

1625 N. French Dr.
Hobbs, NM 88240

Form 3160-4
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: November 30, 2000

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NM19623 BHN24490

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other		6. If Indian, Allottee or Tribe Name	
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		7. Unit or CA Agreement Name and No. RHNU NM104037	
2. Name of Operator EOG RESOURCES, INC.		8. Lease Name and Well No. RED HILLS NORTH UNIT #306	
3. Address P. O. BOX 2267 MIDLAND, TX 79702		9. API Well No. 30-025-35751	
3a. Phone No. (include area code) Ph: 915.686.3689		10. Field and Pool, or Exploratory RED HILLS; BONE SPRING	
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface NESE 2080FSL 990FEL At top prod interval reported below SENE 1330FNL 10FEL At total depth NESE 2080FSL 990FEL Unit 6 18-H 7255 R34E		11. Sec., T., R., M., or Block and Survey or Area Sec 13 T25S R33E Mer 1PM	
12. County or Parish LEA		13. State NM	
14. Date Spudded 11/17/2001		15. Date T.D. Reached 01/25/2002	
16. Date Completed ☐ D & A ☒ Ready to Prod. 02/21/2002		17. Elevations (DF, KB, RT, GL)* 3348 GL	
18. Total Depth: MD 16430 TVD 12500		19. Plug Back T.D.: MD 12658 TVD 11400	
20. Depth Bridge Plug Set: MD TVD			
21. Type Electric & Other Mechanical Logs Run (Submit copy of each)		22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)	

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375	47.0		670		601		0	
12.250	9.625	40.0		5195		1450		0	
8.750	7.000	26.0		12752		1080		4500	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	11437	11411						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) THIRD BONE SPRING	12923	15437	19323 TO 15437			OPEN
B)						
C)						
D)						

26. Perforation Record

Depth Interval	Amount and Type of Material
12923 TO 15437	FT W/15046 GAL 10# WTR FRAC G PREPAD, 11745 GAL 7-1/2% HCL, 73908 GAL 30# DELTA FRAC 200 PAD, 94861
12923 TO 15437	GAL 30# DELTA FRAC 200 20/40 ECONIO PROP, 19049 GAL 10# WTR FRAC G FLUSH.

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
02/21/2002	03/04/2002	24	→	550.0	88.0	54.0			ELECTRIC PUMPING UNIT
Choke Size	Tbg. Press Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
SI	100	30.0	→					POW	

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
SI			→						

(See Instructions and spaces for additional data on reverse side)

ACCEPTED FOR RECORD
MAR 20 2002
GARY GOURLEY
PETROLEUM ENGINEER

BLM-7 000-1 W-5 - Per - Scan - 13

RECEIVED
2002 MAR 11 AM 9:06
BUREAU OF LAND MANAGEMENT
FISHHILL OFFICE

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
3RD BONE SPRING	12923	15437		RUSTLER DELAWARE MT GROUP 3RD BONE SPRING LIME	1100 5150 9275

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7 Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Name (please print) BEV HATFIELD

Title

Sr. Regulatory Admin

Signature

Bev Hatfield

Date 03/08/2002

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Well Name and Number: Red Hills North Unit #306 H

Location: Sec. 13, T25S, R33E, Lea County, NM

SUR: I - 2080/S & 990/E
Operator: EOG Resources, Inc. 30-025-35751

Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
1/2 229	1 10781	77 12610	89 1/2 14649
1/2 670	1 3/4 11262	81 12643	88 1/4 14745
1/2 1184	1 1/2 11741	88 12707	90 3/4 15125
3/4 1659	2 1/4 12222	88.2 12754	91 1/4 15190
1/4 2166	14 1/2 11727	88 12707	89 3/4 15380
3/4 2673	22 1/2 11884	91 12870	87 3/4 15662
1 1/4 3150	36 1/2 11916	92 12932	90 3/4 15758
1 1/4 3655	44 11973	91 12996	88 15868
1/4 4130	46 3/4 12005	89 1/4 13124	90 3/4 15758
3/4 4732	48 3/4 12036	90 1/2 13315	88 15868
1 3/4 5725	52 12100	91 13442	92 1/2 16014
3/4 6236	58 12195	90 1/2 13570	91 1/4 16077
3/4 6742	62 12333	90 13720	91 1/2 16301
3/4 7218	66 12355	90 3/4 13760	91 1/2 16364
1 1/2 7724	68 12385	90 1/4 13824	
1 1/2 8234	76 12512	89 1/2 13855	
1 3/4 8762	82 12683	89 1/2 14014	
2 1/4 9247	83 12705	90 1/4 14109	
1 9724	68 12450	90 14396	
1 10235	66 12511	89 1/2 14586	

Drilling Contractor: McVay Drilling Company

By: [Signature]

Subscribed and sworn to before me this 21st day of January, 2002

[Signature]
Notary Public

My Commission Expires: 8-16-05

Lea County, New Mexico



MWD SERVICES, INC.

