HUDSON BAY EXPLORATION AND DEVELOPMENT

COMPANY LIMITED

GEOLOGICAL, GEOCHEMICAL

and GEOPHYSICAL

REPORT OF

THE BEYON CLAIMS

(BEYON 1-64 YA81656-81719)

WHITEHORSE MINING DISTRICT

AUGUST 10-19, 1984

105 K 5

ROBERT STROSHEIN

$62^{o}23'$ 133^{o} 55'

091597

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 $ 7,805.26.

D D Ernond

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

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LIST OF FIGURES

INTRODUCTION:

Prospecting along the Pelly River during the late summer of 1983, Mr. A.Carlos discovered a quartz vein outcropping within a light grey green phyllite unit. A grab sample No. 27898 of quartz yielded geochemical analysis of 265/4.1/800 ppm Pb/Ag/As respectively and 10/130 ppb Hg and Au respectively. The regional geological mapping (Templeman-Kluit 1972) indicated a suite of sedimentary, volcanic and hypabayssal rocks of Tertiary age. The anomalous geochemical results suggested a potential for epithermal type precious metal deposits in the area.

The Beyon claim group was staked and later recorded on May 11, 1984. A detailed prospecting, geological mapping, geochemical pan sampling and local geophysical survey program was carried out between August 10 and 19, 1984.

LOCATION AND ACCESS:

The claim group is located 32 kilometers WNW of the town of Faro south of and adjacent to the Pelly River. Figure 1.

Access to the property is by River boat to the lower area or by helicopter to isolated clearings at the higher elevations.

CLAIM OWNERSHIP:

The Beyon claim group is composed of 64 quartz claims as follows:

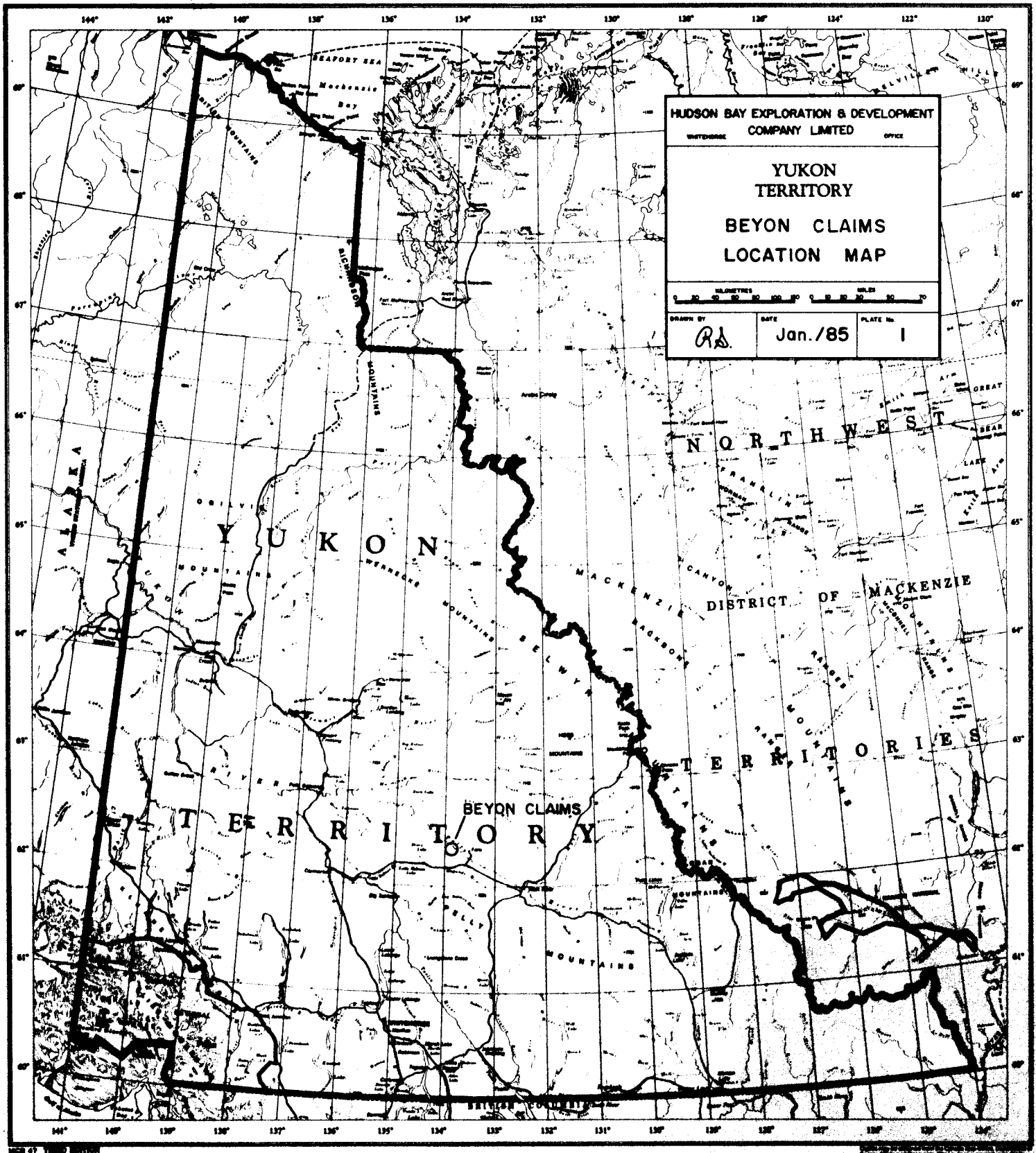
BEYON 1-64 YA 81656-81719

The claims are in the Whitehorse Mining District on claim sheet 105 K 5. Figure 2.

