1978 DRILLING AND GEOLOGY REPORT

FOR

CABIN #1, 2, 3 and RAM #1 & 2 CLAIMS

FORT STEEL MINING DIVISION

N.T.S. 82-G-2

Latitude: 49°05'N
Longitude: 114°39'W

By: Mark A. Van Fraassen

September, 1978

Owner: Imperial Oil Limited
Operator: Imperial Oil Limited

Esso Resources Canada
500 - 6th Avenue S.W.
Calgary, Alberta
T2P 0S1

CONTENTS

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Mark A. Van Fraassen
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INTRODUCTION

The purpose of the drilling program was to follow up five (5) phosphate showings to determine the extent, the size, the grade (% P_2O_5) and to rapidly appraise the economic potential of the basal Jurassic phosphate horizon.

All holes were made with a Sanderson Cyclone Downhole Hammer Drill contracted from Garritty & Baker Drilling Company Ltd. Thirty-three (33) holes totalling 430 metres were drilled. Five holes are about 50 metres in depth and 28 holes are 20 metres or less.

The Cabin and Ram properties are approximately 70 km southeast of Fernie. Good access is available by the Lodgepole and Bighorn forestry logging roads. The three Cabin claims total 39 units and the two Ram claims total 30 units. They are located near 49°06' - 114°40' (Cabin 1-3), and 49°10' - 114°45' (Ram 1 & 2).

The claims involved in the drilling program are:

Cabin #1	Claim No.	44086	18 units
Cabin #2	" "	44087	12 "
Cabin #3	" "	44050	9 "
Ram #1	" "	44088	18 "
Ram #2	" "	44089	12 "

All claims are located on map N.T.S. 82-G-2.

The terrain is mountainous with surrounding peaks about 2,500 metres and valleys arround 1,500 metres. Most holes were drilled between 1,500 metres and 1,850 metres near, and a few hundred feet above the main creeks.

The topographic lows are filled with glacial till which adversely affected the drilling. In places, the till is in excess of 30 metres thick.

GENERAL GEOLOGY

The prospective areas are on the southern edge of the Crowsnest Basin. The Jurassic shales are intensely deformed, fractured, faulted and folded. The MacDonald Thrust, extending 50 kilometers along strike, brings over-turned Upper Paleozoic and Mesozoic sediments over deformed and faulted Jurassic shales.

The main formations are:

Jurassic:	Fernie Fm. (600 m)	- black shale, limy shale, sandstone, lm basal phosphorite, recessive, deformed, slickensides, calcite fractures, pyrite, belemnites, gryphea, pectins.
Triassic:	Spray River Fm. (about 50 m in this area)	- Siltstone, grey, laminated, thin bedded, siliceous, upper unit of limestone & limy siltstone, sometimes with pectin pelecypods, moderately resistant.
Permian:	Rocky Mountain Fm. (ss)(300 m+)	- sandstone, white, aranaceous, chert nodules and lenses, phosphate pebbles, resistant.

SURFACE SHOWINGS

Cabin #3:

The phosphate bed is exposed in road cuts at 3 places over a distance of 800'. Two outcrops are on the east and west flanks of a gentle

anticline and the third, to the southwest, on the flank of a southwest plunging syncline. The phosphate bed thickness varies by 6" over a short distance. The phosphatic unit consists of 75cm ± 7 cm of massive pelletal phosphorite, overlain by 25 cm of shale, and 25 cm ± 3 cm phosphorite. The phosphorite beds average about 20% P_2O_5. This phosphatic unit is usually overlain by 1 to 2 metres of shale with a few pellets. The phosphatic beds dip rapidly into a hill so that the amount of section and cover increases rapidly to the south.

Cabin #2:

The phosphatic unit outcrops in a stream bank just north of Cabin Creek and is on the vertical east limb of an anticline. Small "M-folds" are present in Triassic rocks a few metres south of the showing.

The section at this location is:

Brown shales		0.57% P_2O_5
Phosphatic shale	35 cm	9.34% "
Nodular & Phosphatic shales & siltstone	53 cm	20.8 % "
Massive, pelletal phosphorite	106 cm	21.4 % "
Triassic siltstones		

A minor amount of thickening may have occurred here due to structural deformation. The phosphatic units could not be traced along strike to the northwest or southeast.

