



PHOENIX
TECHNOLOGY SERVICES

October 29, 2019

Oil Conservation Division
State of New Mexico
1625 N. French Drive
Hobbs, New Mexico 88240

Dear District 1 - Hobbs

Re: Centennial Resources
Duck Hunt 1 State Com 401H
Lea County, NM
API #30-025-46345
Job No. 65516

HOBBS OCD

DEC 10 2019

RECEIVED

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced well by Phoenix Technology Services, Inc. Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Peter Mavrelis	401H	1,907	17,513	10/16/19	10/27/19	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

**Phoenix Technology Services
SURVEY DATA CERTIFICATION**



PHOENIX JOB NUMBER

65516

ENERGY COMPANY

Centennial Resources

WELL NAME

Duck Hunt 1 State Com 401H

COUNTY & STATE

Lea County, NM

API WELL NUMBER

30-025-46345

PROPOSED DIRECTION

179.98

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
1,821. ft	1,820.76 ft	1.30	221.70	-4.14 ft	-19.57 ft	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
16-Oct-19	1,907.00 ft	0.91	231.36

SURVEY INSTRUMENT TYPE
Phoenix MWD Velocity

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
27-Oct-19	17,513.00 ft	91.86	183.35

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
27-Oct-19	17,575.00 ft	91.86	183.35

Peter Mavrelis

PRINT YOUR NAME ABOVE

Peter Mavrelis

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.63
DECLINATION OR GRID	DECLINATION

10/27/2019

TODAY'S DATE

TRUE NORTH

MWD SUPERVISOR 1

Peter Mavrelis

DIRECTIONAL DRILLER 1

Scott Middleton

MWD SUPERVISOR 2

Blake Turner

DIRECTIONAL DRILLER 2

Carlo Jaictin

12329 Cutten Rd., Houston, Texas 777066 (713)337-0600 (Voice), (713)337-0599 (Fax)

**Centennial Resources
Development, Inc.**

**Lea County, NM (NAD83 - UTM Zone 13)
Duck Hunt 1 State Com
401H**

OH / 65516

Survey: Phoenix MWD Surveys

Standard Survey Report

28 October, 2019

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 401H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3392.50usft (H&P 618)
Site:	Duck Hunt 1 State Com	MD Reference:	RKB @ 3392.50usft (H&P 618)
Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 618)	Database:	USA Compass

Project	Lea County, NM (NAD83 - UTM Zone 13)		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		
			Using geodetic scale factor

Site		Duck Hunt 1 State Com			
Site Position:		Northing:	11,740,221.78 usft	Latitude:	32.332815
From:	Map	Easting:	2,129,032.10 usft	Longitude:	-103.417617
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.85 °

Well	401H					
Well Position	+N/-S	0.00 usft	Northing:	11,739,902.52 usft	Latitude:	32.331986
	+E/-W	0.00 usft	Easting:	2,127,823.23 usft	Longitude:	-103.421546
Position Uncertainty		1.00 usft	Wellhead Elevation:	usft	Ground Level:	3,367.50 usft

Wellbore	OH / 65516				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	10/15/2019	6.63	60.03	47,867.00000000

Design	Surveys (H&P 618)				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	172.37

Survey Program	Date 10/28/2019				
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
25.00	1,821.00	Wildfire MWD Surveys (OH / 65516)	MWD	OWSG MWD - Standard
1,921.00	17,575.00	Phoenix MWD Surveys (OH / 65516)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

Survey										
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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)
1,821.00	1.30	221.70	1,820.76	-4.14	-19.57	1.50	0.00	0.00	0.00
Tie In									
1,907.00	0.91	231.36	1,906.74	-5.29	-20.75	2.49	0.50	-0.45	11.23
First Phoenix MWD Survey									
2,002.00	0.87	230.38	2,001.73	-6.22	-21.89	3.26	0.05	-0.04	-1.03
2,097.00	0.96	237.82	2,096.72	-7.11	-23.12	3.97	0.16	0.09	7.83
2,191.00	0.97	108.89	2,190.71	-7.78	-23.04	4.66	1.85	0.01	-137.16
2,285.00	2.76	77.11	2,284.66	-7.54	-20.08	4.80	2.13	1.90	-33.81
2,379.00	4.27	71.59	2,378.48	-5.93	-14.55	3.94	1.64	1.61	-5.87

