



PHOENIX
TECHNOLOGY SERVICES

30-025-46403

February 12, 2020

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

Dear District 1 - Hobbs

Re: Centennial Resources
Winnebago 30 State Com 503H
Lea County, NM
API #30-025-46403
Job No. 65920

HOBBS OCD

MAR 02 2020

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	503H	1,884	20,397	1/12/20	1/25/20	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

65920

ENERGY COMPANY Centennial Resources

WELL NAME

Winnebago 30 State Com 503H

COUNTY & STATE

Lea County, NM

API WELL NUMBER

30-025-46403

PROPOSED DIRECTION

358.37

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
1,826.50 ft	1,826.36 ft	1.10	281.66	-4.51 ft	3.65 ft	Surface

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
12-Jan-20	1,884 ft	1.08	281.42

SURVEY INSTRUMENT
TYPE

Phoenix MWD Velocity

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
25-Jan-20	20,397ft	91.24	0.18

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
25-Jan-20	20,428 ft	91.24	0.18

Peter Mavrelis

PRINT YOUR NAME ABOVE

Peter Mavrelis

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.64
DECLINATION OR GRID	TRUENORTH

1/26/2020

TODAY'S DATE

MWD SUPERVISOR 1

Peter Mavrelis

DIRECTIONAL DRILLER 1

Scot Middleton

MWD SUPERVISOR 2

Blake Turner

DIRECTIONAL DRILLER 2

Dwight Dautreuil

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



PHOENIX
TECHNOLOGY SERVICES

Centennial Resources Development, Inc.

**Lea County, NM (NAD83 - UTM Zone 13)
Winnebago 30 State Com
503H**

OH / 65920

Survey: Phoenix MWD Surveys

Standard Survey Report

26 January, 2020





Survey Report



Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 503H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3492.60usft (H&P 618)
Site:	Winnebago 30 State Com	MD Reference:	RKB @ 3492.60usft (H&P 618)
Well:	503H	North Reference:	True
Wellbore:	OH / 65920	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	Winnebago 30 State Com		
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Site Position:		Northing:	11,748,785.38 usft	Latitude:	32.356247
From:	Map	Easting:	2,131,624.41 usft	Longitude:	-103.408813
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.85 °

Well	503H				
Well Position	+N/-S	0.00 usft	Northing:	11,748,785.38 usft	Latitude: 32.356247
	+E/-W	0.00 usft	Easting:	2,131,624.41 usft	Longitude: -103.408813
Position Uncertainty	1.00 usft		Wellhead Elevation:	usft	Ground Level: 3,466.10 usft

Wellbore	OH / 65920				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	2/19/2020	6.62	60.02	47,938.00903662

Design	Surveys (H&P 618)				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	1,826.50

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	358.37

Survey Program	Date 1/26/2020				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
131.50	1,826.50	Invictus MWD Surveys (OH / Surface)	MWD	OWSG MWD - Standard	
1,884.00	20,428.00	Phoenix MWD Surveys (OH / 65920)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction	

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)
1,826.50	1.10	281.66	1,826.36	-4.51	3.65	-4.61	0.00	0.00	0.00
Tie In									
1,884.00	1.08	281.42	1,883.85	-4.29	2.58	-4.36	0.04	-0.03	-0.42
First Phoenix MWD Survey									
1,978.00	1.16	271.99	1,977.84	-4.08	0.76	-4.10	0.21	0.09	-10.03
2,072.00	1.14	245.32	2,071.82	-4.44	-1.04	-4.41	0.56	-0.02	-28.37
2,167.00	1.72	227.25	2,166.79	-5.80	-2.95	-5.72	0.77	0.61	-19.02
2,261.00	3.22	225.84	2,260.70	-8.60	-5.88	-8.43	1.60	1.60	-1.50
2,356.00	4.74	227.41	2,355.47	-13.11	-10.68	-12.81	1.60	1.60	1.65



