



Archer

PDC Energy, Inc.
Project: Weld Co., CO
Site: Sec.27-T5N-R64W
Well: Chesnut 27O-341
Wellbore: Wellbore #1
Design: Design #2
Lat: 40° 22' 16.464 N
Long: 104° 32' 27.888 W
Pad GL: 4614.00
KB: WELL @ 4627.00usft (Original Well Elev)

PROJECT DETAILS: Weld Co., CO

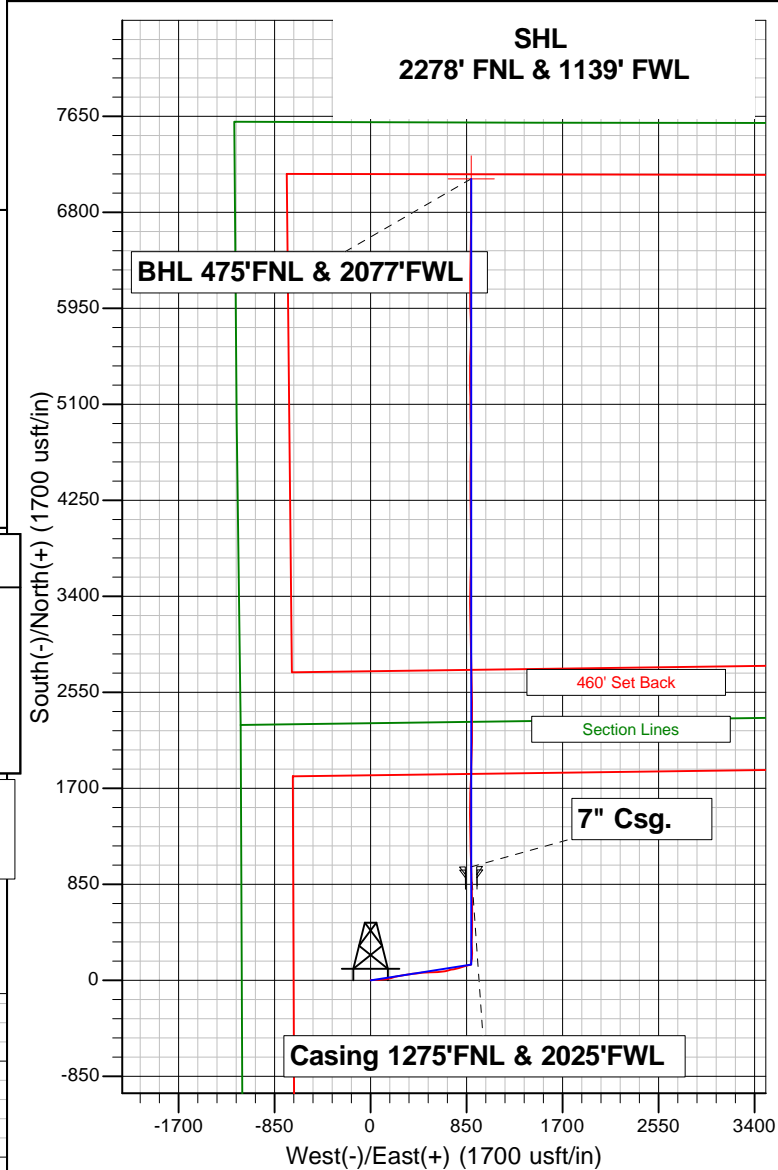
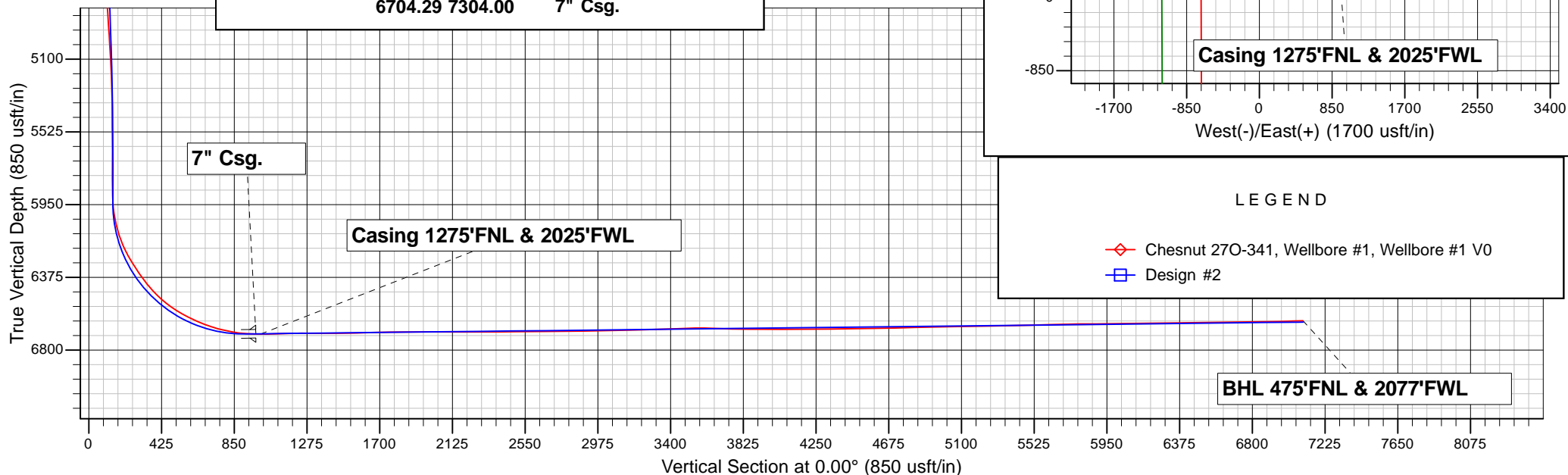
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

