personnel

Title	Name	Days Onsite
Project Manager (2006)	Kevin Lindsay	57
QC Geophysicist (2005)	Adam Barrett	29
Operator (2005)	Adam Barrett	29
Aircraft Pilot (2005)	Rory Clayton	29
QC Geophysicist (2006)	Asif Mirza	61
Operator (2006)	Kevin Lindsay	57
Operator (2006)	Jan Niemeijer	57
Aircraft Pilot (2006)	Marieke Niemeijer	57

4. AIRCRAFT AND EQUIPMENT

4.1 The Aircraft

The survey was flown using a PA-31 Piper Navajo aircrafts with Canadian registration C-FFRY supplied by Aries Aviation of Calgary, Alberta and C-GPVN Bruce land Air of Wiarnton, Ontario, Canada respectively. The aircrafts were modified as a geophysical survey platform, and features one high sensitivity magnetometer installed in a tail stinger. This aircraft can acquire aeromagnetic data at nominal survey airspeed of 135 knots (Approx. 230 km/hour) with has approximately 6 hours flight duration including the geophysical system and a crew of 2 persons onboard.

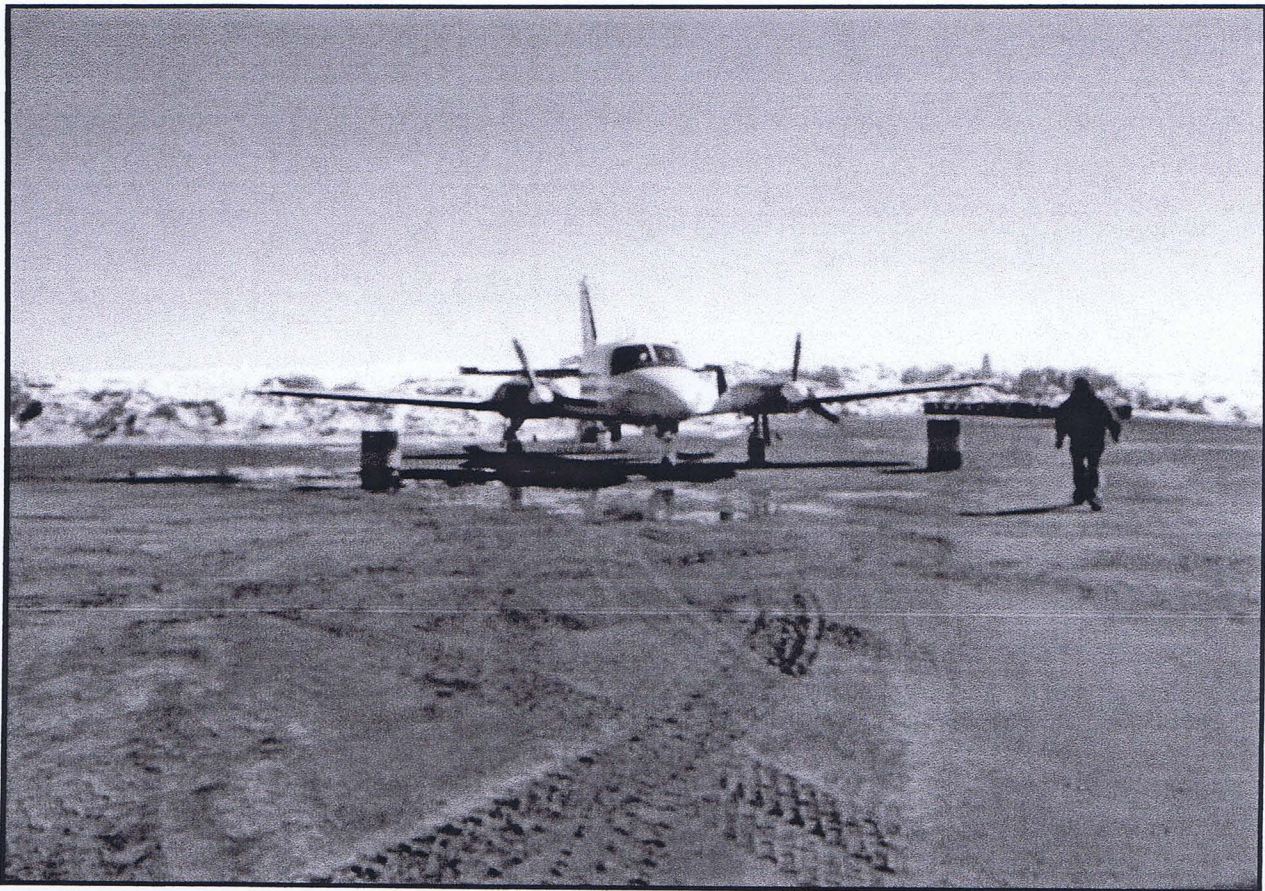


Figure 7: PA-31 Piper Navajo aircraft with Canadian registration C-FFRY (2005)



Figure 8: PA-31 Piper Navajo aircraft with Canadian registration C-GPVN (2006)

Mobilization of the aircraft, equipment and personnel to Mayo was again accomplished on April 13, 2006. Installation of the survey equipment into the aircraft and pre-survey test flight was undertaken on April 11, 2006 at Norman Wells, NWT, Canada. The final survey flight was completed on June 12, 2006.

McPhar personnel at the Calgary, Alberta and Norman Wells, NWT, CANADA carried out the installation of the geophysical and ancillary equipment, respectively. After the aircraft's arrival, final adjustments, calibration and testing was completed in Mayo, Yukon Territories, prior to production survey flights commencing.

Aircraft Model:	- Piper Navajo
Aircraft Registration:	- Canadian, C-FFRY
Engine:	- 2 x Textron Lycoming TIO-540-A2C
Empty weight:	- 3,759 lbs / 1,709 kg
Gross weight:	- 6,500 lbs / 2,955 kg
Fuel Capacity:	- 350 gal / 1,330 litres
Survey speed:	- 120-160 knots / 220-295 km/h
Survey duration:	- 7.5 hours
Ferry:	- 185 knots / 340 km/h
Cruise range:	- 1,295 nm / 2300 km
Max. Alt:	- 26,000 ft / 8092 m

Aircraft Model:	-	Piper Navajo
Aircraft Registration:	-	Canadian, C-PGVN
Engine:	-	2 x Textron Lycoming TIO-540-A2C
Empty weight:	-	4,336 lbs / 1,966 kg
Gross weight:	-	6,770 lbs / 3,070 kg
Fuel Capacity:	-	240 gal / 1,019 litres
Survey speed:	-	120-160 knots / 220-295 km/h
Survey duration:	-	4:45 hours
XC:	-	160 knots
Cruise range:	-	1,040 nm/ 1926 km
Max. Alt:	-	1,000 ft

