

RIO TINTO AUSTRALIAN EXPLORATION PTY LTD

EL 4 / 61

SAVAGE RIVER

DRILL CORE RESULTS

60_328

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Statement of Iron Ore Contract for 1962

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
<u>Philippines</u>																		
Larap = Sinter	Larap	Philippine Iron Mines Incorp.	936,000 DMT	Apr. 1962 Mar. '63	\$8.50 DMT	\$2.76 WMT	+\$0.30 -\$0.60	55 (55)	(5.00)	(0.3)	(19)	(0.15)	-	-	(0.15)	(10)	+10mm 15% max	S-\$0.10 per 0.1% Cu-\$0.12 per 0.01% Moist-\$0.03 per DMT (5-10%) Oversize-\$0.10 per DMT
Mati = Sinter	Mati	Atlas Consolidated Mining & Development Corp.	80,000 DMT	Apr. 1962 Mar. '63	\$8.40 DMT	\$3.62 WMT	+\$0.50 +(65%) +\$0.40 (60-65%)	60 (55)	(5.00)	(0.15)	(15)	(0.15)	(0.15)	-	(0.15)	(10)	-10mm 100%	
Sibuguey = Lump	Pamintayan	Samar Mining Co., Incorp.	320,000 DMT	Apr. 1962 Mar. '63	\$9.10 DMT	\$3.45 WMT	+\$0.30 (55-60%) +\$0.40 (+60%)	55 (53)	0.15 (0.50)	0.10 (0.15)	13 (18)	0.10 (0.15)	(0.50)	-	(0.15)	8.5 (10)	+10mm 60% min 250mm max	S-\$0.05 per 0.05% P-\$0.08 per 0.05% Cu-\$0.08 per 0.01% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Moist-\$0.03 per MT -Freight Oversize -\$0.20 per DMT Undersize -\$2.50 per DMT
Sibuguey = Sinter	Pamintayan	Samar Mining Co., Incorp.	160,000 DMT	Apr. 1962 Mar. '63	\$8.30 DMT	\$3.45 WMT	+\$0.30	55 (55)	2 (5)	0.10 (0.15)	15 (19)	0.10 (0.15)	(0.60)	-	(0.15)	5 (10)	-10mm 85% min	S-\$0.10 per 0.1% P-\$0.08 per 0.05% Cu-\$0.12 per 0.01% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Moist -\$0.03 per MT Oversize -\$0.10 per DMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
<u>Malaya</u> Dungun = Ben A	Sura	Eastern Mining & Metales Co., Ltd.	2,530,000 DLT	Apr.1962 Dec.'62	\$9.50 DLT	\$4.34 WLT	+\$0.40 -\$0.60 (60.57%) -\$1.00 (57.53%) -FOB (-53%)	60 (57)	(0.20)	(0.05)	(9) Al ₂ O ₃ = (5.0) (5.50)	-	(0.35)	(0.05)	As (0.1)	5 (9)	+6mm 85% min +12mm 65% min +50mm 10% max	S-\$0.09 per 0.05% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Al ₂ O ₃ -\$0.56 per 1% (5.6%) -\$0.70 per 1% (6.8%) -1.40 per 1% (8.10%) -FOB per 1% (+10%) Moist-CIF Oversize -\$0.15 per WLT Undersize -\$0.15 per WLT
Dungun = Sinter	Sura	Eastern Mining & Metales Co., Ltd.	600,000 DLT	Apr.1962 Dec.'62	\$7.35 DLT	\$4.34 WLT	+\$0.30 -\$0.45 (58.55%) -FOB (-50%) \$0.80 (55.50%)	58 (55)	(0.50)	(0.10)	(12)	-	-	(0.05)	As (0.10)	8(11)	+6mm 5% min	Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Oversize -\$0.15 per WLT Undersize -\$0.15 per WLT
Rompin = Lump	Tg. Tengku	Rompin Mining Co., Ltd.	700,000 DLT	Apr.1962 Dec.'62	\$9.90 DLT	\$4.34 WLT	+\$0.40 -\$0.60 (60.57%) -\$1.00 (57.53%) -FOB (-53%)	60 (57)	(0.15)	(0.05)	(10) Al ₂ O ₃ = (5) (5.5)	(0.12)	(0.35)	(0.05)	Zn (0.05) As (0.10) Bi (0.05) O.M (0.15)	5 (9)	+50mm 10% max +10mm 75% min	S-\$0.09 per 0.05% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Al ₂ O ₃ -\$0.56 per 1% (5.6%) -\$0.70 per 1% (6.8%) -1.40 per 1% (8.10%) -FOB per 1% (+10%) Moist-CIF Oversize \$0.15 per WLT Undersize -\$1.40 per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Rompin + Fines	Tg. Tengku	Rompin Mining Co., Ltd.	300,000 DLT	Apr. 1962 - Dec. '62	\$8.20 DLT	\$4.34 WLT	+ \$0.30 - \$0.45 (58.55%) - \$0.80 (55.50%) - FOB (-50%)	58 (55)	(0.30)	(0.10)	(12)	(0.12)	-	(0.05)	Zn (0.05) As (0.10) Bi (0.05) O.M (0.15)	8(11)	+10mm 10% max	Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Moist-CIF Oversize -\$0.15 per WLT Undersize -\$1.40 per WLT
Sri Medan	Batu Pahat	The Malayan Miners Co., (M) Ltd.	330,000 DLT	Apr. 1962 - Mar. '63	\$8.80 +\$0.25 \$9.05 DLT	\$5.13 WLT	+ \$0.30 - \$0.40	60 (57)	(0.10)	(0.30)	(15)	(0.05)	(0.50)	(0.05)	(0.10)	(7)	+10mm 70% min 250mm max	Moist -\$3.00 per WLT Oversize -\$0.10 per WLT Undersize -\$1.50 per WLT
Kedah	Prai	South Island Mining Co., Ltd.	190,000 DLT	Apr. 1962 - Mar. '63	\$8.40 DLT	Sh 37/9 WLT	+ \$0.30 - \$0.40	58 (56)	(0.10)	0.1 (0.2)	(15)	-	-	-	(0.15)	(8)	+10mm 80% min 200mm max	P-sh 0/7 per 0.05% Oversize -sh 1/5 per WLT
Bedong	Prai	Abdullah Ghaffar Mining Co., Ltd.	80,000 DLT	Apr. 1962 - Mar. '63	\$8.95 DLT	\$5.44 WLT (Kawasaki)	+ \$0.30 - \$0.40	60 (57)	(0.10)	(0.10)	Al ₂ O ₃ (5) SiO (4)	(0.05)	-	(0.05)	(0.05)	(11)	+10mm 75% min 100mm max	S-\$0.82 per 0.05% P-\$0.047 per 0.025% Al ₂ O ₃ +SiO ₂ -\$0.126 per 1% Oversize -\$0.21 per WMT Undersize -\$0.21 per WMT
Ipoh.MMC	Prai	Malaya Mining Co., Ltd.	200,000 DLT	Apr. 1962 - Mar. '63	\$9.90 DLT	\$5.34 WLT	+ \$0.30 - \$0.40 (63.60%) - \$0.80 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	+6mm 75% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
Ipoh.IMC	Prai	Ipoh Mining Co., (M) Ltd.	105,000 DLT	Apr. 1962 - Mar. '63	\$9.90 DLT	\$5.46 WLT (Hirohata)	+ \$0.30 - \$0.40 (63.60%) - \$0.80 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	+6mm 75% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT

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Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Ipoh.FEMCO = Lump	Lumut	Federal Mining Co., Ltd.	290,000 DLT	Apr.1962 -Mar.'63	\$9.90 DLT	\$5.15 WLT	+\$0.30 -\$0.40	63 (58)	(0.10)	(0.10)	(10)	-	-	(0.03)	-	(8)	+6mm 70% min 250mm max	Oversize -\$0.14 per WLT Undersize
Ipoh.FEMCO = Sinter	Lumut	Federal Mining Co., Ltd.	30,000 DLT	Apr.1962 -Mar.'63	\$7.25 DLT	\$5.15 WLT	+\$0.30 -\$0.40	60 (58)	(0.10)	(0.10)	(12)	-	-	(0.03)	-	-	+1/2" 5% max	-
Ipoh.Glee	Prai	Glee Mining Co., Ltd.	100,000 DLT	Sep.1962 -Mar.'63	Sh 70/9 DLT	\$5.46 WLT (Hanshin)	+Sh 2/2 -Sh 2/10 (63.60%) -Sh 5/8 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	(0.05)	-	(0.05)	-	(8)	+6mm 75% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
Ipoh = SSIMCO	Prai	Surgei Siput Iron Mining Co., Ltd.	20,000 DLT	Oct.1962 -Dec.'62	\$9.90 DLT	Sh 38/1 DLT	+\$0.30 -\$0.40	63 (60)	(0.10)	(0.10)	(7)	-	-	(0.03)	-	(8)	+6mm 75% min 250mm max	-
Ipoh = Nanyang	Prai	Nanyang Mines Ltd.	30,000 DLT	Apr.1962 -Mar.'63	\$9.90 DLT	\$5.71 WLT (Chiba)	+\$0.30 -\$0.40	63 (60)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	+6mm 75% min 250mm max	-
Ipoh = Gurong Idong	Prai	Kho Sice Bin Brothers	30,000 DLT	Apr.1962 -Mar.'63	\$9.90 DLT	\$5.46 WLT (Hirohata)	+\$0.30 -\$0.40 -\$0.80 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	+6mm 75% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
Ipoh = Gunong Rapat	Tg. Dawai	Gunong Rapat Mining Co., Ltd.	20,000 DLT	Apr.1962 -Mar.'63	\$8.40 DLT	\$5.22 WLT (Hirohata)	+\$0.30 -\$0.40	58 (56)	(0.10)	(0.10)	(15)	-	-	-	-	(8)	+10mm 80% min 200mm max	P-20-0-7 per 0.05% (0.1-0.15%)

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
(Ah Kee)	Prai	Ah Kee Iron Mines Ltd.	90,000 DLT	Apr.1962 Mar.'63	\$9.90 DLT	\$5.46 WLT (Hirohata)	+\$0.30 -\$0.40 (63.60%) -\$0.80 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	+6mm 75% min 250mm max	Oversize -\$0-1-0 per WLT Undersize -\$1-0-0 per WLT
Tambun	Prai	Tambun Mining Co., Ltd.	354,000 DLT	Apr.1962 Mar.'63	\$9.90 DLT	\$5.33 WLT	+\$0.30 -\$0.40	63 (60)	(0.10)	(0.10)	(10)	-	-	-	-	5 (8)	+6mm 75% min 250mm max	Moist-CIF Oversize -\$0.14 per WLT Undersize
Kepong	Muar	Kepong Mining Ltd.	210,000 DLT	Apr.1962 Mar.'63	\$9.50 DLT	\$4.96 WLT	+\$0.30 -\$0.40	62 (57)	(0.10)	(0.20)	(13)	-	-	-	-	(8)	+6mm 75% min 200mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
Pontian	Pontian	Pontian Iron Mining Co., Ltd.	120,000 DMT	Apr.1962 Mar.'63	\$8.30 DLT	Sh 34/- DLT	Fe+Mn +\$0.20 -\$0.30	Fe+Mn 58 (56)	(0.10)	(0.10)	(15)	(0.07)	(0.30)	(0.03)	(0.15)	(10)	+10mm 70% min (-200mm 5% Allow- ance)	Oversize -\$0-1-6 per WMT Undersize -\$0-14-4 per WMT
Temangan = Lump	Tumpat	Oriental Mining Co., Ltd.	460,000 WMT	Jan.1962 Dec.'62	\$7.92 DMT	\$4.38 WLT	+\$0.20 -\$0.30 Mn +\$0.30 -\$0.40	55 (52) Mn 1.3-2.5 (1)	(0.10)	(0.10)	Al ₂ O ₃ (7) SiO ₂ (8)	(0.05)	(0.50)	(0.05)	(0.15)	(11)	+6mm 8% min 75mm max (10% Allow- ance)	S-\$0.82 per 0.05% P-\$0.047 per 0.025% Al ₂ O ₃ +SiO ₂ -\$0.126 per 1% Oversize -\$0.21 per WMT Undersize -\$2.007 per WMT
Temangan = Sinter	Tumpat	Oriental Mining Co., Ltd.	40,000 WMT	Jan.1962 Dec.'62	\$5.75 DMT	\$4.38 WLT	+\$0.20 -\$0.30 Mn +\$0.30 -\$0.40	53 (51) Mn 1.3-2.5 (1)	(0.10)	(0.10)	Al ₂ O ₃ (7) SiO ₂ (8)	(0.05)	(0.50)	(0.05)	(0.15)	(13)	-10mm 100% (10% Allow- ance)	S-\$0.82 per 0.05% P-\$0.047 per 0.025% Al ₂ O ₃ +SiO ₂ -\$0.126 per 1% Oversize -\$2.007 per WMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Ca	TiO ₂	Sn	Other metals	Moist	Size	
Che'ah	Batu Pahat	Endau Iron Mining Co., Ltd.	135,000 DLT	Apr.1962 Mar.'63	\$8.40 DLT	\$5.13 WLT	+\$0.30 -\$0.40	58 (56)	(0.10)	(0.30)	(15)	(0.05)	(0.50)	-	(0.15)	(7)	-10mm 20% 250mm max	Oversize -\$0-1-1 per WLT Undersize -\$1-0-0 per WLT
Kemaman	Quele Kemaman	Kemaman Mining Co., Ltd.	60,000 DLT	Apr.1962 Mar.'63	\$8.80 DLT		+\$0.20 -\$0.30	60 (58)	(0.10)	(0.10)	(9)	-	-	(0.05)	(0.15)	(8)	-6mm 25% 250mm max	
Sengat	Prai	United Iron Mining Co., Ltd.	50,000 DLT	Apr.1962 Mar.'63	Sh 70/9 DLT	\$5.46 WLT (Hirohata)	+Sh2/2 -Sh2/10 (63.60%) -Sh5/8 (60.58%)	63 (58)	(0.10)	(0.10)	(10)	-	-	-	-	(8)	-6mm 25% 250mm max	Oversize -\$0-1-0 per WLT Undersize -\$1-0-0 per WLT
Kuantan	Kuantan	Southeast Asia Mining (M) Ltd.	70,000 DLT	May 1962 Oct.'62	\$3-2-10 DLT	\$4.46 WLT	+Sh1/5 -Sh2/2	60 (57)	(0.10)	(0.05)	(12)	-	-	(0.05)	Zn (0.20)	7 (9)	+10mm 80% min 250mm max	Moist-Freight Oversize -\$0-1-0 per WLT Undersize -\$1-0-0 per WLT
Tui	Batu Pahat	Kien Huat Mining Ltd.	70,000 100,000 DLT	Apr.1962 Mar.'63	\$9.40 DLT	\$5.24 WLT (Hirohata)	+\$0.30 -\$0.40	62 (60)	(0.10)	(0.20)	(12)	(0.05)	(0.30)	(0.05)	(0.10)	(7)	+10mm 70% min 250mm max	Oversize -\$0-1-0 per WLT Undersize -\$1-0-0 per WLT
BRISCO	Port Swettenham	Bunga Raya Iron Mining Co., Ltd.	60,000 DLT	Apr.1962 Mar.'63	\$8.75 DLT	\$5.44 WLT (Kawasaki)	+\$0.30 -\$0.40	57 (55) Mn 1.7-1.3 (1)	(0.10)	(0.10)	Al ₂ O ₃ (4) SiO ₂ (9)	(0.05)	-	-	(0.15)	(11)	-10mm 20% max 100mm max	S-\$0.82 per 0.05% P-\$0.047 per 0.025% Al ₂ O ₃ +SiO ₂ -\$0.126 per 1% Oversize -\$0.21 per WMT Undersize -\$0.21 per WMT
Hong Kong	Hong Kong	Tolo	Mutual Trust Co., Ltd.	125,000 DMT	Apr.1962 Mar.'63	C & F \$10.58 DMT	(Sh22/9 WMT) +\$0.20 -\$0.30	56 (54)	(0.20)	(0.10)	(12)	-	-	(0.05)	(0.15)	(10)	+100 mesh 30% min	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
<u>Thailand</u> Koh Samui	Koh Samui	Loho Pas Panich Co., Ltd.	120,000 DLT	Apr.1962 Mar.'63	\$8.00 DLT	Sh33/3 WLT	+\$0.30 -\$0.30	57 (55)	0.10 (0.10)	0.10 (0.10)	Al ₂ O ₃ (5) SiO ₂ (15)	-	-	-	-	-	+6mm 75% min 250mm max	-
<u>Korea</u> Yang Yang = Lump	Daepo	Chun Yang Industrial Co., Ltd.	36,000 DMT	Oct.1961 Sep.'62	CIF \$12.00 +\$ 0.50 \$12.50 DMT		+\$0.20 -\$0.30	56 (53)	0.1 (0.3)	0.2 (0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT
Yang Yang = Sinter	Daepo	Chun Yang Industrial Co., Ltd.	16,000 DMT	May 1961 Apr.'62	CIF \$11.70 +\$ 0.50 \$12.20 DMT		+\$0.40 -\$0.40	60 (60)	0.1 (0.3)	0.2 (0.2)	-	-	-	-	(0.1)	(10)	-10mm 100%	S-\$0.06 per 0.1%
Yang Yang = Lump	Daepo	Chun Yang Industrial Co., Ltd.	25,000 DMT	Apr.1962 Jun.'62	CIF \$13.00 +\$ 0.50 \$13.50 DLT		+\$0.20 -\$0.30	56 (53)	0.1 (0.3)	0.2 (0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT Undersize -\$1.50 per WMT
Yang Yang = Sinter	Daepo	Chun Yang Industrial Co., Ltd.	12,000 DMT	May 1961 Apr.'62	CIF \$12.70 +\$ 0.50 \$13.20		+\$0.40 -\$0.40	60 (60)	0.1 (0.3)	0.2 (0.2)	-	-	-	-	(0.1)	(10)	-10mm 100%	S-\$0.06 per 0.1%
Yang Yang = Lump	Daepo	Young Poang Shipping Corp.	30,000 DMT	Mar.1962 Oct.'62	\$13.00 +\$ 0.50 \$13.50		+\$0.20 -\$0.30	56 (53)	0.1 (0.3)	0.2 (0.2)	-	-	-	-	(0.15)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% (0.1-0.3%) -\$0.12 per 0.1% (+0.3%) Oversize -\$0.20 per WMT Undersize -\$2.80 per WMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Yang Yang = Lump	Daepo	Dai Han Iron Min- ing Co., Ltd.	60,000 DMT	Oct.1962 -Mar.'63	CIF \$12.00 +\$ 0.50 \$12.50 DMT		+\$0.20 -\$0.30	56 (53)	0.1 (0.5)	(0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% (0.1-0.3%) -\$0.12 per 0.1% (0.3-0.5%) Oversize -\$0.20 per DMT Undersize -\$2.80 per DMT
Yang Yang = Lump	Daepo	Dai Han Iron Min- ing Co., Ltd.	20,000 DMT	Oct.1962 -Mar.'63	CIF \$13.00 -\$ 0.50 \$13.50 DMT		+\$0.20 -\$0.30	56 (53)	0.1 (0.5)	(0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% (0.1-0.3%) -\$0.12 per 0.1% (0.3-0.5%) Oversize -\$0.20 per DMT Undersize -\$2.80 per DMT
Yang Yang = Lump	Daepo	Dai Han Iron Min- ing Co., Ltd.	20,000 DMT	Oct.1962 -Mar.'63	CIF \$12.50 +\$ 0.50 \$13.00 DMT		+\$0.20 -\$0.30	56 (53)	0.1 (0.5)	(0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% (0.1-0.3%) -\$0.12 per 0.1% (0.3-0.5%) Oversize -\$0.20 per DMT Undersize -\$2.80 per DMT
Choongju = Lump	Pusan	Samwha Trading Co., Ltd.	(1,000) DLT	(Apr.1961 -Jun.'61)	CIF \$ 9.50 +\$ 0.50 \$10.00 DMT		+\$0.20 -\$0.30	50 (47)	(0.1)	(0.1)	(3)	(0.05)	-	-	-	-	- 10% max 8" max	S-\$0.06 per 0.1% (0.1-0.3%)
Choongju + Lump	Pusan	Young Poong Shipping Corp.	6,000 DMT	Apr.1962 -Jun.'62	CIF \$6.90 +\$0.50 \$7.40 DMT		+\$0.20 -\$0.30	40 (38)	0.1 (0.3)	(0.1)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT
Choongju = Lump	Pusan	Young Poong Shipping Corp.	30,000 DMT	Jan.1962 -Jun.'62	CIF \$7.40 +\$0.50 \$7.90 DMT		+\$0.20 -\$0.30	40 (38)	0.1 (0.3)	(0.1)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	Oversize -\$0.20 per WMT Undersize -\$1.50 per WMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Fe Scale Base)	Specification										Other Penalties
							Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Choongju = Lump	Pusan	Young Poong Trading Co., Ltd.	10,000 DMT	Jun.1962 Mar.'63	CIF \$13.90 DMT	+\$0.30 -\$0.40	58 (56)	0.1 (0.3)	(0.15)	Al ₂ O ₃ (2)	(0.05)	-	-	As (0.02)	-	+10mm 90% min 150mm max	S-\$0.06 per 0.1%
Yunkok = Lump	Pusan or Masan	Kaya Industrial Co., Ltd.	16,000 DMT	Apr.1962 Mar.'63	CIF \$12.00 +\$0.50 \$12.50 DMT	+\$0.20 -\$0.30	56 (53)	0.1 (0.3)	(0.1)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT
Yunkok = Lump	Pusan or Masan	Kaya Industrial Co., Ltd.	20,000 DMT	Apr.1962 Mar.'63	CIF \$8.30 +\$0.50 \$8.80 DMT	+\$0.20 -\$0.30	56 (53)	0.1 (0.3)	(0.1)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT
Mulkeum = Lump	Pusan	Taiheung Corp.	(1,200) DMT	Mar.1962 Aug.'62	CIF \$12.00 +\$0.50 \$12.50 DMT	+\$0.20 -\$0.30	56 (53)	(0.3)	(0.2)	-	-	-	-	(0.1)	(4)	+10mm 90% min 200mm max	S-\$0.06 per 0.1% Oversize -\$0.20 per WMT
Mulkeum = Lump	Pusan	Taiheung Corp.	15,000 DMT	Apr.1962 Mar.'63	CIF \$13.90 DMT	+\$0.20 -\$0.30	58 (56)	0.1 (0.3)	(0.2)	Al ₂ O ₃ (3)	(0.05)	-	-	As (0.02)	-	+10mm 90% min 150mm max	S-\$0.06 per 0.1%
Punggi = Lump	Pusan	Hyuk Shin Enterprise Co., Ltd.	(6,000) DMT	Apr.1961 Sep.'61	CIF \$13.00 +\$0.50 \$13.50 DMT	+\$0.20 -\$0.30	56 (53)	(0.3)	(0.15)	-	(0.1)	-	-	(0.15)	(4)	+10mm 90% min 200mm max	Oversize -\$0.20 per WMT Undersize -\$0.50 per WMT
Punggi = Lump	Pusan	Hyuk Shin Enterprise Co., Ltd.	6,000 DMT	Oct.1962 Mar.'63	CIF \$13.00 DMT	+\$0.20 -\$0.40	56 (53)	0.1 (0.3)	(0.15)	Al ₂ O ₃ (2)	(0.05)	-	-	As (0.02)	-	+10mm 90% min 150mm max	S-\$0.06 per 0.1%

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size		
= Lump	Inchon	Young Poong Trading Co., Ltd.	10,000 DMT	Jun.1962 -Mar.'63	CIF \$13.90 DMT		+\$0.20 -\$0.40	58 (56)	0.1 (0.3)	(0.15)	Al ₂ O ₃ (2)	(0.05)	-	-	As (0.02)	-	+10mm 90% min 150mm max	S-\$0.06 per 0.1%	
So Sok = Lump	Pusan	Il Uoo Co., Ltd.	3,000 DMT	Oct.1962 -Dec.'62	CIF \$12.90 DMT		+\$0.20 -\$0.40	56 (53)	0.1 (0.3)	(0.15)	Al ₂ O ₃ (2)	(0.05)	-	-	As (0.02)	-	+10mm 90% min 150mm max	S-\$0.06 per 0.1%	
Shin Jin = Lump	Pusan or Masan	Shin Jin Moolsan Co., Ltd.	5,000 DMT	Apr.1962 -Mar.'63	CIF \$13.00 +\$ 0.50 \$13.50 DMT		+\$0.20 -\$0.30	56 (53)	(0.1)	(0.10)	-	-	-	-	-	(4)	+10mm 90% min 200mm max		
Bup Yang	Inchon	Bupyang Iron Mining	5,000 DMT	Apr.1962 -Mar.'63	CIF \$13.00 +\$ 0.50 \$13.50 DMT		+\$0.20 -\$0.30	56 (53)	(0.3)	(0.10)	-	-	-	-	-	(4)	+10mm 90% min 200mm max		
<u>India</u>																			
India	Calcutta	The State Trading Corp. of India, Ltd.	2,000,000 DLT	Mar.1962 -Mar.'63	Sh 81/- DLT	Sh 48/- DLT	+Sh 1/6 -Sh 1/6 -Sh 3/- (62.61%) -Sh 5/- (61.60%)	65 (62)	(0.05)	(0.10)	(9)	(0.05)	-	-	(0.15)	(7)	+1/2" 90% min 8" max	Moist-Freight Oversize -Sh2/- per WLT Undersize -Sh2/- per WLT	
Cuddalore	Cuddalore	The State Trading Corp. of India, Ltd.	300,000 DLT	Oct.1961 -Dec.'62	Sh 85/- DLT	Sh 48/3 WLT (Apr.'62 Mar.'63)	Sh 2/- (65.67%) Sh 3/- (+67%)	65 (65)	(0.05)	(0.10)	(9)	(0.05)	-	-	(0.15)	(7)	+1/2" 90% min +8% 5% max	Moist-Freight Oversize -Sh2/- per WLT Undersize -Sh2/- per WLT	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ + SiO ₂	Cu	TiO	Sn	Other metals	Moist	Size	
Redi	Port Redi	The State Trading Corp. of India, Ltd.	150,000 DLT		Sh 61/- DLT	Sh 48/3 WLT (Apr. '62 - Mar. '63)	+Sh 1/6 -Sh 1/6 -Sh 4/- (60.59%) -Sh 5/- (60.59%)	62 (60)	(0.05)	(0.12)	(7)	-	-	-	-	(7)	+1/2" 90% min +8" 5% max	Moist-Freight Oversize -Sh2/- per WLT Undersize -SH2/- per WLT
Goa	Mormugao	Chowgule & Co., Ltd.	500,000 WMT	Apr. 1962 - Mar. '63	FAS \$5.30 DMT	Sh 43/7 WLT Sh39/11 WLT	+\$0.15 -\$0.20 (58.57%) -\$0.40 (57-56%)	58 (56)	(0.10)	(0.10)	Al ₂ O ₃ 7 (8) SiO ₂ (4)	(0.05)	-	-	-	Nov.. May (8) Jun.. Oct. (10)	+6mm 75% min 125- 250mm 20% 250mm max	S-\$0.08 per 0.05% P-\$0.05 per 0.025% Al ₂ O ₃ -\$0.10 per 1% (7.8%) -\$0.30 per 1% (+8%) SiO -\$0.10 per 1%
			200,000 WMT	Apr. 1962 - Mar. '63	FAS \$7.38 DMT	Sh 43/7 WLT Sh39/11 WLT	+\$0.20 -\$0.30	62 (60)	(0.10)	(0.10)	Al ₂ O ₃ 7 (8) SiO ₂ (4)	(0.05)	-	-	-	Nov.. May (8) Jun.. Oct. (10)	+6mm 75% min 125- 250mm 20% 250mm max	Oversize -\$0.20 per WMT Undersize -\$4.00 per WMT
Goa	Mormugao	Chowgule & Co., Ltd.	200,000 WMT	Apr. 1962 - Mar. '63	FAS \$7.38 DMT	Sh 43/7 WLT Sh39/11 WLT	+\$0.20 -\$0.30	62 (60)	(0.10)	(0.10)	Al ₂ O ₃ 7 (8) SiO ₂ (4)	(0.05)	-	-	-	Nov.. May (8) Jun.. Oct. (10)	+6mm 75% min 125- 250mm 20% 250mm max	
Goa	Mormugao	VS. Dempo & Co., Ltd.	1,200,000 DLT	Apr. 1962 - Mar. '63	\$7.70 DMT FAS \$7.38 DMT	Sh 48/7 WLT Sh44/10 WLT	+\$0.20 -\$0.30	62 (60)	(0.05)	(0.10)	(10)	-	-	-	(0.15)	(10)	+10mm 80% min 250mm max	Oversize -\$0.20 per WMT Undersize -\$4.00 per WMT

