

Pathfinder Energy

Survey Report

Company: EOG Resources		Date: 6/14/2006		Time: 15:14:01		Page: 1	
Field: Thames Field		Co-ordinate(NE) Reference: Well: Guadalupe 8 Fed #1, Grid North					
Site: Guadalupe 8 Fed #1		Vertical (TVD) Reference: System: Mean Sea Level					
Well: Guadalupe 8 Fed #1		Section (VS) Reference: Well (0.00N,0.00E,270.05Azi)					
Wellpath: Original Hole		Survey Calculation Method: Minimum Curvature		Db: Sybase			

Field: Thames Field Eddy, Co. NM USA		Map Zone: New Mexico, Eastern Zone	
Map System: US State Plane Coordinate System 1927		Coordinate System: Well Centre	
Geo Datum: NAD27 (Clarke 1866)		Geomagnetic Model: igrf2005	
Sys Datum: Mean Sea Level			

Site: Guadalupe 8 Fed #1			
Eddy County, NM			
Site Position:	Northing: 705484.00 ft	Latitude: 32 56 20.964 N	
From: Map	Easting: 416906.90 ft	Longitude: 104 36 15.036 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 3645.00 ft		Grid Convergence: -0.15 deg	

Well: Guadalupe 8 Fed #1		Slot Name:	
Well Position:	Northing: 705484.00 ft	Latitude: 32 56 20.964 N	
+N/-S 0.00 ft	Easting: 416906.90 ft	Longitude: 104 36 15.036 W	
+E/-W 0.00 ft			
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: Mean Sea Level		Tie-on Depth: 0.00 ft	
Magnetic Data: 6/1/2006		Above System Datum: Mean Sea Level	
Field Strength: 49473 nT		Declination: 8.70 deg	
Vertical Section: Depth From (TVD)		Mag Dip Angle: 60.79 deg	
ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	270.05

Survey: Pathfinder Mwd Survey		Start Date: 6/7/2006	
Company: Pathfinder Energy		Engineer:	
Tool:		Tied-to: From: Definitive Path	

Survey: Pathfinder Mwd Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
3700.00	1.16	102.55	3699.73	7.43	11.11	-11.11	0.00	0.00	0.00	
3712.00	0.44	187.44	3711.73	7.36	11.23	-11.22	10.03	-6.00	707.42	
3743.00	3.08	260.97	3742.71	7.11	10.39	-10.38	9.63	8.52	237.19	
3775.00	7.03	269.44	3774.58	6.95	7.58	-7.57	12.53	12.34	26.47	
3807.00	11.26	275.33	3806.17	7.22	2.51	-2.50	13.52	13.22	18.41	
3838.00	15.48	277.88	3836.32	8.07	-4.61	4.61	13.74	13.61	8.23	
3869.00	19.61	275.42	3865.88	9.13	-13.89	13.89	13.53	13.32	-7.94	
3901.00	23.30	273.13	3895.65	9.98	-25.56	25.56	11.82	11.53	-7.16	
3932.00	26.82	271.64	3923.73	10.52	-38.67	38.68	11.54	11.35	-4.81	
3964.00	30.42	270.23	3951.82	10.76	-54.00	54.00	11.45	11.25	-4.41	
3995.00	33.41	269.88	3978.13	10.77	-70.38	70.39	9.66	9.65	-1.13	
4027.00	36.40	269.97	4004.37	10.75	-88.69	88.70	9.35	9.34	0.28	
4058.00	39.66	270.41	4028.78	10.81	-107.79	107.80	10.55	10.52	1.42	
4089.00	43.00	270.59	4052.06	10.99	-128.25	128.26	10.78	10.77	0.58	
4121.00	46.25	270.50	4074.83	11.21	-150.73	150.74	10.16	10.16	-0.28	
4152.00	49.95	271.11	4095.53	11.54	-173.80	173.81	12.02	11.94	1.97	
4184.00	53.38	271.03	4115.38	12.00	-198.89	198.90	10.72	10.72	-0.25	
4215.00	57.42	270.50	4132.97	12.34	-224.40	224.41	13.11	13.03	-1.71	
4246.00	60.76	269.88	4148.90	12.43	-250.99	251.00	10.91	10.77	-2.00	
4278.00	64.10	269.97	4163.71	12.39	-279.35	279.36	10.44	10.44	0.28	
4309.00	67.71	270.32	4176.36	12.46	-307.65	307.66	11.69	11.65	1.13	
4341.00	71.40	270.50	4187.54	12.68	-337.63	337.64	11.54	11.53	0.56	
4372.00	74.74	270.59	4196.56	12.96	-367.28	367.29	10.78	10.77	0.29	
4403.00	77.65	270.67	4203.96	13.29	-397.38	397.39	9.39	9.39	0.26	

