

ASSESSMENT REPORT

PROSPECTING, GEOCHEMICAL SAMPLING, BLASTING

MR 1-16 CLAIMS (YA 85563 - YA 85578)
MR 17-18 CLAIMS (YA 96374 + YA 96375)
WHEATON RIVER

NTS 105 - D - 6

Latitude: $60^{\circ} 15' N$
Longitude: $135^{\circ} 05' W$
Whitehorse Mining District



11 June to 28 September 1986

Gary G.A. Reynolds C.E.T.
Whitehorse, Yukon
Feb. 16/87

091914

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 \$ 1,600.00.

for *D. Diamond*
Regional Manager, Exploration and
Geological Services for Commission
of Yukon Territory.

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TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
PROPERTY	1
LOCATION AND ACCESS	1
PHYSIOGRAPHY, CLIMATE, VEGETATION	2
REGIONAL GEOLOGY	2
HISTORY	3
GEOLOGY AND EXPLORATION - 1986	4
CONCLUSIONS AND RECOMMENDATIONS	5

LIST OF FIGURES

Figure 1:	Location Map	
Figure 2:	Claim Distribution	
Figure 3:	Geology	(pocket)
Figure 4:	Rock and Soil Sample Locations	(pocket)
Figure 5:	Soil Geochemistry	(pocket)

LIST OF TABLES

Table of Formations	2
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LIST OF APPENDICES

Appendix I:	Statement of Expenditures	6
Appendix II:	Statement of Qualifications	7

INTRODUCTION

This report describes the MR 1-18 claims located in the Wheaton River district, with particular reference to a preliminary exploration program of prospecting and geochemical sampling carried out by Gary Reynolds prospector and owner of the property.

The general location of the Wheaton River district is shown on Figure 1.

PROPERTY

The MR 1-16 claims were staked on the 29th and 30th of September 1984 and were recorded on the 5th of October 1984 in the office of the Whitehorse District Mining Recorder under grant numbers YA 85563 - YA 85578, in accordance with the Yukon Quartz Mining Act.

The M.R. 17 + 18 claims were staked on the 27th of September 1986 and were recorded on the 29th of September 1986 in the office of the Whitehorse District Mining Recorder under grant numbers YA 96374 and YA 96375, in accordance with the Yukon Quartz Mining Act.

The location of the MR claims with respect to local topography and adjacent mineral claims is shown in Figure 2.

LOCATION AND ACCESS

The MR claims are located about 50 km south of Whitehorse on Map Sheet NTS 105-D-6. Approximate geographical co-ordinates are 60° 15' North latitude and 135° 05' West longitude.

Access to the property from Whitehorse is by paved highway following the Alaska Highway and then the Klondike Highway (Carcross-Skagway section) as far south as Robinson; a distance of 40 km. From Robinson, an all-weather gravel road (Annie Lake-Wheaton River road) is followed for 25 km to the MR claims; this road runs through the southern part of the property.

During the summer of 1985, major improvements to the Annie Lake road were carried out by the Yukon Government Highways Department and Mount Skukum Gold Mines Ltd. (a subsidiary of Erickson Gold Mines Ltd.) as part of the development program at the Mount Skukum gold mine owned by Agip Canada Ltd. and Erickson Gold Mines Ltd. Production from this deposit began in February 1986. The Mount Skukum millsite is located 16 km west of the MR property.

Exploration of the MR property in 1986 was carried out by travelling daily to the property by truck from Whitehorse.

