

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **O Investment Properties 6T-421**

Surface Location: O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W
 North American Datum 1983, US State Plane 1983, Colorado Northern Zone

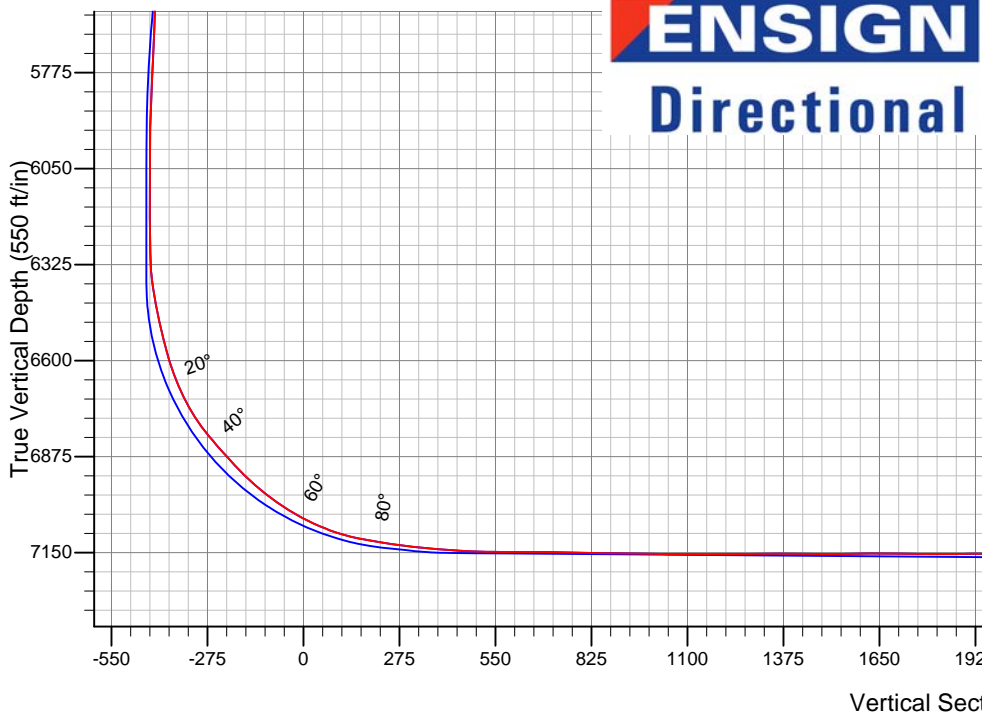
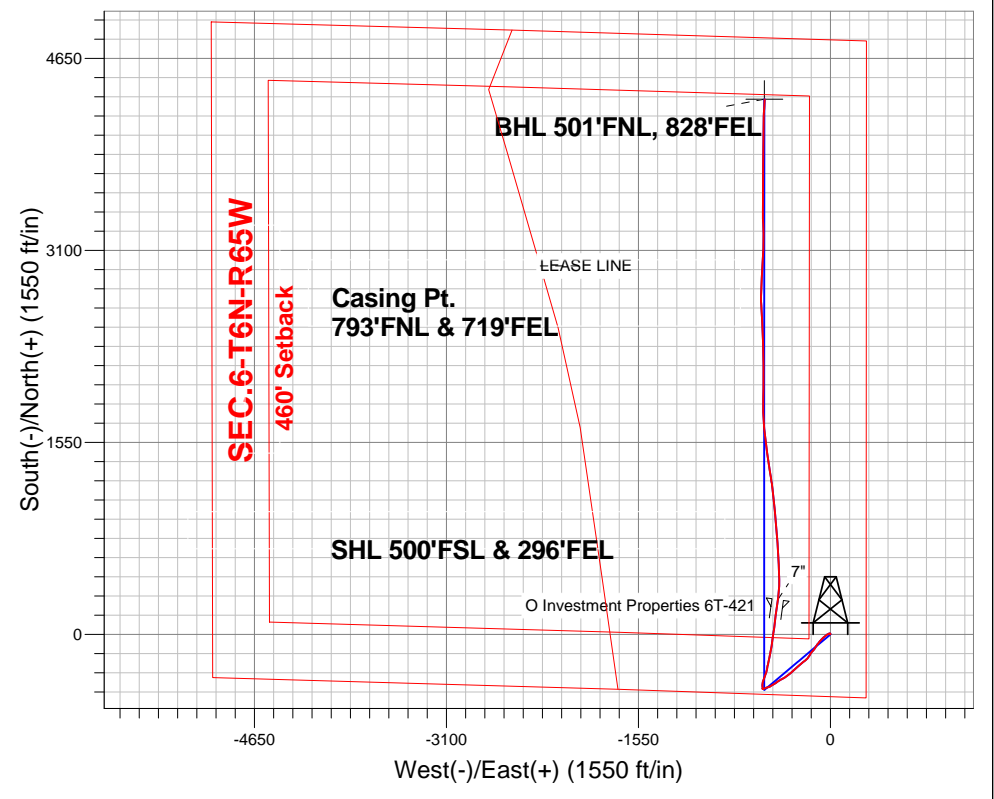
Ground Elevation: 4777.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1430039.27	3223018.49	40.511090	-104.697920	