4.2 The Survey Instrumentation

4.2.1 Survey System Overview

The instrumentation installed in the aircraft included:

- One Scintrex CS-2 high resolution cesium magnetometer (2005)
- One Scintrex CS-3 high resolution cesium magnetometer (2006)
- Pico-Envirotec AGIS 100 Data Acquisition System (2005)
- Fluxgeo Data Acquisition System (2006)
- NovAtel GPS Glonass System
- NovAtel L1/L2 Antenna
- Instrumentation Rack and Power Distribution System

The processing and base stations comprised:

- A Field Workstation, comprising a portable Pentium PC, printer and full data processing software (Waypoint Navigation GrafNav GPS Processing Software, CCMag Magnetic Compensation Software and Geosoft Montaj Processing Software)
- A Magnetometer Base Station, comprising a GEM GSM-19 Proton magnetometer (2005)
- A Magnetometer Base Station, comprising a Scintrex CS-3 High Resolution cesium magnetometer and KMAG 4 mag counter (2006)
- NovAtel ProPak II GPS System
- NovAtel L1/L2 Antenna
- A complement of spare parts and test equipment were maintained at the survey site.

4.2.2 Airborne Magnetometer

A Scintrex CS-2 & CS-3 cesium split-beam total-field magnetometer was installed in the tail stinger of the aircraft, respectively. Sampling rate was ten (10) times per second with an in-flight sensitivity of 0.001 nT. Aerodynamic magnetometer noise was +/- 0.01 nT. The sensitivity of the magnetometer was recorded at 0.001 nT when operated at a sampling rate of 0.1 second.

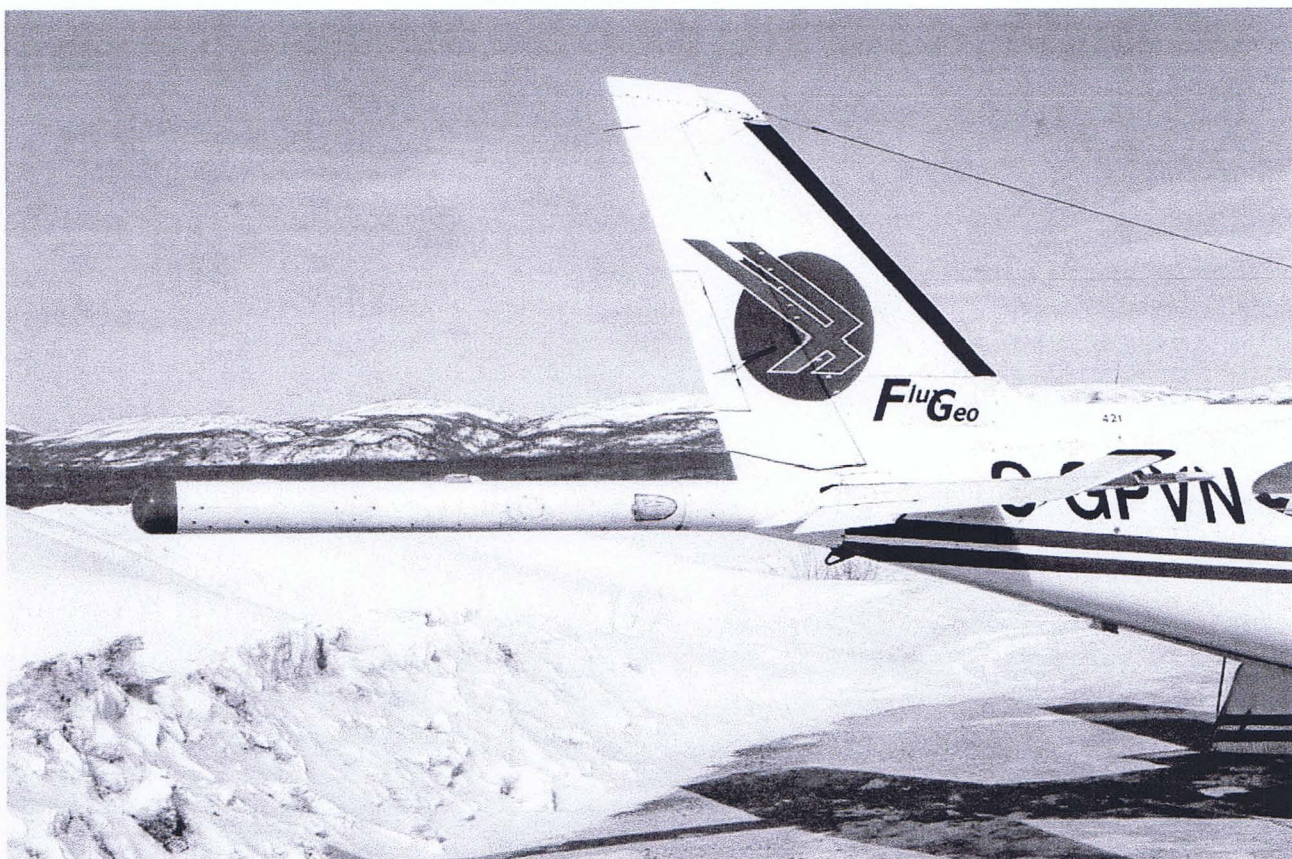


Figure 9: Tail stinger of the aircraft with CS-3 Mag sensor

The magnetic Figure-of-Merit (FOM) of the aircraft was determined using the Geological Survey of Canada's method, and was demonstrated to be better than 1 nT. The Scintrex CS-3 magnetometer is described in Appendix 1.

4.2.3 Magnetic Compensation

Compensation for the orientation and movement of the aircraft in the Earth's ambient magnetic field was undertaken post flight using a proprietary program "CCMAG" installed on the Field Workstation. The Larmor frequency output of the cesium magnetometer sensor was processed by a high precision frequency counter in the Fluxgeo and AGIS 100 / MMS-4 data acquisition systems (resolution of 0.001nT at a sampling rate of 10 times per second). A three-axis Bartington fluxgate magnetometer monitored the attitude and motion of the aircraft in flight. The output from this fluxgate magnetometer, or attitude sensor, was then used in the "CCMAG" processing of the raw magnetic data to produce magnetic data compensated for the orientation and motion of the aircraft in the Earth's magnetic field.

The CCMAG post-flight compensation program is described in Appendix 2.

4.2.4 The Base Station Magnetometer

The magnetometer base stations used were comprised of a GEM System GSM 19 base station data recorder, proton magnetometer and KMAG 4 mag counter utilizing a Scintrex CS-3 cesium magnetometer to monitor and record diurnal variations of the Earth's magnetic field. The base station magnetometers were set up at the distance of 5 kilometres from Mayo airport. Every effort was made to ensure that the magnetometer sensor was placed in a location of low magnetic gradient and sited away from electric transmission lines, and moving ferrous objects, such as motor vehicles and aircraft.

