

SURVEY DATA CERTIFICATION



PHOENIX
TECHNOLOGY SERVICES

Job #: 65377
 Client: Centennial Resources
 County & State: Lea County NM
 Well: Carne Asada State Com 502H
 API No: 30-025-46331
 Proposed Direction: 3.85

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
1853.50	1853.38	0.9	278.7	5.29	-3.41	Surface
Data Source Company:						Phoenix

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
13-Sep-19	1,929 ft	0.86°	295.70°

Last Survey Date	Last Survey Depth	INC	AZM
23-Sep-19	17,907 ft	89.82°	359.87°

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
23-Sep-19	17,949 ft	89.82°	359.87°

Survey Instrument Type
Phoenix MWD

HOBBS OCD
DEC 18 2019
RECEIVED

CORRECTION INFORMATION

Magnetic Declination Used	6.70 degrees
Grid Convergence Used	degrees

Corrected to True/Grid North
TRUE

Total Correction	6.70 degrees
	490

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

J Hunter
 Signature

September 23, 2019
 Date

Centennial Resources Development, Inc.

**Lea County, NM (NAD83 - UTM Zone 13)
Carne Asada Sate Com
502H**

OH / 65377

Survey: Phoenix MWD Surveys

Standard Survey Report

24 September, 2019

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 502H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3662.30usft (H&P 650)
Site:	Came Asada Sate Com	MD Reference:	RKB @ 3662.30usft (H&P 650)
Well:	502H	North Reference:	True
Wellbore:	OH / 65377	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 650)	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		Came Asada Sate Com				
Site Position:		Northing:	11,767,032.87 usft	Latitude:	32.406371	
From:	Map	Easting:	2,132,406.52 usft	Longitude:	-103.405399	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.85 °

Well	502H					
Well Position	+N/-S	0.00 usft	Northing:	11,767,033.29 usft	Latitude:	32.406371
	+E/-W	0.00 usft	Easting:	2,132,436.51 usft	Longitude:	-103.405302
Position Uncertainty		1.00 usft	Wellhead Elevation:	usft	Ground Level:	3,635.80 usft

Wellbore	OH / 65377				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	9/10/2019	6.70	60.07	47,953.00000000

Design	Surveys (H&P 650)				
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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	3.85

Survey Program		Date 9/24/2019			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
26.50	1,853.50	Wildfire MWD Surveys (OH / 65377)	MWD	OWSG MWD - Standard	
1,929.00	17,949.00	Phoenix MWD Surveys (OH / 65377)	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)	
1,853.50	0.90	278.70	1,853.38	5.29	-3.41	5.05	0.00	0.00	0.00	
Tie In										
1,929.00	0.86	295.70	1,928.87	5.63	-4.51	5.31	0.35	-0.05	22.52	
First Phoenix MWD Survey										
1,991.00	0.27	275.99	1,990.87	5.84	-5.07	5.49	0.99	-0.95	-31.79	
2,085.00	2.44	109.32	2,084.85	5.20	-3.40	4.96	2.88	2.31	-177.31	
2,179.00	4.24	105.85	2,178.68	3.59	1.83	3.71	1.93	1.91	-3.69	
2,273.00	4.38	105.88	2,272.42	1.66	8.63	2.24	0.15	0.15	0.03	
2,367.00	5.09	109.58	2,366.09	-0.72	16.01	0.36	0.82	0.76	3.94	

