



# **MORNING GUN EXPLORATION**

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

**SW SW SEC. 11 T7N R59W 6th P.M.**

**CASTOR 7-59 11-2-10**

**ORIGINAL WELLBORE**

**03 January, 2019**

**Plan: PROPOSAL #2**



WELD COUNTY, COLORADO (NAD 83)  
SW SW SEC. 11 T7N R59W 6th P.M.  
CASTOR 7-59 11-2-10  
ORIGINAL WELLBORE  
PROPOSAL #2

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 460ft FSL & 648ft FWL of Sec 11	
300.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	START NUDGE (5°/100ft BUR)	
1002.58	1056.30	37.81	98.37	-35.05	238.08	44.05	240.65	EOB TO 37.81° INC	
4627.46	5644.79	37.81	98.37	-444.76	3021.35	559.07	3053.91	END OF TANGENT	
5330.04	6401.09	0.00	0.00	-479.81	3259.43	603.13	3294.56	EOD TO VERTICAL	
5480.04	6551.09	0.00	0.00	-479.81	3259.43	603.13	3294.56	KOP (10°/100ft BUR)	
6053.00	7451.09	90.00	0.48	93.13	3264.27	1146.67	3867.51	BPI: 600ft FSL & 1350ft FEL of Sec 11	
6053.01	16817.12	90.00	0.48	9458.82	3343.42	10031.88	13233.54	EPI: 600ft FNL & 1483ft FEL of Sec 2	
6053.00	16820.93	90.00	0.37	9462.63	3343.58	10035.54	13237.35	EOT TO 0.37° AZ	
6053.00	17116.97	90.00	0.36	9758.66	3345.45	10316.18	13533.39	BHL: 300ft FNL & 1487ft FEL of Sec 2	

PROPOSED LOCAL COORDINATES:

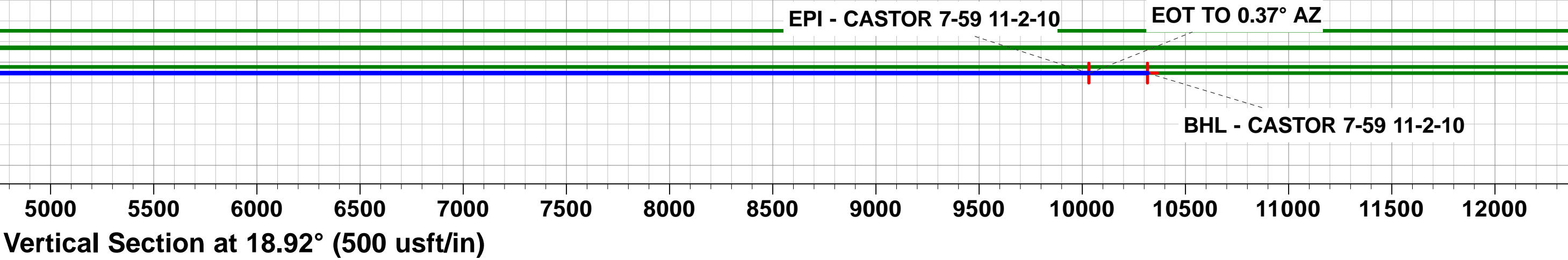
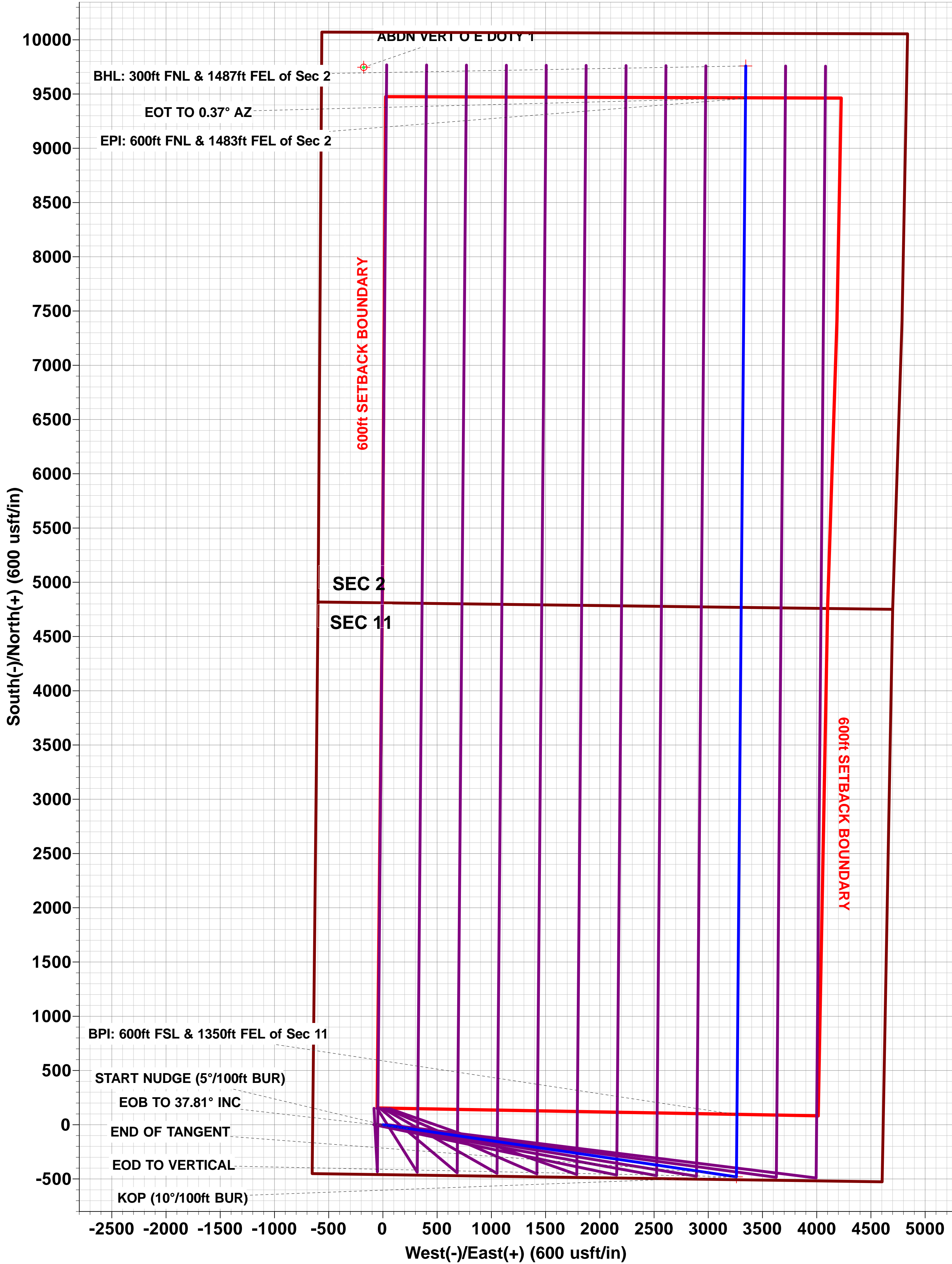
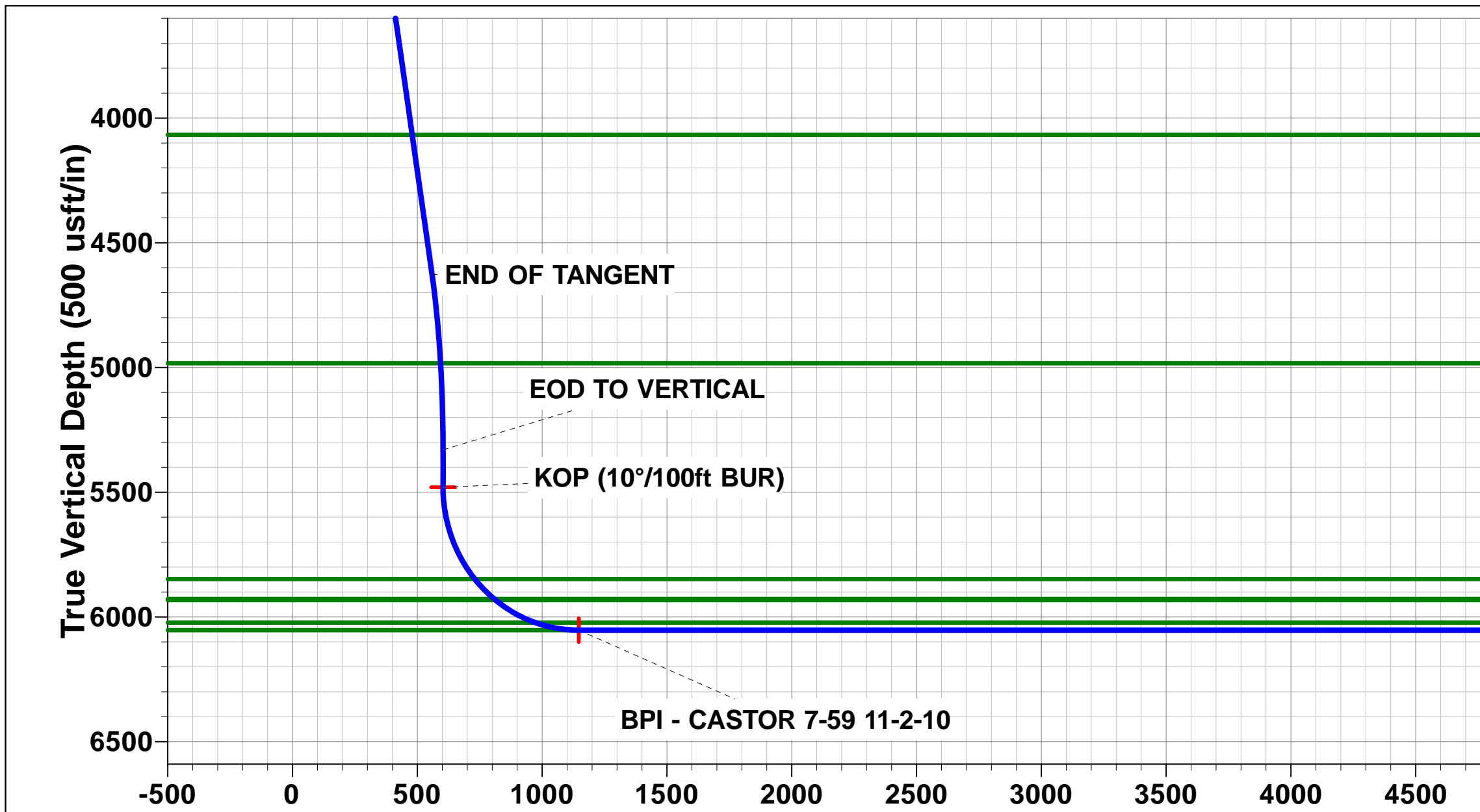