System Datum: Mean Sea Level

Projected Bottom Hole Location
13,397'MD 6627.96'TVD 7096.57'N & 889.49'W OF SHL
91.60 degree Incl @ 359.50 degree AZM

CASING DETAILS

TVD	MD	Name
6704.29	7304.00	7" Csg.



LEGEND

- Chesnut 27O-341, Wellbore #1, Wellbore #1 V0
- Design #2



PDC Energy, Inc.

Weld Co., CO

Sec.27-T5N-R64W

Chesnut 27O-341

Wellbore #1

Survey: Survey #1

Standard Survey Report

16 March, 2015

Archer

Company:	PDC Energy, Inc.	Local Co-ordinate Reference:	Well Chesnut 270-341
Project:	Weld Co., CO	TVD Reference:	WELL @ 4627.00usft (Original Well Elev)
Site:	Sec.27-T5N-R64W	MD Reference:	WELL @ 4627.00usft (Original Well Elev)
Well:	Chesnut 270-341	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

Project	Weld Co., CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec.27-T5N-R64W			
Site Position:		Northing:	1,379,023.488 usft	Latitude:	40° 22' 11.496 N
From:	Lat/Long	Easting:	3,267,026.653 usft	Longitude:	104° 32' 29.904 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.62 °

Well		Chesnut 270-341				
Well Position	+N/-S	0.00 usft	Northing:	1,379,527.844 usft	Latitude:	40° 22' 16.464 N
	+E/-W	0.00 usft	Easting:	3,267,177.243 usft	Longitude:	104° 32' 27.888 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,614.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2015/02/27	8.24	66.93	52,751

Design	Wellbore #1			
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	0.00

Survey Program	Date	2015/03/16		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
77.00	13,397.00	Survey #1 (Wellbore #1)	MWD	MWD v3:standard declination

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
First Archer Survey									
77.00	0.70	38.40	77.00	0.37	0.29	0.37	0.91	0.91	0.00
170.00	0.70	22.70	169.99	1.34	0.86	1.34	0.21	0.00	-16.88
264.00	0.40	81.00	263.99	1.92	1.41	1.92	0.63	-0.32	62.02
357.00	0.40	108.80	356.99	1.87	2.04	1.87	0.21	0.00	29.89
451.00	0.80	92.90	450.98	1.73	3.00	1.73	0.46	0.43	-16.91
544.00	1.00	67.80	543.97	2.00	4.40	2.00	0.47	0.22	-26.99
638.00	0.60	87.70	637.96	2.33	5.65	2.33	0.51	-0.43	21.17
731.00	1.20	67.00	730.95	2.73	7.04	2.73	0.72	0.65	-22.26
825.00	2.30	78.20	824.90	3.50	9.79	3.50	1.22	1.17	11.91
905.00	3.30	91.40	904.81	3.77	13.66	3.77	1.48	1.25	16.50
1,007.00	2.90	85.80	1,006.66	3.89	19.17	3.89	0.49	-0.39	-5.49

