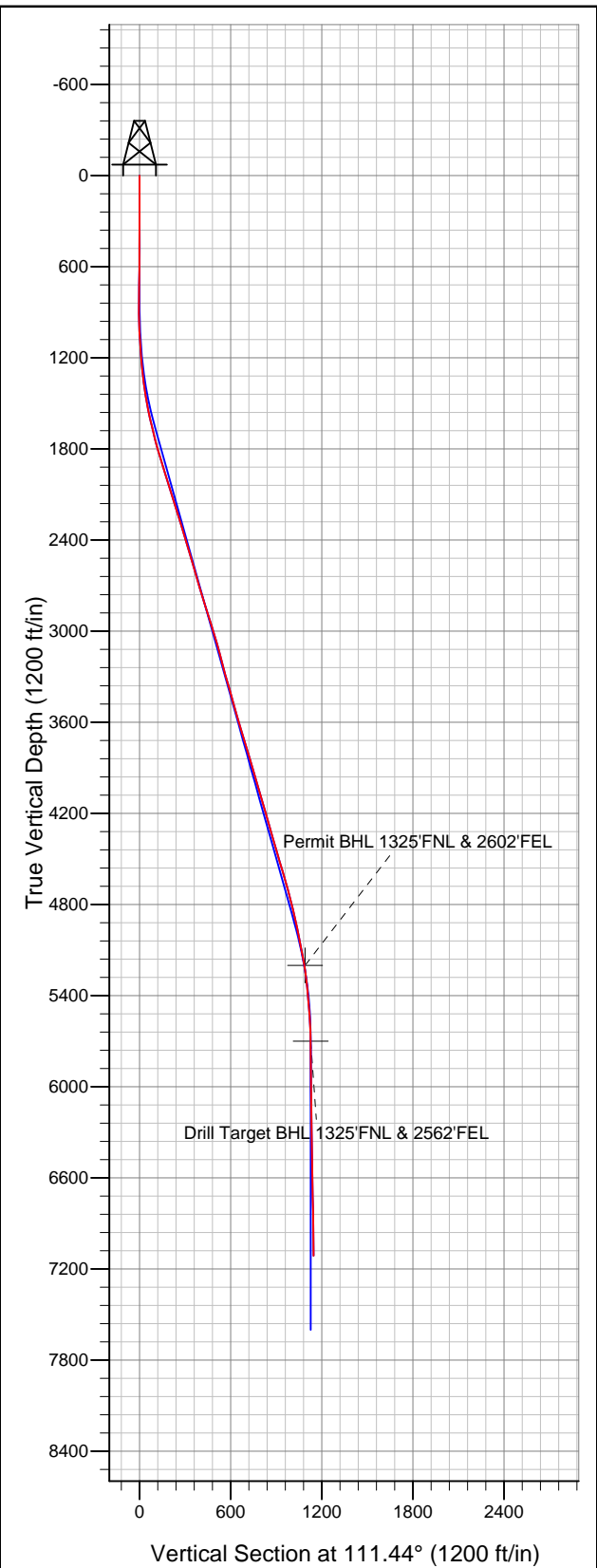




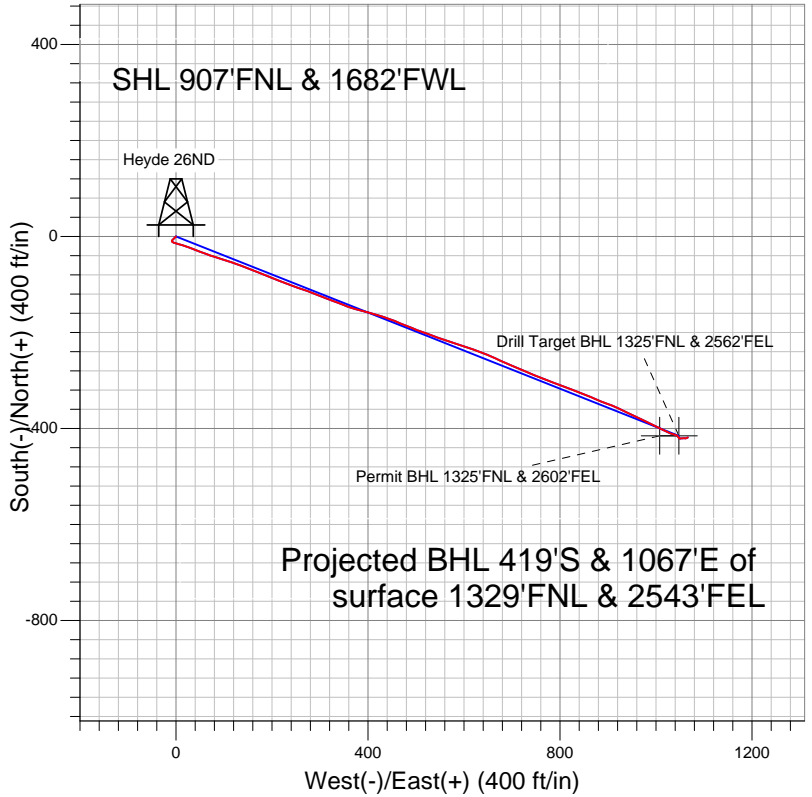
Well Name: Heyde 26ND

Surface Location: Heyde 26ND Pad Sec. 26-T3N-R64W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4840.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1317627.80	3273173.73	40.201150	-104.522010	
Original Well EleWELL @ 4853.0ft (Original Well Elev)						



PETROLEUM DEVELOPMENT CORP Weld County CO



LEGEND

- Heyde 26ND, Wellbore #1, Plan #1 (7-22-10) VO
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7262'MD & 7112'TVD @ 1146' VS
1.1 deg Inc 63.4 deg AZ

Project: SEC.26-T3N-R64W
Site: Heyde 26ND Pad Sec. 26-T3N-R64W
Well: Heyde 26ND
Plan: Wellbore #1



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.26-T3N-R64W

Heyde 26ND Pad Sec. 26-T3N-R64W

Heyde 26ND

Wellbore #1

Survey: Survey #1

Standard Survey Report

16 September, 2011

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Heyde 26ND
Project:	SEC.26-T3N-R64W	TVD Reference:	WELL @ 4853.0ft (Original Well Elev)
Site:	Heyde 26ND Pad Sec. 26-T3N-R64W	MD Reference:	WELL @ 4853.0ft (Original Well Elev)
Well:	Heyde 26ND	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.26-T3N-R64W, 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	Heyde 26ND Pad Sec. 26-T3N-R64W				
