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District II
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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

HOBBS OCD

AUG 05 2013

RECEIVED

State of New Mexico
Energy, Minerals & Natural Resources
Department
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- 41310	² Pool Code 97900	³ Pool Name Red Hills; Upper Bone Spring Shale
⁴ Property Code 4052	⁵ Property Name DILLON 31	⁶ Well Number #3H
⁷ GRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3440'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	31	24-S	34-E	-	220'	SOUTH	1755'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	31	24-S	34-E	-	230'	NORTH	1327'	EAST	LEA

¹¹ Dedicated Acres 160	¹² Joint or Infill	¹³ Consolidation Code	¹⁴ 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.

BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 X=756494 Y=430386 LAT.: N 32.1805314 LONG.: W 103.5043045 LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=756495 Y=430286 LAT.: N 32.1802565 LONG.: W 103.5043037 UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=756541 Y=4255673 LAT.: N 32.1675764 LONG.: W 103.5042697 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=756117 Y=425560 LAT.: N 32.1672746 LONG.: W 103.5056416		¹⁷OPERATOR 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 undivided 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> 8/5/13 Signature Date Stan Wagner Printed Name E-mail Address
	¹⁸SURVEYOR 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. 8/25/2013 Date of Survey Signature and Seal of Professional Surveyor MICHAEL BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR Certificate Number	

AUG 07 2013

Permit Information:

Well Name: Dillon 31 No. 3H

Location:

SHL: 220' FSL & 1755' FEL, Section 31, T-24-S, R-34-E, Lea Co., N.M.

BHL: 230' FNL & 1327' FEL, Section 31, 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 - 1,215'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' - 5,060'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-14,167'	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
1,215'	550	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)
	250	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
5,060'	850	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
14,167'	300	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 @ 4,560')
	300	11.9	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 - 1,215'	Fresh - Gel	8.6-8.8	28-34	N/c
1,215' - 5,060'	Brine	10.0-10.2	28-34	N/c
5,060' - 8,987'	Cut Brine	8.4-9.0	28-34	N/c
8,987' - 14,167' Lateral	Cut Brine	9.0-9.5	40-42	8-10

