

1.13.2
1.13.3

17th October, 1968.

ABERFOYLE HOLDINGS LIMITED - MINING DIVISION

TO - Mines Superintendent (Copy to Mine Surveyor).
FROM - Senior Geologist.
SUBJECT - DIAMOND DRILL HOLE PICK-UPS.

Outlined below are the check surveys and new diamond drill hole pick-ups which require attention -

Lutwyche Surface -

- D.D.S. S28 - R.L. to be checked; dip incorrect.
- D.D.S. S31 - Co-ordinates to be checked; site does not check out with location previously outlined.
- D.D.S. S30 - Requires co-ordinates and R.L.; rig still on site.

A rapid check on the possible next shallow D.D. site S.E. of the Aberfoyle Rivulet is also required. This proposed D.D. site is located on the following co-ordinates - 7364N/3636E.

Lutwyche Underground -

The co-ordinates, R.L., bearing at collar and on inclination at collar of the following D.D. holes on 13 Level are required -

- AU13- 8 - Drill cutting, main 13 level X-Cut.
- AU13- 9 - Drill cutting, main 13 Level X-Cut; drilling in progress.
- AU13-13 - 13 Level Drive, N.W.

Aberfoyle Mine - 7 Level

- AU7-22 - Co-ordinates, bearing, inclination required.
- AU7-23 - Co-ordinates, bearing, inclination required; drilling currently in progress.

The approximate locations of both the above D.D. holes are in a short crosscut on 5700N/1220E.


G. Kraussel
Senior Geologist



HOLE.	DIP	COLLAR		VEIN.		VAN		E SINK	
		RL		VEIN.	HORIZ	VEIN	RL	COLLAR	RL
132	+10°44.3	285.43	15.32 / 134	15.05	288.28				
									$\frac{281.32 - 278.60}{288.28 - 278.60} = \frac{2.72}{9.68} = .28$
134	5°6.1	285.18	24.16 / 270	24.06	287.33				.31 x
135	-18°12.2	284.48	10.12 / 360	9.61	281.32				
136	-21°30.6	284.28	15.5 / 330	14.42	278.66				

DRILL HOLE SURVEY COMPUTATION

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT IR-PAE

HOLE NUMBER 51

SURVEYED

COMPUTED

DATE

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W	N	E	
Collar	.		80°		587.3		14"						2337.82	978.41	
	4.55	4.55		4.48	582.82			6.79	6.77		6.19		2338.59	978.60	
9.1			80°				13.5								
	38.05	33.5		32.99	549.83			5.82	5.61		1.56		2344.20	980.16	
67			75°				23.5								
	99.0	60.95		58.87	490.96			15.78	14.47		6.29		2358.67	986.45	
131			68°				34.5								
	164.5	65.5		60.73	430.23			24.54	20.22		13.90		2378.89	1000.35	
198			58°				44.5								
	205.7	41.2		34.94	395.29			21.83	15.57		15.36		2394.46	1015.65	
213.4			56°				46.5								
	236.2	30.5		25.29	370.00			17.06	11.74		12.37		2406.20	1028.82	
259			50				47.5								
✓	264	27.8		21.30	348.70			17.87	12.07		13.18		2418.27	1041.20	
				238.60					80.45		62.79				

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT TRO-PARI

HOLE NUMBER 519

SURVEYED

COMPUTED

DATE

N	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W	N	E	
Collar			70°		587.7		104°						2331.72	975.36	
	15.24	15.2		14.28	573.4			5.20		1.26	5.05		2330.46	980.41	
30.48			69				91.5								
	45.72	30.5		28.47	544.9			10.93		0.29	10.93		2330.17	991.34	
60.96			69				91.0								
	91.4	15.72 60.9		42.68	502.2			16.38		0.29	16.38		2329.82	1007.72	
121.92			63				76.0								
	152.4	61.0 41.5		54.35	447.8			27.69	6.760		26.87		2336.58	1034.59	
182.88			60				71.5								
	205.74	53.3 144.2		46.16	401.6			26.65	8.46		25.27		2345.04	1059.86	
228.6			57				73.0								
	228.6	22.9		19.20	382.4			12.47	3.65		11.93		2348.69	1071.79	
									18.88	1.84	96.43				
									-1.84						
									16.97						

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT TRO PAR

HOLE NUMBER S20

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ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT

HOLE NUMBER, 521

SURVEYED

COMPUTED

DATE 4/11/81

[illegible]

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT TRO. PAR.

