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District II
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Phone: (575) 748-1283 Fax: (575) 748-9720
District III
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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
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- 41308	² Pool Code 97900	³ Pool Name Red Hills; Bone Spring Upper Shale
⁴ Property Code 4052	⁵ Property Name DILLON 31	
⁶ GRID No. 7377	⁷ Operator Name EOG RESOURCES, INC.	
		⁸ Well Number #1H
		⁹ Elevation 3440'

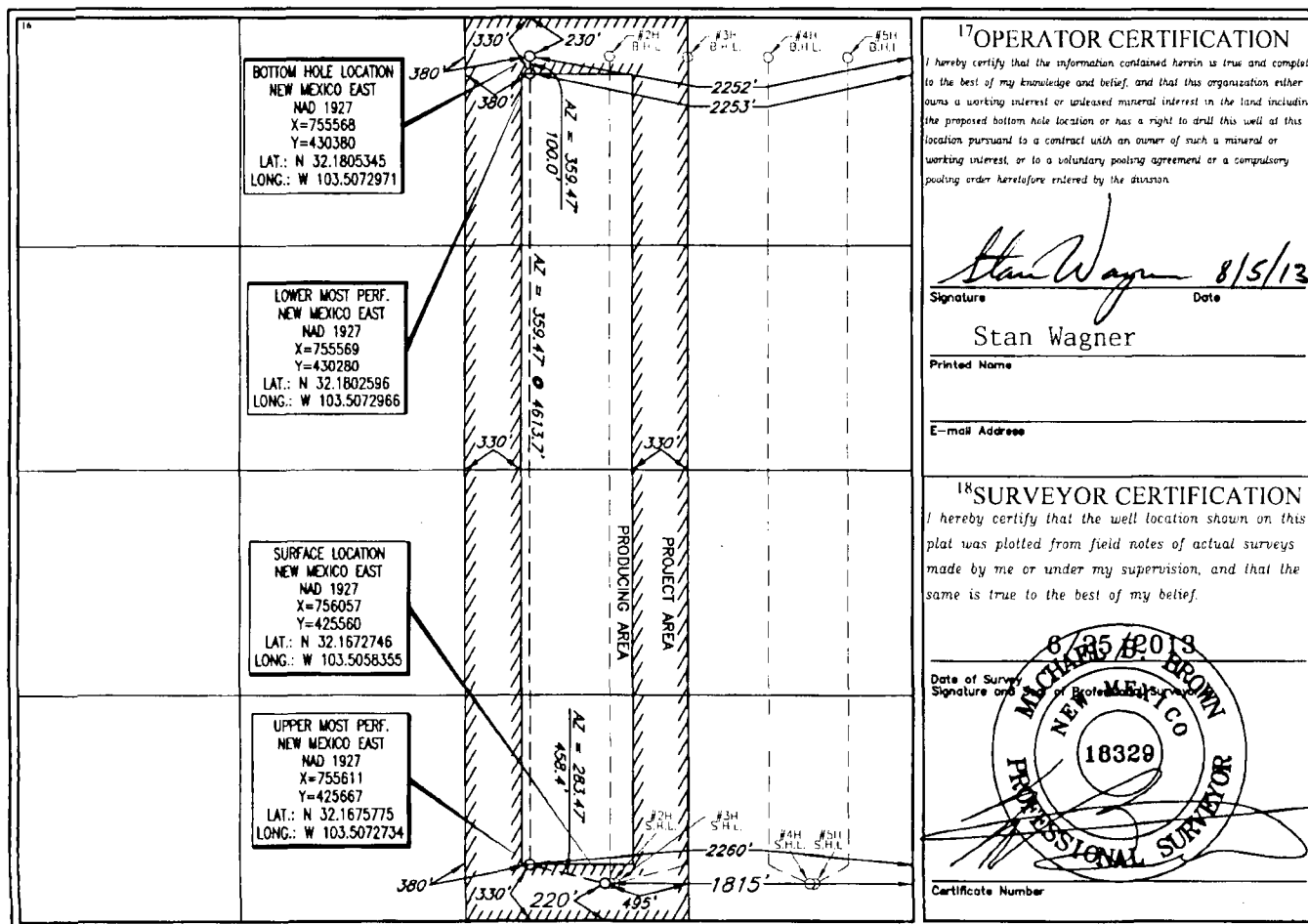
¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	31	24-S	34-E	-	220'	SOUTH	1815'	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	2252'	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.