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Site:	Duck Hunt 1 State Com	MD Reference:	RKB @ 3392.50usft (H&P 618)
Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 618)	Database:	USA Compass

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)
2,474.00	5.34	67.21	2,473.15	-3.10	-7.12	2.12	1.19	1.13	-4.61
2,568.00	6.31	68.75	2,566.66	0.47	1.73	-0.24	1.05	1.03	1.64
2,663.00	7.47	69.29	2,660.97	4.55	12.37	-2.86	1.22	1.22	0.57
2,757.00	8.63	66.12	2,754.05	9.56	24.54	-6.22	1.32	1.23	-3.37
2,851.00	9.41	64.00	2,846.88	15.79	37.89	-10.62	0.90	0.83	-2.26
2,946.00	9.85	64.21	2,940.54	22.73	52.19	-15.60	0.46	0.46	0.22
3,040.00	10.08	63.24	3,033.13	29.93	66.77	-20.80	0.30	0.24	-1.03
3,134.00	11.13	64.29	3,125.52	37.57	82.29	-26.31	1.14	1.12	1.12
3,228.00	12.99	62.79	3,217.44	46.34	99.86	-32.67	2.01	1.98	-1.60
3,323.00	14.46	62.23	3,309.73	56.74	119.86	-40.33	1.55	1.55	-0.59
3,417.00	15.09	62.74	3,400.62	67.82	141.12	-48.48	0.68	0.67	0.54
3,512.00	15.56	63.40	3,492.24	79.19	163.50	-56.78	0.53	0.49	0.69
3,606.00	14.93	64.38	3,582.93	90.07	185.70	-64.61	0.72	-0.67	1.04
3,700.00	15.27	64.63	3,673.69	100.61	207.80	-72.13	0.37	0.36	0.27
3,795.00	15.38	64.68	3,765.31	111.35	230.49	-79.77	0.12	0.12	0.05
3,889.00	13.44	66.08	3,856.35	121.12	251.75	-86.62	2.10	-2.06	1.49
3,983.00	12.48	65.44	3,947.95	129.77	270.97	-92.64	1.03	-1.02	-0.68
4,078.00	11.56	66.67	4,040.87	137.80	289.05	-98.21	1.01	-0.97	1.29
4,172.00	10.78	66.40	4,133.09	145.05	305.75	-103.17	0.83	-0.83	-0.29
4,267.00	11.17	63.63	4,226.35	152.70	322.14	-108.57	0.69	0.41	-2.92
4,361.00	11.52	64.20	4,318.51	160.83	338.74	-114.43	0.39	0.37	0.61
4,456.00	12.33	64.54	4,411.46	169.32	356.44	-120.49	0.86	0.85	0.36
4,550.00	11.96	63.86	4,503.36	177.92	374.25	-126.65	0.42	-0.39	-0.72
4,645.00	14.27	62.54	4,595.87	187.66	393.48	-133.75	2.45	2.43	-1.39
4,739.00	14.32	64.02	4,686.96	198.09	414.21	-141.34	0.39	0.05	1.57
4,833.00	14.21	64.25	4,778.06	208.20	435.05	-148.59	0.13	-0.12	0.24
4,928.00	13.99	64.06	4,870.20	218.29	455.88	-155.82	0.24	-0.23	-0.20
5,022.00	13.86	63.81	4,961.44	228.23	476.20	-162.98	0.15	-0.14	-0.27
5,117.00	13.41	63.94	5,053.76	238.09	496.31	-170.08	0.47	-0.47	0.14
5,211.00	14.24	63.65	5,145.04	248.01	516.46	-177.24	0.89	0.88	-0.31
5,305.00	15.39	63.11	5,235.91	258.78	537.94	-185.06	1.23	1.22	-0.57
5,390.00	15.21	64.24	5,317.90	268.73	558.04	-192.25	0.41	-0.21	1.33
5,481.00	15.15	64.26	5,405.72	279.08	579.51	-199.66	0.07	-0.07	0.02
5,576.00	15.48	64.89	5,497.35	289.85	602.17	-207.33	0.39	0.35	0.66
5,670.00	15.77	64.89	5,587.88	300.60	625.09	-214.94	0.31	0.31	0.00
5,765.00	15.77	59.70	5,679.31	312.59	647.93	-223.79	1.48	0.00	-5.46
5,859.00	15.21	59.02	5,769.89	325.38	669.53	-233.60	0.63	-0.60	-0.72
5,953.00	14.65	59.09	5,860.72	337.83	690.30	-243.19	0.60	-0.60	0.07
6,048.00	13.95	58.96	5,952.77	349.91	710.42	-252.48	0.74	-0.74	-0.14
6,142.00	14.05	58.81	6,043.98	361.66	729.89	-261.55	0.11	0.11	-0.16
6,236.00	13.58	58.89	6,135.26	373.27	749.10	-270.50	0.50	-0.50	0.09
6,330.00	13.46	58.79	6,226.66	384.64	767.90	-279.28	0.13	-0.13	-0.11
6,425.00	13.62	57.23	6,319.02	396.43	786.77	-288.45	0.42	0.17	-1.64