The claims are wholly owned by Hudson Bay Exploration and Development Company, Limited of 100-10 Burns Road, Whitehorse, Yukon Territory.

PERSONNEL:

The following personnel were employed by Hudson Bay Exploration and Development to conduct the exploration program:


HUDSON BAY EXPLORATION & DEVELOPMENT COMPANY LIMITED
YUKON TERRITORY
BEYON CLAIMS
LOCATION MAP
KILOMETRES
MILES
DRAWN BY
RS.
DATE
Jan./85
PLATE No.
1
Y U K O N
T E R R I T O R Y
N O R T H W E S T
T E R R I T O R I E S
DISTRICT OF MACKENZIE
BEYON CLAIMS
ALASKA
BEAUFORT SEA
MACKENZIE MOUNTAINS
RICHARDSON MOUNTAINS
OGILVIE MOUNTAINS
WERNECKE MOUNTAINS
SELWYN MOUNTAINS
MACKENZIE RIVER
PELLY MOUNTAINS
BRITISH COLUMBIA

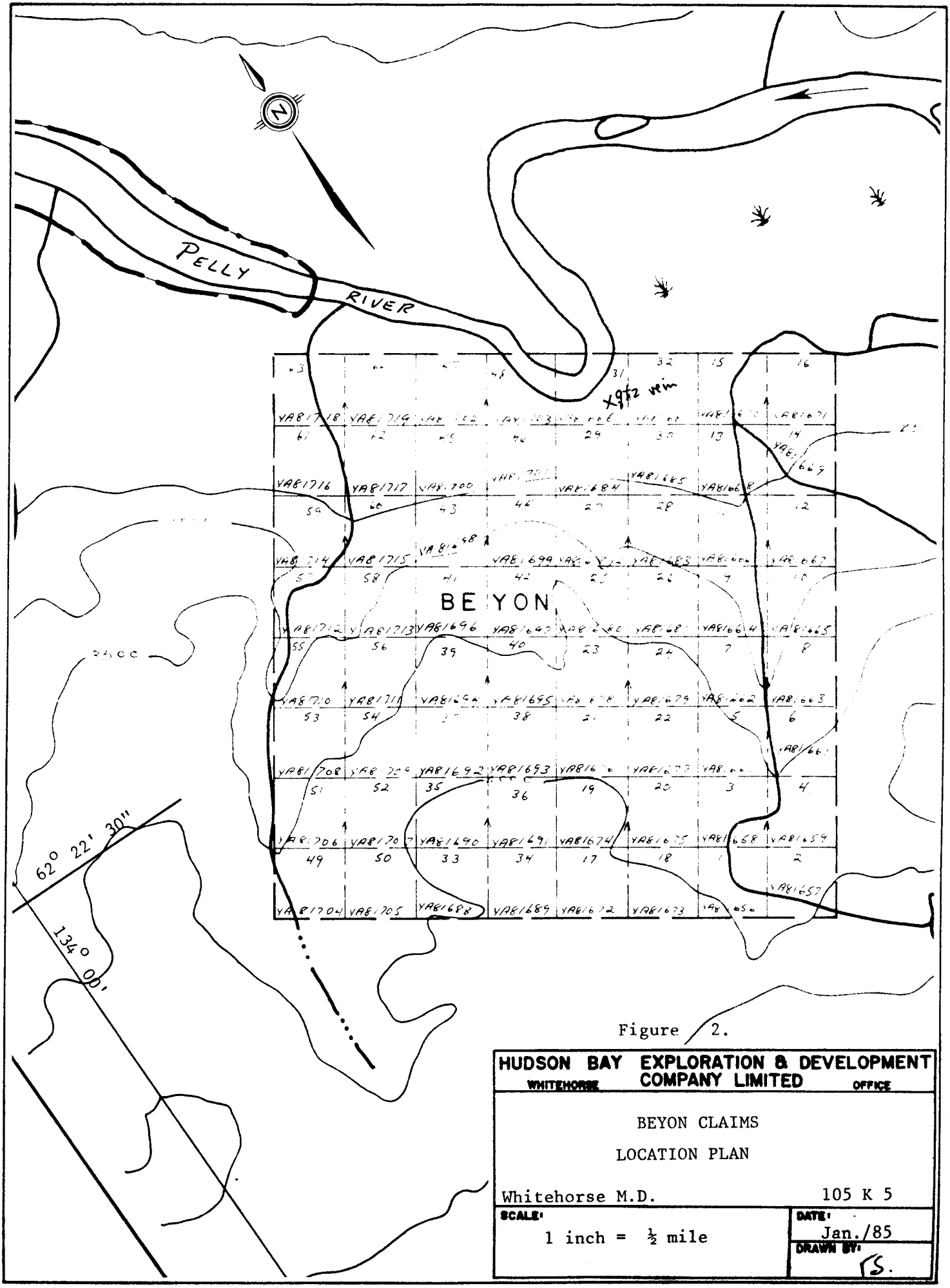


Figure 2.

