~~MAP~~ No.

105 D 3

ASSESSMENT REPORT [x]
N. M. E. A. P. [ ]
CONFIDENTIAL [x]
OPEN FILE [ ]

TYPE OF WORK: ROTARY DRILLING

REPORT FILED UNDER	TALLY-HO EXPLORATIONS LTD.	DOCUMENT NO.	091794
DATE PERFORMED	JULY - AUGUST 1985	DATE FILED:	MARCH 14, 1986
LOCATION - LAT.	60°13'N	AREA:	WHEATON RIVER
LONG.	135°01'W		
CLAIM NO.	BUFFLO: 1-12		
VALUE $			
WORK DONE BY	TALLY-HO EXPLORATIONS LTD.		
WORK DONE FOR	TALLY-HO EXPLORATIONS LTD.		

REMARKS

31-BUFFALO

The property is underlain by Triassic Lewes River Group metamorphosed sedimentary and volcanic rocks. More recent dykes and extensive fractures also occur on the property.

YEr 85 p. 91 ✓

In 1985, a four man crew performed line cutting, soil and rock geochemical sampling, bulldozer trenching and rotary percussion drilling. A total of 268 soil and 45 rock samples were collected and analyzed for gold, silver and lead. Several northwesterly trending soil anomalies were detected. Trenching uncovered zones which assayed up to 2.5 g/t Au with 875 g/t Ag over 50 cm. Drilling failed to encounter any ore grade material.

091794

TALLY-HO EXPLORATION LTD.

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LISTED VANCOUVER STOCK EXCHANGE THL

ASSESSMENT REPORT

ROTARY PERCUSSION DRILLING
BUFFLO 1-12 MINERAL CLAIMS
YA75766-YA75777
Mount Stevens
NTS 105-D-3
Whitehorse Mining District

Latitude: 60°13' North
Longitude: 135°01' West

091794

RECEIVED
26 MAR 1986
MINING RECORDERS OFFICE
WHITEHORSE, Y.T.

OFFICE OF THE REGIONAL MANAGER
MINERAL RIGHTS
MAR 26 1986
WHITEHORSE
YUKON TERRITORY

By:
GRAHAM S. DAVIDSON, P.Geol.
March 1986

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 $ 15,200.

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

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

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INTRODUCTION

In late November 1985, a track-mounted rotary percussion drill was driven onto the upland plateau of Mount Stevens to test mineralized quartz veins uncovered earlier in the season. This assessment report describes the drill program undertaken on the BUFFLO 9 claim.

The BUFFLO claims are being explored as part of the Wheaton River Joint Venture in which Euro-Petroleum Corporation and Permian Resources Ltd. can earn an interest in eight Tally-Ho Exploration Limited claim blocks by meeting the terms of a three-year agreement arranged in August 1984.

This report was prepared by G. Macdonald and Associates Limited on behalf of the Wheaton River Joint Venture.

LOCATION AND ACCESS

The claims cover the upland surface and the western side of Mount Stevens, 45 km south of Whitehorse on NTS map sheet 105-D-3 at Latitude 60°13' North, Longitude 135°01' West. Property location is shown on Figure 1.

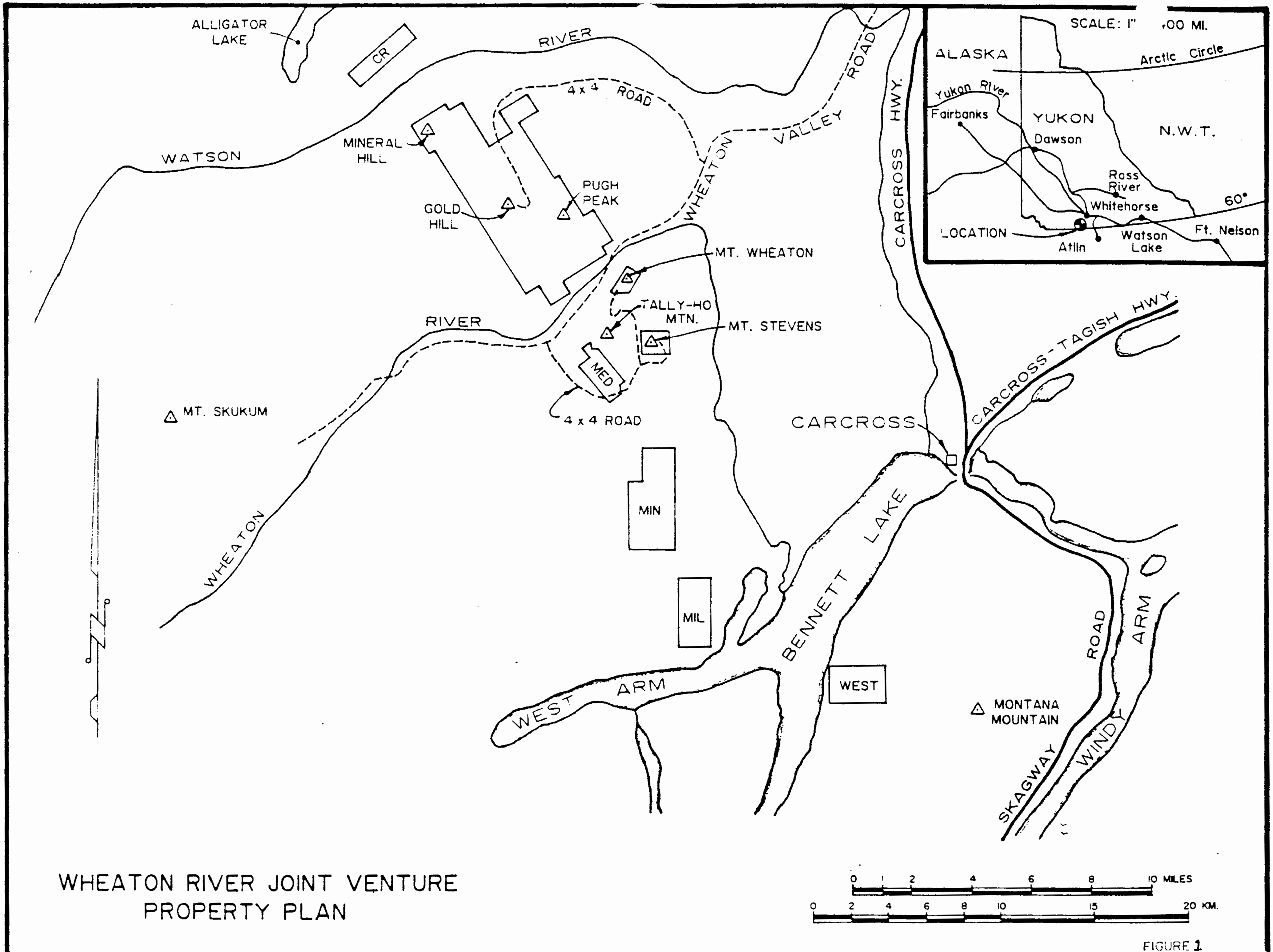
The property is accessible from Whitehorse via the Alaska and Carcross highways and the Wheaton River-Mount Skukum gravel road. A four-wheel-drive road extends up Partridge Creek from the Wheaton River road to the summit of Mount Stevens. The total road distance from Whitehorse to the BUFFLO claims is approximately 65 km.

PROPERTY

The BUFFLO 1-12 claims and three crown grants are held by Tally-Ho Exploration Limited and recorded in the office of the Whitehorse District Mining Recorder under the Yukon Quartz Mining Act.