RKB - 15' WELL @ 4792.0ft (RKB - 15')

FINAL SURVEY

Projected Bottom Hole Location
 11613'MD 7184'TVD 4320'N & 530'W of SHL
 90.6 degree Incl @ 2.9 degree AZM

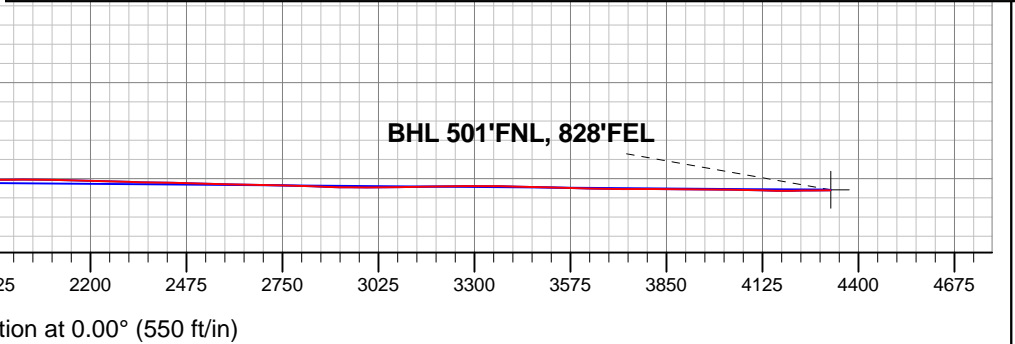


O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W
 O Investment Properties 6T-421
 Wellbore #1
 7:05, October 21 2013

ANNOTATIONS
 No annotation data is available.

LEGEND

- ✕ O Investment Properties 6T-421, Wellbore #1, Plan #1 (2-07-13) V0
- Wellbore #1
- Survey #1





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.6-T6N-R65W

O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W

O Investment Properties 6T-421

Wellbore #1

Survey: Survey #1

Standard Survey Report

21 October, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well O Investment Properties 6T-421
Project:	SEC.6-T6N-R65W	TVD Reference:	WELL @ 4792.0ft (RKB - 15')
Site:	O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W	MD Reference:	WELL @ 4792.0ft (RKB - 15')
Well:	O Investment Properties 6T-421	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.6-T6N-R65W, 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	O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W				
Site Position:		Northing:	1,430,039.28ft	Latitude:	40.511090
From:	Lat/Long	Easting:	3,223,018.48ft	Longitude:	-104.697920
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.52 °

Well	O Investment Properties 6T-421					
Well Position	+N-S	0.0 ft	Northing:	1,430,039.27 ft	Latitude:	40.511090
	+E-W	0.0 ft	Easting:	3,223,018.49 ft	Longitude:	-104.697920
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,777.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/4/2013	8.53	67.07	52,954

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	0.00	

Survey Program	Date	10/21/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
65.0	11,613.0	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	
65.0	0.60	18.20	65.0	0.3	0.1	0.3	0.92	0.92	0.00	
126.0	1.10	16.60	126.0	1.2	0.4	1.2	0.82	0.82	-2.62	
221.0	1.10	358.70	221.0	3.0	0.6	3.0	0.36	0.00	-18.84	
316.0	1.30	347.40	316.0	4.9	0.4	4.9	0.33	0.21	-11.89	
411.0	1.40	292.40	410.9	6.4	-1.0	6.4	1.32	0.11	-57.89	
506.0	2.00	278.70	505.9	7.1	-3.7	7.1	0.76	0.63	-14.42	
600.0	2.90	264.60	599.8	7.1	-7.7	7.1	1.15	0.96	-15.00	
694.0	3.90	248.60	693.6	5.8	-13.0	5.8	1.46	1.06	-17.02	
789.0	6.60	241.30	788.2	2.0	-20.8	2.0	2.92	2.84	-7.68	
892.0	8.00	231.80	890.4	-5.3	-31.6	-5.3	1.79	1.36	-9.22	