FIELD SURVEY CALCULATIONS

DATE PRINTED: 01/17/02
 COMPANY: EOG RESOURCES, INC.
 LOCATION: LEA COUNTY, NM
 FILE NAME: 02002.SRV
 CALCULATION MODEL: MINIMUM CURVATURE METHOD
 GRID CONVERGENCE: 0.45 E MAGN. DEC.: 8.72 E MAGN. TO MAP CORR.: 8.27 E
 COMMENTS: SURVEY #0 = TIE IN SURVEY FROM COMPUTALOG DRG. SVCS. GYRO
 SURVEY #88 = FINAL SURVEY, BOREHOLE CONTINUES
 SURVEYS CORRECTED TO GRID NORTH

MWD.REP.: J.TURNEY / W.HATTAWAY

WELL_NAME: RED HILLS NORTH UNIT 306-H

RIG: MCVAY DRILLING 10

VERT.SEC.DIR.: N 71.07 E

DEPTH DATUM: RKB

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===== MWD SURVEY PROGRAM

Ver: 3.10 PC (4-Jun-87)

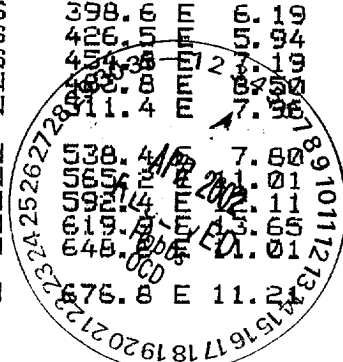
Date: 1/17/2002 Time: 15: 7: 9

Filename: "02002.SRV" Description: "Red Hills North Unit 306-H" PAGE: 1

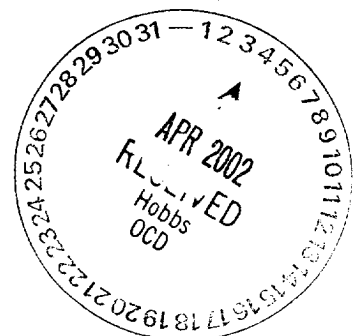
Target Coordinates: 2143.4 N 6248.0 E Target TVD: 12279.000

Using Minimum Curvature Method.

