

# MAR 19640001: SWIFT CREEK

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19640001

ECONOMIC MINERALS  
FILE REPORT No.  
FE-AF-020(01)

A-78

IRON PROSPECTING PERMIT NO. 20

FINAL REPORT

Edmonton, Alberta  
February 3rd, 1964

N. S. Edgar, P.Eng.

## IRON PROSPECTING PERMIT NO. 20

### FINAL REPORT

#### Descriptions of Programs

1) During the life of the Permit, since 8 Aug., 1962, a number of holes were drilled within this Permit area to show continuity of the iron ore which outcrops on Swift Creek in section 1 T91 R5 W6M.

A plan marked Appendix "A" is included with this report showing location of the drill holes in the permit area. Drill logs of the holes also accompany this report.

2) Prior to the creation of this Permit, 8 Aug., 1962, during the period 21st to 24th March, 1962 a line of holes was drilled across this permit area.

Appendix "A" also shows these drill hole locations and logs of these holes also accompany this report.

3) During March 1954, one drill hole, designated as "E-1" was drilled within this permit area.

#### Discussion of Drilling Results

Sampling of the Swift Creek Iron ore has indicated an average grade of about 34% iron. Close examination of samples and cores obtained from drill holes in Permit No. 20 show the ore, in this Permit area, to be identical with the Swift Creek ore and there is every reason to believe that the ore in Permit No. 20 is a continuation of the Swift Creek deposit.

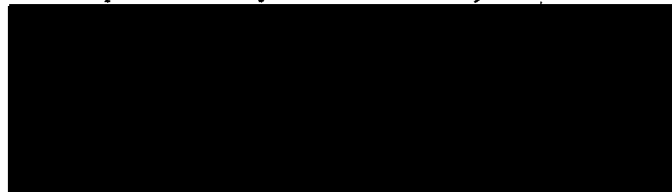
Sufficient data was obtained from holes drilled in this Permit area to indicate the thickness of the ore zone and its lateral extent. Approximately 11,840 acres of this permit area is underlain by iron ore having an overburden thickness of 200' or less. The area is shown on Appendix "A". Average thickness of the ore within this area will be about 17' and the ore tonnage underlying the lease area may be calculated using a factor of 3397 tons per acre foot.

Resume of Expenditures made on Permit No. 20

Program 1)	\$4,036.00
Program 2)	2,553.00
Program 3)	Unknown

Total amount spent on this Permit by Peace River Mining & Smelting Ltd. is \$6,589.00

Respectfully submitted,



N. S. Edgar, P. Eng.

Edmonton, Alberta  
February 3rd, 1964

Location: SE Corner of LSD Elevation Top: 2520' Depth: 200' Page No. 1Elevation: 2705' Inclination: 90° Date Completed: 12 February 1963

Drill Core		Description	Samples		Description
From	To		From	To	
0'	4'	Tan coloured surface clay			
4'	75'	Glacial till			
75'		<u>Bedrock</u> elev. 2630'			
75'	99'	Soft grey clay shales			
99'	105'	Poorly cemented conglomerate			
105'	150'	Grey clay shales			
150'	185'	Hard grey clay shale			
185'	198'	Oolitic ore 2520 to 2507 (13')			
198'	200'	Impure blue sandstone			
		Bottom of hole at 200' elev. 2505'			
		60% core recovery.			

Location: In SW Corner of LSD Elevation Top: 2583.5' Depth: 211.5' Page No. 1Elevation: 2780' Inclination: 90° Date Completed: 10 Feb. '63

Drill Core		Description	Samples		Description
From	To		From	To	
0'	4'	Carbonaceous material (peat muskeg)			
4'	38'	Alternate sections of glacial till and grey shale-like clay. Probably the result of landsiding.			
38'	76'	Glacial till			<u>Bedrock</u> 2704
76'		<u>Bedrock</u> elev. 2704			<u>Conglomerate</u> 2645 to 2643'
76'	135'	Tan grey, very soft, clay shale			<u>Hard cap</u> 2583.6 to 2583.5:
135'	137'	Conglomerate, fine pebbles, well cemented, elev. top 2645			<u>ORE</u> 2583.5 to 2572' <u>Zone</u> 2583.6 to 2570.4
137'	196.4'	Grey clay shale			
196.4'	196.5'	"Hard-capping"			Bottom of hole at 211.5' elev. 2568.5'
196.5'	209.5'	Dark green, with some short khaki sections, densely oolitic to sparsely oolitic at 208'. Much wafering.			
209.5'	211.5'	Sandy clay, no oolites.			