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Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
					\$5.70 DMT FAS \$5.38 DMT	Sh 48/7 WLT Sh44/10 WLT	+\$0.15 -\$0.20	58 (57)	(0.10)	(0.10)	(12)	-	-	-	(0.15)	(10)	+10mm 80% min 250mm max	Oversize -\$0.10 per WMT Undersize -\$4.00 per WMT
Goa	Mormugao	V.M. Selgaoncar e Irmao Ltd.	200,000 DLT	Apr.1962 Mar.'63	CIF \$13.72DLT		+\$0.20 -\$0.30	62 (60)	(0.10)	(0.10)	Al ₂ O ₃ (5) SiO ₂ (5)	-	-	-	-	Nov.. May (8) Jun.. Oct. (10)	+10mm 80% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
Goa	Mormugao	V.M. Selgaoncar e Irmao Ltd.	150,000 DLT	Apr.1962 Mar.'63	CIF \$13.72DLT		+\$0.20 -\$0.30	62 (60)	(0.10)	(0.10)	Al ₂ O ₃ (5) SiO ₂ (5)	-	-	-	-	Nov.. May (8) Jun.. Oct. (10)	+10mm 80% min 250mm max	Oversize -\$0.14 per WLT Undersize -\$2.80 per WLT
					C&F \$12.64DLT		+\$0.15 -\$0.15	60 (58)	(0.10)	(0.10)	(14)	(0.05)	-	-	-	Nov.. May (10) Jun.. Oct. (12)	10mm 100 mesh 95% min	Oversize -\$0.14 per WLT
Goa	Mormugao	S.Kantilal & Cia.Ltd. Shantiler Khushardas & Irmaos.	930,000 DMT	Apr.1962 Mar.'63	\$8.80 DMT	Sh 47/7 WLT	+\$1.17 -\$0.23	63 (62)	(0.05)	(0.10)	(9) Al ₂ O ₃ (4)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+10mm 85% min +250mm max	Oversize -\$0.23 per WMT Undersize -\$2.80 per WMT
					\$7.70 DMT	Sh 47/7 WLT	-\$0.30	62 (60)	(0.05)	(0.10)	(10)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+1/2" 80% min +10" max	Oversize -\$0.23 per WMT Undersize -\$2.80 per WMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
					\$5.80 DMT	Sh 47/7 WLT	-\$0.20	58 (57)	(0.10)	(0.10)	(12)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+1/2" 80% min +10" max	Oversize -\$0.23 per WMT Undersize -\$2.80 per WMT
Goa.Betul	Mormugao	Shantilal Khushardas & Irmaos.	200,000 DLT	Feb.1962 -Jan.'63	\$5.80 DMT	Sh	-\$0.15	58 (56)	(0.10)	(0.10)	(14)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+1/2" 80% min +10" max	Oversize -\$0.23 per WLT Undersize -\$2.80 per WLT
Goa	Mormugao	Timbo Irmaos Limitada	50,000 DLT	Apr.1962 -Mar.'63	C&F 11.90 DLT		+\$0.15 -\$0.20	62 (60)	(0.10)	(0.10)	(12)	-	(0.2)	-	-	Nov.. May (8) Jun.. Oct. (10)	+10mm 80% min 250mm max	Oversize -\$0.15 per WLT Undersize -\$2.80 per WLT
Goa	Mormugao	Timbo Irmaos Limitada	40,000 DLT	Oct.1962 -Feb.'63	C&F Sh 76/5DLT		+\$0.15	60 (60)	(0.07)	(0.07)	(10)	-	(0.2)	-	-	Nov.. May (8) Jun.. Oct. (10)	-10mm 100%	
Goa	Mormugao	Timblo Irmaos Limitada	35,000 DLT	Apr.1962 -Mar.'63	\$6.80 DLT		+\$0.20	60 (60)	(0.05)	(0.01)	(10)	-		-	-	Nov.. May (8) Jun.. Oct. (10)	+100mm 75% min 250mm max	Oversize -\$0.20 per WLT Undersize -\$4.00 per WLT
Goa	Mormugao	Damodar Mangalji & Co., Ltd.	40,000 DLT	Sep.1962 -Mar.'63	C&F \$11.90DLT		+\$0.15 -\$0.20	62 (60)	(0.10)	(0.10)	(12)	-	(0.2)	-	-	Nov.. May (8) Jun.. Oct. (10)	+10mm 80% min 250mm max	Oversize -\$0.15 per WLT Undersize -\$2.80 per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Goa	Mormugao	Vinaeca Naraina Bandecar	30,000 DLT	Oct. 1962 -Mar. '63	C&F \$11.90 DLT		+\$0.15 -\$0.20	62 (60)	(0.10)	(0.10)	(12)	-	(0.2)	-	-	Nov. May (8) Jun. Oct. (10)	+10mm 80% min 250mm max	Oversize -\$0.15 per WLT Undersize -\$2.80 per WLT
Goa	Mormugao	Vinaeca Naraina Bandecar	10,000 DLT	Feb. 1963	C&F Sh 76/6 DLT		+\$0.15	60 (60)	(0.10)	(0.10)	(12)	-	(0.2)	-		(8)	-10mm 100%	
<u>Canada</u>																		
Nimpkish	Nimpkish	C.T. Takahashi Trading S.A. (Nimpkish Iron Mines Ltd.)	350,000 DMT	Apr. 1962 -Mar. '63	\$9.85 DMT	\$5.10 WLT	+\$0.40 -\$0.40	62 (60)	(2)	0.10 (0.20)	12 (15)	(0.05)	(0.25)	-	(0.15)	(5)	-1/4" 100% -100 mesh 35% max	Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% P-\$0.08 per 0.05% Undersize -\$1.50 per WMT Moist-Freight -6
Texada	Texada	Texada Mines Ltd.	460,000 DMT	Oct. 1962 -Sep. '63	\$9.70 DMT	\$5.10 WLT	+\$0.40 -\$0.40	62 (60)	3(4)	(0.15)	-	0.12 (0.15)	-	-	-	(7)	-10 mesh About 100% 6	S-\$0.10 per 0.05% Cu-\$0.05 per 0.01% -\$0.05 per 0.01%
Lake Kennedy	Toquart Bay	Noranda Mines Ltd.	630,000 DMT	Apr. 1962 -Mar. '63	\$8.86 DMT	\$5.10 WLT	+\$0.40 -\$0.40	61 (58)	(0.5)	(0.05)	(5)	0.12 (0.15)	-	-	(0.15)	(5)	-10 mesh 100% -100 mesh 40% max	Cu+\$0.05 per 0.01% -\$0.05 per 0.01% Moist-Freight 6
Quatsino	Port Mac Nail	C.T. Takahashi Trading S.A. (Empire Develop- ment Co., Ltd.)	23,000 DLT	Aug. 1962 -Mar. '63	\$9.65 DLT	\$5.10 WLT	+\$0.20 -\$0.30	58 (56)	(0.50)	(0.20)	(15)	(0.05)	(0.25)	-	(0.15)	(5)	+1/4" 60% min 6" max	S-\$0.15 per 1% (0.4-0.5%) -\$0.30 per 1% (+0.5%) P-\$0.08 per 1% (0.1-0.2%) Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% (12-15%) Moist-Freight Oversize -\$2.80 per WLT
			100,000 DLT	Apr. 1963 -Mar. '64	\$9.60 DLT		-\$0.20 -\$0.30	58 (56)	(0.50)	(0.20)	(15)	(0.08)	(0.25)	-	(0.15)	(5)	+1/4" 60% min 6" max	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
																		Undersize -\$1.50 per WLT
Zeballos	Zeballos	C.T. Takahashi Trading S.A. (Zeballos Iron Mines Ltd.)	360,000 DMT	Apr. 1962 - Mar. '63	\$8.75 DMT	\$5.10 WLT \$5.06 WLT	+\$0.40 (+60%) +\$0.30 (58-60%) -\$0.30	58 (56)	(0.35)	(0.20)	(15)	(0.05)	(0.25)	-	(0.15)	(5)	-1/4" 40% max	S-\$0.15 per 0.05% (0.20-0.35%) P-\$0.08 per 0.05% (0.10-0.20%) Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% (12-15%) Oversize -\$ Undersize -\$2.80 per WMT
Jedway	Harriet	Jedway Iron Ore Ltd.	150,000 DLT	1962 - Mar. '63	\$9.50 DLT		+\$0.40 -\$0.40	62 (60)	(2)	(0.1)	(15)	(0.05)	-	-	(0.15)	(5)	-100 mesh 30% max 10mm max	
<u>North America</u>																		
O C Nevada	Stockton	Overseas Central Enterprise Inc.	425,000 DMT	Apr. 1962 - Mar. '63	\$9.70 DMT	\$5.25 WLT	+\$0.30 -\$0.30	58-60 (56)	0.30 (0.50)	0.30 (0.50)	12 (15)	-	(0.46)	-	-	(5)	+10mm 60% min +200mm max	S-\$0.15 per 0.05% P-\$0.08 per 0.05% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Oversize -\$0.20 per WMT Undersize -\$1.00 per WMT 66
Wabuska	Pittruberg	C.T. Takahashi Trading S.A. (The Standard Slag Co.)	200,000 DMT	Apr. 1962 - Mar. '63	\$9.65 DMT	\$5.20 WLT \$5.25 WLT	+\$0.40 -\$0.40 (60-62%) -\$0.80 (-60%)	62 (60)	(2)	0.20	(15)	(0.05)	(0.25)	-	-	(5)	1/4" 100% -100 mesh 40% max	P-\$0.08 per 0.05% (0.10-0.20%) Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% (12-15%) Cu-\$0.05 per 0.01% (0.03-0.05%) Moist-Freight Oversize -\$1.50 per DMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size		
Eagle Mt. = Lump	Long Beach	Kaiser Steel Corp.	600,000 DMT	Oct.1962 -Sep.'63	\$9.25 DMT	\$3.90 WLT (45,D/W)	+\$0.30 -\$0.30	57 (55)	0.4 (0.6)	(0.12)	Al ₂ O ₃ (3) SiO ₂ (12)	-	-	-	-	(3.5)	+1/4- 2" 80% min 1/4" 20% max	S-\$0.05 per 0.1%	
Eagle Mt. = Sinter	Long Beach	Kaiser Steel Corp.	400,000 DMT	Oct.1962 -Sep.'63	\$8.30 DMT	\$3.90 WLT (45,D/W)	+\$0.30 -\$0.30	57 (55)	(2.5)	(0.12)	Al ₂ O ₃ (3) SiO ₂ (12)	-	-	-	-	(7)	-3/8" 100%		
Chile																			
Algarobe	Huasco	Wm H. Muller & Co., Inc.	400,000 DLT	Apr.1962 -Mar.'63	\$9.00 DLT	\$6.90 WLT (50,D/W)	+\$0.30	65 (65)	(0.05)	(0.19)	(4)	(0.04)	-	-	-	-	-1" 10% max 8-10" 10% max	Oversize -\$0.20 per WLT Undersize -\$2.80 per WLT	
Algarobe	Huasco	Wm H. Muller & Co., Inc.	500,000 DLT	Apr.1962 -Mar.'63	\$9.00 DLT	\$6.90 WLT (50,D/W)	+\$0.30	65 (65)	(0.05)	(0.19)	(4)	(0.03)	-	-	-	-	-1" 10% max 8-10" 10% max	Oversize -\$0.20 per WLT Undersize -\$2.80 per WLT	
El Tofo	Cruz Grade	Wm H. Muller & Co., Inc.	300,000 DLT	Apr.1962 -Mar.'63	C&F \$16.80DLT \$16.60DLT	-	+\$0.30 -\$0.30	65 (64)	(0.05)	(0.12)	Al ₂ O ₃ (2) SiO ₂ (5)	(0.03)	(1.20)	-	(0.4) (0.15)	(3)	+1/4" 90% min +8" 5% max	Oversize -\$0.20 per WLT Undersize -\$2.80 per WLT	
Adrianitas	Caderilla	Cia. Minera de Atacama	400,000 DLT	Apr.1962 -Mar.'63	\$8.50 DLT	\$8.40 WLT	+\$0.25	65 (65)	(0.1)	(0.1)	(10)	(0.1)	-	-	(0.15)	(5)	+10mm 90% min 200mm max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Santa Fe	Coquimbo Caldera Chanaral Cruz Grande	Canadian Foreign Ore Development Corp. Ltd.	800,000 DLT	1962 Mar. '63	\$9.90 DLT C&F \$16.76 DLT (20-45, D/W)	\$7.10 WLT (1961-1962)	+\$0.25 -\$0.25	65 (64)	(0.11)	(0.25-0.20)	(5.5)	(0.05)	-	-	(0.15)	(2)	+1/2" 84% min 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
Cosinex	Coquimbo	Compania Minera de Exportacion Ltda. (Philipp Brothers)	100,000 DLT	Apr. 1962 Mar. '63	\$9.00 DLT	About \$7.00 WLT (20, D/W)	+\$0.26 -\$0.26	65 (64)	(0.06)	(0.2)	(4.5)	(0.05)	-	-	-	-	-1/2" 15% max 9" max	
Romeral	Guayacon	Wm H. Muller & Co., Inc.	(240,000) DLT	Apr. 1962 Mar. '63	\$6.50 DLT	\$7.20 WLT (30, D/W) \$7.50 WLT (20, D/W)	+\$0.20 -\$0.30	60 (58)	-	(0.4)	Al ₂ O ₃ (11) SiO ₂ (2.5)	-	-	-	-	-	-1/2" 40% max	
Phibro	Coquimbo	Philipp Brothers Far East Inc.	280,000 DLT	Jan. 1962 Jun. '62	\$9.90 DLT	\$8.10 WLT (65-64%) -\$0.39 (64-63%)	+\$0.26 -\$0.26 -\$0.39	65 (63)	(0.06)	(0.25)	SiO ₂ (5)	(0.05)	-	-	(0.15)	-	+1/2" 9" 82% -1/2" 15% +9" 3%	
Phibro	Cruz Grande or Chanaral	Philipp Brothers Far East Inc.	100,000 DLT	Apr. 1962 Mar. '63	C&F \$16.45 DLT	-	+\$0.25 -\$0.25	65 (64)	(0.11)	0.20 (0.25)	(5.5)	(0.05)	-	-	(0.15)	(2)	1/2"-8" 84% min	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
<u>Peru</u> Marcona = Lump	San Juan	Cia. San Juan S.A.	315,000 DLT	Apr. 1962 Mar. '63	C&F \$14.00 DLT (45-50, D/W)	-	+\$0.25 -\$0.50	60 (58)	(0.25)	(0.07)	(10)	-	-	-	(0.15)	(3)	-10mm 20% max 4" max	Undersize -\$3.00 per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Marcona = Sinter	San Juan or San Nicolas	Cia. San Juan S.A.	300,000 DLT	Apr. 1962 - Mar. '63	C&F \$12.00 DLT (45, D/W) \$12.50 DLT (35, D/W)	-	+\$0.25 -\$0.50	60 (58)	(3.00)	(0.07)	(10)	-	-	-	(0.15)	(8)	-100 mesh 20% max 3/8" max	Oversize -\$0.10 per WLT Undersize -\$1.00 per WLT (+25%)
Marcona = Lump	San Juan	Cia. San Juan S.A.	360,000 DLT	Apr. 1962 - Mar. '63	C&F \$14.00 DLT (45, D/W) \$14.25 DLT (45, -35, D/W) \$14.50 DLT (35, -20, D/W) \$15.00 DLT (20, D/W)	-	+\$0.25 -\$0.50	60 (58)	(0.25)	(0.07)	(9)	-	-	-	(0.15)	(3)	-10mm 20% max 4" max	Undersize -\$3.00 per WLT
Marcona = Lump	San Juan	Cia. San Juan S.A.	425,000 DLT	Dec. 1962 - Nov. '63	C&F \$13.50 DLT (67,5 D/W)	-	+\$0.25 -\$0.50	60 (58)	(0.25)	(0.07)	(9)	-	-	-	-	(2)	-10mm 20% max 4" max	Oversize -\$0.20 per WLT Undersize -\$3.00 per WLT
Marcona = Lump	San Juan	Cia. San Juan S.A.	40,000 DLT	Apr. 1962 - Mar. '63	C&F \$15.00 DLT (20, D/W)	-	+\$0.25 -\$0.50	60 (58)	(0.25)	(0.07)	(9)	-	-	-	(0.15)	(3)	-10mm 20% max 4" max	
Marcona = Sinter	San Nicolas	Cia. San Juan S.A.	60,000 DLT	Apr. 1962 - Mar. '63	C&F \$13.00 DLT (20, D/W)	-	+\$0.25 -\$0.50	60 (58)	(3)	(0.07)	(10)	-	-	-	(0.15)	(8)	-100 mesh 25% max 3/8" 5% max	Oversize -\$0.10 per WLT Undersize -\$1.00 per WLT
Marcona = Sinter	San Nicolas	Cia. San Juan S.A.	100,000 DLT	Apr. 1962 - Mar. '63	C&F \$13.00 DLT (20, D/W)	-	+\$0.25 -\$0.50	60 (58)	(3)	(0.07)	(10)	-	-	-	(0.15)	(8)	-100 mesh 25% max 3/8" max	Oversize \$1.00 per WLT Undersize \$1.00 per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Fe Scale Base)		Specification								Other Penalties		
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals		Moist	Size
Marcona = Sinter	San Nicolas	Cia. San Juan S.A.	150,000 DLT	Apr.1962 Mar.'63	C&F \$12.50 DLT (35, D/W) \$12.00 DLT (45, D/W)	-	+\$0.25 -\$0.50	60 (58)	(3)	(0.07)	(10)	-	-	-	(0.15)	(8)	-100 mesh 25% max 3/8" max	Oversize \$0.10 per WLT Undersize \$1.00 per WLT
Marcona = Sinter	San Juan or San Nicolas	Cia. San Juan S.A.	90,000 DLT	Apr.1962 Mar.'63	C&F \$12.65 DLT (30, D/W)	-	+\$0.25	60 (60)	(0.25)	(0.07)	(10)	-	-	-	(0.15)	(8)	-100 mesh 25% max 1/4" max	Oversize \$0.10 per WLT Undersize \$1.00 per WLT
Acari	San Juan	World Commerce Corp., S.A.	300,000 DLT	Apr.1962 Mar.'63	CIF \$16.30 DLT (40,50,D/W)	-	+\$0.26 -\$0.26	65 (64)	(0.05)	(0.25)	(10)	(0.03)	-	-	(0.15)	(2)	+1/2" 90% min 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
Acari	San Juan	World Commerce Corp., S.A.	150,000 DLT	Apr.1962 Mar.'63	CIF \$0.26 DLT (per Fe 1%)	-	+\$0.26 -\$0.26	65 (64)	(0.05)	(0.25)	(10)	(0.03)	-	-	(0.15)	(2)	+1/2" 90% min 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
<u>Brazil</u>																		
Itabira = Lump	Vitoria	Cia. Vale do Rio Doce S.A.	250,000 WLT	Mar.1962	\$11.00 -\$ 0.33 \$10.67 WLT	\$7.95 WLT	+\$0.16 -\$0.16	68.5 (68)	(0.02)	(0.045)	(3)	-	-	-	-	1 (2)	+1/2" 90% min 8" max	Moist-FOB per WLT (1.2%) -C&F per WLT (+2%) Undersize -\$5.00 per WLT
Itabira = Pebble	Vitoria	Cia. Vale do Rio Doce S.A.	50,000 WLT	Mar.1962	\$8.40 WLT	\$7.95 WLT	+\$0.131 -\$0.131	64 (64)	(0.03)	(0.05)	(5)	-	-	-	-	6 (6)	+1/2" 75% min 3" max	Moist -C&F per WLT (+6%) Undersize -\$5.00 per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ + SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Paraopeba = Lump	Rio de Janeiro	Wm H. Muller & Co., Inc.	100,000 WLT	Mar. 1962 - Dec. '62	C&F \$18.60 WLT	-	+\$0.16 -\$0.16	68.5 (68)	(0.02)	(0.045)	(3)	-	-	-	-	1 (2)	+1/2" 90% min 8" max	Moist-FOB per WLT (1.2%) -C&F per WLT (+2%) Undersize -\$5.00 per WLT
Mutuca = Lump	Rio de Janeiro	The Hanna Mining Co.	80,000 WLT	Sep. 1962 - May '63	C&F \$18.60 WLT	-	+\$0.16 -\$0.16	68.5 (68)	(0.02)	(0.045)	(3)	-	-	-	-	1 (2)	+1/2" 90% min 8" max	Moist-FOB per WLT (1.2%) -C&F per WLT (+2%) Undersize -\$5.00 per WLT
Africa																		
Postmasburg = Wilhelmi	Port Elizabeth	Arnhold Wilhelmi & Co. Pty., Ltd.	60,000 DLT	Apr. 1962 - Mar. '63	Sh 79/- DLT		+Sh 2/-	65 (65)	(0.06)	(0.06)	(6)	(0.01)	-	-	-	(3)	+6" 5% max -1/8" 10% max 8" max	Oversize -Sh 2/- per WLT Undersize -Sh 10/- per WLT
Postmasburg = Wilhelmi	Port Elizabeth	Arnhold Wilhelmi & Co. Pty., Ltd.	50,000 DLT	Jul. 1962 - Jun. '63	Sh 79/- DLT		+Sh 2/-	65 (65)	(0.06)	(0.06)	(6)	(0.01)	-	-	-	(0.2)	+6" 5% max -1/8" 10% max 8" max	Oversize -Sh 2/- per WLT Undersize -Sh 10/- per WLT
Postmasburg = Wilhelmi	Port Elizabeth	Arnhold Wilhelmi & Co. Pty., Ltd.	100,000 DLT	Apr. 1962 - Mar. '63	Sh 79/- DLT		+Sh 2/-	65 (65)	(0.06)	(0.06)	(6)	-	-	-	-	(5)	+6" 5% max -1/8" 10% max 8" max	Oversize -Sh 2/- per WLT Undersize -Sh 10/- per WLT

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Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Postmasburg = Asso Man	Port Elizabeth	Fedmar Ltd.	60,000 DLT	Apr.1962 -Mar.'63	Sh 79/-DLT		+Sh 1/6 -Sh 4/6	65 (63)	(0.10)	(0.10)	(7)	-	-	-	-	(0.2)		Oversize -Sh 2/- per WLT Undersize -Sh 10/- per WLT
Postmasburg = Asso Man	Port Elizabeth	Derby & Co., Ltd.	100,000 DLT	Apr.1962 -Mar.'63	Sh 79/-DLT		+Sh 1/6 -Sh 4/6	65 (63)	(0.1)	(0.1)	(7.0)	-	-	-	-	-	- 100% max 8" max	
Postmasburg = Asso Man	Port Elizabeth	Derby & Co., Ltd.	100,000 DLT	Apr.1962 -Mar.'63	Sh 79/-DLT		+Sh 1/6 -Sh 4/6	65 (63)	(0.06)	(0.06)	(6.0)	(0.01)	-	-	(0.15)	-	- 10% max 8" max	
Postmasburg = Asso Man	Port Elizabeth	Fedmar Ltd.	70,000 DLT	Apr.1962 -Mar.'63	Sh 79/-DLT		+Sh 1/6 -Sh 4/6	65 (63)	(0.06)	(0.06)	(6.0)	-	-	-	-	(5)	- 10% max 8" max	
Postmasburg = Asso Man	Port Elizabeth	Ore & Metal	15,000 DLT	Apr.1962 -Dec.'62	Sh 79/-DLT		+Sh 1/6 -Sh 6/-	65 (64)	(0.06)	(0.1)	(6)	-	-	-	-	(2)	1/2"-8" 90% min	Oversize -Sh 2/- per WLT Undersize -Sh 2/- per WLT
Beacon Tor	Lourenco Marques	Iron & Mineral Development Co.	100,000 DLT	Apr.1962 -Mar.'63	Sh 72/6DLT		+Sh 2/- -Sh 2/- (65-63%) -Sh 4/- (63-62.5%) -Sh 6/- (62.5-62%)	65 (62)	(0.05)	(0.07)	(10)	(0.05)	(0.15)	-	(0.15)	(8)	+1" 80% min 8" max	Moist-Freight x 1/2 (+3%) Oversize -Sh 1/6 per WLT Undersize -Sh 20/- per WLT

Long Terms Contract for 1963 Onward

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Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	Other Penalties
<u>Malaya</u> Dungun = Ben A	Sura	Eastern Mining & Metales Co., Ltd.	6,600,000 DLT (1)2,200,000 (+330,000) (2)2,200,000 (3)2,200,000	Apr.1962 -Dec.'64 (3-Year)	\$9.50 DLT	\$4.34 WLT	+\$0.40 -\$0.60 (60-57%) -\$1.00 (57-53%) -FOB (-53%)	60 (57)	(0.20)	(0.05)	(9) Al ₂ O ₃ (5.0) (5.50)	-	(0.35)	(0.05)	As (0.10)	5 (9)	+6mm 85% min +12mm 65% min +50mm 10% max	S-\$0.09 per 0.05% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Al ₂ O ₃ -\$0.56 per 1% (5-6%) -\$0.70 per 1% (6-8%) -\$1.40 per 1% (8-10%) -FOB per 1% (+10%) Moist-CIF Oversize -\$0.15 per WLT Undersize -\$0.15 per WLT
Dungun = Sinter	Sura	Eastern Mining & Metales Co., Ltd.	1,800,000 DLT (1)600,000 (2)600,000 (3)600,000	Apr.1962 -Dec.'64 (3-Year)	\$7.35 DLT	\$4.34 WLT	+\$0.30 -\$0.45 (58-55%) -\$0.80 (55-50%)	58 (55)	(0.50)	(0.10)	(12)	-	-	(0.05)	As (0.10)	8(11)	+6mm 5% min	Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Oversize -\$0.15 per WLT Undersize -\$0.15 per WLT
Rompin = Lump	Tg. Tengku	Rompin Mining Co., Ltd.	2,400,000 DLT (1)600,000 (2)900,000 (3)900,000	Apr.1962 -Dec.'64 (3-Year)	\$9.90 DLT	\$4.34 WLT	+\$0.40 -\$0.60 (60-57%) -\$1.00 (57-53%) -FOB (-53%)	60 (57)	(0.15)	(0.05)	(10) Al ₂ O ₃ (0.12) (5) (0.10) (5.5) (0.10)	1962 (0.12) 1963 (0.10) 1964 (0.10)	(0.35)	(0.05)	Zn (0.05) As (0.10) Bi (0.05) O.M (0.15)	5 (9)	+50mm 10% max +10mm 75% min	S-\$0.09 per 0.05% Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% Al ₂ O ₃ -\$0.56 per 1% (5-6%) -\$0.70 per 1% (6-8%) -\$1.40 per 1% (8-10%) -FOB per 1% (+10%) Moist-CIF per LT Oversize -\$0.15 per WLT Undersize -\$1.40 per WLT

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Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ + SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Rompin - Fines	Tg. Tengku	Rompin Mining Co., Ltd.	1,500,000 DLT (1) 400,000 (2) 600,000 (3) 600,000	Apr. 1962 - Dec. '64 (3-Year)	\$8.20 DLT	\$4.34 WLT	+\$0.30 -\$0.40 (58-55%) -\$0.80 (55-50%) -FOB (-50%)	58 (55)	(0.30)	(0.10)	(12)	1962 (0.12) 1963 (0.10) 1964 (0.10)	-	(0.05)	Zn (0.05) As (0.10) Bi (0.05) O.M (0.15)	8(11)	+10mm 10% max	Al O -\$0.05 per 1% Moist-CIF per LT Oversize -\$0.15 per WLT Undersize -\$1.40 per WLT
Pontian	Pontian	Pontian Iron Mining Co., Ltd.	600,000 DMT (1)-(5) 120,000	Apr. 1961 - Mar. '66 (5-Year)	\$8.30 DLT	Sh 34/- WLT	Fe+Mn +\$0.20 -\$0.30	Fe+Mn 58 (56)	(0.10)	(0.10)	(15)	(0.07)	(0.30)	(0.03)	(0.15)	(10)	+10mm 70% min 150mm max	Oversize -\$0-1-6 per WMT Undersize -\$0-14-4 per WMT
Kemaman	Quala Kemaman	Kemaman Mining Co., Ltd.	480,000 DLT (1) 80,000 (2) 60,000 (3) (4) (5)	Apr. 1961 - Mar. '66 (5-Year)	\$8.80 DLT		+\$0.20 -\$0.30	60 (58)	(0.10)	(0.10)	(9)	-	-	(0.05)	(0.15)	(8)	-6mm 25% 250mm max	
India	Calcutta & Others	The State Trading Corp. of India, Ltd.	6,000,000 DLT (1) Dec. 60 -Mar. 62 1,750,000 (2) Mar. 62 -Mar. 63 2,000,000 (3) Apr. 63 -Mar. 64 2,250,000	Dec. 1960 - Mar. '64 (3-Year)	Sh 81/- DLT	Sh 48/3 WLT	+Sh 1/6 -Sh 1/6 -Sh 3/- (62-61%) -Sh 5/- (61-60%)	65 (62)	(0.05)	(0.10)	(9)	(0.05)	-	-	(0.15)	(7)	+1/8" 90% min 8" max	Moist-Freight Oversize -Sh 2/- per WLT Undersize -Sh 2/- per WLT
Redi	Port Redi	The State Trading Corp. of India Ltd.	45,000 DLT (1) Sep. 60 -Apr. 62 (2) Oct. 62 -Apr. 63 (3) Oct. 63 -Apr. 64 150,000	Sep. 1959 - Apr. '64 (4-Year)	(1) Sh 61/6 DLT (2) Sh 61/- DLT (3) Sh 60/6 DLT	Sh 48/3 WLT	+Sh 1/6 -Sh 1/6 -Sh 4/- (60-59%) -Sh 5/- (60-59%)	62-60 (59)	(0.05)	(0.12)	(7)	-	-	-	-	(7)	+1/8" 90% min 8" 5% max	Moist-Freight Oversize -Sh 2/- per WLT Undersize -Sh 2/- per WLT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	S p e c i f i c a t i o n										
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	Other Penalties
Rourkele	Visakhapatnam	The State Trading Corp. of India Ltd.	20,000,000 DLT (1)-(10) 2,000,000	1964 -1974 (10-Year)														
Bailadila	Visakhapatnam	The State Trading Corp. of India Ltd.	60,000,000 DLT (1)-(15) 4,000,000	1966 -1981 (15-Year)														
Goa	Mormugao	Chowgule & Co., Ltd.	3,000,000 WMT (1)700,000 (2)700,000 (3)590,000 (4)700,000 (5)	Apr. 1959 -Mar. '63 -4 (4-5-Year)	FAS \$5.30 DMT	Sh43/7	+\$0.15	58	(0.10)	(0.10)	Al ₂ O ₃	(0.05)	-	-	-	Nov..	+6mm	S-\$0.08 per 0.05%
						WLT	-\$0.20 (58-57%) -\$0.40 (57-56%)	(56)			7 (8) SiO ₂ (4)				May (8) Jun.. Oct. (10)	80% min 8" max	P-\$0.05 per 0.025% Al ₂ O ₃ -\$0.10 per 1% (7-8%) -\$0.30 per 1% (+8%) SiO ₂ -\$0.10 per 1% Oversize -\$0.20 per WMT Undersize -\$4.00 per WMT	
						Sh43/7	+\$0.20	62	(0.10)	(0.10)	Al ₂ O ₃	(0.05)	-	-	-	Nov..	125-	S-\$0.08 per 0.05%
						WLT	-\$0.30	(60)			7 (8) SiO ₂ (4)					May (8) Jun.. Oct. (10)	250mm 20% 250mm max	P-\$0.05 per 0.025% Al ₂ O ₃ -\$0.10 per 1% (7-8%) -\$0.30 per 1% (+8%) SiO ₂ -\$0.10 per 1% Oversize -\$0.20 per WMT Undersize -\$4.00 per WMT

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Goa	Mormugao	V.S. Dempo & Co., Ltd.	3,000,000 DMT (1) 800,000 (670,000) (2) 1,000,000 (600,000) (3) 1,200,000 (700,000) (4) 1,030,000	Apr.1960 Mar.'63 (3-Year)	\$7.70 DMT	Sh48/7	+\$0.20	62	(0.05)	(0.10)	(10)	-	-	-	(0.15)	(10)	+10mm	Oversize -\$0.20 per WMT
					FAS \$7.38 DMT	WLT	-\$0.30	(60)										
					\$5.70 DMT		+\$0.15	58	(0.10)	(0.10)	(12)	-	-	-	(0.15)	(10)	+10mm	Oversize -\$0.10 per WMT
					FAS \$5.38 DMT		-\$0.20	(57)									80% min 250mm max Undersize -\$4.00 per WMT	
Goa	Mormugao	V.M. Salgaoncar & Irmao Ltd.	4,000,000 DMT (1)-(2) 150,000 (3)-(11) 400,000 (12) 100,000	Apr.1961 Mar.'73 (12-Year)	CIF		+\$0.20	62	(0.10)	(0.10)	Al ₂ O ₃ (5)	-	-	-	-	Nov..	+10mm	Oversize -\$0.14 per WLT
					\$13.72DLT		-\$0.30	(60)					SiO ₂ (5)				May (8)	80% min 250mm max Undersize -\$2.80 per WLT
					C&F		+\$0.15	60	(0.10)	(0.10)	(14)	(0.05)	-	-	Nov..	10mm	Undersize	
					\$12.64DLT		-\$0.15	(58)							May (10)	100 mesh 95% min Undersize -\$0.14 per WLT		
Goa	Mormugao	S.Kantilal & Cia.Ltda. Shantilal Khushaldas & Irmaos	3,000,000 DMT (1)-(5) 600,000	Apr.1960 Mar.'65 (5-Year)	\$8.80 DMT	Sh47/7	+\$1.17	63	(0.05)	(0.10)	(9)	-	-	-	-	Nov..	+10mm	Oversize
						WLT	-\$0.23	(62)					Al ₂ O ₃ (4)				May (7)	85% min +250mm max Undersize
					\$7.70 DMT	Sh47/7	-\$0.30	62	(0.05)	(0.10)	(10)	-	-	-	-	Nov..	+1/2"	Oversize
						WLT		(60)							May (7)	80% min +10" max Undersize		
						(Han- shin)									Jun..			
															Oct. (9)			

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata East)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
					\$5.80 DMT	Sh47/7 WLT (Hanshin)	-\$0.20	58 (57)	(0.10)	(0.10)	(12)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+1/2" 80% min +10" max	Oversize Undersize
Goa	Mormugao	Shantilal Khushaldas & Irmas	2,000,000 DLT (1)-(10) 200,000	Jan.1962 Dec. '71 (10-Year)	\$5.80 DLT		-\$0.15	58 (56)	(0.10)	(0.10)	(14)	-	-	-	-	Nov.. May (7) Jun.. Oct. (9)	+1/2" 80% min +10" max	Oversize -\$0.23 per WLT Undersize -\$2.28 per WLT
<u>Canada</u>																		
Lake Kennedy	Toquart Bay	Noranda Mines Ltd.	4,900,000 DMT (1)630,000 (2)-(7) 700,000 (8) 70,000	Apr.1962 Mar. '70 (8-Year)	\$8.86 DMT	\$5.10 WLT	+\$0.40 -\$0.40	61 (58)	(0.50)	(0.05)	(5)	0.12 (0.15)	-	-	(0.15)	(5)	-10 mesh 100% -100 mesh 40% max	Cu+\$0.05 per 0.01% -\$0.05 per 0.01% Moist-Freight
Zaballos	Zaballos	C.T. Takahashi Trading S.A. (Zaballos Iron Mines Ltd.)	3,000,000 DMT (1)360,000 (2)-(7) 400,000 (8)240,000	Apr.1962 Mar. '71 (8-Year)	\$8.75 DLT	\$5.10 WLT \$5.06 WLT	+\$0.30 (58-60%) +\$0.40 (+60%) -\$0.30	58 (56)	(0.35)	(0.20)	(15)	(0.05)	(0.25)	-	(0.15)	(5)	-1/4" 40% max	-\$0.15 per 0.05% (0.20,0.35%) P-\$0.08 per 0.05% (0.10-0.20%) Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% (12.15%)
Jedway	Harriet	Jedway Iron Ore Ltd.	2,000,000 DLT (1)150,000 (2)-(6) 300,000 -400,000	Oct.1962 Mar. '68 (6-Year)	\$9.50 DLT		+\$0.40 -\$0.40	62 (60)	(2)	(0.1)	(15)	(0.05)	-	-	(0.15)	(5)	-100 mesh 30% max 10mm max	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
North America																		
O C Nevada	Stockton	Overseas Central Enterprise Inc.	1,500,000 DMT (1) 450,000 (2) (3)	Apr. 1962 Mar. '65 (3-Year)	\$9.70 DMT	\$5.25 WLT	+\$0.30 -\$0.30	58- 60 (56)	0.30 (0.50)	0.30 (0.50)	12(15)	-	(0.46)	-	-	(5)	+10mm 60% min +20mm max Oversize -\$0.20 per WMT Undersize -\$1.00 per WMT	
Wabuska	Pittruberg	C.T. Takahashi Trading S.A. (The Standard Slag Co.)	4,000,000 DMT (1) 200,000 (2) 300,000 (3) (10) 400,000 +	Apr. 1962 Mar. '72 (10-Year)	\$9.65 DMT	\$5.25 WLT \$5.20 WLT	+\$0.40 -\$0.40 (62-60%) -\$0.80 (-60%)	62 (62)	(2)	(0.20)	(15)	(0.05)	(0.25)	-	-	(5)	1/4" 100% -100 mesh 40% max P-\$0.08 per 0.05% (0.10-0.20%) Al ₂ O ₃ +SiO ₂ -\$0.05 per 1% (12.15%) Cu-\$0.05 per 0.01% (0.03-0.05%) Moist-Freight Oversize -\$1.50 per DMT	
Eagle Mt. = Lump	Long Beach	Kaiser Steel Corp.	6,000,000 DMT (1)-(10) 600,000	Oct. 1962 Sep. '72 (10-Year)	\$9.25 DMT	\$3.90 WLT	+\$0.30 -\$0.30	57 (55)	0.4 (0.6)	(0.12)	(3) (12)	-	-	-	-	(3.5)	+1/4" 2" 80% min -1/4" 20% max S-\$0.05 per 1%	
Eagle Mt. = Sinter	Long Beach	Kaiser Steel Corp.	4,000,000 DMT (1)-(10) 400,000	Oct. 1962 Sep. '72 (10-Year)	\$8.30 DMT	\$3.90 WLT	+\$0.30 -\$0.30	57 (55)	(2.5)	(0.12)	(3) (12)	-	-	-	-	(7)	-3/8" About 100%	
Algarrobo	Huasco	Wm H. Muller & Co., Inc.	5,000,000 DLT (1)-(10) 500,000	Apr. 1962 Mar. '72 (10-Year)	\$9.00 DLT	\$6.90 WLT (50, D/W) \$6.55 WLT	+\$0.30	65 (65)	(0.05)	(0.19)	(3)	(0.01)	-	-	-	-	+1" 10% max +8" 10% max	

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ + SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Algarrobo	Huasco	Wm H. Muller & Co., Inc.	5,150,000 DLT (1)-(10) 515,000	Apr. 1963 Mar. '73 (10-Year)	\$9.00 DLT	\$6.90 WLT (50, D/W) \$6.55 WLT	+\$0.30	65 (65)	(0.05)	(0.19)	(4)	(0.04)	-	-	-	-	-3/8" 10% max +2 1/2" 5% max 4" max	
Algarrobo	Huasco	Wm H. Muller & Co., Inc.	2,350,000 DLT (1)-(10) 235,000	Apr. 1963 Mar. '73 (10-Year)	\$9.00 DLT	\$6.90 WLT (50, D/W) \$6.55 WLT	+\$0.20 -\$0.30	65 (60)	(0.05)	(0.20)	(7)	(0.04)	-	-	-	-	-1" 10% max +8" 10% max 10" max	
Adrianitas	Caderilla	Cia. Minera de Atacama	4,500,000 5,400,000 DLT	1960-1975 (15-Year)	\$8.50 DLT	\$8.70 WLT (36, 5D/W)		65 (65)	(0.10)	(0.10)	(10)	(0.10)	-	-	(0.15)	(5)	-10mm 10% max 200mm max	
Santa Fe	Coquimbo Caldera Chanaral Cruz-Grande	Canadian Foreign Ore Development Corp., Ltd.	11,000,000 DLT (1) 600,000 (2) 800,000 (3)-(10) min 900,000	Feb. 1961 Mar. '70 (10-Year)	\$9.90 DLT C&F \$16.76 DLT (20, -45, D/W) \$16.46 DLT (46, D/W)	\$7.10 WLT -\$0.25	+\$0.25 -\$0.25	65 (64)	(0.11)	(0.25-0.20)	(5.5)	(0.05)	-	-	(0.15)	(2)	+ 1/2" 84% min 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
Cominex	Coquimbo	Cia. Minera de Exportacion Ltda. (Philipp Brothers)	750,000 DLT (1)-(6) 100,000 -150,000	Apr. 1962 Mar. '68 (6-Year)	\$9.00 DLT	About \$7.00 WLT	+\$0.26 -\$0.26	65 (64)	(0.06)	(0.2)	(4.5)	(0.05)	-	-	-	-	- 1/2" 15% max 9" max	
Phibro	Cruz Grande or Chanaral	Philipp Brothers Far East Inc.	500,000 DLT (1)-(5) 100,000	Apr. 1962 Mar. '67 (5-Year)	C&F \$16.45 DLT	-	+\$0.25 -\$0.25	65 (64)	(0.11)	0.20 (0.25)	(5.5)	(0.05)	-	-	(0.15)	(2)	1/2" 8" 84% min	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT

320032

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ + SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
<u>Peru</u> Marcona = Sinter	San Nicolas	Cia. San Juan S.A.	2,800,000 DLT (1)-(7) 400,000	Jan.1963 Mar.'70 (7-Year)	C&F \$13.75 DLT (67,5D/W)	-	+\$0.25 -\$0.50	65 (63)	(1)	(0.05)	(6)	(0.05)	-	-	(0.15)	(8)	-100 mesh 30% max 1/4" max	
Marcona	San Juan or San Nicolas	Cia. San Juan S.A.	2,800,000 DLT (1)-(7) 400,000	Jan.1963 Mar.'70 (7-Year)	C&F \$13.75 DLT (67,5D/W)	-	+\$0.25 -\$0.50	65 (63)	(1)	(0.05)	(6)	(0.05)	-	-	(0.15)	(8)	-100 mesh 30% max 1/4" max	
Marcona = Lump	San Juan or San Nicolas	Cia. San Juan S.A.	2,975,000 DLT (1)-(7) 425,000	Dec.1962 Nov.'69 (7-Year)	C&F \$13.30 DLT (67,5D/W)	-	+\$0.25 -\$0.50	60 (58)	(0.25)	(0.07)	(9)	-	-	-	(2)	-10mm 20% max 4" max	Oversize -\$0.20 per WLT Undersize -\$3.00 per WLT	
Marcona = Sintor	San Juan or San Nicolas	Cia. San Juan S.A.	2,800,000 DLT (1)-(7) 400,000	Jan.1964 Dec.'70 (7-Year)	D&F \$13.75 DLT (67,5D/W)	-	+\$0.25 -\$0.50	65 (63)	(1)	(0.05)	(6)	(0.05)	-	-	(0.15)	(8)	-100 mesh 30% max 1/4" max	
Acari	San Juan	World Commerce Corp., S.A.	1,000,000 DLT (1)300,000 (2)350,000 (3)350,000	Apr.1962 Mar.'65 (3-Year)	CIF \$16.30 DLT	-	+\$0.26 -\$0.26	65 (64)	(0.05)	(0.25)	(10)	(0.03)	-	-	(0.15)	(2)	1/4" max 10% max 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT
Acari	San Juan	World Commerce Corp., S.A.	450,000 DLT (1)-(3) 150,000	Apr.1961 - (3-Year)	CIF \$0.26 DLT (per Fe 1%)	-	+\$0.26 -\$0.26	65 (64)	(0.05)	(0.25)	(10)	(0.03)	-	-	(0.15)	(2)	1/4" max 10% max 8" max	Oversize -\$0.20 per WLT Undersize -\$2.00 per WLT

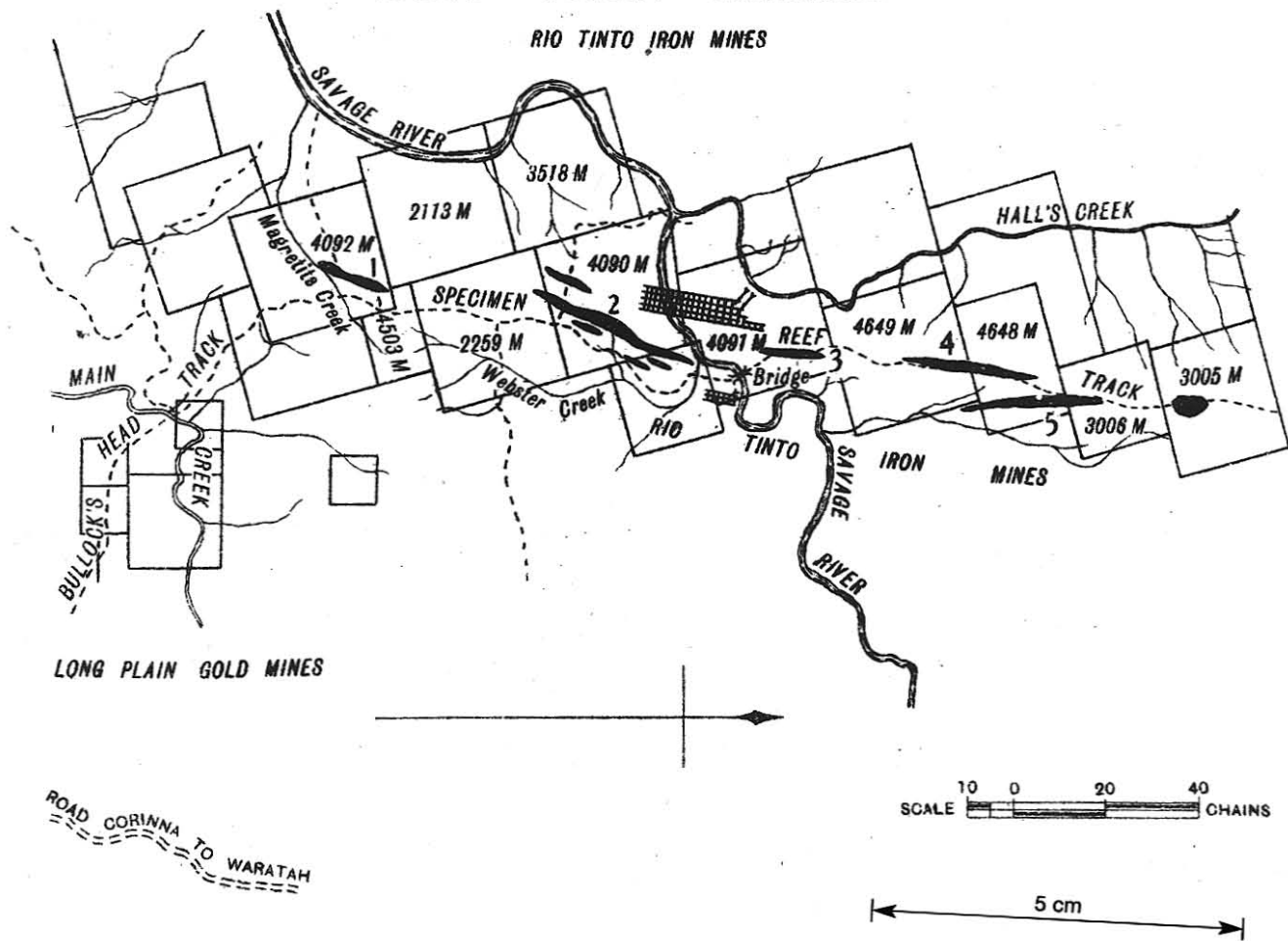
Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	We Scale	Specification									Other Penalties	
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist		Size
Brazil																		
Itabira = Lump	Vitoria	Cia. Vale do Rio Doce S.A.	2,000,000	Apr. 1963	\$10.67 DLT	\$7.95	+\$0.16	68.5 (68)	(0.02)	(0.045)	(3)	-	-	-	-	1(2)	-1/8" 10% max 8" max	Moist-FOB per WLT (1.2%) -C&F per WLT (+2%) Undersize -\$5.00 per WLT
			1,400,000	Mar. '66		WLT	-\$0.16											
			(1) 550,000	(3-Year)			(1) 250,000											
			350,000															
			(2) 650,000															
			-450,000															
			(3) 800,000															
			-600,000															
Itabira = Run of Mine					\$8.25 DLT		+\$0.24	66	(0.03)	(0.08)	(5)	-	-	-	(0.15)	(5)	-1/8" 40% max 8" max	
							-\$0.48	(64)										
Itabira = Pebble					\$8.40 WLT		+\$0.131	64	(0.03)	(0.05)	(5)	-	-	-	-	6 (6)	-1/8" 25% max 3" max	Moist -C&F per WLT (+6%) Undersize -5.00 per WLT
							-\$0.131	(64)										
Itabira = Run of Mine	Tubarao	Cia. Vale do Rio Doce S.A.	50,000,000	Apr. 1966	\$8.00 DLT		+\$0.24	66	(0.03)	(0.08)	(5)	-	-	-	(0.15)	(5)	-1/8" 40% max 8" max	Moist -Freight Undersize -\$3.00 per WLT
			(1) 1,000,000	Mar. '81	C&F		-\$0.48	(64)										
			(2) - (3)	(15-Year)	\$15.84 DLT													
			2,000,000															
			(4) - (7)															
			3,000,000															
			(8) - (13)															
			4,000,000															
			(14) - (15)															
			4,500,000															
Africa																		
Bomvu Rioge = Swazi- land	Lourenco Marques	Swazi- land Iron Ore Deve- lopment Co.	12,000,000	Jul. 1964	Sh 70/- DLT	Sh 45/-	+Sh 2/-	65	(0.05)	(0.07)	(10)	(0.15)	-	-	(8)		+1/4" 80% min 8" max	Oversize -Sh 1/6 per WLT Undersize Sh 20/- per WLT
			(1) - (10)	Jun. '74		WLT	-Sh 2/-	(62)										
			1,200,000	(10-Year)		(65, D/W)	(65-63%)											
							-Sh 4/-											
							(63-62.5%)											
							-Sh 6/-											
							(62.5-62%)											

Description	Loading Port	Shipper	Quantity	Shipment	FOB	Freight (Yawata Base)	Fe Scale	Specification										Other Penalties
								Fe	S	P	Al ₂ O ₃ +SiO ₂	Cu	TiO ₂	Sn	Other metals	Moist	Size	
Beacon Tor	Lourence Marques	Iron & Mineral Development Co.	2,750,000 (1) 100,000 (2) 150,000 (3) (10) 300,000	Apr. 1962 DLT Mar. '72 (10-Year)	Sh 72/6DLT		+Sh 2/- -Sh 2/- (65-63%) -Sh 4/- (63-62.5%) -Sh 6/- (62.5-62%)	65 (62)	(0.05)	(0.07)	(10)	(0.05)	(0.15)	-	(0.15)	(8)	+1/4" 8% min 8" max	Moist -Freight x 1/2 (+3%) Oversize -Sh 1/6 per WLT Undersize -Sh 20/- per WLT

Plate VII.

