

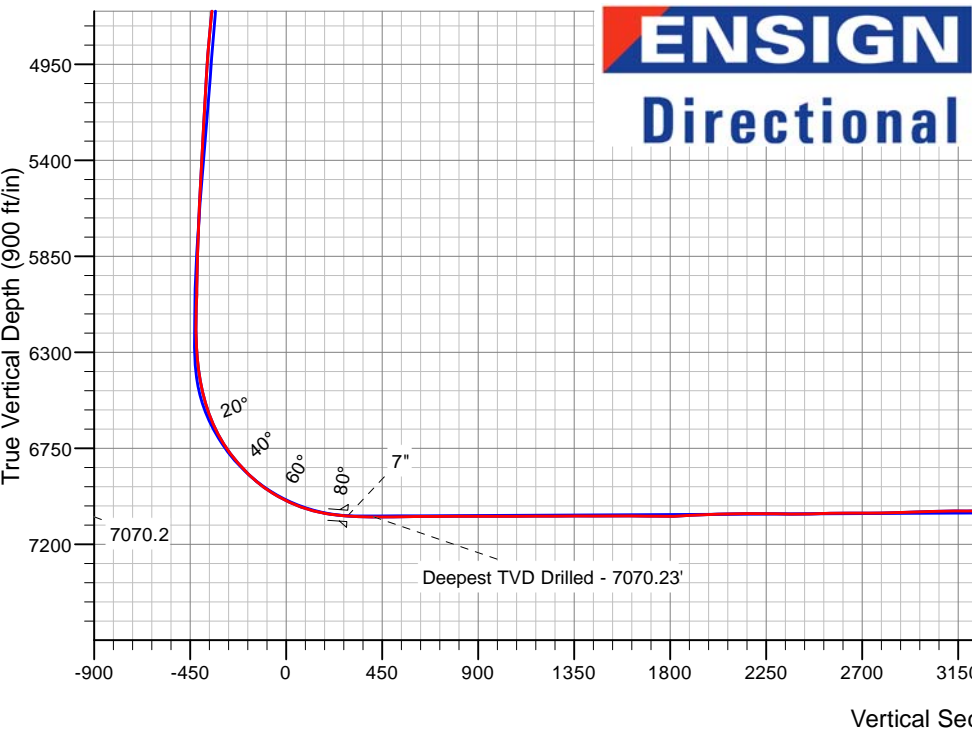
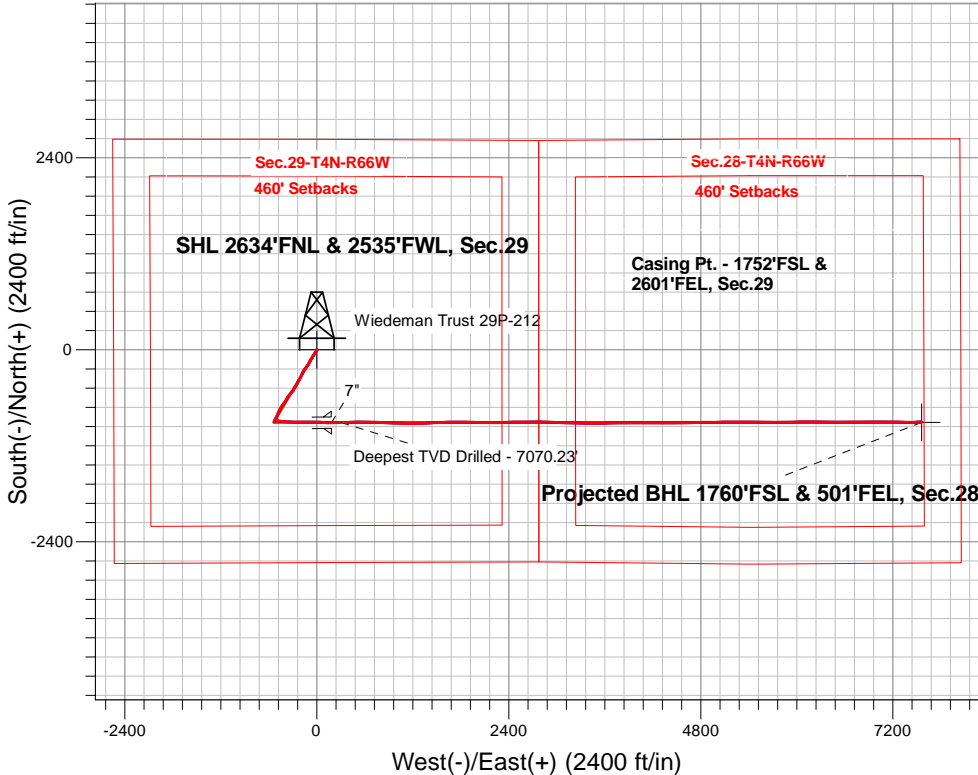
PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Wiedeman Trust 29P-212**