Cabin #1:

This showing is located near the middle of the southern edge of Cabin #1 Claim. The phosphorite is highly siliceous and lower grade. Small scale thrust and normal faults, and shearing have deformed the section and are probably responsible for intense silicification of the phosphorite.

The section at this location is:

Brown shale	30 cm	5.1% P_2O_5
Massive, pelletal phosphorite*	55 cm ±	24.0% "
Phosphatic shale	23 cm ±	5.5% "
Massive, pelletal phosphorite	20 cm ±	16.1% "
Siliceous, conglomeratic pelletal phosphorite	84 cm ±	5.7% "
Triassic siltstones		

* The lower contact of this bed is disturbed and irregular, and may be the plane of a minor thrust. The phosphorite here is close to the mapped surface trace of the MacDonald Thrust and minor tectonism associated with it is probably responsible for the disturbed nature of the sediments.

Ram #1:

An outcrop of basal Jurassic phosphorite occurs near the hinge of a gentle syncline plunging to the southeast. It consists of, from base to top: 13 cm phosphatic conglomerate (7.1% P_2O_5), 38 cm massive phosphorite (24.5% P_2O_5), 18 cm shaly phosphorite (24.5% P_2O_5), 10 cm shale (0.9% P_2O_5), 8 cm shaly phosphorite (12.1% P_2O_5), and is overlain by till. The phosphatic unit dips at 14° into a hill to the southeast.

One half mile south, on the southwest limb of the same syncline, the exposed unit consists of 8 cm phosphatic conglomerate (11.5% P_2O_5), 28 cm massive phosphorite (22.0% P_2O_5) overlain by erosional soil and till. The bed dips at 14° into a hill.

SUMMARY AND CONCLUSIONS

First, the phosphate bed is thin - about 75 cm, occasionally 150 cm as in the case of Cabin #2. Second, the grades are variable - around

20% P_2O_5. Third, the cover is generally thick which would inhibit stripping. Fourth, the hanging wall shales are friable, fractured and blocky, a poor roof rock, if underground mining were to be considered. In conclusion, the above factors, combined with structures more complex than indicated by surface mapping, make the area an uneconomic proposition.

A P P E N D I X I

DRILLING SUMMARY - 1978

APPENDIX I

Drilling Summary - 1978

All holes were drilled with a tandem Sanderson Cyclone Drill equipped with Mission Megadrill downhole hammer, 0.13 metre (5 1/8") drill stem, 0.13 metre core barrel, geolograph, and insert and hammer bits.

About 8 kilometers of road improvement (levelling and clearing debris) were necessary. All holes were drilled on existing logging access and skid roads.

Drilling was done by Garritty & Baker Drilling Company (Edmonton) Ltd., and core and chip samples were logged by Mark A. van Fraassen (Imperial Oil Limited).

Hole	T.D.	Claim	Comments
23-1	50.6m	Cabin #1	T.D. in medium grey shale, Fernie Formation
23-1A	3.4m	Cabin #1	T.D. inPermian sandstone
23-1B	3.4m	Cabin #1	T.D. inPermian sandstone
23-1C	5.5m	Cabin #1	Overburden, abandoned
23-1D	5.5m	Cabin #1	Overburden, abandoned
23-1E	18.3m	Cabin #1	Through Jurassic into Permian, fault?
23-1F	6.4m	Cabin #1	T.D. in Triassic(?) siltstones
23-1G	2.4m	Cabin #1	T.D. in Permian sandstone
23-1H	2.4m	Cabin #1	T.D. in Permian sandstone
23-1I	6.4m	Cabin #1	T.D. in Triassic(?) siltstone
23-1J	6.4m	Cabin #1	T.D. in Triassic(?) siltstone
23-3A	6.4m	Cabin #1	T.D. in Triassic siltstone
23-3B	6.4m	Cabin #1	T.D. in Triassic siltstone
23-3C	6.1m	Cabin #1	Caving shales, abandoned
23-3D	48.5m	Cabin #1	Brown shales
23-4	3.7m	Cabin #3	T.D. in Permian limestone
23-5	3.8m	Cabin #3	T.D. in Permian sandy limestone
23-6	6.1m	Cabin #3	Overburden, abandoned