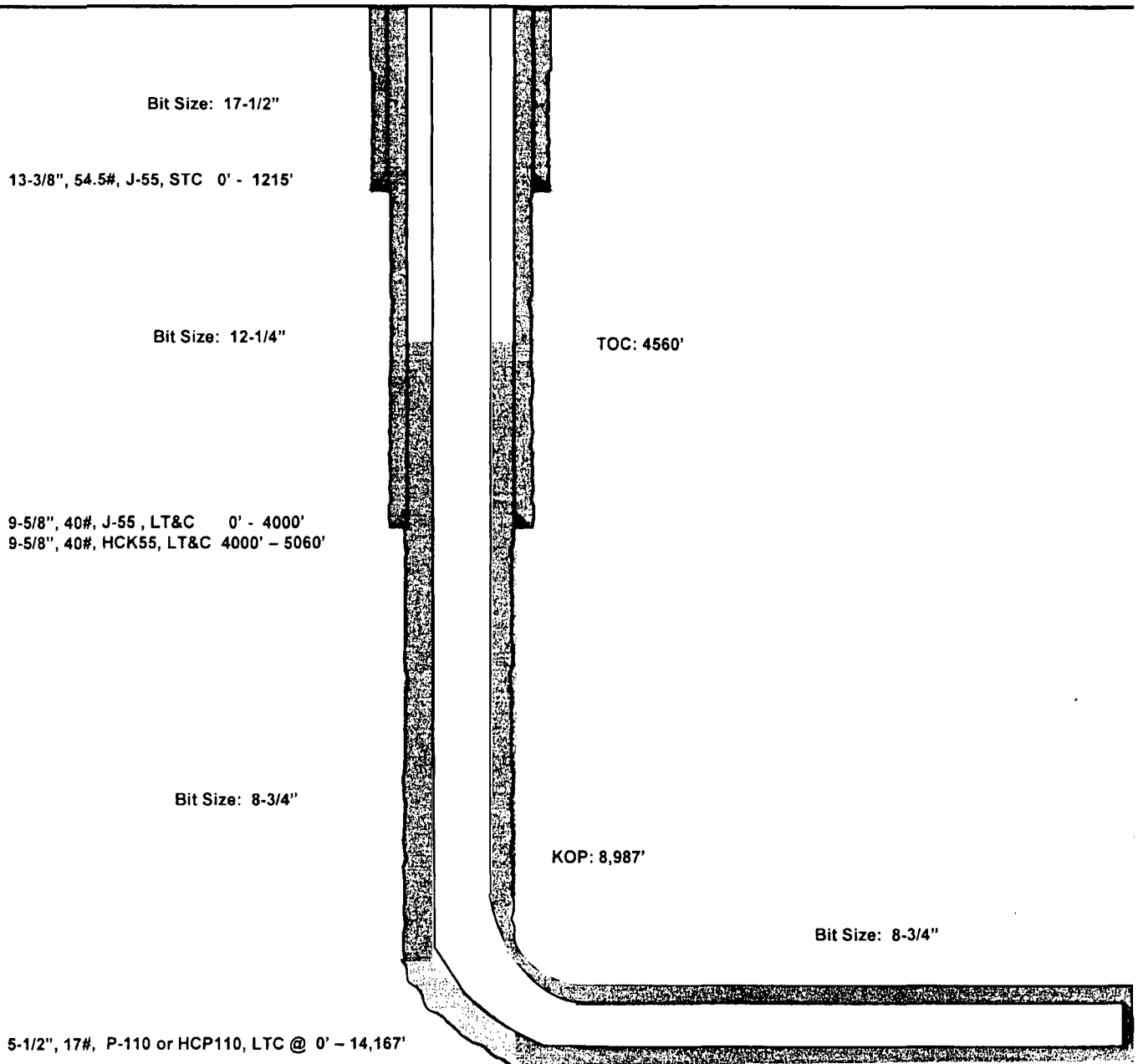
Dillon 31 #3H
Lea County, New Mexico

220' FSL
1755' FEL
Section 31
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-

KB: 3,467'
GL: 3,440'



Lateral: 14,167' MD, 9,504' TVD

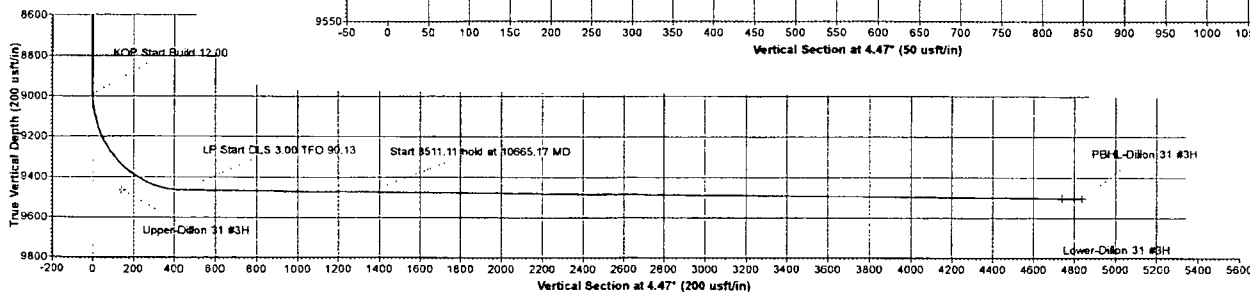
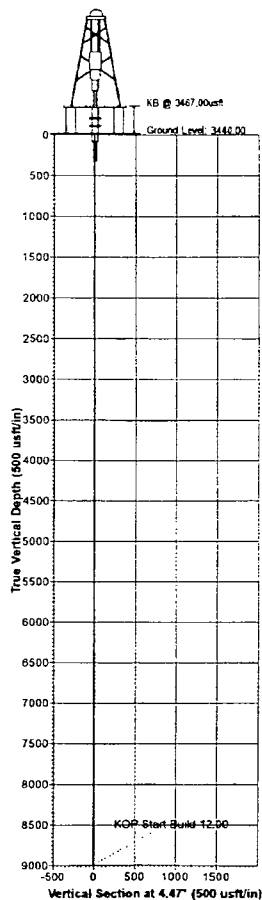
BH Location: 230' FNL & 1327' FEL
Section 31
T-24-S, R-34-E



Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #3H
Wellbore: OH
Design: Plan #1 08-01-13



True North: 0.44°
Magnetic North: 6.85°
Magnetic Field Strength: 48375.0 nT
Dip Angle: 60.09°
Date: 08/01/2013
Model: IGRF 2010_14



WELL DETAILS										
+N-S		+E-W		Northing		Ground Level		3440.00		
0.00		0.00		425560.00		756117.00		Latitude		Longitude
								32° 10' 2.185662 N		103° 30' 20.310154 W

SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSecl	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	8987.50	0.00	0.00	8987.50	0.00	0.00	0.00	0.00	0.00		KOP Start Build 12.00
3	9733.42	89.50	26.52	9465.00	423.54	211.36	12.00	26.52	438.72		LP Start DLS 3.00 TFO 90.13
4	10636.42	89.50	358.43	9473.05	1295.29	412.29	3.00	-40.13	1323.48		
5	14167.45	89.50	350.43	9504.00	4826.00	377.00	0.00	0.00	4840.70	PBHL-Dillon 31 #3H	

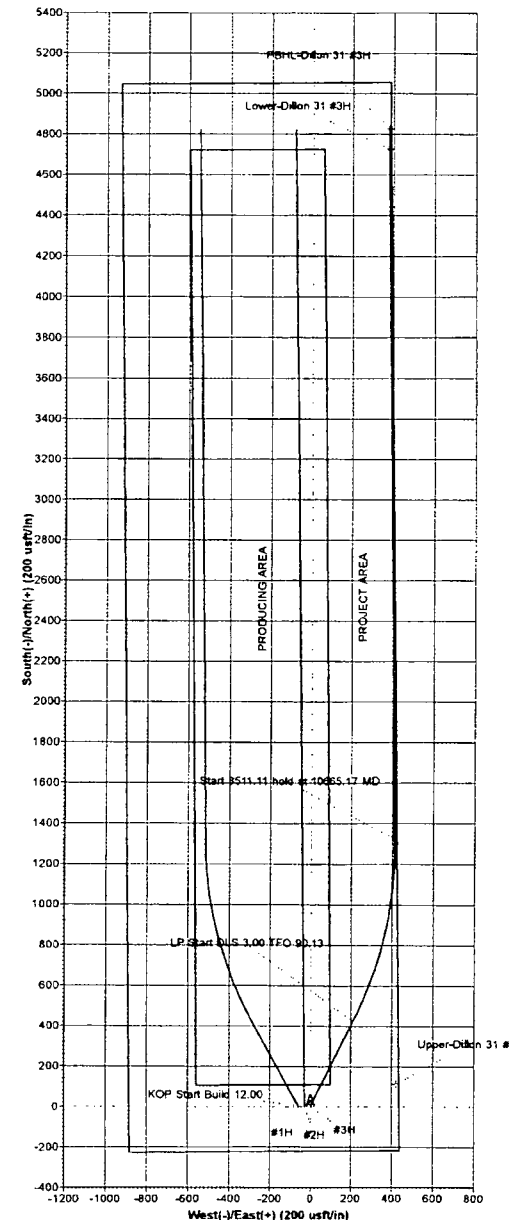
DESIGN TARGET DETAILS										
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape		
Upper-Dillon 31 #3H	9465.00	113.00	A24.00	425673.00	756541.00	32° 10' 3.271548 N	103° 30' 15.367612 W	Point		
- plan misses target center by 330.82 uft at 9504.00 uft MD (9432.82 TVD: 271.20 N, 135.33 E)										
Lower-Dillon 31 #3H	9503.12	4726.00	378.00	430286.00	756495.00	32° 10' 48.922643 N	103° 30' 15.489240 W	Point		
- plan hits target center										
PBHL-Dillon 31 #3H	9504.00	4826.00	377.00	430386.00	756494.00	32° 10' 49.912260 N	103° 30' 15.481908 W	Point		
- plan hits target center										

