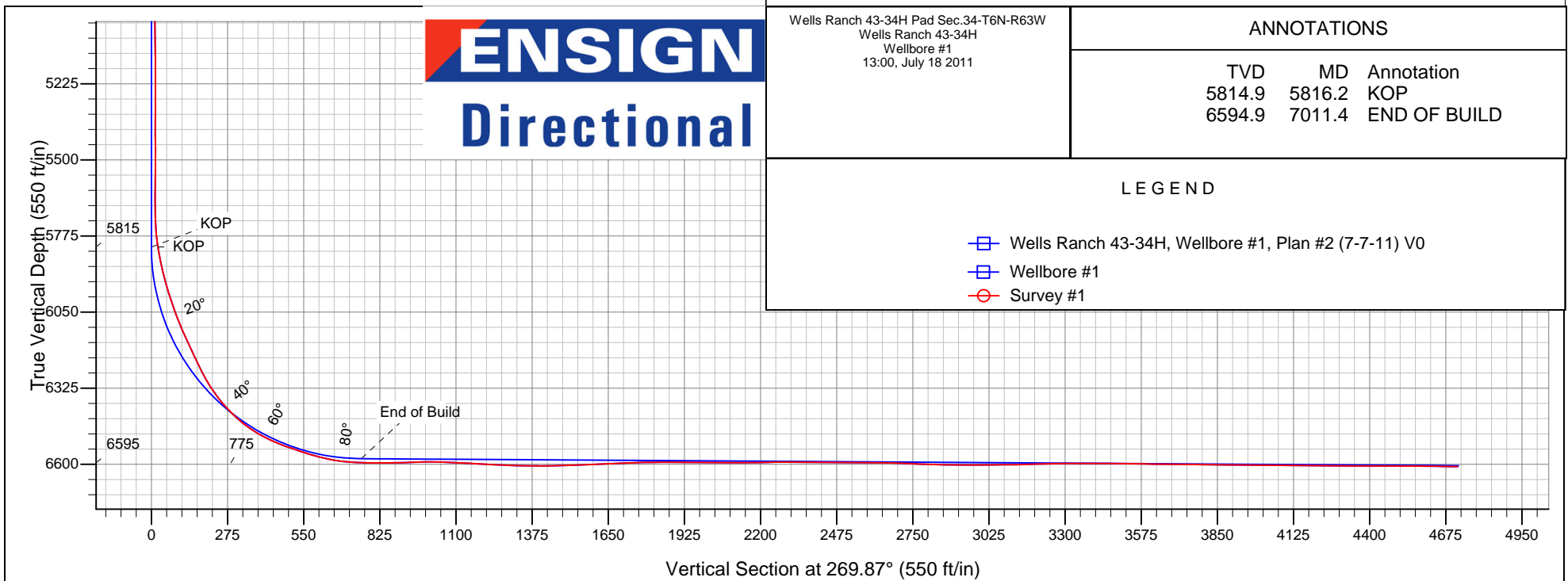
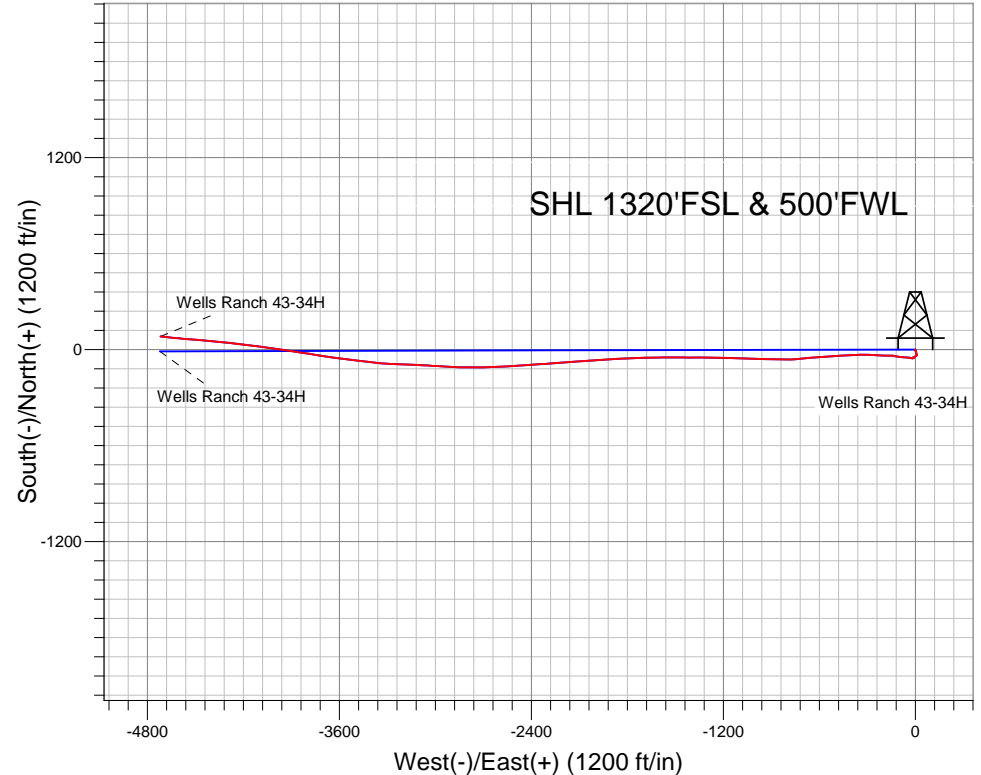


PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Wells Ranch 43-34H
 Surface Location: Wells Ranch 43-34H Pad Sec.34-T6N-R63W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4771.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1404732.49 3302321.06 40.439310 -104.413850
 RKB Ensign 32 - 15' WELL @ 4786.0ft (RKB Ensign 32 - 15')

FINAL SURVEY

Projected Bottom Hole Location
 10969' MD 6608' TVD 82°N & 4718'W of
 SHL
 89.4 degree Incl @ 275.3 degree AZM





Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T6N-R63W

Wells Ranch 43-34H Pad Sec.34-T6N-R63W

Wells Ranch 43-34H

Wellbore #1

Survey: Survey #1

Standard Survey Report

18 July, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.34-T6N-R63W, Weld County, Colorado		
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		Wells Ranch 43-34H Pad Sec.34-T6N-R63W			
Site Position:		Northing:	1,404,732.51 ft	Latitude:	40.439310
From:	Lat/Long	Easting:	3,302,321.06 ft	Longitude:	-104.413850
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.70 °

Well	Wells Ranch 43-34H					
Well Position	+N-S	0.0 ft	Northing:	1,404,732.49 ft	Latitude:	40.439310
	+E-W	0.0 ft	Easting:	3,302,321.06 ft	Longitude:	-104.413850
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,771.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/7/2011	8.67	67.14	53,184