BEAUFORT SEA

FIGURE 1

• Tuktoyaktuk

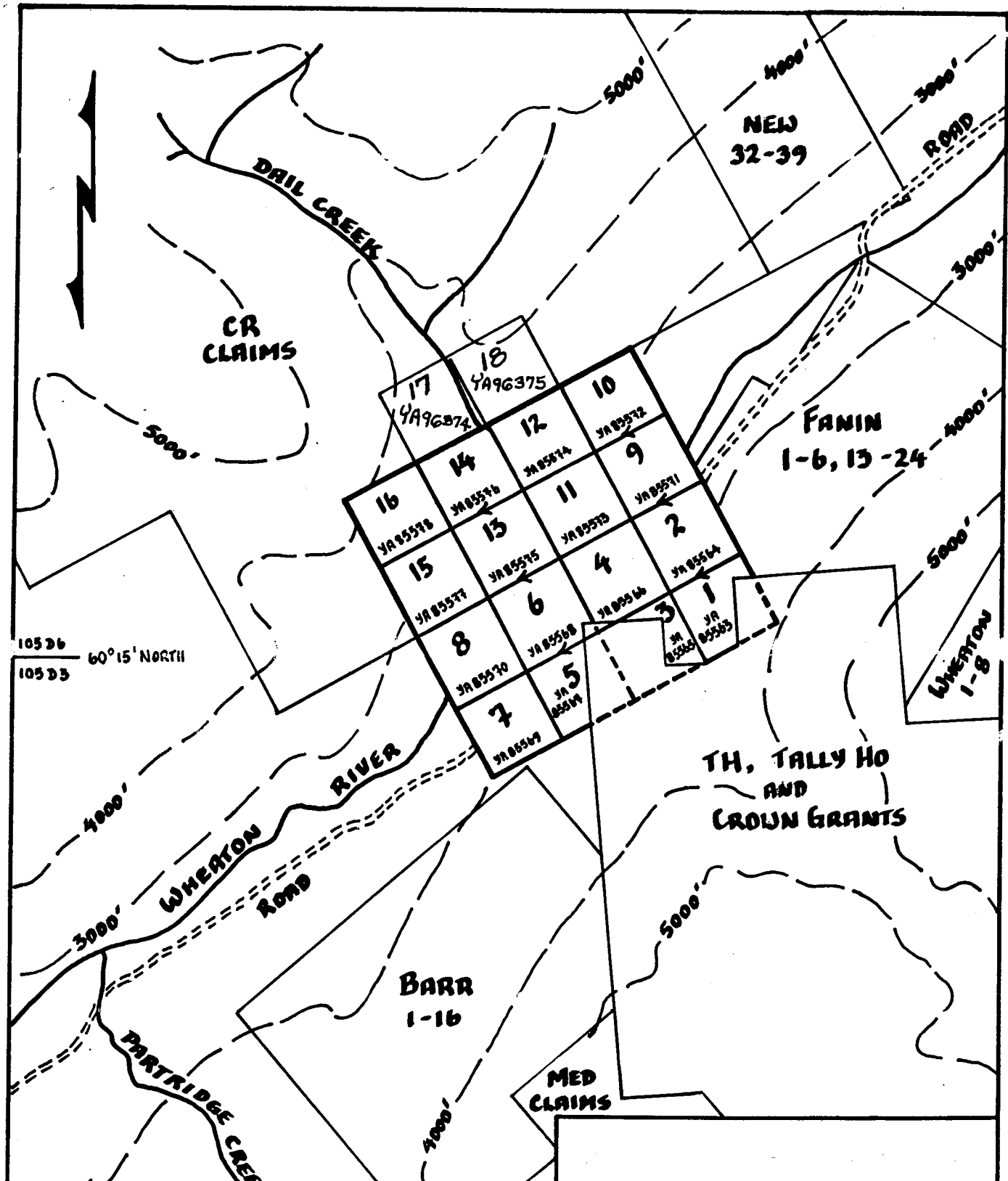


LOCATION MAP

SCALE: 1" = 90 miles

✖ PROPERTY LOCATION
WHEATON RIVER AREA





10526 60°15' NORTH
10525

MR 1-18 CLAIMS
G. REYNOLDS
CLAIM DISTRIBUTION

NTS: 10525, D6	DATE: FEB. 1987
SCALE: 1:31680	DRAFTING: G. R.
	FIGURE: 308-BG-2

PHYSIOGRAPHY, CLIMATE, VEGETATION

The MR claims cover ground on both sides of the Wheaton River including the lower section of Dail Creek, which drains the southern slopes of Gold Hill and Pugh Peak and joins the Wheaton River within the claim block. Virtually all of the property lies below the 3500 foot (1065 metre) contour. The central area of the claims covers flat-lying, well-drained, forest-covered ground on either side of the river, underlain by recent river gravels and older fluvial and fluvio-glacial clays, sands and gravels.