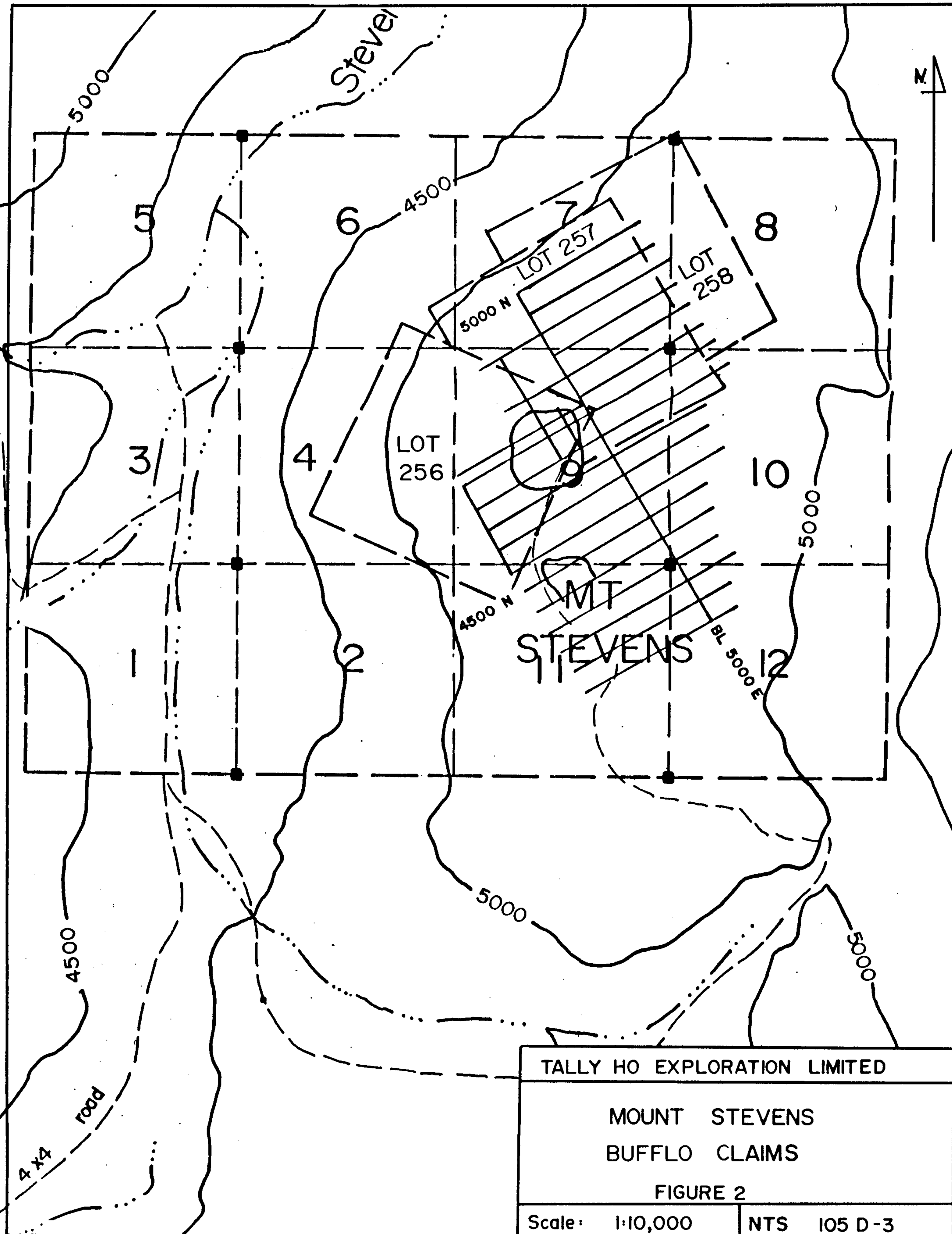
Claim Name	Grant Number	Pending Expiry Date
BUFFLO 1-12	YA75766 - YA75777	31 December, 1990
WHEATON, Lot 256	Crown Grant	
GOLDEN SLIPPER, Lot 257	Crown Grant	
SUNRISE, Lot 258	Crown Grant	

The location of the BUFFLO claims and crown grants with respect to topography is shown on Figure 2.



WHEATON RIVER JOINT VENTURE PROPERTY PLAN

FIGURE 1


Steve
5000
4500
5
6
7
8
N
LOT 257
LOT 258
5000 N
LOT 256
3
4
9
10
MT STEVENS
4500 N
BL 5000 E
1
2
11
12
5000
4500
4x4 road
TALLY HO EXPLORATION LIMITED
MOUNT STEVENS
BUFFLO CLAIMS
FIGURE 2
Scale: 1:10,000
NTS 105 D-3

PHYSIOGRAPHY, CLIMATE, VEGETATION

The property covers the upland plateau on top of Mount Stevens and the westerly facing slope above Stevens Creek. The summit of Mount Stevens lies at 5,500' (1,675 m). The upper slopes are steep and covered with talus and outcrop. Lower slopes feature buck brush primarily below 4500' (1370 m) while the upland plateau is grass covered.

Southwestern Yukon has a dry sub-arctic climate with temperatures varying between extremes of -50°C in winter and +25°C in summer. Precipitation averages 35 cm per year. Large areas of the joint venture properties are quite remote from reliable sources of water for diamond drilling; water sources are often dry by late July in years with low snowfall or exceptionally dry summers. On average, mineral exploration is practical from early June to late September. An exceptionally snowy winter in 1984-85 delayed access to the BUFFLO claims until early July. Strong winds and squalls at higher elevations frequently disrupt exploration activities.

REGIONAL GEOLOGY

The Wheaton River/Bennett Lake district overlies the boundary between two terranes: (1) the Whitehorse Trough, consisting of Mesozoic and Paleozoic, folded metavolcanic and metasedimentary rocks, and (2) a younger volcanic and intrusive suite consisting of intrusive rocks of the Cretaceous Coast Plutonic Complex and Early Tertiary volcanic rocks of the Skukum Group.

The Whitehorse Trough features a complex assemblage of deformed volcanic and sedimentary rocks consisting of the Triassic Lewes River Group, the Lower Jurassic Laberge Group, the Jurassic Tantalus Group and the Jurassic or Cretaceous Hutshi Group. The Lewes River Group consists of andesite, basalt and pyroclastic flows, and foliated marine sedimentary rocks. A narrow but continuous unit of limestone, limestone breccia and quartzite has been traced in a northwesterly direction from the west side of Mount Stevens across Tally Ho Mountain and Gold Hill to the Hodnett Lakes. Interbedded schists occur with the limestone and volcanic rocks of the Lewes River Group. A narrow band of Tantalus Group conglomerates and Laberge Group siltstones outcrops on Folle Mountain and Idaho Hill; however, rocks of these groups primarily outcrop north and east of the Wheaton River/Bennett Lake district. Hutshi Group volcanic rocks occur on Montana Mountain and Gray Ridge. They are thought to be contemporaneous with Mount Nansen volcanics in central Yukon.

Cretaceous granitic rocks of the Coast Plutonic Complex are the most common in the district; typically, they consist of fresh quartz monzonite or quartz diorite. Pendants and masses of Yukon Group quartz-mica schist, gneisses and crystalline limestone occur in the granitic intrusives. The Yukon Group is of early Paleozoic and Precambrian age.

A younger series of andesite and rhyolite flows, tuffs and agglomerates mapped as the Tertiary Mount Skukum Group intrude and overlie granitic rocks, forming volcanic complexes at Mount Skukum and Mt. Macauley. Also, Skukum Group rhyolite and granite porphyry dykes and plugs intrude Lewes River Group rocks and Cretaceous granodiorites throughout the Wheaton River area.

The geology of the Wheaton River region was initially mapped by D. D. Cairnes of the G.S.C., published in Memoir #31 (1912) and later by J. Wheeler published in Memoir #312 (1961). A reinterpretation of the regional geology formed part of the metallogenic map published as Open File E.G.S. 1979-6 (G. W. Morrison) by the Department of Indian Affairs and Northern Development.

Table 1

TABLE OF FORMATIONS

QUATERNARY	Q	Alluvium; glacial and fluvial deposits.
QUATERNARY(?)		
Miles Canyon Volcanics		Basalt; minor pyroclastics.
LATE CRETACEOUS/ EARLY TERTIARY		
Skukum Group	Trp	Stocks, plugs and dykes of quartz and feldspar porphyry with aphanitic rhyolitic matrix. Some granite porphyry; some intermediate plugs and dykes.
	Tva	Rhyolite and trachyte breccias, tuffs and flows; some felsic plugs and dykes (Trp).
	Tvb	Andesite and basalt tuffs, flows and breccias; minor greywacke at base.
MID-CRETACEOUS		
Coast Plutonic Complex	Kgd	Medium to coarse grained homogeneous biotite-hornblende granodiorite and quartz monzonite. Includes undifferentiated Trp and Tva.
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	uRc	Fine to medium grained limestone, quartzite and some marble.
	uRwp	Greywacke, siltstone, argillite and minor conglomerate.
	uRvb	Basalt and andesite flows and flow breccias; augite and/or feldspar porphyry locally.
PROTEROZOIC AND PALEOZOIC		
"Yukon Group"	PIPc	Marble, crystalline limestone, minor graphitic limestone, skarn.
	PIPsbq	Quartz-mica and quartz-chlorite schist, quartzite, minor amphibolite, feldspathic gneiss.

(Note: Symbols from Morrison (1979)

Mesozoic and Paleozoic sedimentary and volcanic rocks of the Whitehorse Trough Terrane are deformed and generally metamorphosed to at least lower green schist facies. These units trend north to northwest and are internally complex.

Structurally, the area features major faults, primarily along river valleys, associated with movement in the Coast Plutonic Complex and with early Tertiary volcanism at Mount Skukum, Mount Macauley and Montana Mountain(?) The 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 dacite, rhyolite and granite porphyry dykes, emplaced in fracture and fualt zones around the volcanic complexes, and quartz or quartz carbonate veining with significant precious and base metal mineralization.

HISTORY OF EXPLORATION

The Wheaton River/Lake Bennett district was first explored by prospectors travelling along the major lakes and rivers of southwestern Yukon in the early 1890's. The original claims recorded in the district were those of prospectors Corwin and Rickman who, in 1893, located antimony showings on Carbon Hill and gold-silver bearing quartz veins at an undisclosed site. The untimely deaths of the two men occurred before revealing the location of the high grade quartz showings.

