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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
Department
OIL CONSERVATION DIVISION
220 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- 41312	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 #5H
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3431'

¹⁰Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	24-S	34-E	-	220'	SOUTH	579'	EAST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	31	24-S	34-E	-	230'	NORTH	380'	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=757440 Y=430392 LAT.: N 32.1805281 LONG.: W 103.5012443 LOWER MOST PERF. NEW MEXICO EAST NAD 1927 X=757442 Y=430292 LAT.: N 32.1802532 LONG.: W 103.5012433 UPPER MOST PERF. NEW MEXICO EAST NAD 1927 X=757491 Y=425680 LAT.: N 32.1675753 LONG.: W 103.5011984 SURFACE LOCATION NEW MEXICO EAST NAD 1927 X=757293 Y=425569 LAT.: N 32.1672732 LONG.: W 103.5018413	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 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	
	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. 8/25/2013 Date of Survey MICHAEL BROWN Signature and Title of Professional Surveyor 18329 NEW MEXICO PROFESSIONAL SURVEYOR Certificate Number	
	_____ Certificate Number	

AUG 07 2013

Permit Information:

Well Name: Dillon 31 No. 5H

Location:

SHL: 220' FSL & 579' FEL, Section 31, T-24-S, R-34-E, Lea Co., N.M.

BHL: 230' FNL & 380' 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 - 1,220'	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' - 5,080'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-14,105'	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
1,220'	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
5,080'	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
14,105'	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 @ 4,580')
	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 - 1,220'	Fresh - Gel	8.6-8.8	28-34	N/c
1,220' - 5,080'	Brine	10.0-10.2	28-34	N/c
5,080' - 8,987'	Cut Brine	8.4-9.0	28-34	N/c
8,987' - 14,105' Lateral	Cut Brine	9.0-9.5	40-42	8-10