Hole	T.D.	Claim	Comments
23-7A	4.9m	Cabin #3	Brown shale, phosphorite, Triassic
23-7B	6.7m	Cabin #3	Brown shale, phosphorite, Triassic
23-8	6.1m	Ram #1	T.D. Grey shale, Jurassic
23-9	6.1m	Ram #1	T.D. Grey shale, Jurassic
23-10	6.4m	Ram #1	T.D. in Permian sandstone
23-11	51.1m	Ram #1	Brown shale, phosphorite, Triassic
23-12	48.2m	Ram #1	Brown shale, phosphorite, Triassic
23-13	6.4m	Ram #1	Overburden, abandoned
23-14	54.9m	Ram #1	T.D. in siltstones, possibly Jurassic
23-15	6.4m	Ram #1	Overburden, abandoned
23-16	6.1m	Ram #1	Overburden, abandoned
23-17	6.4m	Ram #1	Overburden, abandoned
23-18	6.4m	Ram #1	Overburden, abandoned
23-19	6.4m	Ram #1	Overburden, abandoned
23-20	10.7m	Ram #1	Overburden, abandoned

A P P E N D I X II

Assay Results

APPENDIX II

Assay Results

Sample	Hole	Interval	Thickness (Metres)	Grade (% P_2O_5)	Comments
15068	23-1	49.0-50.5	1.5	0.23	Drill chips
15063	23-3D	45.4-46.0	0.6	0.27	Core, BCA indeterminate
15064	23-3D	46.0-47.2	1.2	0.27	but probably about 60° to 70°.
15065	23-3D	47.2-47.3	0.1	1.3	Core
15066	23-3D	47.3-47.7	0.4	1.05	Core
15067	23-3D	47.7-48.5	0.8	0.23	Core
15047	23-7B	0 - 2.6	2.6	0.23	Core
15048	23-7B	2.6- 4.0	1.4	<0.10	Core
15049	23-7B	4.0- 4.9	0.9	1.15	Core
15050	23-7B	4.9- 5.1	0.2	15.1	Core
15051	23-7B	5.1- 5.7	0.6	2.9	Core, BCA = 60°
15052	23-7B	5.7- 6.5	0.8	21.8	Core, BCA = 60°
15053	23-12	42.7-43.0	0.3	0.34	Core
15054	23-12	43.0-43.5	0.5	0.23	Core
15055	23-12	43.5-43.6	0.1	3.5	Core
15056	23-12	43.6-43.9	0.3	0.46	Core, BCA = 60°
15057	23-12	43.9-44.0	0.1	0.23	Core, BCA = 85°
15058	23-12	44.0-45.0	1.0	0.46	Core
15059	23-12	45.0-45.3	0.3	10.1	Core
15060	23-12	45.3-46.0	0.7	13.5	Core
15061	23-12	46.0-46.9	0.9	1.5	Core
15062	23-12	46.9-48.2	1.3	0.46	Core
15069	23-14	31.4-32.3	0.9	1.37	Core, BCA indeterminate

A P P E N D I X III

Drill Logs

APPENDIX III

Drill Logs

CABIN #1

Claim #44086 - NTS. 82-G-2

Hole 23-1: July 13, 1978

Type: Downhole Hammer

0 - 15.2m	Brown and black shale
15.2 - 50.6m	Grey shale, intensely fractured, sparry calcite veining, sheared, disseminated pyrite, Jurassic Fernie Fm., 49-50.5 - Sample 15068.

T.D. = 50.6m

Hole 23-1A: July 14, 1978

Type: Downhole hammer

0 - 1.8m	Sand, clay, boulders, gravel
1.8- 3.4m	Siltstone, white-grey, fine grained (Permian)

T.D. = 3.4m

Hole 23-1B: July 14, 1978

Type: Downhole hammer

0 - 1.7m	Overburden-clay, sand
1.7 - 3.4m	Sandstone, white, medium grained (Permian)

T.D. = 3.4m

Hole 23-1C: July 14, 1978

Type: Downhole hammer

0 - 5.5m	Overburden - mud, gravel.
T.D. = 5.5m	Abandoned.