HOLE NUMBER S 27

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ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT TRO-PARI

HOLE NUMBER 578

SURVEYED

COMPUTED

710

DATE 26-11-8

[illegible]

DRILL HOLE SURVEY COMPUTATION

FILE NUMBER 531

SURVEYED

COMPUTED

DATE

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT

FILE NUMBER

532

SURVEYED

COMPUTED

DATE

[illegible]

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT _____ HOLE NUMBER 30

SURVEYED _____ COMPUTED _____ DATE _____

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
COLLAR	.		76°			45							2128.42	1130.81	
	7.6	7.6		7.37	637.43			1.84	1.23		1.37		2129.65	1132.18	
15.25			75°			.49									
	22.95	15.35		14.83	622.6			3.97	2.45		3.13		2132.1	1135.31	
30.50			72°			50									
	45.75	22.8		21.68	600.92			7.05	4.24		5.63		2136.34	1140.94	
61.0			64°			51									
	76.20	30.45		27.37	573.55			13.35	7.85		10.8		2144.19	1151.74	
91.5			58°			55									
	106.7	30.5		25.87	547.68			16.16	8.56		13.71		2152.75	1165.45	
122.0			51°			56									
	137.2	30.5		23.7	523.98			19.19	9.89		16.65		2162.64	1181.9	
152.5			46°			56									
	167.7	30.5		21.94	502.04			21.19	10.91		18.16		2173.55	1200.06	
183.0			46°			56									
	198.2	30.5		21.94	480.1			21.19	10.91		18.16		2184.46	1218.22	
213.50			32.5°			56									
	228.75	30.55		16.41	463.69			25.77	12.27		22.00		2197.71	1240.21	

DRILL HOLE SURVEY COMPUTATION

HOLE NUMBER 30 cont

COMPUTED

DATE _____

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

THIS PROPERTY

720 YAKI

534

SURVEYED

COMPUTED

DATE

I	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE N	TOTAL DEPART. E	REMARKS
									N	S	E	W			
Collar	.		86.5		676.1		17°						2566.42	698.29	
	7.6	7.6		7.59	668.51			0.46	0.44		0.13		2566.86	698.42	
15.2			84				36°								
	22.9	15.3		15.22	653.29			1.60	1.29		0.94		2568.15	699.36	
30.5			84				37								
	43.0	20.1		19.99	633.30			2.10	1.68		1.26		2569.83	700.62	
55.5			81				40								
	72.7	29.7		29.33	603.97			4.65	3.11		3.46		2572.94	704.08	
89.9			75				52								
	106.0	33.3		32.17	571.80			8.62	5.31		6.79		2578.25	710.87	
122			67				53								
	137.0	31.0		28.54	543.26			12.11	7.29		9.67		2585.54	720.54	
152			59				60								
	167.5	30.5		26.14	517.12			15.71	7.86		13.61		2593.40	734.15	
183			50				67.5								
	198.2	30.7		23.52	493.60			19.73	7.55		18.23		2600.95	752.38	
213.4			43				65.5								
244	228.7	30.5	3.9	20.80	472.80		68.0	22.31	9.25	62.74	26.21	91.11	2616.30	777.10	

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT Exchange

HOLE NUMBER Spauldings

SURVEYED T. G. H. C. P. COMPUTED

DATE 6-10

[illegible]

[illegible]

DRILL HOLE SURVEY COMPUTATION

SURVEYED T.O. - C.P. COMPUTED C.P.

DATE 6-10-11

STATION	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L. 663.30	INST. READG (MAG)	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
			0°										2253	807	
	285	22.5		285				0					2253	807	
57			0.5°			2.62°									
	62	24.5		45						0.24		0.30			
69			0.75°			142°									
	73.5	10.5		10.5				0.14		0.12	0.09				
78			0.75°			37°									
	83.5	15		15				0.20	0.16		0.12				
99			0.40°			257°									
	108	19.5		19.5				0.14		0.23		0.14			
117			0.80°			29°									
	123	15		15				0.21	0.11		0.12				
129			0.80°			27°									
	140.5	17.5		17.50				0.24	0.21		0.13				
152			0.90°			56°									
	158	17.50		17.50				0.27	0.15		0.22				
164			1.0			60°									
	170	12		12				0.21	0.11		0.18		2252.62	807.25	

[illegible]

