

REPORT OF EXPLORATION

JULIAN ORE DEPOSIT

1958

Pickands, Mather & Co.

*2000 Huron Commerce Building
Cleveland 14, Ohio*

February 1959

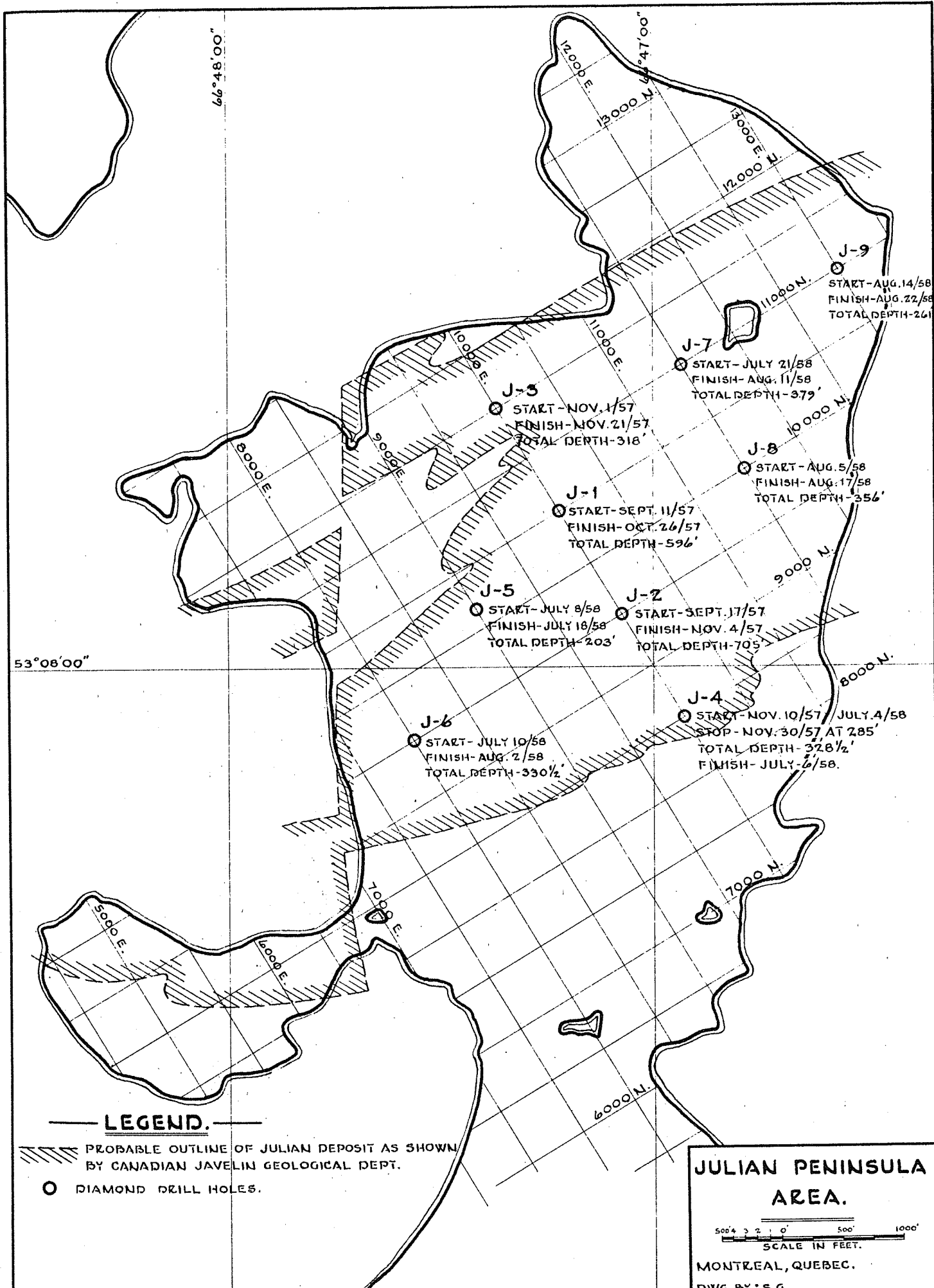
REPORT OF EXPLORATION

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Exploration of the Julian ore deposit by Pickands Mather & Co. as agent for Canadian Javelin Limited in 1958 included 1,573 feet of diamond drilling in five holes identified as J-4 through J-9. Included with this report is a plan map showing the location of these holes, together with the drill hole classification sheets and the analyses of the iron formation as encountered.

