

RECONNAISSANCE
GEOLOGY AND GEOCHEMISTRY
MRT CLAIM

NTS 92H/10W
49° 40' N, 120° 50' W

SIMILKAMEEN MINING DISTRICT
PRINCETON, B.C.

Owned and Operated by
Pan Ocean Oil Ltd.

Report By
G. D. White

Report No. 17-81

June 17, 1981

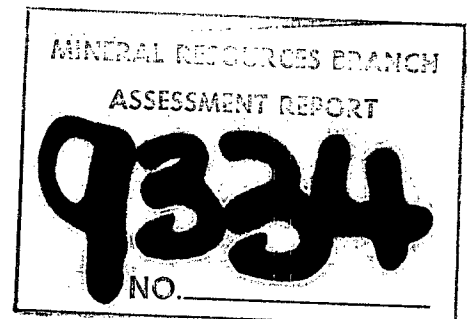


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RECONNAISSANCE
GEOLOGY AND GEOCHEMISTRY
OF THE MRT CLAIMS
NTS: 92H/10W

INTRODUCTION

The twenty unit MRT Claim is located forty-three kilometres south of Merritt on the southeast slope of Thynne Mountain straddling the headwaters of Thynne Creek on map sheet NTS 92H/10W (Fig. A and B). The property is accessible via gravel road south from Merritt to Brookmere then via the lower McPhail Creek logging road to the property. These claims cover an area of altered Kingsvale group volcanics which are intruded by Cretaceous Otter granite peripheral to the Otter fault.

During the 1980 field season the area was partially prospected, fifty reconnaissance soil samples were taken and a total of six heavy mineral stream samples were collected in the claim area. The 1981 season saw a limited amount of work in the form of prospecting and rock chip sampling.

Till cover on the property is extensive with one to two metres on the ridges and several tens of metres in the valley. For this reason outcrop exposure is poor (as little as 5 percent in the claim area) and mainly restricted to road cuts. Relief on the property is moderate, vegetation is mixed pine-- fir and spruce - balsam forest.

Pan Ocean Oil Ltd.

Claims

The MRT Claim consists of twenty units located in the Similkameen Mining Division on map sheet NTS 92H/10W (Fig. A and B).

