

# **EXTRACTION OIL & GAS**

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

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

**WINDER SOUTH 7**

**ORIGINAL WELLBORE**

**15 June, 2016**

**Plan: PROPOSAL #1**

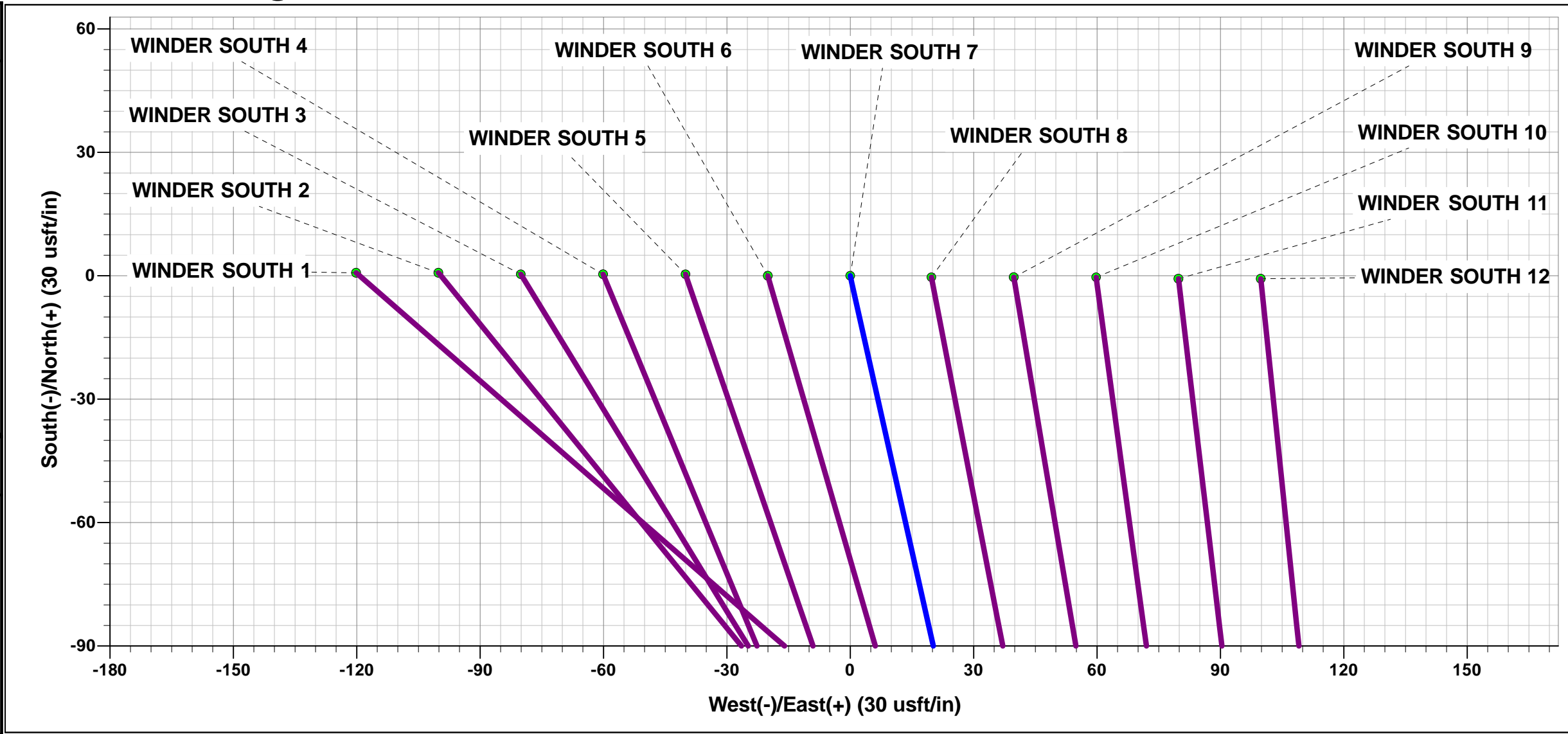




Project: WELD COUNTY, COLORADO (NAD 83)  
Site: SE NE SEC. 9 T6N R67W 6th P.M.  
Well: WINDER SOUTH 7  
Wellbore: ORIGINAL WELLBORE  
Design: PROPOSAL #1