DRILL HOLE SURVEY COMPUTATION

SURVEYED T. Oliver
C. Parfrey COMPUTED C. Parfrey DATE 14-7-81

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
0.00															
	27.5	27.5	0.5	27.5		53°		0.24	0.14		0.19				
55.0															
	64.0	36.5	1.0	36.5		61°		0.63	0.30		0.55				
73.0															
	85.0	21.0	3.50	21.0		40°		1.30	1.00		.83				
97.0															
	109	24.0	8.5	23.9		52°		1.8	1.20		1.40				
121.0															
	133	24	8.5	23		63°		3.1	1.40		2.8				
145															
	154	21	10	20.7		69°		3.6	1.3		3.4				
163															
	167.5	13.5	11	13.25		70°		2.58	0.88		2.42		6.22.	11.59	
172															

RE BE 11/50

[illegible]

SURVEYED TJO + SW COMPUTED

DATE 27-10

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT EASTMAN S.S.

HOLE NUMBER W. HOLE

To 4L

SURVEYED T.O. C.P.

COMPUTED T.O. C.P.

DATE 28/10/81

	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
			2°			183 180°							5508.74	1402.96	
	9.85	9.85		9.844				0.344		0.344			1679.06	427.62	
9.7			3°			188 185°									
	27.2	17.35		17.326				0.908		0.905		0.079			
4.7			3°			126 193°									
	47.2	20.0		19.973				1.047		1.02		0.236			
9.7			1.9°			201 198°									
	77.2	30.0		29.984				0.995		0.943		0.308			
4.7			1.8°			210 207°									
	102.2	25.0		24.988				0.785		0.699		0.356			
9.7			1.5			153 190°									
	112.85	10.65		10.646				0.279		0.275		0.048			
6.0		3.15	1.75°	3.149		178 175°		0.096		0.096		0.008			
		116		115.91						4.285		1.035	1674.78	1401.933	
													5492.67	1399.56	

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

T. OLIVIER
 SURVEYED C. PARR COMPUTED 10-11-81 DATE 9-11-81

	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W	N	E	
21.2	10.6	10.6	3.0	10.59	656.4	273° 270°		0.55	0.03			0.55	2227.03	852.45	
47	34.1	23.5	2.5	23.48		283° 284°		1.03	0.24			1.03	2226.99	851.42	
76.2	71.6	37.5	1.1	37.49		283° 285°		0.65	0.19			0.62	2227.18	850.80	
122	109.1	37.5	0.9	37.49		205° 200°		0.72	0.22			0.68	2227.40	850.12	
171.2	146.6	37.5	1.5	37.5		64° 61°		0.59	0.54			0.73	2226.86	849.89	
221.2	196.2	49.6	3.0	49.58		73° 70°		1.30	0.57		1.17		2227.43	851.86	
271.2	246.2	50.0	5.5	49.93		63° 60°		2.62	0.77		2.51		2228.20	853.57	
307	289.1	42.9	10.75	42.70		73° 70°		4.11	1.87		3.66		2230.07	857.23	
	307	17.9		(306.35) 17.59	350.05			3.34	(4.63) 1.98	(0.58)	(0.53) 3.19	(3.11)	2231.04	860.42	

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

SURVEYED C.P.T.O.

COMPUTED C.P.T.O.

DATE 10/11/71

	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W	N	S	
			0°		652.2	0°							2212.3	844.2	
	10.6	10.6		10.6	641.6			0.0					2212.3	844.2	
21.2			1°			193° 192°									
	33.6	23.0		23.0	618.6			0.40		0.39		0.10	2211.91	844.1	
46			0.90°			197° 194°									
	58.6	25		25.0	593.6			0.39		0.37		0.11	2211.54	843.99	
71.2			15°			57° 54°									
	86.1	27.5		27.49	566.1			0.72	0.37		0.60		2211.93	844.59	
01			2.2°			85° 82°									
	123.6	37.51		37.47	528.6			1.44	0.12		1.43		2212.06	846.02	
46.2			4.75°			88° 85°									
	173.1	49.51		49.33	479.3			4.10	0.14		4.10		2212.20	850.12	
200			7.0°			90° 87°									
	200	26.9		26.7	452.6			3.28			3.28		2212.10	853.40	
		200		199.53	452.61				0.66	0.74	3.41	0.21			

FILE NUMBER *RR3*

SURVEYED C.P. COMPUTED C.P. DATE 3-12-8

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

Instrument Eastman S.S. ~~15~~ Hole No. 111 Hole One

RICKARDS

SURVEYED CP-T.O

COMPUTED C.P.T.O.

DATE 10/11/81

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT EASTMAN S. SHOT.