Steeper slopes on the northern and southeastern parts of the property are underlain by talus and covered by moss and brush. Bedrock exposures are scarce, being limited to the steeper slopes and parts of the Dail Creek drainage.

Climatic conditions are generally those of similar elevations in the Carcross area, characterized by a northern interior climate modified by a warmer, moist influence of the nearby Pacific Ocean. Average annual precipitation is approximately 40 cm. Winters in the area are long, with temperature extremes to -40°C but commonly in the -10°C to -20°C range. Summers are pleasant with temperatures up to 25°C and long hours of daylight during May, June and July. The area generally is snowfree from mid-May to late September.

REGIONAL GEOLOGY

The Wheaton River district straddles the boundary between folded Mesozoic and Paleozoic volcanic and sedimentary rocks of the Whitehorse Trough and the granitic intrusive rocks of the Cretaceous Coast Crystalline Complex to the west. All of these units are locally overlain by volcanic rocks of the late Cretaceous/early Tertiary Skukum Group and intruded by rhyolite and site dykes of the same age.

The region has been mapped twice by the Geological Survey of Canada and the results published as Memoir 31 (D.D. Cairnes, 1912) and Memoir 312 (J.O. Wheeler, 1961). A reinterpretation of the regional geology formed part of the metallogenic map published as Open File EGS 1979-6 of the Department of Indian Affairs and Northern Development (G.W. Morrison).

Table of Formations

QUATERNARY		Alluvium; glacial and fluvial deposits
QUATERNARY (?)	Miles Canyon volcanics	Basalt; minor pyroclastic rocks
TERTIARY	Skukum Group	Basalt, andesite, rhyolite flows, tuffs and breccias, dykes and sills
MID-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 terrain; quartz-biotite schist; micaceous quartzite; minor gneissic units

Older sedimentary and volcanic rocks are typically deformed and exhibit at least lower-greenschist facies regional metamorphism. These units generally trend north or northwest and appear to be separated by unconformities. Much of the deformation seen in these rocks relates to regional tectonic events associated with intrusion of large bodies of quartz monzonite and granodiorite of the Coast Range Complex about 100 m.y.

Major fault structures are associated with early Tertiary volcanic complexes at Montana Mountain, Mount Macauley and Mount Skukum but older structures may also be present. Skukum Group volcanic rocks are equivalent to the Sloko Group of northern British Columbia and the Mount Nansen Group of central Yukon. Late stage features of Skukum Group volcanism include andesite, dacite and rhyolite dykes, small rhyolite porphyry stocks and quartz or quartz-carbonate veining with important precious metal mineralization.

HISTORY

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. 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. 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.

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. From the 1940's until the early 1980's, the Wheaton River District witnessed only sporadic exploration activity as specific commodities were sought. During the 1970's, exploration reconnaissance programs were conducted in the region for porphyry copper deposits. With the increasing price of gold during the late 1970's, interest again revived for precious metal exploration in southern Yukon.

A regional exploration program conducted by Agip Canada Ltd. in 1980 led to discovery of gold-bearing vein structures at Mount Skukum in 1981. Subsequent diamond drill programs in 1982-1984 defined a commercial ore body consisting of 165,000 tons grading 0.73 oz gold and 0.63 oz silver per ton as finely disseminated gold hosted by quartz-calcite veining. Development work by Mount Skukum Gold Mines Ltd. (a subsidiary of Erickson Gold Mines Ltd. of Vancouver) proceeded during 1984-1985 under a joint venture agreement with Agip; production commenced early in 1986.

The significance of this discovery was realized in 1983 and exploration activity in the Wheaton River district showed a dynamic increase during 1983-1985.

There are no records of previous exploration activity in the area presently covered by the MR 1-18 claims. Extensive prospecting and exploration have been conducted in the past on adjacent properties, including southern Gold Hill and the Dail Creek drainage immediately north of the MR claims and old gold-silver occurrences just southeast of the claims including the Tally Ho mine which produced high grade gold-silver ore from 1917 to 1921. Undoubtedly parts of the MR claims were examined during these earlier periods of exploration in the Wheaton River district.