AUG 07 2013

Permit Information:

Well Name: Dillon 31 No. 1H

Location:

SHL: 220' FSL & 1815' FEL, Section 31, T-24-S, R-34-E, Lea Co., N.M.

BHL: 230' FNL & 2252' 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' - 14,176'	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
14,176'	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' - 14,176' Lateral	Cut Brine	9.0-9.5	40-42	8-10

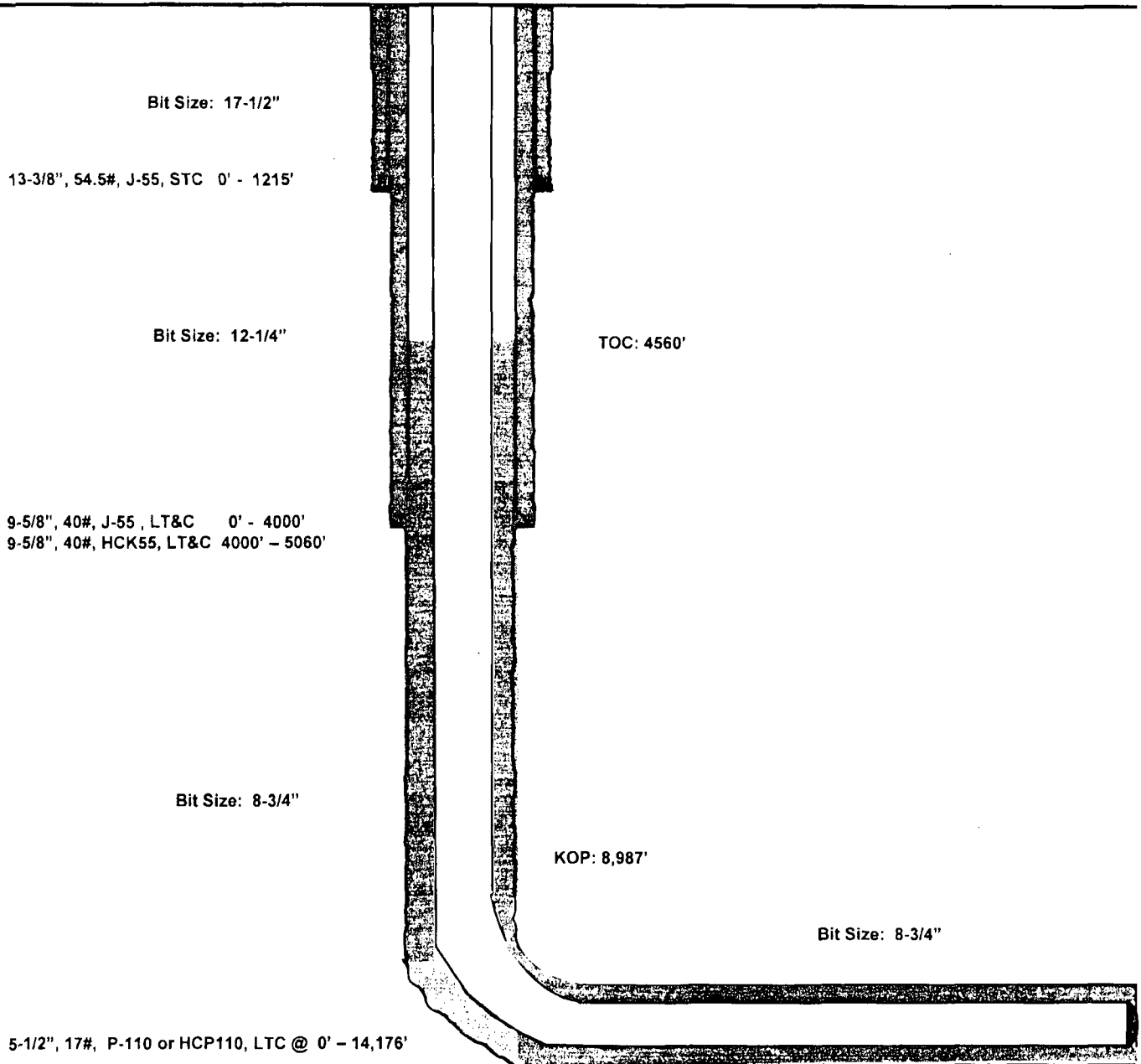
Dillon 31 #1H
Lea County, New Mexico

220' FSL
1815' FEL
Section 31
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-