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	269.87	

Survey Program	Date 7/18/2011				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
945.0	10,969.0	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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
1.0	0.00	190.90	1.0	0.0	0.0	0.0	0.00	0.00	0.00	
HARDLINE SHL 460°FEL										
7.8	0.00	190.90	7.8	0.0	0.0	0.0	0.07	0.07	0.00	
HARDLINE BHL 460°FWL										
945.0	0.60	190.90	945.0	-4.9	-0.9	0.9	0.06	0.06	0.00	
1,037.0	0.70	126.40	1,037.0	-5.7	-0.6	0.6	0.76	0.11	-70.11	
1,129.0	0.80	136.50	1,129.0	-6.5	0.3	-0.3	0.18	0.11	10.98	
1,222.0	1.00	137.70	1,222.0	-7.5	1.3	-1.3	0.22	0.22	1.29	
1,315.0	1.00	143.70	1,314.9	-8.8	2.3	-2.3	0.11	0.00	6.45	
1,408.0	1.00	143.90	1,407.9	-10.1	3.3	-3.3	0.00	0.00	0.22	
1,501.0	0.70	150.40	1,500.9	-11.2	4.1	-4.0	0.34	-0.32	6.99	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,594.0	0.80	157.70	1,593.9	-12.3	4.6	-4.6	0.15	0.11	7.85
1,687.0	0.80	150.30	1,686.9	-13.5	5.2	-5.1	0.11	0.00	-7.96
1,780.0	0.70	166.10	1,779.9	-14.6	5.6	-5.6	0.25	-0.11	16.99
1,873.0	0.90	171.40	1,872.9	-15.9	5.9	-5.8	0.23	0.22	5.70
1,966.0	0.70	192.30	1,965.9	-17.2	5.8	-5.8	0.38	-0.22	22.47
2,059.0	0.70	202.40	2,058.9	-18.3	5.5	-5.5	0.13	0.00	10.86
2,152.0	0.90	187.50	2,151.9	-19.5	5.2	-5.2	0.31	0.22	-16.02
2,245.0	1.10	178.70	2,244.8	-21.1	5.1	-5.1	0.27	0.22	-9.46
2,338.0	0.90	170.20	2,337.8	-22.7	5.3	-5.2	0.27	-0.22	-9.14
2,432.0	0.80	148.50	2,431.8	-24.0	5.7	-5.7	0.36	-0.11	-23.09
2,525.0	0.70	143.50	2,524.8	-25.0	6.4	-6.4	0.13	-0.11	-5.38
2,618.0	0.70	162.70	2,617.8	-26.0	6.9	-6.9	0.25	0.00	20.65
2,711.0	0.70	147.40	2,710.8	-27.1	7.4	-7.3	0.20	0.00	-16.45
2,805.0	0.70	140.20	2,804.8	-28.0	8.1	-8.0	0.09	0.00	-7.66
2,898.0	0.70	163.70	2,897.8	-29.0	8.6	-8.5	0.31	0.00	25.27
2,991.0	0.80	154.20	2,990.8	-30.1	9.0	-9.0	0.17	0.11	-10.22
3,084.0	0.90	156.90	3,083.8	-31.3	9.6	-9.5	0.12	0.11	2.90
3,177.0	0.70	162.20	3,176.8	-32.6	10.1	-10.0	0.23	-0.22	5.70
3,270.0	1.00	174.10	3,269.7	-33.9	10.3	-10.2	0.37	0.32	12.80
