



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

PHILLIPS PETROLEUM COMPANY
COMPANY

ROOSEVELT HOT SPRINGS
WELL NAME

BEAVER CO., UTAH
LOCATION

JOB NUMBER
RM683-G1589

TYPE OF SURVEY
GYROSCOPIC & MAGNETIC

DATE
20-JUN-83

WELL NUMBERS
54-3
27-3 12-35
35-3 82-33
13-10 14-2

SURVEY BY
MCFALL & EISERMAN

OFFICE
410

PHILLIPS PETROLEUM COMPANY

SURVEY REPORT

WELL NAME: ROOSEVELT HOT SPRINGS 54-3

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-260, FL13-20

RUN DATE: 15 JUNE 1983

JOB NO.: RM683-G1589

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON

VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE



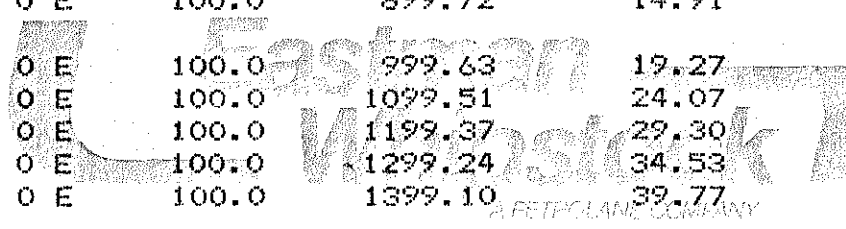
RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

WELL NAME: ROOSEVELT HOT SPRINGS 54-3
 LOCATION: BEAVER COUNTY, UTAH

COMPUTATION PAGE NO. 1
 TIME 14:07:51 DATE 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
0.00	0 0	0 0	0.0	0.00	0.00	0.00 0.00	0.00
100.00	0 15	N 86 0 W	100.0	100.00	-0.10	0.02 N 0.22 W	0.25
200.00	0 0	0 0	100.0	200.00	-0.20	0.03 N 0.43 W	0.25
300.00	0 15	N 64 0 W	100.0	300.00	-0.36	0.13 N 0.63 W	0.25
400.00	0 30	S 43 0 E	100.0	400.00	-0.13	0.25 S 0.90 W	0.74
500.00	1 0	S 57 0 E	100.0	499.99	1.03	1.09 S 0.09 E	0.53
600.00	2 0	S 45 0 E	100.0	599.95	3.35	2.73 S 2.13 E	1.04
700.00	2 15	S 33 0 E	100.0	699.88	6.92	5.61 S 4.45 E	0.51
800.00	2 15	S 31 0 E	100.0	799.81	10.80	8.94 S 6.53 E	0.08
900.00	2 30	S 28 0 E	100.0	899.72	14.91	12.54 S 8.57 E	0.28
1000.00	2 30	S 25 0 E	100.0	999.63	19.27	16.44 S 10.52 E	0.13
1100.00	3 0	S 21 0 E	100.0	1099.51	24.07	20.86 S 12.39 E	0.54
1200.00	3 0	S 23 0 E	100.0	1199.37	29.30	25.71 S 14.36 E	0.10
1300.00	3 0	S 24 0 E	100.0	1299.24	34.53	30.51 S 16.44 E	0.05
1400.00	3 0	S 22 0 E	100.0	1399.10	39.77	35.33 S 18.49 E	0.10
1500.00	3 15	S 27 0 E	100.0	1498.95	45.22	40.29 S 20.75 E	0.37
1600.00	3 15	S 29 0 E	100.0	1598.79	50.87	45.30 S 23.41 E	0.11
1700.00	3 15	S 33 0 E	100.0	1698.63	56.48	50.15 S 26.33 E	0.23
1775.00	3 0	S 33 0 E	75.0	1773.52	60.52	53.58 S 28.56 E	0.33



END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT

1875.00	3 0	S 29 0 E	100.0	1873.38	65.70	58.07 S 31.25 E	0.21
1975.00	3 0	S 26 0 E	100.0	1973.24	70.92	62.71 S 33.67 E	0.16
2075.00	3 0	S 23 0 E	100.0	2073.11	76.16	67.47 S 35.84 E	0.16
2175.00	2 45	S 24 0 E	100.0	2172.98	81.17	72.07 S 37.84 E	0.25
2275.00	3 0	S 16 0 E	100.0	2272.85	86.17	76.78 S 39.55 E	0.47
2375.00	3 30	S 2 0 W	100.0	2372.69	91.59	82.38 S 40.24 E	1.13
2475.00	3 15	S 5 0 E	100.0	2472.52	97.05	88.26 S 40.39 E	0.48
2575.00	3 0	S 22 0 E	100.0	2572.37	102.40	93.55 S 41.66 E	0.96
2675.00	2 45	S 16 0 E	100.0	2672.24	107.40	98.29 S 43.29 E	0.39

WELL NAME: ROOSEVELT HOT SPRINGS 54-3
 LOCATION: BEAVER COUNTY, UTAH

TIME: 14:07:51
 DATE: 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
2775.00	2 0	S 11 0 E	100.0	2772.16	111.48	102.32 S 44.26 E	0.78
2808.00	1 0	S 36 0 E	33.0	2805.15	112.34	103.10 S 44.60 E	3.55

FINAL CLOSURE - DIRECTION: S 23 DEGS 23 MINS 36 SECS E
 DISTANCE: 112.34 FEET

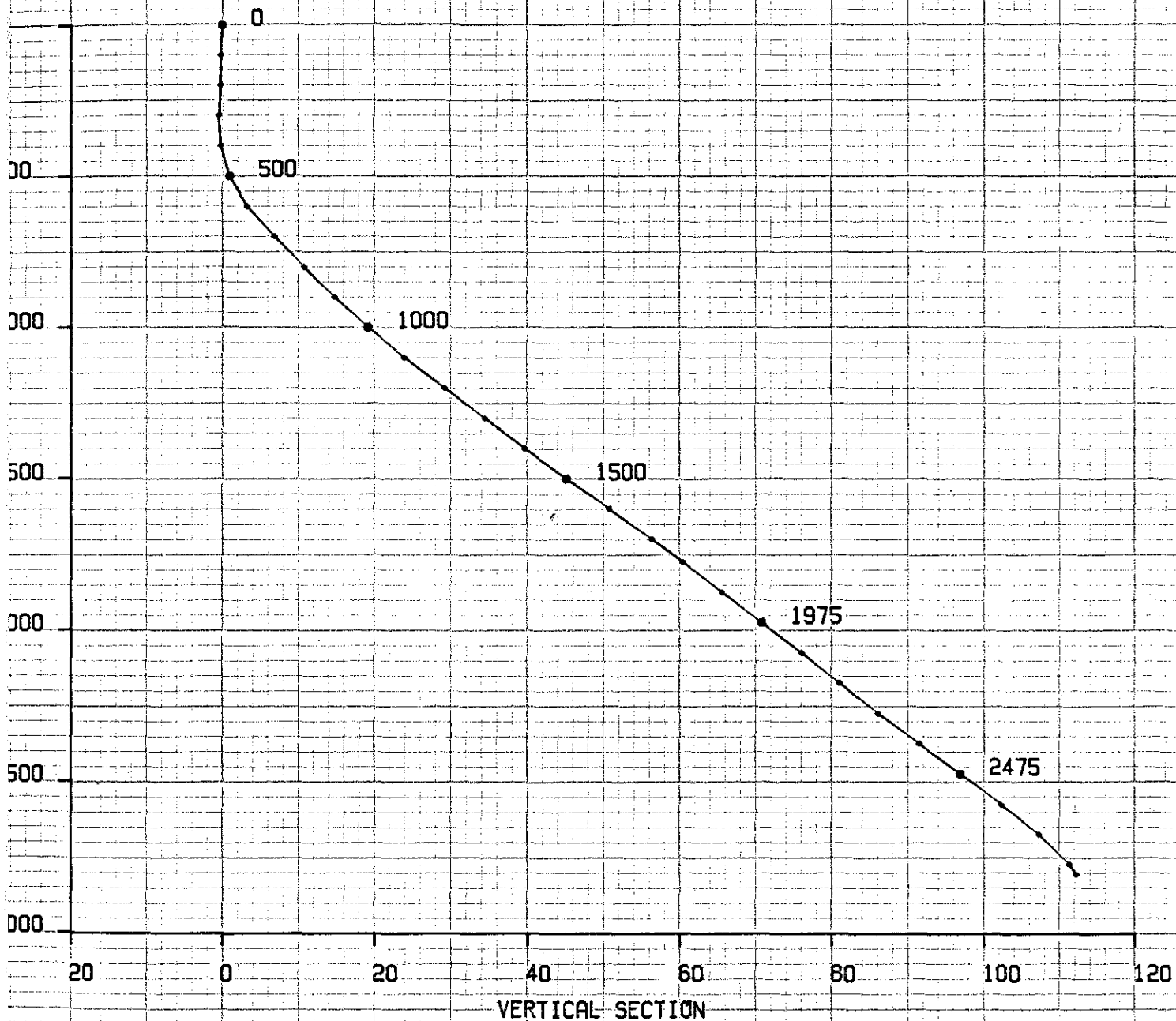


HILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 54-3
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

ASTMAN WHIPSTOCK, INC.

HORIZONTAL SCALE 1 INCH : 20 FEET
VERTICAL SCALE 1 INCH : 500 FEET



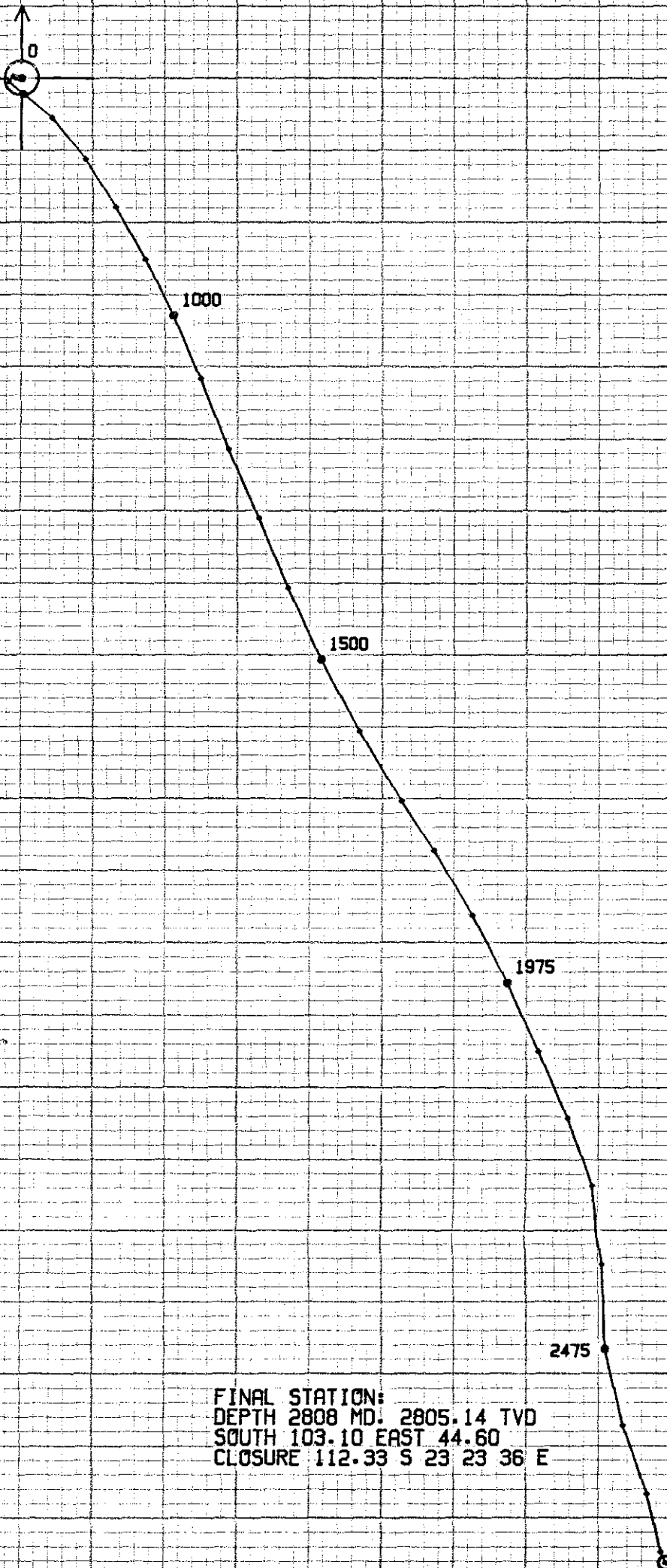
CLOSURE 112.33 S 23 23 36 E

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 54-3
LOCATION: BEAVER COUNTY, UTAH

HORIZONTAL PROJECTION

SCALE 1 IN. = 10 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.