Surface Location: Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4763.0
+N/-S+E/-W Northing Easting Latitude Longitude Slot
0.0 0.0346577.34 3194768.20 40.282650 -104.801880
Ensign Rig #121 - RKB - 13.5'WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')

FINAL SURVEY

Projected Bottom Hole Location
14930'MD 7031'TVD 902'S & 7557'E of SHL
90.5 degree Incl @ 87.7 degree AZM



Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W
Wiedeman Trust 29P-212
Wellbore #1
6:57, February 04 2016

ANNOTATIONS

TVD	MD	Annotation
7070.2	7675.0	Deepest TVD Drilled - 7070.23'

LEGEND

- Wiedeman Trust 29P-212, Wellbore #1, Plan #4 (1-25-16) R V0
- Wellbore #1
- Survey #1

Projected BHL 1760'FSL & 501'FEL, Sec.28



PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.29-T4N-R66W

Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W

Wiedeman Trust 29P-212

Wellbore #1

Survey: Survey #1

Standard Survey Report

04 February, 2016

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Wiedeman Trust 29P-212
Project:	SEC.29-T4N-R66W	TVD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Site:	Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W	MD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Project	SEC.29-T4N-R66W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W			
Site Position:		Northing:	1,346,577.36 usft	Latitude:	40.282650
From:	Lat/Long	Easting:	3,194,768.20 usft	Longitude:	-104.801880
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	Wiedeman Trust 29P-212					
Well Position	+N/-S	0.0 ft	Northing:	1,346,577.34 usft	Latitude:	40.282650
	+E/-W	0.0 ft	Easting:	3,194,768.20 usft	Longitude:	-104.801880
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,763.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/25/2016	8.25	66.79	52,581