Survey Report

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Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 618)	Database:	USA Compass

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)	
6,519.00	12.05	54.51	6,410.67	408.11	804.06	-297.74	1.79	-1.67	-2.89	
6,614.00	11.94	54.56	6,503.59	419.57	820.14	-306.96	0.12	-0.12	0.05	
6,708.00	11.73	53.61	6,595.59	430.88	835.76	-316.09	0.30	-0.22	-1.01	
6,802.00	11.48	52.92	6,687.67	442.18	850.91	-325.29	0.30	-0.27	-0.73	
6,897.00	10.69	54.79	6,780.90	452.96	865.65	-334.02	0.91	-0.83	1.97	
6,991.00	9.78	58.79	6,873.40	462.13	879.61	-341.25	1.23	-0.97	4.26	
7,086.00	9.27	59.43	6,967.09	470.20	893.09	-347.46	0.55	-0.54	0.67	
7,180.00	8.88	58.85	7,059.92	477.80	905.82	-353.30	0.43	-0.41	-0.62	
7,274.00	7.04	60.25	7,153.01	484.42	917.03	-358.37	1.97	-1.96	1.49	
7,369.00	5.73	70.17	7,247.42	488.91	926.55	-361.56	1.80	-1.38	10.44	
7,463.00	5.51	69.89	7,340.97	492.06	935.20	-363.53	0.24	-0.23	-0.30	
7,557.00	3.71	67.81	7,434.66	494.76	942.26	-365.27	1.92	-1.91	-2.21	
7,652.00	2.95	66.56	7,529.50	496.89	947.34	-366.71	0.80	-0.80	-1.32	
7,746.00	2.57	66.55	7,623.39	498.69	951.50	-367.94	0.40	-0.40	-0.01	
7,841.00	2.16	46.66	7,718.31	500.77	954.75	-369.57	0.96	-0.43	-20.94	
7,935.00	2.00	34.18	7,812.25	503.34	956.96	-371.82	0.51	-0.17	-13.28	
8,029.00	1.92	19.24	7,906.19	506.19	958.40	-374.45	0.55	-0.09	-15.89	
8,123.00	1.83	3.65	8,000.14	509.17	959.02	-377.33	0.55	-0.10	-16.59	
8,218.00	2.06	359.29	8,095.09	512.39	959.09	-380.51	0.29	0.24	-4.59	
8,312.00	0.75	319.36	8,189.06	514.55	958.67	-382.70	1.66	-1.39	-42.48	
8,406.00	0.94	289.24	8,283.05	515.27	957.54	-383.57	0.51	0.20	-32.04	
8,500.00	1.06	282.44	8,377.04	515.71	955.97	-384.22	0.18	0.13	-7.23	
8,594.00	1.25	294.36	8,471.02	516.32	954.18	-385.06	0.32	0.20	12.68	
8,689.00	1.08	291.67	8,566.00	517.08	952.41	-386.04	0.19	-0.18	-2.83	
8,783.00	0.78	288.19	8,659.98	517.60	950.98	-386.76	0.32	-0.32	-3.70	
8,877.00	0.85	164.07	8,753.98	517.13	950.56	-386.34	1.53	0.07	-132.04	
8,971.00	0.52	223.24	8,847.97	516.15	950.46	-385.39	0.78	-0.35	62.95	
9,065.00	0.69	191.46	8,941.97	515.29	950.05	-384.58	0.39	0.18	-33.81	
9,160.00	1.22	194.12	9,036.96	513.75	949.69	-383.10	0.56	0.56	2.80	
9,254.00	1.93	192.61	9,130.92	511.23	949.10	-380.69	0.76	0.76	-1.61	
9,348.00	2.63	212.31	9,224.85	507.86	947.61	-377.55	1.11	0.74	20.96	
9,443.00	4.08	235.05	9,319.68	504.08	943.67	-374.33	2.04	1.53	23.94	
9,476.00	4.54	240.75	9,352.59	502.77	941.57	-373.31	1.90	1.39	17.27	
9,523.00	4.78	222.42	9,399.44	500.42	938.62	-371.36	3.20	0.51	-39.00	
9,570.00	9.09	188.78	9,446.10	495.30	936.74	-366.54	12.24	9.17	-71.57	
9,617.00	17.18	177.13	9,491.84	484.68	936.52	-356.04	18.03	17.21	-24.79	
9,665.00	19.96	173.59	9,537.34	469.45	937.79	-340.78	6.25	5.79	-7.38	
9,712.00	24.59	167.70	9,580.82	451.92	940.77	-323.00	10.93	9.85	-12.53	
9,759.00	27.49	168.56	9,623.05	431.73	945.00	-302.43	6.22	6.17	1.83	
9,806.00	33.09	170.41	9,663.62	408.42	949.29	-278.76	12.08	11.91	3.94	
9,854.00	36.67	172.33	9,702.99	381.29	953.39	-251.33	7.80	7.46	4.00	
9,901.00	40.63	175.08	9,739.69	352.12	956.58	-221.99	9.18	8.43	5.85	
9,948.00	44.05	175.09	9,774.43	320.59	959.29	-190.38	7.28	7.28	0.02	
9,995.00	47.49	174.62	9,807.21	287.05	962.31	-156.74	7.35	7.32	-1.00	

