

# **EXTRACTION OIL & GAS**

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

**SW SE SEC 36 T6N R66W 6th P.M.**

**CS-SHERWOOD 2-1-13**

**ORIGINAL WELLBORE**

**29 November, 2016**

**Plan: PROPOSAL #3**





Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SW SE SEC 36 T6N R66W 6th P.M.  
Well: CS-SHERWOOD 2-1-13  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #3

ANNOTATIONS

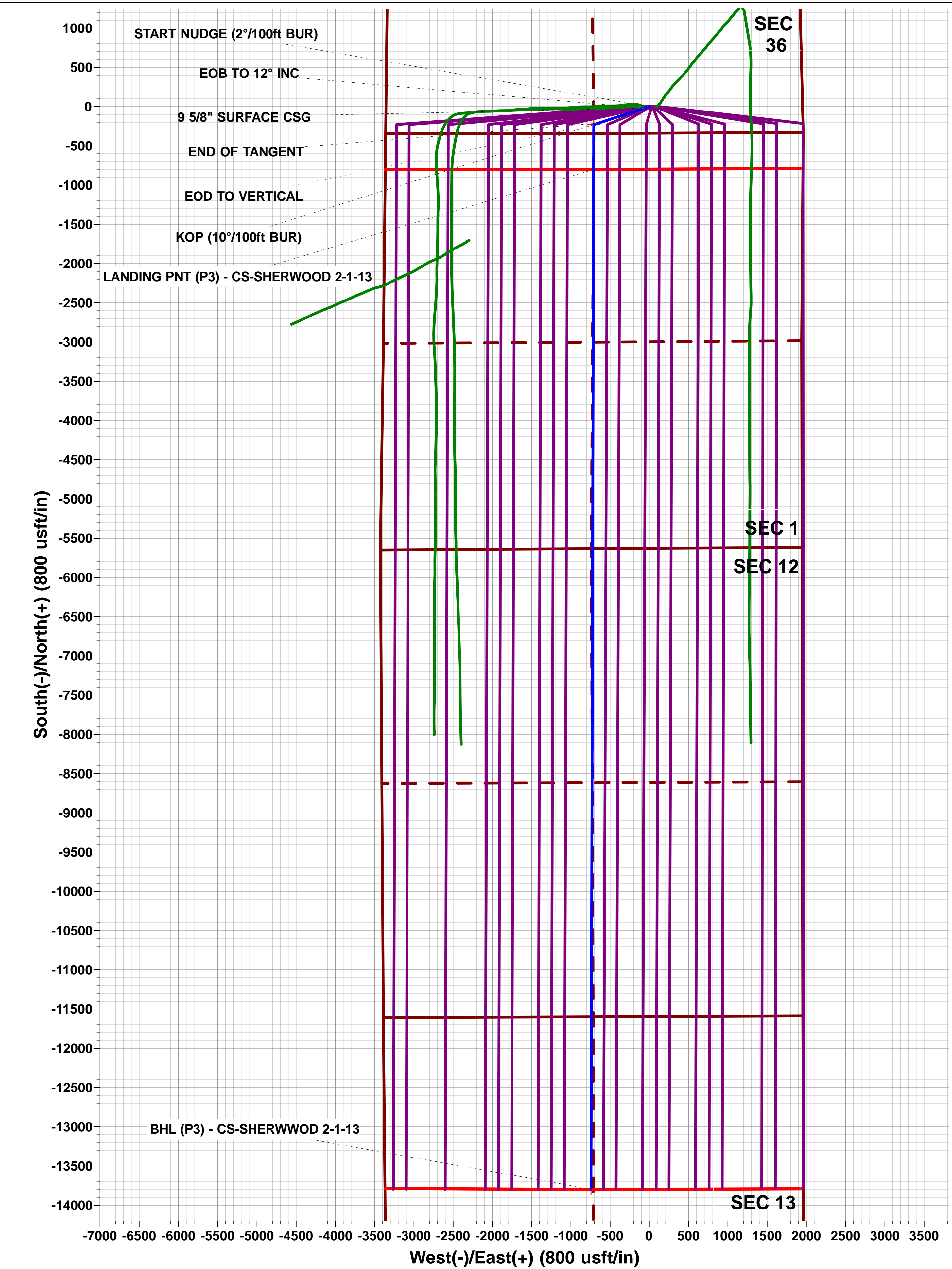
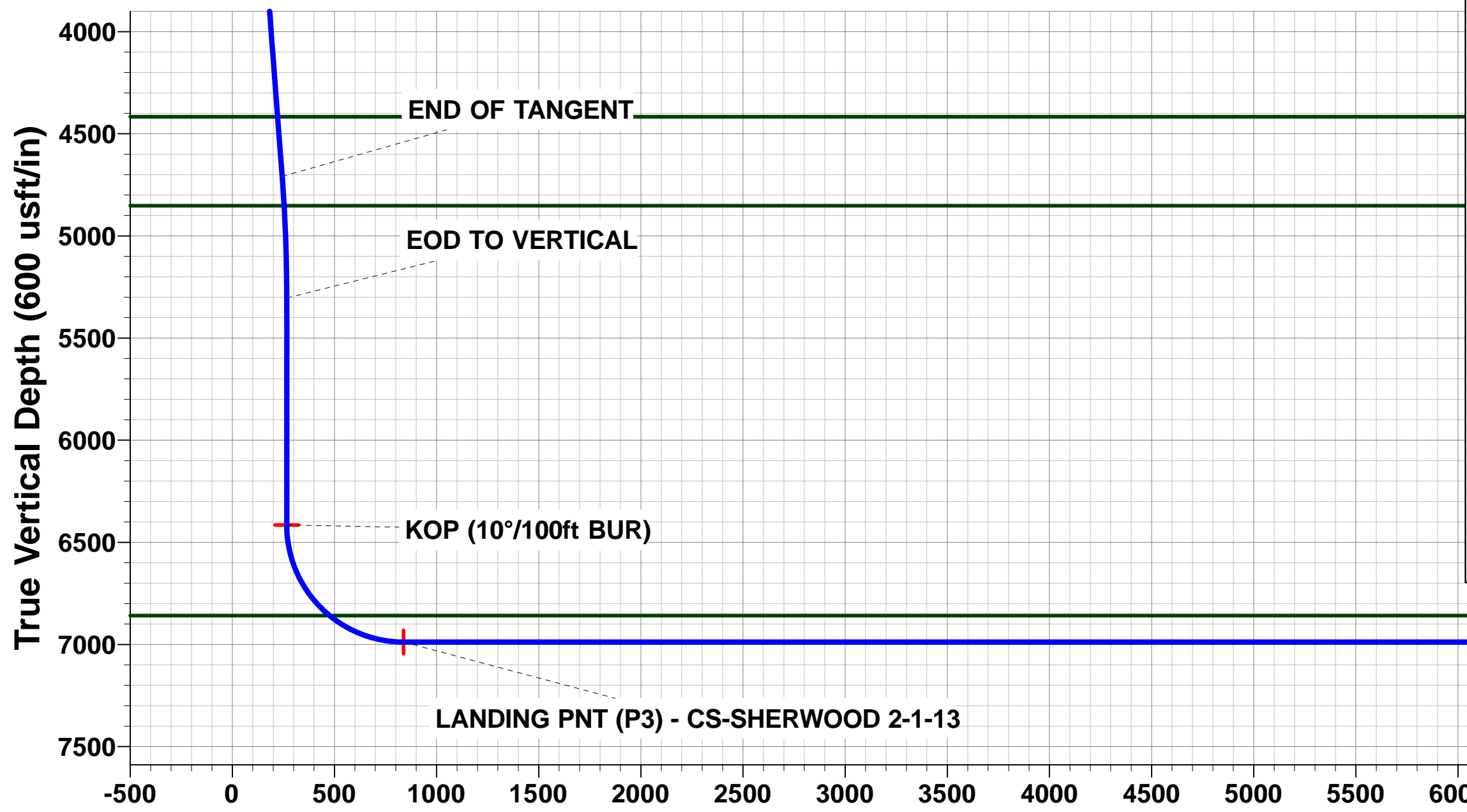
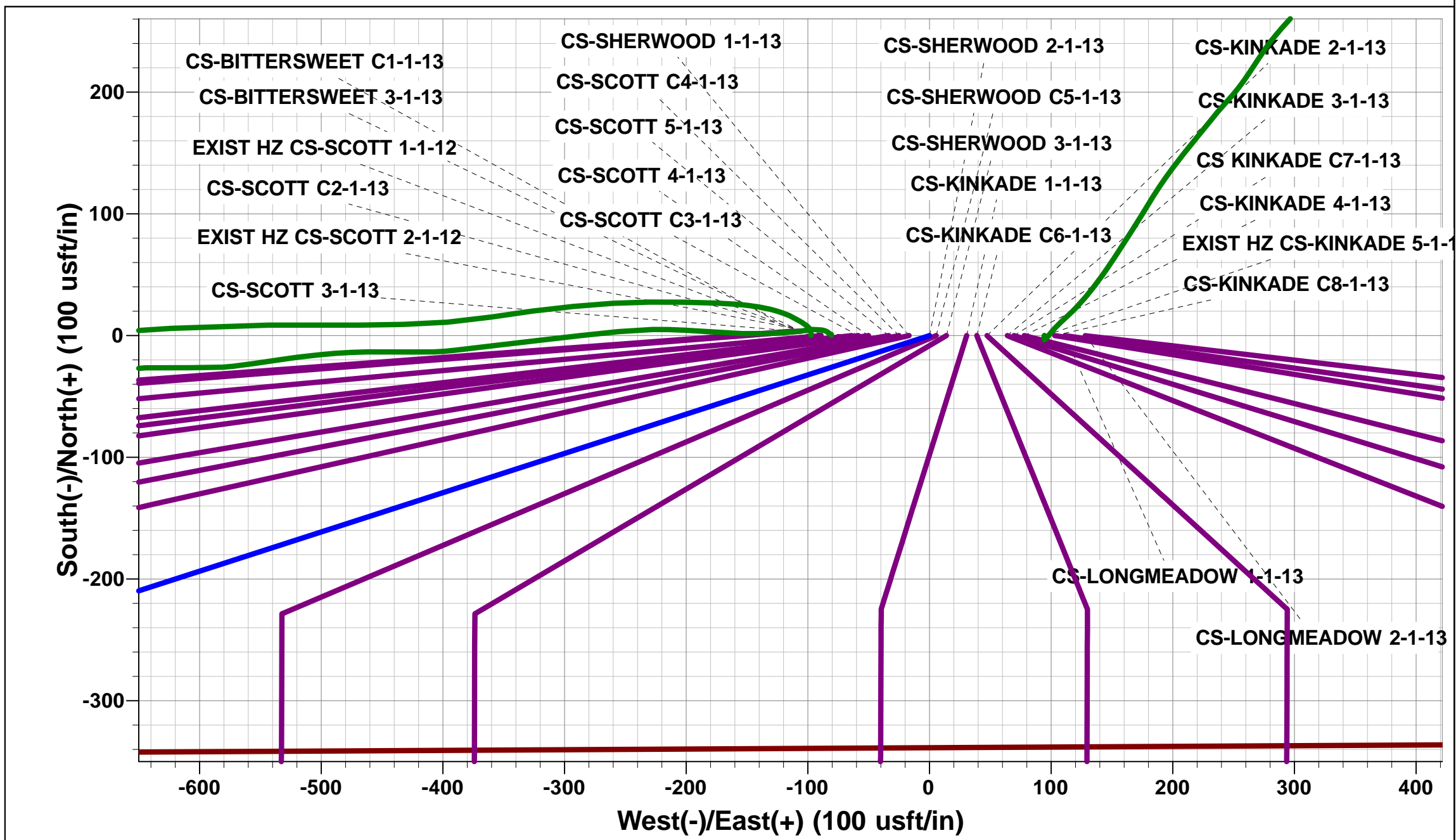
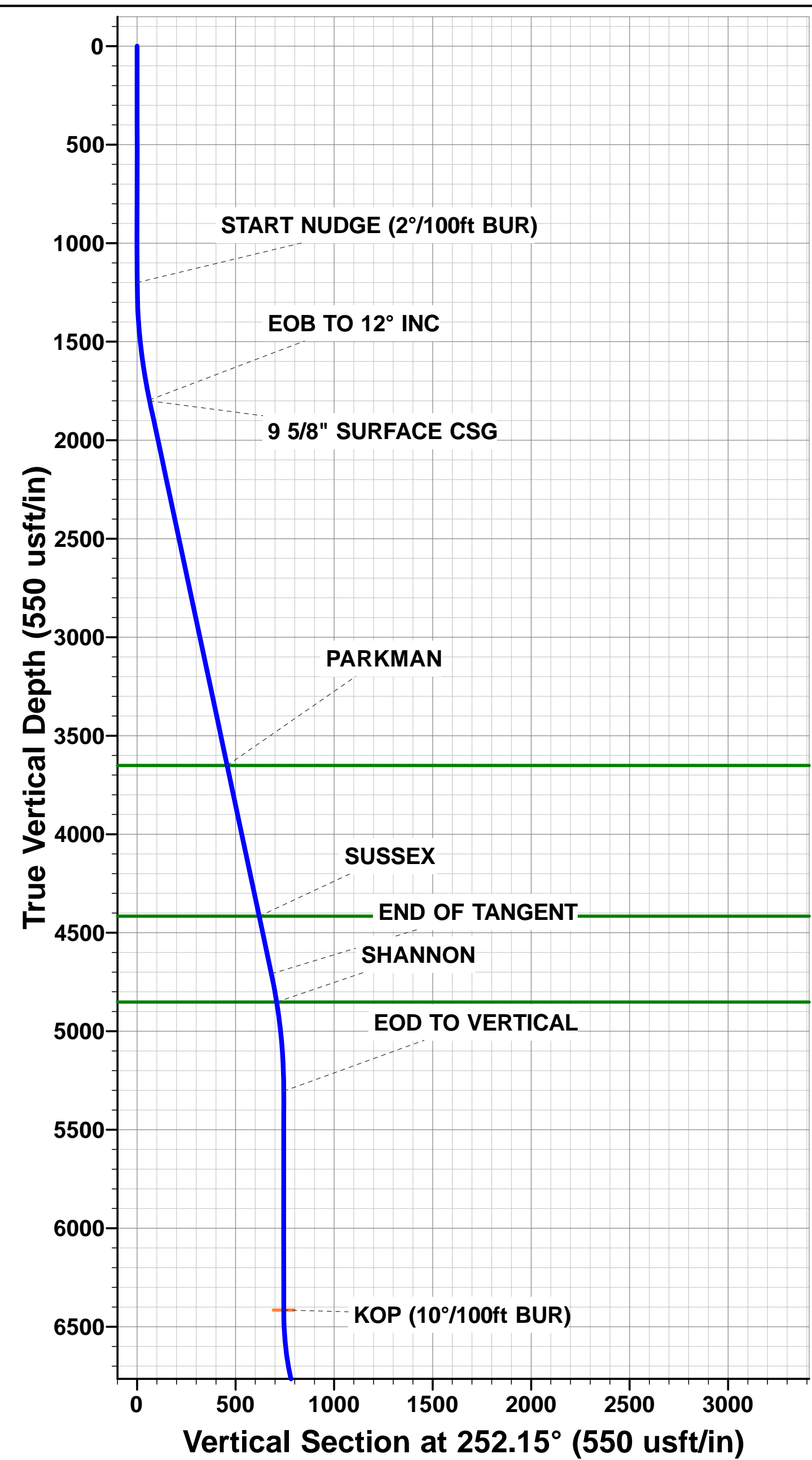
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation
1200.0	1200.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1795.5	1799.9	12.00	252.12	-19.2	-59.6	22.4	62.6	EOB TO 12° INC
1800.0	1804.5	12.00	252.12	-19.5	-60.5	22.7	63.5	9 5/8" SURFACE CSG
4708.5	4777.9	12.00	252.12	-209.3	-648.7	243.9	681.7	END OF TANGENT
5304.0	5377.8	0.00	252.12	-228.5	-708.3	266.3	744.2	EOD TO VERTICAL
6415.0	6488.8	0.00	0.00	-228.5	-708.3	266.3	744.2	KOP (10°/100ft BUR)
6988.0	7388.8	89.99	180.15	-801.4	-709.8	838.5	1317.2	LANDING PNT (P3) - CS-SHERWOOD 2-1-13
6988.0	20380.3	90.00	180.14	-13792.8	-743.6	13812.9	14308.6	BHL (P3)- CS-SHERWOOD 2-1-13

