

PREVIOUS EXPLORATION WORK

The area was actively explored in 1946 and 1947. St. Anthony Minerals, A.R. Graham, and Graham-Bellingham each worked small claim blocks within or bordering on the present Sims group. Magnetometer surveys were conducted on these three properties, locating the "Dale Granite-Syenite Batholith", and volcanic rock contacts. The "main break" (DPFZ) was located in the northern part of the Graham Bellingham group. Two drill holes of 110 feet each were put on the St. Anthony property, with nothing of interest to report. Harter township was mapped soon after by J. Satterly whose map and report were published in 1951 (OGS Map No. 1951-4). The property has seen little work from that time until 1980. H.D. Carlson held 21 claims, on which he performed geological mapping, again with nothing significant to report.

Kerr Addison Mines Limited optioned the property from W. Sims in spring of 1984, after which it performed linecutting, geology, magnetometer and EM-VLF surveys in the summer of 1984 (assessment report previously submitted). This was followed by an overburden reverse-circulation drill program of 110 holes, in October to December of 1984 (assessment report previously submitted).

AMERICAN BARRICK RESOURCES CORPORATION

Co-ords: 12889.1 889.5

DIAMOND DRILL RECORD

HOLE NO.: MC.88-463

Azimuth: 159.8

Section: 900

Property: Union Mining

Dip: -45.0

Core Size: 80

Location: 0890E 12890N

Elevation: 5000.0

Date Started: July 29, 1988

Length: 243.8

Date Completed: August 3, 1988

Measurement: Metric

Logged by: G. Baschuk

Comments: Casing left in hole

Depth	Azimuth	Dip	Depth	Azimuth	Dip	Depth	Azimuth	Dip
45.72		-41.5	137.16		-39.0	243.84		-38.5
91.44		-40.5	182.88		-39.5			

-----Log Summary-----

.00 4.88 CASING.  
 4.88 60.92 GREYWACKE.  
 60.92 68.86 OXIDE IRON FORMATION.  
 68.86 70.38 GREYWACKE.  
 70.38 94.49 ULTRAMAFIC.  
 94.49 104.30 HIGH MAG BASALT.  
 104.30 123.84 ULTRAMAFIC.  
 123.84 127.67 LANPROPHYRE.  
 127.67 167.40 ULTRAMAFIC.  
 167.40 168.37 90% SILICIFIED - MAG.  
 168.37 243.84 ULTRAMAFIC.  
 243.84 END OF HOLE.

From To -----Description----- Sample From To Length % Sul GW Au g/t

.00 4.88 CASING

4.88 60.92 GREYWACKE

4.88 60.92 Fine grained, uniform grain size, massive quartz rich sediment. The rocks are grey red to purple in colour with traces of pyrite noted locally. The rocks are siliceous, non-magnetic and non-carbonatized. 2 to 3% late stage quartz and carbonate fracture fillings and rarely stringers are noted. Locally white grains of quartz are noted averaging 0.5 mm across. Over lower 7 m, quartz stringers comprise 3 to 5% of the sediments with trace to 1% pyrite as fine disseminations. Pyrite occurs in host, veining is barren.

8.05 8.46 Mafic intrusive. Medium to coarse grained, biotite and chlorite rich dark green intrusive with chilled contacts. Pervasively carbonatized throughout and weakly magnetic. Contacts are diffuse at 45 degrees to the core axis.

14.00 15.75 Mafic intrusive. Medium grained, dark green, biotite and chlorite rich with rare carbonate stringers sub-parallel to core axis. Contacts are relatively sharp at less than 5 degrees and 15 degrees to the core axis. Minor fragments of sediment noted within.

45.20 45.75 5% quartz stringers with 1 to 2% pyrite in adjacent sediments. Stringers at 55 to 60 degrees to the core axis.

47715	22.05	23.05	1.00	TR-1	.080	.08
47716	26.81	27.81	1.00	TR	.050	.05
47717	36.50	37.50	1.00	TR-1	1.270	1.27
47718	45.00	46.00	1.00	TR-1	.680	.68
47719	53.95	54.95	1.00	1	.010	.01
47720	54.95	55.95	1.00	TR-1	.050	.05
47721	55.95	56.95	1.00	TR	.100	.10
47722	56.95	57.95	1.00	TR-1	.070	.07
47723	57.95	58.95	1.00	1	.100	.10
47724	58.95	59.95	1.00	TR	.030	.03
47725	59.95	60.92	.97	TR	.039	.04

60.92 68.86 OXIDE IRON FORMATION

47726 60.95 62.00 1.05 TR .000 nil

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
			47727	62.00	63.00	1.00	TR	.030	.03
60.92	68.86	Fine grained, dark grey to black, finely bedded rocks with 1 to 2% late stage white carbonate stringers. Upper contact is sharp at 60 degrees to the core axis. Rare red hematite rich beds noted. Minor orange ankeritic fracture fillings are noted, generally sub-parallel to core axis. Bedding at 61 degrees at 66 m and 52 degrees to the core axis at 68.65 m. From 61.36 to 61.62 m the unit is brecciated within a matrix of white quartz, minor carbonate and minor chlorite. Fragments are generally iron formation with minor greywackes and are angular in shape. Fault gouge noted at 61.57 m at 66 degrees to the core axis. Pyrite is rare and noted locally associated in sediments adjacent to quartz stringers eg. 61.75 m, 63.37 m. Traces of specular hematite noted locally.	47728	63.00	64.00	1.00	TR	.040	.04
			47729	67.86	68.86	1.00	TR	.020	.02
68.86	70.38		GREYWACKE						
			47730	68.86	69.46	.60	TR	.030	.05
		Fine grained, dark purple brecciated section with weak magnetics noted at top decreasing down section. The upper contact is sharp at 30 degrees to the core axis. The rocks are siliceous, non-carbonatized and contain traces of pyrite locally. Lower contact is sharp with minor ankerite stringers at 44 degrees to the core axis.	47731	69.46	70.38	.92	TR	.147	.16
70.38	243.84		ULTRAMAFIC.						
		The ultramafic unit is highly sheared with talc, serpenite, carbonate and rarely chlorite. Primary textures are rare and generally all textures have been obliterated by the shearing. Individual flows are not recognized.							
70.38	94.49	ULTRAMAFIC							
			47732	70.38	71.38	1.00	TR	.000	nil
			47733	71.38	72.38	1.00	TR	.000	nil
70.38	84.00	Talc schist. Fine grained, highly contorted schist with talc, serpentine, biotite and							

From	To	Description	Sample From	To	Length	% Sul	GW	Au g/t
		carbonate. The carbonate is most intense in serpentine rich sections. The serpentine is blue in colour, possibly antigorite. Clay-grit seams are common throughout the unit, but no orientations possible due to high degree of fracturing and fissile nature of the unit. Sulphides are rare with pyrite crystals noted locally, at upper contact and in 1 m noted from 72.59 to 72.65 m. The unit is often brecciated with serpentine wrapped around fragments. Foliations are variable, and noted at 15 degrees to the core axis at 76 m and 42 degrees to the core axis at 82.1 m. Traces of ankerite noted as fine specks within schist. Magnetic throughout.						
84.00	94.49	Continuation of the above unit with more competent core and increased recovery. The foliation is less contorted and averages 45 to 55 degrees to the core axis. Locally sections are brecciated with serpentine wrap-around. Magnetic throughout.						
		89.3 M : fault gouge at 48 degrees to the core axis, locally highly contorted.						
		93.6 M : fault gouge at approximately 40 degrees to the core axis, within rubble section.						
94.49	104.30	HIGH MAG BASALT						
94.49	104.30	Fine grained massive flow. Dark green to black with localized biotitic sections and minor blue serpentine adjacent to fractures. Strongly magnetic throughout with traces of pyrite. Locally pervasively carbonatized but carbonatization is generally in 1 to 2% fine fractures at dominantly 48 degrees to the core axis. This unit may be intrusive as upper contact is fault gouge at 51 degrees to the core axis and lower weakly chilled and biotite rich with clay-grit seam at 42 degrees to the core axis. The upper 0.6 m is brecciated with traces of crystal pyrite and 10 to 15% blue serpentine and 2 to 3% carbonate stringers.						

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
104.30	123.84	ULTRAMAFIC							
			47734	106.17	107.21	1.04	TR	.000	nil
			47735	114.00	115.00	1.00	TR	.000	nil
104.30	107.68	Fine grained, talc rich dark green blue massive flow with 1% orange ankerite speckling. The unit is frequently brecciated with carbonate fracture fillings, stringers and locally pervasive. Narrow mafic intrusive noted from 105.35 to 105.44 m at approximately 25 degrees to the core axis. At lower contact the grain size is medium grained -pseudo cumulate. Strongly magnetic throughout.	47736	123.36	123.84	.48	TR-1	.005	.01
105.44	105.77	FAULT ZONE. Highly fractured and brecciated with clay along breaks and in matrix to fragments. Dominant clay-grit seam at 105.75 m at 55 degrees to the core axis.							
107.68	109.40	Flow top with spinifex. Sharp contact at 80 to 90 degrees to the core axis. The amount of spinifex is erratic within fine grained dark green blue material. 3 to 5% late stage white calcite stringers and fracture fillings noted throughout. Strongly magnetic.							
109.40	123.84	Fine grained massive flow. Continuation of above sequence with localized spinifex noted at 112.5 m with no distinct contacts. The rocks are generally fine grained, green blue, strongly magnetic and locally highly fissile. Fault gouges and clay slips are common throughout the section. Spinifex noted at 115 m.							
113.70	114.00	Fault gouge at 52 degrees to the core axis with clay-grit seam.							
114.80	115.00	Fault gouge. Highly ground core and rubbled							
116.00	116.10	Fault gouge. Clay-grit seam with ultramafic fragments within. Angle is variable and approximately 60 degrees to the core axis.							
116.45	116.47	Clay-grit seam at 47 degrees to the core axis.							
118.75	118.88	Fault gouge with host fragments at approximately 40 degrees to the core axis.							
121.60	121.65	Fault gouge at 40 degrees to the core axis.							
123.39	123.60	Fine grained, dark grey red sediments with 1% pyrite. The rocks are siliceous and							