LEGEND	
—	#1H, OH, Plan #1 08-01-13 V0
—	#2H, OH, Plan #1 08-01-13 V0
—	Plan #1 08-01-13

Map System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone Name: New Mexico East 3001
Local Origin: Well #3H, Gnd North
Latitude: 32° 10' 2.185662 N
Longitude: 103° 30' 20.310154 W
Grid East: 756117.00
Grid North: 425560.00
Scale Factor: 1.000
Geomagnetic Model: IGRF 2010_14
Sample Date: 01-Aug-13
Magnetic Declination: 7.29°
Dip Angle from Horizontal: 60.09°
Magnetic Field Strength: 48376
To convert a Magnetic Direction to a Gnd Direction, Add 6.85°
To convert a Magnetic Direction to a True Direction, Add 7.29° East
To convert a True Direction to a Gnd Direction, Subtract 0.44°

PROJECT DETAILS: Lea County, NM (NAD27 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

SITE DETAILS: Dillon 31
Site Centre Northing: 425560.00
Easting: 756057.00
Positional Uncertainty: 0.00
Convergence: 0.44
Local North: Gnd



Created By: Julio Pina Date: 10/54, August 01 2013



EOG Resources

Lea County, NM (NAD27 NME)

Dillon 31

#3H

OH

Plan: Plan #1 08-01-13

Standard Planning Report

01 August, 2013





Phoenix Technology Services
Planning Report



Database: GCR DB
Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #3H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #3H
TVD Reference: KB @ 3467.00usft
MD Reference: KB @ 3467.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD27 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	Dillon 31		
Site Position:	Northing:	425,560.00 usft	Latitude: 32° 10' 2.190228 N
From: Map	Easting:	756,057.00 usft	Longitude: 103° 30' 21.008137 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.44 °

Well	#3H		
Well Position	+N/-S	0.00 usft	Northing: 425,560.00 usft
	+E/-W	60.00 usft	Easting: 756,117.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,440.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	08/01/13	7.29
			Dip Angle
			60.09
			Field Strength
			48,376

Design	Plan #1 08-01-13		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			4.47

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,987.50	0.00	0.00	8,987.50	0.00	0.00	0.00	0.00	0.00	0.00	
9,733.42	89.50	26.52	9,465.00	423.54	211.36	12.00	12.00	0.00	26.52	
10,636.42	89.50	359.43	9,473.05	1,295.29	412.20	3.00	0.00	-3.00	-90.13	
14,167.45	89.50	359.43	9,504.00	4,826.00	377.00	0.00	0.00	0.00	0.00	PBHL-Dillon 31 #3H