GEOLOGY AND EXPLORATION 1986

An examination of the MR 1-18 claims was carried out by 3 prospector owners namely Gary Reynolds, Keith Murphy and Bruce Martel all of Whitehorse, Yukon. The program as carried out was as per some of the recommendations contained in the 1985 assessment report. Consultation with Mr. R. Robertson of G. MacDonald and Associates Ltd. and Mr. Jim Morin of D.I.A.N.D. Geology Section was done prior to the program being carried out. The advice and recommendations of these 2 gentlemen were very much appreciated by the owners of the property.

Much of the central portion of the property below about 900 metres (3000 feet) elevation and flanking the Wheaton River is underlain by thick deposits of fluvioglacial sands and gravels. Bedrock exposures are limited to steeper slopes towards the northern and southeastern areas of the property and the Dail Creek Valley.

Geology of the claims is shown on Figure 3.

The oldest rock unit present on the MR claims is a series of older andesite volcanics ("greenstones") which are regionally deformed and metamorphosed. This unit is probably part of the Upper Triassic Lewes River Group. Mid-Cretaceous granitic rocks (principally granodiorites) of the Coast Range Intrusive Complex intrude the older andesite series on the north side of the property. Similar relationships are seen on adjacent claims of Tally Ho Exploration Ltd. just southeast of the MR claims where gold-silver mineralized veins are present. This mineralization may be related to fracture systems extending from Tally Ho Gulch through the MR claims and along Dail Creek.

A body of Tertiary Skukum Group rhyolite porphyry ("Folle Mountain intrusion") outcrops immediately north of the property; associated peripheral rhyolite dykes may underlie part of the MR claims.

Outcrops of quartz-carbonate veining in altered (carbonatized) andesite of the Lewes River Group were located and sampled during the 1986 exploration program. Similar veining elsewhere in the district is commonly of Tertiary age, a late stage hydrothermal event associated with Skukum Group volcanic activity. Several veins are present, displaying strong "pinch and swell" characteristics along strike with vein widths up to 0.25 metres. Veins are located in narrow shear zones and contain trace amounts of fine-

grained pyrite as well as occasional fragments of altered wallrock.

Twelve samples of vein material were collected and analyzed for gold and silver by Bondar-Clegg and Co. Ltd. (Vancouver). Gold analyses use a 30 g portion of pulverized rock and fire assay preconcentration (i.e. preparation of the dore bead) followed by digestion of the bead in acid and analysis by atomic absorption spectrophotometry. Silver analyses are by standard atomic absorption techniques. Sample locations and results are shown on Figure 4. Silver analyses indicated one sample as high as 1.68 OPT with three other samples containing 7, 10, 26 P.P.M. Samples 2 C upper 6 and 17 upper contained 300 P.P.B gold and 240 P.P.B. gold respectively, both significant geochemical anomalies. This is the first indication of silver on the property and the sample containing 300 P.P.B. gold confirms an earlier sample in the same area which assayed 330 P.P.B. gold. The sample assaying 240 P.P.B. gold, is a new discovery approximately 1000' north of rock sampling done in 1985. Blasting was done at three locations as shown on Figure 4 to obtain fresh rock for assay and to remove talus to get to bedrock.

A total of 31 soil samples were collected in the western area of the property (MR 14 claim) on the lower slope of Gold Hill just south of the Dail Creek Valley. Sample locations are shown in Figure 4. These samples were analyzed for gold, and silver by Bondar-Clegg. Silver was analyzed by standard atomic absorption techniques. Gold was analyzed as described above except that a 10g portion of the minus 80 mesh fraction was used. Analytical results and sample numbers are shown in Figure 5. There are no strongly anomalous gold values but a modest anomaly is present over a distance of 150 metres with values of 30-70 P.P.B. gold.

CONCLUSIONS AND RECOMMENDATIONS

Although only a modest program of preliminary exploration has so far been conducted on the MR claims, there are several significant conclusions.

