

HOBBS OCD

District I

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Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
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District IV

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Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025- 41665	² Pool Code 97900	³ Pool Name Red Hills; Upper Bone Spring Shale
⁴ Property Code 40398	⁵ Property Name JOLLY ROGER 16 STATE	⁶ Well Number #1H
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3551'

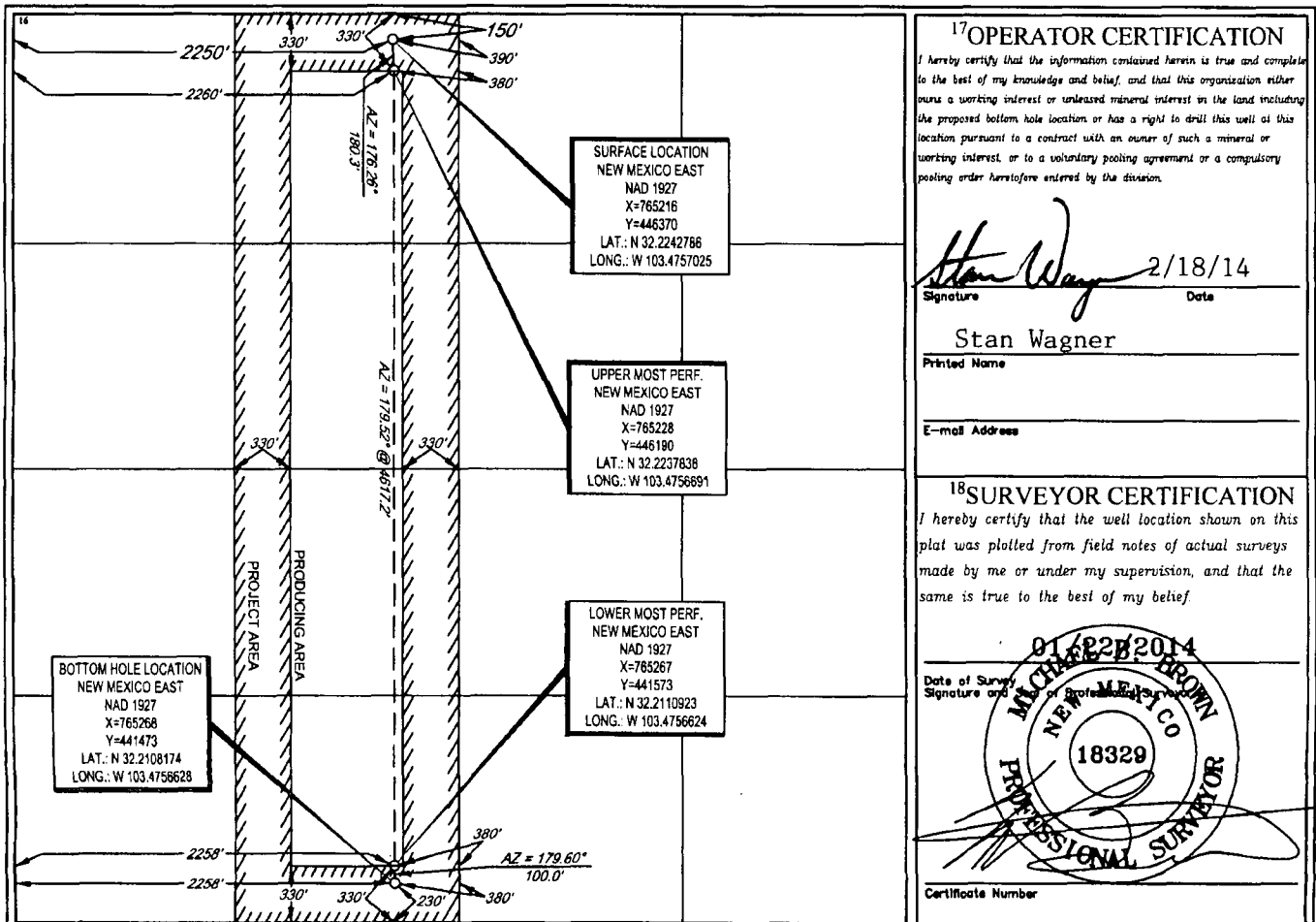
¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	16	24-S	34-E	-	150'	NORTH	2250'	WEST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	16	24-S	34-E	-	230'	SOUTH	2258'	WEST	LEA

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



S:\SURVEY\EOG_MIDLAND\JOLLY_ROGER_16_STATE_#1H\FINAL_PRODUCTS\JOLLY_ROGER16STATE_1H_REV2.DWG 2/10/2014 3:53:01 PM svllaprasa

FEB 19 2014

Permit Information:

Well Name: Jolly Roger 16 State No. 1H

Location:

SL: 150' FNL & 2250' FWL, Section 16, T-24-S, R-34-E, Lea Co., N.M.