HOLE NUMBER BH-12

SURVEYED T. Oliver
S. Penney

COMPUTED C. PARFREY

DATE 14-7-81

[illegible]

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

Instrument Eastman

No 12 NO 111 TOR 1

ELECTRIC
SPARKINGT. OLIVER
SURVEYED C. PARRY

COMPUTED

10-11-81

DATE 9-11-81

	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W	N	E	
0.0			3.0		656.4	273° 270°							2227.0	853.0	
	10.6	10.6		10.55				0.55	0.03			0.55	2227.03	852.45	
21.2			2.5°			268° 265°									
	34.1	23.5		23.48				1.03		0.04		1.03	2226.99	851.42	
47			1.0			287° 284°									
	71.6	37.5		37.49				0.65	0.19			0.62	2227.18	850.80	
76.2			1.1°			288° 285°									
	109.1	37.5		37.49				0.72	0.22			0.68	2227.40	850.12	
122			0.9			203° 200°									
	146.6	37.5		37.5				0.59		0.54		0.73	2226.86	849.89	
171.2			1.5			64° 61°									
	196.2	49.6		49.58				1.30	0.57		1.17		2227.43	851.06	
221.2			3.0°			73° 70°									
	246.2	50.0		49.93				2.62	0.77		2.51		2228.20	853.57	
271.2			5.5°			63° 60°									
	289.1	42.9		42.70				4.11	1.87		3.66		2230.07	857.23	
307			10.75			73° 70°									
	307	17.9		(306.35) 17.59	350.05			3.34	(4.63) 0.98	(0.58)	(0.53) 3.19	(3.11)	2231.04	860.42	

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT Eastman Single Shot

HOLE NUMBER FILLHOLE 3-SPALLO

SURVEYED

COMPUTED

DATE 5-10-81

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
	10.0	10.0	2.0	9.99		175°		0.35		0.35	0.03				
20															
	25	15	20°	14.99		182°		0.52		0.52		0.19			
30															
	40	15	1.0°	15		182°		0.26		0.26		0.009			
50	* 100m = ESTIMATED DIP AND BEARING														
	75	35	4°	34.91		80°		2.44	0.42		2.40				
100*															
	127.5	52.5	8°	51.99		74°		7.31	2.01		7.03				
155															
	182.5	55	10°	54.16		74°		9.55	2.63		9.18				
210															
	236.5	54	12°	52.82		75°		11.23	2.90		10.85				
263															
	283	46.5	14°	45.12		73°		11.25	3.29		10.76				
303			14°												
	323	40	16° 15'	38.45		74°		11.1	3.06		10.67				
343*			16°												

RE CALCULATED

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT Eastman

HOLE NUMBER 2pauldings 1st

SURVEYED Tot C.P COMPUTED

DATE 6-10-8

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L. Assumed.	INST. READG. MAG.	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
0			3°		662.00	228° 225°							2292	860.5	D.BUTT. DRYUM.
	10.	10.		9.99	655.34			0.52		0.35		0.39	2291.65	860.11	
									0.37			0.37	2291.63	860.13	
20.			2°			178° 175°									
	25.	15.		14.99	660.35			0.52		0.52	0.02		2291.13	860.13	
											0.05		2291.11	860.18	
30			2°			185° 182°									
	40	15		14.99	625.35			0.52		0.52		0.05	2290.61	860.08	
												0.02	2290.59	860.16	
50			1°			185° 182°									
	75	35		34.99	590.44			0.61		0.61		0.05	2290.00	860.03	
												0.02	2289.98	860.14	
100			4°			83° 80°									
	127.5	52.5		52.37	538.74			0.64	0.44	0.63	3.65		2290.44	863.64	
								3.66	0.64		3.60		2290.61	863.72	✓
155			8°			75° 74°									
	182.5	55		54.46	484.28			7.65	1.98		7.39		2292.42	871.03	
									2.11		7.35		2292.72	871.07	✓
210			10°			78° 75°									
	236.5	54		53.18	431.1			9.38	1.95		9.18		2294.37	880.21	
									2.43		9.06		2295.15	880.13	
263			12°			78° 75°									
	283	46.5		45.48	385.61			9.67	2.01		9.46		2296.38	889.67	
									2.50		9.34		2297.65	889.47	
303			14°			76° 73°									
	323	40		38.81	346.8			9.68	2.34		9.39		2298.72	899.06	
									2.83		9.26		2300.48	898.73	
343			16°			77° 74°									
	363	20		19.23	325.51			5.51	1.24		5.37		2299.96	904.43	
									1.52		5.30		2302.00	904.03	

ROSSARDEN MINES LIMITED
 DRILL HOLE SURVEY COMPUTATION

INSTRUMENT EASTMAN S. SHOT.