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Well:	502H	North Reference:	True
Wellbore:	OH / 65377	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 650)	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)
2,461.00	6.16	113.01	2,459.64	-4.09	24.58	-2.43	1.19	1.14	3.65
2,555.00	7.64	115.74	2,552.96	-8.77	34.85	-6.41	1.61	1.57	2.90
2,649.00	8.51	114.62	2,646.03	-14.38	46.80	-11.21	0.94	0.93	-1.19
2,743.00	8.46	114.72	2,739.00	-20.17	59.40	-16.14	0.06	-0.05	0.11
2,837.00	7.97	110.86	2,832.03	-25.39	71.78	-20.51	0.78	-0.52	-4.11
2,931.00	7.80	110.90	2,925.14	-29.98	83.82	-24.29	0.18	-0.18	0.04
3,025.00	8.04	109.52	3,018.25	-34.45	95.98	-27.93	0.33	0.26	-1.47
3,119.00	8.43	107.21	3,111.28	-38.69	108.76	-31.30	0.54	0.41	-2.46
3,213.00	8.05	104.72	3,204.31	-42.40	121.70	-34.13	0.55	-0.40	-2.65
3,307.00	8.17	100.96	3,297.37	-45.34	134.63	-36.20	0.58	0.13	-4.00
3,401.00	7.53	98.11	3,390.49	-47.48	147.28	-37.48	0.80	-0.68	-3.03
3,495.00	7.21	102.30	3,483.71	-49.61	159.14	-38.81	0.67	-0.34	4.46
3,589.00	6.95	111.86	3,577.00	-52.98	170.19	-41.43	1.28	-0.28	10.17
3,683.00	7.04	116.93	3,670.30	-57.71	180.60	-45.45	0.66	0.10	5.39
3,776.00	6.41	118.16	3,762.66	-62.74	190.26	-49.82	0.69	-0.68	1.32
3,870.00	5.80	118.57	3,856.12	-67.49	199.05	-53.97	0.65	-0.65	0.44
3,964.00	6.04	115.58	3,949.62	-71.89	207.69	-57.79	0.42	0.26	-3.18
4,059.00	6.01	114.75	4,044.10	-76.13	216.71	-61.41	0.10	-0.03	-0.87
4,153.00	5.87	113.71	4,137.59	-80.13	225.58	-64.80	0.19	-0.15	-1.11
4,247.00	6.61	111.93	4,231.04	-84.08	235.00	-68.11	0.81	0.79	-1.89
4,341.00	6.86	112.62	4,324.39	-88.26	245.20	-71.60	0.28	0.27	0.73
4,435.00	6.98	112.04	4,417.70	-92.56	255.68	-75.19	0.15	0.13	-0.62
4,528.00	7.13	111.11	4,510.00	-96.76	266.30	-78.66	0.20	0.16	-1.00
4,623.00	7.05	110.45	4,604.27	-100.92	277.26	-82.08	0.12	-0.08	-0.69
4,717.00	7.11	110.75	4,697.56	-105.00	288.11	-85.42	0.07	0.06	0.32
4,811.00	7.20	110.52	4,790.82	-109.12	299.07	-88.80	0.10	0.10	-0.24
4,905.00	7.60	108.98	4,884.04	-113.21	310.46	-92.11	0.47	0.43	-1.64
4,999.00	7.96	108.83	4,977.18	-117.33	322.50	-95.41	0.38	0.38	-0.16
5,093.00	8.31	108.55	5,070.23	-121.59	335.10	-98.82	0.37	0.37	-0.30
5,187.00	8.51	108.16	5,163.22	-125.92	348.15	-102.26	0.22	0.21	-0.41
5,281.00	8.59	108.45	5,256.17	-130.31	361.42	-105.75	0.10	0.09	0.31
5,375.00	7.64	110.90	5,349.23	-134.76	373.91	-109.35	1.08	-1.01	2.61
5,435.00	6.94	112.90	5,408.75	-137.60	380.98	-111.71	1.24	-1.17	3.33
5,557.00	7.02	114.52	5,529.84	-143.56	394.55	-116.74	0.17	0.07	1.33
5,652.00	7.22	113.26	5,624.11	-148.33	405.32	-120.78	0.27	0.21	-1.33
5,746.00	7.08	113.57	5,717.38	-152.98	416.05	-124.69	0.15	-0.15	0.33
5,840.00	7.08	114.91	5,810.66	-157.73	426.62	-128.73	0.18	0.00	1.43
5,934.00	7.08	114.45	5,903.95	-162.57	437.14	-132.85	0.06	0.00	-0.49
6,028.00	7.04	100.29	5,997.24	-166.00	448.09	-135.53	1.85	-0.04	-15.06
6,122.00	7.23	100.00	6,090.51	-168.05	459.58	-136.81	0.21	0.20	-0.31
6,217.00	7.27	99.56	6,184.75	-170.09	471.39	-138.05	0.07	0.04	-0.46
6,310.00	7.21	99.09	6,277.01	-171.99	482.96	-139.17	0.09	-0.06	-0.51
6,405.00	6.88	96.91	6,371.29	-173.61	494.50	-140.02	0.45	-0.35	-2.29