The Klondike Gold Rush brought a great influx of people to the Yukon, many of whom crossed Lake Bennett en route to Dawson City. Some of these individuals strayed into the Wheaton Valley, locating claims in the Schnabel Creek drainage in 1903.

More intensive exploration began in 1906 after the discovery of free gold and gold-silver tellurides on Gold Hill by D. Hodnett and J. Stagar, and the rediscovery of the Corwin-Rickman antimony-silver showings on Carbon and Chieftain Hills. Wagon roads were built along the Wheaton River, Thompson Creek and Stevens Creek to provide access to numerous adits and pits on Gold Hill, Mineral Hill, Mount Stevens, Wheaton Mountain and Mount Anderson. Limited mining of high grade gold and silver bearing ore occurred on the Gold Reef vein at the northeast end of Gold Hill and on the Becker-Cochran (WHIRLWIND) property on the west face of Mount Anderson. Adits and shafts on Mount Stevens and Wheaton Mountain were probably exploratory; no record of ore production exists.

The Tally Ho Mine on Tally Ho Mountain was the most significant operation during the early years of activity in the area. In 1918, a shipment of 14 tons of hand-sorted ore grading 2.35 oz/ton gold, 5.1 oz/ton silver and 7% lead was smelted at Tacoma. Underground development was continued at various times between 1909 and 1938; additional ore shipments were sent to Juneau but details no longer exist. On Montana Mountain, Colonel Conrad and associates developed several gold and silver bearing quartz veins on the slope above Windy Arm (Tagish Lake). A small mill on the shore of Windy Arm processed ore extracted from the Venus, Montana and

Big Thing quartz veins between 1906 and 1920.

From the mid-1920's to the late 1960's, little exploration of significance took place. By 1970, many of the old showings were restaked as an increase in the value of base and precious metals rekindled the interest of mining companies and prospectors. The Venus and Arctic mines operated on Montana Mountain between 1969 and 1971. The Venus Mine was briefly rehabilitated during 1980-1981 and a new mill was installed at the southern end of Windy Arm.

In 1981, Agip Canada Ltd. discovered a gold bearing vein structure on Mount Skukum and proceeded to define a commercially viable ore-body consisting of 165,000 tons grading 0.73 oz gold and 0.63 oz silver per ton by 1984. Mount Skukum Gold Mines Ltd., through a joint venture agreement with Agip, has developed the ore-body and constructed a 300 ton-per-day mill. Production is expected to commence in March 1986.

The discovery of gold on Mount Skukum has intensified exploration activities in the Wheaton district and initiated a methodical staking rush in which all of the known showings and most of the surrounding area has been staked. Presently, large claim blocks are held by Erickson Gold Mines Ltd., United Keno Hill Mines, Omni Resources Inc., Tally-Ho Exploration Ltd., Shakwak Exploration Co. Ltd., Island Mining and Exploration Ltd., Kerr Addison Mines Ltd., Berglynn Resources Inc., Carmac Resources Ltd. and Noranda Exploration Co. Ltd.

On Mount Stevens, prospectors first discovered gold-bearing quartz veins in 1906. Numerous pits and adits were excavated on and around the summit and a wagon road was developed along Stevens Creek to a large camp at the base of Buffalo Hump. Records indicate that native gold occurs in narrow quartz veins on the SUNRISE crown grant and on the old HIDDEN ORE Group on the southeast face of Mount Stevens. In 1909, a 26-metre drift and 6 metre crosscut were driven on the GOLDEN SLIPPER claim but no quartz vein was located. A further 15 metres of adit work were completed between 1923 and 1927 on the north and west faces of Mount Stevens. Since 1940, only minimal work has taken place.

1984 EXPLORATION SUMMARY

The 1984 exploration program consisted of soil geochemistry and reconnaissance level prospecting with follow-up bulldozer trenching on a very limited scale at the end of the field season. A road was pushed to the top of Mount Stevens and a camp was established on Stevens Creek. A 900 m baseline, bearing N30°W, was extended across the upper plateau and 2200 m of crosslines at 100 m centres were developed. Rock and soil sampling on the grid outlined a gold-silver geochemical anomaly on the north side of the summit of Mount Stevens. A bulldozer moved onto the property late in the season and started trenching this anomaly. Broken ground and permafrost conditions prevented sufficient stripping to reach bedrock; however, mineralized quartz and feldspar porphyry boulders were uncovered. Grab samples returned gold values of up to 0.32 ounces per ton and silver values up to 12.8 ounces per ton.

Rock samples collected from the two adit dumps on the west face of Mount Stevens recorded gold values of 1.21 and 0.64 ounces per ton and silver values of 41.0 and 35.0 ounces per ton. Both portals were partially collapsed when inspected in 1984.

The old Acme quartz showing was located on the east side of Mount Stevens; samples returned trace gold and silver values.

EXPLORATION SUMMARY - July/August 1985

In 1985, a four-man crew based in a tent and trailer camp on Stevens Creek continued exploration on the summit plateau and surrounding slopes of Mount Stevens. The program consisted of further grid development, soil and rock geochemistry, follow-up bulldozer trenching and, late in the year, rotary percussion drilling.

A total of 268 soil samples and 45 rock samples were collected and analyzed for gold, silver and lead. Geochemical anomalies were investigated in eight bulldozer trenches - five around the summit and three at the northwest end of the upland plateau of Mount Stevens. Permafrost conditions in the trench floors prevented good exposure of bedrock; consequently, many of the trench samples were of broken sub-crop.

Soil geochemistry surveys outlined several moderate to strong northwesterly trenching gold, silver and lead anomalies on the upland plateau of Mount Stevens. These anomalies line up with mineralized quartz veins on the west and northwest faces of Mount Stevens.

Gold and silver bearing quartz veins primarily occur in fractured granodiorite in close association with Tertiary felsic porphyry dykes and geological contacts with Triassic or older rocks. Mineralization is irregularly distributed in the quartz and veins containing cubic galena appear to be richer in gold and silver.

Bulldozer trenching did not effectively expose bedrock due to permafrost conditions and broken ground, except in Trench 85-1 which was stripped in 1984 and allowed to thaw. In this trench a quartz vein 50 cm wide contained massive galena and a chip sample (50 cm) assayed 0.073 ounces per ton gold and 25.53 ounces per ton silver. In Trenches 85-2 and 85-3, quartz boulders were unearthed containing up to 0.583 opt gold and 36.5 opt silver. These mineralized quartz veins were the targets for the drilling program.

PROPERTY GEOLOGY

Mount Stevens is primarily underlain by Triassic Lewes River Group metasedimentary and metavolcanic rocks and Cretaceous granodiorite of the Coast Plutonic Complex. Several northwesterly trending dykes of the Tertiary Skukum Group intrude the Mesozoic and Paleozoic rocks. Pendants of schistose rock and amphibolite "Yukon Group" material occur in the granodiorite. Figure 3 shows the local geology.

Structurally, the rock is highly fractures, which may be attributable to regional faulting associated with formation of calderas at Bennett Lake and Mount Skukum. Peripheral fracture and fault zones are thought to pass through Mount Stevens and vicinity. Individual rock types are discussed below.

Yukon Group

Quartz-sericite schist, chlorite schist and amphibolite outcrop on the east facing slope of Mount Stevens overlooking the Wheaton River. The metasedimentary rocks contain narrow quartz veins trending parallel to the northwest foliation and the Acme quartz pod which is greater than 10 m wide and 30 m long.

Triassic Lewes River Group

Andesite, andesite breccia and tuff outcrop on the western and southern sides of Mount Stevens. Typically, the rock is dark green and black, containing grey limy to schistose fragments. Phenocrysts of quartz and feldspar occur in the porphyritic andesites. A northwesterly trending foliation transects the volcanic rocks. Quartz lenses and veins occur along these planes, especially near rhyolite and granite porphyry dykes or contacts with granodiorite.

On the west face of Mount Stevens, several huge blocks of white quartz lie amongst andesite talus near the contact with granodiorite. The source of the quartz is buried but probably occurred as a lens in the andesite breccia.

On the south end of Mount Stevens, the andesite breccia is cut by a medium to coarse grained granite porphyry dyke. At the contact, the andesite is bleached and silicified for approximately a metre.

Granodiorite

Granodiorite outcrops extensively on the west and north sides of Mount Stevens; however, on the upland plateau it is covered by glacial debris and is only exposed in several old pits and in the new bulldozer trenches. The granodiorite is medium grained hornblende-biotite granodiorite to quartz diorite. In places, it is cut by rusty fine black veinlets and narrow quartz veins and lenses.

On the west face, near the adits, the granodiorite is intensely fractured and silcified around rhyolite and granite porphyry dykes and near contacts with andesite breccia. The fractured zone is very broken up and unstable. Blocky talus and outcrop contain quartz lenses and veins.

At the north end of Mount Stevens, a rhyolite porphyry dyke intrudes the granodiorite, silicifying it locally and creating fracture zones containing narrow quartz veins.

In the trenches, the granodiorite appears fresh except where narrow manganese and limonite stained quartz veins cut the rock; there it contains chlorite and pyrite.