Survey Report



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Well:	503H	North Reference:	True
Wellbore:	OH / 65920	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)
2,450.00	5.45	230.13	2,449.09	-18.60	-16.97	-18.11	0.80	0.76	2.89
2,545.00	5.41	230.41	2,543.67	-24.35	-23.88	-23.66	0.05	-0.04	0.29
2,639.00	5.39	231.63	2,637.25	-29.92	-30.76	-29.03	0.12	-0.02	1.30
2,733.00	5.31	230.05	2,730.84	-35.45	-37.56	-34.37	0.18	-0.09	-1.68
2,827.00	5.44	234.51	2,824.43	-40.83	-44.52	-39.55	0.47	0.14	4.74
2,922.00	6.13	245.44	2,918.95	-45.55	-52.80	-44.03	1.37	0.73	11.51
3,017.00	6.13	244.73	3,013.40	-49.83	-62.00	-48.04	0.08	0.00	-0.75
3,111.00	5.79	244.98	3,106.90	-53.97	-70.83	-51.94	0.36	-0.36	0.27
3,205.00	7.11	243.63	3,200.30	-58.56	-80.34	-56.25	1.41	1.40	-1.44
3,299.00	7.23	244.58	3,293.56	-63.69	-90.90	-61.07	0.18	0.13	1.01
3,394.00	7.06	245.33	3,387.83	-68.69	-101.60	-65.77	0.20	-0.18	0.79
3,488.00	6.61	245.51	3,481.16	-73.34	-111.77	-70.13	0.48	-0.48	0.19
3,582.00	5.90	245.74	3,574.60	-77.57	-121.10	-74.09	0.76	-0.76	0.24
3,676.00	5.48	244.43	3,668.13	-81.49	-129.56	-77.77	0.47	-0.45	-1.39
3,770.00	5.93	239.41	3,761.67	-85.90	-137.79	-81.95	0.71	0.48	-5.34
3,864.00	5.91	237.61	3,855.17	-90.96	-146.05	-86.77	0.20	-0.02	-1.91
3,959.00	6.19	235.99	3,949.64	-96.45	-154.43	-92.02	0.35	0.29	-1.71
4,053.00	6.64	235.77	4,043.05	-102.34	-163.12	-97.66	0.48	0.48	-0.23
4,147.00	6.23	234.86	4,136.46	-108.33	-171.79	-103.40	0.45	-0.44	-0.97
4,242.00	7.01	238.40	4,230.82	-114.34	-180.94	-109.14	0.93	0.82	3.73
4,336.00	6.71	240.33	4,324.15	-120.06	-190.60	-114.59	0.40	-0.32	2.05
4,431.00	6.53	239.81	4,418.52	-125.53	-200.09	-119.78	0.20	-0.19	-0.55
4,525.00	6.74	238.55	4,511.89	-131.09	-209.41	-125.08	0.27	0.22	-1.34
4,619.00	7.86	238.88	4,605.12	-137.29	-219.62	-130.99	1.19	1.19	0.35
4,713.00	7.79	239.91	4,698.25	-143.81	-230.64	-137.19	0.17	-0.07	1.10
4,807.00	7.53	241.33	4,791.41	-149.96	-241.55	-143.02	0.34	-0.28	1.51
4,902.00	7.21	242.28	4,885.62	-155.72	-252.29	-148.48	0.36	-0.34	1.00
4,996.00	7.01	241.08	4,978.90	-161.23	-262.53	-153.70	0.27	-0.21	-1.28
5,091.00	6.69	239.65	5,073.22	-166.83	-272.38	-159.02	0.38	-0.34	-1.51
5,185.00	6.31	241.00	5,166.62	-172.10	-281.63	-164.02	0.44	-0.40	1.44
5,280.00	5.94	240.47	5,261.08	-177.06	-290.47	-168.72	0.39	-0.39	-0.56
5,374.00	6.01	240.38	5,354.57	-181.89	-298.98	-173.31	0.08	0.07	-0.10
5,468.00	5.91	240.21	5,448.06	-186.72	-307.46	-177.90	0.11	-0.11	-0.18
5,537.00	5.66	239.29	5,516.71	-190.23	-313.47	-181.23	0.39	-0.36	-1.33
5,657.00	5.47	238.90	5,636.14	-196.20	-323.45	-186.92	0.16	-0.16	-0.33
5,751.00	4.19	220.52	5,729.81	-201.13	-329.52	-191.67	2.12	-1.36	-19.55
5,845.00	2.95	204.37	5,823.63	-205.94	-332.75	-196.39	1.69	-1.32	-17.18
5,939.00	1.57	145.90	5,917.56	-209.21	-333.02	-199.65	2.67	-1.47	-62.20
6,034.00	1.43	130.15	6,012.53	-211.05	-331.39	-201.54	0.46	-0.15	-16.58
6,128.00	1.78	76.93	6,106.50	-211.48	-329.07	-202.03	1.57	0.37	-56.62
6,223.00	1.76	66.02	6,201.45	-210.55	-326.30	-201.19	0.35	-0.02	-11.48
6,317.00	1.77	68.12	6,295.41	-209.43	-323.63	-200.14	0.07	0.01	2.23
6,411.00	1.33	30.10	6,389.38	-207.94	-321.74	-198.70	1.16	-0.47	-40.45