Survey Report

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Site:	Came Asada Sate Corn	MD Reference:	RKB @ 3662.30usft (H&P 650)
Well:	502H	North Reference:	True
Wellbore:	OH / 65377	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 650)	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)
6,499.00	6.33	109.51	6,464.67	-176.02	504.97	-141.72	1.64	-0.59	13.40
6,593.00	6.30	116.10	6,558.11	-180.02	514.49	-145.07	0.77	-0.03	7.01
6,688.00	5.50	120.66	6,652.60	-184.64	523.08	-149.10	0.98	-0.84	4.80
6,782.00	3.91	115.23	6,746.28	-188.30	529.86	-152.30	1.75	-1.69	-5.78
6,876.00	2.29	115.93	6,840.14	-190.49	534.45	-154.17	1.72	-1.72	0.74
6,970.00	0.69	136.22	6,934.11	-191.72	536.53	-155.26	1.77	-1.70	21.59
7,065.00	0.46	152.75	7,029.10	-192.47	537.10	-155.97	0.30	-0.24	17.40
7,159.00	0.49	130.34	7,123.10	-193.07	537.58	-156.53	0.20	0.03	-23.84
7,253.00	0.38	137.31	7,217.10	-193.55	538.09	-156.99	0.13	-0.12	7.41
7,347.00	0.34	179.05	7,311.10	-194.06	538.31	-157.48	0.28	-0.04	44.40
7,441.00	0.16	172.93	7,405.09	-194.47	538.33	-157.89	0.19	-0.19	-6.51
7,535.00	0.38	114.13	7,499.09	-194.73	538.63	-158.12	0.35	0.23	-62.55
7,629.00	0.23	95.05	7,593.09	-194.87	539.10	-158.24	0.19	-0.16	-20.30
7,723.00	0.46	118.89	7,687.09	-195.07	539.62	-158.40	0.28	0.24	25.36
7,817.00	0.38	107.62	7,781.09	-195.35	540.25	-158.63	0.12	-0.09	-11.99
7,911.00	0.65	107.51	7,875.08	-195.60	541.06	-158.83	0.29	0.29	-0.12
8,005.00	0.89	85.40	7,969.08	-195.71	542.29	-158.85	0.40	0.26	-23.52
8,099.00	0.95	97.31	8,063.06	-195.75	543.79	-158.79	0.21	0.06	12.67
8,193.00	1.16	84.62	8,157.05	-195.76	545.51	-158.69	0.33	0.22	-13.50
8,287.00	0.97	66.41	8,251.03	-195.35	547.19	-158.17	0.41	-0.20	-19.37
8,382.00	1.11	328.97	8,346.02	-194.24	547.45	-157.04	1.65	0.15	-102.57
8,476.00	1.29	319.57	8,440.00	-192.65	546.30	-155.54	0.28	0.19	-10.00
8,570.00	1.27	328.31	8,533.98	-190.96	545.06	-153.93	0.21	-0.02	9.30
8,665.00	1.19	334.45	8,628.96	-189.18	544.08	-152.22	0.16	-0.08	6.46
8,759.00	1.04	356.79	8,722.94	-187.44	543.62	-150.52	0.49	-0.16	23.77
8,853.00	1.04	8.70	8,816.92	-185.75	543.70	-148.82	0.23	0.00	12.67
8,947.00	0.77	20.19	8,910.91	-184.31	544.04	-147.37	0.34	-0.29	12.22
9,041.00	0.69	69.75	9,004.90	-183.52	544.79	-146.53	0.66	-0.09	52.72
9,135.00	0.48	32.47	9,098.90	-182.99	545.53	-145.95	0.45	-0.22	-39.66
9,229.00	0.42	332.00	9,192.90	-182.36	545.58	-145.31	0.49	-0.06	-64.33
9,323.00	0.47	321.88	9,286.89	-181.75	545.18	-144.73	0.10	0.05	-10.77
9,417.00	0.78	250.39	9,380.89	-181.66	544.34	-144.70	0.82	0.33	-76.05
9,500.00	0.99	210.46	9,463.88	-182.47	543.45	-145.57	0.77	0.25	-48.11
9,547.00	0.55	250.80	9,510.88	-182.89	543.03	-146.02	1.43	-0.94	85.83
9,594.00	3.37	348.41	9,557.85	-181.61	542.54	-144.78	7.42	6.00	207.68
9,641.00	8.36	356.59	9,604.59	-176.85	542.06	-140.05	10.74	10.62	17.40
9,688.00	12.83	0.76	9,650.78	-168.21	541.92	-131.45	9.64	9.51	8.87
9,735.00	15.92	8.94	9,696.31	-156.63	542.99	-119.81	7.85	6.57	17.40
9,782.00	18.06	11.50	9,741.25	-143.12	545.45	-106.17	4.82	4.55	5.45
9,829.00	22.14	8.10	9,785.38	-127.20	548.15	-90.11	9.03	8.68	-7.23
9,876.00	26.60	3.74	9,828.19	-107.92	550.09	-70.74	10.23	9.49	-9.28
9,923.00	32.11	0.85	9,869.14	-84.91	550.96	-47.73	12.10	11.72	-6.15
9,970.00	36.78	359.31	9,907.89	-58.34	550.97	-21.21	10.11	9.94	-3.28
10,017.00	43.72	358.48	9,943.74	-28.00	550.37	9.02	14.81	14.77	-1.77