FINAL STATION:
DEPTH 2808 MD. 2805.14 TVD
SOUTH 103.10 EAST 44.60
CLOSURE 112.33 S 23 23 36 E

WELL NAME: ROOSEVELT HOT SPRINGS 27-3

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-259, FL13-19

RUN DATE: 20 JUNE 1983

JOB NO.: RM483-G1589

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON



VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

LOCATION: BEAVER COUNTY, UTAH

13:12:30 22-JUN-83

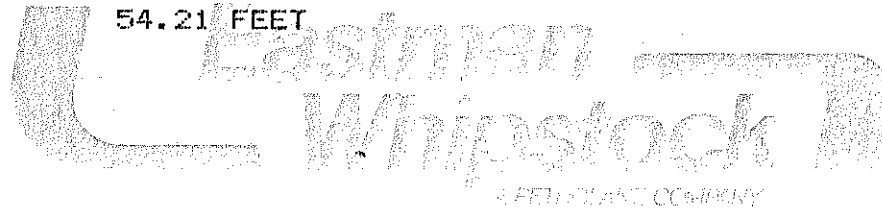
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
0.00	0 0	0 0	0.0	0.00	0.00	0.00 0.00	0.00
100.00	0 0	0 0	100.0	100.00	0.00	0.00 0.00	0.00
200.00	0 0	0 0	100.0	200.00	0.00	0.00 0.00	0.00
300.00	0 15	N 71 0 E	100.0	300.00	0.08	0.07 N 0.21 E	0.25
400.00	0 0	0 0	100.0	400.00	0.15	0.14 N 0.41 E	0.25
500.00	0 15	S 2 0 W	100.0	500.00	0.32	0.08 S 0.40 E	0.25
600.00	0 0	0 0	100.0	600.00	0.48	0.29 S 0.40 E	0.25
700.00	0 15	N 56 0 W	100.0	700.00	0.27	0.17 S 0.22 E	0.25
800.00	1 0	S 69 0 W	100.0	799.99	-0.49	0.05 S 0.83 W	0.88
900.00	1 15	S 59 0 W	100.0	899.97	-0.96	0.91 S 2.59 W	0.32
1000.00	2 0	S 50 0 W	100.0	999.93	-1.17	2.56 S 4.90 W	0.79
1100.00	2 30	S 57 0 W	100.0	1099.85	-1.40	4.89 S 8.05 W	0.57
1200.00	2 30	S 46 0 W	100.0	1199.76	-1.51	7.60 S 11.46 W	0.48
1300.00	2 15	S 67 0 W	100.0	1299.67	-1.96	9.88 S 14.89 W	0.90
1400.00	2 30	S 63 0 W	100.0	1399.59	-3.03	11.63 S 18.65 W	0.30
1500.00	1 45	S 55 0 W	100.0	1499.52	-3.60	13.53 S 21.82 W	0.80
1600.00	1 30	S 58 0 W	100.0	1599.48	-3.91	15.10 S 24.19 W	0.26
1700.00	1 45	S 24 0 W	100.0	1699.44	-3.47	17.21 S 26.02 W	0.98
END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT							
1800.00	1 30	S 11 0 E	100.0	1799.40	-1.54	19.98 S 26.34 W	1.01
1900.00	1 45	S 25 0 E	100.0	1899.36	1.09	22.67 S 25.46 W	0.47
2000.00	1 45	S 35 0 E	100.0	1999.31	4.09	25.31 S 23.94 W	0.30
2100.00	2 0	S 31 0 E	100.0	2099.26	7.34	28.06 S 22.15 W	0.28
2200.00	2 0	S 51 0 E	100.0	2199.20	10.81	30.68 S 19.88 W	0.69
2300.00	2 0	S 58 0 E	100.0	2299.13	14.19	32.70 S 17.04 W	0.24
2400.00	2 15	S 71 0 E	100.0	2399.07	17.55	34.30 S 13.70 W	0.54
2500.00	2 15	S 75 0 E	100.0	2498.99	20.84	35.45 S 9.94 W	0.16
2600.00	3 0	S 75 0 E	100.0	2598.88	24.53	36.63 S 5.52 W	0.75
2700.00	3 0	S 75 0 E	100.0	2698.75	28.86	37.98 S 0.46 W	0.00

LOCATION: BEAVER COUNTY, UTAH

15:12:30 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
2800.00	3 15	S 78 0 E	100.0	2798.60	33.24	39.26 S	4.84 E	0.30
2900.00	2 45	N 88 0 E	100.0	2898.46	36.92	39.71 S	10.04 E	0.88
3000.00	2 30	S 90 0 E	100.0	2998.35	39.79	39.63 S	14.62 E	0.27
3100.00	3 15	S 87 0 E	100.0	3098.23	43.11	39.76 S	19.63 E	0.76
3200.00	3 30	S 82 0 E	100.0	3198.05	47.29	40.33 S	25.49 E	0.39
3300.00	3 30	S 87 0 E	100.0	3297.87	51.64	40.91 S	31.57 E	0.31
3360.00	2 45	S 68 0 E	60.0	3357.78	54.21	41.62 S	34.74 E	2.11

FINAL CLOSURE - DIRECTION: S 39 DEGS 51 MINS 24 SECS E
 DISTANCE: 54.21 FEET

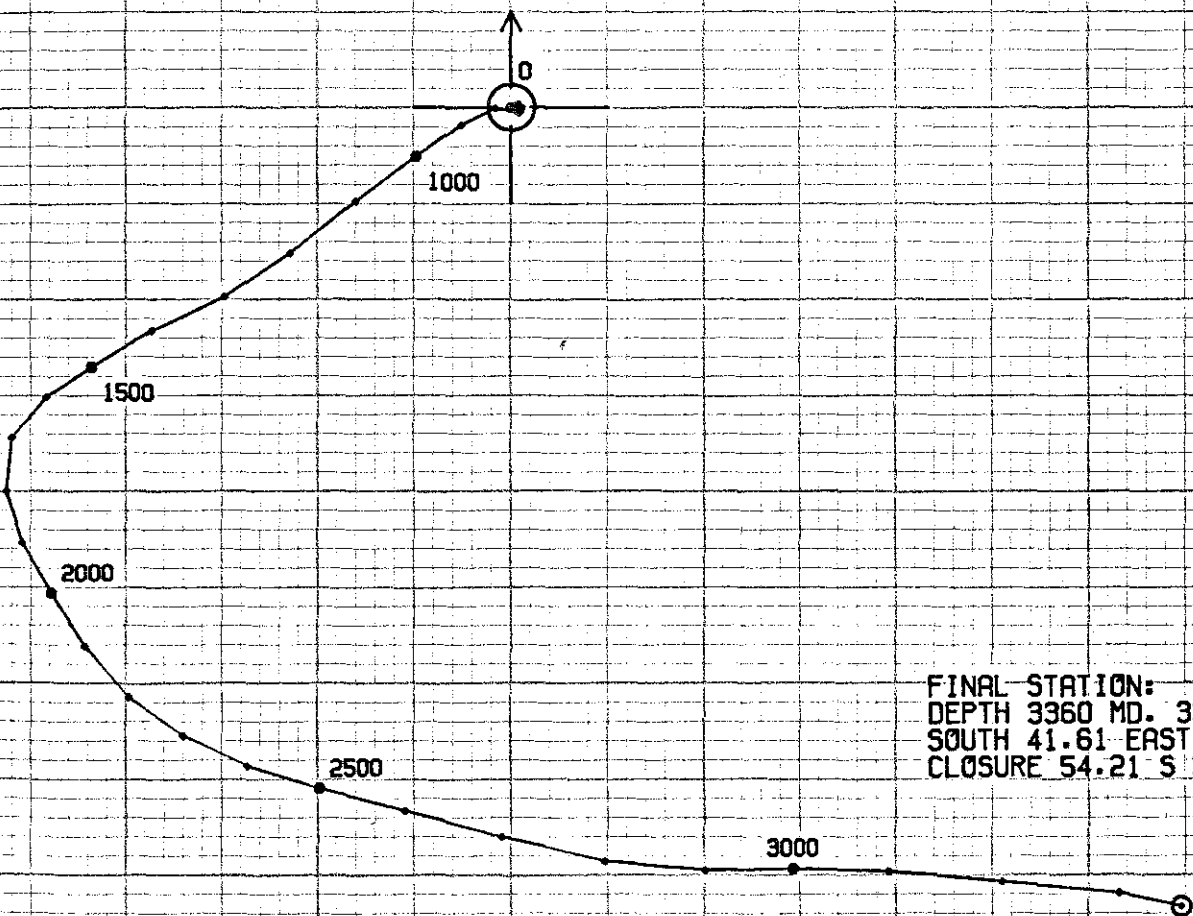


PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 27-3
LOCATION: BEAVER COUNTY, UTAH

HORIZONTAL PROJECTION

SCALE 1 IN. = 10 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.



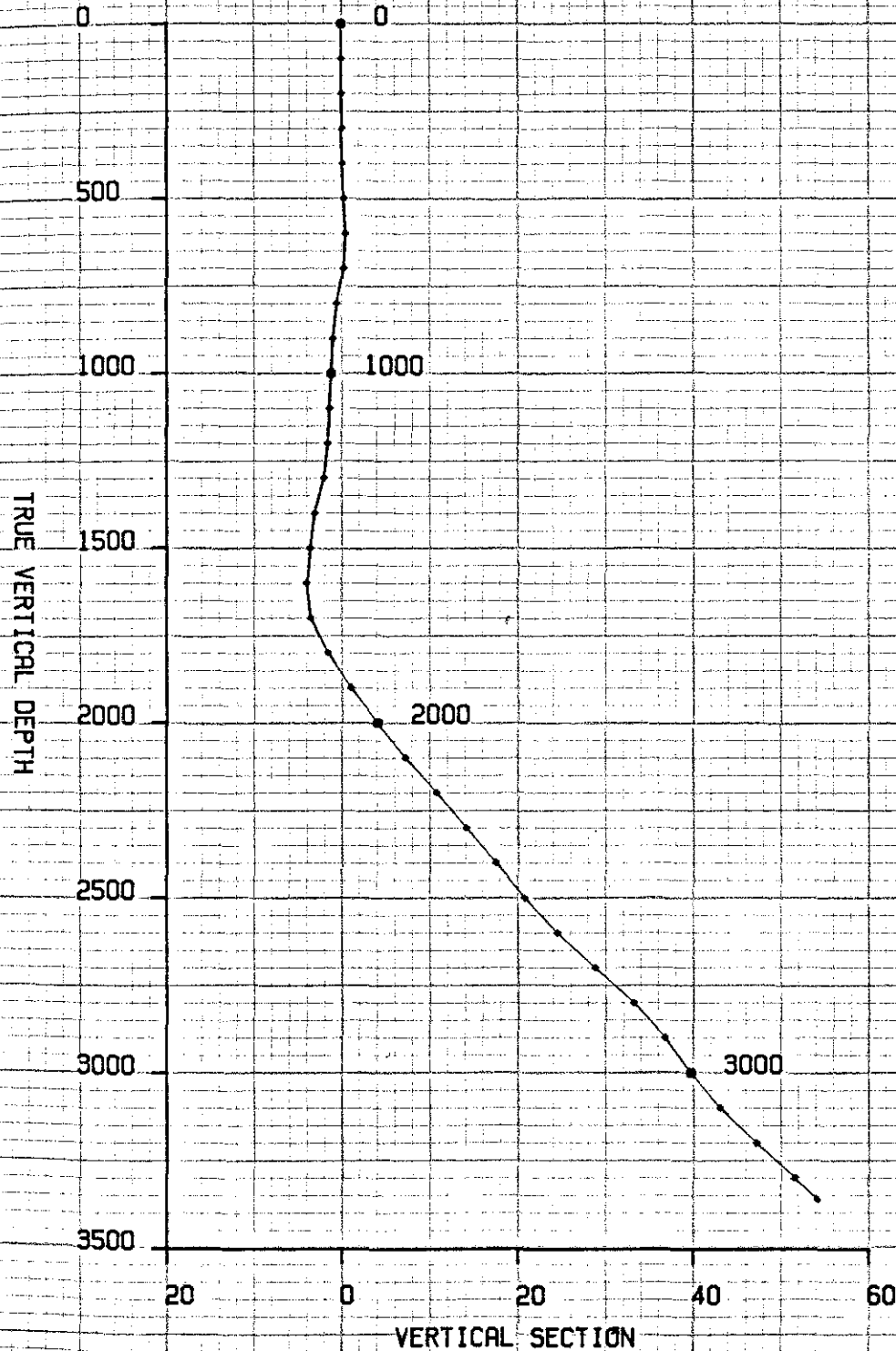
FINAL STATION:
DEPTH 3360 MD. 3357.77 TVD
SOUTH 41.61 EAST 34.74
CLOSURE 54.21 S 39 51 24 E

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 27-3
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

EASTMAN WHIPSTOCK, INC.

