

# **EXTRACTION OIL & GAS**

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

**SE NE SEC. 9 T6N R67W 6th P.M.**

**WINDER SOUTH 5**

**ORIGINAL WELLBORE**

**15 June, 2016**

**Plan: PROPOSAL #1**

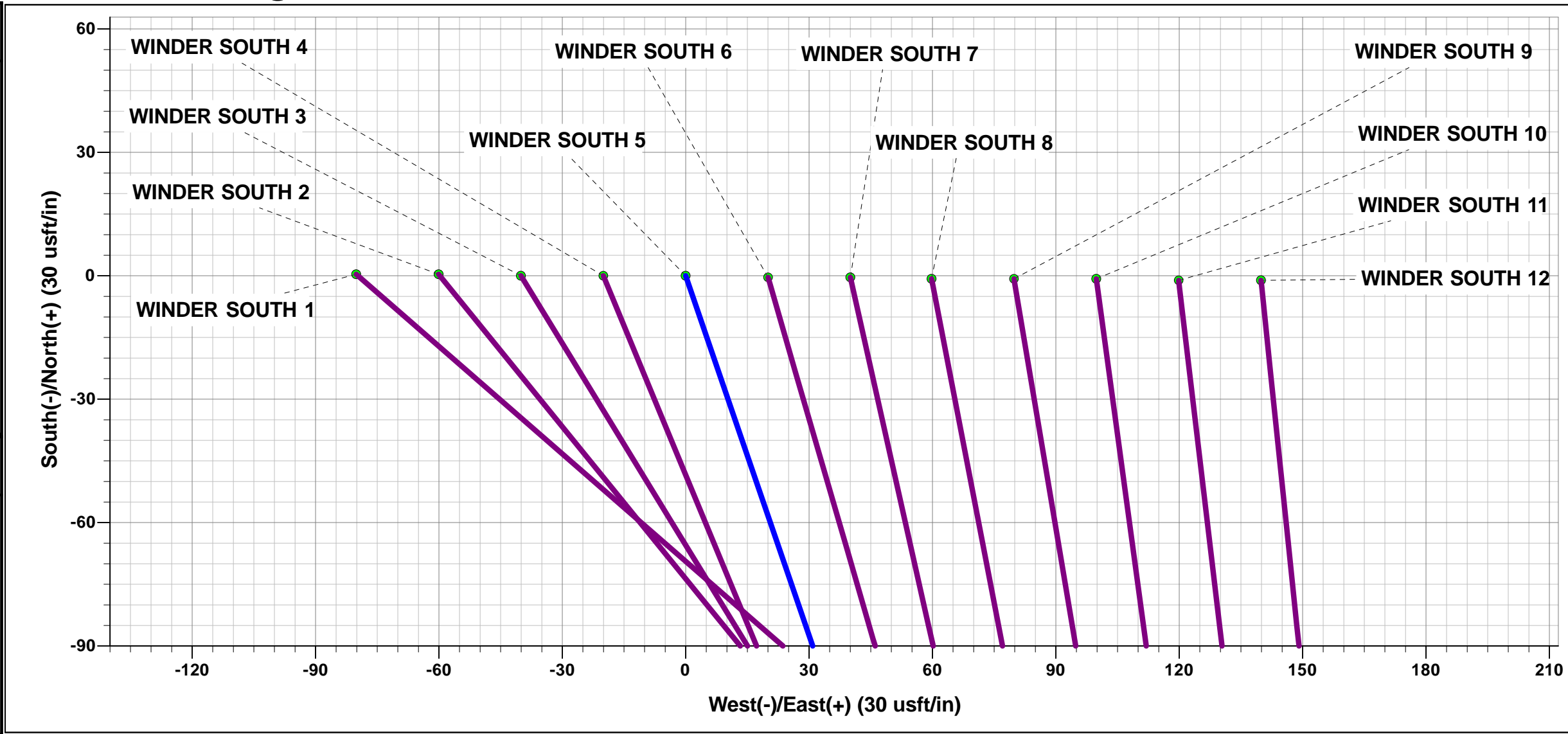




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SE NE SEC. 9 T6N R67W 6th P.M.  
Well: WINDER SOUTH 5  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation	
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2306ft FNL & 448ft FEL of Sec 9	
800.0	800.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1435.1	1440.4	12.81	161.07	-67.4	23.1	-13.8	71.3	EOB TO 12.81° INC	
6684.2	6823.5	12.81	161.07	-1196.3	410.2	-245.6	1264.7	KOP (10°/100ft DGLG)	
7285.0	7765.1	90.00	270.15	-1323.9	-161.6	338.2	1878.3	HZ LANDING PNT *NEW*: 1800ft FSL & 603ft FEL of Sec 9	
7285.0	17174.2	90.00	270.15	-1299.1	-9570.7	9658.5	11287.4	BHL: 1870ft FSL & 460ft FWL of Sec 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - WINDER SOUTH 5	7285.0	-1323.9	-161.6	40.499040	-104.891064
BHL - WINDER SOUTH 5	7285.0	-1299.1	-9570.7	40.499103	-104.924896



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3580.0	3640.1	PARKMAN
4140.0	4214.3	SUSSEX
4700.0	4788.6	SHANNON
6905.0	7052.7	SHARON SPRINGS
6951.0	7103.2	NIOBRARA
7240.0	7533.8	FORT HAYS
7275.0	7656.6	CODELL
7285.0	7765.1	CODELL TGT

PROPOSED LOCAL COORDINATES	
SHL: 2306ft FNL & 448ft FEL of Sec 9	
LP *NEW*: 1800ft FSL & 603ft FEL of Sec 9	
BHL: 1870ft FSL & 460ft FWL of Sec 8	