PICKANDS MATHER & CO.



66°48'00"

66°47'00"

53°08'00"

J-9
 START-AUG.14/58
 FINISH-AUG.22/58
 TOTAL DEPTH-261'

J-7
 START-JULY 21/58
 FINISH-AUG. 11/58
 TOTAL DEPTH-379'

J-3
 START-NOV.1/57
 FINISH-NOV.21/57
 TOTAL DEPTH-316'

J-8
 START-AUG.5/58
 FINISH-AUG.17/58
 TOTAL DEPTH-356'

J-1
 START-SEPT. 11/57
 FINISH-OCT.26/57
 TOTAL DEPTH-596'

J-5
 START-JULY 8/58
 FINISH-JULY 16/58
 TOTAL DEPTH-203'

J-2
 START-SEPT.17/57
 FINISH-NOV. 4/57
 TOTAL DEPTH-705'

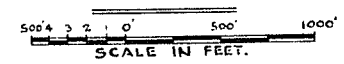
J-6
 START-JULY 10/58
 FINISH-AUG. 2/58
 TOTAL DEPTH-330½'

J-4
 START-NOV. 10/57
 STOP-NOV.30/57 AT 285'
 TOTAL DEPTH-328½'
 FINISH-JULY-6/58.

LEGEND.

- PROBABLE OUTLINE OF JULIAN DEPOSIT AS SHOWN BY CANADIAN JAVELIN GEOLOGICAL DEPT.
- DIAMOND DRILL HOLES.

JULIAN PENINSULA AREA.



MONTREAL, QUEBEC.
 DWG BY: S.G.

DRILL HOLE CLASSIFICATION

Hole No. J-4
Elevation 1950
Coordinates 8500N/10000E
Angle Vertical

Footages
From To

285	302	Non magnetic, badly broken and partially oxidized, lean quartz hematite iron formation with numerous quartz bands. Core exhibits evidence of shear. Vuggy zones present at 292', 294', 296' and 297'. Delta angle averages 60°.
302	328 $\frac{1}{2}$	Quartzite - iron stained, coarse grained. Badly broken in places.

End of Hole.

METALLURGICAL RESULTS

Drill Hole J-4

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
285 - 302 $\frac{1}{2}$	26.74	.20

DRILL HOLE CLASSIFICATION

Hole No. J-5
 Elevation 1937
 Coordinates 10160N/9000E
 Angle 50°
 Bearing North

Footages
From To

0	10	Surface
10	23½	Non magnetic, medium to coarse grained, rich quartz specular hematite iron formation.
23½	47	Same as above except very friable. Delta angle = 70°.
47	70½	Non magnetic, medium grained, friable quartz specular hematite iron formation. Delta = 70°.
70½	90	Non magnetic, medium to coarse grained, badly broken, quartz specular hematite iron formation. Numerous friable zones encountered. Delta = 70°.
90	100	Non magnetic, medium to fine grained, badly broken and oxidized, reddish colored, mixed quartz specular hematite and earthy type hematite. No delta measurable.
100	111½	Non magnetic, medium to fine grained, dark grey colored, lean quartz specular hematite iron formation. Quartz vein 2" wide at 107'. Pitted zone at 102' filled with earthy hematite.
111½	131	Non magnetic, fine to medium grained, light grey colored, lean quartz specular hematite iron formation. Minor amounts of iron silicates present. Limonitic material present in narrow bands scattered throughout footage. Core slightly porous due to leaching.
131	145	Non magnetic, medium grained, dark grey colored, very badly broken, quartz specular hematite iron formation with considerable amount of iron silicates present and some narrow limonitic bands. Delta angle varies between 75° and 55°.
145	154	Non magnetic, badly broken and oxidized, red earthy hematite with minor amount of specular hematite.
154	162	No solid core. Material recovered light orange to pinkish in color. Very talcous and muddy. Scattered small pieces of quartz present.
162	199	No solid core recovered. The material recovered was a mixture of gummy red clay with mica and very fine grained quartz sand. Material believed to be rotten quartz mica schist with narrow seams of talc.
199	203	Quartzite.