LONG PLAIN DISTRICT

RIO TINTO IRON MINES



168

9600E

9700E

9800E

9900E

10000E

10100E

10200E

10300E

10400E

10500E

West C'

RL 900

East C

RL 800

RL 700

1 1/2 Band Country Rock

79'

56.6%

120'

116'

125'

146 1/2'

262 1/2'

268'4"

296'

298'4"

315'3"

49.1%

425'9"

428'9"





449'

639' completed

IMPURITIES

FROM-TO	Fe%	SiO ₂ %	TiO ₂ %	Mn%	P ₂ O ₅ %	S%
79 - 116	56.6	6.07	1.54	0.09	0.08	1.64
315'3" - 498'	49.1	7.57	0.95	0.06	0.07	7.64

REFERENCE

-  IRON ORE - HIGH GRADE
-  IRON ORE - MEDIUM GRADE
-  IRON ORE - LOW GRADE
-  COUNTRY ROCK

5 cm

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

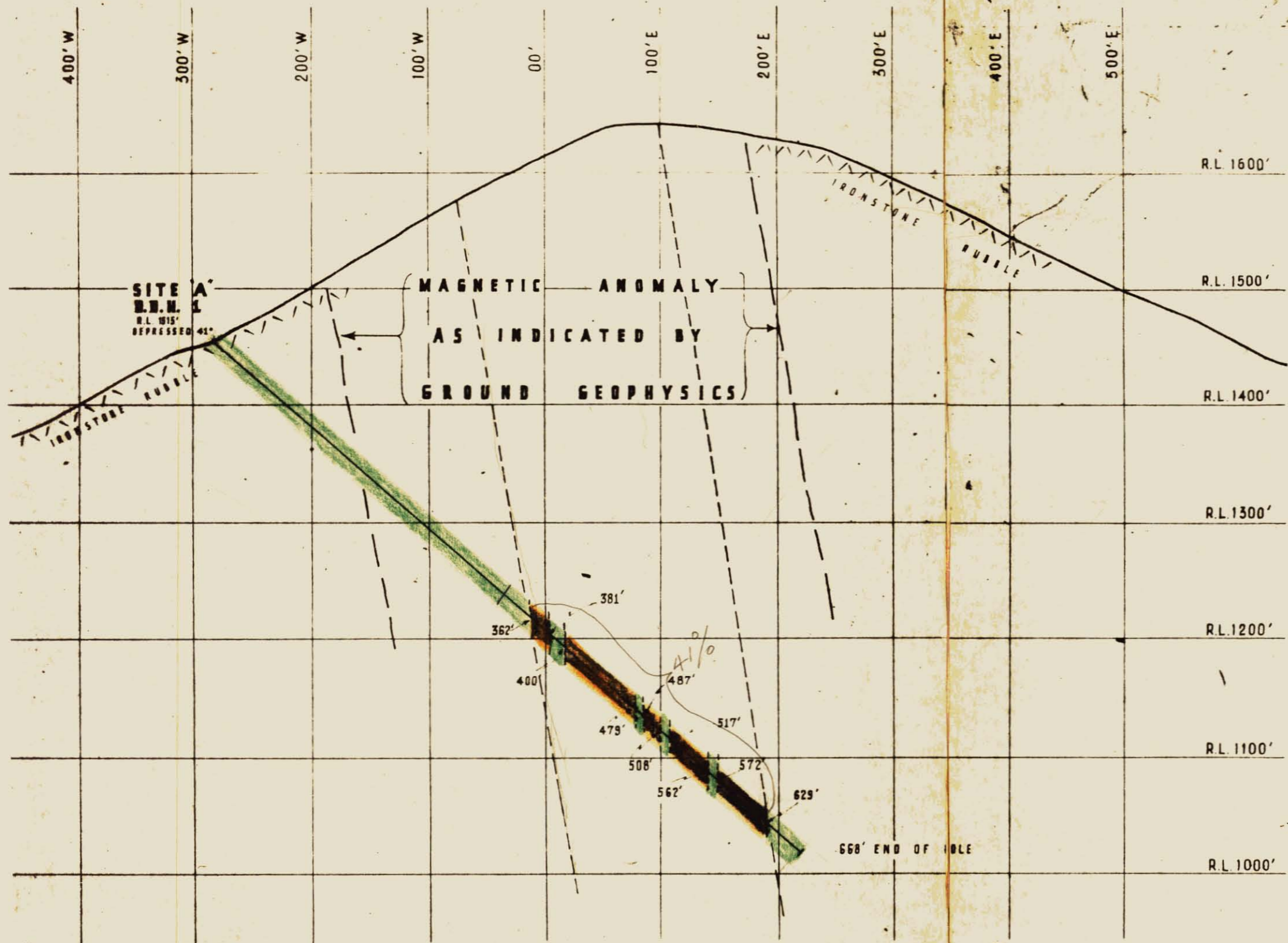
PROFILE SECTION R.T.A.E. D.D.H. N°1
R.T.A.E. ANOMALY - SAVAGE RV.

Scale: 1 inch to 100 feet

Date Sept 1959 | PXP 1/00/3 | Plan N° T602

320038

1738-35

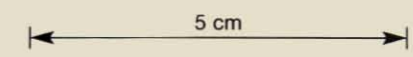


SECTION SAMPLED	CORE RECOVERY %	AVERAGE TOTAL VALUE IRON %	
		CORE	SLUDGE
362' - 381'	27.5	35.43	
360' - 385'	-	-	35.92
401' - 479'	37.8	53.2	
400' - 480'	-	-	54.75
487' - 508'	31.3	59.9	
485' - 500'	-	-	53.5
515' - 563'	53.4	41.2	
515' - 563'	-	-	51.4
572' - 631'	38.6	49.2	
572' - 631'	-	-	51.4
362' - 631'	43.6	44.2	
360' - 631'	-	-	50.3
401' - 631'		45.8	
400' - 600'			50.6

IMPURITIES

FROM - TO	SiO ₂ %		TiO ₂ %		Mn %		RO ₂ %		S %	
	Ft.	Ft.	Core	Sludge	Core	Sludge	Core	Sludge	Core	Sludge
401	631	14.7		1.59	0.12		0.08		0.78	
400	631		11.3		1.38		0.11		0.06	1.07

320037



REFERENCE

- IRON ORE
- COUNTRY ROCK

B.M. N°1 COMPLETED AT DEPTH 668 FEET AT 17th DEC 1957

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

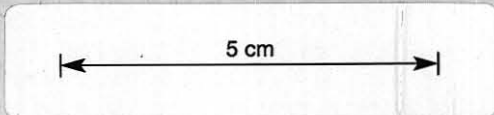
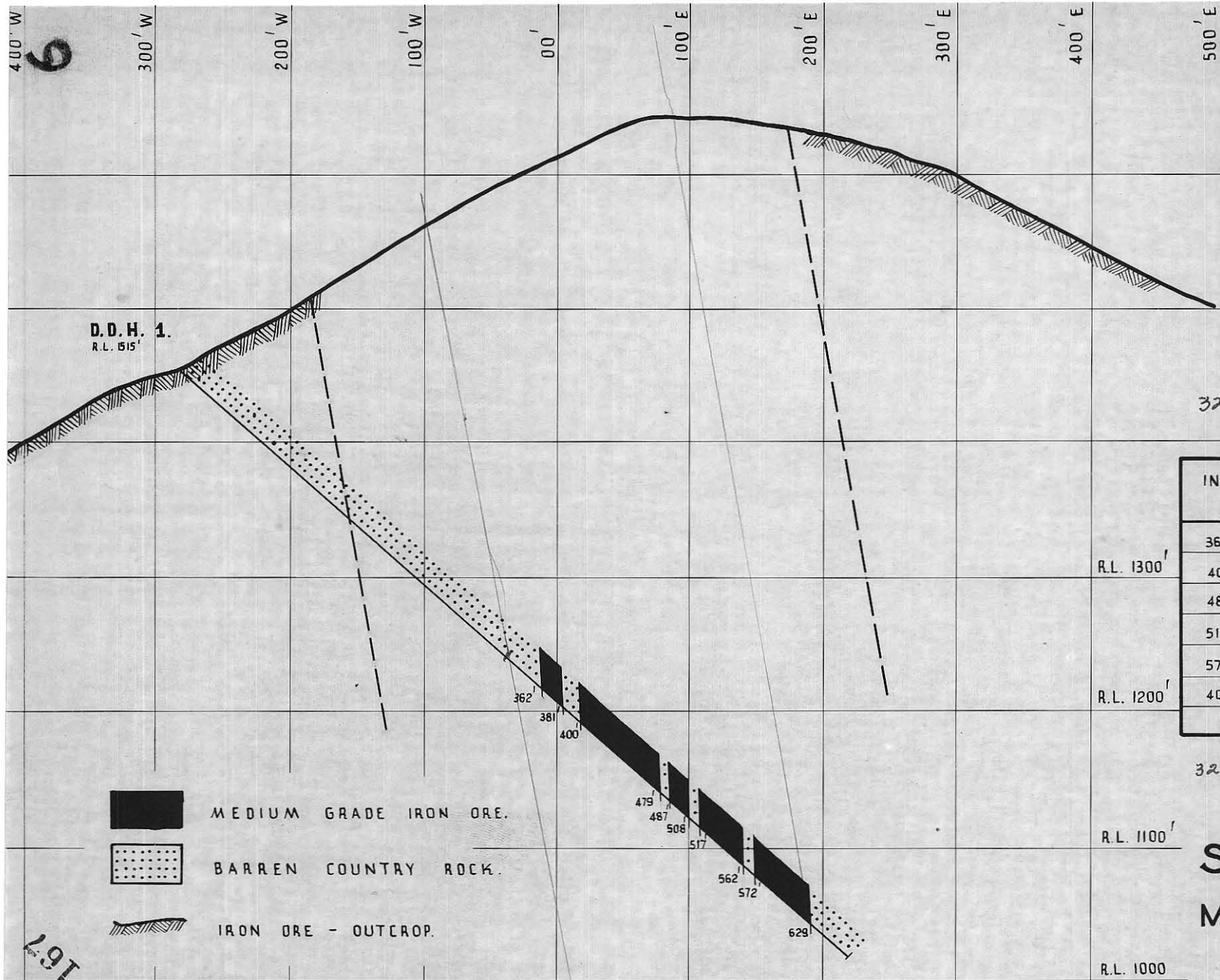
**SAVAGE RIVER DRILLING
MAIN NORTH IRON DEPOSIT
PRELIMINARY DRILLING SECTION**

SCALE 1 INCH TO 100 FEET

DATE : DECEMBER 1957

DRAFTSMAN : D.J. LAWTON AUTHORITY : 100/7/100 PLAN NO. 1

69T



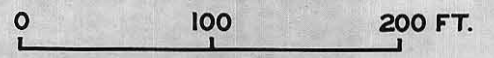
329-401 - 26.4%
R.L. 1400'

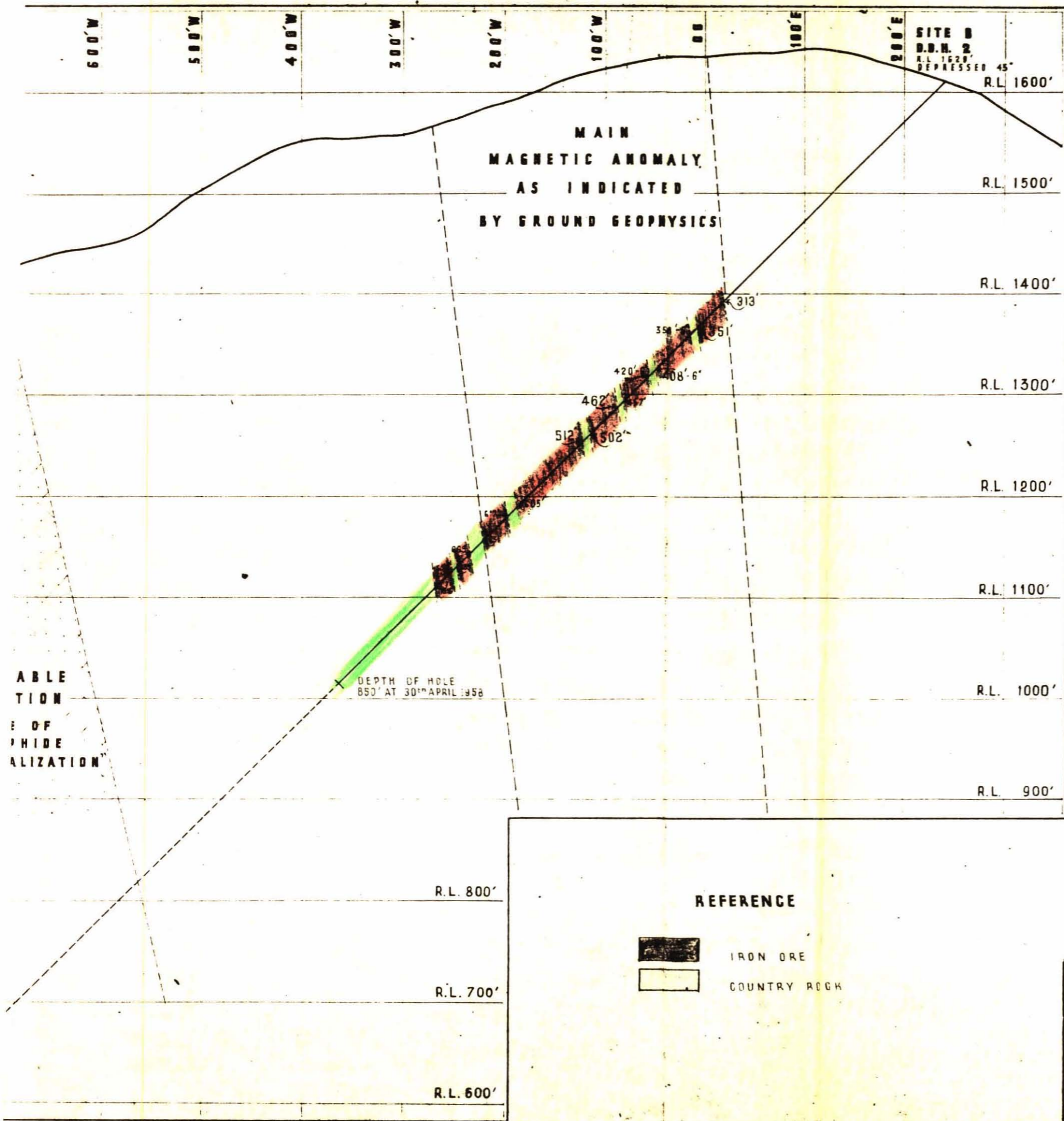
INTERSECTION HOLE NO 1.	% CORE RECOVERY	% Fe. HCl Sol.	IMPURITIES.				
			SiO ₂ %	TiO ₂ %	Mn %	P ₂ O ₅ %	S% Al ₂ O
362' - 381'	27.5	35.43					
401' - 479'	37.8	53.2					
487' - 508'	31.3	59.9					
515' - 563'	53.4	41.2					
572' - 631'	38.6	49.2					
401' - 631'		45.8					

329-631 41%

- MEDIUM GRADE IRON ORE.
- BARREN COUNTRY ROCK.
- IRON ORE - OUTCROP.

320038
SAVAGE RIVER AREA
MAIN NORTH IRON DEPOSIT
DDH. 1.



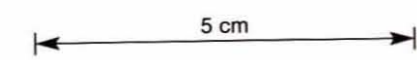


SECTION	CORE RECOVERY %	VALUE % Fe. HCL SOLUBLE
313'-0" - 351'-0"	94.5	47.2
358'-6" - 408'-6"	73.3	51.4
420'-6" - 457'-0"	97.9	50.4
462'-0" - 502'-0"	99.6	47.4
512'-0" - 605'-0"	93.5	50.0
617'-0" - 651'-0"	98.8	52.0
669'-0" - 689'-0"	97.9	51.3
696'-0" - 718'-6"	94.0	44.5
513'-0" - 718'-6"	93.9	44.1

IMPURITIES

FROM - TO	SiO ₂ %	TiO ₂ %	Mn %	P ₂ O ₅ %	S %
313' - 718.5'	14.88	1.78	0.12	0.08	0.48

320039



RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

**SAVAGE RIVER DRILLING
MAIN NORTH IRON DEPOSIT
SECTION SHOWING LOCATION
OF D.B.H. No 2**

SCALE: 1 INCH TO 100 FEET

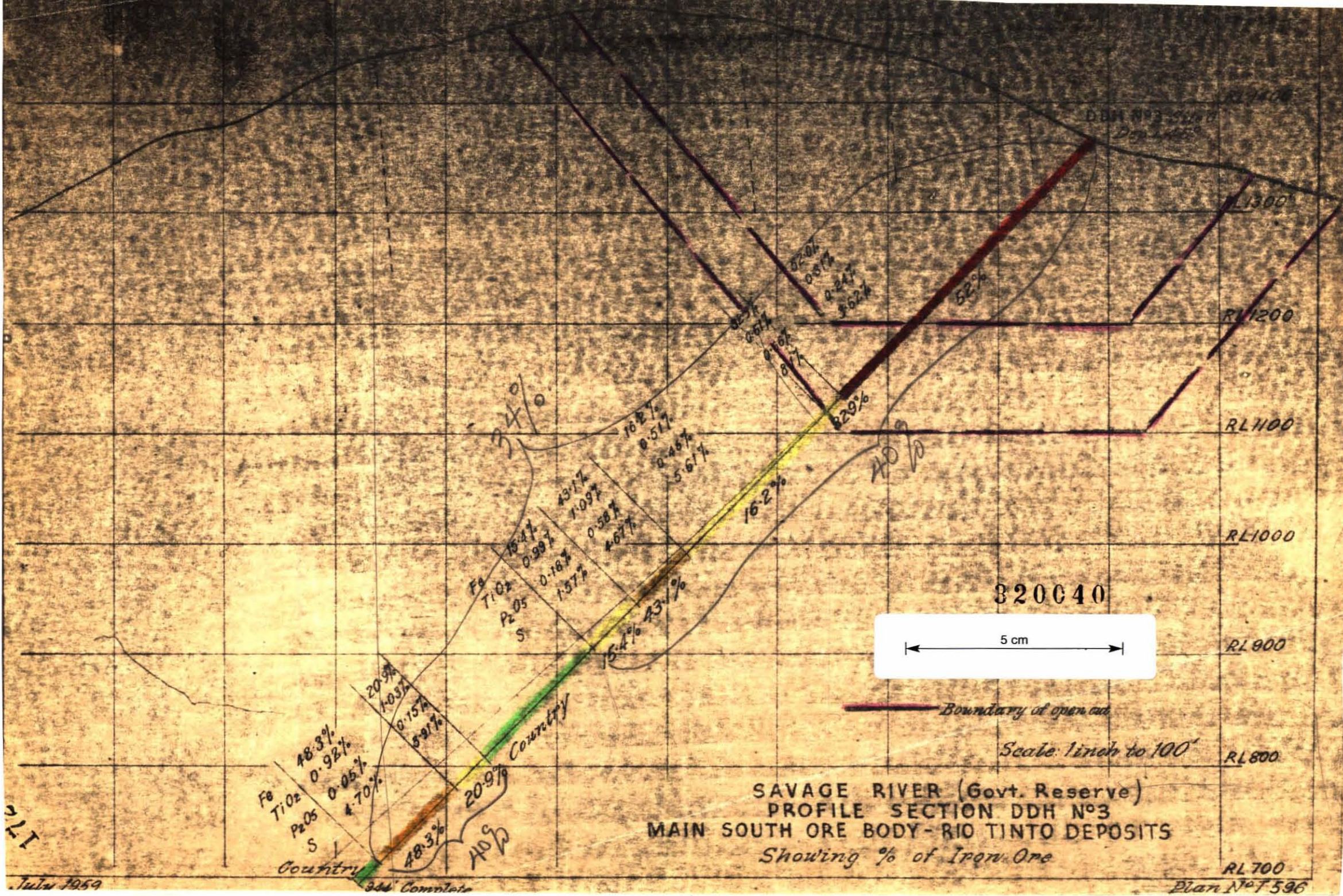
DATE: APRIL, 1958.

GEOLOGIST: W. ATKINSON

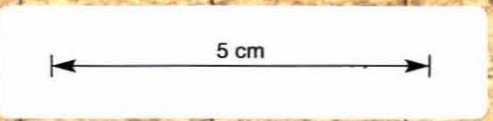
DRAFTSMAN: D. LAWSON

AUTHORITY: PRV/7/109

PLAN No T. 120



320040



Boundary of open cut

Scale: 1 inch to 100'

SAVAGE RIVER (Govt. Reserve)
 PROFILE SECTION DDH N°3
 MAIN SOUTH ORE BODY - RIO TINTO DEPOSITS
 Showing % of Iron Ore

Country
 20.9%
 1.03%
 0.15%
 5.91%
 48.3%
 0.92%
 0.05%
 4.70%
 Fe
 TiO₂
 P₂O₅
 S
 20.9%
 40°
 48.3%

Country
 16.2%
 15.4%
 0.99%
 0.18%
 1.57%
 43.1%
 1.09%
 0.58%
 4.67%
 Fe
 TiO₂
 P₂O₅
 S
 16.2%
 43%
 16.2%

52.0%
 0.51%
 2.24%
 5.62%
 42.9%
 0.51%
 0.16%
 8.7%

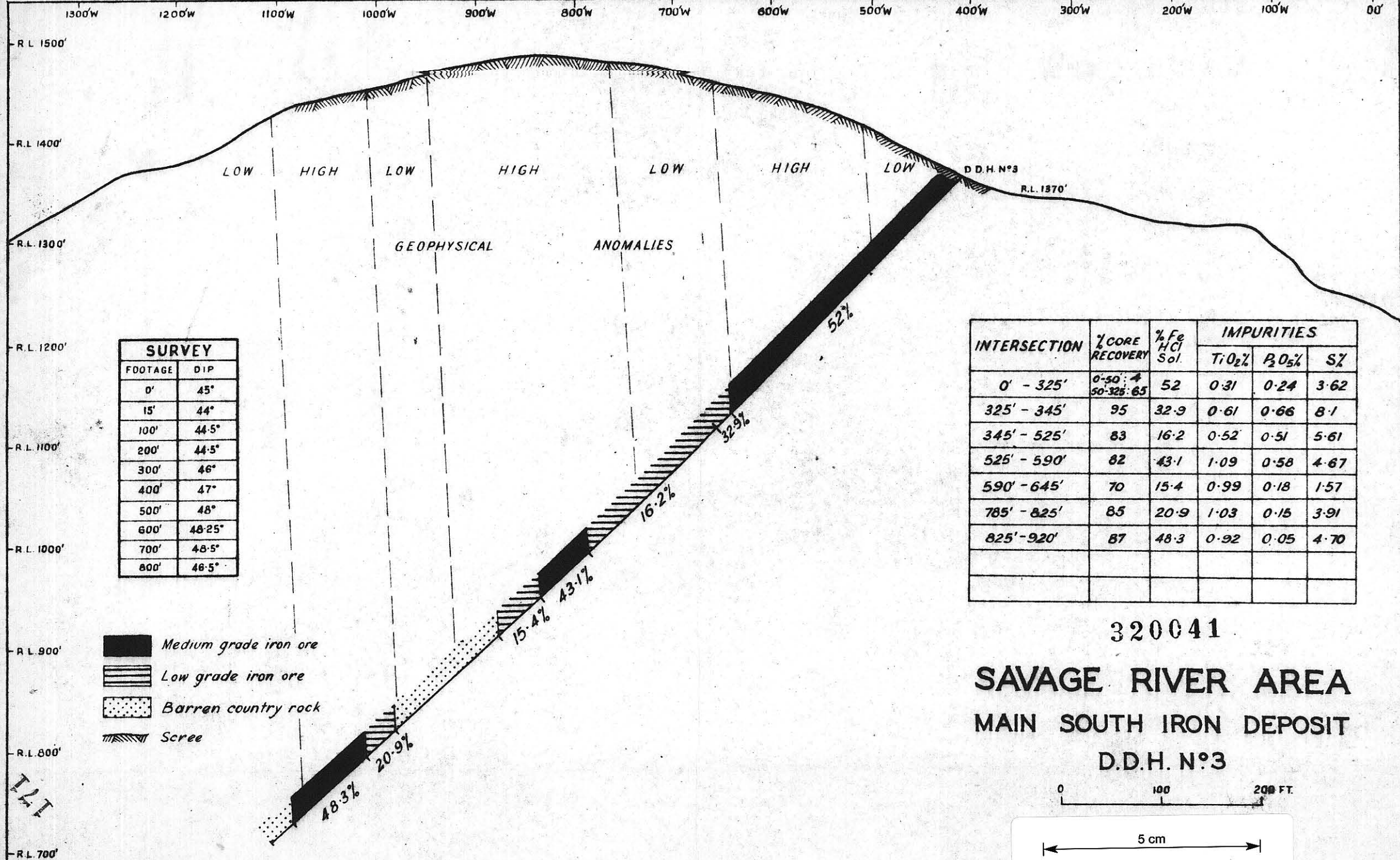
RL 1400
 RL 1300
 RL 1200
 RL 1100
 RL 1000
 RL 900
 RL 800
 RL 700

171

July 1959

344 Complete

Plan N° T 596

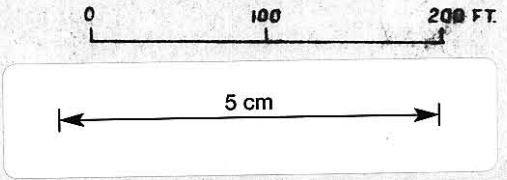


SURVEY	
FOOTAGE	DIP
0'	45°
15'	44°
100'	44.5°
200'	44.5°
300'	46°
400'	47°
500'	48°
600'	48.25°
700'	48.5°
800'	46.5°

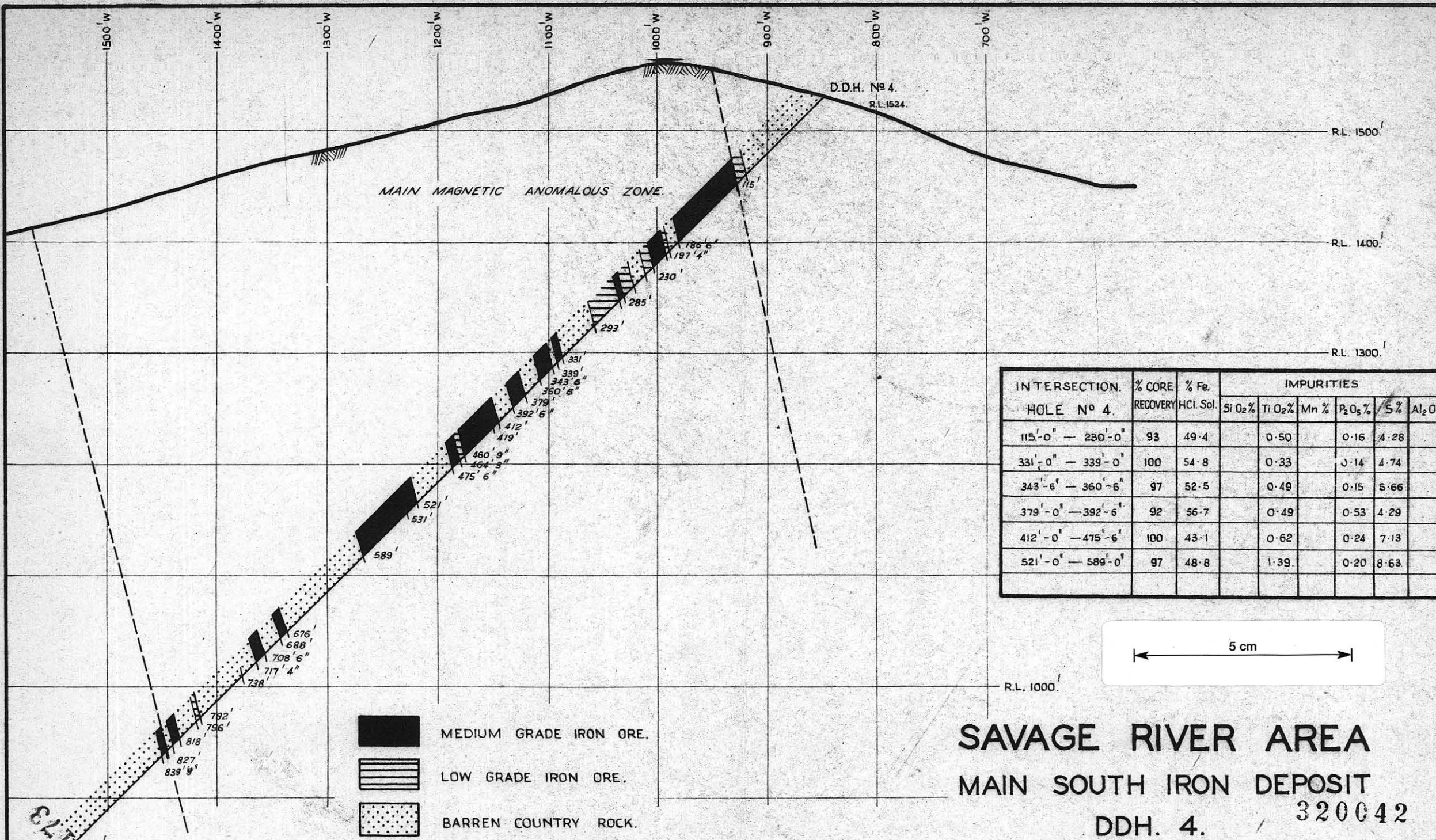
INTERSECTION	% CORE RECOVERY	% Fe HCl Sol.	IMPURITIES		
			TiO ₂ %	P ₂ O ₅ %	S%
0' - 325'	0-50: 4 50-325: 65	52	0.31	0.24	3.62
325' - 345'	95	32.9	0.61	0.66	8.1
345' - 525'	83	16.2	0.52	0.51	5.61
525' - 590'	82	43.1	1.09	0.58	4.67
590' - 645'	70	15.4	0.99	0.18	1.57
785' - 825'	85	20.9	1.03	0.15	3.91
825' - 920'	87	48.3	0.92	0.05	4.70

320041

**SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
D.D.H. N°3**



1695-35

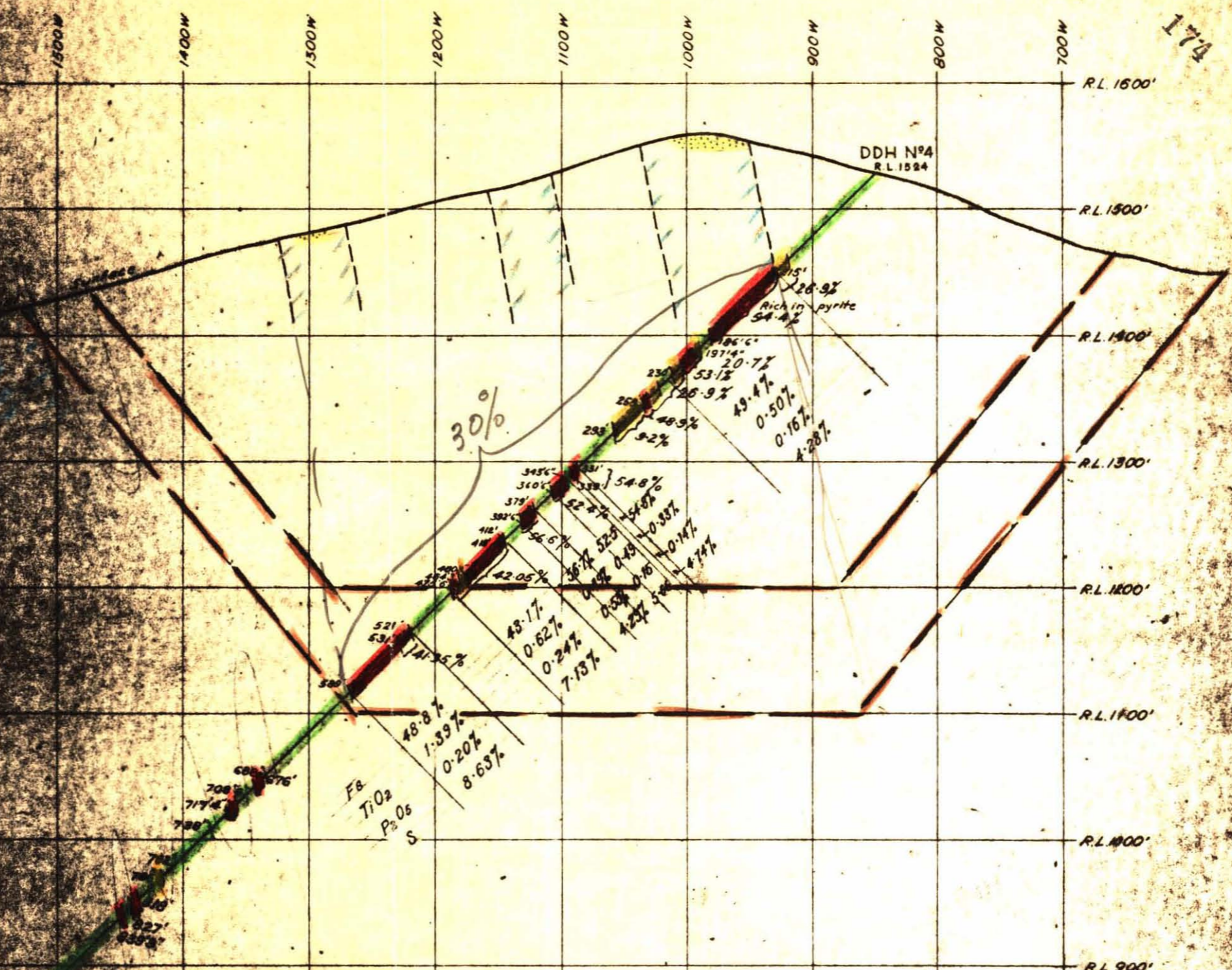


INTERSECTION. HOLE N ^o 4.	% CORE RECOVERY	% Fe. HCl. Sol.	IMPURITIES				
			Si O ₂ %	Ti O ₂ %	Mn %	P ₂ O ₅ %	Al ₂ O ₃ %
115'-0" — 230'-0"	93	49.4		0.50		0.16	4.28
331'-0" — 339'-0"	100	54.8		0.33		0.14	4.74
343'-6" — 360'-6"	97	52.5		0.49		0.15	5.66
379'-0" — 392'-6"	92	56.7		0.49		0.53	4.29
412'-0" — 475'-6"	100	43.1		0.62		0.24	7.13
521'-0" — 589'-0"	97	48.8		1.39		0.20	8.63

DEPT. OF MINES.
1804-35.

SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
DDH. 4. 320042

0 100 200 FT.



- BOUNDARY OF OPEN CUT
- IRON ORE - MEDIUM TO HIGH GRADE
- IRON ORE - LOW GRADE
- COUNTRY ROCK
- IRON ORE - OUTCROP
- MAGNETIC HIGHS REVEALED BY B.M.R. GROUND SURVEY

320043

5 cm

RIO TINTO AUSTRALIAN EXPLORATION PTY. LTD.			
PROFILE SECTION DDH N°4			
MAIN SOUTH ORE BODY-RIO TINTO DEPOSITS			
GOVT. RESERVE			
SAVAGE RIVER			
December 1959	SCALE: 1 in. = 100 ft.	PRP/7/100/1a2	PLAN N°761/5

COORDS OF COLLAR: 850W AT 15 FT. N OF TRAVERSE 800
 LEVELS BASED ON ABNEY CLINOMETER SURVEY
 USING COLLAR OF D.D.H. 5 (1569) AS DATUM.

