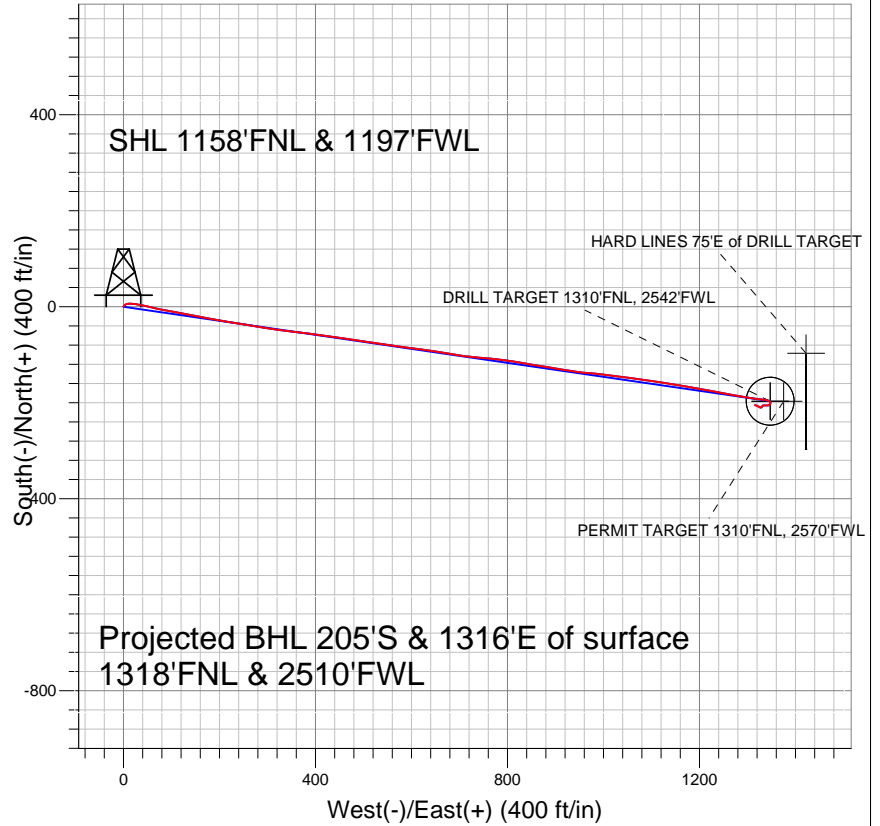
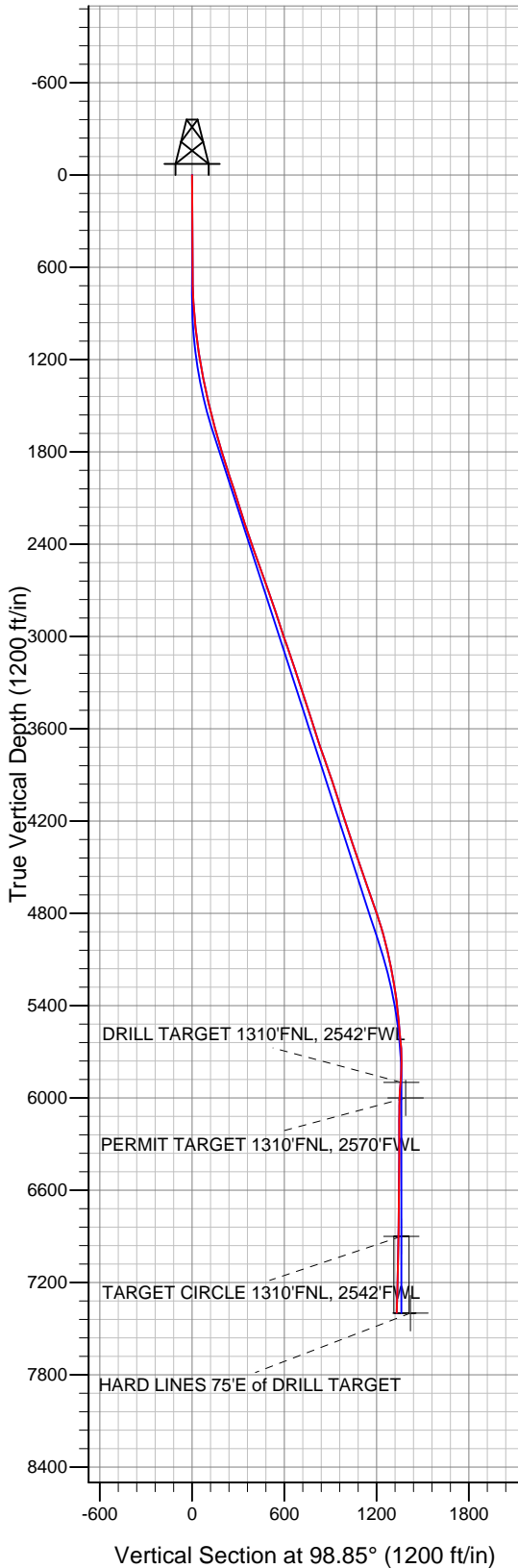


