

JAN 14 2018

Permit Information:

Well Name: Black Bear 36 State No. 704H

Location:

SL: 254' FNL & 675' FEL, Section 36, T-25-S, R-33-E, Lea Co., N.M.

BHL: 230' FSL & 330' FEL, Section 36, T-25-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
14.75"	0 - 1,065'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0-10,500'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
6.75"	0'-10,500'	5.5"	23#	HCP-110	JFE	1.125	1.25	1.60
6.75"	10,500' - 17,413'	5"	23.2#	P-110	JFE	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Slurry Description
1,065'	300	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
10,700' DV Tool w/ ECP @ 5,150'	350	10.8	3.68	Stage 1 Lead: Class C + 15.00 lbs/sk BA-90 + 4.00% MPA-5 + 3.00% SMS + 5.00% A-10 + 1.00% BA-10A + 0.80% ASA-301 + 2.90% R-21 + 8.00 lb/sk LCM-1 + 0.005 lb/sx Static Free
	250	15.6	1.19	Stage 1 Tail: Class H + 1.0% FL-52 + 0.6% CD-32 + 0.5% SMS + 1.0% Salt + 0.3% R-3
	650	12.7	2.22	Stage 2 Lead: Class 'C' + 2.0% SMS + 10.0% Slat + 0.55% R-21 + 0.25 pps Celloflake + 0.005 pps Static Free (TOC @ Surface)
	200	14.8	1.35	Stage 2 Tail: Class 'C' + 0.60% FL-62 + 0.7% CD-32 + 0.3% SMS + 2.0% Salt + 0.10% R-3 + 0.005 pps Static Free + 0.005 gps FP-6L
17,413'	625	14.2	1.35	50:50:2 Class H + 0.65% FL-52 + 0.70% CD-32 + 1.0% EC-1 + 0.40% SMS + 2.0% Salt + 0.05% R-3 + 0.005 pps Static Free + 0.005 gps FP-6L (TOC @ 10,000')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,065'	Fresh - Gel	8.6-8.8	28-34	N/c
1,065' - 10,500'	Oil Base	8.7-9.4	58-68	N/c - 6
10,500' - 12,124'	Oil Base	8.7-9.4	58-68	N/c - 6
12,124' - 17,413' Lateral	Oil Base	9.0-9.5	58-68	N/c - 6

