

DIAMOND DRILLING



010

TOWNSHIP: Cargill

REPORT No.: 13

WORK PERFORMED BY: Sherritt Gordon Mines Ltd.

<u>CLAIM No.</u>	<u>HOLE No.</u>	<u>FOOTAGE</u> (Metres)	<u>DATE</u>	<u>NOTE</u>
S. 89923	SG-1	12.2	Nov/80	(1)
	SG-2	18.9	Nov/80	(1)
	SG-3	74.4	"	(1)
	SG-4	43.9	"	(1)
	SG-5	13.4	"	(1)
	SG-6	44.2	"	(1)
	SG-8	89.9	Dec/80	(1)
	SG-9	43.9	Dec/80	(1)
	SG-10	67.1	Dec/80	(1)
	SG-11	80.9	"	(1)
	SG-12	52.4	"	(1)
	SG-16	47.9	"	(1)
SG-17	9.1	"	(1)	
SG-18	49.1	"	(1)	
SG-20	61.9	"	(1)	
S. 78658	SG-23	17.1	Dec/80	(1)
	SG-24	55.8	Dec/80	(1)
	SG-25	16.8	"	(1)
NOTES:	SG-26	30.8	"	(1)
	SG-27	26.0	"	(1)

(1) Submitted under O.M.E.P. - #OM56-PE52-C-80

20 DDA

835.9m

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#1 SHEET NO. 1 of 1
DRILLING DATES: November 25, 1980
BOREHOLE LOCATION: 10,670 N, 10,340 E BOREHOLE ELEV. 226.8 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 4.8	Soft to very stiff brown to grey at 2.3 metres <u>SILTY CLAY</u> ; till-like below 3 metres	
4.8 to 6.1	Very dense grey <u>SANDY SILT TILL</u>	
6.1 to 10.0	Reddish brown <u>SILTY SAND AND GRAVEL</u> , cobbles	<u>IRON OXIDE RICH RESIDUUM</u> , some magnetite estimated 20-40% apatite
10.0 to 12.2	Very dense lightly cemented grey and brown <u>SILTY SAND</u> , gravel and cobbles (broken rock)	<u>GREY LEAN RESIDUUM</u> estimated 10-20% apatite

FREE WATER ENCOUNTERED AT ABOUT 6 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#2 SHEET NO. 1 of 1
DRILLING DATES: November 26, 1980
BOREHOLE LOCATION: 10,632 N, 10,298 E BOREHOLE ELEV. 227.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 5.8	Soft to very stiff grey <u>SILTY CLAY</u> , trace sand	
5.8 to 13.7	Brown <u>SILTY SAND</u> , trace clay, some gravel	<u>RED-BROWN RESIDUUM</u> , moderate iron oxides estimated 30-50% apatite
13.7 to 16.5	Very dense grey <u>SILTY SAND AND GRAVEL</u>	<u>GREY-BLACK RESIDUUM</u> , estimated 35-45% apatite
16.5 to 18.9	Very dense grey silty sand and gravel cobbles and boulders	<u>VERY LEAN RESIDUUM</u> (fractured soft rock)

FREE WATER ENCOUNTERED AT ABOUT 6 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#3 SHEET NO. 1 of 1
DRILLING DATES: November 26, 27 and 28, 1980
BOREHOLE LOCATION: 10.633 N, 10.265 E BOREHOLE ELEV. 225.5 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 6.1	Soft to very stiff brown to grey at 2.1 <u>SILTY CLAY</u> , trace sand	
6.1 to 6.3	Loose grey <u>SAND</u>	
6.3 to 7.6	Very dense grey <u>SANDY SILT TILL</u>	
7.6 to 50.3	Very dense grey and white mottled <u>SILTY SAND</u> , occasional gravel	<u>GREY AND WHITE RESIDUUM</u> , high apatite, white decreasing with depth
50.3 to 51.5	Hard grey <u>SILTY CLAY</u> , trace sand	
51.5 to 74.4	Very dense grey with dark brown layers, <u>SILTY SAND</u> , occasional gravel, gravel increasing below 61.5 metres	<u>GREY AND BROWN RESIDUUM</u> , high apatite with pyrite magnetite and mica flakes. 71.6 to 74.4 - <u>DARK GREY TO BLACK RESIDUUM</u> with cemented residuum, low apatite content

END OF BOREHOLE AT 74.4 METRES

APPROXIMATE WATER LEVEL AT 9.1 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#4 SHEET NO. 1 of 1
DRILLING DATES: November 28 and 29, 1980
BOREHOLE LOCATION: 10,645 N, 10,054 E BOREHOLE ELEV. 224.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 13.4	Soft to stiff brown to grey at about 1.5 metres <u>SILTY CLAY</u>	
13.4 to 16.8	Very dense grey <u>SANDY SILT</u> , trace to some clay, occasional gravel to cobbles <u>till</u>	
16.8 to 25.0	Very dense brown <u>SAND</u>	Quartz sand
25.0 to 43.0	Very dense brown and grey <u>SILTY SAND</u> , occasional gravel, cobbles and boulders below 35.1 metres	<u>RED BROWN</u> to brown at 35.1 metres <u>RESIDUUM</u>
3.0 to 43.9	Very dense brown <u>SILTY SAND AND GRAVEL</u> and cobbles (angular)	<u>BROWN AND GREY CEMENTED RESIDUUM</u> , broken carbonatite

END OF BOREHOLE AT 43.9 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#5 SHEET NO. 1 of 1
DRILLING DATES: November 29, 1980
BOREHOLE LOCATION: 10,583 N, 10,886 E BOREHOLE ELEV. 228.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 7.0	Soft to very stiff brown to grey at 5.0 feet <u>SILTY CLAY</u>	
7.0 to 10.7	Very dense <u>SANDY SILT</u> , some clay, occasional gravel, cobbles, boulders <u>TILL</u>	
10.7 to 13.4	Very dense grey <u>GRAVEL</u> , cobbles and boulders	<u>BROKEN CARBONATITE</u> (probably bedrock)

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#6 SHEET NO. 1 of 1
DRILLING DATES: November 30, 1980
BOREHOLE LOCATION: 10,595 N, 10,250 E BOREHOLE ELEV. 226.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 0.3	Black fibrous <u>PEAT</u>	
0.3 to 7.9	Soft to very stiff brown to grey at about 1.5 metres <u>SILTY CLAY</u>	
7.9 to 42.7	Very dense grey <u>SILTY SAND</u> , occasional clay layers to 22.9 metres	<u>RESIDUUM</u> , <u>GREY</u> with <u>WHITE</u> irregular layers, high apatite, occasional kaolinite layers
42.7 to 44.2	Very dense grey <u>GRAVEL</u> and cobbles, some sand (possibly bedrock)	<u>CARBONATITE</u> , biotite flakes and pyrite fragments

END OF BOREHOLE AT 44.2 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#9 SHEET NO. 1 of 1
DRILLING DATES: December 3 and 4, 1980
BOREHOLE LOCATION: 10,675 N, 10,095 E BOREHOLE ELEV. 225.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 7.6	Soft to stiff brown to grey at 1.5 metres <u>SILTY CLAY</u>	
7.6 to 11.3	Very dense grey <u>SILTY SAND TILL</u>	
11.3 to 13.1	Very dense brown <u>SILTY SAND</u>	<u>QUARTZ SAND</u>
13.1 to 22.9	Very dense grey <u>SILTY SAND</u>	<u>GREY RESIDUUM</u> , high apatite content
22.9 to 38.1	Very dense brown <u>SILTY SAND</u>	<u>REDDISH-BROWN RESIDUUM</u> , moderate to low apatite, iron oxide rich with cemented residuam and carbonatite chips
38.1 to 40.2	Very dense brown <u>SILTY SAND</u> , gravel and cobbles	<u>BROWN CEMENTED RESIDUUM</u> , low apatite content
40.2 to 43.9	Very dense brown silty sand and gravel with cobbles (probably bedrock)	<u>CARBONATITE</u>