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Site:	O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W	MD Reference:	WELL @ 4792.0ft (RKB - 15')
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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)
971.0	8.50	224.70	968.6	-12.9	-40.0	-12.9	1.44	0.63	-8.99
1,068.0	8.50	236.00	1,064.5	-22.0	-51.0	-22.0	1.72	0.00	11.65
1,163.0	10.60	225.80	1,158.2	-32.0	-63.1	-32.0	2.83	2.21	-10.74
1,263.0	10.90	223.00	1,256.5	-45.3	-76.2	-45.3	0.60	0.30	-2.80
1,352.0	8.80	218.80	1,344.1	-56.8	-86.2	-56.8	2.49	-2.36	-4.72
1,444.0	8.40	215.10	1,435.1	-67.8	-94.4	-67.8	0.74	-0.43	-4.02
1,535.0	6.80	222.10	1,525.3	-77.2	-101.9	-77.2	2.03	-1.76	7.69
1,596.0	6.90	216.10	1,585.9	-82.8	-106.5	-82.8	1.18	0.16	-9.84
1,687.0	8.70	210.30	1,676.0	-93.2	-113.1	-93.2	2.16	1.98	-6.37
1,810.0	7.30	211.60	1,797.8	-107.9	-121.9	-107.9	1.15	-1.14	1.06
1,901.0	7.00	218.10	1,888.1	-117.2	-128.4	-117.2	0.95	-0.33	7.14
2,023.0	6.90	221.60	2,009.2	-128.5	-137.8	-128.5	0.36	-0.08	2.87
2,146.0	7.00	224.90	2,131.3	-139.3	-148.0	-139.3	0.33	0.08	2.68
2,303.0	7.50	206.50	2,287.1	-155.3	-159.4	-155.3	1.51	0.32	-11.72
2,461.0	6.70	212.60	2,443.9	-172.3	-168.9	-172.3	0.70	-0.51	3.86
2,620.0	7.00	218.20	2,601.7	-187.7	-179.9	-187.7	0.46	0.19	3.52
2,778.0	7.70	229.10	2,758.5	-202.2	-193.9	-202.2	0.99	0.44	6.90
2,937.0	8.60	233.50	2,915.8	-216.3	-211.5	-216.3	0.69	0.57	2.77
3,095.0	6.90	230.90	3,072.4	-229.3	-228.3	-229.3	1.10	-1.08	-1.65
3,254.0	7.70	233.40	3,230.1	-241.6	-244.3	-241.6	0.54	0.50	1.57
3,413.0	6.70	222.60	3,387.9	-254.8	-259.1	-254.8	1.06	-0.63	-6.79
3,571.0	6.50	223.70	3,544.8	-268.1	-271.6	-268.1	0.15	-0.13	0.70
3,730.0	7.40	225.80	3,702.6	-281.7	-285.1	-281.7	0.59	0.57	1.32
3,889.0	10.30	232.30	3,859.7	-297.6	-303.7	-297.6	1.93	1.82	4.09
4,047.0	11.30	232.30	4,014.9	-315.7	-327.1	-315.7	0.63	0.63	0.00
