



# **MORNING GUN EXPLORATION**

**WELD COUNTY, COLORADO (NAD 83)**

**SW SE SEC. 12 T7N R59W 6th P.M.**

**CASTOR 7-59 12-1-10**

**ORIGINAL WELLBORE**

**11 September, 2018**

**Plan: PROPOSAL #1**



WELD COUNTY, COLORADO (NAD 83)  
SW SE SEC. 12 T7N R59W 6th P.M.  
CASTOR 7-59 12-1-10  
ORIGINAL WELLBORE  
PROPOSAL #1

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 360ft FSL & 2337ft FEL of Sec 12		
300.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (2°/100ft BUR)		
984.40	991.08	13.82	108.92	-26.90	78.47	-17.04	82.95	EOB TO 13.82° INC		
4594.54	4708.88	13.82	108.92	-314.89	918.66	-199.45	971.13	END OF TANGENT		
5278.94	5399.96	0.00	0.00	-341.79	997.13	-216.49	1054.08	EOD TO VERTICAL		
5378.94	5499.96	0.00	0.00	-341.79	997.13	-216.49	1054.08	KOP (10°/100ft BUR)		
5951.90	6399.96	90.00	1.31	231.02	1010.23	353.58	1627.04	BPI: 600ft FSL & 1330ft FEL of Sec 12		
5951.90	15802.01	90.00	1.32	9630.60	1225.58	9708.22	11029.09	EPI: 600ft FNL & 1297ft FEL of Sec 1		
5951.90	15808.88	90.00	1.11	9637.48	1225.73	9715.06	11035.97	EOT TO 1.11° AZ		
5951.90	16101.90	90.00	1.11	9930.44	1231.40	10006.50	11328.98	BHL: 300ft FNL & 1297ft FEL of Sec 1		

PROPOSED LOCAL COORDINATES:

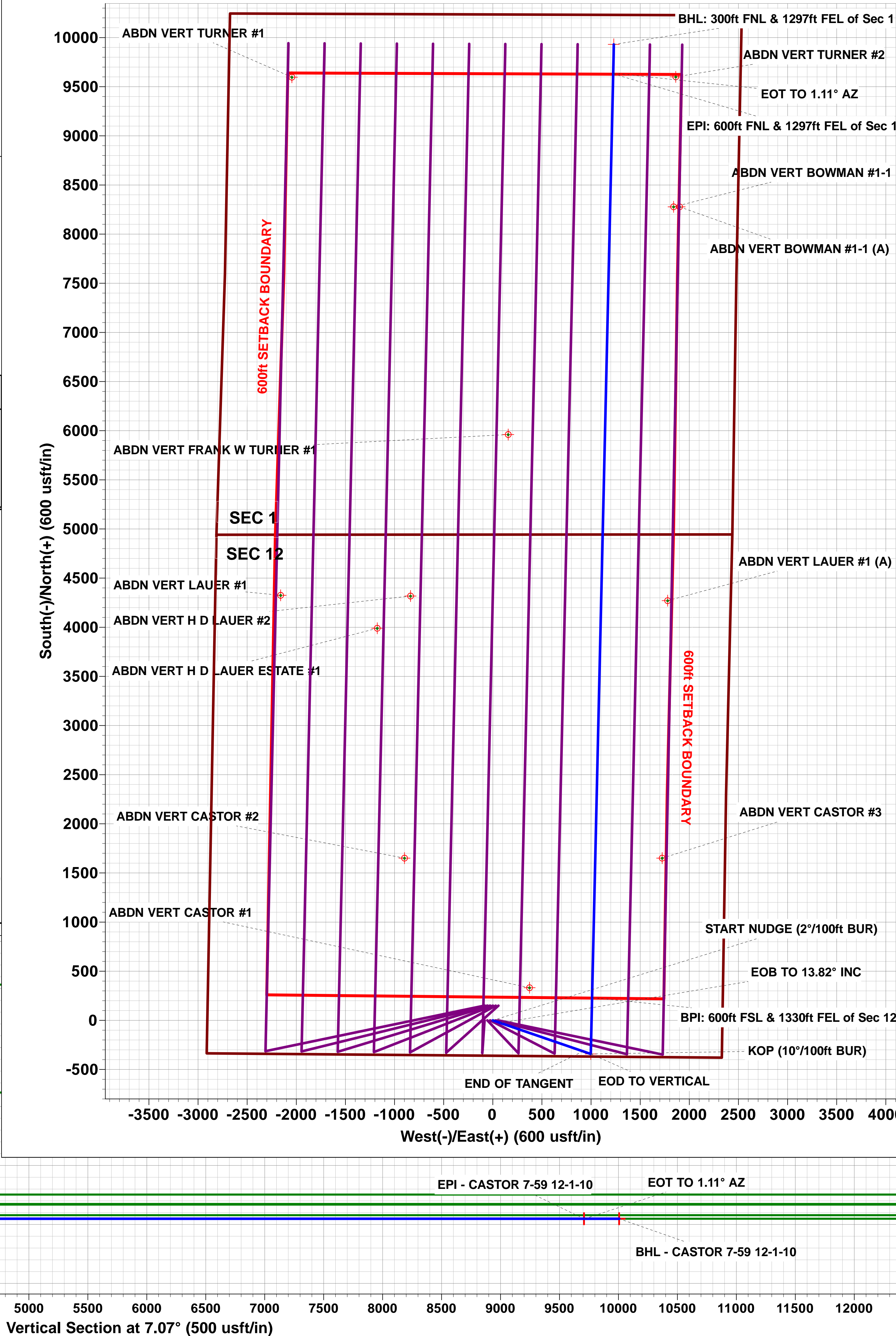
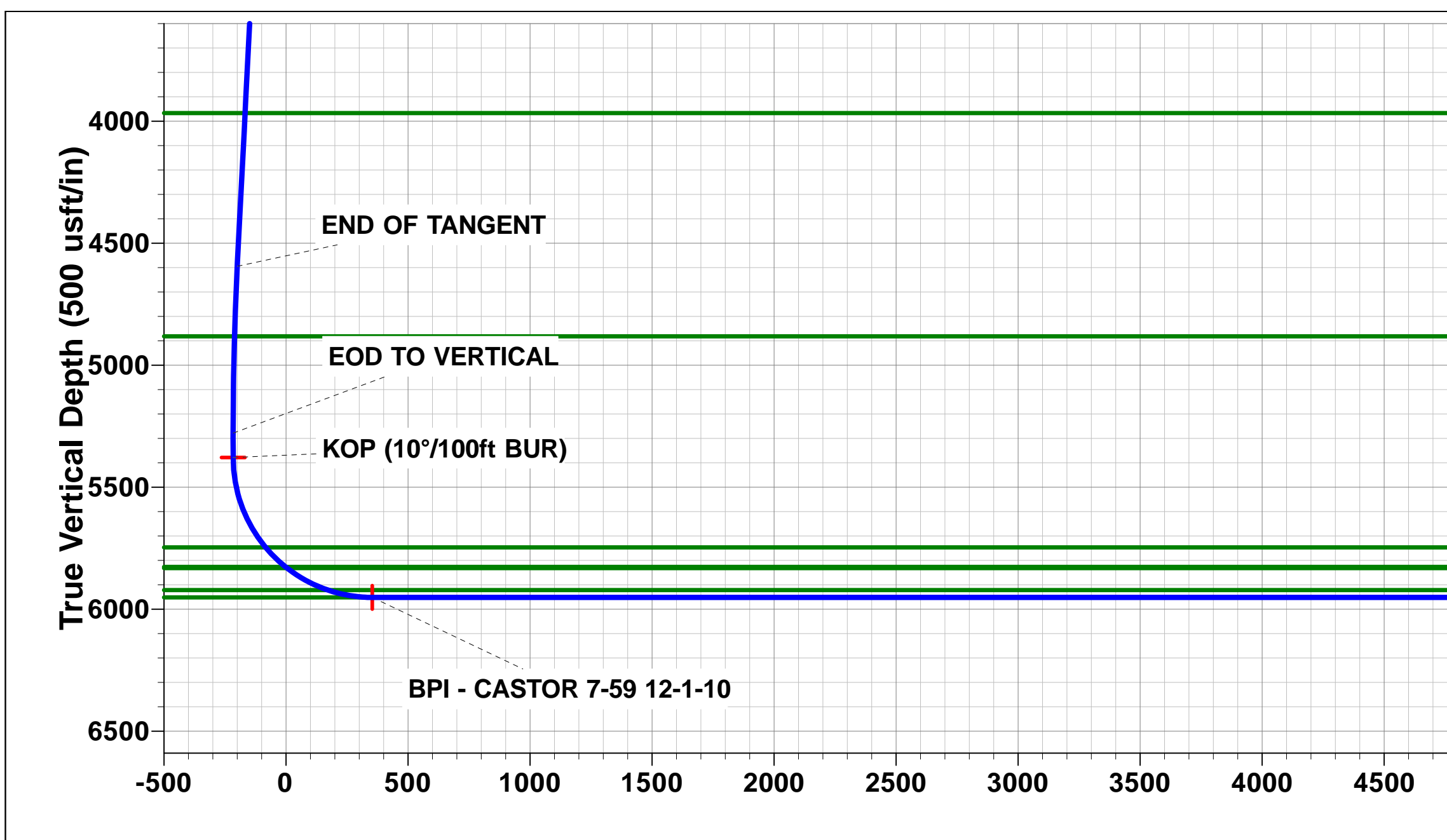