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#8 SHEET NO. 1 of 1
DRILLING DATES: December 2 and 3, 1980
BOREHOLE LOCATION: 10,685 N, 10,045 E BOREHOLE ELEV. 225.5 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 16.8	Soft to stiff grey <u>SILTY CLAY</u> , silt layers and pockets below 7.6 metres	
16.8 to 19.8	Very dense grey <u>SANDY SILT</u> , trace clay, occasional gravel, cobbles (<u>till</u>)	
19.8 to 50.3	Very dense brown <u>SILTY SAND AND GRAVEL</u> , occasional cobbles, cobbles localized below 38.1 metres	<u>RESIDUUM, RED-BROWN</u> , high apatite content.
50.3 to 77.7	Very dense red-brown <u>SILTY SAND AND GRAVEL</u> , occasional cobbles (angular)	Cemented <u>RESIDUUM</u> chips and goethite below 22.9 metres becoming localized below 38.1 metres. Apatite decreasing to 50% with depth.
77.7 to 89.9	Very dense brown <u>SILTY SAND</u> , some gravel	<u>DARK BROWN RESIDUUM</u> , moderate apatite, mainly unidentified iron oxides

END OF BOREHOLE AT 89.9 METRES

WATER LEVEL AT 1.5 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#10 SHEET NO. 1 of 1
DRILLING DATES: December 4 and 5, 1980
BOREHOLE LOCATION: 10,637 N, 10,176 E BOREHOLE ELEV. 225.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 4.6	Soft to stiff brown to grey at 2.4 metres <u>SILTY CLAY</u> , till-like below 3 metres	
4.6 to 11.3	Dense to very dense grey <u>SANDY SILT</u> , trace clay, occasional gravel, cobbles, <u>TILL</u>	
11.3 to 20.1	Hard grey and black layered <u>CLAYEY SILT</u> and non fibrous peat	
20.1 to 24.7	Very dense grey <u>SILTY SAND</u>	<u>RESIDUUM</u> , <u>GREY</u> , high apatite content mixed with peat. Layers of lesser residuum and high peat content
24.7 to 48.8	Hard black <u>CLAYEY SILT</u> , non fibrous peat with silty sand layers	
48.8 to 67.1	Very dense grey to white <u>SILTY SAND</u>	<u>RESIDUUM</u> , <u>GREY TO WHITE</u> , very high apatite content, some carbon rich sections

END OF BOREHOLE AT 67.1 METRES

WATER LEVEL AT ABOUT 2.4 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#11 SHEET NO. 1 of 1
DRILLING DATES: December 5 and 6, 1980
BOREHOLE LOCATION: 10,634 N, 10,234 E BOREHOLE ELEV. 225.5 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 7.9	Soft to very stiff brown to grey at about 1.5 metres <u>SILTY CLAY</u>	
7.9 to 16.2	Hard grey <u>CLAYEY SILT</u> , trace sand, occasional gravel <u>TILL</u>	Quartz crystals (localized only)
16.2 to 25.0	Hard grey and white mottled <u>CLAYEY SILT TO SILTY CLAY</u> with sand layers	<u>LEAN RESIDUUM, GREY AND WHITE</u> clay and sand layers, occasional kaolinite layers, low apatite content
25.0 to 74.7	Hard grey and light brown <u>LAYERED CLAY AND SILTY SAND</u>	<u>RESIDUUM, GREY</u> with brown layers, high apatite content, evidence of slumping
74.7 to 78.4	Very dense grey and white mottled <u>SILTY SAND</u>	<u>RESIDUUM, GREY</u> with brown layers, high apatite content, evidence of slumping
HOLE ADVANCED TO 80.9, SAMPLE LOST		
END OF BOREHOLE AT 80.9 METRES		

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#12 SHEET NO. 1 of 1
DRILLING DATES: December 7, 1980
BOREHOLE LOCATION: 10,640 N, 10,128 E BOREHOLE ELEV. 225.5 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 6.1	Soft to very stiff brown to grey at 2.4 metres <u>SILTY CLAY</u> , trace sand	
6.1 to 20.1	Very dense grey <u>SANDY SILT</u> , trace clay, occasional gravel, cobbles (<u>TILL</u>)	
20.1 to 30.8	Very dense grey layered <u>SANDY SILT TILL</u> and silty sand	<u>LEAN RESIDUUM, GREY</u> , low apatite content in till, high apatite content in sand
30.8 to 35.1	Very dense red <u>SILTY SAND</u> , occasional gravel, cobbles	<u>RESIDUUM, RED</u> , hematite stained high apatite content
35.1 to 39.6	Very dense light grey <u>SILTY SAND AND GRAVEL</u>	<u>LEAN RESIDUUM, GREY</u> , cemented residuum and carbonatite chips
39.6 to 44.8	Very dense reddish-brown <u>SILTY SAND AND GRAVEL</u>	<u>RESIDUUM, REDDISH-BROWN</u> , low to moderate apatite content
44.8 to 50.0	Very dense brown <u>SILTY SAND AND GRAVEL</u>	<u>RESIDUUM, BROWN</u> , high apatite content in sandy portions
50.0 to 52.4	<u>BEDROCK</u>	<u>CARBONATITE</u>

END OF BOREHOLE AT 52.4 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#16 SHEET NO. 1 of 1
DRILLING DATES: December 9 and 10, 1980
BOREHOLE LOCATION: 10,560 N, 10.027 E (Precise) BOREHOLE ELEV. 224.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 6.4	Soft to stiff brown to grey at 1.0 metre <u>SILTY CLAY</u>	
6.4 to 11.3	Hard grey <u>CLAYEY SILT</u> , trace sand, occasional gravel <u>TILL</u>	
11.3 to 16.8	Very dense grey <u>SANDY SILT</u> , trace to some clay, occasional gravel, cobble boulders (<u>TILL</u>)	
16.8 to 41.2	Very dense grey <u>SILTY SAND</u> , occasional gravel below 32 metres	<u>RESIDUUM, DARK GREY</u> to 32.0 metres and <u>LIGHT GREY</u> to 41.2 metres, moderate to high apatite content
41.2 to 46.6	Very dense light brown <u>SAND AND GRAVEL</u> , some silt	Lean <u>LIGHT BROWN</u> residuum, low apatite content
46.6 to 47.9	Bedrock	Carbonatite .

END OF BOREHOLE AT 47.9 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#17 SHEET NO. 1 of 1
DRILLING DATES: December 10, 1980
BOREHOLE LOCATION: 10,560 N, 10,274.5 E BOREHOLE ELEV. 228.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 0.3	Soft black fibrous <u>PEAT</u>	
0.3 to 6.7	Soft to stiff brown to grey at about 1.5 metres <u>SILTY CLAY</u> , occasional organic layers with depth	
6.7 to 8.8	Very dense grey <u>SANDY SILT</u> till	
8.8 to 9.1	Bedrock	

END OF BOREHOLE AT 9.1 METRES

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SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#18 SHEET NO. 1 of 1
DRILLING DATES: December 10, 1980
BOREHOLE LOCATION: 10,500 N, 10,250 E BOREHOLE ELEV. 226.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 5.2	Soft to stiff brown to grey at 2.7 metres <u>SILTY CLAY</u>	
5.2 to 6.7	Hard grey <u>CLAYEY SILT TILL</u>	
6.7 to 10.7	Very dense grey <u>SANDY SILT TILL</u> , occasional boulders	
10.7 to 41.8	Very dense dark grey with white layers, mottled <u>SILTY SAND</u> , gravel below 38.1 metres	<u>RESIDUUM, DARK GREY, WHITE LAYERS</u> , moderate to high apatite content
41.8 to 47.9	Dense brown silty sand and gravel grading into weathered carbonatite	<u>LEAN RESIDUUM, BROWN</u>
47.9 to 49.1	Very dense grey <u>SAND</u> , some gravel and cobbles (bedrock)	Carbonatite (bedrock)

