

# ASSESSMENT REPORTS

WHITEHORSE M.D.

MAP No. 105 D 6 TYPE OF WORK: Geophysical

REPORT FILED UNDER	Barker Creek Placer Exploration Co.		
DATE PERFORMED	May 1985	DATE FILED:	June 14, 1985
LOCATION - LAT.	60° 17' N		
LONG.	135° 03' W		
CLAIM Nos.	NEW 1-30; YA82083-YA82112		
WORK DONE BY	G.C. MacDonald		
WORK DONE FOR	Barker Creek Placer Exploration Co.		
REMARKS	<p>In May, 1985 a 12 line-km grid with a N-S baseline was established in the central and southern part of the property. Ground magnetometry was carried out using a Geometrics proton magnetometer. No strong anomalies were generated.</p> <p style="text-align: right;">46 x 85 p. 77 ✓</p>		

Q91650



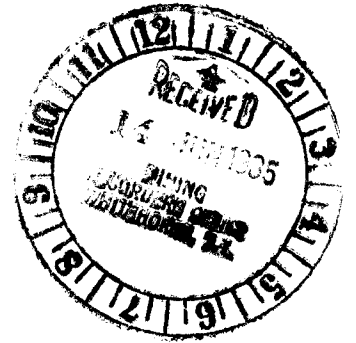
ASSESSMENT REPORT

GEOPHYSICAL SURVEY

NEW 1-30 CLAIMS  
YA 82083 - YA 82112

NTS 105-D-6  
WHITEHORSE MINING DISTRICT

MAY 1985

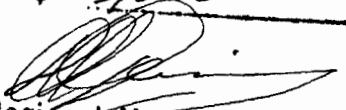


By: ...  
Glen C. Macdonald, P.Geol.,  
Whitehorse, Y.T.  
June 1985

For:  
Barker Creek Placer Explor-  
ation Co.

091650

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 \$ 3,000.00.

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

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## INTRODUCTION

This report describes a program of control grid establishment and ground magnetometer survey carried out during May 1985 on the NEW 1-30 claims (grant numbers YA 82083 - YA 82112) of Barker Creek Placer Exploration Co. by MBW Surveys Ltd. and G. Macdonald and Associates Ltd., both of Whitehorse, Yukon.

Late snow cover restricted exploration to the southern portion of the property.

## PROPERTY

The NEW property consists of 30 contiguous unsurveyed mineral claims located under the Yukon Quartz Mining Act and recorded in the Whitehorse Mining District on 7th June 1984 as the NEW 1-30 claims with grant numbers YA 82083 - YA 82112 inclusive.

## LOCATION AND ACCESS

The NEW 1-30 claims are located on Folle Mountain on the north side of the Wheaton River on NTS map sheet 105-D-6. Approximate geographical co-ordinates are 60°17' North latitude and 135°03' West longitude.

The gravel-surfaced Wheaton River Road crosses the southeast corner of the claim group at a point approximately 26 km from Robinson on the Klondike Highway. The property is 65 km by road from Whitehorse.

During the May 1985 program, road access was used to transport workcrews to and from the property; a Whitehorse-based helicopter was used to position crews on the ridge of Folle Mountain during the grid establishment.

