

HOBBS OCD
JUN 11 2018
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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Ruby 2 State Com

#710H

OH

Survey: Intrepid MWD

Midland PVA

13 April, 2018





Midland PVA



Company:	E.O.G. Resources - Midland	Local Co-ordinate Reference:	Well #710H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3322.0usft (HP 647)
Site:	Ruby 2 State Com	MD Reference:	KB = 25' @ 3322.0usft (HP 647)
Well:	#710H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Ruby 2 State Com		
Site Position:		Northing:	393,569.99 usft
From:	Map	Easting:	775,148.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 47.315 N
		Longitude:	103° 34' 42.355 W
		Grid Convergence:	0.40 °

Well	#710H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft		Wellhead Elevation:
			usft
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	12/29/2017	6.82
			Dip Angle
			(°)
			Field Strength
			(nT)
			47,812.32775446

Design	OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			177.88

Survey Program	Date 4/13/2018		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
120.0	17,440.0	Intrepid MWD (OH)	MWD
			Description
			OWSG MWD - Standard



Midland PVA



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MD Reference: KB = 25' @ 3322.0usft (HP 647)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
175.0	0.80	3.20	175.0	0.4	0.0	1.45	1.45	0.00	0.0	0.0
357.0	1.00	18.40	357.0	3.2	0.6	0.17	0.11	8.35	0.0	0.0
539.0	1.40	7.50	538.9	6.9	1.4	0.25	0.22	-5.99	0.0	0.0
638.0	1.20	7.10	637.9	9.1	1.7	0.20	-0.20	-0.40	0.0	0.0
792.0	1.10	11.90	791.9	12.1	2.2	0.09	-0.06	3.12	0.0	0.0
885.0	1.20	12.50	884.9	14.0	2.6	0.11	0.11	0.65	0.0	0.0
1,013.0	1.30	359.80	1,012.8	16.7	2.9	0.23	0.08	-9.92	0.0	0.0
1,169.0	1.10	4.90	1,168.8	20.0	3.0	0.15	-0.13	3.27	0.3	-0.2
1,354.0	1.10	33.00	1,353.8	23.2	4.1	0.29	0.00	15.19	2.9	0.0
1,540.0	1.50	53.40	1,539.7	26.2	7.0	0.33	0.22	10.97	4.5	-3.0
1,727.0	1.40	49.20	1,726.7	29.2	10.7	0.08	-0.05	-2.25	6.2	-5.0
1,915.0	1.60	35.40	1,914.6	32.8	14.0	0.22	0.11	-7.34	3.9	-4.1
2,103.0	1.50	40.80	2,102.5	36.8	17.1	0.09	-0.05	2.87	-1.6	-4.2
2,291.0	1.90	40.10	2,290.4	41.0	20.7	0.21	0.21	-0.37	-7.1	-4.2
2,478.0	2.20	49.70	2,477.3	45.7	25.5	0.24	0.16	5.13	-14.4	-2.4
2,666.0	2.50	52.40	2,665.2	50.6	31.5	0.17	0.16	1.44	-22.2	-1.6
2,854.0	2.70	35.60	2,853.0	56.7	37.3	0.42	0.11	-8.94	-29.1	-9.1
3,042.0	3.10	29.80	3,040.7	64.7	42.4	0.26	0.21	-3.09	-37.5	-12.5
3,229.0	3.90	34.40	3,227.4	74.3	48.5	0.45	0.43	2.46	-49.8	-9.0
3,324.0	4.70	33.40	3,322.1	80.2	52.5	0.85	0.84	-1.05	-56.8	-10.0
3,511.0	4.40	30.50	3,508.5	92.8	60.3	0.20	-0.16	-1.55	-71.0	-13.2
3,698.0	4.00	14.20	3,695.0	105.3	65.6	0.67	-0.21	-8.72	-77.9	-34.7
3,885.0	4.10	6.80	3,881.6	118.3	67.9	0.28	0.05	-3.96	-85.9	-45.3
4,073.0	4.40	5.50	4,069.0	132.1	69.4	0.17	0.16	-0.69	-98.8	-47.4
4,261.0	4.00	1.80	4,256.5	145.9	70.3	0.26	-0.21	-1.97	-109.3	-54.1



