

**NM OIL CONSERVATION
ARTESIA DISTRICT**

AUG 17 2017

RECEIVED

EOG Resources - Midland

Eddy County, NM (NAD 83 NME)

Gutsy Bun Federal Com

#1H

OH

Survey: Intrepid MWD #1

EOG Midland PVA

04 June, 2017

**Please provide signature
page for directional survey**



EOG Resources, Inc.
EOG Midland PVA

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County, NM (NAD 83 NME)	TVD Reference:	KB = 25 @ 3452.0usft (H&P 610)
Site:	Gutsy Bun Federal Com	MD Reference:	KB = 25 @ 3452.0usft (H&P 610)
Well:	#1H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

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

Site	Gutsy Bun Federal Com			
Site Position:				
From:	Map	Northing:	392,294.20 usft	Latitude:
Position Uncertainty:	0.0 usft	Easting:	549,914.70 usft	Longitude:
		Slot Radius:	13-3/16 "	Grid Convergence:
				32° 4' 42.576 N
				104° 18' 20.305 W
				0.01 °

Well	#1H			
Well Position	+N-S	0.0 usft	Northing:	392,294.20 usft
	+E-W	0.0 usft	Easting:	549,914.70 usft
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft
			Latitude:	32° 4' 42.576 N
			Longitude:	104° 18' 20.305 W
			Ground Level:	3,427.0 usft

Wellbore	OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)
	IGRF2015	5/10/2017	7.29	59.81
				Field Strength (nT)
				47,782.71993462

Design	OH			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:		Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)
		0.0	0.0	0.0
			Direction (°)	179.60



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Well #1H

KB = 25 @ 3452.0usft (H&P 610)

KB = 25 @ 3452.0usft (H&P 610)

Grid

Minimum Curvature

EDM 5000.14 Single User Db

Survey Program		Date	6/4/2017							
From (usft)	To (usft)	Survey (Wellbore)		Tool Name	Description					
132.0	397.0	Wildfire MWD (OH)		MWD	MWD - Standard					
514.0	17,155.0	Intrepid MWD #1 (OH)		MWD	MWD - Standard					
Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	D/Leg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
397.0	1.40	193.31	396.9	-4.5	-1.7	0.00	0.00	0.00	0.0	0.0
514.0	1.60	207.00	513.9	-7.3	-2.8	0.35	0.17	11.70	0.0	0.0
700.0	1.30	209.80	699.8	-11.5	-5.0	0.17	-0.16	1.51	0.0	0.0
884.0	0.60	295.70	883.8	-12.8	-6.9	0.76	-0.38	46.68	0.0	0.0
1,070.0	0.80	284.50	1,069.8	-12.1	-9.0	0.13	0.11	-6.02	0.0	0.0
1,257.0	1.80	88.80	1,256.8	-11.7	-7.4	1.38	0.53	87.86	0.0	0.0
1,443.0	1.70	112.50	1,442.7	-12.7	-1.9	0.39	-0.05	12.74	0.0	0.0
1,629.0	1.40	111.80	1,628.6	-14.6	2.8	0.16	-0.16	-0.38	0.0	0.0
1,767.0	1.10	107.90	1,766.6	-15.6	5.6	0.23	-0.22	-2.83	0.0	0.0
1,908.0	1.00	105.90	1,907.6	-16.4	8.1	0.08	-0.07	-1.42	0.0	0.0
2,094.0	0.60	91.60	2,093.5	-16.9	10.6	0.24	-0.22	-7.69	0.0	0.0
2,279.0	0.50	107.70	2,278.5	-17.1	12.3	0.10	-0.05	8.70	0.0	0.0
2,467.0	0.10	201.30	2,466.5	-17.5	13.1	0.27	-0.21	49.79	0.0	0.0
2,654.0	0.40	205.10	2,653.5	-18.3	12.7	0.16	0.16	2.03	0.0	0.0
2,840.0	1.90	347.60	2,839.5	-15.9	11.8	1.20	0.81	76.61	0.0	0.0
3,028.0	2.00	354.40	3,027.4	-8.6	10.8	0.13	0.05	3.62	0.0	0.0
3,215.0	1.70	344.00	3,214.3	-3.6	9.7	0.24	-0.16	-5.56	0.0	0.0
3,403.0	0.20	64.90	3,402.3	-0.8	9.2	0.89	-0.80	43.03	0.0	0.0
3,590.0	0.10	60.80	3,589.3	-0.6	9.7	0.05	-0.05	-2.19	0.0	0.0
3,778.0	0.40	83.30	3,777.3	-0.4	10.5	0.16	0.16	11.97	0.0	0.0
3,966.0	0.40	75.30	3,965.3	-0.2	11.8	0.03	0.00	-4.26	0.0	0.0



