

ARCHER, CATHRO

& ASSOCIATES (1981) LIMITED

CONSULTING GEOLOGICAL ENGINEERS

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ASSESSMENT REPORT

describing

GROUND MAGNETIC SURVEYS

on the

SINISTER PROPERTY

Sin 1-11	YA39499-YA39509
13-33	YA39511-YA39531
35	YA39533
37	YA39535
39-40	YA39537-YA39538

Latitude 63°53' N; Longitude 135°46' W

NTS 105M/13

in the

MAYO MINING DISTRICT

YUKON TERRITORY

Prepared by

Archer, Cathro & Associates (1981) Limited

for

EXPATRIATE RESOURCES LTD.

T. C. Becker, B.Sc., P.Geo.

April, 1999



094008

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 7200.00.

M. B. ...
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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INTRODUCTION

The Sinister property consists of 36 mineral claims owned 100% by Expatriate Resources Ltd. The property is situated at the west end of the Keno Hill District which has produced over 200 million ounces of silver from veins cutting Mississippian quartzite and schist. The district also includes skarn and replacement-style gold mineralization hosted by Proterozoic to Lower Cambrian metasedimentary rocks which have been thrust over the Mississippian units. The property straddles the contact between the two packages and could host silver veins and/or gold mineralization.

This report describes a short exploration program conducted in early October 1998. The work was done by a two-person crew working from a tent on the property and consisted of a ground magnetics survey. Unfortunately one of the field crew developed a serious infection in his leg shortly after mobilizing to the property. This severely limited his effectiveness and resulted in premature termination of the survey when it became apparent that the infection was not responding to treatment. The program was managed by Archer, Cathro & Associates (1981) Limited and supervised by the author. Appendix I contains the Author's Statement of Qualifications.

LOCATION, CLAIM STATUS AND ACCESS

The Sinister Property consists of 36 mineral claims owned 100% by Expatriate. The claims are located in central Yukon at latitude 63°53' north and longitude 135°46' west on NTS 105M/13 (Figures 1). They are registered with the Mayo Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited which holds them in trust for Expatriate. Claim data are listed below while their locations are shown on Figure 2.

<u>Claim Name</u>	<u>Grant Number</u>	<u>Expiry Date*</u>
Sin 1-11	YA39499-YA39509	April 9, 2001
13-33	YA39511-YA39531	April 9, 2001
35	YA39533	April 9, 2001
37	YA39535	April 9, 2001
39-40	YA39537-YA39538	April 9, 2001

*Expiry dates include 1998 work filed for assessment credit but not yet accepted.

The property is situated at the west end of the Keno Hill District, 12 km west of Elsa and 35 km northeast of Mayo. Mayo is 400 km by all-weather paved and chip-sealed highway from Whitehorse. The Silver Trail, a gravel highway extending from Mayo to Elsa, lies about 1 km south of the property. The northern part of the property is accessible by driving approximately 5 km east on the South McQuesten River road from its junction with the Silver Trail.