Rhyolite and Granite Porphyry

Skukum Group felsic dykes traverse across the summit of Mount Stevens in a northwesterly direction. Granite porphyry dykes contain medium grained glassy quartz eyes, feldspar and biotite phenocrysts in a gritty fine grained light brown groundmass. Rhyolite porphyry dykes are finer grained consisting of quartz and feldspar phenocrysts in a cream coloured felsic matrix. Minor pyrite and limonite are common accessory minerals.

A 20-30 m wide granite porphyry dyke outcrops along a small bluff crossing the upland plateau of Mount Stevens. This dyke was traced for more than a kilometre intruding andesite breccia and granodiorite. Intense fracturing and quartz veining in the granodiorite is associated with this dyke.

On the north end of Mount Stevens, a buff weathering rhyolite porphyry dyke, containing fine black fractures and narrow auriferous quartz veins, silicifies and fractures the granodiorite.

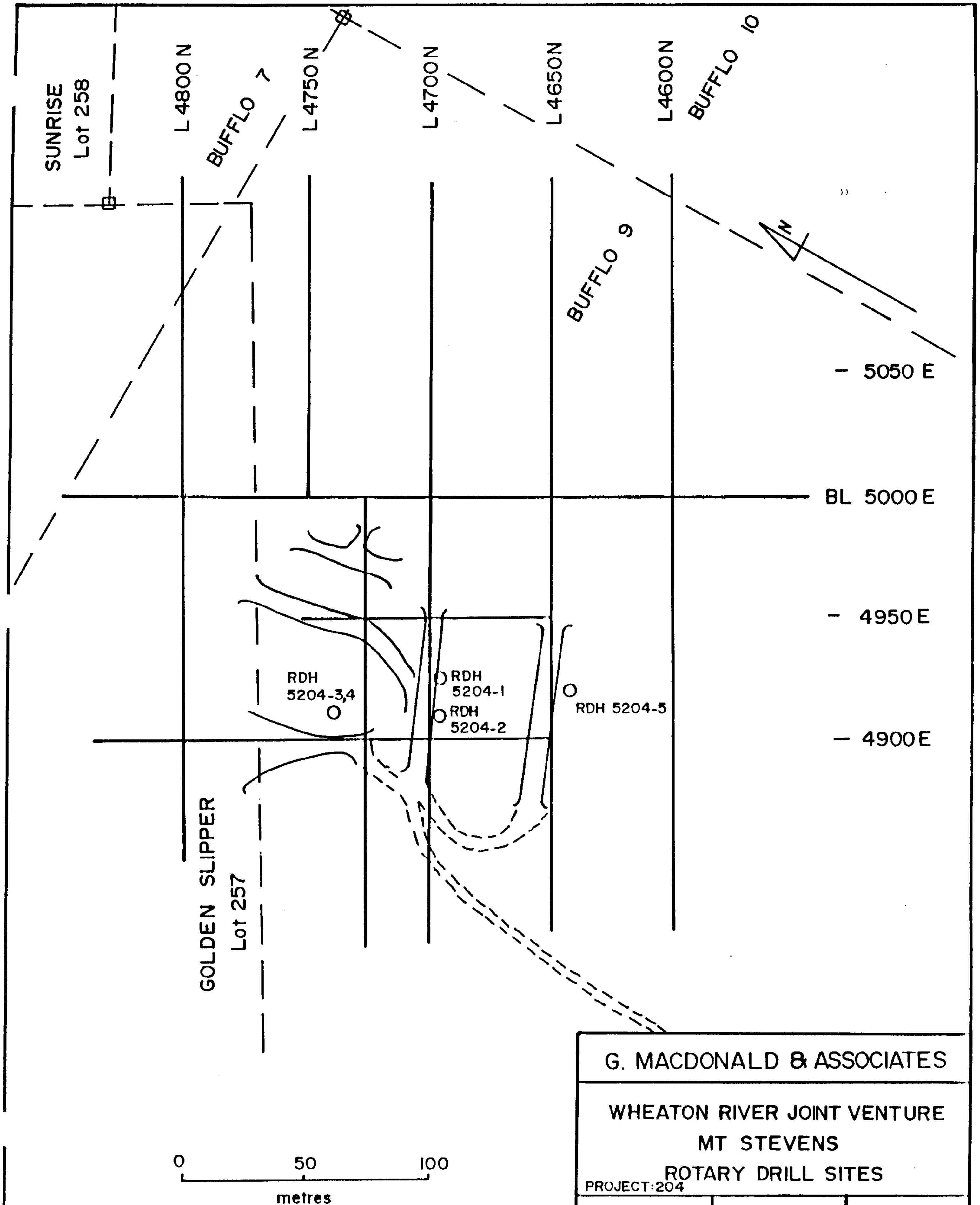
ROTARY PERCUSSION DRILLING

In late November 1985, a track-mounted Schramm T64 rotary percussion drill owned by Caron Diamond Drilling was driven onto the upland plateau of Mount Stevens to test mineralized quartz veins uncovered earlier in the year. A D7 cat preceeded the drill up Mount Stevens to plow the access road and to build four drill pads. Five drill holes were completed from the pads with the drill boom at -60°. Figure 4 shows the drill sites relative to the trenches and geochemical grid.

The mobilization and operation of the drill project involved the maintenance of a tent and trailer camp on the Wheaton River and the upkeep of approximately 15 km of four-wheel-drive road through severe temperatures (-40°C) and climatic conditions. Also, high winds combined with low temperatures at the drill sites on the Mount Stevens summit hindered human and mechanical activities.

The drill holes were planned to reach 200' (61 m); however, broken ground with open fractures forced the abandonment of three holes before attaining the desired depth. Drill profiles are shown in Figures 5, 6 and 7 and the following charts contain the drill logs and geochemical values. A description of the reverse circulation rotary percussion drilling method is presented in Appendix I.

In the five holes drilled on Mount Stevens, geochemically anomalous zones generally contained white to rusty quartz fragments. Drill hole results are discussed individually hereafter.

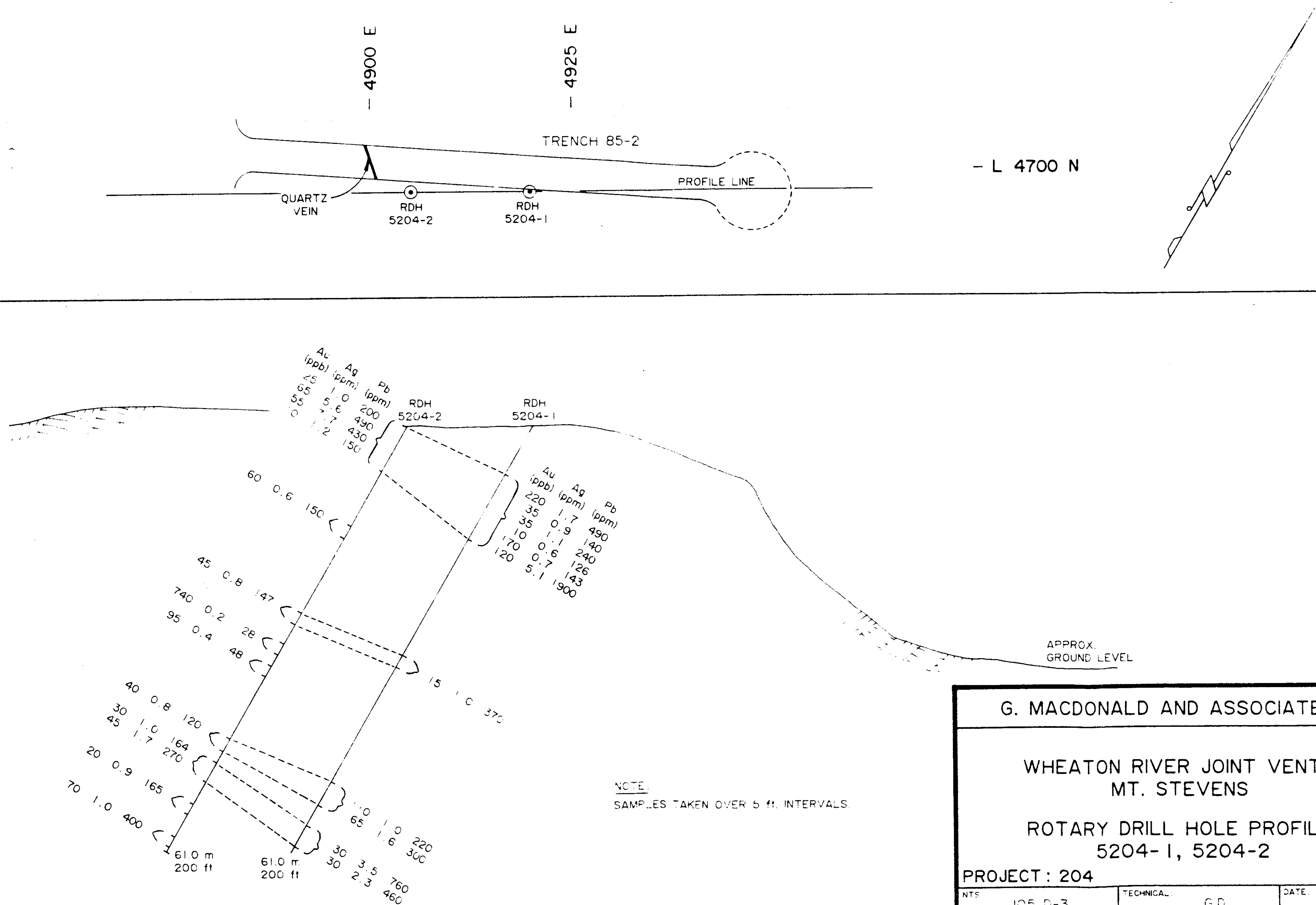


G. MACDONALD & ASSOCIATES

WHEATON RIVER JOINT VENTURE
MT STEVENS
ROTARY DRILL SITES

PROJECT: 204

NTS: 105 D-3	Technical: G.D.	Date: Jan., 1986
Scale: 1:2000	Drafting: G.D.	FIGURE 4