END OF BOREHOLE AT 49.1 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#20 SHEET NO. 1 of 1
DRILLING DATES: December 11 and 12, 1980
BOREHOLE LOCATION: 10,501 N, 10,046 E BOREHOLE ELEV. 225.2 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 7.0	Soft to stiff brown to grey at 2.1 metres <u>SILTY CLAY</u>	
7.0 to 16.5	Hard grey <u>CLAYEY SILT</u> , trace sand, occasional gravel, cobbles, boulders <u>TILL</u>	Very low apatite
16.5 to 60.1	Very dense grey and brown <u>SILTY SAND</u> , occasional clay layers, occasional clay layers, occasional gravel below 50.3 metres	<u>RESIDUUM, DARK GREY</u> with brown mottlings, pyrite rich fragments, high apatite content
60.1 to 61.9	Very dense light brown silty sand	<u>LEAN RESIDUUM, LIGHT BROWN</u>

END OF BOREHOLE AT 61.9 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#23 SHEET NO. 1 of 1
DRILLING DATES: December 13, 1980
BOREHOLE LOCATION: 10,380 N, 10,065 E BOREHOLE ELEV. 224.2 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 2.1	Stiff brown varved <u>SILTY CLAY</u>	
2.1 to 7.0	Soft grey <u>SILTY CLAY</u> , till-like below 4.6 metres	
7.0 to 14.3	Very dense grey <u>SILTY SAND</u> , trace to some clay, occasional gravel and cobbles (till)	
14.3 to 15.9	Very dense dark grey interlayered <u>TILL AND SILTY SAND</u>	<u>LEAN RESIDUUM, DARK GREY,</u> low apatite content
15.9 to 17.1	Bedrock	Leached and groken <u>CARBONATITE</u> (bedrock)

END OF BOREHOLE AT 17.1 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#24 SHEET NO. 1 of 1
DRILLING DATES: December 13 and 14, 1980
BOREHOLE LOCATION: 10,380 N, 10,205 E BOREHOLE ELEV. 226.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 0.2	Black <u>PEAT</u>	
0.2 to 5.8	Soft to stiff brown to grey at 2.1 metres <u>SILTY CLAY</u>	
5.8 to 15.5	Very dense grey <u>SANDY SILT</u> , occasional cobbles <u>TILL</u>	
15.5 to 54.0	Very dense grey <u>SILTY SAND</u> , gravel increasing below 47.3 m	<u>RESIDUUM</u> , <u>DARK GREY</u> , moderate to high apatite content
54.0 to 55.5	Very dense grey <u>SILTY SAND</u> , some clay	<u>LEAN RESIDUUM</u> , <u>BROWN</u> , low apatite content
.5 to 55.8	Bedrock	Bedrock

END OF BOREHOLE AT 55.8 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#25 SHEET NO. 1 of 1
DRILLING DATES: December 14, 1980
BOREHOLE LOCATION: 10,380 N, 10,250 E BOREHOLE ELEV. 226.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 4.6	Soft to stiff brown to grey at 2.13 metres <u>SILTY CLAY</u>	
4.6 to 11.0	Very dense grey <u>SANDY SILT</u> , some clay, occasional gravel, cobbles <u>TILL</u>	
11.0 to 14.9	Very dense brown <u>SILTY SAND</u> , occasional gravel	<u>RESIDUUM, BROWN</u> , iron oxide rich, moderate to high apatite
14.9 to 16.2	Grey <u>SILTY SAND AND GRAVEL</u>	<u>LEAN RESIDUUM, GREY</u>
16.2 to 16.8	Bedrock	Bedrock

END OF BOREHOLE AT 16.8 METRES

SUMMARY LOG

EXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
BOREHOLE NO. SG#26 SHEET NO. 1 of 1
DRILLING DATES: December 14, 1980
BOREHOLE LOCATION: 10,320 N, 10,200 E BOREHOLE ELEV. 224.0 m
DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 7.0	Soft to stiff brown to grey at 2.1 metres <u>SILTY CLAY</u>	
7.0 to 11.0	Very dense grey <u>SANDY SILT TILL</u>	
11.0 to 29.6	Very dense dark brown and grey <u>SILTY SAND AND GRAVEL</u> , occasional cobbles	<u>RESIDUUM, DARK BROWN AND GREY</u> , moderate apatite
29.6 to 30.8	Very dense light grey <u>SILTY SAND</u> and clay, some rock chips (probably bedrock)	Bedrock

END OF BOREHOLE AT 30.8 METRES

SUMMARY LOGEXPLORATION PROGRAMME

JOB NO. 801-3077 JOB NAME: Sherritt/Phosphate Mine/Kapuskasing
 BOREHOLE NO. SG#27 SHEET NO. 1 of 1
 DRILLING DATES: December 14, 1980
 BOREHOLE LOCATION: 10,320 N, 10,125 E BOREHOLE ELEV. 224.0 m
 DRILLING METHOD: Sonic BOREHOLE DIA. 146 mm
 CONTRACTOR: Midwest Drilling Ltd.

<u>DEPTH</u> (m)	<u>STRATIGRAPHY</u>	<u>GEOLOGICAL COMMENTS</u>
0.0 to 5.2	Soft to stiff brown to grey at 2.1 metres <u>SILTY CLAY</u>	
5.2 to 13.4	Very dense grey <u>SANDY SILT TILL</u>	
13.4 to 26.0	Bedrock	Pyroxenite
END OF BOREHOLE AT 26.0 METRES		

X-RAY ASSAY LABORATORIES LIMITED
 1885 LESLIE STREET, DON MILLS, ONTARIO M3B 3J4
 PHONE 416-445-5755 TELEX 06-986947

CERTIFICATE OF ANALYSIS

TO: SHERRITT GORDON MINES,
 ATTN: W. GLAZIER,
 P.O. BOX 28, COMMERCE CT. W.,
 TORONTO, ONTARIO.
 MSL 1B1

CUSTOMER NO. 546
 DATE SUBMITTED
 14-JAN-81

REPORT 10322

REF. FILE 6220-BR

385 SOILS

WERE ANALYSED AS FOLLOWS:

	UNITS	METHOD	DETECTION LIMIT
MGO	%	XRF	0.010
P205	%	XRF	0.010
S	%	XRF	0.010
FE203	%	XRF	0.010

ASSAY RESULTS

B.H. #'S 1-30

Copy 2

DATE 27-FEB-81

X-RAY ASSAY LABORATORIES LIMITED

CERTIFIED BY

[Handwritten Signature]