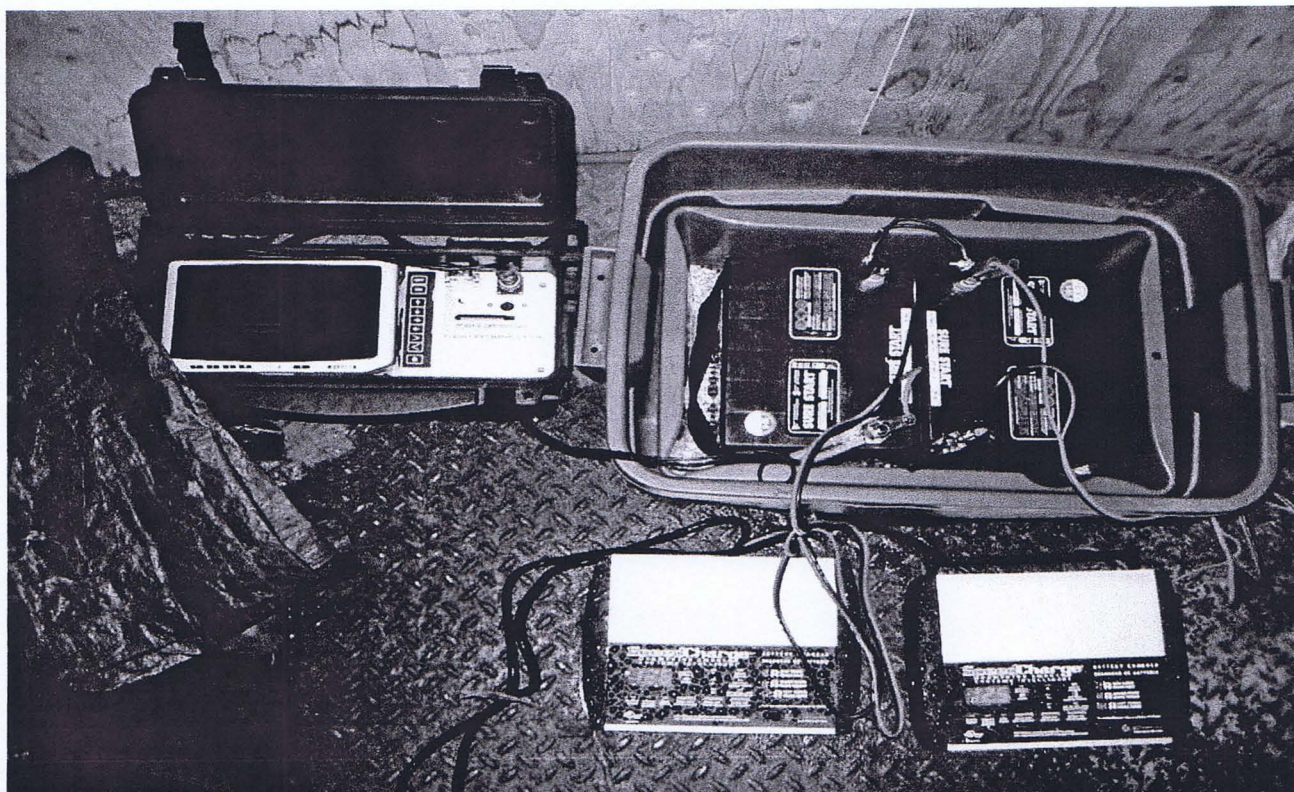


Figure 10: Base station magnetic system (2005)

The base-station magnetometer was operated continuously throughout the airborne data acquisition phase at sample rate at 1.0 second of a sensitivity of 0.01 nT. The ground and airborne system clocks were synchronised using GPS time, to an accuracy of 1 second or better. A continuously updated profile plot of the base station values was presented on the base station screen. At the end of the day, the digital data was transferred from the base station's data-logger to the fieldwork station.

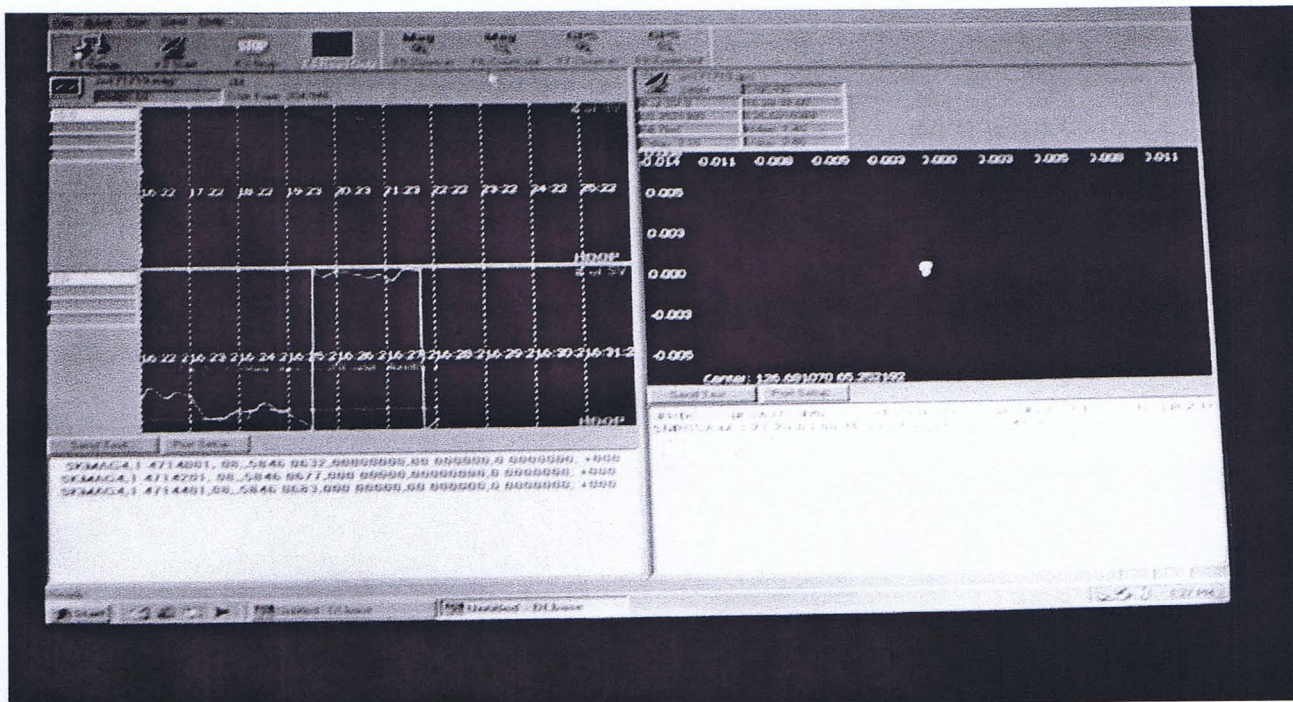


Figure 11: Base station magnetic system (2006)

4.2.5 Altimeter

The Terra TRA-3000/TRI-30 and King KP-10 radar altimeter systems were used to record the aircraft terrain clearance to an accuracy of less than 1 metre (approximately 3 ft), over a range of 40 ft to 2,500 ft. The altimeter was interfaced to the data acquisition system with an output repetition rate of 0.1 second, and were digitally recorded.