End of Hole.

METALLURGICAL RESULTS

Drill Hole J-5

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
12 - 18	62.52	.96
18 - 37	64.40	1.25
37 - 56	35.96	.25
56 - 71	36.29	.12
71 - 93	34.52	.20
93 - 98	31.93	.29
98 - 119	32.42	.22
119 - 133	32.34	.12
133 - 145	32.58	.16
145 - 154	35.17	.24

DRILL HOLE CLASSIFICATION

Hole No. J-6 (Page 1 of 2 Pages)
 Elevation 1812.82
 Coordinates 9500N/8000E
 Angle Vertical

Footages		
From	To	
0	10	Surface
10	21½	Non magnetic, medium to coarse grained, badly broken, mixed earthy and quartz specular hematite. No delta measurable as core too broken up.
21½	30½	Material recovered all ground up. Quartz grains and coarse grained specular hematite.
30½	47	Non magnetic, medium grained, badly broken, quartz specular hematite iron formation with seams of earthy type hematite scattered throughout footage. No delta angle measurable.
47	63	Same as above. Delta = 50° at 52 ft.
63	85½	Non magnetic, badly fractured and vuggy, mixed rich specular hematite and earthy hematite iron formation. Numerous narrow mud seams scattered throughout sample. Delta angle = 50°.
85½	96	Non magnetic, coarse to medium grained, dark grey colored highly fractured, quartz specular hematite iron formation. Earthy hematite present along fractures. Scattered vuggy zones present. Delta = 50°.
96	113	Same as above except no vuggy zones present. Iron formation becoming more quartzose.
113	134	Unconsolidated material made up of coarse grained specular hematite, quartz sand, and clay. Only one piece of core, 1" long was recovered that had a measurable delta which = 45°.
134	156	Non magnetic, medium to coarse grained, friable, quartz specular hematite iron formation with some red clayey bands present. Delta = 65° at 153 ft.
156	167	Unconsolidated material of quartz sand and specular hematite. No core.
167	189	Non magnetic, coarse grained, rich quartz specular hematite iron formation.
189	198	Same as above. A zone from 193 to 198 badly broken and oxidized. Talcose seam from 197 to 198. Delta at 190 ft. = 68°.
198	216	Non magnetic, medium grained, dark grey colored, badly broken, rich quartz specular hematite iron formation. Delta = 68°.
216	236	Non magnetic, medium grained, badly broken and oxidized from 216 to 217 and 229 to 230, quartz specular hematite iron formation.

DRILL HOLE CLASSIFICATION

Hole No. J-6 (Page 2 of 2 Pages)

Footages
From To

236	262	Unconsolidated material made up of quartz sand and specular hematite.
262	330 $\frac{1}{2}$	Material recovered all ground up, consisting of quartz sand and specular hematite. A small piece of core at 322 had delta of 75°.

End of Hole

METALLURGICAL RESULTS

Drill Hole J-6

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
10 - 20	45.30	.10
20 - 25	47.71	.20
25 - 39	46.28	.08
39 - 56	40.85	.10
56 - 86	42.63	.16
86 - 95	37.69	.08
95 - 117	39.06	.10
117 - 134	30.63	.16
134 - 153	39.71	.08
153 - 167	41.41	.10
167 - 187	44.90	.18
187 - 197	49.92	.22
197 - 216	39.63	.10
216 - 230	46.11	.16
230 - 248	45.40	.14
248 - 275	27.68	.29
275 - 284	45.40	.24
295 - 308)		
314 - 323)	36.85	.15

DRILL HOLE CLASSIFICATION

Hole No. J-7 (Page 1 of 2 Pages)
 Elevation 1757
 Coordinates 11000/11500E
 Angle Vertical