4,205.0	10.80	231.40	4,170.0	-334.4	-351.0	-334.4	0.33	-0.32	-0.57
4,364.0	9.00	239.50	4,326.6	-350.0	-373.3	-350.0	1.43	-1.13	5.09
4,521.0	7.50	242.10	4,482.0	-361.0	-392.9	-361.0	0.98	-0.96	1.66
4,680.0	6.70	236.30	4,639.8	-371.0	-409.8	-371.0	0.68	-0.50	-3.65
4,838.0	7.10	237.00	4,796.6	-381.4	-425.7	-381.4	0.26	0.25	0.44
4,997.0	5.60	236.90	4,954.7	-391.0	-440.4	-391.0	0.94	-0.94	-0.06
5,156.0	6.90	236.90	5,112.7	-400.5	-454.9	-400.5	0.82	0.82	0.00
5,314.0	6.40	238.80	5,269.7	-410.2	-470.4	-410.2	0.35	-0.32	1.20
5,409.0	5.60	241.30	5,364.1	-415.2	-479.0	-415.2	0.89	-0.84	2.63
5,504.0	6.60	235.50	5,458.6	-420.5	-487.6	-420.5	1.24	1.05	-6.11
5,600.0	7.20	257.30	5,553.9	-425.0	-498.0	-425.0	2.78	0.63	22.71
5,695.0	6.20	252.50	5,648.3	-427.8	-508.7	-427.8	1.21	-1.05	-5.05
5,790.0	6.70	245.70	5,742.7	-431.6	-518.6	-431.6	0.96	0.53	-7.16
5,885.0	5.60	247.60	5,837.1	-435.7	-528.0	-435.7	1.18	-1.16	2.00
5,980.0	4.60	248.10	5,931.7	-438.9	-535.8	-438.9	1.05	-1.05	0.53
6,075.0	3.30	269.90	6,026.5	-440.3	-542.1	-440.3	2.07	-1.37	22.95
6,170.0	1.50	292.90	6,121.4	-439.8	-545.9	-439.8	2.11	-1.89	24.21
6,297.0	0.60	89.40	6,248.4	-439.2	-546.8	-439.2	1.63	-0.71	123.23
6,329.0	0.60	79.90	6,280.4	-439.1	-546.5	-439.1	0.31	0.00	-29.69
6,361.0	1.90	0.10	6,312.4	-438.6	-546.3	-438.6	5.90	4.06	-249.38
6,392.0	4.70	351.80	6,343.4	-436.8	-546.5	-436.8	9.14	9.03	-26.77
6,424.0	7.30	352.20	6,375.2	-433.5	-547.0	-433.5	8.13	8.13	1.25
6,456.0	9.50	351.70	6,406.8	-428.9	-547.6	-428.9	6.88	6.88	-1.56
6,487.0	11.10	354.60	6,437.3	-423.3	-548.3	-423.3	5.42	5.16	9.35
6,519.0	11.60	357.30	6,468.7	-417.1	-548.7	-417.1	2.28	1.56	8.44
6,551.0	12.90	358.70	6,500.0	-410.3	-548.9	-410.3	4.17	4.06	4.38
6,582.0	13.70	3.80	6,530.2	-403.2	-548.8	-403.2	4.58	2.58	16.45
6,614.0	14.90	9.40	6,561.2	-395.3	-547.9	-395.3	5.72	3.75	17.50