4.2.6 The GPS Satellite Navigation System

A CSI-Wireless DGPS MAX navigation system input to a navigation computer and pilot steering indicator (PSI) provided the navigation control. The PSI provided steering and cross-track guidance to the pilot. The pilot was provided with GPS and altimeter data to aid in the flying of the aircraft.

The co-ordinate system employed in the survey design and digital recording was WGS84 latitude and longitude. The GPS positional data was recorded at one second intervals and used with data obtained from three different differential services: Space Based Augmentation Systems (SBAS), OmniSTAR, and DGPS beacon stations, to calculate real-time differentially corrected locations. The GPS ground base station, comprised of NoveAtel ProPak II GPS System with Aero Antenna AT, recorded GPS data on a Pocket PC Based Data Logger (2005).

A NovAtel high-performance navigation/positioning system was used on the aircraft. This system consisted of a NovAtel GPS/GLONASS receiver and NovAtel L1/L2 Antenna. A pilot steering indicator, providing steering instructions to the pilot in three dimensions, was installed on top of the

cockpit dashboard. The indicator was connected to the Fluxgeo data acquisition system. A GPS ground base station, comprising a NovAtel ProPak II GPS receiver and NovAtel L1/L2 Antenna, was set up near a hut in Mayo. The GPS data was recorded on a Notebook PC-data logger for post-survey differential corrections (using GrafNav software). The GPS receivers are fully described in Appendix 2.

Survey co-ordinates were set-up prior to commencement of the survey and the information located into the airborne navigation system. The co-ordinate system employed in the survey design and digital recording was WGS-84 latitude and longitude. The GPS positional data was recorded at one-second intervals and used with the base station data to calculate differentially corrected locations (2006).

This navigation system yielded a real-time positional accuracy of better than ± 2 metres.

4.2.7 Data Acquisition/Recording System

The PC-based AGIS 100 and Fluxgeo data acquisition systems were used to record the geophysical and navigation survey data on an internal hard disk drive. Data was displayed on an LCD screen as profile traces to allow the operator to monitor the integrity of the system. The system provides for the:

- System control and monitoring
- Data acquisition recording
- Real-time data processing
- Navigation processing, and
- Post flight data playback and analysis

All data collection routines, checking and verification, buffering, and recording are software controlled for maximum flexibility both during and after the survey flight.

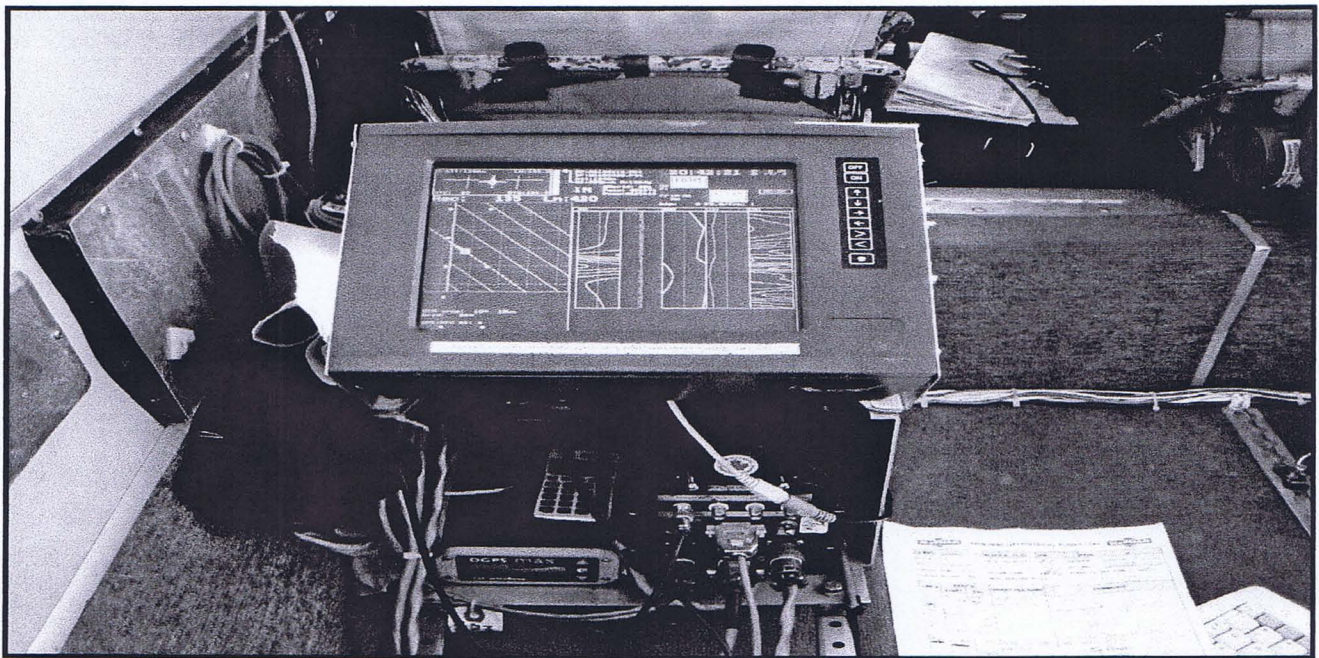


Figure 12: AGIS 100 Data Acquisition System installed in C-FFRY (2005).



Figure 13: Fluxgeo Data Acquisition System installed in C-GPVN (2006)

4.2.8 Field Computer Workstations

A Data Processing Field Workstation (FWS) comprised of a dedicated PC-based notebook computer for use at the technical base in the field, was used on this project. The FWS is designed for use with Geosoft OASIS/Montaj Data Processing Software. The FWS has a data replot capability, and may be used to produce pseudo-analogue charts from the recorded digital data within less than 12 hours after the completion of a survey flight, if this is necessary. It is also capable of processing and imaging all the geophysical and navigation data acquired during the survey, producing semi-final, preliminary-levelled maps.