Midland PVA



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Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 State Corn
Well: #710H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #710H
TVD Reference: KB = 25' @ 3322.0usft (HP 647)
MD Reference: KB = 25' @ 3322.0usft (HP 647)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey											
MD (usft)	Inc (")	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
4,449.0	3.80	2.60	4,444.1	158.6	70.8	0.11	-0.11	0.43	-122.8	-52.5	
4,636.0	3.20	33.00	4,630.8	169.2	73.9	1.03	-0.32	16.26	-143.0	20.1	
4,823.0	3.30	21.20	4,817.5	178.6	78.7	0.36	0.05	-6.31	-154.6	-10.6	
5,011.0	4.30	63.10	5,005.1	186.8	87.0	1.53	0.53	22.29	-133.1	99.1	
5,199.0	4.40	79.00	5,192.5	191.4	100.3	0.64	0.05	8.46	-114.8	133.8	
5,381.0	3.40	73.60	5,374.1	194.3	112.4	0.58	-0.55	-2.97	-136.8	120.9	
5,472.0	3.30	63.60	5,465.0	196.2	117.3	0.65	-0.11	-10.99	-159.9	92.3	
5,662.0	4.10	41.50	5,654.6	203.7	126.7	0.85	0.42	-11.63	-178.1	20.0	
5,755.0	2.30	30.00	5,747.4	207.8	129.8	2.05	-1.94	-12.37	-174.1	-16.3	
5,942.0	1.80	2.60	5,934.3	214.0	131.9	0.58	-0.27	-14.65	-136.6	-87.2	
6,130.0	2.10	6.90	6,122.2	220.4	132.4	0.18	0.16	2.29	-131.5	-68.9	
6,317.0	1.50	4.00	6,309.1	226.2	133.0	0.32	-0.32	-1.55	-116.6	-67.2	
6,506.0	1.60	0.10	6,498.0	231.3	133.2	0.08	0.05	-2.06	-100.2	-65.4	
6,694.0	1.30	351.90	6,686.0	236.0	132.9	0.19	-0.16	-4.36	-79.6	-67.4	
6,882.0	1.30	9.60	6,873.9	240.3	132.9	0.21	0.00	9.41	-82.6	-32.6	
7,070.0	0.30	4.00	7,061.9	242.9	133.3	0.53	-0.53	-2.98	-64.4	-32.2	
7,257.0	0.20	316.10	7,248.9	243.6	133.1	0.12	-0.05	-25.62	-14.8	-51.4	
7,444.0	0.50	304.30	7,435.9	244.3	132.2	0.16	0.16	-6.31	-3.8	-34.4	
7,538.0	0.60	266.40	7,529.9	244.5	131.4	0.39	0.11	-40.32	12.8	-23.0	
7,726.0	0.20	176.50	7,717.9	244.1	130.4	0.34	-0.21	-47.82	16.8	7.8	
7,913.0	0.40	150.00	7,904.9	243.2	130.8	0.13	0.11	-14.17	10.6	14.3	
8,101.0	0.40	144.00	8,092.9	242.1	131.5	0.02	0.00	-3.19	7.7	15.2	
8,288.0	1.10	107.50	8,279.9	241.0	133.6	0.44	0.37	-19.52	-5.2	16.4	
8,476.0	1.40	104.50	8,467.8	239.9	137.5	0.16	0.16	-1.60	-10.1	16.0	
8,664.0	1.80	104.50	8,655.8	238.6	142.6	0.21	0.21	0.00	-15.4	16.0	
8,852.0	0.80	121.20	8,843.7	237.2	146.6	0.56	-0.53	8.88	-14.3	20.6	
9,039.0	0.70	111.50	9,030.7	236.1	148.8	0.09	-0.05	-5.19	-20.0	17.7	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