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FIGURE 1

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

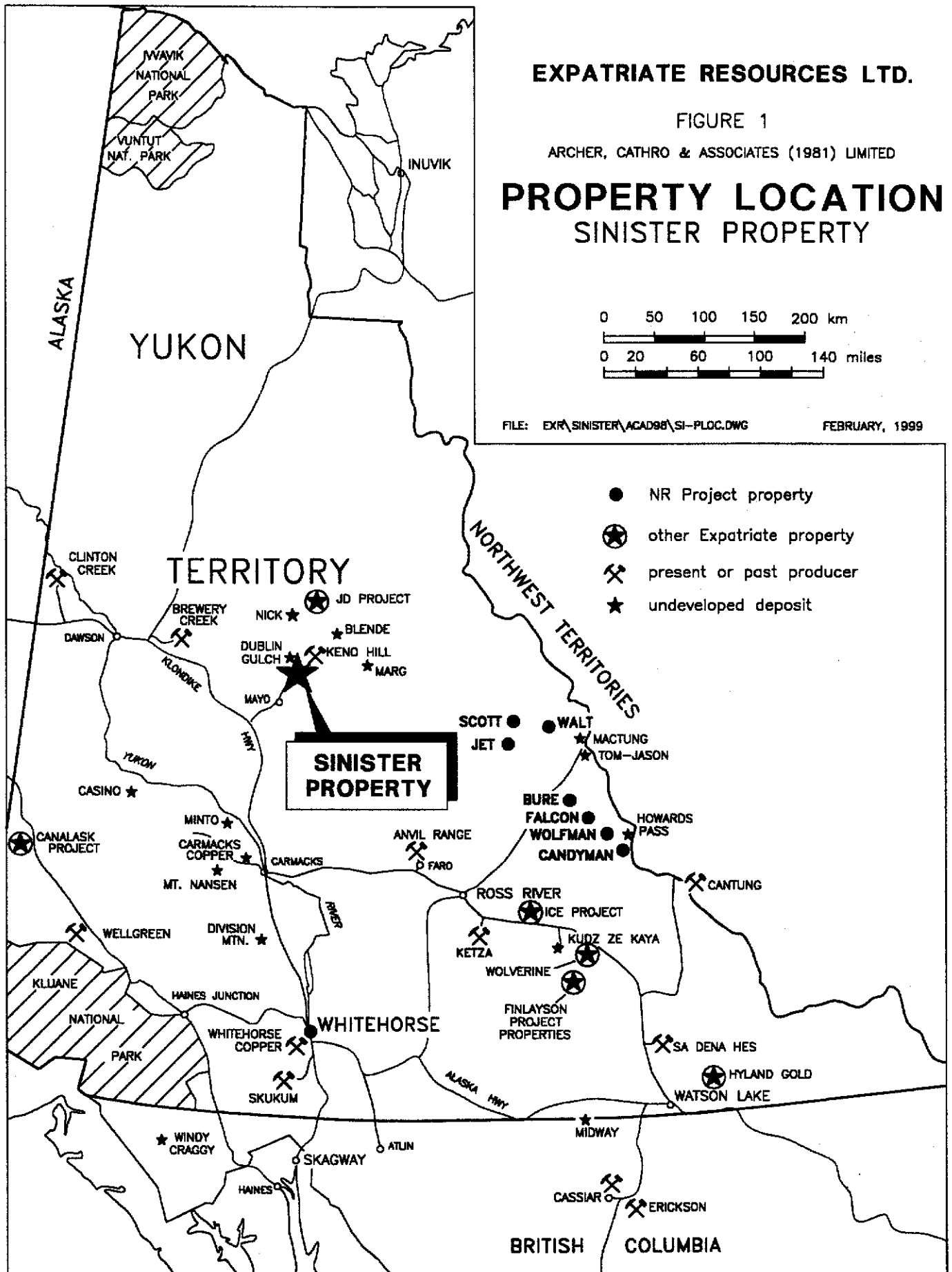
PROPERTY LOCATION SINISTER PROPERTY

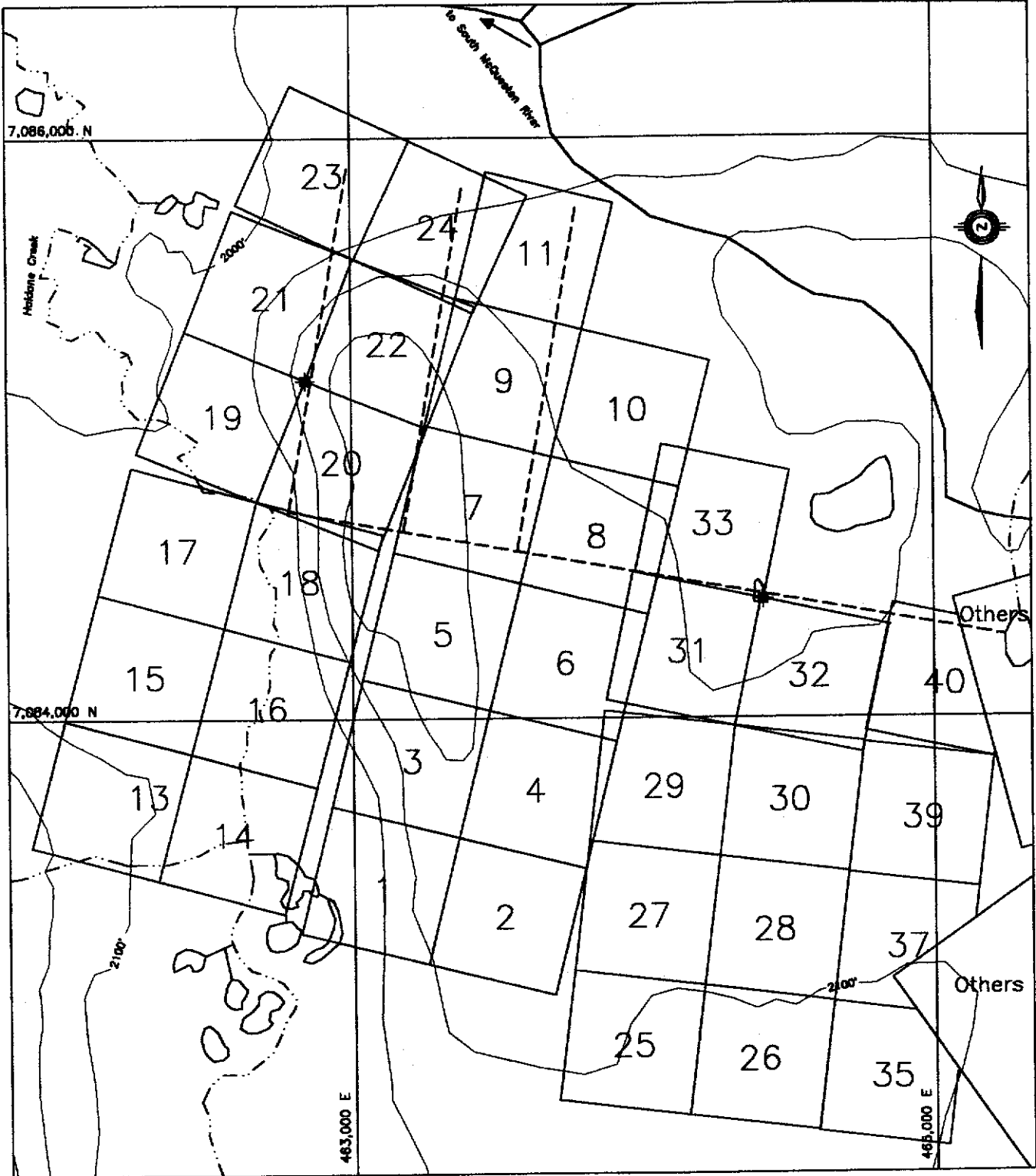
0 50 100 150 200 km

0 20 60 100 140 miles

FILE: EXR\SINISTER\ACAD98\SI-PL0C.DWG

FEBRUARY, 1999





- 1998 grid lines
- ★ Claim post location
- Road

EXPATRIATE RESOURCES LTD.

FIGURE 2
 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATION
 SINISTER PROPERTY

0 500 1000 1500 m

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PREVIOUS WORK

Work on the property prior to 1979 is poorly documented. The first reported activity on ground now covered by the Sinister property occurred in 1962 when Silver Titan Mines Ltd. conducted geological mapping and an electromagnetic survey (McClintock, 1987). In 1970, Lacanex Mining Company Limited flew an aeromagnetic survey (Esson, 1979) and the following year Canadian Reserve Oil and Gas Limited conducted a ground geophysical survey (Rockel, 1972). Two east-west conductors were located and drilling was recommended but there is no record of it being carried out.

In 1979 Archer Cathro staked the Sin, Is and Ter claims and optioned them to Canada Tungsten Mining Corporation Limited. Exploration later that year and in 1980 consisted of geological mapping, electromagnetic surveys, soil geochemical surveys and five overburden drill holes. The property was returned to Archer Cathro in 1987 which sold it to Expatriate in 1993.