The FWS was used to accomplish the following:

- **Quality Control/Digital Data Verification** - flight data quality and completeness were assured by both statistical and graphical means on a daily basis
- **Flight Path Plots** - flight path plots were generated from the GPS satellite data to verify the completeness and accuracy of each day's flying
- **Preliminary Maps** - the Geosoft software system permitted preliminary maps to be quickly and efficiently created for noise and coherency checks.

The FWS is fully described in Appendix 2.

The Geosoft Oasis/Montaj software is designed for airborne data editing, compilation, processing and plotting. The software reads the portable data media from the airborne system checking for gaps, spikes or other defects and permits the data to be edited where necessary. The base station GPS/magnetometer data is checked, edited, processed and then merged with the airborne data by using GrafNav GPS Post-Processing Software. GPS flight path plots are created and plotted for both flight planning and flight path verification.

4.2.9 Spares

A normal compliment of spare parts, tools, back-up software, and necessary test instrumentation was available in the office at the airport.

5. INSTRUMENT CHECKS AND CALIBRATIONS

5.1 Airborne Magnetic System Tests and Calibrations

5.1.1 Manoeuvre Noise

As the magnetometer system sensor, installed in the tail stringer, is still within the magnetic effect of the aircraft structure, tests were conducted at regular intervals to determine the effects of aircraft roll, pitch and yaw. These tests were completed at high altitude over an area of low magnetic gradient by performing $\pm 10^\circ$ rolls, $\pm 5^\circ$ pitches and $\pm 5^\circ$ yaw manoeuvres flown over periods of 4-5 seconds in the same direction as the flight and tie lines. A compensated Figure-of-Merit (FOM) for the aircraft was calculated by summing the peak-to-peak amplitudes of the twelve magnetic manoeuvres. The FOM was determined at the commencement of flight operations on flight # 1 on November 20, 2005, 11 April 2006 and again on May 21 & 24, 2006. The FOM tests were determined to be 1.10 nT, 0.72 nT & 0.27 nT for tail stinger sensor respectively. Detailed information about the FOM tests is provided in Appendix 1.

5.1.2 Magnetic Heading Effect

The magnetic heading effect was determined by flying a cloverleaf pattern oriented in the same direction as the survey lines and tie lines. Two passes in each direction were flown over a recognizable feature on the ground in order to obtain sufficient statistical information to estimate the heading error. The heading errors were determined at the start of the survey on November 11, 2005 and again April 30, 2006. The results of the heading tests are presented in Appendix 1.

5.1.3 Lag Tests

The Lag Tests were performed on November 11, 2005 and on April 30, 2006 respectively to ascertain the time difference between the magnetometer readings and the operation of the GPS System. The tests were flown over an identifiable magnetic anomaly by flying the same line in opposite directions at survey altitude.

5.1.4 GPS Checks & Tests

In addition to carefully selecting a suitable area for the positioning of the base station, care was also taken to ensure that the base station GPS antenna maintained a maximum field-of-view to the GPS satellites, and was not obstructed due to movement and placement of airport equipment.

5.1.5 Altimeter Calibration Checks

Two altimeter tests were performed during the survey, the first on November 20, 2005, and the second on April 11, 2006. The radar altimeter was calibrated by comparing the radar altitudes with suitable readings from the GPS navigation system during radar "stack" flown over Mayo airport runway and the Norman Wells airport runway respectively. The ellipsoidal height of runway was determined by GPS. The procedure employed involved having the aircraft fly over the runway at various altitudes above the

ground (100, 200, 300, 400, 500 and 600 feet) recording the values of the radar altimeter and GPS altimeter, which were then plotted and compared. The results of the tests are included in Appendix 1.

The radar calibration was checked on a daily basis by completing a vertical calibration test flight during take off and landing.

5.1.6 Other Daily Checks

The validity of data on all system channels were checked at the start and end of each survey flight, together with the synchronization of each of the systems (airborne and ground).

6. QC AND DATA PROCESSING

Daily quality control, initial processing and archiving of the data were completed in Mayo at the temporary data processing centre established at the Bed Rock Motel, using Geosoft MONTAJ software and a notebook PC computer. All data were verified upon receipt, and checked against the operator's flight logs.

The pre-processing or infield processing sequence included the following quality control measures:

- Examination of all incoming data to ensure completeness of data set.
- The production of preliminary flight path maps, speed checks, and aircraft terrain clearance checks.
- Full profile quality control of all acquired traces for noise levels, data completeness, spike editing, and adherence to contract specifications.

The final data processing, map generation and report was completed by McPhar at the Newmarket, Ontario office.

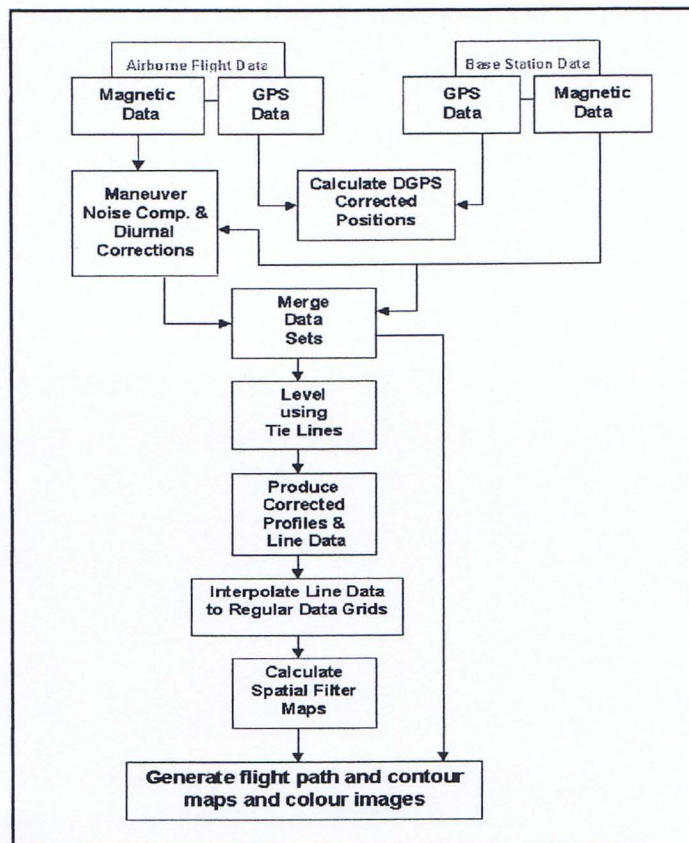


Figure 14: Data Processing Flow Chart

6.1 Flight Path Compilation

The flight path was derived from differentially corrected GPS positions using the airborne and static GPS data. Differential GPS data editing and processing was accomplished using the GrafNav GPS Post-Processing Software as developed by WayPoint Navigation, Inc. A position was calculated each 1.0 second (approx. each 60 metres along the flight path) to an accuracy of better than ± 1.5 metre. The position data was then merged into the magnetic and ancillary data in the Geosoft GDB database.