3,363.0	0.50	149.60	3,362.7	-35.1	10.6	-10.5	0.63	-0.54	-26.34
3,457.0	0.30	198.10	3,456.7	-35.6	10.7	-10.7	0.40	-0.21	51.60
3,550.0	0.80	240.10	3,549.7	-36.2	10.1	-10.0	0.66	0.54	45.16
3,642.0	0.80	266.10	3,641.7	-36.6	8.9	-8.8	0.39	0.00	28.26
3,735.0	0.70	231.40	3,734.7	-37.0	7.8	-7.7	0.49	-0.11	-37.31
3,829.0	0.80	255.60	3,828.7	-37.5	6.7	-6.6	0.35	0.11	25.74
3,922.0	0.80	243.70	3,921.7	-37.9	5.5	-5.4	0.18	0.00	-12.80
4,015.0	1.10	236.80	4,014.7	-38.7	4.2	-4.1	0.34	0.32	-7.42
4,108.0	1.30	241.10	4,107.7	-39.7	2.5	-2.4	0.24	0.22	4.62
4,201.0	1.70	227.90	4,200.6	-41.1	0.6	-0.5	0.57	0.43	-14.19
4,294.0	2.00	216.30	4,293.6	-43.4	-1.4	1.5	0.51	0.32	-12.47
4,387.0	2.20	214.70	4,386.5	-46.2	-3.4	3.5	0.22	0.22	-1.72
4,481.0	2.30	216.40	4,480.5	-49.2	-5.5	5.6	0.13	0.11	1.81
4,574.0	1.80	226.50	4,573.4	-51.7	-7.7	7.8	0.66	-0.54	10.86
4,667.0	0.70	216.10	4,666.4	-53.1	-9.1	9.2	1.20	-1.18	-11.18
4,760.0	1.20	322.90	4,759.4	-52.8	-10.0	10.1	1.67	0.54	114.84
4,853.0	1.10	324.70	4,852.3	-51.3	-11.1	11.2	0.11	-0.11	1.94
4,946.0	1.10	332.90	4,945.3	-49.8	-12.0	12.2	0.17	0.00	8.82
5,040.0	1.10	315.00	5,039.3	-48.3	-13.1	13.2	0.36	0.00	-19.04
5,133.0	0.40	202.40	5,132.3	-48.0	-13.9	14.0	1.41	-0.75	-121.08
5,226.0	0.60	174.00	5,225.3	-48.8	-13.9	14.0	0.34	0.22	-30.54
5,319.0	0.70	177.90	5,318.3	-49.8	-13.9	14.0	0.12	0.11	4.19
5,412.0	0.70	180.60	5,411.3	-51.0	-13.8	13.9	0.04	0.00	2.90
5,505.0	0.60	179.60	5,504.3	-52.0	-13.8	14.0	0.11	-0.11	-1.08
5,598.0	0.60	176.30	5,597.3	-53.0	-13.8	13.9	0.04	0.00	-3.55
5,660.0	0.60	183.40	5,659.3	-53.7	-13.8	13.9	0.12	0.00	11.45
5,691.0	0.60	204.10	5,690.3	-54.0	-13.9	14.0	0.70	0.00	66.77
5,722.0	1.70	239.40	5,721.3	-54.4	-14.3	14.5	4.06	3.55	113.87
5,753.0	4.10	262.90	5,752.2	-54.7	-15.8	16.0	8.48	7.74	75.81
5,784.0	7.30	278.70	5,783.1	-54.6	-18.9	19.0	11.40	10.32	50.97
5,815.0	9.40	282.70	5,813.7	-53.7	-23.3	23.4	7.02	6.77	12.90
5,816.2	9.44	282.63	5,814.9	-53.7	-23.5	23.6	3.66	3.54	-5.73
KOP									
5,846.0	10.50	281.10	5,844.3	-52.6	-28.5	28.7	3.66	3.55	-5.14