Footages		
From	To	
0	12	Surface
12	25	Non magnetic, coarse grained, rich quartz specular hematite iron formation. Core is moderately friable and has scattered vuggy zones. Delta = 60°.
25	55	Non magnetic, medium to coarse grained, slightly banded, slightly friable, rich quartz specular hematite iron formation. Core exhibits leachings along bedding planes giving it a vuggy appearance. Delta angle = 60°.
55	88	Non magnetic, medium to fine grained, banded, light grey colored, leaner quartz specular hematite iron formation. Evidence of leaching along bedding planes from 73 ft. on delta angle = 60° at 64' and 50° at 77'.
88	115	Same as above. Delta angle = 50° at 97' and 60° at 108'.
115	160	Non magnetic, medium to fine grained, grey colored, slightly banded moderate rich quartz specular hematite iron formation.
160	170½	Non magnetic, medium grained, grey colored, slightly friable, lean quartz specular hematite iron formation.
170½	180½	Non magnetic, coarse grained, dark grey to black colored rich quartz specular hematite iron formation.
180½	210	Non magnetic, medium to coarse grained, dark grey colored moderately rich quartz specular hematite iron formation. Delta angle = 45° at 195'.
210	235	Same as above except much of sample made up of unconsolidated material. Delta angle = 50° at 228'.
235	245	Non magnetic, medium grained, rich quartz specular hematite iron formation. Some leaching along bedding planes. Delta angle averages 60°.
245	283	Non magnetic, medium to fine grained, light grey colored, lean, highly quartzose specular hematite iron formation. Sand present from 257½ to 259. Lined structure containing iron silicates present from 266 to 283. Delta angle = 50° at 255' and 265', and 45° at 278'.

DRILL HOLE CLASSIFICATION

Hole No. J-7 (Page 2 of 2 Pages)

Footages		
<u>From</u>	<u>To</u>	
283	304	Non magnetic, medium to fine grained, lean specular hematite iron formation with narrow bands. Lineated structure present to 297'. From 297' on not lineated but very siliceous with scattered seam of earthy type hematite. Delta = 50° at 285' and 40° at 299'.
304	324	Non magnetic, medium grained, badly broken and oxidized in places, mixed quartz specular hematite and earthy hematite iron formation. Material recovered from 310 to 324 was unconsolidated. Delta angle = 55° at 306'.
324	338	Non magnetic, fine grained, very badly broken lean quartz specular hematite iron formation. Delta = 55° at 324' and 65° at 334'.
338	362	Non magnetic, lean quartz specular hematite iron formation. Oxidized zone of red earthy type hematite and rotten quartz from 356' to 358'. Core increasing in quartz content. Delta angle averages 60° .
362	379	Non magnetic, ground up, quartz specular hematite iron formation.

End of Hole

METALLURGICAL RESULTS

Drill Hole J-7

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
12 - 32 $\frac{1}{2}$	38.82	.18
32 $\frac{1}{2}$ - 55	30.31	.16
55 - 76	27.80	.14
76 - 97	31.56	.14
97 - 110	31.89	.14
110 - 130	32.37	.16
130 - 140	30.75	.25
140 - 157	28.97	.25
157 - 170	32.70	.16
170 - 196	38.12	.20
196 - 212	38.69	.10
212 - 221	53.09	.08
221 - 245	39.74	.16
245 - 257)		
257 - 278)	39.85	.20
278 - 297)		
297 - 319)	36.60	.17
321 - 342)		
342 - 362)	32.95	.15
362 - 379	45.12	.11

DRILL HOLE CLASSIFICATION

Hole No. J-8 (Page 1 of 2 Pages)
 Elevation 1760.0
 Coordinates 11500E/10000N
 Angle Vertical