Survey Report

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Site:	Duck Hunt 1 State Com	MD Reference:	RKB @ 3392.50usft (H&P 618)
Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
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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)
10,043.00	50.07	175.37	9,838.83	251.09	965.46	-120.67	5.50	5.38	1.56
10,090.00	52.28	176.85	9,868.30	214.56	967.94	-84.14	5.30	4.70	3.15
10,137.00	55.75	178.51	9,895.91	176.57	969.46	-46.28	7.92	7.38	3.53
10,184.00	61.19	180.19	9,920.48	136.52	969.90	-6.54	11.97	11.57	3.57
10,231.00	66.55	180.14	9,941.17	94.34	969.78	35.26	11.40	11.40	-0.11
10,278.00	72.09	178.62	9,957.77	50.39	970.27	78.88	12.17	11.79	-3.23
10,326.00	75.41	179.22	9,971.20	4.32	971.13	124.66	7.02	6.92	1.25
10,373.00	77.41	178.08	9,982.24	-41.34	972.21	170.06	4.86	4.26	-2.43
10,420.00	77.43	177.56	9,992.48	-87.18	973.95	215.73	1.08	0.04	-1.11
10,467.00	78.46	177.46	10,002.29	-133.10	975.95	261.50	2.20	2.19	-0.21
10,515.00	84.37	178.15	10,009.45	-180.51	977.77	308.73	12.39	12.31	1.44
10,610.00	90.44	177.80	10,013.75	-275.31	981.12	403.14	6.40	6.39	-0.37
10,667.00	90.70	177.32	10,013.19	-332.25	983.55	459.90	0.96	0.46	-0.84
10,762.00	90.86	180.50	10,011.89	-427.21	985.35	554.26	3.35	0.17	3.35
10,856.00	89.71	182.33	10,011.43	-521.18	983.03	647.09	2.30	-1.22	1.95
10,951.00	90.42	185.94	10,011.32	-615.91	976.18	740.07	3.87	0.75	3.80
11,045.00	90.86	187.28	10,010.27	-709.28	965.36	831.18	1.50	0.47	1.43
11,139.00	90.87	186.78	10,008.85	-802.56	953.86	922.11	0.53	0.01	-0.53
11,234.00	92.24	184.30	10,006.27	-897.08	944.69	1,014.56	2.98	1.44	-2.61
11,328.00	91.70	181.24	10,003.04	-990.90	940.15	1,106.95	3.30	-0.57	-3.26
11,422.00	90.25	178.43	10,001.44	-1,084.87	940.42	1,200.13	3.36	-1.54	-2.99
11,517.00	89.42	176.87	10,001.71	-1,179.79	944.32	1,294.73	1.86	-0.87	-1.64