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9,227.0	0.80	82.40	9,218.7	235.8	151.1	0.21	0.05	-15.48	-28.4		5.2
9,413.0	1.50	49.30	9,404.6	237.6	154.3	0.50	0.38	-17.80	-30.1		-11.8
9,600.0	2.80	57.20	9,591.5	241.7	160.0	0.71	0.70	4.22	-38.5		-7.3
9,787.0	1.30	350.20	9,778.4	246.2	163.4	1.38	-0.80	-35.83	-12.3		-42.5
9,975.0	3.30	341.00	9,966.2	253.4	161.3	1.08	1.06	-4.89	-12.8		-44.2
10,162.0	3.90	338.50	10,152.9	264.5	157.2	0.33	0.32	-1.34	-22.6		-45.0
10,338.0	2.70	314.70	10,328.6	272.9	152.1	1.02	-0.68	-13.52	-12.2		-52.7
10,525.0	1.20	312.50	10,515.5	277.4	147.5	0.80	-0.80	-1.18	-16.5		-53.3
10,712.0	0.20	139.00	10,702.4	278.4	146.3	0.75	-0.53	-92.78	24.1		50.8
10,900.0	1.90	110.00	10,890.4	277.1	149.4	0.92	0.90	-15.43	-7.0		56.0
11,087.0	3.00	136.00	11,077.2	272.5	155.7	0.82	0.59	13.90	10.5		54.7
11,278.0	3.40	168.10	11,268.0	263.4	160.4	0.95	0.21	16.81	28.1		43.4
11,465.0	4.10	207.20	11,454.6	252.0	158.5	1.39	0.37	20.91	38.2		19.5
11,653.0	3.20	225.70	11,642.2	242.4	151.6	0.78	-0.48	9.84	30.8		8.5
11,840.0	3.60	259.10	11,828.9	237.6	142.1	1.06	0.21	17.86	20.1		-7.0
11,883.0	3.60	261.90	11,871.8	237.2	139.5	0.41	0.00	6.51	17.1		-8.0
11,948.0	3.50	268.30	11,936.7	236.8	135.5	0.63	-0.15	9.85	12.1		-9.6
12,041.0	3.10	282.60	12,029.5	237.3	130.2	0.98	-0.43	15.38	4.1		-11.6
12,088.0	2.80	291.00	12,076.5	238.0	127.9	1.12	-0.64	17.87	-0.1		-11.8
12,135.0	2.90	282.20	12,123.4	238.7	125.6	0.95	0.21	-18.72	-0.6		-11.9
12,182.0	4.40	214.70	12,170.3	237.4	123.5	9.02	3.19	-143.62	8.8		-6.4
12,229.0	9.00	190.70	12,217.0	232.3	121.7	11.25	9.79	-51.06	9.2		-3.7
12,276.0	12.30	191.30	12,263.2	223.8	120.1	7.03	7.02	1.28	8.7		-5.5
12,323.0	17.60	188.50	12,308.6	211.9	118.0	11.38	11.28	-5.96	9.6		-7.3
12,370.0	22.40	184.70	12,352.7	195.9	116.3	10.58	10.21	-8.09	11.2		-8.7
12,414.0	28.60	183.10	12,392.4	177.0	115.0	14.18	14.09	-3.64	12.3		-9.9
12,461.0	34.50	180.40	12,432.5	152.4	114.3	12.91	12.55	-5.74	13.1		-10.4