T M

Azimuths to True North

Magnetic North: 8.39°

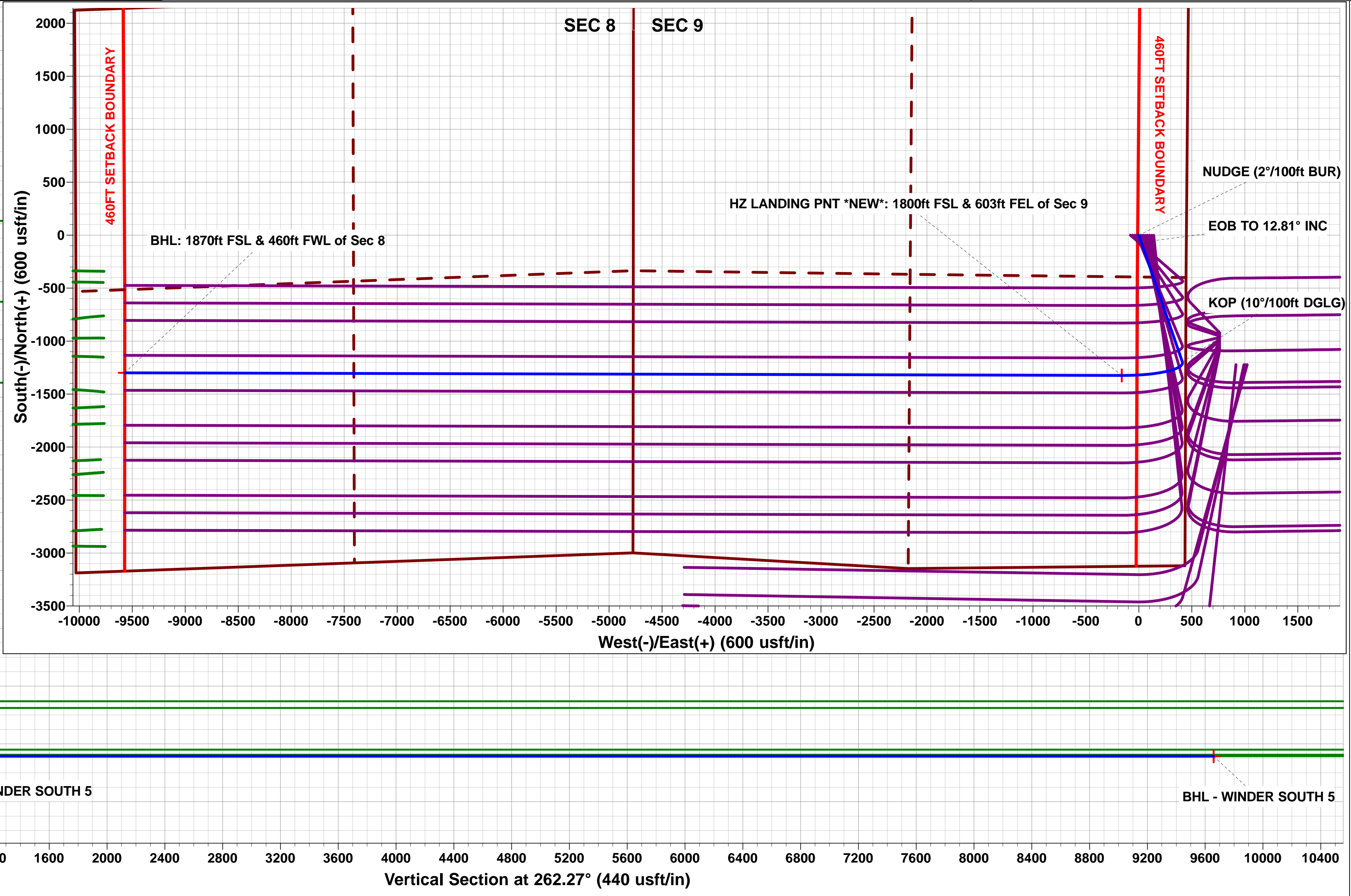