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
		strongly magnetic. Contacts in adjacent rocks are highly biotitic.							
123.84	127.67	LAMPROPHYRE							
		Fine grained, pervasively carbonatized, strongly magnetic dark grey intrusive with minor antigorite along fractures. Locally biotitic clots are noted. Contacts are sharp at 37 and 65 degrees to the core axis.							
127.67	167.40	ULTRAMAFIC							
			47737	136.30	137.30	1.00	TR-1	.000	nil
			47738	137.30	138.30	1.00	TR-1	.000	nil
127.67	157.80	Massive flow. Fine grained, sheared and fissile dark green blue talc and antigorite rich section with numerous clay lined slips. Major clay-grit seams are noted from 135.65 to 136.30 m and at 139.52 m. The first seam is irregular and sub-parallel to core axis, the second is at 38 degrees to the core axis. Traces of fine pyrite crystals are noted locally. Foliation at 148.35 m at 40 degrees to the core axis.	47739	156.80	157.80	1.00	TR-1	.000	nil
			47740	157.80	158.80	1.00	TR	.000	nil
			47741	158.80	159.51	.71	TR	.000	nil
			47742	159.51	160.50	.99	TR-1	.000	nil
			47743	160.50	162.00	1.50	TR	.000	nil
			47744	162.00	163.00	1.00	TR-1	.050	.05
			47745	163.00	163.60	.60	TR-1	.018	.03
			47746	166.87	167.40	.53	TR-1	.016	.03
142.40	143.68	Mafic intrusive ?. Fine to medium grained biotite and carbonate rich intrusive. Contacts are highly biotitic. Strongly magnetic. Traces pyrite and chalcopyrite noted at lower contact.							
		144.78 Clay-grit seam in rubbled section.							
		149.96 Highly rubbled and clay grit section							
157.70	157.80	FAULT ZONE, highly fractured, fissile clay grit section.							
157.80	159.51	Dark green section with pale purple rounded blebs throughout. Non-carbonatized. Contacts of this section are biotitic with 1% pyrite crystals. Magnetic throughout. Upper contact in clay-grit seam.							
159.51	162.00	Fine grained massive flow. Biotite and antigorite rich section with trace to 1% pyrite, 1 to 2% at top within carbonate stringers. Biotite content increases down							

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
		section.							
162.00	163.60	Biotite rich section with trace to 1% finely disseminated pyrite. Strongly magnetic, pervasively carbonatized. No foliation. Contacts are at highly fractured, brecciated section.							
163.60	167.40	Blue green, fine grained, highly fissile and fractured section with traces of pyrite crystals. Strongly magnetic, weakly pervasively carbonatized.							
167.40	168.37	90% SILICIFIED - MAG	47747	167.40	168.37	.97	3-5	.000	nil
		Fine grained, dark grey, granular, siliceous section. The unit is moderately magnetic and contains 3 to 5% very finely disseminated pyrite. No distinctive features within the unit and contacts are sharp and fractured. This section may be rafted sediments or CHERT.							
168.37	243.84	ULTRAFINE	47748	168.37	169.21	.84	TR-1	.000	nil
168.37	233.10	Very fine grained to fine grained, highly fractured and fissile talc and antigorite rich unit. Pyrite noted locally as fine crystals. Localized biotite rich narrow bands noted. Calcitic fracture fillings comprise 3 to 5% of the unit. Entire unit is pervasively carbonatized and magnetic. Clay seams up to 3 cm are common throughout the unit. The unit is locally massive but still very fissile. Below 184 m, the rocks generally become more massive and granular. Below 219.2 m, the talc and serpentine content increases. Clay-grit seams noted at 177.90 to 178 m at approximately 75 degrees, 180.6 m at 43 degrees, 182.88 m, 183.6 m at 45 degrees, 188.00 to 188.05 m at 58 degrees, 204.2 m, 204.95 m at 35 degrees, 208.25 to 208.75 m at 70 to 85 degrees to the core axis. From 182.60 to 182.80 m in the unit contains 5 mm rounded biotite blebs within							



From	To	Description	Sample From	To	Length	% Sul	GW	Au g/t
		a pale green groundmass.						
226.68	227.08	Mafic intrusive. Fine grained, biotite and carbonate rich dark green to black intrusive with biotitic contacts. Strongly magnetic. Upper contact sharp at 56 degrees to the core axis, lower in rubble.						
233.10	243.84	Massive flow. Fine grained continuation of above with decreased fracturing and the rocks are more competent, although talc and chlorite rich. The unit is magnetic and non-carbonatized. The rocks are dark green blue to black and massive. With the increased competency and massive appearance, the hole may be getting out of the SHEAR ZONE.						
243.84		END OF HOLE.						

AMERICAN BARRICK RESOURCES CORPORATION

Co-ords: 13239.3 1042.2

DIAMOND DRILL RECORD

HOLE NO.: MC.88-464

Azimuth: 344.2

Section: 1050E

Property: Union Mining

Dip: -55.0

Core Size: BD

Location: 1040E 13240N

Elevation: 5000.0

Length: 244.8

Date Started: August 4, 1988

Date Completed: August 10, 1988

Logged by: G. Baschuk

Measurement: Metric

Comments: Casing partially pulled

Depth	Azimuth	Dip	Depth	Azimuth	Dip	Depth	Azimuth	Dip
45.72		-51.0	137.16		-52.0	228.60		-50.0
91.44		-51.0	182.88		-51.0			

-----Log Summary-----

.00 32.92 CASING.  
 32.92 69.19 HIGH MAG BASALT.  
 69.19 81.77 ULTRAMAFIC.  
 81.77 88.60 HIGH MAG BASALT.  
 88.60 112.00 ULTRAMAFIC.  
 112.00 113.60 CHERT.  
 113.60 158.92 HIGH MAG BASALT.  
 158.92 162.29 ULTRAMAFIC.  
 162.29 170.61 HIGH MAG BASALT.  
 170.61 179.96 ULTRAMAFIC.  
 179.96 191.55 HIGH MAG BASALT.  
 191.55 196.22 MAFIC SYENITE.  
 196.22 197.32 ULTRAMAFIC.  
 197.32 198.87 GREYWACKE.  
 198.87 200.60 ULTRAMAFIC.  
 200.60 204.56 GREYWACKE.  
 204.56 212.55 OXIDE IRON FORMATION.  
 212.55 244.75 GREYWACKE.  
 244.75 END OF HOLE.

From To -----Description----- Sample From To Length % Sul GN Au g/t

.00 32.92 CASING

24.38 M of CASING LEFT IN HOLE.

32.92 69.19 HIGH MAG BASALT

32.92 69.19 Fine grained massive flow. Green, moderately magnetic highly fractured and ground section. Localized chlorite and epidote rich bands are noted resembling selvages, but the core is too fractured to be positive. The upper 7 m contains hematite rich fracture fillings, locally with limonite. Below, epidote and carbonate are dominant. Rare amphibole clots are noted up to 3 m across concentrated at 41.5 m. Glomeroporphyritic feldspar phenocrysts noted locally at 48.0 m. Below 49 m, the fracturing has decreased and core recovery increased, still localized sections, generally chlorite rich, are fractured and ground. Below 55 m, the fracturing continues. Below 68 m, the rocks are becoming enriched in talc, but no distinct contacts are noted. At 69.19 m the unit is rich in biotite, possibly the basalt and ultramafic contact.

69.19 81.77 ULTRAMAFIC

47753	77.94	78.94	1.00	TR-1	.000	nil
47754	78.94	79.94	1.00	TR	.000	nil

69.19 73.80 Fine grained massive flow. Highly fractured, dark green, magnetic, talc and chlorite rich unit with carbonatization increasing down section. The upper contact appears

From To -----Description----- Sample From To Length % Sul GW Au g/t

gradational. 2.44 m ground core at 72.24 m.

73.80 76.50 Flow contact zone. Finely brecciated foliated top with clay-grit seam at upper contact at 50 degrees to the core axis. The intensity of brecciation is decreasing down section. The unit is green with dark green fragments, often rounded and averaging 0.5 cm across. Pale green talc rich matrix is noted. Lower contact in rubbled section.

76.50 81.77 Fine grained massive flow, foliated and sheared. The unit is dark green, strongly magnetic, strongly pervasively carbonatized and rich in talc. Minor localized dark green mafics are noted resembling fish-net texture. Lower contact is indistinct and appears gradational. The unit is highly fractured. The unit becomes biotite rich towards lower contact. Locally trace to 1% pyrite is noted as crystals.

81.77 88.60 HIGH MAG BASALT

81.77 88.60 Fine grained massive flow. Green to dark green, strongly magnetic with 1% carbonate +/- epidote stringers and fracture fillings. Lower contact is indistinct.

88.60 112.00 ULTRAMAFIC

47755 110.34 111.00 .66 TR-1 .000 nil  
47756 111.00 112.00 1.00 TR-1 .000 nil

88.60 110.34 Fine grained massive flow. Green, magnetic, talc, chlorite and carbonate rich foliated unit, often highly fractured with ground core. Foliation is at 10 to 20 degrees to the core axis and subrounded fragments of ultramafics are elongated parallel to foliation. The amount of talc is increasing from 95.5 m to lower contact and the rocks are more friable and fractured. Lower contact is within rubbled section.

89.00 89.43 Mafic intrusive. Fine to medium grained grey green biotite rich, pervasively carbonatized intrusive with a red hue. Strongly magnetic.

From	To	Description	Sample	From	To	Length	% Sul	GM	Au g/t
		Contacts are indistinct at 75 to 85 degrees and ground at base.							
95.07	95.20	Mafic intrusive. Dark green, granular, fine grained intrusive with sharp contacts at 45 to 50 degrees to the core axis. Highly carbonatized, magnetic and biotite rich.							
107.22	107.27	Clay-grit seam in rubble.							
110.34	112.00	Highly carbonatized, dark grey-green, granular, fine grained section, possibly in part mafic intrusive. The unit is highly fractured. Strongly magnetic containing trace to 1% finely disseminated pyrite.							
112.00	113.60	CHERT	47757	112.00	113.00	1.00	1	.020	.02
		Grey cherty unit with a red hue containing trace to 1% finely disseminated pyrite. The unit is locally weathered from carbonate stringers leached out, intensely pervasively carbonatized and strongly magnetic. Minor mafic sections are noted within.	47758	113.00	113.60	.60	TR-1	.036	.06
113.60	158.92	HIGH MAG BASALT	47759	113.60	114.60	1.00	TR-1	.480	.48
			47760	119.05	119.80	.75	TR	.000	nil
113.60	119.05	Fine grained massive flow. Green to dark green, cut by 5% epidote stringers and fracture fillings. Non-carbonatized. Strongly magnetic. Rare amygdules noted at top. Upper 0.25 m contains trace to 1% pyrite.	47761	119.80	120.80	1.00	TR-1	.000	nil
			47762	120.80	121.74	.94	1	.000	nil
			47763	121.74	122.83	1.09	TR	.000	nil
			47764	122.83	123.38	.55	TR	.005	.01
			47765	123.38	124.10	.72	TR-1	.007	.01
			47766	124.10	124.70	.60	TR-1	.000	nil
			47767	124.70	125.36	.66	TR-1	.000	nil
119.05	119.80	SYENITE. Rubbled contacts. Fine grained, brick red becoming red green at lower contact. Traces pyrite within. Pervasively carbonatized, weakly to moderately magnetic.	47768	125.36	126.00	.64	TR	.000	nil
			47769	126.00	126.70	.70	TR	.000	nil
			47770	126.70	127.73	1.03	1	.000	nil
			47771	132.80	133.42	.62	TR-1	.000	nil
			47772	133.42	134.20	.78	TR-1	.000	nil
			47773	134.20	134.60	.40	2-3	.008	.02
119.80	125.36	Fine grained massive flow. Dark green, strongly magnetic unit rich in chlorite, becoming less chloritic down section. From 119.80 to 121.74 m, 1% pyrite is noted with weak silicification and 10% fracture fillings accompanied by minor brecciation.	47774	134.60	135.14	.54	TR	.000	nil