SAMPLE	MGO %	P2O5 %	S %	FE2O3 %
SG 01-5	0.27	9.98	0.14	19.2
SG 01-6	0.71	5.11	0.02	26.3
SG 01-7	0.14	8.71	0.01	21.1
SG 01-8	0.03	7.69	0.06	34.7
SG 02-5	0.40	20.6	0.08	34.3
SG 02-6	0.14	19.4	0.13	39.1
SG 02-7	0.36	24.0	0.01	31.7
SG 02-8	0.30	24.4	0.14	34.1
SG 02-9	0.79	23.6	0.22	30.8
SG 02-10	0.77	14.1	0.80	23.6
SG 02-11	1.28	16.0	0.73	16.6
SG 03-5	0.25	35.5	0.01	2.11
SG 03-6	0.04	35.6	NIL	0.77
SG 03-7	0.09	31.1	0.01	2.05
SG 03-8	<0.01	36.5	0.05	0.53
SG 03-9	<0.01	37.2	NIL	0.53
SG 03-10	<0.01	36.9	NIL	0.51
SG 03-11	<0.01	36.2	NIL	0.50
SG 03-12	0.01	35.4	NIL	0.68
SG 03-13	<0.01	36.8	NIL	0.67
SG 03-14	<0.01	36.8	NIL	0.65
SG 03-15	<0.01	35.8	NIL	0.78
SG 03-16	<0.01	35.6	0.01	0.96
SG 03-17	<0.01	34.2	NIL	1.08
SG 03-19	<0.01	36.6	NIL	0.87
SG 03-20	0.05	35.9	0.06	1.42
SG 03-20A	<0.01	35.4	0.15	0.96
SG 03-22	<0.01	36.9	NIL	0.89
SG 03-23	0.05	36.8	0.07	1.60
SG 03-24	0.66	34.0	0.76	5.76
SG 03-25	1.35	27.1	2.36	21.7
SG 03-26	1.65	32.7	3.18	7.22
SG 03-28	1.12	31.7	2.18	11.6
SG 04-9	<0.01	37.5	TRACE	1.14
SG 04-9C	0.17	27.7	0.03	35.2
SG 04-10	0.11	28.1	NIL	27.2
SG 04-11	0.09	31.4	NIL	25.6
SG 04-12	0.28	39.6	0.11	28.3
SG 04-13	0.08	33.0	NIL	21.3
SG 04-14	0.74	32.1	NIL	17.4
SG 05-6	2.86	7.50	0.55	26.3
SG 06-4	<0.01	36.0	NIL	0.93
SG 06-5	<0.01	36.7	NIL	0.94
SG 06-6	<0.01	36.9	NIL	0.75
SG 06-7	<0.01	37.1	NIL	0.65
SG 06-8	<0.01	36.5	NIL	0.46
SG 06-9	<0.01	37.0	NIL	0.26
SG 06-10	<0.01	36.5	NIL	0.56
SG 06-11	0.08	35.5	NIL	1.16
SG 06-12	0.22	34.1	TRACE	1.14
SG 06-13	<0.01	36.4	NIL	0.74
SG 06-14	1.31	33.9	2.46	3.74
SG 06-15	1.37	23.5	2.29	6.63
SG 07-12	0.02	16.8	NIL	51.1
SG 07-13	0.05	27.5	NIL	37.0

SAMPLE	MGO %	P2O5 %	S %	FE2O3 %
SG 07-15	0.06	31.0	NIL	29.2
SG 07-16	0.09	32.4	0.11	23.8
SG 07-17	0.11	32.4	NIL	23.1
SG 07-18	0.17	28.5	NIL	33.1
SG 07-19	0.35	19.4	NIL	19.9
SG 07-20	0.09	23.9	NIL	26.1
SG 07-21	0.03	33.7	NIL	19.0
SG 07-21A	0.04	33.2	NIL	21.9
SG 07-23	0.03	23.3	0.01	31.8
SG 07-24	0.02	17.3	NIL	23.1
SG 07-25	<0.01	18.8	NIL	14.8
SG 07-26	<0.01	17.9	NIL	10.2
SG 07-27	<0.01	12.6	NIL	13.1
SG 07-28	0.04	24.3	NIL	22.2
SG 07-29	<0.01	14.9	NIL	14.9
SG 08-7A	2.61	1.30	0.06	3.16
SG 08-7B	1.19	21.0	0.02	13.7
SG 08-8	0.07	34.1	0.09	10.3
SG 08-9	0.13	27.7	0.04	33.7
SG 08-10	0.06	33.6	NIL	16.2
SG 08-11	0.01	34.9	NIL	12.7
SG 08-12	0.03	33.2	NIL	19.3
SG 08-13	0.09	32.3	NIL	23.3
SG 08-14	<0.01	36.6	NIL	2.80
SG 08-15	0.02	34.4	NIL	14.7
SG 08-16	0.01	34.6	NIL	13.4
SG 08-17	<0.01	35.6	0.01	5.90
SG 08-18	<0.01	35.0	NIL	8.80
SG 08-19	0.01	34.0	NIL	14.2
SG 08-20	0.01	34.8	NIL	8.07
SG 08-21	0.04	33.8	0.09	13.6
SG 08-22	0.04	34.9	NIL	14.7
SG 08-23	0.07	34.8	NIL	12.1
SG 08-24	0.02	34.1	0.01	6.90
SG 08-25	0.07	31.6	NIL	10.9
SG 08-26	0.15	32.6	NIL	20.8
SG 08-27	0.21	30.6	NIL	18.0
SG 08-28	0.13	33.9	NIL	13.4
SG 08-29	0.06	34.9	NIL	10.5
SG 08-30	0.13	33.6	NIL	15.9
SG 09-4	0.60	26.8	0.01	24.0
SG 09-5	<0.01	36.1	1.62	1.66
SG 09-6	<0.01	36.3	1.77	1.72
SG 09-7	0.03	37.7	NIL	0.35
SG 09-8	0.07	33.7	TRACE	18.1
SG 09-9	0.22	24.8	0.04	31.9
SG 09-10	0.24	14.7	0.06	42.5
SG 09-12	0.14	13.2	NIL	18.9
SG 09-13	0.41	12.8	NIL	32.9
SG 09-14	2.34	16.3	0.05	41.2
SG 10-6	0.11	0.10	0.75	0.75
SG 10-7	<0.01	0.12	0.19	0.56
SG 10-8	<0.01	0.05	0.15	0.41
SG 10-9	<0.01	0.06	0.04	0.27
SG 10-9B	0.04	0.05	0.26	0.50
SG 10-10A	0.05	0.05	0.42	0.62

SAMPLE	MGO %	P2O5 %	S %	FE2O3 %
SG 10-10B	<0.01	0.02	0.19	0.35
SG 10-11	0.09	20.2	0.10	30.0
SG 10-11A	0.02	0.05	0.58	0.68
SG 10-11B	<0.01	0.03	0.20	0.37
SG 10-12A	<0.01	0.05	0.28	0.47
SG 10-12B	0.10	0.07	0.06	0.87
SG 10-13A	0.14	0.06	0.15	0.84
SG 10-13B	0.21	0.12	1.92	1.02
SG 10-13C	<0.01	0.03	0.15	0.42
SG 10-14	0.46	0.45	2.73	1.08
SG 10-16	0.38	0.15	1.81	1.27
SG 10-17	<0.01	0.04	0.08	0.45
SG 10-18	0.16	0.63	1.43	1.91
SG 10-19	<0.01	0.81	0.17	0.61
SG 10-21	<0.01	0.04	NIL	0.31
SG 10-22	<0.01	0.89	0.04	0.81
SG 10-23	<0.01	1.03	NIL	0.32
SG 10-24	<0.01	0.05	0.05	0.58
SG 10-25	<0.01	0.09	0.64	1.09
SG 10-26	<0.01	0.47	0.07	0.53
SG 11-2	0.65	1.26	0.05	1.21
SG 11-3	<0.01	1.72	0.07	0.79
SG 11-4	<0.01	0.41	0.02	0.69
SG 11-5	<0.01	0.25	NIL	0.73
SG 11-6	<0.01	2.24	0.11	1.06
SG 11-7	<0.01	0.24	NIL	0.65
SG 11-8	<0.01	0.23	NIL	0.69
SG 11-9	<0.01	0.23	NIL	0.51
SG 11-10	<0.01	0.64	TRACE	0.55
SG 11-12	<0.01	0.56	0.01	0.74
SG 11-13	<0.01	1.85	0.03	0.81
SG 11-14	0.04	32.9	0.14	0.98
SG 11-15	0.02	35.5	0.09	0.67
SG 11-16	<0.01	34.8	0.20	0.66
SG 11-17	<0.01	35.4	0.15	0.72
SG 11-18A	<0.01	33.8	0.39	0.57
SG 11-18B	<0.01	34.6	0.41	0.62
SG 11-19	<0.01	35.0	0.12	0.47
SG 11-20	0.01	36.1	0.51	1.02
SG 11-21	<0.01	37.0	0.23	0.39
SG 11-22	0.05	34.0	4.06	4.42
SG 11-23	0.02	35.2	2.20	2.72
SG 11-24	0.08	35.3	3.15	3.70
SG 11-25	0.12	32.5	3.95	6.45
SG 12-7	4.50	1.18	0.12	5.52
SG 12-3A	4.55	2.56	0.21	6.15
SG 12-9	4.00	5.28	0.36	6.12
SG 12-10	3.65	2.38	0.19	4.72
SG 12-11A	2.29	10.5	0.72	3.62
SG 12-11B	6.07	4.12	0.28	5.03
SG 12-12	2.90	4.74	0.38	3.54
SG 12-13	1.12	12.9	0.76	2.63
SG 12-14A	0.98	21.4	3.64	5.33
SG 12-14B	0.16	33.7	4.44	4.65
SG 12-14C	<0.01	36.0	4.63	4.73
SG 12-15	0.44	33.0	0.20	15.8