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Database: EDM 5000.14 Single User Db

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)
	4,154.0	0.10	21.80	4,153.3	0.1	12.5	0.19	-0.16	-28.46	0.0	0.0
	4,341.0	0.10	153.90	4,340.3	0.1	12.6	0.10	0.00	70.64	0.0	0.0
	4,529.0	0.40	193.00	4,528.3	-0.7	12.5	0.17	0.16	20.80	0.0	0.0
	4,716.0	0.50	197.60	4,715.3	-2.1	12.1	0.06	0.05	2.46	0.0	0.0
	4,903.0	0.80	208.50	4,902.2	-4.0	11.2	0.17	0.16	5.83	0.0	0.0
	5,090.0	1.10	217.50	5,089.2	-6.6	9.5	0.18	0.16	4.81	0.0	0.0
	5,277.0	1.30	227.70	5,276.2	-9.4	6.9	0.16	0.11	5.45	0.0	0.0
	5,464.0	1.00	219.50	5,463.1	-12.1	4.3	0.18	-0.16	-4.39	0.0	0.0
	5,648.0	1.10	202.40	5,647.1	-15.0	2.6	0.18	0.05	-9.29	0.0	0.0
	5,836.0	0.80	218.40	5,835.1	-17.7	1.1	0.21	-0.16	8.51	0.0	0.0
	6,023.0	1.00	169.70	6,022.1	-20.3	0.5	0.41	0.11	-26.04	0.0	0.0
	6,211.0	0.40	16.90	6,210.1	-21.3	1.0	0.73	-0.32	-81.28	0.0	0.0
	6,398.0	0.30	281.10	6,397.1	-20.6	0.7	0.28	-0.05	-51.23	0.0	0.0
	6,586.0	0.70	266.60	6,585.0	-20.5	-0.9	0.22	0.21	-7.71	0.0	0.0
	6,736.0	0.80	251.30	6,735.0	-20.9	-2.8	0.15	0.07	-10.20	0.0	0.0
	6,775.0	0.90	236.00	6,774.0	-21.2	-3.3	0.63	0.26	-39.23	0.0	0.0
	6,820.0	4.60	170.80	6,819.0	-23.2	-3.3	9.56	8.22	-144.89	-0.9	0.4
	6,868.0	10.50	167.70	6,866.5	-29.4	-2.1	12.32	12.29	-6.46	-1.3	1.7
	6,913.0	16.40	166.00	6,910.3	-39.5	0.3	13.14	13.11	-3.78	-1.6	3.9
	6,957.0	20.70	164.20	6,952.0	-53.1	4.0	9.86	9.77	-4.09	-1.4	7.2
	7,006.0	23.70	160.80	6,997.4	-70.7	9.6	6.66	6.12	-6.94	0.3	12.6
	7,056.0	28.80	160.60	7,042.2	-91.6	16.9	10.20	10.20	-0.40	4.5	20.0
	7,101.0	34.10	164.50	7,080.6	-114.0	23.9	12.61	11.78	8.67	10.6	26.3
	7,130.6	37.25	167.77	7,104.6	-130.7	28.0	12.43	10.64	11.05	15.4	29.3
HL Crossing 7130.6' MD; 7104.6' TVD; -130.7'; 28.0'; 37.25											
	7,144.0	38.70	169.10	7,115.2	-138.8	29.6	12.43	10.84	9.91	17.7	30.3
	7,194.0	47.60	170.60	7,151.6	-172.4	35.6	17.92	17.80	3.00	24.1	34.0