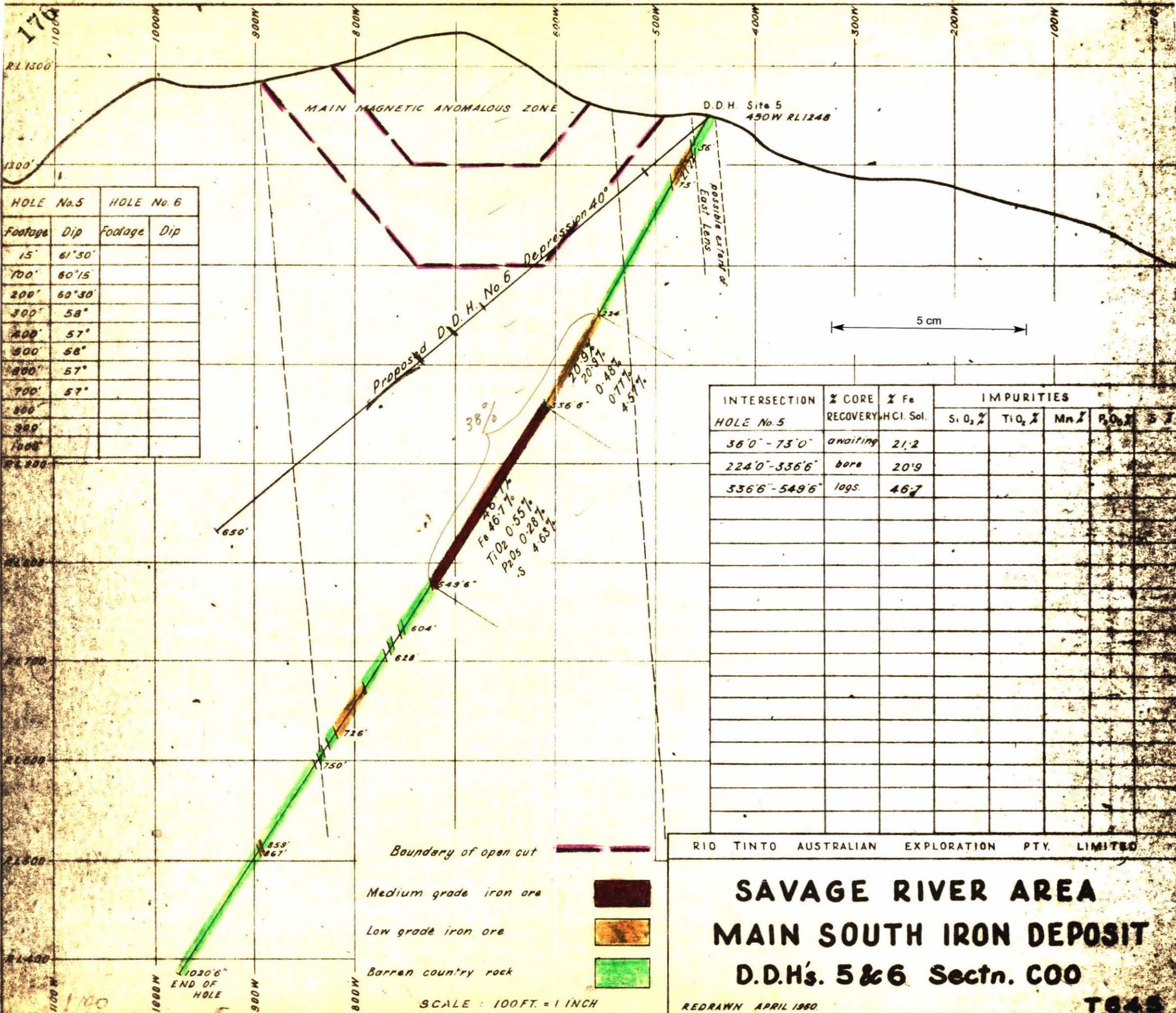
End of Hole 18-12-59

R.L. 800'

R.L. 700'

174

Section 4 N. end



HOLE No. 5		HOLE No. 6	
Footage	Dip	Footage	Dip
15'	61°30'		
100'	60°15'		
200'	60°30'		
300'	58°		
400'	57°		
500'	58°		
600'	57°		
700'	57°		
800'			
900'			
1000'			

INTERSECTION HOLE No. 5	% CORE RECOVERY	% Fe HCl. Sol.	IMPURITIES				
			Si. O ₂ %	TiO ₂ %	Mn %	P ₂ O ₅ %	S %
36'0" - 73'0"	awaiting	21.2					
224'0" - 336'6"	bore	20.9					
336'6" - 549'6"	logs	46.7					

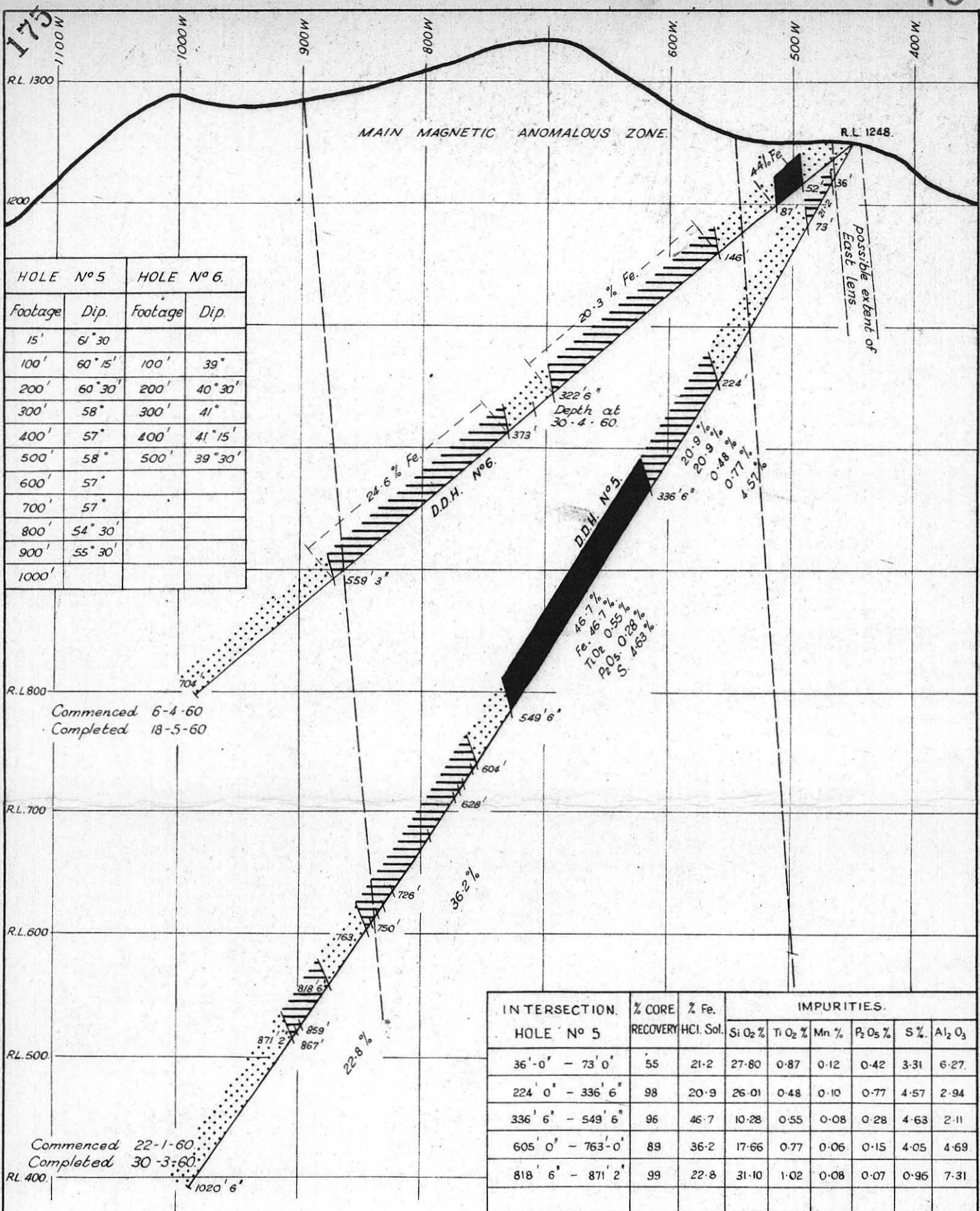
Fe 46.7%
TiO₂ 0.55%
P₂O₅ 0.28%
S 4.65%

RIO TINTO AUSTRALIAN EXPLORATION PTY. LIMITED

**SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
D.D.H's. 5 & 6 Sectn. C00**

REDRAWN APRIL 1960

T645



HOLE N° 5		HOLE N° 6.	
Footage	Dip.	Footage	Dip.
15'	61° 30'		
100'	60° 15'	100'	39°
200'	60° 30'	200'	40° 30'
300'	58°	300'	41°
400'	57°	400'	41° 15'
500'	58°	500'	39° 30'
600'	57°		
700'	57°		
800'	54° 30'		
900'	55° 30'		
1000'			

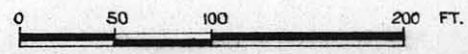
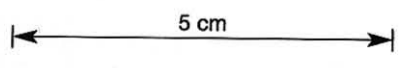
Commenced 6-4-60
Completed 18-5-60

Commenced 22-1-60
Completed 30-3-60

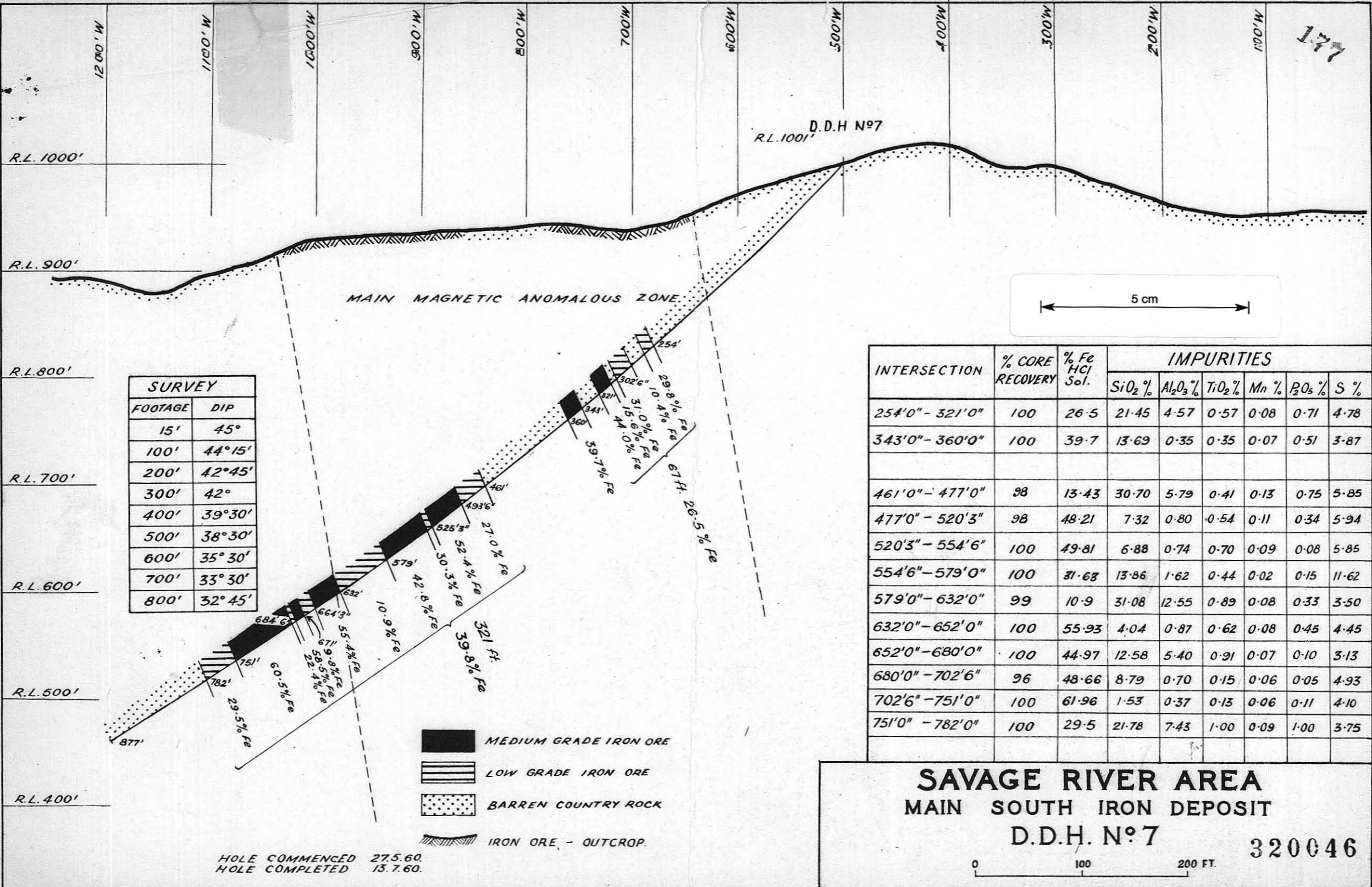
- Medium grade iron ore.
- Low grade iron ore.
- Barren country rock.

INTERSECTION.	% CORE RECOVERY	% Fe. HCl. Sol.	IMPURITIES.					
			Si O ₂ %	Ti O ₂ %	Mn %	P ₂ O ₅ %	S %	Al ₂ O ₃
36'-0" - 73' 0"	55	21.2	27.80	0.87	0.12	0.42	3.31	6.27.
224' 0" - 336' 6"	98	20.9	26.01	0.48	0.10	0.77	4.57	2.94
336' 6" - 549' 6"	96	46.7	10.28	0.55	0.08	0.28	4.63	2.11
605' 0" - 763'-0"	89	36.2	17.66	0.77	0.06	0.15	4.05	4.69
818' 6" - 871' 2"	99	22.8	31.10	1.02	0.08	0.07	0.96	7.31
HOLE N° 6.								
52' 0" - 87' 0"	40	44.0	15.75	0.69	0.10	0.48	4.56	3.02
146' 0" - 322' 6"	74	20.3	29.67	0.86	0.11	0.30	3.21	6.63
373' 0" - 559' 3"	98	24.6	27.58	0.91	0.11	0.26	2.38	6.02

320045
SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
DDHs. 5 & 6.



177



SURVEY	
FOOTAGE	DIP
15'	45°
100'	44° 15'
200'	42° 45'
300'	42°
400'	39° 30'
500'	38° 30'
600'	35° 30'
700'	33° 30'
800'	32° 45'

INTERSECTION	% CORE RECOVERY	% Fe HCl Sol.	IMPURITIES					
			SiO ₂ %	Al ₂ O ₃ %	TiO ₂ %	Mn %	P ₂ O ₅ %	S %
254'0" - 321'0"	100	26.5	21.45	4.57	0.57	0.08	0.71	4.78
343'0" - 360'0"	100	39.7	13.69	0.35	0.35	0.07	0.51	3.87
461'0" - 477'0"	98	13.43	30.70	5.79	0.41	0.13	0.75	5.85
477'0" - 520'3"	98	48.21	7.32	0.80	0.54	0.11	0.34	5.94
520'3" - 554'6"	100	49.81	6.88	0.74	0.70	0.09	0.08	5.85
554'6" - 579'0"	100	31.63	13.86	1.62	0.44	0.02	0.15	11.62
579'0" - 632'0"	99	10.9	31.08	12.55	0.89	0.08	0.33	3.50
632'0" - 652'0"	100	55.93	4.04	0.87	0.62	0.08	0.45	4.45
652'0" - 680'0"	100	44.97	12.58	5.40	0.91	0.07	0.10	3.13
680'0" - 702'6"	96	48.66	8.79	0.70	0.15	0.06	0.05	4.93
702'6" - 751'0"	100	61.96	1.53	0.37	0.13	0.06	0.11	4.10
751'0" - 782'0"	100	29.5	21.78	7.43	1.00	0.09	1.00	3.75

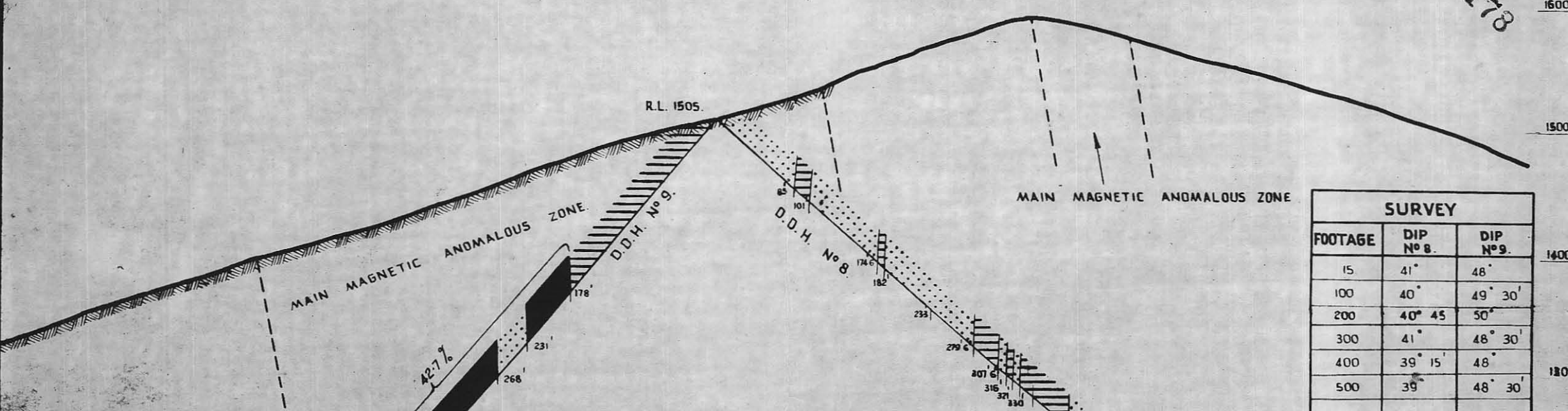
SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
D.D.H. N°7 320046

0 100 200 FT.

HOLE COMMENCED 27.5.60.
HOLE COMPLETED 13.7.60.

2100' W. 2000' W. 1900' W. 1800' W. 1700' W. 1600' W. 1500' W. 1400' W. 1300' W. 1200' W. 1100' W. 1000' W.

178

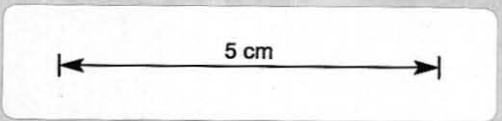


- MEDIUM GRADE IRON ORE
- LOW GRADE IRON ORE
- BARREN COUNTRY ROCK
- IRON ORE - OUTCROP

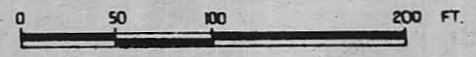
SURVEY		
FOOTAGE	DIP No. 8.	DIP No. 9.
15	41°	48°
100	40°	49° 30'
200	40° 45'	50°
300	41°	48° 30'
400	39° 15'	48°
500	39°	48° 30'

INTERSECTION	% CORE RECOVERY	% Fe HCl SOL.	IMPURITIES				
			SiO ₂ %	TiO ₂ %	Mn%	P ₂ O ₅ %	S%
No. 8.							
85 - 101	98	14.17					
174'-6" - 182'	47	23.9					
233' - 279'-6"	75	7.85					
279'-6" - 307'-6"	59	18.57					
316 - 321	90	31.4					
330 - 342' 6"	96	25.48					
342'-6" - 380'-6"	88	11.49	INCOMPLETE.				
448 - 471'-6"	100	35.06					
No. 9.							
0 - 110'	1	48.9					
110' - 154'	1	53.9					
154' - 178'	50	7.0					
178' - 231'	43	54.2					
268' - 497'	88	47.0					
543 - 548	35	48.8					

320047



**SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
DDHs. 8 & 9.**


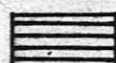




DEPT. OF MINES.
1788 - 35

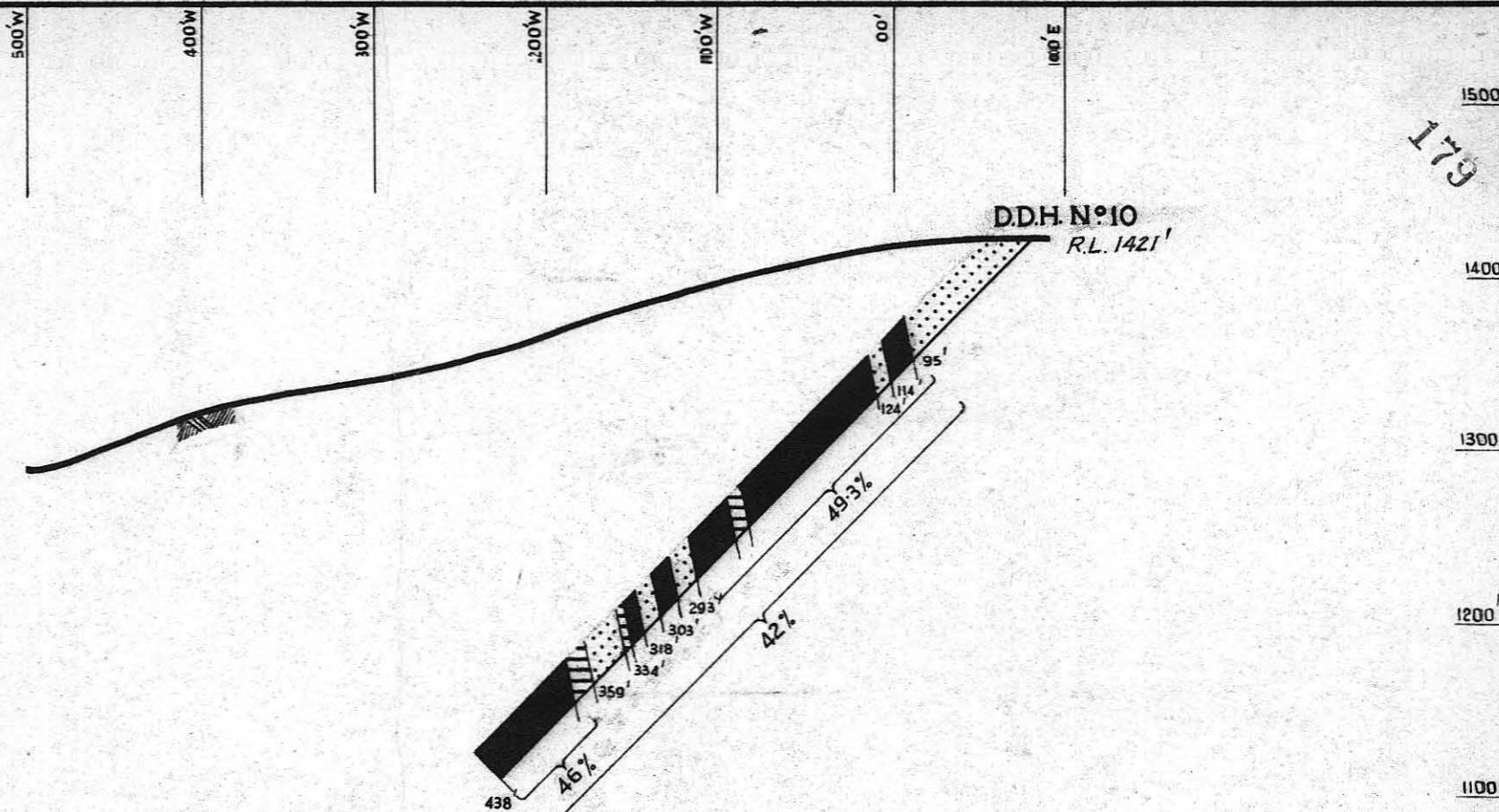
12

INTERSECTION	% CORE RECOVERY	% Fe HCl SOL.	IMPURITIES				
			SiO ₂ %	TiO ₂ %	Mn%	P ₂ O ₅ %	5% Al ₂ O ₃ %
95 - 114	-	54.5					
124 - 276	-	52					
293 - 303	-	53					
318 - 331	83	45					
359 - 438	91	46	INCOMPLETE				

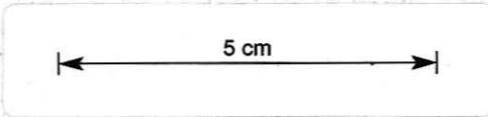
N.B. NO SURVEY OF DIPS.

-  MEDIUM GRADE IRON ORE
-  LOW GRADE IRON ORE
-  BARREN COUNTRY ROCK
-  IRON ORE - OUTCROP

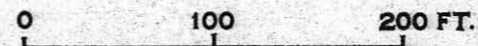
DEPT. OF MINES
1843-35

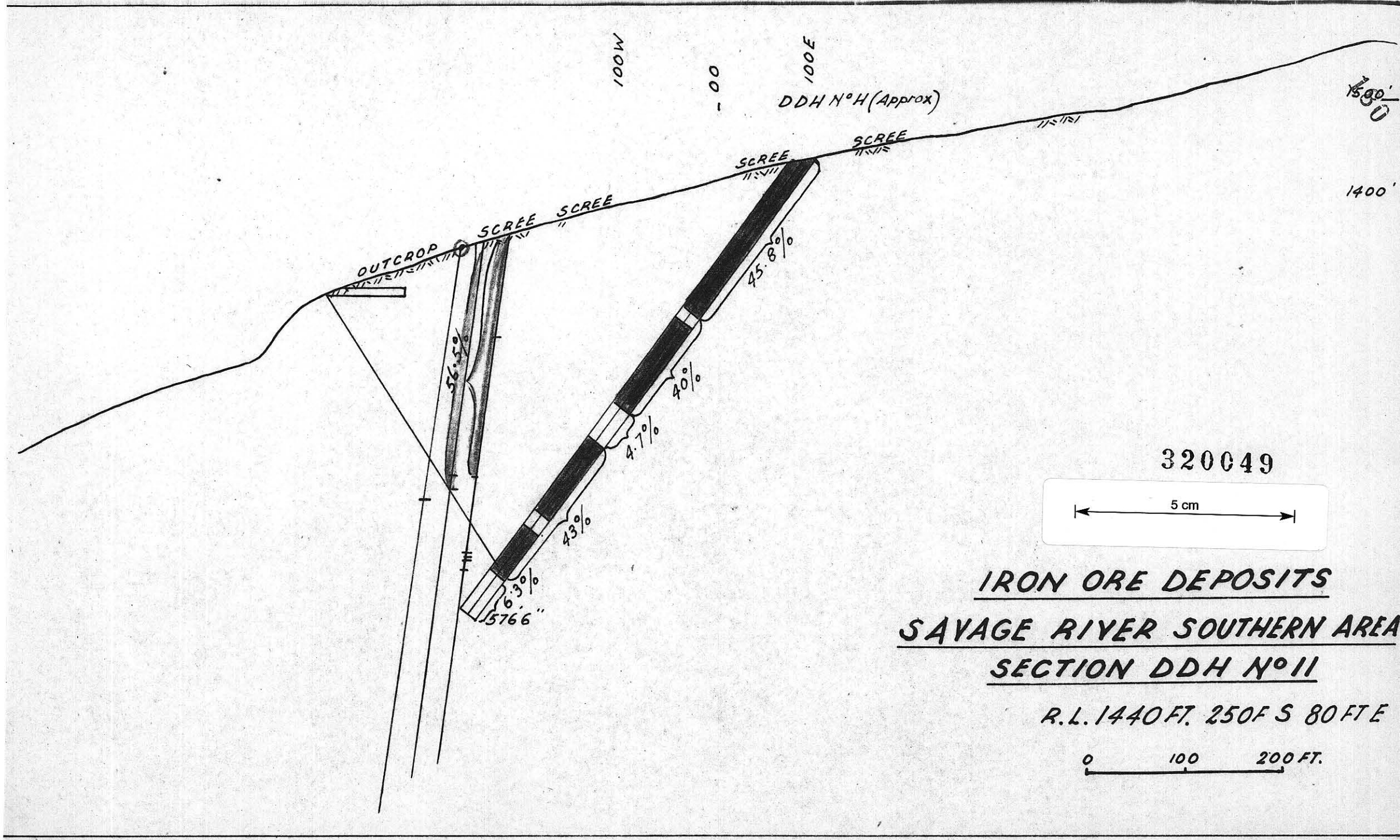


320048

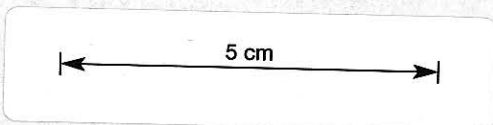


SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
D.D.H. 10



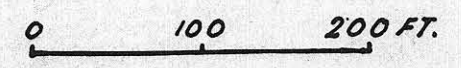


320049


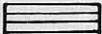



IRON ORE DEPOSITS
SAVAGE RIVER SOUTHERN AREA
SECTION DDH N°II

R.L. 1440 FT. 250' S 80' E



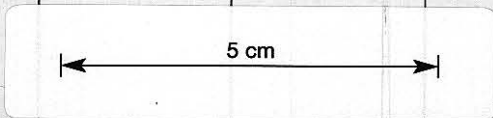
SURVEY		
FOOTAGE	DIP N°11	DIP N°12
100	55°	81°
200	55°	81°
300	54°	80°
400	53°	79°
500	52°	79°

-  MEDIUM GRADE IRON ORE.
-  LOW GRADE IRON ORE.
-  BARREN COUNTRY ROCK

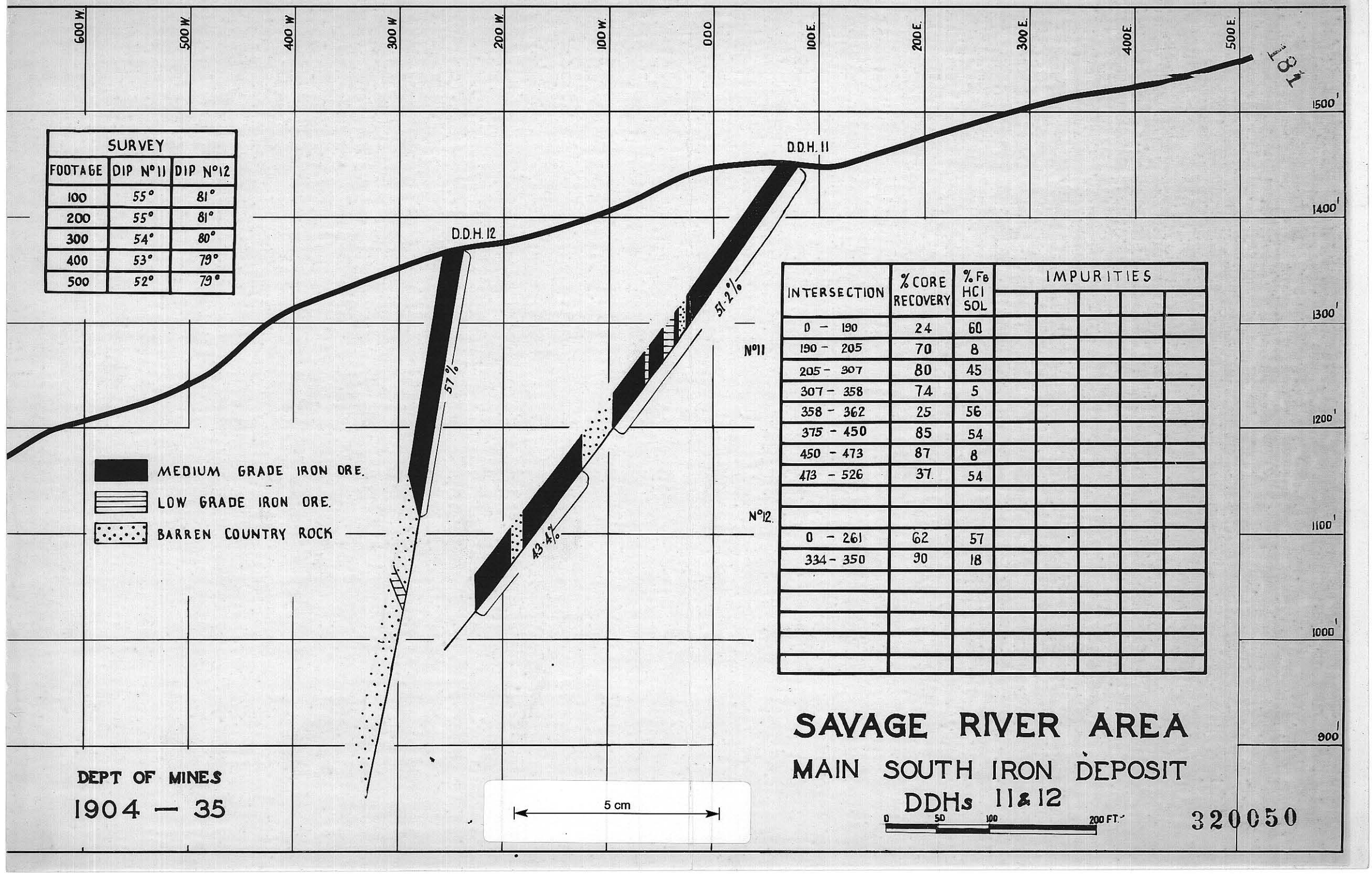
INTERSECTION	% CORE RECOVERY	% Fe HCl SOL	IMPURITIES				
0 - 190	24	60					
190 - 205	70	8					
205 - 307	80	45					
307 - 358	74	5					
358 - 362	25	56					
375 - 450	85	54					
450 - 473	87	8					
473 - 526	37	54					
0 - 261	62	57					
334 - 350	90	18					

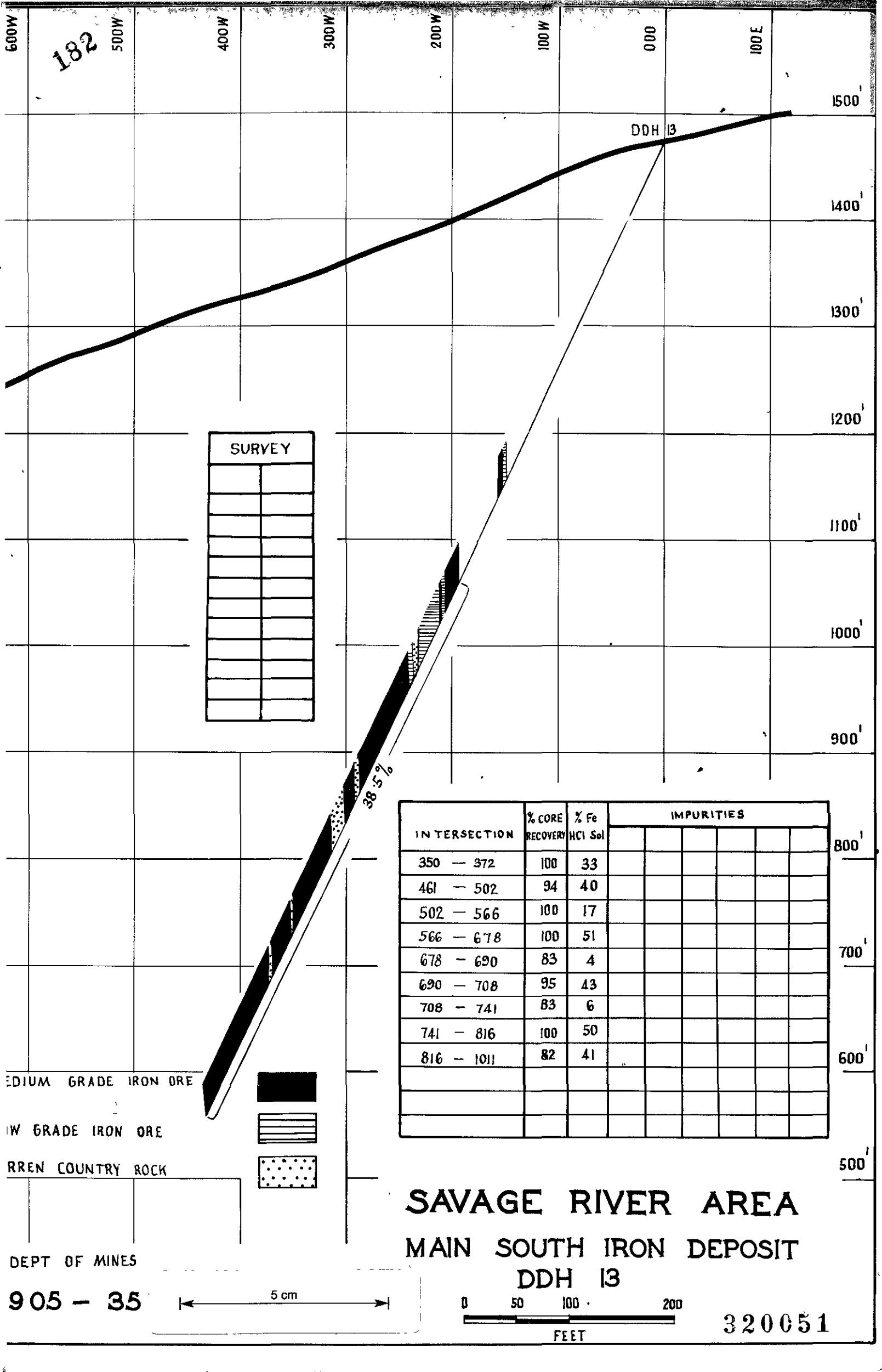
**SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
DDHs 11 & 12**

DEPT OF MINES
1904 - 35



320050





182

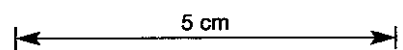
SURVEY	

INTERSECTION	% CORE RECOVERY	% Fe HCl Sol	IMPURITIES				
350 - 372	100	33					
461 - 502	94	40					
502 - 566	100	17					
566 - 678	100	51					
678 - 690	83	4					
690 - 708	95	13					
708 - 741	83	6					
741 - 816	100	50					
816 - 1011	82	41					

MEDIUM GRADE IRON ORE
 LOW GRADE IRON ORE
 PRIMITIVE COUNTRY ROCK

SAVAGE RIVER AREA MAIN SOUTH IRON DEPOSIT DDH 13


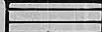


DEPT OF MINES
 9 05 - 35

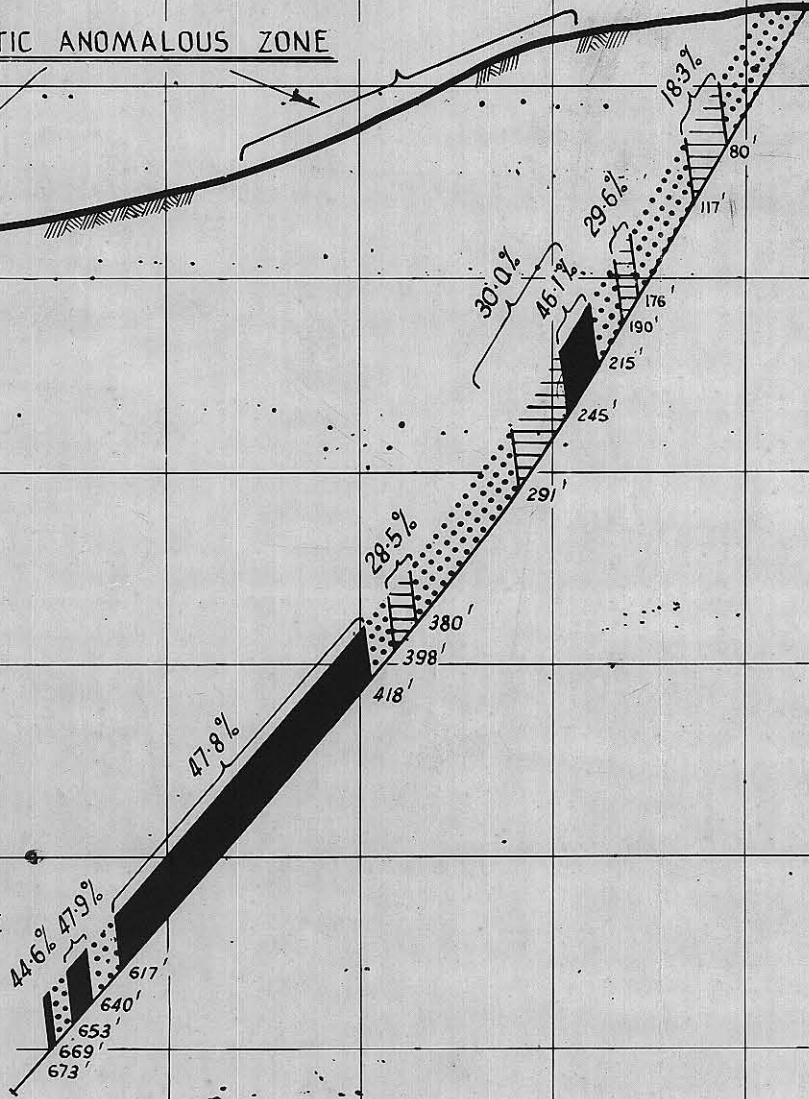


320051

MAGNETIC ANOMALOUS ZONE

SURVEY	
FOOTAGE	DIP
0	60°
100	60°
200	57° 30'
300	52° 30'
400	50°
500	49°
600	49°
700	48°

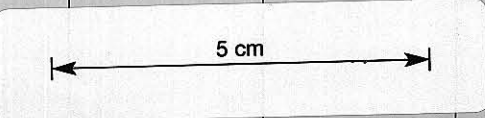
-  MEDIUM GRADE IRON ORE
-  LOW GRADE IRON ORE
-  BARREN COUNTRY ROCK
-  IRON ORE OUTCROP



INTERSECTION	% CORE RECOVERY	% Fe HCl SOL.	IMPURITIES				
			SiO ₂ %	TiO ₂ %	Mn%	P ₂ O ₅ %	S%
80 - 117	40	18.3					
176 - 190	20	29.6					
215 - 291	63	30.0					
380 - 398	100	28.5					
418 - 494	90	36.4					
494 - 617	86	55					
640 - 653	77	47.9					
669 - 673	75	44.6					

320052

SAVAGE RIVER AREA
MAIN SOUTH IRON DEPOSIT
D.D.H. 16.