Midland PVA



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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12,505.0	40.70	178.80	12,467.3	125.6	114.5	14.26	14.09	-3.64	13.1	-10.1	
12,552.0	47.70	178.30	12,501.0	92.9	115.4	14.91	14.89	-1.06	11.9	-9.6	
12,597.0	54.50	175.90	12,529.2	57.9	117.2	15.67	15.11	-5.33	9.7	-8.0	
12,644.0	57.80	176.70	12,555.4	19.0	119.7	7.16	7.02	1.70	7.4	-6.0	
12,689.0	60.50	177.90	12,578.5	-19.6	121.5	6.42	6.00	2.67	7.1	-4.7	
12,723.7	65.08	178.65	12,594.4	-50.5	122.4	13.33	13.19	2.16	7.5	-4.2	
HL Crossing 12723.7 MD; 12594.4 TVD; -50.5; 122.4; 65.08											
12,736.0	66.70	178.90	12,599.4	-61.7	122.7	13.33	13.20	2.05	7.6	-4.1	
12,780.0	72.90	179.40	12,614.6	-102.9	123.3	14.13	14.09	1.14	7.5	-3.9	
12,827.0	76.70	179.70	12,626.9	-148.3	123.6	8.11	8.09	0.64	7.7	-4.0	
12,870.0	81.30	180.80	12,635.1	-190.5	123.4	10.99	10.70	2.56	8.7	-4.7	
12,917.0	83.80	181.30	12,641.2	-237.1	122.6	5.42	5.32	1.06	11.3	-6.0	
12,961.0	88.80	180.30	12,644.0	-281.0	122.0	11.59	11.36	-2.27	13.5	-7.1	
13,052.0	89.60	181.20	12,645.3	-371.9	120.8	1.32	0.88	0.99	13.4	-9.2	
13,143.0	87.50	181.00	12,647.6	-462.9	119.0	2.32	-2.31	-0.22	14.4	-11.9	
13,234.0	87.10	180.40	12,651.9	-553.8	117.9	0.79	-0.44	-0.66	17.4	-14.0	
13,327.0	89.60	179.20	12,654.6	-646.7	118.2	2.98	2.69	-1.29	18.7	-14.6	
13,421.0	90.10	178.20	12,654.8	-740.7	120.4	1.19	0.53	-1.06	17.6	-13.5	
13,514.0	90.10	179.60	12,654.6	-833.7	122.2	1.51	0.00	1.51	16.1	-12.7	
13,608.0	90.20	180.80	12,654.4	-927.7	121.8	1.28	0.11	1.28	14.5	-14.0	
13,702.0	90.60	181.10	12,653.7	-1,021.7	120.3	0.53	0.43	0.32	12.5	-16.6	
13,796.0	90.50	181.10	12,652.8	-1,115.7	118.5	0.11	-0.11	0.00	10.2	-19.3	
13,890.0	88.00	180.40	12,654.1	-1,209.6	117.2	2.76	-2.66	-0.74	10.1	-21.6	
13,984.0	86.50	179.50	12,656.6	-1,303.5	117.3	1.86	-1.60	-0.96	13.2	-22.5	
14,077.0	87.00	178.60	12,663.8	-1,396.4	118.9	1.11	0.54	-0.97	17.2	-21.9	
14,171.0	88.50	177.90	12,667.5	-1,490.2	121.7	1.76	1.60	-0.74	19.5	-20.0	
14,265.0	91.30	177.40	12,667.7	-1,584.1	125.6	3.03	2.98	-0.53	18.3	-17.2	



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14,358.0	91.60	178.00	12,665.3	-1,677.0	129.3	0.72	0.32	0.65	14.6	-14.4	
14,453.0	92.70	179.10	12,661.8	-1,771.9	131.7	1.64	1.16	1.16	9.3	-13.0	
14,546.0	91.70	179.50	12,658.2	-1,864.9	132.8	1.16	-1.08	0.43	4.1	-12.8	
14,640.0	90.90	179.40	12,656.1	-1,958.8	133.8	0.86	-0.85	-0.11	0.2	-12.9	
14,732.0	90.20	180.70	12,655.2	-2,050.8	133.7	1.60	-0.76	1.41	-2.4	-14.0	
14,825.0	87.70	179.80	12,656.9	-2,143.8	133.3	2.86	-2.69	-0.97	-2.5	-15.3	
14,920.0	88.50	178.50	12,660.1	-2,238.7	134.7	1.61	0.84	-1.37	-1.1	-14.9	
15,013.0	89.00	178.90	12,662.1	-2,331.7	136.8	0.69	0.54	0.43	-0.8	-13.8	
15,107.0	89.20	178.90	12,663.6	-2,425.7	138.6	0.21	0.21	0.00	-1.0	-13.0	
15,201.0	88.50	179.30	12,665.4	-2,519.6	140.1	0.86	-0.74	0.43	-0.9	-12.5	
15,294.0	88.70	177.80	12,667.7	-2,612.6	142.4	1.63	0.22	-1.61	-0.4	-11.1	
15,388.0	90.60	178.20	12,668.3	-2,706.5	145.7	2.07	2.02	0.43	-1.8	-8.8	
15,482.0	90.40	178.00	12,667.5	-2,800.4	148.8	0.30	-0.21	-0.21	-4.1	-6.6	
15,576.0	89.80	177.20	12,667.3	-2,894.4	152.7	1.06	-0.64	-0.85	-6.0	-3.7	
15,670.0	90.00	177.80	12,667.5	-2,988.3	156.8	0.67	0.21	0.64	-7.6	-0.6	
15,764.0	89.30	177.80	12,668.0	-3,082.2	160.5	0.74	-0.74	0.00	-8.8	2.0	
15,858.0	89.00	178.70	12,669.4	-3,176.1	163.3	1.01	-0.32	0.96	-9.2	3.9	
15,952.0	89.20	178.30	12,670.9	-3,270.1	165.8	0.48	0.21	-0.43	-9.4	5.4	
16,046.0	89.90	178.00	12,671.7	-3,364.0	168.8	0.81	0.74	-0.32	-10.5	7.5	
16,140.0	88.80	178.20	12,672.7	-3,458.0	171.9	1.19	-1.17	0.21	-11.1	9.6	
16,234.0	89.40	179.90	12,674.2	-3,552.0	173.5	1.92	0.64	1.81	-11.4	10.2	
16,327.0	88.70	179.20	12,675.7	-3,644.9	174.2	1.06	-0.75	-0.75	-11.6	9.9	
16,421.0	90.30	179.40	12,676.6	-3,738.9	175.4	1.72	1.70	0.21	-12.5	10.1	
16,516.0	89.50	179.30	12,676.7	-3,833.9	176.5	0.85	-0.84	-0.11	-14.1	10.2	
16,609.0	89.70	180.60	12,677.4	-3,926.9	176.5	1.41	0.22	1.40	-15.0	9.3	
16,703.0	89.60	181.10	12,677.9	-4,020.9	175.1	0.54	-0.11	0.53	-15.1	6.9	
16,797.0	89.50	180.60	12,678.7	-4,114.9	173.7	0.54	-0.11	-0.53	-15.0	4.5	