Site Position:		Northing:	1,317,627.81 ft	Latitude:	40.201150
From:	Lat/Long	Easting:	3,273,173.73 ft	Longitude:	-104.522010
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.63 °

Well	Heyde 26ND					
Well Position	+N-S	0.0 ft	Northing:	1,317,627.80 ft	Latitude:	40.201150
	+E-W	0.0 ft	Easting:	3,273,173.73 ft	Longitude:	-104.522010
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,840.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/22/2010	8.84	66.96	53,148

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	111.44	

Survey Program	Date	9/16/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
252.0	7,262.0	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
252.0	0.50	224.00	252.0	-0.8	-0.8	-0.4	0.20	0.20	0.00
464.0	0.25	224.00	464.0	-1.8	-1.7	-1.0	0.12	-0.12	0.00
618.0	1.30	224.00	618.0	-3.3	-3.2	-1.8	0.68	0.68	0.00
800.0	2.50	224.00	799.9	-7.6	-7.4	-4.1	0.66	0.66	0.00
895.0	0.80	170.70	894.8	-9.8	-8.7	-4.5	2.23	-1.79	-56.11
990.0	2.10	124.10	989.8	-11.4	-7.1	-2.5	1.74	1.37	-49.05
1,085.0	3.60	106.00	1,084.7	-13.2	-2.8	2.2	1.82	1.58	-19.05
1,180.0	4.20	109.80	1,179.5	-15.2	3.3	8.6	0.69	0.63	4.00
1,275.0	5.90	104.80	1,274.1	-17.6	11.3	17.0	1.85	1.79	-5.26
1,370.0	7.50	108.20	1,368.4	-20.8	21.9	28.0	1.73	1.68	3.58
1,465.0	9.40	111.60	1,462.4	-25.6	35.0	41.9	2.07	2.00	3.58