320053

RIO TINTO AUSTRALIAN EXPLORATION PTY LTD

EL 4 / 61

SAVAGE RIVER

DRILL CORE RESULTS

60_328

320054

DIAMOND DRILL
HOLES

D.D.R.T.A.E. No. 1

Core No.

DRILL RECORD

GEOLOGICAL LOG

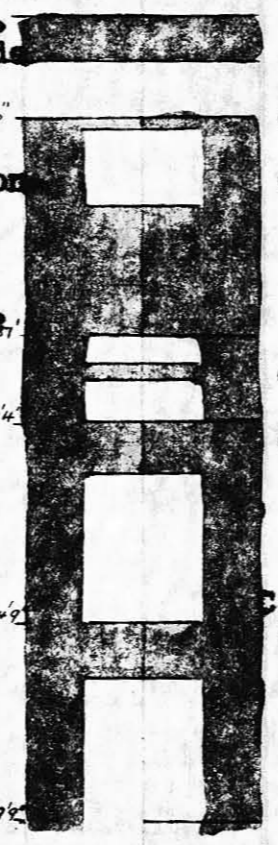
GEOLOGICAL SECTION

ASSAY RESULTS

320057

037

Date	DRILL RECORD		GEOLOGICAL LOG		Sample No.	From	To	ASSAY RESULTS								
	From	To	From	To				Description	Core	Sample	Actual length of sample	HCl sol Fe %	SiO ₂ %	TiO ₂ %	Mn %	P ₂ O ₅ %
	64'	2'2"														
	80'	2'3"	79	80	616	79	80	10"	54.7							
	82'	1'7"	80	81'6"	617	80	81'6"	1'6"	28.7							
	82'		81'6"		618	81'6"	87'	3'8"	58.5							
	87'	3'7"			619	87'	89'4"	5"	58.6							
	89'4"	5"			620	89'4"	99'9"	3'7"	58.2							
	94'9"	1'4"			Comp 758	79	116	21'2"	56.6	6.07	1.54	0.09	0.08	1.64	2.36	
3/7	94'9"															
	99'9"	1'4"														



DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Core recov-ary	HCl sol Fe %	SiO ₂ %	TiO ₂ %	Mn %	P ₂ O ₅ %	S %	Al ₂ O ₃ %	
	321'	2'9"				with thin slivers of talc, & pyrite aligned in discontinuous linear bands. The linear arrangement could well be due to a prior schistosity which localised the emplacement of the magnetite & pyrite. Observations on schistosity are :			657	321	328'7"	6'8"	47.8							
	321'	325'							Comp 759	315'3"	335'9"	17'0"	49.9	7.68	1.10	0.04	0.18	4.78	2.24	
	328'7"	331'5"							658	328'7"	335'9"	6'3"	52.7							
	331'5"	335'9"				321' = 47° 327 1/2' = 55° 336' = 50° 345' = 60° 350' = 60° 361' = 70° 369' = 100° 372' = 55° to 0°			659	335'9"	340'9"	3'4"	48.8							
	340'9"	344'6"							660	340'9"	344'6"	1'2"	60.4							
	344'6"	348'0"							661	344'6"	350'0"	2'8"	54.5							
	348'0"	350'1'0"							Comp 760	335'9"	355'1'	8'2"	54.7	5.46	0.89	0.05	0.10	3.81	2.25	
	350'1'0"	355'1'0"							662	350'1'0"	355'1'0"	1'0"	56.7							
	355'1'0"	365'1'0"				From 381' to 393' the magnetite pyrite assemblage is massive & the pyrite unoriented. N.B. Throughout the whole section an asbestiform mineral in occasional seams up to 1/4" occur, paralleling the general schistosity. N.B. At 381 1/2' a small drag fold is reflected in several small pyrite seams over 2" core length			663	355'1'0"	365'1'0"	3'1"	50.4							
	365'1'0"	370'1'0"							664	365'1'0"	370'1'0"	2'1"	55.7							
	370'1'0"	373'1'5"							665	370'1'0"	375'6"	2'3"	55.2							
	373'1'5"	375'6"							Comp 761	355'1'0"	375'6"	7'5"	53.0	7.33	1.05	0.07	0.07	2.39	2.67	

320062

0420

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS							
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Core Recov-ery	HCl sol Fe %	SiO ₂ %	TiO ₂ %	Mr. P ₂ O ₅ %
1959	431'9	431'9	2'11"	428'9		Banded magnetite talc - chlorite rock the alternating rock types represent the trace of an old schistosity.			701	428'9	436'	6'3	38.7			
	436'		3'4"			Talc: Magnetite = 1:2 by volume approx			702	436'	441'0	2'3	24.1			
	441'		2'3"						703	441'	446'	2'2	41.1			
	446'		2'2"						704	446'	452'	2'3	49.9			
	449'		2'1"	449'	449'				705	452'	454'	1'6	55.2			
	452'		0'7"						722	454'	460'6	2'8	56.4			
	454'		1'6"			Massive banded magnetite - pyrite. Pyrite occupies 1/3 by vol. of whole.			Comp 911	446'	460'6	6'10		4.29	0.99	0.04 0.05 6.3
	458'6		1'5"			High grade										
	460'6		1'3"			Dip observations										
						460' = 80°										
						482' = 85°										
						487' = 75°										
						497' = 80°										
						500' = 80°										
	469'6		N11						723	460'6	476'	2'0	51.4			
	470'9		0'5"						Comp 912	460'6	479'0	2'		3.12	0.49	0.04 0.03 9.5
	476'		1'7"													
	479'		N11						724	479'0	483'9	2'9	47.8			
	480'9		0'1"													
	483'9		2'8"						725	483'9	488'9	4'11	43.6			

Hole No.

DRILL RECORD			GEOLOGICAL LOG				GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To		
		545'			545'								
	545'			545'		No core							
		564'	N11										
	564'				565'								
		567'		565'		Yellow & chocolate coloured clay pug.							
	567'												
		571'											
	571'												
		576'	N11										
	576'												
		581'	0.8"										
	581'												
		591'	1.2"										
	591'			591'									

046

DRILL RECORD

GEOLOGICAL LOG

GEOLOG. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To							
1953						Mildly sheared fine-grained pale green coloured country rock.												
		600'																
	600'	601'	11"			Shearing 45° to axis												
	601'																	
		606'	4'11"		606'													
	606'			606'		Massive milky-white vein quartz.												
		610'	3'10"															
	610'																	
		615'	5'															
	615'																	
					621'													
				621'		Pale green siliceous country rock												
		624'	8'9"		623'6"													
	624'			623'6"		Massive milky-white vein quartz												
		627'3"	3'5"															
	627'3"																	
		634'	6'3"															
	634'																	
		639'	5'		639'													

End of hole

Inclination of Bore Hole

15'	46 1/2°
100	46°
200	44 1/2°
300	45°
400	45 1/2°
500	47 1/2°

320068

D.D.H. No. 1

DIAMOND DRILL CORE RECORD

320069

AREA OF OPERATION **Savage River Iron Ore, Deposit**

Hole No. **No.1**

Location of Site **300 ft. West on Traverse E00**

Reduced Level of Site **1515' Above sea**

Drilled by **Associated Diamond Drillers**

Date Commenced **31st October, 1957.**

Bearing of Hole **103 degrees**

Core Recovery

Date Completed

Dip of Hole **41 degrees**

Geological Logging by —

W. Atkinson

Bore Depth

DRILL RECORD			GEOLOGICAL LOG			ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	GEOL. SECTION	Sample No.	From	To
1957 31/10	0'	5'	nil	0'	5'	Extremely loose iron-ore scree. Pebbles of magnetite and limonite (0.5-10.0 cm) in matrix of clay and iron ore particles.				
1/11	5'	17'	6"	5'	7'	Scree - as above. Yellow clay, iron-stained. Weathering product of "amphibolite."				
				12'	17'	Partially weathered "Amphibolite", clay in joint planes, numerous grains magnetite (1.0-1.5mm) and minor amounts pyrite. Sludge (10'-15') "amphibolite", magnetite and a few pyrite grains.				
2/11	17'	42'	6"	17'	20'	Slightly weathered "amphibolite", with magnetite and some pyrite. Sludge (15'-20') shows more pyrite than previous sludge.				
				20'	40'	No core. Five foot sludges show "amphibolite" material, chlorite and clay with roughly equal amounts magnetite and pyrite.				
3/11	42'	52'	Nil	42'	52'	No core. Sludge of "amphibolite" with much pyrite. Pyrite = magnetite.				
4/11	52'	83'	16"	52'	80'	No core. Sludge shows "amphibolite" magnetite and pyrite grains.				
				80'	83'	12 inches - green, schistose amphibolite, much chlorite. Schistosity 50° to axis of core. 4 inches - mineralised "amphibolite" with magnetite grains and pyrite veinlets.				
6/11	83'	110'	9'	83'	89'	(21" core) 12" Foliose, magnetite-amphibolite-schist. Magnetite as granulate masses and veinlets. Minor amounts pyrite, and some chalcopyrite grains. Schistosity about 60° to axis of core. 9" more massive amph-schist with little mag. and pyrite.				

031

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION	ASSAY RESULTS		
Date	From	To	Core Recov.	From	To	Description	Sample No.	From	To
6/11 801	83'			89'	95'	Massive "amphibolite" (doleritic texture) minor amounts, mag. and pyrite. 1" with much pyrite (approx. 30%) as cubes.			
				95'	110'	Very poor core recovery "soft bands?" in solid formation of c.gr.gabbro-amphibolite, a little mag.var. amounts pyrite.			
7/11	110'	140'	11'	110'	120'	No core, soft amph?			
				120'	124'	F.gr. amph-schist. Minor pyrite and mag.			
				124'	125'	M.gr. amph-schist. Large pyr.cubes.			
				125'	130'	3" core, mag.-amph. with some pyrite and a few grains chalcopryite.			
				130'	135'	Foliated mag-amph. with pyrite and a little chalco.			
				135'	138'	F.gr.amph-schist, mag.pyr.chalcopyrite			
				138'	140'	Magnetite-pyrite intergrowth. little rock material.			
8/11	140'	181'	15'	140'	148'	F.gr. mag-amph-schist, minor pyrite and haematite veinlets.			
				148'	181'	Banded l and d.green amphibolite-			
9/11				181'	205'	schist, little magnetite. Small quartz stringers. Var.amounts pyrite, generally small.			

320070

032

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION	ASSAY RESULTS					
Date	From	To	Core Recov.	From	To	Description		Sample No.	From	To	Fe	Cu	S
1957 11/11	205'	242'	24'	205'	240'	Massive f.gr. "amphibolite" schistosity absent or slight. Magnetite rare, small grains in matrix. Minor ants. pyrite, possibly chalcopyrite. Some small (1-3 mm.) quartz stringers at 209'. Small serpentine veinlets (3-6 mm) at 216'-224'. Hematite on joint planes.	7	205'	208'	Nil	Nil	1.03%	
				240'	242'	L. grey "mag-amphibolite", slightly schistose. Magnetite as granular masses and layers. Minor ants. pyrite							
12/11	242'	246'	2"	242'	246'	"Magnetite amphibolite" - as for 240' - 242'							
14/11	246'	272'	9'	246'	272'	Magnetite-amphibolite-schist, proportion mag. increases gradually. Poor core-recovery indicates "soft hands" Minor ant. pyrites as disseminated grains. High iron in sludge.							
17/11	272'	313'	15'	272'	289'	Magnetite-amphibolite-schist. Proportion magnetite variable, as granular masses and veinlets. Pyrite as small grains and aggregates. Core recovery still poor. Schistosity generally 30° - 50° to axis of core.							
				289'	313'	D. Green "mag-amph-schist" ant. pyrite slightly increased. Graininess variable. Some small veinlets of quartz-felspathic material and of l. green serpentine.							
16/11	313'	320'	Nil	313'	320'	No core. Sludge rich in "amphibolite" matter, mainly chlorite and talc? particles, pyrite and a little magnetite. "Shear zone"?							
15/11	320'	355'	14'	320'	322'	F. and m.gr. mag-amphibolite-massive. Little pyrite.							
				322'	323'	Pyritised-amph- Little mag. Pyrite as veinlets and granular masses.							
				323'	329'	Massive f.gr. mag-amphibolite. Mag. as grains (1-2 mm) in ground mass, and as small veinlets (3-6mm). Several quartz veinlets (5mm) 327'-329'	101	325'	330'				
				329'	332'	C. and m.gr. magnetite-ore, minor ants. amphibolite-schist, pyrite and quartz	12 102	329' 330'	338' 335'				32.3
				332'	338'	12" core - 7" mag-amph-schist, small asbestosiform veinlets-antigorite? 5" - massive magnetite ore.	103	335'	340'				
				338'	344'	C. and m.gr. mag-amphibolite. High mag. with minor ants. pyrite, asbestos, quartz.	13 104	338' 340'	346' 345'				25.3
				344'	345'	3" core - mag-amphibolite with much pyrite.							

033

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION	ASSAY RESULTS					034				
Date	From	To	Core Recov.	From	To	Description		Sample No.	From	To	Au	Cu		S	Fe		
10/11 cont'd.	320'	355'	14'	345'	346'	3" core - Massive - amphibolite	106	350'	355'								
				346'	350'	Mag-amph-schist. Proportion magnetite variable. Pyrite as granular masses.	14	346'	350'				23.5				
				350'	355'	C-gr. magnetite ore - 12" core Mag-amphibolite - 12" core.	15 107	350' 355'	355' 360'				38.9				
11/11	355'	381'	12'	355'	362'	Massive, d.green, f-m.gr. mag-amphibolite.	16	355'	362'				9.2				
				362'	381'	Minor amt. pyrite as small grains C-m.gr. granular magnetite in a sparse ground mass of foliated amph.material. A little quartz, talc, pyrite & serpentins	108 17 109	360' 362' 365'	365' 370' 370'				33.9				
							18 110	370' 370'	377' 375'				39.9				
							19 111 20 112	377' 375' 382' 380'	382' 380' 390' 385'				32.5 12.7				
							388' 389' 401'	389' 401'	C-gr.magnetite, minor amts.foliosse amph. Massive, f.grained magnetite-amphibolite, schistose in part. Schistose parts mag. rich. Little pyrite present. Towards 400' grades into a mag-rich variety, Magnetite ore - a talc-magnetite rock with very minor amts.pyrite and unaltered amphibolite. The talc occurs as small veinlets and masses in a magnetite groundmass, being the ant.derivative of the "amphibolite".	21 114 115 22	390' 390' 395' 397'	397' 395' 400' 401'			13.7 36.6		
20/11	381'	423'	24'	401'	423'	Magnetite ore - a talc-magnetite rock with very minor amts.pyrite and unaltered amphibolite. The talc occurs as small veinlets and masses in a magnetite groundmass, being the ant.derivative of the "amphibolite".	23 116 117 24 118 25	401' 400' 405' 408' 410' 415'	408' 405' 410' 415' 421'				54.0 57.4 47.7				
				423'	440'	Talc-magnetite ore - amt.pyrite variable generally small.	119 26	415' 421'	420' 429'				59.2				
				440'	442'	Magnetite-amphibolite; with pyrite mag-rich	120 121 27 122 28 123	420' 425' 429' 430' 435' 435'	425' 430' 435' 440' 440'				55.2 62.9				
				442'	445'	Talc magnetite ore, Minor amt.green amph-schist.	29 124	440' 440'	445' 445'				34.2				
				21/11	445'	471'	15'	445'	471'	Talc-magnetite ore. Proportion talc: mag. approx. 1:10. Minor amts.pyrite as cubes or as small granulate masses. A little mag-amph-schist as small, rare veinlets.	30 125 31 126 32 127 33 128 34 129	445' 445' 450' 450' 455' 455' 459' 460' 465' 465'	450' 450' 455' 455' 459' 460' 465' 471' 470'				54.4 57.1 59.8 55.7 55.6
								471'	475'	Mag-amphibolite-talc schist. Contact with magnetite ore is gradational.	35 130	471' 470'	475' 475'				33.9
								475'	479'	Mag-amphibolite. Much magnetite.	36 131	475' 475'	479' 480'				50.9

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION	ASSAY RESULTS					
Date	From	To	Core Recov.	From	To	Description		Sample No.	From	To	As	Cu	S
10/11	471'	484'	7'	479'	484'	Mg-amphibolite, generally massive, minor amt. pyrite	37 132	479' 480'	484' 485'				10.1
10/11	484'	503'	7'	484'	487'	F. and H. gr. massive mag-amphibolite pyrite as cubes.	38 133	484' 485'	487' 490'				7.1
				487'	503'	Talc-magnetite ore. Transition from mag amph. gradual. Minor amts. pyrite and serpentine material.	39 134 40 135 41 136	487' 490' 494' 495' 500' 500'	494' 495' 500' 500' 503' 505'				60.9 57.3 61.0
10/11	503'	517'	3'	503'	508'	Talc-magnetite, a little pyrite and serp.	42	508'	515'				15.7
				508'	517'	F. and H. grained, magnetite-amphibolite minor amts. pyrite. Generally massive. Serpentine (5 mm.) veinlets. At 515' hole caving badly, very soft, mag-amph. v. hard on either side. "Shear Zone?"							

035

D.D.H. No. 2

DIAMOND DRILL CORE RECORD

AREA OF OPERATION SAVAGE RIVER - TASMANIA

RECEIVED	17 JUN 1958
ANSWERED	
DEPT. OF MINES	
REF. NO.	

Director Mines

320075

048

Hole No. D.D.H. No. 2

Location of Site 241 ft. east of E.5

Drilled by Associated Diamond Drillers

Date Commenced 28th January, 1958

Core Recovery Total = 64.51 per cent.
Ore Sections 313-718'6" 93.71 per cent.

Date Completed 12th April, 1958

Reduced Level of Site R.L. 1630'

Bearing of Hole 260°

Dip of Hole 45°

Bore Depth 863 feet.

Geological Logging by —

W.J. Atkinson

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS					
Date	From	To	Core Recov.	From	To	Description	SECTION	Sample No.	From	To			
28/1	0'					0' (Collar Red-brown residual clay containing small quartz stringers. Shows remnants of schistosity. Not coring. 5'							
	9'		N11			Weathering product of "amphibolite-schist".							
	9'					No indication of magnetite or pyrite.							
	17'		N11	17'	17'								
	17'	17'6"	S	17'	17'6"	(Dry-cored) Clay similar to collar of hole. 77'							
	17'6"			17'6"									
	25'		N11										
	25'					Sludge - Red-brown mixture of clay, partially decomposed rock matter (amphibolite) and quartz particles. 25'							
	30'		N11										
	30'												
	38'			38'	38'	No core but drilling indicates slightly harder band. 40'							
	40'		N11	40'	41'								
	40'			40'	41'								

REMARKS

- [] = Amphibolite-schist.
- [x x x] = Magnetite-amphibolite-schist
- [] = Amphibolite - massive type
- [x x x] = Magnetite-amphibolite - massive type.
- [] = Less than 40% Hal Sol. iron.
- [] = 40-50% Hal Sol. iron
- [] = Greater than 50% Hal Sol. iron.

Ore

Notes: Samples with an "S" number indicate sludge samples.
Silica content quoted for composite samples is total silica including silica in rock forming minerals.
Total iron content referred to is iron soluble in Hal, HNO₃ and fuming H₂SO₄.
Hal Sol. iron is equivalent to oxidation.

DRILL RECORD				GEOLOGICAL LOG				GEOL. SECTION		ASSAY RESULTS								
Date	From	To	Core Recov.	From	To	Description	98'	Core	Sample	Sample No.	From	To						
1976		100'	Nil	98'		Continues in clay and decomposed "amphibolite-schist". No core. Sludge still uniform brown, of clay and decomposed country rock.	100'											
	100'																	
		108'	Nil															
	108'																	
		120'	Nil															
	120'																	
					123'													
				123'		Slight change in sludge colour to a lighter brown. Ground somewhat harder.												
		130'	Nil		130'													
30/1	130'	131'	2"	130'	131'	Very soft, highly decomposed amphibolite-schist. Fine grained schistosity 45° to core axis. Iron-stained but no indication of magnetite or pyrite.												
	131'																	
		135'	Nil		135'													
	135'				135'	Amphibolite-schist as above, becoming progressively less weathered.												
		145'	102"		145'	Quartz veinlets at 144'												
	145'				145'	Amphibolite-schist as above slightly												
					146'	Less weathered												
					146'	Clay and very soft amphibolite-schist (weathered)												
		155'	6"		155'													

050

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To							
30/1	155'			155'		Clay and highly decomposed country rock - "amphibolite-schist"												
31/1	160'	160'	Nil			Red-brown sludge of clay and weathered rock particles. Some quartz.												
	165'	165'	Nil															
	170'	170'	Nil															
	180'	180'	1'3"	178'	178'	Very soft weathered "amphibolite-schist" and clay. Clay as bands parallel to schistosity. "Amphibolite" partly chloritized.												
1/2	185'	185'	10"			Quartz veinlets at 186'												
	190'	190'	2'0"	190'	190'	Amph. becomes progressively less weathered.												
	195'	195'	2"	190'	190'	As above, but slightly less weathered. Clay band often washed away.												
1/2	200'	200'	2"	200'	200'	Zone of oxidation ends at 200'.												
	205'	205'	4'5"			Sludge changes from brown to grey. Fine grained, green-grey "amphibolite-schist". Much quartz as veinlets up to 1 cm. in width. No visible magnetite												
	210'	210'	5'0"	210'	210'	Pyrite as small grains in matrix and as masses in quartz. 209'6" possibly some chalcopyrite.												

051

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To									
1952	210'			210'		Fine grained, gray-green "amphibolite-schist" as before. Much quartz as veins.														
		215'	2'0"																	
	215'				216'															
				216'	218'	Very soft "blue" clay-not coring shear?														
		219'	10"	218'	221'	Soft, dark green, fine grained amphibolite-schist. No pyrite.														
	219'			221'		Fine-medium grained, light green amphibolite-schist. Much quartz. Some pyrite. Quartz vein.														
		224'	2'1"		225'															
	224'	226'	1'0"	225'		Dark green, soft, amphibolite-schist. No pyrite.														
4/2	226'				227'															
		230'	2'6"	227'		Fine grained, light green, "amphibolite-schist". Quartz veins. Minor amounts pyrite as single crystals and masses.														
	230'																			
		234'	1'9"			Quartz veins generally parallel to schistosity. Quartz at 230' minor amounts chalcopyrite.														
	234'				240'	237'- small shear, pug and pyrite for 1".														
				240'																
		243'	7'0"			Medium grained, light & dark green "amphibolite-schist", containing much quartz and feldspar (white) forming bands alternating with the chloritized amphibolite material. Structure is "gneissic" the quartz-feldspar masses forming augen in places.														
	243'																			
		250'	4'7"																	
	250'																			
		255'	3'6"			Pyrite as single crystals and as granular masses.														
	255'					No magnetite visible.														
		260'	8"			253'- Foliated mass of quartz, feldspar and chlorite. Very soft.														
	260'																			
		264'	2'4"		264'															

052

DRILL RECORD				GEOLOGICAL LOG				GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe Hel Sol	Fe Total	Total SiO ₂	TiO ₂	P ₂ O ₅	Mn	S	Al ₂ O ₃	
5/2 1928	264'			264'	269'	Amphibolite-schist (gneissic) Magnetite-amphibolite-schist. Consists of a soft, fine to medium grained ground mass of magnetite and chloritized "amphibolite", with veinlets of quartzo-felspathic material replacing amphibolite. Pyrite as small disseminated grains. Magnetite sometimes localized in bands.	264'													
		271'	1'6"																	
	271'																			
		273'	3"																	
	273'																			
		278'	1'0"																	
	278'																			
		283'	1'0"		283'															
	283'	285'	8"	283'	284'6"	Dark green mag.-amphibolite (Tex. granulitic) No pyrite. Magnetite-amphibolite-schist as above, highly chloritized with much quartz & feldspar (white). Generally proportion of magnetite small, but from 290' onwards occurs as granular bands.	283'													
	285'			284'6"																
		290'	4'0"																	
	290'																			
		295'	2'10"																	
	295'																			
		300'	3'10"																	
	300'																			
6/2	300'					Minor Cu mineralization (CuFeS ₂)	300'													
		304'	1'6"																	
	304'	307'	1'7"		307'															
	307'				307'	Massive talc (soapstone) light green and quartz. Minor amount mag.-amphibolite-schist. Much pyrite.	307'													
		310'	1'7"																	
	310'																			
		313'			313'															
		315'	1'8"		313'	315'	Massive magnetite, talcose.													
	315'	317'	1'7"		315'	316'	Fine grained mag.-amphibolite-schist, a little pyrite.													
	317'	318'	1'		316'	Massive, granular magnetite.														
7/2	318'					Principal impurity talc. Minor														
		321'	3'0"																	

053

Al₂O₃

Al₂O₃
0.54

DRILL RECORD			GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS												
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe Hcl Sol. %	Fe Total %	Total SiO ₂ %	TiO ₂ %	P ₂ O ₅ %	Mn %	S %		
7/2	321'	324'	3'0"			Amounts pyrite and chloritized amphibolite-schist. Pyrite is rare, as granular masses and veinlets.			L67	323'	328'	46.4								
	324'									BA	313'	337'	46.6	48.7	13.8	1.65	0.04	0.10	0.27	
	327'	331'	3'10"							L68	328'	333'	50.9							
	334'	334'	2'9"							L69	333'	337'	51.3							
	334'	336'6"	2'6"		337'															
	336'6"	338'	1'6"	337'	339'	Fine grained (chloritized) mag.-amphibolite-schist. Magnetite. Talcose with more minor amounts chlorite and serpentine minerals			L70	337'	339'	13.8								
	338'	342'	4'0"	339'																
10/2	342'	346'6"	4'4"				341' - 4" mag-amphibolite-schist.			L71	339'	345'	56.8							
	346'6"				348'				L72	345'	351'	51.2								
	351'	351'	3'11"	348'	349'	Fine grained mag-amphibolite-schist.														
	351'			349'	351'	Magnetite ore, as above.			BB	337'	370'	43.0	45.8	16.7	1.68	0.03	0.10	0.40		
	351'	355'6"	4'6"	351'		Magnetite-amphibolite-schist. Consists of bands of medium grained magnetite in matrix of fine grained chloritized amphibolite-schist. Minor amounts pyrite and talc.			L73	351'	358'6"	15.0								
	355'6"	358'	2'6"	359'		Magnetite ore, high grade.														
	358'	361'	3'0"	359'		Talcose with very minor amounts pyrite.			L74	358'6"	364'	60.1								
	361'	362'	1'0"																	
	362'	365'	3'0"	366'																
	365'	366'	1'0"	366'	367'	Mag.-amphibolite-schist 4" clay pug			L75	364'	370'	50.0								
11/2	366'	370'	2'4"	367'		Magnetite ore. Massive & granular														
	370'	372'	1'11"			impurities generally schistose. Principal			L76	370'	377'	54.1								
	372'	377'	3'4"			impurities talc & chlorite, some amphibolite material & pyrite.			L77	372'	377'	50.9								

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe Sol.	Fe Total %	Total SiO2 %	TiO2 %	P2O5 %	Mn %	S %	
17/2	487'					Impure magnetite ore													
	489'6"	2'6"		489'6"					L100	484'	489'	45.5							
	489'6"			489'6"		Massive mag.-amphibolite													
				491'															
				491'		Impure magnetite ore (poor grade)			L160	489'	495'	39.0							
	494'6"	3'0"				Impurities fine grained chloritized amphibolite material, minor amounts													
	494'6"								BI	479'	502'	45.1	46.6	13.3	1.45	0.06	0.10	1.14	
	497'	2'6"				asbestos & serpentine minerals and pyrite.													
	497'								L161	495'	502'	47.4							
	502'	5'0"		502'															
	502'			502'		Fine grained magnetite-amphibolite-schist (Chloritized) Magnetite as													
	505'	3'0"				granular band in fine grained ground			L162	502'	507'	14.4							
	505'					mass of chlorite etc. Schistosity													
	509'	4'0"				variable, in places almost absent.													
18/2	509'								L163	507'	512'	29.2							
	512'	3'0"		512'															
	512'			512'		Magnetite, impurities less, generally chlorite, asbestos and pyrite													
	517'	5'0"							L164	512'	519'	58.8							
	517'			519'															
	520'6"	3'6"		519'	520'	Medium grained green, mag-amphibolite schist.			L165	519'	523'	4.0							
	520'6"			520'		Fine grained massive, magnetite-amphibolite.													
	525'	4'6"		523'					L166	523'	528'	57.6							
	525'					Magnetite ore, fine grained granular and massive.			IK	512'	538'	50.1	51.8	11.4	1.87	0.05	0.15	0.45	
	528'	3'0"				Impurities generally few, mainly fine grained chloritized amphibolite material & "serpentine - asbestos".													
19/2	528'								L167	528'	533'	61.2							
	533'	4'10"				Minor amounts pyrite & little or no talc.													
	533'								L168	533'	538'	56.1							
	538'	4'8"																	
	538'								L169	538'	544'	44.9							
	540'	2'0"		540'															
									L170	544'	550'	48.6							

058

DRILL RECORD			GEOLOGICAL LOG			GEOL. SECTION		ASSAY RESULTS												
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe Hel Sol	Fe Total	SiO2	TiO2	P2O5	Mn	S		
1958	540'	541'6"	1'6"	540'		Fine grained magnetite, granular & massive. High & medium grade ore, proportions variable. Impurities in minor amounts only, pyrite very rare. Amphibolite matter chloritized & generally schistose. Also some serpentine often asbesti form. No quartz, felspar or talc visible			L169	538'	544'	44.9								
	541'6"	544'6"	3'6"							L170	544'	550'	48.6							
	544'6"	547'	2'6"							BL	538'	560'	50.3	51.3	11.0	1.69	0.05	0.10	0.21	
	547'	549'	2'0"							L171	550'	555'	50.4							
5/3	549'	550'	1'0"																	
	550'	552'	4'0"																	
	552'	557'	3'0"							L172	555'	560'	58.6							
	557'	561'	4'0"																	
	561'	565'	4'0"							L173	560'	565'	53.8							
	565'	569'	4'0"																	
	569'	571'	2'0"							L174	565'	570'	44.7							
	571'	575'	4'0"																	
	575'	577'	2'0"																	
6/3	577'	579'	2'0"							BL	560'	581'	53.1	54.0	9.3	2.03	0.04	0.10	0.11	
	579'	581'	2'0"							L175	570'	575'	58.1							
	581'	585'	2'4"																	
	585'	586'	1'1"																	
	586'	587'	7"							L176	575'	581'	55.3							
	587'	589'	1'9"																	
	589'	591'	2'0"																	
7/3	591'	593'	1'8"						L177	581'	586'	54.4								
	593'	594'	7"	594'																
									L178	586'	591'	38.4								
									L179	591'	596'	46.8								

063

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To		
1958	815'						816'						
23/A	815'												
		817'	1'11"										
		817'					820'						
		822'6"	4'9"										
24/A	822'6"						825'						
					830'								
		832'	3'10"	830'	832'	Green, medium grained chloritized amphibolite-schist with massive amphibolite showing remnants of original doleritic? texture.	830'						
	832'				832'	Fine & medium grained, light green magnetite-amphibolite schist, chloritized.							
		835'	1'9"	832'		Magnetite not abundant as small grains and irregular bands roughly parallel to schistosity. A little pyrite.							
	835'						840'						
		840'	5'0"										
	840'				844'								
		845'	3'9"	844'		Fibrous actinolite?-schist forms ground mass for magnetite & pyrite in approx.							
	845'	846'	Nil										
24/A	846'				848'	(approx) equal proportions. "Shear Zone" and water course, hole caving.							
		850'	3"	848'		Massive, hard, fine grained chlorite-serpentine rock. Dark green in colour.							
7/5	850'				850'	Pyrite as cubes.							
					850'	Mag-amphibolite-schist. Soft, poor coring. Granular magnetite in schistose							
		855'	Nil										
8/5	855'	857'	8"		857'	matrix of fine fibrous amphiboles & talc.							
9/5	857'	857'6"	3"	857'	858'6"	Massive, dark green, talc-chlorite.							
	857'6"	858'	2"	858'6"		No core, sludge indicates fine fibrous amphibolites, talc, chlorite & a little							
		858'	3"										
12/5	860'	863'	Nil		863'	magnetite.							

"Shear zone" 844'-863'+, core recovery poor
 Consists of thin bands of massive serpentine material, talc (soapstone) & mag-amphibolite-schist, which core, separated by soft, non-coring green fibrous amphibole (actinolite?). Minor amounts pyrite throughout.

HOLE ABANDONED AT 863 FEET

D.D.H. No. 3

DIAMOND DRILL CORE RECORD

AREA OF OPERATION SAVAGE RIVER - Tas.

RECEIVED	27 JUL 1959	REGISTRAR	E & I L
ANSWERED		DEPT. OF MINES	
REF. NO.			

320092

064

Hole No. D.D.H. No. 3

Drilled by ASSOCIATED DIAMOND DRILLERS

Core Recovery 74.31%

Geological Logging by —

0' 0" - 544' 6" W.J. Atkinson
544' 6" - 939' 9" D.M. McKenna.

Location of Site 414'W on B8

Date Commenced 13th April, 1959.

Date Completed 19th June, 1959.

Reduced Level of Site R.L. 1364'

Bearing of Hole 269° (Approx.)

Dip of Hole 45°

Bore Depth 944 feet.

DRILL RECORD				GEOLOGICAL LOG			ASSAY RESULTS												
Date 1959.	From	To	Core Recov.	From	To	Description	GEOLOG. SECTION Core Sample	Sample No.	From	To	Fe HCl.Sol	Fe Total	SiO ₂	TiO ₂	Mn	P ₂ O ₅	S.	Al ₂ O ₃	
13/4	0'	2'	Nil	0'	2'	Scree. Magnetite and hematite													
	2'			2'		Weathered magnetite showing slight oxidation to hematite and limonite.													
		5'	4"																
14/4	5'					Siliceous and sulphide impurities rare. Generally friable in fragmental boulders with many voids. High grade ore.			0'	28'	67.5								
		10'	Nil																
15/4	10'																		
		23'	5"																
	23'				25'														
		28'	1"		28'	Iron-stained clay, weathered amphibolite. No core. Water lost 28'		5	Sludge	23'	28'	52.1							
	28'				28'	Thin bands weath. mag. alternating with clay bands. Clay lost on coring				28'	31'	67.0							
		31'	6"		31'	Minor amts. pyrite and limonite.													
	31'				31'	Barren iron-stained clay, i.e. weathered amphibolite country rock.				0'	28'		0.17	0.35	0.09	0.04	0.06	0.68	
		38'	Nil																
16/4	38'																		

- REFERENCES -

SCREE

Amphibolite Schist.