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Well:	503H	North Reference:	True
Wellbore:	OH / 65920	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)	
6,505.00	1.77	353.96	6,483.35	-205.55	-321.34	-196.33	1.12	0.47	-38.45	
6,600.00	1.79	357.16	6,578.30	-202.61	-321.57	-193.38	0.11	0.02	3.37	
6,694.00	1.58	1.02	6,672.26	-199.85	-321.62	-190.62	0.25	-0.22	4.11	
6,788.00	1.47	357.91	6,766.23	-197.35	-321.64	-188.12	0.15	-0.12	-3.31	
6,882.00	0.82	349.52	6,860.21	-195.48	-321.81	-186.25	0.71	-0.69	-8.93	
6,976.00	0.88	223.73	6,954.20	-195.34	-322.43	-186.09	1.61	0.06	-133.82	
7,071.00	0.85	213.08	7,049.19	-196.46	-323.32	-187.19	0.17	-0.03	-11.21	
7,165.00	1.33	218.15	7,143.17	-197.90	-324.37	-188.60	0.52	0.51	5.39	
7,259.00	1.07	192.81	7,237.15	-199.62	-325.24	-190.28	0.62	-0.28	-26.96	
7,354.00	0.89	187.82	7,332.14	-201.21	-325.54	-191.87	0.21	-0.19	-5.25	
7,448.00	1.29	137.54	7,426.12	-202.72	-324.92	-193.39	1.06	0.43	-53.49	
7,542.00	1.43	136.22	7,520.10	-204.34	-323.40	-195.06	0.15	0.15	-1.40	
7,636.00	1.65	124.05	7,614.06	-205.95	-321.47	-196.72	0.42	0.23	-12.95	
7,731.00	1.44	105.59	7,709.03	-207.04	-319.18	-197.87	0.57	-0.22	-19.43	
7,825.00	1.30	92.96	7,803.00	-207.41	-316.98	-198.31	0.35	-0.15	-13.44	
7,920.00	0.79	82.30	7,897.99	-207.38	-315.26	-198.32	0.57	-0.54	-11.22	
8,014.00	1.34	57.78	7,991.97	-206.70	-313.68	-197.70	0.75	0.59	-26.09	
8,109.00	0.93	44.82	8,086.95	-205.56	-312.20	-196.60	0.51	-0.43	-13.85	
8,203.00	1.27	33.95	8,180.94	-204.16	-311.08	-195.22	0.42	0.36	-11.35	
8,297.00	0.66	9.75	8,274.92	-202.76	-310.41	-193.85	0.77	-0.65	-25.74	
8,391.00	0.61	21.41	8,368.92	-201.76	-310.14	-192.85	0.15	-0.05	12.40	
8,486.00	0.79	325.50	8,463.91	-200.75	-310.32	-191.84	0.71	0.19	-58.85	
8,580.00	0.84	9.27	8,557.90	-199.53	-310.58	-190.62	0.65	0.05	46.56	
8,675.00	0.85	334.49	8,652.89	-198.21	-310.77	-189.29	0.53	0.01	-36.61	
8,769.00	0.77	297.81	8,746.88	-197.29	-311.63	-188.34	0.55	-0.09	-39.02	
8,863.00	0.81	267.10	8,840.87	-197.03	-312.85	-188.05	0.45	0.04	-32.67	
8,958.00	0.86	282.09	8,935.86	-196.91	-314.22	-187.89	0.24	0.05	15.78	
9,052.00	0.79	236.15	9,029.86	-197.12	-315.45	-188.07	0.69	-0.07	-48.87	
9,147.00	1.45	235.32	9,124.84	-198.17	-316.98	-189.07	0.69	0.69	-0.87	
9,241.00	1.72	223.79	9,218.80	-199.87	-318.93	-190.71	0.44	0.29	-12.27	
9,335.00	1.58	239.84	9,312.76	-201.54	-321.03	-192.32	0.51	-0.15	17.07	
9,429.00	1.72	264.29	9,406.72	-202.33	-323.55	-193.04	0.76	0.15	26.01	
9,524.00	1.37	288.80	9,501.69	-202.10	-326.05	-192.75	0.78	-0.37	25.80	
9,618.00	1.45	312.16	9,595.66	-200.94	-327.99	-191.53	0.61	0.09	24.85	
9,631.00	1.62	321.86	9,608.66	-200.69	-328.23	-191.27	2.38	1.31	74.62	
9,663.00	1.84	327.86	9,640.64	-199.90	-328.78	-190.46	0.89	0.69	18.75	
9,757.00	7.77	9.24	9,734.29	-192.34	-328.56	-182.92	6.92	6.31	44.02	
9,804.00	13.17	9.82	9,780.49	-183.92	-327.14	-174.54	11.49	11.49	1.23	
9,851.00	16.22	5.77	9,825.95	-172.11	-325.57	-162.78	6.84	6.49	-8.62	
9,898.00	20.35	356.49	9,870.57	-157.41	-325.41	-148.09	10.73	8.79	-19.74	
9,946.00	24.78	354.24	9,914.89	-139.07	-326.93	-129.71	9.40	9.23	-4.69	
9,993.00	27.63	1.12	9,957.06	-118.36	-327.70	-108.99	8.85	6.06	14.64	
10,040.00	32.05	2.90	9,997.82	-95.00	-326.86	-85.66	9.59	9.40	3.79	
10,087.00	33.68	5.03	10,037.30	-69.56	-325.09	-60.28	4.25	3.47	4.53	

