

Pathfinder Energy

Survey Report

Company: EOG Resources	Date: 7/5/2006	Time: 11:02:29	Page: 1
Field: Thames Field	Co-ordinate(NE) Reference: Well: New 25 Fed #1H, Grid North		
Site: New 25 Fed #1H	Vertical (TVD) Reference: SITE 3647.0		
Well: New 25 Fed #1H	Section (VS) Reference: Well (0.00N,0.00E,0.04Azi)		
Wellpath: Original Hole	Survey Calculation Method: Minimum Curvature	Db: Sybase	

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

Site: New 25 Fed #1H			
S-25, T-25S, R-24E			
Site Position:	Northing: 686960.30 ft	Latitude: 32 53 18.136 N	
From: Map	Easting: 437987.90 ft	Longitude: 104 32 7.251 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 3647.00 ft		Grid Convergence: -0.11 deg	

Well: New 25 Fed #1H	Slot Name:		
Well Position: +N/-S 0.00 ft	Northing: 686960.30 ft	Latitude: 32 53 18.136 N	
+E/-W 0.00 ft	Easting: 437987.90 ft	Longitude: 104 32 7.251 W	
Position Uncertainty: 0.00 ft			

Wellpath: Original Hole	Drilled From: Surface		
Current Datum: SITE	Tie-on Depth: 0.00 ft		
Magnetic Data: 6/24/2006	Above System Datum: Mean Sea Level		
Field Strength: 49445 nT	Declination: 8.66 deg		
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.75 deg		
ft	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	0.04

Survey: Pathfinder MWD Surveys	Start Date: 6/27/2006		
Company: Pathfinder Energy	Engineer: Midwellplan		
Tool:	Tied-to: From: Definitive Path		

Survey: Pathfinder MWD Surveys										
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
4300.00	2.72	101.77	4299.63	-32.37	3.27	-32.36	0.00	0.00	0.00	
4342.00	2.81	83.04	4341.58	-32.45	5.27	-32.44	2.15	0.21	-44.60	
4373.00	4.04	46.91	4372.53	-31.61	6.82	-31.60	7.82	3.97	-116.55	
4405.00	6.60	26.79	4404.39	-29.20	8.47	-29.19	9.78	8.00	-62.87	
4436.00	10.20	23.71	4435.05	-25.09	10.38	-25.08	11.70	11.61	-9.94	
4468.00	13.89	22.39	4466.34	-18.94	12.98	-18.93	11.56	11.53	-4.12	
4499.00	17.67	20.28	4496.17	-11.09	16.03	-11.07	12.33	12.19	-6.81	
4531.00	21.46	18.44	4526.32	-0.97	19.57	-0.96	12.00	11.84	-5.75	
4562.00	25.50	16.59	4554.74	10.81	23.27	10.82	13.25	13.03	-5.97	
4593.00	29.37	14.57	4582.25	24.56	27.09	24.58	12.84	12.48	-6.52	
4624.00	33.24	11.14	4608.74	40.27	30.64	40.29	13.74	12.48	-11.06	
4656.00	36.58	7.89	4634.98	58.32	33.65	58.35	11.94	10.44	-10.16	
4687.00	40.10	4.11	4659.29	77.44	35.63	77.47	13.64	11.35	-12.19	
4719.00	43.35	0.95	4683.17	98.71	36.55	98.74	12.09	10.16	-9.87	
4750.00	47.04	359.72	4705.02	120.70	36.67	120.72	12.23	11.90	-3.97	
4782.00	51.27	359.54	4725.94	144.90	36.52	144.93	13.23	13.22	-0.56	
4813.00	56.28	359.10	4744.25	169.90	36.22	169.92	16.20	16.16	-1.42	
4844.00	61.11	358.22	4760.36	196.37	35.59	196.39	15.77	15.58	-2.84	
4876.00	64.90	357.43	4774.88	224.86	34.51	224.88	12.05	11.84	-2.47	
4907.00	67.18	357.17	4787.47	253.15	33.17	253.18	7.39	7.35	-0.84	
4939.00	70.08	357.26	4799.13	282.91	31.73	282.94	9.07	9.06	0.28	
4970.00	73.34	357.61	4808.85	312.31	30.41	312.34	10.57	10.52	1.13	
5001.00	76.41	357.70	4816.94	342.21	29.18	342.23	9.91	9.90	0.29	
5033.00	79.40	358.14	4823.65	373.48	28.05	373.50	9.44	9.34	1.37	

