

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
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- 42087	² Pool Code 96674 96682	³ Pool Name Triple X; Bone Spring, West EAST
⁴ Property Code 313638	⁵ Property Name HEARNS 27 STATE COM	⁶ Well Number #504H
⁷ GRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3480'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	24-S	33-E	-	210'	SOUTH	1350'	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	34	24-S	33-E	-	230'	SOUTH	1505'	WEST	LEA

¹² Dedicated Acres 160.00	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.

	¹⁶ 28 27 26 33 34 35 4 3 2	
	SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=738060 Y=430711 LAT.: N 32.1818005 LONG.: W 103.5638713 UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=738219 Y=430172 LAT.: N 32.1803162 LONG.: W 103.5633699 LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=738253 Y=425557 LAT.: N 32.1676303 LONG.: W 103.5633677 BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=738254 Y=425457 LAT.: N 32.1673554 LONG.: W 103.5633676	
	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Stan Wagner</i> 9/3/14 Signature Date Stan Wagner Printed Name E-mail Address	
	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief. 08/18/14 Date of Survey MICHAEL BROWN Signature and Professional Surveyor 18329 Certificate Number	

SEP 11 2014

Permit Information:

Well Name: Hearn's 27 State Com No. 504H

Location:

SL: 210' FSL & 1350' FWL, Section 27, T-24-S, R-33-E, Lea Co., N.M.

BHL: 230' FSL & 1505' FWL, Section 34, T-24-S, R-33-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 – 1205'	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' – 5000'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-16,264'	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
1205'	500	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)
	200	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,000'	800	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)
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
16,264'	375	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 @ 4500')
	400	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
	1300	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 – 1205'	Fresh - Gel	8.6-8.8	28-34	N/c
1205' – 5,000'	Brine	10.0-10.2	28-34	N/c
5,000' – 10,722'	Cut Brine	8.4-9.0	28-34	N/c
10,722' – 16,264' Lateral	Cut Brine	9.0-9.5	40-42	8-10

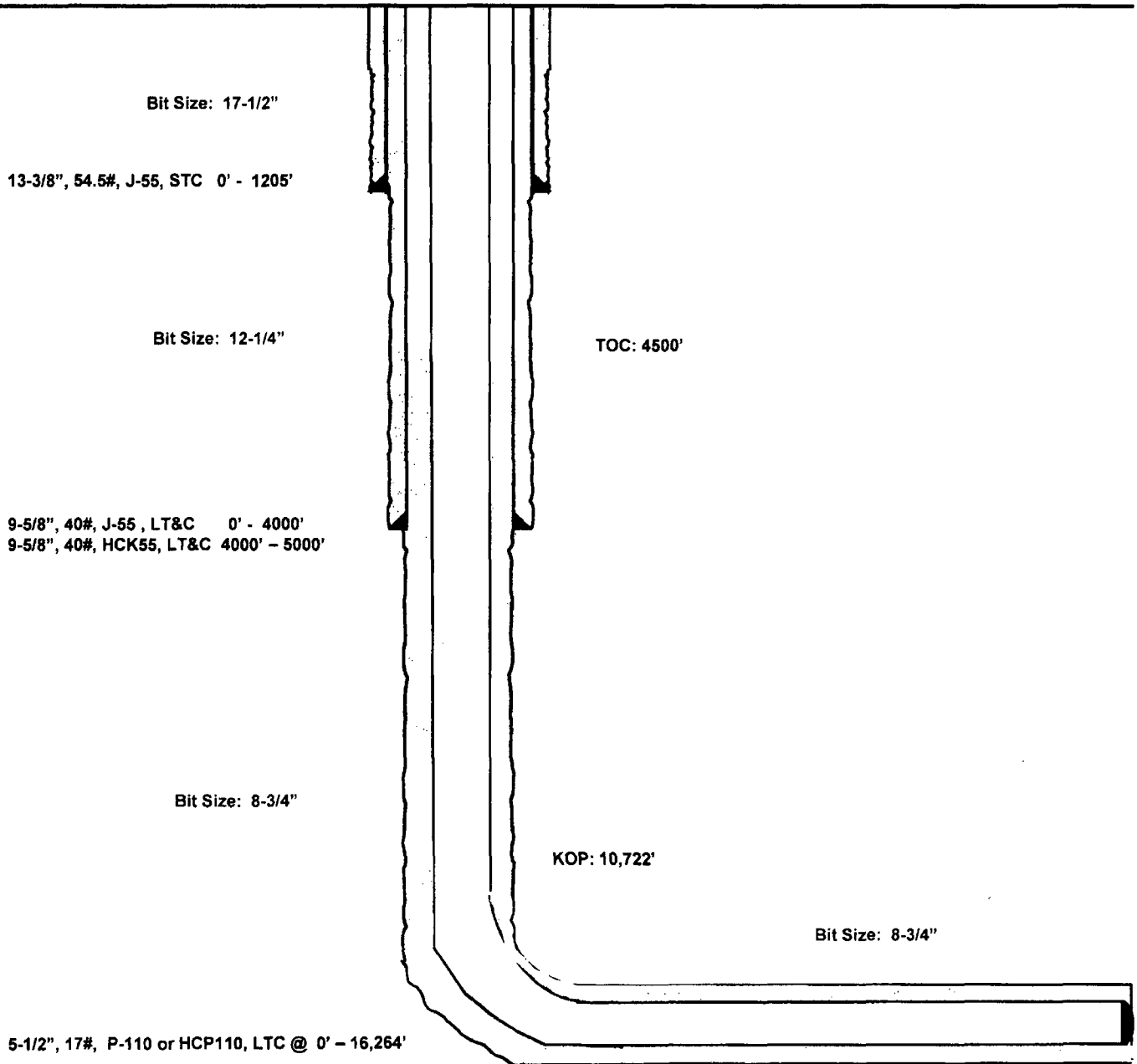
Hearns 27 State Com #504H
Lea County, New Mexico