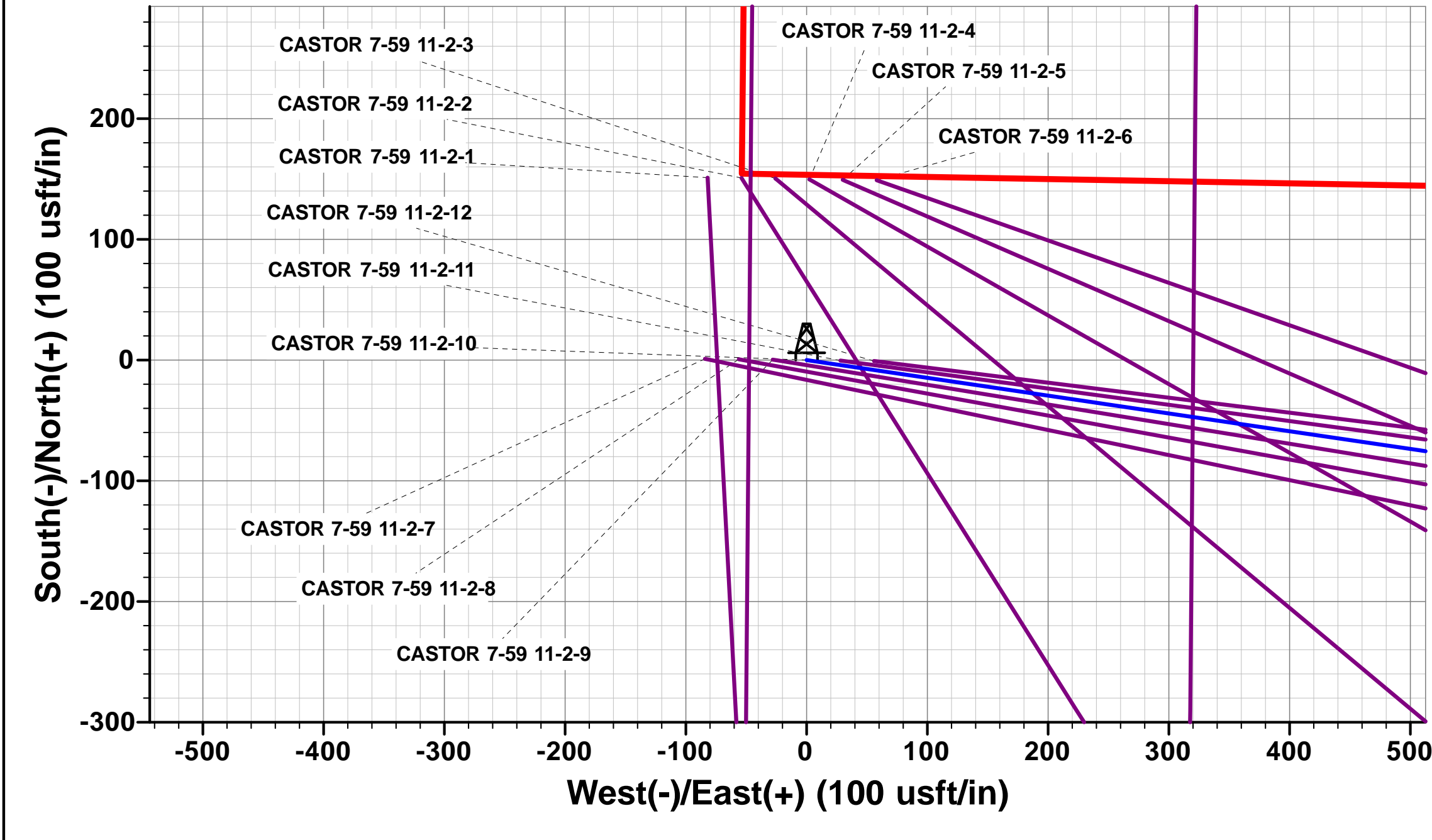
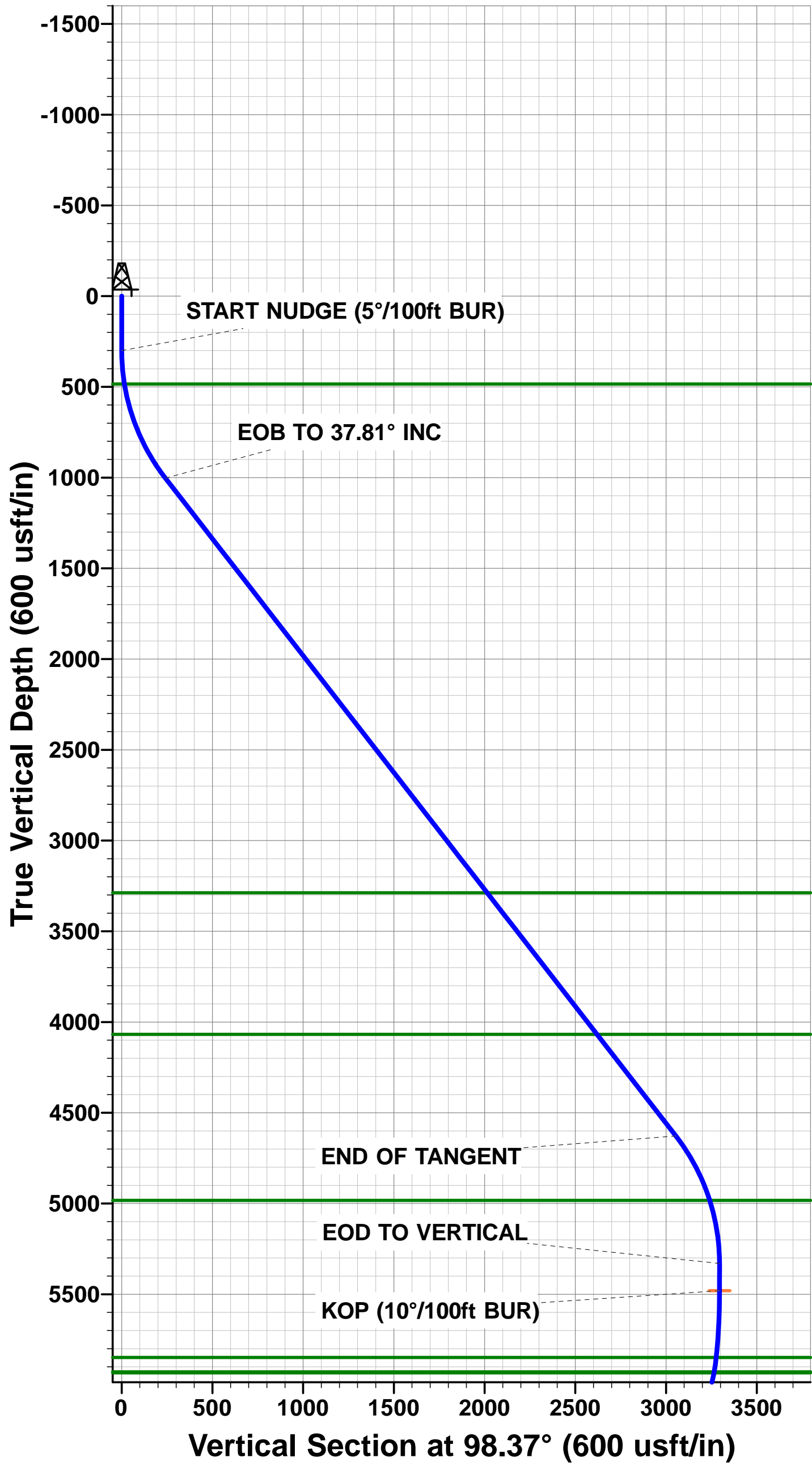
SHL: 460ft FSL & 648ft FWL Sec 11