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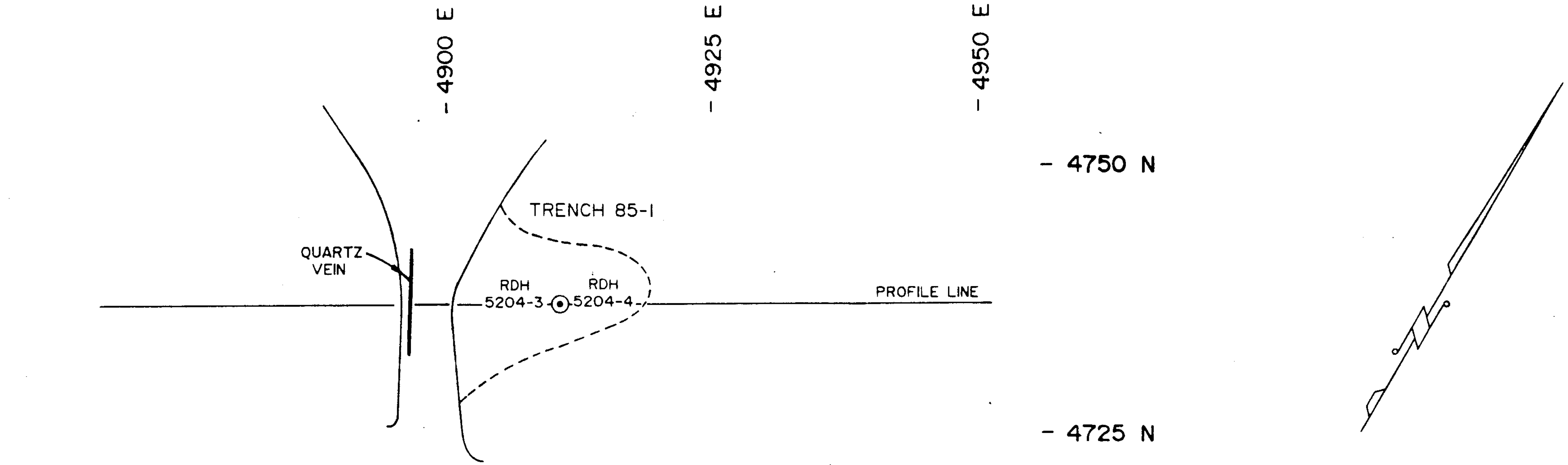
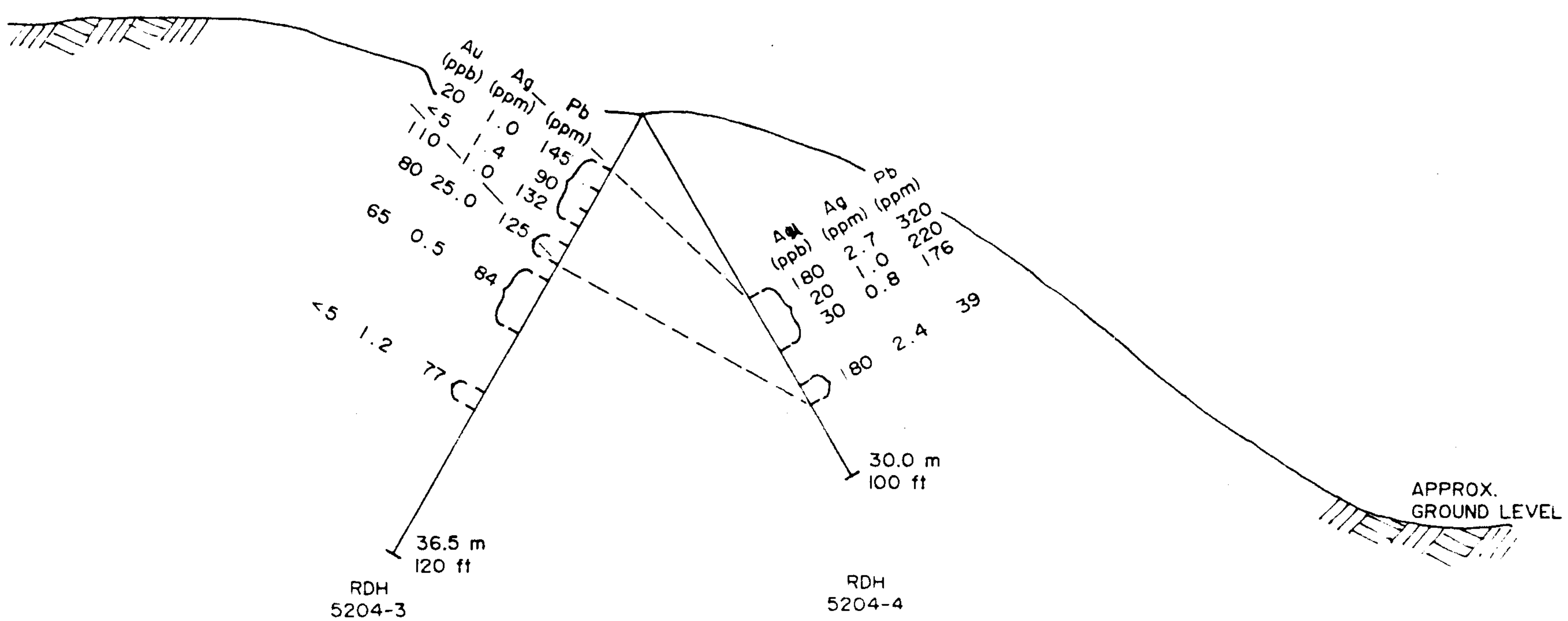
WHEATON RIVER JOINT VENTURE
MT. STEVENS

