



DIRECTIONAL SURVEY REPORT

EOG RESOURCES

RED HILLS NORTH UNIT #706 #1 ST #1

LEA COUNTY, NEW MEXICO

SUR: I -7-25s-34e, 1830/S & 659/E
BHL: N - 7-25s-34e, 975/S & 3551/E
API # 30-025-32814

PREPARED BY: ROCK BRUNET

PathFinder Energy Services, Inc.
3329 West Pinhook Road, Lafayette, LA 70508
(337) 233-3982

November 7, 2003

EOG RESOURCES, INC.
4000 N. Big Springs Ste. 500
Midland, TX 79702

Attn: Craig Young

RE: EOG RESOURCES
RED HILLS NORTH UNIT #706 #1 ST #1
LEA COUNTY, NEW MEXICO
RIG: MCVAY #7
API NO.: 30-025-32814-01
FILENAME: J-WT-0309-0050

Dear Sir:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

SURVEY DATA

- 1 - Original survey report
- 2 – Survey report copies

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,



Rock Brunet
Service Coordinator
PathFinder Energy Services

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY: A) YOHANCE SAMPSON
B) LEWIS ROBINSON
3. POSITION OF SAID PERSON(S): (A-B) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 10/02/03 TO 10/19/03
5. STATE IN WHICH SURVEY WAS PERFORMED: ONSHORE, NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY, NEW MEXICO
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

EOG RESOURCES
RED HILLS NORTH UNIT #706 #1 ST #1
LEA COUNTY, NEW MEXICO
RIG: MCVAY #7
9. SURVEY CERTIFIED FROM: 11,878 TO 15,067 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 3,015.55 FEET ON A BEARING OF 253.52 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT MEASURED DEPTH OF 15,120 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



ROCK BRUNET
SERVICE COORDINATOR

Pathfinder

BHL Report

Page 1

Job No: J-WT-0309-0050

Date: 10/19/03

Time: 2:06 pm

Wellpath ID: RED HILLS NORTH UNIT #706 ST #1

Date Created: 9/29/03

Last Revision: 10/19/03

Calculated using the Minimum Curvature Method

Computed using PDS VER2.2.6

Vertical Section Plane: 253.95 deg.

Survey Reference: WELLHEAD

Vertical Section Reference: WELLHEAD

Closure Reference: WELLHEAD

TVD Reference: WELLHEAD

EOG RESOURCES

RED HILLS NORTH UNIT # 706 ST #1

LEA COUNTY, NEW MEXICO

McVAY # 7

DECL= 8.02° EAST TO GRID

KBH= 16' ROTARY TO GROUND LEVEL

PATHFINDER OFFICE SUPERVISOR:

GLENN COYLE

PATHFINDER FIELD ENGINEERS:

YOHANCE SAMPSON / LEWIS ROBINSON

Measured Depth	15120.00	(ft)
Inclination	88.64	(deg)
Azimuth	254.64	(deg)
True Vertical Depth	12288.01	(ft)
Vertical Section	3015.47	(ft)
Rectangular Offsets		
North/South	855.47 S	(ft)
East/West	2891.67W	(ft)
Closure Dist & Dir	3015.55@253.52	(deg)
Dogleg Severity	0.00	(deg/100ft)
Build Rate	0.00	(deg/100ft)
Walk Rate	0.00	(deg/100ft)

Pathfinder

Survey Report

Page 1
Job No: J-WT-0309-0050
Date: 10/19/03
Time: 2:01 pm
Wellpath ID: RED HILLS NORTH UNIT #706 ST #1
Date Created: 9/29/03
Last Revision: 10/19/03

Calculated using the Minimum Curvature Method
Computed using PDS VER2.2.6
Vertical Section Plane: 253.95 deg.