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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)
7,201.7	49.16	171.32	7,156.7	-178.1	36.5	21.50	20.32	9.38	25.1	34.3
FTP(GB FC #1H)										
7,239.0	56.80	174.40	7,179.2	-207.6	40.2	21.50	20.47	8.25	28.3	35.1
7,273.0	64.20	176.20	7,195.9	-237.1	42.6	22.25	21.76	5.29	28.8	35.1
7,304.0	71.20	177.70	7,207.7	-265.7	44.1	23.02	22.58	4.84	27.3	34.4
7,362.0	83.50	179.80	7,220.3	-322.2	45.3	21.50	21.21	3.62	19.7	31.9
7,455.0	89.60	182.60	7,225.9	-414.9	43.3	7.21	6.56	3.01	8.3	23.4
7,548.0	91.70	182.60	7,224.9	-507.8	39.1	2.26	2.26	0.00	6.3	12.9
7,642.0	91.90	181.70	7,221.9	-601.7	35.6	0.98	0.21	-0.96	4.1	5.7
7,735.0	92.60	181.00	7,218.3	-694.6	33.4	1.06	0.75	-0.75	1.3	2.7
7,829.0	91.10	178.70	7,215.2	-788.6	33.7	2.92	-1.60	-2.45	-1.0	2.5
7,922.0	91.30	179.00	7,213.3	-881.5	35.5	0.39	0.22	0.32	-2.2	4.0
8,014.0	90.50	179.10	7,211.8	-973.5	37.0	0.88	-0.87	0.11	-2.8	5.1
8,107.0	90.40	179.00	7,211.1	-1,066.5	38.6	0.15	-0.11	-0.11	-2.8	6.3
8,201.0	88.70	178.20	7,211.9	-1,160.5	40.9	2.00	-1.81	-0.85	-1.3	8.2
8,294.0	88.80	179.10	7,213.9	-1,253.4	43.1	0.97	0.11	0.97	1.5	10.0
8,387.0	89.20	179.50	7,215.5	-1,346.4	44.2	0.61	0.43	0.43	3.9	10.7
8,480.0	89.30	179.20	7,216.7	-1,439.4	45.3	0.34	0.11	-0.32	5.9	11.4
8,573.0	89.40	179.30	7,217.8	-1,532.4	46.5	0.15	0.11	0.11	7.7	12.2
8,666.0	90.50	179.60	7,217.9	-1,625.4	47.4	1.23	1.18	0.32	8.6	12.7
8,760.0	91.20	179.80	7,216.5	-1,719.3	47.9	0.77	0.74	0.21	8.0	12.8
8,853.0	92.70	180.80	7,213.3	-1,812.3	47.4	1.94	1.61	1.08	5.6	12.0
8,947.0	92.00	179.00	7,209.4	-1,906.2	47.5	2.05	-0.74	-1.91	2.5	11.7
9,040.0	91.10	179.10	7,206.9	-1,999.1	49.1	0.97	-0.97	0.11	0.8	12.9
9,134.0	89.50	180.60	7,206.4	-2,093.1	49.3	2.33	-1.70	1.60	1.1	12.7
9,228.0	89.80	180.90	7,207.0	-2,187.1	48.1	0.45	0.32	0.32	2.4	11.1
9,321.0	89.20	180.20	7,207.8	-2,280.1	47.2	0.99	-0.65	-0.75	4.0	9.8



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	9,413.0	88.70	179.90	7,209.5	-2,372.1	47.1	0.63	-0.54	-0.33	6.4	9.4
	9,506.0	88.60	179.00	7,211.7	-2,465.1	48.0	0.97	-0.11	-0.97	9.4	9.9
	9,540.5	89.38	179.11	7,212.3	-2,499.6	48.6	2.28	2.26	0.32	10.3	10.3
TGT#1(GB FC #1H)											
	9,599.0	90.70	179.30	7,212.3	-2,558.1	49.4	2.28	2.26	0.32	10.7	10.8
	9,693.0	91.70	179.30	7,210.3	-2,652.0	50.6	1.06	1.06	0.00	9.3	11.6
	9,786.0	91.00	180.80	7,208.1	-2,745.0	50.5	1.78	-0.75	1.61	7.8	11.1
	9,879.0	91.40	180.60	7,206.2	-2,838.0	49.3	0.48	0.43	-0.22	6.5	9.6
	9,972.0	89.20	180.50	7,205.7	-2,931.0	48.4	2.37	-2.37	-0.11	6.6	8.3
	10,066.0	90.00	181.00	7,206.3	-3,025.0	47.2	1.00	0.85	0.53	7.9	6.7
	10,160.0	90.50	181.70	7,205.9	-3,118.9	45.0	0.92	0.53	0.74	8.2	4.0
	10,253.0	89.50	179.80	7,205.9	-3,211.9	43.8	2.31	-1.08	-2.04	8.8	2.4
	10,347.0	88.80	179.80	7,207.3	-3,305.9	44.1	0.74	-0.74	0.00	10.8	2.4
	10,441.0	88.00	180.50	7,209.9	-3,399.9	43.9	1.13	-0.85	0.74	14.1	1.7
	10,535.0	87.10	179.40	7,214.0	-3,493.8	43.9	1.51	-0.96	-1.17	18.8	1.4
	10,628.0	88.70	177.60	7,217.4	-3,586.7	46.4	2.59	1.72	-1.94	22.8	3.4
	10,721.0	90.50	178.70	7,218.0	-3,679.6	49.4	2.27	1.94	1.18	24.1	6.0
	10,814.0	90.40	178.60	7,217.3	-3,772.6	51.6	0.15	-0.11	-0.11	24.0	7.8
	10,907.0	90.70	178.40	7,216.4	-3,865.5	54.0	0.39	0.32	-0.22	23.8	9.9
	10,999.0	91.60	178.60	7,214.5	-3,957.5	56.4	1.00	0.98	0.22	22.5	11.9
	11,091.0	89.90	179.10	7,213.3	-4,049.5	58.3	1.93	-1.85	0.54	22.0	13.3
	11,184.0	90.40	179.40	7,213.1	-4,142.5	59.5	0.63	0.54	0.32	22.4	14.2
	11,277.0	90.50	179.40	7,212.4	-4,235.5	60.4	0.11	0.11	0.00	22.3	14.7
	11,370.0	90.00	179.30	7,212.0	-4,328.4	61.5	0.55	-0.54	-0.11	22.5	15.4
	11,463.0	89.50	179.00	7,212.4	-4,421.4	62.9	0.63	-0.54	-0.32	23.5	16.4
	11,556.0	89.10	178.90	7,213.5	-4,514.4	64.6	0.44	-0.43	-0.11	25.3	17.7
	11,649.0	89.50	179.80	7,214.6	-4,607.4	65.6	1.06	0.43	0.97	27.1	18.3