Midland PVA



Company: EOG Resources - Midland
Project: Lea County, NM (NAD 83 NME)
Site: Ruby 2 State Com
Well: #710H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #710H
TVD Reference: KB = 25' @ 3322.0usft (HP 647)
MD Reference: KB = 25' @ 3322.0usft (HP 647)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
16,891.0	89.40	181.30	12,679.6	-4,208.9	172.2	0.75	-0.11	0.74	-14.7	2.0	
16,985.0	88.70	181.60	12,681.1	-4,302.8	169.8	0.81	-0.74	0.32	-13.8	-1.4	
17,077.0	88.70	183.40	12,683.2	-4,394.7	165.8	1.96	0.00	1.96	-12.3	-6.3	
17,171.0	89.20	183.20	12,685.0	-4,488.5	160.4	0.57	0.53	-0.21	-11.2	-12.7	
17,265.0	89.80	184.00	12,685.8	-4,582.4	154.5	1.08	0.84	0.85	-11.0	-19.6	
17,347.3	88.84	183.39	12,686.8	-4,664.5	149.2	1.39	-1.17	-0.74	-10.6	-25.8	
HL Crossing 17347.3' MD; 12686.8' TVD; -4664.5'; 149.2'; 88.84											
17,359.0	88.70	183.30	12,687.0	-4,676.2	148.5	1.39	-1.17	-0.74	-10.5	-26.6	
17,377.0	88.80	183.30	12,687.4	-4,694.2	147.5	0.55	0.55	0.00	-10.2	-27.8	
Last MWD Survey (MD = 17377.0)											
17,440.0	88.80	183.30	12,688.7	-4,757.0	143.8	0.00	0.00	0.00	-9.3	-32.1	
Projection to Bit (MD = 17440.0)											

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N-S (usft)	+E-W (usft)		
12,723.7	12,594.4	-50.5	122.4	HL Crossing 12723.7' MD; 12594.4' TVD; -50.5'; 122.4'; 65.08	
17,347.3	12,686.8	-4,664.5	149.2	HL Crossing 17347.3' MD; 12686.8' TVD; -4664.5'; 149.2'; 88.84	
17,377.0	12,687.4	-4,694.2	147.5	Last MWD Survey (MD = 17377.0)	
17,440.0	12,688.7	-4,757.0	143.8	Projection to Bit (MD = 17440.0)	