GEOMORPHOLOGY

The property lies in an area of subdued topography in the valley of Haldane Creek. This creek is a north-flowing tributary of the South McQuesten River which is part of the Yukon River watershed. Local elevations range from 600 m along the creek to 730 m on a ridge in the centre of the property. The claims are covered by extensive glacial till. Vegetation consists of black spruce and poplar.

Climate in the area is categorized as continental and is characterized by relatively long cold winters and warm dry summers. Daylight hours range from a minimum of about six in December to a maximum of twenty-two in June. Snow can occur in any month and normally covers the ground from October to May. Maximum snow depth is about 50 cm. Permafrost is common in the area but is not pervasive. The local streams usually breakup in late May and freeze over in late October.

PROPERTY GEOLOGY AND MINERALIZATION

The property is underlain by two packages of metasedimentary rocks that are superimposed by a regional scale thrust fault (the Robert Service Fault). The structurally lowest unit is the Mississippian age Keno Hill Quartzite which hosts most of the silver-lead-zinc vein deposits in the district. It is a thick sequence of massive quartzite intercalated with minor carbonaceous phyllite and calcareous quartzite. Fine to medium grained, green amphibolite-chlorite-plagioclase greenstone (meta-diorite or meta-gabbro) sills have intruded into the quartzite package in many areas and locally host silver-lead-zinc veins. The Upper Schist Unit which is correlated to the Upper Proterozoic to Lower Cambrian Hyland Group structurally overlies the Keno Hill Quartzites. The Hyland Group (locally mapped as the Yusezyu Formation) consists of muscovite-chlorite phyllite and micaceous psammite with minor skarn and limestone lenses. The mid-Cretaceous age Tombstone Suite Intrusions cut both units elsewhere in the district. The only intrusions belonging to this suite that have been mapped in the vicinity of the property are narrow sills within the Hyland Group that are exposed in trenches on the McQuesten property, 2 km to the east.

The structural geology of the district is complex. The metasedimentary and mafic sills have undergone low grade metamorphism and polyphase deformation. They show small and large scale folding and are cut by low angle thrust faults and steeper normal faults. The property lies on the southern limb of the westerly plunging McQuesten Antiform (Hunt, et al, 1996). Metasedimentary rocks in the vicinity of the property strike easterly and dip moderately to the

south. The western edge of the property parallels the north-trending steeply east-dipping Haldane Fault.

Silver-lead-zinc veins in the Keno Hill District produced 213 million ounces of silver between 1913 and 1989. The productive veins strike northeast, dip steeply to the southeast and have left lateral offsets ranging from a few metres to over 100 m (McClintock, 1987). The mineralization occurs as open space filling and the main minerals are galena, sphalerite and tetrahedrite in a gangue of siderite, pyrite, arsenopyrite and quartz.

In 1981 gold was discovered on the McQuesten property (Archer and Elliott, 1982) and in 1993 on the Aurex property (Davidson, 1995). These two properties are 2.0 km east and 5.0 km southeast of the Sinister property, respectively.

The mineralization is primarily related to skarn and replacement zones developed in calcareous horizons within the Hyland Group. Some gold also occurs in quartz veins, fracture zones and cross faults which probably acted as conduits for mineralizing fluids. Grade is usually proportional to total sulphide content, including arsenopyrite, pyrrhotite and pyrite. There is a close association between gold and arsenic.

On the McQuesten property felsic sills intruding into the metasedimentary rocks appear to have caused the skarnification and are themselves weakly mineralized. No intrusive bodies have yet been identified on the Aurex property.

Trenching and drilling on the McQuesten property in 1997 and 1998 has defined a 10 to 120 m wide zone of >0.25 g/t gold over an east-west strike length of 2.5 km (YEG, 1998). Trenching has returned values up to 2.48 g/t gold over 18 m while reverse circulation drilling

returned up to 3.2 g/t gold over 23 m. Rotary percussion drilling on the Aurex property in 1993 returned values up to 6.4 g/t gold over 5.4 m (Davidson, 1994).