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	11,742.0	89.50	179.80	7,215.4	-4,700.4	66.0	0.00	0.00	0.00	28.5	18.3
	11,834.0	89.10	179.50	7,216.6	-4,792.4	66.5	0.54	-0.43	-0.33	30.3	18.4
	11,926.0	89.70	180.80	7,217.5	-4,884.4	66.3	1.56	0.65	1.41	31.9	17.8
	12,020.0	89.40	180.40	7,218.3	-4,978.4	65.3	0.53	-0.32	-0.43	33.3	16.4
	12,113.0	90.40	179.90	7,218.4	-5,071.4	65.1	1.20	1.08	-0.54	34.1	15.8
	12,206.0	91.60	179.40	7,216.8	-5,164.3	65.6	1.40	1.29	-0.54	33.1	16.0
	12,300.0	90.40	178.10	7,215.2	-5,258.3	67.7	1.88	-1.28	-1.38	32.1	17.6
	12,393.0	90.50	177.50	7,214.4	-5,351.2	71.2	0.65	0.11	-0.65	32.0	20.8
	12,486.0	91.80	179.00	7,212.6	-5,444.2	74.1	2.13	1.40	1.61	30.8	23.2
	12,579.0	91.40	180.60	7,210.0	-5,537.1	74.4	1.77	-0.43	1.72	28.8	23.2
	12,673.0	91.60	180.20	7,207.5	-5,631.1	73.8	0.48	0.21	-0.43	27.0	22.1
	12,766.0	91.80	179.60	7,204.8	-5,724.1	73.9	0.68	0.22	-0.65	24.9	21.9
	12,860.0	90.90	181.00	7,202.5	-5,818.0	73.4	1.77	-0.96	1.49	23.3	21.0
	12,954.0	90.50	180.90	7,201.4	-5,912.0	71.9	0.44	-0.43	-0.11	22.8	19.0
	13,042.2	90.69	180.33	7,200.5	-6,000.2	70.9	0.68	0.22	-0.65	22.5	17.7
TGT#2(GB FC #1H)											
	13,047.0	90.70	180.30	7,200.4	-6,005.0	70.9	0.68	0.22	-0.65	22.5	17.6
	13,140.0	90.40	179.50	7,199.5	-6,098.0	71.1	0.92	-0.32	-0.86	22.5	17.4
	13,234.0	90.40	178.70	7,198.9	-6,192.0	72.5	0.85	0.00	-0.85	22.8	18.5
	13,327.0	91.00	179.50	7,197.7	-6,285.0	74.0	1.08	0.65	0.86	22.6	19.5
	13,421.0	90.00	179.80	7,196.9	-6,378.9	74.6	1.11	-1.06	0.32	22.8	19.7
	13,514.0	89.10	179.40	7,197.6	-6,471.9	75.2	1.06	-0.97	-0.43	24.4	20.0
	13,608.0	88.90	179.00	7,199.3	-6,565.9	76.5	0.48	-0.21	-0.43	27.0	20.9
	13,701.0	89.70	180.10	7,200.4	-6,658.9	77.3	1.46	0.86	1.18	29.1	21.2
	13,795.0	90.70	180.20	7,200.1	-6,752.9	77.0	1.07	1.06	0.11	29.8	20.6
	13,888.0	91.40	180.80	7,198.4	-6,845.9	76.2	0.99	0.75	0.65	29.0	19.3
	13,982.0	91.40	180.20	7,196.1	-6,939.8	75.4	0.64	0.00	-0.64	27.7	18.1