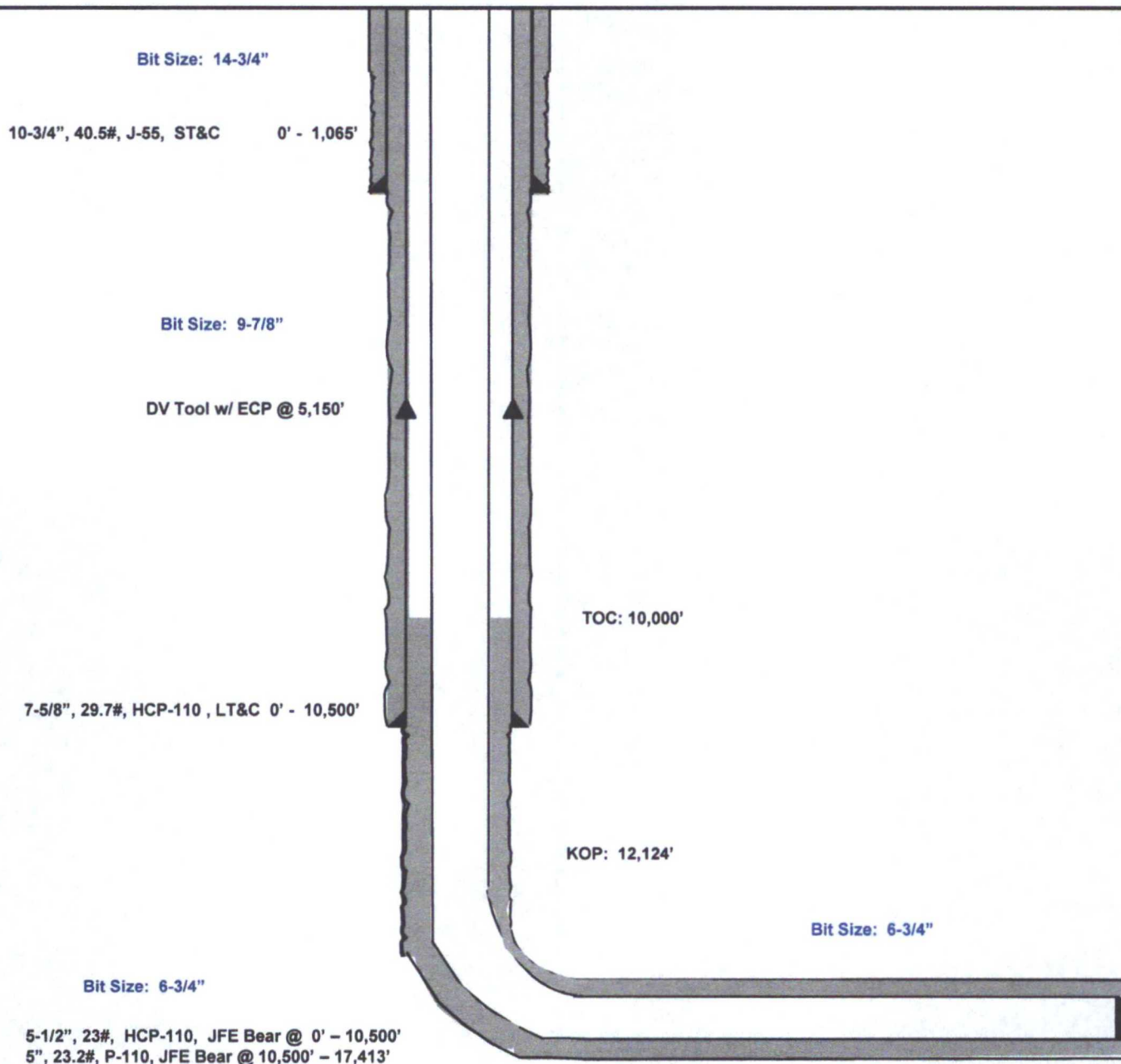
Black Bear 36 State #704H

Lea County, New Mexico
Proposed Wellbore

254' FNL
675' FEL
Section 36
T-25-S, R-33-E

API: 30-025-*****

KB: 3,350'
GL: 3,325'



Lateral: 17,413' MD, 12,605' TVD

BH Location: 230' FSL & 330' FEL
Section 36
T-25-S, R-33-E



Lea County, NM (NAD 27 NME)

Black Bear 36 State #704H
Plan #0.1

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: -0.43°
Magnetic North: 6.64°
Magnetic Field
Strength: 48014.8 nT
Dip Angle: 68.97°
Date: 1/7/2016
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.64°
To convert a Magnetic Direction to a True Direction, Add 7.08° East
To convert a True Direction to a Grid Direction, Subtract 6.64°