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 & 408ft FEL of Sec 9	
600.0	600.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1447.3	1460.2	17.20	167.36	-125.1	28.0	-4.6	128.2	EOB TO 17.2° INC	
6473.6	6721.9	17.20	167.36	-1643.6	368.6	-60.8	1684.5	KOP (10°/100ft DGLG)	
7058.0	7659.4	90.00	270.15	-1818.6	-203.6	533.8	2320.8	HZ LANDING PNT *NEW*: 1305ft FSL & 603ft FEL of Sec 9	
7058.0	17066.8	90.00	270.15	-1793.8	-9610.9	9776.9	11728.2	BHL: 1376ft FSL & 460ft FWL of Sec 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - WINDER SOUTH 7	7058.0	-1818.6	-203.6	40.497681	-104.891071
BHL - WINDER SOUTH 7	7058.0	-1793.8	-9610.9	40.497744	-104.924896



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3580.0	3692.8	PARKMAN
4140.0	4279.0	SUSSEX
4700.0	4865.2	SHANNON
6905.0	7220.8	SHARON SPRINGS
6951.0	7295.4	NIOBRARA
7058.0	7659.4	NIO B TARGET

PROPOSED LOCAL COORDINATES		
SHL: 2306ft FNL & 408ft FEL of Sec 9		
LP *NEW*: 1305ft FSL & 603ft FEL of Sec 9		
BHL: 1376ft FSL & 460ft FWL of Sec 8		