ROTARY DRILL HOLE PROFILES
5204-1, 5204-2

PROJECT: 204

NTS 105 D-3	TECHNICAL G.D.	DATE FEB., 1986
SCALE 1:500	DRAFTING INTEGRAPHICS	FIGURE **FIGURE 5**





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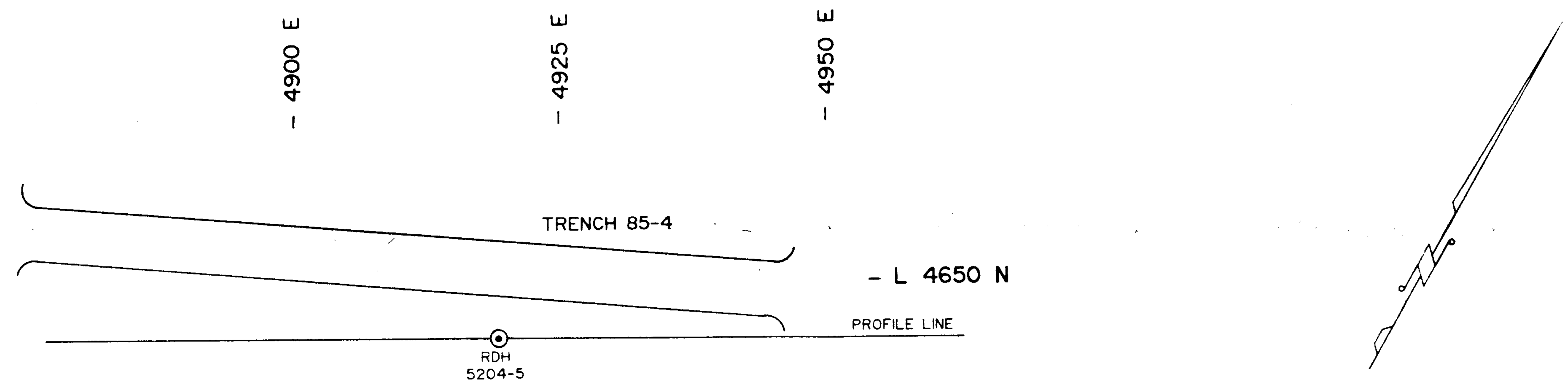
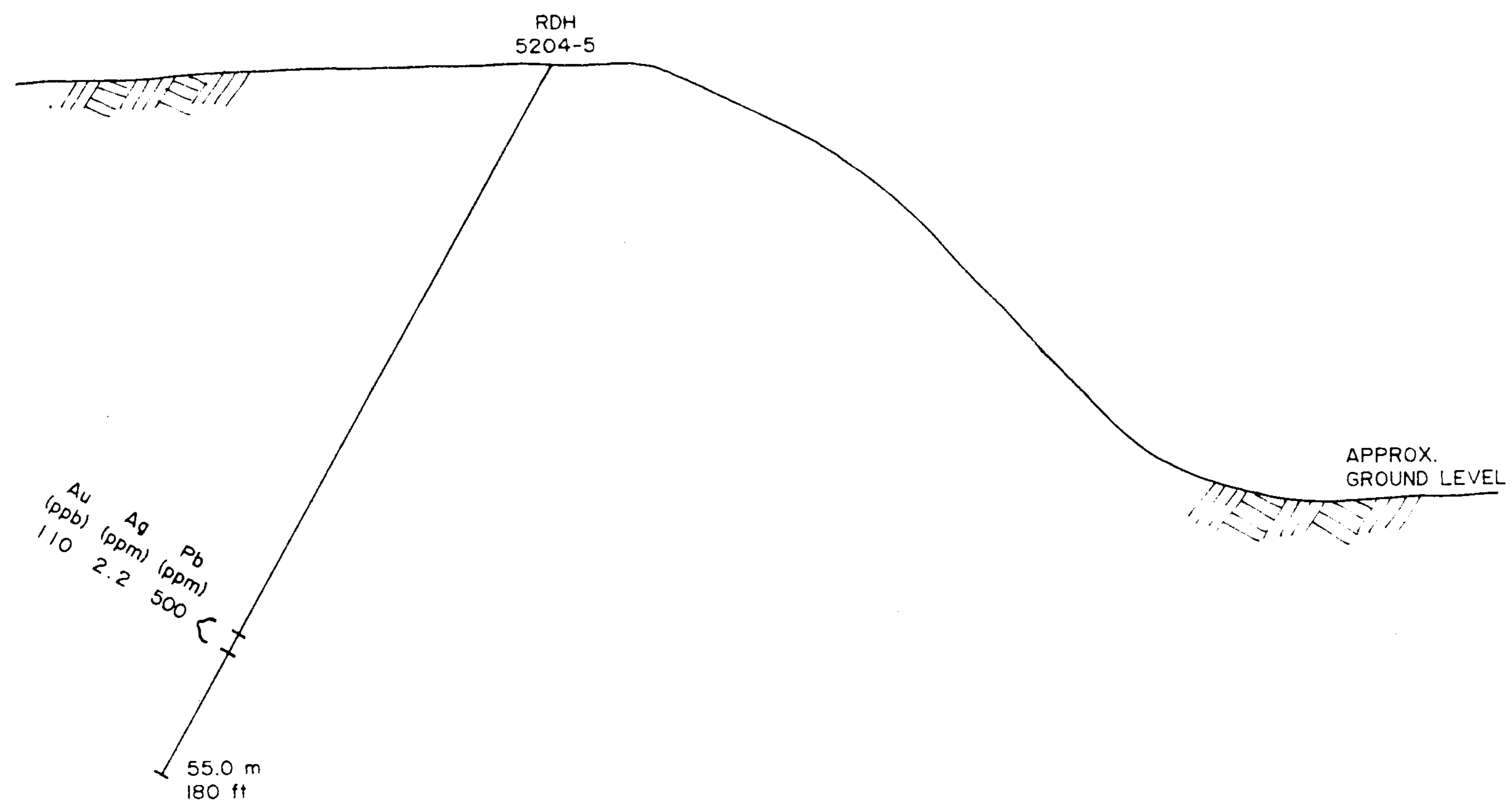
WHEATON RIVER JOINT VENTURE
MT. STEVENS

ROTARY DRILL HOLE PROFILES
5204-3, 5204-4

PROJECT: 204

NTS: 105 D-3	TECHNICAL: G.D.	DATE: FEB., 1986
SCALE: 1 : 500	DRAFTING: INTEGRAPHICS	FIGURE: FIGURE 6





G. MACDONALD AND ASSOCIATES LTD.

WHEATON RIVER JOINT VENTURE
MT. STEVENS

ROTARY DRILL HOLE PROFILE
5204-5

PROJECT: 204

NTS: 105 D-3	TECHNICAL: G.D.	DATE: FEB., 1986
SCALE: 1 : 500	DRAFTING: INTEGRAPHICS	FIGURE: FIGURE 7

Table 2

ROTARY DRILL HOLE LOGS

MT. STEVENS

RDH 5204-1

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70506	0-5	5	0.2	32	25	0-20' Medium grained biotite granodiorite,
7	5-10	5	0.4	103	56	minor pyrite cubes, limonite.
8	10-15	5	0.3	75	53	
9	15-20	25	0.4	40	56	
70510	20-25	220	1.7	490	40	20'-40' Medium grained granodiorite, white
1	25-30	35	0.9	140	45	quartz fragments, limonite, minor pyrite,
2	30-35	35	1.1	240	58	some darker dioritic fragments.
3	35-40	10	0.6	126	75	
4	40-45	170	0.7	143	38	40'-55' Medium grained granodiorite,
5	45-50	120	5.1	1900	32	chlorite, limonite stained quartz
6	50-55	15	0.6	188	54	fragments, cubic pyrite.
7	55-60	5	0.4	76	60	55'-65' Medium grained granodiorite, minor
8	60-65	15	0.7	148	47	limonite, few quartz fragments.
9	65-70	5	<0.2	37	46	65'-100' Medium grained biotite
70520	70-75	<5	0.2	75	43	granodiorite, minor sericite, limonite
1	75-80	<5	<0.2	18	53	and pyrite cubes.
2	80-85	5	<0.2	74	36	
3	85-90	<5	0.2	52	34	
4	90-95	5	<0.2	49	54	
5	95-100	30	0.3	39	65	
6	100-105	<5	0.6	122	42	100'-115' Fine to medium grained
7	105-110	15	1.0	370	47	granodiorite, minor rusty quartz
8	110-115	<5	0.6	133	47	fragments, sericite.
9	115-120	<5	<0.2	39	66	115'-160' Medium grained granodiorite,
70530	120-125	<5	0.3	67	45	minor limonite, minor rusty quartz
1	125-130	20	0.4	73	55	fragments, minor pyrite.
2	130-135	10	0.2	48	44	
3	135-140	<5	<0.2	44	65	
4	140-145	<5	<0.2	19	54	
70535	145-150	<5	0.4	120	47	

NOTES: Drill casing to 20'.

MT. STEVENS

RDH 5204-1 (cont.)

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70536	150-155	15	0.5	68	47	
7	155-160	<5	0.6	56	25	
8	160-165	10	0.4	66	5	160'-175' Medium grained granodiorite,
9	165-170	110	1.0	220	7	white quartz fragments, minor pyrite cubes.
70540	170-175	65	1.8	300	20	
1	175-180	<5	0.2	34	15	175'-185' Medium grained granodiorite,
2	180-185	<5	<0.2	20	12	minor pyrite cubes.
3	185-190	30	3.5	760	18	185'-200' Medium grained granodiorite,
4	190-195	30	2.3	460	18	rusty quartz fragments, approximately 1%
70545	195-200	5	0.8	121	32	pyrite cubes, minor chlorite.

NOTES:

MT. STEVENS

RDH 5204-2

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70466	0-5	25	1.0	200	35	0-5' Medium grained granodiorite, minor pyrite, limonite.
7	5-10	65	5.6	490	65	5'-15' Granodiorite, 15% rusty quartz fragments, pyrite cubes, minor galena.
8	10-15	55	7.7	430	85	
9	15-20	10	1.2	150	15	15'-95' Fine to medium grained granodiorite,
70470	20-25	10	0.5	102	55	some white quartz fragments, minor
1	25-30	10	0.5	105	25	limonite, pyrite cubes and manganese
2	30-35	<5	0.6	58	60	staining, minor sericite.
3	35-40	<5	0.4	44	55	
4	40-45	<5	0.4	77	22	
5	45-50	60	0.6	150	22	
6	50-55	10	0.3	45	24	
7	55-60	5	0.4	59	20	
8	60-65	<5	0.4	44	15	
9	65-70	30	0.2	31	15	
70480	70-75	<5	0.4	68	18	
1	75-80	15	0.7	140	36	
2	80-85	<5	0.3	32	15	
3	85-90	45	0.8	147	13	
4	90-95	20	0.5	75	13	
5	95-100	<5	0.2	20	13	95'-100' Medium grained granodiorite, 10% quartz porphyry.
6	100-105	740	0.2	28	13	100'-110' Fine to medium grained granodiorite, limonite, minor pyrite cubes.
7	105-110	5	0.2	20	28	
8	110-115	95	0.4	48	68	110'-150' Fine to medium grained
9	115-120	10	0.6	76	45	granodiorite, few white to yellow quartz
70490	120-125	20	0.6	72	28	fragments, minor pyrite cubes, sericite.
1	125-130	<5	0.4	59	52	
2	130-135	<5	0.2	25	55	
3	135-140	15	0.7	133	36	
4	140-145	5	0.2	25	18	
70495	145-150	40	0.8	120	48	

NOTES :

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RDH 5204-2 (cont.)