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Survey Report

Company: EOG Resources Field: Thames Field Site: Guadalupe 8 Fed #1 Well: Guadalupe 8 Fed #1 Wellpath: Original Hole	Date: 6/14/2006 Time: 15:14:01 Page: 2 Co-ordinate(NE) Reference: Well: Guadalupe 8 Fed #1, Grid North Vertical (TVD) Reference: System: Mean Sea Level Section (VS) Reference: Well (0.00N,0.00E,270.05Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey: Pathfinder Mwd Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
4435.00	80.46	270.23	4210.03	13.54	-428.79	428.80	8.88	8.78	-1.37	
4466.00	83.01	269.71	4214.49	13.52	-459.47	459.48	8.39	8.23	-1.68	
4498.00	85.38	269.79	4217.73	13.38	-491.30	491.31	7.41	7.41	0.25	
4529.00	88.02	270.50	4219.51	13.46	-522.24	522.26	8.82	8.52	2.29	
4561.00	89.69	270.23	4220.15	13.66	-554.24	554.25	5.29	5.22	-0.84	
4592.00	89.34	269.88	4220.41	13.69	-585.24	585.25	1.60	-1.13	-1.13	
4686.00	92.42	270.67	4218.97	14.15	-679.21	679.22	3.38	3.28	0.84	
4780.00	90.66	269.71	4216.44	14.46	-773.17	773.18	2.13	-1.87	-1.02	
4812.00	90.66	269.53	4216.07	14.24	-805.17	805.18	0.56	0.00	-0.56	
4843.00	90.66	269.88	4215.72	14.08	-836.17	836.18	1.13	0.00	1.13	
4875.00	90.13	269.36	4215.50	13.87	-868.16	868.18	2.32	-1.66	-1.62	
4906.00	90.04	269.71	4215.45	13.62	-899.16	899.18	1.17	-0.29	1.13	
4938.00	89.69	269.97	4215.52	13.53	-931.16	931.17	1.36	-1.09	0.81	
4969.00	89.43	270.41	4215.76	13.63	-962.16	962.17	1.65	-0.84	1.42	
5032.00	90.04	270.94	4216.05	14.38	-1025.16	1025.17	1.28	0.97	0.84	
5063.00	89.96	270.94	4216.05	14.89	-1056.15	1056.17	0.26	-0.26	0.00	
5127.00	88.81	269.97	4216.74	15.39	-1120.14	1120.16	2.35	-1.80	-1.52	
5158.00	88.81	269.79	4217.38	15.33	-1151.14	1151.15	0.58	0.00	-0.58	
5190.00	88.37	269.53	4218.17	15.14	-1183.13	1183.14	1.60	-1.37	-0.81	
5221.00	87.67	269.62	4219.24	14.91	-1214.11	1214.12	2.28	-2.26	0.29	
5253.00	88.29	269.88	4220.37	14.77	-1246.09	1246.10	2.10	1.94	0.81	
5284.00	88.29	269.44	4221.30	14.59	-1277.07	1277.09	1.42	0.00	-1.42	
5316.00	87.58	269.62	4222.45	14.32	-1309.05	1309.06	2.29	-2.22	0.56	
5347.00	87.49	268.92	4223.78	13.93	-1340.02	1340.03	2.27	-0.29	-2.26	
5378.00	88.11	269.62	4224.97	13.53	-1370.99	1371.01	3.02	2.00	2.26	
5410.00	88.46	269.44	4225.93	13.27	-1402.98	1402.99	1.23	1.09	-0.56	
5441.00	88.72	270.32	4226.69	13.21	-1433.97	1433.98	2.96	0.84	2.84	
5473.00	88.90	270.67	4227.36	13.48	-1465.96	1465.97	1.23	0.56	1.09	
5504.00	89.43	271.38	4227.81	14.04	-1496.95	1496.96	2.86	1.71	2.29	
5535.00	90.57	272.52	4227.81	15.09	-1527.93	1527.95	5.20	3.68	3.68	
5567.00	90.66	272.52	4227.47	16.50	-1559.90	1559.91	0.28	0.28	0.00	
5598.00	90.57	272.52	4227.13	17.86	-1590.87	1590.88	0.29	-0.29	0.00	
5661.00	89.96	272.70	4226.84	20.73	-1653.80	1653.82	1.01	-0.97	0.29	
5724.00	88.46	272.08	4227.71	23.36	-1716.74	1716.76	2.58	-2.38	-0.98	
5756.00	89.25	271.99	4228.35	24.49	-1748.71	1748.73	2.48	2.47	-0.28	
5820.00	91.28	271.29	4228.05	26.33	-1812.68	1812.70	3.36	3.17	-1.09	
5883.00	91.19	271.20	4226.70	27.69	-1875.65	1875.68	0.20	-0.14	-0.14	
5978.00	91.63	269.62	4224.36	28.37	-1970.62	1970.64	1.73	0.46	-1.66	
6074.00	90.40	269.44	4222.66	27.59	-2066.60	2066.62	1.29	-1.28	-0.19	
6169.00	92.15	268.56	4220.54	25.93	-2161.56	2161.58	2.06	1.84	-0.93	
6263.00	90.84	267.07	4218.09	22.35	-2255.45	2255.47	2.11	-1.39	-1.59	
6358.00	92.77	268.83	4215.10	18.95	-2350.33	2350.35	2.75	2.03	1.85	
6422.00	90.13	264.70	4213.48	15.34	-2414.19	2414.20	7.66	-4.12	-6.45	
6483.00	91.28	266.81	4212.73	10.82	-2475.02	2475.02	3.94	1.89	3.46	
6546.00	92.24	266.98	4210.79	7.41	-2537.89	2537.90	1.55	1.52	0.27	
6609.00	92.86	267.33	4207.99	4.29	-2600.75	2600.76	1.13	0.98	0.56	
6672.00	94.35	269.00	4204.03	2.28	-2663.59	2663.59	3.55	2.37	2.65	
6766.00	94.26	268.65	4196.97	0.35	-2757.31	2757.31	0.38	-0.10	-0.37	
6861.00	94.09	269.00	4190.06	-1.59	-2852.03	2852.03	0.41	-0.18	0.37	
6988.00	93.47	268.83	4181.68	-3.99	-2978.73	2978.73	0.51	-0.49	-0.13	
7113.00	92.95	269.36	4174.68	-5.96	-3103.52	3103.52	0.59	-0.42	0.42	
7209.00	93.12	269.53	4169.60	-6.89	-3199.38	3199.38	0.25	0.18	0.18	
7334.00	92.95	270.23	4162.98	-7.15	-3324.21	3324.20	0.58	-0.14	0.56	