From	To	Description	Sample	From	To	Length	% Sul	SW	Au g/t
		Carbonatization is localized adjacent to fracture fillings.							
125.36	125.60	Mafic intrusive. Fine grained, grey, strongly magnetic and pervasively carbonatized. Upper contact at 30 degrees to the core axis, lower in ground core.							
125.60	127.73	ULTRAMAFIC. Possibly intrusive or rafted section. The rocks are foliated green with dark green mafic clots elongated parallel to foliation sub-parallel to core axis. Locally pervasively carbonatized, strongly magnetic. Rich in talc. From 126.70 to 127.73 m, the unit is as described above from 119.80 to 125.36 m with minor ultramafic sections.							
127.73	156.65	Fine grained massive flow. Green, magnetic flow cut by 5 to 10% epidote fracture fillings and stringers dominantly at 45 to 60 degrees to the core axis.							
132.24	132.35	MAFIC SYENITE. Fine grained, brown green to red, highly carbonatized and magnetic. Contacts are sharp at 60 and 46 degrees to the core axis.							
132.80	133.42	Chloritic section with trace to 1% pyrite and traces galena.							
133.42	135.14	Continuation of above with less chlorite and traces of pyrite, locally up to 3 to 5% associated with narrow syenitic bands and carbonate stringers at 134.20 to 134.60 m.							
156.65	158.92	Medium grained massive flow. Dark green, weakly magnetic with fish-net texture. Becomes fine grained at base with no distinct lower contact.							
158.92	162.29	ULTRAMAFIC							
158.92	162.29	Medium grained massive flow. Blue green magnetic flow with spotty texture. The unit is talc rich with gradational upper contact. The unit is foliated at 10 to 40 degrees to the core axis. Lower contact in rubbled section. This unit may be a SHEAR ZONE, but the foliation is not intense.							

From To -----Description----- Sample From To Length % Sul GW Au g/t

Traces of fine crystalline pyrite is noted throughout. Non-carbonatized.

162.29 170.61 HIGH MAG BASALT

162.29 163.52 Fine grained massive flow. Dark green, magnetic with localized blue green sections with minor talc noted. These sections are rare.

163.52 163.65 Clay-grit seam within rubble section at approximately 35 to 40 degrees to the core axis.

163.65 170.61 Fine grained massive flow. Continuation of above from 162.29 to 163.52 m with minor carbonate +/- quartz stringers and fracture fillings over upper 1 m. Lower contact is gradational with weak shearing at 40 degrees to the core axis.

170.61 179.96 ULTRAMAFIC

170.61 175.90 Fine grained massive flow. Blue green flow with gradational upper contact and increase in talc component down section. Traces pyrite noted locally, generally adjacent to carbonate stringers and fracture fillings. Magnetic.

47775	175.90	176.90	1.00	TR-1	.000	nil
47776	176.90	177.90	1.00	TR	.000	nil
47777	177.90	178.90	1.00	TR-1	.000	nil
47778	178.90	179.96	1.06	TR	.000	nil

175.16 175.32 Fault gouge. Green with clay at 14 degrees to the core axis.

175.90 179.96 Foliated. Upper contact in rubble. Fine grained, green blue, talc rich foliated section with 5% white late stage carbonate fracture fillings at 5 to 40 degrees to the core axis. The unit is non-carbonatized, strongly magnetic and contains traces of pyrite.

From To -----Description----- Sample From To Length % Sul SW Au g/t

179.96 191.55 HIGH MAG BASALT

47779 186.86 187.60 .74 TR-1 .000 nil  
47780 187.60 188.57 .97 TR-1 .000 nil

179.96 186.86 Aphanitic massive flow. Green, locally pale green, moderately magnetic flow with 5 to 7% epidote fracture fillings and stringers often with carbonate +/- hematite

186.86 188.57 Brecciated section with 10% carbonate stringers up to 10 cm in width. Trace to 1% pyrite. Lower contact in rubble.

188.57 189.76 Rubbled fine to medium grained massive flow with 50% core recovery. Rare SVENITE fragment noted adjacent to clay fragments.

189.76 191.55 Fine to medium grained massive flow. Granular, green flow, strongly magnetic.

191.55 196.22 MAFIC SVENITE

Fine grained, dark red intrusive with brown hue. The unit is consistent in texture and strongly magnetic. Upper 10 cm is pink to red in colour with fractured upper contact. Sections of ULTRAMAFIC are noted within, often highly contorted and accompanied by clay-grit seams. Locally sections resemble, altered silicified sediments but no distinct grains or bedding is noted. Clay-grit seam noted at 195.3 m at 40 degrees to the core axis. Lower contact is brecciated and irregular with minor basalt at base.

196.22 197.32 ULTRAMAFIC

Green, talc rich, highly contorted section. Pervasively carbonatized and magnetic. Sharp lower contact at 70 to 80 degrees to the core axis with minor fragments of underlying sediments. Traces pyrite noted locally.

197.32 198.87 GREYWACKE



From	To	Description	Sample	From	To	Length	% Su)	GW	Au g/t
		Red brown section of massive sediments. Weakly to moderately magnetic with traces of pyrite. Rare pin-head sized quartz grains noted. Lower contact at 56 degrees to the core axis.							
198.87	200.60	ULTRAMAFIC							
		Fine grained, highly chloritic and talc rich unit with contorted foliation. Weakly pervasively carbonatized, and strongly magnetic.							
199.84	199.90	Clay-grit seam at 30 degrees to the core axis.							
200.00	200.05	Clay-grit seam in ground core.							
200.25	200.26	Clay-grit seam in ground core.							
200.60	204.56	GREYWACKE							
			47781	200.60	201.60	1.00	TR	.020	.02
			47782	201.60	202.60	1.00	TR	.020	.02
200.60	202.60	Fine grained, red brown sediments with rare basaltic sections up to 10 cm in width. Strongly to moderately magnetic, weakly pervasively carbonatized and becoming green red in colour down section.	47783	202.60	203.60	1.00	TR	.000	nil
			47784	203.60	204.56	.96	TR	.019	.02
200.80	200.83	Clay-grit seam. Red at 42 degrees to the core axis.							
202.60	204.56	Fine grained, green to red foliated section with epidote and sericite along foliation planes. The rocks are silicified and contain traces of finely disseminated pyrite. Non-magnetic. Foliation at 203.6 m at 34 degrees to the core axis. The foliation is wispy in nature.							
204.56	212.55	OXIDE IRON FORMATION							
			47785	204.56	204.87	.31	TR-1	.028	.09
			47786	204.87	205.27	.40	NIL	.000	nil
		Fine grained, finely bedded dark grey sediments with minor jasper beds noted. Traces of pyrite noted as fracture fillings associated with carbonate fracture fillings. Micro-faulting common as noted in bedding.	47787	205.27	206.00	.73	TR	.066	.09
			47788	206.00	207.00	1.00	TR	.040	.04
			47789	207.00	207.92	.92	TR	.046	.05
			47790	207.92	208.97	1.05	NIL	.042	.04

AMERICAN BARRICK RESOURCES CORPORATION

Hole No.: MC.88-464

Page No.: 9

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
		Bedding noted at 48 degrees at 204.8 m, 45 degrees at 209.2 m and 22 degrees to the core axis at 211.5 m.	47791	208.97	209.97	1.00	TR	.090	.09
			47792	209.97	210.97	1.00	TR	.000	nil
			47793	210.97	211.84	.87	TR	.017	.02
204.87	205.27	Mafic intrusive. Fine grained, granular green intrusive with sharp upper contact at 63 degrees to the core axis and irregular lower contact. Pervasively carbonatized. Non-magnetic.	47794	211.84	212.55	.71	TR	.078	.11
207.92	208.97	Mafic intrusive. As described above with contacts at 36 and 24 degrees to the core axis.							
212.55	244.75	GREYWACKE							
			47795	212.55	213.55	1.00	3-5	.000	nil
			47796	213.55	214.55	1.00	1-2	.030	.03
212.55	217.95	90% SILICIFIED. Fine grained, green to locally red green massive sediments. Non-carbonatized, weakly to moderately magnetic. The unit is 90% silicified and locally strongly brecciated. Trace to 1%, locally up to 5 to 7% finely disseminated pyrite. Associated with brecciation is a red to purple colouration. Locally weak hematitic streak is noted.	47797	214.55	215.55	1.00	1-2	.030	.03
			47798	215.55	216.55	1.00	3-5	.020	.02
			47799	216.55	217.35	.80	2-3	.024	.03
			47800	217.35	217.95	.60	2-3	.018	.03
			47801	217.95	218.70	.75	TR-1	.120	.16
			47802	218.70	219.34	.64	TR-1	.064	.10
			47803	219.34	220.10	.76	2-3	.000	nil
			47804	220.10	221.07	.97	TR-1	.393	.41
			47805	221.07	222.10	1.03	TR-1	.041	.04
			47806	222.10	223.15	1.05	TR-1	.000	nil
217.95	219.34	OXIDE IRON FORMATION. Dark grey brecciated unit resembling conglomerate with jasper and rare greywacke fragments averaging 2 to 4 mm across. Pervasively carbonatized throughout. Traces pyrite. Matrix is magnetite.	47807	223.15	224.15	1.00	TR-1	.130	.13
			47808	224.15	225.15	1.00	1-2	.090	.09
			47809	225.15	226.15	1.00	TR-1	.070	.07
			47810	226.15	227.00	.85	TR-1	.349	.41
			47811	227.00	227.80	.80	1	.016	.02
			47812	227.80	228.80	1.00	TR-1	.000	nil
			47813	228.80	229.80	1.00	1	.000	nil
219.34	221.07	70% SILICIFIED. Fine grained, green matrix to pink buff fragments. The fragments appear to be relict beds. Trace to 1% finely disseminated pyrite throughout. Weakly pervasively carbonatized, non-magnetic. A foliation is developed at 25 degrees to the core axis as defined by siliceous beds. Cores of fragments are green grey with the pink an alteration product.	47814	229.80	230.80	1.00	1-2	.070	.07
			47815	230.80	231.80	1.00	TR-1	.000	nil
			47816	231.80	232.80	1.00	TR	.000	nil
			47817	232.80	233.80	1.00	TR	.000	nil
			47818	233.80	234.70	.90	TR-1	.000	nil
			47819	234.70	235.70	1.00	TR-1	.000	nil
			47820	235.70	236.70	1.00	1	.000	nil
			47821	236.70	237.70	1.00	TR-1	.000	nil
			47822	237.70	238.70	1.00	1	.040	.04
			47823	238.70	239.70	1.00	1-2	.000	nil
			47824	239.70	240.70	1.00	1	.000	nil
221.07	223.15	10% SILICIFIED. Chlorite rich section, possibly relict mafic intrusive with silicified breccia bands comprising 10% of the unit. Trace to 1% finely disseminated pyrite. Weakly magnetic, strongly	47825	240.70	241.70	1.00	TR	.000	nil
			47826	241.70	242.70	1.00	TR	.000	nil
			47827	242.70	243.70	1.00	TR	.000	nil
			47828	243.70	244.75	1.05	TR	.000	nil

From To -----Description----- Sample From To Length % Sul GW Au g/t

pervasively carbonatized. Foliated at 27 degrees to the core axis.