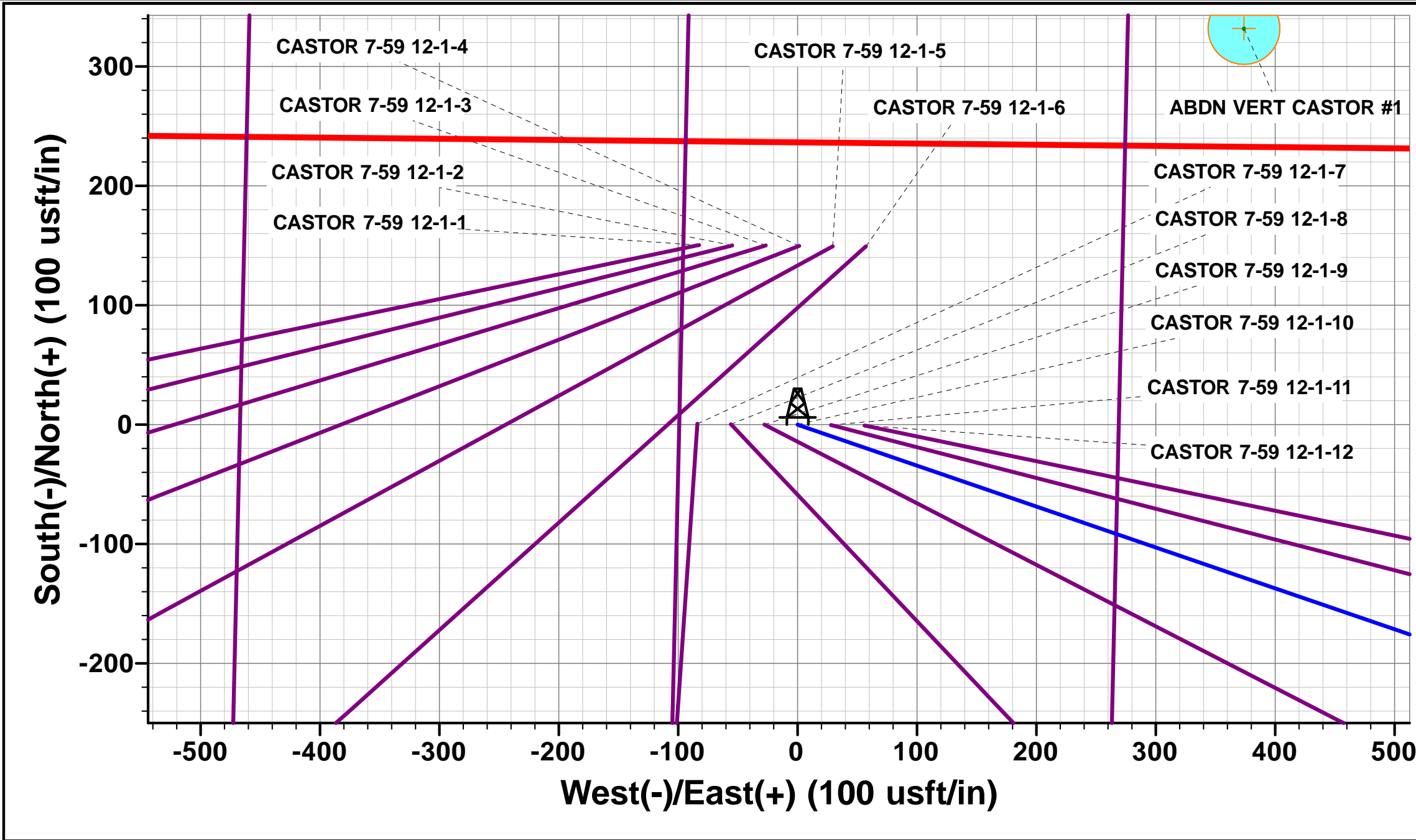
