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**sperry-sun**  
OF CANADA LTD

78-X-04  
DIRECTIONAL SURVEY REPORT  
for  
CYPRUS ANVIL MINING CORPORATION



Edmonton (403) 436-9602, Calgary (403) 264-6702

# sperry-sun

## DIRECTIONAL SURVEY REPORT

FOR

CYPRUS ANVIL MINING CORPORATION



TYPE OF SURVEY: SURWEL GYROSCOPIC

SURVEY DEPTH: FROM 0 FT. TO 2190 FT.

LEASE: 78X04

FIELD:/AREA: FARD

PROVINCE: YUKON TERRITORY JOB NO. SU1.75-E-166

DATE OF SURVEY: MAY 14, 1978

OFFICE: EDMONTON, ALBERTA

\*CUSTOMER RUN SINGLE SHOT SURVEYS INCLUDED

SPERRY-SUN OF CANADA  
GYROSCOPIC DIRECTIONAL SURVEY

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CYPRUS ANVIL MINING CORPORATION  
78X04

SU1.75-E-166  
05/14/78

TOTAL DEPTH	DIRECTION DEG MIN	ANGLE DEG MIN	VERTICAL DEPTH	LATITUDE FEET	DEPARTURE FEET	VERTICAL SECTION	DOG LEG
	N E		.00	.00 N	.00 E	.00	.00
100	N 2 9 W	1 1	99.99	.89 N	.03 W	.85	1.02
200	N 56 3 W	4	199.89	3.74 N	2.97 W	2.84	3.50
300	N 77 4 W	4 2	299.65	6.47 N	9.29 W	3.85	1.47
400	N 76 48 W	3 24	399.44	7.94 N	15.62 W	3.63	.63
500	N 61 45 W	4 59	499.17	10.67 N	22.34 W	4.53	1.91
600	N 54 16 W	6 9	598.70	15.86 N	30.51 W	7.42	1.37
700	N 55 29 W	6 13	698.11	22.06 N	39.33 W	11.13	.15
800	N 41 34 W	8 16	797.32	30.51 N	48.57 W	16.90	2.68
900	N 40 32 W	8 2	896.31	41.20 N	57.88 W	24.82	.28
1000	N 36 12 W	8 28	995.28	52.44 N	66.76 W	33.38	.76
1100	N 22 36 W	9 6	1094.11	65.69 N	74.15 W	44.26	2.17
1200	N 17 31 W	11 32	1192.49	82.53 N	80.20 W	58.96	2.58
1300	N 19 42 W	10 46	1290.60	100.84 N	86.35 W	75.06	.87
1400	N 14 19 W	11 52	1388.66	119.60 N	92.04 W	91.70	1.53
1500	N 16 33 W	13 36	1486.20	140.83 N	97.93 W	110.68	1.80
1600	N 22 52 W	17 1	1582.64	165.58 N	106.97 W	132.26	3.79
1700	N 24 58 W	17 43	1678.09	192.85 N	119.07 W	155.46	.94
1800	N 33 44 W	15 53	1773.83	218.02 N	133.10 W	176.14	3.12
1900	N 22 26 W	15 54	1870.03	242.07 N	145.93 W	196.05	3.09
2000	N 18 1 W	16 43	1966.01	268.40 N	155.60 W	218.98	1.48
2100	N 35 4 W	19	2061.26	295.41 N	169.41 W	241.50	5.68
2190	N 42 44 W	20 16	2146.04	318.86 N	188.40 W	259.23	3.19

THE DOGLEG SEVERITY IS IN DEGREES PER ONE HUNDRED FEET.  
THE VERTICAL SECTION WAS COMPUTED ALONG N 15 E.

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS, THE BOTTOM HOLE  
DISPLACEMENT IS 370.36 FEET, IN THE DIRECTION OF N 30 34 W.

\* BOTTOM HOLE DISPLACEMENT CALCULATED FROM WELLHEAD.

CYPRUS ANVIL MINING CORPORATION  
 78204

CUSTOMER: RUN SINGLE SHOTS  
 05/16/78

TOTAL DEPTH	DIRECTION		ANGLE	VERTICAL	LATITUDE	DEPARTURE	VERTICAL	DOG
	DEC	MIN	DEC MIN	DEPTH	FEET	FEET	SECTION	LEG
	N		E	.00	.00 N	.00 E	.00	.00
117	N	10	E	2 20	116.97	2.35 N	2.37	1.99
207	N	37	W	4	206.84	6.66 N	6.13	3.28
387	N	62	W	3 30	386.47	14.25 N	11.23	1.94
477	N	50	W	4 50	476.23	17.98 N	13.45	1.76
567	N	41	W	6 20	565.80	24.16 N	17.83	1.92
657	N	42	W	6 30	655.24	31.70 N	23.38	1.22
747	N	44	W	8	744.51	39.99 N	29.38	1.69
837	N	28	W	8 25	833.60	50.31 N	37.43	2.57
927	N	29	W	8 50	922.58	62.17 N	47.21	1.49
1017	N	26	W	9 15	1011.46	74.71 N	57.64	1.70
1107	N	19	W	10	1100.20	88.60 N	69.58	1.54
1197	N	9	W	11 50	1188.57	105.11 N	84.49	2.92
1287	N	14	W	12 10	1276.61	123.43 N	101.22	1.21
1377	N	13	W	11 10	1364.75	141.12 N	117.21	1.13
1467	N	10	W	13 10	1452.72	159.71 N	134.20	2.33
1557	N	10	W	16 50	1539.64	182.64 N	155.30	4.07
1647	N	16	W	17 30	1625.64	208.49 N	178.71	2.10
1737	N	18	W	18	1711.35	234.72 N	201.98	1.88
1827	N	22	W	16 25	1797.32	259.74 N	223.80	2.20
1917	N	17	W	17 15	1883.47	284.29 N	245.27	1.86
2007	N	10	W	16 50	1969.53	309.89 N	268.40	2.32
2097	N	22	W	18 35	2055.29	336.03 N	291.67	4.49
2187	N	35	W	20 35	2149.54	365.22 N	315.71	4.78