If the contract specifications were not met, a reflight was deemed necessary. All positional data was projected in NAD83, UTM Zone 8N coordinates as specified by the contact.

6.2 Base Station Magnetic Data

The base station magnetometer data was edited, plotted and merged into the GDB database on a daily basis.

The QA/QC procedure to determine acceptable magnetic base station data involved:

- Despiking of the base station data resulting from cultural activities not associated with the performance of the survey.
- Determination of the maximum noise of the observed total magnetic intensity
- Determination of the average 4th difference noise of the signal
- Determination of the rate of diurnal change

6.3 Processing the Airborne Magnetic Data

Final processing of the magnetic data was completed at the McPhar office in Newmarket, Ontario. The following processing steps were applied to the magnetic data:

6.3.1 Corrections

The processing of the data involved: post-flight compensation for the movement and orientation of the aircraft in the Earth's magnetic field; correcting for diurnal variations by using the digitally recorded ground base station magnetic values; network adjustment using the flight-line and tie-line information to level the survey data set. The corrected data set was used to generate the initial Total Magnetic Products grid and served as a base for all further processing and analysis.

6.3.2 Levelling

Levelling of the magnetic data included the following steps:

- statistically levelling the tie lines;
- levelling the traverse lines using statistically levelled ties (note: this procedure involves editing/adjusting of individual corrections at selected intersections as required in order to obtain the best possible levelled data before microlevelling);
- micro-levelling the traverse lines. After applying the above corrections to the profile data any residual line-direction-related noise was removed through the application of microlevelling. The microlevelling technique consisted of the application of directional and high pass filters to produce a grid containing noise-only in the line direction. The grid is extracted to the profile database, and an amplitude limit and a filter length are determined, so that the final error channel reflects only noise present in the grid without removing or changing geologic signal. The error channel is then subtracted from the initial input magnetic data channel in order to obtain the final micro-levelled channel. The resulting grid is free of line direction noise.

6.3.3 CompuDrape Method

In order to be able to merge the different datasets and provide a single merged data and map product, the data was processed using a procedure commonly referred to as CompuDrape.

As a result of the survey being completed in two stages, it was inevitable that the mean terrain clearance between the two survey parts varied considerably from 2005 and 2006. This variance was in part due

to:

- Different survey specifications with respect to flying heights and line spacing;
- Different survey aircraft and pilots and hence different levels of experience in flying and aircraft performance characteristics;
- Different weather conditions;
- Similar but different data processing and magnetic compensation procedures.

The application of Compudrape involves computation through the use of upward and downward height continuation on aeromagnetic profile data to transform it from the original magnetic field on an arbitrary observation surface to the magnetic field on a new surface of specified height.

In areas with steep topography such as encountered in some areas of the Project, it was difficult for the survey aircraft to maintain a constant nominal height above the ground. This was further complicated by the fact that the survey was flown in two parts, similar but different aircraft, few months difference apart, and under different survey conditions. The result was large variations in the distance between the magnetic sensor and the ground (from 50 to 500 m), making it very difficult to process the data.

Compudrape attempts to correct this variable terrain clearance effect by generating a magnetic grid that "simulates" the result that would have been obtained had the magnetic sensor been maintained a constant height above ground. In the case of this Project, a sensor height of 100 metres was used for the Compudrape surface.

In this application, the raw profile data was processed for multiple continuation surfaces using a 1D FFT transform to achieve maximum removal of the effects of the variation in terrain clearance from line-to-line and at traverse-tie line intersections.

The Compudrape process was designed to perform a loose drape transformation. The elevation channel is the magnetic sensor elevation above sea level. The Topography channel is the topography (i.e., sensor terrain clearance above ground subtracted from sensor elevation above sea level). The new observation height value is the desired constant drape height above ground. The end result is for a more acceptable merging of the different data sets to produce a relatively contiguous TMI image for the entire area covered by the two surveys. Microlevelling was performed again to get rid of line direction noise.

6.3.4 IGRF Removal

The International Geomagnetic Reference Field (IGRF) is a long-wavelength regional magnetic field calculated from permanent magnetic observatory data collected around the world. The IGRF is updated and determined by an international committee of geophysicists every 5 years. Secular variations in the Earth's magnetic field are incorporated into the determination of the IGRF.

Through the removal of the IGRF from the observed Total Magnetic Intensity (TMI), the resulting residual magnetic intensity provides for more valid modelling of individual near surface anomalies. Additionally, the data can be more easily incorporated into databases of magnetic data acquired in the past or to be acquired in the future.

6.3.5 Gridding

The corrected magnetic line data was interpolated between survey lines using a random point minimum curvature gridding algorithm to yield x-y grid values for a standard grid cell size of $1/5^{\text{th}}$ of the line spacing (70m).

6.3.6 Filter Derivatives

The Total Magnetic Intensity (TMI) data were subjected to:

- Reduction-to-the-Pole
- Calculation of the First Vertical Derivative (1VD)
- Calculation of the Second Vertical Derivative (2VD)
- Calculation of the Analytic Signal
- Calculated Horizontal Derivative

Colour/contour images were produced for all the above listed magnetic products.

All of these spatial filtering techniques were completed using the Oasis/Montaj Magmap and IGRF modules for filtering in the 2D FFT domain.

6.3.6.1 Reduction-to-the-Pole

To compensate for the shift of the true anomaly position over the causative source due to the magnetic inclination and declination, the magnetic data was recomputed so that magnetic anomalies will appear as they would if located at the north magnetic pole. The result of this operation is that in theory the magnetic anomaly is located directly overtop of the causative source. The computation is referred to as "reduction-to-the-pole" (RTP). The reduction-to-the-pole is computed using a FFT (Fast Fourier Transform) operator.

The RTP not only shifts the anomalies to their correct position with respect to the causative magnetic bodies, but assists in the direct correlation and comparison of magnetic anomalies, trends, structural axis, and discontinuities with mapped geologic surface expression.

6.3.6.2 First Vertical Derivative

To "sharpen" magnetic anomalies and to provide better spatial location of source axes and boundaries, a first vertical derivative map was computed from the RTP-TMI. Vertical derivatives compute the rate of change of the TMI as it drops off when measured vertically over the same point (upward continuation). Potential field data obeys Laplace's equation, which allows for the computation, through the application of analysis FFT, to take advantage of this symmetry and solve for the vertical or "z" component of the field.