BPI: 600ft FSL & 1350ft FEL Sec 11

EPI: 600ft FNL & 1483ft FEL Sec 2

BHL: 300ft FNL & 1487ft FEL of Sec 2

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP - CASTOR 7-59 11-2-10	5480.04	-479.81	3259.43	40.582091	-103.940142
BPI - CASTOR 7-59 11-2-10	6053.00	93.13	3264.27	40.583664	-103.940124
EPI - CASTOR 7-59 11-2-10	6053.00	9458.82	3343.55	40.609371	-103.939834
BHL - CASTOR 7-59 11-2-10	6053.00	9758.66	3345.45	40.610194	-103.939827



# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

<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

<b>Site</b>	SW SW SEC. 11 T7N R59W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,459,188.61 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,432,602.73 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.583442
		<b>Longitude:</b>	-103.942432
		<b>Grid Convergence:</b>	1.01 °

<b>Well</b>	CASTOR 7-59 11-2-10		
<b>Well Position</b>	<b>+N/-S</b>	-11.89 usft	<b>Northing:</b>
	<b>+E/-W</b>	-2,623.20 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

<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	03/01/2019	7.62	67.08	52,392

<b>Design</b>	PROPOSAL #2			
<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>
	6,053.00	0.00	0.00	18.92

<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	-4,973.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-4,673.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,056.30	37.81	98.37	1,002.58	-3,970.42	-35.05	238.08	5.00	5.00	0.00	98.37	
5,644.79	37.81	98.37	4,627.46	-345.54	-444.76	3,021.35	0.00	0.00	0.00	0.00	
6,401.09	0.00	0.00	5,330.04	357.04	-479.81	3,259.43	5.00	-5.00	0.00	180.00	
6,551.09	0.00	0.00	5,480.04	507.04	-479.81	3,259.43	0.00	0.00	0.00	0.00	KOP - CASTOR 7-59
7,451.09	90.00	0.48	6,053.00	1,080.00	93.13	3,264.27	10.00	10.00	0.05	0.48	BPI - CASTOR 7-59
16,817.12	90.00	0.48	6,053.00	1,080.00	9,458.82	3,343.55	0.00	0.00	0.00	0.00	EPI - CASTOR 7-59
16,820.93	90.00	0.37	6,053.00	1,080.00	9,462.63	3,343.58	3.00	0.00	-3.00	-90.00	
17,116.97	90.00	0.36	6,053.00	1,080.00	9,758.66	3,345.45	0.00	0.00	0.00	-89.29	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 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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: 460ft FSL &amp; 648ft FWL of Sec 11</b>										
0.00	0.00	0.00	0.00	4,973.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,873.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,773.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>START NUDGE (5°/100ft BUR)</b>										
300.00	0.00	0.00	300.00	4,673.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	5.00	98.37	399.87	4,573.13	-0.64	4.31	0.80	5.00	5.00	0.00
<b>PIERRE SHALE (BASE OF FOX HILLS)</b>										
484.80	9.24	98.37	484.00	4,489.00	-2.17	14.71	2.72	5.00	5.00	0.00
500.00	10.00	98.37	498.99	4,474.01	-2.54	17.22	3.19	5.00	5.00	0.00
600.00	15.00	98.37	596.58	4,376.42	-5.69	38.63	7.15	5.00	5.00	0.00
700.00	20.00	98.37	691.93	4,281.07	-10.06	68.37	12.65	5.00	5.00	0.00
800.00	25.00	98.37	784.28	4,188.72	-15.64	106.22	19.65	5.00	5.00	0.00
900.00	30.00	98.37	872.96	4,100.04	-22.36	151.89	28.11	5.00	5.00	0.00
1,000.00	35.00	98.37	957.27	4,015.73	-30.18	205.03	37.94	5.00	5.00	0.00
<b>EOB TO 37.81° INC</b>										
1,056.30	37.81	98.37	1,002.58	3,970.42	-35.05	238.08	44.05	5.00	5.00	0.00
1,100.00	37.81	98.37	1,037.10	3,935.90	-38.95	264.59	48.96	0.00	0.00	0.00
1,200.00	37.81	98.37	1,116.10	3,856.90	-47.88	325.25	60.18	0.00	0.00	0.00
1,300.00	37.81	98.37	1,195.10	3,777.90	-56.81	385.91	71.41	0.00	0.00	0.00
1,400.00	37.81	98.37	1,274.10	3,698.90	-65.74	446.56	82.63	0.00	0.00	0.00
1,500.00	37.81	98.37	1,353.10	3,619.90	-74.67	507.22	93.86	0.00	0.00	0.00
1,600.00	37.81	98.37	1,432.10	3,540.90	-83.60	567.88	105.08	0.00	0.00	0.00
1,700.00	37.81	98.37	1,511.10	3,461.90	-92.52	628.54	116.30	0.00	0.00	0.00
1,800.00	37.81	98.37	1,590.10	3,382.90	-101.45	689.19	127.53	0.00	0.00	0.00
1,900.00	37.81	98.37	1,669.10	3,303.90	-110.38	749.85	138.75	0.00	0.00	0.00
2,000.00	37.81	98.37	1,748.10	3,224.90	-119.31	810.51	149.98	0.00	0.00	0.00
2,100.00	37.81	98.37	1,827.10	3,145.90	-128.24	871.17	161.20	0.00	0.00	0.00
2,200.00	37.81	98.37	1,906.09	3,066.91	-137.17	931.82	172.42	0.00	0.00	0.00
2,300.00	37.81	98.37	1,985.09	2,987.91	-146.10	992.48	183.65	0.00	0.00	0.00
2,400.00	37.81	98.37	2,064.09	2,908.91	-155.03	1,053.14	194.87	0.00	0.00	0.00
2,500.00	37.81	98.37	2,143.09	2,829.91	-163.96	1,113.80	206.10	0.00	0.00	0.00
2,600.00	37.81	98.37	2,222.09	2,750.91	-172.89	1,174.45	217.32	0.00	0.00	0.00
2,700.00	37.81	98.37	2,301.09	2,671.91	-181.82	1,235.11	228.55	0.00	0.00	0.00
2,800.00	37.81	98.37	2,380.09	2,592.91	-190.75	1,295.77	239.77	0.00	0.00	0.00
2,900.00	37.81	98.37	2,459.09	2,513.91	-199.68	1,356.43	250.99	0.00	0.00	0.00
3,000.00	37.81	98.37	2,538.09	2,434.91	-208.61	1,417.08	262.22	0.00	0.00	0.00
3,100.00	37.81	98.37	2,617.09	2,355.91	-217.53	1,477.74	273.44	0.00	0.00	0.00
3,200.00	37.81	98.37	2,696.09	2,276.91	-226.46	1,538.40	284.67	0.00	0.00	0.00
3,300.00	37.81	98.37	2,775.09	2,197.91	-235.39	1,599.06	295.89	0.00	0.00	0.00
3,400.00	37.81	98.37	2,854.09	2,118.91	-244.32	1,659.71	307.11	0.00	0.00	0.00