HRM Resources, LLC Weld County, CO



LEGEND

- ▲ Dutton 4-2-22, Wellbore #1, Plan #1 (10-13-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7600'MD & 7397'TVD @ 1331' VS
 1.4 deg Inc 285.9 deg AZ

Project: SEC.22-T4N-R67W
 Site: Dutton 11-22 Pad Sec.22-T4N-R67W
 Well: Dutton 4-2-22
 Plan: Wellbore #1



Directional

HRM Resources, LLC Weld County, CO

SEC.22-T4N-R67W

Dutton 11-22 Pad Sec.22-T4N-R67W

Dutton 4-2-22

Wellbore #1

Survey: Survey #1

Standard Survey Report

18 November, 2010

Company:	HRM Resources, LLC Weld County, CO	Local Co-ordinate Reference:	Well Dutton 4-2-22
Project:	SEC.22-T4N-R67W	TVD Reference:	WELL @ 4883.0ft (Original Well Elev)
Site:	Dutton 11-22 Pad Sec.22-T4N-R67W	MD Reference:	WELL @ 4883.0ft (Original Well Elev)
Well:	Dutton 4-2-22	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.22-T4N-R67W, Weld County, CO		
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	Dutton 11-22 Pad Sec.22-T4N-R67W		
Site Position:		Northing:	1,353,525.58 ft
From:	Lat/Long	Easting:	3,172,324.52 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40° 18' 7.848 N
		Longitude:	104° 52' 55.740 W
		Grid Convergence:	0.40 °

Well	Dutton 4-2-22		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40° 18' 7.596 N
		Longitude:	104° 52' 55.488 W
		Ground Level:	4,870.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/11/2010	9.01	66.97	53,138

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	98.85

Survey Program	Date	11/18/2010		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
679.0	7,600.0	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
679.0	1.00	42.20	679.0	4.4	4.0	3.3	0.15	0.15	0.00
772.0	2.90	71.20	771.9	5.7	6.8	5.8	2.24	2.04	31.18
865.0	4.40	90.70	864.7	6.5	12.5	11.4	2.07	1.61	20.97
957.0	5.50	96.40	956.4	5.9	20.5	19.3	1.31	1.20	6.20
1,051.0	6.80	98.70	1,049.8	4.6	30.4	29.4	1.41	1.38	2.45
1,144.0	8.30	102.10	1,142.0	2.3	42.4	41.6	1.68	1.61	3.66
1,237.0	9.80	103.30	1,233.9	-0.9	56.7	56.2	1.63	1.61	1.29
1,330.0	11.70	101.60	1,325.2	-4.6	73.7	73.5	2.07	2.04	-1.83
1,423.0	12.00	99.90	1,416.2	-8.2	92.4	92.6	0.49	0.32	-1.83
1,516.0	13.40	101.80	1,507.0	-12.0	112.5	113.0	1.57	1.51	2.04
1,608.0	14.60	100.50	1,596.2	-16.3	134.3	135.2	1.35	1.30	-1.41
1,702.0	15.50	101.20	1,687.0	-20.9	158.3	159.6	0.98	0.96	0.74