11,611.00	89.04	177.01	10,002.98	-1,273.65	949.34	1,388.42	0.43	-0.40	0.15
11,706.00	89.14	176.74	10,004.48	-1,368.49	954.51	1,483.11	0.30	0.11	-0.28
11,800.00	88.48	175.67	10,006.44	-1,462.26	960.73	1,576.88	1.34	-0.70	-1.14
11,895.00	88.41	175.74	10,009.01	-1,556.96	967.85	1,671.68	0.10	-0.07	0.07
11,989.00	88.61	176.89	10,011.46	-1,650.73	973.89	1,765.43	1.24	0.21	1.22
12,083.00	88.53	178.14	10,013.80	-1,744.62	977.96	1,859.02	1.33	-0.09	1.33
12,178.00	90.27	179.80	10,014.80	-1,839.59	979.67	1,953.38	2.53	1.83	1.75
12,272.00	89.95	180.65	10,014.62	-1,933.59	979.30	2,046.49	0.97	-0.34	0.90
12,367.00	90.86	181.67	10,013.95	-2,028.56	977.38	2,140.37	1.44	0.96	1.07
12,461.00	92.72	182.71	10,011.01	-2,122.44	973.79	2,232.94	2.27	1.98	1.11
12,555.00	92.38	182.41	10,006.83	-2,216.25	969.59	2,325.37	0.48	-0.36	-0.32
12,650.00	92.47	182.26	10,002.81	-2,311.09	965.72	2,418.85	0.18	0.09	-0.16
12,744.00	92.41	181.81	9,998.81	-2,404.95	962.39	2,511.43	0.48	-0.06	-0.48
12,839.00	92.27	181.19	9,994.93	-2,499.83	959.90	2,605.15	0.67	-0.15	-0.65
12,934.00	92.24	180.38	9,991.19	-2,594.75	958.60	2,699.06	0.85	-0.03	-0.85
13,028.00	91.49	179.22	9,988.13	-2,688.70	958.93	2,792.22	1.47	-0.80	-1.23
13,122.00	89.85	177.69	9,987.03	-2,782.65	961.47	2,885.67	2.39	-1.74	-1.63
13,217.00	89.25	177.63	9,987.78	-2,877.57	965.35	2,980.27	0.63	-0.63	-0.06
13,311.00	89.36	178.78	9,988.92	-2,971.51	968.29	3,073.77	1.23	0.12	1.22
13,405.00	88.98	180.10	9,990.28	-3,065.50	969.21	3,167.04	1.46	-0.40	1.40
13,498.00	89.65	180.86	9,991.39	-3,158.49	968.43	3,259.11	1.09	0.72	0.82

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 401H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3392.50usft (H&P 618)
Site:	Duck Hunt 1 State Com	MD Reference:	RKB @ 3392.50usft (H&P 618)
Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 618)	Database:	USA Compass