PROPOSED LOCAL COORDINATES:

SHL: 340ft FSL & 1952ft FEL Sec 36  
LANDING PNT: 460ft FNL & 2655t FWL Sec 1  
BHL: 2197ft FNL & 2626ft FWL Sec 13

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
KOP (P3) - CS-SHERWOOD 2-1-13	6415.0	-228.5	-708.3	40.437743	-104.725424
BHL (P3) - CS-SHERWOOD 2-1-13	6988.0	-13792.8	-743.6	40.400510	-104.725550
LANDING PNT (P3) - CS-SHERWOOD 2-1-13	6988.0	-801.5	-709.8	40.436170	-104.725430



Vertical Section at 183.09° (600 usft/in)

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CS-SHERWOOD 2-1-13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

<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 SE SEC 36 T6N R66W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,403,485.52 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,216,213.28 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.438370
		<b>Longitude:</b>	-104.723230
		<b>Grid Convergence:</b>	0.50 °

<b>Well</b>	CS-SHERWOOD 2-1-13		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 1,403,486.36 usft
	<b>+E/-W</b>	97.4 usft	<b>Easting:</b> 3,216,310.70 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	40.438370
		<b>Longitude:</b>	-104.722880
		<b>Ground Level:</b>	4,665.0 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	23/06/2015	8.40	66.94	52,644

<b>Design</b>	PROPOSAL #3			
<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>
	6,988.0	0.0	0.0	183.09