No mineralization has been found on the Sinister property but this is not surprising because there are no bedrock exposures and only five overburden holes have been drilled. Two of the overburden holes intersected anomalous silver, lead and copper values in the basal till (McClintock, 1987) while geochemical analyses of pan sample concentrates from till in some of the holes returned high gold and tungsten values (Archer, personal communication).

A 1971 horizontal loop electromagnetic survey located a strong conductor along the eastern edge of the property (McClintock, 1987). This conductor probably parallels the contact between Keno Hill Quartzite and the Hyland Group. The skarn and replacement zone on the McQuesten property occurs near this contact and may extend onto the Sinister property. Since gold mineralization occurring in skarn zones is accompanied by pyrrhotite, it is likely that the buried extension of the zone will be marked by a positive magnetic signature. The ground magnetic survey proposed for the Sinister property was designed to test for such a feature.

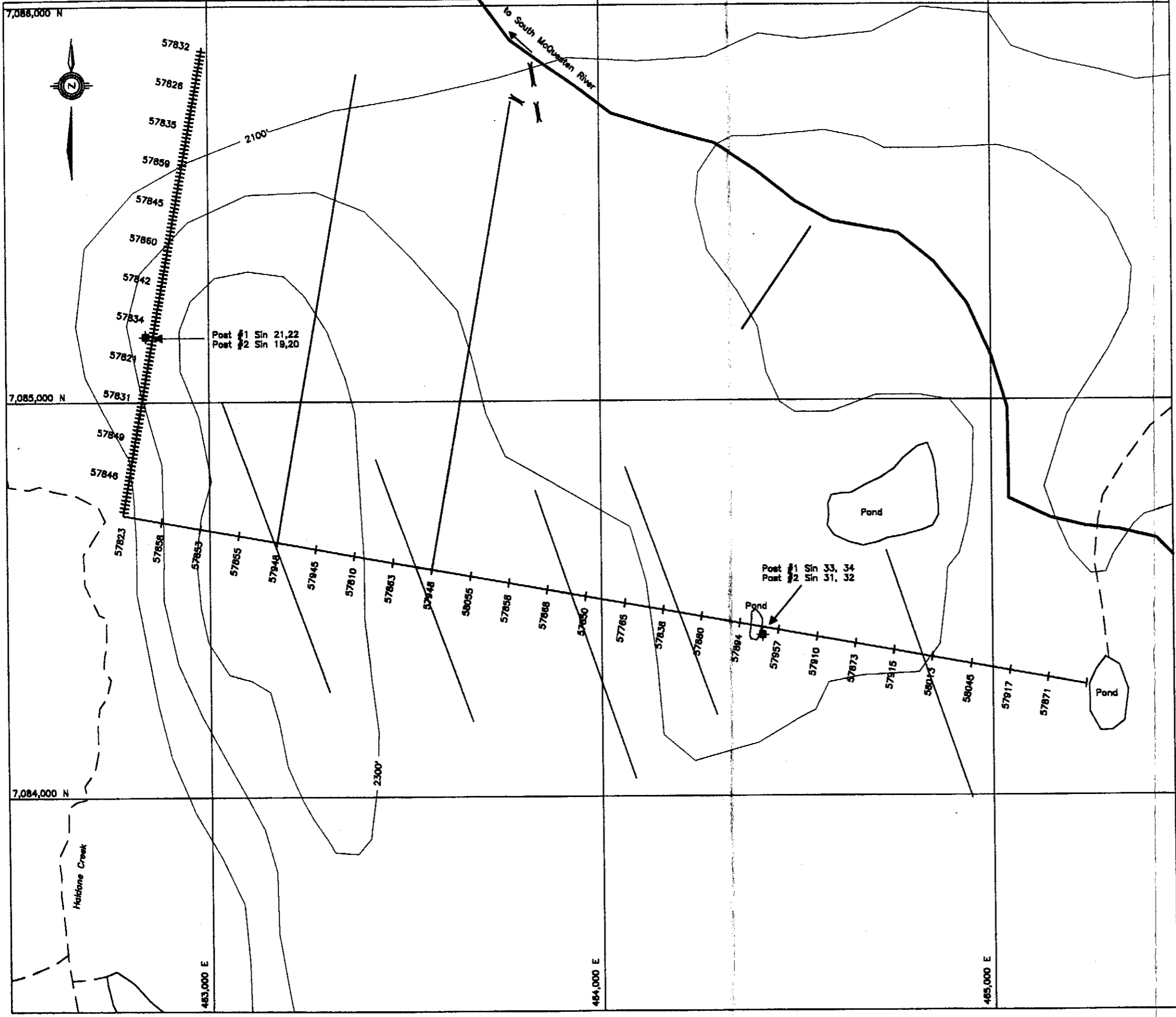
PROPERTY GEOPHYSICS







During the 1998 program a ground magnetics survey was begun in the northern part of the Sinister Property (Figure 3) along strike to the west from the McQuesten Skarn Zone. The survey ended prematurely because of unstable magnetic readings and a physical injury to one member of the crew.


In preparation for the survey a 2.5 km baseline was established and three crosslines were put in. Lath bearing aluminum tags inscribed with the grid coordinates were placed at 50 m intervals along the baseline and magnetic readings were taken at each station. Three crosslines 400 m apart were run perpendicular to the baseline. Magnetic readings were taken at 10 m intervals along these lines. Readings along the lines were corrected by integrating the magnetic drift determined from base station readings taken at the start and finish of each line. The survey utilized a Barringer Research Limited proton ground magnetometer (model number GM-122).

Magnetometer readings are a passive measurement of the variation in the earth's magnetic field due to underlying rocks. These readings are adversely affected by fluctuations in the magnetic field not related to underlying rocks. The most common fluctuations are caused by magnetic storms which are a result of solar flares on the sun. On several days during the program readings taken in the field were so erratic that corrections were not possible and the data was unusable.