HUDSON BAY EXPLORATION & DEVELOPMENT COMPANY LIMITED	
WHITEHORSE OFFICE	
BEYON CLAIMS LOCATION PLAN	
Whitehorse M.D.	105 K 5
SCALE: 1 inch = ½ mile	DATE: Jan./85
	DRAWN BY: RS.

R. Stroshein - Senior Exploration Geologist

D. Downing - Project Geologist

V. Celuszak - Prospector

R. Bidwell - Geophysical operator

GEOLOGY:

The geology underlying the claim group is dominated by northwesterly trending structures which create linear fault bounded geological units. Figure 3. The rock units range from early Paleozoic phyllite to Tertiary greywacke or pebble conglomerate. Small Quartz-Feldspar porphyry plugs have invaded along the fault zones and zones of weakness throughout the area. Local phases of the intrusions have been mapped as Rhyolite porphyry where they occur with a distinct light green aphanitic matrix amd coarse felspar phenocrysts. Local rust stained alteration halos occur in the country rock adjacent the intrusions commonly several meters from the contact.

The faults are believed to be steep angled normal faults which create adjacent up/down thrown blocks moving older rock units to elevations above younger units. Northerly trending faults apparently create minor (300 m) offsets of the NW trending structures.

A brief description of the units as summerized in the legend on Figure 3 follows:

Unit 1 - Paleozoic pelitic phyllites, slates, silt banded and carbonaceous shales.

1a - A light grey green chlorite phyllite outcrop occurs in a slide area above the Pelly River. This is the location of the quartz vein. The quartz vein has been deformed and disrupted by faulting but occurs within an approximately 5 meter wide sericite alteration zone. The chlorite phyllite grades to grey carbonaceous phyllite. The phyllite unit appears to grade upward to unit 1b.

1 - Outcrops of grey muscovite phyllite, slate, silt banded grey shale and carbonaceous black shale occur in a prominent 1.5 km belt through the claim group. Rare narrow limestone (marble) bands occur with the carbonacous shale which locally is calcareous. Silt banding is prominent in some localities with the silt bands up to 50% of the rock. This unit may be in part correlative with Road River Formation.

Unit 2 - Permian basic to intermediate volcanic rocks form two belts flanking the central phyllite block. The volcanics are generally dark commonly dark grey green. Most commonly andesite volcanic rocks which are commonly amygdaloidal with calcite and may be calcareous. Andesite generally massive although may be pyroclastic and rare pillows. Unit includes massive basalt flows. The unit is generally resistent and commonly forms prominent ridges. 2a local outcrops of meta-sedimentary rocks which form ridges.

Unit 3 - Tertiary dark clastic sediments outcrop at the south edge of the map. Small isolated remenant lens occur locally overlying the southern volcanic zone.
The sediments are generally immature and the outcrops of miceous shale, grey wacke and massive pebble conglomerate are commonly carbonaceous.

Unit 4 - Tertiary (Cretaceous?) acid intrusives with minor crystal tuff. Small ($\approx$ 200 m across) plugs of rhyolite porphyry intrude both units 1 and 2. The intrusions occur throughout the units but appear to preferentially invade the major fault zones or areas of structural weakness.
Larger bodies exhibit zoning with internal areas composed of equigranular quartz monzonite. Contact auroeles appear as rusty weathered and fracture zones in the country rocks. The alteration zone is generally localized to within several meters of the intrusion although more extensive rusty weathered zones do occur in the vicinity of larger intrusions.

GEOCHEMISTRY:

Geochemical analyses for Pb/Ag/As/Hg/Au were made from samples of rock chips or concentrated stream sediments.

A total of 17 pan concentrates were obtained from the major streams on the claim group. The samples consisted of the heavies recovered from two 10 inch diameter gold pans of screened stream sediments. The sediments were screened through 3/4" punch plate screens to level pan full. The concentrates were deposited in standard sample envelopes, labelled, dried and submitted for analyses. No visible gold was reported in any of the samples.