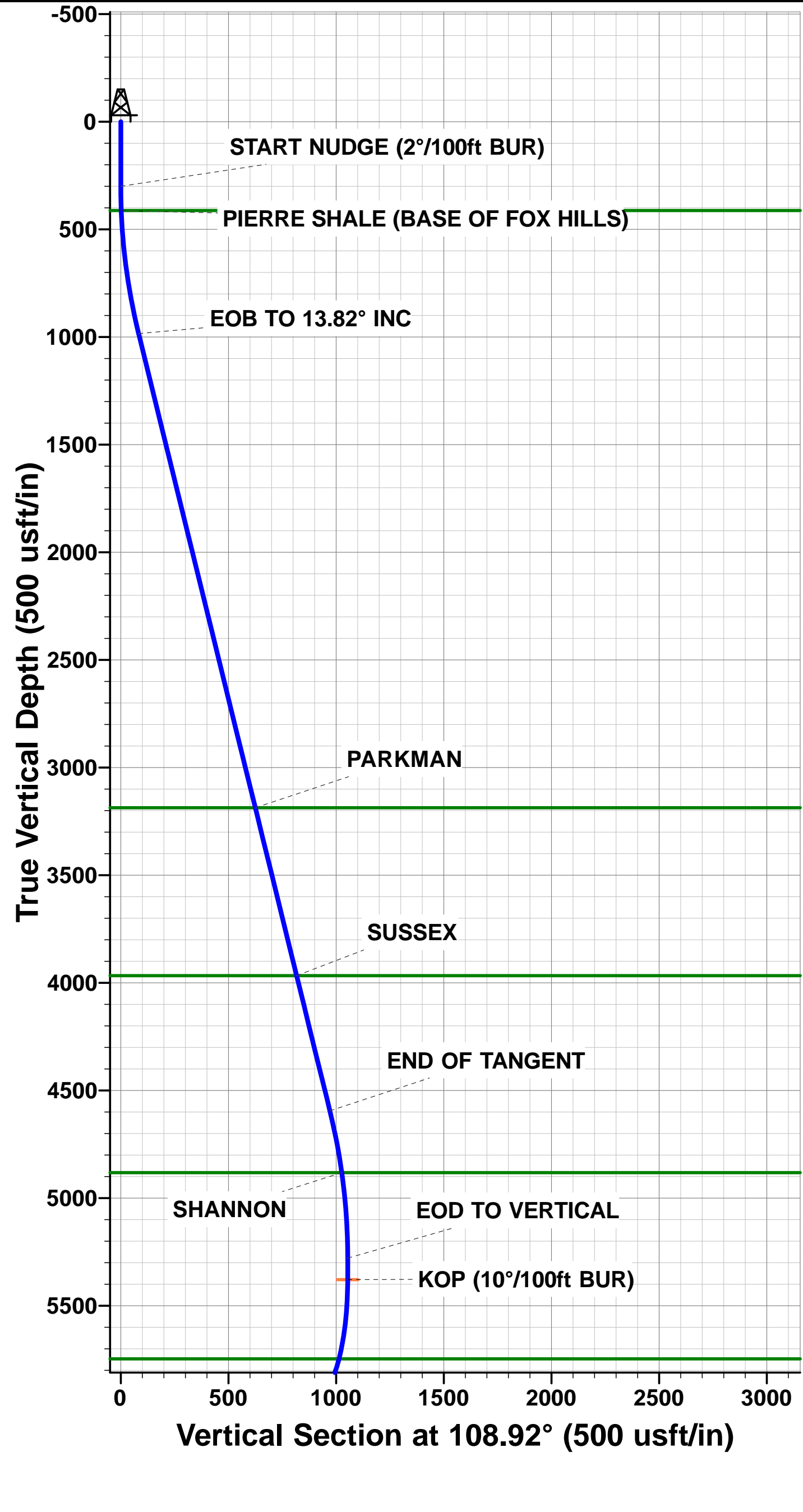
SHL: 360ft FSL & 2337ft FEL Sec 12