223.15 227.80 80% SILICIFIED. Dark grey to grey-green with red hued silicified, brecciated sections. Minor chert noted. Brecciation is dominant in upper 1 m. Trace to 1% pyrite as a fine dissemination noted throughout. Weakly magnetic and locally a hematitic streak is noted. Rocks are well foliated at 27 degrees at 223.4 m and bedding at 48 degrees to the core axis at 226.15 m.

227.80 244.75 Green, fine grained tuffaceous sediments and buff to buff green cherts. Bedding is well defined at 43 degrees at 228.2 m, 40 degrees at 232.6 m and 47 degrees to the core axis at 234.4 m. No brecciation noted within this section. Non-carbonatized throughout and moderately magnetic throughout. Trace to 1% finely disseminated pyrite. From 233.10 to 235.15, 236.11 to 238.57, and 241.74 to 243.85 m the core is highly fractured and often grease covered. Locally, carbonate is leached out.

244.75 END OF HOLE.

AMERICAN BARRICK RESOURCES CORPORATION

Co-ords: 13589.1 1161.0

DIAMOND DRILL RECORD

HOLE NO.: MC.88-465

Azimuth: 346.7

Section: 1150

Property: Union Mining

Dip: -53.0

Core Size: BQ

Location: 1160E 13590N

Elevation: 5000.0

Date Started: August 10, 1988

Length: 304.8

Date Completed: August 17, 1988

Logged by: G. Baschuk

Measurement: Metric

Comments: Casing left in hole

Depth	Azimuth	Dip	Depth	Azimuth	Dip	Depth	Azimuth	Dip
45.72		-51.0	182.88		-42.0	304.80		-26.0
91.44		-48.0	228.60		-36.5			
137.16		-47.0	274.32		-28.0			

-----Log Summary-----

.00 50.90 CASING.  
 50.90 69.19 TUFF.  
 69.19 74.07 10% SILICIFIED.  
 74.07 74.63 Mafic intrusive.  
 74.63 103.48 TUFF.  
 103.48 111.50 VARIABLY SILICIFIED SEDIMENTS.  
 111.50 253.81 TUFF.  
 253.81 259.69 VARIABLY SILICIFIED SEDIMENTS.  
 259.69 261.67 30% SILICIFIED.  
 261.67 263.23 VARIABLY SILICIFIED SEDIMENTS.  
 263.23 304.80 TUFF.  
 304.80 END OF HOLE.

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t	
.00	50.90	CASING								
50.90	69.19	TUFF								
			47829	52.50	53.50	1.00		1	.000	nil
			47830	55.20	56.10	.90		TR-1	.000	nil
50.90	69.19	Ash. Very fine grained, finely bedded, green, non-magnetic sediment. Locally weakly to moderately pervasively carbonatized. Upper 0.39 m is foliated with foliation at 0 to 5 degrees to the core axis with a crenulation cleavage developed at 90 degrees to the core axis. Traces of pyrite and leucoxene are noted as fine disseminations throughout. Localized beds are aphanitic, pale green with jagged contacts, possibly due to slumping. Graded bedding indicates tops down as noted at 54.7 m. Bedding noted at 53.25 m at 40 degree, 54.8 m at 33 degrees to the core axis and 58.85 m at 48 degrees to the core axis. From 55.2 to 56.1 m, pale green, aphanitic basaltic fragments are noted within a carbonate rich matrix resembling a flow top breccia. Trace to 1% pyrite noted within matrix. Fracturing consists of carbonate and rarely quartz with localized sericite along foliation planes. Traces to 1% finely disseminated pyrite is noted adjacent to white quartz filled fractures eq. 62.7 m.	47831	62.30	63.30	1.00		TR-1	.000	nil
			47832	63.30	64.30	1.00		TR-1	.010	.01
			47833	64.30	65.30	1.00		TR-1	.010	.01
			47834	65.30	66.30	1.00		TR-1	.000	nil
			47835	68.19	69.19	1.00		TR	.000	nil
69.19	74.07	10% SILICIFIED								
			47836	69.19	70.19	1.00		TR	.000	nil
			47837	70.19	71.19	1.00		TR	.000	nil
		Fine grained, pale green sediments as described above with local ochre silicified breccia bands parallel to foliation or bedding. Silicified breccia bands are up to 16 cm in width. Foliation at 30 degrees to the core	47838	71.19	72.19	1.00		TR-1	.000	nil
			47839	72.19	73.02	.83		TR-1	.021	.03
			47840	73.02	74.07	1.05		TR-1	.000	nil

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
		axis at 73.0 m. Traces finely disseminated pyrite within silicified sections and host. Narrow white quartz stringers cut the zone averaging 1 to 2% at variable angles to the core axis.							
74.07 74.63 MAFIC INTRUSIVE									
Medium grained, granular dark green and grey, weakly carbonatized intrusive with sharp contacts at 35 degrees to the core axis. Non-magnetic. Weakly brecciated and silicified. Mafics are chlorite and biotite.									
74.63 103.48 TUFF									
			47841	90.53	91.49	.96	TR	.000	nil
			47842	91.49	92.49	1.00	TR	.000	nil
74.63	91.46	Ash. Very fine grained, green, finely bedded sediment. Unit is cut by 2 to 3% white carbonate +/- quartz stringers. Bedding at 36 degrees at 79.5 m and 38 degrees to the core axis at 88.1 m. Locally and rarely pyrite is noted as fine disseminations along bedding and or foliation planes. Non-magnetic, non-carbonatized.							
91.46	91.49	Fault gouge. Clay-grit seam within foliated and brecciated zone. Clay-grit seam at 42 degrees to the core axis.							
91.49	103.48	Ash. Very fine grained to fine grained, green sediments with bedding poorly developed and generally massive. Localized pale green, aphanitic basaltic fragments are noted exceeding the width of the core. Non-magnetic and non-carbonatized. Bedding noted at 100.0 m at 42 degrees to the core axis.							
103.48 111.50 VARIABLY SILICIFIED SEDIMENTS									
			47843	103.48	104.50	1.02	TR	.000	nil
			47844	104.50	105.50	1.00	TR	.000	nil
		Fine grained, green moderately to well bedded sediments with less than 5% pink to beige silicified breccia bands	47845	105.50	106.50	1.00	TR	.000	nil
			47846	106.50	107.50	1.00	TR	.000	nil

From	To	Description	Sample	From	To	Length	% Sul	GM	Au g/t
		up to 7 cm in width. Traces pyrite, locally up to 1% associated with silicification. Bands are parallel to bedding as noted at 108.6 m at 44 degrees to the core axis. The contacts of the bands are gradational with silica content increasing inwards. The entire unit is non-carbonatized and non-magnetic. Epidote is common along bedding planes averaging 3 to 5 mm in width. From 109.15 to 109.35 a carbonate rich injection breccia is noted with clay on fractures.	47847	107.50	108.50	1.00	TR	.000	nil
			47848	108.50	109.50	1.00	TR	.000	nil
			47849	109.50	110.50	1.00	TR-1	.000	nil
			47850	110.50	111.50	1.00	TR	.000	nil
111.50	253.81	TUFF							
			47851	179.00	179.77	.77	TR	.000	nil
			47852	201.50	202.25	.75	TR-1	.000	nil
111.50	179.00	Ash. Fine grained, green ash tuff with bedding poorly developed and a moderately well developed foliation. The unit is cut by 2 to 3% carbonate - quartz stringers and fracture fillings, rarely with pyrite. The section is non-magnetic and non-carbonatized. Graded bedding at 119.1 m indicates tops down. Below 132 m, the rocks become fine grained to very fine grained and green grey in colour. Bedding at 138.2 at 34 degrees, 148.05 at 32 degrees, 152.5 at 35 degrees, 164.4 m at 40 degrees and at 171.45 m at 36 degrees to the core axis.	47853	210.53	211.37	.84	TR	.000	nil
			47854	211.37	212.34	.97	1-2	.000	nil
			47855	212.34	213.34	1.00	TR	.000	nil
			47856	241.93	242.93	1.00	TR	.000	nil
			47857	242.93	243.35	.42	NIL	.000	nil
			47858	243.35	244.35	1.00	TR	.020	.02
			47859	252.81	253.81	1.00	TR	.000	nil
114.20	114.70	Mafic intrusive.. Same as described above from 74.07 to 74.63 m. The unit is well foliated and may be a coarse grained bed of sediments as banding is parallel to bedding as are the contacts at 46 and 47 degrees to the core axis. The adjacent rocks to the lower contact are quartz rich and may represent a chill margin.							
179.00	179.77	Brecciated. Weakly and locally silicified section containing traces of pyrite associated with narrow quartz stringers accompanied by sericite. Foliation at 44 degrees to the core axis.							
179.77	242.93	Ash. Continuation of the above sequence of fine grained to very fine grained, green to green grey finely bedded sediments. Non-magnetic and non-carbonatized. 1 to 2% late stage carbonate and quartz stringers cut the zone containing traces to locally 1% pyrite. Bedding at 182.55 m at 45							

From	To	Description	Sample From	To	Length	% Sul	GM	Au g/t
		degrees, 188.45 m at 40 degrees, 204.9 m at 35 degrees, 224.85 m at 50 degrees, 228 m at 46 degrees and 239.9 m at 50 degrees to the core axis. 201.85 m 3 cm quartz - carbonate stringer at 16 degrees to the core axis containing 1 to 2% pyrite. From 205.05 to 209.02 m the rocks are mafic, dark green and weakly bedded. From 211.37 to 212.34, 1 to 2% finely disseminated pyrite is noted. 3 to 5% quartz - carbonate stringers present containing 1% pyrite. Weak shear noted at 211.52 m at 36 degrees to the core axis.						
242.93	243.35	Mafic intrusive. Fine to medium grained, grey green. Pervasively carbonatized, non-magnetic. Rich in sericite wrapping around grains, in part resembles medium grained tuff. Contacts are sharp at 50 and 32 degrees to the core axis. Lower contact is cutting bedding planes of adjacent sediments. 1 to 2% finely disseminated pyrite is noted in sediment adjacent to intrusive, nil in intrusive.						
243.35	248.93	Ash. Fine grained, grey green to green sediments with localized sericitic wisps along bedding planes. Traces of pyrite noted with sericite. Non-carbonatized and non-magnetic. 2 to 3% late stage carbonate +/- quartz stringers and fracture fillings noted. Bedding at 248.1 m at 40 degrees to the core axis. Localized granular medium grained beds noted with minor brecciation due to secondary rotation to a foliation at approximately 50 degrees to the core axis.						
248.93	249.34	Mafic intrusive. As described above from 242.93 to 243.35 m with no pyrite at contacts in adjacent sediments.						
249.34	253.81	Ash. Fine grained, green to grey green tuffaceous sediments becoming very fine grained at lower contact. Bedding is moderately to well developed with tops down as noted at 252.15 m at 46 degrees to the core axis. Non-magnetic, non-carbonatized. Localized medium grained beds are carbonate rich.						