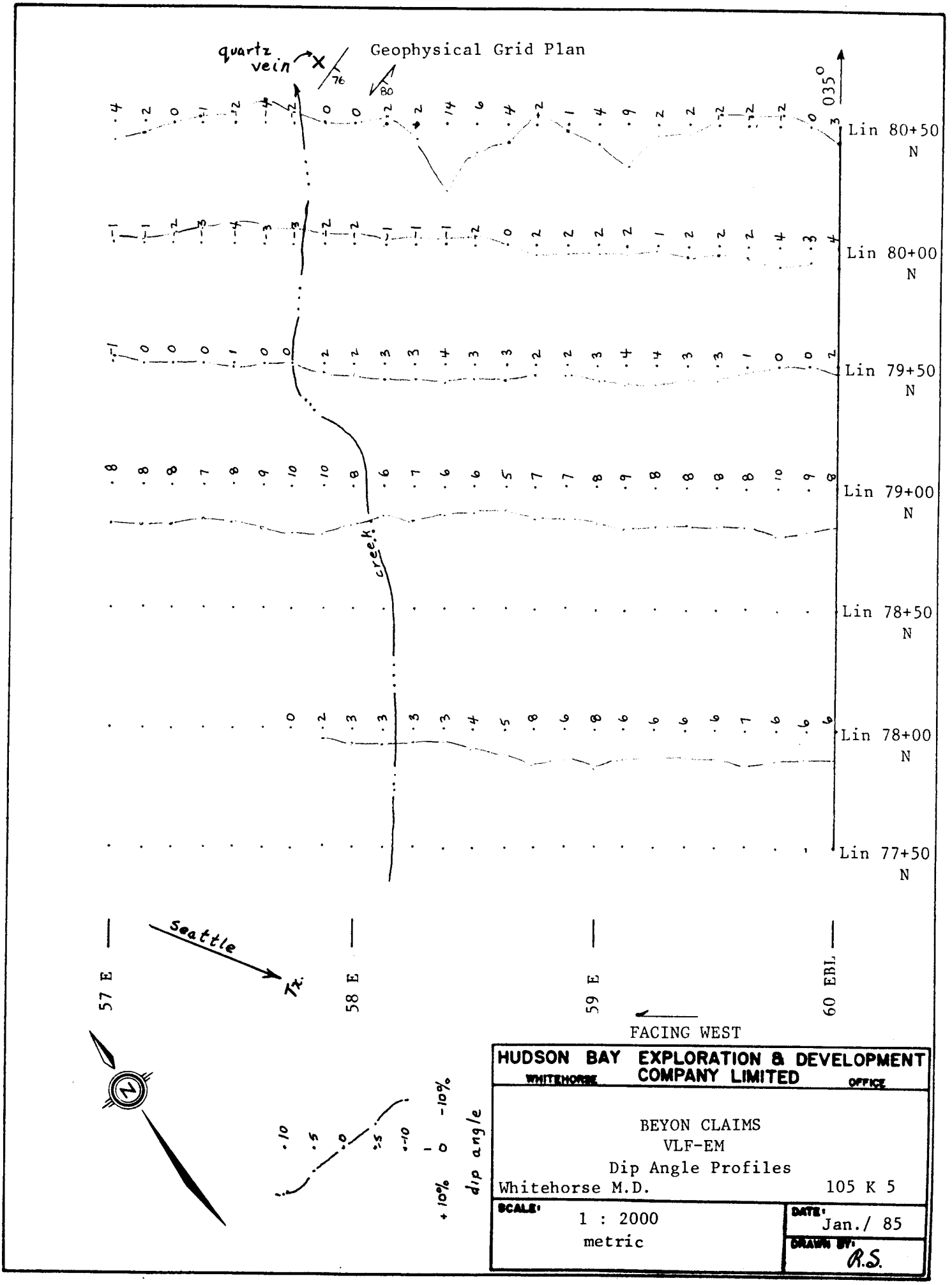
Sixteen rock samples were collected during geological mapping. Samples were generally of the most potentially favourable rocks; most commonly of rusty weathered, altered or included visible sulphides.

All samples were submitted for geochemical analyses to Bondar-Clegg and Company Limited in Whitehorse, Yukon. The samples were prepared in the local laboratory and then sent to Vancouver for the actual analyses. The determinations were by the atomic absorption technique although the gold results were obtained in combination with fire assay.

GEOPHYSICAL SURVEYS:

A small line grid was established to cover the southern extension of the quartz vein trend. Lines were run at fifty meter intervals from a base-line bearing 035°. VLF-EM and Proton magnetic surveys were carried out along the grid lines. The results are indicated on figures 4 and 5. The lines were chained with hip chain and flagged at 12.5 meter intervals. The instruments were read at this interval and recorded in the field.

The orientation of the Seattle transmitter used for the survey is too far off the quartz vein orientation to be useful. Line 80 + 50N shows some variations of the dip angle reading. This may be due to the steep north facing slope that overlooks the Pelly River rather than an indicator of VLF conductors.