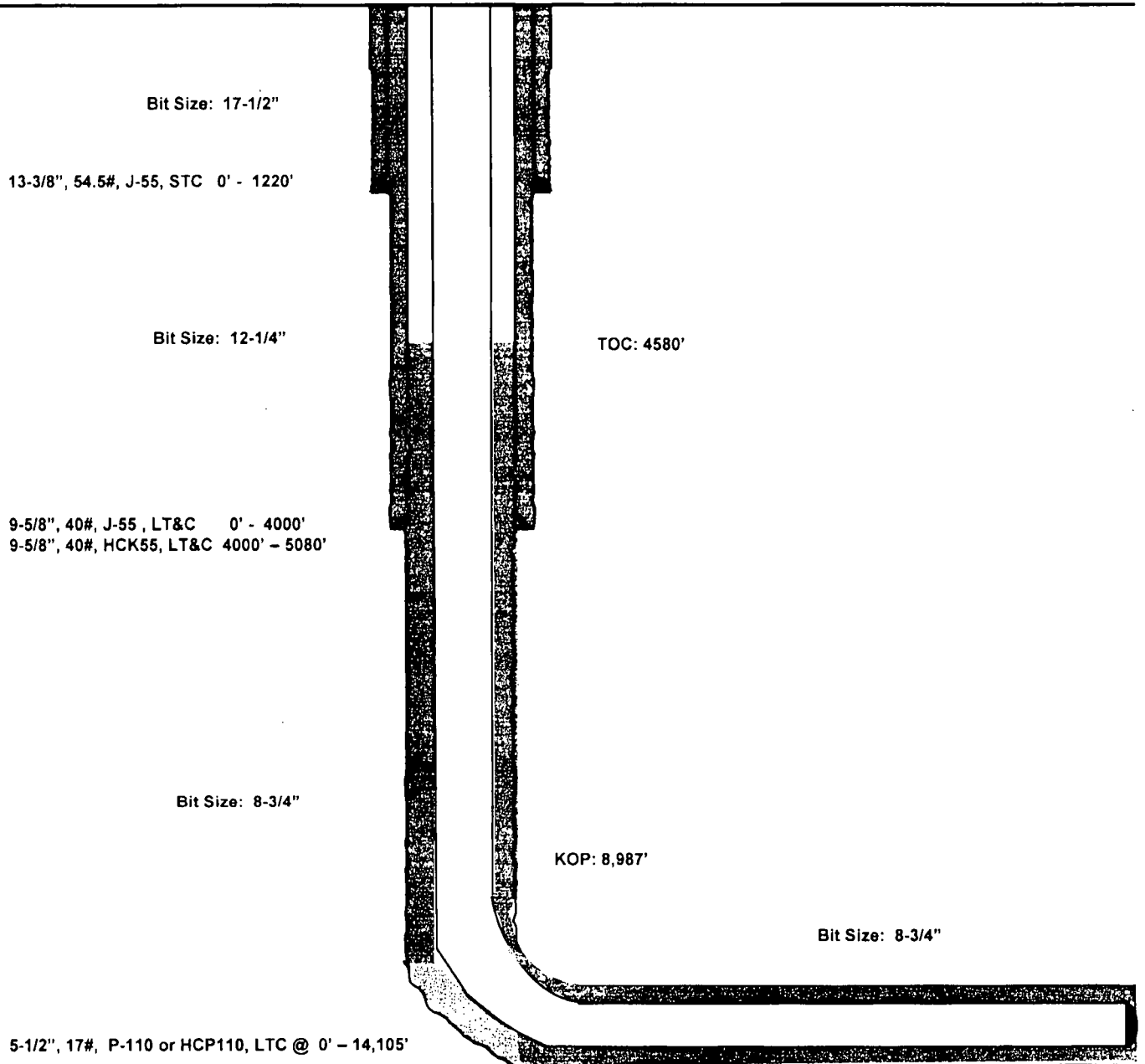
Dillon 31 #5H
Lea County, New Mexico

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

Proposed Wellbore

API: 30-025-

KB: 3,458'
GL: 3,431'



Lateral: 14,105' MD, 9,503' TVD

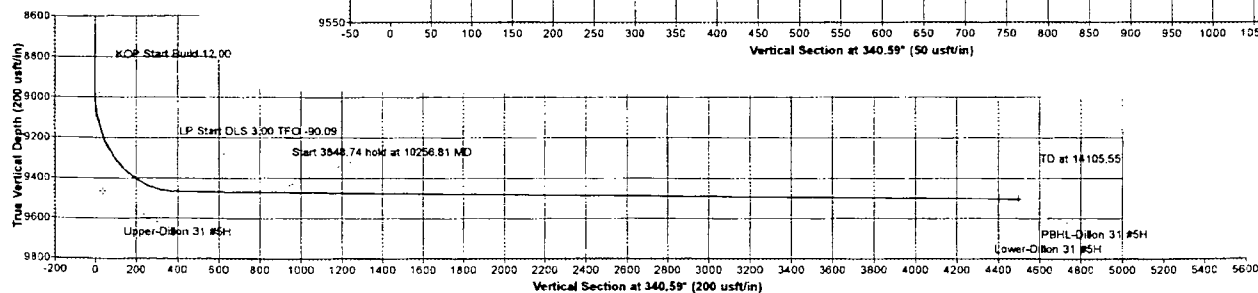
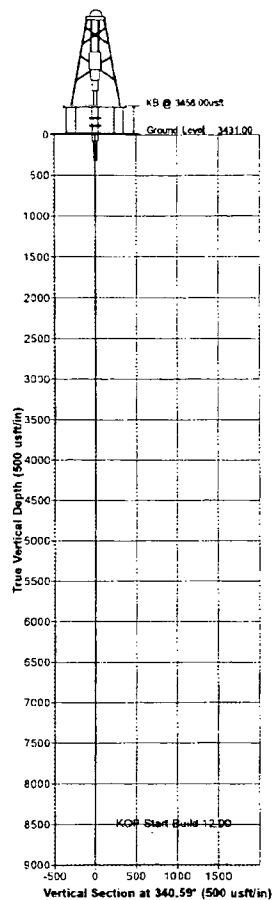
BH Location: 230' FNL & 380' FEL
Section 31
T-24-S, R-34-E