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)
13,592.00	89.96	180.62	9,991.71	-3,252.48	967.22	3,352.10	0.42	0.33	-0.26
13,686.00	88.34	179.80	9,993.11	-3,346.46	966.87	3,445.21	1.93	-1.72	-0.87
13,780.00	88.70	180.22	9,995.53	-3,440.43	966.85	3,538.34	0.59	0.38	0.45
13,875.00	89.61	180.47	9,996.94	-3,535.42	966.28	3,632.41	0.99	0.96	0.26
13,969.00	89.21	180.80	9,997.90	-3,629.41	965.24	3,725.43	0.55	-0.43	0.35
14,063.00	88.79	180.50	9,999.54	-3,723.39	964.17	3,818.44	0.55	-0.45	-0.32
14,158.00	89.41	181.27	10,001.04	-3,818.36	962.71	3,912.38	1.04	0.65	0.81
14,252.00	88.94	181.92	10,002.39	-3,912.32	960.09	4,005.15	0.85	-0.50	0.69
14,346.00	88.99	182.38	10,004.09	-4,006.23	956.56	4,097.77	0.49	0.05	0.49
14,440.00	89.11	182.52	10,005.65	-4,100.13	952.55	4,190.31	0.20	0.13	0.15
14,535.00	89.11	181.96	10,007.12	-4,195.05	948.83	4,283.89	0.59	0.00	-0.59
14,629.00	89.02	181.87	10,008.66	-4,288.99	945.69	4,376.58	0.14	-0.10	-0.10
14,723.00	89.56	181.55	10,009.82	-4,382.94	942.89	4,469.32	0.67	0.57	-0.34
14,817.00	90.07	180.65	10,010.12	-4,476.92	941.08	4,562.23	1.10	0.54	-0.96
14,912.00	89.62	179.24	10,010.38	-4,571.91	941.18	4,656.40	1.56	-0.47	-1.48
15,006.00	88.90	179.65	10,011.59	-4,665.90	942.09	4,749.68	0.88	-0.77	0.44
15,100.00	89.92	180.63	10,012.56	-4,759.89	941.86	4,842.80	1.50	1.09	1.04
15,194.00	90.07	179.07	10,012.57	-4,853.89	942.10	4,936.00	1.67	0.16	-1.66
15,288.00	89.93	177.76	10,012.57	-4,947.85	944.70	5,029.48	1.40	-0.15	-1.39
15,382.00	89.47	176.85	10,013.06	-5,041.75	949.12	5,123.13	1.08	-0.49	-0.97
15,476.00	89.59	175.80	10,013.83	-5,135.55	955.15	5,216.90	1.12	0.13	-1.12
15,570.00	89.58	176.19	10,014.51	-5,229.32	961.71	5,310.71	0.42	-0.01	0.41
15,665.00	87.53	177.67	10,016.91	-5,324.14	966.80	5,405.37	2.66	-2.16	1.56
15,759.00	90.95	181.03	10,018.16	-5,418.10	967.86	5,498.64	5.10	3.64	3.57
15,853.00	91.26	178.42	10,016.34	-5,512.07	968.31	5,591.84	2.80	0.33	-2.78
15,947.00	89.92	176.39	10,015.38	-5,605.96	972.57	5,685.46	2.59	-1.43	-2.16
16,042.00	87.90	174.28	10,017.18	-5,700.62	980.29	5,780.31	3.07	-2.13	-2.22
16,136.00	88.07	174.79	10,020.49	-5,794.14	989.24	5,874.18	0.57	0.18	0.54
16,230.00	87.43	175.42	10,024.18	-5,887.72	997.25	5,968.00	0.96	-0.68	0.67
16,324.00	88.53	177.58	10,027.49	-5,981.48	1,002.99	6,061.69	2.58	1.17	2.30
16,355.00	87.91	177.36	10,028.46	-6,012.43	1,004.36	6,092.56	2.12	-2.00	-0.71
16,418.00	88.45	177.22	10,030.46	-6,075.33	1,007.33	6,155.29	0.89	0.86	-0.22
16,481.00	88.13	177.17	10,032.34	-6,138.23	1,010.42	6,218.04	0.51	-0.51	-0.08
16,513.00	88.04	177.02	10,033.41	-6,170.17	1,012.04	6,249.91	0.55	-0.28	-0.47
16,517.00	87.88	177.32	10,033.55	-6,174.16	1,012.23	6,253.90	8.50	-4.00	7.50
16,549.00	88.42	177.43	10,034.58	-6,206.11	1,013.70	6,285.76	1.72	1.69	0.34
16,580.00	88.54	177.37	10,035.40	-6,237.07	1,015.10	6,316.63	0.43	0.39	-0.19
16,612.00	89.07	177.99	10,036.07	-6,269.04	1,016.40	6,348.48	2.55	1.66	1.94
16,643.00	89.39	177.97	10,036.49	-6,300.01	1,017.49	6,379.33	1.03	1.03	-0.06
16,674.00	90.16	179.45	10,036.61	-6,331.00	1,018.19	6,410.14	5.38	2.48	4.77
16,706.00	90.58	180.84	10,036.40	-6,363.00	1,018.11	6,441.85	4.54	1.31	4.34
16,737.00	91.09	181.21	10,035.95	-6,393.99	1,017.55	6,472.49	2.03	1.65	1.19
16,769.00	91.66	180.82	10,035.18	-6,425.98	1,016.99	6,504.12	2.16	1.78	-1.22