Hole 23-1D: July 14, 1978

Type: Downhole hammer

0.- 5.5m	Overburden - mud, gravel
T.D. = 5.5m	Abandoned.

Hole 23-1E: July 16, 1978

Type: Downhole hammer

0 - 8.8m	Shale, black, silty, fractured, faulted.
8.8 - 9.4m	Sandstone, shaley, grey-brown, limonitic, fine-grained, very well indurated.
9.4 - 15.2m	Shale, silty, grey-brown, blocky, and fractured, slickensides, sandy, limonitic (Jurassic).
15.2 - 18.3m	Sandstone, white, coarse-medium grained, disseminated, pyrite, silica cement (Permian).
T.D. = 18.3m	

Hole 23-1F: July 15, 1978

Type: Downhole hammer

0 - 4.9m	Overburden
4.9 - 6.4m	Siltstone- greyish-black, hard, siliceous, laminated (Triassic)
T.D. = 6.4m	

Hole 23-1G: July 15, 1978

Type: Downhole hammer

0 - 1.8m	Overburden
1.8 - 2.4m	Sandstone, clean, white, siliceous (Permian)
T.D. = 2.4m	

Hole 23-1H: July 15, 1978

Type: Downhole hammer

0	-	2.1m	Overburden
2.1	-	2.4m	Sandstone, white, clean (Permian)

T.D. = 2.4m

Hole 23-1I: July 15, 1978

Type: Downhole hammer

0	-	4.9m	Mud
4.9	-	6.4m	Siltstone - limy, hard, with soft sandstone zones (Triassic).

T.D. = 6.4m

Hole 23-1J: July 15, 1978

Type: Downhole hammer

0	-	4.9m	Overburden, mud.
4.9	-	6.4m	Brown limy siltstone, yellow sandstone zones (Triassic).

T.D. = 6.4m

Hole 23-3A: July 14, 1978

Type: Downhole hammer

0	-	4.6m	Overburden
4.6	-	6.4m	Siltstone, brown fine grained, laminated, siliceous (Triassic).

T.D. = 6.4m

Hole 23-3B: July 14, 1978

Type: Downhole hammer

0	-	4.6m	Overburden
4.6	-	6.4m	Silty shale, shattered, fractured, (Triassic)

T.D. = 6.4m

Hole 23-3C: July 14, 1978

Type:	Downhole Hammer	
	0 - 6.1m	Shale, brown, soft, caving, and wet (Jurassic).
	T.D. = 6.1m	Abandoned.

Hole 23-3D: July 14-15, 1978

Type:	Downhole hammer & core barrel.	
	0 - 45.4m	Shale, brown, silty, laminated with some calcite fractures, white bentonite marker bed @ 45.0m.
Core:	45.4 - 46.0m	Shale, black, calcareous, many flat, sheared(?) flakes, grains or pellets. Sample 15063
	46.0 - 47.2m	Shale, black, calcareous, pellet-like, sheared(?), flaky fresh surface, heavy core. Sample 15064.
	47.2 - 47.3m	Fault - sheared, slickensides, shiny broken shale. Sample 15065.
	47.3 - 47.7m	Shale, brown, massive calcareous, coal fragments, tiny fault zones, Sample 15066
	47.7 - 48.5	Siltstone, grey, limey, blocky, calcite veins Sample 15067.
	T.D. = 48.5m	

CABIN #3

Claim #44050 - NTS. 82-G-2

Hole 23-4: July 16, 1978

Type: Downhole hammer

0	-	3.4m	Sand and boulders
3.4	-	3.7m	Limestone, Permian

T.D. = 3.7m

Hole 23-5: July 16, 1978

Type: Downhole hammer

0	-	3.4m	Sandy overburden
3.4	-	3.8m	Sandy white limestone, Permian

T.D. = 3.8m

Hole 23-6: July 16, 1978

Type: Downhole hammer

0	-	6.1m	Overburden

T.D. = 6.1m Abandoned.