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	96.81	

Survey Program	Date	2/4/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
166.0	14,930.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	127.30	1.0	0.0	0.0	0.0	0.42	0.42	0.00	
SHL 2634'FNL & 2535'FWL, Sec.29										
166.0	0.70	127.30	166.0	-0.6	0.8	0.9	0.42	0.42	0.00	
260.0	1.40	192.30	260.0	-2.1	1.0	1.3	1.35	0.74	69.15	
355.0	3.10	209.90	354.9	-5.4	-0.5	0.1	1.91	1.79	18.53	
448.0	5.40	208.10	447.6	-11.5	-3.8	-2.4	2.48	2.47	-1.94	
541.0	7.50	212.20	540.1	-20.5	-9.1	-6.6	2.31	2.26	4.41	
635.0	8.40	213.40	633.1	-31.4	-16.2	-12.3	0.97	0.96	1.28	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Wiedeman Trust 29P-212
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Site:	Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W	MD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
728.0	9.10	213.60	725.1	-43.2	-24.0	-18.7	0.75	0.75	0.22
821.0	11.40	214.10	816.6	-56.9	-33.2	-26.2	2.47	2.47	0.54
905.0	11.90	213.90	898.8	-71.0	-42.7	-34.0	0.60	0.60	-0.24
1,002.0	11.70	211.60	993.8	-87.7	-53.4	-42.6	0.53	-0.21	-2.37
1,095.0	12.00	212.90	1,084.8	-103.8	-63.6	-50.9	0.43	0.32	1.40
1,189.0	11.40	211.30	1,176.9	-120.0	-73.7	-59.0	0.73	-0.64	-1.70
1,283.0	11.10	209.30	1,269.1	-135.8	-83.0	-66.3	0.52	-0.32	-2.13
1,376.0	10.60	204.90	1,360.4	-151.4	-91.0	-72.4	1.04	-0.54	-4.73
1,469.0	10.10	204.80	1,451.9	-166.5	-98.0	-77.6	0.54	-0.54	-0.11
1,562.0	10.30	212.30	1,543.4	-181.0	-105.9	-83.7	1.44	0.22	8.06
1,655.0	11.80	221.10	1,634.7	-195.2	-116.6	-92.6	2.42	1.61	9.46
1,748.0	10.60	214.30	1,725.9	-209.4	-127.6	-101.9	1.92	-1.29	-7.31
1,842.0	10.60	218.10	1,818.3	-223.3	-137.8	-110.4	0.74	0.00	4.04
1,934.0	11.20	218.10	1,908.7	-237.0	-148.6	-119.4	0.65	0.65	0.00
2,032.0	11.30	211.80	2,004.8	-252.7	-159.5	-128.4	1.26	0.10	-6.43
2,127.0	12.00	209.00	2,097.8	-269.2	-169.2	-136.1	0.95	0.74	-2.95
2,222.0	10.90	206.20	2,190.9	-285.9	-178.0	-142.8	1.30	-1.16	-2.95
2,318.0	10.20	204.20	2,285.3	-301.8	-185.4	-148.4	0.82	-0.73	-2.08
2,413.0	10.70	204.20	2,378.7	-317.5	-192.5	-153.5	0.53	0.53	0.00
2,508.0	11.30	205.30	2,472.0	-334.0	-200.1	-159.1	0.67	0.63	1.16
2,604.0	12.70	208.80	2,565.9	-351.7	-209.2	-166.0	1.64	1.46	3.65
2,699.0	12.80	207.60	2,658.5	-370.2	-219.1	-173.7	0.30	0.11	-1.26
2,794.0	13.10	206.40	2,751.1	-389.2	-228.8	-181.0	0.42	0.32	-1.26
2,890.0	12.00	206.00	2,844.8	-407.9	-238.0	-188.0	1.15	-1.15	-0.42
2,985.0	11.70	212.30	2,937.8	-424.9	-247.5	-195.4	1.40	-0.32	6.63
3,080.0	11.10	210.20	3,030.9	-441.0	-257.2	-203.1	0.77	-0.63	-2.21
3,175.0	11.00	207.60	3,124.2	-456.9	-266.0	-210.0	0.53	-0.11	-2.74
3,271.0	10.10	210.00	3,218.6	-472.3	-274.5	-216.5	1.04	-0.94	2.50
3,366.0	10.20	207.80	3,312.1	-487.0	-282.6	-222.8	0.42	0.11	-2.32
3,461.0	9.50	206.20	3,405.7	-501.4	-289.9	-228.5	0.79	-0.74	-1.68
3,557.0	9.00	220.10	3,500.4	-514.3	-298.3	-235.2	2.38	-0.52	14.48
3,652.0	9.50	227.10	3,594.2	-525.3	-308.8	-244.4	1.30	0.53	7.37
3,748.0	10.30	221.80	3,688.8	-537.1	-320.3	-254.4	1.26	0.83	-5.52
3,843.0	11.20	222.90	3,782.1	-550.2	-332.3	-264.7	0.97	0.95	1.16
3,938.0	12.80	217.60	3,875.0	-565.3	-345.0	-275.5	2.04	1.68	-5.58
4,034.0	12.20	215.00	3,968.8	-582.0	-357.3	-285.8	0.86	-0.63	-2.71
4,129.0	11.30	213.00	4,061.8	-598.1	-368.1	-294.6	1.04	-0.95	-2.11
4,224.0	10.60	209.70	4,155.0	-613.5	-377.5	-302.1	0.99	-0.74	-3.47
4,320.0	10.70	207.80	4,249.4	-629.0	-386.0	-308.8	0.38	0.10	-1.98
4,415.0	10.20	211.50	4,342.8	-644.0	-394.5	-315.4	0.88	-0.53	3.89
4,510.0	10.40	218.00	4,436.3	-657.9	-404.2	-323.4	1.24	0.21	6.84
4,606.0	10.90	213.70	4,530.6	-672.3	-414.6	-332.0	0.98	0.52	-4.48