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Design:	Wellbore #1	Database:	Landmark

Survey									
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6,646.0	17.00	13.50	6,591.9	-386.7	-546.1	-386.7	7.44	6.56	12.81
6,677.0	19.30	17.10	6,621.4	-377.4	-543.5	-377.4	8.25	7.42	11.61
6,709.0	22.10	19.30	6,651.3	-366.7	-540.0	-366.7	9.08	8.75	6.88
6,741.0	25.50	20.80	6,680.6	-354.5	-535.5	-354.5	10.79	10.63	4.69
6,773.0	28.30	21.70	6,709.1	-341.1	-530.3	-341.1	8.84	8.75	2.81
6,804.0	30.90	19.60	6,736.1	-326.7	-524.9	-326.7	9.03	8.39	-6.77
6,836.0	34.30	15.90	6,763.0	-310.3	-519.7	-310.3	12.31	10.63	-11.56
6,868.0	37.10	13.50	6,789.0	-292.2	-514.9	-292.2	9.78	8.75	-7.50
6,899.0	39.40	12.40	6,813.4	-273.5	-510.7	-273.5	7.74	7.42	-3.55
6,931.0	41.60	11.00	6,837.7	-253.2	-506.4	-253.2	7.44	6.88	-4.38
6,963.0	42.80	12.20	6,861.4	-232.1	-502.1	-232.1	4.52	3.75	3.75
6,994.0	43.40	13.60	6,884.0	-211.5	-497.4	-211.5	3.64	1.94	4.52
7,026.0	43.70	12.60	6,907.2	-190.0	-492.4	-190.0	2.35	0.94	-3.13
7,058.0	45.90	10.60	6,929.9	-167.9	-487.9	-167.9	8.16	6.88	-6.25
7,089.0	48.90	9.60	6,950.9	-145.5	-483.9	-145.5	9.96	9.68	-3.23
7,121.0	51.40	9.60	6,971.4	-121.2	-479.8	-121.2	7.81	7.81	0.00
7,152.0	53.30	8.90	6,990.4	-97.0	-475.8	-97.0	6.38	6.13	-2.26
7,184.0	55.00	8.70	7,009.1	-71.4	-471.9	-71.4	5.34	5.31	-0.63
7,215.0	57.60	7.80	7,026.3	-45.9	-468.2	-45.9	8.73	8.39	-2.90
7,247.0	60.90	8.00	7,042.7	-18.6	-464.4	-18.6	10.33	10.31	0.63
7,279.0	64.30	8.20	7,057.4	9.5	-460.4	9.5	10.64	10.63	0.63
7,311.0	66.00	8.90	7,070.8	38.2	-456.1	38.2	5.67	5.31	2.19
7,342.0	68.70	7.70	7,082.8	66.5	-451.9	66.5	9.41	8.71	-3.87
7,374.0	71.70	6.60	7,093.6	96.4	-448.2	96.4	9.92	9.38	-3.44
7,406.0	76.00	6.20	7,102.5	126.9	-444.8	126.9	13.49	13.44	-1.25
7,437.0	78.80	7.30	7,109.3	157.0	-441.2	157.0	9.67	9.03	3.55
7,469.0	80.10	7.80	7,115.1	188.1	-437.1	188.1	4.34	4.06	1.56
7,501.0	80.80	8.00	7,120.4	219.4	-432.7	219.4	2.27	2.19	0.63
7,526.0	81.30	8.00	7,124.3	243.9	-429.3	243.9	2.00	2.00	0.00
7,546.0	82.00	7.80	7,127.2	263.5	-426.6	263.5	3.64	3.50	-1.00
7,564.0	82.66	7.74	7,129.6	281.1	-424.2	281.1	3.68	3.67	-0.33
7"									
7,576.0	83.10	7.70	7,131.1	292.9	-422.6	292.9	3.68	3.67	-0.33
7,607.0	83.70	6.90	7,134.7	323.5	-418.7	323.5	3.21	1.94	-2.58
7,637.0	84.40	5.40	7,137.8	353.1	-415.5	353.1	5.49	2.33	-5.00
7,667.0	85.60	3.40	7,140.4	382.9	-413.2	382.9	7.75	4.00	-6.67
7,699.0	86.30	0.80	7,142.7	414.8	-412.0	414.8	8.39	2.19	-8.13
7,730.0	86.70	358.20	7,144.6	445.8	-412.3	445.8	8.47	1.29	-8.39
7,762.0	87.80	358.00	7,146.1	477.7	-413.3	477.7	3.49	3.44	-0.63
7,794.0	87.80	358.00	7,147.3	509.7	-414.4	509.7	0.00	0.00	0.00
7,825.0	89.30	357.60	7,148.1	540.6	-415.6	540.6	5.01	4.84	-1.29
7,857.0	89.70	357.50	7,148.4	572.6	-417.0	572.6	1.29	1.25	-0.31
7,889.0	89.40	356.60	7,148.6	604.6	-418.7	604.6	2.96	-0.94	-2.81
7,921.0	90.40	356.60	7,148.7	636.5	-420.6	636.5	3.13	3.13	0.00
7,952.0	90.00	356.00	7,148.6	667.4	-422.6	667.4	2.33	-1.29	-1.94
7,984.0	88.90	355.50	7,148.9	699.3	-424.9	699.3	3.78	-3.44	-1.56
8,016.0	89.40	356.80	7,149.4	731.3	-427.1	731.3	4.35	1.56	4.06
8,047.0	89.60	356.60	7,149.6	762.2	-428.9	762.2	0.91	0.65	-0.65
8,080.0	88.80	355.90	7,150.1	795.1	-431.0	795.1	3.22	-2.42	-2.12
8,111.0	88.20	355.50	7,150.9	826.0	-433.3	826.0	2.33	-1.94	-1.29
8,143.0	88.30	355.30	7,151.9	857.9	-435.9	857.9	0.70	0.31	-0.63
8,175.0	89.00	355.20	7,152.6	889.8	-438.6	889.8	2.21	2.19	-0.31