Company:	HRM Resources, LLC Weld County, CO	Local Co-ordinate Reference:	Well Dutton 4-2-22
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Site:	Dutton 11-22 Pad Sec.22-T4N-R67W	MD Reference:	WELL @ 4883.0ft (Original Well Elev)
Well:	Dutton 4-2-22	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)
1,794.0	17.20	99.10	1,775.3	-25.5	183.8	185.5	1.96	1.85	-2.28
1,887.0	17.70	99.80	1,864.0	-30.0	211.3	213.4	0.58	0.54	0.75
1,980.0	18.20	99.20	1,952.5	-34.8	239.6	242.1	0.57	0.54	-0.65
2,073.0	17.90	100.30	2,040.9	-39.6	268.0	270.9	0.49	-0.32	1.18
2,166.0	17.70	99.10	2,129.5	-44.4	296.0	299.3	0.45	-0.22	-1.29
2,258.0	17.30	97.00	2,217.2	-48.3	323.4	327.0	0.81	-0.43	-2.28
2,353.0	18.60	96.60	2,307.6	-51.8	352.4	356.2	1.37	1.37	-0.42
2,446.0	18.60	97.20	2,395.7	-55.3	381.9	385.9	0.21	0.00	0.65
2,539.0	20.10	97.70	2,483.5	-59.3	412.4	416.7	1.62	1.61	0.54
2,632.0	20.00	97.70	2,570.8	-63.6	444.0	448.5	0.11	-0.11	0.00
2,725.0	19.80	98.90	2,658.3	-68.2	475.4	480.2	0.49	-0.22	1.29
2,818.0	18.50	98.80	2,746.1	-72.9	505.5	510.7	1.40	-1.40	-0.11
2,911.0	18.90	98.40	2,834.2	-77.3	535.0	540.5	0.45	0.43	-0.43
3,004.0	18.20	98.40	2,922.4	-81.7	564.3	570.1	0.75	-0.75	0.00
3,097.0	18.20	95.70	3,010.7	-85.2	593.1	599.1	0.91	0.00	-2.90
3,190.0	19.60	98.70	3,098.7	-89.0	622.9	629.2	1.83	1.51	3.23
3,283.0	18.60	98.40	3,186.6	-93.5	653.0	659.7	1.08	-1.08	-0.32
3,375.0	18.30	99.90	3,273.9	-98.2	681.8	688.8	0.61	-0.33	1.63
3,468.0	17.60	98.20	3,362.3	-102.7	710.1	717.4	0.94	-0.75	-1.83
3,561.0	18.40	94.50	3,450.8	-105.8	738.6	746.1	1.50	0.86	-3.98
3,653.0	17.90	95.10	3,538.2	-108.2	767.2	774.7	0.58	-0.54	0.65
3,746.0	17.40	97.60	3,626.8	-111.4	795.2	802.9	0.98	-0.54	2.69
3,839.0	19.30	99.70	3,715.1	-115.8	824.1	832.1	2.16	2.04	2.26
3,931.0	19.20	100.20	3,802.0	-121.0	854.0	862.5	0.21	-0.11	0.54
4,024.0	19.40	98.80	3,889.7	-126.1	884.3	893.2	0.54	0.22	-1.51
4,117.0	18.30	99.20	3,977.7	-130.8	914.0	923.3	1.19	-1.18	0.43
4,210.0	17.60	98.60	4,066.2	-135.2	942.3	951.9	0.78	-0.75	-0.65
4,303.0	18.10	93.70	4,154.7	-138.3	970.6	980.4	1.70	0.54	-5.27
4,396.0	18.00	97.40	4,243.2	-141.0	999.3	1,009.1	1.24	-0.11	3.98
4,489.0	17.90	97.30	4,331.6	-144.7	1,027.7	1,037.8	0.11	-0.11	-0.11
4,581.0	19.60	97.50	4,418.8	-148.5	1,057.1	1,067.3	1.85	1.85	0.22
4,675.0	19.10	98.10	4,507.4	-152.7	1,087.9	1,098.5	0.57	-0.53	0.64
4,767.0	19.40	98.40	4,594.3	-157.1	1,117.9	1,128.8	0.34	0.33	0.33
4,860.0	19.00	99.70	4,682.1	-161.9	1,148.1	1,159.4	0.63	-0.43	1.40
4,953.0	19.30	99.60	4,770.0	-167.0	1,178.2	1,189.9	0.32	0.32	-0.11
5,046.0	17.60	100.70	4,858.2	-172.2	1,207.2	1,219.3	1.87	-1.83	1.18
5,139.0	15.10	101.20	4,947.4	-177.2	1,232.9	1,245.5	2.69	-2.69	0.54
5,231.0	13.30	99.50	5,036.6	-181.2	1,255.1	1,268.0	2.01	-1.96	-1.85
5,325.0	11.70	100.40	5,128.4	-184.7	1,275.1	1,288.4	1.71	-1.70	0.96
5,417.0	10.20	99.60	5,218.7	-187.8	1,292.3	1,305.8	1.64	-1.63	-0.87
5,510.0	8.60	98.60	5,310.5	-190.2	1,307.3	1,321.0	1.73	-1.72	-1.08
5,603.0	6.60	97.00	5,402.6	-191.9	1,319.5	1,333.3	2.16	-2.15	-1.72
5,696.0	5.40	97.80	5,495.1	-193.1	1,329.2	1,343.0	1.29	-1.29	0.86
5,789.0	5.20	95.30	5,587.7	-194.1	1,337.7	1,351.6	0.33	-0.22	-2.69
5,881.0	5.10	121.70	5,679.4	-196.6	1,345.3	1,359.6	2.56	-0.11	28.70
5,974.0	4.30	201.70	5,772.1	-202.1	1,347.5	1,362.6	6.53	-0.86	86.02
6,067.0	4.90	269.40	5,864.9	-205.3	1,342.3	1,357.9	5.53	0.65	72.80
6,101.7	4.34	269.60	5,899.4	-205.4	1,339.5	1,355.1	1.61	-1.61	0.59
DRILL TARGET 1310'FNL, 2542'FWL									
6,160.0	3.40	270.10	5,957.7	-205.4	1,335.6	1,351.2	1.61	-1.61	0.85
6,200.7	2.46	262.70	5,998.3	-205.5	1,333.5	1,349.2	2.49	-2.32	-18.18
PERMIT TARGET 1310'FNL, 2570'FWL									
6,253.0	1.40	239.00	6,050.6	-206.0	1,331.8	1,347.7	2.49	-2.02	-45.30
6,346.0	0.30	162.40	6,143.6	-206.8	1,330.9	1,346.9	1.46	-1.18	-82.37