• Tuktoyaktuk

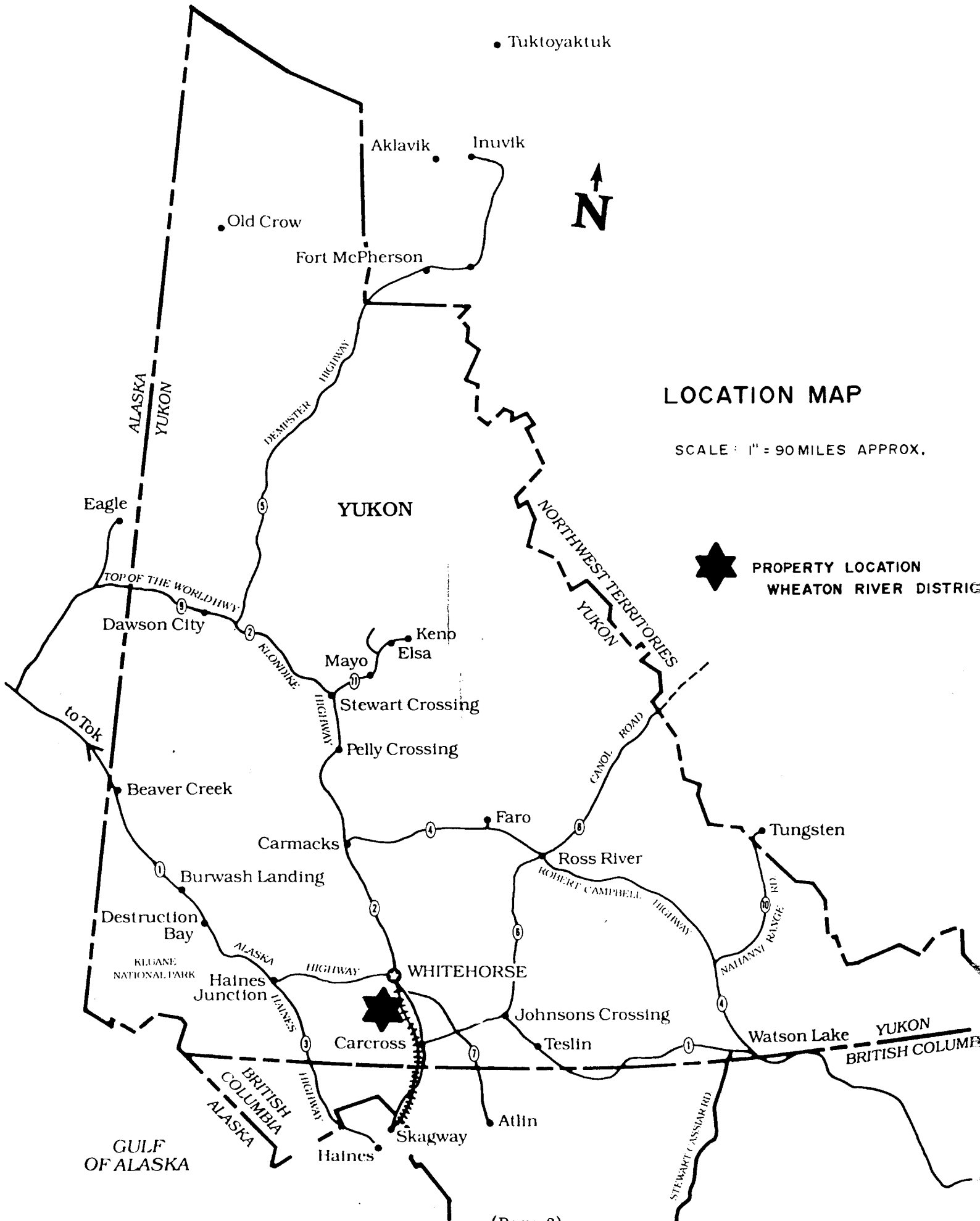


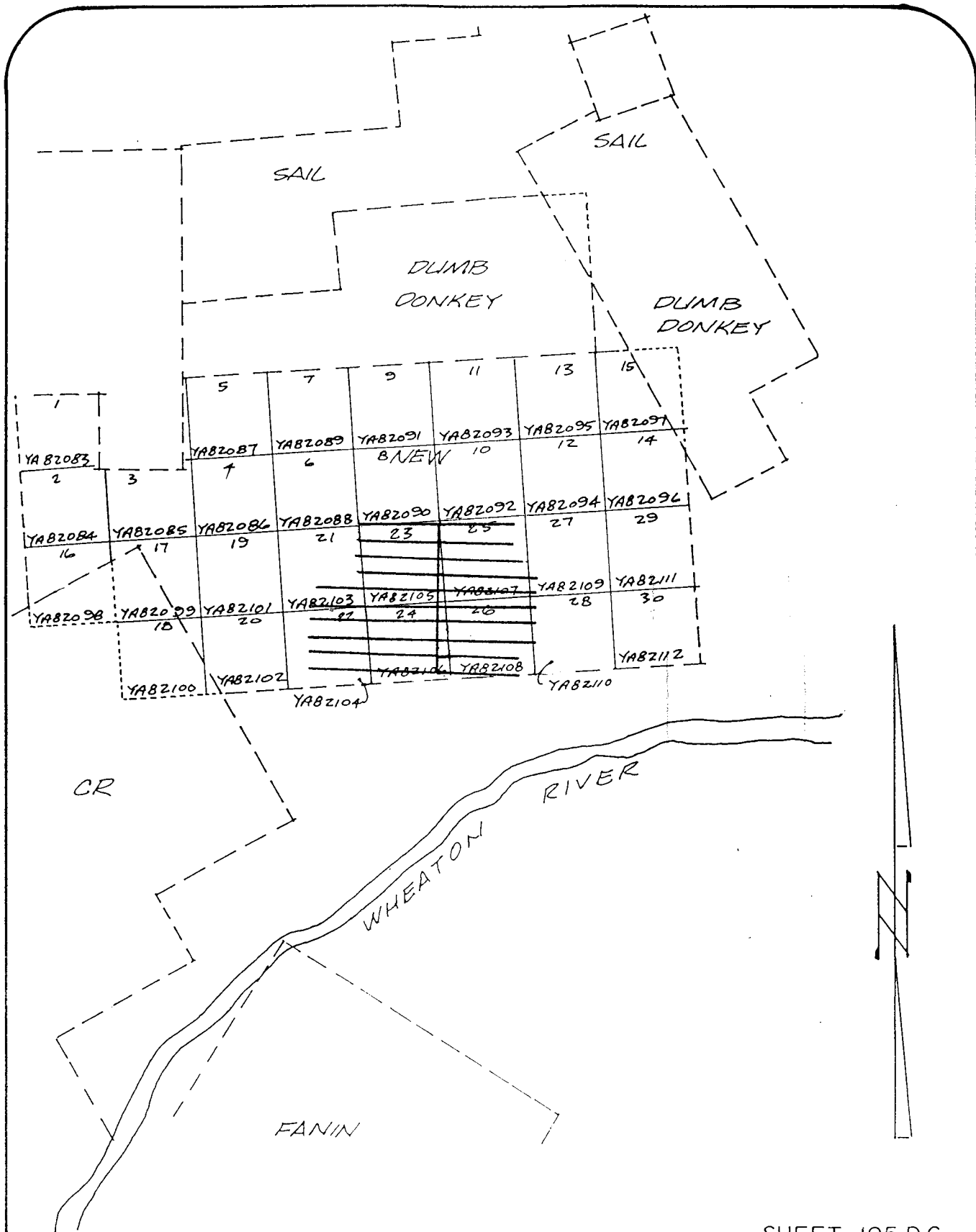
### LOCATION MAP

SCALE: 1" = 90 MILES APPROX.



PROPERTY LOCATION  
WHEATON RIVER DISTRICT





SHEET 105 D 6

BARKER CREEK PLACER EXPLORATION CO.

CLAIM SKETCH SHOWING NEW CLAIMS 1-30

DATE May/85

SCALE Approx 1:30,000

DRWN. WKB.

## PHYSIOGRAPHY AND CLIMATE

The property covers most of the broad ENE trending ridge of Folle Mountain (approximate elevation 6200 feet / 1890 meters) which rises in steep slopes from the Wheaton River valley (elevation 2800 feet / 850 meters). The property is drained by Schnabel Creek to the north and the Wheaton River on the south.