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



Lateral: 14,176' MD, 9,504' TVD

BH Location: 230' FNL & 2252' FEL
Section 31
T-24-S, R-34-E



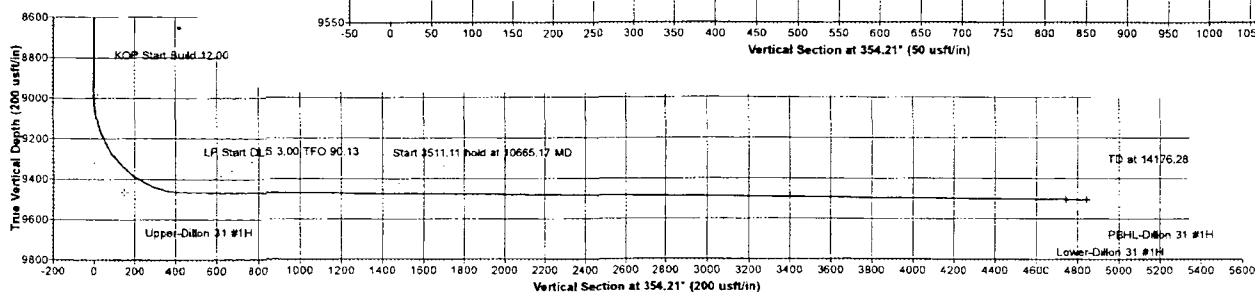
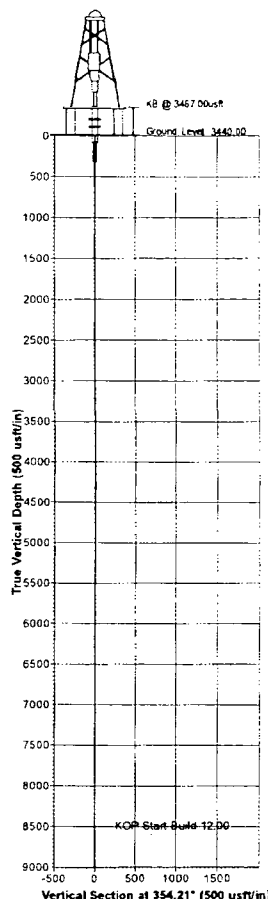
Project: Lea County, NM (NAD27 NME)
 Site: Dillon 31
 Well: #1H
 Wellbore: OH
 Design: Plan #1 08-01-13