S #	MEASURED DEPTH (feet)	DRIFT ANGLE (deg)	DRIFT DIRECTION (deg)	COURSE LENGTH (feet)	TRUE VERTICAL DEPTH (feet)	VERTICAL SECTION (feet)	RECTANGULAR COORDINATES (feet)	DOGLEG SEVERITY DG/100FT
0	11400.0	1.25	223.750	0.0	11396.1	0.0	172.2 S	16.5 W 0.00
1	11600.0	1.10	178.300	200.0	11596.1	-74.0	175.7 S	18.0 W 0.46
2	11632.0	2.60	79.800	32.0	11628.0	-73.4	175.9 S	17.2 W 0.28
3	11664.0	6.90	70.000	32.0	11659.9	-70.7	175.1 S	14.7 W 13.63
4	11695.0	10.50	64.900	31.0	11690.6	-66.1	173.2 S	10.4 W 11.87
5	11727.0	14.50	62.400	32.0	11721.8	-59.2	170.2 S	4.2 W 12.61
6	11758.0	18.60	62.800	31.0	11751.5	-50.5	166.1 S	3.6 W 13.23
7	11790.0	22.20	63.500	32.0	11781.5	-39.4	161.1 S	13.6 E 11.28
8	11821.0	25.60	65.000	31.0	11809.8	-26.9	155.6 S	24.9 E 11.14
9	11853.0	29.20	65.800	32.0	11838.2	-12.3	149.5 S	38.3 E 11.31
10	11884.0	32.50	66.900	31.0	11864.9	3.6	143.1 S	52.9 E 10.80
11	11916.0	36.50	68.200	32.0	11891.2	21.6	136.7 S	69.6 E 12.71
12	11941.0	40.10	70.100	25.0	11910.8	37.1	130.7 S	84.1 E 15.15
13	11973.0	43.80	70.200	32.0	11934.6	50.5	123.5 S	104.2 E 11.56
14	12005.0	46.80	70.800	32.0	11957.1	61.2	115.9 S	125.8 E 9.47
15	12036.0	48.70	70.200	31.0	11978.0	104.2	108.2 S	147.3 E 6.29
16	12068.0	50.50	70.500	32.0	11998.7	128.6	100.8 S	170.2 E 5.67
17	12100.0	52.20	71.100	32.0	12018.7	153.5	91.8 S	193.8 E 5.51
18	12132.0	54.10	71.200	32.0	12037.9	179.2	83.5 S	218.1 E 5.94
19	12163.0	56.10	70.800	31.0	12055.6	204.6	75.2 S	242.1 E 6.54
20	12195.0	57.70	70.500	32.0	12073.1	231.4	66.4 S	267.4 E 5.06
21	12227.0	58.90	70.900	32.0	12089.9	258.6	57.4 S	293.1 E 3.90
22	12258.0	60.40	70.700	31.0	12105.6	285.4	48.6 S	318.3 E 4.87
23	12290.0	62.50	71.200	32.0	12120.9	313.5	39.4 S	344.3 E 6.76
24	12322.0	64.50	71.000	32.0	12135.2	342.1	30.1 S	372.0 E 6.27
25	12353.0	66.40	70.700	31.0	12148.0	370.3	20.9 S	398.6 E 6.19
26	12385.0	68.30	70.600	32.0	12160.4	399.8	11.1 S	426.5 E 5.94
27	12417.0	70.60	70.600	32.0	12171.6	429.6	1.1 S	454.2 E 5.19
28	12450.0	67.80	70.400	33.0	12183.3	460.6	9.2 N	482.8 E 8.30
29	12482.0	65.60	69.000	32.0	12196.0	490.0	19.4 N	511.4 E 7.56
30	12514.0	66.00	66.300	32.0	12209.1	519.1	30.5 N	538.4 E 7.80
31	12546.0	69.00	64.300	32.0	12221.3	548.6	42.8 N	565.2 E 1.01
32	12578.0	72.80	63.500	32.0	12231.8	578.5	56.1 N	592.4 E 1.11
33	12610.0	77.10	62.700	32.0	12240.1	609.1	70.1 N	619.9 E 1.65
34	12643.0	80.70	62.200	32.0	12246.5	641.2	85.1 N	648.5 E 1.01
35	12675.0	84.20	63.000	32.0	12250.7	672.5	99.7 N	676.8 E 11.24