From To -----Description----- Sample From To Length % Sul GW Au g/t

253.81 259.69 VARIABLY SILICIFIED SEDIMENTS

47860	253.81	254.30	.49	TR	1.605	3.28
47861	254.30	254.84	.54	1	.032	.06
47862	254.84	255.80	.96	TR	.010	.01
47863	255.80	256.72	.92	TR	.018	.02
47864	256.72	256.95	.23	NIL	.000	nil
47865	256.95	257.95	1.00	TR	.020	.02
47866	257.95	258.95	1.00	TR-1	.000	nil
47867	258.95	259.69	.74	TR	.015	.02

253.81 254.84 Brecciated, weakly silicified section resembling mafic intrusives as described above, but with white quartz carbonate fragments within a sericite rich matrix accompanied by minor carbonate. The unit is strongly foliated with relict fault gouge at lower contact at 54 degrees to the core axis. Non-magnetic throughout. The unit is finely foliated or laminated with trace to 1% finely disseminated pyrite along foliation planes. The unit is green to locally dark green and chlorite rich at base. Foliation is at 50 to 60 degrees to the core axis and locally contorted wrapping around white quartz rich fragments.

254.84 256.72 Ash. Fine grained, green tuffaceous sediments with minor brecciation and sericite along bedding or foliation planes. Traces pyrite noted adjacent to white bleached narrow intrusives with chloritic cores. Foliation at 60 degrees to the core axis at 255.25 m.

256.72 256.95 Mafic intrusive. White bleached intrusive with dark green mafics within white to grey groundmass. Weakly pervasively carbonatized, non-magnetic. Sharp contacts at 23 and 35 degrees to the core axis.

256.95 259.69 Ash. Fine grained, highly foliated section with highly contorted foliations. The unit consists of a grey green matrix with pale green epidote and sericite rich contorted, wispy bands and red to pink bands and localized carbonate rich blebs. The foliation is highly contorted varying from parallel to core axis to 60 degrees to the core axis. The unit is non-magnetic and locally carbonatized. Pyrite content averages traces with locally up to 1%.

From	To	Description	Sample	From	To	Length	% Sul	GW	Au g/t
259.69	261.67	30% SILICIFIED	47868	259.69	260.69	1.00	1	.020	.02
			47869	260.69	261.67	.98	1	.314	.32

The unit is a continuation of the above sequence and style with an increase in quartz bleb or brecciated stringer content. Pyrite averages 1%, generally associated with sericitic rich contorted foliation planes. Less red colouration is noted within this section

261.67 263.23 VARIABLY SILICIFIED SEDIMENTS

47870	261.67	262.50	.83	TR	.017	.02
47871	262.50	263.23	.73	TR	.073	.10

The unit is dominantly green fine grained tuffaceous sediments with highly to moderately contorted bedding or foliation and only minor silicification. No red colouration is noted and the foliation is more consistent at 55 to 60 degrees to the core axis. Non-carbonatized and non-magnetic. Traces of pyrite noted. Lower contact is sharp and rich in sericite.

263.23 304.80 TUFF

47872	263.23	264.23	1.00	TR	.010	.01
47873	271.09	272.09	1.00	TR	.010	.01
47874	272.09	272.72	.63	TR	.013	.02
47875	297.60	298.50	.90	TR	.000	nil
47876	298.50	299.10	.60	1	.012	.02
47877	299.10	300.00	.90	TR-1	.000	nil
47878	300.00	301.00	1.00	TR	.000	nil

263.23 304.80 Ash. Very fine grained, pale green finely bedded sediments. From 264.0 to 256.18 m, the core is highly fractured and ground. Non-magnetic and non-carbonatized throughout. A magnetic section is noted from 271.09 to 272.72 m with a gradational lower contact. Tops down. This section contains pin-head to 1 mm quartz grains near upper contact and traces of finely disseminated pyrite and minor sericite along bedding planes at 46 degrees to the core axis. Down section, below 278 m the colour is becoming more grey with more localized medium grained beds as described above from 271.09 to 272.72 m with rare sericitized fragments up to 1 cm as noted at 285.7 m. Individual beds grading from medium grained to very fine grained are noted up to 2.96 m in width from 289.34 to 292.3 m. Bedding is well developed at 45 to 55 degrees to the core axis. 298.80 to 299.00 m quartz - carbonate

From	To	Description	Sample	From	To	Length	% Sul	SW	Au g/t
		stringer at 30 degrees to the core axis containing 2 to 3% pyrite and traces of chalcopyrite.							
299.62	299.80	Silicified brecciated section with 1% pyrite. Rocks are grey to buff in colour with white silicification.							

304.80 END OF HOLE.

DOCUMENT No. W9008-3281

Instructions  
Please type or print.  
Per each time of work performed.



Mining Act

Report of Work

32012SW0055 66 HARKER

900

Name and Address of Recorded Holder: Union Mining Corporation  
 Prospector's Licence No. 7-1356  
 Telephone No. (416) 364-0042  
 Address: STE 605, 80 RICHMOND ST. W TORONTO M5H 2S9

Summary of Distribution of Credits and Work Performance

Mining Division	Mining Claim			Work Days Cr.	Mining Claim			Work Days Cr.
	Prefix	Number	Work Days Cr.		Prefix	Number	Work Days Cr.	
LARDER LAKE								
Township or Area								
HARKER	L	579108	11.0					
Total Assessment Credits Claimed	L	579109	37.65					
2578.5 days	L	579110	11.0					
Type of Work Performed (Check one only)	L	578047	144.3					
<input type="checkbox"/> Manual Work	L	578047	84.9					
<input type="checkbox"/> Shaft Sinking Drifting or other Lateral Work	L	578865	63.5					
<input type="checkbox"/> Mechanical equipment	L	578048	242.15					
<input type="checkbox"/> Power Stripping other than Manual (maximum credit allowed - 100 days per claim)								
<input checked="" type="checkbox"/> Diamond or other Core drilling								
<input type="checkbox"/> Core Specimens								

OCT 20 1990  
RECEIVED

Dates when work was performed: From July 29/88 To Aug 17/88  
 Total No. of Days Performed: 2578.5  
 Total No. of Days Claimed: 612.5  
 Total No. of Days to be Claimed at a Future Date: 2166 1966

All the work was performed on Mining Claim(s):  
 Indicate no. of days performed on each claim.  
 \* (See note No. 1 on reverse side)

Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days	Mining Claim	No. of Days
L578047	129.5	L579110	342.8	L578048	990.6				

Required Information eg. type of equipment, Names, Addresses, etc. (See Table on reverse side)  
 If space below is insufficient, attach schedules with required information and location sketches.

MUCK HOLE - 463 <sup>m</sup> 243.8 <sup>ft</sup> 792.35 <sup>claim</sup> 449.5 on L578047, 342.8 on L579110

- 464 244.8 795.60 L578047

- 465 309.8 990.60 L578048

2578.5

PHILLIPIN DIAMOND DRILLING - 50

Certification of Beneficial Interest \* (See Note No. 2 on reverse side)  
 I hereby certify that, at the time the work was performed, the claims covered in this report of work were recorded in the current recorded holder's name or held under a beneficial interest by the current recorded holder.  
 Date: Sept 20, 1990  
 Recorded Holder or Agent (Signature): [Signature]

Certification Verifying Report of Work  
 I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.  
 Name and Address of Person Certifying: L. G. HARRIS  
 Telephone No.: 416 364-0042  
 Date: Sept 20/90  
 Certified By (Signature): [Signature]

For Office Use Only

Work Assignments: L 578047 Union Mining Corporation 342.8  
 527.6

Received Stamp: RECEIVED LARDER LAKE MINING DIVISION OCT 4 1990 TIME 9:33 am



Township or Area <b>HARKER TOWNSHIP</b>	C.L.M. No.	Reference Plan No.
--	------------	--------------------

Claim No.	Acreage	Acres at \$1.00	Acres at \$2.00	Total Amount	Extra Work Requirements (No. of days)
L 578048	88.43	40.00	48.43	136.86	242.15
L 578865	52.70	40.00	12.70	65.40	63.5
L 578047	56.98	40.00	16.98	73.96	84.9
L 578866	68.86	40.00	28.86	97.72	144.3
L 579110	26.41	26.41	Nil	26.41	---
L 579109	55.53	40.00	15.53	71.06	77.65
L 579108	32.12	32.12	Nil	<u>32.12</u>	---
				<b>\$503.53</b>	<u>612.5</u>
Total acreage is 381.03					
Average acreage is 54.43					
Lease to issue for Mining Rights Only					

**RECEIVED**  
 LARDEE LAKE  
 MINING DIVISION  
 OCT 4 1990  
 TIME 9:33am

The applicant may apply for a lease including the surface rights where available or he may apply for the mining rights only. The annual rentals subject to penalties are as follows:

First Year - \$1.00 per acre (minimum \$10.00)	Subsequent Years - (incl. surface) 25¢ per acre (minimum \$5.00)
Sand and gravel are reserved to the Crown.	- (excl. surface) 10¢ per acre (minimum \$4.00)



THIS AGREEMENT made in duplicate as of the 31st day of January, 1988,

BETWEEN:

**UNION MINING CORPORATION**

a corporation under the laws of the Province of Quebec  
and having its Executive Office in the City of Toronto,  
in the Province of Ontario

herein called, "Union"

OF THE FIRST PART,

- and -

**AMERICAN BARRICK RESOURCES CORPORATION**

a corporation under the laws of the Province of Ontario  
and having its Registered Office in the said City of Toronto,

hereinafter called, "Barrick",

OF THE SECOND PART.

