

# **Extraction Oil & Gas**

**WELD COUNTY, CO**

**S32-T2N-R67W**

**Troudt #5**

**Hz**

**24 February, 2015**

**Plan: Plan #1**

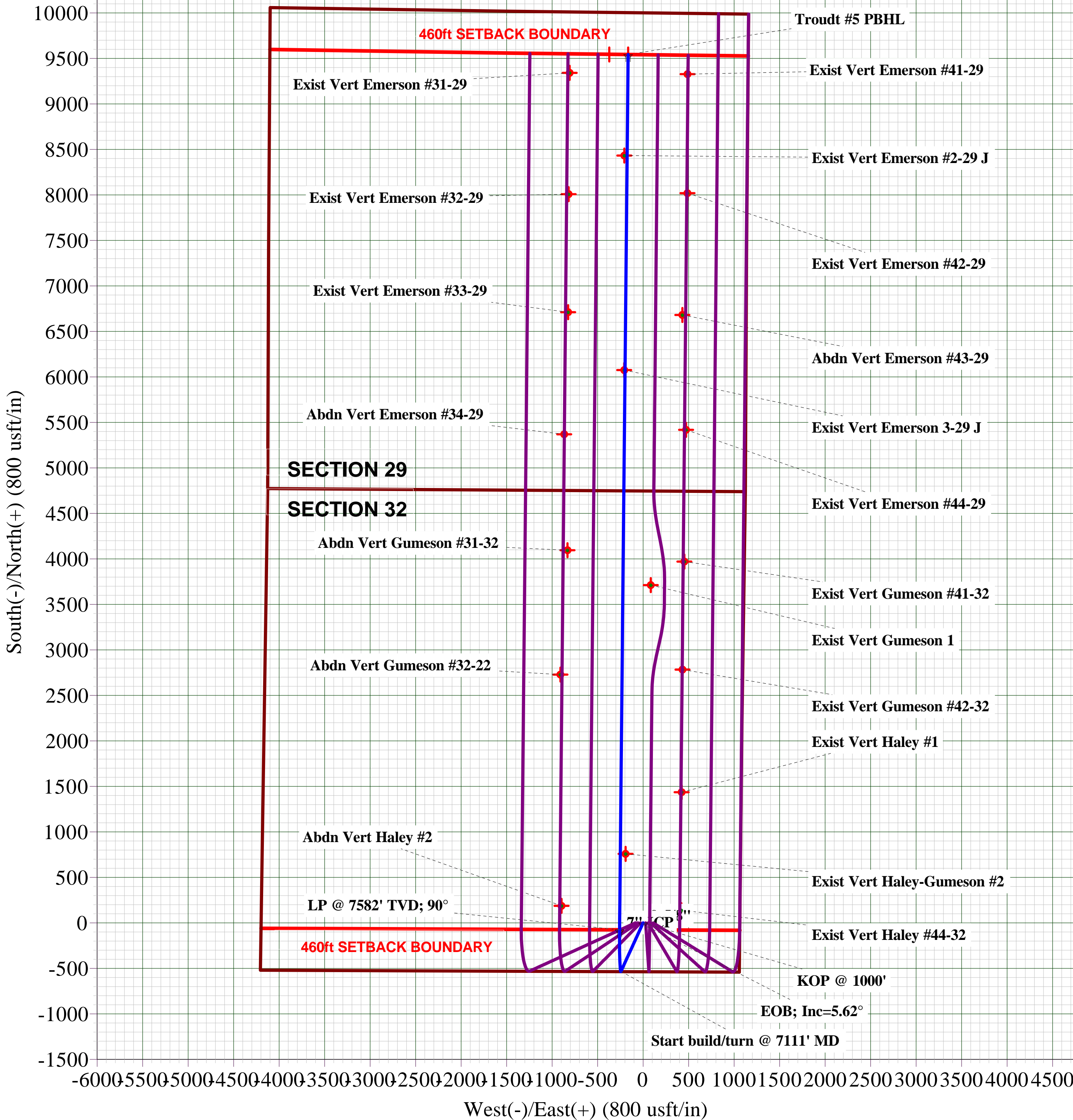
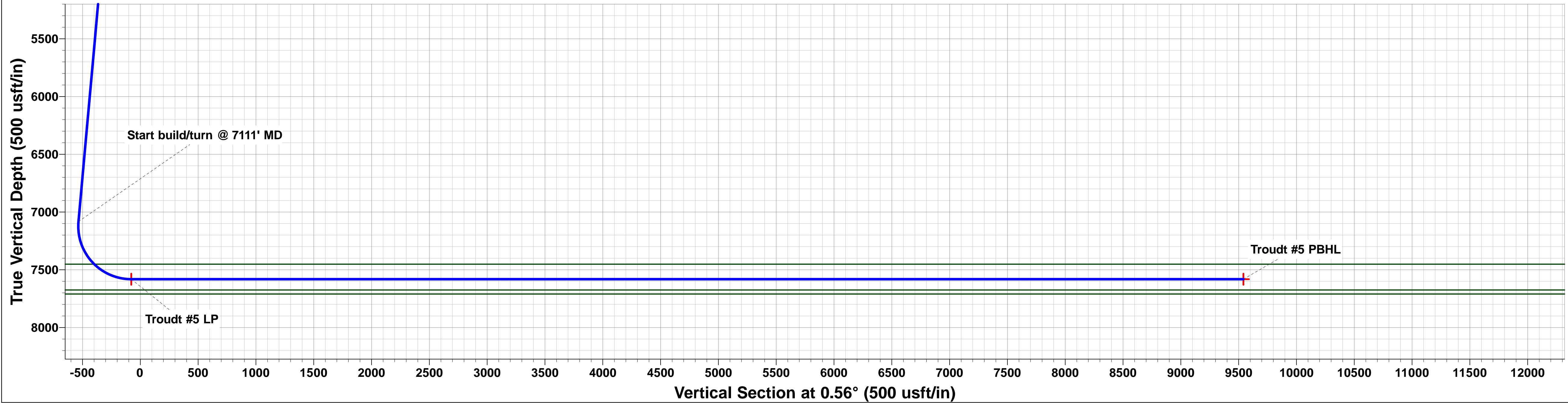
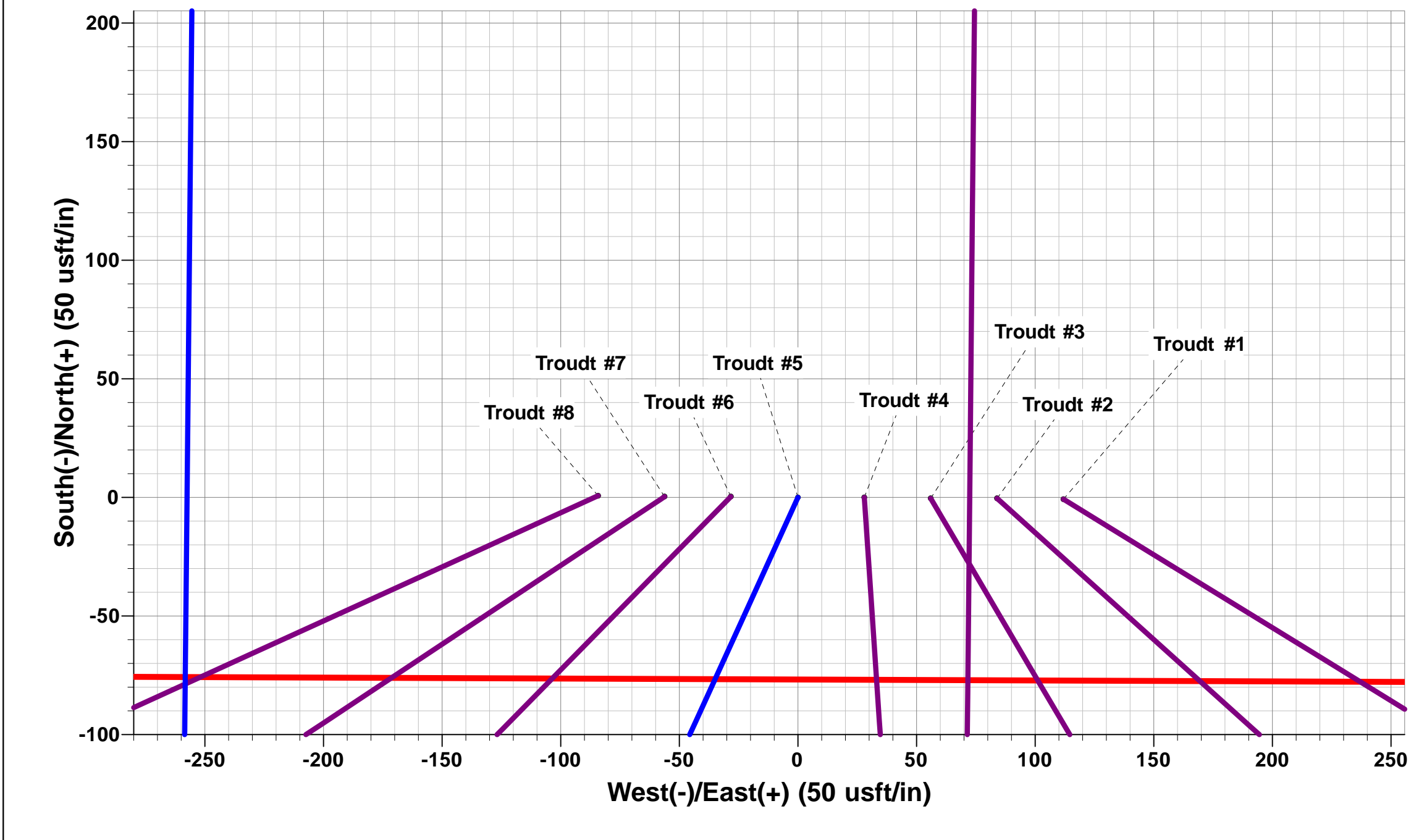
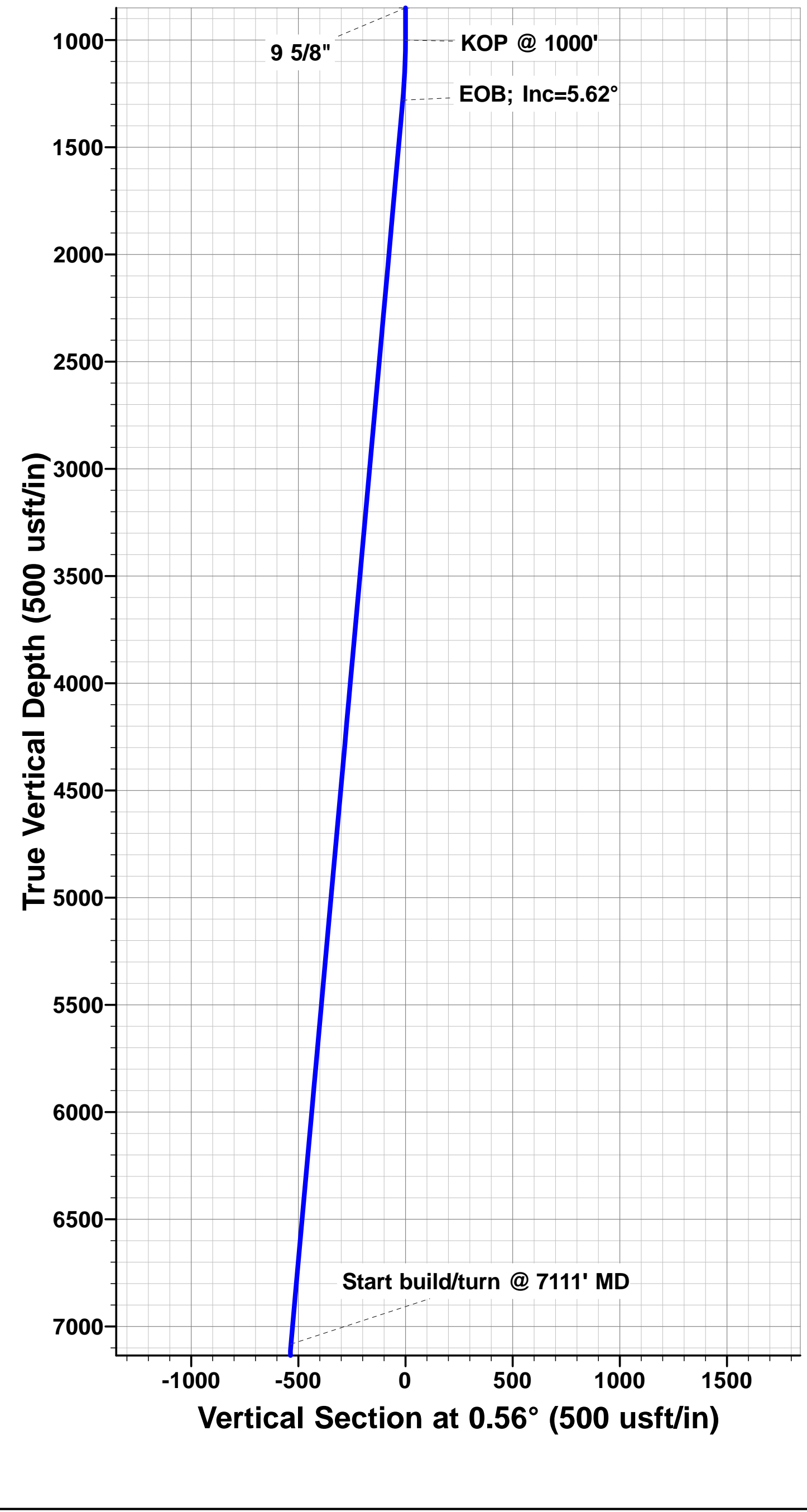