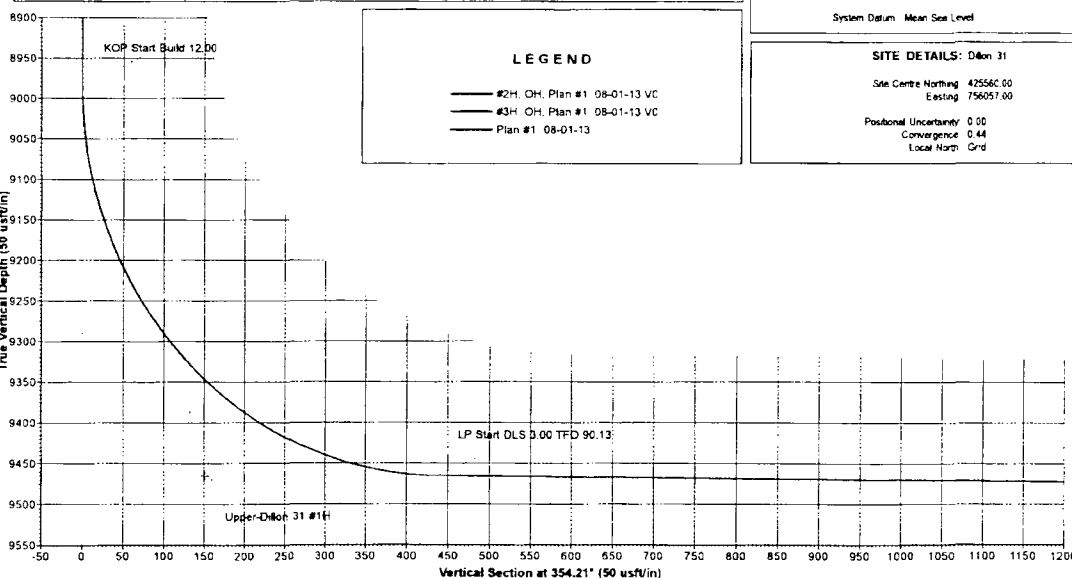
PHOENIX
 TECHNOLOGY SERVICES



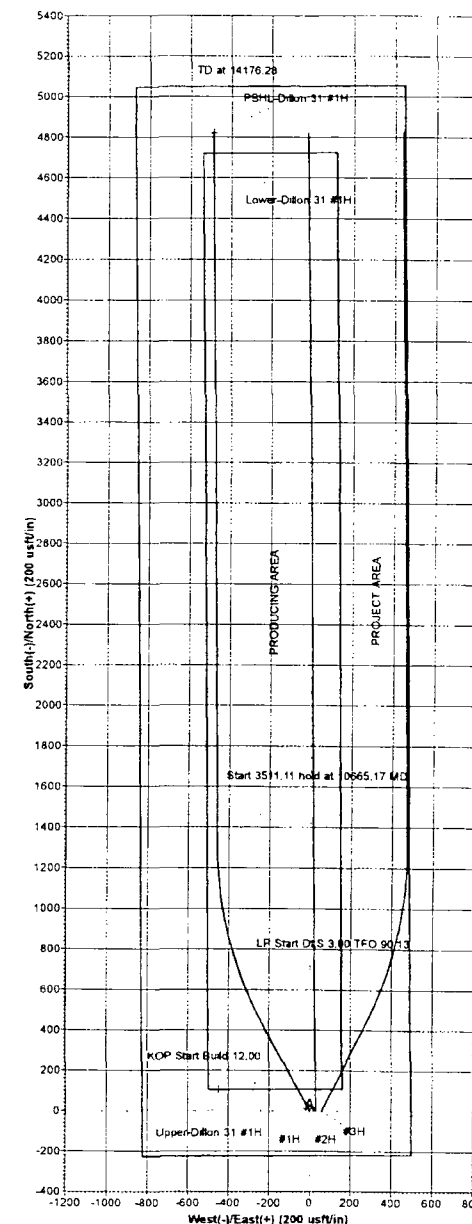
Azimuths to Grid North
 True North: 0.44°
 Magnetic North: 6.85°
 Magnetic Field
 Strength: 48376.0anT
 Dip Angle: 60.09°
 Date: 08/01/2013
 Model: IGRF2010_14



WELL DETAILS											
					Ground Level	3440.00					
					Easting		Latitude		Longitude		
	-N/S	-E/W	North					103° 30'	21,008137° W		
	0.00	0.00	425560.00		756357.00		32° 10'	21,90228° N			
SECTION DETAILS											
Sec	MD	Inc	Azi	TVD	-N/S	-E/W	Dleg	T/Face	V Sect	Target	Annotation:
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8967.50	0.00	0.00	8967.50	0.00	0.00	0.00	0.00	0.00	0.00	KOP Start Build 12.00
3	9133.42	89.50	331.52	9465.00	415.07	-225.72	12.00	331.52	436.72		LP Start DLS 3.00 TFO 90.13
4	10565.17	89.50	358.47	9473.30	1305.17	-456.74	3.00	90.13	1349.56		Start 3511.11 hold at 10665.17 MD
5	14176.28	89.50	358.47	9504.00	4820.00	-489.00	3.00	0.00	4844.74	PBL-Dillon 31 #1H	TD at 14176.28
DESIGN TARGET DETAILS											
Name		TVD	-N/S	-E/W	North		Latitude		Longitude	Shape	
Upper-Dillon 31 #1H	9465.00	107.00	-446.90	425661.00	755811.00	32° 10'	3,322948° N	103° 30'	26,188298° W	Point	
									</		



PROJECT DETAILS: Lea County, NM (NAD27 NME)										
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 #1H, Grid North									
Latitude	32° 10' 21.90228 N									
Longitude	103° 30' 21.008137 W									
Grid East	756057.00									
Grid North	425560.00									
Scale Factor	1.000									
Geomagnetic Model	IGRF2010_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 Grid Direction, Add 6.85°										
To convert a Magnetic Direction to a True Direction, Add 7.29° East										
To convert a True Direction to a Grid Direction, Subtract 0.44°										
SITE DETAILS: Dillon 31										
Site Centre North	425560.00									
East	756057.00									
Positional Uncertainty	0.00									
Convergence	0.44									
Local North	Grid									





EOG Resources

Lea County, NM (NAD27 NME)

Dillon 31

#1H

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: #1H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #1H
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:	Northings:	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:	#1H		
Well Position	+N/-S	0.00 usft	Northings: 425,560.00 usft
	+E/-W	0.00 usft	Easting: 756,057.00 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
			354.21