Footages
 From To

0	26	Surface
26	53	Non magnetic, medium to fine grained, non friable, lean quartz specular hematite iron formation. Specular hematite occurring in narrow bands. Oxidation present from 35' to 37'. Leached & vuggy zone at 41'. High % of quartz throughout sample. Delta angles = 55° at 28' and 50° at 36' and 51'.
53	76	Non magnetic, lean, banded, very quartzose iron formation with only occasional zones of non friable, fine grained, disseminated specular hematite. Some leaching present at 58' and 76'. Delta = 55° at 59' and 74'.
76	107	Non magnetic, fine grained, light grey, non friable, banded, lean quartzose specular hematite iron formation. Many of the specular hematite bands have been oxidized and leached out giving core a pitted appearance. Limonitic stains present along fractures. Mud seam from 79' to 80'. Delta = 50° at 84', 103' and 107'.
107	147	Non magnetic, fine grained, hard, non friable, slightly banded, very lean quartz specular hematite iron formation. Most of iron leached out leaving only stains in core. Delta = 50° at 109 and 145', 40° at 123', and 55° at 147'.
147	195	Non magnetic, fine grained, lean, highly quartzose, slightly banded, quartz specular hematite iron formation. Many of the bands have been leached leaving behind only limonitic stains and pitted appearance. Only traces of specular hematite present. Delta angle = 45° at 150', 50° at 156' and 185', and 55° at 164' and 169'.
195	229	Non magnetic, fine grained, very quartzose, leached and pitted, hard iron formation with only scattered traces of hematite and numerous limonitic stained bands to depth of 218'. From 218 to 229 material encountered was medium grained, slightly friable, rich quartz specular hematite iron formation. A badly broken zone from 206 to 207 followed by a 1 foot mud seam was encountered suggesting a possible shear which could account for the abrupt change in the formation. Delta angle = 55° at 208', 60° at 225'.
229	244	Non magnetic, non friable, dark grey colored, pitted & leached in few places, quartz specular hematite iron formation. Massive specular hematite zone from 229' to 231'. Delta angle = 50° at 236'.
244	280	Non magnetic, medium grained, dark grey colored, moderately friable in places, quartz specular hematite iron formation. Mud

DRILL HOLE CLASSIFICATION

Hole No. J-8 (Page 2 of 2 Pages)

Footages
From To

seam present from 272' to 273'. Minor leaching present leaving pitted appearance to core in zones scattered throughout footage. Delta angle = 50° at 254', 60° at 265' and 272'.

280 324 Non magnetic, light grey colored, medium to coarse grained, moderately friable, badly broken, moderately rich quartz specular hematite iron formation to depth of 317 feet. From 317 on the formation is much leaner, less friable, and more quartzose with small leached zones leaving pitted appearance in core. A few bands are pinkish in color. Delta angle = 60° at 313' and 50° at 322'.

324 356 Non magnetic, non friable, narrowly banded, light grey to pinkish in color, medium to fine grained, quartz specular hematite iron formation. Scattered zones of leaching present throughout sample. Quartz content appears to be increasing.

METALLURGICAL RESULTS

Drill Hole J-8

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
26 - 46)		
46 - 66)	34.57	.15
66 - 86)		
86 - 105)		
105 - 125)	21.18	.13
125 - 145)		
145 - 165)		
165 - 185)	31.98	.15
185 - 205)		
205 - 225)		
225 - 245)	29.95	.11
245 - 265)		
265 - 285)	30.19	.04
285 - 291)		
302 - 322)		
322 - 342)	34.98	.11
342 - 356)	39.12	.17

DRILL HOLE CLASSIFICATION

Hole No. J-9
 Elevation 1745
 Coordinates 11000N/13000E
 Angle Vertical

Footages		
From	To	
0	136	Surface
136	140	Quartz specular hematite iron formation (ground to sand size).
140	155	Non magnetic, medium grained, slightly friable, narrow bands, moderately rich quartz specular hematite iron formation. Soft earthy hematite zone encountered from 140 to 144'. Leached zone from 151 to 152'. Delta angle = 50° at 141', 155', 55° at 150'.
155	180	Non magnetic, medium to fine grained, banded, light grey colored in solid portions and reddish in the softer oxidized zones, quartz specular hematite iron formation. Material only slightly friable but badly broken from 166' to 180'. Delta angle = 55° at 158', 162', 168' and 178'.
180	215	Non magnetic, medium to fine grained, badly broken and oxidized, quartz specular hematite iron formation. Core recovery poor. No delta angles measurable.
215	234	Non magnetic, dark grey to reddish in places, medium grained, badly broken and oxidized in places, moderately friable, rich quartz specular hematite iron formation with some earthy type hematite zones scattered throughout sample. Mud seam encountered from 226' to 232'.
234	261	Non magnetic, dark grey to reddish colored in places, medium to coarse grained, friable, badly broken & oxidized, mixed rich quartz specular hematite and earthy type hematite iron formation. Mud seam present at 251'. Core recovery low. Delta angles = 55° at 237' and 50° at 251'.

METALLURGICAL RESULTS

Drill Hole J-9

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
138 - 155	34.27	.13
155 - 176	34.91	.08
176 - 188	29.98	.08
188 - 208	37.50	.11
208 - 224	34.02	.11
224 - 243	40.49	.13
243 - 261	42.83	.08

23/G

(6A)

4

REPORT OF EXPLORATION

NORTH CONCESSION AREA

1958

4

Pickands Mather & Co.