HORIZONTAL SCALE 1 INCH = 20 FEET
VERTICAL SCALE 1 INCH = 500 FEET



CLOSURE 54.21 S 39 51 24 E

WELL NAME: ROOSEVELT, WST, 01414

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-264, FL14-04

RUN DATE: 20 JUNE 1983

JOB NO.: RM683-G1589

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON

VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE



RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

LOCATION: BEAVER COUNTY, UTAH

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION		COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES		DOGLEG SEVERITY DG/100FT
		D	M				FEET	FEET	
0.00	0 0	0	0	0.0	0.00	0.00	0.00	0.00	0.00
100.00	0 15	N 41	0 W	100.0	100.00	0.02	0.16 N	0.14 W	0.25
200.00	0 15	N 6	0 W	100.0	200.00	-0.06	0.56 N	0.31 W	0.15
300.00	0 15	N 81	0 E	100.0	300.00	-0.44	0.87 N	0.07 W	0.34
400.00	0 15	N 73	0 W	100.0	400.00	-0.64	1.19 N	0.05 W	0.49
500.00	0 30	S 14	0 W	100.0	499.99	-0.06	0.90 N	0.56 W	0.57
600.00	2 15	S 40	0 W	100.0	599.96	2.04	1.22 S	1.64 W	1.81
700.00	2 45	S 54	0 W	100.0	699.87	6.35	4.19 S	4.82 W	0.79
800.00	3 15	S 59	0 W	100.0	799.73	11.58	7.08 S	9.19 W	0.56
900.00	3 45	S 55	0 W	100.0	899.54	17.68	10.40 S	14.31 W	0.56
1000.00	4 0	S 46	0 W	100.0	999.31	24.41	14.69 S	19.51 W	0.66
1100.00	5 0	S 49	0 W	100.0	1099.00	32.19	19.99 S	25.30 W	1.03
1200.00	5 30	S 50	0 W	100.0	1198.58	41.30	25.94 S	32.26 W	0.51
1300.00	5 30	S 52	0 W	100.0	1298.12	50.96	31.97 S	39.70 W	0.19
1400.00	5 15	S 50	0 W	100.0	1397.68	60.21	37.86 S	46.98 W	0.31
1500.00	5 30	S 49	0 W	100.0	1497.24	69.53	43.94 S	54.10 W	0.27
1550.00	5 30	S 57	0 W	50.0	1547.01	74.31	46.83 S	57.93 W	1.53
END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT									
1650.00	5 0	S 55	0 W	100.0	1646.59	83.46	51.94 S	65.51 W	0.53
1750.00	4 30	S 56	0 W	100.0	1746.25	91.74	56.63 S	72.34 W	0.51
1850.00	4 45	S 55	0 W	100.0	1845.92	99.81	61.20 S	78.98 W	0.26
1950.00	4 30	S 56	0 W	100.0	1945.60	107.87	65.77 S	85.63 W	0.26
2050.00	4 15	S 61	0 W	100.0	2045.31	115.48	69.75 S	92.13 W	0.46
2150.00	3 45	S 57	0 W	100.0	2145.06	122.44	73.34 S	98.11 W	0.57
2250.00	4 0	S 60	0 W	100.0	2244.83	129.18	76.87 S	103.87 W	0.32
2350.00	4 0	S 61	0 W	100.0	2344.59	136.12	80.31 S	109.94 W	0.07
2450.00	4 0	S 64	0 W	100.0	2444.35	143.04	83.53 S	116.13 W	0.21
2550.00	4 0	S 67	0 W	100.0	2544.10	149.89	86.42 S	122.47 W	0.21
2575.00	4 0	S 69	0 W	25.0	2569.04	151.59	87.07 S	124.09 W	0.56

FINAL CLOSURE - DIRECTION:

S 54 DEGS 56 MINS 33 SECS W

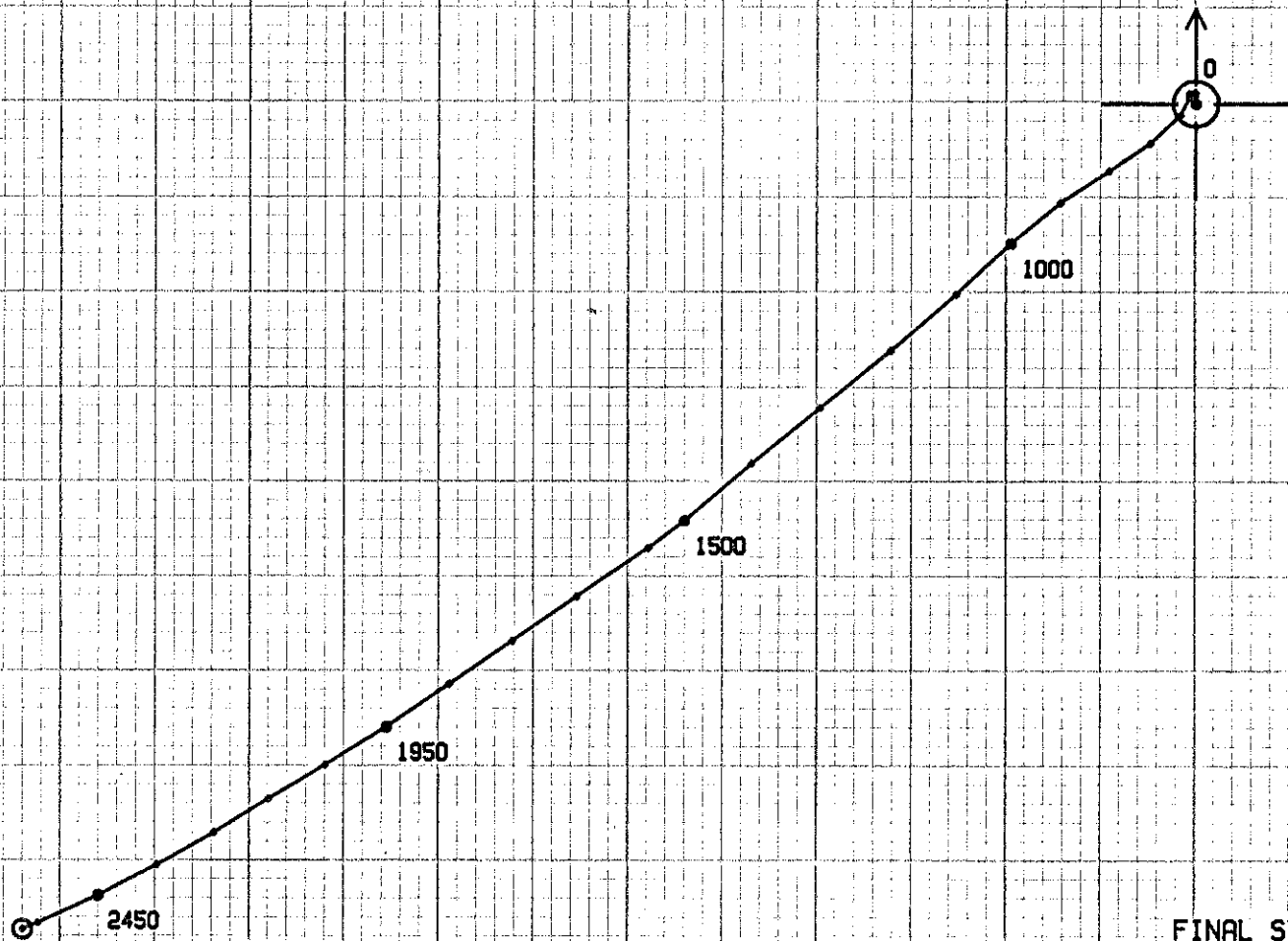
Eastern
Whipstock
PETROLEUM COMPANY

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 35-3
LOCATION: BEAVER COUNTY, UTAH

EASTMAN WHIPSTOCK, INC.

HORIZONTAL PROJECTION

SCALE 1 IN. = 20 FEET
DEPTH INDICATOR: MD



FINAL STATION:
DEPTH 2575 MD. 2569.04 TVD
SOUTH 87.07 WEST 124.09
CLOSURE 151.59 S 54 56 33 W

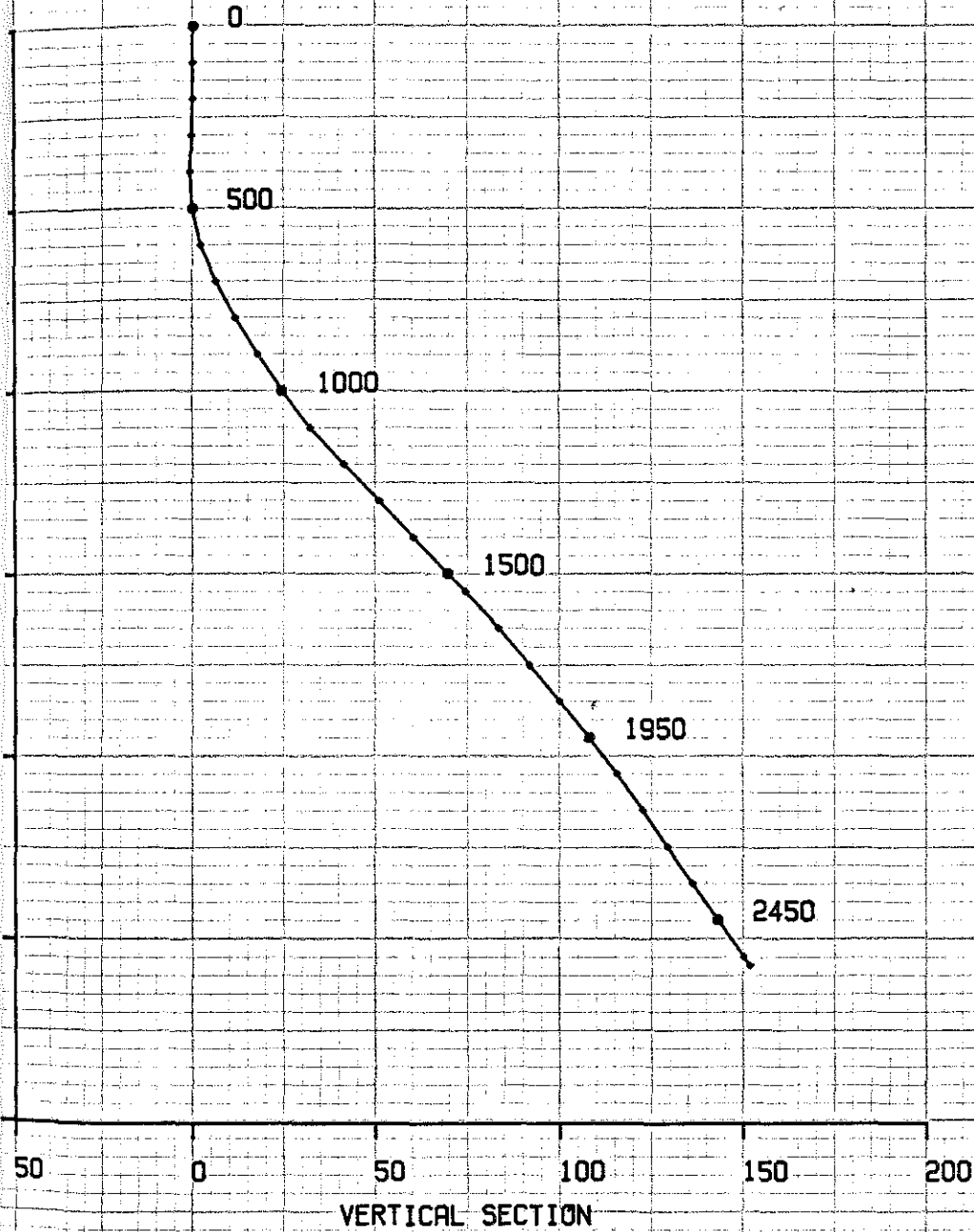
IPS PETROLEUM COMPANY
NAME: ROOSEVELT HOT SPRINGS 35-3
ION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

HORIZONTAL SCALE 1 IN. = 50 FEET

VERTICAL SCALE 1 IN. = 500 FEET

IN WHIPSTOCK, INC.



CLOSURE 151.59 S 54 56 33 W

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-262, FL14-02

RUN DATE: 20 JUNE 1983

JOB NO.: RM683-G1589

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON

VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE



RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE	VERTICAL SECTION FEET	RECTANGULAR		DOGLEG SEVERITY DG/100FT
				VERTICAL DEPTH FEET		COORDINATES FEET		
0.00	0 0	0 0	0.0	0.00	0.00	0.00	0.00	0.00
100.00	0 15	N 29 0 W	100.0	100.00	-0.08	0.19 N	0.11 W	0.25
200.00	0 30	N 22 0 W	100.0	200.00	-0.37	0.78 N	0.39 W	0.25
300.00	0 30	N 37 0 W	100.0	299.99	-0.70	1.54 N	0.82 W	0.13
400.00	0 45	N 30 0 E	100.0	399.99	-1.47	2.57 N	0.88 W	0.72
500.00	1 0	N 74 0 E	100.0	499.98	-2.91	3.48 N	0.29 E	0.70
600.00	1 15	S 56 0 E	100.0	599.96	-3.85	3.18 N	2.17 E	0.98
700.00	2 0	S 15 0 E	100.0	699.92	-3.08	0.92 N	3.79 E	1.34
800.00	1 45	S 11 0 E	100.0	799.86	-1.03	2.27 S	4.52 E	0.28
900.00	2 0	S 14 0 E	100.0	899.81	1.03	5.46 S	5.23 E	0.27
1000.00	2 15	S 13 0 E	100.0	999.74	3.32	9.07 S	6.10 E	0.25
1100.00	3 0	S 2 0 W	100.0	1099.63	6.61	13.61 S	6.53 E	1.01
1200.00	3 15	S 2 0 E	100.0	1199.49	10.89	19.06 S	6.53 E	0.33
1300.00	3 45	S 2 0 W	100.0	1299.30	15.67	25.17 S	6.53 E	0.56
1400.00	4 0	S 2 0 W	100.0	1399.07	21.11	31.92 S	6.30 E	0.25
1500.00	4 30	S 1 0 W	100.0	1498.79	27.04	39.33 S	6.10 E	0.51
1600.00	4 15	S 7 0 W	100.0	1598.50	33.33	46.94 S	5.57 E	0.52
1675.00	4 15	S 12 0 W	75.0	1673.30	38.19	52.42 S	4.66 E	0.49