MRT Claim

20 units: 500 hectares or 1235.6 acres

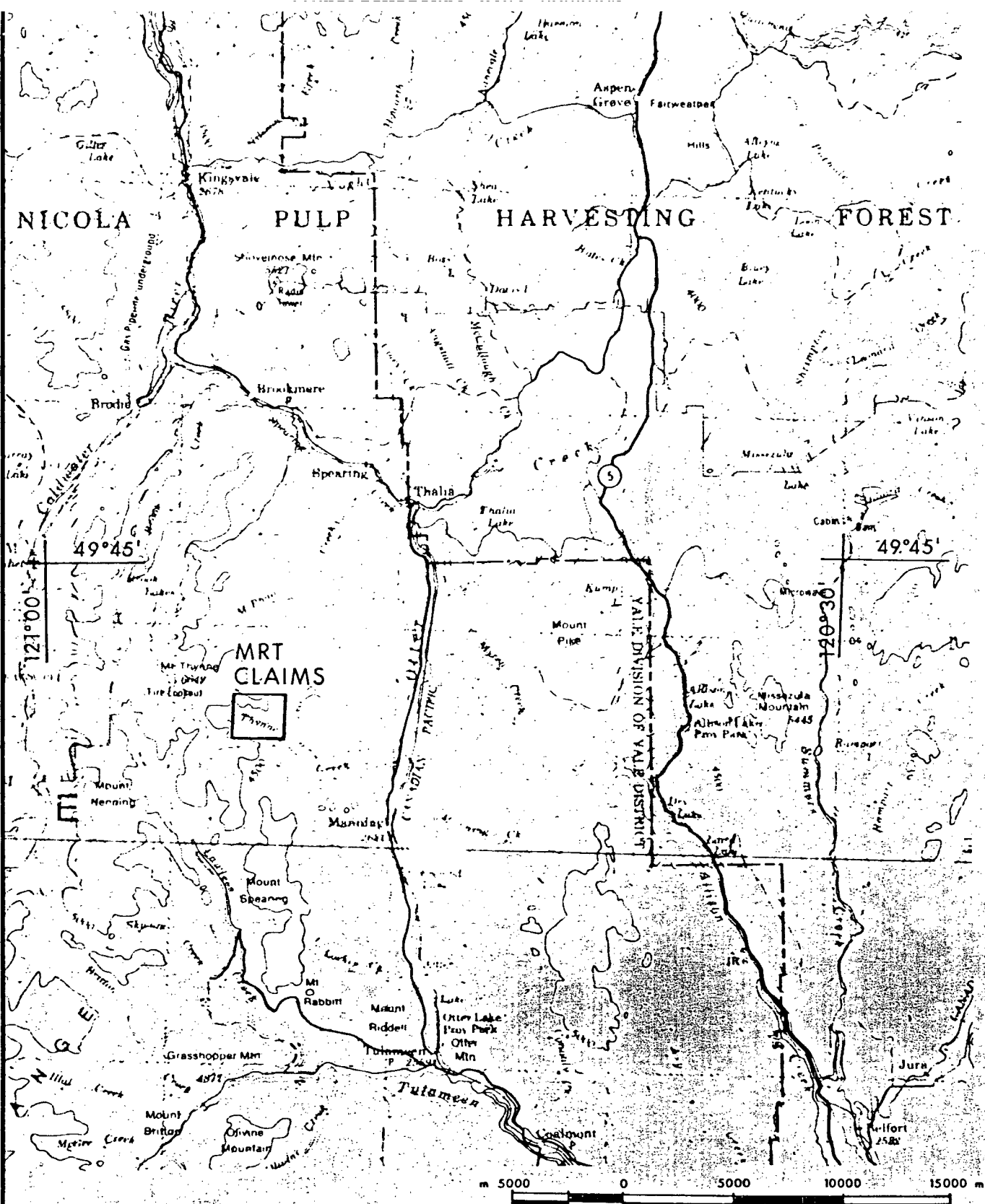
Record # 1052

Tag # 12292

Located by J.E. Robinson, agent for Pan Ocean Oil Ltd.

Recording date: June 17, 1981

Due date: June 17, 1981



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Figure 4
 LOCATION OF
 MRT CLAIMS