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	331.52	9,465.00	416.07	-225.72	12.00	12.00	0.00	331.52	
10,665.17	89.50	359.47	9,473.30	1,309.17	-456.74	3.00	0.00	3.00	90.13	
14,176.28	89.50	359.47	9,504.00	4,820.00	-489.00	0.00	0.00	0.00	0.00	PBHL-Dillon 31 #1H



Phoenix Technology Services
Planning Report



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

Local Co-ordinate Reference: Well #1H
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	331.52	9,000.00	0.14	-0.08	0.15	12.00	12.00	0.00
9,100.00	13.50	331.52	9,098.96	11.59	-6.29	12.17	12.00	12.00	0.00
9,200.00	25.50	331.52	9,193.06	40.88	-22.18	42.91	12.00	12.00	0.00
9,300.00	37.50	331.52	9,278.17	86.72	-47.04	91.02	12.00	12.00	0.00
9,400.00	49.49	331.52	9,350.58	147.11	-79.81	154.41	12.00	12.00	0.00
9,500.00	61.49	331.52	9,407.12	219.41	-119.03	230.30	12.00	12.00	0.00
9,575.05	70.50	331.52	9,437.62	279.61	-151.69	293.49	12.00	12.00	0.00
Upper-Dillon 31 #1H									
9,600.00	73.49	331.52	9,445.33	300.46	-163.00	315.38	12.00	12.00	0.00
9,700.00	85.49	331.52	9,463.54	386.73	-209.80	405.93	12.00	12.00	0.00
9,733.42	89.50	331.52	9,465.00	416.07	-225.72	436.72	12.00	12.00	0.00
LP Start DLS 3.00 TFO 90.13									
9,800.00	89.50	333.52	9,465.58	475.13	-256.44	498.59	3.00	-0.01	3.00
9,900.00	89.49	336.52	9,466.47	565.76	-298.67	593.02	3.00	-0.01	3.00
10,000.00	89.49	339.52	9,467.36	658.48	-336.09	689.03	3.00	0.00	3.00
10,100.00	89.49	342.52	9,468.26	753.03	-368.62	786.38	3.00	0.00	3.00
10,200.00	89.48	345.52	9,469.16	849.15	-396.15	884.79	3.00	0.00	3.00
10,300.00	89.48	348.52	9,470.06	946.57	-418.61	983.99	3.00	0.00	3.00
10,400.00	89.49	351.52	9,470.95	1,045.05	-435.94	1,083.70	3.00	0.00	3.00
10,500.00	89.49	354.52	9,471.85	1,144.29	-448.09	1,183.67	3.00	0.00	3.00
10,600.00	89.50	357.52	9,472.73	1,244.03	-455.03	1,283.60	3.00	0.00	3.00
10,665.17	89.50	359.47	9,473.30	1,309.17	-456.74	1,348.58	3.00	0.01	3.00
Start 3511.11 hold at 10665.17 MD									
10,700.00	89.50	359.47	9,473.61	1,344.00	-457.06	1,383.27	0.00	0.00	0.00
10,800.00	89.50	359.47	9,474.48	1,443.99	-457.98	1,482.84	0.00	0.00	0.00
10,900.00	89.50	359.47	9,475.36	1,543.99	-458.90	1,582.41	0.00	0.00	0.00
11,000.00	89.50	359.47	9,476.23	1,643.98	-459.82	1,681.99	0.00	0.00	0.00
11,100.00	89.50	359.47	9,477.11	1,743.97	-460.74	1,781.56	0.00	0.00	0.00
11,200.00	89.50	359.47	9,477.98	1,843.96	-461.66	1,881.14	0.00	0.00	0.00
11,300.00	89.50	359.47	9,478.85	1,943.95	-462.58	1,980.71	0.00	0.00	0.00
11,400.00	89.50	359.47	9,479.73	2,043.95	-463.49	2,080.28	0.00	0.00	0.00
11,500.00	89.50	359.47	9,480.60	2,143.94	-464.41	2,179.86	0.00	0.00	0.00
11,600.00	89.50	359.47	9,481.48	2,243.93	-465.33	2,279.43	0.00	0.00	0.00
11,700.00	89.50	359.47	9,482.35	2,343.92	-466.25	2,379.01	0.00	0.00	0.00
11,800.00	89.50	359.47	9,483.23	2,443.91	-467.17	2,478.58	0.00	0.00	0.00
11,900.00	89.50	359.47	9,484.10	2,543.91	-468.09	2,578.16	0.00	0.00	0.00
