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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

HOBBS OCD State of New Mexico
Energy, Minerals & Natural Resources
AUG 05 2013 Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Sante 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- 41309	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 #2H
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3440'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
0	31	24-S	34-E	-	220'	SOUTH	1785'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
B	31	24-S	34-E	-	232'	NORTH	1790'	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=756031 Y=430381 LAT.: N 32.1805276 LONG.: W 103.5058014 LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=756032 Y=430283 LAT.: N 32.1802581 LONG.: W 103.5058004 UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=756081 Y=425670 LAT.: N 32.1675770 LONG.: W 103.5057548 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=756087 Y=425560 LAT.: N 32.1672746 LONG.: W 103.5057385	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 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> 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 MICHAEL E. BROWN Signature and Seal of Professional Surveyor NEW MEXICO 18329 PROFESSIONAL SURVEYOR Certificate Number
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AUG 07 2013

Permit Information:

Well Name: Dillon 31 No. 2H

Location:

SHL: 220' FSL & 1785' FEL, Section 31, T-24-S, R-34-E, Lea Co., N.M.

BHL: 232' FNL & 1790' 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'-14,081'	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
14,081'	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' - 14,081' Lateral	Cut Brine	9.0-9.5	40-42	8-10

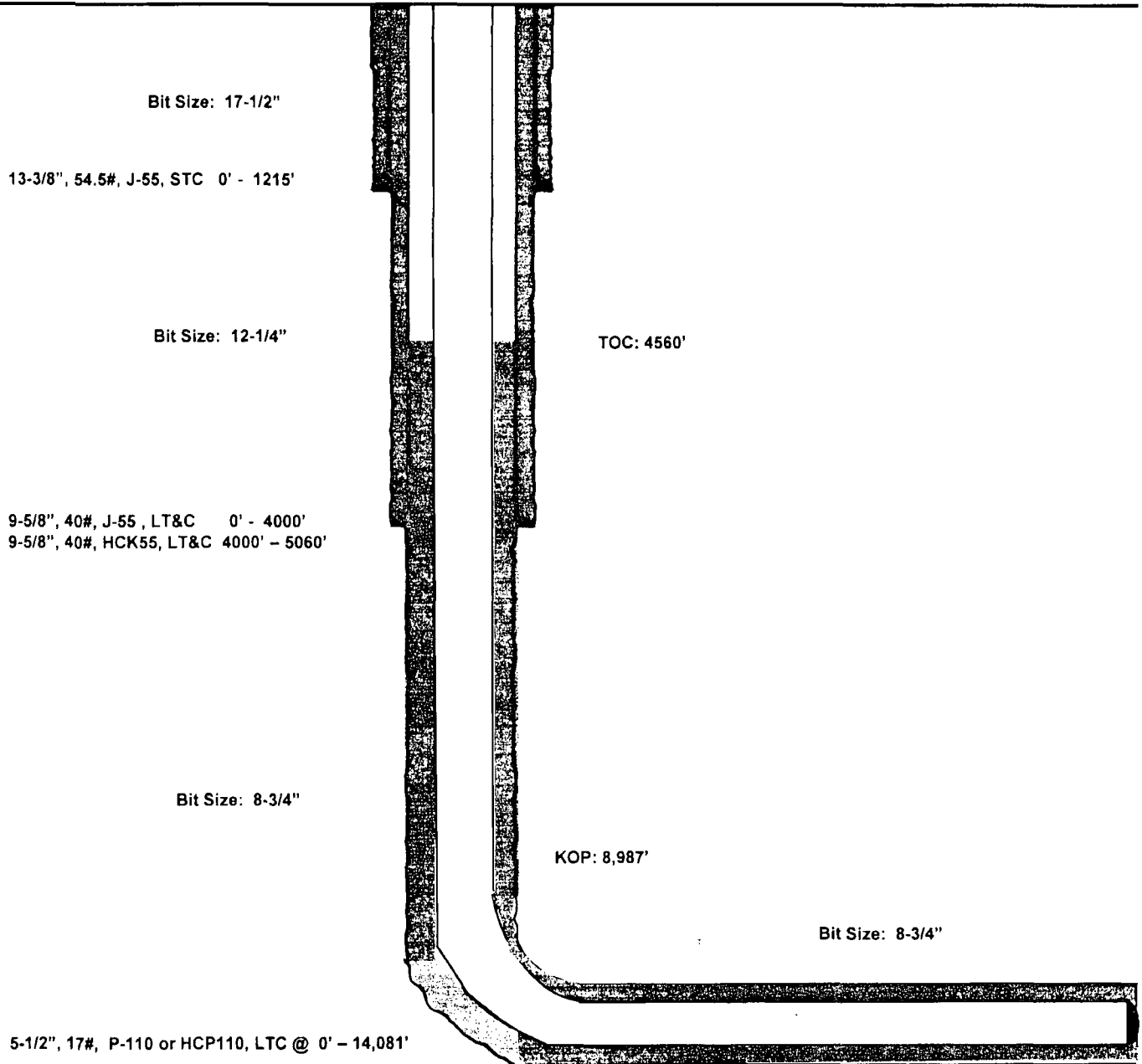
Dillon 31 #2H
Lea County, New Mexico

220' FSL
1785' FEL
Section 31
T-24-S, R-34-E

Proposed Wellbore

API: 30-025-

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



Lateral: 14,081' MD, 9,504' TVD

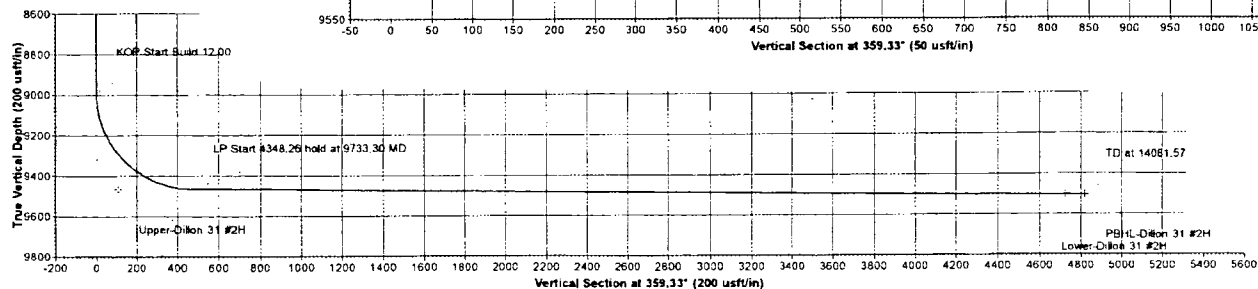
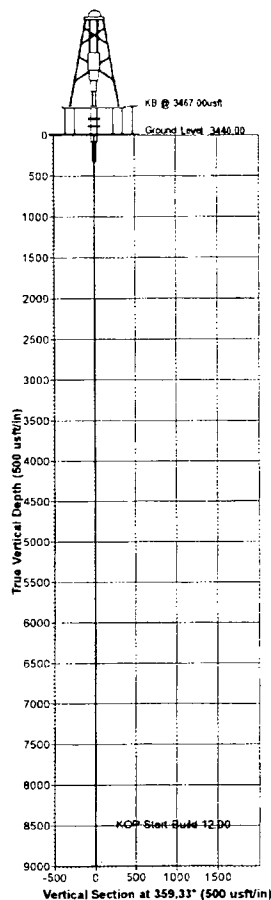
BH Location: 232' FNL & 1790' FEL
Section 31
T-24-S, R-34-E



Project: Lea County, NM (NAD27 NME)
 Site: Dillon 31
 Well: #2H
 Wellbore: OH
 Design: Plan #1 08-01-13



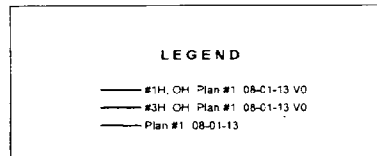
T G M
 A A
 Azimuth to Grid North
 True North: 0.44°
 Magnetic North: 6.85°
 Magnetic Field
 Strength: 48376.0nT
 Dip Angle: 50.09°
 Date: 08/01/2013
 Model: IGRF2010_14



WELL DETAILS						
N/S	E/W	Northing	Ground Level	3440.00	Latitude	Longitude
0.00	0.00	425560.00	756087.00		32° 10' 2 187945 N	103° 30' 20.659146 W