On East side of Forestry  
 Location: Road in NE1/4 of LSD Elevation Top: NIL Depth: 275 Page No. 1  
 Elevation: 2855 Inclination: 90° Date Completed: 6 February, 1963.

Drill Core		Description	Samples		Description
From	To		From	To	
0'	3'	Tan coloured surface clay			No samples
3'	54'	Glacial till			
54'		<u>Bedrock</u> elev. 2801			
54'	275'	Grey clay shale, soft, with harder thin beds of gritty clay shale  (Shales become slightly harder after 68')  Bottom of hole at 275' elev. 2580  Top of ore here must be 2570 or lower)			All rods used, hole too short.  Abandoned.

LOG OF DRILL HOLE NO. 13-3-90-4W6

Location: In NW Corner of LSD Elevation Top: 2519 Depth: 161' Page No. 1

Elevation: 2665 Inclination: 90° Date Completed: 9 February, 1963

Drill Core		Description	Samples		Description
From	To		From	To	
0'	7'	Peat muskeg, mostly vegetable matter			
7'	74'	Glacial till			
74'		<u>Bedrock</u> elev. 2591			
74'	123'	Grey clay shale, occas. gritty bed			Bedrock 2591
123'	130'	Hard, well cemented conglomerate, fine pebbles, 50% qtz.			Top of ore 2519
130'	146'	Hard shale with harder thin brown shale beds.			
<u>146'</u>	148'	Probably all ore and perhaps some "hardcap" - very scant returns - oolites and qtz. grains identified - attempted to core but pieces of hard conglomerate from above must have fallen in and caused these two feet to grind - no recovery.			
148'	149'	Ground, core lost, a few cuttings recovered, oolitic, dark green ore.			
149'	158'	5' of 9' cored section recovered, small (3" diameter) piece of conglomerate ahead of core bit and suspect that first 4' of run was ground, no recovery.			



Location: \_\_\_\_\_ Elevation Top: \_\_\_\_\_ Depth: \_\_\_\_\_ Page No. 2  
 Elevation: \_\_\_\_\_ Inclination: \_\_\_\_\_ Date Completed: \_\_\_\_\_

Drill Core		Description	Samples		Description
From	To		From	To	
		At 153' core is 70% oolites.			
		From 153' to <u>154.6'</u> oolite content grades down from dense to sparse.			
		<u>154.6' to 161'</u> grades down from rare oolites to none at all, dirty partially consolidated sandstone; and then clay with some grit from 159' to 161'.			
		Conglomerate 2542 to 2535			
		"ore" 2519 to 2511			
		Bottom of sandstone zone at 2506			
		Bottom of hole is 161' elev. 2504			

Location: Near center of LSD Elevation Top: 2543' Depth: 226' Page No. 1

Elevation: 2730' Inclination: 90° Date Completed: 7 Feb. '63

Drill Core		Description	Samples		Description
From	To		From	To	
0'	4'	Tan coloured surface clay			NOTE: Ore section and lower zone is similar to W18
4'	12'	Grey shale-like clay			
12'	115'	Glacial till			
115'		<u>Bedrock</u> elev. 2615			
115'	187'	Grey clay shale with some thin interbeds of gritty clay shale			Core recovery 90%
187'		Top of ore			
	188'	Ground, core lost; some cuttings caught on screen.			187')
	194.5'	Densely oolitic, inoxidized, unfractured			) 188')
	200'	As above but broken, wafered and very friable with occas. slight oxidation.			) 194.5)
	218'	Not logged in detail; oolite density grades gradually downward and at 218' becomes sparse.			) 218')
218'	226'	Grades from impure blue sandstone down to gritty clay shale.			
		Bottom of hole at 226' elev. 2504'			Ore section 31' (?)