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10,064.00	50.10	358.07	9,975.83	6.29	549.33	43.16	13.59	13.57	-0.87
10,111.00	56.31	357.40	10,003.97	43.88	547.84	80.57	13.26	13.21	-1.43
10,158.00	61.42	356.34	10,028.26	84.04	545.63	120.48	11.04	10.87	-2.26
10,205.00	65.10	358.49	10,049.41	125.96	543.75	162.18	8.83	7.83	4.57
10,252.00	70.23	359.13	10,067.26	169.41	542.86	205.47	10.99	10.91	1.36
10,299.00	76.50	1.04	10,080.71	214.41	542.93	250.39	13.90	13.34	4.06
10,346.00	81.47	0.97	10,089.69	260.53	543.74	296.45	10.58	10.57	-0.15
10,393.00	87.13	0.26	10,094.35	307.27	544.24	343.12	12.14	12.04	-1.51
10,440.00	89.82	0.51	10,095.60	354.25	544.56	390.02	5.75	5.72	0.53
10,472.00	90.38	0.54	10,095.55	386.25	544.85	421.96	1.75	1.75	0.09
10,560.00	90.42	358.49	10,094.93	474.24	544.11	509.70	2.33	0.05	-2.33
10,654.00	90.53	357.69	10,094.16	568.18	540.97	603.22	0.86	0.12	-0.85
10,749.00	90.84	358.98	10,093.02	663.13	538.21	697.78	1.40	0.33	1.36
10,843.00	90.81	358.11	10,091.67	757.09	535.83	791.36	0.93	-0.03	-0.93
10,937.00	90.87	359.15	10,090.29	851.06	533.58	884.96	1.11	0.06	1.11
11,031.00	90.70	358.32	10,089.00	945.02	531.51	978.58	0.90	-0.18	-0.88
11,125.00	90.73	357.97	10,087.83	1,038.97	528.46	1,072.10	0.37	0.03	-0.37
11,220.00	90.87	0.14	10,086.50	1,133.94	526.90	1,166.76	2.29	0.15	2.28
11,314.00	90.87	358.53	10,085.07	1,227.92	525.81	1,260.45	1.71	0.00	-1.71
11,408.00	90.67	357.68	10,083.81	1,321.86	522.70	1,353.97	0.93	-0.21	-0.90
11,502.00	91.34	358.59	10,082.16	1,415.79	519.64	1,447.49	1.20	0.71	0.97
11,596.00	92.52	0.36	10,079.00	1,509.73	518.78	1,541.15	2.26	1.26	1.88
11,690.00	92.38	359.21	10,074.98	1,603.64	518.43	1,634.83	1.23	-0.15	-1.22
11,784.00	92.32	0.03	10,071.12	1,697.56	517.80	1,728.49	0.87	-0.06	0.87
11,879.00	92.27	0.95	10,067.32	1,792.48	518.61	1,823.25	0.97	-0.05	0.97
11,973.00	92.41	1.59	10,063.48	1,886.38	520.70	1,917.08	0.70	0.15	0.68
12,068.00	92.30	359.98	10,059.58	1,981.28	522.00	2,011.86	1.70	-0.12	-1.69
12,162.00	92.18	359.95	10,055.90	2,075.21	521.94	2,105.57	0.13	-0.13	-0.03
12,256.00	91.90	1.39	10,052.56	2,169.14	523.04	2,199.37	1.56	-0.30	1.53
12,350.00	91.79	0.51	10,049.53	2,263.08	524.59	2,293.20	0.94	-0.12	-0.94
12,445.00	91.57	0.45	10,046.74	2,358.04	525.39	2,387.99	0.24	-0.23	-0.06
12,539.00	91.60	0.57	10,044.14	2,452.00	526.23	2,481.80	0.13	0.03	0.13
12,633.00	91.74	359.61	10,041.40	2,545.96	526.37	2,575.55	1.03	0.15	-1.02
12,727.00	91.57	359.83	10,038.69	2,639.91	525.92	2,669.27	0.30	-0.18	0.23
12,821.00	91.74	359.55	10,035.97	2,733.87	525.41	2,762.98	0.35	0.18	-0.30
12,915.00	91.23	0.00	10,033.54	2,827.84	525.04	2,856.71	0.72	-0.54	0.48
13,009.00	91.20	1.57	10,031.55	2,921.81	526.33	2,950.55	1.67	-0.03	1.67
13,103.00	90.70	1.15	10,029.99	3,015.77	528.56	3,044.45	0.69	-0.53	-0.45
13,197.00	90.73	0.46	10,028.81	3,109.75	529.88	3,138.31	0.73	0.03	-0.73
13,291.00	90.67	0.15	10,027.67	3,203.74	530.38	3,232.12	0.34	-0.06	-0.33
13,385.00	90.56	1.47	10,026.66	3,297.73	531.71	3,325.98	1.41	-0.12	1.40
13,479.00	90.98	0.88	10,025.39	3,391.70	533.63	3,419.87	0.77	0.45	-0.63
13,573.00	90.76	1.03	10,023.97	3,485.67	535.20	3,513.74	0.28	-0.23	0.16