Magnetite Amphibolite Schist.

Amphibolite - Massive type.

Magnetite - Amphibolite massive.

Less than 40% - HCl.sol.Fe.

40 - 50% - HCl.sol.Fe.

Greater than 50% HCl.sol.Fe.

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
20/4	156'3"	156'3"	4'3"	155'	156'	"Pug" of soft, talcose, clayey, magnetite amphibolite. Some pyr. & mag.	x	x											
	156'3"			156'		Magnetite ore with minor amounts pyrite and chlorite.				155'	160'	58.5							
21/4	160'3"	162'	1'9"	160'		F.gr. massive magnetite-amphibolite Chloritized with some serpentization along joint planes. Some epidote? visible. Pyrite and magnetite in equal small amts. as grains in ground mass.	x	x		150'	160'		3.88	0.30	0.11	0.09	4.1	1.04	
	162'	163'	12"							160'	168'	2.8	42.08	1.13	0.24	0.17	0.82	12.68	
	163'	164'	12"																
	164'	165'	12"																
	165'	166'	12"		169'														
	166'	169'	1'5"	169'															
	169'	172'	1'3"			M.gr. high grade magnetite ore, containing a little granular pyrite.				168'	175'	62.0							
	172'	173'3"	1'5"																
	173'3"	175'9"	12"			Chloritized amphibolite as small veinlets.				168'	190'		2.45	0.26	0.10	0.04	3.8	0.70	
	175'9"																		
		178'	2'3"							175'	180'	64.3							
	178'	181'7"	2'10"																
	181'7"																		
		183'6"	1'11"		185'					180'	185'	63.6							
	183'6"			185'		Mag-amph-schist. Mag. and pyr. as granular masses in talcose & chlorite Schistosity 25°.	x	x											
		186'6"	3'0"		186'	(matrix.)													
	186'6"			186'		Magnetite ore containing variable amts. pyrite and chloritized "actinolite-tremolite-schist".				185'	190'	56.1							
		190'	3'6"																
	190'																		
		192'6"	2'6"		193'					190'	195'	47.3							
	192'6"			193'		Magnetite-amphibolite (Low grade ore) Mag. in var. amts. in altered amphibolite matrix. Much serpentine.													
		196'	2'0"							195'	205'	53.9							
	196'	199'	1'3"																
	199'				200'														
		202'	1'3"	200'		Friable m.grained, high grade magnetite ore, but containing a considerable proportion pyrite as grains & veinlets. Very little siliceous impurity.				190'	210'		6.00	0.36	0.13	0.04	4.3	1.00	
	202'																		
		205'	2'3"							205'	210'	61.0							
	205'																		
		210'	3'0"																

06203

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS %										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
1959																			
22/4	210'	212'	1'6"							210'	215'	61.3							
	212'																		
		216'6"	4'6"																
	216'6"																		
		220'	2'7"							215'	220'	61.5							
	220'																		
		225'	5'0"																
	225'	227'	2'0"							210'	230'		1.37	0.35	0.15	0.03	2.9	0.99	
	227'									220'	225'	64.5							
		225'	5'0"																
	225'	227'	2'0"																
	227'									225'	230'	66.1							
		231'6"	3'2"																
	231'6"																		
		237'3"	5'8"																
	237'3"									230'	250'		3.10	0.29	0.14	0.18	3.9	0.55	
		242'3"	3'9"							235'	240'	62.8							
	242'3"																		
		247'3"	2'6"		245'														
	247'3"			245'		Magnetite ore as above. Somewhat harder with a little more amphibolite material.				240'	245'	59.2							
		249'6"	9"	249'6"	250'6"	Magnetite-amph-schist.				245'	250'	51.3							
27/4	249'6"			250'6"		F.gr. massive magnetite ore, in parts friable. Considerable amounts pyrite as granular masses 2 - 4 mm diam. Minor amts. chloritized amphibolite and serpentine.													
		253'6"	2'10"							250'	255'	51.1							
	253'6"	255'8"	1'4"																
	255'8"	257'9"	9"																
28/4	257'9"	258'6"	4"							255'	265'	54.2							
	258'6"	260'9"	3"																
	260'9"	261'10"	3"							250'	270'		6.83	0.22	0.14	0.61	4.2	0.63	
	261'10"	264'	7"																
29/4	264'																		

06203

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date 1959	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	Al ₂ O ₃	
29/4		266'	1'6"																	
	266'									265'	270'	57.6								
		271'	3'5"																	
	271'	273'7"	2'6"		273'3"					270'	273'7"	50.0								
	273'7"				274'	F.gr. massive, altered mag-amphibolite			L501	273'7"	275'	45.8								
		278'6"	2'9"			F.-m.gr. magnetite ore, generally massive but showing some banding, possibly veining, in low grade parts.			L502	275'	280'	56.3								
	278'6"								L501-L504	273'7"	290'		6.15	0.16	0.14	0.50	4.0	0.23		
		282'6"	1'5"						L503	280'	285'	52.9								
	282'6"					Principal impurity in form of serpentinized amphibolite. Chlorite relatively rare.														
		284'3"	1'3"																	
	284'3"					Pyrite common as veinlets and granular masses.			L504	285'	290'	55.8								
		289'3"	6"																	
	289'3"	291'	4"			From 285'-305', ore high grade consisting of very friable, granular magnetite.														
	291'	292'6"	2"						L505	290'	295'	56.2								
	292'6"	294'9"	1'4"						S. M666	285'	305'	54.8	4.85	0.10	0.15	0.93	4.2	0.68		
	294'9"	297'	4"																	
30/4	297'								L506	295'	300'	57.0								
		302'	8"																	
	302'	302'8"	3"			Proportion of magnetite in formation shows a marked decrease from approx. 300 ft. onward.			L505-L508	290'	310'		6.04	0.15	0.15	0.82	3.7	0.24		
	302'8"	303'8"	9"						L507	300'	305'	50.3								
	303'8"	305'	9"																	
	305'								L508	305'	310'	53.8								
		310'	5'0"																	
	310'	312'9"	2'9"						L509	310'	315'	46.4								
	312'9"	313'	3"																	
	313'	314'3"	1'3"						L509-L512	310'	330'		10.38	0.33	0.13	0.17	5.9	0.47		
	314'3"	317'3"	3'0"						L510	315'	320'	51.8								
	317'3"																			
		320'3"	3'0"																	

0.69

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
	320'3"																		
		323'6"	2'9"																
	323'6"	325'3"	1'6"																
1/5	325'3"	326'4"	1'1"																
	326'4"																		
		331'4"	4'4"																
	331'4"	333'6"	2'2"																
	333'6"	335'6"	2'0"																
	335'6"																		
		339'9"	4'3"																
	339'9"																		
		343'	3'0"																
	343'	345'3"	2'3"		344'														
	345'3"	346'6"	1'3"	344'		Serpentinized gabbro-amphibolite, fine to med.-grained, colour varying from light grey to shades of green.													
	346'6"																		
		350'9"	4'3"																
	350'9"					Chlorite not common, principal mineral a tough, f.gr. serpentine.													
		354'6"	3'9"																
2/5	354'6"					Pyrite abundant as granular masses and veinlets. Proportion magnetite small, some local concentrations.													
		358'9"	3'6"																
	358'9"					Generally massive, some lineation of pyrite and magnetite veinlets.													
		362'3"	3'6"																
	362'3"																		
		365'6"	3'0"																
	365'6"																		
						Probably some shearing, core rec. poor													
		371'	10"																
4/5	371'																		
		375'	2'0"																

0.70

8.1

6.1

320099

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS									
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S
5/5	375'	376'7"	4"						L522	375'	380'	7.2						
	376'7"	378'	Nil															
	378'	380'6"	2'6"															
6/5	380'6"	382'	1'6"						L521- L524	370'	390'				1.20			4.0
7/5	382'	383'6"	1'6"						L523	380'	385'	6.2						
	383'6"	385'6"	2'0"															
8/5	385'6"	387'7"	2'1"															
9/5	387'7"	389'7"	2'0"						L524	385'	390'	8.2						
	389'7"				391'													
		391'10"	2'3"	391'		Grey, serpentized, magnetite-amph ^{391'}												
11/5	391'10"	393'11"	1'9"		392'	schist.			L525	390'	395'	11.4						
	393'11"	396'7"	2'8"	392'		Massive f.gr. magnetite-amphibolite.												
	396'7"	397'11"	1'5"			Proportion chloritized amphiboles & serpentinite vary. Minor amt.pyrite.			L526	395'	400'	7.7						
	397'11"					Amt. magnetite shows gradual increase with bore depth.			L525- L528	390'	410'				1.14			4.3
	401'6"	403'8"	2'2"						L527	400'	405'	10.2						
	401'6"	403'8"	2'2"															
	403'8"	406'	2'4"	406'		4" vein granular pyrite												
	406'			406'		Soft l.green, serpentized schist, presumed to be originally amphibolite.			L528	405'	410'	13.3						
	408'5"	411'3"	2'5"			Magnetite and pyrite occur as unequal granular bands 1 mm - 5 mm width, parallel to schistosity (35° to axis of core.)			L529	410'	415'	18.4						
	408'5"	411'3"	2'5"															
	411'3"	414'3"	3'0"															
	414'3"	415'6"	2'11"	415'		Gradual increase mag.from 415' onwards, possibly a low grade ore. Rock consists of highly serpentized 2" pyr.vein schists, only small amounts of chloritized amphiboles remaining. Mag.occurs as granular bands // to schistosity.			L530	415'	420'	12.7						
	414'3"	415'6"	1'0"	415'														
	415'6"	418'5"	2'11"						L529- L532	410'	430'				0.10			4.9
12/5	418'5"	418'9"	4"						L531	420'	425'	15.5						
	418'9"	419'8"	11"															
	419'8"	423'	3'4"															
	423'	423'8"	8"															
	423'8"	424'8"	8"	427'	427'	Pyr.of similar habits in lesser amts. Small blebs of pink qtz-fels.mat.present.			L532	425'	430'	11.4						
	424'8"	427'3"	2'5"	427'	428'6"	L.green,soft,completely barren serpentinite. Serpentitized mag-amph.schist. Granular pyrite abundant												
	427'3"	428'6"	11"	428'6"														

071

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
1959	428'6"	432'	2'10"	431'	431'		x	x											
	432'	434'4"	2'14"	431'	432'	High grade, granular, massive magnetite.	x	x	L533	430'	435'	15.7							
	434'4"			432'		Massive, f-m.gr. gabbro-amphibolite almost completely serpentized. Proportion magnetite showing gradual increase with depth. Minor amts. pyrite.	x	x											
13/5	437'3"	439'3"	2'11"				x	x	L534	435'	440'	11.6							
	439'3"	439'9"	6"				x	x											
	439'9"	441'	1'3"	442'6"	442'6"	Rock very soft and broken.	x	x	L533- L536	430'	450'				0.07			3.7	
	441'	442'6"	1'6"	442'6"	442'6"	Serpentized schist, variable amts. magnetite, aligned // to schistosity.	x	x	L535	440'	445'	12.9							
	442'6"	444'6"	2'10"				x	x											
	444'6"	447'	1'6"			Minor amts. pyrite.	x												
14/5	447'	448'6"	4"				x		L536	445'	450'	19.0							
	448'6"	450'6"	10"				x												
	450'6"						x	x											
				454'			x	x	L537	450'	455'	41.2							
	455'	2'14"	454'			F-m.gr. massive magnetite. A medium grade ore. Consists of granular magnetite with minor amts. pyrite intersected by bands (2"-6" width) of serpentized mag-amph-schist.	x												
	455'						x												
	458'3"	1'7"					x		L538	455'	460'	41.5							
	458'3"	460'6"	2'3"				x		L537- L540	450'	470'				0.18			6.2	
	460'6"	463'3"	1'4"				x												
	463'3"					At 474' onwards serpentine becomes segregated in patches rather than bands.	x		L539	460'	465'	27.5							
	465'	1'4"					x												
	465'						x												
	469'7"	2'2"					x												
	469'7"			471'			x		L540	465'	470'	25.3							
15/7	472'6"	3'11"	471'	473'	473'	Massive, d.green, mag-amphibolite	x	x											
	472'6"	474'	1'6"	473'	474'	Med. grade magnetite.	x	x											
	474'			474'		Massive, d.green mag-amphibolite	x	x	L541	470'	475'	13.6							
	477'	2'8"		476'			x	x											
	477'	478'6"	1'6"	476'		F.gr. massive magnetite with much serpentine. Possibly talcose in parts.	x		L542	475'	480'	18.6							
	478'6"	480'6"	1'9"				x		L541- L544	470'	490'				0.32			5.9	
	480'6"	481'6"	1'10"			Minor amts. pyrite.	x												
	481'6"	483'	1'6"	484'			x		L543	480'	485'	29.4							
	483'	484'	1'10"	484'		Magnetite - amphibolite - schist	x	x											

072

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe. HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S. ^{0.1}	Al ₂ O ₃
	484'	485'2"	1'2"			banded with variable amounts of magnetite and pyrite	x	x	L544	485'	490'	13.0							
	485'2"	486'2"	1'0"				x	x											
	486'2"					486'6" - Pyrite vein 1" wide	x	x	L545	490'	495'	20.5							
		491'3"	5'1"		491'3"		x	x											
	491'3"	493'4"	1'11"	491'3"		F.-m. grained magnetite ore of variable grade. Serpentine occurs in			L546	495'	500'	13.3							
18/5	495'					variable amts. Pyrite abundant.													
		500'	1'6"						L545-L548	490'	510'				0.33				7.5
	500'	502'3"	1'4"						L547	500'	505'	12.8							
	502'3"	503'9"	1'6"																
	503'9"								L548	505'	510'	6.4							
		507'3"	2'10"																
	507'3"	507'9"	6"																
	507'9"	509'9"	1'11"						L549	510'	515'	17.9							
19/5	509'9"	511'3"	1'6"																
	511'3"	513'	1'9"																
	513'	513'6"	6"						L550	515'	520'	16.2							
	513'6"	517'	2'6"																
	517'								L549-L551	510'	525'				0.28				8.7
		519'8"	1'4"						L551	520'	525'	17.6							
	519'8"																		
		524'2"	4'1"																
	524'2"				525'				L552	525'	530'	31.0							
		526'9"	2'7"	525'		F.m. grained, hard, massive magnetite containing considerable proportions of pyrite as cubes and granular masses. Generally small variable masses of serpentine.													
20/5		530'3"	3'6"						L553	530'	535'	42.6							
	530'3"	534'9"	4'6"																
	534'9"					High grade ore.			L552-L554	525'	539'			13.94	0.78	0.13	0.80	5.0	1.70
									L554	535'	539'	44.2							
	539'0"	539'0"	4'3"		539'	Fine grained, massive, dark green			L555	539'	544'6"	3.4			1.06				1.2

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS												
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe. HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.		
	650'7"					magnetite in the aggregate. Narrow seams of magnetite associated with pyrite occurrences between: 771'8" - 772'0"; 772'3" - 772'6".														
	655'9"	655'9"	5'2"																	
	660'2"	660'2"	4'5"																	
	665'10"	665'10"	4'10"																	
28/5	665'10"																			
	673'0"	673'0"	8'0"																	
	673'0"	675'6"	2'6"																	
	675'6"																			
	681'0"	681'0"	5'6"																	
	689'6"	689'6"	8'0"																	
	697'0"	697'0"	7'6"																	
29/5	697'0"																			

320104

076

DRILL RECORD				GEOLOGICAL LOG				GEOLOGICAL SECTION		ASSAY RESULTS								
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe. HCl Sol.	Fe. Total	SiO2	TiO2	Mn.	P2O5	S.
		707'0"	10'0"															
	707'0"																	
		710'0"	3'0"															
	710'0"																	
		718'0"	8'0"															
	718'0"																	
		725'0"	6'3"															
	725'0"																	
		732'0"	6'9"															
	732'0"																	
		742'0"	10'0"															
1/6	742'0"																	
		752'6"	10'0"															
	752'6"																	

320105

0.07

320106

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe. HCl Sol.	Fe. Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
		762'7"	10'1"																
	762'7"																		
		772'7"	10'0"																
	772'7"																		
					777'1"														
				777'1"															
2/6	782'0"	782'0"	9'5"			Green, fine-grained amphibolite containing occasional seams to 1" wide of magnetite associated with granular pyrite. Whole zone, very low grade.	x x												
					785'0"														
				785'0"		Green fine-grained mildly sheared amphibolite containing seams and irregular masses of magnetite and pyrite, whole zone, low grade.	x x		L573	785'	790'	26.7							
	791'0"	791'0"	9'0"				x x												
	791'0"						x x		L574	790'	795'	21.6							
							x x		L573- L575	785'	805'			1.02				4.0	
	796'0"	796'0"	4'0"			Recognisable schistosity varies from 45° to 90° (inclination to long axis of core). On the whole, average schistosity trend is near 45° or 50°.	x x		L575	795'	805'	22.6							
							x x												
		805'0"	5'9"				x x												
	805'0"						x x		L576	805'	810'	23.4							
							x x												
							x x		L577	810'	815'	15.8							
		813'7"	8'4"				x x												
	813'7"						x x		L576- L579	805'	823'			1.04				3.8	

0.8

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol	Fe Total	SiO ₂	TiO ₂	Mn	P ₂ O ₅	S	Al ₂ O ₃	
	871'0"								L589	870'	875'	55.9								
	874'9"	3'6"							L590	875'	880'	50.5								
	874'9"																			
	879'7"	4'10"							L591	880'	885'	57.5								
8/6	879'7"								L590- L592	875'	893'3"			6.31	0.89	0.05	0.03	4.1	0.30	
	883'8"	4'1"																		
15/6	883'8"								L592	885'	893'3"	55.9								
	887'3"	4'3"																		
17/6	887'3"																			
	892'3"	5'4"			893'3"				L593	893'3"	895'6"	11.3			1.58				0.85	
	896'0"	4'0"		893'3"	895'6"	Massive, pale-green amphibolite country rock. High grade magnetite rock containing seams of pyrite averaging 8-10% estimated by volume. Pyrite seam at 902' trends at 45° to long axis of core. Pyrite continues to 905'.			L594	895'6"	900'0"	59.2								
	896'0"			895'6"																
									L595	900'	905'	56.2								
									L594- L597	895'6"	918'			7.20	1.09	0.04	0.01	1.7	1.47	
18/6	906'0"	10'0"							L596	905'	910'	59.2								
	915'0"	8'7"																		
	915'0"																			
					918'4"				L598	918'	930'	7.6								
				918'4"		Pale green massive amphibolite containing occasional masses of crystalline pyrite & mildly sheared Schistosity generally at 45° to long axis core.														
	924'0"	5'2"							L598- L599	918'	940'				0.18				0.81	

320108

0.80

DRILL RECORD

GEOLOGICAL LOG

GEOLOGICAL SECTION

ASSAY RESULTS

320109

Date	DRILL RECORD		GEOLOGICAL LOG		GEOLOGICAL SECTION		ASSAY RESULTS												
	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe HCl Sol.	Fe Total	SiO ₂	TiO ₂	Mn.	P ₂ O ₅	S.	
1959																			
		930'0"	0'11"			Strongly suspect that all or most of core loss between 915'0" and 924'0" is country rock.			L599	930'	939'9"	7.7							
	930'0"																		
	932'3"	932'3"	1'5"																
		936'3"	1'11"																
19/6	936'3"	936'10"	0'11"																
	936'10"	939'9"	2'0"		939'9"														
				939'9"		The core from this section is still down the hole and is irrecoverable. Bit and reamer also abandoned in 944' hole.													

081

D.D.H. No. 4

DIAMOND DRILL CORE RECORD

320111

082

Hole No. D.D.H. No. 4

Drilled by Associated Diamond Drillers

Core Recovery 745' 5", 78.14%

Geological Logging by —
P. Tetlow (Dept. of Mines)
(checked by D. King & W. J. Atkinson).

AREA OF OPERATION Savage River - N.W. Tas.

Location of Site 850 W on Traverse B00

Date Commenced 12th October, 1959

Date Completed 18th December, 1959

RECEIVED	6 APR 1960
ANSWERED	
DEPT. OF MINES	
REF. NO.	

Reduced Level of Site 1532' (Datum B00 1250')

Bearing of Hole 270°

Dip of Hole 45°

Bore Depth 954 ft.

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS									
Date 1959	From	To	Core Recov.	From	To	Description	CORE	SAMPLE	Sample No.	From	To							
12/10	0'			0'		Soft yellow clay. Few iron grains present. Weathered amphibolite												- REFERENCES -
		5'	0'		5'													Amphibolite, massive. Often altered to chloritic and serpentinous, epidote-rich types.
	5'				5'	Decomposed & weathered massive amphibolite, yellow & brown clays.												
13/10		10'	1'9"			Partly iron stained with hard dark brown oxide deposited along cracks & minor fissures.												Amphibolite schists. Hornblende, talcose and chloritic types.
		15'	1'2"															Magnetite - amphibolite. Composition similar to massive types with greater than 5% magnetite.
		20'	1'3"		20'													
	20'				20'	No core. Return water indicates soft yellow clays derived from amphibolite country rock.												
																		Greater than 50% HCl. Sol. Fe)
																		Magnetite Mineralization.
																		40%-50% HCl. Sol. Fe
																		Less than 40% HCl. Sol. Fe.

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS							
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To				
14/10	51'	51' 0"													
19/10	91'	92'	6"	91'	91'	Soft pale brown to greenish clay.									
	92'			92'	92'	Decomposed massive incl. gr. amph., barren.									
						No core. Return water indicates yellow clay.									
		100'	0'	100'	100'										

033

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% HCl. Sol. Fe.	
20/10 1959	100'		2'9"	100'		Dark green to black schistose amphibolite. Cleavage 30° to axis of hole. Groundmass consists of green chlorite, talc, and clay along creeks. Narrow bands of white talc and black magnetite occur ($\frac{1}{8}$ "- $\frac{1}{2}$ "). The magnetite banding is variable in thickness and small amounts of crystalline pyrites accompany it.	x	x	L801	100'	110'	30.3	
	107'						x	x					
	107'						x	x					
	108'	6"					x	x					
	108'						x	x					
	109'	12"					x	x	L802	110'	115'	20.2	
	109'						x	x					
	111'6"	2'3"					x	x					
	111'6"	115'	3'6"				x	x	L803	115'	120'	45.9	
	115'			115'			x	x					
	117'4"	2'4"		115'		Dark magnetite schist. Chiefly medium-grained crystalline magnetite aggregated with a little interstitial greenish chlorite and talc. Serpentinous on cleavage planes. 90% magnetite by volume. Pyrite variable 2-4%	x	x	L804	120'	125'	57.0	
	117'4"						x	x					
	122'4"	4'11"					x	x					
	122'4"						x	x					
	127'4"	5'					x	x	L805	125'	130'	52.7	
21/10	127'4"					Med-High grade ore	x	x					
							x	x	L806	130'	135'	51.5	
						From 135'10" to 137'2" rock becomes extremely pyritic 10-20% by volume	x	x	L806	Sn, Ni, Cu, Au, Ag = Nil.			
	132'4"	5'					x	x					
	132'4"						x	x	L807	135'	140'	44.0	
	137'4"	5'					x	x					
	137'4"						x	x					
	140'4"	3'					x	x	L808	140'	145'	53.4	
	140'4"						x	x					
	145'4"	5'					x	x					
	145'4"						x	x	L809	145'	150'	58.0	
							x	x					
	150'4"	5'					x	x	L810	150'	155'	63.8	
22/10	150'4"						x	x					
							x	x					
	155'4"	5'					x	x	L811	155'	160'	65.2	

084

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS			
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% HCl Sol. Fe.
1959	155'4											
	160'	4'6"		160'								
	160'			160'		With depth the magnetite rock becomes more massive. Infrequent small pale green patches of interstitial chlorite talc groundmass occurs. Pyrite increasing to about 5% by volume.			L812	160'	165'	62.2
	165'	5'							L813	165'	170'	63.9
	169'6	4'6"							L814	170'	175'	61.5
	169'6											
	174'3	4'9"							L815	175'	180'	45.6
	174'3											
	178'3	4'				From 177'6"-181' have a noteworthy increase in pale green serpentiferous groundmass and coarse pyrite.			L816	180'	186'3	42.4
	178'3											
	183'3	5'							L817	186'3	190'	9.9
	183'3											
	188'3	4'4"		186'3		Dark greenish compact serpentine Country rock. Schistose, soft & talcose in places. A little pyrite & magnetite occur.						
23/10	188'3	188'6	2"	190'		Massive magnetite rock. Becomes schistose where the serp-chlorite talc content increases. The pyrite is coarse & usually patchy, sometimes exhibiting a banded orientation.			L818	190'	197'4	26.2
	188'6			190'								
	191'	2' 6"		191'6		green serp. fine gr. material. Fibrous serp. (asbestos) occurs along some fracture planes.						
	191'	1'9"		191'6		magnetite & dark green resinous serpentine with little less pyrite. Serp. & a little asbestos occur along old fractures.			L819	201'	205'	56.9
	193'	12"		192'10								
	194'	12"		192'10								
	195'	5'		194'6								
	200'											
	205'	4'		197'4		Disseminated pyrite occurs & magnetite comes in from 196', chiefly as irregular patches.						
	205'					coloured interstitial groundmass of serp.-talc. At 201' have a 1 1/2" zone of white carbonate. (also a little talc & pyrite). High grade 201'-219'6". At 215' have euhedral crystals of pyrite occurring in narrow vughs. At 221'3" have a 3" barren dark & pale green serp.-talc vein.			L821	205'	210'	60.4
	209'6	2'9"										

085

Hole No. 4

320115

086

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% HCl. Sol. Fe.	
1959	209'6					Pyrite occurs from 3-6% by volume	x	x					
		213'3	3'				x	x	L822	210'	215'	54.6	
	213'3		3'3"				x	x					
		218'3					x	x					
	218'3						x	x	L823	215'	220'	49.2	
		221'9	3'3"				x	x					
	221'9						x	x					
		225'3	3'6"				x	x	L824	220'	225'	45.8	
26/10	225'3						x	x					
		228'	2'9"				x	x					
	228'				230'		x	x	L825	225'	230'	38.3	
		231'	3'		230'	Dark green to black amphib.-schist. Also black clay, coarse pyrite and a little fine magnetite.	x	x					
	231'						x	x					
		233'6	2'3"		235'		x	x	L826	230'	235'	31.5	
	233'6				235'	White to pale green more massive serp. talc. rock, i.e. altered amph. Darkened by irregular patches & veinlets of fine magnetite. Altered to chlorite & cream & black clays, in fracture zones. Pyrite, usually coarse, approx. 5% by vol. Presents brecciated appearance due to criss-crossing veinlets of serp. & talc.	x	x					
		237'	3'6"				x	x	L827	235'	245'	12.2	
	237'						x	x					
		242'	4'9"				x	x					
	242'						x	x					
					245'		x	x					
27/10		247'	3'3"		245'	A speckled fairly schistose rock of black magnetite, greenish serp. & pale talc. Pyrite rich 5-10% by vol.	x	x					
	247'						x	x					
		250'	9"				x	x	L828	245'	258'	48.9	
	250'						x	x					
		253'	0"				x	x					
	253'						x	x					
		257'	2'6"				x	x					
	257'				258'		x	x					
		261'6	4'6"		258'	Creamy-green to grey amphibolite schist. Schistose nature accentuated by oriented veinlets of fine gr. magn. & pyrite. One vein magn. from 262'2-263'. Largely altered to pale serp. & talc.	x	x	L829	258'	266'6	14.7	
	261'6						x	x					
		265'3	3'9"		266'6		x	x					
	265'3						x	x					

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl.Sol	
1959	374'				379'								
									L837	379'	383'6"	55.6	
	379'	379'	4'6"	379'		Black, fairly massive, fine-med. gr. magnetite-serpentine rock.							
	379'	383'6"	4'6"			Contact with previous unit gradational over several inches. Much coarse pyrite. Coarse pyrite veinlets			L838	383'6"	387'6"	59.3	
11/11	383'6"	387'6"	4'0"			2" at 386'6"							
	387'6"					3" at 392'3"							
									L839	387'6"	392'6"	55.6	
	392'6"	392'6"	4'0"	392'6"		Med-to high grade ore.							
	392'6"	394'6"	2'0"			Dark green, massive, altered amphibolite mainly serpentine & talc.							
	394'6"	398'6"	4'0"			Minor amounts of fine pyrite as fine grains and as very fine veneers on cleavage and fracture planes.							
	398'6"	403'6"	5'0"			403'3" - $\frac{3}{8}$ " veinlet black horn blende? bounded by thin qtz. veinlets.							
	403'6"	406'3"	3'3"			404'6" - Narrow veinlet cupriferosus ? pyrite							
	406'3"	409'9"	3'3"										
	409'9"	412'6"	2'9"	412'6"		Dark grey to black, fairly massive magnetite-serpentine-talc rock.			L840	412'6"	419'6"	39.8	
12/11	412'6"	414'6"	1'6"			5-10% pyrite. Coarse pyrite zones throughout, parallel to schistosity.							
	414'6"	415'9"	1'9"										
	415'9"	419'6"	3'3"			From 424' a general increase in magnetite content.			L841	419'6"	425'6"	46.2	
	419'6"	422'6"	3'6"										
	422'6"	425'6"	3'0"						L842	425'6"	428'6"	49.1	
	425'6"	428'6"	3'0"										
	428'6"												

083

091

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl.Sol	
1959	484'	486'6"	2'6"			and silicious, slight alteration.							
	486'6"					Numerous irregularly distributed vein-							
		488'9"	2'3"			lets & stringers of qtz.(white)							
17/11	488'9"	491'5"	2'2"			488'4" - Qtz. vein $\frac{3}{8}$ "							
	491'5"	493'9"	2'0"			A fine veneer of red-brown haematite							
	493'9"					(secondary?) occurs on some cleavage							
		498'3"	3'6"			faces.							
	498'3"	500'3"	2'0"										
	500'3"	501'3"	9"										
	501'3"												
		506'9"	5'4"										
18/11	506'9"												
		511'	2'9"		511'6"								
	511'			511'6"		Grey serpentine-talc schist. Broken	x	x					
		514'	2'0"			and friable in part. Bands of pyrite	x	x					
	514'	516'	2'0"			common (10-15%) 520'-520'6" -	x	x					
	516'	518'	2'0"			rich in pyrite. Minor quantities magn.	x	x					
	518'					variably distributed.	x	x					
		521'	3'6"		521'								
19/11	521'			521'		Dark magnetite-pyrite rock. More	x	x	L854	521'	526'	34.8	
		526'	5'0"			massive where the magnetite content	x	x					
	526'					high. Variable minor quantities of	x	x					
		531'	5'0"			interstitial serpentine and talc.	x	x	L855	526'	531'	47.9	
	531'					Rich in pyrite (10% by volume)	x	x					
		535'4"	4'3"			Schistosity 30-40° to axis of drill	x	x					
20/11	535'4"					hole.	x	x	L856	531'	535'4"	50.9	
		540'4"	4'6"			From 535'4" to 536'3" greenish,	x	x					
						fairly massive, talcose serpentine	x	x					
						rock. Practically barren of magnetite	x	x					
						& pyrite.	x	x	L857	535'4"	540'4"	54.3	

Hole No. 4

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				320121	
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe. To HCl.Sol		
1959	540'4						x	x	L858	540'4	545'8	50.0		
		545'8	4'6				x	x						
	545'8						x	x	L859	545'8	550'8	52.2		
		550'8	5'0				x	x						
	550'8						x	x	L860	550'8	555'8	48.0		
		555'8	5'0				x	x						
23/11	555'8					557'6" - 6" low grade serpentine pyrite zone	x	x	L861	555'8	560'8	41.7		
		560'8	3'9			Minor intermixed chalcopryrite at 588'	x	x						
	560'8						x	x	L862	560'8	565'8	50.3		
		565'8	5'0				x	x						
	565'8						x	x	L863	565'8	570'8	49.3		
		570'8	5'0				x	x						
	570'8						x	x	L864	570'8	575'8	55.1		
		575'8	5'0				x	x						
	575'8						x	x	L865	575'8	580'8	55.2		
29/11		580'8	5'0				x	x						
	580'8						x	x	L866	580'8	585'8	52.8		
		585'8	5'0				x	x						
	585'8				589'		x	x	L867	585'8	589'	51.2		
		590'8	5'0	589'	589'10	Rich pyrite vein 10% magnetite, minor serpentine & talc.	x	x						
	590'8			589'10	590'8	Pale green talc-serp. zone 10% pyrite & magnetite in equal quantities.	x	x						
		590'8		590'8	590'8	Secondary fibrous amphibolite	x	x						
	590'8			590'8	590'8	Green, fairly massive serpentine	x	x	L868	589'	590'8	20.8		
		595'8	5'0			talc rock. Patches of schistose	x	x						

082

Hole No. 4

320122

093

DRILL RECORD

GEOLOGICAL LOG

GEOLOGICAL SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Assay Results
1959	595'8	596'2	6"			friable material at fracture zones.						
	596'2					Small quantities fine disseminated pyrite grains. No visible magnetite.						
		601'	5'0									
	601'					Silicious in parts, narrow veins of white quartz at 598' to 599'						
		606'	4'4"									
25/11	606'											
	611'	611'	2'4"									
	611'											
		614'	2'0"?									
	614'			617'								
		616'	1'2"	617'		From 617', fine veinlets of magnetite intimately associated with coarse pyrite (5%) occur in a friable talcose serpentine rock. Fine green crystalline secondary amphibole is also present.	x	x				
	616'						x	x				
		621'	3'6"				x	x				
	621'						x	x				
		625'3	3'9				x	x				
	625'3						x	x				
		630'3	4'3	630'			x	x				
26/11	630'3			630'		Fairly massive, green, altered amphibolite highly serpentinized.						
		633'6	3'0			Specks of fine pyrite, little magnetite. Partially silicified, thin veinlets of white quartz occur.						
	633'6											
		638'	4'6									
	638'	638'9	6"	641'6								
	638'9	642'6	3'0	641'6		Magnetite-rich serpentine-talc rock	x	x				
	642'6			643'6		Pyrite increased to 5%.	x	x				
		646'6	4'0	643'6		Typical altered amphibolite.	x	x				
	646'6					Green, partly massive, partly schistose rock composed of serpentine, talc & chlorite.	x	x				
		651'9	4'6"				x	x				

Hole No. 4

320123

094

DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe. HCl. Sol
1959	651'9"					The schistose, soft & friable zones carry coarse isolated crystals of pyrite, with veinlets & small aggregates of magnetite in a talc, serpentine, chlorite & actinolite matrix.	x					
	655'6"	3'9"					x					
	655'6"						x					
	658'	2'6"				The harder, partially silicified zones tend to carry fine pyrite crystals only.	x					
	658'						x					
	663'	4'0"				Magnetite increases from 661'8 to 662'4".	x					
	663'						x					
	668'	4'6"					x					
	668'	669'4"	1'4"				x					
	669'4"						x					
	672'10"	3'6"					x					
	672'10"			676'			x					
				676'		Black, medium grained, magnetite pyrite talc rock. Barren zone, serpentinous country rock, from 681'9" to 683'3" & 684'6" to 685'6". Specks of chalcopyrite.	x		L869	676'	682'	50.5
	677'11"	3'10"					x					
	677'11"						x					
	682'11"	5'0"					x					
	682'11"						x		L870	683'3"	688'	44.6
	682'11"						x					
	687'11"	5'0"		688'		Fairly massive, coherent, green serpentinous country rock. Fine veinlets & crystals of pyrite. At 690'9", 3" vein of rich black magnetite	x					
	687'11"			688'			x					
	691'9"	3'10"					x					
30/11	691'9"						x					
	695'	3'3"					x					
	695'			698'		Fairly rich, magnetite serpentine rock 5% pyrite. Reddish colour on fracture planes due to secondary haematite.	x					
	700'	5'0"					x					
	700'			700'9"			x					
	703'	3'		700'9"			x					
	703'					Partly massive, partly broken	x					

096

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	% Fe To HCl.Sol.		
1959	759'6												
		763'	2'4"										
	763'												
		770'	6'2"										
3/12	770'												
		774'6	4'3"										
	774'6												
		776'3	1'9"										
	776'3												
		779'	1'10"										
	779'												
		783'	3'0										
	783'	785'4	1'6"										
	785'4												
		789'6	4'2"										
4/12	789'6					From 792'6 to 796' a small number of veinlets and granular masses of magnetite + approx 5% of pyrite							
		792'6	3'0				x	x					
	792'6					793'6" - 1/4" calcite vein with minor magnetite & pyrite. Haematite ? staining on fracture surfaces.	x	x					
		795'3	3'0				x	x					
	796'3						x	x					
		801'	5'0										
	801'												
		806'	5'0										
	806'												
		811'	5'0										
	811'												
		816'	5'0										

816'

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS			320126	
Date 1959	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl.Sol	
7/12	816'				818'								
					818'	Magnetite-serpentine rock. Dark massive rock, speckled appearance.	818'		L.873	818'	823'	39.0	
					823'	5% pyrite approx.							
		823'	4'6"		823'	High grade magnetite pyrite rock. Fairly massive.	823'		L.874	823'	827'	54.8	
	823'				827'								
					827'	D.green serpentinous country rock, fairly massive. Magnetite & pyrite almost nil. Minor scattered crystals							
		828'	5'0			Magnetite throughout.							
	828'	833'	5'0										
	833'				835'3								
		837'3	4'3		835'3	Magnetite-pyrite rock. Course grained with a little interstitial serpentine	835'3		L875	835'3	839'9	46.8	
	837'3				839'9								
		842'3	5'0		839'9	Green, typical,serpentinous country rock. Mostly massive with schistose zones. Fine speckled appearance due to fine euhedral crystals of magnetite; some pyrite. Small crystalline aggregates of chalcopyrite also occur							
	842'3												
		845'9	3'6										
	845'9												
		849'	3'3										
8/12	849'					e.g. associated with qtz.vein at 856'							
		854'	5'0										
	854'	856'8	2'8			From 861' to 861'8 have a speckled magnetite-chlorite serpentine-pyrite zone with coarse matrix.							
	856'8												
		861'8	4'4"										
	861'8												
		866'2	4'4										
	866'2												
		869'6"	3'4"										