Company:	PDC Energy, Inc.	Local Co-ordinate Reference:	Well Chesnut 27O-341
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Site:	Sec.27-T5N-R64W	MD Reference:	WELL @ 4627.00usft (Original Well Elev)
Well:	Chesnut 27O-341	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

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)
1,100.00	6.00	86.80	1,099.37	4.33	26.37	4.33	3.33	3.33	1.08
1,194.00	8.00	89.20	1,192.66	4.70	37.82	4.70	2.15	2.13	2.55
1,287.00	7.80	89.50	1,284.78	4.84	50.60	4.84	0.22	-0.22	0.32
1,381.00	7.10	88.10	1,377.98	5.09	62.79	5.09	0.77	-0.74	-1.49
1,474.00	9.10	88.80	1,470.05	5.44	75.88	5.44	2.15	2.15	0.75
1,568.00	10.00	86.00	1,562.75	6.16	91.46	6.16	1.08	0.96	-2.98
1,661.00	11.40	81.10	1,654.13	8.15	108.59	8.15	1.79	1.51	-5.27
1,755.00	11.80	88.10	1,746.22	9.90	127.38	9.90	1.56	0.43	7.45
1,848.00	12.40	78.60	1,837.16	12.19	146.67	12.19	2.23	0.65	-10.22
1,942.00	11.60	74.10	1,929.11	16.78	165.66	16.78	1.31	-0.85	-4.79
2,032.00	12.70	76.40	2,017.09	21.58	183.98	21.58	1.34	1.22	2.56
2,122.00	12.20	70.30	2,104.98	27.11	202.55	27.11	1.56	-0.56	-6.78
2,212.00	13.10	75.50	2,192.79	32.87	221.37	32.87	1.61	1.00	5.78
2,302.00	12.20	78.00	2,280.61	37.40	240.55	37.40	1.17	-1.00	2.78
2,392.00	14.60	81.40	2,368.15	41.08	261.07	41.08	2.81	2.67	3.78
2,482.00	14.00	79.40	2,455.36	44.78	282.99	44.78	0.86	-0.67	-2.22
2,572.00	15.20	83.60	2,542.46	48.10	305.42	48.10	1.78	1.33	4.67
2,662.00	15.30	81.50	2,629.29	51.17	328.88	51.17	0.62	0.11	-2.33
2,752.00	15.10	79.10	2,716.14	55.14	352.14	55.14	0.73	-0.22	-2.67
2,841.00	12.70	85.30	2,802.54	58.13	373.28	58.13	3.17	-2.70	6.97
2,931.00	12.60	83.80	2,890.35	60.00	392.90	60.00	0.38	-0.11	-1.67
3,021.00	12.00	82.10	2,978.29	62.35	411.92	62.35	0.78	-0.67	-1.89
3,111.00	10.80	80.90	3,066.51	64.97	429.52	64.97	1.36	-1.33	-1.33
3,201.00	10.10	77.70	3,155.02	67.98	445.55	67.98	1.01	-0.78	-3.56
3,291.00	9.70	83.00	3,243.68	70.59	460.79	70.59	1.11	-0.44	5.89