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 502H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3662.30usft (H&P 650)
Site:	Came Asada Sate Com	MD Reference:	RKB @ 3662.30usft (H&P 650)
Well:	502H	North Reference:	True
Wellbore:	OH / 65377	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 650)	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)
13,667.00	90.70	0.68	10,022.77	3,579.65	536.60	3,607.61	0.38	-0.06	-0.37
13,761.00	90.64	1.52	10,021.67	3,673.63	538.41	3,701.49	0.90	-0.06	0.89
13,855.00	90.64	0.64	10,020.62	3,767.61	540.18	3,795.37	0.94	0.00	-0.94
13,949.00	90.67	2.04	10,019.54	3,861.57	542.38	3,889.28	1.49	0.03	1.49
14,043.00	90.76	0.24	10,018.37	3,955.54	544.25	3,983.16	1.92	0.10	-1.91
14,138.00	90.53	0.26	10,017.30	4,050.54	544.66	4,077.97	0.24	-0.24	0.02
14,231.00	90.31	358.28	10,016.62	4,143.52	543.48	4,170.66	2.14	-0.24	-2.13
14,325.00	90.45	0.33	10,016.00	4,237.51	542.34	4,264.36	2.19	0.15	2.18
14,420.00	90.36	358.38	10,015.33	4,332.49	541.27	4,359.06	2.05	-0.09	-2.05
14,514.00	90.59	0.81	10,014.55	4,426.48	540.60	4,452.79	2.60	0.24	2.59
14,608.00	90.98	359.99	10,013.26	4,520.47	541.26	4,546.61	0.97	0.41	-0.87
14,702.00	90.39	358.02	10,012.13	4,614.44	539.63	4,640.26	2.19	-0.63	-2.10
14,795.00	90.45	357.38	10,011.45	4,707.37	535.89	4,732.72	0.69	0.06	-0.69
14,889.00	90.64	359.79	10,010.56	4,801.33	533.57	4,826.32	2.57	0.20	2.56
14,984.00	90.50	0.20	10,009.61	4,896.32	533.56	4,921.10	0.46	-0.15	0.43
15,077.00	90.28	357.38	10,008.98	4,989.29	531.60	5,013.72	3.04	-0.24	-3.03
15,171.00	90.28	356.66	10,008.52	5,083.16	526.71	5,107.05	0.77	0.00	-0.77
15,266.00	90.64	359.48	10,007.76	5,178.09	523.52	5,201.56	2.99	0.38	2.97
15,360.00	90.50	358.17	10,006.82	5,272.07	521.59	5,295.19	1.40	-0.15	-1.39