S #	MEASURED DEPTH (feet)	DRIFT ANGLE (deg)	DRIFT DIRECTION (deg)	COURSE LENGTH (feet)	TRUE VERTICAL DEPTH (feet)	VERTICAL SECTION (feet)	--- RECTANGULAR COORDINATES (feet)	DOGLEG SEVERITY DG/100FT
36	12707.0	88.20	64.100	32.0	12252.8	704.2	113.9 N 705.4 E	12.96
37	12807.0	88.90	61.600	100.0	12255.3	803.1	159.5 N 794.3 E	2.60
38	12838.0	90.80	62.800	31.0	12255.4	833.7	174.0 N 821.8 E	7.25
39	12870.0	91.30	64.000	32.0	12254.8	865.4	188.3 N 850.4 E	4.06
40	12901.0	92.00	63.500	31.0	12253.9	896.2	202.0 N 878.2 E	2.77
41	12932.0	92.00	63.700	31.0	12252.8	926.9	215.8 N 905.9 E	0.64
42	12964.0	91.00	64.600	32.0	12252.0	958.7	229.7 N 934.7 E	4.20
43	12996.0	90.90	64.000	32.0	12251.5	990.4	243.6 N 963.5 E	1.90
44	13061.0	89.30	64.500	65.0	12251.4	1055.0	271.8 N 1022.1 E	2.58
45	13124.0	89.30	66.400	63.0	12252.1	1117.7	298.0 N 1079.4 E	3.02
46	13187.0	88.70	67.900	63.0	12253.2	1180.5	322.5 N 1137.4 E	2.56
47	13219.0	89.00	67.200	32.0	12253.9	1212.4	334.7 N 1167.0 E	2.68
48	13251.0	89.70	68.100	32.0	12254.2	1244.4	346.8 N 1196.6 E	3.56
49	13283.0	90.60	68.700	32.0	12254.1	1276.3	358.6 N 1226.6 E	3.58
50	13315.0	90.60	69.000	32.0	12253.8	1308.3	370.2 N 1256.2 E	0.94
51	13347.0	90.50	70.800	32.0	12253.5	1340.3	381.2 N 1286.2 E	5.63
52	13379.0	90.50	70.200	32.0	12253.2	1372.3	391.8 N 1316.4 E	1.87
53	13442.0	91.10	70.500	63.0	12252.6	1435.2	413.0 N 1375.7 E	1.06
54	13506.0	90.40	70.200	64.0	12251.5	1499.3	434.5 N 1436.0 E	1.19
55	13570.0	90.60	69.500	64.0	12250.9	1563.3	456.6 N 1496.0 E	1.14
56	13633.0	90.60	68.600	63.0	12250.3	1626.2	479.1 N 1554.9 E	1.43
57	13697.0	90.30	70.000	64.0	12249.8	1690.2	501.7 N 1614.7 E	2.34
58	13760.0	90.70	67.500	63.0	12249.2	1753.1	524.6 N 1673.5 E	4.02
59	13792.0	91.40	67.900	32.0	12248.7	1785.1	536.7 N 1703.1 E	2.52
60	13824.0	90.80	69.300	32.0	12248.0	1817.0	548.4 N 1732.8 E	4.76
61	13855.0	89.50	69.600	31.0	12248.0	1848.0	559.3 N 1761.9 E	4.30
62	13887.0	89.70	69.000	32.0	12248.2	1880.0	570.6 N 1791.8 E	1.98
63	13950.0	89.30	70.200	63.0	12248.7	1943.0	592.5 N 1850.9 E	2.01
64	14014.0	89.50	69.900	64.0	12249.4	2007.0	614.4 N 1911.0 E	0.56
65	14077.0	90.20	69.200	63.0	12249.6	2069.9	636.4 N 1970.0 E	1.57
66	14141.0	89.60	70.700	64.0	12249.7	2133.9	658.3 N 2030.2 E	2.52
67	14205.0	88.60	71.100	64.0	12250.7	2197.9	679.3 N 2090.6 E	1.68
68	14269.0	89.10	70.800	64.0	12252.0	2261.9	700.1 N 2151.1 E	0.91
69	14332.0	89.10	70.000	63.0	12253.0	2324.9	721.3 N 2210.4 E	1.27
70	14396.0	90.20	69.900	64.0	12253.3	2388.9	743.2 N 2270.6 E	1.73
71	14458.0	91.30	69.300	62.0	12252.5	2450.8	764.8 N 2328.7 E	2.02
72	14522.0	90.40	70.200	64.0	12251.6	2514.8	787.0 N 2388.7 E	1.99
73	14586.0	89.40	70.800	64.0	12251.7	2578.8	808.3 N 2449.0 E	1.82
74	14649.0	89.50	70.200	63.0	12252.3	2641.8	829.4 N 2508.4 E	0.97
75	14713.0	88.20	70.900	64.0	12253.6	2705.8	850.7 N 2568.8 E	2.31
76	14745.0	88.30	70.400	32.0	12254.6	2737.8	861.3 N 2598.9 E	1.59



S #	MEASURED DEPTH (feet)	DRIFT ANGLE (deg)	DRIFT DIRECTION (deg)	COURSE LENGTH (feet)	TRUE VERTICAL DEPTH (feet)	VERTICAL SECTION (feet)	RECTANGULAR COORDINATES (feet)	DOBLEG -SEVERITY DG/100FT
77	14808.0	88.40	72.600	63.0	12256.4	2800.7	881.3 N 2650.6 E	3.49
78	14840.0	88.80	71.900	32.0	12257.2	2832.7	891.0 N 2689.1 E	2.52
79	14903.0	88.70	71.900	63.0	12258.5	2895.7	910.6 N 2749.0 E	0.16
80	14935.0	89.10	71.600	32.0	12259.1	2927.7	920.6 N 2779.4 E	1.56
81	14998.0	89.40	71.900	63.0	12260.0	2990.7	940.3 N 2839.2 E	0.67
82	15062.0	89.90	70.900	64.0	12260.4	3054.7	960.7 N 2899.8 E	1.75
83	15125.0	90.70	70.600	63.0	12260.0	3117.7	981.5 N 2959.3 E	1.36
84	15189.0	91.40	70.100	64.0	12258.9	3181.7	1003.0 N 3019.6 E	1.34
85	15252.0	90.50	72.300	63.0	12257.8	3244.7	1023.3 N 3079.2 E	3.77
86	15316.0	90.50	71.500	64.0	12257.3	3308.6	1043.2 N 3140.0 E	1.25
87	15380.0	89.80	72.300	64.0	12257.1	3372.6	1063.1 N 3200.9 E	1.66
88	15441.0	88.40	72.900	61.0	12258.0	3433.6	1081.3 N 3259.1 E	2.50

--- Final Closure Direction: 71.645
 --- Final Closure Distance: 3433.778 feet