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Wiedeman Trust 29P-212
Project:	SEC.29-T4N-R66W	TVD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Site:	Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W	MD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,701.0	10.90	218.30	4,623.9	-686.8	-425.1	-340.7	0.92	0.00	4.84
4,796.0	11.50	215.30	4,717.1	-701.6	-436.2	-349.9	0.88	0.63	-3.16
4,892.0	12.00	210.80	4,811.1	-718.0	-446.8	-358.6	1.09	0.52	-4.69
4,987.0	11.40	210.40	4,904.1	-734.6	-456.6	-366.3	0.64	-0.63	-0.42
5,082.0	11.00	204.60	4,997.3	-750.9	-465.1	-372.9	1.26	-0.42	-6.11
5,178.0	10.50	206.50	5,091.6	-767.1	-472.9	-378.6	0.64	-0.52	1.98
5,273.0	10.90	203.70	5,185.0	-783.0	-480.3	-384.1	0.69	0.42	-2.95
5,368.0	11.30	202.70	5,278.2	-799.8	-487.5	-389.3	0.47	0.42	-1.05
5,464.0	10.60	199.70	5,372.4	-816.8	-494.1	-393.8	0.94	-0.73	-3.13
5,559.0	10.00	204.20	5,465.9	-832.6	-500.5	-398.3	1.06	-0.63	4.74
5,654.0	9.40	207.60	5,559.6	-847.0	-507.4	-403.5	0.87	-0.63	3.58
5,750.0	8.50	203.50	5,654.4	-860.4	-513.9	-408.3	1.15	-0.94	-4.27
5,845.0	8.00	201.60	5,748.4	-873.0	-519.1	-412.0	0.60	-0.53	-2.00
5,940.0	4.50	211.30	5,842.8	-882.3	-523.5	-415.2	3.84	-3.68	10.21
6,035.0	3.30	204.60	5,937.6	-888.0	-526.6	-417.6	1.35	-1.26	-7.05
6,130.0	1.20	250.10	6,032.5	-890.8	-528.7	-419.3	2.74	-2.21	47.89
6,226.0	0.50	308.70	6,128.5	-890.9	-529.9	-420.6	1.07	-0.73	61.04
6,321.0	0.70	351.20	6,223.5	-890.1	-530.3	-421.1	0.50	0.21	44.74
6,417.0	5.00	65.70	6,319.4	-887.8	-526.6	-417.7	5.06	4.48	77.60
6,464.0	8.40	74.70	6,366.1	-886.0	-521.4	-412.7	7.55	7.23	19.15
6,512.0	10.50	83.10	6,413.4	-884.6	-513.7	-405.2	5.22	4.38	17.50
6,559.0	11.70	88.80	6,459.5	-884.0	-504.7	-396.4	3.46	2.55	12.13
6,607.0	13.50	99.00	6,506.4	-884.7	-494.3	-385.9	5.95	3.75	21.25
6,654.0	16.90	103.00	6,551.7	-887.1	-482.2	-373.7	7.57	7.23	8.51
6,703.0	21.00	103.00	6,598.1	-890.7	-466.7	-357.9	8.37	8.37	0.00
6,750.0	24.90	99.30	6,641.3	-894.2	-448.7	-339.6	8.84	8.30	-7.87
6,798.0	28.50	97.90	6,684.2	-897.4	-427.4	-318.0	7.61	7.50	-2.92
6,845.0	32.30	94.90	6,724.8	-900.0	-403.8	-294.3	8.70	8.09	-6.38
6,893.0	35.80	92.30	6,764.5	-901.7	-377.0	-267.4	7.90	7.29	-5.42
6,940.0	39.20	91.60	6,801.8	-902.7	-348.4	-238.9	7.29	7.23	-1.49
6,988.0	42.30	90.30	6,838.2	-903.2	-317.1	-207.8	6.70	6.46	-2.71
7,035.0	45.50	90.90	6,872.0	-903.5	-284.5	-175.4	6.87	6.81	1.28
7,084.0	49.90	89.60	6,905.0	-903.7	-248.2	-139.4	9.19	8.98	-2.65
7,131.0	54.30	90.50	6,933.9	-903.7	-211.2	-102.6	9.48	9.36	1.91
7,179.0	58.70	88.80	6,960.3	-903.4	-171.2	-62.9	9.63	9.17	-3.54
7,226.0	62.30	89.10	6,983.5	-902.7	-130.3	-22.4	7.68	7.66	0.64
7,275.0	66.00	90.30	7,004.8	-902.5	-86.2	21.4	7.87	7.55	2.45
7,322.0	69.70	91.40	7,022.6	-903.1	-42.7	64.7	8.17	7.87	2.34
7,370.0	74.10	92.80	7,037.5	-904.8	2.9	110.1	9.58	9.17	2.92
7,417.0	77.60	93.50	7,049.0	-907.3	48.4	155.6	7.59	7.45	1.49
7,465.0	81.00	92.10	7,057.9	-909.6	95.5	202.7	7.64	7.08	-2.92
7,516.0	84.90	89.60	7,064.1	-910.4	146.1	253.0	9.06	7.65	-4.90

