

Permit Information:

HOBBS OCD

Well Name: Ruby 2 State Com No. 2H

MAY 05 2014

Location:

SL: 220' FSL & 652' FWL, Section 2, T-26-S, R-34-E, Lea Co., N.M.

RECEIVED

BHL: 230' FNL & 880' FWL, Section 2, T-26-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 - 965'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4000' - 5200'	9.625"	40#	HCK-55	LTC	1.125	1.25	1.60
8.75"	0'-14,293'	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
965'	500	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
5,200'	800	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
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
14,293'	375	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
	400	11.8	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 - 965'	Fresh - Gel	8.6-8.8	28-34	N/c
965' - 5,200'	Brine	10.0-10.2	28-34	N/c
5,200' - 9,162'	Cut Brine	8.4-9.0	28-34	N/c
KOP - 14,293' Lateral	Cut Brine	9.0-9.5	40-42	8-10

MAY 07 2014

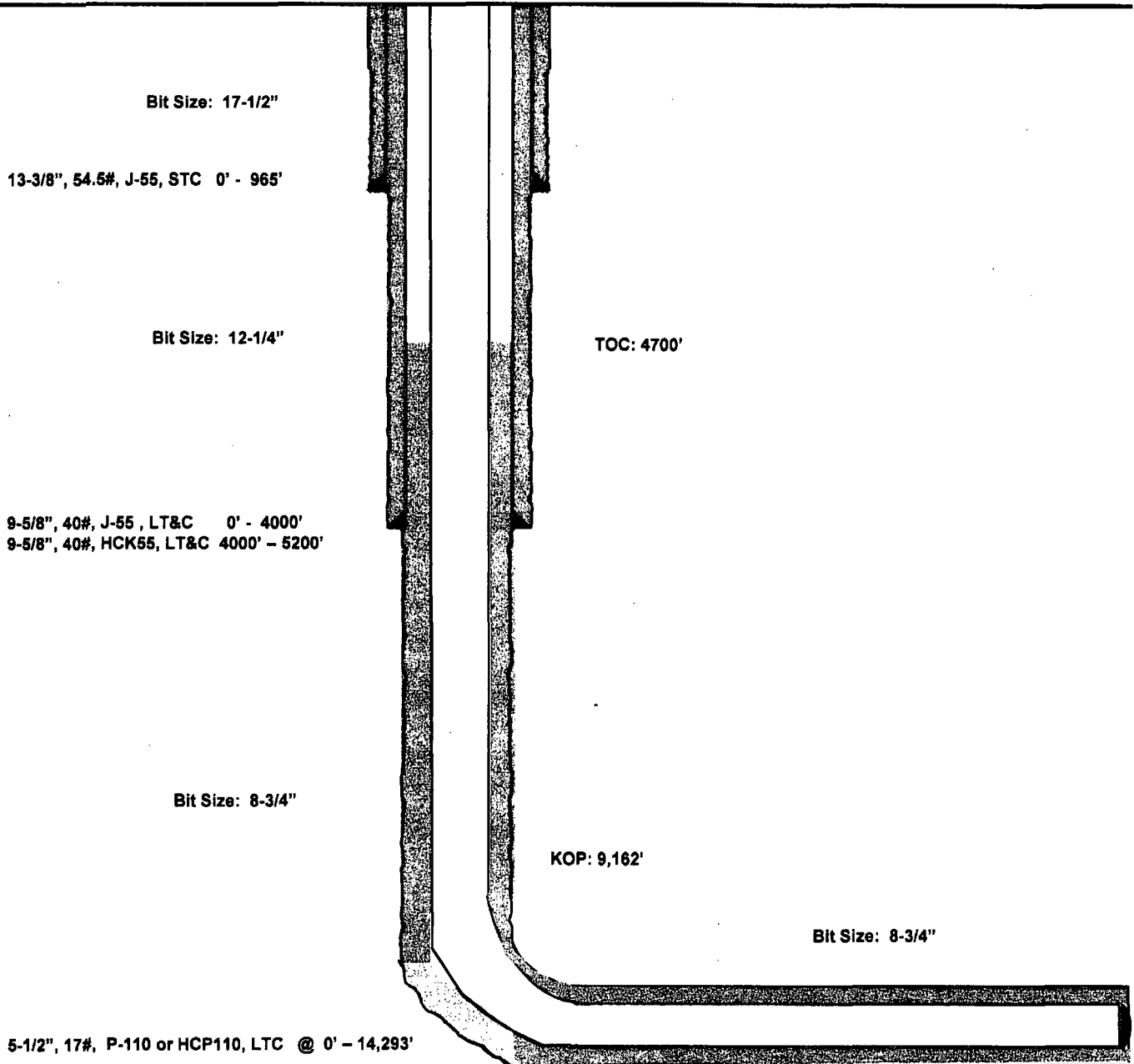
Ruby 2 State Com #2H
Red Hills
Lea County, New Mexico