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10,135.00	38.07	2.68	10,076.19	-41.50	-323.23	-32.29	9.58	9.15	-4.90
10,182.00	43.50	3.62	10,111.76	-10.86	-321.53	-1.71	11.63	11.55	2.00
10,230.00	47.33	4.56	10,145.45	23.23	-319.08	32.30	8.10	7.98	1.96
10,277.00	51.24	1.69	10,176.11	58.79	-317.16	67.79	9.52	8.32	-6.11
10,324.00	53.92	0.74	10,204.66	96.10	-316.38	105.06	5.92	5.70	-2.02
10,371.00	58.38	359.40	10,230.84	135.13	-316.34	144.07	9.78	9.49	-2.85
10,418.00	64.30	359.21	10,253.37	176.35	-316.84	185.29	12.60	12.60	-0.40
10,465.00	72.34	359.86	10,270.72	219.98	-317.19	228.92	17.15	17.11	1.38
10,513.00	77.83	0.20	10,283.07	266.35	-317.17	275.26	11.46	11.44	0.71
10,560.00	82.05	0.66	10,291.28	312.61	-316.82	321.50	9.03	8.98	0.98
10,607.00	83.94	0.79	10,297.01	359.26	-316.23	368.11	4.03	4.02	0.28
10,701.00	84.24	359.32	10,306.69	452.76	-316.14	461.56	1.59	0.32	-1.56
10,848.00	87.77	0.27	10,316.93	599.37	-316.66	608.14	2.49	2.40	0.65
10,942.00	92.21	1.32	10,316.94	693.34	-315.36	702.03	4.85	4.72	1.12
11,037.00	91.42	3.39	10,313.93	788.20	-311.45	796.75	2.33	-0.83	2.18
11,131.00	91.80	5.44	10,311.29	881.88	-304.22	890.18	2.22	0.40	2.18
11,226.00	92.61	4.38	10,307.64	976.46	-296.10	984.49	1.40	0.85	-1.12
11,320.00	94.02	1.25	10,302.20	1,070.18	-291.49	1,078.04	3.65	1.50	-3.33
11,414.00	93.71	359.09	10,295.86	1,163.96	-291.21	1,171.77	2.32	-0.33	-2.30
11,509.00	91.90	356.70	10,291.22	1,258.77	-294.69	1,266.64	3.15	-1.91	-2.52
11,603.00	91.98	355.60	10,288.03	1,352.50	-301.00	1,360.52	1.17	0.09	-1.17
11,697.00	91.27	356.48	10,285.37	1,446.24	-307.49	1,454.40	1.20	-0.76	0.94
11,792.00	91.16	357.25	10,283.35	1,541.07	-312.68	1,549.35	0.82	-0.12	0.81
11,886.00	90.87	357.44	10,281.69	1,634.96	-317.04	1,643.32	0.37	-0.31	0.20
11,980.00	90.16	358.17	10,280.84	1,728.88	-320.64	1,737.31	1.08	-0.76	0.78
12,074.00	89.98	359.49	10,280.73	1,822.86	-322.56	1,831.30	1.42	-0.19	1.40
12,169.00	89.87	0.68	10,280.85	1,917.86	-322.42	1,926.26	1.26	-0.12	1.25
12,263.00	89.92	1.88	10,281.02	2,011.84	-320.32	2,020.13	1.28	0.05	1.28
12,357.00	89.90	2.64	10,281.17	2,105.76	-316.61	2,113.92	0.81	-0.02	0.81
12,451.00	90.41	2.65	10,280.92	2,199.66	-312.27	2,207.65	0.54	0.54	0.01
12,545.00	91.15	2.28	10,279.64	2,293.56	-308.23	2,301.40	0.88	0.79	-0.39
12,639.00	90.38	1.70	10,278.38	2,387.50	-304.97	2,395.21	1.03	-0.82	-0.62
12,734.00	90.19	1.16	10,277.91	2,482.47	-302.60	2,490.07	0.60	-0.20	-0.57
12,828.00	90.16	0.55	10,277.62	2,576.46	-301.19	2,583.98	0.65	-0.03	-0.65
12,922.00	90.67	0.14	10,276.94	2,670.45	-300.63	2,677.92	0.70	0.54	-0.44
13,017.00	90.96	359.49	10,275.59	2,765.44	-300.93	2,772.88	0.75	0.31	-0.68
13,111.00	90.70	358.75	10,274.23	2,859.42	-302.38	2,866.86	0.83	-0.28	-0.79
13,205.00	90.61	357.90	10,273.16	2,953.37	-305.12	2,960.86	0.91	-0.10	-0.90
13,299.00	90.50	358.11	10,272.24	3,047.31	-308.40	3,054.85	0.25	-0.12	0.22
13,394.00	90.52	358.11	10,271.40	3,142.25	-311.53	3,149.84	0.02	0.02	0.00
13,488.00	90.53	357.71	10,270.54	3,236.19	-314.96	3,243.84	0.43	0.01	-0.43
13,583.00	90.33	357.45	10,269.82	3,331.10	-318.97	3,338.83	0.35	-0.21	-0.27
13,677.00	90.02	357.67	10,269.54	3,425.01	-322.97	3,432.82	0.40	-0.33	0.23

