

Rmf @ Measured Temp (degF)	N/A @ N/A				
Rmc @ Measured Temp (degF)	N/A @ N/A				
Max Tool Temp (degF) / Source	124.60 / PCG-R				
Rm @ Max Tool Temp (degF)	N/A @ N/A				
Lead MWD Engineer	Fred Burger				
Customer Representative	Jack Everette				

SENSOR INFORMATION

Directional Sensor Information

Tool Type	PCD				
Distance From Bit (ft)	47.13				
Software Version	3.32				
Sub Serial Number	11595287				
Sonde Serial Number	10993563				
Sensor ID Number	N/A				
Toolface Offset (deg)	112.98				

Gamma Ray Sensor Information

Tool Type	PCG				
Distance From Bit (ft)	52.63				
Recorded Sample Period (sec)	15				
Software Version	8.15				
Sub Serial Number	10993563				
Insert/Sonde Serial Number	10986798				

REMARKS

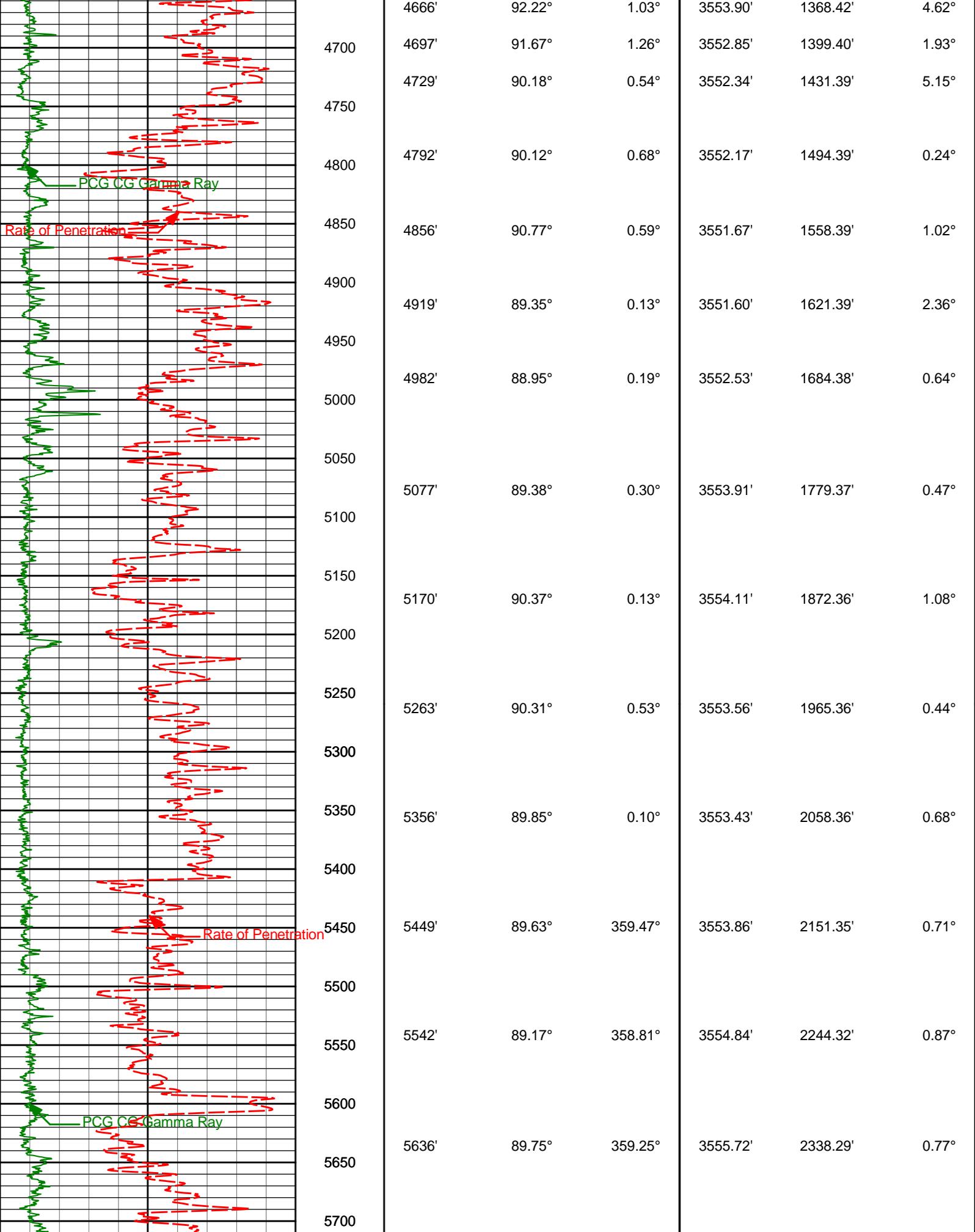
1. All depths are calibrated to the driller's pipe tally, and measured from the drill floor.
 2. No depth correction has been made for pipe stretch or compression.
 3. All data presented is recorded (memory data) unless otherwise stated.
 4. The following smoothing parameters have been applied to data:
 - ROP: 1.0' interval, 3.0' coercion distance
 - All other curves: 0.5' interval, 0.6' distance
- Started all data in lateral section at depth of 3891' MD/3563' TVD