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,878.0	11.80	275.90	5,875.7	-51.7	-34.7	34.8	5.13	4.06	-16.25
5,909.0	13.60	273.20	5,905.9	-51.2	-41.5	41.6	6.11	5.81	-8.71
5,940.0	15.40	275.70	5,935.9	-50.6	-49.2	49.3	6.15	5.81	8.06
5,971.0	16.70	274.90	5,965.7	-49.8	-57.7	57.8	4.25	4.19	-2.58
6,002.0	17.70	273.30	5,995.3	-49.1	-66.9	67.0	3.57	3.23	-5.16
6,033.0	18.90	275.20	6,024.8	-48.4	-76.6	76.7	4.32	3.87	6.13
6,064.0	20.50	276.70	6,053.9	-47.3	-87.0	87.1	5.41	5.16	4.84
6,095.0	22.00	279.10	6,082.8	-45.8	-98.1	98.2	5.59	4.84	7.74
6,126.0	23.50	278.60	6,111.4	-43.9	-109.9	110.0	4.88	4.84	-1.61
6,157.0	24.30	278.40	6,139.8	-42.1	-122.4	122.4	2.59	2.58	-0.65
6,189.0	25.20	279.50	6,168.8	-40.0	-135.6	135.7	3.16	2.81	3.44
6,220.0	25.10	275.60	6,196.9	-38.2	-148.6	148.7	5.36	-0.32	-12.58
6,251.0	25.70	272.30	6,224.9	-37.3	-161.9	162.0	4.96	1.94	-10.65
6,282.0	26.20	270.60	6,252.8	-37.0	-175.5	175.5	2.89	1.61	-5.48
6,313.0	28.60	270.20	6,280.3	-36.9	-189.7	189.8	7.76	7.74	-1.29
6,344.0	31.30	270.10	6,307.1	-36.9	-205.2	205.3	8.71	8.71	-0.32
6,375.0	34.20	271.50	6,333.2	-36.6	-222.0	222.0	9.67	9.35	4.52
6,407.0	37.40	273.00	6,359.2	-35.9	-240.7	240.7	10.37	10.00	4.69
6,438.0	40.60	273.90	6,383.3	-34.7	-260.1	260.2	10.48	10.32	2.90
6,469.0	43.80	273.00	6,406.2	-33.4	-280.9	281.0	10.50	10.32	-2.90
6,500.0	47.20	271.50	6,427.9	-32.6	-303.0	303.1	11.50	10.97	-4.84
6,531.0	50.80	269.60	6,448.3	-32.4	-326.4	326.5	12.50	11.61	-6.13
6,561.0	54.50	268.00	6,466.5	-32.9	-350.2	350.3	13.04	12.33	-5.33
6,592.0	58.10	266.80	6,483.7	-34.0	-376.0	376.1	12.05	11.61	-3.87
6,623.0	61.70	266.20	6,499.2	-35.7	-402.8	402.8	11.73	11.61	-1.94
6,654.0	65.30	267.50	6,513.0	-37.2	-430.5	430.5	12.20	11.61	4.19
6,685.0	68.40	267.80	6,525.2	-38.4	-458.9	459.0	10.04	10.00	0.97
6,716.0	70.10	268.30	6,536.2	-39.4	-487.9	488.0	5.69	5.48	1.61
6,747.0	71.10	267.30	6,546.5	-40.5	-517.1	517.2	4.43	3.23	-3.23
6,778.0	71.80	265.50	6,556.4	-42.3	-546.4	546.5	5.95	2.26	-5.81
6,809.0	73.50	265.60	6,565.6	-44.6	-575.9	576.0	5.49	5.48	0.32
6,840.0	75.80	264.30	6,573.8	-47.3	-605.7	605.8	8.45	7.42	-4.19
6,871.0	78.40	264.20	6,580.7	-50.3	-635.8	635.9	8.39	8.39	-0.32
6,902.0	80.90	264.30	6,586.3	-53.3	-666.1	666.2	8.07	8.06	0.32
6,933.0	84.00	264.80	6,590.4	-56.3	-696.7	696.8	10.13	10.00	1.61
6,965.0	86.20	264.80	6,593.1	-59.1	-728.5	728.6	6.88	6.88	0.00
6,985.0	88.00	266.20	6,594.1	-60.7	-748.4	748.5	11.40	9.00	7.00
7,011.4	88.71	268.48	6,594.9	-61.9	-774.7	774.9	9.06	2.70	8.65
END OF BUILD									
7,022.0	89.00	269.40	6,595.1	-62.1	-785.3	785.5	9.06	2.71	8.65
7,054.0	89.90	269.00	6,595.4	-62.6	-817.3	817.5	3.08	2.81	-1.25
7,086.0	90.50	270.40	6,595.3	-62.7	-849.3	849.5	4.76	1.88	4.38
7,118.0	91.30	271.70	6,594.8	-62.2	-881.3	881.4	4.77	2.50	4.06
7,149.0	91.80	272.30	6,594.0	-61.1	-912.3	912.4	2.52	1.61	1.94
7,181.0	91.80	272.60	6,593.0	-59.7	-944.2	944.4	0.94	0.00	0.94
7,213.0	92.00	272.90	6,591.9	-58.2	-976.2	976.3	1.13	0.63	0.94
7,245.0	89.50	272.80	6,591.5	-56.6	-1,008.1	1,008.3	7.82	-7.81	-0.31
7,276.0	88.20	271.60	6,592.1	-55.4	-1,039.1	1,039.2	5.71	-4.19	-3.87
7,308.0	87.50	271.40	6,593.3	-54.6	-1,071.1	1,071.2	2.27	-2.19	-0.63
7,339.0	87.20	271.20	6,594.7	-53.9	-1,102.0	1,102.2	1.16	-0.97	-0.65
7,372.0	87.00	271.10	6,596.4	-53.2	-1,135.0	1,135.1	0.68	-0.61	-0.30
7,403.0	86.90	270.70	6,598.0	-52.7	-1,165.9	1,166.1	1.33	-0.32	-1.29
7,435.0	86.90	271.00	6,599.8	-52.2	-1,197.9	1,198.0	0.94	0.00	0.94