097

File No. 4

320127

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To		
	869'6												
		874'6	4'0			Veins of coarse magnetite from							
9/12	874'6					873'9" - 874'6"							
		879'6	1'0			884' - 888'9"							
	879'6												
		883'6	3'6"										
10/12	883'6												
		888'6	3'6"										
	888'6	890'6	2'0"										
	890'6												
		894'3	3'9										
	894'3												
		899'	3'6"										
	899'			901'									
16/12		902'	3'0	901'		Fairly massive broken country rock.							
		902'				Siliceous serpentine rock speckled							
		905'3	2'6			with minute crystals of magnetite.							
	905'3												
		910'3	3'3										
	910'3			911'									
				911'		Altered amphibolite schist.							
		915'3	3'0"			Initially chloritic becoming very							
	915'3					siliceous & exhibiting a gneissic							
						type of banding.							
		920'3	2'9			White qtz. veins common.							
	920'3					Specks & isolated crystals of magne-							
17/12		923'	2'9			tite & pyrite distributed throughout.							
	923'												

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Hole No. 4

320128

039

DRILL RECORD

GEOLOGICAL LOG

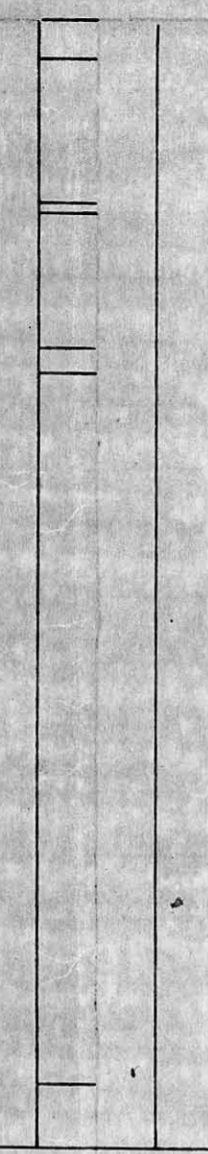
GEOLOG. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.
1959		926'	2'0"
	926'		
		930'	3'9"
	930'		
		934'	3'6"
	934'		
		939'	5'0"
	939'		
		944'	5'0"
	944'		
18/12		949'	5'0"
	949'		
		954'	3'6"

925'

954'



END OF HOLE

D.D.H. No. 5

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS													
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To											
1960																						
	100'6"					serpentinized. Epidote common as																
		104'	116"			irregular masses in ground mass																
	104'	105'6"	119"			material. Minor amounts pyr. as																
	105'6"					disseminated grains. Magnetite rare																
		108'	217"			as occasional euhedral grains (possibly																
	108'					ilmenite). No evidence of shearing,																
		112'3"	4'3"			material quite massive.																
	112'3"					Minor hematite and limonite on																
2/2		115'	219"			fracture planes.																
	115'																					
		120'	219"			120'-120'9" Magnetite, 5-10% of																
	120'					rock. Pyrite 7-10%.																
		123'	3'0"																			
	123'	123'6"	6"																			
	123'6"																					
		128'6"	5'0"																			
	128'6"	130'	1'6"																			
	130'	132'	10"																			
	132'	133'6"	110"			133' - 1/2" qtz. vein, 10" to core																
	133'6"	135'	112"			axis.																
	135'	135'9"	9"																			
	135'9"																					
		140'9"	5'0"																			
	140'9"																					
		145'9"	5'0"																			
	145'9"																					
		150'9"	5'0"																			
	150'9"																					
3/2		153'	211"																			
	153'																					

102

Hole No. 5

DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

320133

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To								
1960		156'6"	3'0"																
	156'6"																		
		160'	3'3"																
	160'																		
		162'	1'7"																
	162'																		
		167'	4'10"																
	167'																		
		169'9"	2'9"																
	169'9"																		
		176'3"	5'9"																
	176'3"																		
		180'3"	3'3"																
	180'3"																		
		185'3"	5'0"																
4/2	185'3"																		
		189'9"	4'4"																
	189'9"																		
		193'6"	3'9"																
	193'6"																		
		202'3"	8'3"																
	202'3"																		
		204'3"	1'10"																
	204'3"																		
		210'6"	6'3"																

103

Hole No. 5

320134

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS									
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	SiO ₂	Al ₂ O ₃	TiO ₂	Mn	FeO	S	
1960	210'6"																	
		213'6"	2'10"															
	213'6"																	
		220'6"	6'2"		220'9"													
	220'6"			220'9"		Finer grained, altered, doleritic amphibolite.												
		223'6"	2'2"															
	223'6"				224'													
		227'6"	3'2"	224'		Med. grade, f.gr. magnetite & magnetite-amph.-schist, some chloritization and serp.			M681	224'	231'	43.0						
5/2	227'6"			228'		High grade magnetite, very little pyrite. Impur. talcose amph-schist.												
				231'		L.green, altered, mag-amph-schist. Mag. 5-10%, pyrite variable from 5-50%			M682	231'	242'6"	13.1						
		237'6"	9'0"			Some qtz-carbonate veinlets // to schistosity. Schistosity 30° to core axis.												
	237'6"				240'6"													
		242'6"	5'0"	240'6"	242'6"	D.grey, graphitic clay pug some.												
	242'6"			242'6"		Mag-amph-schist, highly pyritic 10-50%. Qtz-carbonate veining. Mag. as masses & fine veinlets parallel to schistosity (40° to core axis)			M683	242'6"	247'6"	13.6						
		247'6"	5'0"		247'6"													
	247'6"			247'6"		F.gr. high grade magnetite. Small lenses (1/2-1") "on edge" in magnetite. Minor qtz.veining. Pyrite 2-5%			M684	247'6"	254'	52.3						
		252'6"	5'0"	254'		Altered mag-amph-schist, chloritis and serpentinous.			M685	254'	259'	17.3						
		257'6"	5'0"			Pyrite-Magnetite = 10% approx.												
	257'6"					264' - 2" 50% pyr.												
		261'	3'6"			Towards end of formation serp. & talc. proportions increase.			M686	259'	264'	11.9						
	261'					270' - 3" black pug some.												
									M 200	247'6"	273'	23.5	24.9	0.40	0.15	0.06	1.30	4.07

104

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
1960		266'	4'0"																
	266'	267'	1'0"						M687	264'	269'	10.8							
	267'	270' 5"	3' 5"						M688	269'	273'	15.1							
	270' 5"				273'														
	275'	4' 7"		273'	274' 6"	High grade mag. 5-10% pyrite. Chloritized & serpentinized mag- amph-schist. Pyrite 5% Mag. varies 5-2% of rock.			M689	273'	279'	36.9							
	280'	5' 0"							20	273'	296'	15.8	30.6	4.79	0.72	0.11	0.55	3.78	
	280'								M690	279'	286'	14.6							
8/2	285'	5' 0"			286'	Shear →													
	285'			286'		Green, f.gr. massive, chloritic amphibolite. V. minor quantities iron. Pyrite as fine disseminated grains, 1-2% of rock, also as veneers on slip-sidled faces. Minor serpy, and oxides.			M691	286'	291'	6.2							
	290'	5' 0"																	
	290'								M692	291'	296'	2.2							
	293'	3' 0"			296' 6"	Mag-amph-schist, schistosity 75° to axis. Peg material 297'			M693	296'	300'	30.7							
	298'	3' 10"																	
	298'				300'														
	302'	4' 0"		300'		F.gr. mag. magnetite. 5-1% pyrite Serp. & chlorite in minor quantities.			M694	300'	304'	42.8							
	302'			304'		Mag-amph-schist (altered) Minor quantities magnetite & pyrite			20	296'	315'	26.5	22.3	2.23	0.43	0.09	0.89	5.13	
	307'	5' 0"							M695	304'	310'	14.7							
	307'				310'														
	311'	4' 0"		310'	311'	F.gr. massive, chld. & serpi. amph. Mag-amph-schist, highly chloritized with small nubs. pyrite & magnetite. Schistosity 25-35° to axis. From 314' pyrite increases.			M696	310'	315'	24.2							
	311'			311'															
	316'	5' 0"							M697	315'	321'	9.1							
	316'																		

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Hole No. 5

320137

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Depth	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe Mn Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
		376'6"	5'0"		377'														
10/2	376'6"	380'3"	3'9"	377'	378'	Magnetite-amphibolite.			1885	377'	382'	43.4							
	380'3"	384'3"	4'0"			High grade, massive magnetite. Little or no amph. Pyrite 5-10%.													
	384'3"	389'3"	5'0"			377'6"-376'6", 70-80% pyrite.			1886	382'	388'	57.0							
	389'3"	392'3"	3'0"	388'	388'	379' - 3" 80% pyrite.			57 206	377'	400'	37.4	15.5	3.67	0.62	0.10	0.36	5.91	
	392'3"	397'3"	5'0"			Talcosse & chloritic, magnetite-amphibolite. 5-10% pyrite. Magnetite rich in places.			1887	388'	395'	41.3							
	397'3"	401'	5'0"	395'	395'	F.gr. massive chloritized amphibolite. V. small ants. mag. & pyr. Somewhat schistose towards end of formation.			1888	395'	400'	2.3							
	401'	405'9"	4'9"																
	405'9"	410'9"	5'0"	400'6"	400'6"	Massive, f.gr. granular magnetite, a high grade ore. Amphiboles in v. small ants. talcosse & chloritic. Pyrite as f.gr. disseminated masses & veinlets, 5-15% of rock.			1889	400'	405'	52.1							
	410'9"	415'9"	5'0"			409' - 1/2" pyr. vein 45° to core axis.			1890	405'	410'	55.8							
	415'9"	420'9"	5'0"			418' - 1" quartz vein.			57 207	400'	420'	52.9	6.49	1.25	0.46	0.09	0.38	4.83	
	420'9"	424'	3'3"			418' - 424' - somewhat higher proportion of amphibolite.			1891	410'	415'	53.2							
11/2	424'	429'	5'0"						1892	415'	420'	50.3							
	429'								1893	420'	425'	49.2							
									1894	425'	430'	53.0							
						429' - Pyrite, 7%													

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DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
18/2	539'9"	542'6"	3'0"			amounts pyrite as disseminated grains and veneers on slickensided faces			B294	537'	543'	52.9							
	542'6"								B214	537'	549'6"	57.7	6.37	1.42	1.06	0.13	0.05	1.57	
18/2	547'3"	549'6"	2'3"						B295	543'	549'6"	62.1							
	549'6"	550'3"	3'0"	549'6"		F.gr. massive, serpentinous amphibolite. Barren with only minor ants. pyrite, little or no magnetite.													
	550'3"	554'3"	4'0"			Minor qtz. veining.													
	554'3"	556'3"	2'0"			Some "specular" hematite on joint planes.													
	556'3"	558'9"	2'6"																
	558'9"	563'9"	5'0"																
	563'9"	566'9"	3'0"																
	566'9"	573'4"	6'5"																
	573'4"	577'1"	3'7"																
19/2	577'1"	589'1"	12'0"																
	589'1"																		

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
		598'6"	9'6"																
	598'6"																		
		601'	2'6"																
	601'	604'	3'0"																
3/3	604'	605'	1'0"		605'														
	605'			605'		Massive magnetite containing small ants. chloritic f.gr. amph. Pyrite 5-15% as granular aggregates.			B296	605'	610'	57.4							
		610'	3'4"																
4/3	610'					614'-615'6" - massive barren amph.													
		615'	3'2"						B297	610'	615'	46.2							
	615'				618'				B298	615'	618'	47.3							
				618'		Altered, chloritized and talcose? mag-amph-schist. Minor ants. pyrite													
		623'6"	8'0"		622'6"				B299	618'	622'6"	30.3							
	623'6"			622'6"		Massive, high grade, f.gr. pyritic magnetite. Minor ants. chlorite etc.			B300	622'6"	628'3"	57.1							
		628'3"	5'0"		628'3"														
	628'3"			628'3"		F.gr. barren, massive amphibolite.													
		632'3"	4'0"			Chloritized in part, well developed actinolite small.													
	632'3"				633'3"				F251	628'3"	633'3"	3.4							
		637'3"	4'0"		633'3"														
	637'3"				639'	Chloritic mag-amph-schist, little pyrite. Mag. up to 40% by vol.			F252	633'3"	639'	41.4							
8/3	637'3"																		
		642'3"	5'0"		639'														
	642'3"				648'	F.gr. schistose in part, amphibolite very small quantities magnetite. Epidote common as veinlets & "vegt" linings			F253	639'	648'	4.9							
		647'3"	5'0"																
	647'3"				648'				B294	628'3"	647'3"	23.5	27.6	8.13	1.04	0.03	0.19	1.78	
				648'		Magnetite-amphibolite. Barren f.gr.													

LII

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS													
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S				
						amph. ground mass containing patches 1"-2" diam. high grade magnetite.	x	x	F254	648'	655'6"	45.6										
	656'3"	4'3"		655'6"		Barren, pyritic, serpentinous and chloritized massive amph. Epidote rich. Minor qtz-carbonate veining.	x	x	F255	655'6"	659'6"	19.4										
	661'	4'9"		659'6"		Mag-amph-schist, talcose & chloriti- zed highly pyritic. Med. grade ore.	x	x	F256	659'6"	664'2"	23.0										
	664'2"	3'1"		664'2"		Amph-schist, only v. minor ants. mag. and pyr. Devel. small black horn- blende xtals. in veins.	x	x	F257	664'2"	669'2"	7.0	585	655'6"	669'2"	16.1	30.0	8.99	0.88	0.06	0.68	2.98
9/3	669'2"			669'2"		Mag-amph-schist. Altered f.gr. amph-schist and magnetite in alter- nate bands (approx. 35-40° to core axis) 2-10 mm. thick.	x	x	F258	669'2"	675'	36.2										
	674'2"	3'0"		675'8"	1'6"		x	x	F259	675'	680'	33.4										
	680'8"	5'0"		680'8"		671-674' F.gr. pyrite, 90% of rock with minor amounts chalcovrite. Little or no magnetite.	x	x	F260	680'	685'	38.9	586	669'2"	690'	34.9	12.7	0.93	0.28	0.04	0.05	11.34
	685'8"	5'0"		687'5"	1'7"		x	x	F261	685'	690'	31.0										
	691'3"	3'10"		691'3"			x	x	F262	690'	695'	57.0										
	695'	3'4"		695'			x	x	F263	695'	700'	38.9	587	690'	710'	41.6	10.6	1.79	0.48	0.05	0.02	7.27
	698'	3'0"		700'9"	2'9"		x	x	F264	700'	705'	20.6										
10/3	705'9"	5'0"		706'			x	x														

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DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS													
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S				
1960	705'9"			706'		Highly pyritic, massive high grade magnetite, minor ants. talc and chlorite. Serpentine on fracture planes.			F265	705'	710'	50.0										
		710'3"	4'0"						F266	710'	715'	55.0										
		714'6"	4'0"						F267	715'	720'	58.9										
		714'6"							588	710'	726'	58.0	3.75	1.50	0.70	0.09	0.04	3.85				
		719'	4'6"						F268	720'	726'	59.7										
		719'																				
		724'	4'3"		726'																	
		724'	726'3"	2'3"	726'					Chloritic amphibolite, secondary devel. of hornblende xtals in veinlets. Little mag. and pyr.			F269	726'	730'	6.3						
		726'3"			728'																	
			731'6"	3'2"	728'					Magnetite - amphibolite.												
11/3	731'6"			733'					F270	730'	735'	32.0										
		735'9"	4'3"	733'		Barren, massive, amphibolite (altered chloritic & serpentinous). Minor pyr. 338'6" - 1/2" qtz. vein.			589	726'	740'	14.9	35.9	10.86	1.05	0.02	0.07	0.79				
		735'9"																				
		738'3"	2'6"						F271	735'	740'	4.6										
		738'3"																				
		742'	3'0"		742'3"		Magnetite & talcose amphibolite			F272	740'	745'	45.9									
		742'					Minor ants. pyrite.															
		745'3"	3'3"				743'6" - Small veinlet chalcopyrite.															
		745'3"	747'6"	2'3"						F273	745'	750'	54.0									
		747'6"																				
		750'9"	3'3"	750'9"		F.gr. barren, serpentinized & chloritic amphibolite.			590	740'	763'	45.1	14.3	4.22	0.64	0.09	0.19	1.14				
	750'9"			753'					F274	750'	755'	22.3										
		755'5"	3'5"	753'		Mag-amph-schist (altered)																
14/3	755'9"			757'																		
		760'3"	4'10"	757'		Magnetite, only small amounts talc and chlorite.			B275	755'	760'	48.6										

320143

DRILL RECORD			GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS												
1960	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S		
		818'9"	5'0"		818'6"	Altered (talcoose & chloritic) magnetite amphibolite, generally massive, schistose in part. Barren and iron rich areas alternate. Much epidote developed with only small amounts pyrite.			F277	818'6"	823'	23.9								
	823'	4'3"								F278	823'	828'	39.9							
		828'	5'0"							591	818'6"	843'	29.6	27.0	6.71	1.12	0.09	0.04	0.69	
		833'	5'0"		833'					F279	828'	833'	36.1							
		833'			833'		F.gr. barren massive amphibolite			F280	833'	836'6"	8.1							
		838'	5'0"		836'6"		F.gr. mas. mag-amph. Pyr. about 5%			F281	836'6"	843'	32.1							
		843'	5'0"		843'		Mag. c.gr. in locally developed rich patches 2-10 inches. Minor qtz-carb. veining.													
		848'	5'0"				F. gr. generally massive, barren amph. Schistose in part. Pyr. as c.gr. veinlets, 2-5 mm width. Mag. not more than 5%. Qtz-carb. veining			F282	843'	850'	6.4							
		851'4"	2'10"				847' devel. of much epidote.			F283	850'	859'	12.1							
18/3		855'2"	3'10"							592	843'	871'2"	16.9	34.7	7.83	0.93	0.07	0.09	1.21	
		858'	2'10"																	
		861'	3'0"		859'	860'6"	Talcoose magnetite-amph. High grade magnetite.			F284	859'	867'1"	32.0							
		861'			860'6"	862'	D.green, mag-amph. Prop. mag. small Pyr. varies 1-5%													
		865'8"	4'8"		862'		Talcoose, mag-amph, a low grade iron ore. Small bands, f.gr. massive chloritic amph. Pag zone fault 866-867'													
		867'1"	1'2"		867'1"		"Puggy" d.green, highly chloritized & sheared amph-schist. Fairly barren.			F285	867'1"	871'2"	15.6							

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DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS			
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To
1960.											
	983'	983'	5'0"			in parts. Magnetite sparse, as fine scattered grains.					
	983'					Epidote, qtz. present in small amounts. Pyrite sparse 2-3%.					
	988'	988'	5'0"								
	992'	992'	4'0"								
	992'			994'							
	995'9"	995'9"	3'9"	994'		Talc-magnetite-schists. Pug zone 6"					
29/3	995'9"			996'		10-25% mag. "Puggy" in shear zone					
				996'		C.gr. green, highly chloritic amph-schist. Pyr. ~10%. Scattered qtz-fels. grains (porphyroblasts?) No mag. Schistosity 45° to axis.					
	1000'9"	1000'9"	4'4"								
	1000'9"			1002'6"							
				1002'6"		Light green to grey, highly chloritic amph-schist containing appreciable quantities (up to 50%) qtz-felspar material as grains, veinlets & bands					
	1005'9"	1005'9"	5'			In parts banded & lenticular structures produce "gneissic" texture.					
	1010'	1010'	4'3"								
	1014'	1014'	4'0"			Pyrite 2-5%. Mag-nil.					
	1014'					Schistosity 30-40° to axis.					
30/3	1017'	1017'	3'0"								
	1017'										
	1020'6"	1020'6"	3'6"	1020'6"							

END OF HOLE

320149

D.D.H. No. 6

RECEIVED	19 SEP 1960
ANSWERED	
DEPT. OF MINES	
REF. NO.	

DIAMOND DRILL CORE RECORD

320150

Hole No. **D.D.N. NO. 6**

Drilled by **ASSOC. DIAMOND DRILLERS**

Core Recovery **79.1%**

Geological Logging by —

W.J. Atkinson

AREA OF OPERATION **SAVAGE RIVER - N.M. TASMANIA.**

Location of Site **TREVENEN COO, 49°W.**

Date Commenced **6th April, 1960.**

Date Completed **18th May, 1960.**

Reduced Level of Site **R.L. 12481**

Bearing of Hole **90° APPROX.**

Dip of Hole **40°**

Bore Depth **704 feet.**

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS						
Date 1960	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To				
6/4	0'			0'		Yellow-orange clays, derived from fairly barren amphibolite rocks.						REFERENCE			
												Amphibolite schist. Hornblende, talcose and chloritic types.			
												Magnesite-amphibolite schist, similar to amphibolite-schist with magnesite greater than 5%.			
												Amphibolite, massive. Often altered to chloritic and serpentine, epidote-rich types.			
7/4												Magnesite-amphibolite. Composition similar to massive types with greater than 5% magnesite.			
												Gabbro-amphibolite. Massive, barren "colonnade" texture.			
												IRON VALUES			
												Greater than 50% HCl. Sol. Iron.			
												40%-50% HCl. Sol. Iron.			
30'		30'	6'			In lower part of formation from 25' onwards beds of slightly weathered and fresh amphibolite occur. Degree of weathering near surface depends on porosity, (schistose amphibolite weather to clay more readily than massive types) and presence of fissures. This limit of zone of oxidation in vicinity of corehole is quite irregular in section.						30%-40% HCl. Sol. Iron.			
												Less than 30% HCl. Sol. Iron.			

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Hole No. 6

320152

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS									
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Gr. Sol.						
		100'6"	1'0"			Little or no magnetite.												
	100'6"																	
		104'3"	3'0"															
	104'3"																	
		108'6"	3'1"															
13/4	108'6"																	
		113'6"	1'10"															
	113'6"																	
		117'	1'7"															
	117'	117'	2'0"															
	119'																	
		122'6"	3'0"															
14/4	122'6"																	
		127'6"	4'0"															
	127'6"																	
		130'7"	2'10"															
	130'7"																	
		137'6"	3'7"															
	137'6"																	
		139'3"	1'11"															
	139'3"	140'7"	1'0"															
	140'7"	143'	1'2"															
	143'				140'0"													
		146'	1'0"	146'0"		M.gr. massive, granular magnetite, minor amt. chloritized actinolite? Pyrite - 10% by vol.												
20/4	146'	148'6"	2'0"							1293	146'	151'0"	60.7					
	148'6"																	
		151'0"	3'0"															
	151'0"				153'													
		155'0"	4'0"	155'		Very f.g.r. (massy texture) serpentinized			1294	151'0"	160'9"	22.5						

DRILL RECORD				GEOLOGICAL LOG			GEOL. SECTION		ASSAY RESULTS									
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% Fe ₂ O ₃	% Cu	
1980																		
		268'6"	3'1"						727	257'	280'	29.9	18.70	2.55	0.58	0.09	0.44	8.12
	268'6"								724	268'6"	274'2"	28.9						
		271'2"	2'6"															
	271'2"																	
		274'2"	2'8"		274'2"													
	274'2"			274'2"		Massive, f.gr. chloritic mag-amphibolite. barren amphib. containing masses (up to 6" diam.) of f.gr. granular magnetite. Pyr. 3%. Med. grade ore.			725	274'2"	280'	33.8						
		278'9"	4'0"															
	278'9"				280'													
28/4		283'9"	4'7"		280'													
	283'9"					Massive, f-m grained barren, chloritic amphibolite, slightly schistose in parts. Epidote and serpentine minerals common.			726	280'	290'9"	10.6						
		288'9"	5'0"															
	288'9"	290'9"	2'0"			Very minor amt. pyr. and magnetite.												
	290'9"																	
		294'6"	3'9"															
	294'6"								727	290'9"	300'	4.8						
		298'	3'3"															
	298'				300'				728	280'	316'	7.5	39.10	9.55	0.94	0.09	0.14	1.26
		303'	2'8"		300'	Generally soft & waxy, highly talcose & chloritic, green, amphibolite schist.												
	303'					barren, little or no pyr. and mag.												
		308'	1'6"															
	308'	310'3"	2'3"		310'3"													
29/4	310'3"	312'6"	2'3"	310'3"		Med, massive, m.gr. d.green, gabbro-amphibolite. Minor pyr. white magnetite, epidote & serpentine.			729	310'3"	316'	3.9						
	312'6"																	
		316'	1'6"		316'													
	316'					F.gr. massive, granular magnetite. A high grade ore. Minor pyr. chlorite.			730	316'	319'3"	25.1						
		317'3"	3'0"						729	316'	320'6"	25.3	5.68	1.08	1.24	0.05	0.20	1.48

DRILL RECORD				GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% FeO _T	% S	
	376'6"					magnetite. Pyrite 1%.			3432	373'	380'	95.8							
3/5	381'0"	381'0"	5'0"						330	373'	391'	98.0	11.40	1.95	1.22	0.12	0.07	2.96	
	386'6"	386'6"	5'0"						3433	380'	386'6"	93.6							
	386'6"			386'6"	386'6"				3434	386'6"	391'	27.6							
	389'9"	389'9"	3'3"			Irregular patches granular magnetite in f.gr. barren amphibolite matrix.													
	389'9"				391'	Low-med. grade ore.													
	394'	394'	4'3"	391'															
	397'	397'	3'0"			F.gr. massive, barren, chloritic and epidote-rich amphibolite. Pyr. 2-3% Minor qtz.-carbonate & epidote veins			3435	391'	402'	4.2							
	400'6"	400'6"	3'6"																
	404'3"	404'3"	3'9"	402'	402'	Magnetite-amphibolite-schist.			3436	402'	405'	15.9							
	409'3"	409'3"	5'0"	405'	405'	Grey, f.gr. pyritic magnetite amphibolite with higher propn. of mag. than previous form.			3437	405'	410'6"	35.9							
	409'3"				410'6"	Only minor devel. of chlorite.													
	414'3"	414'3"	5'0"	410'6"	410'6"	Green, mag-amph-schist.			3438	410'6"	414'3"	10.7							
	418'3"	418'3"	4'0"	414'3"	414'3"	F-m. grained, barren, chloritic amphibolite. Minor amt. epidote, pyrite & qtz. Hematite on fracture planes. Texture chloritic where m.grained.			3439	414'3"	424'6"	4.8							
4/5	421'0"	421'0"	3'3"						331	391'	421'0"	98.0	37.30	9.17	0.25	0.12	0.07	1.20	
	424'6"	424'6"	3'0"																
	429'6"	429'6"	5'0"						3440	424'6"	429'6"	5.6							

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn.	% P ₂ O ₅	% S.	
1960	429'6"																		
		434'6"	5'0"	434'6"		L. gray, low grade, mag-amp-schist Talcose and chloritic.													
5/5	434'6"	436'	1'6"																
	436'	438'6"	2'6"						1441	434'6"	440'6"		20.7						
	438'6"					Pag zones 443'6" and 446'													
		443'6"	5'0"						1442	440'6"	446'6"		9.6						
	443'6"																		
		446'6"	2'8"	446'6"		F-m.gr. massive, chloritic and epidote-rich, barren amphibolite.													
6/5	446'6"	447'6"	1'0"			Schistose in parts. Minor qtz.-carb. and epidote veining.			1443	446'6"	449'6"		6.5						
	447'6"	449'9"	2'3"																
	449'9"	452'3"	2'6"			Minor ants (2%) pyrite.													
	452'3"																		
		456'6"	4'3"																
	456'6"								1444	454'6"	462'6"		5.2						
		460'3"	3'3"																
	460'3"	462'6"	2'3"	462'6"		F.gr. massive, granular, pyritic magnetite.			1445	462'6"	468'		51.2						
	462'6"																		
		465'6"	2'10"			Minor patches massive, chloritic amphibolite													
	465'6"																		
		468'	2'6"						1446	468'	473'		32.3						
	468'																		
		473'	5'0"																
	473'								1447	473'	478'		60.2						
		478'	5'0"																
	478'								732	462'6"	487'6"		75.3	7.88	2.19	1.35	0.11	0.20	1.74
		482'6"	4'6"																
	482'6"								1448	478'	482'6"		79.8						
		487'9"	3'0"																

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Date	DRILL RECORD			GEOLOGICAL LOG		GEOLOGICAL SECTION		ASSAY RESULTS							320159				
	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃		% TiO ₂	% Mn	% P ₂ O ₅	% S.
	485'9"			487'					M449	482'6"	487'6"	53.7							
		487'6"	1'8"	487'		Magnetite and talcose slightly schistose	x	x											
	487'6"	490'6"	3'0"		490'6"	magnetite-amphibolite. Low grade ore.	x	x	M450	487'6"	490'6"	21.5							
7/5	490'6"			490'6"		D.green, f.gr. chloritic magnetite-amph-schist. Schistosity generally indistinct. Minor quantities, pyrite magnetite, epidote & serpentine minerals.	x	x											
		494'9"	4'3"				x	x											
	494'9"						x	x	F301	490'6"	499'9"	9.0							
		499'9"	5'0"				x	x											
	499'9"						x	x	733	487'6"	511'12.3	36.50	7.36	0.77	0.12	0.50	1.61		
		504'9"	4'6"		504'		x	x											
	504'9"	506'6"	1'9"	504'	504'9"	Talc-magnetite-schist.	x	x	F302	499'9"	504'9"	14.7							
	506'6"			504'9"		F.gr. massive amphibolite. Pyrite 5%	x	x											
				508'		Magnetite little or none	x	x	F303	504'9"	511'	11.0							
		511'	3'7"	508'		Talc (60% by vol) - magnetite schist.	x	x											
	511'					Magnetite as f.gr. granular masses in schistose talc matrix.	x	x	F304	511'	516'	36.8							
		516'	5'0"				x	x											
	516'				517'		x	x	734	511'	526'45.2	13.40	1.95	1.11	0.09	0.72	3.67		
					517'	518'	Massive, f.gr. amphibolite	x	x	F305	516'	521'	51.1						
		521'	5'0"	518'		F.gr. massive, granular magnetite.	x	x											
	521'					Minor amts. pyrite and talc.	x	x											
		524'	3'0"		524'		x	x	F306	521'	526'	47.6							
	524'			524'	526'	Talc-magnetite schist. Schistosity 45° to axis.	x	x											
				526'		F.gr. talcose, magnetite-amphibolite schist	x	x	F307	526'	531'9"	19.7							
10/5		529'	5'0"				x	x											
	529'				531'-531'9"	- 40% pyr. banded // to schistosity.	x	x											
		531'9"	3'6"		531'9"		x	x	F308	531'9"	536'3"	19.6							
		536'3"	4'6"			Highly talcose and chloritic magnetite-amphibolite-schists containing patches of massive, barren, chloritic amphibolite	x	x											
	536'3"					Pyr. 5%. Magnetite varies from 5-30% by vol.	x	x	F309	536'3"	543'3"	23.0							
		540'6"	4'3"				x	x											

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DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

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Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S.	
1960	540'6"																		
	543'3"	2'9"							F310	543'3"	543'3"	18.1							
	543'3"								735	526'	559'3"	19.7	30.50	5.29	0.55	0.10	0.28	5.06	
	548'3"	5'0"							F311	548'3"	553'3"	10.6							
11/5	548'3"																		
	553'3"	3'4"							F312	553'3"	559'3"	24.6							
	553'3"																		
	556'6"	2'2"																	
	556'6"																		
	559'3"	2'6"		559'3"															
	559'3"			559'3"		F.gr. barren, massive chloritic amphibolite. Schistose in part. Minor qtz. and epidote veinlets. pyr. 1-2%. Magnetite 2-3%. Pug zone 581'3"													
	564'3"	2'3"																	
	564'3"																		
	569'3"	3'2"																	
	569'3"																		
	574'3"	3'4"																	
	574'3"																		
	577'	3'10"																	
	577'																		
	581'3"	4'9"																	
12/5	581'3"																		
	584'6"	3'3"																	
	584'6"																		
	588'3"	3'9"																	
	588'3"																		
	593'3"	4'5"		593'3"															
	593'3"			593'3"	594'3"	Talc-magnetite. High grade iron.													



DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To
				594'3"		Green, slightly schistose, chloritic amphibolite, containing up to 10% magnetite.	x	x			
	597'6"	3'7"									
	597'6"										
		602'6"	2'8"			Generally sheared and puggy where iron rich. Some pug zones barren. Pyrite 1%.	x				
	602'6"										
		607'6"	2'10"								
	607'6"										
		611'	1'6"	612'							
13/5	611'			612'		Green, f-m. gr. chloritic amphibolite schist. Schistosity poorly defined with much f.gr. massive amph. Minor ants. pyr. and magnetite.	x	x			
		616'	4'5"								
	616'										
		621'	4'0"								
	621'										
		625'	3'2"			Pug Zone					
	625'										
		629'	3'7"								
	629'										
		634'	4'3"								
	634'										
		636'	2'0"			Pug Zone					
	636'										
		640'	4'0"								
	640'										
		645'	4'1"			Pug					
	645'										
		649'4"	3'11"			Pug					
	649'4"										

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Hole No. 6

DRILL RECORD

GEOLOGICAL LOG

GEOLOG. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To
1960	649'4"										
	653'	3'8"		654'		F-m. gr. massive, barren, chloritic-amphibolite. Voids common. In parts a faintly defined schistosity. Pyrite less than 1%.					
	657'	3'3"									
	661'	4'0"									
	664'3"	2'9"		664'3"		F.gr. l.green, massive chloritic-amphibolite. Mag (poss. ilmenite) as fine euhedral grains disseminated through matrix. 2-4%.					
	669'3"	5'0"		671'							
	674'3"	4'4"				F-m. grained, d.green, chloritic-amphibolite-schists. Schistosity generally poorly developed, most apparent where mineralized (pyrite) Epidote common as irregular masses and veinlets. Magnetite absent or less than 2%. Pug zone 679'.					
	679'	4'6"									
	684'	5'0"				Pyrite variable, f.gr. bands & lenses aligned // to schistosity.					
	689'	5'0"				671' - 683' Pyr. 3-4%. 683' - 687'6" " 40-50% (in parts 80%) 687'6" - 693' " 5-10%. 693' - 699' " 25%. 699' - 704' " 5-10%.					
	694'	4'10"				679' - 683' irregular lenses, qtz.-fels. common.					
	699'	5'0"				No visible chalcopyrite in sulphide rich zones.					
	704'	5'0"				<u>END OF HOLE</u>					

Pug zone

DRILL HOLE DIP SURVEY

Depth	As Read	Corrected
100'	46½°	-39°
200'	48°	-40½°
300'	48½°	-41°
400'	48¾°	-41½°
500'	47°	-39½°

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320163

D.D.H. No. 7

DRILL RECORD

GEOLOGICAL LOG

GEOLOG. SECTION

ASSAY RESULTS

Date	DRILL RECORD			GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS		
	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To
1960											
1/6		45'3"	2'3"								
	45'3"	46'4"	1'1"								
	46'4"	49'	2'8"								
	49'	51'6"	1'6"								
	51'6"	52'6"	8"								
	52'6"	54'	1'6"								
	54'	56'6"	2'6"								
	56'6"	58'6"	2'0"								
	58'6"	60'	1'6"								
	60'										
		62'6"	2'6"								
	62'6"	65'6"	3'0"								
	65'6"										
		68'6"	3'0"								
	68'6"										
		72'	3'6"								
	72'										
		75'6"	3'6"								
	75'6"										
		79'8"	4'2"		78'						
	79'8"			78'		Fresh, very little penetration of water along joint planes, f-m. gr. gabbro-amphibolite. No magnetite very minor arts. pyrite < 0.2%.					
		83'	3'4"								
	83'										
		87'6"	4'6"								
	87'6"										
		89'	1'6"								
	89'	91'3"	2'3"								
	91'3"	94'	2'9"								
	94'	96'	2'0"								
	96'										
		99'	3'0"								
2/6											

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DRILL RECORD			GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS	
From	To	Core Recov.	From	To	Description	Core	Sample No.	From	To
99'									
	103'	4'0"		103'					
103'	105'	2'0"	103'		Coarse grained gabbro-amphibolite.				
105'					Blue-green in colour.				
	108'	3'0"			Pyrite and magnetite absent.				
108'									
	111'	3'0"							
111'									
	114'6"	3'6"							
114'6"									
	119'6"	5'0"							
119'6"									
	122'6"	3'0"							
122'6"									
	126'6"	4'0"							
126'6"									
	131'	4'6"							
131'									
	135'	4'0"							
135'									
	139'6"	4'6"							
139'6"									
	143'3"	3'9"							
143'3"	145'3"	2'0"							
145'3"									
	148'3"	3'0"							
148'3"									
	150'3"	2'0"							
150'3"	153'	2'9"							
153'									

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS		
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To
1960.		156'	3'0"								
	3/6	156'									
		160'	4'0"								
		160'									
		163'6"	3'6"		163'						
		163'6"		163'		Fine grained, light green, massive barren amphibolite. Pyrite and magnetite very rare or absent.					
		168'	4'6"			Minor quartz veining. In places, irregular masses of epidote.					
		168'	170'	2'0"							
		170'									
		173'6"	3'2"								
		173'6"			175'						
				175'		Coarse grained, epidote-rich gabbro-amphibolite. No magnetite and only minor amounts pyrite (<2%) as irregular grains and veneers on fracture planes. Minor serpentinization					
		177'6"	1'3"								
		177'6"									
		181'6"	4'0"								
		181'6"									
		185'	3'6"			Epidote highly developed, up to 40% in places, causes some distortion of original gabbroic texture. Minor					
		185'			188'	qtz. veins.					
		189'	4'0"								
		189'			188'						
		192'	3'0"			Similar to previous formation but proportion of epidote is less, about 20%. Rock a blue grey colour.					
		192'									
		197'	5'0"			Pyrite <1%, magnetite nil.					
		197'				Much development of hornblende prisms, up to 8 mm long at 225-226'.					
		202'	5'0"								
		202'									
		208'	6'0"								
6/6		208'									

DRILL RECORD			GEOLOGICAL LOG			GEOLOG. SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
1960		213'	5'0"																
		213'																	
		218'	9"																
		218'	9"																
		220'	9"																
		220'	9"																
		222'	6"																
		227'	6"																
		227'	6"		228'														
		231'	6"		228'	F.gr. epidote-rich, massive, barren													
		231'	6"		231'	amphibolite.													
		231'	6"		231'	M.gr. epidote-rich, massive, barren													
		235'	3'6"			gabire-amphibolite. Some f.gr.													
		235'				amphibolite.													
		237'	6"																
		237'	6"		240'														
		240'	6"																
		244'	3'6"		242'	Altered amphibolite-schist containing													
		244'			242'	minor ants. magnetite.													
		244'	245'		244'	10-15% pyrite.													
		245'	6"		244'	Generally massive, fine and medium													
		248'	2'6"			grained, barren amphibolite.													
		248'				At 247'-248' - schistose with 50%													
		251'	3'0"			pyrite.													
7/6		251'	254'		254'														
		254'	255'		254'														
		255'	6"		254'	Magnetite-amphibolite-schist, talcose													
		262'	6'6"			and serpentized. Pyrite % in													
		262'				parts 10%. A low grade ore.													
		264'	2'0"																
		264'																	