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Site:	Dutton 11-22 Pad Sec.22-T4N-R67W	MD Reference:	WELL @ 4883.0ft (Origianl Well Elev)
Well:	Dutton 4-2-22	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)	
6,439.0	0.30	189.20	6,236.6	-207.3	1,331.0	1,347.0	0.15	0.00	28.82	
6,532.0	0.30	210.80	6,329.6	-207.7	1,330.8	1,346.9	0.12	0.00	23.23	
6,625.0	0.40	235.60	6,422.6	-208.1	1,330.4	1,346.6	0.19	0.11	26.67	
6,718.0	0.40	207.30	6,515.6	-208.6	1,330.0	1,346.2	0.21	0.00	-30.43	
6,810.0	0.80	227.00	6,607.6	-209.3	1,329.4	1,345.7	0.48	0.43	21.41	
6,903.0	0.80	251.00	6,700.5	-209.9	1,328.3	1,344.8	0.36	0.00	25.81	
6,996.0	1.10	288.60	6,793.5	-209.9	1,326.8	1,343.3	0.73	0.32	40.43	
7,089.0	0.40	305.20	6,886.5	-209.4	1,325.7	1,342.1	0.78	-0.75	17.85	
7,102.4	0.46	303.97	6,899.9	-209.3	1,325.6	1,342.0	0.43	0.43	-9.21	
TARGET CIRCLE 1310'FNL, 2542'FWL										
7,182.0	0.80	300.30	6,979.5	-208.9	1,324.9	1,341.2	0.43	0.43	-4.61	
7,275.0	1.40	296.00	7,072.5	-208.1	1,323.3	1,339.6	0.65	0.65	-4.62	
7,368.0	1.60	295.40	7,165.5	-207.0	1,321.1	1,337.2	0.22	0.22	-0.65	
7,460.0	1.50	292.60	7,257.4	-206.0	1,318.8	1,334.8	0.14	-0.11	-3.04	
7,556.0	1.40	285.90	7,353.4	-205.2	1,316.5	1,332.4	0.20	-0.10	-6.98	
7,600.0	1.40	285.90	7,397.4	-204.9	1,315.5	1,331.4	0.00	0.00	0.00	
HARD LINES 75'E of DRILL TARGET										

Checked By: _____ Approved By: _____ Date: _____