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8,206.0	90.00	355.20	7,152.9	920.7	-441.1	920.7	3.23	3.23	0.00	
8,238.0	89.50	354.60	7,153.0	952.6	-444.0	952.6	2.44	-1.56	-1.88	
8,270.0	88.50	353.60	7,153.6	984.4	-447.3	984.4	4.42	-3.13	-3.13	
8,301.0	89.20	353.90	7,154.2	1,015.2	-450.7	1,015.2	2.46	2.26	0.97	
8,333.0	90.10	355.30	7,154.4	1,047.1	-453.7	1,047.1	5.20	2.81	4.38	
8,365.0	90.10	354.60	7,154.4	1,078.9	-456.5	1,078.9	2.19	0.00	-2.19	
8,396.0	90.00	354.50	7,154.3	1,109.8	-459.4	1,109.8	0.46	-0.32	-0.32	
8,428.0	89.80	353.10	7,154.4	1,141.6	-462.9	1,141.6	4.42	-0.63	-4.38	
8,460.0	89.30	352.20	7,154.6	1,173.3	-467.0	1,173.3	3.22	-1.56	-2.81	
8,491.0	90.00	352.20	7,154.8	1,204.1	-471.2	1,204.1	2.26	2.26	0.00	
8,523.0	90.70	351.10	7,154.6	1,235.7	-475.8	1,235.7	4.07	2.19	-3.44	
8,555.0	91.30	351.50	7,154.1	1,267.3	-480.7	1,267.3	2.25	1.88	1.25	
8,586.0	90.70	351.30	7,153.5	1,298.0	-485.3	1,298.0	2.04	-1.94	-0.65	
8,618.0	89.60	351.70	7,153.5	1,329.6	-490.0	1,329.6	3.66	-3.44	1.25	
8,650.0	89.60	351.70	7,153.7	1,361.3	-494.7	1,361.3	0.00	0.00	0.00	
8,682.0	89.90	351.50	7,153.8	1,393.0	-499.3	1,393.0	1.13	0.94	-0.63	
8,713.0	89.60	351.80	7,154.0	1,423.6	-503.8	1,423.6	1.37	-0.97	0.97	
8,745.0	89.70	351.80	7,154.2	1,455.3	-508.4	1,455.3	0.31	0.31	0.00	
8,777.0	89.70	350.40	7,154.3	1,486.9	-513.3	1,486.9	4.37	0.00	-4.38	
8,809.0	90.20	352.50	7,154.3	1,518.6	-518.1	1,518.6	6.75	1.56	6.56	
8,840.0	90.50	352.00	7,154.2	1,549.3	-522.3	1,549.3	1.88	0.97	-1.61	
8,872.0	91.20	354.10	7,153.7	1,581.0	-526.2	1,581.0	6.92	2.19	6.56	
8,904.0	90.70	353.90	7,153.2	1,612.9	-529.5	1,612.9	1.68	-1.56	-0.63	
8,935.0	90.50	355.50	7,152.8	1,643.7	-532.4	1,643.7	5.20	-0.65	5.16	
8,967.0	89.80	355.20	7,152.7	1,675.6	-535.0	1,675.6	2.38	-2.19	-0.94	
8,999.0	89.00	355.90	7,153.1	1,707.5	-537.4	1,707.5	3.32	-2.50	2.19	
9,031.0	89.10	357.10	7,153.6	1,739.5	-539.4	1,739.5	3.76	0.31	3.75	
9,062.0	88.70	357.10	7,154.2	1,770.4	-541.0	1,770.4	1.29	-1.29	0.00	
9,094.0	89.50	358.50	7,154.7	1,802.4	-542.2	1,802.4	5.04	2.50	4.38	
9,126.0	90.70	359.20	7,154.7	1,834.4	-542.8	1,834.4	4.34	3.75	2.19	
9,157.0	91.20	359.60	7,154.1	1,865.4	-543.2	1,865.4	2.07	1.61	1.29	
9,189.0	91.00	1.10	7,153.5	1,897.4	-543.0	1,897.4	4.73	-0.63	4.69	
9,221.0	89.90	1.30	7,153.3	1,929.3	-542.3	1,929.3	3.49	-3.44	0.63	
9,252.0	89.80	1.10	7,153.4	1,960.3	-541.6	1,960.3	0.72	-0.32	-0.65	
9,284.0	90.00	0.10	7,153.4	1,992.3	-541.3	1,992.3	3.19	0.63	-3.13	
9,316.0	90.80	0.30	7,153.2	2,024.3	-541.2	2,024.3	2.58	2.50	0.63	
9,347.0	89.90	0.30	7,153.0	2,055.3	-541.0	2,055.3	2.90	-2.90	0.00	
9,379.0	88.30	0.60	7,153.5	2,087.3	-540.8	2,087.3	5.09	-5.00	0.94	
9,411.0	88.20	0.40	7,154.5	2,119.3	-540.5	2,119.3	0.70	-0.31	-0.63	
9,443.0	88.30	0.30	7,155.5	2,151.3	-540.3	2,151.3	0.44	0.31	-0.31	