F313 254' 258' 31.8

254' 267'6" 29.9 20.14 0.56 0.08 0.63 3.69 3.56

F314 258' 264' 31.6

DRILL RECORD				GEOLOGICAL LOG			GEOL. SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S.	
1960		266'	2'0"				x	x	F315	264'	267'6"	24.9							
	266'			267'6"			x	x											
	269'3"	3'3"		267'6"		F.gr. massive, amphibolite. V.minor ants. talc, pyrite and magnetite			F316	267'6"	276'2"	9.5							
	269'3"																		
	273'3"	4'0"																	
	273'3"			276'2"															
	276'2"	2'11"		276'2"		Pyritic magnetite-amphibolite-schist, some areas of (<1'0") massive gabbro-amphibolite and f.grained	x	x	F317	276'2"	281'9"	15.3							
	276'2"																		
	281'3"	5'1"		281'9"		amphibolite.	x	x											
	281'3"			281'9"		F.gr. barren, massive, serpentinous			F318	281'9"	285'3"	4.9							
				285'3"		and epidote-rich amphibolite.													
	286'3"	5'0"		285'3"		Altered, talcose and serpentinous magnetite-amphibolite-schist. Massive in parts. Pyrite approx. 5%.	x	x	F319	285'3"	290'	36.5							
	286'3"																		
	290'	3'9"																	
	290'																		
	293'6"	3'6"							F320	290'	296'	29.8							
8/6	293'6"																		
	298'6"	5'0"							F321	296'	302'6"	29.3							
	298'6"																		
	302'6"	4'0"																	
	302'6"			302'6"					F322	302'6"	308'	15.6							
				302'6"		F.gr. barren, fairly massive serpentinous and chloritic amphibolite.													
	306'3"	3'9"		308'															
	306'3"			308'															
	311'	4'9"		308'		F.gr. massive, granular pyritic magnetite. 10-15% pyrite. Minor patches barren, f.gr. amphibolite.			F323	308'	315'	49.0							
	311'																		
	315'	4'0"																	
	315'																		
	319'3"	4'3"							F324	315'	321'	38.0							
	319'3"																		

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By calculation

DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
	322'6"	310"		321'															
	322'6"			321'		D. green, f-med. grained epidote-rich altered amphibolite. Minor development of serpentine & actinolite													
	327'6"	5'0"				Minor qtz. veining.													
	327'6"					Magnetite visually absent, HCl.Sol.Fe. content less than 3%.													
	332'6"	5'0"																	
	332'6"																		
	335'3"	2'9"																	
	335'3"																		
	340'3"	5'0"																	
	340'3"	341'9"	1'6"																
	341'9"	343' 1'3"		343'															
	343'			343'		High-med. grade granular, pyritic and serpentiferous magnetite.													
	348'	5'0"																	
9/6	348'																		
	351'	3'0"		351'															
	351'			351'		Low to med. grade magnetite-talc-amphibolite schist. Serpentiniferous in parts.													
	356'	5'0"																	
	356'																		
	360'	4'0"		360'															
	360'	361'6"	1'6"	360'		F.gr. massive green amphibolite. Barren. Epidote-rich in parts.													
	361'6"	362'6"	1'0"																
	362'6"																		
	366'	3'6"																	
	366'																		
	370'6"	4'6"																	
	370'6"																		
	375'3"	4'9"																	

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DRILL RECORD

GEOLOGICAL LOG

GEOLOG. SECTION

ASSAY RESULTS

Date	From		Core Recov.	To		Description	Core		Sample No.	From		To	
							375'						
10/6													
14/6													
16/6													

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DRILL RECORD

GEOLOGICAL LOG

GEOLOG. SECTION

ASSAY RESULTS

1980	From		Core Recov.	From		Description	Core		Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S.
	430'9"	431'	3"															
	431'	433'6"	2'6"															
	433'6"																	
		436'9"	3'3"															
	436'9"																	
		440'6"	3'9"															
17/6	440'6"																	
		444'6"	4'0"															
	444'6"																	
		446'	1'6"															
	446'	446'6"	2"															
	446'6"	449'	2'3"															
	449'	451'9"	2'9"															
	451'9"	454'9"	2'9"															
	454'9"																	
		458'	7"															
	458'	459'	4"															
	459'	460'	8"															
20/6	460'	461'	1'0"		461'													
	461'				461'	Altered, talcose & chloritized, pyritic magnetite-amphibolite-schists.												
		464'6"	3'6"						F329	461'	469'6"	9.3						
	464'6"					Only minor ants. magnetite. Pyr. 5-1%. Minor qtz. veining. In parts, some f.gr. massive amphibolite.												
		469'6"	5'0"															
	469'6"																	
		471'	1'6"															
	471'	473'	1'6"															
	473'																	
		477'	4'0"		477'													
	477'				477'	F.gr. massive granular pyritic magnetite. Only small ants. amph. Pyrite 10-15%.			F331	477'	483'	47.9						
		480'6"	3'6"		480'6"													
	480'6"				480'6"	Altered mag-amph-schist.												
		481'6"	1'0"		482'													
	481'6"	483'	1'0"		482'	F.gr. massive, granular, pyritic			F332	483'	488'6"	45.6						

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Hole No. 7

DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn.	% P ₂ O ₅	% S.	
1960	539'9"	544'6"	4'9"						F344	539'9"	544'6"	53.7							
	544'6"									539'9"	554'6"	54.7	4.34	0.77	0.08	0.04	5.47	0.53	
	549'6"	5'0"							F345	544'6"	549'6"	55.1							
	549'6"																		
	554'6"	5'0"							F346	549'6"	554'6"	55.1							
	554'6"																		
	559'3"	4'6"							F347	554'6"	559'3"	29.2							
	559'3"																		
	564'	4'9"							F348	559'3"	566'	33.5							
23/6	564'			566'															
	564'	4'9"		566'		Highly pyritic (20-40% FeS ₂) schistose magnetite, altered amphibolite-schist and serpentine. Pyrite 60% in parts			F349	566'	572'6"	19.6							
	568'	4'0"				572'6" Med. grade iron ore.													
	573'	5'0"		572'6"		High grade pyritic magnetite, minor amounts serpentine			F350	572'6"	579'	43.5							
	573'																		
	578'	5'0"		579'		Fairly massive, highly serpentinised magnetite-amphibolite. All amph. now a f.gr. massive serpentine, l. green in colour. Pyr. 2-5%. Magnetite 20-25%.			F351	579'	587'	14.4							
	578'																		
	583'	5'0"																	
	583'																		
	587'	4'0"							F352	587'	591'6"	14.6							
	587'																		
	591'3"	4'3"		591'6"		F.gr. massive, amphibolite. Barren of magnetite & highly serpentinised.			F353	591'6"	599'	4.1							
	591'3"	593'	1'9"	591'6"						579'	632'	10.9	31.08	0.89	0.08	0.33	3.50	12.55	
	593'																		

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Date	DRILL RECORD			GEOLOGICAL LOG			GEOLOG. SECTION		Sample No.	ASSAY RESULTS								
	From	To	Core Recov.	From	To	Description	Core	Sample		From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S.
						Pyrite 1-2%. Magnetite < 5%.												
24/6	598'	599'6"	1'6"	599'	599'	Serpentinized, magnetite amphibolite. Pyrite 1%.			F354	599'	602'3"	31.5						
	599'6"	602'3"	2'9"	602'3"	602'3"	Fairly massive, f.gr. serpentinized magnetite-amphibolite. Pyrite < 2%. Only small amounts magnetite.			F355	602'3"	609'6"	12.0						
	607'	609'6"	2'6"	609'6"	609'6"				F356	609'6"	615'	12.1						
27/6	615'	615'	5'6"	614'	614'	L. green, serpentinized, barren amphibolite.												
	619'6"	619'6"	4'6"	617'	617'	Fairly massive, highly serpentinized magnetite-amphibolite, containing only minor ants. magnetite and pyrite. Schistose in parts.			F357	615'	624'6"	7.0						
	624'6"	628'3"	3'9"	628'3"	628'3"				F358	624'6"	632'	5.6						
	633'3"	633'3"	5'0"	632'	632'	High grade, f.gr. granular magnetite Appearance massive but a faint schistosity is defined by parallelism of pyrite lenses and bands. Only very minor ants. of chloritic serpentine.			F359	632'	637'	55.9						
28/6	637'	637'	3'9"	637'	637'					632'	652'	55.9	4.04	0.62	0.08	0.45	4.45	0.87
	642'	642'	5'0"	642'	642'				F360	637'	642'	58.8						
	647'	647'	5'0"	647'	647'				F361	642'	647'	58.0						
	647'	647'	5'0"	647'	647'				F362	647'	652'	51.0						

1413

Hole No. 7

DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S ₁₄₄	
1960.		652'	5'0"																
	652'	654'3"	2'3"						F363	652'	659'3"	54.2							
	654'3"	659'3"	5'0"						F364	659'3"	664'3"	54.7							
	664'3"	664'3"	5'0"	664'3"		Barren, serpentized, f.gr. massive amphibolite.				652'	680'	45.0	12.58	0.91	0.07	0.10	3.13	5.40	
	664'3"	667'3"	3'0"						F365	664'3"	671'	9.8							
	667'3"	670'6"	3'3"																
	670'6"	670'6"		671'															
29/6	674'6"	674'6"	3'6"	671'		High grade granular pyritic magnetite Pyrite 5-7%. Minor qtz. veining and as "vugh" linings.			F366	671'	680'	58.5							
	674'6"	679'6"	5'0"																
	679'6"	680'		680'															
	684'3"	684'3"	3'10"	680'		Massive, schistose in part, serpentized & slightly talcose magnetite-			F367	680'	684'6"	22.4							
	684'3"	684'6"		684'6"		amph. Only minor ants. pyrite.													
	686'	686'	1'9"	684'6"						632'	751'	54.5	5.93	0.40	0.06	0.16	4.09	1.70	
	686'	691'	5'0"			High grade, f.gr. granular magnetite Magnetite massive but original schistosity shown by lineation of pyrite aggregates and lenses.			F368	684'6"	691'	49.6							
	691'	694'	3'0"							680'	702'6"	48.7	8.79	0.15	0.06	0.05	4.93	0.70	
	694'	697'6"	2'8"			Pyrite 5-7%. At 690 up to 30% of serpentized f.gr. amphibolite, but generally present in only minor ants.			F369	691'	697'6"	55.1							
	697'6"	702'6"	5'0"						F370	697'6"	702'6"	62.7							
	702'6"	702'6"																	

by calculation

Hole No. 7

DRILL RECORD

GEOLOGICAL LOG

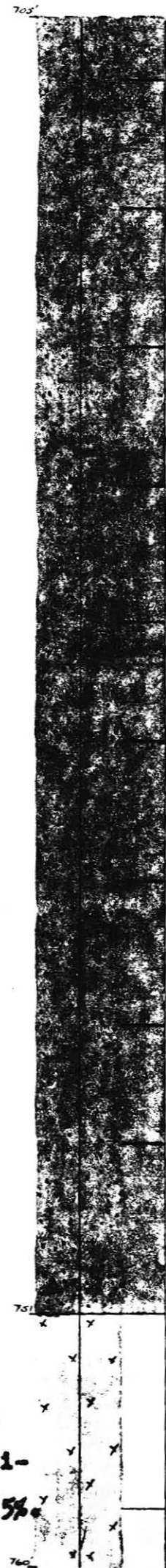
GEOL. SECTION

ASSAY RESULTS

320177 14.

Date	From	To	Core Recov.	From	To
1960		707'3"	4'9"		
30/6	707'3"				
		711'8"	4'5"		
	711'8"				
		716'8"	5'0"		
	716'8"				
		721'6"	4'10"		
	721'6"				
		726'6"	5'0"		
	726'6"				
		730'9"	4'3"		
	730'9"				
		735'9"	5'0"		
	735'9"				
		740'9"	5'0"		
	740'9"				
		745'	4'3"		
1/7	745'				
		750'	5'0"		
	750'			751'	
		755'	5'0"		
	755'				
		758'	3'0"		
	758'				

Description



Sample No.	From	To	% Fe Sol.	% SiO2	% Al2O3	% TiO2	% Mn	% P2O5	% S.
F371	702'6"	707'3"	58.0						
F372	707'3"	711'8"	62.4						
F373	711'8"	716'8"	63.5	1.64	0.11	0.06	0.21	4.18	0.51
F374	716'8"	721'6"	62.5						
F375	721'6"	726'6"	61.9						
F376	726'6"	730'9"	61.8						
F377	730'9"	735'9"	61.3						
F378	735'9"	740'9"	62.8	1.43	0.15	0.05	0.02	4.02	0.24
F379	740'9"	745'	64.1						
F380	745'	751'	62.0						
F381	751'	758'	24.0						

751' Massive, often schistose in parts, magnetite amphibolite. A low grade ore. Altered chloritized & serpentinized. Pyrite generally less than 5%.

14C

Hole No. 7

DRILL RECORD			GEOLOGICAL LOG		GEOLOGICAL SECTION		ASSAY RESULTS												
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% Fe HCl Sol.	% SiO ₂	% Al ₂ O ₃	% TiO ₂	% Mn	% P ₂ O ₅	% S	
1960		763' 5'0"							F382	758'	763'	31.8							
	763'									751'	771'3"	31.5	21.28	1.06	0.10	0.12	3.58	7.88	
	766'3"	3'3"							F383	763'	771'3"	37.7							
	771'3"	5'0"								751'	782'	29.5	21.78	1.00	0.09	0.96	3.75	7.43	
	771'3"	773'3"	2'0"						F384	771'3"	777'	28.8							
	773'3"									771'3"	782'	25.6	22.71	0.88	0.08	0.05	4.06	6.59	
	777'	3'9"		777'					F385	777'	779'	17.4							
4/7	777'	779'	2'0"	777'		Grey siliceous country rock with			F386	779'	779'6"	45.4							
	779'	779'6"	6"			minor magnetite & pyrite. Magnetite-rich band from 779'-779'6".			F387	779'6"	782'	20.8							
	779'6"	782'0"	2'6"			782' Foliation 45° to hole.													
7/7	782'			782'															
	787'	1'0"																	
	787'					Pale greenish fine grained amphibolite, notably talcose & serpentinous.													
	792'	9"				Pyrite abundant as disseminated grains.													
	792'					Only traces of magnetite visible.													
	793'	3"				Foliation at 797'6" at 45° to hole.													
	793'																		
	797'6"	3'6"																	
	797'6"																		
	802'6"	3'3"																	
	802'6"			802'6"															
	806'	2'3"		802'6"															
8/7	806'																		
	811'	3'6"				Pale greenish fine grained amphibolite.													
	811'					Only minor traces of pyrite and magnetite.													
	814'9"	2'9"																	

140

by calculation

Hole No. 7

17.

DRILL RECORD

GEOLOGICAL LOG

GEOL. SECTION

ASSAY RESULTS

320180

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Date
1960

From To Core Recov. From To

Description

Core Sample Sample No. From To

13/7 869'3"

871'9" 2'6" 871'9"

871'9" 874'4" 2'0" 871'9" Grey siliceous amphibolite country

874'4" rock, pyritic from 872'9" to 873'3"

877' 2'8" 877' Foliation at 40 degrees to hole.

END OF HOLE

DIP SURVEYS

Depth	Dip of hole
15'	45°
100'	44½°
200'	42¾°
300'	42°
400'	39½°
500'	38½°
600'	35½°
700'	33½°
800'	32¾°

320181

D.D.H. No. 8

DIAMOND DRILL CORE RECORD

320182

Hole No. 8
 Drilled by Associated Diamond Drillers
 Core Recovery 0-70', 12% ; 70-554', 92%
 Geological Logging by—
Hughes, Jennings

Area of Operation SAVAGE R.
 Location of Site 1600' W ON A TRAVERSE
 Date Commenced
 Date Completed 23rd August 1960.

Reduced Level of Site 1505'?
1405'
 Bearing of Hole ± 95°
 Dip of Hole 40°
 Bore Depth 554'

149

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	% HCl Sol. Fe.	SiO ₂	Al ₂ O ₃	TiO ₂	Mn	Ca	S	
	0'	70'	1'	0	70	Sheared Amphibolite - plentiful pyrite													
	70'	71'6"	10"	70	73'9"	Massive Amphibolite - little fine pyrite - albite veins, parallel to core													
	71'6"	73'9"	1'8"																
	73'9"	77'	3'3"	73'9"	77'	do but little more pyrite													
	77'	82'	5'	77'	82'	do kyanite in albite veins													
	82'	85'	3'	82	85	Amph. more sheared - some serpentine forming													
	82'	85'	3'																
	85'	88'6"	3'6"	85'	96'9"	Altered amphibolite with pyrite, kyanite and magnetite				85	90	16.8							
	88'6"	91'9"	2'3"			do but more pyrite				90	95	13.3	22.109	14.28	0.25	0.07	0.74	11.25	
	91'9"	96'9"	5'	96'9"	101	do but more pyrite				95	101	12.7							
	96'9"	99'9"	3'	101	102	Massive amphibolite - some pyrite													
	99'9"	102'	2'3"			serp. along joints													
	102'	106'3"	4'	102	112'6"	do													
	106'3"	111'3"	5'																
	111'3"	113'9"	2'6"	112'6"	115'	Altered to Serpentine, some kyanite													
	113'9"	118'9"	5'			pyrite, clay.				115'	116'6"	8.0							
	118'9"	123'	4'3"	115'	116'9"	Half pyrite, half magnetite - little late													
	123'	128'	4'6"																
	128'	131'3"	3'3"																
	131'3"	134'3"	2'6"	116'	149'9"	Strongly jointed but massive amphibolite with serpentine, pyrite in joints -													
	134'3"	136'9"	1'8"			125' more alteration - pyrite + kyanite													
	136'9"	140'	3'3"			137'9" White albite veins													
	140'	141'	1'			141-5 Broken along joints 75° to hole													
	141'	145'	4'			Pyrite + Magnetite													
	145'	147'6"	2'6"																
	147'6"	152'	4'6"	149'9"	151	Sheared Amphibolite + Pyrite				149'9"	151'	26.4							
				151	152														

Amphibolite Massive. Often altered to chloritic, serpentine type. Pyrite do but more than 5% Magnetite

Amphibolite Sheared. Often altered to chloritic, serpentine. talc core type. Pyrite do but more than 5% Magnetite

IRON VALUES.
 Greater than 50% HCl Sol. Iron
 40% - 50%
 30% - 40%
 Less than 30%

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS											
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	Fe	Si	Al ₂ O ₃	TiO ₂	Mn	CaO	S		
	393'6"	398'6"	2'3"	390	448	Coarse grained massive amphibolites altering to Serpentine & Talc.														
	398'6"	404'3"	5'9"																	
	404'3"	409'3"	4'3"																	
	409'3"	409'9"	6"																	
	404'9"	414'9"	4'10"																	
	414'9"	417'9"	3'	448	471'6"	Medium grade ore - magnetite, talc - pyrite pyrite concentrated at 457'-457'6" 461'-462'6" 465'3"-467' 470'-470'6"														
	417'9"	422'3"	4'8"																	
	422'3"	433'9"	11'6"																	
	433'9"	438'9"	1'9"																	
	438'9"	442'6"	2'																	
	442'6"	445'	2'6"																	
	445'	448'	2'4"																	
	448'	461'	13'	471'6"	554'	Fine grained amphibolites - well jointed with serpentine on joint planes - little pyrite				448'	453'	44.6								
	461'	466'	3'10"								453'	458'	42.2							
	466'	470'6"	3'4"								458'	463'	33.6	2.07	2.00	0.25	0.05	0.40	11.25	
	470'6"	473'6"	2'10"								463'	468'	17.9							
	473'6"	554'	80'6"								468'	471'6"	37.8							

320185

152

D.D.H. No. 9

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS									
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	SiO ₂	HCl Sol Fe	Al ₂ O ₃	MnO	P ₂ O ₅	S	
				333'0"	334'3"	Disrupted and iron stained amphibolite with a little pyrite.												
	334'3"	339'3"	2'3"	334'3"	339'3"	Lower grade iron ore - much white material;												
	339'3"	343'0"	3'9"			probably, altered amphibolite, bearing a shearing at 45° to core			9	344	364	40.6	52.1	15	0.27	0.2	0.02	0.5
	343'0"	346'3"	3'3"															
	346'3"	350'0"	3'7"	335'0"	374'0"	Iron ore with pyrite - from 343' jointing at 58° at 364' altered vein												
	350'0"	355'0"	5'0"															
	355'0"	358'0"	3'0"	374'6"	376'0"	Lower grade iron ore with some altered amphibolite												
	358'0"	363'0"	5'0"	370'0"	377'0"	Low grade iron ore with blotches of white weathered material and veins of small pyrite			10	364	384	42.5	48.4	13	0.22	0.1	0.02	0.9
	363'0"	367'0"	4'0"															
	367'0"	372'0"	5'0"															
	372'0"	377'0"	5'0"	377'0"	401'0"	Iron ore with pyrite and blotches of white weathered amphibolite			11	384	404	46.5	48.2	13.7	0.27	0.1	0.02	0.02
	382'0"	387'0"	5'0"															
	387'0"	392'0"	5'0"			400-401 has altered amphibolite.												
	392'0"	397'0"	5'0"															
	397'0"	401'0"	4'0"	401'0"	405'0"	Low grade iron ore, weathered and altered amphibolite from 387'0"			12	404	424	47.8	37.8	14	0.27	0.1	0.02	0.4
	405'0"	409'6"	4'6"															
	409'6"	413'0"	3'4"	413'0"	416'0"	Low grade iron ore with much white material												
	413'0"	418'0"	5'0"															
	418'0"	420'3"	1'8"	418'0"	423'0"	Highly pyritic and weathered low grade iron ore												
	420'3"	423'0"	2'7"			Low grade iron ore with blotches of altered amphibolite. Amphibolite and pyrite both rather friable												
	423'0"	423'9"		423'0"	423'9"	Altered amphibolite - pyrite												
	423'9"	424'0"		423'9"	424'0"	Low grade iron ore as above												
	424'0"	428'0"	4'0"	424'0"	427'0"	Low grade iron ore with much altered amphibolite and pyrite.			13	424	444	40.2	40.9	13.5	0.27	0.1	0.02	0.30
	428'0"	430'0"	2'0"															
	430'0"	433'0"	3'0"	427'0"	428'0"	Highly pyritic and weathered low grade iron ore												
	433'0"	435'0"	2'0"	428'0"	433'9"	Iron ore with nodules of pyrite and altered amphibolite. At 431'9" vein of altered material.												

320189

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS										
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	SiO ₂	Al ₂ O ₃	Fe	CaO	MgO	TiO ₂	Loss	
	435'0"	438'3"	2'6"	433'9"	435'0"	Whitish and tan altered amphibolite													
	438'3"	442'3"	1'9"	435'0"	442'3"	Broken, sheared and siliceous altered amphibolite with patches of iron 441-442: iron patches become less.													
	442'3"	445'0"	2'5"	442'3"	450'0"	Iron ore with pyrite - occasional patches of altered amphibolite.			14	444	464	62.3	52.9	1.1	1.70	0.26	0.09	5.04	
	445'0"	448'0"	1'9"																
	448'0"	451'0"	2'4"			448-448 broken.													
	451'0"	453'0"	1'2"	450'0"	451'0"	Dark altered amphibolite with iron ore and pyrite													
				451'0"	453'0"	Iron ore - more altered amphibolite ore, less													
	453'0"	455'3"	1'6"	450'0"	450'0"	Iron ore with pyrite and altered amphibolite													
	455'3"	459'0"	2'4"	450'0"	451'0"	White altered amphibolite with iron ore													
				451'0"	453'0"	Iron ore with pyrite													
	459'0"	461'9"	2'6"	450'0"	461'9"	Iron ore with small patches of pyrite and altered amphibolite At 459: sheared and altered remnant of amphibolite													
	461'9"	464'3"	2'2"	461'9"	468'0"	Iron ore with small patches of white material (prob. alt. amph.)			15	464	489	62.8	42.3	1.52	1.62	0.23	0.06	4.71	
	464'3"	468'0"	3'9"																
	468'0"	468'6"	0'6"	468'0"	476'0"	As above but with more amphibolite and lower grade iron ore.													
	468'6"	473'0"	4'0"																
	473'0"	476'0"	2'10"	470'0"	481'0"	Low grade iron ore with small patches of altered amphibolite; breccias from 473'													
	476'0"	478'3"	1'4"																
	478'3"	481'0"	1'																
	481'0"	482'5"	2'6"	481'0"	482'0"	Very brecciated low grade iron ore.													
				482'0"	482'5"	Dark green amphibolite with pyrite.													
	482'5"	481'0"	6'0"	483'5"	484'4"	Broken amphibolite													
				484'4"	485'6"	Low grade iron ore													
				485'6"	481'0"	Dark green amphibolite with iron ore ends at 481'0"													
	481'0"	489'0"	1'6"	481'0"	488'0"	Broken, fine grained amphibolite, sheared and altered with a little pyrite													
				488'0"	489'0"	Low grade iron ore with altered amphibolite.													

320190

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS			320191
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	
489'0"	492'0"	1'10"	489'0"	497'0"		Medium/low grade iron ore with pyrite						157
492'0"	495'0"	3'0"				altered amphibolite, talc and serpentine	+					
495'0"	498'0"	3'0"				block veinlets.						
				497'0"	498'0"	altered fine grained amphibolite with	+					
						serpentine and talc						
498'0"	502'0"	2'0"	498'0"	505'0"		altered amphibolite, serpentine with	+					
						little pyrite and some magnetite						
				505'0"	502'0"	amphibolite almost completely altered to	+					
						serpentine and talc material, very						
						fine reniform veinlets of magnetite						
						and some pyrite nodules. Some very massive.						
502'0"	504'0"	2'0"	502'0"	504'0"		massive, altered, siliceous amphibolite with						
						some serpentine veins and veins of						
						pyrite also fine siliceous blocks of						
						magnetite.						
504'0"	507'0"	2'0"	504'0"	507'0"		massive, altered amphibolite with						
						serpentine veins and some fine						
						magnetite veins, pyrite veins and						
						blocks. Some pieces of iron appear to						
						be a variety resembling ls, magnetite						
						and pyrite with some serpentine veins						
507'0"	511'0"	2'0"	507'0"	511'0"		altered and somewhat amphibolite altered						
						to white siliceous serpentine material						
						with very fine veins and veins						
						of magnetite and pyrite.						
511'0"	515'0"	2'0"	511'0"	514'0"		fine grained, altered amphibolite with						
						magnetite and pyrite veins along joints						
				514'0"	515'0"	Disorganized and altered amphibolite; broken						
						and remnant alteration "veins" made						
						of fragments consist of pyrite, magnetite,						
						talc and serpentine. Also fine						
						reniform veinlets of magnetite.						

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS								
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To						
	515'3"	519'0"	1'2"	515'3"	534'0"	Very broken core - altered amphibolite	513										
	519'0"	521'0"	1'4"			with pyrite and fine magnetite veinlets.	+										
	521'0"	524'0"	3'0"			see serpentine veins.											
	524'0"	525'6"	0'8"	534'0"	535'0"	Soft clay, decomposed amphibolite.	+										
	525'6"	527'3"	-														
	527'3"	532'3"	1'4"				+										
	532'3"	535'0"	1'4"				+										
	535'0"	536'6"	1'6"	535'0"	545'0"	Serpentinized amphibolite with magnetite	+										
	536'6"	540'0"	3'6"			and pyrite and probably low grade iron ore,											
	540'0"	544'4"	1'2"			good recovery.	+										
	544'4"	546'4"	1'4"	545'0"	548'0"	Low ore: magnetite and pyrite	545		16	542	548	2.15	3.41	1.73	0.46	0.03	2.46
	546'4"	548'0"	0'2"	548'0"	551'0"	Very broken core - fragments of altered	548										
	548'0"	552'3"	0'7"			amphibolite, magnetite and pyrite.											
	552'3"	555'0"	0'9"			502-503 soft green decomposed pyrite.											
	555'0"	557'0"	nd														
	557'0"	559'0"	0'9"														
	559'0"	561'0"	1'0"							562'0"	563						
	561'0"	563'0"	1'1"														
	563'0"	565'0"	0'4"														
	565'0"	567'0"	1'6"														
	567'0"	569'0"	0'4"				581										
	569'0"	571'0"	0'3"														
	571'0"	573'0"	0'5"				586										
	573'0"	574'6"	1'0"														
	574'6"	576'0"	1'3"														
	576'0"	578'0"	1'3"														
	578'0"	579'0"	nd														
	579'0"	581'0"	0'2"				603										
	581'0"	583'0"	1'0"	581'0"	586'0"	Low ore and broken decomposed				582	586						
	583'0"	585'0"	1'0"			amphibolite				603	611						
	585'0"	586'0"	1'0"														
	586'0"	588'0"	0'10"	586'0"	603'0"	Makes fine grained amphibolite											
	588'0"	590'0"	0'7"			frag. 586-588, 590-591 & 603-604											

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS					
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	320193		
	590'0"	591'6"	0'2"			585'-604' : core badly broken and								
	591'6"	593'0"	0'8"			decomposed. a probable								
	593'0"	595'0"	0'8"			zone of fracture.								
	595'0"	597'0"	nil											
	597'0"	599'0"	nil											
	599'0"	600'0"	nil											
	600'0"	601'0"	nil											
	601'0"	603'0"	-											
	603'0"	604'0"	0'8"											
	604'0"	606'0"	0'9"	603'0"	604'0"	Very broken, iron ore and decomposed				603	611			
	606'0"	608'0"	0'10"			amphibolite.								
	608'0"	609'0"	0'9"	604'0"	608'0"	Very broken iron ore with pyrite								
	609'0"	611'0"	1'2"	608'0"	609'0"	3" narrow, 6" fine grained chert								
	611'0"	612'6"	0'10"			amphibolite.								
				609'0"	611'0"	entirely broken iron ore with pyrite.								
				611'0"	612'6"	broken weathered fine grained and								
						amphibolite and pyrite magnetite ore.								
	612'6"	614'0"	0'9"	612'6"	617'0"	as above with very small amount of ore.								
	617'0"	618'3"	nil	61'0"	618'3"									
	618'3"	620'0"	1'2"	618'3"	622'0"	fine grained amphibolite, pyrite and								
	620'0"	622'0"	1'8"			serpentine along joints. Very broken 620-622								
	622'0"	626'0"	3'8"	622'0"	628'0"	Amphibolite with blotches of pyrite,								
	626'0"	630'0"	1'9"			jointing at 20° to core.								
	630'0"	632'0"	0'6"											
	632'0"	634'0"	0'3"											
	634'0"	638'0"	1'1"											
	638'0"	642'0"	0'11"											
	642'0"	644'6"	0'6"	642'0"	651'0"	Very broken, fine grained amphibolite								
	644'6"	647'6"	1'2"											
	647'6"	649'5"	0'5"											
	649'5"	651'0"	0'1"											
	651'0"	653'0"	1'6"	651'0"	653'0"	Weathered sericite chlorite schist								
	653'0"	654'0"	0'9"	653'0"	656'6"	As above with small amount								
	654'0"	656'5"	1'0"			of fine grained, sericite								
						amphibolite								

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Schist

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS					320194		
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To					
	656'0"	657'0"	1'6"													
	657'0"	660'0"	0'8"													
	660'0"	662'0"	1'6"													
	662'0"	663'0"	1'0"													
	663'0"	665'0"	1'3"	663'0"	665'0"	Very broken, soft fuzzy weathered schist.										
						<u>End of Hole 665'6"</u>										

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320195

D.D.H. No. 10

DIAMOND DRILL CORE RECORD

320196

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Hole No. 10
 Drilled by Associated Diamond Drillers
 Core Recovery
 Geological Logging by—

Area of Operation Savage River
 Location of Site
 Date Commenced
 Date Completed

Reduced Level of Site
 Bearing of Hole
 Dip of Hole
 Bore Depth

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	HCl Sol Fe	
	0	18'	1'	0'	85'	Talcosse clay derived from serpentinous rocks.			1	95'6"	103'	57.8	
	18'	70'	6"						2	103'	109'	51.0	
	70'	90'	1'	85'	95'6"	Talcosse clay, decomposed basic igneous rocks.			3	109'	114'	55.9	
	90'	103'	3'						4	124'	130'	62.0	
	103'	125'	9'	95'6"	114'	Medium grade magnetite with narrow bands of clayey country rock at 103', 109' and 112'. Ground highly fractured.			5	130'	133'	52.6	
				114'	124'	Pale greenish grey talcosse country rock. Pyrite abundant as segregations. Some minor disseminations of magnetite.			6	133'	134'6"	13.0	
									7	134'6"	139'	51.8	
									8	139'	145'	55.2	
									9	145'	151'6"	58.5	
									10	151'6"	156'	59.0	
									11	156'	158'6"	55.8	
									12	158'6"	159'	12.6	
	125'	145'	14'	124'	130'	Medium grade pyrite magnetite rock, fine grained.			13	159'	166'6"	55.8	
									14	166'6"	171'	55.5	
				130'	133'	Magnetite rocks with patches of country rock.			15	171'	176'	61.0	
									16	176'	180'6"	59.7	
				133'	134'6"	Pale grey talcosse country rock with patches of tremolite asbestos.			17	180'6"	182'9"	59.7	
									18	182'9"	187'3"	42.6	
	145'	158'	12'	134'6"	221'	Medium to high grade pyrite magnetite rock. Pale greenish clayey country rock from 158'6" - 159', 186'6" - 187', 195' - 195'6". Highly pyritic from 170' - 170'6"			19	187'3"	192'3"	58.0	
	158'	192'	31'						20	192'3"	196'	53.6	
	192'	225'	32'						21	196'	201'	58.5	
									22	201'	206'	59.3	
									23	206'	211'	59.1	
									24	211'	216'	58.9	
									25	216'	221'	59.3	
	225'	242'	15'	221'	224'6"	Pale grey talcosse and pyritic country rock. Traces only of magnetite.			26	221'	224'6"	14.3	
	242'	246'	1'						27	224'6"	227'6"	57.5	

DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				320197
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	HCl Sol Fe	
				224'	232'6"	Medium grade pyritic magnetite rock.			28	227'6"	232'6"	57.3	
				232'6"	241'	Pale greenish amphibolitic country rock. Only minor amounts of disseminated magnetite.			38	232'6"	241'	10.2	
	246'	262'	5'	241'	276'	Medium to high grade magnetite rocks. Highly pyritic 274'-276'. Patches of country rock between 242'-246' 9" and 256'6"-258'6"			29	241'	246'9"	51.4	
	262'	279'	10'						30	246'9"	252'6"	56.9	
									31	252'6"	256'6"	59.7	
									32	256'6"	258'6"	7.4	
									33	258'6"	265'	53.1	
	279'	284'	4'	276'	293'6"	Pale green amphibolitic country rock.			34	265'	271'	59.7	
	284'	292'	7'						35	271'	276'	56.6'	
	292'	298'	3'	293'6"	303'	Medium grade pyritic magnetite rock.			36	293'6"	298'	47.4	
	298'	306'	4'						37	298'	303'	58.1	
	306'	308'	1'	303'	308'	Green serpentine country rock.							
	308'	309 1/2'	1'6"										
				308'	309 1/2'	Fairly massive amphibolite, little pyrite and serpentine.							
	309 1/2'	311 1/2'	1'	309 1/2'	311 1/2'	do.							
	311 1/2'	314 1/2'	3'	311 1/2'	314 1/2'	do.							
	314 1/2'	318'	2'	314 1/2'	318'	do.							
	318'	326'	5'9"	318'	326'	Magnetite with pyrite and some talc. 6" country rock at 323'.			49	318'	326 1/2'	58.5	
	326'	326 1/2'	1/2'	326'	326 1/2'	Amphibolite.							
	326 1/2'	331'	4 1/2'	326 1/2'	331'	Mixed magnetite and country rock.			50	326 1/2'	331'	25.2	
	331'	341'	9'	331'	341'	Sheared amphibolite, plentiful pyrite. Serpentinized in part. (See sample 331-332).							
	341'	345'	4'										
	345'	346'	1'	341'	354'	Slightly sheared amphibolite							

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DRILL RECORD				GEOLOGICAL LOG			GEOLOGICAL SECTION		ASSAY RESULTS				
Date	From	To	Core Recov.	From	To	Description	Core	Sample	Sample No.	From	To	McI	Sol Fe
				341	357								
	346'	348'	2'			pyrite patchy but not plentiful, little serpentine only along minor shear planes. Magnetite and pyrite 2" at 353'.							
	348'	351'	3'										
	351'	354'	3'										
	354'	357'	1'6"										
	357'	357'6"	6"										
	357'6"	361'6"	4'	359'	367'4"	mixed country rock and magnetite, pyrite sparse, little shearing.			51	359'	366'	21.4	
	361'6"	362'6"	1'										
	362'6"	366'	3'6"						52	366'	374'	18.9	
	366'	367'4"	1'4"										
	367'4"	371'	1'	367'4"	374'	mostly country rock with some magnetite and pyrite, sheared serpentine.			53	374'	379'	49.8	
	371'	380'6"	7'6"						54	379'	384'	26.9	
				374'	383'6"	mainly magnetite, pyrite and a little talc.			55	384'	389'	57.3	
	380'6"	381'9"	9"	378'6"	383'6"	weathered amphibolite with a little magnetite and pyrite							
	381'9"	383'6"	1'										
	383'6"	388'6"	3'6"	383'6"	403'	mostly magnetite, few inches of country rocks at 394'6" and 398'			56	389'	394'	57.4	
	388'6"	393'6"	5'						57	394'	399'	41.7	
	393'6"	397'	3'3"						58	399'	404'	53.9	
	397'	403'	5'										
	403'	408'	1'	403'	409'	magnetite.							
	408'	413'	1'6"	407'	408'	country rock.							
	413'	416'	3'	408'	419'	mostly magnetite with some talc and pyrite.							
	416'	420'	4'	419'	420'	poorer magnetite.							
	420'	425'	5'										
	425'	428'	3'	420'	438'	mostly magnetite - few inches of fairly massive amphibolite.							
	428'	433'	5'			at 423', 425'6", 433'							
	433'	438'	5'			436'							

D.D.H. No. 18