3,381.00	10.90	94.40	3,332.23	70.86	476.80	70.86	2.62	1.33	12.67
3,471.00	10.00	91.10	3,420.74	70.06	493.10	70.06	1.20	-1.00	-3.67
3,561.00	10.10	89.50	3,509.36	69.98	508.80	69.98	0.33	0.11	-1.78
3,651.00	10.60	87.90	3,597.90	70.35	524.97	70.35	0.64	0.56	-1.78
3,741.00	10.90	85.30	3,686.32	71.35	541.72	71.35	0.63	0.33	-2.89
3,830.00	12.30	87.20	3,773.50	72.50	559.58	72.50	1.63	1.57	2.13
3,920.00	11.40	85.10	3,861.58	73.73	578.01	73.73	1.11	-1.00	-2.33
4,010.00	11.10	86.80	3,949.85	74.97	595.53	74.97	0.50	-0.33	1.89
4,100.00	12.60	87.00	4,037.93	75.97	613.98	75.97	1.67	1.67	0.22
4,190.00	13.10	83.30	4,125.68	77.67	633.91	77.67	1.07	0.56	-4.11
4,280.00	12.70	79.10	4,213.41	80.73	653.76	80.73	1.13	-0.44	-4.67
4,370.00	13.50	76.20	4,301.06	85.11	673.67	85.11	1.15	0.89	-3.22
4,460.00	13.00	74.60	4,388.67	90.31	693.64	90.31	0.69	-0.56	-1.78
4,550.00	11.90	78.60	4,476.55	94.83	712.49	94.83	1.55	-1.22	4.44
4,640.00	12.00	79.30	4,564.60	98.40	730.78	98.40	0.20	0.11	0.78
4,730.00	12.10	80.10	4,652.62	101.76	749.27	101.76	0.22	0.11	0.89
4,820.00	13.00	77.30	4,740.47	105.61	768.44	105.61	1.21	1.00	-3.11
4,910.00	12.70	75.40	4,828.22	110.32	787.88	110.32	0.58	-0.33	-2.11
5,000.00	12.20	72.80	4,916.10	115.63	806.54	115.63	0.83	-0.56	-2.89
5,090.00	10.30	70.20	5,004.37	121.17	823.20	121.17	2.18	-2.11	-2.89
5,180.00	8.90	68.10	5,093.10	126.49	837.23	126.49	1.60	-1.56	-2.33
5,270.00	8.00	70.80	5,182.13	131.15	849.60	131.15	1.09	-1.00	3.00
5,360.00	6.30	81.30	5,271.43	133.95	860.40	133.95	2.38	-1.89	11.67
5,450.00	5.60	75.80	5,360.94	135.78	869.54	135.78	1.00	-0.78	-6.11
5,540.00	3.00	91.00	5,450.68	136.81	876.15	136.81	3.13	-2.89	16.89
5,630.00	1.70	78.50	5,540.61	137.04	879.82	137.04	1.54	-1.44	-13.89
5,720.00	1.50	82.60	5,630.57	137.46	882.29	137.46	0.26	-0.22	4.56
5,810.00	0.90	74.90	5,720.55	137.79	884.14	137.79	0.69	-0.67	-8.56
5,900.00	0.70	55.10	5,810.54	138.29	885.28	138.29	0.38	-0.22	-22.00