6.3.6.3 Second Vertical Derivative

To enhance local magnetic anomalies and to outline the edges of anomalous bodies observed in the TMI, a second vertical derivative map was computed of the RTP_TMI. The Second Vertical Derivative map is a powerful interpretive tool and is used to assist in the delineation of causative bodies and accurate location of changes in the potential field gradient. Better definition of discontinuities and their relation to geology can be gained from the use of this tool. A Second Vertical Derivative map will show steep gradients over faults and positive closures over the “up thrown” blocks.

6.3.6.4 Analytic Signal

The Analytic Signal is the square root of the sum of the squares of the derivatives in the x, y, and z directions:

$$asig = \text{sqrt} (dx*dx + dy*dy + dz*dz)$$

*where: asig is the Analytic Signal
 sqrt is the square root of
 dx is the horizontal gradient in the x direction
 dy is the horizontal gradient in the y direction
 dz is the vertical gradient in the z direction*

The analytic signal is useful in locating the edges of magnetic source bodies, particularly where remanence and/or low magnetic latitude complicates interpretation.

6.3.6.5 Calculation of the Total Horizontal Derivative (TOTHDRV)

To highlight anomalous areas, which may be the result of a magnetic source of limited strike length, a Total Horizontal Derivative (TOTHDRV) is computed. The TOTHDRV is a powerful interpretive tool that can accurately define the edges of magnetic features such as dykes and vertical cylindrical geologic units that have sharp, but limited in area, magnetic gradients and geometry. A TOTHDRV will indicate peak gradients along the edges of narrow dykes and a circular, donut shaped anomaly over vertical cylinder sources.

7. DELIVERABLE PRODUCTS

The survey data is presented as colour/contour maps on paper, produced at a scale of 1:100,000 for Block 'A' & Block 'B' and 1:20,000 for Block 'A' Infill. A set of report-sized colour/contour images, on paper, is included as Appendix 5. The basic co-ordinate system used was NAD83, Universal Transverse Mercator (UTM) Zone 8N. All digital data are also presented on CD-ROM in ASCII format.

The deliverable items of this survey are:

7.1 Maps

The following maps, at a scale of 1:100,000 for the Block 'A' & Block 'B' and Block 'A' Infill, at a scale of 1:20,000, are delivered in two (2) paper copies.

- Flight Path with Topography
- Digital Terrain Model (DTM)
- Total Magnetic Intensity (TMI)
- Total Magnetic Intensity (IGRF removed)
- Total Magnetic Intensity (CompuDrape)
- Total Magnetic Intensity (IGRF removed) CompuDrape
- Total Magnetic Intensity Reduced to the Pole (CompuDrape)
- First Vertical Derivative (1VD) (CompuDrape)
- Calculated Second Vertical Derivative (2VD) (CompuDrape)
- Calculated Analytic Signal of TMI (CompuDrape)
- Calculated Horizontal Derivative (CompuDrape)

7.2 Digital Data

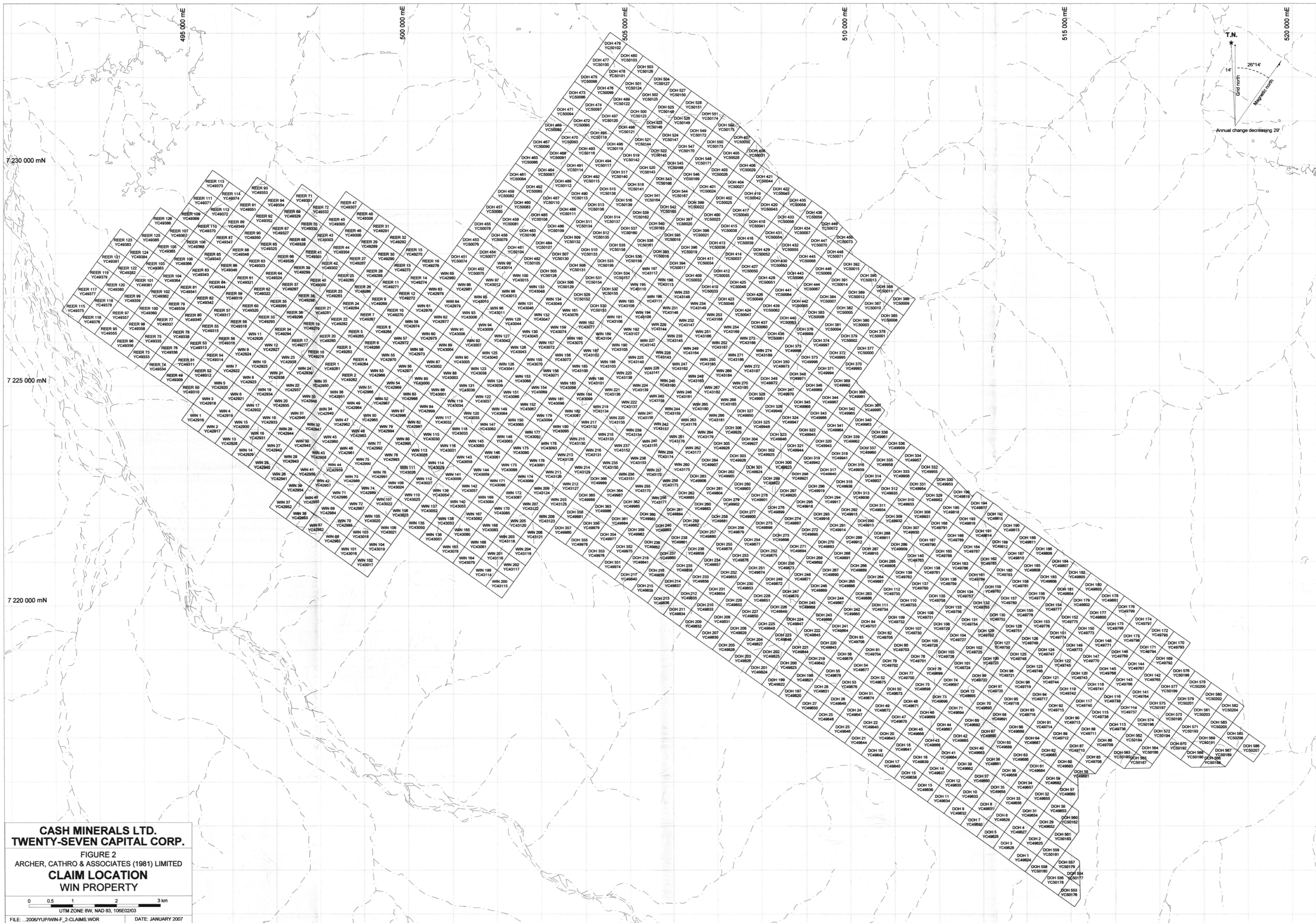
The edited field and processed digital data are delivered in two (2) copies, in ASCII code, on CD-ROM. The final processed line and grid data, in GEOSOFT format, are also delivered in two (2) copies on CD-ROM. Full descriptions of the digital data formats are included in this final report and as text files on each CD-ROM.