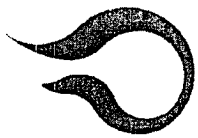
Pathfinder Energy

Survey Report

Company: EOG Resources Field: Thames Field Site: Guadalupe 8 Fed #1 Well: Guadalupe 8 Fed #1 Wellpath: Original Hole	Date: 6/14/2006 Time: 15:14:01 Page: 3 Co-ordinate(NE) Reference: Well: Guadalupe 8 Fed #1, Grid North Vertical (TVD) Reference: System: Mean Sea Level Section (VS) Reference: Well (0.00N,0.00E,270.05Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey: Pathfinder Mwd Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7461.00	93.21	270.50	4156.16	-6.34	-3451.02	3451.01	0.29	0.20	0.21	
7554.00	91.98	268.65	4151.95	-7.03	-3543.92	3543.91	2.39	-1.32	-1.99	
7618.00	91.98	268.65	4149.74	-8.54	-3607.86	3607.85	0.00	0.00	0.00	



eog resources

Field: Thames Field
Site: Guadalupe 8 Fed #1
Well: Guadalupe 8 Fed #1
Wellpath: Original Hole
Survey: Pathfinder Mwd Survey

SITE DETAILS

Guadalupe 8 Fed #1
Eddy County, NM
Site Centre Northing: 705484.00
Easting: 416906.50
Ground Level: 3645.00
Positional Uncertainty: 0.00
Convergence: -0.15

COMPANY DETAILS

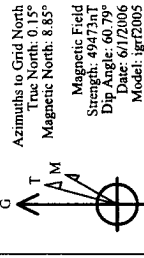
EOG Resources
4000 N. Big Spring, Ste. 500
Midland, TX 79705

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Cone
Warning Method: Error Ratio

PATHFINDER

WELLPATH DETAILS

Rig: McVay #4
Ref. Datum: Mean Sea Level
V. Section Angle: 270.05°
Origin +N/-S: 0.00
Origin +E/-W: 0.00
Starting From TVD: 0.00