Project: WELD COUNTY, CO  
Site: S32-T2N-R67W  
Well: Troudt #5  
Wellbore: Hz  
Design: Plan #1

ANNOTATIONS										FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		TVDPATH	MDPATH	FORMATION
1000.0	1000.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP @ 1000'		3780.0	3792.5	PARKMAN
1280.8	1281.2	5.62	204.51	-12.5	-5.7	-12.6	13.8	EOB; Inc=5.62°		4587.0	4603.4	SUSSEX
7083.0	7111.5	5.62	204.51	-532.5	-242.8	-534.8	585.2	Start build/turn @ 7111' MD		4980.0	4998.3	SHANNON
7582.0	7872.6	90.00	0.56	-75.8	-258.3	-78.3	1047.8	LP @ 7582' TVD; 90°		7452.0	7518.5	NIOBRARA
7582.0	17491.8	90.00	0.56	9543.0	-164.5	9540.9	10667.1	TD at 17491.8				

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Troudt #5 LP	7582.0	-75.8	-258.3	40.088858	-104.910038
Troudt #5 PBHL	7582.0	9543.4	-164.5	40.115263	-104.909703



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Troutd #5
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troutd #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

<b>Project</b>	WELD COUNTY, CO		
<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		S32-T2N-R67W			
Site Position:		Northing:	1,275,842.23 usft	Latitude:	40.089064
From:	Lat/Long	Easting:	3,165,433.05 usft	Longitude:	-104.908715
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000 ft	Grid Convergence:	0.38 °

Well	Troutd #5					
Well Position	+N/-S	0.7 usft	Northing:	1,275,842.20 usft	Latitude:	40.089066
	+E/-W	-111.9 usft	Easting:	3,165,321.14 usft	Longitude:	-104.909115
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,076.0 usft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	07/08/2014	8.49	66.67	52,619