220' FSL
652' FWL
Section 2
T-26-S, R-34-E

Proposed Wellbore

API: 30-025-

KB: 3,341'
GL: 3,311'



Lateral: 14,293' MD, 9,640' TVD

BH Location: 230' FNL & 880' FWL
Section 2
T-26-S, R-34-E



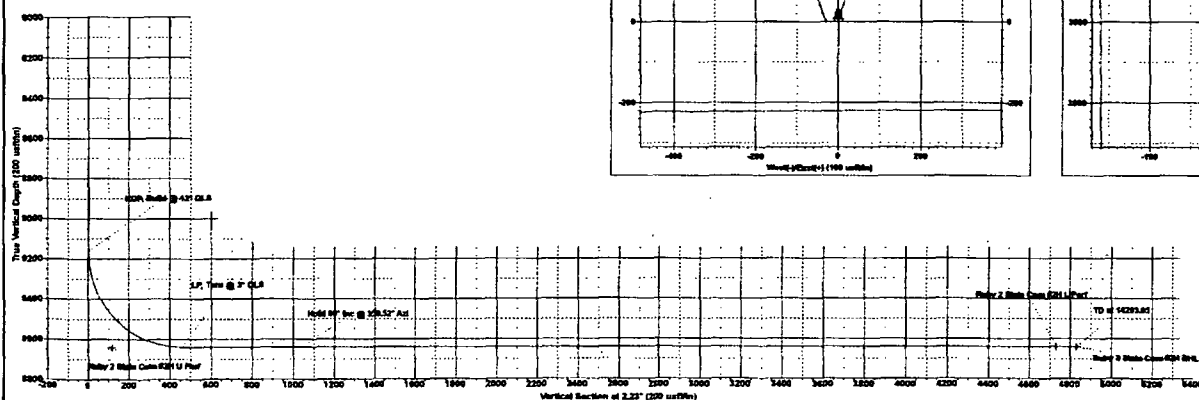