HOLE NUMBER B.H. 1A

SURVEYED J. OLIVER

COMPUTED C. PARKER

DATE 18.8.81

TN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									N	S	E	W			
	182.	12	2.0°	11.99		65°0		0.42	0.18		0.38		2253.72 0.90	808.29 1.63	
188															
	194	12	2.0°	11.99		64°0		0.42	0.18		0.38		2253.90	806.67	
200						235° 174°	camera too close to drill casing								
	218	24	3.5°	23.95 ⁶	average bearing	59°		1.47	0.76		1.26		2254.66	809.93	
236															
	248	24	4.0°	23.94		57°		1.67	0.91		1.40		2255.57	811.33	
260															
	272	24	4.75°	23.92		58°		1.99	1.05		1.69		2256.62 3.98	813.02 6.74	
284															
	294.5	22.5	5.25°	22.41		56°		2.06	1.15		1.71		2257.77	814.73	
305															
	317	22.5	6.0°	22.38		56°		2.35	1.31		1.95		2259.08	816.68	
329															
	341	24	7.0°	23.82		55°		2.92 2.94	1.69		2.39 2.41		7.77	12.09	
53				334.41	328.94								2260.75	819.07	
ESTIMATED READING	357.5	16.5	7.50°	16.36		56°		2.16	1.21		1.79		2261.96	820.06	
62				350.77	312.5	RnHm	RL 3108.	COORD	2261.37	819.99					

ROSSARDEN MINES LIMITED
DRILL HOLE SURVEY COMPUTATION

INSTRUMENT Leica S. Shot

HOLE NUMBER BH-1A

SURVEYED T. Oliver
C. P. Bailey

COMPUTED C. P. Bailey

DATE 4/8/81

STN	MID STN	SLOPE DIST.	DIP	VERT. DIST.	R.L.	INST. READG	ADJ. BEAR	HORIZ DIST.	LATITUDE		DEPARTURE		TOTAL LATITUDE	TOTAL DEPART.	REMARKS
									+ N	- S	+ E	- W	2253	807	
	28.5	28.50	0.50	28.50	113.30	262°		0.25		0.03		0.25	2252.97	806.75	
57m															
	62	34.50	0.75°	34.49		142°0		0.45		0.35	0.28		2252.62	807.02	
69m															
	73.5	10.50	0.75°	10.49		37°0		0.14	0.11		0.08		2252.73	807.11	
78m															
	88.50	15.00	0.40°	14.99		257°0				0.02		0.10	2252.71	807.01	
99m															
	108	19.50	0.80°	19.49		39°0		0.27	0.21		0.17		2252.92	807.14	
117m															
	123	15.0	0.80°	14.99		27°0		0.20	0.18		0.09		2253.1	807.27	bearings inaccurate when dip is under 10°
29m															
	140.50	17.50	0.90°	17.49		56°0		0.27	0.15		0.22		2253.25	807.44	
52m															
	158.0	17.50	1.0	17.49		60°0		0.30	0.15		0.26		2253.4	807.75	
64															
	170	12.0	1.0	11.99		50°0		0.21	0.14		0.16		0.90	1.63	
76													2253.50	807.91	

RE CALCULATED

ROSSARDEN MINES LIMITED

DRILL HOLE SURVEY COMPUTATION

INSTRUMENT EASTMAN SINGLE SHOT

HOLE NUMBER BH1A-Govt. Ho

SURVEYED T.O. - C.P. COMPUTED C.P.

DATE 6-10-81

[illegible]

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DIAMOND DRILLING - LUTWYCHE From 4/11/77