<b>Plan Sections</b>											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,681.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	-3,481.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,799.9	12.00	252.12	1,795.5	-2,885.5	-19.2	-59.6	2.00	2.00	0.00	252.12	
4,777.9	12.00	252.12	4,708.5	27.5	-209.3	-648.7	0.00	0.00	0.00	0.00	
5,377.8	0.00	0.00	5,304.0	623.0	-228.5	-708.3	2.00	-2.00	0.00	180.00	
6,488.8	0.00	0.00	6,415.0	1,734.0	-228.5	-708.3	0.00	0.00	0.00	0.00	KOP (P3) - CS-SH
7,388.8	90.00	180.15	6,988.0	2,307.0	-801.5	-709.8	10.00	10.00	-19.98	180.15	LANDING PNT (P3
20,380.3	90.00	180.14	6,988.0	2,307.0	-13,792.8	-743.6	0.00	0.00	0.00	-66.06	BHL (P3) - CS-SHE

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CS-SHERWOOD 2-1-13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

## 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	4,681.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,581.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,481.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,381.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,281.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,181.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,081.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	3,981.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	3,881.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,781.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,681.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,581.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
1,200.0	0.00	0.00	1,200.0	3,481.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	2.00	252.12	1,300.0	3,381.02	-0.5	-1.7	0.6	2.00	2.00	0.00
1,400.0	4.00	252.12	1,399.8	3,281.16	-2.1	-6.6	2.5	2.00	2.00	0.00
1,500.0	6.00	252.12	1,499.5	3,181.55	-4.8	-14.9	5.6	2.00	2.00	0.00
1,600.0	8.00	252.12	1,598.7	3,082.30	-8.6	-26.5	10.0	2.00	2.00	0.00
1,700.0	10.00	252.12	1,697.5	2,983.53	-13.4	-41.4	15.6	2.00	2.00	0.00
<b>EOB TO 12° INC</b>										
1,799.9	12.00	252.12	1,795.5	2,885.47	-19.2	-59.6	22.4	2.00	2.00	0.00
1,800.0	12.00	252.12	1,795.6	2,885.38	-19.2	-59.6	22.4	0.41	0.41	0.00
<b>9 5/8" SURFACE CSG</b>										
1,804.5	12.00	252.12	1,800.0	2,881.00	-19.5	-60.5	22.7	0.00	0.00	0.00
1,900.0	12.00	252.12	1,893.4	2,787.56	-25.6	-79.4	29.8	0.00	0.00	0.00
2,000.0	12.00	252.12	1,991.3	2,689.75	-32.0	-99.1	37.3	0.00	0.00	0.00
2,100.0	12.00	252.12	2,089.1	2,591.93	-38.4	-118.9	44.7	0.00	0.00	0.00
2,200.0	12.00	252.12	2,186.9	2,494.12	-44.8	-138.7	52.2	0.00	0.00	0.00
2,300.0	12.00	252.12	2,284.7	2,396.30	-51.1	-158.5	59.6	0.00	0.00	0.00
2,400.0	12.00	252.12	2,382.5	2,298.48	-57.5	-178.3	67.0	0.00	0.00	0.00
2,500.0	12.00	252.12	2,480.3	2,200.67	-63.9	-198.1	74.5	0.00	0.00	0.00
2,600.0	12.00	252.12	2,578.1	2,102.85	-70.3	-217.9	81.9	0.00	0.00	0.00
2,700.0	12.00	252.12	2,676.0	2,005.04	-76.7	-237.6	89.3	0.00	0.00	0.00
2,800.0	12.00	252.12	2,773.8	1,907.22	-83.0	-257.4	96.8	0.00	0.00	0.00
2,900.0	12.00	252.12	2,871.6	1,809.41	-89.4	-277.2	104.2	0.00	0.00	0.00
3,000.0	12.00	252.12	2,969.4	1,711.59	-95.8	-297.0	111.7	0.00	0.00	0.00
3,100.0	12.00	252.12	3,067.2	1,613.78	-102.2	-316.8	119.1	0.00	0.00	0.00
3,200.0	12.00	252.12	3,165.0	1,515.96	-108.6	-336.6	126.5	0.00	0.00	0.00
3,300.0	12.00	252.12	3,262.9	1,418.15	-115.0	-356.3	134.0	0.00	0.00	0.00
3,400.0	12.00	252.12	3,360.7	1,320.33	-121.3	-376.1	141.4	0.00	0.00	0.00
3,500.0	12.00	252.12	3,458.5	1,222.52	-127.7	-395.9	148.9	0.00	0.00	0.00
3,600.0	12.00	252.12	3,556.3	1,124.70	-134.1	-415.7	156.3	0.00	0.00	0.00
<b>PARKMAN</b>										
3,696.8	12.00	252.12	3,651.0	1,030.00	-140.3	-434.9	163.5	0.00	0.00	0.00
3,700.0	12.00	252.12	3,654.1	1,026.89	-140.5	-435.5	163.7	0.00	0.00	0.00
3,800.0	12.00	252.12	3,751.9	929.07	-146.9	-455.3	171.2	0.00	0.00	0.00
3,900.0	12.00	252.12	3,849.7	831.25	-153.3	-475.1	178.6	0.00	0.00	0.00
4,000.0	12.00	252.12	3,947.6	733.44	-159.6	-494.8	186.0	0.00	0.00	0.00
4,100.0	12.00	252.12	4,045.4	635.62	-166.0	-514.6	193.5	0.00	0.00	0.00
4,200.0	12.00	252.12	4,143.2	537.81	-172.4	-534.4	200.9	0.00	0.00	0.00
4,300.0	12.00	252.12	4,241.0	439.99	-178.8	-554.2	208.4	0.00	0.00	0.00
4,400.0	12.00	252.12	4,338.8	342.18	-185.2	-574.0	215.8	0.00	0.00	0.00
<b>SUSSEX</b>										
4,478.9	12.00	252.12	4,416.0	265.00	-190.2	-589.6	221.7	0.00	0.00	0.00



# Planning Report



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<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