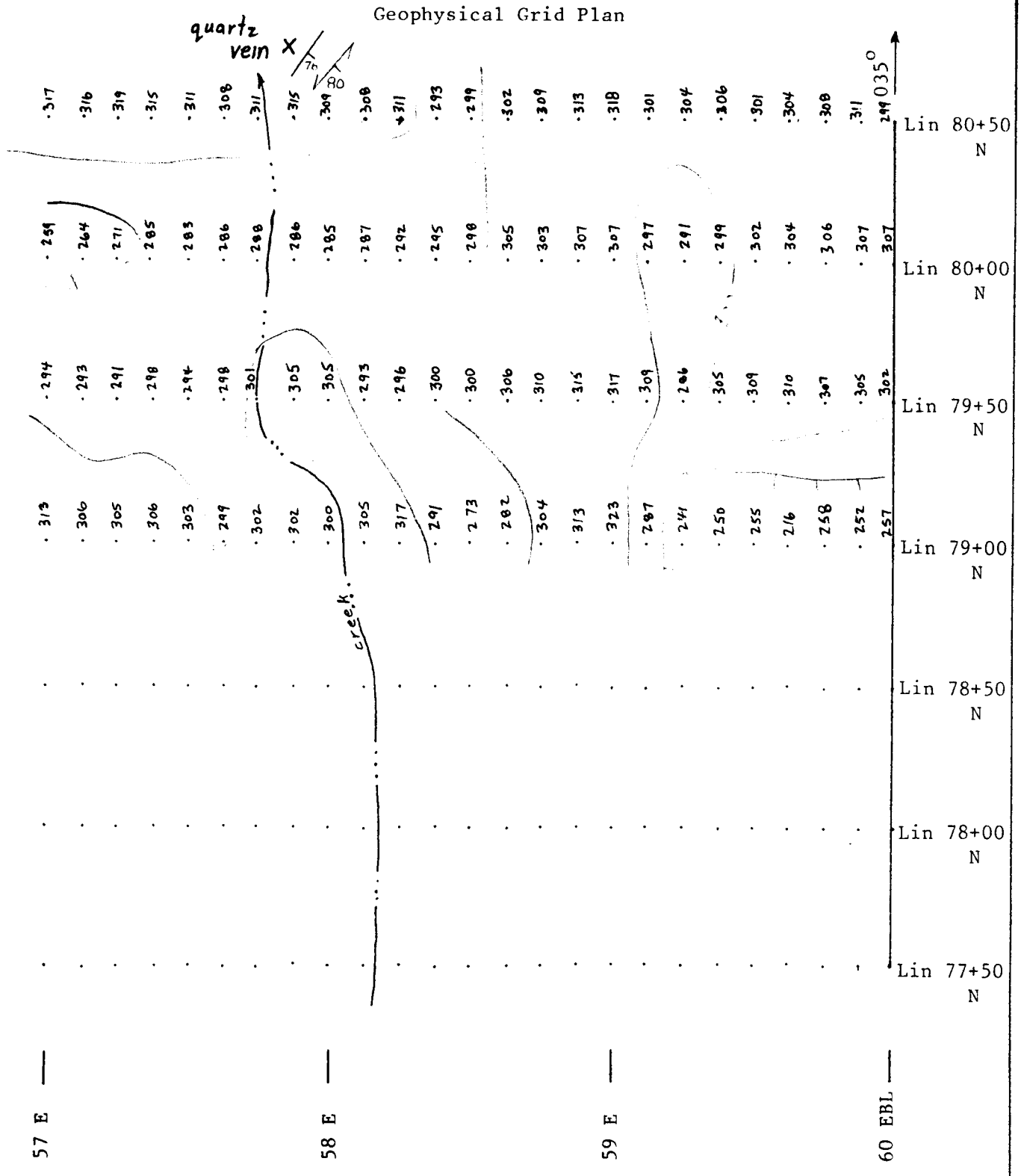
HUDSON BAY EXPLORATION & DEVELOPMENT COMPANY LIMITED
WHITEHORSE OFFICE

BEYON CLAIMS
VLF-EM
Dip Angle Profiles
Whitehorse M.D. 105 K 5

SCALE: 1 : 2000 metric

DATE: Jan./ 85

DRAWN BY: R.S.



For Total Magnetic Field Intensity add 58,000 γ's

Proton Magnetometer

Geometrics Model :816

HUDSON BAY EXPLORATION & DEVELOPMENT COMPANY LIMITED	
WHITEHORSE OFFICE	
BEYON CLAIMS Magnetic Survey	
Whitehorse M.D.	105 K 5
SCALE: 1 : 2000 metric	DATE: Jan./84
	DRAWN BY: R.S.

The magnetic survey results do not indicate a strong discernible pattern although there is a contrast of over 100 gammas from the lowest to highest recorded values.

DISCUSSION OF RESULTS:

The geological setting is controlled by a sub-parallel series of probably normal faults trending north-westerly. The linear fault blocks are demarked by lithological changes or topographical depressions as one crosses the trend. The lithological sequence from the ridge top north to the river is; Tertiary age seiments - Permian mafic volcanics - lower Paleozoic phyllite - mid Paleozoic fine clastics - Permian mafic volcanics - lower Paleozoic phyllite. Quartz - feldspar porphyry bodies have intruded the fault zones separating the lithological blocks. These intrusions may exhibit tectural and compositional phases in larger bodies. Locally the intrusions have invaded areas within the fault blocks and outcrop as domal features capped by the host rock. Rusty weathered contact aureoles occur in the immediate surrounding rocks of the intrusion.

The gological mapping and prospecting of the claim group did not locate significant alteration patterns and indicated no potential for hot springs type depositional systems. Minor shearing and rare associated alteration or rocks containing pyrite were sampled throughout the property. Several of these samples did indicate anomalous values of Ag and As (up to 4 ppm and 300 ppm respectively). The highest Au value was 45 ppb from a narrow shear zone with a yellow alteration stain. These various samples are of generally minor features. Samples of the quartz vein located near the Pelly river were disppointingly low. (No.s 74620-621-622). The initial grab sample of rusty vein material No. 27898 was anomalous in Pb, Ag, As and Au (4.1, 800, 130 ppm and 130 ppb respectively). The deformation of the quartz vein suggests an early deposition prior to the extensive faulting and associated intrusions of Post Permian age. J. R. Johnston (1936) reports that barren quartz veins are common in the district in most rock types.

Several of the pan concentrate samples are variously anomalous in Pb, As and Hg. Values up to 229 ppm Pb, 450 ppm As and 540 ppb Hg occur along the two major drainages. The anomalous values cannot be directly related to a specific fault zone or area. The results do tend to build up and

drop off from the central portion of the map area.