WELL DETAILS: #704H

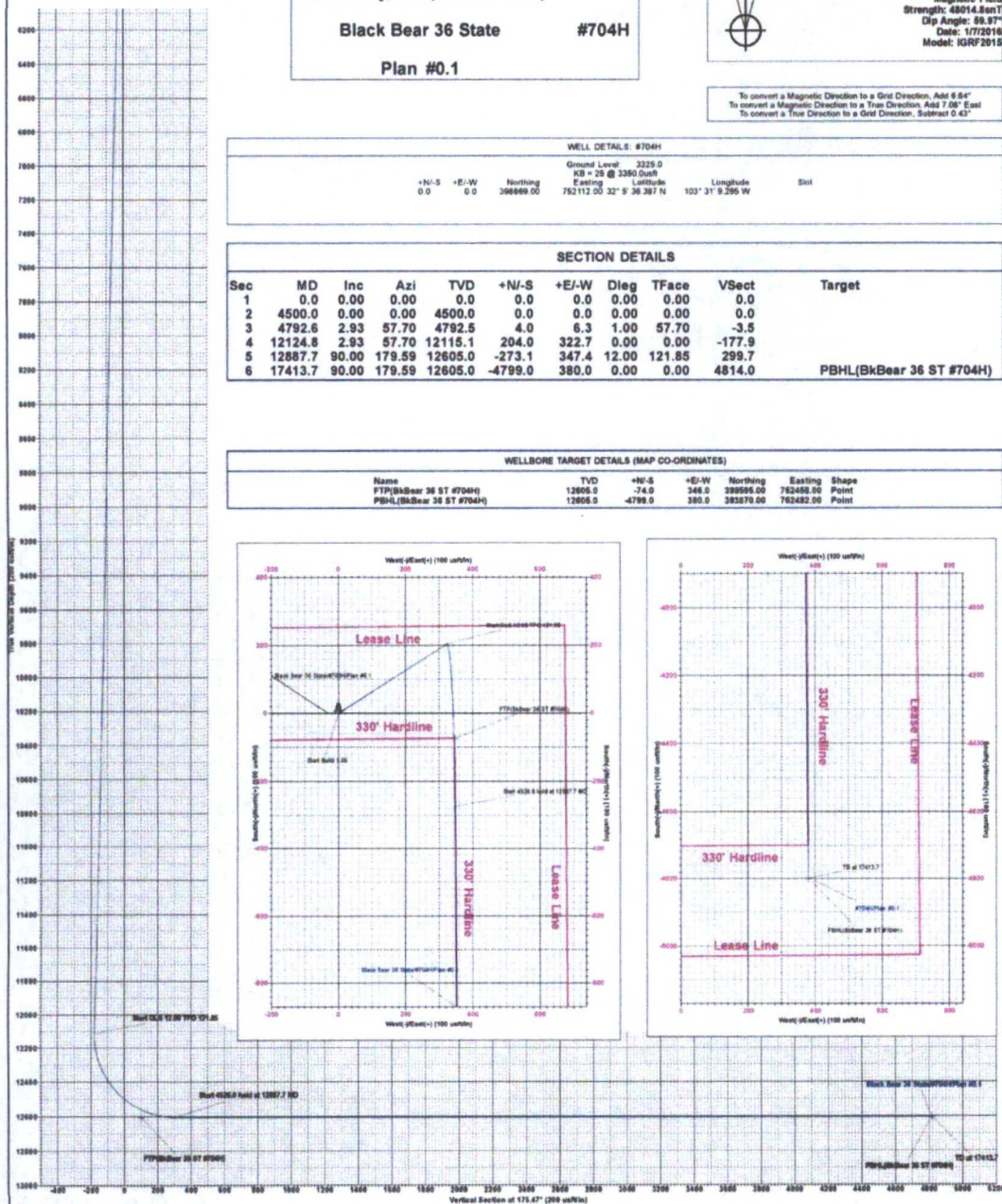
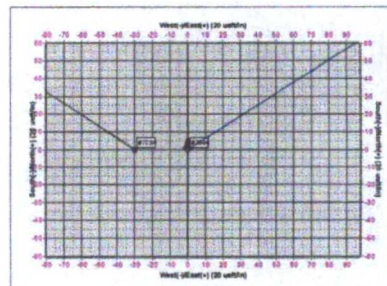
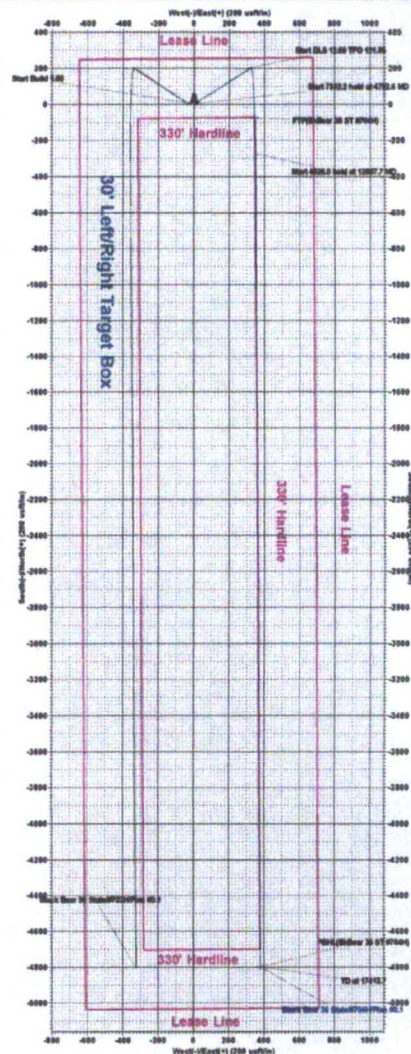
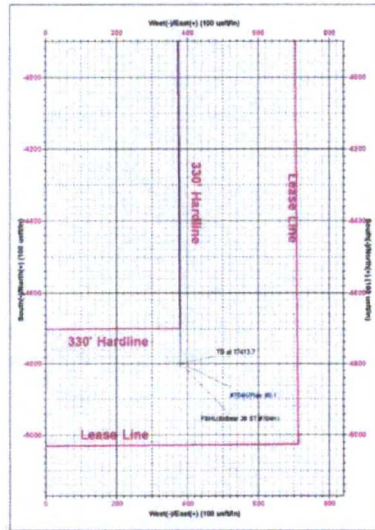
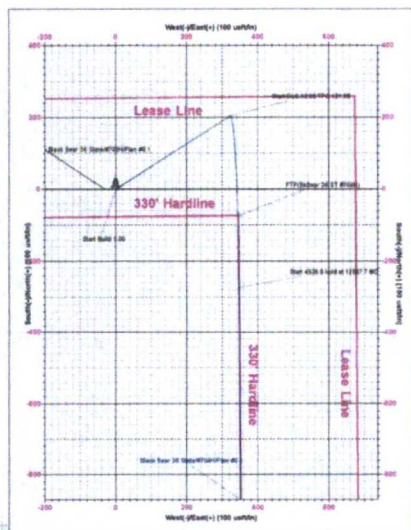
	+N/-S	+E/-W	Northing	Ground Level	Eastings	Latitude	Longitude	Spot
	0.0	0.0	398699.00	3325.0	782112.00	32° 5' 36.387 N	103° 31' 9.295 W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0	
2	4500.0	0.00	0.00	4500.0	0.0	0.0	0.00	0.00	0.0	
3	4792.6	2.93	57.70	4792.5	0.0	6.3	1.00	57.70	-3.5	
4	12124.8	2.93	57.70	12115.1	204.0	322.7	0.00	0.00	-177.9	
5	12887.7	90.00	179.59	12605.0	-273.1	347.4	12.00	121.85	299.7	
6	17413.7	90.00	179.59	12605.0	-4799.0	380.0	0.00	0.00	4814.0	PBHL(BkBear 36 ST #704H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Eastings	Shape
PTPB(BkBear 36 ST #704H)	12605.0	-14.0	346.0	398698.00	782488.00	Point
PBHL(BkBear 36 ST #704H)	12605.0	-4799.0	380.0	383570.00	782482.00	Point