Lower slopes up to the 1000 meter elevation are covered with thick underbrush of willows, alders and scrub conifers. Higher slopes are mostly of loose talus with grass, moss and dwarf birch. Bedrock exposures are limited to steep upper slopes.

The Wheaton River area is characterized by a northern interior climate modified by the nearby Pacific Ocean. Winters are long with temperature extremes to  $-40^{\circ}\text{C}$  but commonly in the  $-10^{\circ}\text{C}$  to  $-20^{\circ}\text{C}$  range. Summers are pleasant, with long hours of daylight during June and July. Precipitation is generally light because the area lies in a "rain shadow" region. Freeze-up occurs after the middle of October, and rivers are usually open again by early May.

## REGIONAL GEOLOGY

The Wheaton River District has been twice mapped by the Geological Survey of Canada. D. D. Cairnes mapped much of the district during 1909 and 1915 and published his interpretation as Map 60A (1917) in conjunction with Memoir No. 31 (1912). The area was subsequently re-mapped as part of the general mapping of Map Sheet 105-D (Whitehorse Map Area) during 1946 by J. G. Fyles and W. E. Cockfield and 1948-1951 by J. O. Wheeler, who published his compilation as Geological Survey Memoir 312 in 1961.

The Wheaton River District is situated along the eastern margin of the Cretaceous Coast Range intrusive complex. Rocks of this mass are typically fresh quartz monzonite or quartz diorite, and underlie much of the area. The oldest stratified rocks present in the district are pendants and masses of lower Paleozoic Yukon Group quartz mica schists, gneisses and micaceous quartzite. Pennsylvanian-Permian meta-volcanic rocks are present in this eastern margin of the district, near Windy Arm, and perhaps along Gray Ridge. A complex assemblage of volcanic rocks comprised of older andesite, basalt and rhyolite flows and associated pyroclastic rocks (variously mapped as Hutshi Group, Mt. Stevens Group and Lewes River Group) occurs throughout the district.

These lithologies typically exhibit regional propylitic alteration and occupy a similar stratigraphic setting where exposed on Montana Mountain, Tally Ho Mountain and Mt. Skukum. A younger series of andesite and rhyolite flows, tuffs and agglomerates mapped as the Mt. Skukum Group overlies the older volcanics at Mt. Skukum, Mt. Macauley and Montana Mountain. These lithologies are internally very complex and typically change composition rapidly over short distances horizontally and vertically.

The Mt. Skukum volcanics are a product of Tertiary volcanism and are probably equivalent to the Sloko volcanic lithologies south of Atlin, B.C. Late Tertiary Upper Skukum series rhyolite porphyry dykes and stocks intrude all other rocks in the Wheaton River District. A summary of the general geology is presented as Table 1 of this report.

Table 1 - Table of Formations

QUATERNARY		Alluvium; glacial deposits
QUATERNARY(?)	Miles Canyon volcanics	Basalt; minor pyroclastic rocks
LATE TERTIARY	Upper Skukum Group	Rhyolite, andesite dykes, sills
TERTIARY	Skukum Group	Basalt, andesite, rhyolite flows; associated tuffs and breccias
CRETACEOUS	Coast Range intrusions	Medium-grained quartz-monzonite; granodiorite
JURASSIC/CRETACEOUS	Hutshi Group(?)	Andesite, rhyolite flows and pyroclastic equivalents
JURASSIC	Tantalus Group	Mainly conglomerate
LOWER JURASSIC	Laberge Group	Greywacke, arkose, quartzite, siltstone, argillite and conglomerate
TRIASSIC	Lewes River Group	Andesite, basalt flows and pyroclastic equivalents; limestone; minor rhyolite flows
LOWER PALEOZOIC	"Yukon Group"	Metamorphic terraine; quartz-biotite schist; micaceous quartzite; minor gneissic units