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70496	150-155	<5	0.4	52	46	150'-160' Medium grained granodiorite.
7	155-160	30	1.0	164	75	
8	160-165	45	1.7	270	20	160'-180' Fine to medium grained
9	160-165	<5	0.4	46	35	granodiorite, few white quartz fragments,
70500	170-175	10	0.8	74	64	minor limenite and pyrite.
1	175-180	20	0.9	165	64	
2	180-185	<5	0.4	46	50	180'-200' Medium grained granodiorite,
3	185-190	<5	<0.2	20	68	minor pyrite, chlorite
4	190-195	70	1.0	400	55	
70505	195-200	10	0.4	115	50	

NOTES :

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RDH 5204-3

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70390	0-5	30	0.4	28	8	0-20' Granodiorite and 20% quartz-mica
1	5-10	5	0.5	30	28	schist
2	10-15	10	<0.2	15	68	
3	15-20	20	1.0	145	50	
4	20-25	<5	1.4	90	64	20-25' Quartz-mica schist and 20% granodiorite
5	25-30	110	1.0	132	54	25-30' Medium grained granodiorite, minor pyrite
6	30-35	35	0.4	60	38	
7	35-40 **	80	25.0	128	4	35-40' Granodiorite, rust quartz fragments, pyrite
8	40-45	5	0.5	75	18	40-90' Medium grained granodiorite
9	45-60	65	0.5	84	25	
70400	60-65 **	<5	<0.2	19	<2	
1	65-70	15	<0.2	19	7	
2	70-75	<5	<0.2	19	18	
3	75-80	<5	1.2	77	25	
4	80-85 **	<5	<0.2	18	5	
5	85-90 **	<5	<0.2	10	10	
6	90-95	<5	<0.2	11	14	90-100' Medium grained granodiorite, white quartz fragments, minor pyrite cubes; limonite
7	95-100	20	0.6	55	11	
8	100-105	10	0.3	22	7	100-120' Medium grained granodiorite
9	105-110	10	0.4	24	17	
10	110-115	20	0.6	70	25	
70411	115-120	25	0.8	92	12	

NOTES: ** = No store sample

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RDH 5204-4

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70412	0-5	5	0.3	49	65	0-10' Granodiorite, weathered, limonite
3	5-10	<5	0.2	19	75	
4	10-15	<5	0.2	16	75	10-20' Granodiorite, quartz feldspar
5	15-20	5	0.2	27	80	porphyry(?), minor pyrite
6	20-25	<5	<0.2	13	56	20-50' Medium grained granodiorite, some
7	25-30	<5	0.2	17	35	dioritic fragments, few white quartz fragments, minor pyrite,
8	30-35	<5	<0.2	14	25	limonite
9	35-40	<5	<0.2	10	55	
70420	40-45	<5	<0.2	14	35	
1	45-50	<5	<0.2	11	35	
2	50-55	180	2.7	320	37	50-80' Medium grained granodiorite, some
3	55-60	20	1.0	220	15	quartz-feldspar porphyry, white
4	60-65	30	0.8	176	32	quartz fragments, pyrite cubes,
5	65-70	5	0.3	27	35	limonite
6	70-75	25	1.3	49	17	
7	75-80	180	2.4	39	30	
8	80-85	55	0.6	19	24	80-100' Fine to medium grained grano-
9	85-90	45	0.6	17	30	diorite, few quartz fragments,
70430	90-95	60	0.5	17	30	minor pyrite and limonite
70431	95-100	25	0.3	17	27	

NOTES:

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RDH 5204-5

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au	Ag	Pb	SAMPLE WEIGHT	SAMPLE DESCRIPTION
		PPB	PPM	PPM	LBS	
70432	0-5	5	<0.2	24	66	0-20' Oxidized granodiorite
3	5-10	<5	<0.2	11	75	
4	10-15	<5	<0.2	9	95	
5	15-20	10	0.4	98	80	
6	20-25	<5	0.2	24	35	20-65' Medium grained granodiorite,
7	25-30	5	<0.2	14	25	minor limonite
8	30-35	10	<0.2	16	30	
9	35-40	<5	<0.2	11	25	
70440	40-45	<5	<0.2	16	23	
1	45-50	<5	<0.2	13	5	
2	50-55	<5	<0.2	10	8	
3	55-60	40	<0.2	14	12	
4	60-65	<5	<0.2	12	12	
5	65-70	<5	<0.2	17	24	65-75 Medium grained granodiorite,
6	70-75	<5	<0.2	13	38	limonite, minor pyrite cubes
7	75-80	<5	0.2	15	25	75-115: Medium grained granodiorite,
8	80-85	<5	<0.2	12	15	minor pyrite
9	85-90	<5	0.2	42	25	
70450	90-95	<5	0.3	38	27	
1	95-100	<5	0.2	18	40	
2	100-105	10	0.2	41	28	
3	105-110	<5	<0.2	17	30	
4	110-115	<5	<0.2	10	34	
5	115-120	<5	<0.2	16	62	115-150' Medium grained granodiorite,
6	120-125	5	0.2	30	32	some quartz-feldspar porphyry,
7	125-130	<5	0.2	36	55	few quartz fragments, pyrite,
8	130-135	20	0.8	105	28	limonite, sericite
9	135-140	<5	0.3	40	35	
70460	140-145	15	0.6	110	20	
70461	145-150	110	2.2	500	17	

NOTES :

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RDH 5204-5

SAMPLE NUMBER	INTERVAL Ft.	ELEMENTS Au PPB	Ag PPM	Pb PPM	SAMPLE WEIGHT LBS	SAMPLE DESCRIPTION
70462	150-155	5	0.5	88	16	150-170' Medium grained granodiorite,
3	155-160	20	0.2	35	26	minor limonite
4	160-165	<5	0.3	24	10	
70465	165-170	<5	<0.2	16	40	

NOTES :

RDH 5204-1

Two intervals of anomalous silver-lead values (105-110', 185-195') and two intervals of anomalous gold-silver-lead values (20-55', 165-175') were intersected in this hole. A peak value in gold of 220 ppb was obtained from 20-25' and peak values in silver (5.1 ppm) and lead (1900 ppm) occurred between 45-50'. The anomalous intervals in this hole appear to align with anomalous intervals in hole #5204-2 using a 20-30°E dip measured on several nearby quartz veins, and to line up with quartz boulders excavated in Trench 85-3.

RDH 5204-2

Gold, silver and lead values were anomalous over three sections (0-20', 155-165', 190-195') and gold values were anomalous between 100-115'. The drill cutting contained up to 15% rusty quartz fragments from 5-15' where a silver value of 7.7 ppm and lead value of 490 ppm were recorded. A high gold value of 740 ppb (100-105') occurs in granodiorite close to a porphyry dyke.

RDH 5204-3

Gold, silver and lead values are weakly anomalous between 15-40' except for a high silver value of 25.0 ppm recorded in granodiorite with rusty quartz fragments (35-40'). Cuttings recovery in this interval was less than 10%. Low cuttings recovery through much of the hole suggests that the ground is highly fractured. At ±90' a drill bit sheared off the rods, presumably when it hit rock at the bottom of an open cavity. A second bit was attached and the hole proceeded to 120' depth where broken ground, poor recovery and the danger of losing drill rods forced its termination.

RDH 5204-4

One interval of anomalous gold, silver and lead values (50-65') and one interval of anomalous gold and silver values (75-80') were intersected. Approximately 13 m grid west from the drill collar, a 50 cm wide quartz vein exposed in Trench 85-1 strikes 140° and dips 30°E. Projecting this vein down-dip from surface, it passes through both holes 5204-3 and 5204-1 where gold, silver and lead geochemical anomalies were recorded in the drill cuttings (Figure 6).

RDH 5204-5

Alongstrike from mineralized quartz veins in Trenches 85-1 and 85-3, this hole produced anomalous gold, silver and lead values from 145-150'. Cuttings from this interval consisted of granodiorite and some quartz-feldspar porphyry with a few quartz fragments.

DISCUSSION

The rotary percussion drill program has outlined several zones containing anomalous gold, silver and lead geochemistry. Drill cuttings from these zones generally contain white quartz fragments, indicating that quartz veins have been intersected. Low cuttings recovery and poor drilling conditions around the quartz veins suggest that rotary percussion drilling is not suited for the highly fractured ground around the summit of Mount Stevens.

The best 5' intersection for gold was recorded in hole 5204-2 from 100-105' (740 ppb) and the strongest 5' intersection in silver was from 35-40' (±25.0 ppm) in hole 5204-3.

Mineralized quartz samples from bulldozer trenches returned considerably higher gold and silver values.

A program of diamond drilling is recommended to accurately evaluate these quartz veins.