Hole 23-7A: July 19, 1978

Type: Downhole hammer

0	-	2.4m	Shale, brown, soft, Fernie Formation
2.4	-	3.4m	Shale, as above with bluish grey stringers, granular texture, phosphatic.
3.4	-	4.9m	Siltstone, dark grey calcareous, Triassic.

T.D. = 4.9m

Hole 23-7B: July 19, 1978

Type: Core

0	-	2.6m	Brown, muddy, shale, soft. Sample 15047

Hole 23-7B: Cont'd.

2.6 - 4.0m	Brown clay, shale, crumbly, calcite veins, slickensides. Sample 15048.
4.0 - 4.9m	Muddy, brown shale, crumbly. Sample 15049.
4.9 - 5.1m	Phosphorite, black, massive, coarse to medium pelletal, calcareous. Sample 15050.
5.1 - 5.7m	Shale, black and grey, hard calcite veins, very few pellets, bedding to core angle 60°. Sample 15051.
5.7 - 6.5m	Phosphorite, massive, black, coarse pelletal, minor calcite veins, bottom 2" shale with minor pellets. (Jurassic) Sample 15052.
6.5 - 6.7m	Siltstone, limy grey, hard (Triassic).
T.D. = 6.7m	

total Cabin 1,3 205.9m

RAM #1

Claim #44088 - NTS. 82-G-2

Hole 23-8: July 20, 1978.

Type: Downhole hammer

0	- 2.7m	Overburden
2.7	- 6.1m	Shale, grey, silty, calcareous (Jurassic).

T.D. = 6.1m

Hole 23-9: July 20, 1978.

Type: Downhole hammer

0	- 3.4m	Overburden
3.4	- 6.1m	Shale, grey, silty, calcareous.

T.D. = 6.1m

Hole 23-10: July 21, 1978

Type: Downhole hammer

0	- 2.7m	Overburden
2.7	- 4.6m	Siltstone-shale, grey non-calcareous.
4.6	- 6.4m	Sandstone, white, calcareous, medium grained (Permian).

T.D. = 6.4m

Hole 23-11: July 21, 1978

Type: Downhole hammer

0	- 3.5m	Overburden
3.5	- 5.9m	Shale, silty, grey, calcareous, disseminated pyrite, some non-calcareous gritty sections.
5.9	- 10.5m	Siltstone, grey, laminated, numerous calcite veins.
10.5	- 12.5m	Shale, black, soft, strongly calcareous, disseminated pyrite.

Hole 23-11: Cont'd.

12.5 - 25.0m	Shale, silty, calcareous, laminated, black, disseminated pyrite.
25.0 - 26.8m	Siltstone, grey, siliceous, hard, strongly calcareous, blocky.
26.8 - 42.4m	Shale, silty, black, limy, disseminated pyrite, slickensides at 35.0m, calcite filled fractures at 35.0m.
42.4 - 48.8m	Siltstone, grey-black, hard, gritty, laminated, calcareous, calcite filled fractures.
48.8 - 50.7m	Phosphorite, hard, pelletal.
50.7 - 51.1m	Sandstone, white, hard, siliceous, (Triassic).
T.D. = 51.1m	

Hole 23-12: July 21 to July 23, 1978.

Type: Downhole hammer & core barrel.

	0 - 2.9m	Overburden
	2.9 - 42.7m	Shale, silty, black, limy.
Core:	42.7 - 43.0m	Shale, black, fine grained, slickensides, disseminated pyrite, calcite veins, belemnites. Sample 15053.
	43.0 - 43.5m	Shale, black, sparse flat pellets, crenulations. Sample 15054.
	43.5 - 43.6m	Shale , massive, hard, calcareous. Sample 15055.
	43.6 - 43.9m	Shale, black, some flattened pellets, bedding-core angle 60°. Sample 15056.
	43.9 - 44.0m	Siltstone, grey, hard blocky, bedding to core angle 85°. Sample 15057.
	44.0 - 45.0m	Shale, sparry calcite veins. Sample 15058.
	45.0 - 45.3m	Phosphatic conglomerate, black, pelletal, matrix around cherty siltstone or pelletal pebbles. Sample 15059.
	45.3 - 46.0m	Phosphorite, black, massive, minor stringers (near top) white calcite crystals, speckled black & white, disseminated pyrite. Sample 15060.
	46.0 - 46.9m	Siltstone, grey, hard, broken, angular, tiny black chert grains, indurated, disseminated pyrite (Triassic). Sample 15061.