Project: Lea County, NM (NAD27 NME)
 Site: Dillon 31
 Well: #5H
 Wellbore: OH
 Design: Plan #1 08-01-13



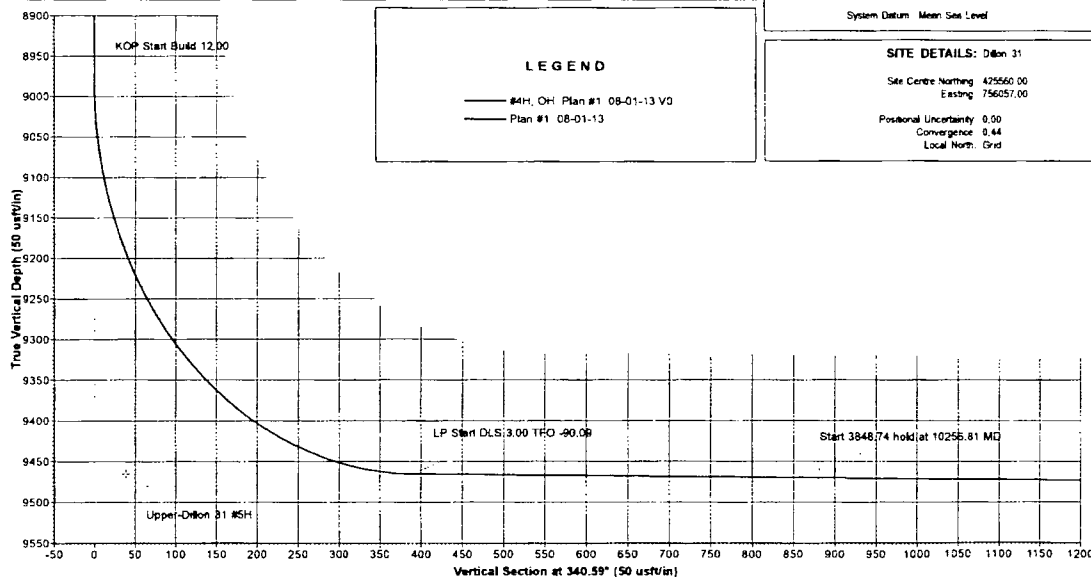
Compass rose showing True North (T), Grid North (G), and Magnetic North (M).
 Azimuths to Grid North
 True North: 0.44°
 Magnetic North: 6.85°
 Magnetic Field
 Strength: 48376.5nT
 Dip Angle: 60.09°
 Date: 08/01/2013
 Model: IGRF2010_14



WELL DETAILS									
	N-S	E-W	North	Ground Level	3431.00	Latitude	Longitude		
	0.00	0.00	425668.00	Easting	757293.00	32° 10' 2.185010 N	103° 30' 6.528881 W		

SECTION DETAILS											
Sec	MD	Inc	Asi	TVD	N-S	E-W	Deg	TFace	Vsect	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	15.08	9465.00	457.05	173.15	12.00	15.08	390.17		LP Start DLS 3.00 TFO -90.09
4	10256.81	89.50	359.38	9469.62	974.64	188.80	3.00	-90.09	856.53		Start 3848.74 hold at 10256.81 MD
5	14105.55	89.50	359.38	9503.50	4823.00	147.00	0.00	0.00	4500.15		TD at 14105.55

DESIGN TARGET DETAILS									
Name	TVD	N-S	E-W	North	Easting	Latitude	Longitude	Shape	
Upper-Dillon 31 #5H	9465.00	111.00	198.00	425668.00	757491.00	32° 10' 3.262257 N	103° 30' 4.315554 W	Point	
plan misses target center by 183.90usft at 9435.24usft MD (938.3 95 TVD, 204.06 N, 54.98 E)									
Lower-Dillon 31 #5H	9502.62	4723.00	149.00	430292.00	757442.00	32° 10' 48.909663 N	103° 30' 4.470644 W	Point	
plan misses target center by 5.60usft at 14000.00usft MD (9502.57 TVD, 4717.46 N, 148.15 E)									
PBHL-Dillon 31 #5H	9503.50	4823.00	147.00	430392.00	757440.00	32° 10' 49.899357 N	103° 30' 4.484914 W	Point	
plan hits target center									