3,500.00	37.81	98.37	2,933.09	2,039.91	-253.25	1,720.37	318.34	0.00	0.00	0.00
3,600.00	37.81	98.37	3,012.09	1,960.91	-262.18	1,781.03	329.56	0.00	0.00	0.00
3,700.00	37.81	98.37	3,091.09	1,881.91	-271.11	1,841.69	340.79	0.00	0.00	0.00
3,800.00	37.81	98.37	3,170.09	1,802.91	-280.04	1,902.34	352.01	0.00	0.00	0.00
3,900.00	37.81	98.37	3,249.09	1,723.91	-288.97	1,963.00	363.23	0.00	0.00	0.00
<b>PARKMAN</b>										
3,949.26	37.81	98.37	3,288.00	1,685.00	-293.37	1,992.88	368.76	0.00	0.00	0.00
4,000.00	37.81	98.37	3,328.09	1,644.91	-297.90	2,023.66	374.46	0.00	0.00	0.00
4,100.00	37.81	98.37	3,407.09	1,565.91	-306.83	2,084.32	385.68	0.00	0.00	0.00
4,200.00	37.81	98.37	3,486.09	1,486.91	-315.76	2,144.97	396.91	0.00	0.00	0.00
4,300.00	37.81	98.37	3,565.09	1,407.91	-324.69	2,205.63	408.13	0.00	0.00	0.00
4,400.00	37.81	98.37	3,644.09	1,328.91	-333.61	2,266.29	419.35	0.00	0.00	0.00
4,500.00	37.81	98.37	3,723.08	1,249.92	-342.54	2,326.95	430.58	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 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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)
4,600.00	37.81	98.37	3,802.08	1,170.92	-351.47	2,387.60	441.80	0.00	0.00	0.00
4,700.00	37.81	98.37	3,881.08	1,091.92	-360.40	2,448.26	453.03	0.00	0.00	0.00
4,800.00	37.81	98.37	3,960.08	1,012.92	-369.33	2,508.92	464.25	0.00	0.00	0.00
4,900.00	37.81	98.37	4,039.08	933.92	-378.26	2,569.58	475.48	0.00	0.00	0.00
<b>SUSSEX</b>										
<b>4,936.60</b>	<b>37.81</b>	<b>98.37</b>	<b>4,068.00</b>	<b>905.00</b>	<b>-381.53</b>	<b>2,591.78</b>	<b>479.58</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,000.00	37.81	98.37	4,118.08	854.92	-387.19	2,630.23	486.70	0.00	0.00	0.00
5,100.00	37.81	98.37	4,197.08	775.92	-396.12	2,690.89	497.92	0.00	0.00	0.00
5,200.00	37.81	98.37	4,276.08	696.92	-405.05	2,751.55	509.15	0.00	0.00	0.00
5,300.00	37.81	98.37	4,355.08	617.92	-413.98	2,812.21	520.37	0.00	0.00	0.00
5,400.00	37.81	98.37	4,434.08	538.92	-422.91	2,872.86	531.60	0.00	0.00	0.00
5,500.00	37.81	98.37	4,513.08	459.92	-431.84	2,933.52	542.82	0.00	0.00	0.00
5,600.00	37.81	98.37	4,592.08	380.92	-440.77	2,994.18	554.04	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>5,644.79</b>	<b>37.81</b>	<b>98.37</b>	<b>4,627.46</b>	<b>345.54</b>	<b>-444.76</b>	<b>3,021.35</b>	<b>559.07</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,700.00	35.05	98.37	4,671.88	301.12	-449.54	3,053.78	565.07	5.00	-5.00	0.00
5,800.00	30.05	98.37	4,756.14	216.86	-457.37	3,107.00	574.92	5.00	-5.00	0.00
5,900.00	25.05	98.37	4,844.77	128.23	-464.11	3,152.76	583.39	5.00	-5.00	0.00
6,000.00	20.05	98.37	4,937.09	35.91	-469.69	3,190.69	590.41	5.00	-5.00	0.00
<b>SHANNON</b>										
<b>6,048.51</b>	<b>17.63</b>	<b>98.37</b>	<b>4,983.00</b>	<b>-10.00</b>	<b>-471.97</b>	<b>3,206.19</b>	<b>593.27</b>	<b>5.00</b>	<b>-5.00</b>	<b>0.00</b>
6,100.00	15.05	98.37	5,032.40	-59.40	-474.08	3,220.52	595.93	5.00	-5.00	0.00
6,200.00	10.05	98.37	5,129.98	-156.98	-477.25	3,242.02	599.90	5.00	-5.00	0.00
6,300.00	5.05	98.37	5,229.08	-256.08	-479.16	3,255.02	602.31	5.00	-5.00	0.00
6,400.00	0.05	98.37	5,328.95	-355.95	-479.81	3,259.43	603.13	5.00	-5.00	0.00
<b>EOD TO VERTICAL</b>										
<b>6,401.09</b>	<b>0.00</b>	<b>0.00</b>	<b>5,330.04</b>	<b>-357.04</b>	<b>-479.81</b>	<b>3,259.43</b>	<b>603.13</b>	<b>5.00</b>	<b>-5.00</b>	<b>0.00</b>
6,500.00	0.00	0.00	5,428.95	-455.95	-479.81	3,259.43	603.13	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,551.09</b>	<b>0.00</b>	<b>0.00</b>	<b>5,480.04</b>	<b>-507.04</b>	<b>-479.81</b>	<b>3,259.43</b>	<b>603.13</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,600.00	4.89	0.48	5,528.89	-555.89	-477.73	3,259.45	605.10	10.00	10.00	0.00
6,700.00	14.89	0.48	5,627.28	-654.28	-460.57	3,259.59	621.38	10.00	10.00	0.00
6,800.00	24.89	0.48	5,721.20	-748.20	-426.59	3,259.88	653.62	10.00	10.00	0.00
6,900.00	34.89	0.48	5,807.78	-834.78	-376.82	3,260.30	700.83	10.00	10.00	0.00
<b>SHARON SPRINGS SHALE</b>										
<b>6,950.66</b>	<b>39.96</b>	<b>0.48</b>	<b>5,848.00</b>	<b>-875.00</b>	<b>-346.05</b>	<b>3,260.56</b>	<b>730.03</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,000.00	44.89	0.48	5,884.41	-911.41	-312.77	3,260.84	761.60	10.00	10.00	0.00
<b>NIOBRARA FORMATION</b>										
<b>7,065.38</b>	<b>51.43</b>	<b>0.48</b>	<b>5,928.00</b>	<b>-955.00</b>	<b>-264.09</b>	<b>3,261.25</b>	<b>807.78</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
<b>NIOBRARA A CHALK</b>										
<b>7,073.47</b>	<b>52.24</b>	<b>0.48</b>	<b>5,933.00</b>	<b>-960.00</b>	<b>-257.73</b>	<b>3,261.31</b>	<b>813.81</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,100.00	54.89	0.48	5,948.75	-975.75	-236.39	3,261.49	834.06	10.00	10.00	0.00
7,200.00	64.89	0.48	5,998.86	-1,025.86	-150.00	3,262.22	916.02	10.00	10.00	0.00
<b>NIOBRARA B CHALK</b>										
<b>7,264.86</b>	<b>71.38</b>	<b>0.48</b>	<b>6,023.00</b>	<b>-1,050.00</b>	<b>-89.83</b>	<b>3,262.73</b>	<b>973.10</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,300.00	74.89	0.48	6,033.19	-1,060.19	-56.21	3,263.01	1,004.99	10.00	10.00	0.00
7,400.00	84.89	0.48	6,050.72	-1,077.72	42.10	3,263.84	1,098.27	10.00	10.00	0.00