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 401H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3392.50usft (H&P 618)
Site:	Duck Hunt 1 State Com	MD Reference:	RKB @ 3392.50usft (H&P 618)
Well:	401H	North Reference:	True
Wellbore:	OH / 65516	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 618)	Database:	USA Compass

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)
16,800.00	91.95	181.49	10,034.21	-6,456.96	1,016.36	6,534.74	2.35	0.94	2.16
16,831.00	91.90	182.79	10,033.17	-6,487.92	1,015.21	6,565.27	4.19	-0.16	4.19
16,863.00	92.16	182.74	10,032.03	-6,519.86	1,013.66	6,596.72	0.83	0.81	-0.16
16,894.00	92.07	182.73	10,030.89	-6,550.80	1,012.19	6,627.20	0.29	-0.29	-0.03
16,957.00	92.37	182.27	10,028.45	-6,613.70	1,009.44	6,689.17	0.87	0.48	-0.73
16,989.00	92.89	182.02	10,026.98	-6,645.64	1,008.24	6,720.67	1.80	1.63	-0.78
17,020.00	92.18	181.94	10,025.61	-6,676.59	1,007.17	6,751.21	2.30	-2.29	-0.26
17,051.00	90.32	182.63	10,024.93	-6,707.56	1,005.94	6,781.73	6.40	-6.00	2.23
17,083.00	89.16	183.32	10,025.08	-6,739.51	1,004.28	6,813.19	4.22	-3.63	2.16
17,177.00	89.98	183.43	10,025.78	-6,833.35	998.74	6,905.45	0.88	0.87	0.12
17,271.00	90.98	183.22	10,024.99	-6,927.18	993.29	6,997.74	1.09	1.06	-0.22
17,366.00	91.96	183.24	10,022.56	-7,022.00	987.94	7,091.00	1.03	1.03	0.02
17,459.00	91.13	183.46	10,020.05	-7,114.81	982.51	7,182.27	0.92	-0.89	0.24
17,513.00	91.86	183.35	10,018.64	-7,168.70	979.30	7,235.25	1.37	1.35	-0.20
Final Phoenix MWD Survey									
17,575.00	91.86	183.35	10,016.63	-7,230.56	975.68	7,296.08	0.00	0.00	0.00
Projection to TD									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,821.00	1,820.76	-4.14	-19.57	Tie In
1,907.00	1,906.74	-5.29	-20.75	First Phoenix MWD Survey
17,513.00	10,018.64	-7,168.70	979.30	Final Phoenix MWD Survey
17,575.00	10,016.63	-7,230.56	975.68	Projection to TD