EOG Resources - Midland

Lea County, NM (NAD 27 NME)

Black Bear 36 State

#704H

OH

Plan: Plan #0.1

Standard Planning Report

07 January, 2016



EOG Resources, Inc.

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #704H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3350.0usft
Project:	Lea County, NM (NAD 27 NME)	MD Reference:	KB = 25 @ 3350.0usft
Site:	Black Bear 36 State	North Reference:	Grid
Well:	#704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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		Black Bear 36 State			
Site Position:		Northing:	398,659.00 usft	Latitude:	32° 5' 36.397 N
From:	Map	Easting:	750,659.00 usft	Longitude:	103° 31' 26.155 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.43

Well	#704H					
Well Position	+N/-S	10.0 usft	Northing:	398,669.00 usft	Latitude:	32° 5' 36.387 N
	+E/-W	1,453.0 usft	Easting:	752,112.00 usft	Longitude:	103° 31' 9.265 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	3,325.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/7/2016	7.08	59.97	48,015

Design	Plan #0.1			
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	175.47

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	
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,792.6	2.93	57.70	4,792.5	4.0	6.3	1.00	1.00	0.00	57.70	
12,124.8	2.93	57.70	12,115.1	204.0	322.7	0.00	0.00	0.00	0.00	
12,887.7	90.00	179.59	12,605.0	-273.1	347.4	12.00	11.41	15.98	121.85	
17,413.7	90.00	179.59	12,605.0	-4,799.0	380.0	0.00	0.00	0.00	0.00	PBHL(BkBear 36 ST :



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Black Bear 36 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well #704H
KB = 25 @ 3350.0usft
KB = 25 @ 3350.0usft
Grid
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	1.00	57.70	4,600.0	0.5	0.7	-0.4	1.00	1.00	0.00
4,700.0	2.00	57.70	4,700.0	1.9	3.0	-1.6	1.00	1.00	0.00
4,792.6	2.93	57.70	4,792.5	4.0	6.3	-3.5	1.00	1.00	0.00
4,800.0	2.93	57.70	4,799.9	4.2	6.6	-3.7	0.00	0.00	0.00
4,900.0	2.93	57.70	4,899.7	6.9	10.9	-6.0	0.00	0.00	0.00
5,000.0	2.93	57.70	4,999.6	9.6	15.3	-8.4	0.00	0.00	0.00
5,100.0	2.93	57.70	5,099.5	12.4	19.6	-10.8	0.00	0.00	0.00
5,200.0	2.93	57.70	5,199.3	15.1	23.9	-13.2	0.00	0.00	0.00



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Wellbore: OH
Design: Plan #0.1