Geological units, contacts and structures present within or close to the property are known to be associated with precious metal mineralization elsewhere in the district. These are the andesite-granodiorite contact, possible late stage rhyolite dykes and fracturing related to the Tally Ho-Dail Creek lineament. Quartz-carbonate veining with some anomalous gold content has been located in outcrop within a favourable host rock and close to the inferred location of the lineament. Slight anomalies in gold in soils show good spatial consistency based on a sample interval (50 m) which is very wide in relation to the likely target (veins only a metre or two in width; probably oriented perpendicular to the sample line, an unfavourable search direction).

These preliminary results are thus encouraging and additional exploration of the MR claims is warranted. A possible program would include contour soil sampling on slopes north of Dail Creek, grid soil sampling around quartz-carbonate veining together with ground magnetometer and VLF-EM surveys to indicate changes in bedrock and locate favourable contact zones and fractures. Soil samples should be analyzed for silver and possibly mercury and arsenic. Targets resulting from this suggested program should be tested by trenching.

APPENDIX ISTATEMENT OF EXPENDITURESEXPLORATION, GEOCHEMICAL SAMPLING
AND BLASTINGPeriod: June 11 - Dec. 22, 1986

GEOCHEMICAL ANALYSES:

31 soil samples (Au,Ag)	\$	183.35
12 rock samples (Au,Ag)		99.75

CAMP SUPPLIES, FOOD, EQUIPMENT		100.00
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TRANSPORTATION:

Truck 4 days @ \$50.00/day		200.00
Gas		50.00

EXPLOSIVES:		150.00
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PERSONNEL:

Prospector Gary Reynolds 4 days @ \$150/day		600.00
Prospector Bruce Martel 1½ days @ \$150/day		225.00
Blaster Bruce Martel 1 day @ \$200/day		200.00
Prospector Keith Murphy 1½ days @ \$150/day		225.00

MISCELLANEOUS:

Report preparation		75.00
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TOTAL COSTS:	\$	2108.10
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APPENDIX II

STATEMENT OF QUALIFICATIONS

I, **GARY REYNOLDS**, of the City of Whitehorse in the Yukon Territory, hereby certify:

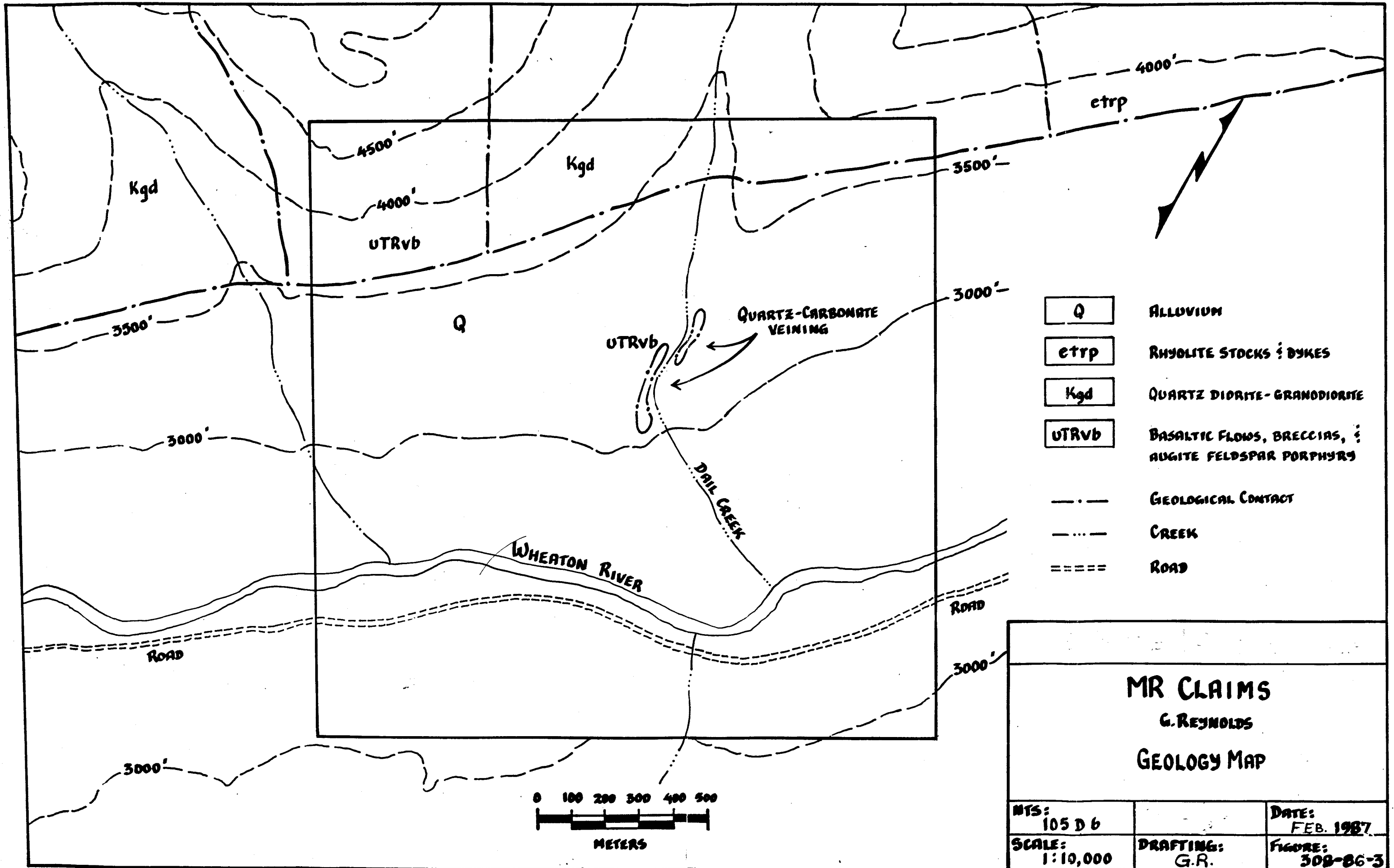
THAT I have taken the basic prospecting course in Whitehorse in 1968 and the advanced prospecting course also in Whitehorse in 1983;

THAT I have been engaged in prospecting and mineral exploration on a part-time basis for seventeen years in the Yukon Territory.

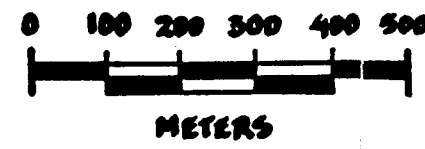
SIGNED at Whitehorse, Yukon Territory, this 18th day of February, 1987.

A handwritten signature in black ink, appearing to read "Gary Reynolds". The signature is written in a cursive style with a large initial "G" and "R".