DATE FEB., 1981	SCALE 1: 250,000	NTS 92 H	DRAWING NO. A-1175
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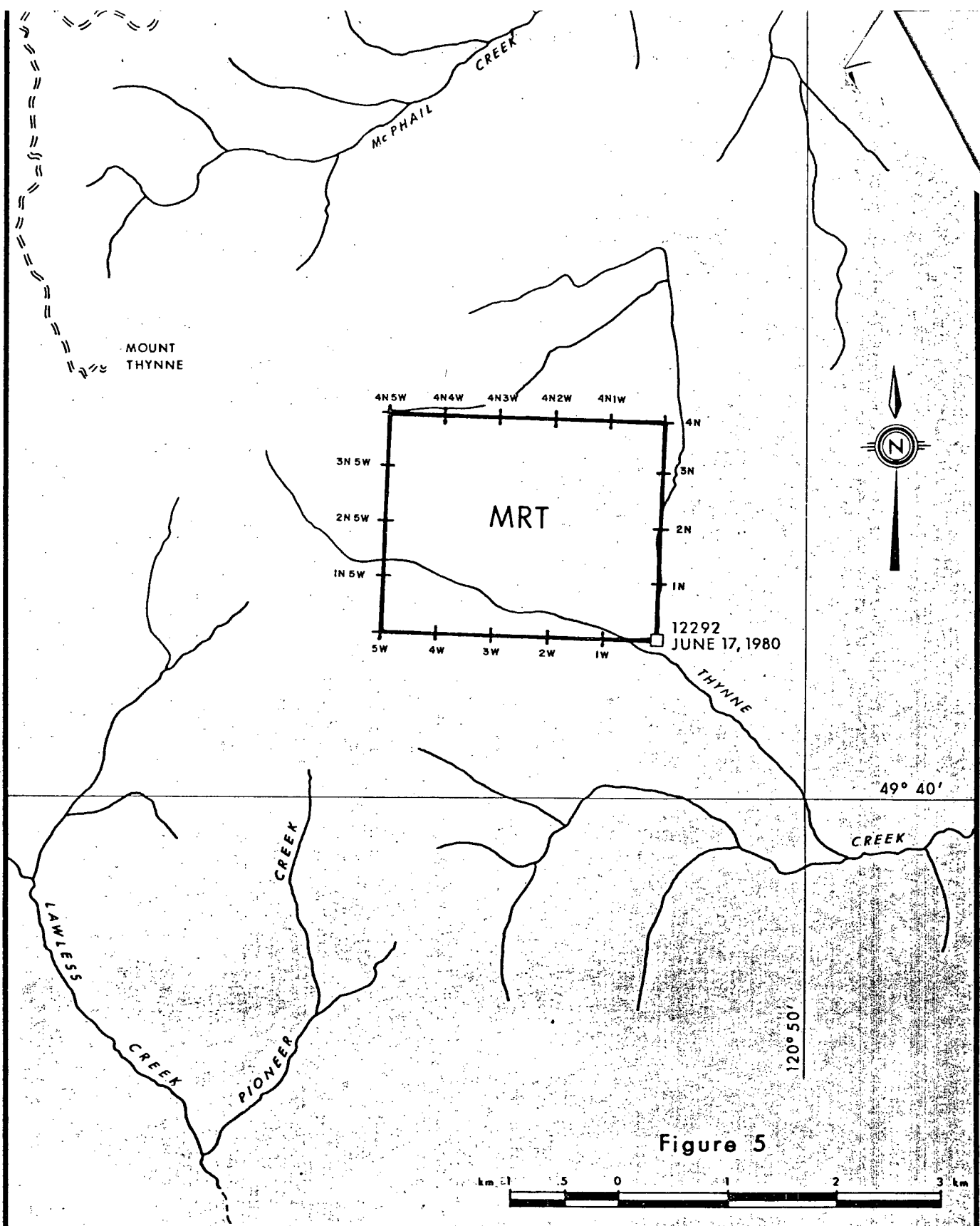


Figure 5



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**FIGURE B
MRT CLAIMS**

DATE FEB., 1981	SCALE 1: 50 000	NTS 92 H/10	DRAWING NO. A-1176
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GEOLOGY

Highly altered and pyritized volcanic and intrusive rocks were initially discovered during the course of regional geochemical sampling. The MRT Claim was located to cover this sequence of altered volcanic rocks which are tentatively correlated to the Lower Cretaceous Kingsvale group as mapped by Rice (1947). Rocks include a lower sequence comprising felsic to intermediate flows commonly containing conspicuous feldspar phenocrysts and lesser flow breccia. Overlying and in part interbedded with the lower sequence is a thick accumulation comprising poly lithic agglomerate, lapilli and welded tuff with lesser fine and coarse ash tuff all of intermediate to felsic composition. This volcanic sequence unconformably overlies or is in fault contact with basalts and andesites correlated with the Upper Triassic Nicola volcanics.

The volcanic sequence has been intruded by several younger plutons tentatively correlated with the Cretaceous Otter intrusions and numerous dykes of varied age and composition. On the southwest side of Thynne Creek an altered intrusive has been exposed by new logging roads. Alteration includes silicification, development of clay minerals, epidote and chlorite, feldspar veining and abundant pyrite.

GEOCHEMISTRY

A variety of geochemical samples were collected during the 1980 and 1981 evaluation. These include reconnaissance soil, heavy mineral stream and rock samples.

Soil Geochemistry

Reconnaissance soil samples were collected in 1980 on selected topofil and compass traverses using a grub hoe. A large gusset bag of reddish brown 'B' Horizon soil was collected from each sample location. Sample lines were chosen to avoid area of thick glacial till. Well developed soil horizons were observed to be present in most of the areas sampled. Soil samples were shipped to Bondar Clegg for analysis by atomic absorption. Samples were analysed for copper, lead, zinc, silver, barite after a hot Lefort Aqua Regia extraction. The only anomalous soil samples occur at MGS 29-30 along the western claim boundary. Results indicate slight enrichment in copper, lead and silver.