SAMPLE	MGJ %	P2O5 %	S %	FE2O3 %
SG 12-16	0.02	37.0	0.25	8.29
SG 12-17	14.1	8.53	0.01	8.58
SG 12-19	14.5	9.55	0.04	7.29
SG 13-8	0.03	4.82	0.01	3.79
SG 13-9	0.11	4.05	NIL	2.68
SG 13-10	0.23	8.93	0.01	2.68
SG 13-12	0.25	4.94	NIL	3.63
SG 13-13	<0.01	3.01	0.01	4.20
SG 13-14	0.04	2.52	0.03	4.55
SG 13-15	0.02	0.82	NIL	4.44
SG 13-16	0.19	0.47	NIL	2.48
SG 13-17	0.04	1.05	NIL	8.15
SG 13-18	0.02	1.99	0.03	4.52
SG 13-19	0.02	7.79	1.09	3.63
SG 13-20	<0.01	35.9	1.73	1.40
SG 13-21	<0.01	35.7	2.50	2.60
SG 13-22	<0.01	34.9	1.57	1.70
SG 13-23	<0.01	32.9	6.06	5.99
SG 13-24	<0.01	35.8	2.50	2.06
SG 13-25	0.28	29.7	0.65	6.79
SG 13-26	0.18	30.8	0.20	17.4
SG 13-27	0.09	34.3	0.01	13.8
SG 13-29	0.12	33.9	0.05	15.6
SG 13-30	0.12	33.0	0.01	16.5
SG 13-31	0.13	33.7	NIL	14.7
SG 13-32	4.09	21.6	NIL	17.0
SG 14-1	2.03	0.88	NIL	4.68
SG 14-2	3.91	0.87	0.03	5.94
SG 14-3	4.65	0.97	0.01	6.02
SG 14-4	4.83	0.86	1.68	3.06
SG 14-5	5.05	0.17	0.02	5.14
SG 14-6	3.16	0.45	0.01	2.87
SG 14-7	0.15	31.4	0.05	19.0
SG 14-8	0.24	25.0	0.02	28.5
SG 14-10	0.08	35.8	NIL	7.29
SG 14-11	0.18	28.6	NIL	24.1
SG 14-12	0.19	30.6	0.04	17.4
SG 14-13	1.64	3.34	NIL	23.8
SG 14-14	2.53	5.31	0.03	29.0
SG 14-15	1.60	15.6	NIL	23.2
SG 14-16	2.65	2.91	NIL	27.6
SG 14-17	3.10	1.36	NIL	35.3
SG 14-18	2.54	1.75	NIL	25.3
SG 14-19	2.00	2.00	NIL	24.9
SG 14-20	1.92	2.58	NIL	24.2
SG 14-21	1.87	1.49	NIL	27.9
SG 14-22	0.84	21.4	NIL	22.8
SG 14-23	0.21	32.1	NIL	17.0
SG 14-24A	1.20	27.6	NIL	20.7
SG 14-24B	13.4	8.84	NIL	7.13
SG 14-25	14.3	9.54	NIL	4.62
SG 15-1	4.26	0.20	NIL	5.96
SG 15-2	4.68	0.14	NIL	5.70
SG 15-3	4.89	0.15	NIL	6.14
SG 15-4	4.94	0.17	0.03	3.19
SG 15-6	2.06	13.7	0.02	9.38

SAMP	MGO %	P2O5 %	S %	FE2O3 %
SG 15-7	0.18	34.1	NIL	18.4
SG 15-8	7.26	18.1	NIL	16.2
SG 15-9	15.3	6.02	NIL	7.52
SG 16-6	3.54	0.14	0.09	3.09
SG 16-7	0.23	35.9	1.82	2.19
SG 16-8	0.04	36.0	2.77	2.94
SG 16-9	0.26	34.9	2.28	2.62
SG 16-10	0.05	36.1	2.09	2.07
SG 16-11	<0.01	35.8	2.36	2.38
SG 16-12	0.15	36.5	2.28	3.09
SG 16-13	<0.01	36.1	2.98	3.58
SG 16-14	0.74	34.1	4.75	8.71
SG 16-15	0.02	35.9	0.66	10.5
SG 16-16	7.65	18.4	0.25	15.6
SG 17-1	4.63	0.98	0.01	5.23
SG 17-2A	4.33	0.97	0.05	4.56
SG 17-2B	3.84	0.44	0.07	2.09
SG 17-3	3.72	1.29	0.11	2.43
SG 18-4	1.50	6.88	1.58	4.34
SG 18-5	0.27	33.5	5.40	6.72
SG 18-6	0.33	32.9	2.87	4.46
SG 18-7	0.43	29.9	2.88	4.77
SG 18-8	0.16	31.8	4.11	5.03
SG 18-9	0.45	28.7	5.10	7.59
SG 18-9A	<0.01	35.2	4.28	4.90
SG 18-10	0.03	34.1	4.19	4.29
SG 18-11	0.70	27.7	6.34	9.37
SG 18-12	0.61	30.3	5.48	7.62
SG 18-13	0.05	36.5	2.43	2.64
SG 18-14	0.32	35.5	3.33	4.06
SG 18-15	0.25	25.8	0.09	30.4
SG 18-16	0.70	27.7	0.23	32.2
SG 18-17	1.83	28.9	0.30	19.3
SG 19-1	4.52	1.59	NIL	5.76
SG 19-2	4.69	0.66	TRACE	6.83
SG 19-3	4.49	1.26	0.02	4.99
SG 19-4A	4.74	0.55	TRACE	5.88
SG 19-4B	3.31	0.24	0.04	2.73
SG 19-5	3.87	0.18	0.06	4.37
SG 19-6	3.46	0.11	0.04	2.69
SG 19-7	0.86	26.8	1.35	2.45
SG 19-8	<0.01	36.7	2.88	2.94
SG 19-10	<0.01	36.5	3.32	3.41
SG 19-11	<0.01	36.2	2.54	2.56
SG 19-12	<0.01	36.4	3.83	4.07
SG 19-13	0.04	36.6	4.20	6.30
SG 20-5	3.35	0.74	0.07	2.72
SG 20-6	<0.01	33.5	2.12	2.32
SG 20-7	<0.01	32.6	1.85	2.19
SG 20-8	<0.01	35.0	1.74	1.93
SG 20-9	0.01	34.9	2.67	2.92
SG 20-10	<0.01	31.4	2.71	3.28
SG 20-11	<0.01	34.5	2.37	2.38
SG 20-12	<0.01	32.5	1.62	1.76
SG 20-13	<0.01	35.5	3.07	3.09
SG 20-14	<0.01	35.9	4.38	4.34