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

EOG RESOURCES
RED HILLS NORTH UNIT # 706 ST #1
LEA COUNTY, NEW MEXICO
McVAY # 7

DECL= 8.02° EAST TO GRID
KBH= 16' ROTARY TO GROUND LEVEL

PATHFINDER OFFICE SUPERVISOR:
GLENN COYLE
PATHFINDER FIELD ENGINEERS:
YOHANCE SAMPSON / LEWIS ROBINSON

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft) (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
TIED INTO SCIENTIFIC GYRO SURVEY @ 11820' MD									
11820.00	3.90	262.59	11817.02	0.00	-44.33	79.85 S	69.10 E	105.60@139.13	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS									
11878.00	13.63	302.10	11874.31	58.00	-37.80	76.46 S	61.33 E	98.02@141.27	18.80
11921.00	22.60	303.60	11915.14	43.00	-29.05	69.18 S	50.13 E	85.44@144.07	20.89
11952.00	27.26	296.83	11943.25	31.00	-19.99	62.68 S	38.83 E	73.73@148.22	17.60
12015.00	37.90	292.08	11996.26	63.00	5.88	48.85 S	7.93 E	49.49@170.78	17.36
12048.00	43.00	291.12	12021.37	33.00	22.84	40.98 S	11.97W	42.69@196.29	15.57
12077.00	47.31	289.97	12041.81	29.00	39.34	33.77 S	31.22W	46.00@222.75	15.13
12109.00	51.97	285.67	12062.54	32.00	59.59	26.35 S	54.43W	60.47@244.17	17.80
12140.00	55.57	280.92	12080.86	31.00	81.39	20.62 S	78.76W	81.41@255.33	16.95
12172.00	59.62	277.14	12098.01	32.00	105.85	16.40 S	105.43W	106.70@261.16	16.11
12193.00	61.47	274.50	12108.34	21.00	122.82	14.55 S	123.62W	124.47@263.29	14.05
12231.00	64.89	267.91	12125.50	38.00	155.19	13.87 S	157.49W	158.10@264.97	17.90
12265.00	67.27	261.94	12139.29	34.00	185.68	16.63 S	188.43W	189.16@264.96	17.51
12297.00	69.02	256.01	12151.21	32.00	215.25	22.32 S	217.56W	218.70@264.14	18.05
12330.00	68.24	249.38	12163.25	33.00	245.95	31.45 S	246.88W	248.88@262.74	18.86
12360.00	67.51	242.06	12174.56	30.00	273.43	42.86 S	272.19W	275.55@261.05	22.73
12391.00	68.50	237.76	12186.17	31.00	301.31	57.27 S	297.05W	302.52@259.09	13.25
12424.00	70.27	238.21	12197.79	33.00	331.00	73.65 S	323.24W	331.52@257.17	5.51
12456.00	72.19	245.59	12208.10	32.00	360.61	87.89 S	349.95W	360.82@255.90	22.64
12485.00	73.69	251.00	12216.62	29.00	388.19	98.14 S	375.70W	388.30@255.36	18.57
12517.00	74.97	253.78	12225.26	32.00	418.98	107.46 S	405.06W	419.07@255.14	9.27
12548.00	76.75	255.53	12232.83	31.00	449.04	115.41 S	434.05W	449.13@255.11	7.93
12574.00	79.40	257.69	12238.21	26.00	474.45	121.30 S	458.79W	474.56@255.19	13.04
12613.00	80.20	256.95	12245.11	39.00	512.76	129.72 S	496.24W	512.92@255.35	2.77