Heavy Mineral Stream Geochemistry

Heavy mineral stream sediment sampling is a procedure whereby 10 kg of dry -6 mesh or 5 kg of wet -20 mesh material is collected at each sample location. Samples are then sent to a contract laboratory where they are screened to various desired size fractions, magnetically and gravity separated to produce various heavy mineral concentrates. The resulting mineral concentrates are then sent to a commercial laboratory for analysis.

Two size and type fractions were chosen for analysis; -35 to +80 mesh and -80 mesh size and heavy paramagnetic and non-magnetic fractions. Paramagnetic fractions were analysed

for copper, lead, zinc, molybdenum and silver. Non-magnetic fractions were analysed for copper, lead, zinc, silver, molybdenum, tungsten, tin, cobalt, barite, arsenic, and gold.

Samples collected from the Thynne Creek drainage in the claim group (1980) include 80 - MGH 25, 26, 45, 79, 183 and 184.

Results of analysis indicate: (see assay values Figure 1):

MGH 25 is slightly anomalous in zinc, barite.

MGH 26 is anomalous in copper, gold.

MGH 45 is slightly anomalous in zinc.

MGH 79 is anomalous in copper, lead, zinc, molybdenum.

MGH 183 is slightly anomalous in molybdenum, silver.

MGH 184 is not anomalous.

Rock Geochemistry

Thirteen samples of altered and pyritized rock (from float and source outcrop - see locations Figure 1) were sent to Bondar Clegg and Company Ltd. of North Vancouver in 1981. Each sample was analysed for Cu, Pb, Zn, Ag, Au, As, Sb, W and Ba. Results from all but three samples showed only minor trace amounts of each of the nine elements (see Figure).

81-GDW-10 is anomalous in lead, zinc, antimony.

81-GDW-14 is anomalous in zinc.

81-GDW-17 is anomalous in lead, zinc.

CONCLUSIONS

The purpose for staking the MRT Claim and subsequent investigation was the location of volcanogenic massive sulphide and/or precious metal polymetallic vein type deposits. Results to date are not encouraging but additional work should be carried out due to the lack of outcrop and our limited work coverage on the property. Since outcrop exposure is poor in the area any further work will be based on a detailed geochemical program of rock and soil sampling.

STATEMENT OF COSTS

WAGES:

G. F. McArthur, Geologist		
June 18 to Oct. 6, 1980: Field		
Work 8 days @ \$150.00/day		\$ 1,200.00
G. D. White, Geologist		
June 18 to June 26, 1980: Field		
Work 6 days @ \$100.00/day		600.00
J. E. Robinson, Assistant		
June 18 to June 26, 1980: Field		
Work 6 days @ \$50.00/day		300.00
S. Adamson, Assistant		
June 18 to July 30, 1980: Field		
Work 7 days @ \$50.00/day		350.00
P. G. Cooper, Geophysicist		
July 3, 1980: Field Work		
1 day @ \$200.00/day		<u>200.00</u>
	SUB TOTAL	\$ 2,650.00

FOOD AND ACCOMODATIONS:

June 18 - 26, 1980: Camp Accommodation for 4 men		
9 days @ \$21.00/day		\$ 225.00
July 3, 1980: Meals for P. G. Cooper		23.50
Accommodation for P. G. Cooper		30.00
Oct. 6, 1980: Meals for G. F. McArthur		16.50
Accommodation for G. F. McArthur		<u>30.00</u>
	SUB TOTAL	\$ 856.00

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TRAVEL COSTS:

June 18 - 26, 1980:	Vehicle Rental for 9 days @ \$25.00/day	\$ 225.00
June 18 - 26, 1980:	Vehicle Gas: Merritt to Claim group, at claims, and return to Merritt.	65.00
July 3, 1980:	Vehicle Rent @ \$25.00/day	25.00
	Vehicle Gas	30.00
Oct. 6, 1980:	Vehicle Rent @ \$25.00/day	25.00
	Vehicle Gas	30.00
	SUB TOTAL	\$ 400.00