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Heyde 26ND
Project:	SEC.26-T3N-R64W	TVD Reference:	WELL @ 4853.0ft (Original Well Elev)
Site:	Heyde 26ND Pad Sec. 26-T3N-R64W	MD Reference:	WELL @ 4853.0ft (Original Well Elev)
Well:	Heyde 26ND	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)
1,560.0	11.60	112.10	1,555.8	-32.1	51.1	59.3	2.32	2.32	0.53
1,655.0	13.60	108.90	1,648.5	-39.3	70.5	80.0	2.23	2.11	-3.37
1,750.0	14.60	107.30	1,740.7	-46.4	92.5	103.1	1.13	1.05	-1.68
1,844.0	16.40	107.70	1,831.2	-54.0	116.4	128.1	1.92	1.91	0.43
1,939.0	17.30	110.30	1,922.2	-63.0	142.5	155.6	1.24	0.95	2.74
2,034.0	17.50	113.40	2,012.8	-73.6	168.8	184.0	1.00	0.21	3.26
2,129.0	17.40	112.20	2,103.4	-84.6	195.1	212.5	0.39	-0.11	-1.26
2,224.0	16.70	110.60	2,194.3	-94.8	221.0	240.4	0.89	-0.74	-1.68
2,319.0	17.70	108.50	2,285.0	-104.2	247.5	268.4	1.24	1.05	-2.21
2,414.0	17.10	110.70	2,375.7	-113.7	274.3	296.8	0.94	-0.63	2.32
2,509.0	16.20	112.10	2,466.7	-123.6	299.6	324.0	1.04	-0.95	1.47
2,604.0	16.30	109.50	2,557.9	-133.0	324.4	350.6	0.77	0.11	-2.74
2,698.0	15.80	112.90	2,648.2	-142.4	348.7	376.6	1.13	-0.53	3.62
2,793.0	17.20	105.70	2,739.3	-151.2	374.1	403.5	2.61	1.47	-7.58
2,888.0	17.80	105.00	2,829.9	-158.8	401.7	431.9	0.67	0.63	-0.74
2,983.0	17.40	107.10	2,920.5	-166.7	429.3	460.5	0.79	-0.42	2.21
3,078.0	16.80	111.60	3,011.3	-176.0	455.6	488.4	1.53	-0.63	4.74
3,172.0	15.70	113.30	3,101.5	-186.0	479.9	514.7	1.27	-1.17	1.81
3,267.0	14.70	109.00	3,193.2	-195.0	503.1	539.6	1.59	-1.05	-4.53
3,362.0	15.60	110.50	3,284.9	-203.4	526.5	564.4	1.03	0.95	1.58
3,457.0	15.40	111.30	3,376.4	-212.5	550.2	589.8	0.31	-0.21	0.84
3,552.0	16.20	106.80	3,467.9	-220.9	574.6	615.6	1.54	0.84	-4.74
3,647.0	16.10	108.20	3,559.1	-228.8	599.8	642.0	0.42	-0.11	1.47
3,742.0	16.30	108.80	3,650.3	-237.2	625.0	668.4	0.27	0.21	0.63
3,836.0	17.00	114.20	3,740.4	-247.1	650.0	695.3	1.81	0.74	5.74
3,931.0	16.70	113.70	3,831.3	-258.3	675.2	722.9	0.35	-0.32	-0.53
4,026.0	16.80	112.60	3,922.3	-269.1	700.3	750.2	0.35	0.11	-1.16
4,121.0	16.40	114.10	4,013.3	-279.8	725.2	777.3	0.62	-0.42	1.58
4,216.0	15.60	112.40	4,104.7	-290.2	749.3	803.5	0.98	-0.84	-1.79
4,310.0	16.40	110.90	4,195.0	-299.7	773.4	829.4	0.96	0.85	-1.60
4,406.0	16.50	110.40	4,287.1	-309.3	798.8	856.6	0.18	0.10	-0.52
4,500.0	15.30	109.90	4,377.5	-318.2	823.0	882.3	1.28	-1.28	-0.53
4,595.0	15.80	111.70	4,469.0	-327.2	846.8	907.8	0.73	0.53	1.89
4,690.0	17.50	113.30	4,560.0	-337.7	871.9	935.0	1.85	1.79	1.68
4,785.0	15.70	110.40	4,651.1	-347.8	897.1	962.1	2.09	-1.89	-3.05
4,880.0	14.60	114.70	4,742.8	-357.3	920.0	987.0	1.65	-1.16	4.53
4,975.0	14.10	116.40	4,834.8	-367.4	941.3	1,010.4	0.69	-0.53	1.79
5,070.0	12.20	114.30	4,927.3	-376.7	960.8	1,032.0	2.06	-2.00	-2.21
5,165.0	11.30	116.90	5,020.3	-385.0	978.2	1,051.3	1.10	-0.95	2.74
5,260.0	10.80	116.00	5,113.6	-393.1	994.5	1,069.4	0.56	-0.53	-0.95
5,348.9	9.10	115.25	5,201.1	-399.8	1,008.4	1,084.7	1.92	-1.91	-0.84
Permit BHL 1325'FNL & 2602'FEL									
5,354.0	9.00	115.20	5,206.1	-400.1	1,009.1	1,085.5	1.92	-1.91	-1.01
5,449.0	6.40	116.30	5,300.3	-405.6	1,020.6	1,098.2	2.74	-2.74	1.16
5,544.0	5.50	113.00	5,394.8	-409.8	1,029.5	1,108.1	1.01	-0.95	-3.47
5,639.0	4.50	105.10	5,489.4	-412.5	1,037.3	1,116.3	1.28	-1.05	-8.32
5,734.0	2.60	116.30	5,584.2	-414.4	1,042.8	1,122.2	2.12	-2.00	11.79
5,829.0	1.10	142.20	5,679.2	-416.1	1,045.3	1,125.1	1.77	-1.58	27.26
5,849.8	1.03	144.21	5,700.0	-416.4	1,045.6	1,125.4	0.38	-0.33	9.65
Drill Target BHL 1325'FNL & 2562'FEL									
5,924.0	0.80	154.10	5,774.2	-417.4	1,046.2	1,126.4	0.38	-0.31	13.33
6,018.0	0.80	135.50	5,868.1	-418.5	1,046.9	1,127.5	0.28	0.00	-19.79
6,113.0	0.80	147.50	5,963.1	-419.5	1,047.7	1,128.6	0.18	0.00	12.63