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Well:	Chesnut 270-341	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

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)
5,945.00	0.70	60.20	5,855.54	138.59	885.74	138.59	0.14	0.00	11.33
5,989.00	0.60	13.30	5,899.54	138.94	886.03	138.94	1.19	-0.23	-106.59
6,034.00	4.10	16.00	5,944.49	140.72	886.52	140.72	7.78	7.78	6.00
6,079.00	8.30	15.00	5,989.22	145.41	887.81	145.41	9.34	9.33	-2.22
6,124.00	11.80	10.90	6,033.52	153.06	889.52	153.06	7.93	7.78	-9.11
6,169.00	13.90	10.40	6,077.39	162.90	891.37	162.90	4.67	4.67	-1.11
6,214.00	17.60	8.70	6,120.70	174.95	893.37	174.95	8.29	8.22	-3.78
6,259.00	21.10	7.40	6,163.15	189.71	895.44	189.71	7.84	7.78	-2.89
6,304.00	25.50	4.30	6,204.47	207.41	897.21	207.41	10.15	9.78	-6.89
6,349.00	28.50	3.00	6,244.56	227.79	898.50	227.79	6.79	6.67	-2.89
6,394.00	31.30	359.10	6,283.57	250.21	898.88	250.21	7.57	6.22	-8.67
6,439.00	33.80	357.30	6,321.50	274.40	898.11	274.40	5.96	5.56	-4.00
6,484.00	35.40	355.70	6,358.54	299.91	896.54	299.91	4.09	3.56	-3.56
6,529.00	36.70	358.10	6,394.92	326.35	895.12	326.35	4.27	2.89	5.33
6,574.00	40.00	2.70	6,430.22	354.24	895.35	354.24	9.69	7.33	10.22
6,619.00	44.00	3.30	6,463.65	384.31	896.93	384.31	8.93	8.89	1.33
6,664.00	47.30	1.80	6,495.11	416.45	898.35	416.45	7.71	7.33	-3.33
6,709.00	51.40	0.20	6,524.42	450.58	898.94	450.58	9.50	9.11	-3.56
6,754.00	56.10	1.40	6,551.02	486.85	899.45	486.85	10.66	10.44	2.67
6,799.00	59.00	1.00	6,575.16	524.81	900.25	524.81	6.49	6.44	-0.89
6,844.00	61.80	0.10	6,597.39	563.93	900.62	563.93	6.46	6.22	-2.00
6,889.00	64.40	359.60	6,617.74	604.06	900.51	604.06	5.86	5.78	-1.11
6,934.00	66.90	358.90	6,636.30	645.05	899.97	645.05	5.73	5.56	-1.56
6,979.00	70.10	358.20	6,652.79	686.90	898.91	686.90	7.26	7.11	-1.56
7,024.00	72.80	358.70	6,667.10	729.54	897.76	729.54	6.09	6.00	1.11
7,069.00	76.00	358.40	6,679.20	772.87	896.66	772.87	7.14	7.11	-0.67
7,114.00	78.80	358.40	6,689.02	816.76	895.43	816.76	6.22	6.22	0.00
7,159.00	81.40	358.00	6,696.75	861.06	894.04	861.06	5.84	5.78	-0.89
7,204.00	84.70	358.20	6,702.20	905.70	892.56	905.70	7.35	7.33	0.44
7,249.00	88.30	358.30	6,704.94	950.59	891.19	950.59	8.00	8.00	0.22
7,258.00	89.20	358.00	6,705.14	959.58	890.90	959.58	10.54	10.00	-3.33
7,321.00	90.90	358.40	6,705.09	1,022.55	888.92	1,022.55	2.77	2.70	0.63
7,414.00	90.90	358.80	6,703.62	1,115.51	886.65	1,115.51	0.43	0.00	0.43
7,504.00	90.80	358.00	6,702.29	1,205.46	884.13	1,205.46	0.90	-0.11	-0.89
7,594.00	90.00	359.80	6,701.66	1,295.44	882.41	1,295.44	2.19	-0.89	2.00
7,684.00	89.80	359.90	6,701.82	1,385.44	882.17	1,385.44	0.25	-0.22	0.11
7,773.00	91.30	0.40	6,700.96	1,474.43	882.40	1,474.43	1.78	1.69	0.56
7,863.00	91.20	359.70	6,699.00	1,564.41	882.48	1,564.41	0.79	-0.11	-0.78
7,954.00	91.40	1.80	6,696.94	1,655.38	883.67	1,655.38	2.32	0.22	2.31
8,047.00	90.90	2.50	6,695.07	1,748.29	887.16	1,748.29	0.92	-0.54	0.75
8,140.00	91.10	1.90	6,693.45	1,841.21	890.73	1,841.21	0.68	0.22	-0.65
8,234.00	89.50	0.90	6,692.95	1,935.17	893.03	1,935.17	2.01	-1.70	-1.06
8,327.00	89.90	0.90	6,693.44	2,028.16	894.49	2,028.16	0.43	0.43	0.00
8,421.00	89.70	0.60	6,693.77	2,122.15	895.72	2,122.15	0.38	-0.21	-0.32
8,514.00	90.00	0.40	6,694.01	2,215.15	896.53	2,215.15	0.39	0.32	-0.22
8,608.00	90.40	0.70	6,693.68	2,309.14	897.43	2,309.14	0.53	0.43	0.32
8,702.00	90.60	0.10	6,692.86	2,403.14	898.09	2,403.14	0.67	0.21	-0.64
8,795.00	91.00	359.80	6,691.57	2,496.13	898.01	2,496.13	0.54	0.43	-0.32
8,888.00	90.40	358.70	6,690.43	2,589.11	896.79	2,589.11	1.35	-0.65	-1.18
8,982.00	90.20	358.10	6,689.94	2,683.07	894.17	2,683.07	0.67	-0.21	-0.64
9,075.00	90.90	359.40	6,689.04	2,776.04	892.14	2,776.04	1.59	0.75	1.40
9,169.00	90.90	358.80	6,687.57	2,870.02	890.66	2,870.02	0.64	0.00	-0.64
9,262.00	90.00	358.00	6,686.84	2,962.98	888.06	2,962.98	1.29	-0.97	-0.86
9,356.00	91.00	359.10	6,686.02	3,056.94	885.69	3,056.94	1.58	1.06	1.17