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Ruby 2 State Com #710H

HP 647

Plan #2

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #710H

KB = 25' @ 3322.0usft (HP 647)
Northing 393605.00 Easting 819954.00
Latitude 32° 4' 44.063 N Longitude 103° 26' 1.611 W



Adjusting to Grid North
True North: 0.48°
Magnetic North: 6.34°
Magnetic Field Strength: 49.43 Gauss
Dip Angle: 66.47°
Code: 15252017
Model: 15GR2014

To convert a Magnetic Direction to a Grid Direction, Add 6.34°
To convert a Magnetic Direction to a True Direction, Add 6.81° East
To convert a True Direction to a Grid Direction, Subtract 0.48°

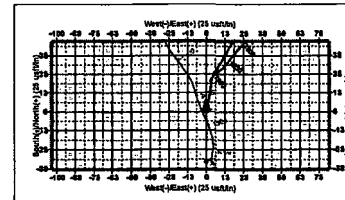
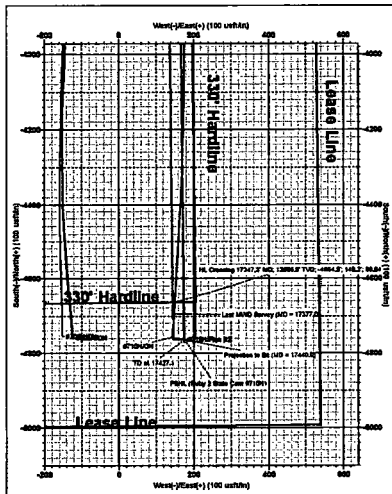
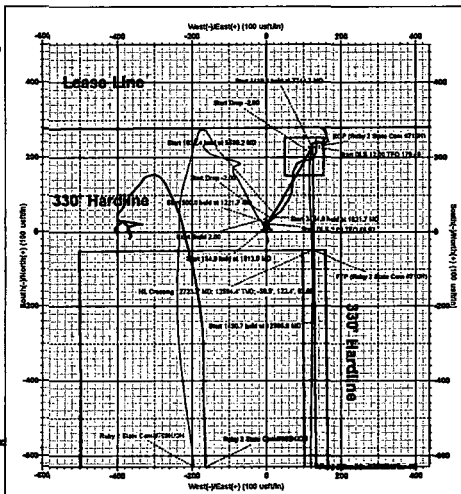
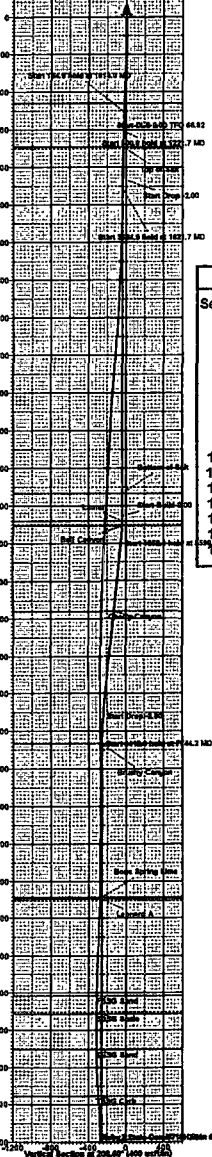
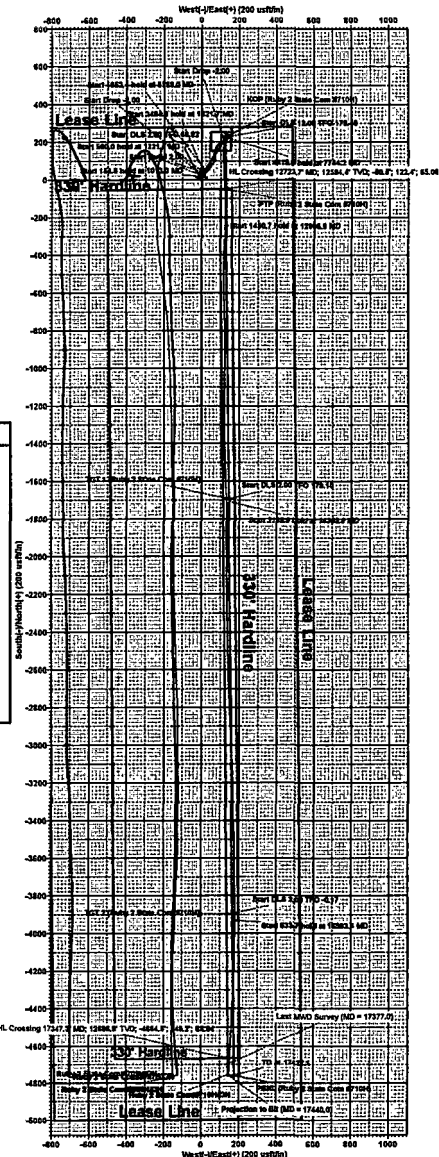
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	1013.0	1.30	359.80	1012.8	16.7	2.9	0.00	0.00	-16.6	
2	1167.0	1.30	359.80	1166.8	20.2	2.8	0.00	0.00	-20.1	
3	1221.7	2.00	30.00	1221.4	21.7	3.3	2.00	66.92	-21.5	
4	1721.7	2.00	30.00	1721.1	36.8	12.0	0.00	0.00	-36.3	
5	1821.7	0.00	0.00	1821.1	38.3	12.9	2.00	180.00	-37.8	
6	5306.6	0.00	0.00	5306.0	38.3	12.9	0.00	0.00	-37.8	
7	5599.2	5.85	30.43	5598.1	51.2	20.5	2.00	30.43	-50.4	
8	7451.6	5.85	30.43	7440.9	214.0	116.1	0.00	0.00	-209.6	
9	7744.2	0.00	0.00	7733.0	226.9	123.7	2.00	180.00	-222.2	
10	12163.8	0.00	0.00	12152.6	226.9	123.7	0.00	0.00	-222.2	
11	12906.8	89.17	179.40	12830.0	-243.6	128.6	12.00	179.40	248.2	
12	14357.6	89.17	179.40	12651.0	-1694.1	143.9	0.00	0.00	1698.3	TGT 1 (Ruby 2 State Com #710H)
13	14369.8	88.93	179.40	12651.2	-1706.0	144.0	2.00	179.10	1710.2	TGT 2 (Ruby 2 State Com #710H)
14	16556.1	88.93	179.40	12692.0	-3895.1	166.9	0.00	0.00	3898.6	
15	16593.4	89.62	179.40	12692.4	-3929.4	167.3	2.00	-0.17	3932.9	
16	17427.1	89.62	179.40	12698.0	-4763.0	176.0	0.00	0.00	4766.3	PBHL (Ruby 2 State Com #710H)