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,467.0	86.90	270.80	6,601.5	-51.7	-1,229.8	1,229.9	0.62	0.00	-0.63
7,499.0	87.70	270.60	6,603.0	-51.3	-1,261.8	1,261.9	2.58	2.50	-0.63
7,531.0	88.30	271.10	6,604.1	-50.9	-1,293.8	1,293.9	2.44	1.88	1.56
7,563.0	88.60	270.90	6,605.0	-50.3	-1,325.8	1,325.9	1.13	0.94	-0.63
7,595.0	89.20	269.80	6,605.6	-50.1	-1,357.8	1,357.9	3.92	1.88	-3.44
7,627.0	89.50	270.10	6,606.0	-50.1	-1,389.7	1,389.9	1.33	0.94	0.94
7,658.0	90.60	270.80	6,605.9	-49.9	-1,420.7	1,420.9	4.21	3.55	2.26
7,691.0	91.20	270.20	6,605.4	-49.6	-1,453.7	1,453.8	2.57	1.82	-1.82
7,723.0	91.50	270.20	6,604.7	-49.5	-1,485.7	1,485.8	0.94	0.94	0.00
7,755.0	91.50	270.20	6,603.8	-49.4	-1,517.7	1,517.8	0.00	0.00	0.00
7,786.0	92.10	269.90	6,602.9	-49.4	-1,548.7	1,548.8	2.16	1.94	-0.97
7,818.0	92.70	269.50	6,601.5	-49.5	-1,580.7	1,580.8	2.25	1.88	-1.25
7,850.0	92.30	269.30	6,600.1	-49.9	-1,612.6	1,612.8	1.40	-1.25	-0.63
7,882.0	92.50	269.30	6,598.8	-50.3	-1,644.6	1,644.7	0.63	0.63	0.00
7,914.0	92.60	268.00	6,597.4	-51.0	-1,676.6	1,676.7	4.07	0.31	-4.06
7,946.0	92.61	268.00	6,595.9	-52.1	-1,708.5	1,708.6	0.03	0.03	0.00
7,978.0	92.40	268.00	6,594.5	-53.2	-1,740.5	1,740.6	0.66	-0.66	0.00
8,010.0	90.70	267.10	6,593.6	-54.6	-1,772.4	1,772.5	6.01	-5.31	-2.81
8,043.0	90.10	267.70	6,593.4	-56.1	-1,805.4	1,805.5	2.57	-1.82	1.82
8,075.0	90.70	267.90	6,593.2	-57.3	-1,837.4	1,837.5	1.98	1.88	0.63
8,106.0	90.60	267.60	6,592.8	-58.6	-1,868.3	1,868.5	1.02	-0.32	-0.97
8,139.0	89.20	267.30	6,592.9	-60.0	-1,901.3	1,901.4	4.34	-4.24	-0.91
8,170.0	89.30	266.50	6,593.3	-61.7	-1,932.3	1,932.4	2.60	0.32	-2.58
8,202.0	89.20	266.40	6,593.7	-63.7	-1,964.2	1,964.3	0.44	-0.31	-0.31
8,235.0	89.70	266.10	6,594.0	-65.8	-1,997.1	1,997.3	1.77	1.52	-0.91
8,267.0	89.90	265.60	6,594.2	-68.2	-2,029.0	2,029.2	1.68	0.63	-1.56
8,299.0	89.70	265.60	6,594.3	-70.6	-2,060.9	2,061.1	0.63	-0.63	0.00
8,331.0	90.00	265.80	6,594.3	-73.0	-2,092.9	2,093.0	1.13	0.94	0.63
8,363.0	90.10	265.40	6,594.3	-75.5	-2,124.8	2,124.9	1.29	0.31	-1.25
8,395.0	90.60	265.00	6,594.1	-78.1	-2,156.6	2,156.8	2.00	1.56	-1.25
8,427.0	90.50	265.70	6,593.8	-80.7	-2,188.5	2,188.7	2.21	-0.31	2.19
8,459.0	91.00	266.20	6,593.4	-83.0	-2,220.5	2,220.6	2.21	1.56	1.56
8,491.0	91.20	264.90	6,592.8	-85.5	-2,252.4	2,252.5	4.11	0.63	-4.06
8,523.0	90.50	266.00	6,592.3	-88.0	-2,284.2	2,284.4	4.07	-2.19	3.44
8,555.0	89.10	266.90	6,592.4	-90.0	-2,316.2	2,316.4	5.20	-4.38	2.81
8,587.0	89.40	266.60	6,592.8	-91.8	-2,348.1	2,348.3	1.33	0.94	-0.94
8,619.0	89.50	267.10	6,593.1	-93.6	-2,380.1	2,380.3	1.59	0.31	1.56
8,651.0	89.30	266.00	6,593.5	-95.5	-2,412.0	2,412.2	3.49	-0.63	-3.44
8,684.0	90.10	266.40	6,593.7	-97.7	-2,444.9	2,445.2	2.71	2.42	1.21
8,716.0	90.20	266.20	6,593.6	-99.7	-2,476.9	2,477.1	0.70	0.31	-0.63
8,748.0	88.90	266.30	6,593.8	-101.8	-2,508.8	2,509.0	4.07	-4.06	0.31
8,780.0	88.70	266.10	6,594.5	-104.0	-2,540.7	2,541.0	0.88	-0.63	-0.63
8,812.0	89.50	265.90	6,595.0	-106.2	-2,572.7	2,572.9	2.58	2.50	-0.63
8,843.0	90.40	266.10	6,595.0	-108.4	-2,603.6	2,603.8	2.97	2.90	0.65
8,875.0	90.00	267.20	6,594.9	-110.2	-2,635.5	2,635.8	3.66	-1.25	3.44
8,907.0	88.60	268.90	6,595.3	-111.3	-2,667.5	2,667.7	6.88	-4.38	5.31
8,939.0	87.50	270.10	6,596.4	-111.6	-2,699.5	2,699.7	5.09	-3.44	3.75
8,971.0	87.70	270.60	6,597.7	-111.4	-2,731.4	2,731.7	1.68	0.63	1.56
9,003.0	88.10	270.30	6,598.9	-111.1	-2,763.4	2,763.7	1.56	1.25	-0.94
9,035.0	87.90	270.50	6,600.0	-110.9	-2,795.4	2,795.6	0.88	-0.63	0.63
9,067.0	88.00	270.40	6,601.2	-110.7	-2,827.4	2,827.6	0.44	0.31	-0.31
9,098.0	88.70	271.80	6,602.1	-110.1	-2,858.4	2,858.6	5.05	2.26	4.52
9,129.0	89.90	273.00	6,602.4	-108.8	-2,889.3	2,889.6	5.47	3.87	3.87