BHL: 230' FSL & 2258' FWL, Section 16, T-24-S, R-34-E, Lea Co., N.M.

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1240'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4000' – 5350'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-13,891'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
1,240'	600	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	300	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,350'	900	12.7	2.22	Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free (TOC @ Surface)
	225	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
13,891'	150	10.8	3.67	60:40:0 Class C + 15.0 pps BA-90 + 4% MPA-5 + 3.0% SMS + 5.0% A-10 + 1.0% BA-10A + 0.80% ASA-301 + 2.55% R-21 + 8.0 pps LCM-1 (TOC @ 4800')
	550	11.8	2.38	50:50:10 Class H + 0.80% FL-52 + 0.30% ASA-301 + 0.40% SMS + 2.0% Salt + 0.30% R-21 + 3.0 pps LCM-1 + 0.25 pps Celloflake
	1350	14.2	1.28	50:50:2 Class H + 0.65% FL-52 + 0.45% CD-32 + 0.10% SMS + 2.0% Salt

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,240'	Fresh - Gel	8.6-8.8	28-34	N/c
1,240' – 5,350'	Brine	10.0-10.2	28-34	N/c
5,350' – 8,602'	Cut Brine	8.4-9.0	28-34	N/c
KOP – 13,891' Lateral	Cut Brine	9.0-9.5	40-42	8-10