<b>BPI: 600ft FSL &amp; 1350ft FEL of Sec 11 - NIOBRARA B LP</b>										
<b>7,451.09</b>	<b>90.00</b>	<b>0.48</b>	<b>6,053.00</b>	<b>-1,080.00</b>	<b>93.13</b>	<b>3,264.27</b>	<b>1,146.67</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,500.00	90.00	0.48	6,053.00	-1,080.00	142.03	3,264.69	1,193.07	0.00	0.00	0.00
7,600.00	90.00	0.48	6,053.00	-1,080.00	242.03	3,265.53	1,287.94	0.00	0.00	0.00
7,700.00	90.00	0.48	6,053.00	-1,080.00	342.03	3,266.38	1,382.80	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 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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	0.48	6,053.00	-1,080.00	442.02	3,267.22	1,477.67	0.00	0.00	0.00
7,900.00	90.00	0.48	6,053.00	-1,080.00	542.02	3,268.07	1,572.53	0.00	0.00	0.00
8,000.00	90.00	0.48	6,053.00	-1,080.00	642.02	3,268.91	1,667.40	0.00	0.00	0.00
8,100.00	90.00	0.48	6,053.00	-1,080.00	742.01	3,269.76	1,762.27	0.00	0.00	0.00
8,200.00	90.00	0.48	6,053.00	-1,080.00	842.01	3,270.60	1,857.13	0.00	0.00	0.00
8,300.00	90.00	0.48	6,053.00	-1,080.00	942.00	3,271.45	1,952.00	0.00	0.00	0.00
8,400.00	90.00	0.48	6,053.00	-1,080.00	1,042.00	3,272.29	2,046.87	0.00	0.00	0.00
8,500.00	90.00	0.48	6,053.00	-1,080.00	1,142.00	3,273.14	2,141.73	0.00	0.00	0.00
8,600.00	90.00	0.48	6,053.00	-1,080.00	1,241.99	3,273.98	2,236.60	0.00	0.00	0.00
8,700.00	90.00	0.48	6,053.00	-1,080.00	1,341.99	3,274.83	2,331.47	0.00	0.00	0.00
8,800.00	90.00	0.48	6,053.00	-1,080.00	1,441.99	3,275.67	2,426.33	0.00	0.00	0.00
8,900.00	90.00	0.48	6,053.00	-1,080.00	1,541.98	3,276.52	2,521.20	0.00	0.00	0.00
9,000.00	90.00	0.48	6,053.00	-1,080.00	1,641.98	3,277.36	2,616.06	0.00	0.00	0.00
9,100.00	90.00	0.48	6,053.00	-1,080.00	1,741.98	3,278.21	2,710.93	0.00	0.00	0.00
9,200.00	90.00	0.48	6,053.00	-1,080.00	1,841.97	3,279.05	2,805.80	0.00	0.00	0.00
9,300.00	90.00	0.48	6,053.00	-1,080.00	1,941.97	3,279.90	2,900.66	0.00	0.00	0.00
9,400.00	90.00	0.48	6,053.00	-1,080.00	2,041.97	3,280.74	2,995.53	0.00	0.00	0.00
9,500.00	90.00	0.48	6,053.00	-1,080.00	2,141.96	3,281.59	3,090.40	0.00	0.00	0.00
9,600.00	90.00	0.48	6,053.00	-1,080.00	2,241.96	3,282.43	3,185.26	0.00	0.00	0.00
9,700.00	90.00	0.48	6,053.00	-1,080.00	2,341.95	3,283.28	3,280.13	0.00	0.00	0.00
9,800.00	90.00	0.48	6,053.00	-1,080.00	2,441.95	3,284.12	3,375.00	0.00	0.00	0.00
9,900.00	90.00	0.48	6,053.00	-1,080.00	2,541.95	3,284.97	3,469.86	0.00	0.00	0.00
10,000.00	90.00	0.48	6,053.00	-1,080.00	2,641.94	3,285.81	3,564.73	0.00	0.00	0.00
10,100.00	90.00	0.48	6,053.00	-1,080.00	2,741.94	3,286.66	3,659.59	0.00	0.00	0.00
10,200.00	90.00	0.48	6,053.00	-1,080.00	2,841.94	3,287.50	3,754.46	0.00	0.00	0.00
10,300.00	90.00	0.48	6,053.00	-1,080.00	2,941.93	3,288.35	3,849.33	0.00	0.00	0.00
10,400.00	90.00	0.48	6,053.00	-1,080.00	3,041.93	3,289.19	3,944.19	0.00	0.00	0.00
10,500.00	90.00	0.48	6,053.00	-1,080.00	3,141.93	3,290.04	4,039.06	0.00	0.00	0.00
10,600.00	90.00	0.48	6,053.00	-1,080.00	3,241.92	3,290.88	4,133.93	0.00	0.00	0.00
10,700.00	90.00	0.48	6,053.01	-1,080.01	3,341.92	3,291.73	4,228.79	0.00	0.00	0.00
10,800.00	90.00	0.48	6,053.01	-1,080.01	3,441.92	3,292.57	4,323.66	0.00	0.00	0.00
10,900.00	90.00	0.48	6,053.01	-1,080.01	3,541.91	3,293.42	4,418.53	0.00	0.00	0.00
11,000.00	90.00	0.48	6,053.01	-1,080.01	3,641.91	3,294.26	4,513.39	0.00	0.00	0.00
11,100.00	90.00	0.48	6,053.01	-1,080.01	3,741.90	3,295.11	4,608.26	0.00	0.00	0.00
11,200.00	90.00	0.48	6,053.01	-1,080.01	3,841.90	3,295.95	4,703.12	0.00	0.00	0.00
11,300.00	90.00	0.48	6,053.01	-1,080.01	3,941.90	3,296.80	4,797.99	0.00	0.00	0.00
11,400.00	90.00	0.48	6,053.01	-1,080.01	4,041.89	3,297.64	4,892.86	0.00	0.00	0.00
11,500.00	90.00	0.48	6,053.01	-1,080.01	4,141.89	3,298.49	4,987.72	0.00	0.00	0.00
11,600.00	90.00	0.48	6,053.01	-1,080.01	4,241.89	3,299.33	5,082.59	0.00	0.00	0.00
11,700.00	90.00	0.48	6,053.01	-1,080.01	4,341.88	3,300.18	5,177.46	0.00	0.00	0.00
11,800.00	90.00	0.48	6,053.01	-1,080.01	4,441.88	3,301.02	5,272.32	0.00	0.00	0.00
11,900.00	90.00	0.48	6,053.01	-1,080.01	4,541.88	3,301.87	5,367.19	0.00	0.00	0.00
12,000.00	90.00	0.48	6,053.01	-1,080.01	4,641.87	3,302.71	5,462.06	0.00	0.00	0.00
12,100.00	90.00	0.48	6,053.01	-1,080.01	4,741.87	3,303.56	5,556.92	0.00	0.00	0.00
12,200.00	90.00	0.48	6,053.01	-1,080.01	4,841.87	3,304.40	5,651.79	0.00	0.00	0.00
12,300.00	90.00	0.48	6,053.01	-1,080.01	4,941.86	3,305.25	5,746.66	0.00	0.00	0.00
12,400.00	90.00	0.48	6,053.01	-1,080.01	5,041.86	3,306.09	5,841.52	0.00	0.00	0.00
12,500.00	90.00	0.48	6,053.01	-1,080.01	5,141.85	3,306.94	5,936.39	0.00	0.00	0.00
12,600.00	90.00	0.48	6,053.01	-1,080.01	5,241.85	3,307.79	6,031.25	0.00	0.00	0.00
12,700.00	90.00	0.48	6,053.01	-1,080.01	5,341.85	3,308.63	6,126.12	0.00	0.00	0.00
12,800.00	90.00	0.48	6,053.01	-1,080.01	5,441.84	3,309.48	6,220.99	0.00	0.00	0.00
12,900.00	90.00	0.48	6,053.01	-1,080.01	5,541.84	3,310.32	6,315.85	0.00	0.00	0.00
13,000.00	90.00	0.48	6,053.01	-1,080.01	5,641.84	3,311.17	6,410.72	0.00	0.00	0.00
13,100.00	90.00	0.48	6,053.01	-1,080.01	5,741.83	3,312.01	6,505.59	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 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