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Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,551.0	86.18	89.33	7,066.9	-910.0	181.0	287.6	3.72	3.65	-0.76	
7"										
7,675.0	90.70	88.40	7,070.2	-907.6	304.9	410.3	3.72	3.65	-0.75	
Deepest TVD Drilled - 7070.23'										
7,770.0	89.40	89.50	7,070.2	-905.8	399.9	504.4	1.79	-1.37	1.16	
7,865.0	90.70	89.80	7,070.1	-905.3	494.9	598.7	1.40	1.37	0.32	
7,961.0	90.70	89.10	7,068.9	-904.3	590.9	693.9	0.73	0.00	-0.73	
8,056.0	90.00	90.90	7,068.3	-904.3	685.9	788.2	2.03	-0.74	1.89	
8,152.0	89.80	92.60	7,068.5	-907.3	781.8	883.8	1.78	-0.21	1.77	
8,247.0	90.00	92.30	7,068.6	-911.3	876.7	978.6	0.38	0.21	-0.32	
8,342.0	90.30	92.30	7,068.4	-915.1	971.7	1,073.3	0.32	0.32	0.00	
8,438.0	90.30	92.10	7,067.9	-918.8	1,067.6	1,169.0	0.21	0.00	-0.21	
8,533.0	89.80	91.40	7,067.8	-921.7	1,162.5	1,263.6	0.91	-0.53	-0.74	
8,629.0	91.20	87.90	7,067.0	-921.1	1,258.5	1,358.8	3.93	1.46	-3.65	
8,724.0	89.30	87.00	7,066.6	-916.9	1,353.4	1,452.6	2.21	-2.00	-0.95	
8,816.0	90.70	87.00	7,066.6	-912.1	1,445.3	1,543.2	1.52	1.52	0.00	
8,908.0	89.60	89.30	7,066.3	-909.1	1,537.2	1,634.1	2.77	-1.20	2.50	
9,001.0	88.60	87.40	7,067.8	-906.5	1,630.2	1,726.1	2.31	-1.08	-2.04	
9,093.0	91.20	89.30	7,067.9	-903.8	1,722.1	1,817.1	3.50	2.83	2.07	
9,185.0	93.70	91.40	7,064.0	-904.4	1,814.0	1,908.4	3.55	2.72	2.28	
9,277.0	92.60	90.70	7,059.0	-906.1	1,905.9	1,999.8	1.42	-1.20	-0.76	
9,370.0	91.20	91.00	7,055.9	-907.4	1,998.8	2,092.3	1.54	-1.51	0.32	
9,462.0	89.20	90.30	7,055.5	-908.5	2,090.8	2,183.7	2.30	-2.17	-0.76	
9,554.0	89.50	90.00	7,056.6	-908.7	2,182.8	2,275.1	0.46	0.33	-0.33	
9,646.0	89.20	88.60	7,057.6	-907.6	2,274.8	2,366.3	1.56	-0.33	-1.52	
9,739.0	92.20	89.10	7,056.5	-905.7	2,367.7	2,458.4	3.27	3.23	0.54	
9,831.0	90.50	88.80	7,054.3	-904.0	2,459.7	2,549.5	1.88	-1.85	-0.33	
9,923.0	90.60	90.30	7,053.5	-903.3	2,551.7	2,640.8	1.63	0.11	1.63	
10,015.0	89.90	89.10	7,053.0	-902.8	2,643.7	2,732.0	1.51	-0.76	-1.30	
10,107.0	91.60	89.60	7,051.8	-901.8	2,735.7	2,823.3	1.93	1.85	0.54	
10,199.0	92.70	92.40	7,048.4	-903.4	2,827.6	2,914.7	3.27	1.20	3.04	
10,292.0	90.80	91.60	7,045.6	-906.6	2,920.5	3,007.3	2.22	-2.04	-0.86	
10,384.0	91.10	91.20	7,044.0	-908.9	3,012.4	3,098.9	0.54	0.33	-0.43	
10,476.0	90.00	91.90	7,043.1	-911.4	3,104.4	3,190.5	1.42	-1.20	0.76	