WITNESSETH that in consideration of the premises, the mutual covenants  
and agreements herein contained, the parties hereto have agreed and do hereby  
agree as follows:

**SECTION 1**

**DEFINITIONS**

As used in this Agreement and any schedules hereto:

- 1.1 "Mining Lands" shall mean the seven unpatented mining claims situate  
in Harker Township in the Province of Ontario, Canada, described as  
follows:

L578047	L579108
L578048	L579109
L578865	L579110
L578866	

**SECTION 2**

**REPRESENTATIONS AND WARRANTIES**

- 2.1 Union represents and warrants to Barrick that
- 2.1.1 Union is the recorded holder and Union is the beneficial owner of 100%  
of the Mining Lands and that it holds the Mining Lands free and clear of  
all liens, charges and claims of others, other than reservations to the  
Crown and exceptions, qualifications and conditions provided for in the  
Mining Act (Ontario);

- 2.1.2 all of the claims comprising the Mining Lands were duly staked and recorded and are in good standing, all taxes thereon have been paid to date and no work need be performed on any of such claims to maintain them in good standing until at least December 31, 1988;
- 2.1.3 the Mining Lands are contiguous and the Optionors do not hold or retain the fee or equity or redemption in or a power or right to grant, assign or exercise a power of appointment with respect to any lands abutting the Mining Lands;
- 2.1.4 it is not in default or breach of, and the execution and delivery of this Agreement by it will not result in a breach of, or be in conflict with or constitute a default under any term or provision of any indenture, agreement or other instrument to which it is bound which may result in material adverse consequences to Barrick; and
- 2.1.5 it has the right to enter into this Agreement.
- 2.2 The representations and warranties contained in this Section 2 shall survive execution of this Agreement.

### SECTION 3

#### **GIVING OF COMMITMENTS BY BARRICK AND RIGHTS AND OPTION BY UNION**

##### ***Payment and Expenditures by Barrick***

3.1 Barrick covenants and agrees with Union to pay to Union the sum of \$20,000 upon the execution and delivery of this Agreement and to expend the sum of \$70,000.00 by way of expenditures incurred on or in connection with the Mining Lands on or before January 31, 1989 (the expenditures referred to in this clause 3.1 being hereinafter referred to as Stage 1).

##### ***Right to Enter***

- 3.2 In consideration of the covenants and agreement of Barrick set forth in Clause 3.1.
- 3.2.1 Union gives and grants to Barrick the sole, exclusive and immediate right to enter upon and explore and develop the Mining Lands and to have quiet and exclusive possession thereof from the date hereof and, during the currency of the said right hereby granted, full power and authority to Barrick, its servants, agents, workmen and contractors, to sample, examine, diamond drill, prospect, explore and develop the same in searching for minerals, in such manner as Barrick in its discretion may determine, including the right to erect, bring and install thereon all such buildings, machinery, equipment and supplies as Barrick shall deem necessary and proper and the right to remove reasonable quantities of material for assay and testing purposes only; and
- 3.2.2 Union hereby further gives and grants to Barrick the further sole and exclusive right and option to purchase the Mining Lands all upon and subject to the terms and conditions herein contained.



### ***Maintenance of Rights Royalty***

3.3 In order to keep the rights and option herein granted by Union to Barrick in good standing and in full force and effect:

- 3.3.1 Stage II - upon and subject to the completion by Barrick of Stage 1 within the time provided in clause 3.1 above, Barrick shall pay to Union an additional sum of \$30,000 and expend, by way of expenditures on or in connection with the Mining Lands, the further sum of \$70,000.00, on or before January 31, 1989 and apply to have the Mining Lands brought to lease (the payments, expenditures and application referred to in this clause 3.3.1 being hereinafter referred to as Stage II);
- 3.3.2 Stage III - upon and subject to the completion by Barrick of Stage II within the time provided in clause 3.3.1 above, Barrick shall pay to Union an additional sum of \$40,000.00 and expend, by way of expenditures on or in connection with the Mining Lands, the further sum of \$200,000.00 on or before January 31, 1990 (the payments and expenditures referred to in this clause 3.3.2 being hereinafter referred to as Stage III); and
- 3.3.3 Stage IV - upon and subject to the completion by Barrick of Stage III within the time provided in clause 3.3.2 above, Barrick shall pay to Union an additional sum of \$60,000.00 and expend, by way of expenditures on or in connection with the Mining Lands, the further sum of \$250,000.00 on or before January 31, 1991 (the payments and expenditures referred to in this clause 3.3.3 being hereinafter referred to as Stage IV); and
- 3.3.4 Stage V - upon and subject to the completion by Barrick of Stage IV within the time provided in clause 3.3.3 above, Barrick shall expend, by way of expenditures on or in connection with the Mining Lands, the further sum of \$400,000.00 on or before January 31, 1992 (the expenditures referred to in this clause 3.3.4 being hereinafter referred to as Stage V); and
- 3.3.5 Stage VI - upon and subject to the completion by Barrick of Stage V within the time provided in clause 3.3.4 above, Barrick shall expend, by way of expenditures on or in connection with the Mining Lands, the further sum of \$500,000.00 on or before January 31, 1993 (the expenditures referred to in this clause 3.3.5 being hereinafter referred to as Stage VI); and

### ***Anticipation of Expenditures and Completion of Stages***

- 3.3.6.1 Any of the payments and the expenditures referred to in this clause 3.3 may be anticipated by Barrick and incurred before the dates provided above provided Barrick is not in default under this agreement.
- 3.3.6.2 Barrick shall give written notice to Union forthwith upon the completion by it of each of 6 Stages, I, II, III, IV, V and VI, each such notice to be accompanied by particulars of expenditures incurred on or in connection with the Mining Lands as at a date within 30 days of such notice and a summary of results obtained.

### ***Interest of Barrick in Project Property***

- 3.3.7.1 Upon and subject to the due completion of Stage VI by Barrick within the time provided in clause 3.3.5, Barrick shall be deemed to have exercised

the option to purchase the Mining Lands granted to it in clause 3.2.2. Barrick shall thereupon have a 100% interest in the Mining Lands, subject to the Royalty Interest set forth in clause 3.3.8.1.

### **Royalty**

- 3.3.8.1 In the event that Barrick develops a mine on the Mining Lands and brings it into commercial production then the Optionors shall be entitled to receive a royalty equal to 3.5% of Net Smelter Returns determined and paid in accordance with Schedule "A" attached hereto less any amount paid by way of advance Royalties as provided in 3.3.8.2 below. The right to receive such royalty is herein referred to as the "Royalty Interest."
- 3.3.8.2 If Barrick shall not have terminated its interest in the Mining Lands Barrick shall with respect to each year, commencing February 1, 1993, make annual advance royalty payments to Union of the sum of \$20,000.
- 3.3.8.3 Any advance royalties paid to Union pursuant to clause 3.3.8.2 shall be deductible by Barrick against royalties payable by Barrick pursuant to clause 3.3.8.1;
- 3.3.8.4 The advance royalty payments referred to in clause 3.3.8.2 shall cease to be payable if Barrick terminates this Agreement (it being agreed that the full amount of advance royalty be payable with respect to the year in which this Agreement is terminated).
- 3.3.8.5 If the Optionors desire to sell the Royalty Interest, in whole or in part, they shall first offer in writing to sell to American Barrick for cash the part of such Royalty Interest they desire to sell and American Barrick shall have 30 days from the receipt of such notice to accept such offer in writing. If the part of such Royalty Interest so offered is not accepted for purchase, then the Optionors shall be free to sell such Royalty Interest to any other person, firm or corporation, on terms and conditions not more favourable to the purchaser than were offered to American Barrick, for a period of 90 days after the end of such 30-day period, provided that any person, firm or corporation acquiring any part of such Royalty Interest from the Optionors must agree in writing with American Barrick that it shall be bound by all the terms and conditions of this Agreement as if it were an original party thereto, including the provisions of this Clause 3.3.8.5. If no sale is effected in such 90-day period, then the provisions of this Clause 3.3.8.5 shall again apply.

### **Termination - Abandonment**

3.4.1 It is understood and agreed that, save as provided in clause 3.1 above, nothing herein contained nor any payment or expenditure by Barrick nor the doing of any other act or thing by Barrick under the terms of this Agreement shall obligate Barrick to pay anything else hereunder, except only that Barrick shall pay taxes on the Mining Lands and do and record sufficient work on the Mining Lands so that the Mining Lands will be kept in good standing. Barrick may terminate the rights herein granted in respect of all of the Mining Lands at any time when not in default hereunder by 30 days' notice in writing given to Union, PROVIDED that if notice of termination is duly given by Barrick it shall incur no further obligation to make any payment nor to do anything hereunder from and after the date such notice is given, and PROVIDED further that no such notice shall be given by Barrick until it shall have incurred expenditures on or in connection with the Mining Lands of \$70,000.00 as provided in clause 3.1 above.

3.4.2 Within 90 days of the effective date of termination as above provided, Barrick shall provide Union with copies of all maps, drill logs, sampling and assay records and other factual data relating to the work carried out on the Mining Lands.

### ***Removal of Buildings***

3.5 In case the rights herein granted shall be terminated all buildings, plant, equipment, machinery, tools, appliances and supplies which may have been brought upon the Mining Lands during the currency of this Agreement shall be removed by Barrick at any time not later than 180 days after the termination of this Agreement if Barrick is requested so to do.

### ***Conduct of Work***

3.6 Barrick agrees that, in exercising the rights granted in this Section 3, Barrick shall conduct its work in accordance with all federal, provincial and municipal laws and regulations and in accordance with good mining practice.

### ***Good Standing***

3.7 Barrick covenants and agrees with Union that during the currency of the rights and option herein granted, Barrick shall record all work done by it on the Mining Lands and shall do and record all such assessment work and pay all taxes and assessments as may be necessary in order to keep the Mining Lands in good standing.

### ***Indemnification***

3.8.1 Barrick agrees to save Union harmless from all costs, loss or damage which may arise by reason of injury (including injury resulting in death to any person employed on the Mining Lands) or damage done to any property as a result of any negligent act or omission by Barrick on the Mining Lands during the currency of the rights and option herein granted. Barrick agrees, during the currency of the rights and option herein granted, to maintain adequate and reasonable insurance coverage, to the extent of reasonable industry standards, with a reputable insurance company to protect the parties hereto and their respective employees and agents from any loss arising out of public liability and/or property damage claims.

3.8.2 Without limiting the generality of the foregoing, Union recognizes that Barrick assumes no liability in respect of loss or damage to persons or property occurring before, on or after the date hereof related to acts or omissions by Union in respect of the Mining Lands before, on or after the date hereof.