GEOCHEMICAL ANALYSIS AND ASSAYS:

July 30, 1980:	50 soil samples analysed for Cu, Pb, Zn, Ag @ \$4.65 each	\$ 232.50
Nov. 30, 1980:	6 heavy mineral samples analysed for Cu, Pb, Zn, Mo, Ag, Au, As, Sb, W, Co, Ba, Sn @ \$79.65 each	477.90
May 30, 1981:	13 rock samples analysed for Cu, Pb, Zn, Ag, Au, As, Sb, W, Ba @ \$26.44 each	343.70
	SUB TOTAL	\$ 1,054.10

COST OF REPORT PREPARATION:

\$ 450.00

TOTAL COST \$ 5,760.10

AUTHOR'S QUALIFICATIONS

I, G. D. White of 300 - 5th Avenue S.W. Calgary, Alberta,

- Am a graduate of the University of Manitoba (1979) with a B.Sc. degree in Geology.
- Have worked in the mineral exploration field with various companies since 1975 as an Assistant, Geologist, and Project Geologist.
- Am presently employed by Pan Ocean Oil Ltd. as a Project Geologist.

G. D. White 10. M. Laflamme

G. D. White
Project Geologist

STATEMENT OF QUALIFICATIONS

I, Gerald F. McArthur of Calgary, Alberta, hereby certify that:

- I am an advanced geologist residing at 111 Chelsea Street N.W., Calgary, Alberta and am currently employed by Pan Ocean Oil Ltd. of 300 - 5th Avenue, S.W., Calgary, Alberta.
- I graduated from the University of British Columbia, Vancouver, British Columbia in 1973 with a B.Sc. Degree in Geology and have practiced my profession since that time.
- I supervised the 1981 field work carried out by G. White for Pan Ocean Oil Ltd. which forms the basis for this report.
- The entire program was conducted under the supervision of R. J. Bailes, P. Geologist, Manager of Base and Precious Metals.

Gerald F. McArthur, Geologist

Gerald F. McArthur,
Geologist
Pan Ocean Oil Ltd.

APPENDIX I

GEOCHEMICAL RESULTS MRT CLAIMS

PAN OCEAN GEOCHEMICAL DATA FORM

DATE: July 30	LAB:	REPORT NO. 20-1417	EXTRACTION:	SEE
PROJECT:		WT. USED:	METHOD:	ATTACHED

PROJECT								YR.								SAMPLE NUMBER		Cu ppm	Pb ppm	Zn ppm	Mo ppm	Ag ppm	Au ppb	As ppm	Sb ppm	W ppm	% Fe	U ppm	U ppm	g
1	2	3	4	5	6	7	8	19	20	25	30	35	40	45	50	55	60	65	70	75										
					80					MGS0001		5	5	35					0.3								B			
										2		6	5	55					0.2											
										3		9	32	76					0.4											
										4		11	13	125					0.2											
										5		11	12	81					0.2											
										6		8	13	157					0.2											
										7		22	9	110					0.2											
										8		5	4	46					0.2											
										9		4	27	225					0.2											
										10		3	23	33					0.2											
										11		8	30	224					0.6											
										12		2	14	50					0.2											
										13		2	11	60					0.2											
										14		10	30	128					0.2											
										15		10	3	44					0.2											
										16		5	8	66					0.2											
										17		5	9	55					0.2											
										18		6	9	63					0.2											
										19		6	13	95					0.2											
										20		7	7	62					0.2											
										21		10	4	59					0.2											
										22		48	9	38					0.2											
										23		14	10	64					0.2											
										24		15	26	59					0.4											
										25		16	20	73					0.3											
										26		9	7	42					0.3											
										27		14	25	53					0.4											
										28		23	66	22					0.6											
										29		130	66	158					1.2											
										30		66	121	74					2.1											
										31		4	16	38					0.2											
										32		4	5	66					0.2											
										33		7	10	85					0.2											
										34		20	13	104					0.2											
										35		8	10	121					0.2											
										36		16	14	99					0.2											
										37		3	9	91					0.2											
										38		38	21	302					0.6											
										39		8	24	129					0.6											
										40		12	57	63					0.4											
										41		12	35	84					0.2											
										42		6	45	56					0.5											
										43		4	32	48					0.4											
										44		5	42	53					0.2											
										45		8	18	67					0.2											
										46		10	26	51					0.2											
										48		14	51	70					0.2											
										49		12	32	50					0.2											
									80										0.3								B			
										MGS0050		20	37	71					0.3											
1	2	3	4	5	6	7	8	19	20	25	30	35	40	45	50	55	60	65	70	75										