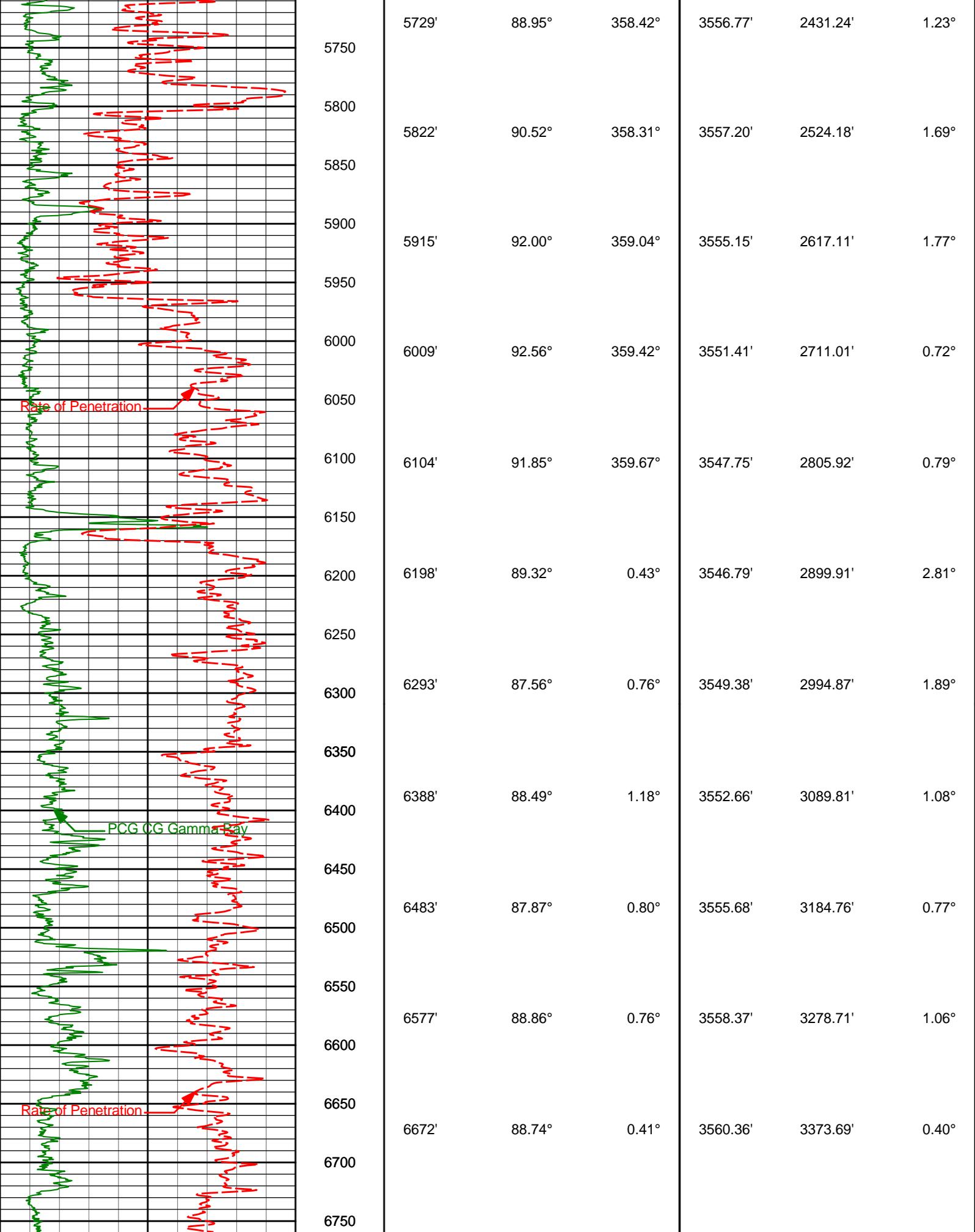
WARRANTY

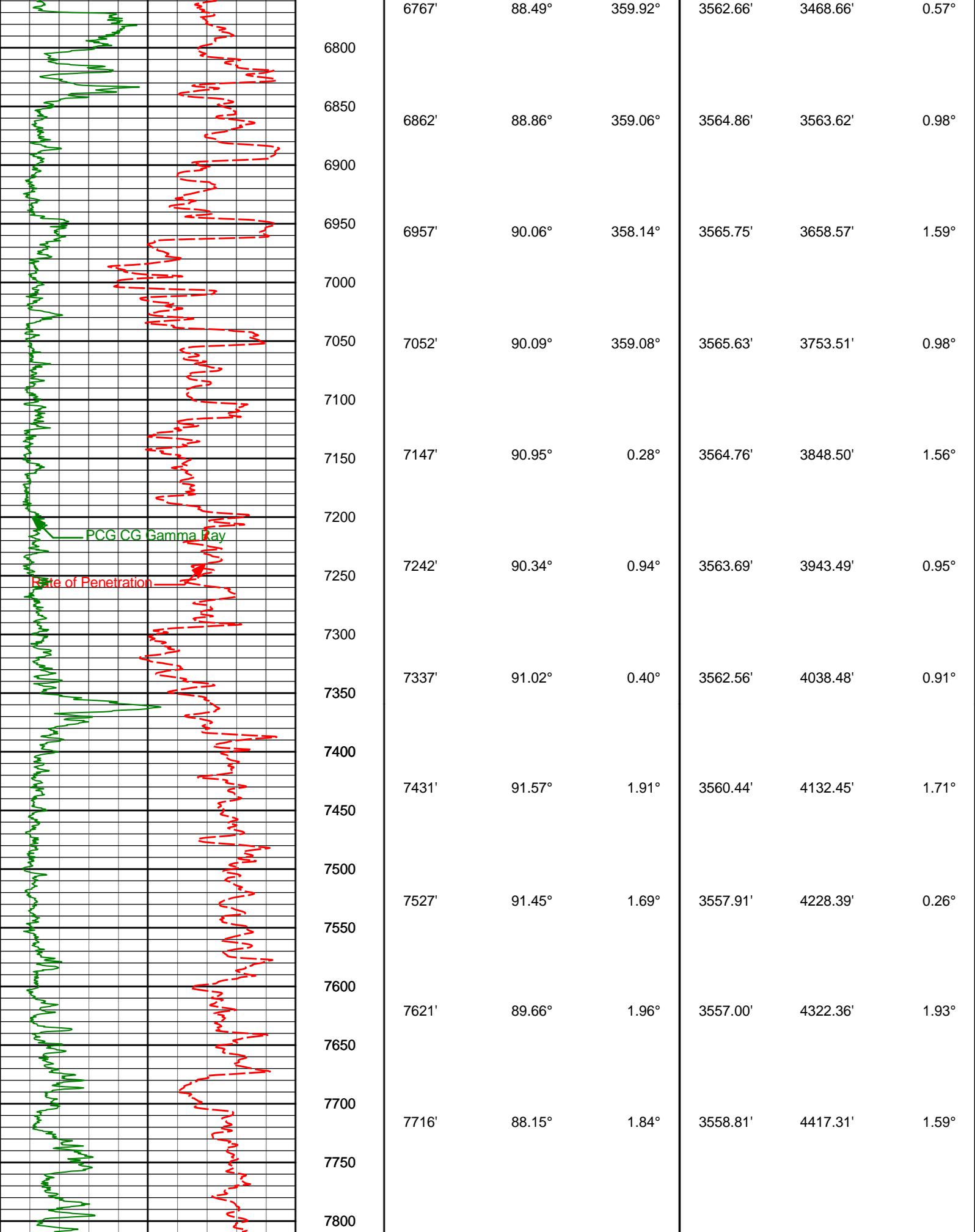
HALLIBURTON WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY

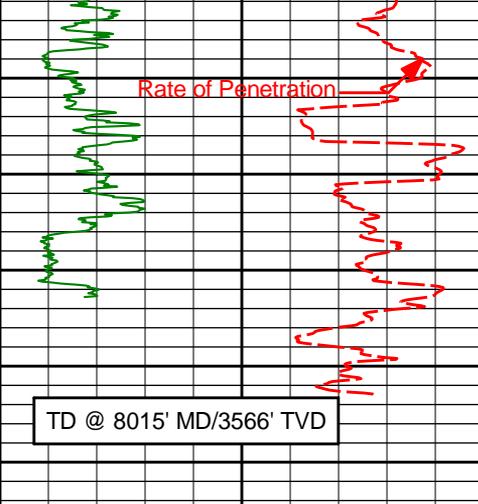
DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY OTHER THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION AND PRODUCTION OPERATION. HALLIBURTON MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON.

Rate of Penetration feet per hr	Measured Depth 1 : 1200	Depth	Inclination	Azimuth	TVD	Vertical Sec	DLS
250	0						
0	150						
PCG CG Gamma Ray api							
Gamma Started @ 3851' MD/3563' TVD							
Run 100							
	3850	3827'	81.30°	3.80°	3553.29'	533.34'	11.30°
	3900						
	3950	3939'	80.36°	3.03°	3571.13'	643.76'	1.08°
	4000	3970'	80.56°	3.36°	3576.27'	674.30'	1.23°
	4050	4002'	82.45°	2.81°	3581.00'	705.92'	6.14°
	4100	4034'	85.90°	3.09°	3584.25'	737.72'	10.81°
	4150	4065'	89.26°	2.86°	3585.56'	768.65'	10.88°
	4200	4097'	90.06°	2.46°	3585.74'	800.63'	2.79°
	4250	4128'	90.00°	2.69°	3585.73'	831.61'	0.77°
	4300	4160'	91.42°	2.91°	3585.33'	863.58'	4.49°
	4350	4192'	92.50°	1.87°	3584.24'	895.54'	4.66°
	4400	4223'	93.24°	0.87°	3582.69'	926.50'	4.01°
	4450	4255'	93.42°	0.56°	3580.83'	958.44'	1.13°
	4500	4286'	93.45°	0.99°	3578.97'	989.39'	1.37°
	4550	4318'	93.77°	0.71°	3576.96'	1021.32'	1.32°
	4600	4350'	94.10°	359.38°	3574.76'	1053.25'	4.25°
	4650	4381'	94.38°	359.53°	3572.47'	1084.16'	1.00°
		4413'	94.56°	359.47°	3569.97'	1116.05'	0.61°
		4444'	94.10°	358.50°	3567.63'	1146.96'	3.45°
		4508'	94.20°	358.42°	3563.00'	1210.75'	0.20°
		4539'	94.38°	358.88°	3560.68'	1241.65'	1.62°
		4571'	92.87°	358.64°	3558.66'	1273.57'	4.77°
		4602'	93.24°	358.42°	3557.01'	1304.50'	1.39°
		4634'	92.83°	359.68°	3555.31'	1336.45'	4.16°









7850	7811'	87.81°	1.90°	3562.15'	4512.22'	0.36°
7900	7906'	88.58°	2.41°	3565.14'	4607.13'	0.97°
7950	7965'	89.75°	3.08°	3566.00'	4666.08'	2.28°
8000	8015'	89.75°	3.08°	3566.21'	4716.02'	0.01°
8050						

Rate of Penetration feet per hr	Measured	Depth	Depth	Inclination	Azimuth	TVD	Vertical Sec	DLS
250	Depth	1 : 1200						
0	PCG CG Gamma Ray api							
150								



HALLIBURTON

DIRECTIONAL SURVEY REPORT

Shell Exploration Production
 Siegrist 2207 #7-1H
 Wildcat
 Reno Co. Kansas
 USA
 OK-XX-0900033716
 Surveys from 82' to 3827' provided by MS Directional
 Sperry Drilling provided survey information from 3939' to 7965'
 Final Survey Projected to Bit at depth of 8015'