EOG Resources, Inc.
EOG Midland PVA

Company: EOG Resources - Midland
Project: Eddy County, NM (NAD 83 NME)
Site: Gutsy Bun Federal Com
Well: #1H
Wellbore: OH
Design: OH

Local Co-ordinate Reference:
TV D Reference: KB = 25 @ 3452.0usft (H&P 610)
MD Reference: KB = 25 @ 3452.0usft (H&P 610)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TV D (usft)	N/S (usft)	EW (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
	14,076.0	91.60	178.90	7,193.6	-7,033.8	76.1	1.40	0.21	-1.38	26.2	18.4
	14,168.0	91.90	180.80	7,190.8	-7,125.8	76.4	2.09	0.33	2.07	24.3	18.3
	14,262.0	90.70	182.00	7,188.7	-7,219.7	74.1	1.81	-1.28	1.28	23.1	15.6
	14,355.0	91.10	182.40	7,187.2	-7,312.6	70.5	0.61	0.43	0.43	22.6	11.6
	14,449.0	89.90	182.10	7,186.4	-7,406.5	66.8	1.32	-1.28	-0.32	22.7	7.5
	14,543.0	89.60	180.10	7,186.8	-7,500.5	65.0	2.15	-0.32	-2.13	24.1	5.3
	14,636.0	89.30	179.10	7,187.7	-7,593.5	65.6	1.12	-0.32	-1.08	26.0	5.6
	14,729.0	88.20	178.40	7,189.7	-7,686.5	67.7	1.40	-1.18	-0.75	28.9	7.2
	14,823.0	89.50	178.70	7,191.6	-7,780.4	70.1	1.42	1.38	0.32	31.8	9.2
	14,916.0	88.60	177.90	7,193.2	-7,873.4	72.8	1.29	-0.97	-0.86	34.3	11.5
	15,010.0	89.00	180.70	7,195.1	-7,967.3	74.0	3.01	0.43	2.98	37.2	12.3
	15,104.0	89.60	180.80	7,196.3	-8,061.3	72.7	0.65	0.64	0.11	39.3	10.7
	15,198.0	91.50	180.80	7,195.4	-8,155.3	71.4	2.02	2.02	0.00	39.4	9.0
	15,291.0	91.90	180.70	7,192.6	-8,248.2	70.2	0.44	0.43	-0.11	37.5	7.3
	15,385.0	89.50	179.40	7,191.5	-8,342.2	70.1	2.90	-2.55	-1.38	37.4	6.8
	15,478.0	90.70	179.00	7,191.3	-8,436.2	71.4	1.35	1.28	-0.43	38.2	7.8
	15,572.0	91.00	178.70	7,189.9	-8,529.2	73.3	0.46	0.32	-0.32	37.7	9.2
	15,666.0	90.50	177.50	7,188.7	-8,623.1	76.4	1.38	-0.53	-1.28	37.5	11.9
	15,760.0	91.70	178.60	7,186.9	-8,717.1	79.6	1.73	1.28	1.17	36.6	14.7
	15,853.0	90.60	181.20	7,185.0	-8,810.0	79.8	3.04	-1.18	2.80	35.7	14.5
	15,948.0	90.90	181.00	7,183.8	-8,905.0	78.0	0.38	0.32	-0.21	35.4	12.3
	16,042.0	88.70	181.70	7,184.1	-8,999.0	75.7	2.46	-2.34	0.74	36.7	9.7
	16,135.0	88.70	181.30	7,186.2	-9,091.9	73.3	0.43	0.00	-0.43	39.8	6.8
	16,228.0	88.70	180.60	7,188.3	-9,184.9	71.8	0.75	0.00	-0.75	42.8	4.9
	16,321.0	89.00	180.10	7,190.2	-9,277.9	71.2	0.63	0.32	-0.54	45.6	3.9
	16,415.0	89.10	179.40	7,191.8	-9,371.8	71.6	0.75	0.11	-0.74	48.1	3.9
	16,507.0	89.70	179.20	7,192.7	-9,463.8	72.7	0.69	0.65	-0.22	50.0	4.6