15,454.00	90.28	0.56	10,006.18	5,366.05	520.55	5,388.89	2.55	-0.23	2.54
15,548.00	90.42	359.57	10,005.61	5,460.05	520.65	5,482.69	1.06	0.15	-1.05
15,642.00	90.34	358.30	10,004.98	5,554.03	518.91	5,576.34	1.35	-0.09	-1.35
15,736.00	90.03	359.90	10,004.68	5,648.01	517.43	5,670.01	1.73	-0.33	1.70
15,830.00	90.34	358.92	10,004.38	5,742.01	516.46	5,763.73	1.09	0.33	-1.04
15,924.00	90.03	0.49	10,004.07	5,836.00	515.98	5,857.48	1.70	-0.33	1.67
16,018.00	90.53	0.20	10,003.61	5,930.00	516.54	5,951.30	0.61	0.53	-0.31
16,112.00	90.22	0.96	10,003.00	6,023.99	517.49	6,045.14	0.87	-0.33	0.81
16,206.00	90.73	0.65	10,002.22	6,117.98	518.82	6,139.01	0.63	0.54	-0.33
16,300.00	89.24	0.88	10,002.25	6,211.97	520.07	6,232.87	1.60	-1.59	0.24
16,394.00	88.99	0.17	10,003.70	6,305.95	520.93	6,326.70	0.80	-0.27	-0.76
16,488.00	88.91	359.41	10,005.42	6,399.93	520.59	6,420.45	0.81	-0.09	-0.81
16,583.00	88.94	358.98	10,007.20	6,494.91	519.25	6,515.11	0.45	0.03	-0.45
16,677.00	88.85	359.43	10,009.01	6,588.88	517.95	6,608.79	0.49	-0.10	0.48
16,771.00	88.94	359.13	10,010.83	6,682.86	516.77	6,702.47	0.33	0.10	-0.32
16,865.00	88.88	1.20	10,012.62	6,776.83	517.04	6,796.26	2.20	-0.06	2.20
16,959.00	89.24	1.82	10,014.16	6,870.79	519.52	6,890.16	0.76	0.38	0.66
17,053.00	88.82	1.28	10,015.75	6,964.74	522.06	6,984.07	0.73	-0.45	-0.57
17,147.00	88.88	0.63	10,017.64	7,058.71	523.62	7,077.93	0.69	0.06	-0.69
17,241.00	88.57	0.02	10,019.73	7,152.68	524.16	7,171.73	0.73	-0.33	-0.65
17,335.00	89.19	0.08	10,021.56	7,246.66	524.24	7,265.51	0.66	0.66	0.06
17,429.00	89.16	0.15	10,022.92	7,340.65	524.43	7,359.30	0.08	-0.03	0.07
17,523.00	89.52	358.67	10,024.00	7,434.64	523.46	7,453.01	1.62	0.38	-1.57
17,618.00	89.64	359.41	10,024.70	7,529.62	521.87	7,547.67	0.79	0.13	0.78