Measured Depth (feet)	Inclination (degrees)	Direction (degrees)	Vertical Depth (feet)	Latitude (feet)	Departure (feet)	Vertical Section (feet)	Dogleg (deg/100ft)
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	TIE-IN
82.00	0.14	225.57	82.00	0.07 S	0.07 W	-0.07	0.17
152.00	0.06	196.25	152.00	0.17 S	0.14 W	-0.17	0.13
222.00	0.26	214.93	222.00	0.33 S	0.24 W	-0.33	0.29
292.00	0.32	210.03	292.00	0.63 S	0.43 W	-0.63	0.09
362.00	0.36	218.84	362.00	0.97 S	0.67 W	-0.98	0.09
430.00	0.20	185.80	430.00	1.26 S	0.81 W	-1.26	0.33
525.00	0.30	170.50	525.00	1.67 S	0.79 W	-1.67	0.13
999.00	0.20	265.10	998.99	2.96 S	1.41 W	-2.97	0.08
1092.00	0.20	251.30	1091.99	3.03 S	1.73 W	-3.04	0.05
1185.00	0.20	237.60	1184.99	3.16 S	2.02 W	-3.18	0.05
1278.00	0.20	269.70	1277.99	3.25 S	2.32 W	-3.27	0.12
1371.00	0.10	216.70	1370.99	3.32 S	2.53 W	-3.34	0.17
1465.00	0.10	221.60	1464.99	3.45 S	2.63 W	-3.47	0.01
1558.00	0.00	282.00	1557.99	3.51 S	2.68 W	-3.53	0.11
1651.00	0.00	4.90	1650.99	3.51 S	2.68 W	-3.53	0.00
1745.00	0.10	184.40	1744.99	3.59 S	2.69 W	-3.61	0.11
1838.00	0.10	4.40	1837.99	3.59 S	2.69 W	-3.61	0.22
1932.00	0.00	73.40	1931.99	3.51 S	2.68 W	-3.53	0.11
2026.00	0.10	128.50	2025.99	3.56 S	2.62 W	-3.58	0.11
2121.00	0.10	212.00	2120.99	3.68 S	2.60 W	-3.70	0.14
2215.00	0.10	184.40	2214.99	3.83 S	2.65 W	-3.85	0.05
2310.00	0.10	274.90	2309.99	3.91 S	2.74 W	-3.93	0.15
2405.00	0.20	155.60	2404.99	4.05 S	2.75 W	-4.07	0.28
2500.00	0.30	196.80	2499.99	4.44 S	2.75 W	-4.46	0.21