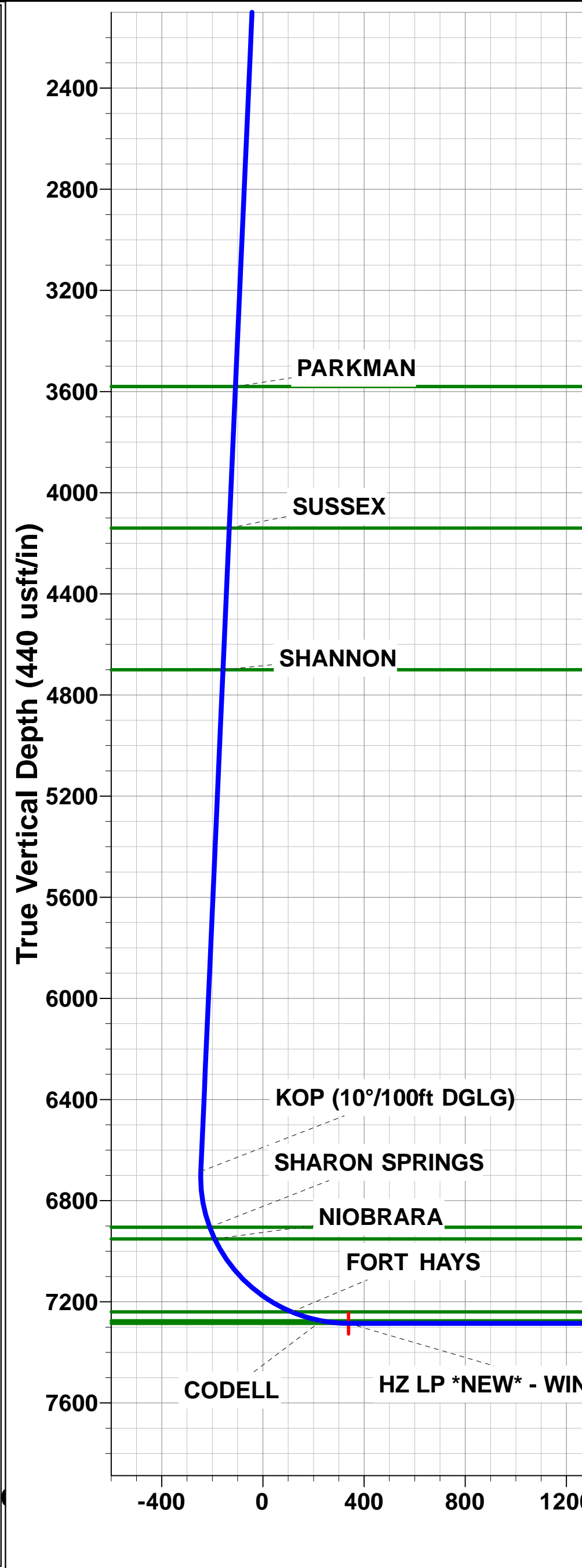
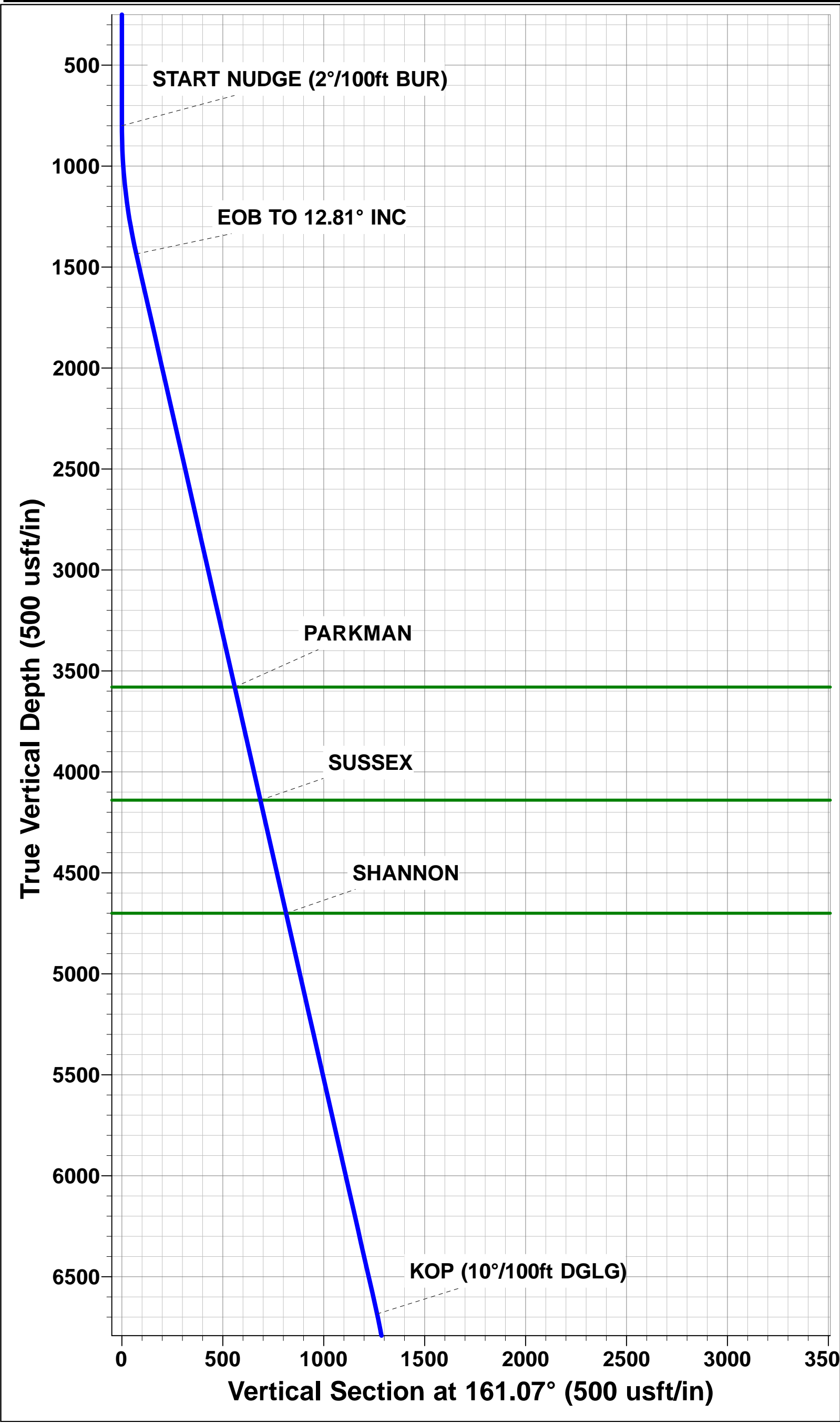
Magnetic Field

