

30-025-41067

Job Number: 13MLD0264
Company: EOG Resources

State/Country: New Mexico, USA
Declination: 6.93

Lease/Well: Endurance 25 Fed #2 Monitor/ SWD Grid: East to Grid

Location: Lea County

File name: C:\DOCUME~1\PDS\DESKTOP\ENDURA~1\SURVEYS\

Rig Name: Cactus 123

Date/Time: 27-Apr-13 / 01:29

RKB: 30'

Curve Name: Work

G.L. or M.S.L.: MSL

PathFinder Energy Drilling

WINSERVE SURVEY CALCULATIONS

Minimum Curvature Method

Vertical Section Plane .00

Vertical Section Referenced to Wellhead

Rectangular Coordinates Referenced to Wellhead

HOBBS OCD

MAR 12 2014

RECEIVED

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
Multi-Shot Gyro Tie In									
875.00	.39	322.26	874.99	1.55	-3.80	1.55	4.10	292.19	.00
Following are Pathfinder MWD Surveys									
1057.00	.70	359.52	1056.98	3.15	-4.19	3.15	5.24	306.96	.25
1241.00	.62	1.98	1240.97	5.27	-4.16	5.27	6.72	321.69	.05
1426.00	.44	9.10	1425.96	6.97	-4.02	6.97	8.05	330.05	.10
1613.00	.44	353.63	1612.96	8.39	-3.98	8.39	9.29	334.62	.06
1803.00	.44	320.67	1802.95	9.68	-4.53	9.68	10.69	334.95	.13
1992.00	.53	316.89	1991.94	10.88	-5.58	10.88	12.23	332.84	.05
2182.00	.53	250.88	2181.94	11.24	-7.01	11.24	13.25	328.03	.30
2372.00	.35	210.89	2371.93	10.45	-8.14	10.45	13.25	322.08	.18
2561.00	.35	198.15	2560.93	9.41	-8.62	9.41	12.76	317.51	.04
2751.00	.26	105.25	2750.93	8.74	-8.38	8.74	12.11	316.20	.23
2941.00	.79	112.81	2940.92	8.12	-6.76	8.12	10.57	320.23	.28
3131.00	.62	105.95	3130.90	7.33	-4.56	7.33	8.64	328.09	.10
3321.00	.53	100.77	3320.89	6.88	-2.71	6.88	7.40	338.49	.05
3511.00	.70	133.02	3510.88	5.93	-1.00	5.93	6.01	350.42	.20
3701.00	.35	147.44	3700.88	4.65	.16	4.65	4.65	1.97	.20
3890.00	1.85	101.29	3889.84	3.56	3.46	3.56	4.97	44.18	.86
4080.00	.53	281.47	4079.81	3.14	5.61	3.14	6.43	60.78	1.25
4270.00	.35	306.52	4269.81	3.66	4.28	3.66	5.63	49.49	.14
4460.00	.26	312.23	4459.80	4.29	3.50	4.29	5.54	39.16	.05
4651.00	1.14	118.35	4650.79	3.68	4.85	3.68	6.09	52.78	.73
4840.00	.35	166.86	4839.78	2.23	6.63	2.23	7.00	71.44	.50
5019.00	.26	148.05	5018.77	1.35	6.97	1.35	7.10	79.04	.07
5201.00	.44	313.99	5200.77	1.49	6.69	1.49	6.85	77.48	.38

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
5392.00	.62	303.97	5391.76	2.57	5.30	2.57	5.89	64.13	.11
5582.00	.26	319.35	5581.76	3.47	4.17	3.47	5.43	50.21	.20
5771.00	.44	314.52	5770.75	4.31	3.37	4.31	5.47	38.07	.10
5960.00	.62	313.29	5959.75	5.52	2.11	5.52	5.91	20.94	.10
6150.00	.70	283.32	6149.73	6.49	.23	6.49	6.49	2.07	.18
6340.00	.88	277.60	6339.72	6.95	-2.34	6.95	7.33	341.38	.10
6530.00	.97	278.83	6529.69	7.39	-5.38	7.39	9.14	323.96	.05
6719.00	.18	81.78	6718.68	7.68	-6.66	7.68	10.17	319.04	.60
6908.00	.35	103.58	6907.68	7.58	-5.81	7.58	9.55	322.55	.10
7098.00	.44	94.53	7097.68	7.39	-4.52	7.39	8.66	328.57	.06
7295.00	.35	108.59	7294.67	7.14	-3.19	7.14	7.82	335.90	.07
7484.00	.79	76.51	7483.66	7.26	-1.38	7.26	7.39	349.24	.28
7673.00	.26	149.81	7672.66	7.19	.10	7.19	7.19	.82	.40
7862.00	.35	202.46	7861.65	6.29	.10	6.29	6.29	.90	.15
8052.00	.79	190.50	8051.64	4.46	-.36	4.46	4.48	355.37	.24
8242.00	.88	198.85	8241.62	1.80	-1.07	1.80	2.09	329.17	.08
8405.00	.70	173.54	8404.61	-.38	-1.36	-.38	1.42	254.50	.24
8595.00	.70	183.30	8594.59	-2.69	-1.30	-2.69	2.99	205.80	.06
8784.00	.79	186.46	8783.58	-5.14	-1.51	-5.14	5.36	196.42	.05
8975.00	.88	191.47	8974.56	-7.88	-1.95	-7.88	8.12	193.92	.06
9165.00	.18	330.78	9164.55	-9.05	-2.39	-9.05	9.36	194.78	.54
9355.00	.00	340.27	9354.55	-8.79	-2.53	-8.79	9.15	196.08	.09
9544.00	.09	354.95	9543.55	-8.64	-2.55	-8.64	9.01	196.42	.05
9734.00	.09	273.56	9733.55	-8.49	-2.71	-8.49	8.91	197.71	.06
9924.00	1.32	235.33	9923.53	-9.72	-4.66	-9.72	10.78	205.60	.66
10113.00	1.14	217.57	10112.49	-12.45	-7.60	-12.45	14.58	211.39	.22
10303.00	2.55	229.26	10302.39	-16.71	-11.95	-16.71	20.54	215.58	.76
10494.00	1.41	277.60	10493.28	-19.17	-17.50	-19.17	25.96	222.39	1.01
10684.00	.62	295.01	10683.25	-18.43	-20.75	-18.43	27.75	228.39	.44
10797.00	1.49	265.39	10796.23	-18.29	-22.77	-18.29	29.20	231.23	.88
TD PTB									
10850.00	1.49	265.39	10849.21	-18.40	-24.14	-18.40	30.35	232.69	.00