THE DOGLEG SEVERITY IS IN DEGREES PER ONE HUNDRED FEET.  
 THE VERTICAL SECTION WAS COMPUTED ALONG N 15 E.

BASED UPON MINIMUM CURVATURE TYPE CALCULATIONS. THE BOTTOM HOLE  
 DISPLACEMENT IS 392.30 FEET, IN THE DIRECTION OF N 21 24 W.

\* BOTTOM HOLE DISPLACEMENT CALCULATED FROM WELLHEAD.

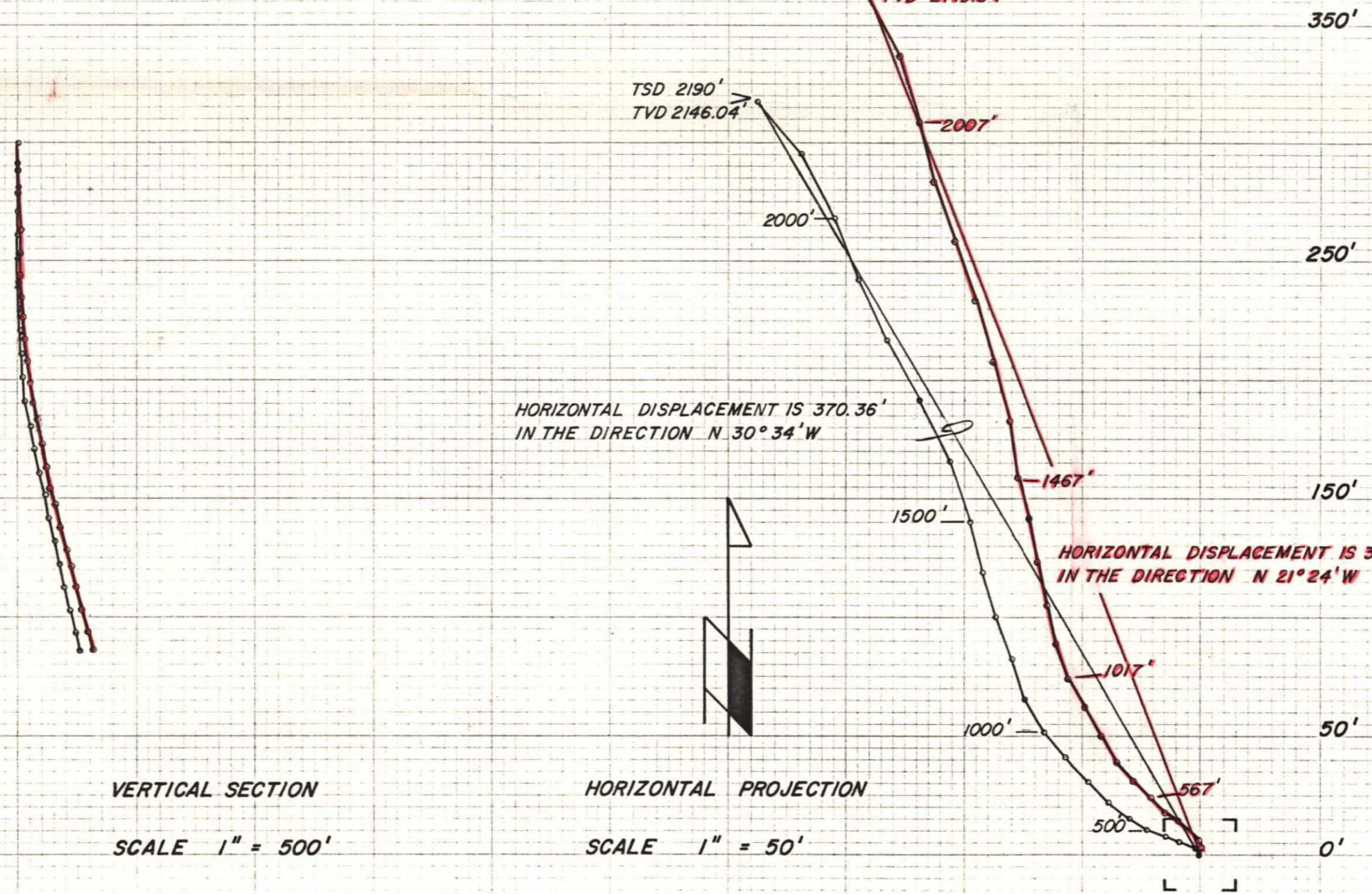
# 78 X 04

TVD

0'  
500'  
1000'  
1500'  
2000'

0' 500'

VERTICAL SECTION  
SCALE 1" = 500'



HORIZONTAL PROJECTION  
SCALE 1" = 50'

Sperry-Sun Gyroscopic Survey  
Customer Run Single Shot Surveys

Sperry-Sun of Canada Ltd. 05/14/78 tin