The area is structurally complex on a local scale but rather less complicated in the regional sense - schistose lithologies have undergone intense internal deformation as a result of tectonic plate margin collisions. Unconformities separate most of the stratified lithologies. Typically, sedimentary and older flow rocks exhibit a preferred north-west orientation. Major fault structures tend to be associated with caldera subsidence and collapse at Mt. Skukum, Mt. Macauley and Montana Mountain. Other larger faults are generally block-faults, some of which may be coeval with the Tertiary volcanism. Some of the late Tertiary rhyolite porphyry dykes were emplaced in ring fractures.

## PROPERTY GEOLOGY

No geological mapping was carried out during the May 1985 exploration program; thus, this section relies heavily on published information.

Apart from the Geological Survey mapping referred to above, recent work in the area includes the metallogenic map of Morrison (published by D.I.A.N.D. in 1979) and a study of the Folle Mountain Tertiary rhyolite porphyry intrusion (included in an unpublished B.Sc. thesis by M. J. Smith, University of Ottawa, 1982). The area now covered by the NEW 1-30 claims was formerly held by Dupont of Canada Exploration as the OLLIE 1-25 claims.

Exploration by Dupont in 1981 included limited reconnaissance-scale geological mapping which showed that the principal rock units on the property are quartzite, greywackes and conglomerates of the Lower Jurassic Laberge Group, and a fault-bounded wedge of andesitic and basaltic and volcanoclastic rocks belonging to either the Lewes River or Hutshi Groups. These units are intruded and locally hornfelsed by granitic and rhyolitic intrusions of mid-Cretaceous and early Tertiary age, and by andesite and rhyolite dykes. Andesite dykes are of unknown age, probably Cretaceous or Tertiary, whereas rhyolite dykes seem related to one of the last stages of Skukum Group volcanic activity.

Silver-lead veins located along Schnabel Creek on the SAIL and DUMB DONKEY mineral claims of Avid Gold Resources Inc. (adjoining the north side of the NEW property) occur in a rhyolite host rock believed to be related to Skukum Group rhyolites associated with gold-silver mineralization at Mount Skukum and Tally Ho Mountain.

A grab sample of malachite-stained rhyolite dyke collected at grid co-ordinates 5+00S, 3+25W during the May 1985 program gave assay values of 0.24% copper, 0.34 oz/t silver, and less than 0.01 oz/t gold. (Certificate of Analysis follows)

## PREVIOUS EXPLORATION

The earliest exploration work in the Wheaton River area pre-dates the Klondike Gold Rush by several years. The first recorded claims staked in the region were located by Frank Corwin and Thomas Rickman on Carbon Hill, Chieftain Hill and Mt. Anderson(?) during the summer of 1893. These two prospectors excavated numerous pits and trenches on Carbon Hill during that season and returned to their base at Juneau, Alaska, at the season's end with samples of antimony ores and gold-quartz mineralization which assayed (by the Treadwell Mines) over \$1,200 per ton. Both prospectors died without revealing the location of their finds.

Additional prospecting in the Wheaton River District continued intermittently until 1906 when the discovery of gold and gold telluride bearing quartz veins on Gold Hill led to a staking rush which resulted in over 700 claims being located near discovery and on Carbon Hill where Corwin and Rickman's original claims had been found.



# Certificate of Analysis

TO Glen MacDonald & Associates  
\_\_\_\_\_  
\_\_\_\_\_

REPORT NO. A45-42 .....

DATE May 30, 1985 .....

I hereby certify that the following are the results of analyses made by us upon the herein described rock samples

MARKED	oz/ton	oz/ton	%	%	%				
	Au	Ag	Cu	Pb	Zn				
23582	L0.01	0.34	0.24	L0.01	L0.01				

(Page 7)

*John Reeve*  
.....