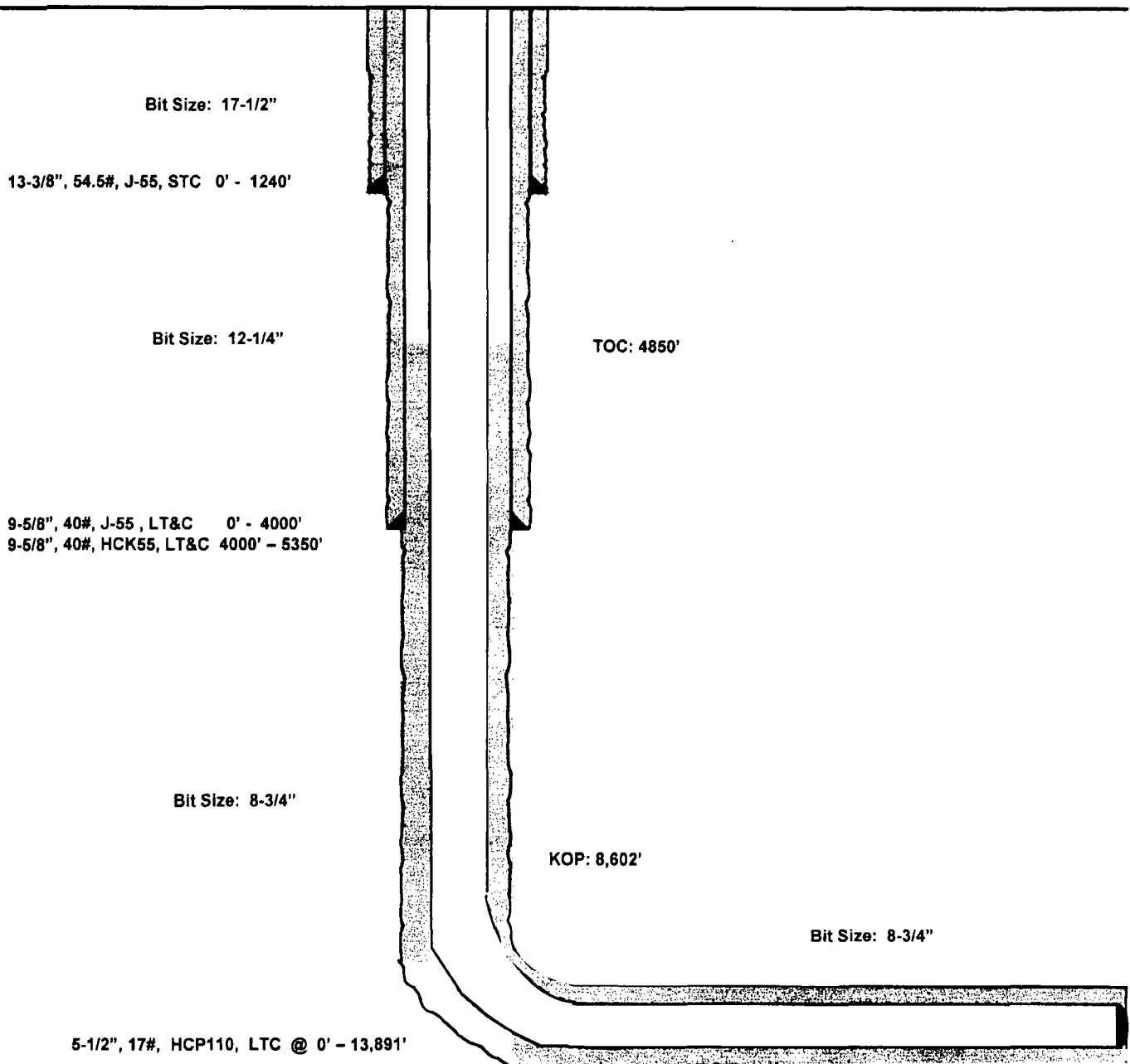
Lea County, New Mexico

150' FNL
2250' FWL
Section 16
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-

KB: 3,573.5'
GL: 3,551.0'