Ba to follow

FIGURE C

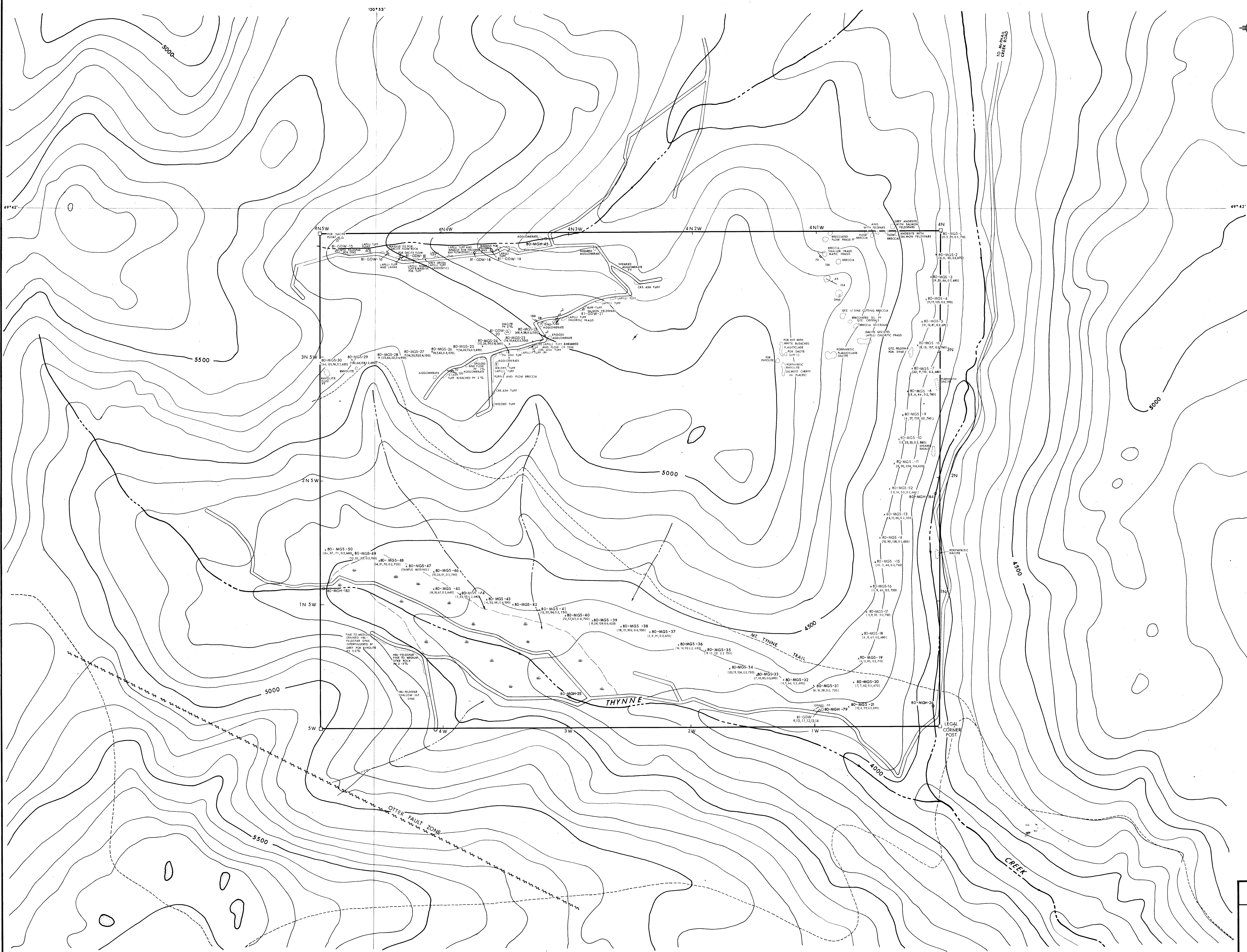
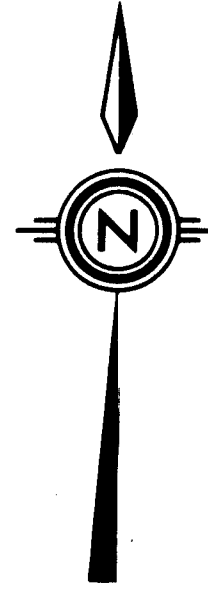
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PAN OCEAN GEOCHEMICAL DATA FORM