SECTION DETAILS									
Sec	MD	Inc	Act	TVD	N/S	E/W	Dleg	TFace	V.Sect Target
1	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	KOP Start Build 12.00
3	9733.30	89.48	359.33	9465.00	473.20	-5.50	12.00	359.33	473.23
4	14081.57	89.48	359.33	9504.00	4821.00	-56.00	0.00	0.00	4821.33 PBHL-Dillon 31 #2H

DESIGN TARGET DETAILS									
Name	TVD	N/S	E/W	Norming	Easting	Latitude	Longitude	Shape	
Upper-Dillon 31 #2H	9465.00	110.00	-6.00	425670.00	756081.00	32° 10' 3.275900 N	103° 30' 20.719103 W	Point	
- plan misses target center by 125.00usf at 9425.00usf MD (9366.31 TVD, 186.77 N, -2.17 E)									
Lower-Dillon 31 #2H	9503.10	473.00	-95.00	430283.00	756032.00	32° 10' 48.928233 N	103° 30' 20.876377 W	Point	
- plan misses target center by 0.14usf at 13963.56usf MD (9503.12 TVD, 4723.00 N, -54.96 E)									
PBHL-Dillon 31 #2H	9504.00	4821.00	-56.00	430381.00	756031.00	32° 10' 48.898080 N	103° 30' 20.879240 W	Point	
- plan hits target center									

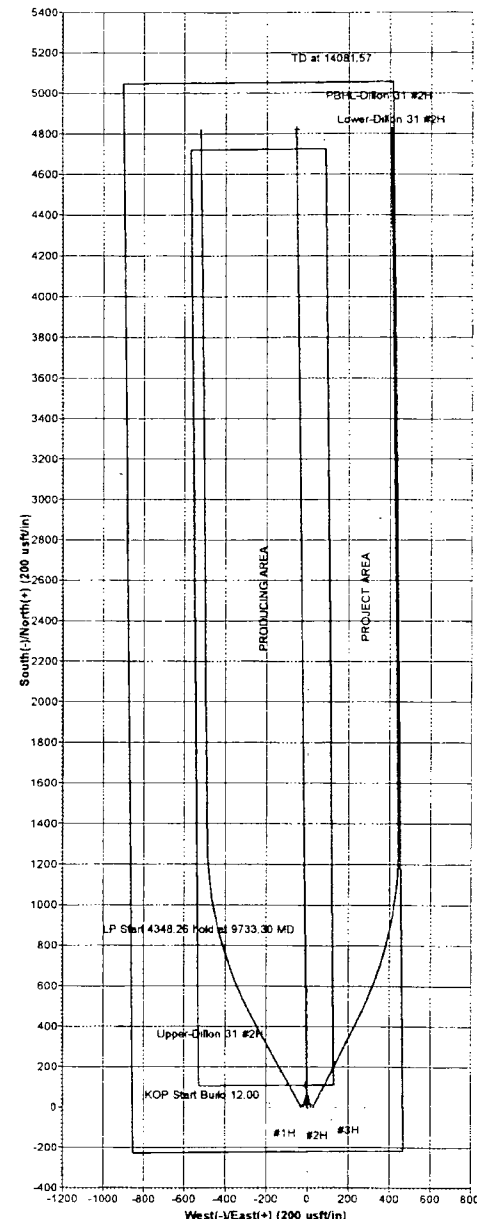


Map System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone Name: New Mexico East 3001
 Local Origin: Well #2H, Grid North
 Latitude: 32° 10' 2.187945 N
 Longitude: 103° 30' 20.659146 W
 Grid East: 756087.00
 Grid North: 425560.00
 Scale Factor: 1.000
 Geomagnetic Model: IGRF2010_14
 Sample Date: 01-Aug-13
 Magnetic Declination: 7.29°
 Dip Angle from Horizontal: 50.09°
 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°

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: Grid





EOG Resources

Lea County, NM (NAD27 NME)

Dillon 31

#2H

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: #2H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #2H
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	#2H		
Well Position	+N/-S	0.00 usft	Northing: 425,560.00 usft
	+E/-W	30.00 usft	Easting: 756,087.00 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 (nT)
			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
			(°)
			359.33