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,162.0	90.00	273.40	6,602.5	-106.9	-2,922.3	2,922.5	1.25	0.30	1.21
9,193.0	90.40	273.00	6,602.4	-105.2	-2,953.2	2,953.5	1.82	1.29	-1.29
9,225.0	90.20	273.20	6,602.2	-103.5	-2,985.2	2,985.4	0.88	-0.63	0.63
9,257.0	89.80	273.40	6,602.2	-101.6	-3,017.1	3,017.4	1.40	-1.25	0.63
9,288.0	90.20	273.30	6,602.2	-99.8	-3,048.1	3,048.3	1.33	1.29	-0.32
9,320.0	90.40	272.60	6,602.0	-98.2	-3,080.0	3,080.2	2.28	0.63	-2.19
9,352.0	90.60	272.60	6,601.7	-96.7	-3,112.0	3,112.2	0.63	0.63	0.00
9,384.0	90.90	272.20	6,601.3	-95.4	-3,144.0	3,144.2	1.56	0.94	-1.25
9,416.0	91.70	272.20	6,600.6	-94.2	-3,175.9	3,176.1	2.50	2.50	0.00
9,447.0	91.50	272.60	6,599.7	-92.9	-3,206.9	3,207.1	1.44	-0.65	1.29
9,479.0	92.10	272.60	6,598.7	-91.4	-3,238.9	3,239.0	1.88	1.88	0.00
9,511.0	91.40	272.60	6,597.7	-90.0	-3,270.8	3,271.0	2.19	-2.19	0.00
9,543.0	90.70	273.30	6,597.2	-88.3	-3,302.8	3,302.9	3.09	-2.19	2.19
9,575.0	90.50	274.30	6,596.8	-86.2	-3,334.7	3,334.9	3.19	-0.63	3.13
9,607.0	89.90	276.00	6,596.7	-83.3	-3,366.6	3,366.7	5.63	-1.88	5.31
9,639.0	89.30	276.70	6,596.9	-79.8	-3,398.4	3,398.5	2.88	-1.88	2.19
9,672.0	89.50	277.20	6,597.3	-75.8	-3,431.1	3,431.3	1.63	0.61	1.52
9,705.0	89.30	276.70	6,597.6	-71.8	-3,463.9	3,464.0	1.63	-0.61	-1.52
9,738.0	89.40	276.40	6,598.0	-68.0	-3,496.6	3,496.8	0.96	0.30	-0.91
9,771.0	89.30	277.00	6,598.4	-64.2	-3,529.4	3,529.6	1.84	-0.30	1.82
9,803.0	89.30	277.30	6,598.8	-60.2	-3,561.2	3,561.3	0.94	0.00	0.94
9,835.0	89.30	277.40	6,599.2	-56.1	-3,592.9	3,593.0	0.31	0.00	0.31
9,867.0	89.50	277.70	6,599.5	-51.9	-3,624.6	3,624.7	1.13	0.63	0.94
9,898.0	89.40	278.00	6,599.8	-47.7	-3,655.3	3,655.4	1.02	-0.32	0.97
9,930.0	89.50	278.40	6,600.1	-43.1	-3,687.0	3,687.1	1.29	0.31	1.25
9,962.0	89.50	278.80	6,600.4	-38.3	-3,718.6	3,718.7	1.25	0.00	1.25
9,994.0	89.40	279.00	6,600.7	-33.4	-3,750.3	3,750.3	0.70	-0.31	0.63
10,026.0	89.10	279.50	6,601.1	-28.2	-3,781.8	3,781.9	1.82	-0.94	1.56
10,057.0	89.60	279.20	6,601.5	-23.2	-3,812.4	3,812.5	1.88	1.61	-0.97
10,089.0	89.10	279.10	6,601.8	-18.1	-3,844.0	3,844.0	1.59	-1.56	-0.31
10,121.0	89.50	278.10	6,602.2	-13.3	-3,875.7	3,875.7	3.37	1.25	-3.13
10,153.0	89.20	278.20	6,602.6	-8.8	-3,907.3	3,907.3	0.99	-0.94	0.31
10,185.0	89.50	278.10	6,602.9	-4.2	-3,939.0	3,939.0	0.99	0.94	-0.31