The geophysical surveys have not provided any additional information of the quartz vein.

CONCLUSIONS AND RECOMMENDATIONS:

The initial exploration of the claims did not reveal that any potential large epithermal systems have been active. The original setting and relationships of the quartz vein along the Pelly River has been deformed by later activity. The signifigance and potential of the vein may be better assessed in a regional framework, although further detailed investigations may prove useful, such as VLF-EM with a differently oriented transmitter station and geochemical pan sampling of soils on a grid pattern.

There are indications from minor shears and fracture zones as well as from creek sediments of some active potential indicator elements (Pb, As, Hg). The samples do not indicate a specific target area. Further and more extensive rock samples should be collected as well as soil samples along systematic reconnaissance lines. The lines should run northerly across the trend and concentrate in areas along the anomalous values in the stream sediments.

The final assessment of the property may best be determined by its setting in the regional picture.

Robert Stroshein

APPENDIX I

ROCK SAMPLE DESCRIPTION

SAMPLE NO.	DESCRIPTION
27898 GRAB	White quartz with linonite stringers and grey green phyllite partings.
74620 .5 m CHIP	White quartz vein with limonite stringers within phyllic alteration zone.
74621 .5 m CHIP	White Quartz vein in phyllic alteration zone.
74622 GRAB	Float sample, dense dark green rock with very fine disseminated sulphides.
74634 CHIP	Limonite stained brecciated andesite possibly pyroclastic.
74636 CHIP	Shear zone with yellow alteration adjacent in rhyolite porphyry.
74637 CHIP	Rusty disrupted and sheared carbonaceous shale at contact with acid intrusive.
74638 CHIP	Calcite stringer stockwork in silt banded altered shale.
74639 1 m CHIP	Chill margin of rhyolite porphyry intrusive.
74640 1 m CHIP	Rusty Weathered contact zone of carbonaceous shale adjacent rhyolite porphyry intrusive. Manganese stained.
74641 1 m CHIP	Dark green basalt adjacent narrow clay seam.
74642 .2 m CHIP	Green clay seam on shear between rhyolite porphyry and basalt.
74643 1 m CHIP	Rhyolite porphyry adjacent narrow clay seam
74644 GRAB	Rhyolite porphyry float. Intensely altered with strong disseminated pyrite.
74645 CHIP	Rhyolite porphyry near contact with phyllite. Rusty contact zone.
74646 CHIP	Rhyolite porphyry.
74635 CHIP	Rhyolite breccia; weakly calcareous, pyritic, with a trace of malachite

APPENDIX II

SUMMARY OF EXPENDITURES

SALARIES AND WAGES:			
R. Stroshein (field and report)	5 days @ 200$/day	$ 1,000.00	
D. Downing	9 days @ 160$/day	1,440.00	
V. Celuszak	9 days @ 100$/day	900.00	
R. Bidwell	7 days @ 75$/day	525.00	
			$ 3,865.00
TRANSPORTATION: (Helicopter)			
Trans North Air			
Oct. 10 2.6 hrs. @ 500$/hr.		1,300.00	
fuel		135.20	
Oct. 17 1.3 hrs. @ 500$/hr.		650.00	
fuel		67.60	
Oct. 19 1.6 hrs. @ 500$/hr.		800.00	
fuel		83.20	
			3,036.00
ASSAYING COSTS:			
17 pan concentrate samples	@ $18.95	322.15	
16 rock samples	@ $19.20	307.20	
			629.35
CAMP COSTS:			
Riverdale Markets Aug. 9/84 - Invoice #02933			274.91
TOTAL -			$ 7,805.26

TRANS NORTH AIR
TRANS NORTH TURBO AIR LTD.
BOX 4338 • WHITEHORSE • YUKON TERRITORY • Y1A 3T6
TELEPHONE (403) 668-2177 • TELEX 036 8-296

ACCOUNT NUMBER: 63260

INVOICE DATE

AREA: B.C. / YUKON / NWT / ALTA.

CHARTERER: Hudson Bay Exploration

BILLING ADDRESS

A/C TYPE: B·206 | AIRCRAFT REGISTRATION C-: F Z X H

FLIGHT DATE: DAY 10 | MONTH 08 | YEAR 84

PURCHASE ORDER NO.

FUEL & OIL-X TNTA	CUST.	TNTA FUEL USED	HRS.-GALS.	FROM
✓			2.6	RR

FROM / TO	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
FROM Ross Rvr.				
TO Beyond Claims		2.6		
Ross Rvr				
(Recce)				
				Kentucca — 86

SUB	G.L.	AMOUNT

	@		
2.6	@ 500		1300.00
	@		
	@		
WAITING TIME	@	/HR.	
FUEL: 260.0	@ .52	/GAL.	135.20
FUEL:	@	/GAL.	
MEALS & LODGING			
OTHER			
OTHER			

TERMS NET 30 DAYS
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS

X [signature]
CHARTERER'S SIGNATURE

BH [signature]
INITIALS | PILOT'S SIGNATURE

CO-PILOT'S NAME

ENGINEER'S NAME

FLIGHT ATTENDANT

TOTAL $ 1435.20

FLIGHT REPORT
CUSTOMER COPY

TRANS NORTH AIR
TRANS NORT[illegible] [illegible]RBO AIR LTD

ACCOUNT NUMBER	63267
INVOICE DATE	
AREA	B.C. ☐ YUKON ☑ NWT ☐ ALTA. ☐
A/C TYPE	B-206
AIRCRAFT REGISTRATION C-	F Z X H
FLIGHT DATE	DAY 19 MONTH 08 YEAR 84
PURCHASE ORDER NO.	