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
0.00	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	
9,733.30	89.49	359.33	9,465.00	473.20	-5.50	12.00	12.00	0.00	359.33	
14,081.57	89.49	359.33	9,504.00	4,821.00	-56.00	0.00	0.00	0.00	0.00	PBHL-Dillon 31 #2H



Phoenix Technology Services
Planning Report



Database: GCR DB
Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #2H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #2H
TVD Reference: KB @ 3487.00usft
MD Reference: KB @ 3487.00usft
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)	Deglog 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	359.33	9,000.00	0.16	0.00	0.16	12.00	12.00	0.00
9,100.00	13.50	359.33	9,098.96	13.19	-0.15	13.19	12.00	12.00	0.00
9,200.00	25.50	359.33	9,193.06	46.50	-0.54	46.51	12.00	12.00	0.00
9,300.00	37.50	359.33	9,278.17	98.65	-1.15	98.66	12.00	12.00	0.00
9,400.00	49.49	359.33	9,350.58	167.35	-1.94	167.36	12.00	12.00	0.00
9,417.63	51.61	359.33	9,361.78	180.96	-2.10	180.98	12.00	12.00	0.00
Upper-Dillon 31 #2H									
9,500.00	61.49	359.33	9,407.12	249.60	-2.90	249.62	12.00	12.00	0.00
9,600.00	73.49	359.33	9,445.33	341.81	-3.97	341.83	12.00	12.00	0.00
9,700.00	85.49	359.33	9,463.54	439.94	-5.11	439.97	12.00	12.00	0.00
9,733.30	89.49	359.33	9,465.00	473.20	-5.50	473.24	12.00	12.00	0.00
LP Start 4348.26 hold at 9733.30 MD									
9,800.00	89.49	359.33	9,465.60	539.90	-6.27	539.93	0.00	0.00	0.00
9,900.00	89.49	359.33	9,466.49	639.89	-7.43	639.93	0.00	0.00	0.00
10,000.00	89.49	359.33	9,467.39	739.87	-8.59	739.92	0.00	0.00	0.00
10,100.00	89.49	359.33	9,468.29	839.86	-9.76	839.92	0.00	0.00	0.00
10,200.00	89.49	359.33	9,469.18	939.85	-10.92	939.92	0.00	0.00	0.00
10,300.00	89.49	359.33	9,470.08	1,039.84	-12.08	1,039.91	0.00	0.00	0.00
10,400.00	89.49	359.33	9,470.98	1,139.83	-13.24	1,139.91	0.00	0.00	0.00
10,500.00	89.49	359.33	9,471.87	1,239.82	-14.40	1,239.90	0.00	0.00	0.00
10,600.00	89.49	359.33	9,472.77	1,339.81	-15.56	1,339.90	0.00	0.00	0.00
10,700.00	89.49	359.33	9,473.67	1,439.80	-16.72	1,439.90	0.00	0.00	0.00
10,800.00	89.49	359.33	9,474.57	1,539.79	-17.89	1,539.89	0.00	0.00	0.00
10,900.00	89.49	359.33	9,475.46	1,639.78	-19.05	1,639.89	0.00	0.00	0.00
11,000.00	89.49	359.33	9,476.36	1,739.77	-20.21	1,739.88	0.00	0.00	0.00
11,100.00	89.49	359.33	9,477.26	1,839.76	-21.37	1,839.88	0.00	0.00	0.00
11,200.00	89.49	359.33	9,478.15	1,939.75	-22.53	1,939.88	0.00	0.00	0.00
11,300.00	89.49	359.33	9,479.05	2,039.73	-23.69	2,039.87	0.00	0.00	0.00
11,400.00	89.49	359.33	9,479.95	2,139.72	-24.85	2,139.87	0.00	0.00	0.00
11,500.00	89.49	359.33	9,480.84	2,239.71	-26.02	2,239.86	0.00	0.00	0.00
11,600.00	89.49	359.33	9,481.74	2,339.70	-27.18	2,339.86	0.00	0.00	0.00
11,700.00	89.49	359.33	9,482.64	2,439.69	-28.34	2,439.86	0.00	0.00	0.00
11,800.00	89.49	359.33	9,483.54	2,539.68	-29.50	2,539.85	0.00	0.00	0.00