Strength: 52547.0snT

Dip Angle: 66.94°

Date: 14/06/2016

Model: IGRF2015



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 5
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4871.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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

<b>Site</b>	SE NE SEC. 9 T6N R67W 6th P.M.		
<b>Site Position:</b>		<b>Northing:</b>	1,426,547.00 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,169,418.27 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	1.10000ft
		<b>Latitude:</b>	40.502675
		<b>Longitude:</b>	-104.890771
		<b>Grid Convergence:</b>	0.39 °

<b>Well</b>	WINDER SOUTH 5		
<b>Well Position</b>	<b>+N/-S</b>	-0.4 usft	<b>Northing:</b>
	<b>+E/-W</b>	80.1 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	usft
		<b>Latitude:</b>	40.502674
		<b>Longitude:</b>	-104.890483
		<b>Ground Level:</b>	4,855.0 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	14/06/2016	8.39	66.94	52,547

<b>Design</b>	PROPOSAL #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	262.27

<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	-4,871.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	-4,071.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,440.4	12.81	161.07	1,435.1	-3,435.9	-67.4	23.1	2.00	2.00	0.00	161.07	
6,823.5	12.81	161.07	6,684.2	1,813.2	-1,196.3	410.2	0.00	0.00	0.00	0.00	
7,765.1	90.00	270.15	7,285.0	2,414.0	-1,323.9	-161.6	10.00	8.20	11.58	108.63	HZ LP *NEW* - WIND
17,174.2	90.00	270.15	7,285.0	2,414.0	-1,299.1	-9,570.7	0.00	0.00	0.00	0.00	BHL - WINDER SO

## Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 5
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4871.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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: 2306ft FNL &amp; 448ft FEL of Sec 9</b>										
0.0	0.00	0.00	0.0	4,871.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,771.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,671.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,571.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,471.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,371.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,271.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,171.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
800.0	0.00	0.00	800.0	4,071.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	2.00	161.07	900.0	3,971.02	-1.7	0.6	-0.3	2.00	2.00	0.00
1,000.0	4.00	161.07	999.8	3,871.16	-6.6	2.3	-1.4	2.00	2.00	0.00
1,100.0	6.00	161.07	1,099.5	3,771.55	-14.8	5.1	-3.0	2.00	2.00	0.00
1,200.0	8.00	161.07	1,198.7	3,672.30	-26.4	9.0	-5.4	2.00	2.00	0.00
1,300.0	10.00	161.07	1,297.5	3,573.53	-41.2	14.1	-8.5	2.00	2.00	0.00
1,400.0	12.00	161.07	1,395.6	3,475.38	-59.2	20.3	-12.2	2.00	2.00	0.00
<b>EOB TO 12.81° INC</b>										
1,440.4	12.81	161.07	1,435.1	3,435.92	-67.4	23.1	-13.8	2.00	2.00	0.00
1,500.0	12.81	161.07	1,493.2	3,377.80	-79.9	27.4	-16.4	0.00	0.00	0.00
1,600.0	12.81	161.07	1,590.7	3,280.29	-100.9	34.6	-20.7	0.00	0.00	0.00
1,700.0	12.81	161.07	1,688.2	3,182.78	-121.9	41.8	-25.0	0.00	0.00	0.00
1,800.0	12.81	161.07	1,785.7	3,085.27	-142.8	49.0	-29.3	0.00	0.00	0.00
1,900.0	12.81	161.07	1,883.2	2,987.76	-163.8	56.2	-33.6	0.00	0.00	0.00
2,000.0	12.81	161.07	1,980.8	2,890.25	-184.8	63.4	-37.9	0.00	0.00	0.00
2,100.0	12.81	161.07	2,078.3	2,792.73	-205.8	70.5	-42.2	0.00	0.00	0.00
2,200.0	12.81	161.07	2,175.8	2,695.22	-226.7	77.7	-46.5	0.00	0.00	0.00
2,300.0	12.81	161.07	2,273.3	2,597.71	-247.7	84.9	-50.8	0.00	0.00	0.00
2,400.0	12.81	161.07	2,370.8	2,500.20	-268.7	92.1	-55.1	0.00	0.00	0.00
2,500.0	12.81	161.07	2,468.3	2,402.69	-289.6	99.3	-59.4	0.00	0.00	0.00
2,600.0	12.81	161.07	2,565.8	2,305.18	-310.6	106.5	-63.8	0.00	0.00	0.00
2,700.0	12.81	161.07	2,663.3	2,207.66	-331.6	113.7	-68.1	0.00	0.00	0.00
2,800.0	12.81	161.07	2,760.8	2,110.15	-352.5	120.9	-72.4	0.00	0.00	0.00
2,900.0	12.81	161.07	2,858.4	2,012.64	-373.5	128.1	-76.7	0.00	0.00	0.00
3,000.0	12.81	161.07	2,955.9	1,915.13	-394.5	135.3	-81.0	0.00	0.00	0.00
3,100.0	12.81	161.07	3,053.4	1,817.62	-415.5	142.5	-85.3	0.00	0.00	0.00
3,200.0	12.81	161.07	3,150.9	1,720.11	-436.4	149.6	-89.6	0.00	0.00	0.00
3,300.0	12.81	161.07	3,248.4	1,622.59	-457.4	156.8	-93.9	0.00	0.00	0.00
3,400.0	12.81	161.07	3,345.9	1,525.08	-478.4	164.0	-98.2	0.00	0.00	0.00
3,500.0	12.81	161.07	3,443.4	1,427.57	-499.3	171.2	-102.5	0.00	0.00	0.00
3,600.0	12.81	161.07	3,540.9	1,330.06	-520.3	178.4	-106.8	0.00	0.00	0.00
<b>PARKMAN</b>										
3,640.1	12.81	161.07	3,580.0	1,291.00	-528.7	181.3	-108.5	0.00	0.00	0.00
3,700.0	12.81	161.07	3,638.5	1,232.55	-541.3	185.6	-111.1	0.00	0.00	0.00
3,800.0	12.81	161.07	3,736.0	1,135.04	-562.3	192.8	-115.4	0.00	0.00	0.00
3,900.0	12.81	161.07	3,833.5	1,037.52	-583.2	200.0	-119.7	0.00	0.00	0.00
4,000.0	12.81	161.07	3,931.0	940.01	-604.2	207.2	-124.0	0.00	0.00	0.00
4,100.0	12.81	161.07	4,028.5	842.50	-625.2	214.4	-128.3	0.00	0.00	0.00
4,200.0	12.81	161.07	4,126.0	744.99	-646.1	221.5	-132.6	0.00	0.00	0.00
<b>SUSSEX</b>										
4,214.3	12.81	161.07	4,140.0	731.00	-649.2	222.6	-133.2	0.00	0.00	0.00
4,300.0	12.81	161.07	4,223.5	647.48	-667.1	228.7	-136.9	0.00	0.00	0.00
4,400.0	12.81	161.07	4,321.0	549.97	-688.1	235.9	-141.2	0.00	0.00	0.00
4,500.0	12.81	161.07	4,418.5	452.46	-709.1	243.1	-145.5	0.00	0.00	0.00