7.3 Report

Two (2) copies of a survey report are delivered, complete with all final maps. This report provides information about the acquisition, processing and presentation of the survey data.

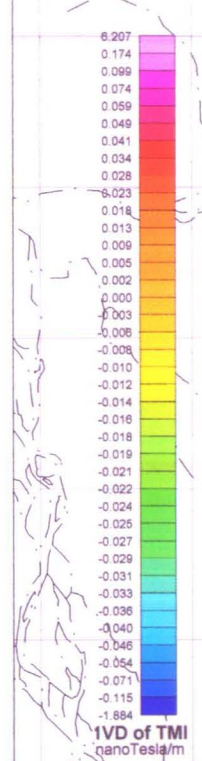
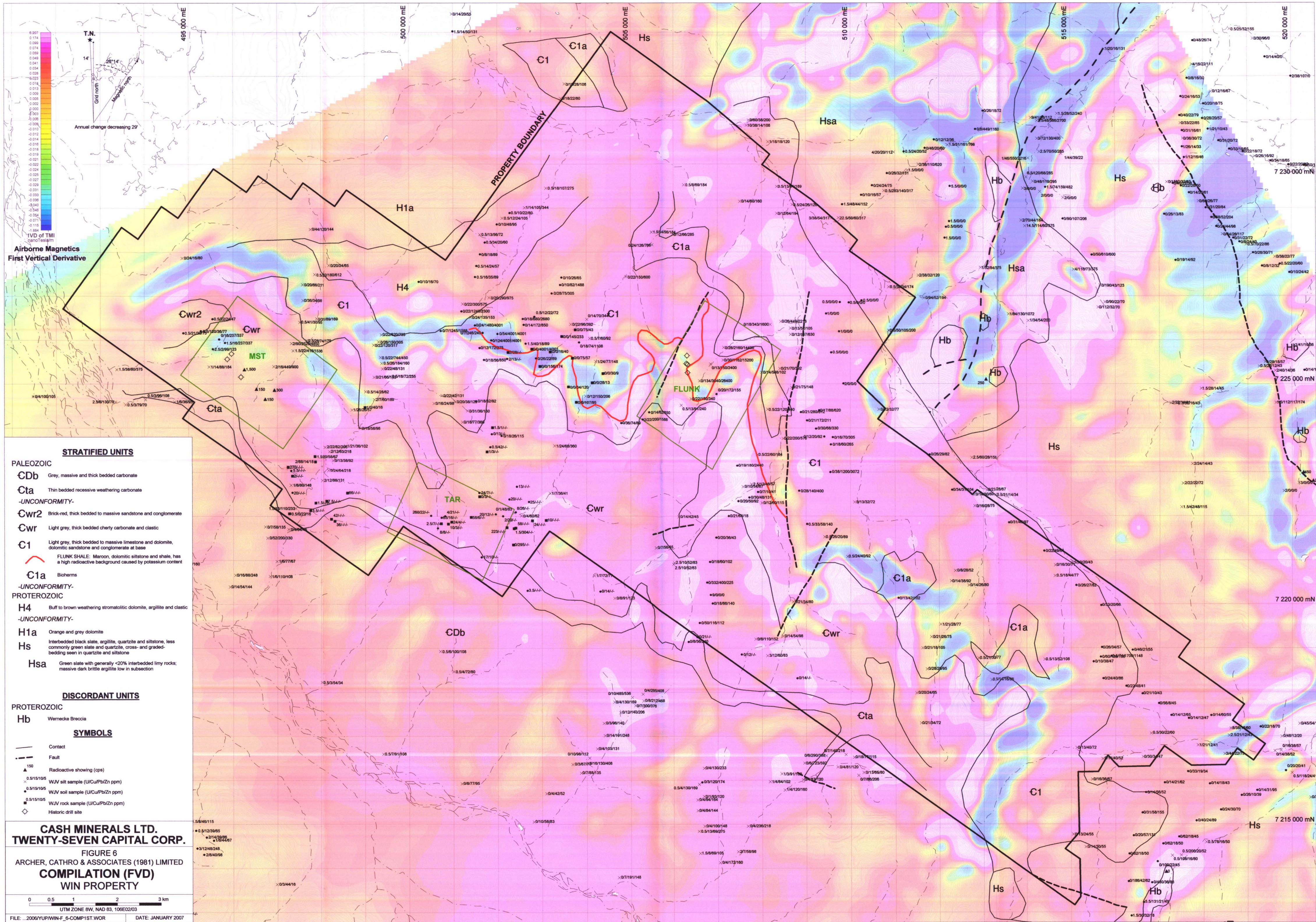
Respectfully submitted,
McPhar Geosurveys Ltd.

Dr. Thomas Grand
Chief Geophysicist
McPhar Geosurveys Ltd.



**CASH MINERALS LTD.
TWENTY-SEVEN CAPITAL CORP.**
FIGURE 2
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
CLAIM LOCATION
WIN PROPERTY

0 0.5 1 2 3 km
UTM ZONE 8V, NAD 83, 106E0203
FILE: 2006\UPWIN-F-2-CLAIMS.WOR DATE: JANUARY 2007



**Airborne Magnetics
First Vertical Derivative**

STRATIFIED UNITS

PALEOZOIC

CDb Grey, massive and thick bedded carbonate

Cta Thin bedded recessive weathering carbonate

-UNCONFORMITY-

Cwr2 Brick-red, thick bedded to massive sandstone and conglomerate

Cwr Light grey, thick bedded cherty carbonate and clastic

C1 Light grey, thick bedded to massive limestone and dolomite, dolomitic sandstone and conglomerate at base

C1a Bioherms

-UNCONFORMITY-

PROTEROZOIC

H4 Buff to brown weathering stromatolitic dolomite, argillite and clastic

-UNCONFORMITY-

H1a Orange and grey dolomite

Hs Interbedded black slate, argillite, quartzite and siltstone, less commonly green slate and quartzite, cross- and graded-bedding seen in quartzite and siltstone

Hsa Green slate with generally <20% interbedded limy rocks; massive dark brittle argillite low in subsection

DISCORDANT UNITS

PROTEROZOIC

Hb Wernicke Breccia

SYMBOLS

— Contact

- - - Fault

▲ 150 Radioactive showing (cps)

○ 0.5/15/105 WJV silt sample (Li/Cu/Pb/Zn ppm)

● 0.5/15/105 WJV soil sample (Li/Cu/Pb/Zn ppm)

■ 0.5/15/105 WJV rock sample (Li/Cu/Pb/Zn ppm)

◇ Historic drill site

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

FIGURE 6
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
**COMPILATION (FVD)
WIN PROPERTY**