## 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)
4,500.0	12.00	252.12	4,436.6	244.36	-191.5	-593.8	223.2	0.00	0.00	0.00
4,600.0	12.00	252.12	4,534.5	146.55	-197.9	-613.5	230.7	0.00	0.00	0.00
4,700.0	12.00	252.12	4,632.3	48.73	-204.3	-633.3	238.1	0.00	0.00	0.00
<b>END OF TANGENT</b>										
<b>4,777.9</b>	<b>12.00</b>	<b>252.12</b>	<b>4,708.5</b>	<b>-27.47</b>	<b>-209.3</b>	<b>-648.7</b>	<b>243.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.0	11.56	252.12	4,730.1	-49.10	-210.7	-653.0	245.5	2.00	-2.00	0.00
4,900.0	9.56	252.12	4,828.4	-147.40	-216.3	-670.5	252.1	2.00	-2.00	0.00
<b>SHANNON</b>										
<b>4,923.9</b>	<b>9.08</b>	<b>252.12</b>	<b>4,852.0</b>	<b>-171.00</b>	<b>-217.5</b>	<b>-674.2</b>	<b>253.5</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,000.0	7.56	252.12	4,927.3	-246.29	-220.9	-684.6	257.4	2.00	-2.00	0.00
5,100.0	5.56	252.12	5,026.6	-345.63	-224.4	-695.5	261.5	2.00	-2.00	0.00
5,200.0	3.56	252.12	5,126.3	-445.31	-226.8	-703.1	264.3	2.00	-2.00	0.00
5,300.0	1.56	252.12	5,226.2	-545.20	-228.2	-707.3	265.9	2.00	-2.00	0.00
<b>EOD TO VERTICAL</b>										
<b>5,377.8</b>	<b>0.00</b>	<b>252.12</b>	<b>5,304.0</b>	<b>-622.99</b>	<b>-228.5</b>	<b>-708.3</b>	<b>266.3</b>	<b>2.00</b>	<b>-2.00</b>	<b>0.00</b>
5,400.0	0.00	0.00	5,326.2	-645.19	-228.5	-708.3	266.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,426.2	-745.19	-228.5	-708.3	266.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,526.2	-845.19	-228.5	-708.3	266.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,626.2	-945.19	-228.5	-708.3	266.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,726.2	-1,045.19	-228.5	-708.3	266.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,826.2	-1,145.19	-228.5	-708.3	266.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,926.2	-1,245.19	-228.5	-708.3	266.3	0.00	0.00	0.00
6,100.0	0.00	0.00	6,026.2	-1,345.19	-228.5	-708.3	266.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,126.2	-1,445.19	-228.5	-708.3	266.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,226.2	-1,545.19	-228.5	-708.3	266.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,326.2	-1,645.19	-228.5	-708.3	266.3	0.00	0.00	0.00
<b>KOP (10°/100ft BUR)</b>										
<b>6,488.8</b>	<b>0.00</b>	<b>0.00</b>	<b>6,415.0</b>	<b>-1,733.99</b>	<b>-228.5</b>	<b>-708.3</b>	<b>266.3</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,500.0	1.12	180.15	6,426.2	-1,745.19	-228.6	-708.3	266.4	9.99	9.99	0.00
6,600.0	11.12	180.15	6,525.5	-1,844.49	-239.3	-708.3	277.0	10.00	10.00	0.00
6,700.0	21.12	180.15	6,621.4	-1,940.44	-267.0	-708.4	304.7	10.00	10.00	0.00
6,800.0	31.12	180.15	6,711.1	-2,030.12	-310.9	-708.5	348.6	10.00	10.00	0.00
6,900.0	41.12	180.15	6,791.8	-2,110.80	-369.8	-708.7	407.4	10.00	10.00	0.00
<b>NIOBRARA</b>										
<b>6,995.2</b>	<b>50.64</b>	<b>180.15</b>	<b>6,858.0</b>	<b>-2,177.00</b>	<b>-438.1</b>	<b>-708.9</b>	<b>475.6</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,000.0	51.12	180.15	6,861.0	-2,180.03	-441.8	-708.9	479.3	10.00	10.00	0.00
7,100.0	61.11	180.15	6,916.7	-2,235.71	-524.7	-709.1	562.1	10.00	10.00	0.00
7,200.0	71.11	180.15	6,957.2	-2,276.15	-616.0	-709.3	653.3	10.00	10.00	0.00
7,300.0	81.11	180.15	6,981.1	-2,300.12	-713.0	-709.6	750.1	10.00	10.00	0.00
<b>LANDING PNT (P3) - CS-SHERWOOD 2-1-13</b>										
<b>7,388.8</b>	<b>89.99</b>	<b>180.15</b>	<b>6,988.0</b>	<b>-2,307.00</b>	<b>-801.4</b>	<b>-709.8</b>	<b>838.5</b>	<b>10.00</b>	<b>10.00</b>	<b>0.00</b>
7,400.0	90.00	180.15	6,988.0	-2,307.00	-812.6	-709.9	849.7	0.04	0.04	0.00
7,500.0	90.00	180.15	6,988.0	-2,307.01	-912.6	-710.1	949.5	0.00	0.00	0.00
7,600.0	90.00	180.15	6,988.0	-2,307.01	-1,012.6	-710.4	1,049.4	0.00	0.00	0.00
7,700.0	90.00	180.15	6,988.0	-2,307.01	-1,112.6	-710.7	1,149.3	0.00	0.00	0.00
7,800.0	90.00	180.15	6,988.0	-2,307.02	-1,212.6	-711.0	1,249.1	0.00	0.00	0.00
7,900.0	90.00	180.15	6,988.0	-2,307.02	-1,312.6	-711.2	1,349.0	0.00	0.00	0.00
8,000.0	90.00	180.15	6,988.0	-2,307.03	-1,412.6	-711.5	1,448.9	0.00	0.00	0.00
8,100.0	90.00	180.15	6,988.0	-2,307.03	-1,512.6	-711.8	1,548.7	0.00	0.00	0.00
8,200.0	90.00	180.15	6,988.0	-2,307.03	-1,612.6	-712.0	1,648.6	0.00	0.00	0.00
8,300.0	90.00	180.15	6,988.0	-2,307.04	-1,712.6	-712.3	1,748.5	0.00	0.00	0.00
8,400.0	90.00	180.15	6,988.0	-2,307.04	-1,812.6	-712.6	1,848.4	0.00	0.00	0.00
8,500.0	90.00	180.15	6,988.0	-2,307.05	-1,912.6	-712.8	1,948.2	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CS-SHERWOOD 2-1-13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