*2000 Union Commerce Building
Cleveland 14, Ohio*

January 1959

REPORT OF EXPLORATION

NORTH CONCESSION AREA

1958

The exploration work done in the North Concession Area during 1958 for the account of Pickands Mather & Co. and The Steel Company of Canada Limited included aerial and ground magnetometer surveys, geological mapping and a limited amount of diamond drilling.

AIRBORNE MAGNETOMETER SURVEY

An airborne magnetometer survey covering a 320 square mile strip of land extending from North East Shabogomo Lake to the south west corner of the North Concession, as shown on the map included in this report, was conducted during the latter part of January and early February. Several minor magnetic anomalies were indicated by this survey, and a preliminary examination on the ground was made on some of these during April. No mineral occurrences of major interest have been located to date. Accompanying this report are prints of the ⁽¹⁾three sheets showing the results of the airborne magnetometer survey and ⁽²⁾three sketch maps showing the results of the ground investigation.

WAHNAHNISH EXPLORATION

1. Ground Magnetometer Survey and Geologic Mapping

A total of 26.8 miles of line were run with a Sharpe's Model A-2 vertical intensity magnetometer in the area immediately west of the north west arm of Wahahnish Lake. Also, rock outcroppings in the north part of the area were located and described. Accompanying this report is a ⁽³⁾plan map of the Wahahnish Area showing the results of the ground magnetometer survey and out-crop mapping.

(1)