HOLE No.	BRG.	DIST.	DIP	HOR. DIST.	VERT. DIST.	LAT.	DEP.	COLLAR CO-ORDS		END CO-ORDS		R.L. Collar	R.L. End
								N	E	N	E		
3-60	69°34.7	101½	3°04.7	101.35	+5.45	35°36	94.98	7347.61	2771.65	7382.97	2866.63	ABOVE RAILS 4.07	9.52
				30.89				2239.55	844.80	2250.33	873.75	1.24	2.90
61	299°33.3	69½	3°44.6	69.35	+4.54	34.21	-60.33	7341.99	2758.47	7376.20	2698.14	4.62	9.16
				21.14				2237.84	840.78	2248.27	822.39	1.41	2.79
62	103°44.3	52½	0°33.4	52.5	-0.51	-12.47	51.00	7339.23	2769.57	7326.76	2820.57	4.33	3.83
				16.00				2237.00	844.16	2233.20	859.71	1.32	1.16
63	246°32.5	131½	57°26.8	70.76	110.84	-28.17	-64.91	7654.09	2759.78	7625.92	2694.87	9.85	120.69
				21.57				2332.97	841.18	2324.38	821.40	3.00	36.75
64	41°03.8	141	47°21.2	95.52	-103.71	72.02	62.75	7169.98	2714.31	7242.00	2777.06	BELOW RAILS 0.09	103.80
				29.11				2185.41	827.32	2207.36	846.45	-0.03	-31.64
65	73°41.4	115½	2°07.3	115.42	+4.28	32.41	110.78	7169.11	2715.42	7201.52	2826.20	ABOVE RAILS 3.11	7.39
				35.18				2185.14	827.66	2195.02	861.43	0.95	2.25
66	251°51.3	173½	38°39.6	135.48	+108.39	-42.19	-128.74	7340.34	2759.20	7298.15	2630.46	9.40	117.79
				41.29				2237.34	841.00	2224.48	801.76	2.87	35.90
67	253°47.5	151½	77°04.2	33.90	+147.66	-9.46	-32.55	7338.34	2760.49	7328.88	2727.94	12.13	159.79
				10.33				2236.73	841.40	2233.84	831.48	3.70	48.70
68	61°39.7	19	42°01.1	14.12	+12.72	6.70	12.43	7627.05	2595.31	7633.75	2607.74	1008.94	1021.66
				4.30				2324.72	791.05	2326.77	794.84	307.52	311.40
69	56°43.5	10	41°51.8	7.45	+6.67	4.09	6.23	7627.74	2596.13	7631.83	2602.36	1008.59	1015.26
				2.27				2324.94	791.30	2326.18	793.20	307.42	309.45
70	72°22.8	80½	13°47.3	78.18	+19.19	23.67	74.51	7627.54	2597.52	7651.21	2672.03	1005.59	1024.78
				23.83				2324.87	791.72	2332.09	814.43	306.50	312.35
71	303°41.4	14¾	43°38.6	10.67	-10.18	5.92	-8.88	7136.51	2725.18	7142.43	2716.30	ABOVE RAILS 0.15	-10.03
				3.25				2175.21	830.63	2177.01	827.93	0.05	-3.06
72	309°18.4	122	38°30.7	95.46	-75.97	60.47	-73.86	7132.50	2727.13	7192.97	2653.27	BELOW 0.01	79.98
				29.10				2173.99	831.23	2192.42	808.72	-	-23.16
73	227°36.2	108½	48°50.5	71.24	81.50	-48.03	-52.61	7556.48	2548.12	7508.45	2495.51	936.03	1017.58
				21.71				2303.22	776.67	2288.58	760.63	285.30	310.14
74	223°28.2	105	44°45.5	74.56	73.93	-54.11	-51.30	7647.10	2502.18	7592.99	2450.88	ABOVE RAILS 8.00	81.93
				22.73				2330.84	762.66	2314.34	747.03	2.44	24.97
75	168°35'	224¾	0°	224¾	-	-220.30	44.49	7062.88	2776.76	6842.58	2821.25	3.59	3.59
				68.50				2152.77	846.36	2085.62	859.92	1.09	1.09
76	123°41.4	160½	0°46'	160.24	2.14	-88.89	133.33	7080.00	2775.13	6991.11	2908.46	3.66	5.80
				48.84				2157.98	845.86	2130.89	886.50	1.12	1.77
77	219°08.6	104	55°09.3	59.42	85.35	-46.08	-37.51	7256.52	2672.15	7210.44	2634.64	936.65	1022.00
				18.11				2211.79	814.47	2197.74	803.04	285.49	311.51
78	45°52.9	5¾	46°13.1	3.98	-4.15	2.77	2.86	7262.23	2677.38	7265.00	2680.24	928.33	924.78
				1.21				2213.53	816.07	2214.37	816.94	282.95	281.64
79	80°15.5'	61½	5°15.3	61.24	5.23	10.36	60.36	7654.85	2769.02	7665.21	2829.38	932.51	938.14
				18.67				2338.20	844.00	2336.36	862.40	284.23	285.95
80	79°51.1'	136½	30°31.6	117.58	69.33	20.72	115.74	7654.81	2768.93	7675.53	2884.67	935.48	1004.81
				35.84				2333.19	843.97	2339.50	871.25	285.13	306.27