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)
8,600.0	90.00	180.15	6,988.1	-2,307.05	-2,012.6	-713.1	2,048.1	0.00	0.00	0.00
8,700.0	90.00	180.15	6,988.1	-2,307.05	-2,112.6	-713.4	2,148.0	0.00	0.00	0.00
8,800.0	90.00	180.15	6,988.1	-2,307.06	-2,212.6	-713.6	2,247.8	0.00	0.00	0.00
8,900.0	90.00	180.15	6,988.1	-2,307.06	-2,312.6	-713.9	2,347.7	0.00	0.00	0.00
9,000.0	90.00	180.15	6,988.1	-2,307.06	-2,412.6	-714.2	2,447.6	0.00	0.00	0.00
9,100.0	90.00	180.15	6,988.1	-2,307.07	-2,512.6	-714.5	2,547.4	0.00	0.00	0.00
9,200.0	90.00	180.15	6,988.1	-2,307.07	-2,612.6	-714.7	2,647.3	0.00	0.00	0.00
9,300.0	90.00	180.15	6,988.1	-2,307.07	-2,712.6	-715.0	2,747.2	0.00	0.00	0.00
9,400.0	90.00	180.15	6,988.1	-2,307.08	-2,812.6	-715.3	2,847.0	0.00	0.00	0.00
9,500.0	90.00	180.15	6,988.1	-2,307.08	-2,912.6	-715.5	2,946.9	0.00	0.00	0.00
9,600.0	90.00	180.15	6,988.1	-2,307.08	-3,012.6	-715.8	3,046.8	0.00	0.00	0.00
9,700.0	90.00	180.15	6,988.1	-2,307.09	-3,112.6	-716.1	3,146.7	0.00	0.00	0.00
9,800.0	90.00	180.15	6,988.1	-2,307.09	-3,212.6	-716.3	3,246.5	0.00	0.00	0.00
9,900.0	90.00	180.15	6,988.1	-2,307.09	-3,312.6	-716.6	3,346.4	0.00	0.00	0.00
10,000.0	90.00	180.15	6,988.1	-2,307.10	-3,412.6	-716.9	3,446.3	0.00	0.00	0.00
10,100.0	90.00	180.15	6,988.1	-2,307.10	-3,512.6	-717.1	3,546.1	0.00	0.00	0.00
10,200.0	90.00	180.15	6,988.1	-2,307.10	-3,612.6	-717.4	3,646.0	0.00	0.00	0.00
10,300.0	90.00	180.15	6,988.1	-2,307.10	-3,712.6	-717.7	3,745.9	0.00	0.00	0.00
10,400.0	90.00	180.15	6,988.1	-2,307.11	-3,812.6	-717.9	3,845.7	0.00	0.00	0.00
10,500.0	90.00	180.15	6,988.1	-2,307.11	-3,912.6	-718.2	3,945.6	0.00	0.00	0.00
10,600.0	90.00	180.15	6,988.1	-2,307.11	-4,012.6	-718.5	4,045.5	0.00	0.00	0.00
10,700.0	90.00	180.15	6,988.1	-2,307.11	-4,112.6	-718.7	4,145.3	0.00	0.00	0.00
10,800.0	90.00	180.15	6,988.1	-2,307.11	-4,212.6	-719.0	4,245.2	0.00	0.00	0.00
10,900.0	90.00	180.15	6,988.1	-2,307.12	-4,312.6	-719.2	4,345.1	0.00	0.00	0.00
11,000.0	90.00	180.15	6,988.1	-2,307.12	-4,412.6	-719.5	4,444.9	0.00	0.00	0.00
11,100.0	90.00	180.15	6,988.1	-2,307.12	-4,512.6	-719.8	4,544.8	0.00	0.00	0.00
11,200.0	90.00	180.15	6,988.1	-2,307.12	-4,612.6	-720.0	4,644.7	0.00	0.00	0.00
11,300.0	90.00	180.15	6,988.1	-2,307.12	-4,712.6	-720.3	4,744.6	0.00	0.00	0.00
11,400.0	90.00	180.15	6,988.1	-2,307.13	-4,812.6	-720.6	4,844.4	0.00	0.00	0.00
11,500.0	90.00	180.15	6,988.1	-2,307.13	-4,912.6	-720.8	4,944.3	0.00	0.00	0.00
11,600.0	90.00	180.15	6,988.1	-2,307.13	-5,012.6	-721.1	5,044.2	0.00	0.00	0.00
11,700.0	90.00	180.15	6,988.1	-2,307.13	-5,112.6	-721.4	5,144.0	0.00	0.00	0.00
11,800.0	90.00	180.15	6,988.1	-2,307.13	-5,212.6	-721.6	5,243.9	0.00	0.00	0.00
11,900.0	90.00	180.15	6,988.1	-2,307.13	-5,312.6	-721.9	5,343.8	0.00	0.00	0.00
12,000.0	90.00	180.15	6,988.1	-2,307.14	-5,412.6	-722.1	5,443.6	0.00	0.00	0.00
12,100.0	90.00	180.15	6,988.1	-2,307.14	-5,512.6	-722.4	5,543.5	0.00	0.00	0.00
12,200.0	90.00	180.15	6,988.1	-2,307.14	-5,612.6	-722.7	5,643.4	0.00	0.00	0.00
12,300.0	90.00	180.15	6,988.1	-2,307.14	-5,712.6	-722.9	5,743.2	0.00	0.00	0.00
12,400.0	90.00	180.15	6,988.1	-2,307.14	-5,812.6	-723.2	5,843.1	0.00	0.00	0.00
12,500.0	90.00	180.15	6,988.1	-2,307.14	-5,912.6	-723.5	5,943.0	0.00	0.00	0.00
12,600.0	90.00	180.15	6,988.1	-2,307.14	-6,012.6	-723.7	6,042.8	0.00	0.00	0.00
12,700.0	90.00	180.15	6,988.1	-2,307.14	-6,112.6	-724.0	6,142.7	0.00	0.00	0.00
12,800.0	90.00	180.15	6,988.1	-2,307.14	-6,212.6	-724.2	6,242.6	0.00	0.00	0.00
12,900.0	90.00	180.15	6,988.1	-2,307.14	-6,312.6	-724.5	6,342.5	0.00	0.00	0.00
13,000.0	90.00	180.15	6,988.1	-2,307.15	-6,412.6	-724.8	6,442.3	0.00	0.00	0.00
13,100.0	90.00	180.15	6,988.1	-2,307.15	-6,512.6	-725.0	6,542.2	0.00	0.00	0.00
13,200.0	90.00	180.15	6,988.1	-2,307.15	-6,612.6	-725.3	6,642.1	0.00	0.00	0.00
13,300.0	90.00	180.15	6,988.1	-2,307.15	-6,712.6	-725.6	6,741.9	0.00	0.00	0.00
13,400.0	90.00	180.15	6,988.1	-2,307.15	-6,812.6	-725.8	6,841.8	0.00	0.00	0.00
13,500.0	90.00	180.15	6,988.1	-2,307.15	-6,912.6	-726.1	6,941.7	0.00	0.00	0.00
13,600.0	90.00	180.15	6,988.1	-2,307.15	-7,012.6	-726.3	7,041.5	0.00	0.00	0.00
13,700.0	90.00	180.15	6,988.1	-2,307.15	-7,112.6	-726.6	7,141.4	0.00	0.00	0.00
13,800.0	90.00	180.15	6,988.1	-2,307.15	-7,212.6	-726.9	7,241.3	0.00	0.00	0.00
13,900.0	90.00	180.15	6,988.1	-2,307.15	-7,312.6	-727.1	7,341.1	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CS-SHERWOOD 2-1-13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