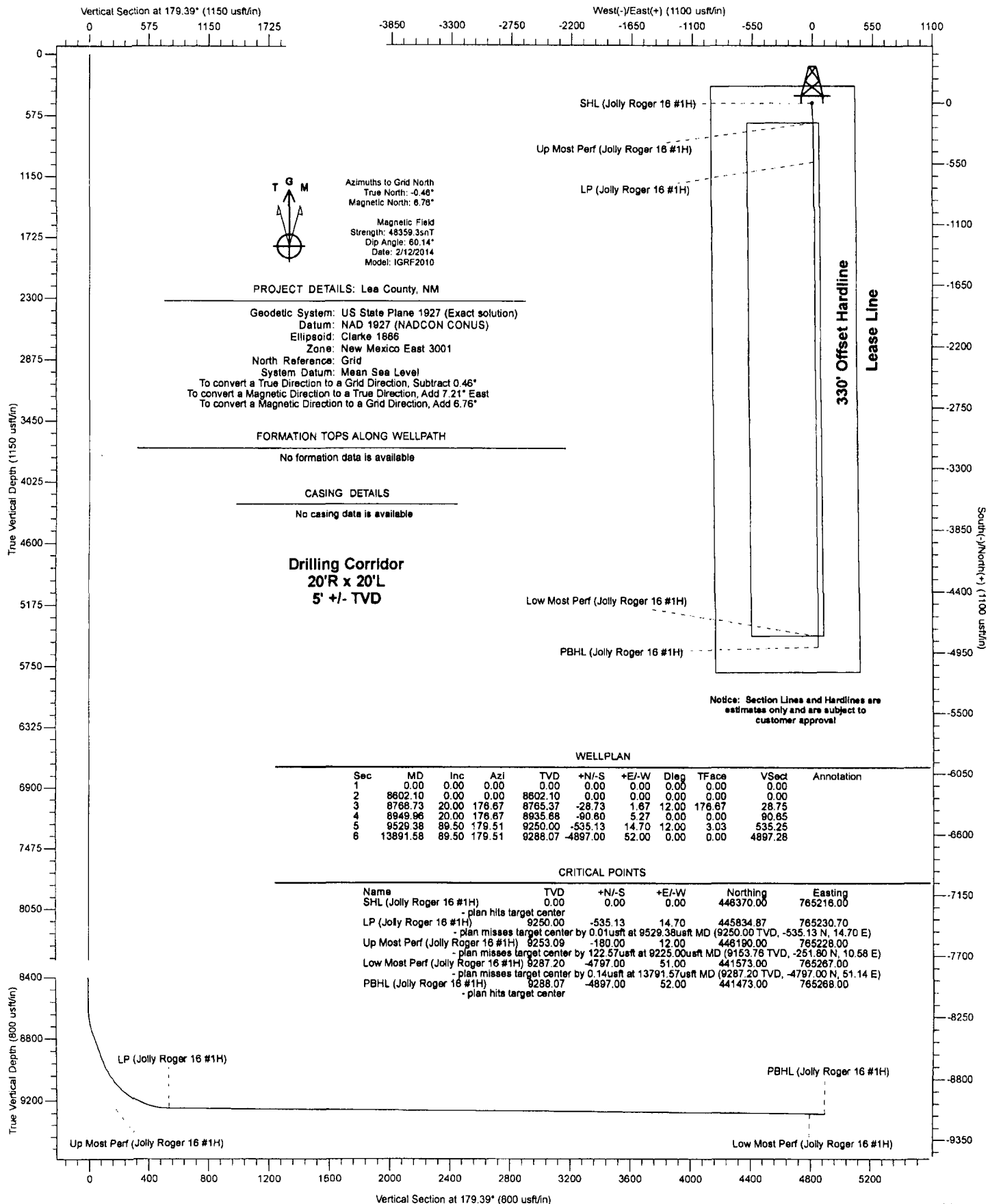
Lateral: 13,891' MD, 9,288' TVD

BH Location: 230' FSL & 2258' FWL
Section 16
T-24-S, R-34-E



EOG Resources
Lea County, NM
Jolly Roger 16 State
Well #1H
Original Hole
Plan: Design #1 (Well #1H/Original Hole)
Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3651')

gyrodata
Precision Wellbore Placement





Planning Report



Database: EDM 5000.1 Single User Db
Company: EOG Resources
Project: Lea County, NM
Site: Jolly Roger 16 State
Well: Well #1H
Wellbore: Original Hole
Design: Design #1

Local Co-ordinate Reference: Well Well #1H
TVD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
MD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Jolly Roger 16 State			
Site Position:		Northing:	446,370.00 usft	Latitude: 32° 13' 27.402 N
From:	Map	Easting:	765,216.00 usft	Longitude: 103° 28' 32.531 W
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: 0.46 °

Well	Well #1H			
Well Position	+N/-S	0.00 usft	Northing:	446,370.00 usft
	+E/-W	0.00 usft	Easting:	765,216.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level: 3,551.00 usft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/12/2014	7.21	60.14	48,359

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN		Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.39

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,602.10	0.00	0.00	8,602.10	0.00	0.00	0.00	0.00	0.00	0.00	
8,768.73	20.00	176.67	8,765.37	-28.73	1.67	12.00	12.00	0.00	176.67	
8,949.96	20.00	176.67	8,935.88	-90.60	5.27	0.00	0.00	0.00	0.00	
9,529.38	89.50	179.51	9,250.00	-535.13	14.70	12.00	12.00	0.49	3.03	
13,891.58	89.50	179.51	9,288.07	-4,897.00	52.00	0.00	0.00	0.00	0.00	PBHL (Jolly Roger 16)



Planning Report



Database: EDM 5000.1 Single User Db
Company: EOG Resources

Project: Lea County, NM

Site: Jolly Roger 16 State
Well: Well #1H
Wellbore: Original Hole
Design: Design #1

Local Co-ordinate Reference: Well Well #1H
TVD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
MD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (Jolly Roger 16 #1H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00



Planning Report



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Project: Lea County, NM
Site: Jolly Roger 16 State
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Wellbore: Original Hole
Design: Design #1