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	0.48	6,053.01	-1,080.01	5,841.83	3,312.86	6,600.45	0.00	0.00	0.00
13,300.00	90.00	0.48	6,053.01	-1,080.01	5,941.83	3,313.70	6,695.32	0.00	0.00	0.00
13,400.00	90.00	0.48	6,053.01	-1,080.01	6,041.82	3,314.55	6,790.19	0.00	0.00	0.00
13,500.00	90.00	0.48	6,053.01	-1,080.01	6,141.82	3,315.39	6,885.05	0.00	0.00	0.00
13,600.00	90.00	0.48	6,053.01	-1,080.01	6,241.82	3,316.24	6,979.92	0.00	0.00	0.00
13,700.00	90.00	0.48	6,053.01	-1,080.01	6,341.81	3,317.08	7,074.78	0.00	0.00	0.00
13,800.00	90.00	0.48	6,053.01	-1,080.01	6,441.81	3,317.93	7,169.65	0.00	0.00	0.00
13,900.00	90.00	0.48	6,053.01	-1,080.01	6,541.80	3,318.77	7,264.52	0.00	0.00	0.00
14,000.00	90.00	0.48	6,053.01	-1,080.01	6,641.80	3,319.62	7,359.38	0.00	0.00	0.00
14,100.00	90.00	0.48	6,053.01	-1,080.01	6,741.80	3,320.46	7,454.25	0.00	0.00	0.00
14,200.00	90.00	0.48	6,053.01	-1,080.01	6,841.79	3,321.31	7,549.12	0.00	0.00	0.00
14,300.00	90.00	0.48	6,053.01	-1,080.01	6,941.79	3,322.15	7,643.98	0.00	0.00	0.00
14,400.00	90.00	0.48	6,053.01	-1,080.01	7,041.79	3,323.00	7,738.85	0.00	0.00	0.00
14,500.00	90.00	0.48	6,053.01	-1,080.01	7,141.78	3,323.84	7,833.72	0.00	0.00	0.00
14,600.00	90.00	0.48	6,053.01	-1,080.01	7,241.78	3,324.69	7,928.58	0.00	0.00	0.00
14,700.00	90.00	0.48	6,053.01	-1,080.01	7,341.78	3,325.53	8,023.45	0.00	0.00	0.00
14,800.00	90.00	0.48	6,053.01	-1,080.01	7,441.77	3,326.38	8,118.31	0.00	0.00	0.00
14,900.00	90.00	0.48	6,053.01	-1,080.01	7,541.77	3,327.22	8,213.18	0.00	0.00	0.00
15,000.00	90.00	0.48	6,053.01	-1,080.01	7,641.77	3,328.07	8,308.05	0.00	0.00	0.00
15,100.00	90.00	0.48	6,053.01	-1,080.01	7,741.76	3,328.91	8,402.91	0.00	0.00	0.00
15,200.00	90.00	0.48	6,053.01	-1,080.01	7,841.76	3,329.76	8,497.78	0.00	0.00	0.00
15,300.00	90.00	0.48	6,053.01	-1,080.01	7,941.75	3,330.60	8,592.65	0.00	0.00	0.00
15,400.00	90.00	0.48	6,053.01	-1,080.01	8,041.75	3,331.45	8,687.51	0.00	0.00	0.00
15,500.00	90.00	0.48	6,053.01	-1,080.01	8,141.75	3,332.29	8,782.38	0.00	0.00	0.00
15,600.00	90.00	0.48	6,053.01	-1,080.01	8,241.74	3,333.14	8,877.25	0.00	0.00	0.00
15,700.00	90.00	0.48	6,053.01	-1,080.01	8,341.74	3,333.98	8,972.11	0.00	0.00	0.00
15,800.00	90.00	0.48	6,053.01	-1,080.01	8,441.74	3,334.83	9,066.98	0.00	0.00	0.00
15,900.00	90.00	0.48	6,053.01	-1,080.01	8,541.73	3,335.67	9,161.84	0.00	0.00	0.00
16,000.00	90.00	0.48	6,053.01	-1,080.01	8,641.73	3,336.52	9,256.71	0.00	0.00	0.00
16,100.00	90.00	0.48	6,053.01	-1,080.01	8,741.73	3,337.36	9,351.58	0.00	0.00	0.00
16,200.00	90.00	0.48	6,053.01	-1,080.01	8,841.72	3,338.21	9,446.44	0.00	0.00	0.00
16,300.00	90.00	0.48	6,053.01	-1,080.01	8,941.72	3,339.05	9,541.31	0.00	0.00	0.00
16,400.00	90.00	0.48	6,053.01	-1,080.01	9,041.72	3,339.90	9,636.18	0.00	0.00	0.00
16,500.00	90.00	0.48	6,053.01	-1,080.01	9,141.71	3,340.74	9,731.04	0.00	0.00	0.00
16,600.00	90.00	0.48	6,053.01	-1,080.01	9,241.71	3,341.59	9,825.91	0.00	0.00	0.00
16,700.00	90.00	0.48	6,053.01	-1,080.01	9,341.70	3,342.43	9,920.78	0.00	0.00	0.00
16,800.00	90.00	0.48	6,053.01	-1,080.01	9,441.70	3,343.28	10,015.64	0.00	0.00	0.00
<b>EPI: 600ft FNL &amp; 1483ft FEL of Sec 2</b>										
<b>16,817.12</b>	<b>90.00</b>	<b>0.48</b>	<b>6,053.01</b>	<b>-1,080.01</b>	<b>9,458.82</b>	<b>3,343.42</b>	<b>10,031.88</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>EOT TO 0.37° AZ</b>										
<b>16,820.93</b>	<b>90.00</b>	<b>0.37</b>	<b>6,053.00</b>	<b>-1,080.00</b>	<b>9,462.63</b>	<b>3,343.58</b>	<b>10,035.54</b>	<b>3.00</b>	<b>0.00</b>	<b>-3.00</b>
16,900.00	90.00	0.37	6,053.00	-1,080.00	9,541.70	3,344.09	10,110.50	0.00	0.00	0.00
17,000.00	90.00	0.36	6,053.00	-1,080.00	9,641.70	3,344.72	10,205.30	0.00	0.00	0.00
17,100.00	90.00	0.36	6,053.00	-1,080.00	9,741.69	3,345.35	10,300.09	0.00	0.00	0.00
<b>BHL: 300ft FNL &amp; 1487ft FEL of Sec 2</b>										
<b>17,116.97</b>	<b>90.00</b>	<b>0.36</b>	<b>6,053.00</b>	<b>-1,080.00</b>	<b>9,758.66</b>	<b>3,345.45</b>	<b>10,316.18</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