Hole 23-12: Cont'd.

46.9 - 48.2m	Siltstone, blocky, grey, calcite veins, looks like top of Triassic. Sample 15062.
T.D. = 48.2m	

Hole 23-13: July 23, 1978

Type: Downhole hammer

0 - 6.4m	Overburden, sand, gravel, boulders.
T.D. = 6.4m	Abandoned.

Hole 23-14: July 23 & 24, 1978

Type: Downhole hammer & core barrel.

0 - 2.7m	Overburden
2.7 - 16.2m	Shale, black, non-calcareous, shiny slickensides, twisted & deformed. (Jurassic)
16.2 - 31.4m	Siltstone, brown, fine grained, calcite fractures, non-calcareous, disseminated pyrite, limestone from 24.4-26.8, shaley from 26.8-31.4, weakly phosphatic at 31.4, faulted, folded and fractured.
31.4 - 32.3m	Siltstone - grey, hard, non-calcareous, siliceous, minor calcite veins, disseminated pyrite. Sample 15069.
32.3 - 54.9m	Silstone, grey-brown, calcareous, shaley, calcite fractures.
T.D. = 54.9m	

Hole 23-15: July 24, 1978

Type: Downhole hammer

0 - 6.4m	Overburden, mud, wet.
T.D. = 6.4m	Abandoned.

Hole 23-16: July 24, 1978.

Type: Downhole hammer

0	-	6.1m	Gravel, overburden.
T.D.	=	6.1m	Abandoned.

Hole 23-17: July 24, 1978

Type: Downhole hammer

0	-	6.4m	Gravel.
T.D.	=	6.4m	Abandoned.

Hole 23-18: July 25, 1978

Type: Downhole hammer

0	-	6.4m	Gravel, wet
T.D.	=	6.4m	Abandoned.

Hole 23-19: July 26, 1978

Type: Downhole hammer

0	-	6.4m	Overburden, wet
T.D.	=	6.4m	Abandoned.

Hole 23-20: July 24, 1978

Type: Downhole hammer

0	-	10.7m	Overburden, gravel, sand, wet.
T.D.	=	10.7m	Abandoned.

Total RAM 1 221.6 m
Total CABIN 1,3 205.9
427.5

APPENDIX 1

Certification

I, Kevin J. Heffernan of #7 Templehill Cr. N.E., Calgary Alberta, hereby certify that:

1. I am a graduate of the University of Saskatchewan with a B.Sc. (Honors) in Geology, and that I have taken four years of Graduate Studies in Economic Geology at the University of Saskatchewan.

2. Since 1975, I have worked as a geologist in Saskatchewan, the Yukon, the Northwest Territories, and British Columbia, and, have been employed by Esso Resources Canada Ltd., in the Minerals Department since 1977.

3. I hold no direct or indirect interest in the property reported herein, nor do I expect to receive any.

Kevin J. Heffernan.

KJH/jk

CABIN AND RAM CLAIMS

	UNITS	TAG NO.	RECORD NO.	STAKED
CABIN 1	18	44086	296	Sept. 29/77
CABIN 2	12	44087	297	Sept. 29/77
CABIN 3	9	44050	290	Aug. 23/77
RAM 1	18	44088	339	Oct. 10/77
RAM 2	12	44089	340	Oct. 8/77

ALL CLAIMS LOCATED NTS 82 G-2,
FORT STEELE MINING DIVISION.