10,568.0	90.70	91.40	7,042.6	-914.0	3,196.3	3,282.1	0.94	0.76	-0.54	
10,661.0	90.30	90.90	7,041.8	-915.9	3,289.3	3,374.7	0.69	-0.43	-0.54	
10,753.0	89.90	91.60	7,041.6	-917.9	3,381.3	3,466.3	0.88	-0.43	0.76	
10,845.0	89.10	90.50	7,042.4	-919.6	3,473.3	3,557.8	1.48	-0.87	-1.20	
10,937.0	89.40	88.80	7,043.6	-919.0	3,565.3	3,649.1	1.88	0.33	-1.85	
11,030.0	89.60	87.70	7,044.4	-916.2	3,658.2	3,741.0	1.20	0.22	-1.18	
11,122.0	90.90	88.40	7,044.0	-913.1	3,750.2	3,831.9	1.60	1.41	0.76	
11,217.0	90.40	89.60	7,042.9	-911.4	3,845.1	3,926.1	1.37	-0.53	1.26	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Wiedeman Trust 29P-212
Project:	SEC.29-T4N-R66W	TVD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Site:	Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W	MD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,313.0	89.70	90.50	7,042.9	-911.5	3,941.1	4,021.4	1.19	-0.73	0.94	
11,408.0	89.50	90.90	7,043.5	-912.6	4,036.1	4,115.8	0.47	-0.21	0.42	
11,503.0	90.00	90.20	7,043.9	-913.5	4,131.1	4,210.3	0.91	0.53	-0.74	
11,599.0	90.40	89.50	7,043.6	-913.3	4,227.1	4,305.6	0.84	0.42	-0.73	
11,694.0	90.80	89.30	7,042.6	-912.3	4,322.1	4,399.8	0.47	0.42	-0.21	
11,790.0	89.60	90.50	7,042.3	-912.1	4,418.1	4,495.1	1.77	-1.25	1.25	
11,885.0	89.50	89.50	7,043.0	-912.1	4,513.1	4,589.4	1.06	-0.11	-1.05	
11,980.0	89.20	87.90	7,044.1	-910.0	4,608.1	4,683.4	1.71	-0.32	-1.68	
12,076.0	90.00	89.10	7,044.8	-907.5	4,704.0	4,778.4	1.50	0.83	1.25	
12,171.0	91.00	90.20	7,043.9	-906.9	4,799.0	4,872.7	1.56	1.05	1.16	
12,267.0	91.50	89.60	7,041.8	-906.7	4,895.0	4,968.0	0.81	0.52	-0.63	
12,362.0	89.70	89.50	7,040.9	-906.0	4,990.0	5,062.2	1.90	-1.89	-0.11	
12,457.0	89.00	88.60	7,041.9	-904.4	5,085.0	5,156.3	1.20	-0.74	-0.95	
12,553.0	89.30	89.60	7,043.4	-902.9	5,180.9	5,251.4	1.09	0.31	1.04	
12,648.0	92.30	89.80	7,042.0	-902.4	5,275.9	5,345.7	3.16	3.16	0.21	
12,743.0	91.10	90.50	7,039.2	-902.6	5,370.9	5,440.0	1.46	-1.26	0.74	
12,839.0	89.00	91.70	7,039.1	-904.5	5,466.8	5,535.5	2.52	-2.19	1.25	
12,934.0	88.70	90.90	7,041.0	-906.6	5,561.8	5,630.1	0.90	-0.32	-0.84	
13,030.0	88.80	90.00	7,043.1	-907.4	5,657.8	5,725.4	0.94	0.10	-0.94	
13,125.0	90.60	88.60	7,043.6	-906.2	5,752.8	5,819.6	2.40	1.89	-1.47	
13,220.0	91.80	89.50	7,041.6	-904.7	5,847.7	5,913.7	1.58	1.26	0.95	
13,316.0	91.80	88.40	7,038.6	-902.9	5,943.7	6,008.8	1.15	0.00	-1.15	