END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT

1775.00	4 30	S 24 0 W	100.0	1773.01	45.33	59.66 S	2.30 E	0.95
1875.00	4 30	S 29 0 W	100.0	1872.70	53.01	66.68 S	1.20 W	0.39
1975.00	4 15	S 28 0 W	100.0	1972.41	60.52	73.38 S	4.84 W	0.26
2075.00	3 30	S 16 0 W	100.0	2072.18	67.00	79.64 S	7.37 W	1.10
2175.00	2 15	S 16 0 W	100.0	2172.05	71.63	84.46 S	8.75 W	1.25
2275.00	3 15	S 19 0 W	100.0	2271.93	76.11	89.03 S	10.19 W	1.01
2375.00	3 15	S 17 0 W	100.0	2371.77	81.43	94.43 S	11.94 W	0.11
2475.00	3 0	S 17 0 W	100.0	2471.62	86.51	99.64 S	13.54 W	0.25
2575.00	3 15	S 29 0 W	100.0	2571.47	91.75	104.65 S	15.66 W	0.70
2675.00	3 45	S 31 0 W	100.0	2671.29	97.79	109.94 S	18.72 W	0.51

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE	VERTICAL SECTION FEET	RECTANGULAR		DOGLEG SEVERITY DG/100FT
				VERTICAL DEPTH FEET		COORDINATES FEET		
2775.00	3 15	S 26 0 W	100.0	2771.10	103.81	115.30 S	21.63 W	0.59
2875.00	4 0	S 21 0 W	100.0	2870.90	109.91	121.10 S	24.15 W	0.81
2975.00	4 30	S 25 0 W	100.0	2970.62	117.06	127.92 S	27.04 W	0.58
3075.00	4 45	S 24 0 W	100.0	3070.30	124.89	135.26 S	30.39 W	0.26
3175.00	4 15	S 27 0 W	100.0	3169.99	132.53	142.34 S	33.76 W	0.55
3275.00	5 0	S 34 0 W	100.0	3269.66	140.52	149.28 S	37.85 W	0.94
3375.00	5 15	S 35 0 W	100.0	3369.26	149.43	156.64 S	42.91 W	0.27
3475.00	6 0	S 44 0 W	100.0	3468.78	159.22	164.20 S	49.14 W	1.16
3575.00	7 45	S 47 0 W	100.0	3568.06	171.09	172.59 S	57.68 W	1.79
3675.00	7 30	S 56 0 W	100.0	3667.17	184.00	180.84 S	68.05 W	1.22
3775.00	7 30	S 60 0 W	100.0	3766.32	196.30	187.75 S	79.12 W	0.52
3875.00	6 45	S 61 0 W	100.0	3865.55	207.79	193.86 S	89.91 W	0.76
3975.00	7 0	S 61 0 W	100.0	3964.83	218.84	199.66 S	100.38 W	0.25
4075.00	7 15	S 65 0 W	100.0	4064.05	230.11	205.29 S	111.43 W	0.56
4175.00	7 45	S 60 0 W	100.0	4163.20	242.02	211.32 S	123.00 W	0.82
4275.00	7 45	S 64 0 W	100.0	4262.28	254.37	217.65 S	134.91 W	0.54
4375.00	7 15	S 61 0 W	100.0	4361.43	266.28	223.67 S	146.48 W	0.63
4475.00	6 45	S 53 0 W	100.0	4460.68	277.82	230.31 S	156.70 W	1.09
4575.00	7 15	S 54 0 W	100.0	4559.94	289.59	237.55 S	166.49 W	0.51
4675.00	7 15	S 54 0 W	100.0	4659.14	301.74	244.97 S	176.70 W	0.00
4775.00	7 0	S 56 0 W	100.0	4758.37	313.63	252.09 S	186.86 W	0.35
4875.00	6 15	S 51 0 W	100.0	4857.70	324.76	258.95 S	196.13 W	0.95
4975.00	5 15	S 50 0 W	100.0	4957.19	334.56	265.32 S	203.86 W	1.00
5075.00	5 0	S 47 0 W	100.0	5056.79	343.35	271.24 S	210.55 W	0.37
5175.00	4 45	S 53 0 W	100.0	5156.43	351.67	276.70 S	217.06 W	0.57
5275.00	4 30	S 48 0 W	100.0	5256.11	359.55	281.82 S	223.28 W	0.47

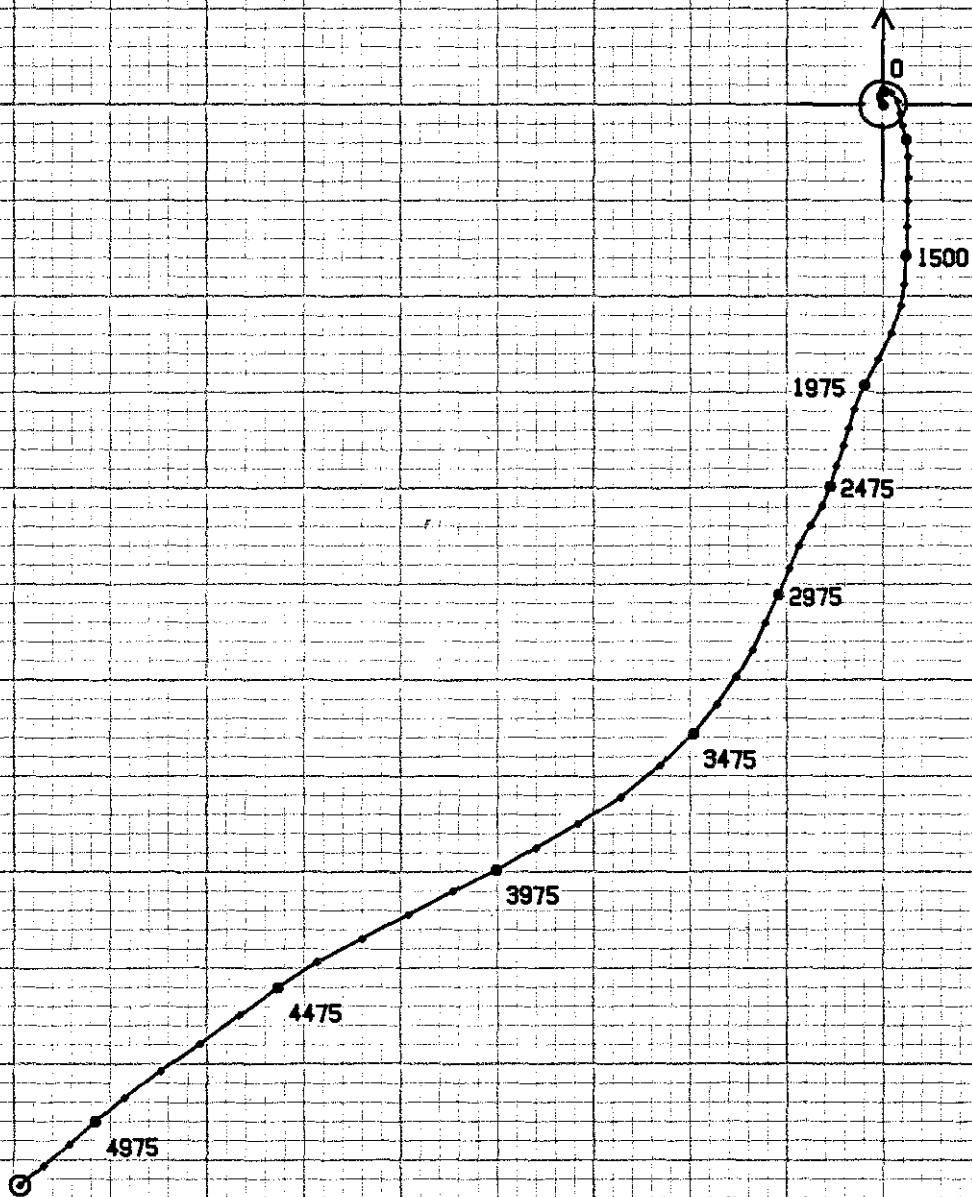
FINAL CLOSURE -- DIRECTION: S 38 DEGS 23 MINS 19 SECS W
DISTANCE: 359.55 FEET

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 13-10
LOCATION: BEAVER COUNTY, UTAH

HORIZONTAL PROJECTION

SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD

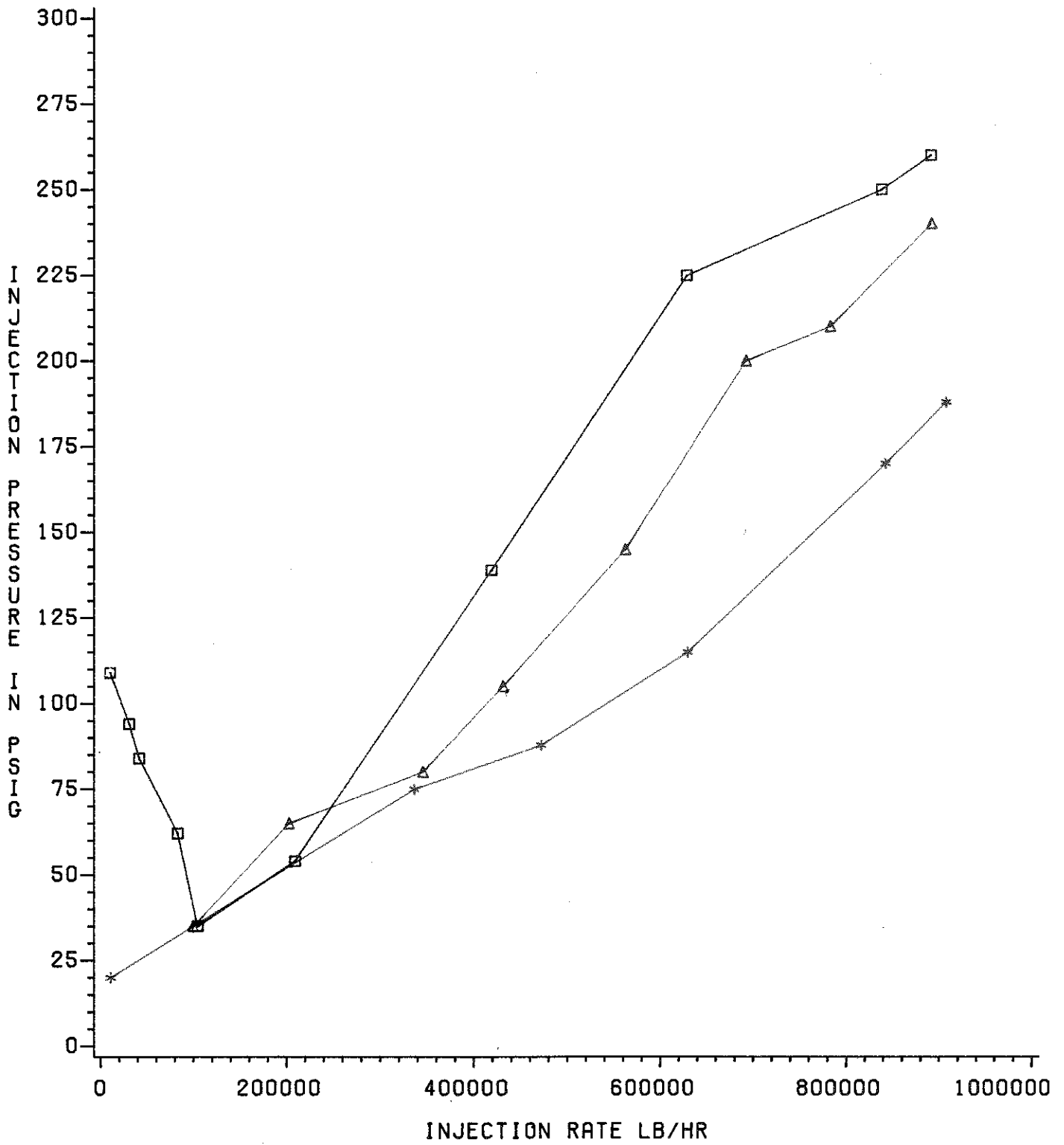
EASTMAN WHIPSTOCK, INC.