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)
14,000.0	90.00	180.15	6,988.1	-2,307.15	-7,412.6	-727.4	7,441.0	0.00	0.00	0.00
14,100.0	90.00	180.15	6,988.1	-2,307.15	-7,512.6	-727.6	7,540.9	0.00	0.00	0.00
14,200.0	90.00	180.15	6,988.1	-2,307.15	-7,612.6	-727.9	7,640.7	0.00	0.00	0.00
14,300.0	90.00	180.15	6,988.1	-2,307.15	-7,712.6	-728.2	7,740.6	0.00	0.00	0.00
14,400.0	90.00	180.15	6,988.1	-2,307.15	-7,812.6	-728.4	7,840.5	0.00	0.00	0.00
14,500.0	90.00	180.15	6,988.1	-2,307.15	-7,912.6	-728.7	7,940.4	0.00	0.00	0.00
14,600.0	90.00	180.15	6,988.1	-2,307.15	-8,012.6	-728.9	8,040.2	0.00	0.00	0.00
14,700.0	90.00	180.15	6,988.1	-2,307.15	-8,112.6	-729.2	8,140.1	0.00	0.00	0.00
14,800.0	90.00	180.15	6,988.1	-2,307.14	-8,212.6	-729.5	8,240.0	0.00	0.00	0.00
14,900.0	90.00	180.15	6,988.1	-2,307.14	-8,312.6	-729.7	8,339.8	0.00	0.00	0.00
15,000.0	90.00	180.15	6,988.1	-2,307.14	-8,412.6	-730.0	8,439.7	0.00	0.00	0.00
15,100.0	90.00	180.15	6,988.1	-2,307.14	-8,512.6	-730.2	8,539.6	0.00	0.00	0.00
15,200.0	90.00	180.15	6,988.1	-2,307.14	-8,612.6	-730.5	8,639.4	0.00	0.00	0.00
15,300.0	90.00	180.15	6,988.1	-2,307.14	-8,712.6	-730.7	8,739.3	0.00	0.00	0.00
15,400.0	90.00	180.15	6,988.1	-2,307.14	-8,812.6	-731.0	8,839.2	0.00	0.00	0.00
15,500.0	90.00	180.15	6,988.1	-2,307.14	-8,912.6	-731.3	8,939.0	0.00	0.00	0.00
15,600.0	90.00	180.15	6,988.1	-2,307.14	-9,012.6	-731.5	9,038.9	0.00	0.00	0.00
15,700.0	90.00	180.15	6,988.1	-2,307.14	-9,112.6	-731.8	9,138.8	0.00	0.00	0.00
15,800.0	90.00	180.15	6,988.1	-2,307.14	-9,212.6	-732.0	9,238.6	0.00	0.00	0.00
15,900.0	90.00	180.15	6,988.1	-2,307.13	-9,312.6	-732.3	9,338.5	0.00	0.00	0.00
16,000.0	90.00	180.15	6,988.1	-2,307.13	-9,412.6	-732.5	9,438.4	0.00	0.00	0.00
16,100.0	90.00	180.15	6,988.1	-2,307.13	-9,512.6	-732.8	9,538.2	0.00	0.00	0.00
16,200.0	90.00	180.15	6,988.1	-2,307.13	-9,612.6	-733.1	9,638.1	0.00	0.00	0.00
16,300.0	90.00	180.15	6,988.1	-2,307.13	-9,712.6	-733.3	9,738.0	0.00	0.00	0.00
16,400.0	90.00	180.15	6,988.1	-2,307.13	-9,812.6	-733.6	9,837.9	0.00	0.00	0.00
16,500.0	90.00	180.15	6,988.1	-2,307.12	-9,912.6	-733.8	9,937.7	0.00	0.00	0.00
16,600.0	90.00	180.15	6,988.1	-2,307.12	-10,012.6	-734.1	10,037.6	0.00	0.00	0.00
16,700.0	90.00	180.15	6,988.1	-2,307.12	-10,112.6	-734.3	10,137.5	0.00	0.00	0.00
16,800.0	90.00	180.15	6,988.1	-2,307.12	-10,212.6	-734.6	10,237.3	0.00	0.00	0.00
16,900.0	90.00	180.15	6,988.1	-2,307.12	-10,312.6	-734.9	10,337.2	0.00	0.00	0.00
17,000.0	90.00	180.15	6,988.1	-2,307.11	-10,412.6	-735.1	10,437.1	0.00	0.00	0.00
17,100.0	90.00	180.15	6,988.1	-2,307.11	-10,512.6	-735.4	10,536.9	0.00	0.00	0.00
17,200.0	90.00	180.15	6,988.1	-2,307.11	-10,612.6	-735.6	10,636.8	0.00	0.00	0.00
17,300.0	90.00	180.15	6,988.1	-2,307.11	-10,712.6	-735.9	10,736.7	0.00	0.00	0.00
17,400.0	90.00	180.15	6,988.1	-2,307.10	-10,812.6	-736.1	10,836.5	0.00	0.00	0.00
17,500.0	90.00	180.15	6,988.1	-2,307.10	-10,912.6	-736.4	10,936.4	0.00	0.00	0.00
17,600.0	90.00	180.15	6,988.1	-2,307.10	-11,012.6	-736.6	11,036.3	0.00	0.00	0.00
17,700.0	90.00	180.15	6,988.1	-2,307.10	-11,112.6	-736.9	11,136.1	0.00	0.00	0.00
17,800.0	90.00	180.15	6,988.1	-2,307.09	-11,212.6	-737.1	11,236.0	0.00	0.00	0.00
17,900.0	90.00	180.15	6,988.1	-2,307.09	-11,312.6	-737.4	11,335.9	0.00	0.00	0.00
18,000.0	90.00	180.15	6,988.1	-2,307.09	-11,412.6	-737.7	11,435.7	0.00	0.00	0.00
18,100.0	90.00	180.15	6,988.1	-2,307.09	-11,512.6	-737.9	11,535.6	0.00	0.00	0.00
18,200.0	90.00	180.15	6,988.1	-2,307.08	-11,612.6	-738.2	11,635.5	0.00	0.00	0.00
18,300.0	90.00	180.15	6,988.1	-2,307.08	-11,712.6	-738.4	11,735.4	0.00	0.00	0.00
18,400.0	90.00	180.14	6,988.1	-2,307.08	-11,812.6	-738.7	11,835.2	0.00	0.00	0.00
18,500.0	90.00	180.14	6,988.1	-2,307.07	-11,912.6	-738.9	11,935.1	0.00	0.00	0.00
18,600.0	90.00	180.14	6,988.1	-2,307.07	-12,012.6	-739.2	12,035.0	0.00	0.00	0.00
18,700.0	90.00	180.14	6,988.1	-2,307.07	-12,112.6	-739.4	12,134.8	0.00	0.00	0.00
18,800.0	90.00	180.14	6,988.1	-2,307.06	-12,212.6	-739.7	12,234.7	0.00	0.00	0.00
18,900.0	90.00	180.14	6,988.1	-2,307.06	-12,312.6	-739.9	12,334.6	0.00	0.00	0.00
19,000.0	90.00	180.14	6,988.1	-2,307.06	-12,412.6	-740.2	12,434.4	0.00	0.00	0.00
19,100.0	90.00	180.14	6,988.1	-2,307.05	-12,512.6	-740.4	12,534.3	0.00	0.00	0.00
19,200.0	90.00	180.14	6,988.0	-2,307.05	-12,612.6	-740.7	12,634.2	0.00	0.00	0.00
19,300.0	90.00	180.14	6,988.0	-2,307.05	-12,712.6	-740.9	12,734.0	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well CS-SHERWOOD 2-1-13
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4681.0usft (Original Well Elev)
<b>Site:</b>	SW SE SEC 36 T6N R66W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	CS-SHERWOOD 2-1-13	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #3		