After one day of work a member of the exploration crew developed an infection in his leg which required medical attention in Mayo. This infection did not respond well to treatment and consequently the crew member was unable to walk long distances. With only one member of



-  1998 grid lines
-  Grid lines with ground magnetic values
-  Pre-1998 grid line
-  Road
-  Pre-1998 excavator trench
-  Claim post location

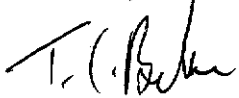
EXPATRIATE RESOURCES LTD.	
FIGURE 3 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED GROUND MAGNETICS SINISTER PROPETY	
	
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FILE: EXR\SINISTER\ACAD98\SI-BASE.DWG	DATE: FEBRUARY, 1999

the crew able to perform field work, the program was slowed considerably. This, coupled with fluctuating magnetic readings, resulted in only a small amount of the intended work being completed.

The survey did locate areas of broad magnetic relief but due to the limited area of coverage no conclusions can be made. It is recommended that more ground magnetic surveys be conducted along north-south orientated lines. The lines should be spaced 100 m apart with readings taken at 10 m intervals along the lines. If this survey is successful in defining areas of high magnetic relief then infill lines should be established at 50 m spacing.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



T. C. Becker, P. Geo.

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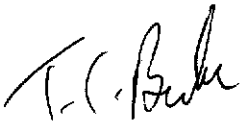
APPENDIX I

AUTHOR'S STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Thomas C. Becker, geologist, with business addresses in Vancouver, British Columbia and Whitehorse, Yukon Territory and residential address in Port Moody, British Columbia, do hereby certify that:

1. I graduated from the University of Alberta in 1989 with a B.Sc. (Honours) in Geological Sciences.
2. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia in the Province of British Columbia (registration number 20021).
3. I have been actively involved in mineral exploration in the Northern Cordillera since 1984.
4. I have personally participated in or supervised the field work reported herein.



Thomas C. Becker, B.Sc., P.Geo.