Many of the claims were further developed until the outbreak of WWI - with adit entry underground drifts driven on shear zones or veins on Gold Hill, Tally Ho Mountain, Mt. Stevens and Carbon Hill. After the termination of the war, additional exploration was conducted on several of the more promising occurrences and limited production arose from high grade zones at Tally Ho Mountain, Gold Hill and Mt. Stevens. An old water-powered stamp mill was located on Becker Creek between Carbon Hill and Mt. Anderson to process high-grade silver-gold ore from veins on the west side of Mt. Anderson, but production records are lost to time.

Most of the Wheaton River District then lay idle from the mid-1920's until the late 1940's as most exploration efforts during this period were directed to silver-lead veins in the Keno Hill area of central Yukon. Most of the main mineral occurrences were maintained as leases or Crown Grants during this phase of inactivity. From the 1940's until the early 1980's, the Wheaton River District witnessed only sporadic exploration activity as specific commodities were sought. During 1966-1968, a considerable amount of underground exploration was carried out at the old Becker-Cochrane property on the east side of Carbon Hill by Yukon Antimony Ltd. where some reserves of antimony-(stibnite)-silver ore were indicated. During the 1970's, exploration reconnaissance programs were conducted in the region for porphyry copper deposits. With the increasing price for gold during the late 1970's, interest again revived for precious metal exploration in southern Yukon.

By 1981-1982, regional exploration programs conducted by AGIP Canada Ltd. had successfully located gold-bearing veins in the Mt. Skukum area. These low-sulphide zones were found to contain microscopic gold mineralization of commercial importance in quartz-calcite veins.

The significance of the discovery was recognized by 1983 and a surge in exploration activity ensued, with some 2,000 new claims being located in the Wheaton River District.

The area immediately north of the NEW 1-30 claims has been explored several times since 1893, principally for silver and base metals occurring in a series of at least 12 veins.

Exploration by Dupont in 1981 on the ground now held as the NEW 1-30 claims included sampling and analysis of 169 soil, four rock and nine stream sediment samples. Soil samples were collected at 100 meter intervals along contour lines as a reconnaissance tool. Most samples were analyzed for Cu, Pb, Zn, Mo, Hg, As, Sb, Mn, Au and Ag. The most anomalous sample in the area of the NEW claims was a soil sample in the SE quadrant, with values of 3.8 ppm silver, 326 ppm zinc and 1500 ppm lead.

## GEOPHYSICAL SURVEY: MAY 1985

In the period May 26 - 30, 1985, MBW Surveys Ltd. of Whitehorse established a 12 line-kilometer grid with a north-south baseline in the central and southern sector of the NEW property, as shown on Figures 2 and 3.

G. Davidson carried out a ground magnetometer survey on the grid area using a Geometrics proton magnetometer. This instrument measures the total intensity of the earth's magnetic field; local variations in field strength depend on the concentration of magnetic minerals at or close to the earth's surface. Field strength readings, corrected for diurnal variation, are shown in Figure 3.

This survey did not generate any strong anomalies. Below-normal readings occur in several small linear gullies which cut into the hillside. Elsewhere the values show little magnetic relief.

### CONCLUSIONS

The review of previous exploration in the area indicates that two or three styles of mineralization may be present on the NEW 1-30 claims.

Silver-lead-zinc vein mineralization occurs immediately to the north on the old Union Mines' property (currently held as the SAIL and DUMB DONKEY claims of Avid Gold Resources Ltd.); geological similarities and anomalous geochemical results obtained by Dupont Exploration indicate that similar mineralization probably occurs on the NEW property.

Skukum Group rhyolite dykes are spatially related to gold-silver mineralization at Mount Skukum and Tally Ho Mountain; their presence on the NEW property suggests that careful prospecting and sampling is warranted.

Copper-silver values (with low gold and lead-zinc values) obtained in a rhyolite dyke sample collected on the 1985 grid suggest the possible presence of a third style of mineralization.