## 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)
19,400.0	90.00	180.14	6,988.0	-2,307.04	-12,812.6	-741.2	12,833.9	0.00	0.00	0.00
19,500.0	90.00	180.14	6,988.0	-2,307.04	-12,912.6	-741.4	12,933.8	0.00	0.00	0.00
19,600.0	90.00	180.14	6,988.0	-2,307.03	-13,012.6	-741.7	13,033.6	0.00	0.00	0.00
19,700.0	90.00	180.14	6,988.0	-2,307.03	-13,112.6	-741.9	13,133.5	0.00	0.00	0.00
19,800.0	90.00	180.14	6,988.0	-2,307.03	-13,212.6	-742.2	13,233.4	0.00	0.00	0.00
19,900.0	90.00	180.14	6,988.0	-2,307.02	-13,312.6	-742.4	13,333.2	0.00	0.00	0.00
20,000.0	90.00	180.14	6,988.0	-2,307.02	-13,412.6	-742.7	13,433.1	0.00	0.00	0.00
20,100.0	90.00	180.14	6,988.0	-2,307.01	-13,512.6	-742.9	13,533.0	0.00	0.00	0.00
20,200.0	90.00	180.14	6,988.0	-2,307.01	-13,612.6	-743.2	13,632.8	0.00	0.00	0.00
20,300.0	90.00	180.14	6,988.0	-2,307.00	-13,712.6	-743.4	13,732.7	0.00	0.00	0.00
<b>BHL (P3)- CS-SHERWOOD 2-1-13</b>										
<b>20,380.3</b>	<b>90.00</b>	<b>180.14</b>	<b>6,988.0</b>	<b>-2,307.00</b>	<b>-13,792.8</b>	<b>-743.6</b>	<b>13,812.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,696.8	3,651.0	PARKMAN			
4,478.9	4,416.0	SUSSEX			
4,923.9	4,852.0	SHANNON			
6,995.2	6,858.0	NIOBRARA			

## Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,200.0	1,200.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,799.9	1,795.5	-19.2	-59.6	EOB TO 12° INC
1,804.5	1,800.0	-19.5	-60.5	9 5/8" SURFACE CSG
4,777.9	4,708.5	-209.3	-648.7	END OF TANGENT
5,377.8	5,304.0	-228.5	-708.3	EOD TO VERTICAL
6,488.8	6,415.0	-228.5	-708.3	KOP (10°/100ft BUR)
7,388.8	6,988.0	-801.4	-709.8	LANDING PNT (P3) - CS-SHERWOOD 2-1-13
20,380.3	6,988.0	-13,792.8	-743.6	BHL (P3)- CS-SHERWOOD 2-1-13