9,475.0	88.60	0.30	7,156.3	2,183.3	-540.1	2,183.3	0.94	0.94	0.00	
9,507.0	89.30	0.40	7,156.9	2,215.3	-539.9	2,215.3	2.21	2.19	0.31	
9,538.0	88.70	359.00	7,157.4	2,246.3	-540.1	2,246.3	4.91	-1.94	-4.52	
9,570.0	87.50	358.30	7,158.5	2,278.2	-540.9	2,278.2	4.34	-3.75	-2.19	
9,602.0	88.10	358.30	7,159.7	2,310.2	-541.8	2,310.2	1.88	1.88	0.00	
9,634.0	88.70	358.00	7,160.6	2,342.2	-542.8	2,342.2	2.10	1.88	-0.94	
9,665.0	89.10	357.60	7,161.2	2,373.2	-544.0	2,373.2	1.82	1.29	-1.29	
9,697.0	89.30	357.60	7,161.7	2,405.1	-545.4	2,405.1	0.63	0.63	0.00	
9,729.0	89.20	357.60	7,162.1	2,437.1	-546.7	2,437.1	0.31	-0.31	0.00	
9,760.0	88.30	356.90	7,162.8	2,468.0	-548.2	2,468.0	3.68	-2.90	-2.26	
9,792.0	88.40	356.60	7,163.7	2,500.0	-550.0	2,500.0	0.99	0.31	-0.94	
9,824.0	88.60	356.40	7,164.5	2,531.9	-552.0	2,531.9	0.88	0.63	-0.63	
9,856.0	88.10	356.80	7,165.4	2,563.8	-553.9	2,563.8	2.00	-1.56	1.25	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well O Investment Properties 6T-421
Project:	SEC.6-T6N-R65W	TVD Reference:	WELL @ 4792.0ft (RKB - 15')
Site:	O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W	MD Reference:	WELL @ 4792.0ft (RKB - 15')
Well:	O Investment Properties 6T-421	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)	
9,887.0	88.10	357.10	7,166.5	2,594.8	-555.5	2,594.8	0.97	0.00	0.97	
9,919.0	88.60	357.30	7,167.4	2,626.7	-557.1	2,626.7	1.68	1.56	0.63	
9,951.0	89.30	357.60	7,168.0	2,658.7	-558.5	2,658.7	2.38	2.19	0.94	
9,983.0	89.40	358.30	7,168.3	2,690.7	-559.6	2,690.7	2.21	0.31	2.19	
10,014.0	89.10	359.70	7,168.8	2,721.7	-560.2	2,721.7	4.62	-0.97	4.52	
10,046.0	88.50	1.30	7,169.4	2,753.6	-559.9	2,753.6	5.34	-1.88	5.00	
10,078.0	88.30	3.10	7,170.3	2,785.6	-558.7	2,785.6	5.66	-0.63	5.63	
10,110.0	87.80	3.10	7,171.4	2,817.5	-556.9	2,817.5	1.56	-1.56	0.00	
10,142.0	87.60	2.90	7,172.7	2,849.5	-555.3	2,849.5	0.88	-0.63	-0.63	
10,174.0	88.20	3.30	7,173.9	2,881.4	-553.5	2,881.4	2.25	1.88	1.25	
10,205.0	88.80	3.40	7,174.7	2,912.3	-551.7	2,912.3	1.96	1.94	0.32	
10,236.0	89.60	3.40	7,175.1	2,943.3	-549.9	2,943.3	2.58	2.58	0.00	
10,268.0	90.20	3.40	7,175.2	2,975.2	-548.0	2,975.2	1.88	1.88	0.00	
10,300.0	90.20	3.30	7,175.0	3,007.2	-546.1	3,007.2	0.31	0.00	-0.31	
10,332.0	90.30	3.10	7,174.9	3,039.1	-544.3	3,039.1	0.70	0.31	-0.63	
10,364.0	90.30	3.10	7,174.7	3,071.1	-542.6	3,071.1	0.00	0.00	0.00	
10,395.0	90.90	2.40	7,174.4	3,102.0	-541.1	3,102.0	2.97	1.94	-2.26	
10,427.0	90.90	1.00	7,173.9	3,134.0	-540.2	3,134.0	4.37	0.00	-4.38	
10,459.0	90.80	359.40	7,173.4	3,166.0	-540.1	3,166.0	5.01	-0.31	-5.00	
10,490.0	91.10	359.40	7,172.9	3,197.0	-540.4	3,197.0	0.97	0.97	0.00	
10,522.0	91.50	359.40	7,172.2	3,229.0	-540.7	3,229.0	1.25	1.25	0.00	
10,553.0	91.00	358.30	7,171.5	3,260.0	-541.3	3,260.0	3.90	-1.61	-3.55	