2595.00	0.20	170.00	2594.99	4.84 S	2.80 W	-4.86	0.16
2690.00	0.00	118.10	2689.99	5.00 S	2.77 W	-5.03	0.21
2784.00	0.20	213.10	2783.99	5.14 S	2.86 W	-5.16	0.21
2879.00	0.80	16.60	2878.99	4.64 S	2.76 W	-4.67	1.05
2911.00	2.40	357.90	2910.97	3.76 S	2.72 W	-3.78	5.19
2942.00	3.90	357.70	2941.92	2.06 S	2.79 W	-2.08	4.84
2974.00	4.90	350.60	2973.83	0.38 N	3.05 W	0.35	3.55
3005.00	6.80	352.70	3004.67	3.50 N	3.50 W	3.47	6.17
3037.00	9.30	355.30	3036.35	7.96 N	3.96 W	7.93	7.89
3068.00	12.30	359.10	3066.80	13.76 N	4.21 W	13.72	9.94
3100.00	15.80	0.70	3097.83	21.53 N	4.21 W	21.49	11.00
3132.00	19.10	0.60	3128.36	31.12 N	4.10 W	31.09	10.31
3163.00	22.10	2.00	3157.37	42.02 N	3.85 W	41.99	9.81
3195.00	24.40	2.70	3186.77	54.64 N	3.33 W	54.61	7.24
3227.00	25.80	3.30	3215.75	68.20 N	2.61 W	68.17	4.45
3258.00	28.30	1.90	3243.36	82.28 N	1.98 W	82.26	8.32
3290.00	31.50	359.80	3271.09	98.23 N	1.76 W	98.21	10.52
3322.00	34.20	359.70	3297.97	115.58 N	1.84 W	115.56	8.44
3353.00	37.40	359.10	3323.11	133.71 N	2.03 W	133.69	10.38
3385.00	41.00	359.10	3347.91	153.93 N	2.35 W	153.91	11.25
3416.00	42.90	1.40	3370.96	174.65 N	2.25 W	174.63	7.88
3448.00	45.40	2.60	3393.92	196.92 N	1.47 W	196.90	8.24
3480.00	48.10	1.80	3415.85	220.21 N	0.58 W	220.20	8.63
3511.00	51.50	2.70	3435.85	243.87 N	0.36 E	243.86	11.19
3543.00	54.80	2.30	3455.04	269.44 N	1.47 E	269.45	10.36
3575.00	58.70	2.60	3472.58	296.18 N	2.62 E	296.19	12.21
3606.00	62.70	2.90	3487.75	323.17 N	3.92 E	323.20	12.93
3638.00	66.60	2.00	3501.45	352.06 N	5.15 E	352.09	12.45
3670.00	70.30	2.00	3513.20	381.80 N	6.19 E	381.84	11.56
3701.00	72.20	1.50	3523.17	411.14 N	7.08 E	411.18	6.32
3732.00	73.80	1.60	3532.23	440.77 N	7.89 E	440.82	5.17
3764.00	76.00	1.80	3540.57	471.65 N	8.80 E	471.71	6.90
3795.00	78.00	2.30	3547.54	501.84 N	9.88 E	501.90	6.64
3827.00	81.30	3.80	3553.29	533.27 N	11.56 E	533.34	11.30
3939.00	80.36	3.03	3571.13	643.64 N	18.14 E	643.76	1.08
3970.00	80.56	3.36	3576.27	674.16 N	19.85 E	674.30	1.23
4002.00	82.45	2.81	3581.00	705.76 N	21.55 E	705.92	6.14
4034.00	85.90	3.09	3584.25	737.55 N	23.18 E	737.72	10.81
4065.00	89.26	2.86	3585.56	768.48 N	24.79 E	768.65	10.88
4097.00	90.06	2.46	3585.74	800.44 N	26.28 E	800.63	2.79
4128.00	90.00	2.69	3585.73	831.41 N	27.67 E	831.61	0.77
4160.00	91.42	2.91	3585.33	863.37 N	29.24 E	863.58	4.49
4192.00	92.50	1.87	3584.24	895.32 N	30.57 E	895.54	4.66
4223.00	93.24	0.87	3582.69	926.27 N	31.31 E	926.50	4.01
4255.00	93.42	0.56	3580.83	958.22 N	31.71 E	958.44	1.13
4286.00	93.45	0.99	3578.97	989.16 N	32.13 E	989.39	1.37
4318.00	93.77	0.71	3576.96	1021.09 N	32.60 E	1021.32	1.32
4350.00	94.10	359.38	3574.76	1053.01 N	32.63 E	1053.25	4.25
4381.00	94.38	359.53	3572.47	1083.93 N	32.33 E	1084.16	1.00
4413.00	94.56	359.47	3569.97	1115.83 N	32.05 E	1116.05	0.61
4444.00	94.10	358.50	3567.63	1146.74 N	31.50 E	1146.96	3.45
4508.00	94.20	358.42	3563.00	1210.54 N	29.78 E	1210.75	0.20
4539.00	94.38	358.88	3560.68	1241.45 N	29.06 E	1241.65	1.62
4571.00	92.87	358.64	3558.66	1273.38 N	28.37 E	1273.57	4.77
4602.00	93.24	358.42	3557.01	1304.32 N	27.57 E	1304.50	1.39
4634.00	92.83	359.68	3555.31	1336.27 N	27.04 E	1336.45	4.16
4666.00	92.22	1.03	3553.90	1368.24 N	27.24 E	1368.42	4.62
4697.00	91.67	1.26	3552.85	1399.22 N	27.86 E	1399.40	1.93
4729.00	90.18	0.54	3552.34	1431.21 N	28.36 E	1431.39	5.15
4792.00	90.12	0.68	3552.17	1494.20 N	29.03 E	1494.39	0.24
4856.00	90.77	0.59	3551.67	1558.20 N	29.74 E	1558.39	1.02
4919.00	89.35	0.13	3551.60	1621.19 N	30.13 E	1621.39	2.36
4982.00	88.95	0.19	3552.53	1684.19 N	30.31 E	1684.38	0.64
5077.00	89.38	0.30	3553.91	1779.18 N	30.71 E	1779.37	0.47
5170.00	90.37	0.13	3554.11	1872.17 N	31.06 E	1872.36	1.08
5263.00	90.31	0.53	3553.56	1965.17 N	31.60 E	1965.36	0.44
5356.00	89.85	0.10	3553.43	2058.17 N	32.11 E	2058.36	0.68
5449.00	89.63	359.47	3553.86	2151.17 N	31.76 E	2151.35	0.71
5542.00	89.17	358.81	3554.84	2244.15 N	30.37 E	2244.32	0.87
5636.00	89.75	359.25	3555.72	2338.13 N	28.78 E	2338.29	0.77
5729.00	88.95	358.42	3556.77	2431.10 N	26.89 E	2431.24	1.23