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	0.56

<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
0.0	0.00	0.00	0.0	-5,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	-4,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,281.2	5.62	204.51	1,280.8	-3,819.2	-12.5	-5.7	2.00	2.00	0.00	204.51	
7,111.5	5.62	204.51	7,083.0	1,983.0	-532.5	-242.8	0.00	0.00	0.00	0.00	
7,872.6	90.00	0.56	7,582.0	2,482.0	-75.8	-258.3	12.50	11.09	20.50	155.95	Troutd #5 LP
17,492.2	90.00	0.56	7,582.0	2,482.0	9,543.4	-164.5	0.00	0.00	0.00	0.00	Troutd #5 PBHL

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Troutd #5
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troutd #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H2		
<b>Design:</b>	Plan #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)
0.0	0.00	0.00	0.0	5,100.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	5,000.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,900.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,800.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,700.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,600.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,500.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,400.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,300.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	4,200.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP @ 1000'</b>										
1,000.0	0.00	0.00	1,000.0	4,100.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	204.51	1,100.0	4,000.02	-1.6	-0.7	-1.6	2.00	2.00	0.00
1,200.0	4.00	204.51	1,199.8	3,900.16	-6.3	-2.9	-6.4	2.00	2.00	0.00
<b>EOB; Inc=5.62°</b>										
1,281.2	5.62	204.51	1,280.8	3,819.24	-12.5	-5.7	-12.6	2.00	2.00	0.00
1,300.0	5.62	204.51	1,299.5	3,800.54	-14.2	-6.5	-14.3	0.00	0.00	0.00
1,400.0	5.62	204.51	1,399.0	3,701.02	-23.1	-10.6	-23.2	0.00	0.00	0.00
1,500.0	5.62	204.51	1,498.5	3,601.50	-32.1	-14.6	-32.2	0.00	0.00	0.00
1,600.0	5.62	204.51	1,598.0	3,501.99	-41.0	-18.7	-41.2	0.00	0.00	0.00
1,700.0	5.62	204.51	1,697.5	3,402.47	-49.9	-22.7	-50.1	0.00	0.00	0.00
1,800.0	5.62	204.51	1,797.1	3,302.95	-58.8	-26.8	-59.1	0.00	0.00	0.00
1,900.0	5.62	204.51	1,896.6	3,203.43	-67.7	-30.9	-68.0	0.00	0.00	0.00
2,000.0	5.62	204.51	1,996.1	3,103.91	-76.6	-34.9	-77.0	0.00	0.00	0.00
2,100.0	5.62	204.51	2,095.6	3,004.39	-85.6	-39.0	-85.9	0.00	0.00	0.00
2,200.0	5.62	204.51	2,195.1	2,904.87	-94.5	-43.1	-94.9	0.00	0.00	0.00
2,300.0	5.62	204.51	2,294.6	2,805.36	-103.4	-47.1	-103.9	0.00	0.00	0.00
2,400.0	5.62	204.51	2,394.2	2,705.84	-112.3	-51.2	-112.8	0.00	0.00	0.00
2,500.0	5.62	204.51	2,493.7	2,606.32	-121.2	-55.3	-121.8	0.00	0.00	0.00
2,600.0	5.62	204.51	2,593.2	2,506.80	-130.1	-59.3	-130.7	0.00	0.00	0.00
2,700.0	5.62	204.51	2,692.7	2,407.28	-139.1	-63.4	-139.7	0.00	0.00	0.00
2,800.0	5.62	204.51	2,792.2	2,307.76	-148.0	-67.5	-148.6	0.00	0.00	0.00
2,900.0	5.62	204.51	2,891.8	2,208.24	-156.9	-71.5	-157.6	0.00	0.00	0.00
3,000.0	5.62	204.51	2,991.3	2,108.73	-165.8	-75.6	-166.5	0.00	0.00	0.00
3,100.0	5.62	204.51	3,090.8	2,009.21	-174.7	-79.7	-175.5	0.00	0.00	0.00
3,200.0	5.62	204.51	3,190.3	1,909.69	-183.7	-83.7	-184.5	0.00	0.00	0.00
3,300.0	5.62	204.51	3,289.8	1,810.17	-192.6	-87.8	-193.4	0.00	0.00	0.00
3,400.0	5.62	204.51	3,389.3	1,710.65	-201.5	-91.9	-202.4	0.00	0.00	0.00
3,500.0	5.62	204.51	3,488.9	1,611.13	-210.4	-95.9	-211.3	0.00	0.00	0.00
3,600.0	5.62	204.51	3,588.4	1,511.61	-219.3	-100.0	-220.3	0.00	0.00	0.00
3,700.0	5.62	204.51	3,687.9	1,412.10	-228.2	-104.1	-229.2	0.00	0.00	0.00
<b>PARKMAN</b>										
3,792.5	5.62	204.51	3,780.0	1,320.00	-236.5	-107.8	-237.5	0.00	0.00	0.00
3,800.0	5.62	204.51	3,787.4	1,312.58	-237.2	-108.1	-238.2	0.00	0.00	0.00
3,900.0	5.62	204.51	3,886.9	1,213.06	-246.1	-112.2	-247.2	0.00	0.00	0.00
4,000.0	5.62	204.51	3,986.5	1,113.54	-255.0	-116.3	-256.1	0.00	0.00	0.00
4,100.0	5.62	204.51	4,086.0	1,014.02	-263.9	-120.3	-265.1	0.00	0.00	0.00
4,200.0	5.62	204.51	4,185.5	914.50	-272.8	-124.4	-274.0	0.00	0.00	0.00
4,300.0	5.62	204.51	4,285.0	814.98	-281.7	-128.5	-283.0	0.00	0.00	0.00
4,400.0	5.62	204.51	4,384.5	715.47	-290.7	-132.5	-291.9	0.00	0.00	0.00
4,500.0	5.62	204.51	4,484.1	615.95	-299.6	-136.6	-300.9	0.00	0.00	0.00
4,600.0	5.62	204.51	4,583.6	516.43	-308.5	-140.7	-309.9	0.00	0.00	0.00
<b>SUSSEX</b>										
4,603.4	5.62	204.51	4,587.0	513.00	-308.8	-140.8	-310.2	0.00	0.00	0.00