BPI: 600ft FSL & 1330ft FEL Sec 12

EPI: 600ft FNL & 1297ft FEL Sec 1

BHL: 300ft FNL & 1297ft FEL of Sec 1

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - CASTOR 7-59 12-1-10	5378.94	-341.79	997.13	40.581947	-103.921232
BPI - CASTOR 7-59 12-1-10	5951.90	231.02	1010.23	40.583519	-103.921185
EPI - CASTOR 7-59 12-1-10	5951.90	9630.60	1225.58	40.609319	-103.920408
BHL - CASTOR 7-59 12-1-10	5951.90	9930.44	1231.40	40.610142	-103.920387



# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 12-1-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

<b>Project</b>	WELD COUNTY, COLORADO (NAD 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site	SW SE SEC. 12 T7N R59W 6th P.M.				
Site Position:		Northing:	1,459,221.09 usft	Latitude:	40.583298
From:	Lat/Long	Easting:	3,437,411.71 usft	Longitude:	-103.925119
Position Uncertainty:	0.00 usft	Slot Radius:	1.10000ft	Grid Convergence:	1.02 °

Well		CASTOR 7-59 12-1-10				
Well Position	+N-S	-150.49 usft	Northing:	1,459,072.10 usft	Latitude:	40.582885
	+E-W	82.50 usft	Easting:	3,437,496.87 usft	Longitude:	-103.924822
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,876.90 usft

<b>Wellbore</b>	ORIGINAL WELLBORE				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/09/2018	7.64	67.09	52,430

<b>Design</b>	PROPOSAL #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	5,951.90	0.00	0.00	7.07

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.00	0.00	0.00	0.00	-4,901.90	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-4,601.90	0.00	0.00	0.00	0.00	0.00	0.00	
991.08	13.82	108.92	984.40	-3,917.50	-26.90	78.47	2.00	2.00	0.00	108.92	
4,708.88	13.82	108.92	4,594.54	-307.36	-314.89	918.66	0.00	0.00	0.00	0.00	
5,399.96	0.00	0.00	5,278.94	377.04	-341.79	997.13	2.00	-2.00	0.00	180.00	
5,499.96	0.00	0.00	5,378.94	477.04	-341.79	997.13	0.00	0.00	0.00	0.00	KOP - CASTOR 7-59
6,399.96	90.00	1.31	5,951.90	1,050.00	231.02	1,010.23	10.00	10.00	0.15	1.31	BPI - CASTOR 7-59
15,802.01	90.00	1.32	5,951.90	1,050.00	9,630.60	1,225.58	0.00	0.00	0.00	92.75	EPI - CASTOR 7-59
15,808.88	90.00	1.11	5,951.90	1,050.00	9,637.48	1,225.73	3.00	0.00	-3.00	-89.96	
16,101.90	90.00	1.11	5,951.90	1,050.00	9,930.44	1,231.40	0.00	0.00	0.00	0.00	BHL - CASTOR 7-59

# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 12-1-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>SHL: 360ft FSL &amp; 2337ft FEL of Sec 12</b>										
0.00	0.00	0.00	0.00	4,901.90	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,801.90	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,701.90	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
300.00	0.00	0.00	300.00	4,601.90	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	108.92	399.98	4,501.92	-0.57	1.65	-0.36	2.00	2.00	0.00
<b>PIERRE SHALE (BASE OF FOX HILLS)</b>										
412.93	2.26	108.92	412.90	4,489.00	-0.72	2.11	-0.46	2.00	2.00	0.00
500.00	4.00	108.92	499.84	4,402.06	-2.26	6.60	-1.43	2.00	2.00	0.00
600.00	6.00	108.92	599.45	4,302.45	-5.09	14.85	-3.22	2.00	2.00	0.00
700.00	8.00	108.92	698.70	4,203.20	-9.04	26.37	-5.73	2.00	2.00	0.00
800.00	10.00	108.92	797.47	4,104.43	-14.11	41.17	-8.94	2.00	2.00	0.00
900.00	12.00	108.92	895.62	4,006.28	-20.30	59.22	-12.86	2.00	2.00	0.00
<b>EOB TO 13.82° INC</b>										
991.08	13.82	108.92	984.40	3,917.50	-26.90	78.47	-17.04	2.00	2.00	0.00
1,000.00	13.82	108.92	993.06	3,908.84	-27.59	80.49	-17.47	0.00	0.00	0.00
1,100.00	13.82	108.92	1,090.16	3,811.74	-35.33	103.09	-22.38	0.00	0.00	0.00
1,200.00	13.82	108.92	1,187.27	3,714.63	-43.08	125.68	-27.29	0.00	0.00	0.00
1,300.00	13.82	108.92	1,284.37	3,617.53	-50.83	148.28	-32.19	0.00	0.00	0.00
1,400.00	13.82	108.92	1,381.48	3,520.42	-58.57	170.88	-37.10	0.00	0.00	0.00
1,500.00	13.82	108.92	1,478.58	3,423.32	-66.32	193.48	-42.01	0.00	0.00	0.00
1,600.00	13.82	108.92	1,575.69	3,326.21	-74.07	216.08	-46.91	0.00	0.00	0.00
1,700.00	13.82	108.92	1,672.79	3,229.11	-81.81	238.68	-51.82	0.00	0.00	0.00
1,800.00	13.82	108.92	1,769.89	3,132.01	-89.56	261.28	-56.73	0.00	0.00	0.00
1,900.00	13.82	108.92	1,867.00	3,034.90	-97.31	283.88	-61.63	0.00	0.00	0.00
2,000.00	13.82	108.92	1,964.10	2,937.80	-105.05	306.48	-66.54	0.00	0.00	0.00
2,100.00	13.82	108.92	2,061.21	2,840.69	-112.80	329.08	-71.45	0.00	0.00	0.00
2,200.00	13.82	108.92	2,158.31	2,743.59	-120.55	351.68	-76.35	0.00	0.00	0.00
2,300.00	13.82	108.92	2,255.42	2,646.48	-128.29	374.27	-81.26	0.00	0.00	0.00
2,400.00	13.82	108.92	2,352.52	2,549.38	-136.04	396.87	-86.16	0.00	0.00	0.00
2,500.00	13.82	108.92	2,449.63	2,452.27	-143.78	419.47	-91.07	0.00	0.00	0.00
2,600.00	13.82	108.92	2,546.73	2,355.17	-151.53	442.07	-95.98	0.00	0.00	0.00
2,700.00	13.82	108.92	2,643.83	2,258.07	-159.28	464.67	-100.88	0.00	0.00	0.00
2,800.00	13.82	108.92	2,740.94	2,160.96	-167.02	487.27	-105.79	0.00	0.00	0.00
2,900.00	13.82	108.92	2,838.04	2,063.86	-174.77	509.87	-110.70	0.00	0.00	0.00
3,000.00	13.82	108.92	2,935.15	1,966.75	-182.52	532.47	-115.60	0.00	0.00	0.00
3,100.00	13.82	108.92	3,032.25	1,869.65	-190.26	555.07	-120.51	0.00	0.00	0.00
3,200.00	13.82	108.92	3,129.36	1,772.54	-198.01	577.67	-125.42	0.00	0.00	0.00
<b>PARKMAN</b>										
3,259.26	13.82	108.92	3,186.90	1,715.00	-202.60	591.06	-128.32	0.00	0.00	0.00
3,300.00	13.82	108.92	3,226.46	1,675.44	-205.76	600.27	-130.32	0.00	0.00	0.00
3,400.00	13.82	108.92	3,323.57	1,578.33	-213.50	622.87	-135.23	0.00	0.00	0.00
3,500.00	13.82	108.92	3,420.67	1,481.23	-221.25	645.46	-140.14	0.00	0.00	0.00
3,600.00	13.82	108.92	3,517.77	1,384.13	-228.99	668.06	-145.04	0.00	0.00	0.00
3,700.00	13.82	108.92	3,614.88	1,287.02	-236.74	690.66	-149.95	0.00	0.00	0.00
3,800.00	13.82	108.92	3,711.98	1,189.92	-244.49	713.26	-154.86	0.00	0.00	0.00
3,900.00	13.82	108.92	3,809.09	1,092.81	-252.23	735.86	-159.76	0.00	0.00	0.00
4,000.00	13.82	108.92	3,906.19	995.71	-259.98	758.46	-164.67	0.00	0.00	0.00
<b>SUSSEX</b>										
4,062.52	13.82	108.92	3,966.90	935.00	-264.82	772.59	-167.74	0.00	0.00	0.00
4,100.00	13.82	108.92	4,003.30	898.60	-267.73	781.06	-169.57	0.00	0.00	0.00
4,200.00	13.82	108.92	4,100.40	801.50	-275.47	803.66	-174.48	0.00	0.00	0.00