LOG OF DRILL HOLE NO. W-20

NE Corner of LSD

Location: 2-29-90-4W6 Elevation Top: 2522.9 Depth: 239.3' Page No. 1

Elevation: 2745 Inclination: 90° Date Completed: 24 March, 1962

Drill Core		Description	Samples		Description
From	To		From	To	
0'	17'	Brown clay till			
17'	121'	Blue clay till			
121'	125.5'	Quartzite			
125.5'	221.5'	Blue grey shale			
221.5'	222.1'	"hard capping", blue grey sandstone			
222.1'	226.5'	Ore zone. Impure brown grey sandstone with much silt & small masses of oolites. Slightly oxidized. Not ore grade, probably eastern edge of zone.			
226.5'	239.3'	Impure blue grey sandstone (227.0' - 232.5' grey gritty shale) becoming increasingly more shale-like with depth.			

LOG OF DRILL HOLE NO. W-19

Location: \_\_\_\_\_ Elevation Top: 2532.5' Depth: 210.9' Page No. 2

Elevation: 2715 Inclination: 90° Date Completed: 23 March, 1962

Drill Core		Description	Samples		Description
From	To		From	To	
197.5'	200'	Blue grey, fine to medium grain, moderatley to sparsely oolitic, much blue silt in lenses & masses, some lenses of greenish brown to blue grey shale. Some wafering. H-3. 85% core recovery.	197.5'	200'	
200'	202.5'	Blue grey, medium to coarse grain. Mass of silt & lenses of blue grey shale. A few patches of oolites.			
202.5'	210.9'	Blue grey, soft impure silty sandstone becoming light grey shale.			

LOG OF DRILL HOLE NO. W-19

SE Corner of LSD  
 Location: 13-20-90-4W6 Elevation Top: 2532.5 Depth: 210.9 Page No. 1  
 Elevation: 2715 Inclination: 90° Date Completed: 23 March, 1962

Drill Core		Description	Samples		Description
From	To		From	To	
0'	164.8'	Glacial till with erratic boulders			
164.8'	171.5'	Mixed beds of white & cream coloured quartzites. No core recovery. Water loss. Scant return of cuttings.			
171.5'	175'	Hard dark grey shale.			
175'	182.5'	No core recovery, probably weathered ore zone, in part, at 182.5' ore is characteristic of upper part of zone.			
182.5'	187.5'	Black, fine grained, densely oolitic clay ironstone pebbles. Irregular fracture. H-4. No oxidization. 90% core recovery.	182.5'	187.5'	
187.5'	192.5'	As above. 90% core recovery.	187.5'	192.5'	
192.5'	197.5'	Black, fine grained, densely oolitic some clay-ironstone pebbles, some blue silt. Irregular fracture. H-4. No oxidization. 85% core recovery.	192.5'	197.5'	

LOG OF DRILL HOLE NO. W-18

Location: \_\_\_\_\_ Elevation Top: \_\_\_\_\_ Depth: 222' Page No. 2

Elevation: 2718 Inclination: 90° Date Completed: 22 March, 1962

Drill Core		Description	Samples		Description
From	To		From	To	
201'	205.5'	Dark blue, fine grained, densely oolitic, some blue silt, some clay ironstone pebbles. Irregular fracture H-4. Slightly oxidized. 100% core recovery.	201'	205.5'	
205.5'	208'	Bluish grey, moderately oolitic, medium grain, much blue silt in small masses, some silica, some clay ironstone pebbles. Irregular fracture H-3. Slightly oxidized. 100% core recovery.	205.5'	208'	
208'	210.7'	Dark blue, fine to coarse grain, sparse to medium oolite content, much blue silt in lenses & masses silica, clay-ironstone pebbles. Some wafering. Irregular fracture. H-2½. No oxidization. 100% core recovery.	208'	210.7'	
210.7'	212.5'	Blue grey impure, silty sandstone with very sparse oolites. Wafered.			
212.5'	214.6'	Light blue grey impure silty sandstone.			
214.6'	220'	Blue grey silt. Scant core recovery.			