210' FSL
1350' FWL
Section 27
T-24-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,501'
GL: 3,480'



Lateral: 16,264' MD, 11,200' TVD

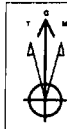
BH Location: 230' FSL & 1505' FWL
Section 34
T-24-S, R-33-E



Lea County, NM (NAD 27 NME)
Hearns 27 State Com #504H
Nomac 55
Plan #2

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



Azimuths to Grid North
True North: -6.61°
Magnetic North: 6.80°
Magnetic Field
Strength: 48288.8 nT
Dip Angle: 66.07°
Date: 6/23/2014
Model: IGRF2014

To convert a Magnetic Direction to a Grid Direction, Add 6.80°
To convert a Magnetic Direction to a True Direction, Add 7.21° East
To convert a True Direction to a Grid Direction, Subtract 0.41°

WELL DETAILS: Hearns 27 State Com #504H

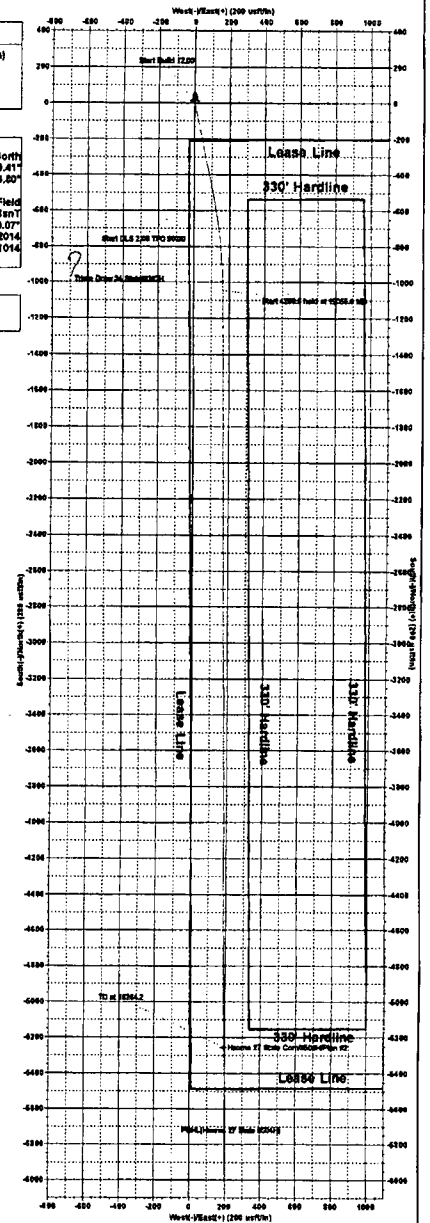
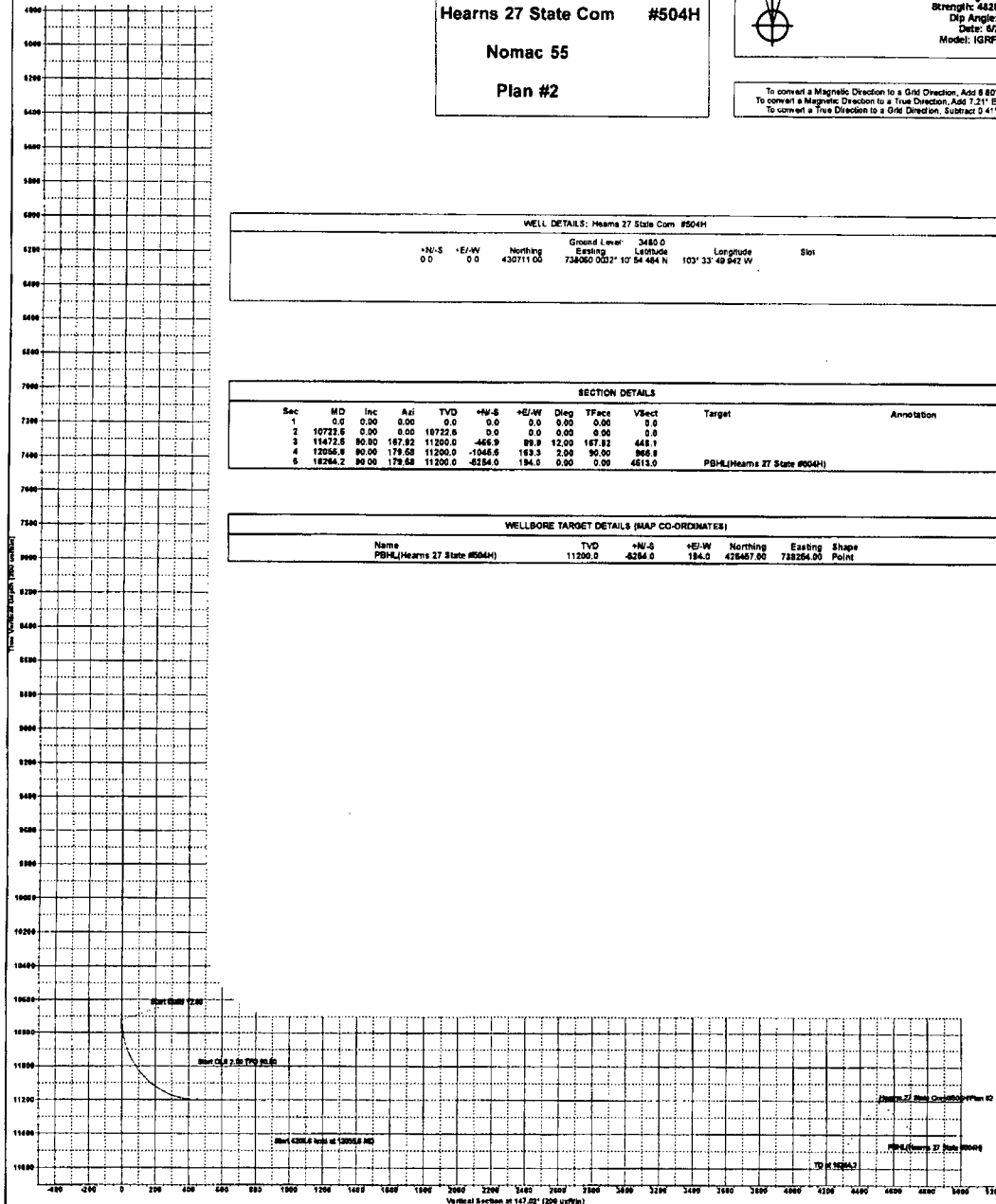
	+N-S	+E-W	Nothing	Ground Level	Easting	Latitude	Longitude	Slon
	0.0	0.0	430711.00	3480.0	73800.0002	31° 54' 48.4" N	103° 33' 49.542" W	

SECTION DETAILS

Sec	MD	Inc	Adj	TVD	+N-S	+E-W	Deg	TFact	VFact	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	10723.6	0.00	0.00	10723.6	0.0	0.0	0.00	0.00	0.0		
3	11472.5	90.00	167.82	11250.0	-466.9	99.9	12.00	167.82	448.1		
4	12056.8	90.00	179.68	11200.0	-1046.6	163.3	2.00	90.00	866.8		
5	16264.2	90.00	179.68	11200.0	-6264.0	194.0	0.00	0.00	4613.0	PBH(L)Hearns 27 State #504H	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Nothing	Easting	Slon
PBH(L)Hearns 27 State #504H	11200.0	-6264.0	194.0	425467.00	738254.00	Point





EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Hearns 27 State Com

#504H

OH

Plan: Plan #2

Standard Planning Report

02 September, 2014



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn 27 State Com
Well: #504H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #504H
TVD Reference: KB = 21 @ 3510.0usft (Nomac 55)
MD Reference: KB = 21 @ 3510.0usft (Nomac 55)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD 27 NME)		
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	Hearn 27 State Com				
Site Position:		Northing:	430,710.00 usft	Latitude:	32° 10' 54.484 N
From:	Map	Easting:	737,910.00 usft	Longitude:	103° 33' 51.687 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41 °

Well	#504H				
Well Position	+N/-S	1.0 usft	Northing:	430,711.00 usft	Latitude: 32° 10' 54.484 N
	+E/-W	150.0 usft	Easting:	738,060.00 usft	Longitude: 103° 33' 49.942 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,480.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF201014	6/23/2014	7.21	60.07	48,289

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN		Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	147.02

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,722.5	0.00	0.00	10,722.5	0.0	0.0	0.00	0.00	0.00	0.00	
11,472.5	90.00	167.92	11,200.0	-466.9	99.9	12.00	12.00	0.00	167.92	
12,055.6	90.00	179.58	11,200.0	-1,045.5	163.3	2.00	0.00	2.00	90.00	
16,264.2	90.00	179.58	11,200.0	-5,254.0	194.0	0.00	0.00	0.00	0.00	PBHL(Hearn 27 Stat



EOG Resources, Inc.
Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn 27 State Com
Well: #504H
Wellbore: OH
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Local Co-ordinate Reference: Well #504H
TVD Reference: KB = 21 @ 3510.0usft (Nomac 55)
MD Reference: KB = 21 @ 3510.0usft (Nomac 55)
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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



EOG Resources, Inc.

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00
10,600.0	0.00	0.00	10,600.0	0.0	0.0	0.0	0.00	0.00	0.00
10,700.0	0.00	0.00	10,700.0	0.0	0.0	0.0	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 27 NME)
 Site: Hearn 27 State Com
 Well: #504H
 Wellbore: OH
 Design: Plan #2