10,585.0	89.80	358.20	7,171.3	3,292.0	-542.3	3,292.0	3.76	-3.75	-0.31	
10,616.0	89.90	358.00	7,171.4	3,323.0	-543.3	3,323.0	0.72	0.32	-0.65	
10,648.0	89.40	359.00	7,171.6	3,354.9	-544.2	3,354.9	3.49	-1.56	3.13	
10,680.0	88.20	359.70	7,172.2	3,386.9	-544.5	3,386.9	4.34	-3.75	2.19	
10,712.0	88.40	0.30	7,173.2	3,418.9	-544.5	3,418.9	1.98	0.63	1.88	
10,744.0	88.50	359.70	7,174.1	3,450.9	-544.5	3,450.9	1.90	0.31	-1.88	
10,775.0	88.90	359.60	7,174.8	3,481.9	-544.7	3,481.9	1.33	1.29	-0.32	
10,807.0	88.70	0.40	7,175.4	3,513.9	-544.7	3,513.9	2.58	-0.63	2.50	
10,839.0	88.40	0.60	7,176.2	3,545.9	-544.5	3,545.9	1.13	-0.94	0.63	
10,870.0	88.50	0.30	7,177.1	3,576.9	-544.2	3,576.9	1.02	0.32	-0.97	
10,902.0	88.50	0.30	7,177.9	3,608.9	-544.0	3,608.9	0.00	0.00	0.00	
10,934.0	88.50	0.30	7,178.8	3,640.8	-543.9	3,640.8	0.00	0.00	0.00	
10,965.0	89.00	0.30	7,179.4	3,671.8	-543.7	3,671.8	1.61	1.61	0.00	
10,997.0	90.00	0.80	7,179.7	3,703.8	-543.4	3,703.8	3.49	3.13	1.56	
11,029.0	90.00	1.10	7,179.7	3,735.8	-542.9	3,735.8	0.94	0.00	0.94	
11,060.0	90.10	1.00	7,179.7	3,766.8	-542.3	3,766.8	0.46	0.32	-0.32	
11,092.0	90.20	1.00	7,179.6	3,798.8	-541.7	3,798.8	0.31	0.31	0.00	
11,124.0	89.20	0.60	7,179.8	3,830.8	-541.3	3,830.8	3.37	-3.13	-1.25	
11,155.0	89.10	0.40	7,180.2	3,861.8	-541.0	3,861.8	0.72	-0.32	-0.65	
11,187.0	89.20	0.10	7,180.7	3,893.8	-540.9	3,893.8	0.99	0.31	-0.94	
11,219.0	89.40	0.30	7,181.1	3,925.8	-540.8	3,925.8	0.88	0.63	0.63	
11,251.0	89.60	0.30	7,181.4	3,957.8	-540.6	3,957.8	0.63	0.63	0.00	
11,282.0	90.00	0.40	7,181.5	3,988.8	-540.4	3,988.8	1.33	1.29	0.32	
11,314.0	89.00	359.70	7,181.8	4,020.8	-540.4	4,020.8	3.81	-3.13	-2.19	
11,346.0	89.00	0.30	7,182.3	4,052.8	-540.4	4,052.8	1.87	0.00	1.88	
11,377.0	88.70	1.10	7,182.9	4,083.8	-540.0	4,083.8	2.76	-0.97	2.58	
11,409.0	88.30	1.30	7,183.8	4,115.8	-539.3	4,115.8	1.40	-1.25	0.63	
11,441.0	89.10	2.00	7,184.5	4,147.7	-538.4	4,147.7	3.32	2.50	2.19	
11,472.0	90.20	2.60	7,184.7	4,178.7	-537.2	4,178.7	4.04	3.55	1.94	
11,504.0	90.20	2.60	7,184.6	4,210.7	-535.7	4,210.7	0.00	0.00	0.00	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well O Investment Properties 6T-421
Project:	SEC.6-T6N-R65W	TVD Reference:	WELL @ 4792.0ft (RKB - 15')
Site:	O Investment Properties 6Y-HZ Pad Sec.6-T6N-R65W	MD Reference:	WELL @ 4792.0ft (RKB - 15')
Well:	O Investment Properties 6T-421	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)
11,535.0	90.20	2.70	7,184.5	4,241.7	-534.3	4,241.7	0.32	0.00	0.32
11,559.0	90.60	2.90	7,184.3	4,265.6	-533.1	4,265.6	1.86	1.67	0.83
11,613.0	90.60	2.90	7,183.7	4,319.5	-530.4	4,319.5	0.00	0.00	0.00
BHL 500'FNL, 831'FEL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,564.0	7,129.6	7"	7	7-1/2

Checked By: _____ Approved By: _____ Date: _____