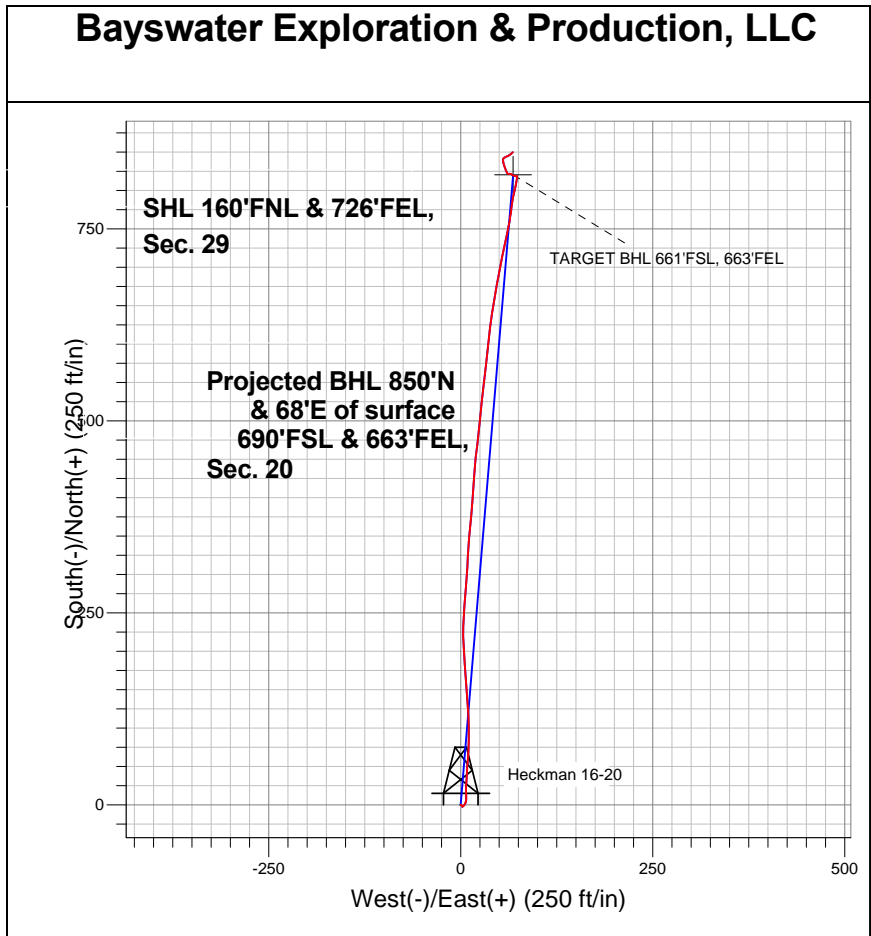
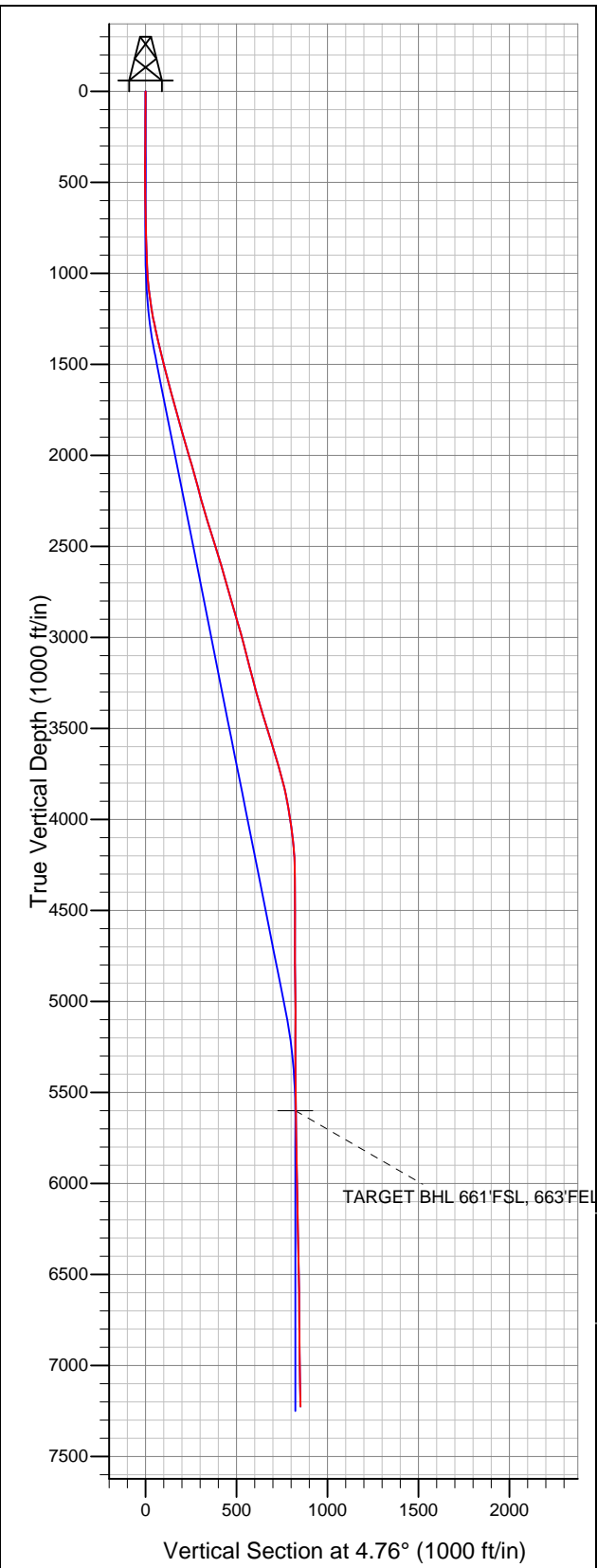