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TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well #704H
KB = 25 @ 3350.0usft
KB = 25 @ 3350.0usft
Grid
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)
5,300.0	2.93	57.70	5,299.2	17.8	28.2	-15.6	0.00	0.00	0.00
5,400.0	2.93	57.70	5,399.1	20.6	32.5	-17.9	0.00	0.00	0.00
5,500.0	2.93	57.70	5,499.0	23.3	36.8	-20.3	0.00	0.00	0.00
5,600.0	2.93	57.70	5,598.8	26.0	41.2	-22.7	0.00	0.00	0.00
5,700.0	2.93	57.70	5,698.7	28.7	45.5	-25.1	0.00	0.00	0.00
5,800.0	2.93	57.70	5,798.6	31.5	49.8	-27.4	0.00	0.00	0.00
5,900.0	2.93	57.70	5,898.4	34.2	54.1	-29.8	0.00	0.00	0.00
6,000.0	2.93	57.70	5,998.3	36.9	58.4	-32.2	0.00	0.00	0.00
6,100.0	2.93	57.70	6,098.2	39.7	62.7	-34.6	0.00	0.00	0.00
6,200.0	2.93	57.70	6,198.0	42.4	67.1	-37.0	0.00	0.00	0.00
6,300.0	2.93	57.70	6,297.9	45.1	71.4	-39.3	0.00	0.00	0.00
6,400.0	2.93	57.70	6,397.8	47.8	75.7	-41.7	0.00	0.00	0.00
6,500.0	2.93	57.70	6,497.6	50.6	80.0	-44.1	0.00	0.00	0.00
6,600.0	2.93	57.70	6,597.5	53.3	84.3	-46.5	0.00	0.00	0.00
6,700.0	2.93	57.70	6,697.4	56.0	88.6	-48.9	0.00	0.00	0.00
6,800.0	2.93	57.70	6,797.3	58.8	92.9	-51.2	0.00	0.00	0.00
6,900.0	2.93	57.70	6,897.1	61.5	97.3	-53.6	0.00	0.00	0.00
7,000.0	2.93	57.70	6,997.0	64.2	101.6	-56.0	0.00	0.00	0.00
7,100.0	2.93	57.70	7,096.9	66.9	105.9	-58.4	0.00	0.00	0.00
7,200.0	2.93	57.70	7,196.7	69.7	110.2	-60.7	0.00	0.00	0.00
7,300.0	2.93	57.70	7,296.6	72.4	114.5	-63.1	0.00	0.00	0.00
7,400.0	2.93	57.70	7,396.5	75.1	118.8	-65.5	0.00	0.00	0.00
7,500.0	2.93	57.70	7,496.3	77.8	123.2	-67.9	0.00	0.00	0.00
7,600.0	2.93	57.70	7,596.2	80.6	127.5	-70.3	0.00	0.00	0.00
7,700.0	2.93	57.70	7,696.1	83.3	131.8	-72.6	0.00	0.00	0.00
7,800.0	2.93	57.70	7,796.0	86.0	136.1	-75.0	0.00	0.00	0.00
7,900.0	2.93	57.70	7,895.8	88.8	140.4	-77.4	0.00	0.00	0.00
8,000.0	2.93	57.70	7,995.7	91.5	144.7	-79.8	0.00	0.00	0.00
8,100.0	2.93	57.70	8,095.6	94.2	149.0	-82.2	0.00	0.00	0.00
8,200.0	2.93	57.70	8,195.4	96.9	153.4	-84.5	0.00	0.00	0.00
8,300.0	2.93	57.70	8,295.3	99.7	157.7	-86.9	0.00	0.00	0.00
8,400.0	2.93	57.70	8,395.2	102.4	162.0	-89.3	0.00	0.00	0.00
8,500.0	2.93	57.70	8,495.0	105.1	166.3	-91.7	0.00	0.00	0.00
8,600.0	2.93	57.70	8,594.9	107.9	170.6	-94.0	0.00	0.00	0.00
8,700.0	2.93	57.70	8,694.8	110.6	174.9	-96.4	0.00	0.00	0.00
8,800.0	2.93	57.70	8,794.6	113.3	179.3	-98.8	0.00	0.00	0.00
8,900.0	2.93	57.70	8,894.5	116.0	183.6	-101.2	0.00	0.00	0.00
9,000.0	2.93	57.70	8,994.4	118.8	187.9	-103.6	0.00	0.00	0.00
9,100.0	2.93	57.70	9,094.3	121.5	192.2	-105.9	0.00	0.00	0.00
9,200.0	2.93	57.70	9,194.1	124.2	196.5	-108.3	0.00	0.00	0.00
9,300.0	2.93	57.70	9,294.0	126.9	200.8	-110.7	0.00	0.00	0.00
9,400.0	2.93	57.70	9,393.9	129.7	205.1	-113.1	0.00	0.00	0.00
9,500.0	2.93	57.70	9,493.7	132.4	209.5	-115.5	0.00	0.00	0.00
9,600.0	2.93	57.70	9,593.6	135.1	213.8	-117.8	0.00	0.00	0.00
9,700.0	2.93	57.70	9,693.5	137.9	218.1	-120.2	0.00	0.00	0.00
9,800.0	2.93	57.70	9,793.3	140.6	222.4	-122.6	0.00	0.00	0.00
9,900.0	2.93	57.70	9,893.2	143.3	226.7	-125.0	0.00	0.00	0.00
10,000.0	2.93	57.70	9,993.1	146.0	231.0	-127.4	0.00	0.00	0.00
10,100.0	2.93	57.70	10,093.0	148.8	235.4	-129.7	0.00	0.00	0.00
10,200.0	2.93	57.70	10,192.8	151.5	239.7	-132.1	0.00	0.00	0.00
10,300.0	2.93	57.70	10,292.7	154.2	244.0	-134.5	0.00	0.00	0.00
10,400.0	2.93	57.70	10,392.6	157.0	248.3	-136.9	0.00	0.00	0.00
10,500.0	2.93	57.70	10,492.4	159.7	252.6	-139.2	0.00	0.00	0.00
10,600.0	2.93	57.70	10,592.3	162.4	256.9	-141.6	0.00	0.00	0.00