LOG OF DRILL HOLE NO. W-18

Location: North centre of LSD 7-19-90-4W6 Elevation Top: 2541 Depth: 222' Page No. 1  
 Elevation: 2718 Inclination: 90° Date Completed: 22 March, 1962

Drill Core		Description	Samples		Description
From	To		From	To	
0'	145'	Soft blue clay till			
145'		Begin coring, no recovery			
165'		Recover 1.5' blue silty till & some pebbles			
174'		Recover 1.25' mixed till material & some oolitic fragments			
173'	177'	No core recovery			
177'	178'	No core recovery, oxidized ore on bit			
178'	186'	Dark green black, fine grained, densely oolitic, some clay ironstone pebbles irregular fracture, friable. 4-4 no oxidation, 50% core recovery	178'	186'	
186'	191'	As above, very slightly oxidized 40% core recovery	186'	191'	
191'	196'	As above, some blue silt, no oxidation 95% core recovery	191'	196'	
196'	201'	Dark blue black, fine grained, densely oolitic, some blue silt, some clay ironstone pebbles. Irregular fracture H-4. No oxidization. 90% core recovery	196'	201'	

LOG OF DRILL HOLE NO. 13-20-89-4W6

Centre of north boundary

Location: of LSD 13 Elevation Top: 2552.5' Depth: 227.5' Page No. 1

Elevation: 2765 Inclination: 90° Date Completed: 11 February, 1963

Drill Core		Description	Samples		Description
From	To		From	To	
0'	12'	Surface clays			Bedrock 2695'
12'	29'	Glacial till			
29'		Hard section, probably sandstone erratic			Conglomerate: Top 2612 Bottom 2611
29'	70'	Glacial till			
70'		<u>Bedrock</u> 2695'			Ore: Top 2552.5' (10.2') Bottom 2542.3'
70'	153'	Soft, grey, clay shale			
153'	154'	Well cemented, fine pebble, conglomerate			
154'	160'	Grey clay shale			Bottom of hole: 2537.5'
160'		3" hard blue shale			
160'	212.5'	Grey clay shale			
212.5'	222.7'	Oolitic iron ore, not oxidized, core recovery 75 to 80%			
222.7'	227.5'	Impure sandstone for 2', then 1' of clay shale, then 1' impure sandstone then gritty clay shale to end.			



DESCRIPTION

IN TOWNSHIP EIGHTY-NINE (89), RANGE FOUR (4),  
WEST OF THE SIXTH (6) MERIDIAN:

Sections Twenty-seven (27) to  
Thirty-four (34) inclusive;

AND

IN TOWNSHIP NINETY (90), RANGE FOUR (4), WEST OF  
THE SIXTH (6) MERIDIAN:

Sections Three (3) to Ten (10)  
inclusive, Sections Sixteen (16)  
to Twenty-one (21) inclusive,  
Sections Twenty-nine (29) and  
Thirty (30), the North East  
quarter of Section Thirty-one  
(31) and Section Thirty-two (32);

AND

IN TOWNSHIP NINETY-ONE (91), RANGE FOUR (4),  
WEST OF THE SIXTH (6) MERIDIAN:

The North half and South East  
quarter of Section Six (6);

AND

IN TOWNSHIP NINETY (90), RANGE FIVE (5), WEST  
OF THE SIXTH (6) MERIDIAN:

Sections Twenty-four (24), Twenty-  
five (25) and Twenty-six (26);

AND

IN TOWNSHIP NINETY-ONE (91), RANGE FIVE (5),  
WEST OF THE SIXTH (6) MERIDIAN:

The North East quarter of Section  
Eleven (11), the North half and  
South East quarter of Section  
Twelve (12), the South half of  
Section Thirteen (13) and the South  
East quarter of Section Fourteen  
(14);

AND

What would be statutory road allowances  
if the lands were surveyed pursuant to  
The Alberta Surveys Act, lying within  
the outer limits of the above described  
lands;

containing an area of Nineteen Thousand, Nine Hundred  
and Forty-nine (19,949) acres, more or less

1000129

RG. 5

RG. 4 W6M

RG.