### ***Removal of Liens***

3.9 Barrick agrees that it will pay or cause to be paid all workmen or wage earners employed by it on the Mining Lands and for all material purchased by it in connection with its work on the Mining Lands which might give a lien or privilege thereon. Should any such lien or privilege or notice thereof be recorded against the Mining Lands in consequence of any work done thereof by or for Barrick, it will, on this fact becoming known to it, forthwith take active proceedings to have such lien or privilege removed and will have the same removed with all reasonable dispatch, provided nevertheless that Barrick may contest any claim of lien or privilege which it desires to dispute. If the right granted to Barrick pursuant to paragraph 3.2.1 shall expire and if at that time a lien has arisen on the Mining Lands in connection with work done thereon by Barrick and if Barrick wishes to contest such lien, Barrick shall post security sufficient to permit such lien to be discharged.

## **Money Expended on Mining Lands**

3.10 As used herein, the words "expenditures incurred on or in connection with the Mining Lands" shall mean and include moneys expended in prospecting, exploring, geological, geophysical and geochemical surveying, sampling, examining, diamond and other types of drilling, developing, dewatering, rehabilitation of shaft facilities, assaying, testing, constructing, maintaining and operating roads, trails and bridges upon or across the Mining Lands, or to obtain access thereto; the cost of acquisition of buildings, equipment, plant and supplies, salaries and wages (including fringe benefits) of employees and contractors directly engaged therein, insurance premiums and all other expenses ordinarily incurred in prospecting, exploring and developing the Mining Lands, including direct head office supervision and engineering expense and an allowance for indirect head office overhead expense, which, unless changed by the parties, shall be determined in accordance with the provisions of Schedule "B" hereto.

### **SECTION 4**

#### **FLUCTUATION IN VALUE OF DOLLAR**

4.1 The fixed money amounts, payable to Union referred to in Clauses 3.3.1, 3.3.2, 3.3.3 and 3.3.8.2 hereof shall be multiplied by a factor which represents the change in the purchasing power of the Canadian dollar during October 1987 and the purchasing power of the Canadian dollar during the second calendar month immediately preceding the payment date in question determined by reference to the All Items column of Table 2, Consumer Price Indexes Canada (1981 equals 100) published by Statistics Canada, it being the intention that the amount in dollars and cents (rounded to the nearest cent, an amount of 0.5 cents or more being rounded to the next highest whole cent and an amount of less than 0.5 cents being rounded to the next lowest whole cent) which results from multiplying \$1.00 by such factor shall be an amount which represents for a particular calendar month the same purchasing power as the purchasing power of \$1.00 during November 1987.

4.2 For the purposes hereof, the All Items column of Table 2, Consumer Price Indexes Canada (1981 equals 100) for October 1987 when published by Statistics Canada shall be deemed to represent the purchasing power of the Canadian dollar during October 1987 and the said index number shall be used as the base for making all computations required under this agreement. If the said index ceases to be published or in the opinion of either party is compiled in a different manner than that now obtaining, the parties shall mutually agree upon an appropriate substitute index, and in default of mutual agreement a substitute index shall be determined by arbitration.

4.3 If an index number as originally published is changed in a subsequently published edition of Statistics Canada, an appropriate adjustment shall be made to any factor calculated hereunder upon the basis of the originally published index number; provided that no change published more than one year after the original publication shall be taken into account.

## SECTION 5

### GENERAL PROVISIONS

#### *Choice of Law*

5.1 Save as herein otherwise expressly provided, the parties hereby (i) agree that this Agreement shall be governed and interpreted in accordance with the laws of and (ii) submit to the jurisdiction of the laws of the Province of Ontario.

#### *Force Majeure*

5.3 Time shall be of the essence of this Agreement provided nevertheless that notwithstanding anything to the contrary contained herein, it is agreed that if a party should at any time or times during the currency of this Agreement be delayed in or prevented from carrying on exploration, development or mining of the Mining Lands in such manner as it reasonably desires by reason of fires, power shortages, strikes, lockouts, shortages of suitable labour, equipment or materials, wars, acts of God, the Queen's enemies or government regulations or any other thing, other than a shortage of funds, beyond the control of the party, the party affected may suspend this Agreement during the currency of such delay by notifying the other party, specifying the nature of the force majeure. The affected party shall notify the other party upon the cessation of the event of force majeure. The period of all such delays resulting from such cause or any of them, shall be excluded in computing the time within which anything required or permitted by the party to be done, is to be done hereunder, it being understood and agreed that the time within which anything is to be done or is permitted to be done hereunder shall be extended by the total period of all such delays.

#### *Arbitration*

5.4 Any dispute or difference between any of the parties hereto concerning questions of fact, procedures, practices or standards relative to this Agreement, the resolution of which is not provided for in this Agreement, and which cannot be resolved or settled by the parties, shall be finally settled by an arbitration panel consisting of one representative of each party and one independent member selected by the parties' representatives. In the event that the parties' representatives are unable to agree on an independent member, the President of the Canadian Institute of Mining and Metallurgy shall be asked to select the independent member. Each party shall pay its costs of arbitration and one-half of the costs of the independent member, unless a majority of the panel awards costs otherwise. The arbitration shall be held and the award shall be deemed to be made in the City of Toronto, Ontario. During the period of any arbitration under this Agreement there shall be no abatement of the amounts payable under this Agreement.

#### *Further Assurances*

5.5 Each of the parties hereto shall make, do or execute or cause to be made, done or executed all such acts, documents, deeds or other things as may be necessary or reasonably required to carry out the intent and purposes hereof fully and effectually.

#### *Act in Good Faith*

5.6 The parties hereto shall at all times during the currency of this Agreement, and after the termination of this Agreement during the period, if any when the provisions of this Agreement continue to apply, act in good faith in respect to the other, and do or cause to be done all things within their respective

powers which may be necessary or desirable to give full effect to the provisions hereof.

### **Notice**

5.7 Unless otherwise provided herein, any notice or other communication to a party under this Agreement may be given or served by registered mail, postage prepaid, or by telegram or telex addressed as follows:

- (i) If to Union  
Union Mining Corporation  
604-80 Richmond St. West  
Toronto, Ontario  
M5H 2S9
  
- (ii) If to Barrick  
American Barrick Resources Corporation  
24 Hazelton Avenue  
Toronto, Ontario  
M5R 3E2

Any notice or other communication so mailed shall be deemed to have been given or served the fourth day after it is deposited in any post office in Canada. Any notice given by telegram or telex or other means of recorded communication shall be deemed given the day following the day it is sent. Any such notice or other communication to a party may also be served in person by delivering the same to a responsible person in the office of the party to be served at the above address. Any party may change its address for service at any time by notice in writing to the other.

In the event of disruption of mail, telegram and telex services, such notice or other communication shall be given by personal service as aforesaid.

### **Perpetuities**

5.8 If any right, power or interest of any party in the Mining Lands under this Agreement would violate the rule against perpetuities, then such right, power or interest shall terminate at the expiration of 20 years after the death of the last survivor of all the lineal descendants of Her Majesty, Queen Elizabeth II of England, living on the date of execution of this Agreement.

### **Construction**

5.9 In the construction of the provisions of this Agreement, words in the singular number include the plural number and words denoting persons include firms and corporations and vice versa.

### **Confidentiality of Information**

5.10 The parties hereto agree that all information they may receive as a result of or in connection with the work carried out under the provisions of this Agreement shall be the exclusive property of the parties hereto, shall be classified as confidential and shall not be shared or traded with others, other than disclosures to governments or agencies thereof or other regulatory authorities having jurisdiction, including duly organized stock exchanges, without the prior consent of the other parties hereto then having an interest in the Mining Lands to which such information relates.

Notwithstanding the foregoing, any party hereto may at any time and without the consent of the other party hereto share all or any part of such information with a company which is more than 50% owned by such party or with a

company owning more than 50% of the shares of such party, or when soliciting a bona fide purchaser or transferee of an interest, provided that such company so receiving such information shall first agree with such party to be bound by and observe the provisions of this paragraph 5.10.

No news release or public announcement respecting any aspect of the Project other than one specifically required by a regulatory authority and issued concurrently by both parties shall be made by any party without first obtaining the express written approval from the other party of the content of such news release or public announcement, such approval not to be unreasonably withheld.

### ***Supersession***

5.11 All the terms, covenants and conditions respecting the Mining Lands are embodied herein and, upon the execution and delivery of this Agreement by each of the parties hereto, all rights and liabilities arising by virtue of any and all statements or agreements (whether oral or written) heretofore made or entered into with respect to the Mining Lands are terminated by this Agreement.

### ***Canadian Funds***

5.12 All references to money herein are to Canadian funds.

### ***Headings***

5.13 Paragraph headings in this Agreement are inserted solely for the purpose of facilitating easy reference and shall not be construed in any way as part of or affecting the construction or interpretation of this Agreement.

### ***Other Opportunities***

5.14 Except as expressly provided in this Agreement, each party shall have the free and unrestricted right independently to engage in and receive the full benefits of any and all business endeavours of any sort whatsoever whether or not competitive with the endeavours contemplated herein without consulting the other or inviting or allowing the other to participate therein. No party shall be under any fiduciary or other duty to the other which will prevent it from engaging in or enjoying the benefits of competing endeavours within the general scope of endeavours contemplated by this Agreement. The legal doctrines of "corporate opportunity" sometimes applied to persons engaged in a joint venture or having fiduciary status shall not apply in the case of any party. In particular, without limiting the foregoing, no party shall have any obligation to any other party as to:

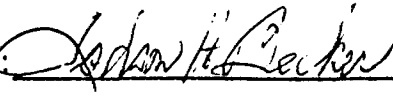
- (i) any opportunity to acquire, explore and develop any mining property interests or right presently owned by it or offered to it outside the Mining Lands at any time; and
- (ii) the erection of any mining plant, mill, smelter or refinery whether or not such mining plant, mill, smelter or refinery treats ores or concentrates produced from the Mining Lands.

### ***Successors and Assigns***

5.15 This Agreement may not be assigned by either party without the written consent of the other party, which consent shall not be unreasonably withheld and shall enure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

IN WITNESS WHEREOF the parties hereto have executed this Agreement effective as of the day and year first above written.

UNION MINING CORPORATION

by:  c/s

AMERICAN BARRICK RESOURCES CORPORATION

by:  c/s

and: 



## SCHEDULE "A"

This is Schedule "A" to the annexed Agreement dated as of the 31st day of January 1988 between Union Mining Corp. Ltd. and American Barrick Resources Corporation

### *Net Smelter Returns*

1. "Net Smelter Returns" shall mean the net proceeds actually received by American Barrick from the sale by it of minerals mined and removed from the Mining Lands, after deduction of the following:

- (a) custom smelting costs, treatment charges and penalties including, but not being limited to, metal losses, penalties for impurities and charges for refining, selling and handling by the smelter, refinery or other purchaser;
- (b) costs of handling, transporting and insuring ores, minerals and other materials or concentrates from the Mining Lands or from a concentrator, whether situated on or off the Mining Lands, to a smelter, refinery or other place of treatment; and
- (c) ad valorem taxes and taxes based upon production, but not income taxes.