Local Co-ordinate Reference: Well #504H
 TVD Reference: KB = 21 @ 3510.0usft (Nomac 55)
 MD Reference: KB = 21 @ 3510.0usft (Nomac 55)
 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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,722.5	0.00	0.00	10,722.5	0.0	0.0	0.0	0.00	0.00	0.00
10,725.0	0.30	167.92	10,725.0	0.0	0.0	0.0	12.00	12.00	0.00
10,750.0	3.30	167.92	10,750.0	-0.8	0.2	0.7	12.00	12.00	0.00
10,775.0	6.30	167.92	10,774.9	-2.8	0.6	2.7	12.00	12.00	0.00
10,800.0	9.30	167.92	10,799.7	-6.1	1.3	5.9	12.00	12.00	0.00
10,825.0	12.30	167.92	10,824.2	-10.7	2.3	10.2	12.00	12.00	0.00
10,850.0	15.30	167.92	10,848.5	-16.5	3.5	15.8	12.00	12.00	0.00
10,875.0	18.30	167.92	10,872.4	-23.6	5.1	22.6	12.00	12.00	0.00
10,900.0	21.30	167.92	10,895.9	-31.9	6.8	30.5	12.00	12.00	0.00
10,925.0	24.30	167.92	10,919.0	-41.4	8.9	39.5	12.00	12.00	0.00
10,950.0	27.30	167.92	10,941.5	-52.0	11.1	49.7	12.00	12.00	0.00
10,975.0	30.30	167.92	10,963.4	-63.8	13.6	60.9	12.00	12.00	0.00
11,000.0	33.30	167.92	10,984.6	-76.7	16.4	73.2	12.00	12.00	0.00
11,025.0	36.30	167.92	11,005.2	-90.6	19.4	86.6	12.00	12.00	0.00
11,050.0	39.30	167.92	11,024.9	-105.6	22.6	100.9	12.00	12.00	0.00
11,075.0	42.30	167.92	11,043.8	-121.6	26.0	116.1	12.00	12.00	0.00
11,100.0	45.30	167.92	11,061.9	-138.5	29.6	132.3	12.00	12.00	0.00
11,125.0	48.30	167.92	11,079.0	-156.3	33.5	149.3	12.00	12.00	0.00
11,150.0	51.30	167.92	11,095.1	-175.0	37.4	167.2	12.00	12.00	0.00
11,175.0	54.30	167.92	11,110.2	-194.4	41.6	185.8	12.00	12.00	0.00
11,200.0	57.30	167.92	11,124.3	-214.7	45.9	205.1	12.00	12.00	0.00
11,225.0	60.30	167.92	11,137.2	-235.6	50.4	225.1	12.00	12.00	0.00
11,250.0	63.30	167.92	11,149.1	-257.1	55.0	245.6	12.00	12.00	0.00
11,275.0	66.30	167.92	11,159.7	-279.2	59.8	268.8	12.00	12.00	0.00
11,300.0	69.30	167.92	11,169.1	-301.9	64.6	288.4	12.00	12.00	0.00
11,325.0	72.30	167.92	11,177.4	-324.9	69.5	310.4	12.00	12.00	0.00
11,350.0	75.30	167.92	11,184.3	-348.4	74.6	332.9	12.00	12.00	0.00
11,375.0	78.30	167.92	11,190.0	-372.2	79.7	355.6	12.00	12.00	0.00
11,400.0	81.30	167.92	11,194.5	-396.3	84.8	378.6	12.00	12.00	0.00
11,425.0	84.30	167.92	11,197.6	-420.5	90.0	401.8	12.00	12.00	0.00
11,450.0	87.30	167.92	11,199.4	-444.9	95.2	425.0	12.00	12.00	0.00
11,472.5	90.00	167.92	11,200.0	-466.9	99.9	446.1	12.00	12.00	0.00
11,500.0	90.00	168.47	11,200.0	-493.8	105.5	471.7	2.00	0.00	2.00
11,600.0	90.00	170.47	11,200.0	-582.1	123.8	564.1	2.00	0.00	2.00
11,700.0	90.00	172.47	11,200.0	-691.0	138.7	655.1	2.00	0.00	2.00
11,800.0	90.00	174.47	11,200.0	-790.4	150.0	744.7	2.00	0.00	2.00
11,900.0	90.00	176.47	11,200.0	-890.0	157.9	832.6	2.00	0.00	2.00
12,000.0	90.00	178.47	11,200.0	-989.9	162.3	918.8	2.00	0.00	2.00
12,055.6	90.00	179.58	11,200.0	-1,045.5	163.3	965.9	2.00	0.00	2.00
12,100.0	90.00	179.58	11,200.0	-1,089.9	163.6	1,003.4	0.00	0.00	0.00
12,200.0	90.00	179.58	11,200.0	-1,189.9	164.3	1,087.6	0.00	0.00	0.00
12,300.0	90.00	178.58	11,200.0	-1,289.9	165.1	1,171.9	0.00	0.00	0.00
12,400.0	90.00	179.58	11,200.0	-1,389.9	165.8	1,256.2	0.00	0.00	0.00
12,500.0	90.00	179.58	11,200.0	-1,489.9	166.5	1,340.5	0.00	0.00	0.00
12,600.0	90.00	179.58	11,200.0	-1,589.9	167.3	1,424.8	0.00	0.00	0.00
12,700.0	90.00	179.58	11,200.0	-1,689.9	168.0	1,509.1	0.00	0.00	0.00
12,800.0	90.00	179.58	11,200.0	-1,789.9	168.7	1,593.3	0.00	0.00	0.00
12,900.0	90.00	179.58	11,200.0	-1,889.9	169.4	1,677.6	0.00	0.00	0.00
13,000.0	90.00	179.58	11,200.0	-1,989.9	170.2	1,761.9	0.00	0.00	0.00
13,100.0	90.00	179.58	11,200.0	-2,089.9	170.9	1,846.2	0.00	0.00	0.00
13,200.0	90.00	179.58	11,200.0	-2,189.9	171.6	1,930.5	0.00	0.00	0.00