# Planning Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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)
4,600.0	12.81	161.07	4,516.1	354.94	-730.0	250.3	-149.8	0.00	0.00	0.00
4,700.0	12.81	161.07	4,613.6	257.43	-751.0	257.5	-154.1	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,788.6</b>	<b>12.81</b>	<b>161.07</b>	<b>4,700.0</b>	<b>171.00</b>	<b>-769.6</b>	<b>263.9</b>	<b>-158.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,800.0	12.81	161.07	4,711.1	159.92	-772.0	264.7	-158.5	0.00	0.00	0.00
4,900.0	12.81	161.07	4,808.6	62.41	-792.9	271.9	-162.8	0.00	0.00	0.00
5,000.0	12.81	161.07	4,906.1	-35.10	-813.9	279.1	-167.1	0.00	0.00	0.00
5,100.0	12.81	161.07	5,003.6	-132.61	-834.9	286.3	-171.4	0.00	0.00	0.00
5,200.0	12.81	161.07	5,101.1	-230.13	-855.9	293.5	-175.7	0.00	0.00	0.00
5,300.0	12.81	161.07	5,198.6	-327.64	-876.8	300.6	-180.0	0.00	0.00	0.00
5,400.0	12.81	161.07	5,296.1	-425.15	-897.8	307.8	-184.3	0.00	0.00	0.00
5,500.0	12.81	161.07	5,393.7	-522.66	-918.8	315.0	-188.6	0.00	0.00	0.00
5,600.0	12.81	161.07	5,491.2	-620.17	-939.7	322.2	-192.9	0.00	0.00	0.00
5,700.0	12.81	161.07	5,588.7	-717.68	-960.7	329.4	-197.2	0.00	0.00	0.00
5,800.0	12.81	161.07	5,686.2	-815.20	-981.7	336.6	-201.5	0.00	0.00	0.00
5,900.0	12.81	161.07	5,783.7	-912.71	-1,002.7	343.8	-205.8	0.00	0.00	0.00
6,000.0	12.81	161.07	5,881.2	-1,010.22	-1,023.6	351.0	-210.1	0.00	0.00	0.00
6,100.0	12.81	161.07	5,978.7	-1,107.73	-1,044.6	358.2	-214.4	0.00	0.00	0.00
6,200.0	12.81	161.07	6,076.2	-1,205.24	-1,065.6	365.4	-218.7	0.00	0.00	0.00
6,300.0	12.81	161.07	6,173.8	-1,302.75	-1,086.5	372.5	-223.0	0.00	0.00	0.00
6,400.0	12.81	161.07	6,271.3	-1,400.27	-1,107.5	379.7	-227.3	0.00	0.00	0.00
6,500.0	12.81	161.07	6,368.8	-1,497.78	-1,128.5	386.9	-231.6	0.00	0.00	0.00
6,600.0	12.81	161.07	6,466.3	-1,595.29	-1,149.4	394.1	-235.9	0.00	0.00	0.00
6,700.0	12.81	161.07	6,563.8	-1,692.80	-1,170.4	401.3	-240.2	0.00	0.00	0.00
6,800.0	12.81	161.07	6,661.3	-1,790.31	-1,191.4	408.5	-244.5	0.00	0.00	0.00
<b>KOP (10°/100ft DGLG)</b>										
<b>6,823.5</b>	<b>12.81</b>	<b>161.07</b>	<b>6,684.2</b>	<b>-1,813.23</b>	<b>-1,196.3</b>	<b>410.2</b>	<b>-245.6</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,900.0	12.61	196.36	6,759.0	-1,887.96	-1,212.4	410.6	-243.8	10.00	-0.26	46.12
7,000.0	18.07	228.95	6,855.5	-1,984.54	-1,233.1	395.8	-226.3	10.00	5.45	32.59
<b>SHARON SPRINGS</b>										
<b>7,052.7</b>	<b>22.22</b>	<b>238.42</b>	<b>6,905.0</b>	<b>-2,034.00</b>	<b>-1,243.7</b>	<b>381.1</b>	<b>-210.4</b>	<b>10.00</b>	<b>7.89</b>	<b>17.97</b>
7,100.0	26.28	244.36	6,948.1	-2,077.14	-1,252.9	364.1	-192.2	10.00	8.58	12.55
<b>NIOBRARA</b>										
<b>7,103.2</b>	<b>26.56</b>	<b>244.70</b>	<b>6,951.0</b>	<b>-2,080.00</b>	<b>-1,253.5</b>	<b>362.8</b>	<b>-190.9</b>	<b>10.00</b>	<b>8.82</b>	<b>10.61</b>
7,200.0	35.38	252.54	7,034.0	-2,162.96	-1,271.2	316.4	-142.5	10.00	9.11	8.10
7,300.0	44.83	257.67	7,110.4	-2,239.38	-1,287.5	254.2	-78.7	10.00	9.45	5.13
7,400.0	54.43	261.31	7,175.1	-2,304.09	-1,301.2	179.3	-2.7	10.00	9.61	3.65
7,500.0	64.13	264.17	7,226.1	-2,355.12	-1,311.9	94.1	83.2	10.00	9.70	2.86
<b>FORT HAYS</b>										
<b>7,533.8</b>	<b>67.42</b>	<b>265.03</b>	<b>7,240.0</b>	<b>-2,369.00</b>	<b>-1,314.8</b>	<b>63.4</b>	<b>114.0</b>	<b>10.00</b>	<b>9.73</b>	<b>2.53</b>
7,600.0	73.87	266.59	7,261.9	-2,390.91	-1,319.4	1.2	176.3	10.00	9.75	2.36
<b>CODELL</b>										
<b>7,656.6</b>	<b>79.40</b>	<b>267.85</b>	<b>7,275.0</b>	<b>-2,404.00</b>	<b>-1,322.0</b>	<b>-53.8</b>	<b>231.1</b>	<b>10.00</b>	<b>9.76</b>	<b>2.22</b>
7,700.0	83.64	268.78	7,281.4	-2,410.39	-1,323.3	-96.7	273.8	10.00	9.77	2.15
<b>HZ LANDING PNT *NEW*: 1800ft FSL &amp; 603ft FEL of Sec 9 - CODELL TGT</b>										
<b>7,765.1</b>	<b>90.00</b>	<b>270.15</b>	<b>7,285.0</b>	<b>-2,414.00</b>	<b>-1,323.9</b>	<b>-161.6</b>	<b>338.2</b>	<b>10.00</b>	<b>9.78</b>	<b>2.11</b>
7,800.0	90.00	270.15	7,285.0	-2,414.00	-1,323.8	-196.5	372.8	0.00	0.00	0.00
7,900.0	90.00	270.15	7,285.0	-2,414.00	-1,323.5	-296.5	471.9	0.00	0.00	0.00
8,000.0	90.00	270.15	7,285.0	-2,414.00	-1,323.3	-396.5	570.9	0.00	0.00	0.00
8,100.0	90.00	270.15	7,285.0	-2,414.00	-1,323.0	-496.5	670.0	0.00	0.00	0.00
8,200.0	90.00	270.15	7,285.0	-2,414.00	-1,322.8	-596.5	769.0	0.00	0.00	0.00
8,300.0	90.00	270.15	7,285.0	-2,414.00	-1,322.5	-696.5	868.1	0.00	0.00	0.00
8,400.0	90.00	270.15	7,285.0	-2,414.00	-1,322.2	-796.5	967.1	0.00	0.00	0.00



# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 5
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4871.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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)
8,500.0	90.00	270.15	7,285.0	-2,414.00	-1,322.0	-896.5	1,066.2	0.00	0.00	0.00
8,600.0	90.00	270.15	7,285.0	-2,414.00	-1,321.7	-996.5	1,165.3	0.00	0.00	0.00
8,700.0	90.00	270.15	7,285.0	-2,414.00	-1,321.4	-1,096.5	1,264.3	0.00	0.00	0.00
8,800.0	90.00	270.15	7,285.0	-2,414.00	-1,321.2	-1,196.5	1,363.4	0.00	0.00	0.00
8,900.0	90.00	270.15	7,285.0	-2,414.00	-1,320.9	-1,296.5	1,462.4	0.00	0.00	0.00
9,000.0	90.00	270.15	7,285.0	-2,414.00	-1,320.6	-1,396.5	1,561.5	0.00	0.00	0.00
9,100.0	90.00	270.15	7,285.0	-2,414.00	-1,320.4	-1,496.5	1,660.5	0.00	0.00	0.00
9,200.0	90.00	270.15	7,285.0	-2,414.00	-1,320.1	-1,596.5	1,759.6	0.00	0.00	0.00
9,300.0	90.00	270.15	7,285.0	-2,414.00	-1,319.9	-1,696.5	1,858.6	0.00	0.00	0.00
9,400.0	90.00	270.15	7,285.0	-2,414.00	-1,319.6	-1,796.5	1,957.7	0.00	0.00	0.00
9,500.0	90.00	270.15	7,285.0	-2,414.00	-1,319.3	-1,896.5	2,056.8	0.00	0.00	0.00
9,600.0	90.00	270.15	7,285.0	-2,414.00	-1,319.1	-1,996.5	2,155.8	0.00	0.00	0.00
9,700.0	90.00	270.15	7,285.0	-2,414.00	-1,318.8	-2,096.5	2,254.9	0.00	0.00	0.00
9,800.0	90.00	270.15	7,285.0	-2,414.00	-1,318.5	-2,196.5	2,353.9	0.00	0.00	0.00
9,900.0	90.00	270.15	7,285.0	-2,414.00	-1,318.3	-2,296.5	2,453.0	0.00	0.00	0.00
10,000.0	90.00	270.15	7,285.0	-2,414.00	-1,318.0	-2,396.5	2,552.0	0.00	0.00	0.00
10,100.0	90.00	270.15	7,285.0	-2,414.00	-1,317.7	-2,496.5	2,651.1	0.00	0.00	0.00
10,200.0	90.00	270.15	7,285.0	-2,414.00	-1,317.5	-2,596.5	2,750.1	0.00	0.00	0.00
10,300.0	90.00	270.15	7,285.0	-2,414.00	-1,317.2	-2,696.5	2,849.2	0.00	0.00	0.00
10,400.0	90.00	270.15	7,285.0	-2,414.00	-1,317.0	-2,796.5	2,948.3	0.00	0.00	0.00
10,500.0	90.00	270.15	7,285.0	-2,414.00	-1,316.7	-2,896.5	3,047.3	0.00	0.00	0.00
10,600.0	90.00	270.15	7,285.0	-2,414.00	-1,316.4	-2,996.5	3,146.4	0.00	0.00	0.00
10,700.0	90.00	270.15	7,285.0	-2,414.00	-1,316.2	-3,096.5	3,245.4	0.00	0.00	0.00
10,800.0	90.00	270.15	7,285.0	-2,414.00	-1,315.9	-3,196.5	3,344.5	0.00	0.00	0.00
10,900.0	90.00	270.15	7,285.0	-2,414.00	-1,315.6	-3,296.5	3,443.5	0.00	0.00	0.00
11,000.0	90.00	270.15	7,285.0	-2,414.00	-1,315.4	-3,396.5	3,542.6	0.00	0.00	0.00
11,100.0	90.00	270.15	7,285.0	-2,414.00	-1,315.1	-3,496.5	3,641.6	0.00	0.00	0.00
11,200.0	90.00	270.15	7,285.0	-2,414.00	-1,314.9	-3,596.5	3,740.7	0.00	0.00	0.00
11,300.0	90.00	270.15	7,285.0	-2,414.00	-1,314.6	-3,696.5	3,839.8	0.00	0.00	0.00
11,400.0	90.00	270.15	7,285.0	-2,414.00	-1,314.3	-3,796.5	3,938.8	0.00	0.00	0.00
11,500.0	90.00	270.15	7,285.0	-2,414.00	-1,314.1	-3,896.5	4,037.9	0.00	0.00	0.00
11,600.0	90.00	270.15	7,285.0	-2,414.00	-1,313.8	-3,996.5	4,136.9	0.00	0.00	0.00
11,700.0	90.00	270.15	7,285.0	-2,414.00	-1,313.5	-4,096.5	4,236.0	0.00	0.00	0.00