# Planning Report



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<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troutd #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	HZ		
<b>Design:</b>	Plan #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)
4,700.0	5.62	204.51	4,683.1	416.91	-317.4	-144.7	-318.8	0.00	0.00	0.00
4,800.0	5.62	204.51	4,782.6	317.39	-326.3	-148.8	-327.8	0.00	0.00	0.00
4,900.0	5.62	204.51	4,882.1	217.87	-335.2	-152.8	-336.7	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,998.3</b>	<b>5.62</b>	<b>204.51</b>	<b>4,980.0</b>	<b>120.00</b>	<b>-344.0</b>	<b>-156.8</b>	<b>-345.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
5,000.0	5.62	204.51	4,981.6	118.35	-344.2	-156.9	-345.7	0.00	0.00	0.00
5,100.0	5.62	204.51	5,081.2	18.83	-353.1	-161.0	-354.6	0.00	0.00	0.00
5,200.0	5.62	204.51	5,180.7	-80.68	-362.0	-165.0	-363.6	0.00	0.00	0.00
5,300.0	5.62	204.51	5,280.2	-180.20	-370.9	-169.1	-372.6	0.00	0.00	0.00
5,400.0	5.62	204.51	5,379.7	-279.72	-379.8	-173.2	-381.5	0.00	0.00	0.00
5,500.0	5.62	204.51	5,479.2	-379.24	-388.7	-177.2	-390.5	0.00	0.00	0.00
5,600.0	5.62	204.51	5,578.8	-478.76	-397.7	-181.3	-399.4	0.00	0.00	0.00
5,700.0	5.62	204.51	5,678.3	-578.28	-406.6	-185.4	-408.4	0.00	0.00	0.00
5,800.0	5.62	204.51	5,777.8	-677.80	-415.5	-189.4	-417.3	0.00	0.00	0.00
5,900.0	5.62	204.51	5,877.3	-777.31	-424.4	-193.5	-426.3	0.00	0.00	0.00
6,000.0	5.62	204.51	5,976.8	-876.83	-433.3	-197.6	-435.2	0.00	0.00	0.00
6,100.0	5.62	204.51	6,076.4	-976.35	-442.3	-201.6	-444.2	0.00	0.00	0.00
6,200.0	5.62	204.51	6,175.9	-1,075.87	-451.2	-205.7	-453.2	0.00	0.00	0.00
6,300.0	5.62	204.51	6,275.4	-1,175.39	-460.1	-209.8	-462.1	0.00	0.00	0.00
6,400.0	5.62	204.51	6,374.9	-1,274.91	-469.0	-213.8	-471.1	0.00	0.00	0.00
6,500.0	5.62	204.51	6,474.4	-1,374.43	-477.9	-217.9	-480.0	0.00	0.00	0.00
6,600.0	5.62	204.51	6,573.9	-1,473.94	-486.8	-222.0	-489.0	0.00	0.00	0.00
6,700.0	5.62	204.51	6,673.5	-1,573.46	-495.8	-226.0	-497.9	0.00	0.00	0.00
6,800.0	5.62	204.51	6,773.0	-1,672.98	-504.7	-230.1	-506.9	0.00	0.00	0.00
6,900.0	5.62	204.51	6,872.5	-1,772.50	-513.6	-234.2	-515.9	0.00	0.00	0.00
7,000.0	5.62	204.51	6,972.0	-1,872.02	-522.5	-238.2	-524.8	0.00	0.00	0.00
7,100.0	5.62	204.51	7,071.5	-1,971.54	-531.4	-242.3	-533.8	0.00	0.00	0.00
<b>Start build/turn @ 7111' MD</b>										
<b>7,111.5</b>	<b>5.62</b>	<b>204.51</b>	<b>7,083.0</b>	<b>-1,982.98</b>	<b>-532.5</b>	<b>-242.8</b>	<b>-534.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
7,200.0	6.35	339.50	7,171.3	-2,071.27	-531.8	-246.3	-534.2	12.50	0.82	152.53
7,300.0	18.56	353.72	7,268.8	-2,168.75	-510.7	-250.0	-513.1	12.50	12.21	14.22
7,400.0	31.00	356.74	7,359.4	-2,259.37	-469.0	-253.2	-471.5	12.50	12.44	3.02
7,500.0	43.47	358.14	7,438.8	-2,338.83	-408.7	-255.8	-411.2	12.50	12.47	1.40
<b>NIOBRARA</b>										