FINAL STATION:
DEPTH 5275 MD. 5256.10 TVD
SOUTH 261.82 WEST 223.28
CLOSURE 359.55 S 38 23 19 W

ROOSEVELT HOT SPRINGS

WELL 14-2 INJECTION DATA



LEGEND: TEST

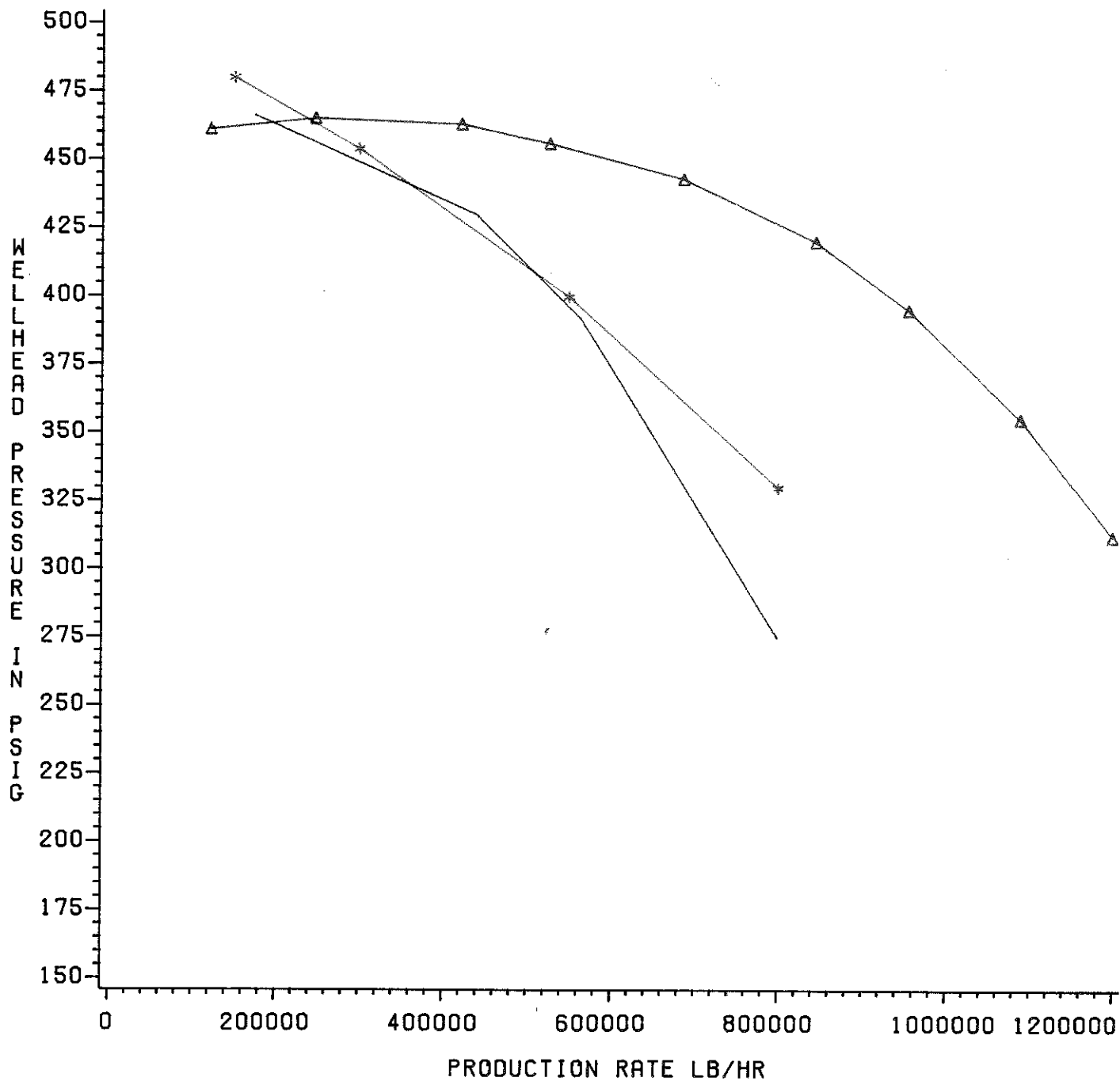
□-□-□ STEP RATE TEST

△-△-△ 7-13-83

--* 7-21-83

ROOSEVELT HOT SPRINGS

WELL 54-3 PRODUCTION DATA



LEGEND: TEST

— CLEAN 10/25/82
 --* TO UP&L 2/22/82

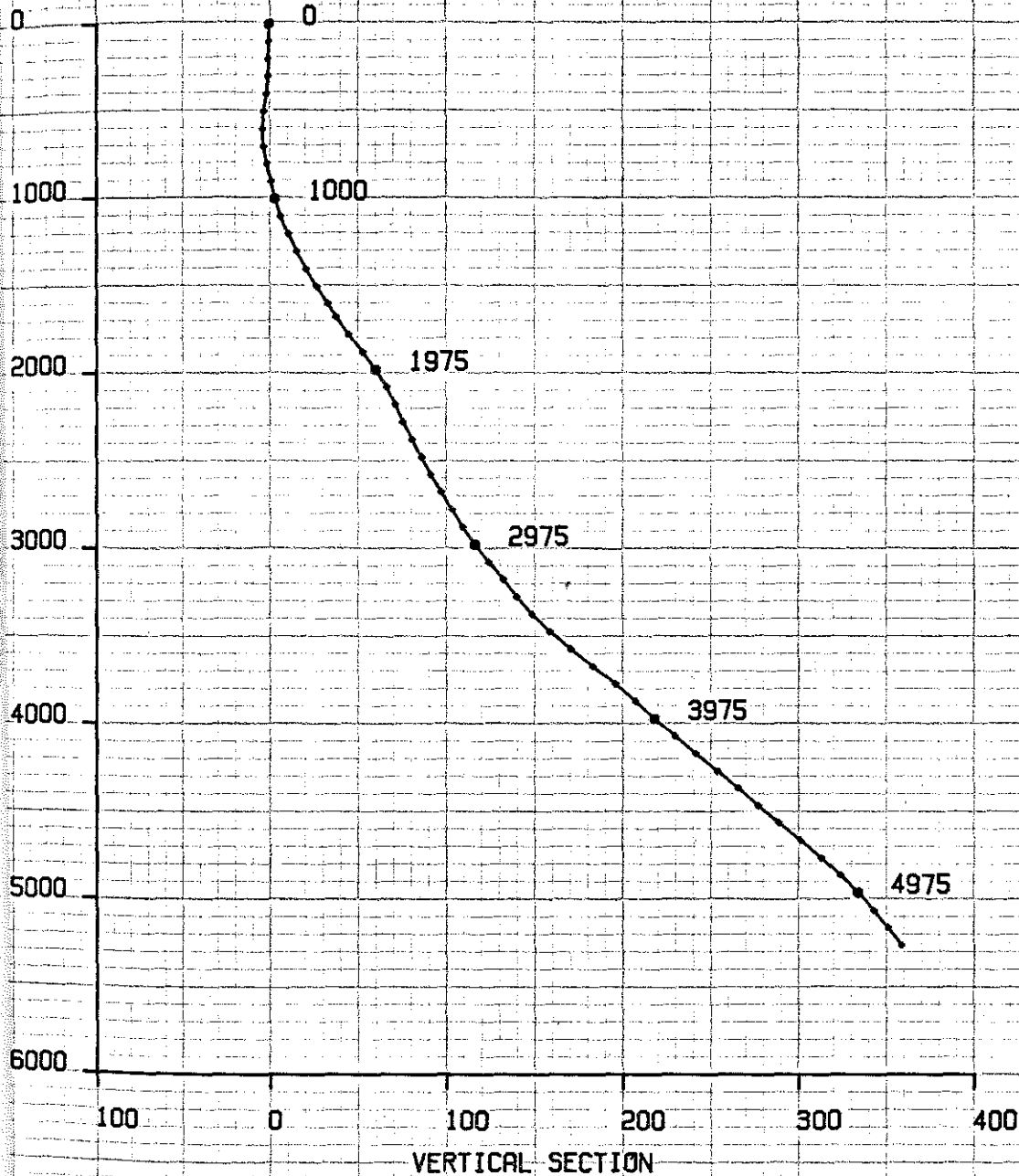
△-△-△ CLEAN 7/13/83

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 13-10
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

EASTMAN WHIPSTOCK, INC.

HORIZONTAL SCALE 1 INCH = 100 FEET
VERTICAL SCALE 1 INCH = 1000 FEET



CLOSURE 359.55 S 38 23 19 W

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-265, FL14-05

RUN DATE: 20 JUNE 1983

JOB NO.: RM683-01589

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON

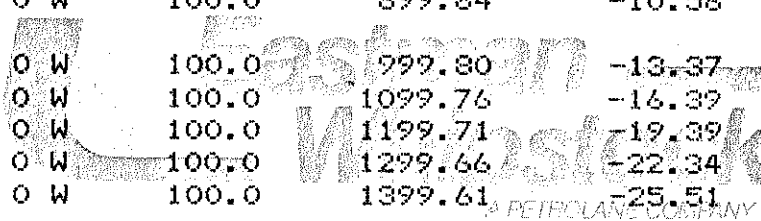
VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE



RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
0.00	0 0	0 0	0.0	0.00	0.00	0.00 0.00	0.00
100.00	0 15	S 51 0 W	100.0	100.00	-0.22	0.14 S 0.17 W	0.25
200.00	0 30	N 56 0 W	100.0	200.00	-0.71	0.16 S 0.78 W	0.49
300.00	0 30	N 39 0 E	100.0	299.99	-0.30	0.60 N 0.90 W	0.74
400.00	0 30	S 51 0 E	100.0	399.99	0.35	0.69 N 0.11 W	0.71
500.00	0 30	S 45 0 W	100.0	499.99	-0.11	0.09 S 0.07 W	0.74
600.00	1 30	S 45 0 W	100.0	599.97	-1.85	1.32 S 1.31 W	1.00
700.00	1 45	S 49 0 W	100.0	699.93	-4.68	3.25 S 3.38 W	0.27
800.00	1 45	S 49 0 W	100.0	799.88	-7.73	5.26 S 5.69 W	0.00
900.00	1 30	S 43 0 W	100.0	899.84	-10.56	7.23 S 7.72 W	0.30
1000.00	1 45	S 41 0 W	100.0	999.80	-13.37	9.33 S 9.62 W	0.26
1100.00	1 45	S 43 0 W	100.0	1099.76	-16.39	11.60 S 11.67 W	0.06
1200.00	1 45	S 37 0 W	100.0	1199.71	-19.39	13.94 S 13.63 W	0.18
1300.00	1 45	S 34 0 W	100.0	1299.66	-22.34	16.43 S 15.40 W	0.09
1400.00	2 0	S 38 0 W	100.0	1399.61	-25.51	19.08 S 17.32 W	0.28
1500.00	2 30	S 35 0 W	100.0	1499.53	-29.32	22.23 S 19.66 W	0.51
1600.00	2 0	S 30 0 W	100.0	1599.45	-33.06	25.54 S 21.77 W	0.54
1700.00	2 30	S 27 0 W	100.0	1699.38	-36.70	28.99 S 23.64 W	0.51
1800.00	2 15	S 26 0 W	100.0	1799.29	-40.42	32.69 S 25.49 W	0.25
1900.00	2 0	S 9 0 W	100.0	1899.22	-43.59	36.22 S 26.60 W	0.67
2000.00	2 0	S 12 0 E	100.0	1999.16	-45.74	39.69 S 26.51 W	0.73
2100.00	2 15	S 17 0 E	100.0	2099.09	-47.32	43.28 S 25.58 W	0.31
2200.00	2 15	S 26 0 E	100.0	2199.01	-48.54	46.92 S 24.14 W	0.35
2300.00	2 30	S 36 0 E	100.0	2298.93	-49.16	50.47 S 22.01 W	0.48
2400.00	3 15	S 67 0 E	100.0	2398.80	-48.15	53.55 S 18.13 W	1.70
2500.00	3 30	S 66 0 E	100.0	2498.63	-45.49	55.90 S 12.74 W	0.26
2600.00	3 0	S 59 0 E	100.0	2598.47	-43.29	58.52 S 7.71 W	0.64
2700.00	2 45	S 70 0 E	100.0	2698.34	-41.19	60.67 S 3.19 W	0.60
2800.00	3 15	S 75 0 E	100.0	2798.20	-38.36	62.25 S 1.80 E	0.56
2900.00	3 30	S 76 0 E	100.0	2898.03	-34.91	63.72 S 7.50 E	0.26



MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
3000.00	3 45	S 71 0 E	100.0	2997.83	-31.39	65.52 S 13.56 E	0.40
3100.00	3 15	S 64 0 E	100.0	3097.64	-28.54	67.85 S 19.20 E	0.66
3200.00	3 45	S 58 0 E	100.0	3197.46	-26.33	70.81 S 24.53 E	0.62
3300.00	4 0	S 61 0 E	100.0	3297.23	-24.03	74.24 S 30.36 E	0.32
3400.00	4 30	S 62 0 E	100.0	3396.95	-21.28	77.78 S 36.87 E	0.51
3500.00	4 0	S 60 0 E	100.0	3496.68	-18.58	81.37 S 43.35 E	0.52
3600.00	4 15	S 62 0 E	100.0	3596.42	-15.97	84.85 S 49.64 E	0.29
3700.00	4 0	S 61 0 E	100.0	3696.16	-13.29	88.29 S 55.96 E	0.26
3800.00	4 30	S 73 0 E	100.0	3795.88	-9.90	91.18 S 62.77 E	1.02
3900.00	5 0	S 80 0 E	100.0	3895.54	-4.94	93.11 S 70.82 E	0.76
4000.00	4 15	S 82 0 E	100.0	3995.21	0.38	94.37 S 78.78 E	0.77
4100.00	3 30	S 83 0 E	100.0	4094.99	4.98	95.25 S 85.48 E	0.75
4200.00	2 15	N 87 0 E	100.0	4194.86	8.72	95.43 S 90.49 E	1.34
4300.00	1 45	N 60 0 E	100.0	4294.80	11.90	94.44 S 93.80 E	1.05
4350.00	1 45	N 45 0 E	50.0	4344.77	13.42	93.52 S 95.01 E	0.91