WELL DETAILS

Name: Guadalupe 8 Fed #1
+N/-S: 0.00
+E/-W: 0.00
Northing: 705484.00
Easting: 416906.90
Latitude: 32°56'20.96"N
Longitude: 104°36'15.03"W
Slot: N/A

Survey: Pathfinder Mwd Survey (Guadalupe 8 Fed #1/Original Hole)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSoc
50	5410.00	88.46	269.44	4225.93	13.27	-1402.98	1.23	-27.21	1402.99
51	5441.00	88.72	270.32	4226.69	13.21	-1433.97	2.96	73.55	1433.98
52	5473.00	88.90	270.67	4227.36	13.48	-1463.96	1.23	62.78	1463.97
53	5504.00	89.43	271.38	4227.81	14.04	-1496.95	2.86	53.26	1496.96
54	5535.00	90.57	272.32	4227.81	15.06	-1527.93	5.20	45.00	1527.95
55	5567.00	90.66	272.32	4227.47	16.50	-1559.90	0.28	0.00	1559.91
56	5598.00	90.57	272.52	4227.13	17.86	-1590.87	0.29	180.00	1590.88
57	5641.00	89.96	272.70	4226.84	20.73	-1653.80	1.01	163.56	1653.82
58	5684.00	89.40	272.81	4226.44	23.67	-1718.71	2.48	155.56	1718.73
59	5726.00	89.25	271.98	4226.05	26.33	-1787.68	3.36	19.02	1787.70
60	5820.00	91.19	271.20	4226.70	37.69	-1875.65	0.20	-135.01	1875.68
61	5914.00	91.19	269.44	4226.70	37.69	-1875.65	0.20	-135.01	1875.68
62	5970.00	90.40	269.44	4226.66	27.59	-2066.60	1.39	-171.67	2066.62
63	6043.00	90.13	266.81	4227.73	15.34	-2414.19	7.66	-122.53	2414.20
64	6169.00	92.15	268.56	4220.54	25.93	-2161.56	2.06	-26.68	2161.58
65	6353.00	90.84	267.07	4218.09	22.35	-2235.45	2.11	-131.31	2235.47
66	6358.00	92.77	268.83	4215.10	18.95	-2350.33	2.75	-42.32	2350.35
67	6422.00	90.13	264.70	4213.48	15.34	-2414.19	7.66	-122.53	2414.20
68	6443.00	91.28	266.81	4212.73	10.82	-2475.02	3.94	61.40	2475.02
69	6466.00	91.24	265.81	4211.89	7.18	-2517.99	1.55	10.03	2517.99
70	6499.00	92.86	267.33	4207.99	4.29	-2607.75	1.13	29.41	2607.76
71	6672.00	94.35	269.00	4204.03	2.28	-2663.59	3.55	48.15	2663.59
72	6766.00	94.26	268.65	4196.97	0.35	-2757.31	0.38	-104.45	2757.31
73	6860.00	93.47	268.30	4189.88	-1.62	-2851.03	0.51	-164.69	2851.03
74	6988.00	93.47	268.83	4181.68	-5.96	-2978.73	0.59	-134.48	2978.73
75	7113.00	92.95	269.36	4174.68	-8.90	-3103.52	0.59	-134.48	3103.52
76	7290.00	93.12	269.53	4169.60	-4.80	-3199.38	0.25	44.96	3199.38
77	7314.00	92.95	270.23	4162.98	-7.15	-3324.21	0.58	103.65	3324.20
78	7461.00	93.21	270.50	4156.16	-6.34	-3451.02	0.29	46.03	3451.01
79	7554.00	91.88	268.65	4151.95	-7.03	-3543.92	2.39	-123.60	3543.91
80	7818.00	91.98	268.65	4149.74	-4.54	-3607.86	0.00	0.00	3607.85

TARGET DETAILS

Name: PBHL Guadalupe 8 Fed #1H
TVD: 4153.70
+N/-S: 3.30
+E/-W: -3985.90
Shape: Point

ANNOTATIONS

No.	TVD	MD	Annotation
1	3699.73	3700.00	Tie-In to Gyro
2	3712.73	3713.00	KOP @ 3713' w/ 11.48° DLS
3	4218.40	4507.14	End of Curve @ 4507' MD / 4222' TVD
4	4222.55	6063.97	Begin 3rd Build Rate
5	4222.55	6063.97	End of Build @ 92' Inc.