<b>7,518.5</b>	<b>45.78</b>	<b>358.33</b>	<b>7,452.0</b>	<b>-2,352.00</b>	<b>-395.7</b>	<b>-256.2</b>	<b>-398.2</b>	<b>12.50</b>	<b>12.48</b>	<b>1.01</b>
7,600.0	55.96	359.01	7,503.4	-2,403.36	-332.6	-257.6	-335.1	12.50	12.48	0.84
7,700.0	68.44	359.65	7,549.9	-2,449.91	-244.3	-258.6	-246.8	12.50	12.49	0.64
7,800.0	80.93	0.19	7,576.3	-2,476.27	-148.1	-258.7	-150.6	12.50	12.49	0.54
<b>LP @ 7582' TVD; 90°</b>										
<b>7,872.6</b>	<b>90.00</b>	<b>0.56</b>	<b>7,582.0</b>	<b>-2,482.00</b>	<b>-75.8</b>	<b>-258.3</b>	<b>-78.3</b>	<b>12.50</b>	<b>12.49</b>	<b>0.50</b>
7,900.0	90.00	0.56	7,582.0	-2,482.00	-48.4	-258.0	-50.9	0.00	0.00	0.00
8,000.0	90.00	0.56	7,582.0	-2,482.00	51.6	-257.0	49.1	0.00	0.00	0.00
8,100.0	90.00	0.56	7,582.0	-2,482.00	151.6	-256.0	149.1	0.00	0.00	0.00
8,200.0	90.00	0.56	7,582.0	-2,482.00	251.6	-255.1	249.1	0.00	0.00	0.00
8,300.0	90.00	0.56	7,582.0	-2,482.00	351.6	-254.1	349.1	0.00	0.00	0.00
8,400.0	90.00	0.56	7,582.0	-2,482.00	451.6	-253.1	449.1	0.00	0.00	0.00
8,500.0	90.00	0.56	7,582.0	-2,482.00	551.6	-252.1	549.1	0.00	0.00	0.00
8,600.0	90.00	0.56	7,582.0	-2,482.00	651.6	-251.2	649.1	0.00	0.00	0.00
8,700.0	90.00	0.56	7,582.0	-2,482.00	751.6	-250.2	749.1	0.00	0.00	0.00
8,800.0	90.00	0.56	7,582.0	-2,482.00	851.6	-249.2	849.1	0.00	0.00	0.00
8,900.0	90.00	0.56	7,582.0	-2,482.00	951.6	-248.2	949.1	0.00	0.00	0.00
9,000.0	90.00	0.56	7,582.0	-2,482.00	1,051.6	-247.3	1,049.1	0.00	0.00	0.00
9,100.0	90.00	0.56	7,582.0	-2,482.00	1,151.6	-246.3	1,149.1	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Troutd #5
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troutd #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H2		
<b>Design:</b>	Plan #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)
9,200.0	90.00	0.56	7,582.0	-2,482.00	1,251.6	-245.3	1,249.1	0.00	0.00	0.00
9,300.0	90.00	0.56	7,582.0	-2,482.00	1,351.6	-244.3	1,349.1	0.00	0.00	0.00
9,400.0	90.00	0.56	7,582.0	-2,482.00	1,451.6	-243.4	1,449.1	0.00	0.00	0.00
9,500.0	90.00	0.56	7,582.0	-2,482.00	1,551.6	-242.4	1,549.1	0.00	0.00	0.00
9,600.0	90.00	0.56	7,582.0	-2,482.00	1,651.6	-241.4	1,649.1	0.00	0.00	0.00
9,700.0	90.00	0.56	7,582.0	-2,482.00	1,751.6	-240.4	1,749.1	0.00	0.00	0.00
9,800.0	90.00	0.56	7,582.0	-2,482.00	1,851.5	-239.5	1,849.1	0.00	0.00	0.00
9,900.0	90.00	0.56	7,582.0	-2,482.00	1,951.5	-238.5	1,949.1	0.00	0.00	0.00
10,000.0	90.00	0.56	7,582.0	-2,482.00	2,051.5	-237.5	2,049.1	0.00	0.00	0.00
10,100.0	90.00	0.56	7,582.0	-2,482.00	2,151.5	-236.5	2,149.1	0.00	0.00	0.00
10,200.0	90.00	0.56	7,582.0	-2,482.00	2,251.5	-235.6	2,249.1	0.00	0.00	0.00
10,300.0	90.00	0.56	7,582.0	-2,482.00	2,351.5	-234.6	2,349.1	0.00	0.00	0.00
10,400.0	90.00	0.56	7,582.0	-2,482.00	2,451.5	-233.6	2,449.1	0.00	0.00	0.00
10,500.0	90.00	0.56	7,582.0	-2,482.00	2,551.5	-232.6	2,549.1	0.00	0.00	0.00
10,600.0	90.00	0.56	7,582.0	-2,482.00	2,651.5	-231.7	2,649.1	0.00	0.00	0.00
10,700.0	90.00	0.56	7,582.0	-2,482.00	2,751.5	-230.7	2,749.1	0.00	0.00	0.00