10,217.0	89.40	277.80	6,603.2	0.2	-3,970.7	3,970.7	0.99	-0.31	-0.94
10,249.0	89.40	278.20	6,603.6	4.6	-4,002.4	4,002.4	1.25	0.00	1.25
10,281.0	89.70	278.30	6,603.8	9.2	-4,034.0	4,034.0	0.99	0.94	0.31
10,313.0	89.40	278.30	6,604.1	13.9	-4,065.7	4,065.7	0.94	-0.94	0.00
10,346.0	89.10	277.40	6,604.5	18.4	-4,098.4	4,098.3	2.87	-0.91	-2.73
10,377.0	89.40	277.70	6,604.9	22.4	-4,129.1	4,129.1	1.37	0.97	0.97
10,409.0	89.50	277.60	6,605.2	26.7	-4,160.8	4,160.8	0.44	0.31	-0.31
10,441.0	90.20	276.90	6,605.3	30.7	-4,192.6	4,192.5	3.09	2.19	-2.19
10,473.0	90.50	276.90	6,605.1	34.6	-4,224.4	4,224.3	0.94	0.94	0.00
10,505.0	89.50	276.20	6,605.1	38.2	-4,256.1	4,256.0	3.81	-3.13	-2.19
10,537.0	89.10	276.30	6,605.5	41.7	-4,287.9	4,287.8	1.29	-1.25	0.31
10,569.0	89.70	276.10	6,605.8	45.2	-4,319.8	4,319.7	1.98	1.88	-0.63
10,600.0	89.50	275.20	6,606.1	48.2	-4,350.6	4,350.5	2.97	-0.65	-2.90
10,631.0	89.90	274.30	6,606.2	50.8	-4,381.5	4,381.4	3.18	1.29	-2.90
10,663.0	89.80	274.70	6,606.3	53.3	-4,413.4	4,413.3	1.29	-0.31	1.25
10,695.0	89.60	275.00	6,606.5	56.0	-4,445.3	4,445.2	1.13	-0.63	0.94
10,727.0	89.80	274.90	6,606.6	58.8	-4,477.2	4,477.0	0.70	0.63	-0.31
10,759.0	89.90	275.20	6,606.7	61.6	-4,509.0	4,508.9	0.99	0.31	0.94
10,791.0	89.70	275.30	6,606.8	64.5	-4,540.9	4,540.8	0.70	-0.63	0.31
10,823.0	89.90	275.50	6,606.9	67.5	-4,572.8	4,572.6	0.88	0.63	0.63

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Wells Ranch 43-34H
Project:	SEC.34-T6N-R63W	TVD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Site:	Wells Ranch 43-34H Pad Sec.34-T6N-R63W	MD Reference:	WELL @ 4786.0ft (RKB Ensign 32 - 15')
Well:	Wells Ranch 43-34H	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,855.0	89.40	275.30	6,607.1	70.5	-4,604.6	4,604.5	1.68	-1.56	-0.63
10,887.0	89.30	275.50	6,607.5	73.5	-4,636.5	4,636.3	0.70	-0.31	0.63
10,919.0	89.40	275.80	6,607.9	76.7	-4,668.3	4,668.1	0.99	0.31	0.94
10,963.0	89.40	275.36	6,608.3	81.0	-4,712.1	4,711.9	1.00	0.00	-1.00
BHL 1320'FSL, 500'FWL									
10,969.0	89.40	275.30	6,608.4	81.5	-4,718.1	4,717.9	1.00	0.00	-1.00

Survey Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,816.2	5,814.9	-53.7	-23.5	KOP
7,011.4	6,594.9	-61.9	-774.7	END OF BUILD

Checked By: _____ Approved By: _____ Date: _____