END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT

4450.00	2 45	N 67 0 E	100.0	4444.69	17.30	91.33 S 98.24 E	1.30
4550.00	3 30	N 59 0 E	100.0	4544.55	22.62	88.86 S 103.10 E	0.87
4650.00	3 30	N 51 0 E	100.0	4644.36	28.70	85.36 S 108.09 E	0.49
4750.00	3 15	N 40 0 E	100.0	4744.19	34.55	81.24 S 112.29 E	0.69
4850.00	3 45	N 45 0 E	100.0	4844.00	40.60	76.74 S 116.41 E	0.59
4950.00	4 15	N 29 0 E	100.0	4943.75	47.37	71.19 S 120.59 E	1.22
5050.00	6 0	N 10 0 E	100.0	5043.35	55.00	62.81 S 123.56 E	2.42
5150.00	6 0	N 5 0 E	100.0	5142.80	62.67	52.45 S 124.93 E	0.52
5250.00	6 0	N 8 0 E	100.0	5242.25	70.21	42.07 S 126.11 E	0.31
5350.00	6 0	N 11 0 E	100.0	5341.71	78.11	31.76 S 127.83 E	0.31
5450.00	6 0	N 15 0 E	100.0	5441.16	86.43	21.57 S 130.18 E	0.42
5550.00	6 45	N 27 0 E	100.0	5540.54	94.09	11.23 S 134.16 E	1.52
5650.00	7 15	N 29 0 E	100.0	5639.79	107.36	0.47 S 139.88 E	0.56
5750.00	7 45	N 32 0 E	100.0	5738.94	119.64	10.78 N 146.50 E	0.63

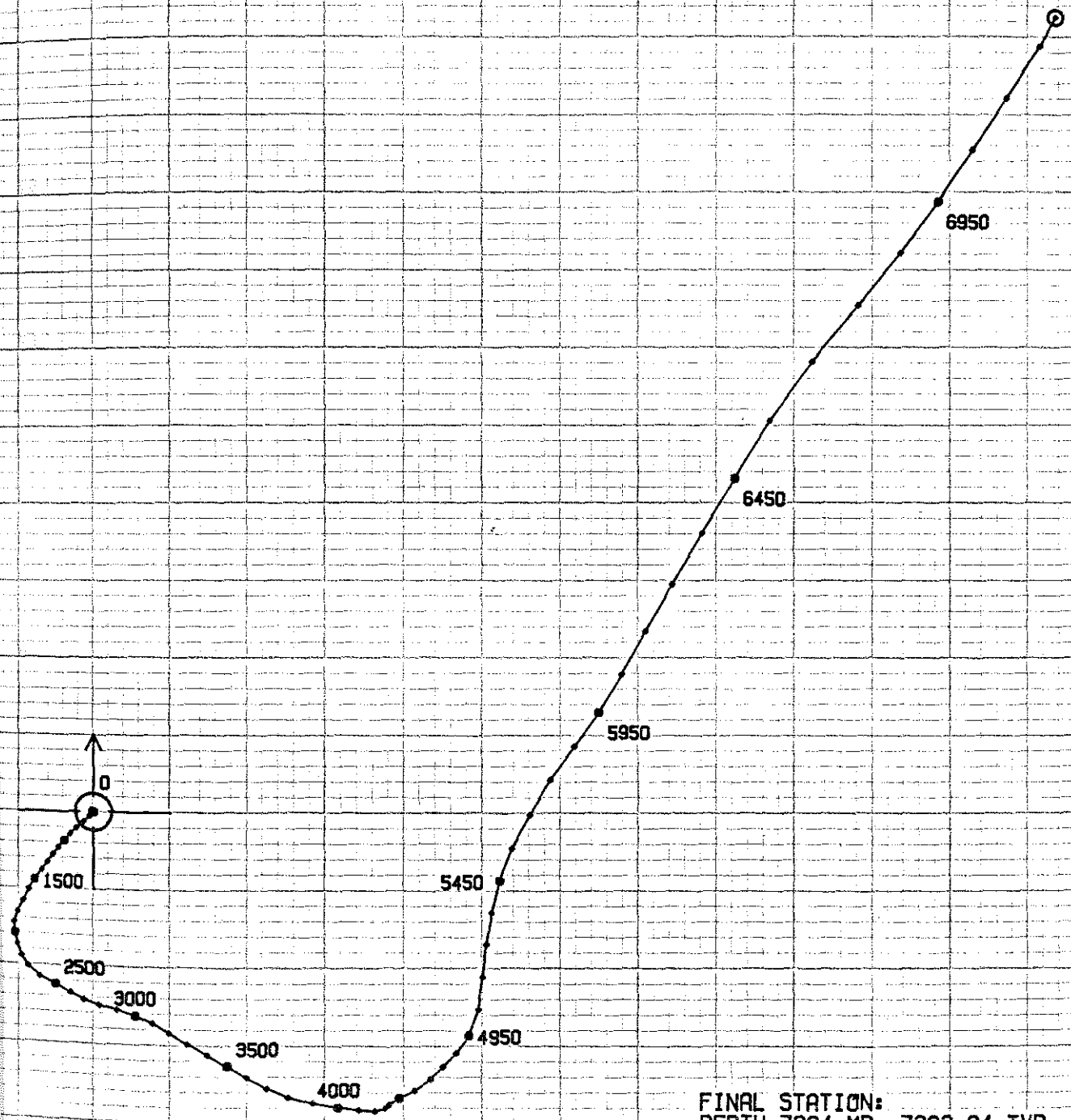
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
5850.00	7 30	N 39 0 E	100.0	5838.05	132.46	21.57 N	154.20 E	0.96
5950.00	8 0	N 33 0 E	100.0	5937.14	145.51	32.48 N	162.12 E	0.95
6050.00	8 30	N 29 0 E	100.0	6036.10	159.05	44.77 N	169.51 E	0.76
6150.00	9 30	N 29 0 E	100.0	6134.87	173.63	58.45 N	177.10 E	1.00
6250.00	10 30	N 30 0 E	100.0	6233.35	189.85	73.57 N	185.65 E	1.01
6350.00	11 30	N 30 0 E	100.0	6331.51	207.75	90.09 N	195.19 E	1.00
6450.00	12 0	N 31 0 E	100.0	6429.42	226.91	107.64 N	205.52 E	0.54
6550.00	13 0	N 32 0 E	100.0	6527.05	247.39	126.09 N	216.83 E	1.02
6650.00	14 0	N 39 0 E	100.0	6624.28	269.94	145.09 N	230.38 E	1.91
6750.00	13 0	N 39 0 E	100.0	6721.52	292.83	163.23 N	245.07 E	1.00
6850.00	12 0	N 39 0 E	100.0	6819.15	314.06	180.05 N	258.69 E	1.00
6950.00	11 30	N 34 0 E	100.0	6917.05	333.83	196.41 N	270.80 E	1.13
7050.00	11 45	N 33 0 E	100.0	7015.00	353.11	213.22 N	281.92 E	0.32
7150.00	11 15	N 34 0 E	100.0	7112.99	372.20	229.84 N	292.93 E	0.54
7250.00	11 30	N 30 0 E	100.0	7211.03	390.92	246.57 N	303.38 E	0.83
7304.00	11 30	N 28 0 E	54.0	7263.94	400.95	255.98 N	308.60 E	0.74

FINAL CLOSURE - DIRECTION: N 50 DEGS 19 MINS 27 SECS E
DISTANCE: 400.95 FEET

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 12-35
LOCATION: BEAVER COUNTY, UTAH

HORIZONTAL PROJECTION
SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.



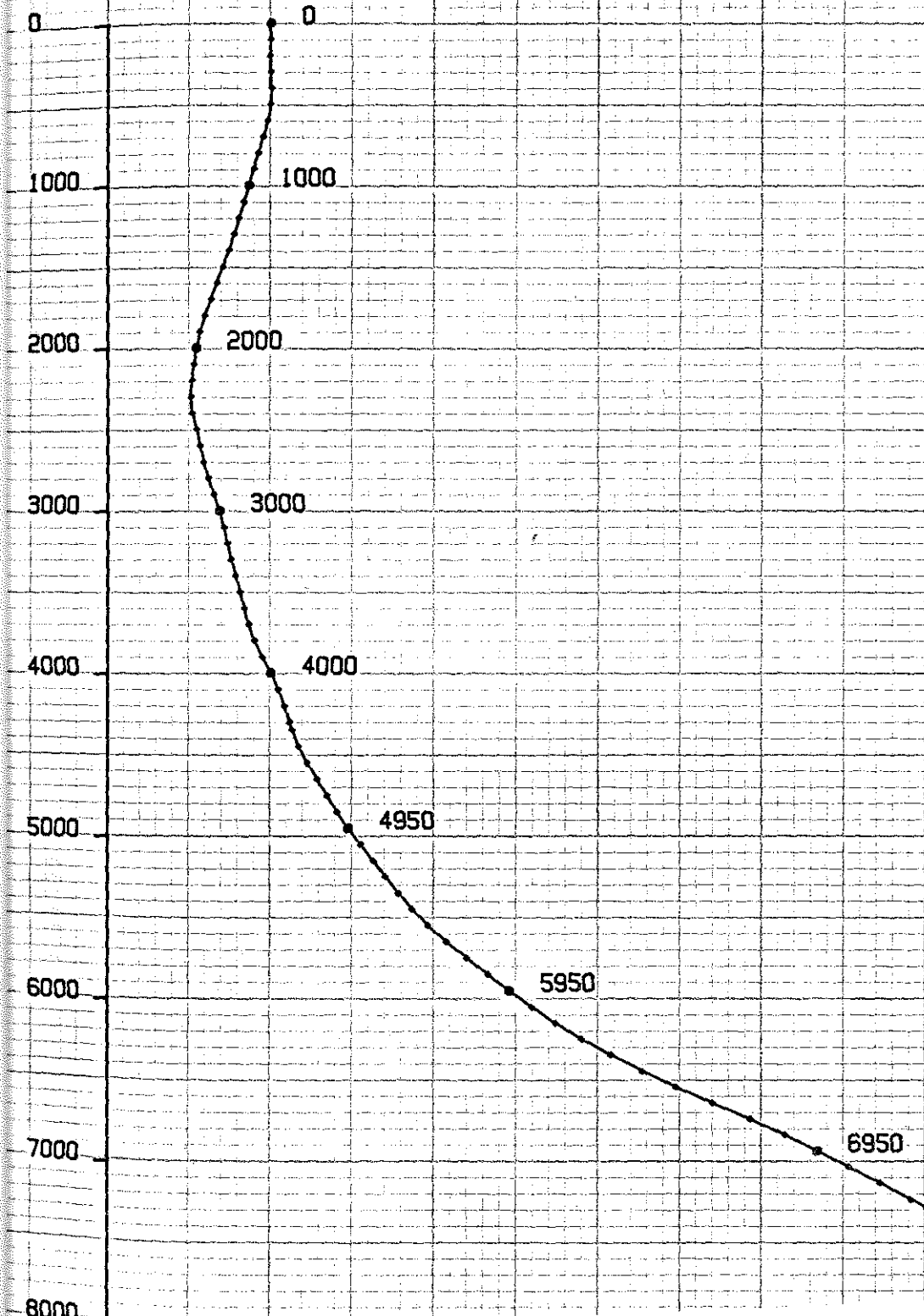
FINAL STATION:
DEPTH 7304 MD. 7263.94 TVD
NORTH 255.98 EAST 308.59
CLOSURE 400.94 N 50 19 27 E

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 12-35
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

EASTMAN WHIPSTOCK, INC.