2. In the event Barrick commingles minerals from the Mining Lands with minerals from other properties, Barrick shall establish procedures, in accordance with sound mining and metallurgical techniques, for determining the proportional amount of the total metal content in the commingled minerals attributable to the input from each of the properties by calculating the same on a metallurgical basis, in accordance with sampling schedules and mining efficiency experience, so that royalties applicable to minerals produced from the Mining Lands may reasonably be determined.

3. Payments shall be made by Barrick to Union within 90 days after the end of each calendar year in which Net Smelter Returns, if any, are received by Barrick commencing with the calendar year in which commercial production occurs. Such payments shall be accompanied by a statement showing in reasonable detail the computation and derivation of such payments and the credits and deductions to which Barrick is entitled. Barrick's computation of royalty payments, as reflected in the statements furnished to Union for each calendar year, shall be deemed binding unless Union shall dispute the correctness thereof in writing within a six-month period at its expense. The books and records of Barrick which are pertinent to the determination of Net Smelter Returns shall be made available to Union for inspection at reasonable times during normal business hours; provided, however, such inspection is conducted by it or by a national accounting firm and shall not unreasonably interfere with or hinder Barrick's operations or procedures.

## SCHEDULE "B"

This is Schedule "B" to the annexed Agreement dated as of the 31st day of January 1988 between Union Mining Corp. Ltd. and American Barrick Resources Corporation

### ACCOUNTING MEMORANDUM

#### 1. GENERAL PROVISIONS

##### 1.1 Definitions

- 1.1.1 "Mining Lands" shall have the meanings ascribed to those words in the annexed agreement to which this Accounting Memorandum is attached.
- 1.1.2 "Operations" shall mean the work performed by Barrick on the Mining Lands.
- 1.1.3 "parties" shall mean Union Mining Corporation ("Union") and American Barrick Resources Corporation ("Barrick").
- 1.1.4 "Material" shall mean personal property, equipment or supplies acquired or held for use on the Mining Lands.

#### 2. DIRECT CHARGES

Barrick shall charge the following items for purposes of determining expenditures incurred on or in connection with the Mining Lands:

- 2.1 All the proper costs and expenditures relative to the Operations incurred by Barrick.
- 2.2 *Labour*
  - 2.2.1 Salaries and wages of Barrick's employees directly engaged on the Mining Lands in the conduct of the Operations, and salaries and wages of technical employees who are temporarily assigned to and directly employed on or in connection with the Mining Lands. Such technical employees shall include engineers, technologists, geologists, geophysicists, engineers, engineering assistants, technicians, draftsmen, engineering clerks, and other personnel performing technical services within the technical organization.
  - 2.2.2 Barrick's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to the employees whose salaries and wages are chargeable under Section 2.2.1 except that in the case of those employees only a pro rata portion of whose salaries and wages are chargeable not more than the same pro rata portion of the benefits and allowances herein provided for shall be charged.
  - 2.2.3 Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Barrick's labour costs of salaries and wages chargeable under Sections 2.2.1 and 2.2.2.

2.2.4 Reasonable living expenses of those employees whose salaries and wages are chargeable under Section 2.2.1 and for which expenses the employees are reimbursed under Barrick's usual practice.

2.2.5 Salaries, wages, payroll burden, employee benefits, and personal expenses of technical employees engaged in other requisite services which may be provided by Barrick's corporate or subsidiary company's technical groups as mutually agreed upon.

2.3 ***Employee Benefits***

Barrick's current cost of established plans for employee's group life insurance, hospitalization, pension, retirement bonus and other benefit plans of a like nature, applicable to Barrick's labour cost shall be chargeable at Barrick's actual cost.

2.4 ***Material***

Material purchases or furnished by Barrick for use on the Mining Lands as provided under Section 4. So far as it is reasonably practical and consistent with efficient and economical operations, only such material shall be purchased for or transferred to the Mining Lands as may be required for immediate use; and the accumulation of surplus stocks shall be avoided.

2.5 ***Transportation***

Transportation of employees and material necessary for the Operations.

2.6 ***Services***

2.6.1 The cost of services and utilities procured from outside sources other than legal services which are specifically covered by Section 2.8.

2.6.2 Use and service of equipment and facilities furnished by Barrick as provided in Section 4.4.

2.7 ***Damages and Losses***

All costs or expenses necessary for repair or replacement made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause.

2.8 ***Legal Expense***

All costs and expenses of handling, investigating and settling litigation or claims arising by reason of the Operations or necessary to protect, or recover the Mining Lands, including but not limited to, fees, court costs, cost of investigation or procuring evidence and amounts paid in settlement or satisfaction of any such litigation or claims.

2.9 ***Claims***

All taxes, duties, or assessments of every kind and nature, except those based on income, assessed or levied upon or in connection with the Mining Lands, the operation thereof, or the production therefrom.

2.10 **Insurance**

Net premiums paid for insurance required to be carried by laws and regulations and other insurance carried for the protection of Barrick and Union.

2.11 **Rentals**

Fees, rentals, etc., for development licences, mining leases or rentals and royalties.

2.12 **Permits**

Permits, fees and other charges which are assess by various governmental agencies.

2.13 **Other Expenditures**

Any other expenditure, not covered or dealt within the foregoing provisions of this Section 2, or in Section 3, incurred for the necessary and proper conduct of the Operations.

3. **INDIRECT CHARGES**

Barrick shall charge the following items for purposes of determining expenditures incurred on or in connection with the Mining Lands:

3.1 A pro rata portion of the expenses of operating and maintaining Barrick's office and facilities not required exclusively for the Mining Lands, such charge to be in an amount for general overhead equal to:

- (1) 2% of all amounts referred to herein, expended for fixed assets, excluding the Mining Properties but including, without limitation, plant, equipment and materials;
- (2) 5% of all payments made to keep the Mining Lands in good standing and including deposits, rental payments or any other such payments;
- (3) 5% of all amounts paid, referred to herein, to third party contractors and/or consultants including, without limitation, amounts paid for drilling, geophysical services and helicopter, aircraft, vehicle and equipment rentals; and
- (4) 5% of all other amounts expended in doing work hereunder for which there has not otherwise been a charge under this Section 3.1 or under Section 4.4.1.

The percentage overhead rates provided for in this Section 3.1 shall be reviewed and if necessary amended if in the opinion of either of the parties such rates are found to be either excessive or insufficient. The party requesting such review shall supply documentation in support of its position that the overhead rates are either excessive or insufficient. Any disagreement between the parties will be subject to arbitration.

4. **BASIS OF CHARGES**

Subject to further provisions of this Section 4, Barrick will procure all material and services for the Mining Lands.

4.1 ***Purchases***

Material purchased and services procured shall be charged at the price paid by Barrick after deduction of all discounts actually received.

4.2 ***Material Furnished from Barrick's Warehouse or Other Properties***

4.2.1 ***New Material***

Material shall be priced at the current replacement cost of the same kind of material, effective at date of movement and f.o.b. the supply store or railway receiving point nearest the Mining Lands where material of the same kind is normally available.

4.2.2 There shall be no credit for cash discounts applicable to prices provided for in Section 4.2.1.

4.2.3 ***Used Material***

Material in sound and serviceable condition and suitable for re-use without reconditioning, shall be priced at seventy-five percent (75%) of the current price of new material.

4.3 ***Warranty of Material Furnished by Barrick***

Barrick does not warrant the material furnished. In case of defective material, credit shall not be passed until adjustment has been received by Barrick from the manufacturers or their agents.

4.4 ***Equipment and Facilities Furnished by Barrick***

4.4.1 Barrick shall charge for use of equipment and facilities at rates commensurate with cost of ownership and operation. Such rates shall include cost of maintenance, repairs, other operating expense, insurance, taxes, depreciation and interest on investment not to exceed seven percent (7%) per annum, provided such rates shall not exceed those currently prevailing in an immediate area within which the Mining Lands are located. Rates for laboratory service shall be charged at Barrick's cost. Rates for trucks and tractors may include wages and expenses of the driver.

4.4.2 Rates shall be revised and adjusted from time to time when found to be either excessive or insufficient.

5. Union, upon notice in writing to Barrick within the six month period following the end of any financial year of Barrick, shall have the right to audit Barrick's accounts and records relating to the Mining Lands for such financial year.

Appendix II  
Legend for Diamond Drill Sections

Major Lithologies:

Code:

Cas	Casing
CHET	Chert
EOH	End of Hole
F3	Oxide Iron Formation
S3	Greywacke
S10-S100	10% to 100% Silicified
S10m-S90m	10% to 90% Silicified-Mag
VSS	Variably Silicified Sediments
V7m	High Mag Basalt
V9	Tuff
4U	Ultramafic

Intrusives:

Mi	Mafic Intrusive
mls	Mafic Syenite
ls	Syenite
3L	Lamprophyre

Lithological Sub-units:

Aphm	Aphanitic massive flow
ash	Ash
bx	Brecciated
clgs	Clay-grit seam
FAZ/FZ	Fault Zone
Fctz	Flow contact zone
Fg	Fine grained
Fgg	Fault gouge
Fgmf	Fine grained massive flow
Fmgm	Fine to medium grained massive flow
Fold	Foliated
Pt	Flow top
mf	Massive flow
mgmf	Medium grained massive flow
rubd	Rubbled

HIGHWAY 101

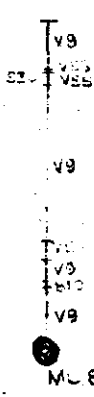
14000 N

10000 E

2000 E

THACKERAY CR.

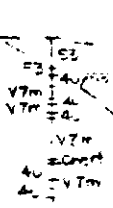
L-578048



S3/F3

L-578047

V7/4J



S3/F3

V7/1S

10000 N

V7/4J

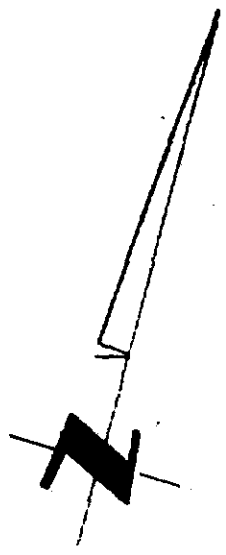
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V7/1S

1S

ROAD

GHOST RIVER



12000 N

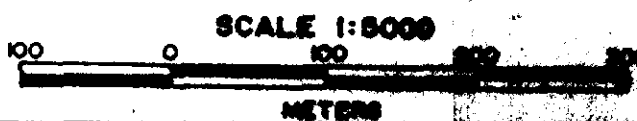
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RESOURCES CORPORATION

UNION MINING CORP.  
OPTION

GEOLOGICAL COMPILATION  
HARKER TOWNSHIP

PLATE 66-7



DATE: DRAWN BY: CHECKED BY:



320125W0055 66 HARKER

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