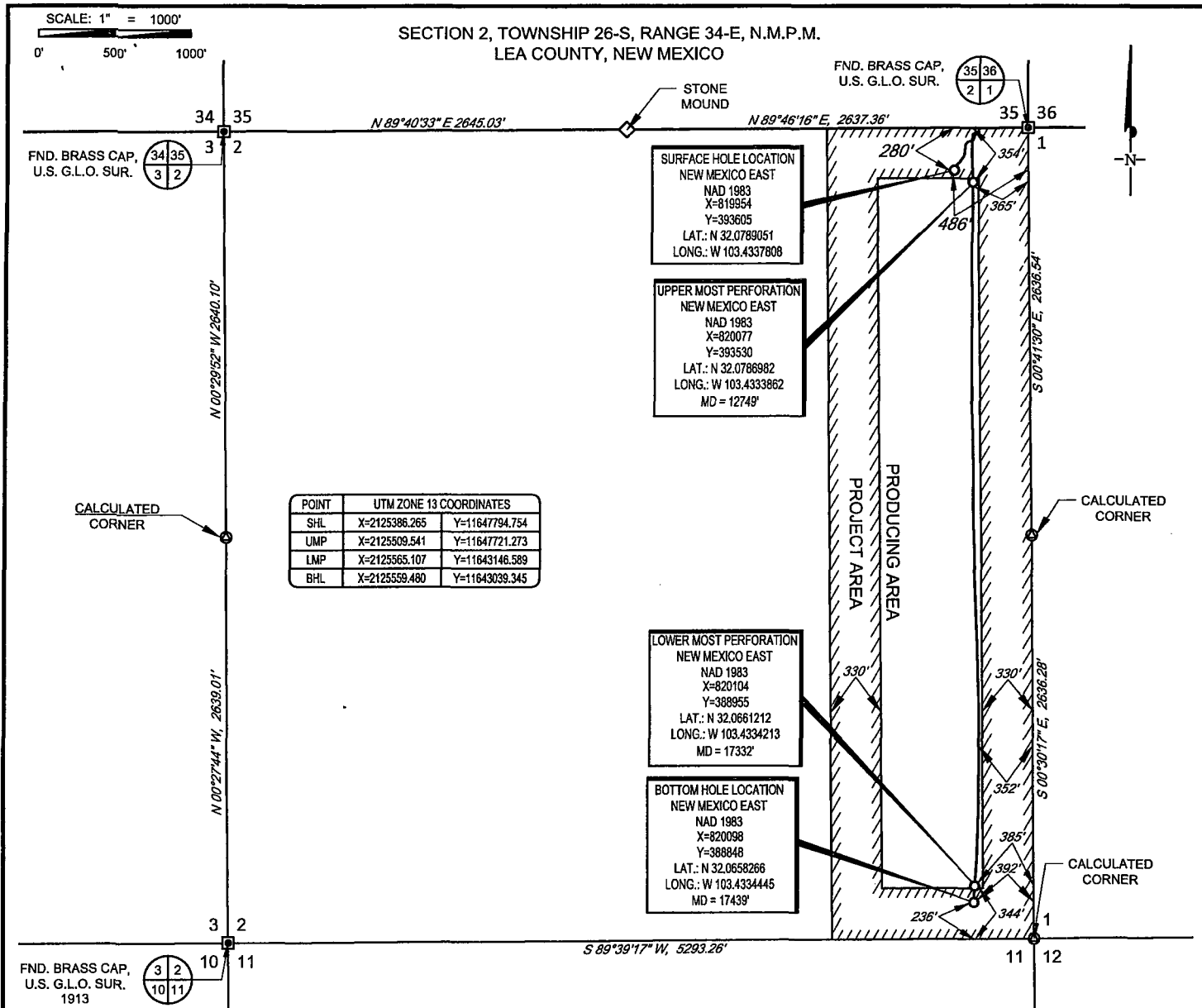
CASING DETAILS
No casing data is available