# Planning Report

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CASTOR 7-59 11-2-10
<b>Company:</b>	MORNING GUN EXPLORATION	<b>TVD Reference:</b>	KB-EST @ 4973.00usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4973.00usft
<b>Site:</b>	SW SW SEC. 11 T7N R59W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CASTOR 7-59 11-2-10	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #2		

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
484.80	484.00	PIERRE SHALE (BASE OF FOX HI			
3,949.26	3,288.00	PARKMAN			
4,936.60	4,068.00	SUSSEX			
6,048.51	4,983.00	SHANNON			
6,950.66	5,848.00	SHARON SPRINGS SHALE			
7,065.38	5,928.00	NIOBRARA FORMATION			
7,073.47	5,933.00	NIOBRARA A CHALK			
7,264.86	6,023.00	NIOBRARA B CHALK			
7,451.09	6,053.00	NIOBRARA B LP			

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 460ft FSL & 648ft FWL of Sec 11
300.00	300.00	0.00	0.00	START NUDGE (5°/100ft BUR)
1,056.30	1,002.58	-35.05	238.08	EOB TO 37.81° INC
5,644.79	4,627.46	-444.76	3,021.35	END OF TANGENT
6,401.09	5,330.04	-479.81	3,259.43	EOD TO VERTICAL
6,551.09	5,480.04	-479.81	3,259.43	KOP (10°/100ft BUR)
7,451.09	6,053.00	93.13	3,264.27	BPI: 600ft FSL & 1350ft FEL of Sec 11
16,817.12	6,053.01	9,458.82	3,343.42	EPI: 600ft FNL & 1483ft FEL of Sec 2
16,820.93	6,053.00	9,462.63	3,343.58	EOT TO 0.37° AZ
17,116.97	6,053.00	9,758.66	3,345.45	BHL: 300ft FNL & 1487ft FEL of Sec 2