SAMP	MGD %	P2O5 %	S %	FE2O3 %
SG 20-15	<0.01	35.9	4.62	4.46
SG 20-16	<0.01	34.5	4.69	4.73
SG 20-17	<0.01	35.8	3.29	3.33
SG 20-18	0.08	36.9	3.32	3.81
SG 20-19	15.2	7.82	TRACE	4.19
SG 20-20	6.68	24.0	1.89	4.41
SG 21-4	3.90	0.62	0.12	2.19
SG 21-5	0.10	32.4	0.01	19.3
SG 21-6	0.37	30.6	NIL	26.5
SG 21-7	0.39	26.8	0.01	34.0
SG 21-8	0.18	30.1	0.13	27.8
SG 22-1	4.75	0.19	0.03	5.36
SG 22-2	5.57	0.49	NIL	2.58
SG 22-3	4.68	0.56	0.01	6.14
SG 22-4	3.73	0.35	0.07	2.12
SG 22-5	3.78	0.27	0.07	2.29
SG 22-6	1.91	7.90	0.60	2.33
SG 22-7	0.39	30.9	2.63	3.27
SG 22-8	0.42	34.4	2.86	7.31
SG 22-50-57	0.70	23.3	1.44	2.25
SG 23-5	3.31	4.52	0.40	2.32
SG 23-6	0.21	33.7	3.42	5.21
SG 23-27	3.58	0.64	0.12	2.07
SG 24-9	0.03	34.6	5.00	5.44
SG 24-10	0.06	33.7	5.41	6.12
SG 24-11	<0.01	36.2	4.20	4.33
SG 24-12	0.03	34.9	4.00	4.78
SG 24-13	0.02	35.5	2.95	3.74
SG 24-14	0.02	34.4	3.57	4.23
SG 24-15	<0.01	33.4	5.41	5.67
SG 24-16	0.13	19.5	5.20	8.14
SG 24-17	0.13	35.4	3.35	4.31
SG 24-18	1.43	33.8	4.75	6.87
SG 24-19	2.29	22.3	1.33	24.4
SG 24-20	4.76	19.4	NIL	23.1
SG 24-21	2.16	19.3	0.01	37.3
SG 24-22	2.50	16.9	0.02	37.4
SG 25-1	3.87	0.51	0.01	5.88
SG 25-2B	3.92	0.27	0.07	2.54
SG 25-3	3.62	0.22	0.07	2.31
SG 25-4	4.00	0.36	0.06	2.97
SG 25-5	2.57	24.3	NIL	25.0
SG 25-6A	2.66	14.5	NIL	14.4
SG 25-6B	1.75	25.6	0.05	21.3
SG 26-1	4.99	0.13	NIL	3.53
SG 26-4	3.82	0.54	0.05	2.54
SG 26-5	0.17	15.1	0.80	17.9
SG 26-6	0.35	20.3	0.13	22.0
SG 26-7	0.63	31.7	1.92	17.1
SG 26-8	0.85	27.1	0.07	11.6
SG 26-9	3.37	19.4	0.07	31.8
SG 26-10	10.3	9.72	1.38	24.4
SG 26-10A	3.95	7.06	0.70	15.1
SG 27-5	0.33	22.3	NIL	22.4
SG 27-9	0.19	30.7	NIL	11.9
SG 27-10	0.13	15.9	NIL	12.6

SAMP	MGO %	P2O5 %	S %	FE2O3 %
SG 28-5	4.20	0.61	0.02	3.78
SG 28-6	3.50	0.22	0.06	2.63
SG 28-7	1.32	0.31	0.01	1.79
SG 28-8	<0.01	11.9	0.08	1.66
SG 28-9	0.08	32.9	1.77	1.96
SG 28-10	0.12	32.8	1.79	1.81
SG 28-11	0.01	26.5	5.23	5.89
SG 28-12	<0.01	33.7	2.22	2.39
SG 28-13	<0.01	36.0	1.51	2.00
SG 28-14	<0.01	35.6	2.65	2.96
SG 28-15	<0.01	36.6	1.96	2.49
SG 28-16	<0.01	37.4	1.02	3.17
SG 28-17	0.02	30.7	0.19	22.1
SG 28-18	0.02	34.7	NIL	14.8
SG 28-19	0.04	33.6	0.05	17.0
SG 28-20	0.09	26.8	NIL	40.1
SG 28-21	0.09	33.0	NIL	17.6
SG 28-22	12.5	9.84	NIL	13.8
SG 28-23	7.39	13.9	2.05	25.6
SG 28-23B	9.30	13.3	0.99	20.2
SG 28-24	7.59	17.7	0.98	17.9
SG 29-5	4.12	0.18	0.06	2.57
SG 29-6	3.66	0.21	0.05	2.89
SG 29-7	1.79	16.1	0.43	2.03
SG 29-8	0.09	35.6	0.58	0.83
SG 29-9	0.01	33.9	2.13	2.27
SG 29-10	<0.01	33.8	1.63	1.89
SG 29-11	<0.01	33.3	1.59	1.80
SG 29-12	0.20	34.0	2.79	3.25
SG 29-13	<0.01	35.0	2.15	2.65
SG 29-14	<0.01	36.8	2.25	2.55
SG 29-15	0.04	37.4	0.31	0.76
SG 29-16	0.01	37.1	NIL	6.13
SG 29-17	5.66	23.9	TRACE	10.5
SG 30-5	3.13	2.55	0.12	2.94
SG 30-6	0.02	34.1	1.53	1.69
SG 30-7	<0.01	35.1	2.60	2.80
SG 30-8	0.10	35.4	1.91	2.28
SG 30-9	0.02	34.3	2.03	2.26
SG 30-10	<0.01	36.7	2.09	2.18
SG 30-11	0.05	35.4	4.32	5.48
SG 30-12	0.12	35.7	2.76	3.53
SG 30-13A	0.15	36.6	0.17	0.91
SG 30-13B	0.04	36.8	0.01	7.40
SG 30-14	0.10	28.8	0.01	35.0
SG 30-15	0.14	26.3	0.03	37.6
SG 30-16	0.10	34.1	0.16	19.5
SG 30-17	3.44	25.7	0.15	20.0
SG 30-18	13.3	10.5	0.11	7.82
SG 30-19	6.52	21.3	0.04	12.1