Form 168

TP.

TP.

91 TP.

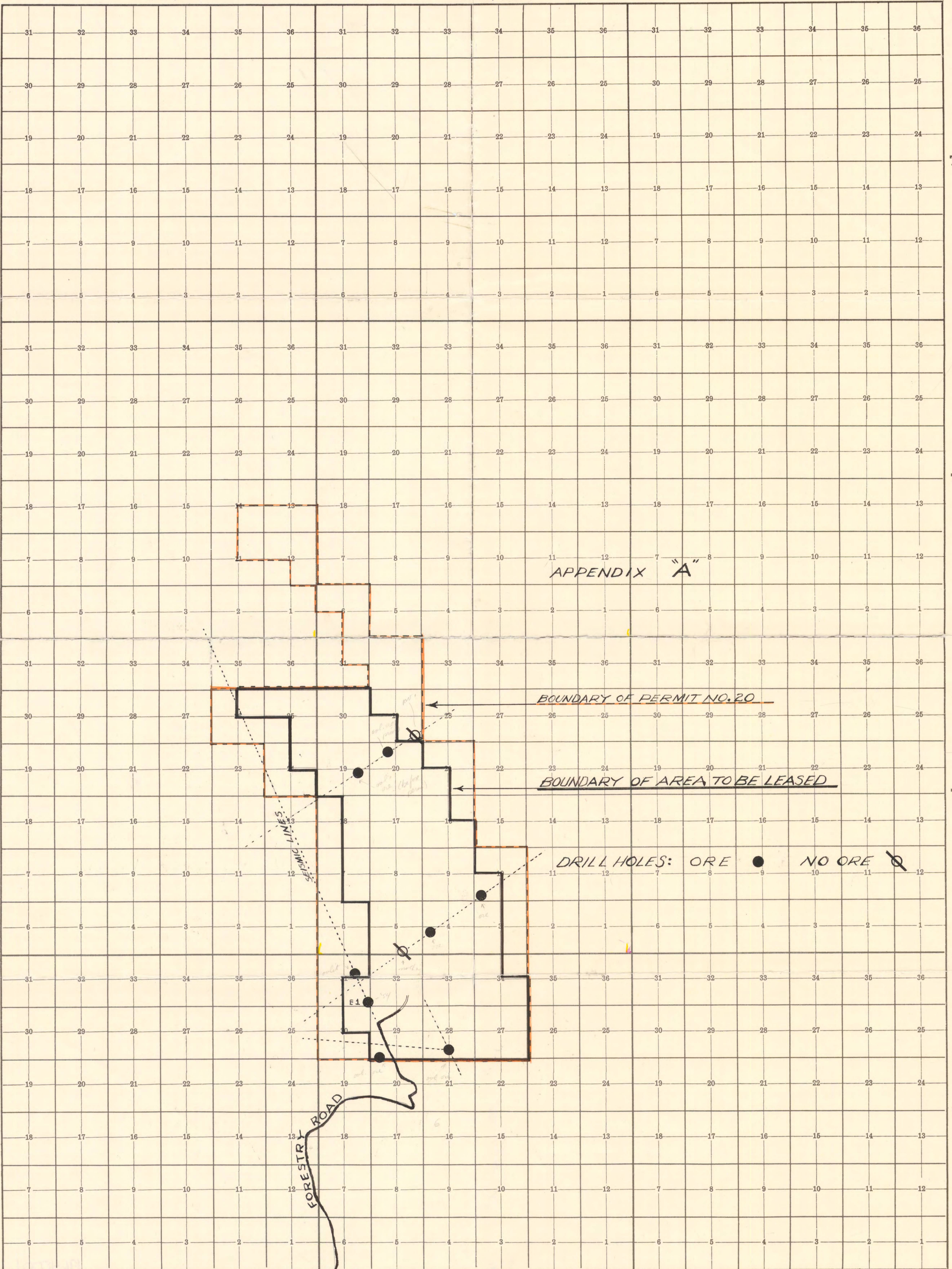
TP.91

90 TP.

TP.90

89 TP.

TP.89



RG. 5

RG. 4 W6M

RG.