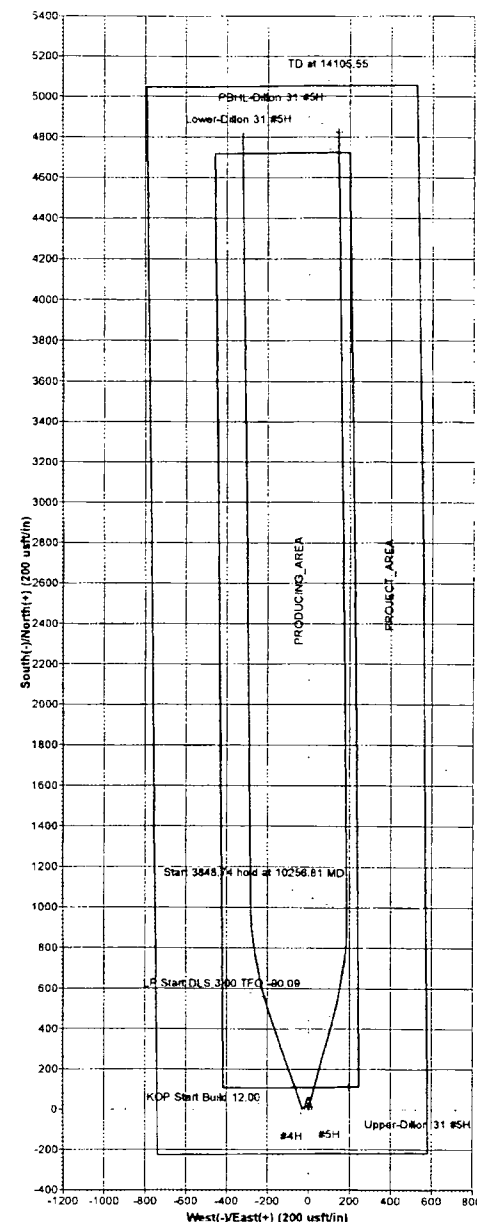
LEGEND

— #4H, 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 #5H, Grid North
 Latitude: 32° 10' 2.185010 N
 Longitude: 103° 30' 6.528881 W
 Grid East: 757293.00
 Grid North: 425569.00
 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: 48377

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

#5H

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: #5H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #5H
TVD Reference: KB @ 3458.00usft
MD Reference: KB @ 3458.00usft
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	#5H		
Well Position	+N/-S	9.00 usft	Northing: 425,569.00 usft
	+E/-W	1,236.00 usft	Easting: 757,293.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,431.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	08/01/13	7.29
			60.09
			48,377

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
			340.59

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFC	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	15.08	9,465.00	457.05	123.15	12.00	12.00	0.00	15.08	
10,256.81	89.50	359.38	9,469.62	974.64	188.80	3.00	0.00	-3.00	-90.09	
14,105.55	89.50	359.38	9,503.50	4,823.00	147.00	0.00	0.00	0.00	0.00	PBHL-Dillon 31 #5H