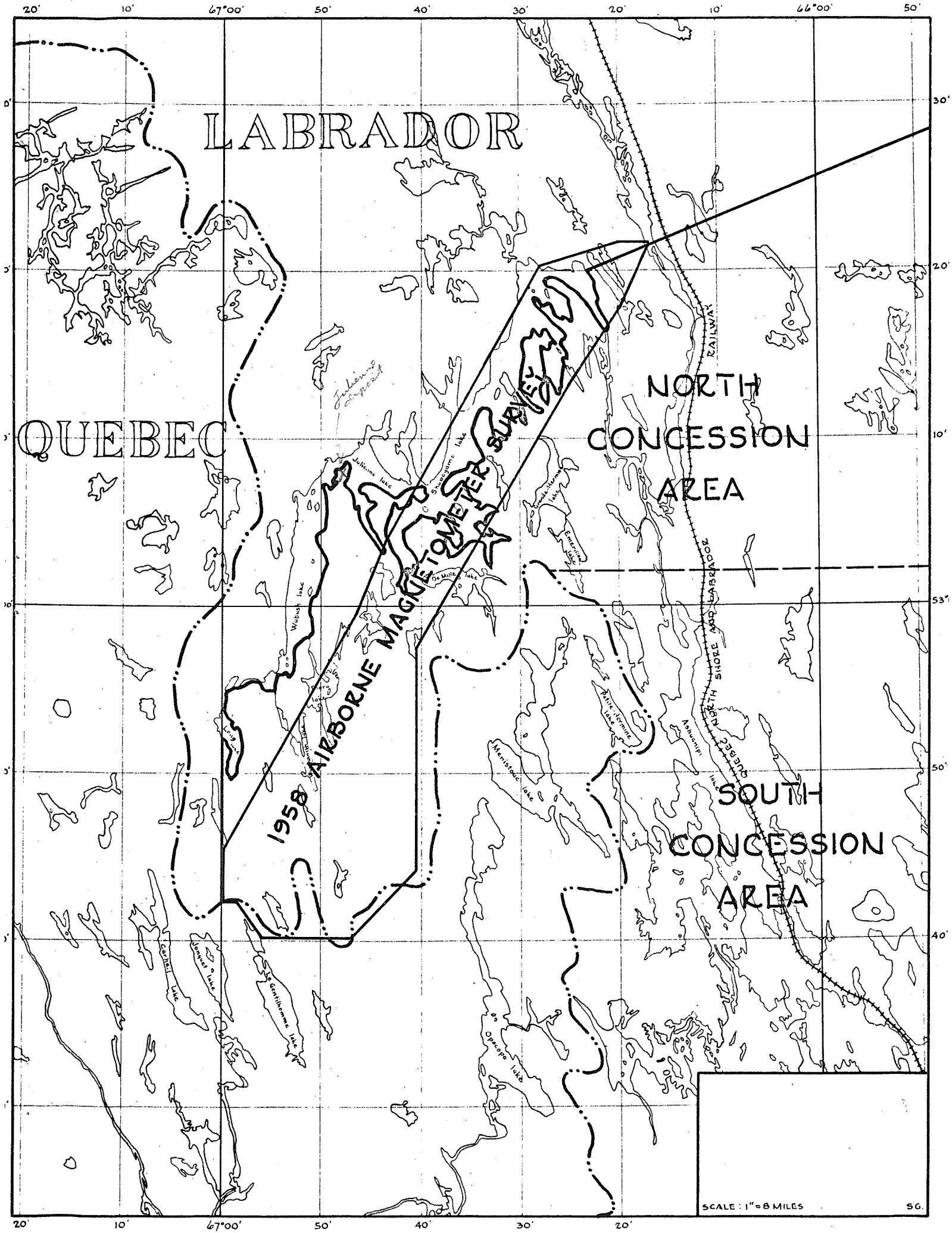
(2) Rec'd. 20/3/59

(3) Rec'd. 20/3/59

2. Diamond Drilling

Diamond drilling in the Wahmahish Area consisted of 781 feet of drilling in two holes located in the north part of the area. The location of the holes is shown on the Wahmahish Area plan map referred to in the above section. Included with this report are drill hole core classifications and analyses from Drill Hole No. W-1 and core classification only on Drill Hole No. W-2. Analyses on D.H. W-2 have not been run.

PICKANDS MATHER & CO.



CLASSIFICATION

OF

DRILL HOLE W-1

Started:	July 20, 1958
Finished:	July 28, 1958
0' - 52'	Surface material consisting of sand and small boulders.
52' - 101'	Irregularly banded, medium to fine grained lean cherty magnetite iron formation with bands of carbonate containing disseminated magnetite. Some iron silicates and sulfides are present but very minor.
101' - 125'	Irregularly banded rich cherty magnetite iron formation with bands of carbonate containing crystalline magnetite. Same accessory minerals as 52' - 101'.
125' - 140'	Same as 52' - 101'.
140' - 220'	Quartz carbonate rock containing no iron oxides. Rather large amounts of sulfides (pyrite, pyrrhotite and pentlandite). Becomes more quartzose downward.
220' - 283'6"	Garnetiferous, quartz, biotite schist with minor disseminated sulfides.
283'6" - 367'	Impure marble containing some quartz and biotite. Sulfides are present in minor amount.

End of Hole

CLASSIFICATION

OF

DRILL HOLE W-2

Started:	July 28, 1958
Finished:	August 6, 1958
0' - 37'7"	Surface material consisting of sand and small boulders.
37'7" - 63'3"	Nearly pure marble.
63'3" - 67'5"	Garnetiferous quartz biotite schist with some amphibole and minor disseminated iron sulfide.
67'5" - 124'	Marble with a zone of quartz sericite schist from 98' - 103'
124' - 129'	Red stained quartzite.
129' - 150'	Finely banded quartz sericite schist.
150' - 237'	Irregularly banded, lean cherty magnetite iron formation with bands of carbonate containing disseminated magnetite. Same material as W-1 52' - 101'.
237' - 255'	Irregularly banded rich cherty magnetite iron formation with bands of carbonate containing magnetite. Same material as W-1 101' - 125'.
255' - 287'8"	Same material as 150' - 237' and W-1 125' - 140'.
287'8" - 372'	Quartz carbonate rock containing no iron oxides. Same material as W-1 140' - 220'.
372' - 393'6"	Garnetiferous quartz biotite schist. Same material as W-1 220' - 283'6".
393'6" - 414'	Impure marble containing some quartz and biotite. Same material as found at the end of W-1.

End of Hole

METALLURGICAL RESULTS

DRILL HOLE W-1

<u>Footage</u>	<u>Crude</u>	
	<u>Fe.</u>	<u>Mn.</u>
52' - 83'	15.47	.40
83' - 100'11"	12.16	.27
100'11" - 125'	31.25	.48
125' - 140'	27.57	.84
 Average		
52' - 140'	21.16	.47