Results of the May 1985 ground magnetometer survey do not encourage additional surveying of this type.

Steep topography on the property would inhibit the potential use of VLF-EM surveys.

Examination of soil geochemical results obtained in the same area by Dupont Exploration indicate a number of preliminary target areas and show that only the elements copper, lead, zinc, silver, arsenic and gold are likely to be of use in reconnaissance and detail sampling.

## RECOMMENDATIONS

The NEW 1-30 claims warrant additional exploration for potential precious metal mineralization - using geological mapping, prospecting and geochemical sampling as the principal exploration techniques.


A proposed program is outlined below:

Grid extension:	\$ 5,000.00
Geological mapping:	5,000.00
Geochemical sampling:	10,000.00
	<hr/>
	\$20,000.00
	=====

Contingent upon the results of this initial program, additional detailed exploration by trenching and diamond drilling may be required.

Cost estimates for this initial program include allowances for field costs, transportation, supervision and report preparation.

Respectfully submitted,



G. Macdonald, P.Geol.

## STATEMENT OF COSTS

### FIELD PROGRAM (May 26-30, 1985)

MBW Surveys Ltd: grid establishment and ground magnetometer survey, including labour costs, materials, equipment rental and ground transportation - 13 line-kilometers @ \$250/line km:	\$3,250
Helicopter - Trans Canada Helicopters, Whitehorse:	672

### PROJECT SUPERVISION AND REPORT PREPARATION

G. Macdonald and Associates Ltd:	700
Assay: 1 rock sample :	33
Drafting (estimated) :	100
Secretarial (estimated):	85
<b>TOTAL</b>	<u>\$4,840</u> =====

4 Hyland Crescent  
Whitehorse, Y.T.  
Y1A 4P6

(403) 668-2044

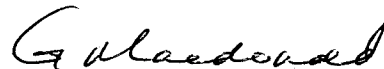
(403) 667-7229

### STATEMENT OF QUALIFICATIONS

I, GLEN C. MACDONALD, with business and residential address in Whitehorse, Yukon Territory, DO HEREBY CERTIFY that:

1. I am a consulting professional geologist.
2. I am a graduate of the University of British Columbia (B.Sc., Geology, 1973 and B.A., Economics, 1971).
3. I am registered as a Professional Geologist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta (# 36214).
4. I am registered as a Professional Geologist in the Northwest Territories (# L166).
5. I am a member in good standing of the Canadian Institute of Mining and Metallurgy.
6. I have practised mining and exploration geology in the Yukon, northern British Columbia and the Northwest Territories since 1973. I began private practice in 1982 after leaving the position of Regional Geologist for Noranda Exploration Company Limited, Whitehorse, Y.T.
7. I have examined the area of the NEW property in the Wheaton River area of the Whitehorse Mining District, and have reviewed all available private and public information on the property to compile this report.
8. I have not received, nor do I expect to receive, any interest in the properties or securities of Barker Creek Placer Exploration Co.
9. I hereby grant my permission for Barker Creek Placer Exploration Co. to use this report for filing with the Vancouver Stock Exchange as partial requirement of a Statement of Material Facts or for any legal purpose normal to the business of Barker Creek Placer Exploration Co.

DATED at Whitehorse, Yukon Territory, this 12th day of June, 1985.



Glen C. Macdonald, P.Geol.

7+50W

5+00W

2+50W

B.L. 0+00

2+50E

5+00E



L0+00S

L1+00S

L2+00S

L3+00S

L4+00S

L5+00S

L6+00S

L7+00S

L8+00S

L9+00S

CONTOURS (GAMMA'S)  
 57,900  
 57,100 - 57,899  
 < 57,699



091650	
BARKER CREEK PLACER EXPLORATION	
MAGNETOMETER SURVEY	
NEW CLAIMS	
SCALE: 1:2,500	DATE: May/85
DRAWN: WMB.	