Phoenix Technology Services

Planning Report



Database: GCR DB
Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #3H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #3H
TVD Reference: KB @ 3467.00usft
MD Reference: KB @ 3467.00usft
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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8,987.50	0.00	0.00	8,987.50	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 12.00									
9,000.00	1.50	26.52	9,000.00	0.15	0.07	0.15	12.00	12.00	0.00
9,100.00	13.50	26.52	9,098.96	11.80	5.89	12.23	12.00	12.00	0.00
9,200.00	25.50	26.52	9,193.06	41.61	20.77	43.10	12.00	12.00	0.00
9,300.00	37.50	26.52	9,278.17	88.28	44.05	91.44	12.00	12.00	0.00
9,400.00	49.49	26.52	9,350.58	149.75	74.73	155.12	12.00	12.00	0.00
9,500.00	61.49	26.52	9,407.12	223.35	111.46	231.35	12.00	12.00	0.00
9,559.97	68.69	26.52	9,432.37	271.99	135.73	281.73	12.00	12.00	0.00
Upper-Dillon 31 #3H									
9,600.00	73.49	26.52	9,445.33	305.86	152.63	316.82	12.00	12.00	0.00
9,700.00	85.49	26.52	9,463.54	393.68	196.45	407.78	12.00	12.00	0.00
9,733.42	89.50	26.52	9,465.00	423.54	211.36	438.72	12.00	12.00	0.00
LP Start DLS 3.00 TFO 90.13									
9,800.00	89.50	24.52	9,465.58	483.63	240.04	500.85	3.00	-0.01	-3.00
9,900.00	89.49	21.52	9,466.47	575.65	279.14	595.64	3.00	0.00	-3.00
10,000.00	89.49	18.52	9,467.36	669.59	313.38	691.96	3.00	0.00	-3.00
10,100.00	89.49	15.52	9,468.26	765.19	342.65	789.55	3.00	0.00	-3.00
10,200.00	89.48	12.52	9,469.16	862.20	366.87	888.15	3.00	0.00	-3.00
10,300.00	89.49	9.52	9,470.05	960.34	385.99	987.48	3.00	0.00	-3.00
10,400.00	89.49	6.52	9,470.95	1,059.34	399.94	1,087.27	3.00	0.00	-3.00
10,500.00	89.49	3.52	9,471.84	1,158.95	408.69	1,187.25	3.00	0.00	-3.00
10,600.00	89.50	0.52	9,472.73	1,258.87	412.22	1,287.15	3.00	0.00	-3.00
10,636.42	89.50	359.43	9,473.05	1,295.29	412.20	1,323.46	3.00	0.01	-3.00
10,665.17	89.50	359.43	9,473.30	1,324.03	411.92	1,352.09	0.00	0.00	0.00
Start 3511.11 hold at 10665.17 MD									
10,700.00	89.50	359.43	9,473.61	1,358.86	411.57	1,386.79	0.00	0.00	0.00
10,800.00	89.50	359.43	9,474.48	1,458.85	410.57	1,486.40	0.00	0.00	0.00
10,900.00	89.50	359.43	9,475.36	1,558.84	409.58	1,586.01	0.00	0.00	0.00
11,000.00	89.50	359.43	9,476.24	1,658.83	408.58	1,685.62	0.00	0.00	0.00
11,100.00	89.50	359.43	9,477.11	1,758.82	407.58	1,785.23	0.00	0.00	0.00
11,200.00	89.50	359.43	9,477.99	1,858.82	406.58	1,884.84	0.00	0.00	0.00
11,300.00	89.50	359.43	9,478.87	1,958.81	405.59	1,984.45	0.00	0.00	0.00
11,400.00	89.50	359.43	9,479.74	2,058.80	404.59	2,084.06	0.00	0.00	0.00
11,500.00	89.50	359.43	9,480.62	2,158.79	403.59	2,183.66	0.00	0.00	0.00
11,600.00	89.50	359.43	9,481.49	2,258.78	402.60	2,283.27	0.00	0.00	0.00
11,700.00	89.50	359.43	9,482.37	2,358.77	401.60	2,382.88	0.00	0.00	0.00
11,800.00	89.50	359.43	9,483.25	2,458.76	400.60	2,482.49	0.00	0.00	0.00
11,900.00	89.50	359.43	9,484.12	2,558.75	399.61	2,582.10	0.00	0.00	0.00
12,000.00	89.50	359.43	9,485.00	2,658.75	398.61	2,681.71	0.00	0.00	0.00
12,100.00	89.50	359.43	9,485.88	2,758.74	397.61	2,781.32	0.00	0.00	0.00
12,200.00	89.50	359.43	9,486.75	2,858.73	396.62	2,880.93	0.00	0.00	0.00
12,300.00	89.50	359.43	9,487.63	2,958.72	395.62	2,980.54	0.00	0.00	0.00
12,400.00	89.50	359.43	9,488.51	3,058.71	394.62	3,080.15	0.00	0.00	0.00
12,500.00	89.50	359.43	9,489.38	3,158.70	393.62	3,179.76	0.00	0.00	0.00
12,600.00	89.50	359.43	9,490.26	3,258.69	392.63	3,279.37	0.00	0.00	0.00
12,700.00	89.50	359.43	9,491.14	3,358.68	391.63	3,378.98	0.00	0.00	0.00
12,800.00	89.50	359.43	9,492.01	3,458.68	390.63	3,478.59	0.00	0.00	0.00
12,900.00	89.50	359.43	9,492.89	3,558.67	389.64	3,578.20	0.00	0.00	0.00
13,000.00	89.50	359.43	9,493.77	3,658.66	388.64	3,677.81	0.00	0.00	0.00
13,100.00	89.50	359.43	9,494.64	3,758.65	387.64	3,777.42	0.00	0.00	0.00
13,200.00	89.50	359.43	9,495.52	3,858.64	386.65	3,877.03	0.00	0.00	0.00
13,300.00	89.50	359.43	9,496.40	3,958.63	385.65	3,976.64	0.00	0.00	0.00