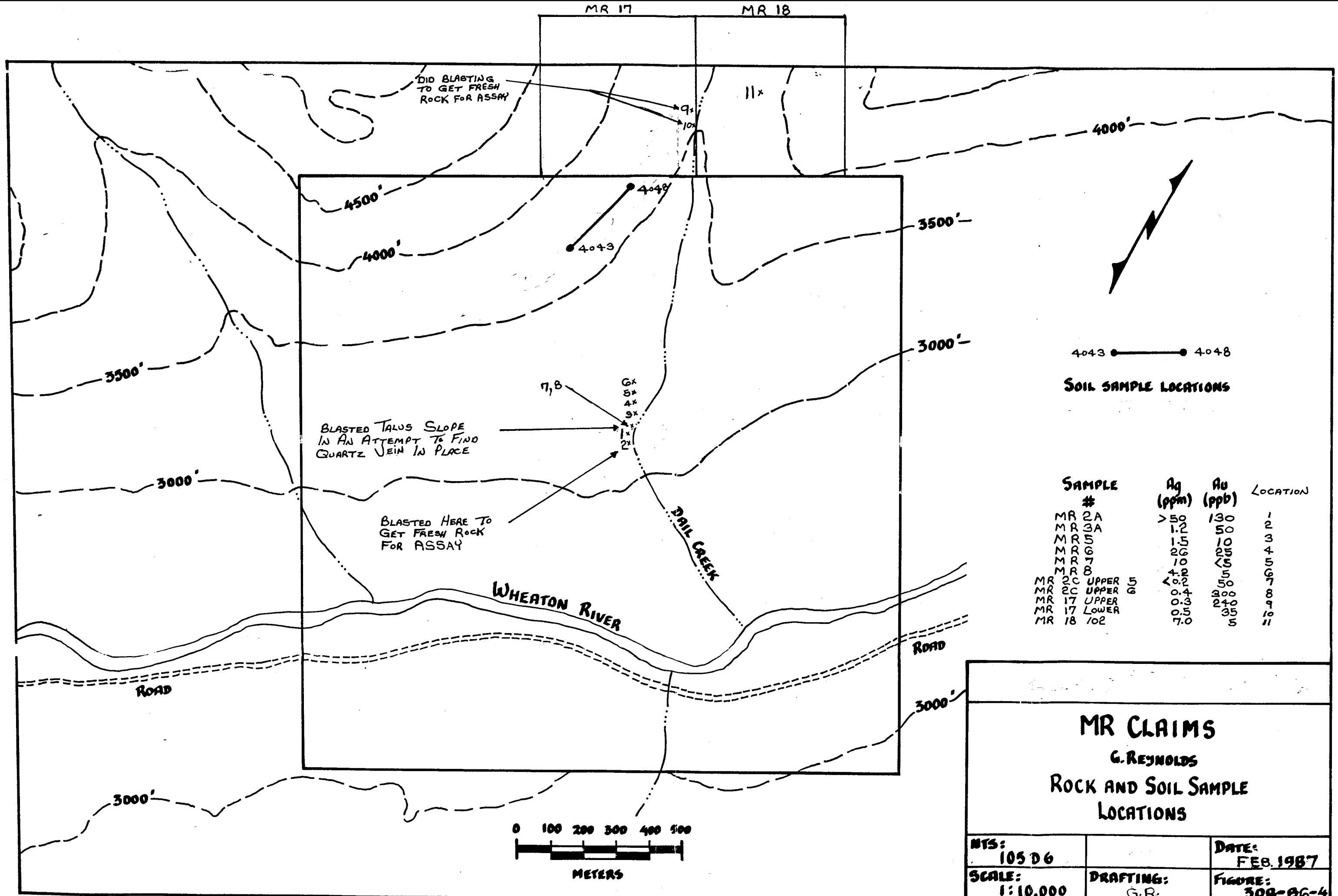
GARY G.A. REYNOLDS C.E.T.



- Q ALLOVIUM
- etrp RHYOLITE STOCKS & DYKES
- Kgd QUARTZ DIORITE-GRANODIORITE
- UTRvb BASALTIC FLOWS, BRECCIAS, & AUGITE FELDSPAR PORPHYRY
- GEOLOGICAL CONTACT
- CREEK
- ROAD



<h2 style="margin: 0;">MR CLAIMS</h2> <p style="margin: 0;">G. REYNOLDS</p> <h3 style="margin: 0;">GEOLOGY MAP</h3>		
NTS: 105 D 6	DRAFTING: G.R.	DATE: FEB. 1987
SCALE: 1:10,000	FIGURE: 308-86-3	