Local Co-ordinate Reference: Well Well #1H
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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,602.10	0.00	0.00	8,602.10	0.00	0.00	0.00	0.00	0.00	0.00
8,625.00	2.75	176.67	8,624.99	-0.55	0.03	0.55	12.00	12.00	0.00
8,650.00	5.75	176.67	8,649.92	-2.40	0.14	2.40	12.00	12.00	0.00
8,675.00	8.75	176.67	8,674.72	-5.55	0.32	5.55	12.00	12.00	0.00
8,700.00	11.75	176.67	8,699.32	-9.98	0.58	9.99	12.00	12.00	0.00
8,725.00	14.75	176.67	8,723.65	-15.70	0.91	15.71	12.00	12.00	0.00
8,750.00	17.75	176.67	8,747.65	-22.69	1.32	22.70	12.00	12.00	0.00
8,768.73	20.00	176.67	8,765.37	-28.73	1.67	28.75	12.00	12.00	0.00
8,800.00	20.00	176.67	8,794.75	-39.41	2.29	39.43	0.00	0.00	0.00
8,900.00	20.00	176.67	8,888.73	-73.55	4.28	73.59	0.00	0.00	0.00
8,949.96	20.00	176.67	8,935.68	-90.60	5.27	90.65	0.00	0.00	0.00
8,975.00	23.00	177.07	8,958.97	-99.76	5.77	99.82	12.00	11.99	1.62
9,000.00	25.99	177.39	8,981.72	-110.11	6.27	110.17	12.00	11.99	1.27
9,025.00	28.99	177.65	9,003.89	-121.64	6.77	121.71	12.00	11.99	1.02
9,050.00	31.99	177.86	9,025.43	-134.32	7.27	134.39	12.00	11.99	0.85
9,075.00	34.99	178.04	9,046.28	-148.10	7.76	148.17	12.00	11.99	0.71
9,100.00	37.99	178.19	9,066.38	-162.96	8.25	163.03	12.00	11.99	0.62



Planning Report



Database: EDM 5000.1 Single User Db
Company: EOG Resources

Project: Lea County, NM

Site: Jolly Roger 16 State

Well: Well #1H

Wellbore: Original Hole

Design: Design #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Well Well #1H

Well @ 3573.50usft (Nomac 133 RKB: 22.5'
+ GL: 3551')

Well @ 3573.50usft (Nomac 133 RKB: 22.5'
+ GL: 3551')