EOG Resources, Inc.

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well #704H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3350.0usft
Project:	Lea County, NM (NAD 27 NME)	MD Reference:	KB = 25 @ 3350.0usft
Site:	Black Bear 36 State	North Reference:	Grid
Well:	#704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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)
10,700.0	2.93	57.70	10,692.2	165.1	261.2	-144.0	0.00	0.00	0.00
10,800.0	2.93	57.70	10,792.0	167.9	265.6	-146.4	0.00	0.00	0.00
10,900.0	2.93	57.70	10,891.9	170.6	269.9	-148.8	0.00	0.00	0.00
11,000.0	2.93	57.70	10,991.8	173.3	274.2	-151.1	0.00	0.00	0.00
11,100.0	2.93	57.70	11,091.6	176.1	278.5	-153.5	0.00	0.00	0.00
11,200.0	2.93	57.70	11,191.5	178.8	282.8	-155.9	0.00	0.00	0.00
11,300.0	2.93	57.70	11,291.4	181.5	287.1	-158.3	0.00	0.00	0.00
11,400.0	2.93	57.70	11,391.3	184.2	291.5	-160.7	0.00	0.00	0.00
11,500.0	2.93	57.70	11,491.1	187.0	295.8	-163.0	0.00	0.00	0.00
11,600.0	2.93	57.70	11,591.0	189.7	300.1	-165.4	0.00	0.00	0.00
11,700.0	2.93	57.70	11,690.9	192.4	304.4	-167.8	0.00	0.00	0.00
11,800.0	2.93	57.70	11,790.7	195.1	308.7	-170.2	0.00	0.00	0.00
11,900.0	2.93	57.70	11,890.6	197.9	313.0	-172.5	0.00	0.00	0.00
12,000.0	2.93	57.70	11,990.5	200.6	317.3	-174.9	0.00	0.00	0.00
12,100.0	2.93	57.70	12,090.3	203.3	321.7	-177.3	0.00	0.00	0.00
12,124.8	2.93	57.70	12,115.1	204.0	322.7	-177.9	0.00	0.00	0.00
12,150.0	2.89	120.33	12,140.3	204.0	323.8	-177.8	12.00	-0.14	248.62
12,175.0	5.12	150.61	12,165.2	202.7	324.9	-176.5	12.00	8.91	121.12
12,200.0	7.88	161.30	12,190.1	200.1	326.0	-173.8	12.00	11.03	42.78
12,225.0	10.77	166.39	12,214.7	196.3	327.1	-169.8	12.00	11.55	20.35
12,250.0	13.70	169.33	12,239.2	191.1	328.2	-164.6	12.00	11.74	11.76
12,275.0	16.66	171.25	12,263.3	184.6	329.3	-158.0	12.00	11.83	7.66
12,300.0	19.63	172.60	12,287.0	176.9	330.4	-150.3	12.00	11.88	5.40
12,325.0	22.61	173.60	12,310.4	168.0	331.5	-141.3	12.00	11.91	4.03
12,350.0	25.59	174.39	12,333.2	157.8	332.5	-131.1	12.00	11.93	3.13
12,375.0	28.58	175.02	12,355.4	146.5	333.6	-119.7	12.00	11.95	2.52
12,400.0	31.57	175.54	12,377.1	134.0	334.6	-107.2	12.00	11.95	2.08
12,425.0	34.56	175.97	12,398.0	120.4	335.6	-93.5	12.00	11.96	1.75
12,450.0	37.55	176.35	12,418.2	105.7	336.6	-78.8	12.00	11.97	1.50
12,475.0	40.54	176.68	12,437.6	90.0	337.6	-63.1	12.00	11.97	1.31
12,500.0	43.53	176.97	12,456.2	73.3	338.5	-46.3	12.00	11.97	1.16
12,525.0	46.53	177.23	12,473.9	55.6	339.4	-28.7	12.00	11.98	1.04
12,550.0	49.52	177.46	12,490.6	37.1	340.2	-10.1	12.00	11.98	0.94
12,575.0	52.52	177.68	12,506.3	17.7	341.1	9.3	12.00	11.98	0.86
12,600.0	55.51	177.88	12,521.0	-2.6	341.8	29.5	12.00	11.98	0.80
12,625.0	58.51	178.06	12,534.6	-23.5	342.6	50.5	12.00	11.98	0.74
12,650.0	61.51	178.24	12,547.1	-45.2	343.3	72.1	12.00	11.98	0.69
12,675.0	64.50	178.40	12,558.5	-67.4	343.9	94.4	12.00	11.99	0.66
12,700.0	67.50	178.56	12,568.6	-90.2	344.5	117.2	12.00	11.99	0.62
FTP(BkBear 36 ST #704H)									
12,725.0	70.50	178.71	12,577.6	-113.6	345.1	140.5	12.00	11.99	0.60
12,750.0	73.49	178.85	12,585.3	-137.3	345.6	164.2	12.00	11.99	0.58
12,775.0	76.49	178.99	12,591.8	-161.5	346.1	188.3	12.00	11.99	0.56
12,800.0	79.49	179.13	12,597.0	-185.9	346.5	212.7	12.00	11.99	0.54
12,825.0	82.48	179.26	12,600.9	-210.6	346.8	237.3	12.00	11.99	0.53
12,850.0	85.48	179.39	12,603.5	-235.5	347.1	262.1	12.00	11.99	0.53
12,875.0	88.48	179.52	12,604.8	-260.4	347.3	287.0	12.00	11.99	0.52
12,887.7	90.00	179.59	12,605.0	-273.1	347.4	299.7	12.00	11.99	0.52
12,900.0	90.00	179.59	12,605.0	-285.4	347.5	312.0	0.00	0.00	0.00
13,000.0	90.00	179.59	12,605.0	-385.4	348.2	411.7	0.00	0.00	0.00
13,100.0	90.00	179.59	12,605.0	-485.4	349.0	511.5	0.00	0.00	0.00
13,200.0	90.00	179.59	12,605.0	-585.4	349.7	611.2	0.00	0.00	0.00
13,300.0	90.00	179.59	12,605.0	-685.4	350.4	710.9	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: Black Bear 36 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference:
TVD Reference: KB = 25 @ 3350.0usft
MD Reference: KB = 25 @ 3350.0usft
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)
13,400.0	90.00	179.59	12,605.0	-785.4	351.1	810.7	0.00	0.00	0.00