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Site:	Sec.27-T5N-R64W	MD Reference:	WELL @ 4627.00usft (Original Well Elev)
Well:	Chesnut 27O-341	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

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)
9,450.00	91.60	358.50	6,683.88	3,150.90	883.72	3,150.90	0.90	0.64	-0.64
9,543.00	92.30	359.40	6,680.72	3,243.83	882.01	3,243.83	1.23	0.75	0.97
9,637.00	92.20	0.00	6,677.03	3,337.75	881.52	3,337.75	0.65	-0.11	0.64
9,730.00	91.90	0.90	6,673.70	3,430.69	882.25	3,430.69	1.02	-0.32	0.97
9,824.00	91.80	1.60	6,670.67	3,524.62	884.30	3,524.62	0.75	-0.11	0.74
9,918.00	87.40	1.80	6,671.32	3,618.55	887.09	3,618.55	4.69	-4.68	0.21
10,010.00	88.20	0.20	6,674.86	3,710.46	888.69	3,710.46	1.94	0.87	-1.74
10,103.00	89.50	0.30	6,676.72	3,803.44	889.10	3,803.44	1.40	1.40	0.11
10,196.00	89.70	359.70	6,677.37	3,896.44	889.10	3,896.44	0.68	0.22	-0.65
10,290.00	89.70	359.50	6,677.86	3,990.44	888.44	3,990.44	0.21	0.00	-0.21
10,383.00	90.60	359.00	6,677.62	4,083.43	887.23	4,083.43	1.11	0.97	-0.54
10,473.00	89.60	358.70	6,677.46	4,173.41	885.42	4,173.41	1.16	-1.11	-0.33
10,563.00	91.00	359.90	6,676.99	4,263.39	884.32	4,263.39	2.05	1.56	1.33
10,653.00	90.60	0.30	6,675.74	4,353.39	884.48	4,353.39	0.63	-0.44	0.44
10,743.00	91.20	0.50	6,674.32	4,443.37	885.11	4,443.37	0.70	0.67	0.22
10,833.00	90.80	0.70	6,672.75	4,533.35	886.05	4,533.35	0.50	-0.44	0.22
10,923.00	90.40	0.50	6,671.81	4,623.34	886.99	4,623.34	0.50	-0.44	-0.22
11,013.00	91.70	359.90	6,670.16	4,713.32	887.31	4,713.32	1.59	1.44	-0.67
11,103.00	91.60	359.90	6,667.57	4,803.29	887.15	4,803.29	0.11	-0.11	0.00
11,193.00	91.50	358.10	6,665.13	4,893.24	885.58	4,893.24	2.00	-0.11	-2.00
11,283.00	91.10	0.80	6,663.09	4,983.20	884.71	4,983.20	3.03	-0.44	3.00
11,373.00	90.20	359.50	6,662.07	5,073.19	884.95	5,073.19	1.76	-1.00	-1.44
11,463.00	91.40	359.20	6,660.81	5,163.18	883.93	5,163.18	1.37	1.33	-0.33
11,553.00	90.60	358.30	6,659.24	5,253.14	881.97	5,253.14	1.34	-0.89	-1.00
11,643.00	91.60	359.80	6,657.52	5,343.11	880.47	5,343.11	2.00	1.11	1.67
11,733.00	91.60	1.30	6,655.00	5,433.06	881.34	5,433.06	1.67	0.00	1.67
11,823.00	91.40	1.30	6,652.65	5,523.01	883.38	5,523.01	0.22	-0.22	0.00
11,913.00	91.30	1.50	6,650.53	5,612.96	885.58	5,612.96	0.25	-0.11	0.22
12,003.00	91.30	1.70	6,648.48	5,702.90	888.09	5,702.90	0.22	0.00	0.22
12,093.00	90.70	358.70	6,646.91	5,792.88	888.40	5,792.88	3.40	-0.67	-3.33
12,183.00	90.10	358.00	6,646.28	5,882.83	885.81	5,882.83	1.02	-0.67	-0.78
12,228.00	90.60	358.00	6,646.01	5,927.81	884.24	5,927.81	1.11	1.11	0.00