12,000.00	89.50	359.47	9,484.97	2,643.90	-469.01	2,677.73	0.00	0.00	0.00
12,100.00	89.50	359.47	9,485.85	2,743.89	-469.93	2,777.30	0.00	0.00	0.00
12,200.00	89.50	359.47	9,486.72	2,843.88	-470.84	2,876.88	0.00	0.00	0.00
12,300.00	89.50	359.47	9,487.60	2,943.87	-471.76	2,976.45	0.00	0.00	0.00
12,400.00	89.50	359.47	9,488.47	3,043.86	-472.68	3,076.03	0.00	0.00	0.00
12,500.00	89.50	359.47	9,489.35	3,143.86	-473.60	3,175.60	0.00	0.00	0.00
12,600.00	89.50	359.47	9,490.22	3,243.85	-474.52	3,275.18	0.00	0.00	0.00
12,700.00	89.50	359.47	9,491.09	3,343.84	-475.44	3,374.75	0.00	0.00	0.00
12,800.00	89.50	359.47	9,491.97	3,443.83	-476.36	3,474.32	0.00	0.00	0.00
12,900.00	89.50	359.47	9,492.84	3,543.82	-477.28	3,573.90	0.00	0.00	0.00
13,000.00	89.50	359.47	9,493.72	3,643.82	-478.19	3,673.47	0.00	0.00	0.00
13,100.00	89.50	359.47	9,494.59	3,743.81	-479.11	3,773.05	0.00	0.00	0.00
13,200.00	89.50	359.47	9,495.47	3,843.80	-480.03	3,872.62	0.00	0.00	0.00
13,300.00	89.50	359.47	9,496.34	3,943.79	-480.95	3,972.19	0.00	0.00	0.00
13,400.00	89.50	359.47	9,497.21	4,043.78	-481.87	4,071.77	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: #1H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #1H
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)
13,500.00	89.50	359.47	9,498.09	4,143.78	-482.79	4,171.34	0.00	0.00	0.00
13,600.00	89.50	359.47	9,498.96	4,243.77	-483.71	4,270.92	0.00	0.00	0.00
13,700.00	89.50	359.47	9,499.84	4,343.76	-484.62	4,370.49	0.00	0.00	0.00
13,800.00	89.50	359.47	9,500.71	4,443.75	-485.54	4,470.07	0.00	0.00	0.00
13,900.00	89.50	359.47	9,501.58	4,543.74	-486.46	4,569.64	0.00	0.00	0.00
14,000.00	89.50	359.47	9,502.46	4,643.74	-487.38	4,669.21	0.00	0.00	0.00
14,076.27	89.50	359.47	9,503.13	4,720.00	-488.08	4,745.16	0.00	0.00	0.00
Lower-Dillon 31 #1H									
14,100.00	89.50	359.47	9,503.33	4,743.73	-488.30	4,768.79	0.00	0.00	0.00
14,176.28	89.50	359.47	9,504.00	4,820.00	-489.00	4,844.74	0.00	0.00	0.00
TD at 14176.28 - PBHL-Dillon 31 #1H									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Upper-Dillon 31 #1H	0.00	0.00	9,465.00	107.00	-446.00	425,667.00	755,611.00	32° 10' 3.282948 N	103° 30' 26.186926 W
- plan misses target center by 342.29usft at 9575.05usft MD (9437.62 TVD, 279.61 N, -151.69 E)									
- Point									
Lower-Dillon 31 #1H	0.00	0.01	9,503.13	4,720.00	-488.00	430,280.00	755,569.00	32° 10' 48.933760 N	103° 30' 26.263515 W
- plan misses target center by 0.08usft at 14076.27usft MD (9503.13 TVD, 4720.00 N, -488.08 E)									
- Point									
PBHL-Dillon 31 #1H	0.00	0.00	9,504.00	4,820.00	-489.00	430,380.00	755,568.00	32° 10' 49.923378 N	103° 30' 26.266215 W
- plan hits target center									
- Point									

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	416.07	-225.72	LP Start DLS 3.00 TFO 90.13
10,665.17	9,473.30	1,309.17	-456.74	Start 3511.11 hold at 10665.17 MD
14,176.28	9,504.00	4,820.00	-489.00	TD at 14176.28