Grid

Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,125.00	40.99	178.33	9,085.67	-178.84	8.73	178.93	12.00	12.00	0.54
9,150.00	43.98	178.44	9,104.10	-195.72	9.21	195.81	12.00	12.00	0.48
9,175.00	46.98	178.55	9,121.63	-213.54	9.67	213.63	12.00	12.00	0.43
9,200.00	49.98	178.65	9,138.20	-232.25	10.13	232.34	12.00	12.00	0.39
9,225.00	52.98	178.74	9,153.77	-251.80	10.58	251.90	12.00	12.00	0.35
Up Most Perf (Jolly Roger 16 #1H)									
9,250.00	55.98	178.82	9,168.29	-272.14	11.01	272.25	12.00	12.00	0.33
9,275.00	58.98	178.90	9,181.73	-293.22	11.43	293.32	12.00	12.00	0.31
9,300.00	61.98	178.97	9,194.04	-314.97	11.83	315.07	12.00	12.00	0.29
9,325.00	64.98	179.04	9,205.20	-337.33	12.22	337.44	12.00	12.00	0.27
9,350.00	67.98	179.10	9,215.18	-360.25	12.60	360.36	12.00	12.00	0.26
9,375.00	70.98	179.16	9,223.94	-383.65	12.95	383.77	12.00	12.00	0.25
9,400.00	73.98	179.22	9,231.47	-407.49	13.29	407.61	12.00	12.00	0.24
9,425.00	76.98	179.28	9,237.74	-431.69	13.61	431.81	12.00	12.00	0.23
9,450.00	79.98	179.34	9,242.73	-456.18	13.90	456.30	12.00	12.00	0.23
9,475.00	82.98	179.39	9,246.44	-480.90	14.18	481.02	12.00	12.00	0.22
9,500.00	85.98	179.45	9,248.84	-505.78	14.43	505.90	12.00	12.00	0.22
9,525.00	88.97	179.50	9,249.95	-530.75	14.66	530.87	12.00	12.00	0.22
9,529.38	89.50	179.51	9,250.00	-535.13	14.70	535.26	11.99	11.99	0.22
LP (Jolly Roger 16 #1H)									
9,600.00	89.50	179.51	9,250.62	-605.74	15.30	605.87	0.00	0.00	0.00
9,700.00	89.50	179.51	9,251.49	-705.73	16.15	705.87	0.00	0.00	0.00
9,800.00	89.50	179.51	9,252.38	-805.73	17.01	805.86	0.00	0.00	0.00
9,900.00	89.50	179.51	9,253.24	-905.72	17.87	905.86	0.00	0.00	0.00
10,000.00	89.50	179.51	9,254.11	-1,005.71	18.72	1,005.85	0.00	0.00	0.00
10,100.00	89.50	179.51	9,254.98	-1,105.71	19.58	1,105.85	0.00	0.00	0.00
10,200.00	89.50	179.51	9,255.86	-1,205.70	20.43	1,205.85	0.00	0.00	0.00
10,300.00	89.50	179.51	9,256.73	-1,305.69	21.29	1,305.84	0.00	0.00	0.00
10,400.00	89.50	179.51	9,257.60	-1,405.68	22.14	1,405.84	0.00	0.00	0.00
10,500.00	89.50	179.51	9,258.47	-1,505.68	23.00	1,505.83	0.00	0.00	0.00
10,600.00	89.50	179.51	9,259.35	-1,605.67	23.85	1,605.83	0.00	0.00	0.00
10,700.00	89.50	179.51	9,260.22	-1,705.66	24.71	1,705.83	0.00	0.00	0.00
10,800.00	89.50	179.51	9,261.09	-1,805.65	25.56	1,805.82	0.00	0.00	0.00
10,900.00	89.50	179.51	9,261.96	-1,905.65	26.42	1,905.82	0.00	0.00	0.00
11,000.00	89.50	179.51	9,262.84	-2,005.64	27.27	2,005.81	0.00	0.00	0.00
11,100.00	89.50	179.51	9,263.71	-2,105.63	28.13	2,105.81	0.00	0.00	0.00
11,200.00	89.50	179.51	9,264.58	-2,205.62	28.98	2,205.81	0.00	0.00	0.00
11,300.00	89.50	179.51	9,265.45	-2,305.62	29.84	2,305.80	0.00	0.00	0.00
11,400.00	89.50	179.51	9,266.33	-2,405.61	30.69	2,405.80	0.00	0.00	0.00
11,500.00	89.50	179.51	9,267.20	-2,505.60	31.55	2,505.79	0.00	0.00	0.00
11,600.00	89.50	179.51	9,268.07	-2,605.59	32.40	2,605.79	0.00	0.00	0.00
11,700.00	89.50	179.51	9,268.95	-2,705.59	33.26	2,705.79	0.00	0.00	0.00
11,800.00	89.50	179.51	9,269.82	-2,805.58	34.11	2,805.78	0.00	0.00	0.00
11,900.00	89.50	179.51	9,270.69	-2,905.57	34.97	2,905.78	0.00	0.00	0.00
12,000.00	89.50	179.51	9,271.56	-3,005.56	35.82	3,005.77	0.00	0.00	0.00
12,100.00	89.50	179.51	9,272.44	-3,105.56	36.68	3,105.77	0.00	0.00	0.00
12,200.00	89.50	179.51	9,273.31	-3,205.55	37.53	3,205.77	0.00	0.00	0.00
12,300.00	89.50	179.51	9,274.18	-3,305.54	38.39	3,305.76	0.00	0.00	0.00
12,400.00	89.50	179.51	9,275.05	-3,405.53	39.24	3,405.76	0.00	0.00	0.00
12,500.00	89.50	179.51	9,275.93	-3,505.53	40.10	3,505.75	0.00	0.00	0.00
12,600.00	89.50	179.51	9,276.80	-3,605.52	40.95	3,605.75	0.00	0.00	0.00
12,700.00	89.50	179.51	9,277.67	-3,705.51	41.81	3,705.75	0.00	0.00	0.00

Database: EDM 5000.1 Single User Db
Company: EOG Resources
Project: Lea County, NM
Site: Jolly Roger 16 State
Well: Well #1H
Wellbore: Original Hole
Design: Design #1