Well Name: Heckman 16-20
 Surface Location: Heckman/Winter Pad Sec.29-T7N-R67W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4971.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1444521.34	3163825.13	40.552116	-104.910454	

 Original Well Elev WELL @ 4987.0ft (Original Well Elev)



LEGEND

- Heckman 16-20, Wellbore #1, Plan #1 (4-23-13) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
 7332'MD & 7225'TVD @ 852'VS
 1.40 deg Inc 48.10 deg AZ

Project: SEC.29-T7N-R67W
 Site: Heckman/Winter Pad Sec.29-T7N-R67W
 Well: Heckman 16-20
 Plan: Wellbore #1



Bayswater Exploration & Production, LLC

SEC.29-T7N-R67W

Heckman/Winter Pad Sec.29-T7N-R67W

Heckman 16-20

Wellbore #1

Survey: Survey #1

Standard Survey Report

16 December, 2013



Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Heckman 16-20
Project:	SEC.29-T7N-R67W	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site:	Heckman/Winter Pad Sec.29-T7N-R67W	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Well:	Heckman 16-20	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.29-T7N-R67W, 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	Heckman/Winter Pad Sec.29-T7N-R67W				
Site Position:		Northing:	1,444,521.15ft	Latitude:	40.552116
From:	Lat/Long	Easting:	3,163,795.02ft	Longitude:	-104.910562
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.38 °

Well	Heckman 16-20					
Well Position	+N/-S	0.0 ft	Northing:	1,444,521.34 ft	Latitude:	40.552116
	+E/-W	0.0 ft	Easting:	3,163,825.13 ft	Longitude:	-104.910454
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,971.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/30/2013	8.70	67.08	52,997

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	4.76	

Survey Program	Date	12/16/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
68.0	7,332.0	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	
68.0	0.50	93.80	68.0	0.0	0.3	0.0	0.74	0.74	0.00	
157.0	0.40	127.50	157.0	-0.2	0.9	-0.2	0.31	-0.11	37.87	
247.0	0.60	134.00	247.0	-0.8	1.5	-0.6	0.23	0.22	7.22	
337.0	0.70	181.00	337.0	-1.6	1.8	-1.5	0.58	0.11	52.22	
429.0	0.40	149.00	429.0	-2.5	2.0	-2.3	0.45	-0.33	-34.78	
520.0	1.10	45.80	520.0	-2.1	2.8	-1.9	1.38	0.77	-113.41	
610.0	1.10	41.00	610.0	-0.9	4.0	-0.5	0.10	0.00	-5.33	
701.0	1.10	38.80	700.9	0.5	5.1	0.9	0.05	0.00	-2.42	
800.0	1.80	27.20	799.9	2.6	6.4	3.1	0.76	0.71	-11.72	
928.0	2.10	359.70	927.8	6.7	7.3	7.3	0.76	0.23	-21.48	
1,057.0	5.40	358.50	1,056.5	15.2	7.1	15.7	2.56	2.56	-0.93	
1,185.0	9.10	3.30	1,183.5	31.3	7.6	31.8	2.93	2.89	3.75	