# Planning Report

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<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

## Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.00	13.82	108.92	4,197.51	704.39	-283.22	826.26	-179.39	0.00	0.00	0.00
4,400.00	13.82	108.92	4,294.61	607.29	-290.97	848.86	-184.29	0.00	0.00	0.00
4,500.00	13.82	108.92	4,391.71	510.19	-298.71	871.46	-189.20	0.00	0.00	0.00
4,600.00	13.82	108.92	4,488.82	413.08	-306.46	894.05	-194.11	0.00	0.00	0.00
4,700.00	13.82	108.92	4,585.92	315.98	-314.20	916.65	-199.01	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,708.88</b>	<b>13.82</b>	<b>108.92</b>	<b>4,594.54</b>	<b>307.36</b>	<b>-314.89</b>	<b>918.66</b>	<b>-199.45</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.00	12.00	108.92	4,683.36	218.54	-321.49	937.92	-203.63	2.00	-2.00	0.00
4,900.00	10.00	108.92	4,781.52	120.38	-327.68	955.97	-207.55	2.00	-2.00	0.00
5,000.00	8.00	108.92	4,880.28	21.62	-332.75	970.76	-210.76	2.00	-2.00	0.00
<b>SHANNON</b>										
<b>5,001.64</b>	<b>7.97</b>	<b>108.92</b>	<b>4,881.90</b>	<b>20.00</b>	<b>-332.83</b>	<b>970.98</b>	<b>-210.81</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,100.00	6.00	108.92	4,979.53	-77.63	-336.70	982.29	-213.26	2.00	-2.00	0.00
5,200.00	4.00	108.92	5,079.14	-177.24	-339.53	990.53	-215.05	2.00	-2.00	0.00
5,300.00	2.00	108.92	5,179.00	-277.10	-341.22	995.48	-216.13	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,399.96</b>	<b>0.00</b>	<b>0.00</b>	<b>5,278.94</b>	<b>-377.04</b>	<b>-341.79</b>	<b>997.13</b>	<b>-216.49</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,400.00	0.00	0.00	5,278.98	-377.08	-341.79	997.13	-216.49	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>5,499.96</b>	<b>0.00</b>	<b>0.00</b>	<b>5,378.94</b>	<b>-477.04</b>	<b>-341.79</b>	<b>997.13</b>	<b>-216.49</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,500.00	0.00	1.31	5,378.98	-477.08	-341.79	997.13	-216.49	0.00	0.00	0.00
5,600.00	10.00	1.31	5,478.48	-576.58	-333.08	997.33	-207.82	10.00	10.00	0.00
5,700.00	20.00	1.31	5,574.94	-673.04	-307.23	997.92	-182.09	10.00	10.00	0.00
5,800.00	30.00	1.31	5,665.46	-763.56	-265.03	998.89	-140.09	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>5,899.53</b>	<b>39.96</b>	<b>1.31</b>	<b>5,746.90</b>	<b>-845.00</b>	<b>-208.06</b>	<b>1,000.19</b>	<b>-83.39</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
5,900.00	40.00	1.31	5,747.26	-845.36	-207.75	1,000.19	-83.09	10.00	10.00	0.00
6,000.00	50.00	1.31	5,817.88	-915.98	-137.14	1,001.81	-12.82	10.00	10.00	0.00
<b>NIOBRARA FORMATION</b>										
<b>6,014.25</b>	<b>51.43</b>	<b>1.31</b>	<b>5,826.90</b>	<b>-925.00</b>	<b>-126.12</b>	<b>1,002.06</b>	<b>-1.85</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>NIOBRARA A CHALK</b>										
<b>6,022.34</b>	<b>52.24</b>	<b>1.31</b>	<b>5,831.90</b>	<b>-930.00</b>	<b>-119.76</b>	<b>1,002.21</b>	<b>4.48</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,100.00	60.00	1.31	5,875.16	-973.26	-55.35	1,003.68	68.58	10.00	10.00	0.00
6,200.00	70.00	1.31	5,917.36	-1,015.46	35.15	1,005.75	158.65	10.00	10.00	0.00
<b>NIOBRARA B CHALK</b>										
<b>6,213.73</b>	<b>71.38</b>	<b>1.31</b>	<b>5,921.90</b>	<b>-1,020.00</b>	<b>48.10</b>	<b>1,006.04</b>	<b>171.54</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,300.00	80.00	1.31	5,943.20	-1,041.30	131.59	1,007.95	254.63	10.00	10.00	0.00
<b>BPI: 600ft FSL &amp; 1330ft FEL of Sec 12 - NIOBRARA B LP</b>										
<b>6,399.96</b>	<b>90.00</b>	<b>1.31</b>	<b>5,951.90</b>	<b>-1,050.00</b>	<b>231.02</b>	<b>1,010.23</b>	<b>353.58</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
6,400.00	90.00	1.31	5,951.90	-1,050.00	231.06	1,010.23	353.62	0.00	0.00	0.00
6,500.00	90.00	1.31	5,951.90	-1,050.00	331.03	1,012.51	453.12	0.00	0.00	0.00
6,600.00	90.00	1.31	5,951.90	-1,050.00	431.01	1,014.80	552.61	0.00	0.00	0.00
6,700.00	90.00	1.31	5,951.90	-1,050.00	530.98	1,017.09	652.11	0.00	0.00	0.00
6,800.00	90.00	1.31	5,951.90	-1,050.00	630.95	1,019.37	751.60	0.00	0.00	0.00
6,900.00	90.00	1.31	5,951.90	-1,050.00	730.93	1,021.66	851.10	0.00	0.00	0.00
7,000.00	90.00	1.31	5,951.90	-1,050.00	830.90	1,023.94	950.59	0.00	0.00	0.00
7,100.00	90.00	1.31	5,951.90	-1,050.00	930.88	1,026.23	1,050.09	0.00	0.00	0.00
7,200.00	90.00	1.31	5,951.90	-1,050.00	1,030.85	1,028.52	1,149.58	0.00	0.00	0.00
7,300.00	90.00	1.31	5,951.90	-1,050.00	1,130.82	1,030.80	1,249.08	0.00	0.00	0.00
7,400.00	90.00	1.31	5,951.90	-1,050.00	1,230.80	1,033.09	1,348.57	0.00	0.00	0.00