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Survey: Pathfinder MWD Surveys

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
5065.00	83.19	358.14	4828.49	405.08	27.02	405.10	11.84	11.84	0.00	
5096.00	86.70	357.96	4831.22	435.94	25.97	435.96	11.34	11.32	-0.58	
5127.00	88.46	357.96	4832.53	466.89	24.87	466.91	5.68	5.68	0.00	
5159.00	88.72	358.31	4833.32	498.87	23.83	498.88	1.36	0.81	1.09	
5190.00	90.48	358.49	4833.53	529.85	22.96	529.87	5.71	5.68	0.58	
5222.00	92.24	359.01	4832.77	561.83	22.27	561.85	5.73	5.50	1.62	
5253.00	92.15	358.84	4831.59	592.81	21.68	592.82	0.62	-0.29	-0.55	
5284.00	91.71	358.40	4830.54	623.78	20.94	623.79	2.01	-1.42	-1.42	
5316.00	91.28	359.19	4829.71	655.76	20.27	655.78	2.81	-1.34	2.47	
5348.00	91.19	359.19	4829.02	687.75	19.81	687.76	0.28	-0.28	0.00	
5379.00	91.10	359.19	4828.40	718.74	19.38	718.75	0.29	-0.29	0.00	
5410.00	90.84	359.01	4827.87	749.73	18.89	749.75	1.02	-0.84	-0.58	
5473.00	90.04	357.78	4827.39	812.70	17.12	812.72	2.33	-1.27	-1.95	
5536.00	89.52	356.82	4827.63	875.63	14.16	875.64	1.73	-0.83	-1.52	
5599.00	89.78	356.82	4828.02	938.53	10.66	938.54	0.41	0.41	0.00	
5662.00	91.10	355.67	4827.53	1001.39	6.54	1001.40	2.78	2.10	-1.83	
5725.00	91.28	354.79	4826.22	1064.16	1.30	1064.16	1.43	0.29	-1.40	
5787.00	90.84	354.36	4825.08	1125.87	-4.56	1125.87	0.99	-0.71	-0.69	
5851.00	89.25	352.77	4825.03	1189.47	-11.73	1189.46	3.51	-2.48	-2.48	
5914.00	90.22	351.72	4825.32	1251.89	-20.24	1251.87	2.27	1.54	-1.67	
5978.00	90.04	351.19	4825.17	1315.18	-29.74	1315.15	0.87	-0.28	-0.83	
6041.00	89.08	350.49	4825.66	1377.37	-39.77	1377.34	1.89	-1.52	-1.11	
6135.00	89.52	349.70	4826.80	1469.96	-55.94	1469.92	0.96	0.47	-0.84	
6230.00	89.87	351.54	4827.31	1563.69	-71.42	1563.63	1.97	0.37	1.94	
6324.00	89.34	352.60	4827.96	1656.78	-84.39	1656.72	1.26	-0.56	1.13	
6420.00	91.19	353.74	4827.51	1752.10	-95.81	1752.02	2.26	1.93	1.19	
6515.00	90.22	356.03	4826.35	1846.70	-104.28	1846.62	2.62	-1.02	2.41	
6611.00	89.96	357.52	4826.19	1942.55	-109.68	1942.46	1.58	-0.27	1.55	
6705.00	90.92	359.63	4825.47	2036.51	-112.01	2036.42	2.47	1.02	2.24	
6831.00	90.04	359.01	4824.42	2162.49	-113.51	2162.41	0.85	-0.70	-0.49	
6958.00	91.98	1.21	4822.18	2289.46	-113.27	2289.37	2.31	1.53	1.73	
7085.00	91.36	0.68	4818.48	2416.39	-111.17	2416.30	0.64	-0.49	-0.42	
7244.00	91.01	1.12	4815.19	2575.33	-108.68	2575.25	0.35	-0.22	0.28	
7370.00	88.81	0.68	4815.39	2701.31	-106.70	2701.23	1.78	-1.75	-0.35	
7496.00	88.37	359.98	4818.49	2827.27	-105.97	2827.19	0.66	-0.35	-0.56	
7655.00	88.37	0.86	4823.01	2986.20	-104.81	2986.12	0.55	0.00	0.55	
7814.00	87.85	0.77	4828.25	3145.10	-102.55	3145.02	0.33	-0.33	-0.06	
7972.00	87.58	1.21	4834.55	3302.95	-99.82	3302.87	0.33	-0.17	0.28	
8131.00	88.64	1.30	4839.80	3461.82	-96.34	3461.75	0.67	0.67	0.06	
8221.00	88.72	2.18	4841.87	3551.75	-93.61	3551.68	0.98	0.09	0.98	
8315.00	90.92	1.65	4842.17	3645.69	-90.46	3645.62	2.41	2.34	-0.56	
8441.00	91.19	1.83	4839.85	3771.61	-86.64	3771.55	0.26	0.21	0.14	
8536.00	90.75	0.95	4838.24	3866.57	-84.34	3866.51	1.04	-0.46	-0.93	
8592.00	90.75	0.95	4837.50	3922.56	-83.41	3922.49	0.00	0.00	0.00	