Phoenix Technology Services Planning Report



Database: GCR DB
Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #3H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #3H
TVD Reference: KB @ 3467.00usft
MD Reference: KB @ 3467.00usft
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)
13,400.00	89.50	359.43	9,497.27	4,058.62	384.65	4,076.25	0.00	0.00	0.00
13,500.00	89.50	359.43	9,498.15	4,158.61	383.65	4,175.86	0.00	0.00	0.00
13,600.00	89.50	359.43	9,499.03	4,258.60	382.66	4,275.47	0.00	0.00	0.00
13,700.00	89.50	359.43	9,499.90	4,358.60	381.66	4,375.08	0.00	0.00	0.00
13,800.00	89.50	359.43	9,500.78	4,458.59	380.66	4,474.69	0.00	0.00	0.00
13,900.00	89.50	359.43	9,501.66	4,558.58	379.67	4,574.30	0.00	0.00	0.00
14,000.00	89.50	359.43	9,502.53	4,658.57	378.67	4,673.91	0.00	0.00	0.00
14,067.44	89.50	359.43	9,503.12	4,726.00	378.00	4,741.08	0.00	0.00	0.00
Lower-Dillon 31 #3H									
14,100.00	89.50	359.43	9,503.41	4,758.56	377.67	4,773.52	0.00	0.00	0.00
14,167.45	89.50	359.43	9,504.00	4,826.00	377.00	4,840.70	0.00	0.00	0.00
PBHL-Dillon 31 #3H									

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
Upper-Dillon 31 #3H - plan misses target center by 330.82usft at 9559.97usft MD (9432.37 TVD, 271.99 N, 135.73 E) - Point	0.00	0.00	9,465.00	113.00	424.00	425,673.00	756,541.00	32° 10' 3.271548 N	103° 30' 15.367612 W
Lower-Dillon 31 #3H - plan hits target center - Point	0.00	0.00	9,503.12	4,726.00	378.00	430,286.00	756,495.00	32° 10' 48.922643 N	103° 30' 15.489240 W
PBHL-Dillon 31 #3H - plan hits target center - Point	0.00	0.00	9,504.00	4,826.00	377.00	430,386.00	756,494.00	32° 10' 49.912260 N	103° 30' 15.491908 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,987.50	8,987.50	0.00	0.00	KOP Start Build 12.00
9,733.42	9,465.00	423.54	211.36	LP Start DLS 3.00 TFO 90.13
10,665.17	9,473.30	1,324.03	411.92	Start 3511.11 hold at 10665.17 MD
14,176.28				TD at 14176.28