OLE No.	BRG.	DIST.	DIP	HOR. DIST.	VERT. DIST.	LAT.	DEP.	COLLAR		CO-ORDS		END CO-ORDS		R.L. Collar	R.L. End
								N	E	N	E	N	E		
AU 13-81	1° 06' 3"	280 3/4	+5° 39' 8"	279.38	27.71	279.33	5.39	7661.49	2764.14	7940.82	2769.53	933.50	961.		
				85.16				2335.22	842.51	2420.36	844.15	284.53	292		
82	338° 54' 8"	113 3/4	17° 06' 2"	108.72	33.45	102.11	-37.34	7661.28	2763.07	7763.39	2725.73	931.13	897		
				33.14				2335.16	842.18	2366.28	830.80	283.81	273		
83	91° 31' 6"	36 1/4	+5° 44' 6"	36.07	3.63	-0.96	36.06	7570.18	2725.25	7569.22	2761.31	932.43	936		
				10.99				2307.39	830.66	2307.10	841.65	284.20	285		
85	152° 19' 1"	197 1/2	+28° 31' 4"	173.53	94.31	153.67	80.61	7464.44	2685.53	7310.77	2766.14	934.80	1029		
				52.89				2275.16	818.55	2228.32	843.12	284.93	313		
86	73° 35' 4"	53 3/4	+6° 33' 3"	53.40	6.14	15.09	51.22	7495.82	2689.13	7510.91	2740.35	932.56	938		
				16.28				2284.73	819.65	2289.33	835.26	284.24	286		
87	1° 32' 9"	54 3/4	+4° 48' 4"	54.56	4.59	54.54	1.47	7661.44	2764.15	7715.98	2765.62	933.91	938		
				16.63				2335.21	842.51	2351.83	842.96	284.53	285		
88	311° 25' 4"	159 1/2	+15° 21' 1"	153.57	42.16	101.60	-115.15	7658.78	2761.38	7760.38	2646.23	933.61	975		
				46.81				2334.40	841.67	2365.36	806.57	284.56	257		
89	50° 58' 7"	62.33	+4° 47' 5"	62.11	5.21	39.11	48.25	7423.32	2788.39	7462.43	2836.64				
				18.93				2262.63	845.90	2274.55	864.41				
90	244° 31' 7"	123.17	+5° 37' 1"	122.58	12.506	-52.72	-110.66	7078.85	2724.62	7026.13	2613.96	Above RL 2.11			
				37.36				2157.63	830.46	2141.56	796.74				
91	112° 46' 6"	67.33	+4° 13' 2"	67.15	4.95	-26.00	61.91	7263.86	2903.16	7237.86	2965.07	Above RL 3.99			
				20.47				2214.02	884.88	2206.10	903.75				
92	60° 11' 5"	301.50	+5° 37' 2"	300.90	+19.04	149.58	261.09	7087.29	2774.65	7236.87	3035.78	Above RL 3.59			
				91.71				2160.21	845.73	2205.80	925.31				
93	77° 20' 2"	300 1/2	+2° 53' 8"	300.12	+15.19	65.79	292.82	7084.17	2777.78	7149.96	3070.60	Above RL 3.63			
				91.48				2159.26	846.67	2179.31	935.92				
94	98° 00' 4"	124	+3° 46' 0"	123.73	+8.15	-17.23	122.52	7082.75	2777.09	7065.52	2899.61	Above RL 3.76			
				37.71				2158.82	846.46	2153.57	883.80				
95	98° 37' 7"	299 1/2	-0° 16' 9"	299.50	1.47	-44.93	296.11	7082.74	2777.05	7037.81	3073.16	Above RL 3.50			
				91.29				2158.82	846.44	2145.12	936.70				
96	44° 24' 8"	160	-38° 10' 2"	125.56	99.17	89.69	87.87	7083.67	2775.27	7173.36	2863.14	Above RL 0.99	Below RL 98.1		
				38.27				2159.10	845.90	2186.44	872.69				
97	136° 31' 4"	35	+0° 09' 9"	35.00	+0.10	-25.40	24.08	7138.46	2642.55	7113.06	2666.63	931.93	932		
				10.67				2175.80	805.45	2168.06	812.79				
98	315° 49' 7"	34	+1° 02' 4"	33.99	+0.62	24.38	-23.68	7146.51	2634.69	7170.89	2611.01	931.50	932		
				10.36				2178.26	803.05	2185.69	795.84				
99	136° 08' 4"	30 1/2	+3° 48' 3"	30.43	+2.02	-21.94	21.08	7051.17	2635.51	7029.23	2656.59				
				9.28				2149.20	803.30	2142.51	809.73				
100	312° 41' 9"	36 3/4	-2° 40' 8"	36.71	1.72	24.89	-21.98	7060.10	2627.50	7084.99	2600.52				
				11.19				2151.92	800.86	2159.50	792.64				
101	141° 11' 5"	32 3/4	+2° 27' 9"	32.72	+1.41	-25.50	20.51	7167.37	2658.37	7141.87	2678.88	930.99	932		
				9.97				2184.61	810.27	2176.84	816.52				
102	332° 31' 5"	34 3/4	+0° 48' 8"	34.75	+0.49	30.83	-16.03	7178.30	2650.50	7209.13	2634.47				
			0.813°	10.59				2187.95	807.87	2197.34	802.99	930.87	931		