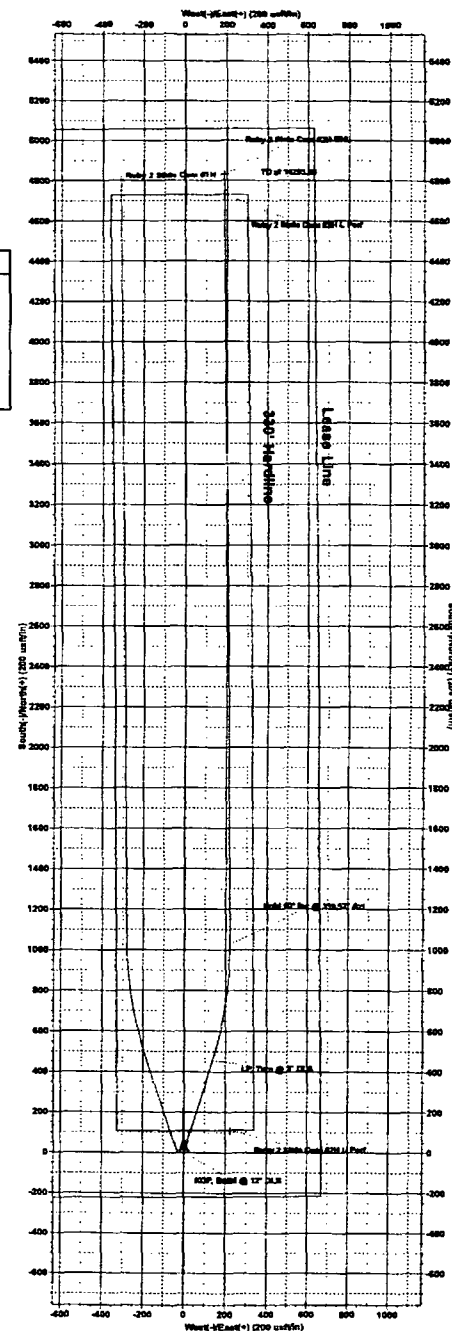
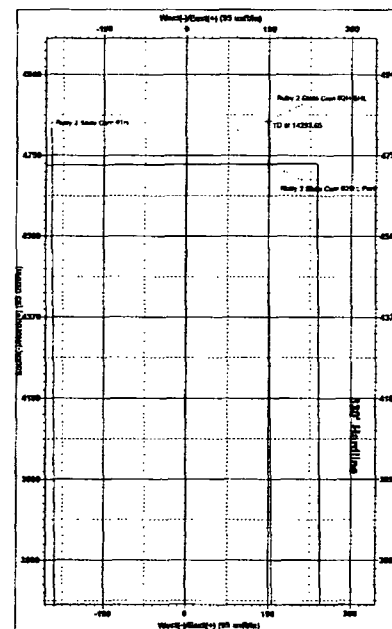
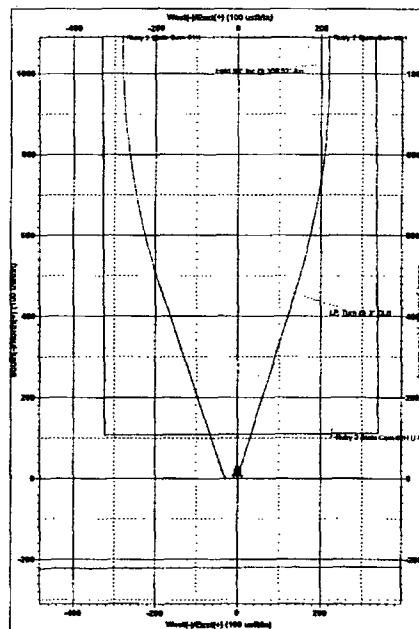
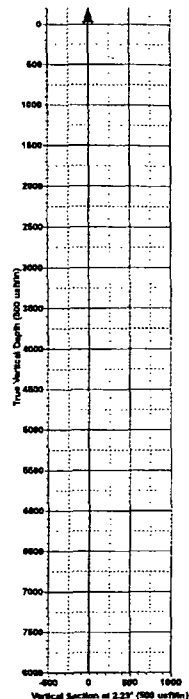
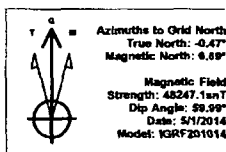
Lea County, NM
Ruby 2 State Com #2H
3311' GL + 30' KB
Plan #1