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Design: OH

Local Co-ordinate Reference:
TVD Reference: KB = 25 @ 3452.0usft (H&P 610)
MD Reference: KB = 25 @ 3452.0usft (H&P 610)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

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)
16,601.0	89.80	178.80	7,193.1	-9,557.8	74.4	0.44	0.11	-0.43	51.4	5.9
16,694.0	90.00	178.30	7,193.3	-9,650.8	76.7	0.58	0.22	-0.54	52.5	7.8
16,786.0	89.80	177.30	7,193.5	-9,742.7	80.3	1.11	-0.22	-1.09	53.6	11.0
16,880.0	89.80	176.60	7,193.8	-9,836.6	85.3	0.74	0.00	-0.74	54.9	15.5
16,975.0	89.90	178.20	7,194.0	-9,931.5	89.6	1.69	0.11	1.68	56.1	19.5
17,067.0	90.20	178.00	7,194.0	-10,023.4	92.6	0.39	0.33	-0.22	57.0	22.1
17,104.0	90.20	177.60	7,193.8	-10,060.4	94.0	1.08	0.00	-1.08	57.2	23.4
Last MWD Survey										
17,155.0	90.20	177.60	7,193.6	-10,111.4	96.2	0.00	0.00	0.00	57.6	25.3
Projection to Bit - Interp @ 7136.0 (#1H OH Plan #2) - PBHL(GB FC #1H)										

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/S (usft)	+E/W (usft)	Comment
7,130.6	7,104.6	-130.7	28.0	HL Crossing 7130.6' MD; 7104.6' TVD; -130.7'; 28.0'; 37.25
17,104.0	7,193.8	-10,060.4	94.0	Last MWD Survey
17,155.0	7,193.6	-10,111.4	96.2	Projection to Bit

Checked By: _____ Approved By: _____ Date: _____

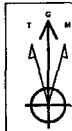


Eddy County, NM (NAD 83 NME)

Gutsy Bun Federal Com #1H

H&P 610

Plan #2



Azimuths to Grid North
True North: -0.01°
Magnetic North: 7.28°

Magnetic Field
Strength: 47782.7 nT
Dip Angle: 59.81°
Date: 5/10/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 7.28°
To convert a Magnetic Direction to a True Direction, Add 7.28° East
To convert a True Direction to a Grid Direction, Subtract 0.01°

PROJECT DETAILS: Eddy 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: #1H

Ground Level: 3427.0
KB = 25 @ 3452.0usft (H&P 610)
Northing 392284.20 Easting 549914.70 Latitude 32° 4' 42.976 N Longitude 104° 18' 20.305 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	6755.0	0.84	243.39	6754.0	-21.0	-3.0	0.00	0.00	21.0	
2	6791.0	0.80	251.30	6790.0	-21.2	-3.5	0.33	113.91	21.2	
3	7469.4	90.48	175.76	7219.0	-454.6	22.7	13.31	-75.53	454.8	
4	7669.3	90.48	179.76	7217.3	-654.4	30.6	2.00	90.04	654.6	
5	9514.8	90.48	179.76	7202.0	-2499.8	38.3	0.00	0.00	2500.0	TGT#1 (GB FC #1H)
6	9519.0	90.39	179.76	7202.0	-2504.0	38.3	2.00	-177.28	2504.2	TGT#2 (GB FC #1H)
7	13015.0	90.39	179.76	7178.0	-5999.8	53.2	0.00	0.00	6000.0	
8	13024.5	90.58	179.75	7177.9	-6009.4	53.3	2.00	-0.30	6009.6	
9	17131.9	90.58	179.75	7136.0	-10116.5	70.9	0.00	0.00	10116.7	Interp @ 7136.0 (#1H OH Plan #2)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
PDB#1 GB FC #1H	7136.0	-10216.5	71.3	392077.70	649986.00
Interp @ 7136.0 (#1H OH Plan #2)	7136.0	-10116.5	70.9	392177.72	649985.67
TGT#2 GB FC #1H	7178.0	-5999.8	83.2	392294.40	649987.94
TGT#1 GB FC #1H	7202.0	-2499.8	38.3	392074.40	649983.01
FTP (GB FC #1H)	7219.0	-130.3	29.0	392163.80	649943.70