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 503H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3492.60usft (H&P 618)
Site:	Winnebago 30 State Com	MD Reference:	RKB @ 3492.60usft (H&P 618)
Well:	503H	North Reference:	True
Wellbore:	OH / 65920	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)
13,771.00	91.38	358.06	10,268.39	3,518.94	-326.47	3,526.80	1.51	1.45	0.41
13,866.00	91.38	358.03	10,266.10	3,613.86	-329.71	3,621.77	0.03	0.00	-0.03
13,960.00	91.63	358.74	10,263.63	3,707.79	-332.36	3,715.74	0.80	0.27	0.76
14,054.00	91.01	358.44	10,261.47	3,801.73	-334.67	3,809.71	0.73	-0.66	-0.32
14,148.00	90.89	358.73	10,259.91	3,895.69	-336.99	3,903.70	0.33	-0.13	0.31
14,242.00	90.59	359.51	10,258.69	3,989.67	-338.44	3,997.68	0.89	-0.32	0.83
14,336.00	90.47	0.18	10,257.82	4,083.67	-338.69	4,091.65	0.72	-0.13	0.71
14,431.00	89.78	1.65	10,257.62	4,178.65	-337.17	4,186.55	1.71	-0.73	1.55
14,525.00	89.87	3.26	10,257.90	4,272.56	-333.15	4,280.31	1.72	0.10	1.71
14,620.00	89.79	2.99	10,258.19	4,367.42	-327.97	4,374.98	0.30	-0.08	-0.28
14,714.00	90.01	2.77	10,258.35	4,461.30	-323.25	4,468.69	0.33	0.23	-0.23
14,809.00	90.72	2.94	10,257.75	4,556.18	-318.51	4,563.40	0.77	0.75	0.18
14,903.00	91.22	2.55	10,256.15	4,650.06	-314.01	4,657.11	0.67	0.53	-0.41
14,998.00	91.36	1.11	10,254.02	4,744.98	-310.98	4,751.91	1.52	0.15	-1.52
15,092.00	91.35	0.00	10,251.79	4,838.95	-310.07	4,845.81	1.18	-0.01	-1.18
15,186.00	92.23	359.35	10,248.86	4,932.90	-310.60	4,939.74	1.16	0.94	-0.69
15,281.00	92.83	359.08	10,244.66	5,027.80	-311.90	5,034.64	0.69	0.63	-0.28
15,375.00	93.11	358.72	10,239.79	5,121.66	-313.71	5,128.51	0.48	0.30	-0.38
15,470.00	92.24	357.98	10,235.36	5,216.51	-316.44	5,223.40	1.20	-0.92	-0.78