13,500.0	90.00	179.59	12,605.0	-885.4	351.8	910.4	0.00	0.00	0.00
13,600.0	90.00	179.59	12,605.0	-985.4	352.6	1,010.2	0.00	0.00	0.00
13,700.0	90.00	179.59	12,605.0	-1,085.4	353.3	1,109.9	0.00	0.00	0.00
13,800.0	90.00	179.59	12,605.0	-1,185.4	354.0	1,209.7	0.00	0.00	0.00
13,900.0	90.00	179.59	12,605.0	-1,285.4	354.7	1,309.4	0.00	0.00	0.00
14,000.0	90.00	179.59	12,605.0	-1,385.4	355.4	1,409.1	0.00	0.00	0.00
14,100.0	90.00	179.59	12,605.0	-1,485.4	356.2	1,508.9	0.00	0.00	0.00
14,200.0	90.00	179.59	12,605.0	-1,585.4	356.9	1,608.6	0.00	0.00	0.00
14,300.0	90.00	179.59	12,605.0	-1,685.4	357.6	1,708.4	0.00	0.00	0.00
14,400.0	90.00	179.59	12,605.0	-1,785.4	358.3	1,808.1	0.00	0.00	0.00
14,500.0	90.00	179.59	12,605.0	-1,885.4	359.0	1,907.8	0.00	0.00	0.00
14,600.0	90.00	179.59	12,605.0	-1,985.4	359.8	2,007.6	0.00	0.00	0.00
14,700.0	90.00	179.59	12,605.0	-2,085.4	360.5	2,107.3	0.00	0.00	0.00
14,800.0	90.00	179.59	12,605.0	-2,185.4	361.2	2,207.1	0.00	0.00	0.00
14,900.0	90.00	179.59	12,605.0	-2,285.4	361.9	2,306.8	0.00	0.00	0.00
15,000.0	90.00	179.59	12,605.0	-2,385.4	362.6	2,406.6	0.00	0.00	0.00
15,100.0	90.00	179.59	12,605.0	-2,485.4	363.4	2,506.3	0.00	0.00	0.00
15,200.0	90.00	179.59	12,605.0	-2,585.4	364.1	2,606.0	0.00	0.00	0.00
15,300.0	90.00	179.59	12,605.0	-2,685.4	364.8	2,705.8	0.00	0.00	0.00
15,400.0	90.00	179.59	12,605.0	-2,785.4	365.5	2,805.5	0.00	0.00	0.00
15,500.0	90.00	179.59	12,605.0	-2,885.4	366.2	2,905.3	0.00	0.00	0.00
15,600.0	90.00	179.59	12,605.0	-2,985.4	366.9	3,005.0	0.00	0.00	0.00
15,700.0	90.00	179.59	12,605.0	-3,085.4	367.7	3,104.8	0.00	0.00	0.00
15,800.0	90.00	179.59	12,605.0	-3,185.4	368.4	3,204.5	0.00	0.00	0.00
15,900.0	90.00	179.59	12,605.0	-3,285.4	369.1	3,304.2	0.00	0.00	0.00
16,000.0	90.00	179.59	12,605.0	-3,385.3	369.8	3,404.0	0.00	0.00	0.00
16,100.0	90.00	179.59	12,605.0	-3,485.3	370.5	3,503.7	0.00	0.00	0.00
16,200.0	90.00	179.59	12,605.0	-3,585.3	371.3	3,603.5	0.00	0.00	0.00
16,300.0	90.00	179.59	12,605.0	-3,685.3	372.0	3,703.2	0.00	0.00	0.00
16,400.0	90.00	179.59	12,605.0	-3,785.3	372.7	3,802.9	0.00	0.00	0.00
16,500.0	90.00	179.59	12,605.0	-3,885.3	373.4	3,902.7	0.00	0.00	0.00
16,600.0	90.00	179.59	12,605.0	-3,985.3	374.1	4,002.4	0.00	0.00	0.00
16,700.0	90.00	179.59	12,605.0	-4,085.3	374.9	4,102.2	0.00	0.00	0.00
16,800.0	90.00	179.59	12,605.0	-4,185.3	375.6	4,201.9	0.00	0.00	0.00
16,900.0	90.00	179.59	12,605.0	-4,285.3	376.3	4,301.7	0.00	0.00	0.00
17,000.0	90.00	179.59	12,605.0	-4,385.3	377.0	4,401.4	0.00	0.00	0.00
17,100.0	90.00	179.59	12,605.0	-4,485.3	377.7	4,501.1	0.00	0.00	0.00
17,200.0	90.00	179.59	12,605.0	-4,585.3	378.5	4,600.9	0.00	0.00	0.00
17,300.0	90.00	179.59	12,605.0	-4,685.3	379.2	4,700.6	0.00	0.00	0.00
17,400.0	90.00	179.59	12,605.0	-4,785.3	379.9	4,800.4	0.00	0.00	0.00
17,413.7	90.00	179.59	12,605.0	-4,799.0	380.0	4,814.0	0.00	0.00	0.00

PBHL(BkBear 36 ST #704H)



EOG Resources, Inc.

Planning Report

Database: EDM 5000.1 Single User Db
Company: EOG Resources - Midland
Project: Lea County, NM (NAD 27 NME)
Site: Black Bear 36 State
Well: #704H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #704H
TVD Reference: KB = 25 @ 3350.0usft
MD Reference: KB = 25 @ 3350.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
FTP(BkBear 36 ST #704 - plan misses target center by 39.9usft at 12700.0usft MD (12568.6 TVD, -90.2 N, 344.5 E) - Point	0.00	0.00	12,605.0	-74.0	346.0	398,595.00	752,458.00	32° 5' 35.629 N	103° 31' 5.249 W
PBHL(BkBear 36 ST #704 - plan hits target center - Point	0.00	0.00	12,605.0	-4,799.0	380.0	393,870.00	752,492.00	32° 4' 48.870 N	103° 31' 5.269 W

EOG RESOURCES, INC.
BLACK BEAR 36 STATE #704H

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.
BLACK BEAR 36 STATE #704H

- **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.
BLACK BEAR 36 STATE #704H**

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
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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

Heath Work	Office (432) 686-6716
	Cell (903) 780-1179

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