Pathfinder

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Date: 10/19/03

Survey Report

Wellpath ID: RED HILLS NORTH UNIT #706 ST #1

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
12644.00	78.35	255.45	12250.88	31.00	543.19	136.98 S	525.82W	543.37@255.40	7.63
12676.00	78.96	253.27	12257.18	32.00	574.57	145.44 S	556.03W	574.74@255.34	6.95
12702.00	80.72	252.82	12261.76	26.00	600.15	152.91 S	580.51W	600.31@255.24	6.98
12711.00	81.43	252.09	12263.16	9.00	609.04	155.59 S	588.98W	609.19@255.20	11.24
12743.00	84.06	251.57	12267.20	32.00	640.76	165.49 S	619.14W	640.88@255.04	8.38
12772.00	84.06	251.74	12270.20	29.00	669.58	174.56 S	646.52W	669.67@254.89	0.58
12808.00	83.10	252.53	12274.23	36.00	705.34	185.54 S	680.57W	705.41@254.75	3.44
12838.00	84.77	253.24	12277.40	30.00	735.16	194.32 S	709.08W	735.22@254.67	6.04
12863.00	87.05	254.11	12279.18	25.00	760.10	201.33 S	733.01W	760.15@254.64	9.76
12896.00	87.85	255.08	12280.65	33.00	793.06	210.08 S	764.79W	793.12@254.64	3.81
12932.00	87.67	255.17	12282.05	36.00	829.03	219.32 S	799.56W	829.09@254.66	0.56
12962.00	87.32	255.87	12283.37	30.00	858.99	226.81 S	828.58W	859.06@254.69	2.61
12997.00	87.49	255.70	12284.95	35.00	893.93	235.40 S	862.47W	894.02@254.73	0.69
13023.00	87.58	256.05	12286.07	26.00	919.89	241.74 S	887.66W	919.99@254.77	1.39
13060.00	88.02	255.78	12287.49	37.00	956.85	250.73 S	923.52W	956.95@254.81	1.39
13089.00	88.90	254.90	12288.27	29.00	985.83	258.07 S	951.57W	985.94@254.83	4.29
13124.00	90.22	254.03	12288.54	35.00	1020.82	267.44 S	985.29W	1020.94@254.81	4.52
13152.00	91.01	253.41	12288.24	28.00	1048.82	275.29 S	1012.16W	1048.93@254.78	3.59
13187.00	91.63	253.06	12287.43	35.00	1083.81	285.39 S	1045.66W	1083.91@254.73	2.03
13216.00	91.36	252.79	12286.67	29.00	1112.79	293.90 S	1073.38W	1112.89@254.69	1.32
13250.00	90.48	252.71	12286.13	34.00	1146.78	303.98 S	1105.84W	1146.86@254.63	2.60
13279.00	89.60	252.71	12286.11	29.00	1175.77	312.60 S	1133.53W	1175.85@254.58	3.03
13314.00	89.52	252.53	12286.37	35.00	1210.76	323.05 S	1166.93W	1210.82@254.53	0.56
13341.00	89.69	252.09	12286.56	27.00	1237.75	331.26 S	1192.66W	1237.80@254.48	1.75
13372.00	89.52	252.53	12286.77	31.00	1268.74	340.68 S	1222.19W	1268.78@254.42	1.52
13408.00	91.54	252.97	12286.44	36.00	1304.73	351.35 S	1256.57W	1304.76@254.38	5.74
13435.00	93.56	253.50	12285.24	27.00	1331.70	359.13 S	1282.39W	1331.73@254.36	7.73
13470.00	93.83	253.32	12282.98	35.00	1366.62	369.10 S	1315.87W	1366.65@254.33	0.93
13503.00	92.86	252.79	12281.06	33.00	1399.56	378.70 S	1347.38W	1399.59@254.30	3.35
13536.00	91.10	252.36	12279.92	33.00	1432.53	388.58 S	1378.84W	1432.55@254.26	5.49
13564.00	90.92	252.36	12279.43	28.00	1460.52	397.06 S	1405.52W	1460.53@254.22	0.64
13596.00	90.84	252.36	12278.93	32.00	1492.50	406.76 S	1436.02W	1492.51@254.18	0.25
13625.00	90.84	252.27	12278.51	29.00	1521.48	415.57 S	1463.64W	1521.49@254.15	0.31
13659.00	90.75	252.18	12278.04	34.00	1555.47	425.95 S	1496.02W	1555.47@254.11	0.37
13687.00	90.66	252.09	12277.69	28.00	1583.45	434.54 S	1522.66W	1583.45@254.07	0.45
13721.00	90.75	251.83	12277.28	34.00	1617.43	445.06 S	1554.99W	1617.43@254.03	0.81
13749.00	91.19	252.62	12276.80	28.00	1645.41	453.61 S	1581.65W	1645.41@254.00	3.23
13785.00	91.45	252.53	12275.97	36.00	1681.39	464.39 S	1615.99W	1681.39@253.97	0.76
13812.00	91.63	252.36	12275.25	27.00	1708.37	472.53 S	1641.72W	1708.37@253.94	0.92
13847.00	91.54	252.44	12274.28	35.00	1743.34	483.11 S	1675.07W	1743.34@253.91	0.34
13877.00	91.36	252.36	12273.52	30.00	1773.32	492.18 S	1703.66W	1773.32@253.89	0.66
13911.00	91.45	252.71	12272.69	34.00	1807.30	502.38 S	1736.08W	1807.31@253.86	1.06
13939.00	91.45	252.27	12271.98	28.00	1835.28	510.80 S	1762.77W	1835.29@253.84	1.57
13974.00	91.19	252.27	12271.17	35.00	1870.26	521.45 S	1796.10W	1870.27@253.81	0.74
14003.00	90.48	252.62	12270.75	29.00	1899.25	530.20 S	1823.75W	1899.25@253.79	2.73