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Heyde 26ND
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Site:	Heyde 26ND Pad Sec. 26-T3N-R64W	MD Reference:	WELL @ 4853.0ft (Original Well Elev)
Well:	Heyde 26ND	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)
6,208.0	1.00	136.50	6,058.1	-420.7	1,048.7	1,129.9	0.28	0.21	-11.58
6,303.0	0.50	69.50	6,153.1	-421.1	1,049.6	1,130.9	0.98	-0.53	-70.53
6,398.0	0.60	74.20	6,248.1	-420.9	1,050.5	1,131.6	0.12	0.11	4.95
6,494.0	1.10	91.50	6,344.1	-420.8	1,051.9	1,132.9	0.58	0.52	18.02
6,589.0	1.50	81.80	6,439.1	-420.6	1,054.0	1,134.8	0.48	0.42	-10.21
6,684.0	1.30	82.10	6,534.1	-420.3	1,056.3	1,136.9	0.21	-0.21	0.32
6,779.0	1.10	95.10	6,629.0	-420.2	1,058.3	1,138.7	0.35	-0.21	13.68
6,874.0	1.00	106.00	6,724.0	-420.5	1,060.0	1,140.4	0.23	-0.11	11.47
6,969.0	1.00	83.90	6,819.0	-420.7	1,061.6	1,141.9	0.40	0.00	-23.26
7,064.0	0.90	72.60	6,914.0	-420.3	1,063.2	1,143.3	0.22	-0.11	-11.89
7,159.0	1.10	66.70	7,009.0	-419.8	1,064.7	1,144.5	0.24	0.21	-6.21
7,262.0	1.10	63.40	7,112.0	-418.9	1,066.5	1,145.9	0.06	0.00	-3.20
Hardline 75'W of Drill Target BHL									

Checked By: _____	Approved By: _____	Date: _____
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