10,800.0	90.00	0.56	7,582.0	-2,482.00	2,851.5	-229.7	2,849.1	0.00	0.00	0.00
10,900.0	90.00	0.56	7,582.0	-2,482.00	2,951.5	-228.7	2,949.1	0.00	0.00	0.00
11,000.0	90.00	0.56	7,582.0	-2,482.00	3,051.5	-227.8	3,049.1	0.00	0.00	0.00
11,100.0	90.00	0.56	7,582.0	-2,482.00	3,151.5	-226.8	3,149.1	0.00	0.00	0.00
11,200.0	90.00	0.56	7,582.0	-2,482.00	3,251.5	-225.8	3,249.1	0.00	0.00	0.00
11,300.0	90.00	0.56	7,582.0	-2,482.00	3,351.5	-224.8	3,349.1	0.00	0.00	0.00
11,400.0	90.00	0.56	7,582.0	-2,482.00	3,451.5	-223.9	3,449.1	0.00	0.00	0.00
11,500.0	90.00	0.56	7,582.0	-2,482.00	3,551.5	-222.9	3,549.1	0.00	0.00	0.00
11,600.0	90.00	0.56	7,582.0	-2,482.00	3,651.5	-221.9	3,649.1	0.00	0.00	0.00
11,700.0	90.00	0.56	7,582.0	-2,482.00	3,751.5	-220.9	3,749.1	0.00	0.00	0.00
11,800.0	90.00	0.56	7,582.0	-2,482.00	3,851.5	-220.0	3,849.1	0.00	0.00	0.00
11,900.0	90.00	0.56	7,582.0	-2,482.00	3,951.4	-219.0	3,949.1	0.00	0.00	0.00
12,000.0	90.00	0.56	7,582.0	-2,482.00	4,051.4	-218.0	4,049.1	0.00	0.00	0.00
12,100.0	90.00	0.56	7,582.0	-2,482.00	4,151.4	-217.0	4,149.1	0.00	0.00	0.00
12,200.0	90.00	0.56	7,582.0	-2,482.00	4,251.4	-216.1	4,249.1	0.00	0.00	0.00
12,300.0	90.00	0.56	7,582.0	-2,482.00	4,351.4	-215.1	4,349.1	0.00	0.00	0.00
12,400.0	90.00	0.56	7,582.0	-2,482.00	4,451.4	-214.1	4,449.1	0.00	0.00	0.00
12,500.0	90.00	0.56	7,582.0	-2,482.00	4,551.4	-213.1	4,549.1	0.00	0.00	0.00
12,600.0	90.00	0.56	7,582.0	-2,482.00	4,651.4	-212.2	4,649.1	0.00	0.00	0.00
12,700.0	90.00	0.56	7,582.0	-2,482.00	4,751.4	-211.2	4,749.1	0.00	0.00	0.00
12,800.0	90.00	0.56	7,582.0	-2,482.00	4,851.4	-210.2	4,849.1	0.00	0.00	0.00
12,900.0	90.00	0.56	7,582.0	-2,482.00	4,951.4	-209.2	4,949.1	0.00	0.00	0.00
13,000.0	90.00	0.56	7,582.0	-2,482.00	5,051.4	-208.3	5,049.1	0.00	0.00	0.00
13,100.0	90.00	0.56	7,582.0	-2,482.00	5,151.4	-207.3	5,149.1	0.00	0.00	0.00
13,200.0	90.00	0.56	7,582.0	-2,482.00	5,251.4	-206.3	5,249.1	0.00	0.00	0.00
13,300.0	90.00	0.56	7,582.0	-2,482.00	5,351.4	-205.3	5,349.1	0.00	0.00	0.00
13,400.0	90.00	0.56	7,582.0	-2,482.00	5,451.4	-204.4	5,449.1	0.00	0.00	0.00
13,500.0	90.00	0.56	7,582.0	-2,482.00	5,551.4	-203.4	5,549.1	0.00	0.00	0.00
13,600.0	90.00	0.56	7,582.0	-2,482.00	5,651.4	-202.4	5,649.1	0.00	0.00	0.00
13,700.0	90.00	0.56	7,582.0	-2,482.00	5,751.4	-201.4	5,749.1	0.00	0.00	0.00
13,800.0	90.00	0.56	7,582.0	-2,482.00	5,851.4	-200.5	5,849.1	0.00	0.00	0.00
13,900.0	90.00	0.56	7,582.0	-2,482.00	5,951.4	-199.5	5,949.1	0.00	0.00	0.00
14,000.0	90.00	0.56	7,582.0	-2,482.00	6,051.3	-198.5	6,049.1	0.00	0.00	0.00
14,100.0	90.00	0.56	7,582.0	-2,482.00	6,151.3	-197.5	6,149.1	0.00	0.00	0.00
14,200.0	90.00	0.56	7,582.0	-2,482.00	6,251.3	-196.6	6,249.1	0.00	0.00	0.00
14,300.0	90.00	0.56	7,582.0	-2,482.00	6,351.3	-195.6	6,349.1	0.00	0.00	0.00
14,400.0	90.00	0.56	7,582.0	-2,482.00	6,451.3	-194.6	6,449.1	0.00	0.00	0.00
14,500.0	90.00	0.56	7,582.0	-2,482.00	6,551.3	-193.6	6,549.1	0.00	0.00	0.00