Local Co-ordinate Reference: Well Well #1H
TVD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
MD Reference: Well @ 3573.50usft (Nomac 133 RKB: 22.5' + GL: 3551')
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,800.00	89.50	179.51	9,278.54	-3,805.50	42.67	3,805.74	0.00	0.00	0.00
12,900.00	89.50	179.51	9,279.42	-3,905.50	43.52	3,905.74	0.00	0.00	0.00
13,000.00	89.50	179.51	9,280.29	-4,005.49	44.38	4,005.73	0.00	0.00	0.00
13,100.00	89.50	179.51	9,281.16	-4,105.48	45.23	4,105.73	0.00	0.00	0.00
13,200.00	89.50	179.51	9,282.04	-4,205.47	46.09	4,205.73	0.00	0.00	0.00
13,300.00	89.50	179.51	9,282.91	-4,305.47	46.94	4,305.72	0.00	0.00	0.00
13,400.00	89.50	179.51	9,283.78	-4,405.46	47.80	4,405.72	0.00	0.00	0.00
13,500.00	89.50	179.51	9,284.65	-4,505.45	48.65	4,505.71	0.00	0.00	0.00
13,600.00	89.50	179.51	9,285.53	-4,605.44	49.51	4,605.71	0.00	0.00	0.00
13,700.00	89.50	179.51	9,286.40	-4,705.44	50.36	4,705.71	0.00	0.00	0.00
13,791.57	89.50	179.51	9,287.20	-4,797.00	51.14	4,797.27	0.00	0.00	0.00
Low Most Perf (Jolly Roger 16 #1H)									
13,800.00	89.50	179.51	9,287.27	-4,805.43	51.22	4,805.70	0.00	0.00	0.00
13,891.58	89.50	179.51	9,288.07	-4,897.00	52.00	4,897.28	0.00	0.00	0.00
PBHL (Jolly Roger 16 #1H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (Jolly Roger 16 #1H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	446,370.00	765,216.00	32° 13' 27.402 N	103° 28' 32.531 W
LP (Jolly Roger 16 #1H) - plan misses target center by 0.01usft at 9529.38usft MD (9250.00 TVD, -535.13 N, 14.70 E) - Point	0.00	0.00	9,250.00	-535.13	14.70	445,834.87	765,230.70	32° 13' 22.106 N	103° 28' 32.409 W
Up Most Perf (Jolly Roger 16 #1H) - plan misses target center by 122.57usft at 9225.00usft MD (9153.76 TVD, -251.80 N, 10.58 E) - Point	0.00	0.00	9,253.09	-180.00	12.00	446,190.00	765,228.00	32° 13' 25.620 N	103° 28' 32.408 W
Low Most Perf (Jolly Roger 16 #1H) - plan misses target center by 0.14usft at 13791.57usft MD (9287.20 TVD, -4797.00 N, 51.14 E) - Point	0.00	0.00	9,287.20	-4,797.00	51.00	441,573.00	765,267.00	32° 12' 39.931 N	103° 28' 32.383 W
PBHL (Jolly Roger 16 #1H) - plan hits target center - Point	0.00	0.00	9,288.07	-4,897.00	52.00	441,473.00	765,268.00	32° 12' 38.941 N	103° 28' 32.380 W

EOG RESOURCES, INC.
JOLLY ROGER 16 STATE #1H

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:
 - Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator
 - Protective equipment for essential personnel.

Breathing apparatus:

 - a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
 - b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
 - c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

 - a. Stretcher
 - b. Two OSHA full body harness
 - c. 100 ft 5/8 inch OSHA approved rope
 - d. 1-20# class ABC fire extinguisher
 - H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
(Gas sample tubes will be stored in the safety trailer)
 - Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
JOLLY ROGER 16 STATE #1H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

**EOG RESOURCES, INC.
JOLLY ROGER 16 STATE #1H**

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department (575) 396-3611

Rod Coffman

Fire Department:

Carlsbad (575) 885-3125

Artesia (575) 746-5050

Hospitals:

Carlsbad (575) 887-4121

Artesia (575) 748-3333

Hobbs (575) 392-1979

Dept. of Public Safety/Carlsbad (575) 748-9718

Highway Department (575) 885-3281

New Mexico Oil Conservation (575) 476-3440

U.S. Dept. of Labor (575) 887-1174

EOG Resources, Inc.

EOG / Midland Office (432) 686-3600

Company Drilling Consultants:

Joe Light Cell (432) 894-3416

Louie Corman

Drilling Engineer

Kirby Castille Office (432) 686-3657

Cell (432) 559-4987

Drilling Manager

Steve Munsell Office (432) 686-3609

Cell (432) 894-1256

Drilling Superintendent

Ron Welch Office (432) 686-3695

Cell (432) 386-0592

Cactus Drilling

Nomac Drilling Office (405) 420-4601

Nomac 133 Drilling Rig Rig (432) 894-3416

Tool Pusher:

Brian Shelton Cell (405) 761-8527

Jesse Lee Cell (830) 505-0746

Safety

Reggie Phillips (HSE Manager) Office (432) 686-3747

Cell (432) 250-7507