HORIZONTAL SCALE 1 INCH : 100 FEET
VERTICAL SCALE 1 INCH : 1000 FEET



WELL TITLE: ROOSEVELT HOT SPRINGS 02 02
LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-263, FL14-03

JOB NO.: RM683-G1539

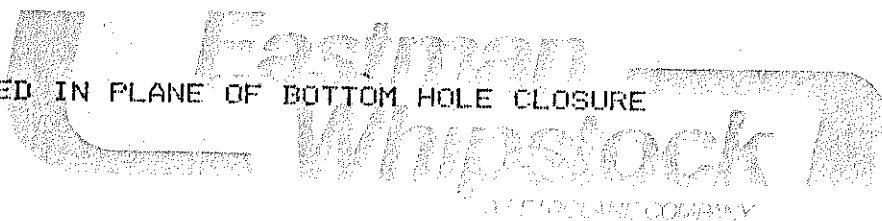
TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON

VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE



RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

15:00:57 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET	DOGLEG SEVERITY DG/100FT
0.00	0 0	0 0	0.0	0.00	0.00	0.00 0.00	0.00
100.00	0 0	0 0	100.0	100.00	0.00	0.00 0.00	0.00
200.00	0 15	N 72 0 E	100.0	200.00	-0.05	0.07 N 0.21 E	0.25
300.00	0 15	N 46 0 E	100.0	300.00	-0.07	0.29 N 0.58 E	0.11
400.00	0 30	N 8 0 W	100.0	400.00	0.33	0.89 N 0.78 E	0.41
500.00	0 30	N 12 0 W	100.0	499.99	1.13	1.75 N 0.63 E	0.03
600.00	0 30	N 36 0 W	100.0	599.99	1.99	2.54 N 0.28 E	0.21
700.00	0 30	N 70 0 W	100.0	699.99	2.80	3.06 N 0.41 W	0.29
800.00	0 45	N 82 0 W	100.0	799.98	3.59	3.32 N 1.46 W	0.28
900.00	0 45	N 89 0 W	100.0	899.97	4.37	3.42 N 2.77 W	0.09
1000.00	1 0	S 87 0 W	100.0	999.96	5.17	3.39 N 4.29 W	0.26
1100.00	1 0	S 83 0 W	100.0	1099.94	5.97	3.24 N 6.03 W	0.07
1200.00	1 15	S 79 0 W	100.0	1199.92	6.75	2.94 N 7.97 W	0.26
1300.00	1 30	S 79 0 W	100.0	1299.90	7.63	2.48 N 10.33 W	0.25
1400.00	1 30	S 79 0 W	100.0	1399.86	8.59	1.98 N 12.90 W	0.00
1500.00	1 45	S 79 0 W	100.0	1499.82	9.63	1.44 N 15.68 W	0.25
1600.00	1 45	S 80 0 W	100.0	1599.77	10.77	0.88 N 18.68 W	0.03
1700.00	2 0	N 80 0 W	100.0	1699.72	12.52	0.88 N 21.94 W	0.70
1800.00	2 30	N 73 0 W	100.0	1799.64	15.34	1.80 N 25.75 W	0.57
1900.00	2 30	N 78 0 W	100.0	1899.55	18.52	2.89 N 29.97 W	0.22
1975.00	2 0	N 72 0 W	75.0	1974.49	20.69	3.65 N 32.82 W	0.74
END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT							
2075.00	2 30	N 67 0 W	100.0	2074.41	23.82	5.02 N 36.49 W	0.54
2175.00	3 0	N 63 0 W	100.0	2174.30	27.87	7.05 N 40.84 W	0.54
2275.00	3 0	N 58 0 W	100.0	2274.16	32.48	9.63 N 45.39 W	0.26
2375.00	4 0	N 58 0 W	100.0	2373.97	37.99	12.86 N 50.57 W	1.00
2475.00	3 30	N 56 0 W	100.0	2473.76	43.94	16.42 N 56.06 W	0.52
2575.00	4 15	N 53 0 W	100.0	2573.53	50.20	20.35 N 61.56 W	0.78
2675.00	4 45	N 58 0 W	100.0	2673.22	57.42	24.79 N 68.02 W	0.64

LOCATION: BEAVER COUNTY, UTAH

TIME 15:00:57 DATE 22-JUN-83

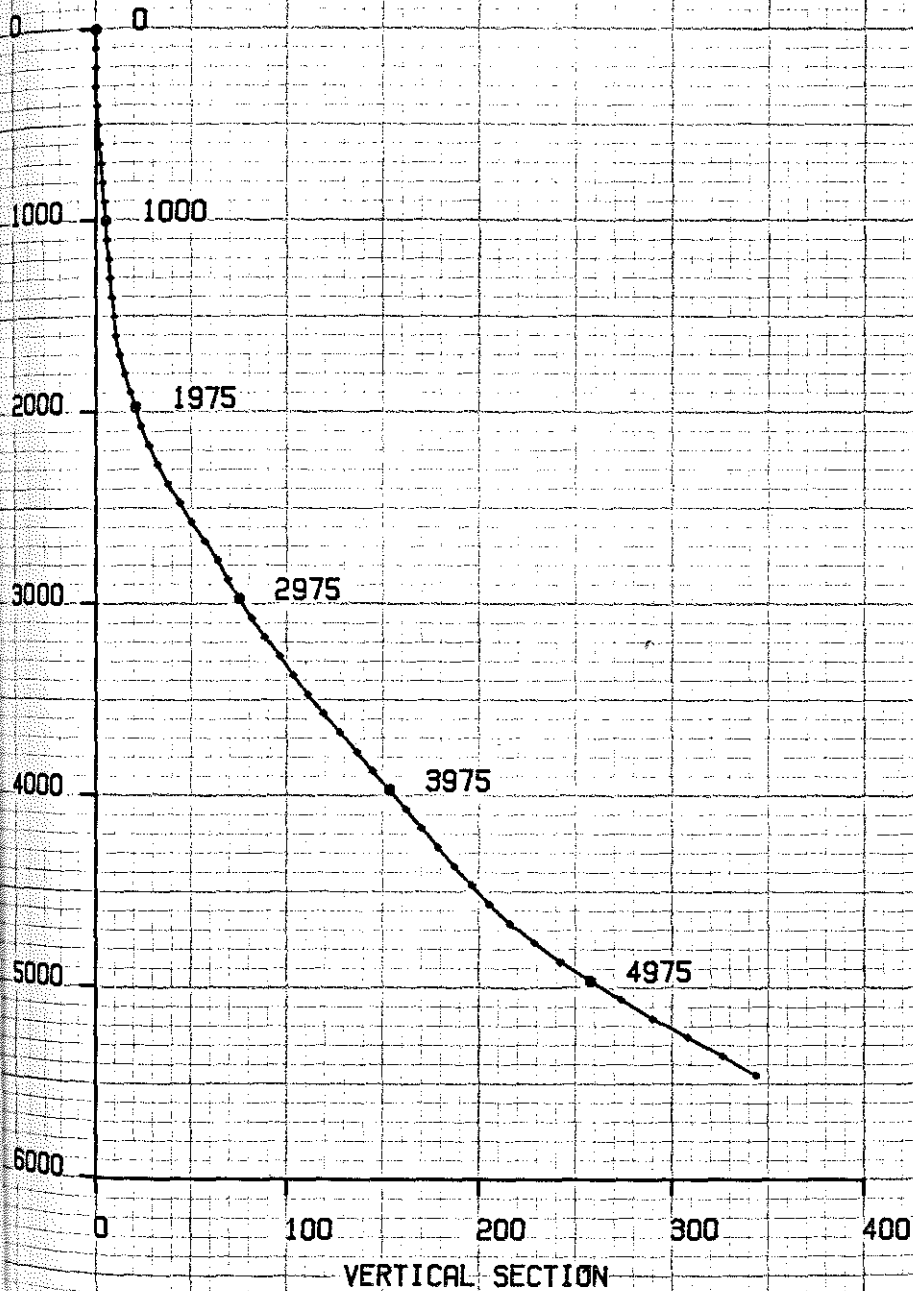
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEO SEVERITY DG/100FT
2775.00	3 30	N 56 O W	100.0	2772.96	63.97	28.71 N	74.05 W	1.26
2875.00	3 0	N 42 O W	100.0	2872.80	69.39	32.42 N	78.32 W	0.93
2975.00	3 30	N 36 O W	100.0	2972.64	75.02	36.82 N	81.89 W	0.60
3075.00	4 0	N 27 O W	100.0	3072.42	81.55	42.39 N	85.30 W	0.77
3175.00	4 15	N 26 O W	100.0	3172.16	88.70	48.83 N	88.51 W	0.26
3275.00	4 30	N 36 O W	100.0	3271.87	96.32	55.36 N	92.44 W	0.80
3375.00	4 0	N 41 O W	100.0	3371.60	103.69	61.16 N	97.05 W	0.62
3475.00	4 30	N 41 O W	100.0	3471.32	111.02	66.75 N	101.91 W	0.50
3575.00	5 0	N 36 O W	100.0	3570.98	119.25	73.23 N	107.06 W	0.65
3675.00	5 15	N 31 O W	100.0	3670.58	128.18	80.68 N	111.99 W	0.51
3775.00	4 30	N 31 O W	100.0	3770.22	136.67	87.96 N	116.37 W	0.75
3875.00	5 0	N 37 O W	100.0	3869.87	144.95	94.82 N	121.00 W	0.70
3975.00	5 0	N 41 O W	100.0	3969.49	153.60	101.60 N	126.48 W	0.35
4075.00	5 0	N 43 O W	100.0	4069.11	162.20	108.07 N	132.31 W	0.17
4175.00	4 30	N 40 O W	100.0	4168.77	170.37	114.27 N	137.80 W	0.56
4275.00	5 0	N 43 O W	100.0	4268.42	178.55	120.47 N	143.28 W	0.56
4375.00	5 15	N 36 O W	100.0	4368.02	187.41	127.36 N	148.96 W	0.67
4475.00	5 0	N 30 O W	100.0	4467.62	196.34	134.85 N	153.83 W	0.59
4575.00	5 30	N 29 O W	100.0	4567.20	205.48	142.82 N	158.33 W	0.51
4675.00	7 0	N 20 O W	100.0	4666.61	216.25	152.71 N	162.84 W	1.79
4775.00	8 0	N 12 O W	100.0	4765.75	228.76	165.25 N	166.44 W	1.44
4875.00	8 45	N 12 O W	100.0	4864.68	242.40	179.50 N	169.47 W	0.75
4975.00	10 0	N 11 O W	100.0	4963.35	257.61	195.46 N	172.71 W	1.26
5075.00	10 0	N 8 O W	100.0	5061.83	273.60	212.58 N	175.58 W	0.52
5175.00	11 15	N 6 O W	100.0	5160.11	290.25	230.88 N	177.83 W	1.30
5275.00	11 45	N 6 O W	100.0	5258.10	308.10	250.71 N	179.91 W	0.50
5375.00	11 30	N 7 O W	100.0	5356.05	326.22	270.73 N	182.19 W	0.32
5475.00	10 45	N 6 O W	100.0	5454.17	343.56	289.90 N	184.37 W	0.77

FINAL CLOSURE - DIRECTION: N 32 DEGS 27 MINS 22 SECS W
 DISTANCE: 343.56 FEET

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 82-33
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION
HORIZONTAL SCALE 1 IN. = 100 FE
VERTICAL SCALE 1 IN. = 1000 FE

EASTMAN WHIPSTOCK, INC.



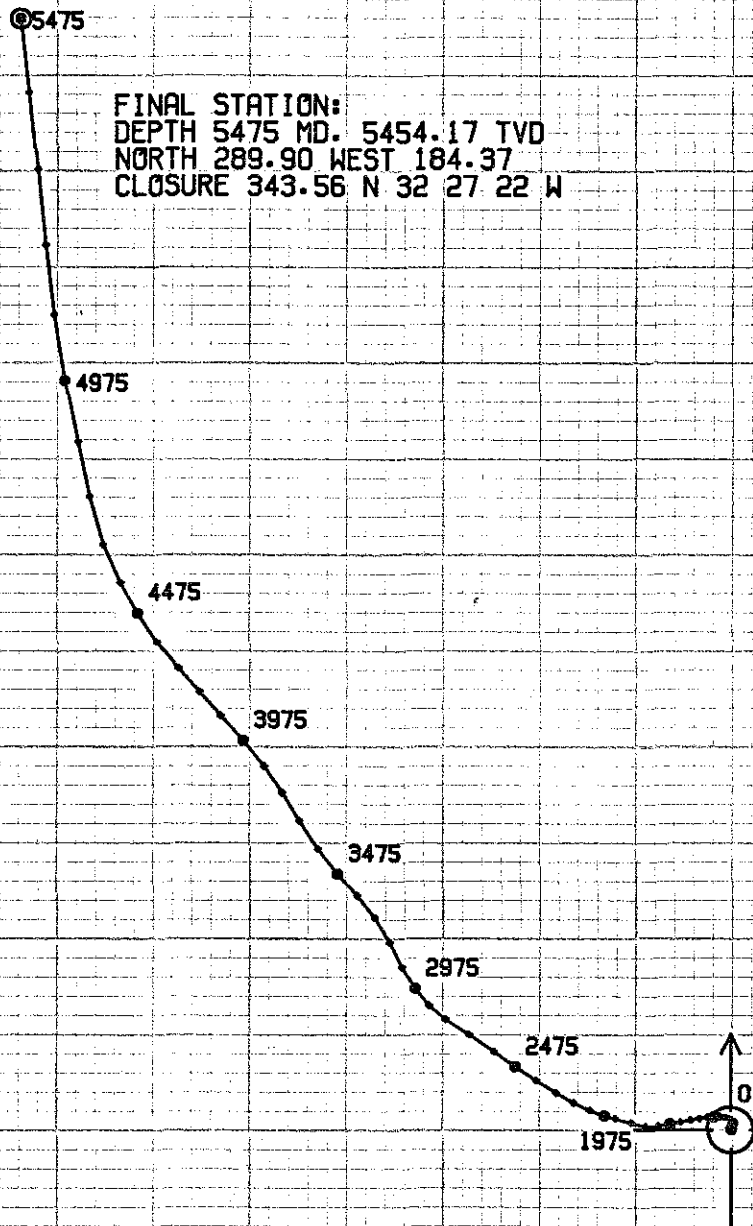
CLOSURE 343.56 N 32 27 22 W

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 82-33
LOCATION: BEAVER COUNTY, UTAH

HORIZONTAL PROJECTION

SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD

EASTMAN WHIPSTOCK, INC.