42G07SW0011 13 CARGILL

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OM 56 - PE 52 - C - 80

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

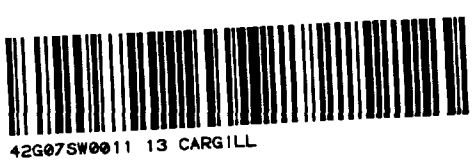
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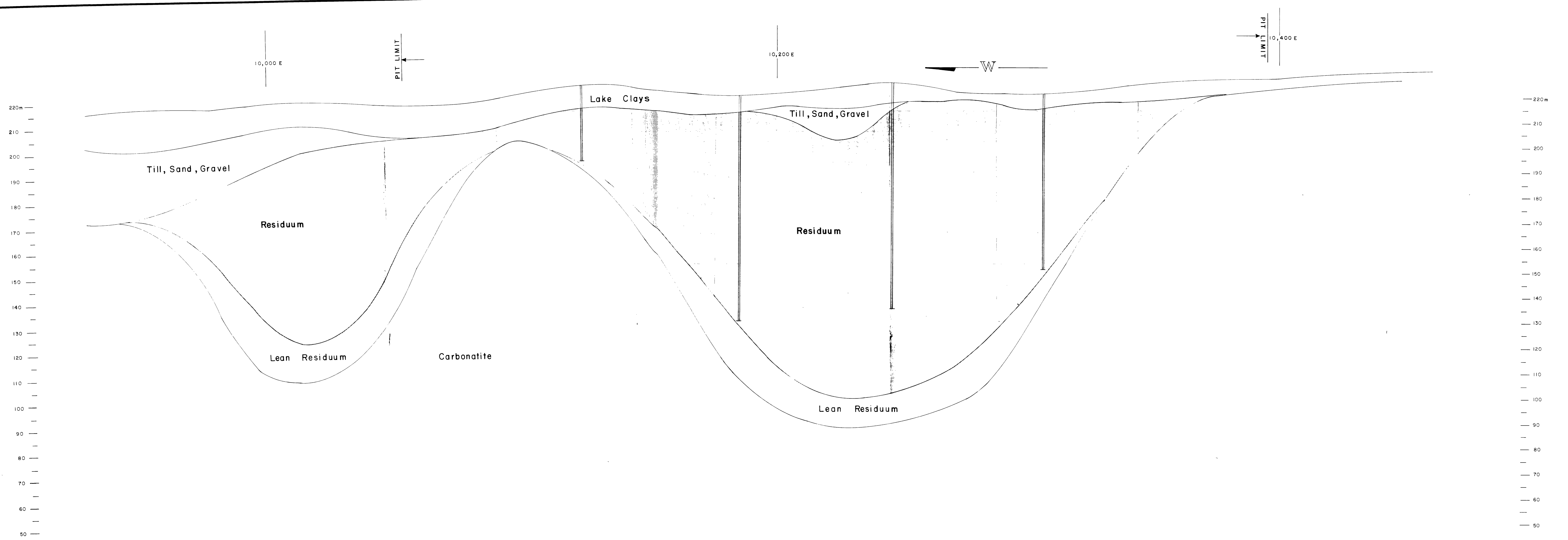
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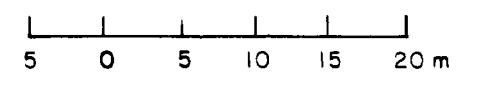
(holes SG-7, 13, 14, 15, 19, 21, 22)

BOREHOLE LEGEND
 * PRESENT INVESTIGATION } BY GOLDR ASSOC
 * PREVIOUS INVESTIGATION }
 ○ PREVIOUS INVESTIGATION - BY OTHERS

SCALE 1:1000



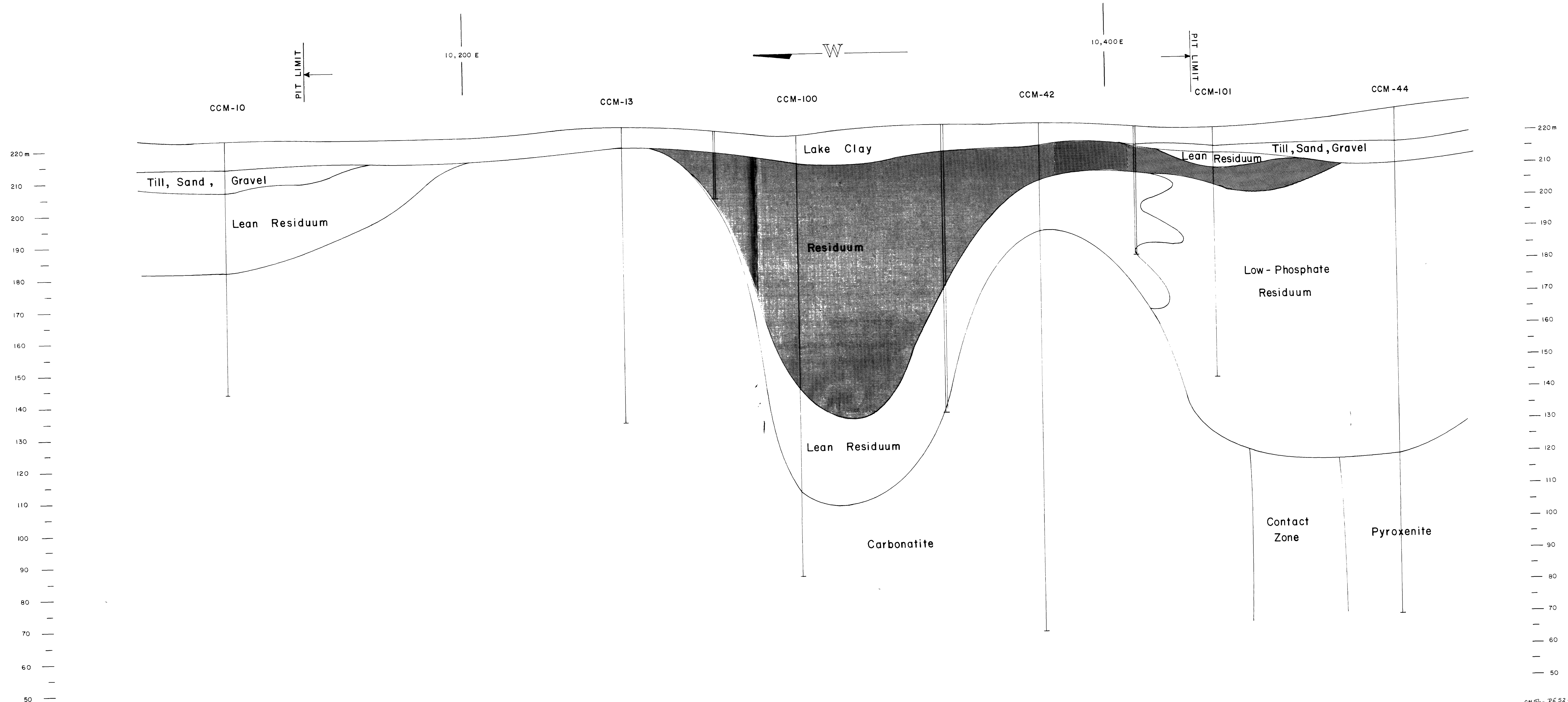


LEGEND:
 PROPOSED DRILL-HOLE
 SCALE

CARGILL PHOSPHATE
 GEOLOGY
 SECTION 10,720 N
 SHERRITT GORDON MINES
 GEOLOGY: G. ERDOOSH
 DRAFTED: N. PLUMLEY
 OCTOBER, 1980

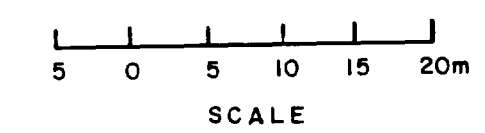
CARGILL DDR #13





LEGEND:

- EXISTING DRILL-HOLE
- || PROPOSED DRILL-HOLE

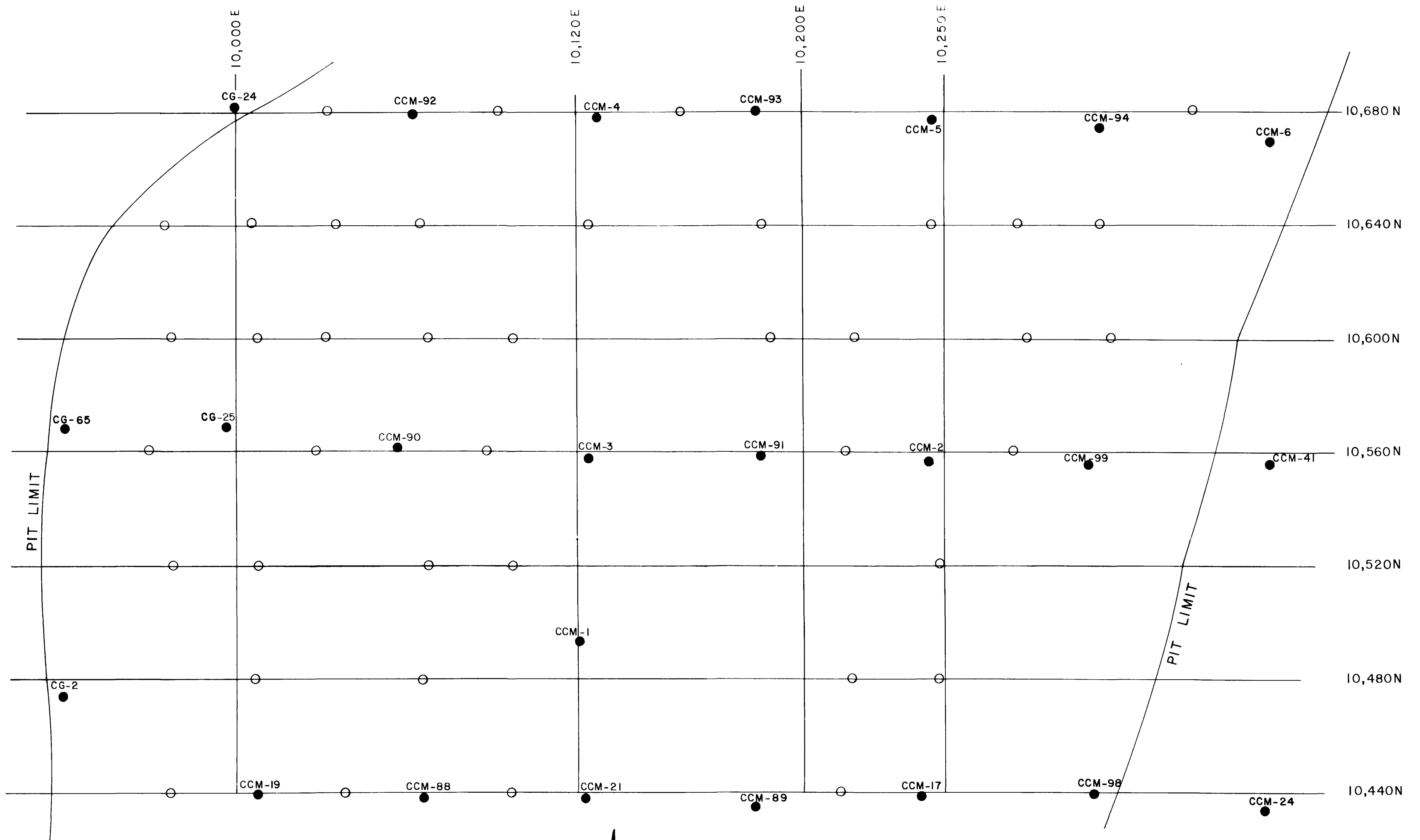


CARGILL PHOSPHATE	
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SHERRITT GORDON MINES	
GEOLOGY: G. ERDOSH	OCTOBER, 1980
DRAFTED: N. PLUMLEY	

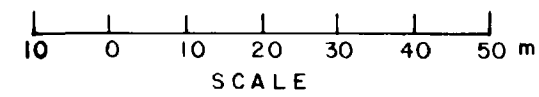
OM 56-DE 52-C-80

CARGILL DR # 13





LEGEND:
 ● EXISTING DRILL-HOLE
 ○ PROPOSED DRILL-HOLE

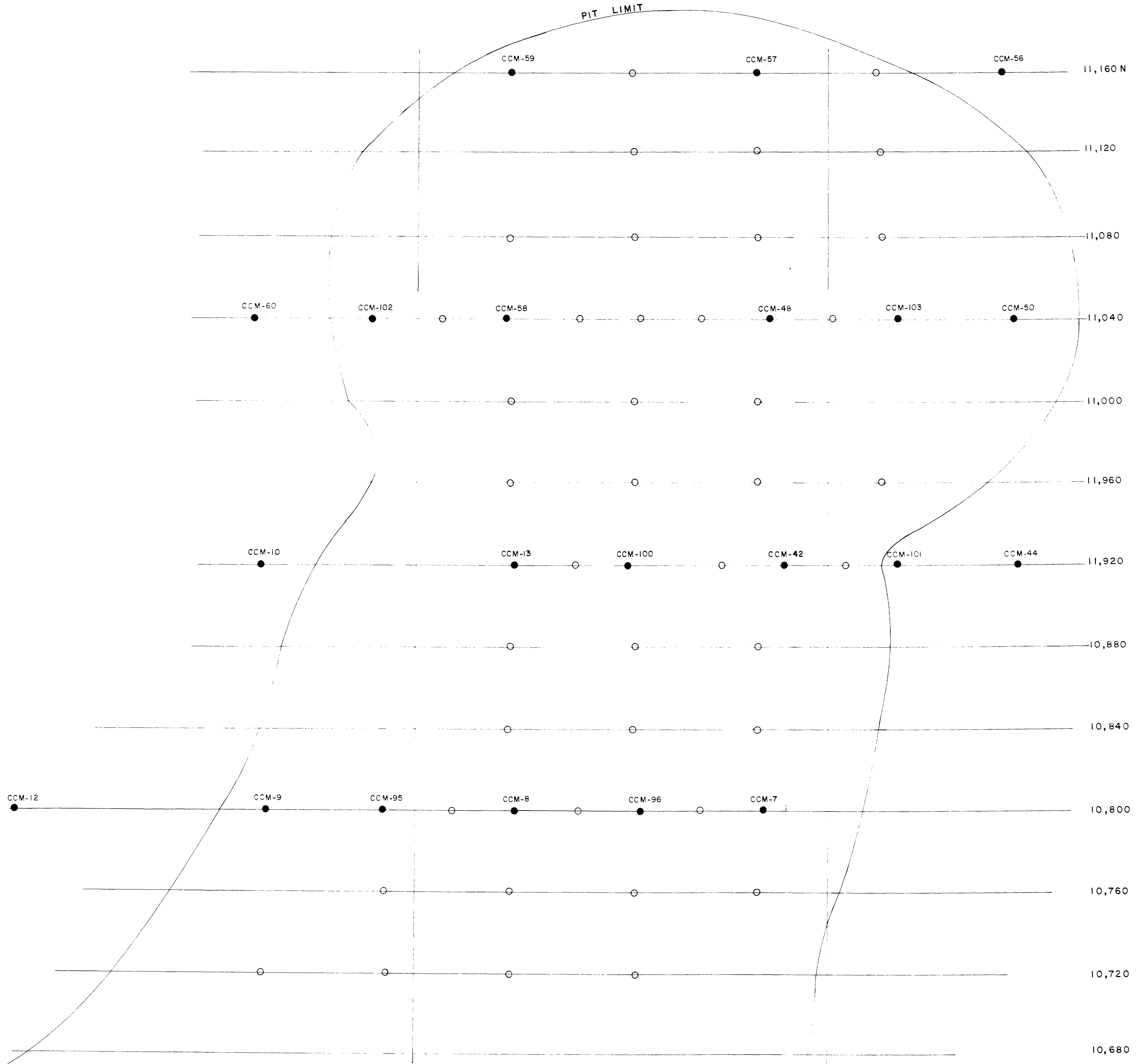


SHEET 1 of 2

CARGILL APATITE
PLAN OF PROPOSED DRILL-HOLES
SHERRITT GORDON MINES
DATA G. ERDOSH DRAFTED: N. PLUMLEY
OCTOBER, 1980

CARGILL S.D.R. #13





LEGEND:
 ● EXISTING DRILL-HOLE
 ○ PROPOSED DRILL-HOLE



10 0 10 20 30 40 50 m
 SCALE

SHEET 2 of 2

CARGILL APATITE
PLAN OF PROPOSED DRILL-HOLES
SHERRITT GORDON MINES
DATA: G. ERDOSH DRAFTED: N. PLUMLEY OCTOBER, 1980