EOG Resources

Field: Thames Field
Site: New 25 Fed #1H
Well: New 25 Fed #1H
Wellpath: Original Hole
Survey: Pathfinder MWD Surveys

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 Conic
 Warning Method: Error Ratio

PATHFINDER

WELLPATH DETAILS

Original Hole
 RIG: SITE 3647.00ft
 Ref. Datum: Origin +E-W
 V. Section Angle 0.04°
 Starting From TVD 0.00

SITE DETAILS

New 25 Fed #1H
 S-25, T-25S, R-24E

Site Centre Northing: 666960.30
 Easting: 437987.90

Ground Level: 3647.00
 Positional Uncertainty: 0.00
 Convergence: -0.11

ANNOTATIONS

No.	TVD	MD	Annotation
1	4299.63	4300.00	Tie In
2	4357.56	4358.00	KOP @ 4358' MD / 4358' TVD Build 11.55°/100
3	4832.09	5113.91	EOC @ 5114' MD / 4840' TVD

Survey: Pathfinder MWD Surveys (New 25 Fed #1H/Original Hole)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
45	5978.00	90.04	351.19	4825.17	1315.18	-29.74	0.87	-108.76	1315.15
46	6041.00	89.08	350.49	4825.66	1377.37	-39.77	1.89	-143.90	1377.34
47	6135.00	88.52	349.50	4826.80	1469.96	-55.94	0.96	-60.89	1469.92
48	6230.00	88.34	348.54	4827.31	1563.98	-71.42	1.57	-12.24	1563.95
49	6324.00	88.34	352.60	4827.16	1658.26	-84.36	2.26	116.27	1658.23
50	6420.00	91.19	353.74	4827.51	1752.10	-95.81	2.26	31.64	1752.02
51	6515.00	90.22	356.03	4826.35	1846.70	-104.28	2.62	112.94	1846.62
52	6611.00	89.96	357.52	4825.55	1942.55	-109.68	1.58	99.90	1942.46
53	6705.00	90.92	359.63	4825.47	2036.51	-112.01	2.47	65.53	2036.42
54	6831.00	90.04	359.01	4824.42	2162.49	-113.51	0.85	-144.83	2162.41
55	6958.00	91.98	1.21	4822.18	2289.46	-113.27	2.31	48.57	2289.37
56	7085.00	91.36	0.68	4818.48	2416.39	-111.17	0.64	-139.48	2416.30
57	7244.00	91.01	1.12	4815.19	2575.33	-108.68	0.35	128.50	2575.25
58	7370.00	88.81	0.68	4815.39	2701.31	-106.70	1.78	-168.69	2701.23
59	7496.00	88.37	359.98	4818.49	2827.27	-105.97	0.66	-122.17	2827.19
60	7653.00	88.37	0.86	4823.01	2986.20	-104.81	0.55	90.01	2986.12
61	7814.00	87.85	0.77	4828.25	3145.10	-102.55	0.33	-170.19	3145.02
62	7972.00	87.58	1.21	4834.55	3302.95	-99.82	0.33	121.56	3302.87
63	8131.00	88.64	1.30	4839.80	3461.82	-96.34	0.67	4.85	3461.75
64	8221.00	88.72	2.18	4841.87	3551.75	-93.61	0.98	84.81	3551.68
65	8315.00	90.92	1.65	4842.17	3645.69	-90.46	2.41	-13.55	3645.62
66	8441.00	91.19	1.83	4839.85	3771.61	-86.64	0.26	33.68	3771.55
67	8536.00	90.75	0.95	4838.24	3866.57	-84.34	1.04	-116.56	3866.51
68	8592.00	90.75	0.95	4837.50	3922.56	-83.41	0.00	0.00	3922.49