Phoenix Technology Services
Planning Report



Database: GCR DB
Company: EOG Resources
Project: Lea County, NM (NAD27 NME)
Site: Dillon 31
Well: #5H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference: Well #5H
TVD Reference: KB @ 3458.00usft
MD Reference: KB @ 3458.00usft
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	15.08	9,000.00	0.16	0.04	0.13	12.00	12.00	0.00
9,100.00	13.50	15.08	9,098.96	12.74	3.43	10.87	12.00	12.00	0.00
9,200.00	25.50	15.08	9,193.06	44.91	12.10	38.33	12.00	12.00	0.00
9,300.00	37.50	15.08	9,278.17	95.26	25.67	81.32	12.00	12.00	0.00
9,400.00	49.49	15.08	9,350.58	161.60	43.54	137.95	12.00	12.00	0.00
9,457.78	56.43	15.08	9,385.36	206.10	55.53	175.94	12.00	12.00	0.00
Upper-Dillon 31 #5H									
9,500.00	61.49	15.08	9,407.12	241.02	64.94	205.75	12.00	12.00	0.00
9,600.00	73.49	15.08	9,445.33	330.06	88.93	281.76	12.00	12.00	0.00
9,700.00	85.49	15.08	9,463.54	424.82	114.47	362.65	12.00	12.00	0.00
9,733.42	89.50	15.08	9,465.00	457.05	123.15	390.17	12.00	12.00	0.00
LP Start DLS 3.00 TFO -90.09									
9,800.00	89.50	13.08	9,465.58	521.63	139.35	445.69	3.00	0.00	-3.00
9,900.00	89.49	10.08	9,466.46	619.58	159.42	531.41	3.00	0.00	-3.00
10,000.00	89.49	7.08	9,467.35	718.44	174.34	619.70	3.00	0.00	-3.00
10,100.00	89.49	4.08	9,468.23	817.95	184.07	710.32	3.00	0.00	-3.00
10,200.00	89.49	1.08	9,469.12	917.83	188.57	803.03	3.00	0.00	-3.00
10,256.81	89.50	359.38	9,469.62	974.64	188.80	856.53	3.00	0.00	-3.00
Start 3848.74 hold at 10256.81 MD									
10,300.00	89.50	359.38	9,470.00	1,017.83	188.33	897.42	0.00	0.00	0.00
10,400.00	89.50	359.38	9,470.88	1,117.82	187.25	992.09	0.00	0.00	0.00
10,500.00	89.50	359.38	9,471.76	1,217.81	186.16	1,086.76	0.00	0.00	0.00
10,600.00	89.50	359.38	9,472.64	1,317.80	185.07	1,181.44	0.00	0.00	0.00
10,700.00	89.50	359.38	9,473.52	1,417.79	183.99	1,276.11	0.00	0.00	0.00
10,800.00	89.50	359.38	9,474.40	1,517.78	182.90	1,370.78	0.00	0.00	0.00
10,900.00	89.50	359.38	9,475.28	1,617.77	181.82	1,465.45	0.00	0.00	0.00
11,000.00	89.50	359.38	9,476.16	1,717.76	180.73	1,560.12	0.00	0.00	0.00
11,100.00	89.50	359.38	9,477.04	1,817.75	179.64	1,654.79	0.00	0.00	0.00
11,200.00	89.50	359.38	9,477.92	1,917.74	178.56	1,749.46	0.00	0.00	0.00
11,300.00	89.50	359.38	9,478.80	2,017.73	177.47	1,844.13	0.00	0.00	0.00
11,400.00	89.50	359.38	9,479.68	2,117.72	176.39	1,938.80	0.00	0.00	0.00
11,500.00	89.50	359.38	9,480.56	2,217.71	175.30	2,033.47	0.00	0.00	0.00
11,600.00	89.50	359.38	9,481.44	2,317.70	174.21	2,128.14	0.00	0.00	0.00
11,700.00	89.50	359.38	9,482.32	2,417.69	173.13	2,222.81	0.00	0.00	0.00
11,800.00	89.50	359.38	9,483.20	2,517.68	172.04	2,317.48	0.00	0.00	0.00
11,900.00	89.50	359.38	9,484.08	2,617.67	170.95	2,412.15	0.00	0.00	0.00
12,000.00	89.50	359.38	9,484.96	2,717.66	169.87	2,506.82	0.00	0.00	0.00
12,100.00	89.50	359.38	9,485.84	2,817.65	168.78	2,601.49	0.00	0.00	0.00
12,200.00	89.50	359.38	9,486.72	2,917.64	167.70	2,696.16	0.00	0.00	0.00
12,300.00	89.50	359.38	9,487.60	3,017.63	166.61	2,790.83	0.00	0.00	0.00
12,400.00	89.50	359.38	9,488.48	3,117.62	165.52	2,885.50	0.00	0.00	0.00
12,500.00	89.50	359.38	9,489.37	3,217.61	164.44	2,980.17	0.00	0.00	0.00
12,600.00	89.50	359.38	9,490.25	3,317.60	163.35	3,074.84	0.00	0.00	0.00
12,700.00	89.50	359.38	9,491.13	3,417.59	162.27	3,169.51	0.00	0.00	0.00
12,800.00	89.50	359.38	9,492.01	3,517.58	161.18	3,264.18	0.00	0.00	0.00
12,900.00	89.50	359.38	9,492.89	3,617.57	160.09	3,358.85	0.00	0.00	0.00
13,000.00	89.50	359.38	9,493.77	3,717.56	159.01	3,453.52	0.00	0.00	0.00
13,100.00	89.50	359.38	9,494.65	3,817.55	157.92	3,548.19	0.00	0.00	0.00
13,200.00	89.50	359.38	9,495.53	3,917.54	156.84	3,642.86	0.00	0.00	0.00
13,300.00	89.50	359.38	9,496.41	4,017.53	155.75	3,737.53	0.00	0.00	0.00
13,400.00	89.50	359.38	9,497.29	4,117.52	154.66	3,832.20	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: #5H
Wellbore: OH
Design: Plan #1 08-01-13