15,564.00	91.98	359.48	10,231.90	5,310.42	-318.52	5,317.33	1.62	-0.28	1.60
15,659.00	91.55	0.79	10,228.97	5,405.37	-318.30	5,412.24	1.45	-0.45	1.38
15,753.00	91.41	2.72	10,226.54	5,499.29	-315.42	5,506.04	2.06	-0.15	2.05
15,848.00	91.56	2.04	10,224.08	5,594.18	-311.47	5,600.78	0.73	0.16	-0.72
15,942.00	91.39	1.85	10,221.66	5,688.09	-308.29	5,694.56	0.27	-0.18	-0.20
16,036.00	91.32	1.53	10,219.44	5,782.03	-305.51	5,788.38	0.35	-0.07	-0.34
16,131.00	91.55	0.94	10,217.06	5,876.98	-303.47	5,883.23	0.67	0.24	-0.62
16,225.00	92.57	0.80	10,213.68	5,970.90	-302.04	5,977.08	1.10	1.09	-0.15
16,320.00	91.66	1.65	10,210.17	6,065.81	-300.01	6,071.89	1.31	-0.96	0.89
16,414.00	91.47	2.53	10,207.61	6,159.72	-296.58	6,165.66	0.96	-0.20	0.94
16,508.00	91.32	0.51	10,205.32	6,253.65	-294.09	6,259.48	2.15	-0.16	-2.15
16,602.00	90.86	359.70	10,203.53	6,347.63	-293.92	6,353.42	0.99	-0.49	-0.86
16,697.00	90.90	0.40	10,202.07	6,442.62	-293.84	6,448.37	0.74	0.04	0.74
16,791.00	90.82	0.44	10,200.66	6,536.61	-293.15	6,542.30	0.10	-0.09	0.04
16,885.00	90.95	359.76	10,199.21	6,630.59	-292.98	6,636.25	0.74	0.14	-0.72
16,980.00	91.01	0.55	10,197.58	6,725.58	-292.73	6,731.18	0.83	0.06	0.83
17,074.00	91.16	0.42	10,195.80	6,819.56	-291.93	6,825.10	0.21	0.16	-0.14
17,168.00	90.72	0.47	10,194.26	6,913.54	-291.20	6,919.03	0.47	-0.47	0.05
17,263.00	91.10	0.44	10,192.75	7,008.53	-290.45	7,013.95	0.40	0.40	-0.03
17,357.00	91.02	0.50	10,191.01	7,102.51	-289.68	7,107.88	0.11	-0.09	0.06
17,451.00	90.96	359.95	10,189.39	7,196.49	-289.31	7,201.81	0.59	-0.06	-0.59
17,545.00	90.92	359.61	10,187.85	7,290.48	-289.67	7,295.77	0.36	-0.04	-0.36
17,639.00	91.01	0.19	10,186.26	7,384.47	-289.83	7,389.72	0.62	0.10	0.62
17,734.00	90.86	0.29	10,184.71	7,479.45	-289.43	7,484.66	0.19	-0.16	0.11