[illegible]DSONS BAY EXPLORATION
[illegible]TERER

[illegible]NG ADDRESS

OIL-X CUST.	TNTA FUEL USED	HRS.-GALS.	FROM
		1.6	RR

	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
Ross River				
Pickup at Grew Crk.		1.6		
Beyond Claims				
Camp Move				
Grew Creek				
Ross River				

Tintina - 86

	1.6 @ 500.00	800.00
	@	
	@	
	@	
WAITING TIME	@ /HR.	
FUEL: 160.0	@ .52 /GAL.	83.20
FUEL:	@ /GAL.	
MEALS & LODGING		
OTHER		
OTHER		

[illegible] NET 30 DAYS
[illegible]EREST PER MONTH (2[illegible]% PER ANNUM) WILL [illegible]ARGED ON ALL OUTSTANDING AMOUNTS [illegible]30 DAYS

CHARTERER'S SIGNATURE
PILOT'S SIGNATURE
CO-PILOT'S NAME
ENGINEER'S NAME
FLIGHT ATTENDANT

TOTAL $ 883.20

FLIGHT REPORT
CUSTOMER COPY

TRANS NORTH AIR
TRANS NORTH TURBO AIR LTD.
BOX 4338 • WHITEHORSE • YUKON TERRITORY • Y1A 3T6
TELEPHONE (403) 668-2177 TELEX 036-8-290

ACCOUNT NUMBER	63265
INVOICE DATE	
AREA	B.C. ☐ YUKON ☑ NWT ☐ ALTA. ☐
A/C TYPE	B-206
AIRCRAFT REGISTRATION C-	F Z X H
FLIGHT DATE	DAY 17 MONTH 08 YEAR 84
PURCHASE ORDER NO.	

Hudsons Bay Exploration
CHARTERER

BILLING ADDRESS

FUEL & OIL-X TNTA	CUST.	TNTA FUEL USED	HRS.-GALS.	FROM
✓			1.3	RR

	MILES	HOURS	ZONE	REMARKS - NO. OF PASS - FREIGHT LBS.
FROM Ross River				
TO Transport crew at		1.3		
Beyond Claims				
Drop off 1 pass. Grew Crk.				
Ross River				

Tintina Tintina - 86

SUB	G.L.	AMOUNT

	1.3 @ 500.00	650.00
	@	
	@	
	@	
WAITING TIME	@ /HR.	
FUEL: 130.0	@ .52 /GAL.	67.60
FUEL:	@ /GAL.	
MEALS & LODGING		
OTHER		
OTHER		

TERMS NET 30 DAYS
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS

X Robert Stroshe
CHARTERER'S SIGNATURE
BHP
INITIALS
PILOT'S SIGNATURE
CO-PILOT'S NAME
ENGINEER'S NAME
FLIGHT ATTENDANT

TOTAL $ 717.60

FLIGHT REPORT
CUSTOMER COPY

2% TO BE CHARGED ON ALL ACCOUNTS OVER 30 DAYS

RIVERDALE MARKETS

95 LEWES BLVD. WHITEHORSE, YT. Y1A 3J4

PHONE: 667-7673

DATE Aug 9 198

NAME Hudson's Bay Exp

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON ACC'T	PAID OUT
				3491
Boyd		84		
TINTINA				

O MOORE BUSINESS FORMS 1 E. & O.E.