DATE: 06/26/81 LAB: REPORT NO. EXTRACTION:
 PROJECT: Merritt WT. USED: METHOD:

PROJECT		YR.	SAMPLE NUMBER	Cu	Pb	Zn	Ag	Au	As	Sb	W	Ba				u.g.					
1	2	3	4	5	6	7	8	19	20	25	30	35	40	45	50	55	60	65	70	75	
	81		GDW0009	5	12	34	0.2	3	1	1	1	2									
			10	12	152	133	0.2	5	3	23		2									
			11	12	22	27	0.2	3	3			2									
			12	12	11	88	0.2	3	1			3									
			13	6	9	73	0.2	3	1			3									
			14	7	12	145	0.2	3	1			2									
			15	6	1	50	0.2	3	1			2									
			16	1	1	27	0.2	3	2			2									
			17	15	101	124	0.2	2	3			2									
			18	10	9	55	0.2	2	5			2									
			19	9	4	63	0.2	2	15			2									
			20	4	16	43	0.2	2	1			2									
	81		GDW0021	4	12	82	0.2	2	1			2									

FIGURE D



HEAVY MINERAL SAMPLES

80-MGH-25	-35 HN	26.18	85.03	2
	-80 HN	3	5	2460
	-35 HP	35.50	605.0	4
	-80 HP	63.25	3200	15
	-35 HN	34.26	96.0	2
	-80 HP	27.31	110.0	2
	-35 HN	10.9	49.0	2
	-80 HN	625.27	75.0	2
	-35 HP	5	400	3
	-80 HP	30.20	62.0	4
	-35 HN	13.11	61.0	2
	-80 HN	5	2155	0.2
	-35 HP	23	300	3
	-80 HN	46.24	157.0	1
	-35 HP	25.19	118.0	2
	-80 HP	2	150	0.2
	-35 HN	23.1665	326.0	2
	-80 HN	315.728	358.0	7.11
	-35 HP	66.57	82.0	7
	-80 HP	41.17	92.0	3
	-35 HN	28.12	96.0	2
	-80 HN	31.17	146.1	2
	-35 HP	32.21	66.0	2
	-80 HP	35.22	70.0	4
	-35 HN	11.6	88.0	2
	-80 HN	18.24	107.0	2
	-35 HP	24.12	65.0	2
	-80 HP	30.16	106.0	2

* NOTE: Au: 15 ppb; ALL OTHER ELEMENTS ARE ppm.

LEGEND

- TRAIL
- LOGGING ROAD
- INTERMITTENT STREAM
- SWAMP
- FAULT
- JOINTING
- STRIKE & DIP
- OUTCROP
- CLAIM POST
- HEAVY MINERAL SAMPLE
- SOIL SAMPLE
- ROCK SAMPLES

100 200 300 400 500 M

TO ACCOMPANY REPORT NO. 17-81 BY G.D.W.

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CALGARY ALBERTA

FIGURE 1
GEOLOGY AND GEOCHEMISTRY
"MRT CLAIMS"
MERRITT VOLCANOGENIC

DATE	SCALE	NTS	DRAWING NO.
MAR, 1981	1:5000	92 H/10	E-1303