7,500.00	90.00	1.31	5,951.90	-1,050.00	1,330.77	1,035.38	1,448.07	0.00	0.00	0.00
7,600.00	90.00	1.31	5,951.90	-1,050.00	1,430.75	1,037.66	1,547.57	0.00	0.00	0.00
7,700.00	90.00	1.31	5,951.90	-1,050.00	1,530.72	1,039.95	1,647.06	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 12-1-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,800.00	90.00	1.31	5,951.90	-1,050.00	1,630.69	1,042.24	1,746.56	0.00	0.00	0.00
7,900.00	90.00	1.31	5,951.90	-1,050.00	1,730.67	1,044.53	1,846.05	0.00	0.00	0.00
8,000.00	90.00	1.31	5,951.90	-1,050.00	1,830.64	1,046.81	1,945.55	0.00	0.00	0.00
8,100.00	90.00	1.31	5,951.90	-1,050.00	1,930.61	1,049.10	2,045.04	0.00	0.00	0.00
8,200.00	90.00	1.31	5,951.90	-1,050.00	2,030.59	1,051.39	2,144.54	0.00	0.00	0.00
8,300.00	90.00	1.31	5,951.90	-1,050.00	2,130.56	1,053.68	2,244.03	0.00	0.00	0.00
8,400.00	90.00	1.31	5,951.90	-1,050.00	2,230.54	1,055.96	2,343.53	0.00	0.00	0.00
8,500.00	90.00	1.31	5,951.90	-1,050.00	2,330.51	1,058.25	2,443.02	0.00	0.00	0.00
8,600.00	90.00	1.31	5,951.90	-1,050.00	2,430.48	1,060.54	2,542.52	0.00	0.00	0.00
8,700.00	90.00	1.31	5,951.90	-1,050.00	2,530.46	1,062.83	2,642.02	0.00	0.00	0.00
8,800.00	90.00	1.31	5,951.90	-1,050.00	2,630.43	1,065.12	2,741.51	0.00	0.00	0.00
8,900.00	90.00	1.31	5,951.90	-1,050.00	2,730.41	1,067.40	2,841.01	0.00	0.00	0.00
9,000.00	90.00	1.31	5,951.90	-1,050.00	2,830.38	1,069.69	2,940.50	0.00	0.00	0.00
9,100.00	90.00	1.31	5,951.90	-1,050.00	2,930.35	1,071.98	3,040.00	0.00	0.00	0.00
9,200.00	90.00	1.31	5,951.90	-1,050.00	3,030.33	1,074.27	3,139.49	0.00	0.00	0.00
9,300.00	90.00	1.31	5,951.90	-1,050.00	3,130.30	1,076.56	3,238.99	0.00	0.00	0.00
9,400.00	90.00	1.31	5,951.90	-1,050.00	3,230.27	1,078.85	3,338.48	0.00	0.00	0.00
9,500.00	90.00	1.31	5,951.90	-1,050.00	3,330.25	1,081.14	3,437.98	0.00	0.00	0.00
9,600.00	90.00	1.31	5,951.90	-1,050.00	3,430.22	1,083.42	3,537.48	0.00	0.00	0.00
9,700.00	90.00	1.31	5,951.90	-1,050.00	3,530.20	1,085.71	3,636.97	0.00	0.00	0.00
9,800.00	90.00	1.31	5,951.90	-1,050.00	3,630.17	1,088.00	3,736.47	0.00	0.00	0.00
9,900.00	90.00	1.31	5,951.90	-1,050.00	3,730.14	1,090.29	3,835.96	0.00	0.00	0.00
10,000.00	90.00	1.31	5,951.89	-1,049.99	3,830.12	1,092.58	3,935.46	0.00	0.00	0.00
10,100.00	90.00	1.31	5,951.89	-1,049.99	3,930.09	1,094.87	4,034.95	0.00	0.00	0.00
10,200.00	90.00	1.31	5,951.89	-1,049.99	4,030.06	1,097.16	4,134.45	0.00	0.00	0.00
10,300.00	90.00	1.31	5,951.89	-1,049.99	4,130.04	1,099.45	4,233.95	0.00	0.00	0.00
10,400.00	90.00	1.31	5,951.89	-1,049.99	4,230.01	1,101.74	4,333.44	0.00	0.00	0.00
10,500.00	90.00	1.31	5,951.89	-1,049.99	4,329.99	1,104.03	4,432.94	0.00	0.00	0.00
10,600.00	90.00	1.31	5,951.89	-1,049.99	4,429.96	1,106.32	4,532.43	0.00	0.00	0.00
10,700.00	90.00	1.31	5,951.89	-1,049.99	4,529.93	1,108.61	4,631.93	0.00	0.00	0.00
10,800.00	90.00	1.31	5,951.89	-1,049.99	4,629.91	1,110.90	4,731.42	0.00	0.00	0.00
10,900.00	90.00	1.31	5,951.89	-1,049.99	4,729.88	1,113.19	4,830.92	0.00	0.00	0.00
11,000.00	90.00	1.31	5,951.89	-1,049.99	4,829.86	1,115.48	4,930.42	0.00	0.00	0.00
11,100.00	90.00	1.31	5,951.89	-1,049.99	4,929.83	1,117.77	5,029.91	0.00	0.00	0.00
11,200.00	90.00	1.31	5,951.89	-1,049.99	5,029.80	1,120.06	5,129.41	0.00	0.00	0.00
11,300.00	90.00	1.31	5,951.89	-1,049.99	5,129.78	1,122.35	5,228.90	0.00	0.00	0.00
11,400.00	90.00	1.31	5,951.89	-1,049.99	5,229.75	1,124.64	5,328.40	0.00	0.00	0.00
11,500.00	90.00	1.31	5,951.89	-1,049.99	5,329.72	1,126.93	5,427.89	0.00	0.00	0.00
11,600.00	90.00	1.31	5,951.89	-1,049.99	5,429.70	1,129.22	5,527.39	0.00	0.00	0.00
11,700.00	90.00	1.31	5,951.89	-1,049.99	5,529.67	1,131.52	5,626.89	0.00	0.00	0.00
11,800.00	90.00	1.31	5,951.89	-1,049.99	5,629.65	1,133.81	5,726.38	0.00	0.00	0.00
11,900.00	90.00	1.31	5,951.89	-1,049.99	5,729.62	1,136.10	5,825.88	0.00	0.00	0.00
12,000.00	90.00	1.31	5,951.89	-1,049.99	5,829.59	1,138.39	5,925.37	0.00	0.00	0.00
12,100.00	90.00	1.31	5,951.89	-1,049.99	5,929.57	1,140.68	6,024.87	0.00	0.00	0.00
12,200.00	90.00	1.31	5,951.89	-1,049.99	6,029.54	1,142.97	6,124.37	0.00	0.00	0.00
12,300.00	90.00	1.31	5,951.90	-1,050.00	6,129.51	1,145.26	6,223.86	0.00	0.00	0.00
12,400.00	90.00	1.31	5,951.90	-1,050.00	6,229.49	1,147.56	6,323.36	0.00	0.00	0.00
12,500.00	90.00	1.31	5,951.90	-1,050.00	6,329.46	1,149.85	6,422.85	0.00	0.00	0.00
12,600.00	90.00	1.31	5,951.90	-1,050.00	6,429.44	1,152.14	6,522.35	0.00	0.00	0.00
12,700.00	90.00	1.31	5,951.90	-1,050.00	6,529.41	1,154.43	6,621.84	0.00	0.00	0.00