12,273.00	90.70	359.50	6,645.50	5,972.79	883.26	5,972.79	3.34	0.22	3.33
12,318.00	90.60	359.60	6,644.99	6,017.79	882.91	6,017.79	0.31	-0.22	0.22
12,363.00	90.70	0.00	6,644.48	6,062.78	882.75	6,062.78	0.92	0.22	0.89
12,408.00	90.80	0.20	6,643.89	6,107.78	882.83	6,107.78	0.50	0.22	0.44
12,453.00	90.70	0.00	6,643.30	6,152.78	882.91	6,152.78	0.50	-0.22	-0.44
12,498.00	90.80	0.40	6,642.71	6,197.77	883.06	6,197.77	0.92	0.22	0.89
12,543.00	91.00	0.40	6,642.00	6,242.76	883.38	6,242.76	0.44	0.44	0.00
12,588.00	90.80	0.90	6,641.30	6,287.76	883.89	6,287.76	1.20	-0.44	1.11
12,633.00	90.70	0.90	6,640.71	6,332.75	884.59	6,332.75	0.22	-0.22	0.00
12,678.00	90.80	1.10	6,640.12	6,377.74	885.38	6,377.74	0.50	0.22	0.44
12,722.00	90.90	1.00	6,639.47	6,421.72	886.19	6,421.72	0.32	0.23	-0.23
12,767.00	91.10	0.90	6,638.68	6,466.71	886.93	6,466.71	0.50	0.44	-0.22
12,812.00	91.10	0.80	6,637.82	6,511.70	887.60	6,511.70	0.22	0.00	-0.22
12,857.00	90.70	0.50	6,637.11	6,556.69	888.11	6,556.69	1.11	-0.89	-0.67
12,902.00	90.60	0.90	6,636.60	6,601.68	888.66	6,601.68	0.92	-0.22	0.89
12,947.00	90.90	0.90	6,636.01	6,646.67	889.37	6,646.67	0.67	0.67	0.00
12,991.00	90.70	0.70	6,635.40	6,690.66	889.98	6,690.66	0.64	-0.45	-0.45
13,036.00	90.00	0.10	6,635.12	6,735.66	890.29	6,735.66	2.05	-1.56	-1.33
13,081.00	90.10	359.60	6,635.08	6,780.66	890.18	6,780.66	1.13	0.22	-1.11
13,126.00	90.90	0.10	6,634.69	6,825.66	890.06	6,825.66	2.10	1.78	1.11
13,171.00	90.90	0.10	6,633.98	6,870.65	890.14	6,870.65	0.00	0.00	0.00
13,216.00	91.50	0.50	6,633.04	6,915.64	890.37	6,915.64	1.60	1.33	0.89

Company:	PDC Energy, Inc.	Local Co-ordinate Reference:	Well Chesnut 27O-341
Project:	Weld Co., CO	TVD Reference:	WELL @ 4627.00usft (Original Well Elev)
Site:	Sec.27-T5N-R64W	MD Reference:	WELL @ 4627.00usft (Original Well Elev)
Well:	Chesnut 27O-341	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDMDBBW

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)	
13,261.00	91.60	359.80	6,631.82	6,960.63	890.49	6,960.63	1.57	0.22	-1.56	
13,306.00	91.70	359.60	6,630.53	7,005.61	890.26	7,005.61	0.50	0.22	-0.44	
Last Archer Survey										
13,340.00	91.60	359.50	6,629.55	7,039.59	889.99	7,039.59	0.42	-0.29	-0.29	
PTB - Chestnut 27O-341 tgt										
13,397.00	91.60	359.50	6,627.96	7,096.57	889.49	7,096.57	0.00	0.00	0.00	

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
77.00	77.00	0.37	0.29	First Archer Survey	
13,340.00	6,629.55	7,039.59	889.99	Last Archer Survey	
13,397.00	6,627.96	7,096.57	889.49	PTB	

Checked By: _____	Approved By: _____	Date: _____
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