PROJECT DETAILS: Lea County, NM
 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

WELL DETAILS: Ruby 2 State Com #2H			
Ground Level:	3311.00		
Northing	388748.00	Easting	774662.00
		Latitude	32° 3' 56.455 N
		Longitude	103° 26' 48.101 W

SECTION DETAILS										
Sec	MD	Inc	Alt	TVD	+NA-S	+E-W	Dleg	Tface	Vflect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9162.84	0.00	0.00	9162.84	0.00	0.00	0.00	0.00	0.00	KOP, build @ 12" DLS
3	9912.84	90.00	16.82	9640.00	437.04	132.18	12.00	16.82	462.07	LP, turn @ 3" DLS
4	10428.17	90.00	329.32	9640.00	1028.66	219.20	3.00	-90.00	1033.42	Hold 90° Inc @ 389.82° Azi
5	14293.85	90.00	329.32	9640.00	4839.00	188.00	0.00	0.00	4833.66	TD at 14293.85
										Ruby 2 State Com #2H BHL

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)						
Name	TVD	+NA-S	+E-W	Northing	Easting	Shape
Ruby 2 State Com #2H BHL	9640.00	4839.00	188.00	388748.00	774662.00	Point
Ruby 2 State Com #2H L Perf	9640.00	4730.00	188.00	388748.00	774662.00	Point
Ruby 2 State Com #2H U Perf	9640.00	111.00	227.00	388889.00	774889.00	Point





EOG Resources - Midland

Lea County, NM

Ruby 2 State Com

Ruby 2 State Com #2H

OH

Plan: Plan #1

Standard Survey Report

01 May, 2014



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Ruby 2 State Com
Well: Ruby 2 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Ruby 2 State Com #2H
TVD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
MD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project	Lea County, NM		
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	Ruby 2 State Com		
Site Position:		Northing:	388,748.00 usft
From:	Map	Easting:	774,632.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 56.457 N
		Longitude:	103° 26' 48.449 W
		Grid Convergence:	0.47 °

Well	Ruby 2 State Com #2H		
Well Position	+N/-S	0.00 usft	Northing: 388,748.00 usft
	+E/-W	0.00 usft	Easting: 774,662.00 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 3' 56.455 N
		Longitude:	103° 26' 48.101 W
		Ground Level:	3,311.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination (")
	IGRF201014	5/1/2014	7.16
		Dip Angle (")	59.99
		Field Strength (nT)	48,247

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
		Direction (")	2.23

Survey Tool Program	Date 5/1/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
0.00	14,293.57	Plan #1 (OH)	MWD
			Description
			MWD - Standard

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00



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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)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Ruby 2 State Corn
Well: Ruby 2 State Corn #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Ruby 2 State Corn #2H
TVD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
MD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,162.54	0.00	0.00	9,162.54	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Build @ 12° DLS									
9,175.00	1.50	16.82	9,175.00	0.16	0.05	0.16	12.00	12.00	0.00
9,200.00	4.50	16.82	9,199.96	1.41	0.42	1.42	12.00	12.00	0.00
9,225.00	7.50	16.82	9,224.82	3.91	1.18	3.95	12.00	12.00	0.00



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Survey Report

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Well: Ruby 2 State Com #2H
Wellbore: OH
Design: Plan #1

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Database: EDM 5000.1 Single User Db