12,800.00	90.00	1.31	5,951.90	-1,050.00	6,629.38	1,156.72	6,721.34	0.00	0.00	0.00
12,900.00	90.00	1.31	5,951.90	-1,050.00	6,729.36	1,159.02	6,820.84	0.00	0.00	0.00
13,000.00	90.00	1.31	5,951.90	-1,050.00	6,829.33	1,161.31	6,920.33	0.00	0.00	0.00
13,100.00	90.00	1.31	5,951.90	-1,050.00	6,929.30	1,163.60	7,019.83	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 12-1-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,200.00	90.00	1.31	5,951.90	-1,050.00	7,029.28	1,165.89	7,119.32	0.00	0.00	0.00
13,300.00	90.00	1.31	5,951.90	-1,050.00	7,129.25	1,168.19	7,218.82	0.00	0.00	0.00
13,400.00	90.00	1.31	5,951.90	-1,050.00	7,229.22	1,170.48	7,318.32	0.00	0.00	0.00
13,500.00	90.00	1.31	5,951.90	-1,050.00	7,329.20	1,172.77	7,417.81	0.00	0.00	0.00
13,600.00	90.00	1.31	5,951.90	-1,050.00	7,429.17	1,175.06	7,517.31	0.00	0.00	0.00
13,700.00	90.00	1.31	5,951.90	-1,050.00	7,529.15	1,177.36	7,616.80	0.00	0.00	0.00
13,800.00	90.00	1.31	5,951.90	-1,050.00	7,629.12	1,179.65	7,716.30	0.00	0.00	0.00
13,900.00	90.00	1.31	5,951.90	-1,050.00	7,729.09	1,181.94	7,815.80	0.00	0.00	0.00
14,000.00	90.00	1.31	5,951.90	-1,050.00	7,829.07	1,184.24	7,915.29	0.00	0.00	0.00
14,100.00	90.00	1.31	5,951.90	-1,050.00	7,929.04	1,186.53	8,014.79	0.00	0.00	0.00
14,200.00	90.00	1.31	5,951.90	-1,050.00	8,029.01	1,188.82	8,114.28	0.00	0.00	0.00
14,300.00	90.00	1.31	5,951.90	-1,050.00	8,128.99	1,191.12	8,213.78	0.00	0.00	0.00
14,400.00	90.00	1.31	5,951.90	-1,050.00	8,228.96	1,193.41	8,313.28	0.00	0.00	0.00
14,500.00	90.00	1.31	5,951.90	-1,050.00	8,328.94	1,195.71	8,412.77	0.00	0.00	0.00
14,600.00	90.00	1.31	5,951.90	-1,050.00	8,428.91	1,198.00	8,512.27	0.00	0.00	0.00
14,700.00	90.00	1.31	5,951.90	-1,050.00	8,528.88	1,200.29	8,611.77	0.00	0.00	0.00
14,800.00	90.00	1.31	5,951.90	-1,050.00	8,628.86	1,202.59	8,711.26	0.00	0.00	0.00
14,900.00	90.00	1.31	5,951.90	-1,050.00	8,728.83	1,204.88	8,810.76	0.00	0.00	0.00
15,000.00	90.00	1.31	5,951.90	-1,050.00	8,828.80	1,207.18	8,910.25	0.00	0.00	0.00
15,100.00	90.00	1.31	5,951.90	-1,050.00	8,928.78	1,209.47	9,009.75	0.00	0.00	0.00
15,200.00	90.00	1.31	5,951.90	-1,050.00	9,028.75	1,211.77	9,109.25	0.00	0.00	0.00
15,300.00	90.00	1.31	5,951.90	-1,050.00	9,128.73	1,214.06	9,208.74	0.00	0.00	0.00
15,400.00	90.00	1.31	5,951.90	-1,050.00	9,228.70	1,216.36	9,308.24	0.00	0.00	0.00
15,500.00	90.00	1.32	5,951.90	-1,050.00	9,328.67	1,218.65	9,407.73	0.00	0.00	0.00
15,600.00	90.00	1.32	5,951.90	-1,050.00	9,428.65	1,220.94	9,507.23	0.00	0.00	0.00
15,700.00	90.00	1.32	5,951.90	-1,050.00	9,528.62	1,223.24	9,606.73	0.00	0.00	0.00
15,800.00	90.00	1.32	5,951.90	-1,050.00	9,628.59	1,225.54	9,706.22	0.00	0.00	0.00
EPI: 600ft FNL & 1297ft FEL of Sec 1										
15,802.01	90.00	1.32	5,951.90	-1,050.00	9,630.60	1,225.58	9,708.22	0.00	0.00	0.00
EOT TO 1.11° AZ										
15,808.88	90.00	1.11	5,951.90	-1,050.00	9,637.48	1,225.73	9,715.06	3.00	0.00	-3.00
15,900.00	90.00	1.11	5,951.90	-1,050.00	9,728.57	1,227.49	9,805.68	0.00	0.00	0.00
16,000.00	90.00	1.11	5,951.90	-1,050.00	9,828.56	1,229.43	9,905.14	0.00	0.00	0.00
16,100.00	90.00	1.11	5,951.90	-1,050.00	9,928.54	1,231.36	10,004.60	0.00	0.00	0.00
BHL: 300ft FNL & 1297ft FEL of Sec 1										
16,101.90	90.00	1.11	5,951.90	-1,050.00	9,930.44	1,231.40	10,006.50	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
412.93	412.90	PIERRE SHALE (BASE OF FOX HI				
3,259.26	3,186.90	PARKMAN				
4,062.52	3,966.90	SUSSEX				
5,001.64	4,881.90	SHANNON				
5,899.53	5,746.90	SHARON SPRINGS SHALE				
6,014.25	5,826.90	NIOBRARA FORMATION				
6,022.34	5,831.90	NIOBRARA A CHALK				
6,213.73	5,921.90	NIOBRARA B CHALK				
6,399.96	5,951.90	NIOBRARA B LP				

## Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 12-1-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4901.90usft (Original Well Elev)
<b>Site:</b>	SW SE SEC. 12 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 12-1-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 360ft FSL & 2337ft FEL of Sec 12
300.00	300.00	0.00	0.00	START NUDGE (2°/100ft BUR)
991.08	984.40	-26.90	78.47	EOB TO 13.82° INC
4,708.88	4,594.54	-314.89	918.66	END OF TANGENT
5,399.96	5,278.94	-341.79	997.13	EOD TO VERTICAL
5,499.96	5,378.94	-341.79	997.13	KOP (10°/100ft BUR)
6,399.96	5,951.90	231.02	1,010.23	BPI: 600ft FSL & 1330ft FEL of Sec 12
15,802.01	5,951.90	9,630.60	1,225.58	EPI: 600ft FNL & 1297ft FEL of Sec 1
15,808.88	5,951.90	9,637.48	1,225.73	EOT TO 1.11° AZ
16,101.90	5,951.90	9,930.44	1,231.40	BHL: 300ft FNL & 1297ft FEL of Sec 1