5725.00	88.95	358.42	3558.77	2431.18 N	20.83 E	2431.23	1.25
5822.00	90.52	358.31	3557.20	2524.06 N	24.24 E	2524.18	1.69
5915.00	92.00	359.04	3555.15	2617.01 N	22.09 E	2617.11	1.77
6009.00	92.56	359.42	3551.41	2710.93 N	20.83 E	2711.01	0.72
6104.00	91.85	359.67	3547.75	2805.85 N	20.07 E	2805.92	0.79
6198.00	89.32	0.43	3546.79	2899.84 N	20.16 E	2899.91	2.81
6293.00	87.56	0.76	3549.38	2994.80 N	21.15 E	2994.87	1.89
6388.00	88.49	1.18	3552.66	3089.73 N	22.76 E	3089.81	1.08
6483.00	87.87	0.80	3555.68	3184.66 N	24.40 E	3184.76	0.77
6577.00	88.86	0.76	3558.37	3278.61 N	25.69 E	3278.71	1.06
6672.00	88.74	0.41	3560.36	3373.59 N	26.65 E	3373.69	0.40
6767.00	88.49	359.92	3562.66	3468.56 N	26.92 E	3468.66	0.57
6862.00	88.86	359.06	3564.86	3563.53 N	26.07 E	3563.62	0.98
6957.00	90.06	358.14	3565.75	3658.49 N	23.75 E	3658.57	1.59
7052.00	90.09	359.08	3565.63	3753.46 N	21.44 E	3753.51	0.98
7147.00	90.95	0.28	3564.76	3848.46 N	20.91 E	3848.50	1.56
7242.00	90.34	0.94	3563.69	3943.44 N	21.93 E	3943.49	0.95
7337.00	91.02	0.40	3562.56	4038.43 N	23.04 E	4038.48	0.91
7431.00	91.57	1.91	3560.44	4132.38 N	24.93 E	4132.45	1.71
7527.00	91.45	1.69	3557.91	4228.30 N	27.94 E	4228.39	0.26
7621.00	89.66	1.96	3557.00	4322.25 N	30.93 E	4322.36	1.93
7716.00	88.15	1.84	3558.81	4417.18 N	34.08 E	4417.31	1.59
7811.00	87.81	1.90	3562.15	4512.07 N	37.18 E	4512.22	0.36
7906.00	88.58	2.41	3565.14	4606.95 N	40.75 E	4607.13	0.97
7965.00	89.75	3.08	3566.00	4665.88 N	43.57 E	4666.08	2.28
8015.00	89.75	3.08	3566.21	4715.80 N	46.26 E	4716.02	0.01

CALCULATION BASED ON MINIMUM CURVATURE METHOD

**SURVEY COORDINATES RELATIVE TO WELL SYSTEM REFERENCE POINT
TVD VALUES GIVEN RELATIVE TO DRILLING MEASUREMENT POINT**

**VERTICAL SECTION RELATIVE TO WELL HEAD
VERTICAL SECTION IS COMPUTED ALONG A DIRECTION OF 0.47 DEGREES (GRID)
A TOTAL CORRECTION OF 4.42 DEG FROM MAGNETIC NORTH TO GRID NORTH HAS BEEN APPLIED**

**HORIZONTAL DISPLACEMENT IS RELATIVE TO THE WELL HEAD.
HORIZONTAL DISPLACEMENT(CLOSURE) AT 8015.00 FEET
IS 4716.03 FEET ALONG 0.56 DEGREES (GRID)**

Final Survey Projected to Bit at depth of 8015'