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Pride, M. J., 1981: Petrology and Geology of High Level Rhyolite Intrusives of the Skukum Area, 105-D-SW, Yukon Territory. Yukon Exploration and Geology, 1981.

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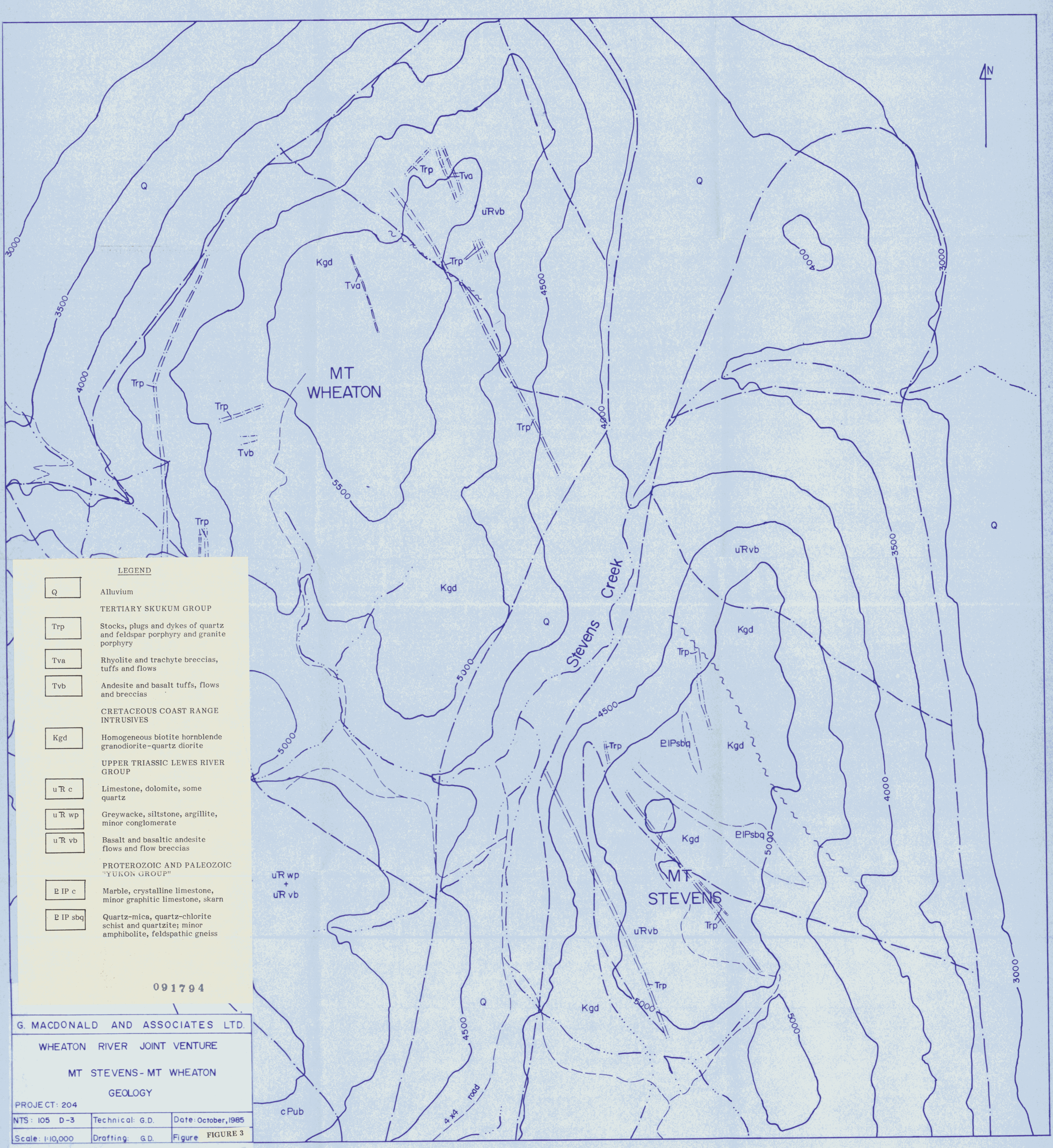

LEGEND

Q	Alluvium
	TERTIARY SKUKUM GROUP
Trp	Stocks, plugs and dykes of quartz and feldspar porphyry and granite porphyry
Tva	Rhyolite and trachyte breccias, tuffs and flows
Tvb	Andesite and basalt tuffs, flows and breccias
	CRETACEOUS COAST RANGE INTRUSIVES
Kgd	Homogeneous biotite hornblende granodiorite-quartz diorite
	UPPER TRIASSIC LEWES RIVER GROUP
uR c	Limestone, dolomite, some quartz
uR wp	Greywacke, siltstone, argillite, minor conglomerate
uR vb	Basalt and basaltic andesite flows and flow breccias
	PROTEROZOIC AND PALEOZOIC "YUKON GROUP"
PIP c	Marble, crystalline limestone, minor graphitic limestone, skarn
PIP sbq	Quartz-mica, quartz-chlorite schist and quartzite; minor amphibolite, feldspathic gneiss

091794

G. MACDONALD AND ASSOCIATES LTD.

WHEATON RIVER JOINT VENTURE

MT STEVENS - MT WHEATON

GEOLOGY

PROJECT: 204		
NTS: 105 D-3	Technical: G.D.	Date: October, 1985
Scale: 1:10,000	Drafting: G.D.	Figure FIGURE 3

091794

ROTARY PERCUSSION DRILLING
REVERSE CIRCULATION METHOD

Reverse circulation drilling is also referred to as:

- rotary continuous sample
- double wall drilling pipe drilling systems
- dual wall drilling
- reverse circulation rotary drilling

Reverse circulation utilizes dual wall drill pipe, top drive rotation and side inlet swivel for injecting the circulation medium to be employed. Reverse circulation drilling normally utilizes air as the transfer medium for the cuttings, but water, mud or foam may also be used.

Reverse circulation means that the sample is recovered up the centre section of the drill pipe. The air or other fluid is injected in the side inlet swivel and down between the two walls of the dual wall pipe to the drill bit. The cuttings and the fluid are directed to the centre of the bit and transported to the surface at very high velocity rates through the inner annulus of the dual wall pipe. Note that the sample is in the form of cuttings or chips.

This discharge material is directed through a discharge hose to the sampling cyclone where velocity is dampened and the sample is collected in a suitable container.

Reverse circulation drilling employs dual wall pipe and a range of drill bits including down-hole hammer, tri-cone bits or open-faced bits.

Common drill pipe diameters:

- 3.5" O.D. x 1.732" I.D.
- 4.5" O.D. x 2.469" I.D.
- 5.5" O.D. x 3.250" I.D.

The I.D. of the inner pipe dictates the size and volume of the sample and is critical in the success of the system. The majority of reverse circulation drillings employs approximately 2½" I.D. pipe. The outer pipe is designed to withstand the torque and shock loads associated with rotary drilling. The inner pipe is under relatively no stress. The bit size is normally a nominal size larger than the drill pipe; therefore, the hole is cut with minimum clearance.

Since the outer drill pipe supports the hole much in the same way as a stabilizer, the circulation can continue internally and surface casing is eliminated. This accounts for one of the main features of the reverse circulation system: the ability to maintain circulation even while drilling in caving, broken or unconsolidated formations as well as low pressure zones, voids, joints, fractures and abandoned mines with open adits or worked-out slopes.

Using standard drilling techniques with the reverse circulation system, proper drilling and sampling will provide little danger of contamination by wall erosion and, therefore, the sample comes only from the bit face, providing a representative, virtually uncontaminated sample.

Sample Collection

The cuttings travel up the inner pipe and are discharged through the top of the rotary top drive into a discharge hose. The discharge hose connects to a sample cyclone or tube. The sample can be collected under the cyclone discharge in any specified container; it can also be split utilizing several methods, including a rotary splitter, mini-cyclone or a three-time sample splitter.

APPENDIX II

STATEMENT OF COSTS

NOVEMBER 15 to DECEMBER 10, 1985:

Caron Diamond Drilling Ltd:

5 rotary percussion drill holes:
790' total drilling

Drill invoice, including casing and mobilization $21,127.00

G. MACDONALD AND ASSOCIATES LIMITED
Consulting Professional Geologists

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

(403) 668-2044 (403) 667-7229

APPENDIX III

STATEMENT OF QUALIFICATIONS

I, **GRAHAM DAVIDSON**, of the City of Whitehorse in the Yukon Territory, HEREBY CERTIFY:

THAT I am a geologist employed by G. Macdonald and Associates Limited AND THAT I participated in the work described in this report;

THAT I am a graduate of the University of Western Ontario (H.B.Sc., Geology, 1981);

THAT I am registered as a Professional Geologist by the Association of Professional Engineers, Geologists and Geophysicists of Alberta (No. 42308);

THAT I have been engaged in mineral exploration on a full-time and part-time basis for seven years, of which five have been in the Yukon and Northwest Territories.

SIGNED at Whitehorse, Yukon Territory, this 26 day of March, 1986.

G. Davidson

G. S. Davidson, P.Geol.