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)
9,250.00	10.50	16.82	9,249.51	7.65	2.31	7.73	12.00	12.00	0.00
9,275.00	13.50	16.82	9,273.96	12.62	3.81	12.78	12.00	12.00	0.00
9,300.00	16.50	16.82	9,298.11	18.81	5.69	19.02	12.00	12.00	0.00
9,325.00	19.50	16.82	9,321.88	26.20	7.92	26.49	12.00	12.00	0.00
9,350.00	22.50	16.82	9,345.22	34.78	10.51	35.16	12.00	12.00	0.00
9,375.00	25.50	16.82	9,368.06	44.51	13.45	45.00	12.00	12.00	0.00
9,400.00	28.50	16.82	9,390.33	55.37	16.74	55.98	12.00	12.00	0.00
9,425.00	31.50	16.82	9,411.98	67.33	20.35	68.07	12.00	12.00	0.00
9,450.00	34.50	16.82	9,432.95	80.36	24.29	81.24	12.00	12.00	0.00
9,475.00	37.50	16.82	9,453.17	94.42	28.54	95.46	12.00	12.00	0.00
9,500.00	40.50	16.82	9,472.60	109.48	33.10	110.68	12.00	12.00	0.00
9,525.00	43.50	16.82	9,491.18	125.49	37.93	126.87	12.00	12.00	0.00
9,550.00	46.50	16.82	9,508.85	142.41	43.05	143.97	12.00	12.00	0.00
9,575.00	49.50	16.82	9,525.58	160.19	48.42	161.95	12.00	12.00	0.00
9,600.00	52.50	16.82	9,541.31	178.78	54.05	180.75	12.00	12.00	0.00
9,625.00	55.50	16.82	9,556.01	198.14	59.90	200.32	12.00	12.00	0.00
9,650.00	58.50	16.82	9,569.63	218.20	65.96	220.60	12.00	12.00	0.00
9,675.00	61.50	16.82	9,582.13	238.92	72.23	241.55	12.00	12.00	0.00
9,700.00	64.50	16.82	9,593.48	260.24	78.67	263.11	12.00	12.00	0.00
9,725.00	67.50	16.82	9,603.64	282.10	85.28	285.20	12.00	12.00	0.00
9,750.00	70.50	16.82	9,612.61	304.44	92.03	307.79	12.00	12.00	0.00
9,775.00	73.50	16.82	9,620.33	327.20	98.91	330.79	12.00	12.00	0.00
9,800.00	76.50	16.82	9,626.80	350.31	105.90	354.16	12.00	12.00	0.00
9,825.00	79.50	16.82	9,632.00	373.71	112.97	377.82	12.00	12.00	0.00
9,850.00	82.50	16.82	9,635.92	397.34	120.12	401.72	12.00	12.00	0.00
9,875.00	85.50	16.82	9,638.53	421.14	127.31	425.77	12.00	12.00	0.00
9,900.00	88.50	16.82	9,639.84	445.04	134.53	449.93	12.00	12.00	0.00
9,912.54	90.00	16.82	9,640.01	457.04	138.16	462.07	12.00	12.00	0.00
LP, Turn @ 3° DLS									
10,000.00	90.00	14.20	9,640.01	541.31	161.54	547.18	3.00	0.00	-3.00
10,100.00	90.00	11.20	9,640.01	638.85	183.52	645.50	3.00	0.00	-3.00
10,200.00	90.00	8.20	9,640.00	737.41	200.36	744.64	3.00	0.00	-3.00
10,300.00	90.00	5.20	9,640.00	836.72	212.02	844.33	3.00	0.00	-3.00
10,400.00	90.00	2.20	9,640.00	936.50	218.47	944.28	3.00	0.00	-3.00
10,489.17	90.00	359.52	9,640.00	1,025.65	219.80	1,033.42	3.00	0.00	-3.00
Hold 90° Inc @ 359.52° Azi									
10,500.00	90.00	359.52	9,640.00	1,036.48	219.71	1,044.24	0.00	0.00	0.00
10,600.00	90.00	359.52	9,640.00	1,136.48	218.88	1,144.13	0.00	0.00	0.00
10,700.00	90.00	359.52	9,640.00	1,236.47	218.04	1,244.02	0.00	0.00	0.00
10,800.00	90.00	359.52	9,640.00	1,336.47	217.20	1,343.90	0.00	0.00	0.00
10,900.00	90.00	359.52	9,640.00	1,436.47	216.37	1,443.79	0.00	0.00	0.00
11,000.00	90.00	359.52	9,640.00	1,536.46	215.53	1,543.68	0.00	0.00	0.00
11,100.00	90.00	359.52	9,640.00	1,636.46	214.70	1,643.57	0.00	0.00	0.00
11,200.00	90.00	359.52	9,640.00	1,736.45	213.86	1,743.46	0.00	0.00	0.00