13,411.0	91.10	89.30	7,036.2	-901.0	6,038.6	6,102.8	1.20	-0.74	0.95	
13,506.0	89.30	90.50	7,035.9	-900.8	6,133.6	6,197.1	2.28	-1.89	1.26	
13,602.0	88.60	91.20	7,037.6	-902.3	6,229.6	6,292.6	1.03	-0.73	0.73	
13,697.0	89.00	90.30	7,039.6	-903.5	6,324.5	6,387.0	1.04	0.42	-0.95	
13,792.0	89.20	89.50	7,041.1	-903.3	6,419.5	6,481.3	0.87	0.21	-0.84	
13,887.0	88.50	90.70	7,043.0	-903.5	6,514.5	6,575.7	1.46	-0.74	1.26	
13,983.0	90.20	90.50	7,044.1	-904.5	6,610.5	6,671.1	1.78	1.77	-0.21	
14,078.0	90.80	90.00	7,043.3	-904.9	6,705.5	6,765.5	0.82	0.63	-0.53	
14,173.0	91.50	88.20	7,041.4	-903.4	6,800.5	6,859.6	2.03	0.74	-1.89	
14,269.0	91.90	89.10	7,038.5	-901.2	6,896.4	6,954.6	1.03	0.42	0.94	
14,364.0	91.60	90.50	7,035.6	-900.8	6,991.3	7,048.8	1.51	-0.32	1.47	
14,459.0	89.90	91.40	7,034.4	-902.4	7,086.3	7,143.3	2.02	-1.79	0.95	
14,554.0	90.60	90.20	7,034.0	-903.7	7,181.3	7,237.8	1.46	0.74	-1.26	
14,650.0	91.30	90.50	7,032.4	-904.3	7,277.3	7,333.2	0.79	0.73	0.31	
14,745.0	89.60	90.90	7,031.6	-905.5	7,372.3	7,427.6	1.84	-1.79	0.42	
14,841.0	90.00	88.90	7,032.0	-905.3	7,468.3	7,522.9	2.12	0.42	-2.08	
14,875.0	90.50	87.70	7,031.8	-904.3	7,502.2	7,556.5	3.82	1.47	-3.53	
14,930.0	90.50	87.70	7,031.3	-902.1	7,557.2	7,610.8	0.00	0.00	0.00	
BHL 1756'FSL & 500'FEL, Sec.28										

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Wiedeman Trust 29P-212
Project:	SEC.29-T4N-R66W	TVD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Site:	Wiedeman Trust 29O-HZ Pad Sec.29-T4N-R66W	MD Reference:	WELL @ 4776.5ft (Ensign Rig #121 - RKB - 13.5')
Well:	Wiedeman Trust 29P-212	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	US_EDM

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL 2634'FNL & 2535'F - hit/miss target - Shape - Point	0.00	0.00	1.0	0.0	0.0	1,346,577.36	3,194,768.20	40.282650	-104.801880	
BHL 1756'FSL & 500'FE - survey misses target center by 4.1ft at 14930.0ft MD (7031.3 TVD, -902.1 N, 7557.2 E) - Point	0.00	0.00	7,031.0	-905.9	7,558.5	1,345,730.97	3,202,333.28	40.280160	-104.774790	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
7,551.0	7,066.9	7"		7	8-3/4

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
7,675.0	7,070.2	-907.6	304.9	Deepest TVD Drilled - 7070.23'	

Checked By: _____	Approved By: _____	Date: _____
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