Pathfinder

Survey Report

Page 3
Date: 10/19/03

Wellpath ID: RED HILLS NORTH UNIT #706 ST #1

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
14037.00	90.31	252.36	12270.51	34.00	1933.24	540.43 S	1856.17W	1933.25@253.77	0.91
14063.00	90.04	252.36	12270.43	26.00	1959.23	548.31 S	1880.95W	1959.24@253.75	1.04
14099.00	89.78	252.18	12270.49	36.00	1995.21	559.27 S	1915.24W	1995.23@253.72	0.88
14127.00	89.78	252.18	12270.60	28.00	2023.20	567.84 S	1941.90W	2023.22@253.70	0.00
14163.00	89.60	252.09	12270.79	36.00	2059.18	578.88 S	1976.16W	2059.20@253.67	0.56
14226.00	89.25	251.12	12271.42	63.00	2122.12	598.76 S	2035.94W	2122.16@253.61	1.64
14254.00	89.16	251.30	12271.81	28.00	2150.09	607.78 S	2062.44W	2150.13@253.58	0.72
14289.00	88.64	251.83	12272.49	35.00	2185.05	618.85 S	2095.64W	2185.10@253.55	2.12
14317.00	88.72	252.18	12273.13	28.00	2213.03	627.50 S	2122.26W	2213.09@253.53	1.28
14352.00	90.13	252.27	12273.48	35.00	2248.01	638.18 S	2155.59W	2248.07@253.51	4.04
14379.00	90.57	252.36	12273.32	27.00	2275.00	646.38 S	2181.31W	2275.07@253.49	1.66
14415.00	90.92	252.53	12272.85	36.00	2310.98	657.24 S	2215.63W	2311.06@253.48	1.08
14441.00	90.40	252.44	12272.55	26.00	2336.97	665.06 S	2240.43W	2337.05@253.47	2.03
14480.00	90.57	252.00	12272.22	39.00	2375.95	676.97 S	2277.56W	2376.04@253.45	1.21
14505.00	90.75	252.36	12271.93	25.00	2400.94	684.62 S	2301.36W	2401.03@253.43	1.61
14543.00	90.48	251.74	12271.52	38.00	2438.91	696.33 S	2337.51W	2439.02@253.41	1.78
14570.00	90.57	252.00	12271.28	27.00	2465.89	704.73 S	2363.17W	2466.01@253.39	1.02
14606.00	88.81	252.88	12271.47	36.00	2501.88	715.59 S	2397.49W	2502.00@253.38	5.47
14632.00	88.72	253.24	12272.03	26.00	2527.87	723.17 S	2422.35W	2528.00@253.38	1.43
14669.00	87.93	253.41	12273.11	37.00	2564.85	733.78 S	2457.78W	2564.98@253.38	2.18
14696.00	86.61	253.41	12274.40	27.00	2591.82	741.48 S	2483.63W	2591.95@253.38	4.89
14731.00	86.70	253.76	12276.44	35.00	2626.76	751.35 S	2517.14W	2626.89@253.38	1.03
14757.00	86.44	253.85	12278.00	26.00	2652.71	758.59 S	2542.07W	2652.84@253.38	1.06
14791.00	86.17	253.50	12280.19	34.00	2686.64	768.13 S	2574.63W	2686.77@253.39	1.30
14826.00	86.53	254.03	12282.42	35.00	2721.57	777.90 S	2608.16W	2721.70@253.39	1.83
14857.00	88.11	254.99	12283.86	31.00	2752.53	786.17 S	2638.00W	2752.66@253.41	5.96
14883.00	89.34	255.17	12284.44	26.00	2778.52	792.86 S	2663.12W	2778.64@253.42	4.78
14920.00	89.69	254.64	12284.76	37.00	2815.51	802.49 S	2698.84W	2815.63@253.44	1.72
14948.00	89.60	254.55	12284.93	28.00	2843.51	809.93 S	2725.84W	2843.62@253.45	0.45
14984.00	89.25	254.62	12285.29	36.00	2879.51	819.50 S	2760.54W	2879.61@253.47	0.99
15011.00	89.16	254.73	12285.67	27.00	2906.50	826.63 S	2786.58W	2906.60@253.48	0.53
15047.00	88.81	254.64	12286.30	36.00	2942.49	836.14 S	2821.29W	2942.59@253.49	1.00
15067.00	88.64	254.64	12286.75	20.00	2962.49	841.44 S	2840.57W	2962.58@253.50	0.85
STRAIGHT LINE PROJECTION TO BIT @ 15120' MD									
15120.00	88.64	254.64	12288.01	53.00	3015.47	855.47 S	2891.67W	3015.55@253.52	0.00