02933 TOTAL 74 11

ALL CLAIMS AND RETURNED GOODS MUST BE ACCOMPANIED BY THIS BILL

95 LEWES BLVD. WHITEH

PHONE: 667-

DATE

NAME

ADDRESS

SOLD BY	C.O.D.	CHARGE
		7381-38

O MOORE BUSINESS FORMS 1

02932 T

ALL CLAIMS AND RETURNED GOODS MUST BE A

2% TO BE CHARGED ON ALL ACCOU

RIVERDALE MA

95 LEWES BLVD. WHITEHORSE

PHONE: 667-7673

DATE

NAME

ADDRESS

SOLD BY	C.O.D.	CHARGE	ON
		7308-84	

O MOORE BUSINESS FORMS 1

APPENDIX III

ROBERT W. STROSHEIN

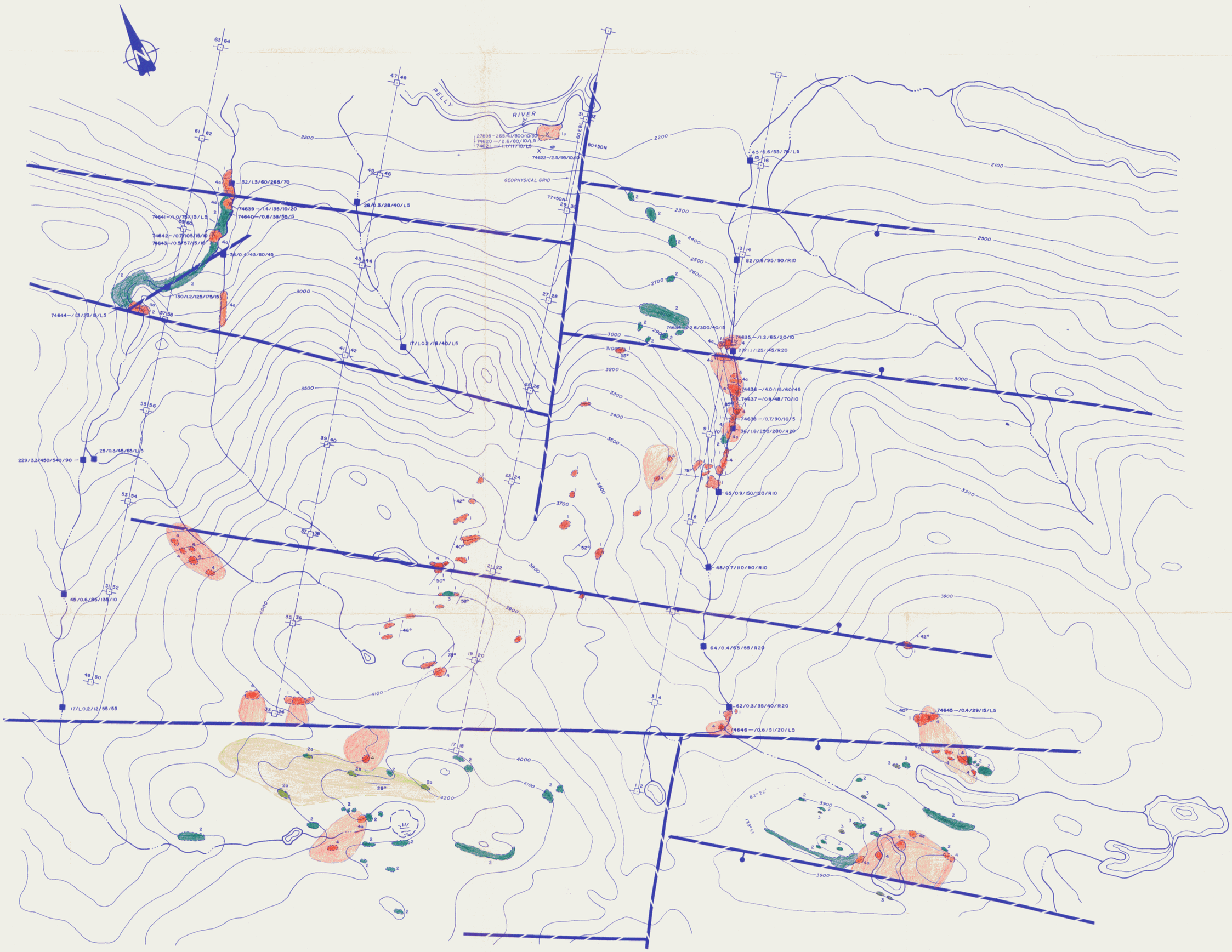
EDUCATION: B. Sc. (Geological Engineering) from
University of Saskatchewan
Graduated in 1973

EMPLOYMENT: 1973 - 1984 Hudson Bay Exploration & Development Co. Ltd.

Flin Flon Office 1973 - 1975
Drill Geologist - field supervisor of diamond drill projects Northern Manitoba and Saskatchewan.

Whitehorse Office
Project Geologist 1975-1980 - field supervisor of geological mapping, geophysical, geochemical and prospecting programs in the Yukon Territory. Included report preparation and assessment.

Senior Exploration Geologist - 1981 - planning, monitoring and assessing exploration projects conducted in the Yukon Territory.



105 K5

GEOLOGICAL LEGEND

- 4a TERTIARY (CRETACEOUS?) Acid intrusions; Quartz feldspar porphyry; 4a rhyolite porphyry.
- 3 TERTIARY carbonaceous sediments; conglomerate shale and greywacke.
- 2a PERMIAN (?) Basic to intermediate volcanic rocks dark green andesite, basalt. 2a metasedimentary unit.
- 1a PALEOZOIC Pelitic sediments: carbonaceous phyllite, slate, silt banded shales. 1a grey green chorite phyllite.

LEGEND

- ■ 25/0.3/45/65/L5 Pan concentrate Sample Pb/Ag/As/Hg/Au (ppm / ppb)
- X 74638 - /0.7/90/10/5 Rock Sample Pb/Ag/As/Hg/Au (ppm / ppb)
- Fault — Down drop
- Rock Outcrop
- 42° Bedding / Dip
- Claim post location (approximate) with claim location line.

HUDSON BAY EXPLORATION & DEVELOPMENT COMPANY LIMITED

WHITEHORSE OFFICE

BEYON CLAIMS 091597

GEOLOGY & GEOCHEMISTRY

DRAWN BY: W.M.	DATE: JAN 1985	PLATE No. 3
FIELD WORK BY: D.D. V.C. R.B. R.S.	REVISED BY:	SCALE: 1:10,000 (0 100 200 300 400 500 METERS)