11,800.0	90.00	270.15	7,285.0	-2,414.00	-1,313.3	-4,196.5	4,335.0	0.00	0.00	0.00
11,900.0	90.00	270.15	7,285.0	-2,414.00	-1,313.0	-4,296.5	4,434.1	0.00	0.00	0.00
12,000.0	90.00	270.15	7,285.0	-2,414.00	-1,312.7	-4,396.5	4,533.1	0.00	0.00	0.00
12,100.0	90.00	270.15	7,285.0	-2,414.00	-1,312.5	-4,496.5	4,632.2	0.00	0.00	0.00
12,200.0	90.00	270.15	7,285.0	-2,414.00	-1,312.2	-4,596.5	4,731.3	0.00	0.00	0.00
12,300.0	90.00	270.15	7,285.0	-2,414.00	-1,312.0	-4,696.5	4,830.3	0.00	0.00	0.00
12,400.0	90.00	270.15	7,285.0	-2,414.00	-1,311.7	-4,796.5	4,929.4	0.00	0.00	0.00
12,500.0	90.00	270.15	7,285.0	-2,414.00	-1,311.4	-4,896.5	5,028.4	0.00	0.00	0.00
12,600.0	90.00	270.15	7,285.0	-2,414.00	-1,311.2	-4,996.5	5,127.5	0.00	0.00	0.00
12,700.0	90.00	270.15	7,285.0	-2,414.00	-1,310.9	-5,096.5	5,226.5	0.00	0.00	0.00
12,800.0	90.00	270.15	7,285.0	-2,414.00	-1,310.6	-5,196.5	5,325.6	0.00	0.00	0.00
12,900.0	90.00	270.15	7,285.0	-2,414.00	-1,310.4	-5,296.5	5,424.6	0.00	0.00	0.00
13,000.0	90.00	270.15	7,285.0	-2,414.00	-1,310.1	-5,396.5	5,523.7	0.00	0.00	0.00
13,100.0	90.00	270.15	7,285.0	-2,414.00	-1,309.8	-5,496.5	5,622.8	0.00	0.00	0.00
13,200.0	90.00	270.15	7,285.0	-2,414.00	-1,309.6	-5,596.5	5,721.8	0.00	0.00	0.00
13,300.0	90.00	270.15	7,285.0	-2,414.00	-1,309.3	-5,696.5	5,820.9	0.00	0.00	0.00
13,400.0	90.00	270.15	7,285.0	-2,414.00	-1,309.1	-5,796.5	5,919.9	0.00	0.00	0.00
13,500.0	90.00	270.15	7,285.0	-2,414.00	-1,308.8	-5,896.5	6,019.0	0.00	0.00	0.00
13,600.0	90.00	270.15	7,285.0	-2,414.00	-1,308.5	-5,996.5	6,118.0	0.00	0.00	0.00
13,700.0	90.00	270.15	7,285.0	-2,414.00	-1,308.3	-6,096.5	6,217.1	0.00	0.00	0.00
13,800.0	90.00	270.15	7,285.0	-2,414.00	-1,308.0	-6,196.5	6,316.1	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 5
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4871.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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)
13,900.0	90.00	270.15	7,285.0	-2,414.00	-1,307.7	-6,296.5	6,415.2	0.00	0.00	0.00
14,000.0	90.00	270.15	7,285.0	-2,414.00	-1,307.5	-6,396.5	6,514.3	0.00	0.00	0.00
14,100.0	90.00	270.15	7,285.0	-2,414.00	-1,307.2	-6,496.5	6,613.3	0.00	0.00	0.00
14,200.0	90.00	270.15	7,285.0	-2,414.00	-1,306.9	-6,596.5	6,712.4	0.00	0.00	0.00
14,300.0	90.00	270.15	7,285.0	-2,414.00	-1,306.7	-6,696.5	6,811.4	0.00	0.00	0.00
14,400.0	90.00	270.15	7,285.0	-2,414.00	-1,306.4	-6,796.5	6,910.5	0.00	0.00	0.00
14,500.0	90.00	270.15	7,285.0	-2,414.00	-1,306.2	-6,896.5	7,009.5	0.00	0.00	0.00
14,600.0	90.00	270.15	7,285.0	-2,414.00	-1,305.9	-6,996.5	7,108.6	0.00	0.00	0.00
14,700.0	90.00	270.15	7,285.0	-2,414.00	-1,305.6	-7,096.5	7,207.6	0.00	0.00	0.00
14,800.0	90.00	270.15	7,285.0	-2,414.00	-1,305.4	-7,196.5	7,306.7	0.00	0.00	0.00
14,900.0	90.00	270.15	7,285.0	-2,414.00	-1,305.1	-7,296.5	7,405.8	0.00	0.00	0.00
15,000.0	90.00	270.15	7,285.0	-2,414.00	-1,304.8	-7,396.5	7,504.8	0.00	0.00	0.00