11,900.00	89.49	359.33	9,484.43	2,639.67	-30.66	2,639.85	0.00	0.00	0.00
12,000.00	89.49	359.33	9,485.33	2,739.66	-31.82	2,739.84	0.00	0.00	0.00
12,100.00	89.49	359.33	9,486.23	2,839.65	-32.98	2,839.84	0.00	0.00	0.00
12,200.00	89.49	359.33	9,487.12	2,939.64	-34.15	2,939.84	0.00	0.00	0.00
12,300.00	89.49	359.33	9,488.02	3,039.63	-35.31	3,039.83	0.00	0.00	0.00
12,400.00	89.49	359.33	9,488.92	3,139.62	-36.47	3,139.83	0.00	0.00	0.00
12,500.00	89.49	359.33	9,489.81	3,239.61	-37.63	3,239.82	0.00	0.00	0.00
12,600.00	89.49	359.33	9,490.71	3,339.59	-38.79	3,339.82	0.00	0.00	0.00
12,700.00	89.49	359.33	9,491.61	3,439.58	-39.95	3,439.82	0.00	0.00	0.00
12,800.00	89.49	359.33	9,492.51	3,539.57	-41.12	3,539.81	0.00	0.00	0.00
12,900.00	89.49	359.33	9,493.40	3,639.56	-42.28	3,639.81	0.00	0.00	0.00
13,000.00	89.49	359.33	9,494.30	3,739.55	-43.44	3,739.80	0.00	0.00	0.00
13,100.00	89.49	359.33	9,495.20	3,839.54	-44.60	3,839.80	0.00	0.00	0.00
13,200.00	89.49	359.33	9,496.09	3,939.53	-45.76	3,939.80	0.00	0.00	0.00
13,300.00	89.49	359.33	9,496.99	4,039.52	-46.92	4,039.79	0.00	0.00	0.00
13,400.00	89.49	359.33	9,497.89	4,139.51	-48.08	4,139.79	0.00	0.00	0.00
13,500.00	89.49	359.33	9,498.78	4,239.50	-49.25	4,239.78	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: #2H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #2H
TVD Reference: KB @ 3487.00usft
MD Reference: KB @ 3487.00usft
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)
13,600.00	89.49	359.33	9,499.68	4,339.49	-50.41	4,339.78	0.00	0.00	0.00
13,700.00	89.49	359.33	9,500.58	4,439.48	-51.57	4,439.78	0.00	0.00	0.00
13,800.00	89.49	359.33	9,501.47	4,539.47	-52.73	4,539.77	0.00	0.00	0.00
13,900.00	89.49	359.33	9,502.37	4,639.45	-53.89	4,639.77	0.00	0.00	0.00
13,983.56	89.49	359.33	9,503.12	4,723.00	-54.86	4,723.32	0.00	0.00	0.00
Lower-Dillon 31 #2H									
14,000.00	89.49	359.33	9,503.27	4,739.44	-55.05	4,739.76	0.00	0.00	0.00
14,081.57	89.49	359.33	9,504.00	4,821.00	-56.00	4,821.33	0.00	0.00	0.00
TD at 14081.57 - PBHL-Dillon 31 #2H									

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 #2H	0.00	0.01	9,465.00	110.00	-6.00	425,670.00	756,081.00	32° 10' 3.276900 N	103° 30' 20.719103 W
- plan misses target center by 125.32usft at 9417.63usft MD (9361.78 TVD, 180.96 N, -2.10 E)									
- Point									
Lower-Dillon 31 #2H	0.00	0.01	9,503.10	4,723.00	-55.00	430,283.00	756,032.00	32° 10' 48.928234 N	103° 30' 20.876377 W
- plan misses target center by 0.14usft at 13983.56usft MD (9503.12 TVD, 4723.00 N, -54.86 E)									
- Point									
PBHL-Dillon 31 #2H	0.00	0.00	9,504.00	4,821.00	-56.00	430,381.00	756,031.00	32° 10' 49.898061 N	103° 30' 20.879240 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
9,733.30	9,465.00	473.20	-5.50	LP Start 4348.26 hold at 9733.30 MD
14,081.57	9,504.00	4,821.00	-56.00	TD at 14081.57