WELLBORE TARGET DETAILS (MAP COORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
TGT 1 (Ruby 2 State Com #710H)	12651.0	-1694.1	143.9	391910.90	820097.80
TGT 2 (Ruby 2 State Com #710H)	12651.0	-3895.1	166.9	389703.90	820120.50
PBHL (Ruby 2 State Com #710H)	12698.0	-4763.0	176.0	389542.00	820130.00
FTP (Ruby 2 State Com #710H)	12630.0	-50.0	127.0	393555.00	820081.00
KOP (Ruby 2 State Com #710H)	12207.4	226.9	123.7	393631.92	820077.70



Lea County, NM (NAD 83 NME)
Ruby 2 State Com #710H
HP 647
Plan #2

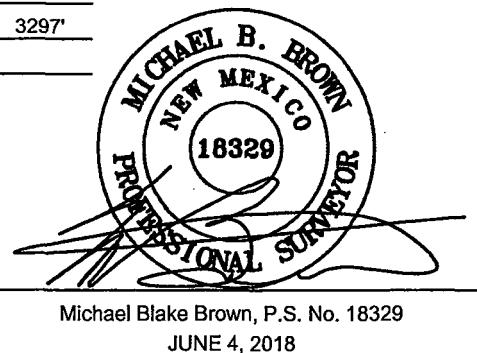


LEASE NAME & WELL NO.: RUBY 2 STATE COM #710H

SECTION 2 TWP 26-S RGE 34-E SURVEY N.M.P.M.

COUNTY LEA STATE NM ELEVATION 3297'

DESCRIPTION 280' FNL & 486' FEL



RUBY 2 STATE COM #710H AS-COMplete	REVISION:	
DATE:	6/4/2018	
FILE:	AD_RUBY2STATECOM_710H	
DRAWN BY:	IMU	
SHEET:	1 OF 1	

- NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
 3. THIS WELL LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.