13,300.0	90.00	179.58	11,200.0	-2,289.9	172.4	2,014.7	0.00	0.00	0.00
13,400.0	90.00	179.58	11,200.0	-2,389.9	173.1	2,099.0	0.00	0.00	0.00
13,500.0	90.00	179.58	11,200.0	-2,489.9	173.8	2,183.3	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Hearn 27 State Com
Well: #504H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #504H
TVD Reference: KB = 21 @ 3510.0usft (Nomac 55)
MD Reference: KB = 21 @ 3510.0usft (Nomac 55)
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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,600.0	90.00	179.58	11,200.0	-2,589.9	174.6	2,267.6	0.00	0.00	0.00
13,700.0	90.00	179.58	11,200.0	-2,689.9	175.3	2,351.9	0.00	0.00	0.00
13,800.0	90.00	179.58	11,200.0	-2,789.9	176.0	2,436.2	0.00	0.00	0.00
13,900.0	90.00	179.58	11,200.0	-2,889.9	176.7	2,520.4	0.00	0.00	0.00
14,000.0	90.00	179.58	11,200.0	-2,989.9	177.5	2,604.7	0.00	0.00	0.00
14,100.0	90.00	179.58	11,200.0	-3,089.9	178.2	2,689.0	0.00	0.00	0.00
14,200.0	90.00	179.58	11,200.0	-3,189.9	178.9	2,773.3	0.00	0.00	0.00
14,300.0	90.00	179.58	11,200.0	-3,289.9	179.7	2,857.6	0.00	0.00	0.00
14,400.0	90.00	179.58	11,200.0	-3,389.9	180.4	2,941.8	0.00	0.00	0.00
14,500.0	90.00	179.58	11,200.0	-3,489.9	181.1	3,026.1	0.00	0.00	0.00
14,600.0	90.00	179.58	11,200.0	-3,589.9	181.9	3,110.4	0.00	0.00	0.00
14,700.0	90.00	179.58	11,200.0	-3,689.9	182.6	3,194.7	0.00	0.00	0.00
14,800.0	90.00	179.58	11,200.0	-3,789.9	183.3	3,279.0	0.00	0.00	0.00
14,900.0	90.00	179.58	11,200.0	-3,889.9	184.0	3,363.3	0.00	0.00	0.00
15,000.0	90.00	179.58	11,200.0	-3,989.8	184.8	3,447.5	0.00	0.00	0.00
15,100.0	90.00	179.58	11,200.0	-4,089.8	185.5	3,531.8	0.00	0.00	0.00
15,200.0	90.00	179.58	11,200.0	-4,189.8	186.2	3,616.1	0.00	0.00	0.00
15,300.0	90.00	179.58	11,200.0	-4,289.8	187.0	3,700.4	0.00	0.00	0.00
15,400.0	90.00	179.58	11,200.0	-4,389.8	187.7	3,784.7	0.00	0.00	0.00
15,500.0	90.00	179.58	11,200.0	-4,489.8	188.4	3,868.9	0.00	0.00	0.00
15,600.0	90.00	179.58	11,200.0	-4,589.8	189.2	3,953.2	0.00	0.00	0.00
15,700.0	90.00	179.58	11,200.0	-4,689.8	189.9	4,037.5	0.00	0.00	0.00
15,800.0	90.00	179.58	11,200.0	-4,789.8	190.6	4,121.8	0.00	0.00	0.00
15,900.0	90.00	179.58	11,200.0	-4,889.8	191.3	4,206.1	0.00	0.00	0.00
16,000.0	90.00	179.58	11,200.0	-4,989.8	192.1	4,290.4	0.00	0.00	0.00
16,100.0	90.00	179.58	11,200.0	-5,089.8	192.8	4,374.6	0.00	0.00	0.00
16,200.0	90.00	179.58	11,200.0	-5,189.8	193.5	4,458.9	0.00	0.00	0.00
16,264.2	90.00	179.58	11,200.0	-5,254.0	194.0	4,513.0	0.00	0.00	0.00

PBHL(Hearn 27 State #504H)

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
PBHL(Hearn 27 State #504H) - plan hits target center - Point	0.00	0.00	11,200.0	-5,254.0	194.0	425,457.00	738,254.00	32° 10' 2.479 N	103° 33' 48.122 W

EOG RESOURCES, INC.
HEARNS 27 STATE COM #504H

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/Escape packs — 4 packs shall be stored on the rig floor th 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.
HEARNS 27 STATE COM #504H

- **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.
HEARNS 27 STATE COM #504H

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:

Jett Dueitt Cell (432) 230-4840

Blake Burney

Drilling Engineer

Robert Brosig Office (432) 686-3737

Cell (432) 770-0705

Drilling Manager

Lee Lohoefer Office (432) 686-6716

Cell (817) 374-9686

Drilling Superintendent

Jason Richey Office (432) 686-3665

Cell (817) 879-6521

H&P Drilling

H&P Drilling Office (432) 563-5757

H&P 415 Drilling Rig Rig (432) 230-4840

Tool Pusher:

Johnathan Craig Cell (817) 760-6374

Brad Garrett

Safety

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

Cell (432) 250-7507