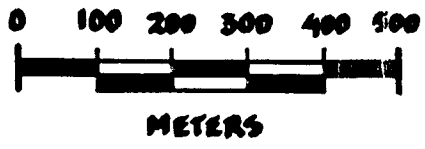


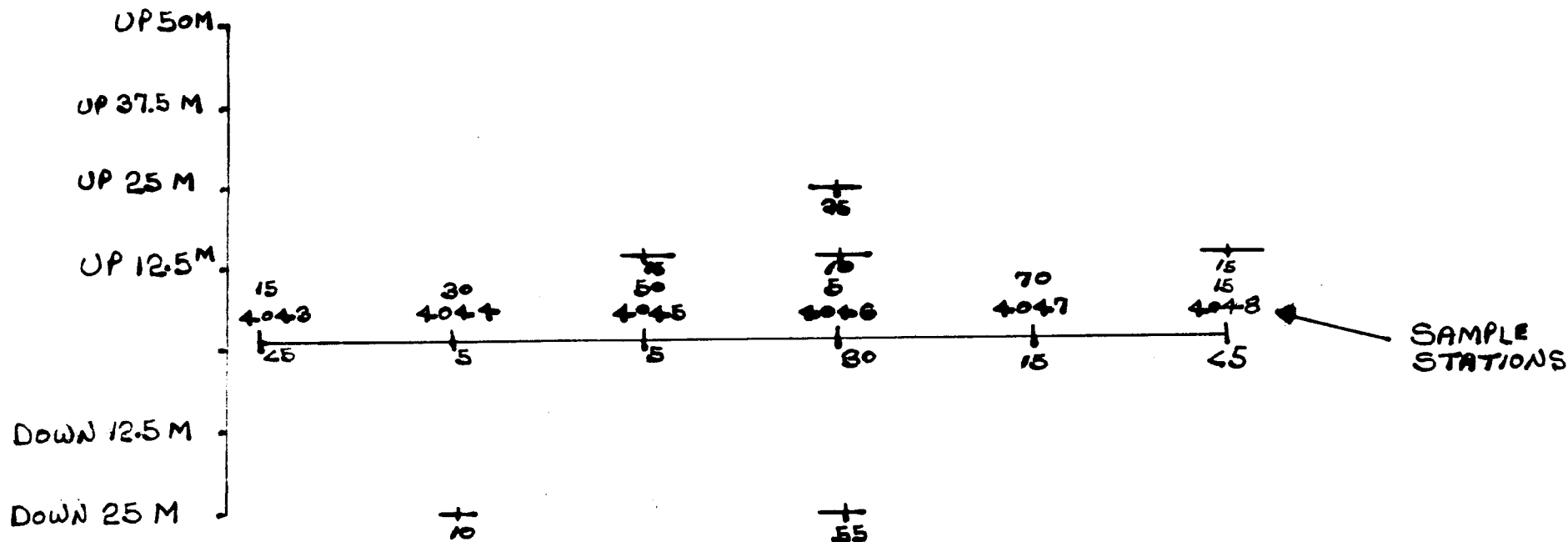
SOIL SAMPLE LOCATIONS

SAMPLE #	Ag (ppm)	Au (ppb)	LOCATION
MR 2A	> 50	130	1
MR 3A	1.2	50	2
MR 5	1.5	10	3
MR 6	26	< 5	4
MR 7	10	< 5	5
MR 8	4.2	5	6
MR 2C UPPER	0.2	50	7
MR 2C UPPER	0.4	200	8
MR 17 UPPER	0.3	240	9
MR 17 LOWER	0.5	35	10
MR 18 702	7.0	5	11

MR CLAIMS
G. REYNOLDS
ROCK AND SOIL SAMPLE LOCATIONS

NTS: 105 D 6	DATE: FEB. 1987
SCALE: 1:10,000	DRAFTING: G.R.
FIGURE: 308-86-4	





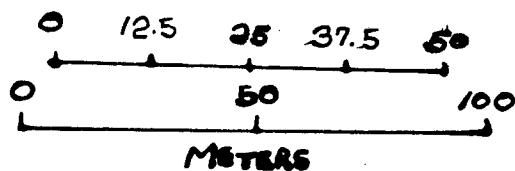
LOCATION SHOWN ON FIGURE 308-86-4

CONTOUR SOIL SAMPLING

SAMPLE INTERVAL 25 METERS HORIZONTALLY - 12.5, 25, METERS VERTICALLY

AU (GOLD) SHOWN IN PPB - TOP FIGURE 1985 ASSAY

BOTTOM FIGURE 1986 ASSAY



VERTICAL SCALE
HORIZONTAL SCALE

MR 1-18 CLAIMS		
GARY REYNOLDS		
SOIL GEOCHEMISTRY		
NOTE 105 DG		DATE FEB 1987
	DRAFTING G.R.	FIGURE 308-86-5