1978 DRILLING COST STATEMENT

CABIN AND RAM CLAIMS

WAGES:	M. Van Fraassen		
	Field 12 days	July 13-24, 1978 @ 65.00	780.00
	Report 4 days	Sept 18-22, 1978 @ 65.00	260.00
	K. Heffernan		
	Report 1 day	March 5, 1979 @ 90.00	90.00
TRANSPORTATION:	July 13-24		
	4 - wheel drive rental		
	12 days @ 25.00		300.00
FOOD AND ACCOMMODATION:			
	M. Van Fraassen		
	Room: 12 days @ 25.00/day		300.00
	Meals: 12 days @ 15/00/day		180.00
DRILLING:	See attached invoice		16,635.83
EQUIPMENT:	Cat D7F See invoice		
	Modbilization - Demobilization		705.75
	Upgrading, clearing, and rebuilding roads, hauling drill truck, hauling water truck		5,870.00
TOTAL COST:			$ 25,121.58

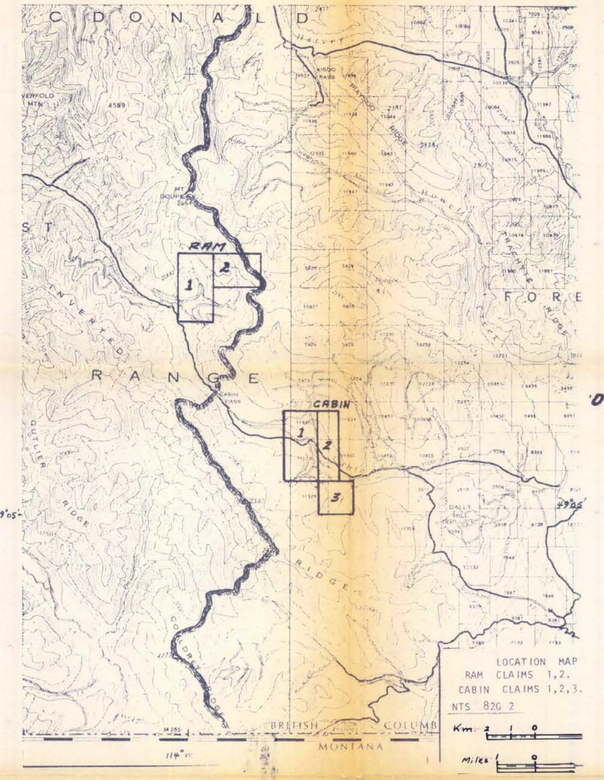
114°45'

114°40'

114°35'

49°10'

49°05'



SYMBOLS

- Drift-covered area
- Rock outcrop, area of outcrop, float
- Geological boundary (defined, approximate interpreted)
- Bedding, tops known (horizontal, inclined, vertical, overturned, dip unknown)
- Bedding, tops unknown (inclined, vertical, dip unknown)
- Schistosity, gneissosity, cleavage, foliation (horizontal inclined, vertical, dip unknown)
- Lineation, axes of minor folds (horizontal, inclined, vertical)
- Drag-fold (arrow indicates plunge)
- Fault (defined, approximate, interpreted)
- Fault (inclined, vertical)
- Fault (solid circle indicated downthrow side, arrows indicate relative movement)
- Thrust fault (approximate, interpreted)
- Shearing and dip
- Joint (horizontal, inclined, vertical, dip unknown)
- Syncline (defined, approximate)
- Anticline (defined, approximate)
- Anticline and syncline (overturned)
- Intensity (weak, moderate, strong)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 7617

- DRILL HOLE LOCATION
- PHOSPHORITE OUTCROP
- ROADS

Contours —— 2500 —— C.I.
Stream or creek (Perennial, intermittent)
Marsh
Lake (Lk)
Road
Jeep Road
Trail
Trees

0 Scale 1/2 Miles 1

IMPERIAL OIL LIMITED – MINERALS

CABIN CLAIMS 1,2,3 AND RAM 1&2
DRILL HOLE AND ROAD LOCATIONS

Project No. _____ Mining Division Ft. Steele

Latitude 49°05'N Longitude 114°39'W

NTS 82 G-2

To Accompany A Report By: M.A. van Fraassen

Dated: Sept. 1978

Map No. _____