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Ruby 2 State Com
Well: Ruby 2 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Ruby 2 State Com #2H
TVD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
MD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
11,300.00	90.00	359.52	9,640.00	1,836.45	213.02	1,843.35	0.00	0.00	0.00
11,400.00	90.00	359.52	9,640.00	1,936.45	212.19	1,943.23	0.00	0.00	0.00
11,500.00	90.00	359.52	9,640.00	2,036.44	211.35	2,043.12	0.00	0.00	0.00
11,600.00	90.00	359.52	9,640.00	2,136.44	210.52	2,143.01	0.00	0.00	0.00
11,700.00	90.00	359.52	9,640.00	2,236.44	209.68	2,242.90	0.00	0.00	0.00
11,800.00	90.00	359.52	9,640.00	2,336.43	208.84	2,342.79	0.00	0.00	0.00
11,900.00	90.00	359.52	9,640.00	2,436.43	208.01	2,442.68	0.00	0.00	0.00
12,000.00	90.00	359.52	9,640.00	2,536.43	207.17	2,542.56	0.00	0.00	0.00
12,100.00	90.00	359.52	9,640.00	2,636.42	206.34	2,642.45	0.00	0.00	0.00
12,200.00	90.00	359.52	9,640.00	2,736.42	205.50	2,742.34	0.00	0.00	0.00
12,300.00	90.00	359.52	9,640.00	2,836.42	204.67	2,842.23	0.00	0.00	0.00
12,400.00	90.00	359.52	9,640.00	2,936.41	203.83	2,942.12	0.00	0.00	0.00
12,500.00	90.00	359.52	9,640.00	3,036.41	202.99	3,042.01	0.00	0.00	0.00
12,600.00	90.00	359.52	9,640.00	3,136.41	202.16	3,141.89	0.00	0.00	0.00
12,700.00	90.00	359.52	9,640.00	3,236.40	201.32	3,241.78	0.00	0.00	0.00
12,800.00	90.00	359.52	9,640.00	3,336.40	200.49	3,341.67	0.00	0.00	0.00
12,900.00	90.00	359.52	9,640.00	3,436.40	199.65	3,441.56	0.00	0.00	0.00
13,000.00	90.00	359.52	9,640.00	3,536.39	198.81	3,541.45	0.00	0.00	0.00
13,100.00	90.00	359.52	9,640.00	3,636.39	197.98	3,641.34	0.00	0.00	0.00
13,200.00	90.00	359.52	9,640.00	3,736.38	197.14	3,741.23	0.00	0.00	0.00
13,300.00	90.00	359.52	9,640.00	3,836.38	196.31	3,841.11	0.00	0.00	0.00
13,400.00	90.00	359.52	9,640.00	3,936.38	195.47	3,941.00	0.00	0.00	0.00
13,500.00	90.00	359.52	9,640.00	4,036.37	194.63	4,040.89	0.00	0.00	0.00
13,600.00	90.00	359.52	9,640.00	4,136.37	193.80	4,140.78	0.00	0.00	0.00
13,700.00	90.00	359.52	9,640.00	4,236.37	192.96	4,240.67	0.00	0.00	0.00
13,800.00	90.00	359.52	9,640.00	4,336.36	192.13	4,340.56	0.00	0.00	0.00
13,900.00	90.00	359.52	9,640.00	4,436.36	191.29	4,440.44	0.00	0.00	0.00
14,000.00	90.00	359.52	9,640.00	4,536.36	190.45	4,540.33	0.00	0.00	0.00
14,100.00	90.00	359.52	9,640.00	4,636.35	189.62	4,640.22	0.00	0.00	0.00
14,200.00	90.00	359.52	9,640.00	4,736.35	188.78	4,740.11	0.00	0.00	0.00
14,293.65	90.00	359.52	9,640.00	4,830.00	188.00	4,833.66	0.00	0.00	0.00

TD at 14293.65



EOG Resources, Inc.

Survey Report

Company: EOG Resources - Midland
Project: Lea County, NM
Site: Ruby 2 State Com
Well: Ruby 2 State Com #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well Ruby 2 State Com #2H
TVD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
MD Reference: WELL @ 3341.00usft (3311' GL + 30' KB)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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									
Ruby 2 State Com #2H I - plan misses target center by 205.81usft at 9641.35usft MD (9565.04 TVD, 211.19 N, 83.84 E) - Point	0.00	0.00	9,640.00	111.00	227.00	388,859.00	774,888.00	32° 3' 57.535 N	103° 26' 45.452 W
Ruby 2 State Com #2H I - plan hits target center - Point	0.00	0.00	9,640.00	4,830.00	188.00	393,578.00	774,850.00	32° 4' 44.235 N	103° 26' 45.454 W
Ruby 2 State Com #2H I - plan misses target center by 0.84usft at 14193.66usft MD (9640.00 TVD, 4730.01 N, 188.84 E) - Point	0.00	0.00	9,640.00	4,730.00	188.00	393,478.00	774,850.00	32° 4' 43.245 N	103° 26' 45.464 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9163	9163	0	0	KOP, Build @ 12° DLS
9913	9640	457	138	LP, Turn @ 3° DLS
10,489	9640	1028	220	Hold 90° Inc @ 359.52° Azi
14,294	9640	4830	188	TD at 14293.65

Checked By: _____ Approved By: _____ Date: _____