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Troutd #5
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troutd #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	H <sub>z</sub>		
<b>Design:</b>	Plan #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)
14,600.0	90.00	0.56	7,582.0	-2,482.00	6,651.3	-192.7	6,649.1	0.00	0.00	0.00
14,700.0	90.00	0.56	7,582.0	-2,482.00	6,751.3	-191.7	6,749.1	0.00	0.00	0.00
14,800.0	90.00	0.56	7,582.0	-2,482.00	6,851.3	-190.7	6,849.1	0.00	0.00	0.00
14,900.0	90.00	0.56	7,582.0	-2,482.00	6,951.3	-189.7	6,949.1	0.00	0.00	0.00
15,000.0	90.00	0.56	7,582.0	-2,482.00	7,051.3	-188.8	7,049.1	0.00	0.00	0.00
15,100.0	90.00	0.56	7,582.0	-2,482.00	7,151.3	-187.8	7,149.1	0.00	0.00	0.00
15,200.0	90.00	0.56	7,582.0	-2,482.00	7,251.3	-186.8	7,249.1	0.00	0.00	0.00
15,300.0	90.00	0.56	7,582.0	-2,482.00	7,351.3	-185.8	7,349.1	0.00	0.00	0.00
15,400.0	90.00	0.56	7,582.0	-2,482.00	7,451.3	-184.9	7,449.1	0.00	0.00	0.00
15,500.0	90.00	0.56	7,582.0	-2,482.00	7,551.3	-183.9	7,549.1	0.00	0.00	0.00
15,600.0	90.00	0.56	7,582.0	-2,482.00	7,651.3	-182.9	7,649.1	0.00	0.00	0.00
15,700.0	90.00	0.56	7,582.0	-2,482.00	7,751.3	-181.9	7,749.1	0.00	0.00	0.00
15,800.0	90.00	0.56	7,582.0	-2,482.00	7,851.3	-181.0	7,849.1	0.00	0.00	0.00
15,900.0	90.00	0.56	7,582.0	-2,482.00	7,951.3	-180.0	7,949.1	0.00	0.00	0.00
16,000.0	90.00	0.56	7,582.0	-2,482.00	8,051.3	-179.0	8,049.1	0.00	0.00	0.00
16,100.0	90.00	0.56	7,582.0	-2,482.00	8,151.2	-178.0	8,149.1	0.00	0.00	0.00
16,200.0	90.00	0.56	7,582.0	-2,482.00	8,251.2	-177.1	8,249.1	0.00	0.00	0.00
16,300.0	90.00	0.56	7,582.0	-2,482.00	8,351.2	-176.1	8,349.1	0.00	0.00	0.00
16,400.0	90.00	0.56	7,582.0	-2,482.00	8,451.2	-175.1	8,449.1	0.00	0.00	0.00
16,500.0	90.00	0.56	7,582.0	-2,482.00	8,551.2	-174.1	8,549.1	0.00	0.00	0.00
16,600.0	90.00	0.56	7,582.0	-2,482.00	8,651.2	-173.2	8,649.1	0.00	0.00	0.00
16,700.0	90.00	0.56	7,582.0	-2,482.00	8,751.2	-172.2	8,749.1	0.00	0.00	0.00
16,800.0	90.00	0.56	7,582.0	-2,482.00	8,851.2	-171.2	8,849.1	0.00	0.00	0.00
16,900.0	90.00	0.56	7,582.0	-2,482.00	8,951.2	-170.2	8,949.1	0.00	0.00	0.00
17,000.0	90.00	0.56	7,582.0	-2,482.00	9,051.2	-169.3	9,049.1	0.00	0.00	0.00
17,100.0	90.00	0.56	7,582.0	-2,482.00	9,151.2	-168.3	9,149.1	0.00	0.00	0.00
17,200.0	90.00	0.56	7,582.0	-2,482.00	9,251.2	-167.3	9,249.1	0.00	0.00	0.00
17,300.0	90.00	0.56	7,582.0	-2,482.00	9,351.2	-166.3	9,349.1	0.00	0.00	0.00
17,400.0	90.00	0.56	7,582.0	-2,482.00	9,451.2	-165.4	9,449.1	0.00	0.00	0.00
<b>TD at 17491.8</b>										
<b>17,491.8</b>	<b>90.00</b>	<b>0.56</b>	<b>7,582.0</b>	<b>-2,482.00</b>	<b>9,543.0</b>	<b>-164.5</b>	<b>9,540.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
17,492.2	90.00	0.56	7,582.0	-2,482.00	9,543.4	-164.5	9,541.3	0.00	0.00	0.00

## Casing Points

MD (usft)	TVD (usft)	Name	Casing Diameter (ft)	Hole Diameter (ft)
850.0	850.0	9 5/8"	0.00000	0.00000
7,872.6	7,582.0	7" ICP	0.00000	0.00000
17,491.8	7,582.0	4 1/2"	0.00000	0.00000

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,792.5	3,780.0	PARKMAN			
4,603.4	4,587.0	SUSSEX			
4,998.3	4,980.0	SHANNON			
7,518.5	7,452.0	NIOBRARA			

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Troudt #5
<b>Company:</b>	Extraction Oil & Gas	<b>TVD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Project:</b>	WELD COUNTY, CO	<b>MD Reference:</b>	24' KB @ 5100.0usft (H&P 519)
<b>Site:</b>	S32-T2N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Troudt #5	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan #1		

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,000.0	1,000.0	0.0	0.0	KOP @ 1000'
1,281.2	1,280.8	-12.5	-5.7	EOB; Inc=5.62°
7,111.5	7,083.0	-532.5	-242.8	Start build/turn @ 7111' MD
7,872.6	7,582.0	-75.8	-258.3	LP @ 7582' TVD; 90°
17,491.8	7,582.0	9,543.0	-164.5	TD at 17491.8