15,100.0	90.00	270.15	7,285.0	-2,414.00	-1,304.6	-7,496.5	7,603.9	0.00	0.00	0.00
15,200.0	90.00	270.15	7,285.0	-2,414.00	-1,304.3	-7,596.5	7,702.9	0.00	0.00	0.00
15,300.0	90.00	270.15	7,285.0	-2,414.00	-1,304.1	-7,696.5	7,802.0	0.00	0.00	0.00
15,400.0	90.00	270.15	7,285.0	-2,414.00	-1,303.8	-7,796.5	7,901.0	0.00	0.00	0.00
15,500.0	90.00	270.15	7,285.0	-2,414.00	-1,303.5	-7,896.5	8,000.1	0.00	0.00	0.00
15,600.0	90.00	270.15	7,285.0	-2,414.00	-1,303.3	-7,996.5	8,099.1	0.00	0.00	0.00
15,700.0	90.00	270.15	7,285.0	-2,414.00	-1,303.0	-8,096.5	8,198.2	0.00	0.00	0.00
15,800.0	90.00	270.15	7,285.0	-2,414.00	-1,302.7	-8,196.5	8,297.3	0.00	0.00	0.00
15,900.0	90.00	270.15	7,285.0	-2,414.00	-1,302.5	-8,296.5	8,396.3	0.00	0.00	0.00
16,000.0	90.00	270.15	7,285.0	-2,414.00	-1,302.2	-8,396.5	8,495.4	0.00	0.00	0.00
16,100.0	90.00	270.15	7,285.0	-2,414.00	-1,301.9	-8,496.5	8,594.4	0.00	0.00	0.00
16,200.0	90.00	270.15	7,285.0	-2,414.00	-1,301.7	-8,596.5	8,693.5	0.00	0.00	0.00
16,300.0	90.00	270.15	7,285.0	-2,414.00	-1,301.4	-8,696.5	8,792.5	0.00	0.00	0.00
16,400.0	90.00	270.15	7,285.0	-2,414.00	-1,301.2	-8,796.5	8,891.6	0.00	0.00	0.00
16,500.0	90.00	270.15	7,285.0	-2,414.00	-1,300.9	-8,896.5	8,990.6	0.00	0.00	0.00
16,600.0	90.00	270.15	7,285.0	-2,414.00	-1,300.6	-8,996.5	9,089.7	0.00	0.00	0.00
16,700.0	90.00	270.15	7,285.0	-2,414.00	-1,300.4	-9,096.5	9,188.7	0.00	0.00	0.00
16,800.0	90.00	270.15	7,285.0	-2,414.00	-1,300.1	-9,196.5	9,287.8	0.00	0.00	0.00
16,900.0	90.00	270.15	7,285.0	-2,414.00	-1,299.8	-9,296.5	9,386.9	0.00	0.00	0.00
17,000.0	90.00	270.15	7,285.0	-2,414.00	-1,299.6	-9,396.5	9,485.9	0.00	0.00	0.00
17,100.0	90.00	270.15	7,285.0	-2,414.00	-1,299.3	-9,496.5	9,585.0	0.00	0.00	0.00
<b>BHL: 1870ft FSL &amp; 460ft FWL of Sec 8</b>										
<b>17,174.2</b>	<b>90.00</b>	<b>270.15</b>	<b>7,285.0</b>	<b>-2,414.00</b>	<b>-1,299.1</b>	<b>-9,570.7</b>	<b>9,658.5</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,640.1	3,580.0	PARKMAN				
4,214.3	4,140.0	SUSSEX				
4,788.6	4,700.0	SHANNON				
7,052.7	6,905.0	SHARON SPRINGS				
7,103.2	6,951.0	NIOBRARA				
7,533.8	7,240.0	FORT HAYS				
7,656.6	7,275.0	CODELL				
7,765.1	7,285.0	CODELL TGT				

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 5
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4871.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4871.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 5	<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)	
0.0	0.0	0.0	0.0	SHL: 2306ft FNL & 448ft FEL of Sec 9
800.0	800.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,440.4	1,435.1	-67.4	23.1	EOB TO 12.81° INC
6,823.5	6,684.2	-1,196.3	410.2	KOP (10°/100ft DGLG)
7,765.1	7,285.0	-1,323.9	-161.6	HZ LANDING PNT *NEW*: 1800ft FSL & 603ft FEL of Sec 9
17,174.2	7,285.0	-1,299.1	-9,570.7	BHL: 1870ft FSL & 460ft FWL of Sec 8