Company:	Bayswater Exploration & Production, LLC	Local Co-ordinate Reference:	Well Heckman 16-20
Project:	SEC.29-T7N-R67W	TVD Reference:	WELL @ 4987.0ft (Original Well Elev)
Site:	Heckman/Winter Pad Sec.29-T7N-R67W	MD Reference:	WELL @ 4987.0ft (Original Well Elev)
Well:	Heckman 16-20	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)	
1,313.0	12.50	4.30	1,309.2	55.2	9.2	55.8	2.66	2.66	0.78	
1,441.0	13.80	1.50	1,433.9	84.3	10.6	84.9	1.13	1.02	-2.19	
1,570.0	14.40	356.70	1,559.0	115.7	10.1	116.1	1.02	0.47	-3.72	
1,698.0	15.10	355.70	1,682.8	148.2	7.9	148.3	0.58	0.55	-0.78	
1,826.0	16.40	355.50	1,805.9	182.8	5.3	182.6	1.02	1.02	-0.16	
1,955.0	16.50	358.50	1,929.7	219.3	3.4	218.8	0.66	0.08	2.33	
2,083.0	15.50	6.10	2,052.7	254.5	4.7	254.0	1.81	-0.78	5.94	
2,211.0	15.60	2.50	2,176.0	288.7	7.3	288.3	0.76	0.08	-2.81	
2,339.0	15.70	4.00	2,299.3	323.2	9.2	322.8	0.33	0.08	1.17	
2,468.0	18.00	5.50	2,422.8	360.4	12.4	360.2	1.81	1.78	1.16	
2,596.0	16.90	3.80	2,544.9	398.7	15.5	398.6	0.95	-0.86	-1.33	
2,724.0	15.70	4.30	2,667.7	434.5	18.0	434.5	0.94	-0.94	0.39	
2,852.0	16.40	7.60	2,790.7	469.7	21.7	469.9	0.90	0.55	2.58	
2,980.0	16.10	4.80	2,913.6	505.3	25.6	505.7	0.66	-0.23	-2.19	
3,109.0	14.80	7.10	3,038.0	539.5	29.1	540.0	1.11	-1.01	1.78	
3,237.0	14.20	6.20	3,161.9	571.3	32.8	572.0	0.50	-0.47	-0.70	
3,365.0	15.60	5.90	3,285.6	604.0	36.3	604.9	1.10	1.09	-0.23	
3,493.0	16.80	8.70	3,408.5	639.4	40.9	640.6	1.12	0.94	2.19	
3,622.0	17.50	10.10	3,531.7	677.0	47.1	678.5	0.63	0.54	1.09	
3,750.0	16.60	11.50	3,654.1	713.8	54.1	715.8	0.77	-0.70	1.09	
3,878.0	15.20	12.00	3,777.2	748.1	61.2	750.6	1.10	-1.09	0.39	
4,007.0	10.50	6.40	3,903.0	776.4	66.1	779.2	3.77	-3.64	-4.34	
4,135.0	8.10	13.80	4,029.3	796.7	69.5	799.8	2.09	-1.88	5.78	
4,263.0	5.30	9.60	4,156.4	811.3	72.7	814.6	2.22	-2.19	-3.28	
4,391.0	1.10	344.80	4,284.2	818.3	73.3	821.6	3.38	-3.28	-19.38	
4,520.0	0.40	193.60	4,413.2	819.1	72.9	822.3	1.13	-0.54	-117.21	
4,648.0	0.40	252.90	4,541.2	818.5	72.4	821.7	0.31	0.00	46.33	
4,819.0	0.80	279.30	4,712.1	818.6	70.6	821.6	0.28	0.23	15.44	
4,989.0	1.70	306.80	4,882.1	820.3	67.4	823.0	0.62	0.53	16.18	
5,160.0	0.60	254.40	5,053.1	821.5	64.5	824.1	0.83	-0.64	-30.64	
5,331.0	0.90	278.90	5,224.1	821.5	62.3	823.8	0.25	0.18	14.33	
5,502.0	0.20	349.10	5,395.0	822.0	61.0	824.2	0.50	-0.41	41.05	
5,673.0	0.90	328.40	5,566.0	823.4	60.2	825.6	0.42	0.41	-12.11	
5,706.8	0.94	329.95	5,599.9	823.9	59.9	826.0	0.14	0.11	4.58	
TARGET BHL 661'FSL, 663'FEL										
5,844.0	1.10	335.10	5,737.0	826.1	58.8	828.1	0.14	0.12	3.75	
6,014.0	1.10	346.40	5,907.0	829.1	57.7	831.1	0.13	0.00	6.65	
6,185.0	1.20	337.80	6,077.9	832.4	56.7	834.2	0.12	0.06	-5.03	
6,356.0	1.50	349.20	6,248.9	836.2	55.6	838.0	0.23	0.18	6.67	
6,527.0	1.10	359.90	6,419.9	840.1	55.2	841.8	0.27	-0.23	6.26	
6,698.0	1.10	63.20	6,590.8	842.5	56.6	844.3	0.68	0.00	37.02	
6,869.0	1.00	66.30	6,761.8	843.8	59.4	845.8	0.07	-0.06	1.81	
7,040.0	1.10	66.00	6,932.8	845.1	62.3	847.3	0.06	0.06	-0.18	
7,211.0	1.60	46.00	7,103.7	847.4	65.5	849.9	0.40	0.29	-11.70	
7,332.0	1.40	48.10	7,224.7	849.6	67.8	852.3	0.17	-0.17	1.74	

Checked By: _____ Approved By: _____ Date: _____