OLE No.	BRG.	DIST.	DIP	HOR. DIST.	VERT. DIST.	LAT. COS	DEP. SIN	COLLAR		CO-ORDS		END		R.L. Collar	R.L. End
								N	E	N	E	N	E		
AU13 103	216°03.8	259.60	+3°17.7	259.17	14.92	-209.50	-152.57	2145.78	829.99	1986.28	677.42				
104	174°19.8	72.70	-0°41.4	72.69	0.88	-72.33	7.18	2153.12	844.95	2080.79	852.13				
105	201°06.3	257.50	+6°34.3	256.28	25.00	-239.09	-92.28	2154.41	843.45	1915.32	751.17				
106	129°09.3	121.90	+0°30.5	121.89	1.08	-76.96	94.52	2311.16	834.21	2234.20	928.73				
107	182°25.8	120.10	+1°25.7	120.06	2.99	-81.00	88.62	2327.84	843.26	2246.84	931.88				
108	230°32.7	44.80	+30°15.8	38.69	22.58	24.59	-29.87	2313.94	830.01	2338.53	900.14	285.64	308		
109	90°16	19.80	+0°08	19.80	.00	-0.09	19.80	2027.48	689.47	2027.39	709.27				
109A	102°36.8	68.50	+0°46.7	68.49	0.93	-16.10	66.57	2026.90	689.49	2010.80	756.06				
110	92°04.0	96.54	+0°21.9	96.54	0.61	-3.48	96.48	2100.54	837.58	2097.06	934.06	290.23	290		
111	113°24.6	122.40	Horiz	122.40	.00	-48.63	112.32	2099.50	837.89	2060.87	950.21	290.46	290		
112	70°11.8	81.79	-0°31.5	81.79	0.75	27.71	76.95	2101.46	837.27	2129.17	914.22	290.33	289		
113	44°39	20.00	+3°09.8	19.97	1.10	14.96	13.23	2012.70	710.27	2027.66	723.50	283.19	284		
114	125°22.7	46.40	+2°21.6	46.36	1.91	-26.84	37.80	2024.97	685.21	1998.13	723.01	282.88	284		
115	209°15.7	31.20	+0°52.1	31.20	0.47	-11.05	-29.18	2044.25	682.97	2033.20	663.79	282.14	283		
116	216°02.5	24.9	+3°23	24.86	1.47	-20.10	-14.63	2009.38	708.07	1989.28	693.44	280.81	282		
117	169°45.4	24.5	+3°44	24.45	1.60	-24.06	4.35	2024.95	684.97	2000.89	689.32	282.12	284		
118	130°14.8	39.0	+1°22.6	38.99	9.37	-25.20	29.17	2100.53	778.10	2075.33	807.87	285.28	294		
119	327°23.2	10.0	+2°01.9	9.99	0.35	8.41	-5.38	2106.15	776.95	2114.56	771.57	285.17	286		
120	132°58.5	18.2	+1°02.5	18.2	0.33	-12.41	12.32	2125.80	789.93	2113.39	803.25	284.99	286		
121	299°26.5	10.80	+2.00	10.80	.06	5.31	-9.00	2129.90	787.13	2135.21	778.13	284.98	286		
122	106°31.1	19.00	+1°31.1	18.99	0.50	-5.40	18.21	1991.87	719.11	1986.47	787.33	282.49	282		

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