PHILLIPS PETROLEUM COMPANY

SURVEY REPORT

WELL NAME: ROOSEVELT HOT SPRINGS 14-2

LOCATION: BEAVER COUNTY, UTAH

FILE NO.: A2-261, FL14-01

RUN DATE: 17 JUNE 1983

JOB NO.: RM683-01539

TYPE: GYROSCOPIC MULTIPLE SHOT, MAGNETIC MULTIPLE SHOT

SURVEYOR: IRVIN MCFALL

DECLINATION: 14 EAST

COMPUTER OPERATOR: STEVE THURSTON



VERTICAL SECTION CALCULATED IN PLANE OF BOTTOM HOLE CLOSURE

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

WELL NAME: ROOSEVELT HOT SPRINGS 14-2

TIME DATE

LOCATION: BEAVER COUNTY, UTAH

14:20:43 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE	VERTICAL SECTION FEET	RECTANGULAR		DOGLEG SEVERITY DG/100FT
				VERTICAL DEPTH FEET		COORDINATES FEET		
0.00	0 0	0 0	0.0	0.00	0.00	0.00	0.00	0.00
100.00	0 15	S 17 0 E	100.0	100.00	-0.22	0.21 S	0.06 E	0.25
200.00	0 15	N 4 0 W	100.0	200.00	-0.25	0.15 S	0.36 E	0.50
300.00	0 30	N 72 0 E	100.0	300.00	0.12	0.35 N	0.70 E	0.50
400.00	0 30	N 86 0 E	100.0	399.99	0.02	0.52 N	1.55 E	0.12
500.00	0 15	N 78 0 E	100.0	499.99	-0.09	0.61 N	2.20 E	0.25
600.00	1 0	N 58 0 E	100.0	599.98	-0.01	1.01 N	3.21 E	0.77
700.00	0 45	N 68 0 E	100.0	699.97	0.24	1.71 N	4.56 E	0.29
800.00	1 0	N 80 0 E	100.0	799.96	0.19	2.13 N	6.03 E	0.31
900.00	1 0	S 84 0 E	100.0	899.95	-0.28	2.19 N	7.77 E	0.28
1000.00	0 45	S 76 0 E	100.0	999.93	-0.99	1.92 N	9.27 E	0.28
1100.00	0 30	S 58 0 E	100.0	1099.93	-1.70	1.50 N	10.27 E	0.31
1200.00	0 30	S 76 0 E	100.0	1199.92	-2.27	1.16 N	11.07 E	0.16
1300.00	0 30	N 48 0 E	100.0	1299.92	-2.32	1.36 N	11.88 E	0.47
1400.00	1 0	N 16 0 E	100.0	1399.91	-1.48	2.46 N	12.56 E	0.63
1500.00	1 15	N 13 0 E	100.0	1499.89	0.18	4.36 N	13.06 E	0.26
1600.00	1 30	N 11 0 E	100.0	1599.86	2.26	6.70 N	13.55 E	0.25
1700.00	1 30	N 6 0 E	100.0	1699.83	4.61	9.29 N	13.94 E	0.13
1775.00	1 30	N 1 0 W	75.0	1774.80	6.45	11.25 N	14.03 E	0.24
END OF GYROSCOPIC MULTIPLE SHOT, START MAGNETIC MULTIPLE SHOT								
1875.00	2 0	N 13 0 W	100.0	1874.76	9.44	14.28 N	13.66 E	0.62
1975.00	2 0	N 22 0 W	100.0	1974.69	12.93	17.60 N	12.61 E	0.31
2075.00	2 30	N 23 0 W	100.0	2074.62	16.84	21.23 N	11.11 E	0.50
2175.00	4 0	N 23 0 W	100.0	2174.45	22.49	26.45 N	8.89 E	1.50
2275.00	3 30	N 14 0 W	100.0	2274.24	29.02	32.65 N	6.82 E	0.77
2375.00	4 0	N 10 0 W	100.0	2374.03	35.53	39.04 N	5.46 E	0.56
2475.00	4 0	N 6 0 W	100.0	2473.78	42.40	45.95 N	4.49 E	0.28
2575.00	4 0	N 9 0 W	100.0	2573.54	49.27	52.86 N	3.58 E	0.21
2675.00	4 0	N 11 0 W	100.0	2673.29	56.18	59.73 N	2.37 E	0.14

WELL NAME: ROOSEVELT HOT SPRINGS 14-2

TIME DATE

LOCATION: BEAVER COUNTY, UTAH

14:20:43 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE	VERTICAL SECTION FEET	RECTANGULAR		DOGLED SEVERITY DG/100FT
				VERTICAL DEPTH FEET		COORDINATES FEET		
2775.00	4 30	N 14 0 W	100.0	2773.02	63.56	66.97 N	0.76 E	0.55
2875.00	4 30	N 11 0 W	100.0	2872.71	71.37	74.63 N	0.94 W	0.24
2975.00	4 0	N 1 0 W	100.0	2972.44	78.62	81.99 N	1.71 W	0.89
3075.00	4 0	N 4 0 W	100.0	3072.19	85.35	88.95 N	2.01 W	0.21
3175.00	4 0	N 6 0 W	100.0	3171.95	92.15	95.90 N	2.62 W	0.14
3275.00	4 0	N 11 0 W	100.0	3271.70	99.03	102.80 N	3.65 W	0.35
3375.00	4 15	N 8 0 W	100.0	3371.45	106.15	109.89 N	4.84 W	0.33
3475.00	5 0	N 17 0 W	100.0	3471.12	114.17	117.76 N	6.58 W	1.04
3575.00	5 30	N 16 0 W	100.0	3570.70	123.32	126.53 N	9.18 W	0.51
3675.00	6 0	N 18 0 W	100.0	3670.20	133.34	136.11 N	12.11 W	0.54
3775.00	6 15	N 21 0 W	100.0	3769.63	144.00	146.17 N	15.67 W	0.41
3875.00	6 30	N 21 0 W	100.0	3869.01	155.09	156.53 N	19.65 W	0.25
3975.00	6 30	N 23 0 W	100.0	3968.36	166.37	167.03 N	23.89 W	0.23
4075.00	6 30	N 24 0 W	100.0	4067.72	177.64	177.41 N	28.41 W	0.11
4175.00	7 30	N 24 0 W	100.0	4166.97	189.75	188.54 N	33.36 W	1.00
4275.00	7 15	N 21 0 W	100.0	4266.15	202.54	200.40 N	38.27 W	0.46
4375.00	7 30	N 22 0 W	100.0	4365.32	215.35	212.35 N	42.98 W	0.28
4475.00	8 15	N 23 0 W	100.0	4464.38	229.00	225.00 N	48.22 W	0.76
4575.00	9 0	N 23 0 W	100.0	4563.24	243.94	238.81 N	54.08 W	0.75
4675.00	10 0	N 25 0 W	100.0	4661.87	260.34	253.88 N	60.79 W	1.05
4775.00	10 0	N 25 0 W	100.0	4760.35	277.57	269.62 N	68.13 W	0.00
4875.00	10 0	N 25 0 W	100.0	4858.83	294.79	285.36 N	75.47 W	0.00
4975.00	9 30	N 22 0 W	100.0	4957.39	311.64	300.89 N	82.22 W	0.71
5075.00	9 0	N 20 0 W	100.0	5056.09	327.68	315.89 N	87.98 W	0.59
5175.00	8 45	N 20 0 W	100.0	5154.89	343.10	330.39 N	93.26 W	0.25
5275.00	8 45	N 20 0 W	100.0	5253.73	358.30	344.69 N	98.46 W	0.00
5375.00	9 45	N 21 0 W	100.0	5352.42	374.36	359.74 N	104.09 W	1.01
5475.00	11 0	N 26 0 W	100.0	5450.79	392.27	376.25 N	111.27 W	1.54
5575.00	11 30	N 26 0 W	100.0	5548.87	411.57	393.79 N	119.82 W	0.50
5675.00	11 30	N 24 0 W	100.0	5646.86	431.35	411.85 N	128.25 W	0.40

WELL NAME: ROOSEVELT HOT SPRINGS 14-2

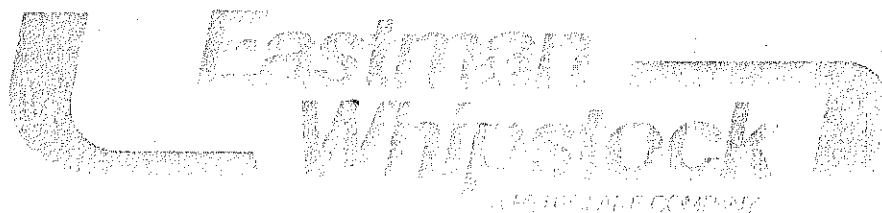
TIME DATE

LOCATION: BEAVER COUNTY, UTAH

14:20:43 22-JUN-83

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOGLEG SEVERITY DG/100FT
5775.00	11 45	N 23 0 W	100.0	5744.81	451.40	430.33 N	136.28 W	0.32
5844.00	12 0	N 22 0 W	69.0	5812.33	465.55	443.45 N	141.72 W	0.47

FINAL CLOSURE - DIRECTION: N 17 DEGS 43 MINS 22 SECS W
 DISTANCE: 465.55 FEET

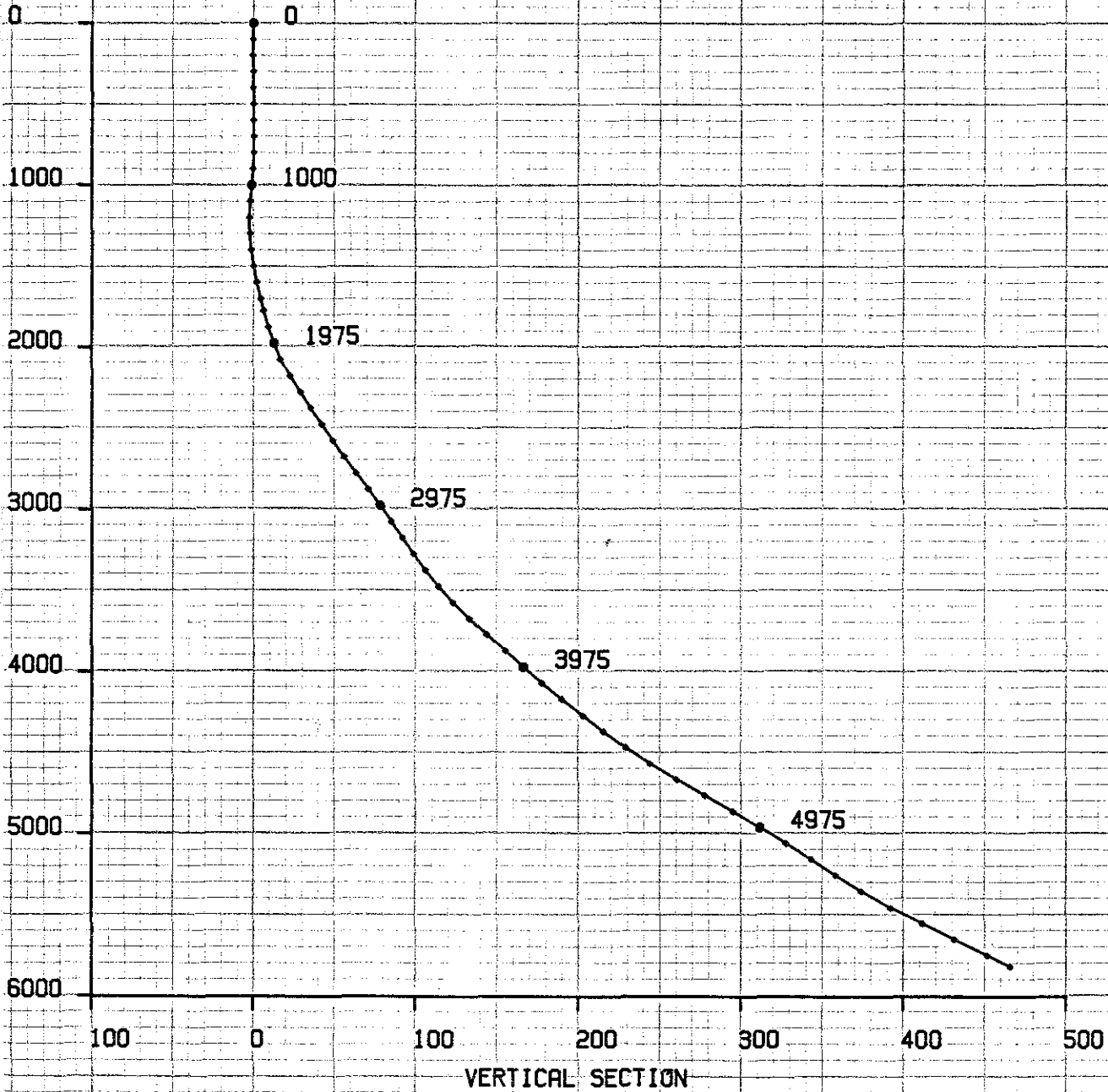


PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 14-2
LOCATION: BEAVER COUNTY, UTAH

VERTICAL PROJECTION

HORIZONTAL SCALE 1 IN. = 100 FEET
VERTICAL SCALE 1 IN. = 1000 FEET

EASTMAN WHIPSTOCK, INC.



CLOSURE 465.54 N 17.43 22 W

PHILLIPS PETROLEUM COMPANY
WELL NAME: ROOSEVELT HOT SPRINGS 14-2
LOCATION: BEAVER COUNTY, UTAH

EASTMAN WHIPSTOCK, INC.

HORIZONTAL PROJECTION
SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD

FINAL STATION:
DEPTH 5844 MD. 5812.33 TVD
NORTH 443.45 WEST 141.71
CLOSURE 465.54 N 17 43 22 W