Survey Report



Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 503H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3492.60usft (H&P 618)
Site:	Winnebago 30 State Com	MD Reference:	RKB @ 3492.60usft (H&P 618)
Well:	503H	North Reference:	True
Wellbore:	OH / 65920	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)
17,828.00	90.72	0.34	10,183.42	7,573.44	-288.92	7,578.60	0.16	-0.15	0.05
17,922.00	90.90	0.52	10,182.09	7,667.43	-288.21	7,672.53	0.27	0.19	0.19
18,016.00	90.73	0.34	10,180.75	7,761.42	-287.51	7,766.46	0.26	-0.18	-0.19
18,111.00	90.90	0.12	10,179.40	7,856.41	-287.13	7,861.40	0.29	0.18	-0.23
18,205.00	90.76	0.63	10,178.04	7,950.40	-286.51	7,955.33	0.56	-0.15	0.54
18,299.00	90.92	0.42	10,176.66	8,044.38	-285.65	8,049.25	0.28	0.17	-0.22
18,393.00	90.81	0.19	10,175.24	8,138.37	-285.15	8,143.19	0.27	-0.12	-0.24
18,488.00	90.61	0.33	10,174.07	8,233.36	-284.72	8,238.13	0.26	-0.21	0.15
18,582.00	90.53	0.16	10,173.13	8,327.36	-284.32	8,332.07	0.20	-0.09	-0.18
18,676.00	90.87	0.18	10,171.98	8,421.35	-284.04	8,426.02	0.36	0.36	0.02
18,770.00	91.79	0.05	10,169.80	8,515.32	-283.85	8,519.95	0.99	0.98	-0.14
18,865.00	91.36	359.99	10,167.19	8,610.29	-283.81	8,614.87	0.46	-0.45	-0.06
18,959.00	91.66	0.32	10,164.71	8,704.25	-283.56	8,708.80	0.47	0.32	0.35
19,053.00	91.56	0.15	10,162.07	8,798.21	-283.18	8,802.71	0.21	-0.11	-0.18
19,148.00	91.22	0.13	10,159.77	8,893.19	-282.94	8,897.64	0.36	-0.36	-0.02
19,242.00	91.55	0.32	10,157.49	8,987.16	-282.57	8,991.56	0.41	0.35	0.20
19,336.00	91.61	0.34	10,154.90	9,081.12	-282.03	9,085.47	0.07	0.06	0.02
19,431.00	91.29	0.56	10,152.50	9,176.09	-281.29	9,180.37	0.41	-0.34	0.23
19,525.00	91.44	0.58	10,150.26	9,270.06	-280.35	9,274.28	0.16	0.16	0.02
19,619.00	91.41	0.01	10,147.92	9,364.02	-279.87	9,368.20	0.61	-0.03	-0.61
19,714.00	90.89	0.18	10,146.02	9,459.01	-279.71	9,463.13	0.58	-0.55	0.18
19,808.00	91.26	0.42	10,144.25	9,552.99	-279.22	9,557.06	0.47	0.39	0.26
19,902.00	91.30	0.55	10,142.15	9,646.96	-278.42	9,650.98	0.14	0.04	0.14
19,996.00	91.30	0.47	10,140.02	9,740.93	-277.59	9,744.89	0.09	0.00	-0.09
20,091.00	91.22	359.98	10,137.93	9,835.91	-277.21	9,839.81	0.52	-0.08	-0.52
20,185.00	91.33	0.23	10,135.84	9,929.88	-277.04	9,933.75	0.29	0.12	0.27
20,279.00	91.32	0.07	10,133.66	10,023.86	-276.80	10,027.68	0.17	-0.01	-0.17
20,373.00	91.39	0.26	10,131.44	10,117.83	-276.52	10,121.60	0.22	0.07	0.20
20,397.00	91.24	0.18	10,130.89	10,141.83	-276.43	10,145.59	0.71	-0.63	-0.33
Final Phoenix MWD Survey									
20,428.00	91.24	0.18	10,130.22	10,172.82	-276.34	10,176.56	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)	
1,826.50	1,826.36	-4.51	3.65	Tie In
1,884.00	1,883.85	-4.29	2.58	First Phoenix MWD Survey
20,397.00	10,130.89	10,141.83	-276.43	Final Phoenix MWD Survey
20,428.00	10,130.22	10,172.82	-276.34	Projection to TD