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well #5H
KB @ 3458.00usft
KB @ 3458.00usft
Grid
Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Elevation (usft)	Logging Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.00	89.50	359.38	9,498.17	4,217.51	153.58	3,926.87	0.00	0.00	0.00
13,600.00	89.50	359.38	9,499.05	4,317.50	152.49	4,021.55	0.00	0.00	0.00
13,700.00	89.50	359.38	9,499.93	4,417.49	151.40	4,116.22	0.00	0.00	0.00
13,800.00	89.50	359.38	9,500.81	4,517.48	150.32	4,210.89	0.00	0.00	0.00
13,900.00	89.50	359.38	9,501.69	4,617.47	149.23	4,305.56	0.00	0.00	0.00
14,000.00	89.50	359.38	9,502.57	4,717.46	148.15	4,400.23	0.00	0.00	0.00
14,005.53	89.50	359.38	9,502.62	4,722.99	148.09	4,405.46	0.00	0.00	0.00
Lower-Dillon 31 #5H									
14,100.00	89.50	359.38	9,503.45	4,817.45	147.06	4,494.90	0.00	0.00	0.00
14,105.55	89.50	359.38	9,503.50	4,823.00	147.00	4,500.15	0.00	0.00	0.00
TD at 14105.55 - PBHL-Dillon 31 #5H									

Design Targets

Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hits/misses target									
- Shape									
Upper-Dillon 31 #5H	0.00	0.00	9,465.00	111.00	198.00	425,680.00	757,491.00	32° 10' 3.268257 N	103° 30' 4.315554 W
- plan misses target center by 188.90usft at 9457.78usft MD (9385.36 TVD, 206.10 N, 55.53 E)									
- Point									
Lower-Dillon 31 #5H	0.00	0.00	9,502.62	4,723.00	149.00	430,292.00	757,442.00	32° 10' 48.909663 N	103° 30' 4.470644 W
- plan misses target center by 0.91usft at 14005.53usft MD (9502.62 TVD, 4722.99 N, 148.09 E)									
- Point									
PBHL-Dillon 31 #5H	0.00	0.00	9,503.50	4,823.00	147.00	430,392.00	757,440.00	32° 10' 49.899357 N	103° 30' 4.484914 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	+N-S (usft)	+E-W (usft)	Comment
8,987.50	8,987.50	0.00	0.00		KOP Start Build 12.00
9,733.42	9,465.00	457.05	123.15		LP Start DLS 3.00 TFO -90.09
10,256.81	9,469.62	974.64	188.80		Start 3848.74 hold at 10256.81 MD
14,105.55	9,503.50	4,823.00	147.00		TD at 14105.55