Survey Report

Company:	Centennial Resources Development, Inc.	Local Co-ordinate Reference:	Well 502H
Project:	Lea County, NM (NAD83 - UTM Zone 13)	TVD Reference:	RKB @ 3662.30usft (H&P 650)
Site:	Came Asada Sate Com	MD Reference:	RKB @ 3662.30usft (H&P 650)
Well:	502H	North Reference:	True
Wellbore:	OH / 65377	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (H&P 650)	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)
17,712.00	88.35	1.14	10,026.35	7,623.60	522.32	7,641.47	2.30	-1.37	1.84
17,806.00	90.00	1.10	10,027.70	7,717.57	524.16	7,735.35	1.76	1.76	-0.04
17,900.00	89.82	359.87	10,027.85	7,811.56	524.95	7,829.18	1.32	-0.19	-1.31
17,907.00	89.82	359.87	10,027.87	7,818.56	524.94	7,836.17	0.00	0.00	0.00
Final Phoenix MWD Survey									
17,949.00	89.82	359.87	10,028.00	7,860.56	524.84	7,878.06	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)	
1,853.50	1,853.38	5.29	-3.41	Tie In
1,929.00	1,928.87	5.63	-4.51	First Phoenix MWD Survey
17,907.00	10,027.87	7,818.56	524.94	Final Phoenix MWD Survey
17,949.00	10,028.00	7,860.56	524.84	Projection to TD

Hydraulic Fracturing Fluid Product Component Information Disclosure

	10/19/2019
	10/28/2019
	New Mexico
	Lea
	30-025-46331-00-00
	Centennial Resource Production, LLC
	Came Asada State Com 502H
	32.40637100
	-103.40530200
	NAD83
	NO
	NO
	10,028
	15,766,758
	0



Hydraulic Fracturing Fluid Composition:

Water	Operator	Carrier/Base Fluid					
		Water	7732-18-5	100.00000	86.69610	None	
Sand (100 Mesh Proppant)	Hi Crush	Proppant					
		Crystalline Silica (quartz)	14808-60-7	100.00000	13.19160	None	
XP 1909FR	Innospec	Friction Reducer					
		Ethoxylated alcohol	68002-97-1	50.00000	0.03598	None	
		Ethoxylated alcohol	68439-50-9	50.00000	0.03598	None	
		Ethoxylated alcohol	68551-12-2	50.00000	0.03598	None	
		Petroleum distillates	64742-47-8	30.00000	0.02159	None	
ScaleCease 7103	Innospec	Scale Inhibitor					
		Mixture	Proprietary	100.00000	0.02163	None	
Biosuite GQ 123	ProFrac	Biocide					
		Water	7732-18-5	100.00000	0.01715	None	
		Glutaral	111-30-8	15.00000	0.00257	None	
		Didecyltrimethylammonium Chloride	7173-51-5	5.00000	0.00086	None	
		Quaternary Ammonium Compounds, benzyl-C12-16-alkyldimethyl, chlorides	68424-85-1	5.00000	0.00086	None	

			Ethanol	64-17-5	1.00000	0.00017	None
Detour 2550	Innsopac	Diverting Agent					
			Poly(lactic Resin	9051-89-2	100.00000	0.00156	None
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Chemical(s)	Listed Above	See Trade Name(s) List					
			Ethoxylated alcohol	68439-50-9	50.00000	0.03598	
			Ethoxylated alcohol	68002-97-1	50.00000	0.03598	
			Ethoxylated alcohol	68551-12-2	50.00000	0.03598	
			Glutaral	111-30-8	15.00000	0.00257	
			Didecyldimethylammonium Chloride	7173-51-5	5.00000	0.00086	
			Quaternary Ammonium Compounds, benzyl-C12-16- alkyldimethyl, chlorides	68424-85-1	5.00000	0.00086	
			Ethanol	64-17-5	1.00000	0.00017	

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)