T  
M

Azimuths to True North

Magnetic North: 8.39°

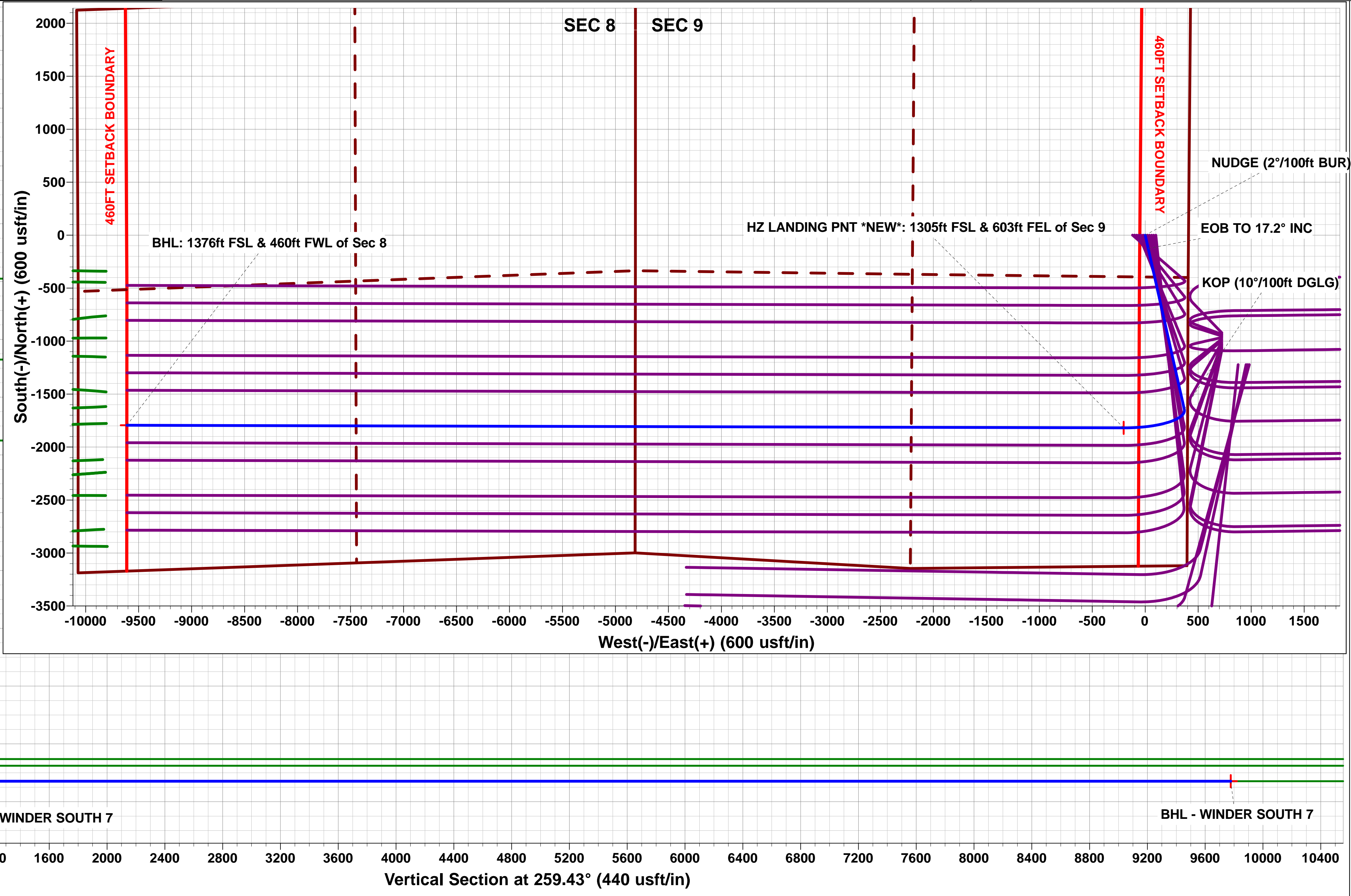
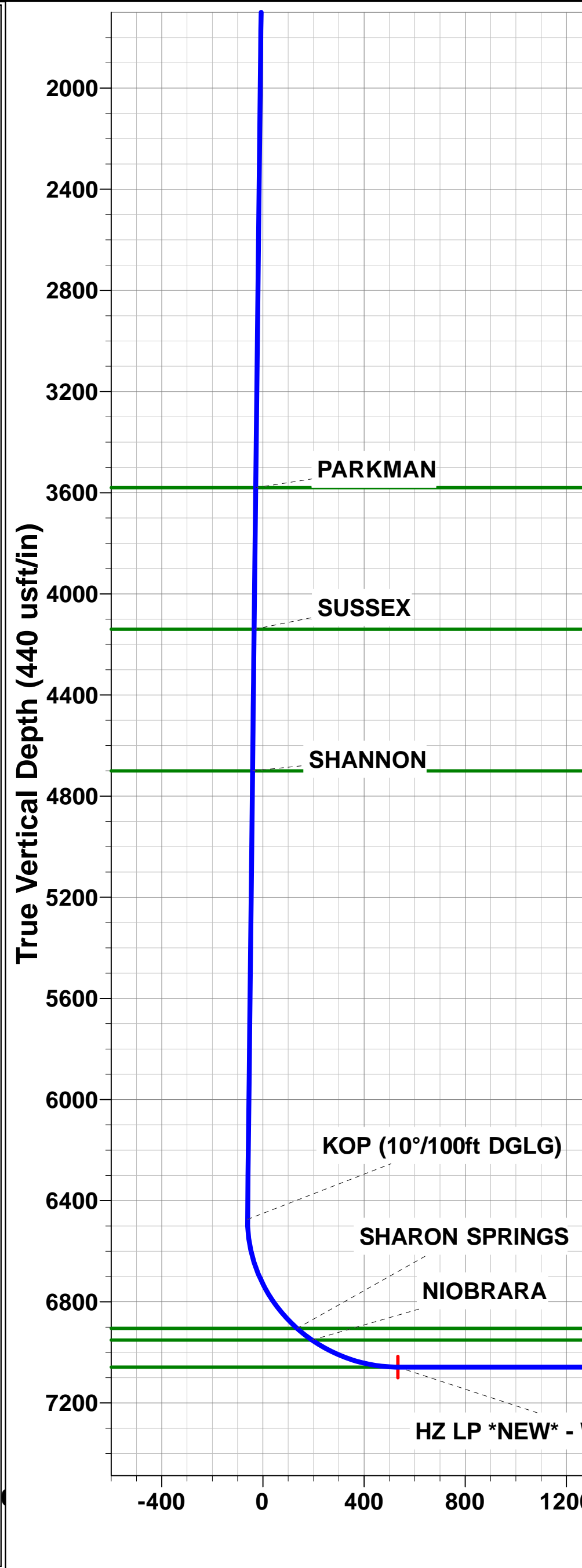
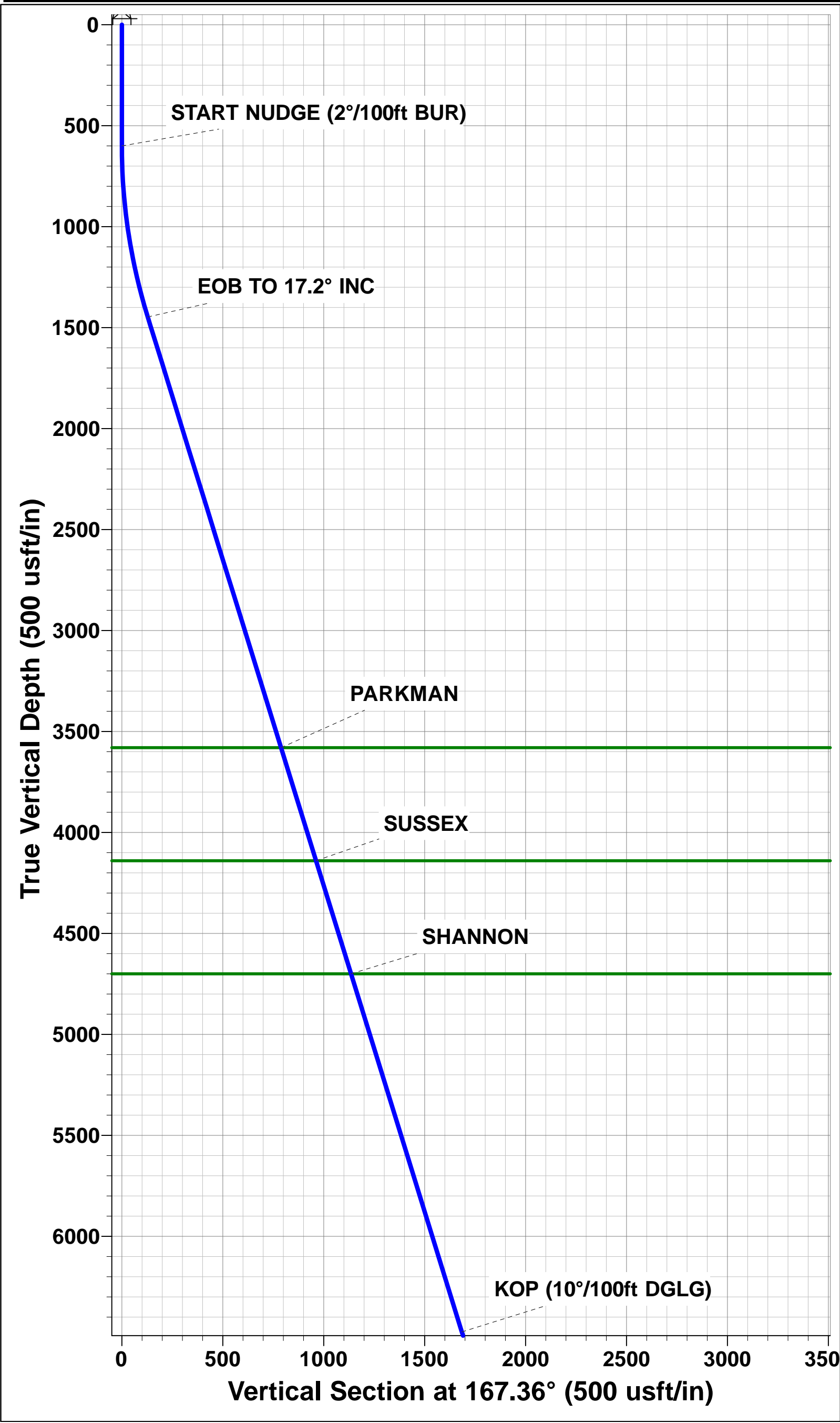
Magnetic Field

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 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	ORIGINAL WELLBORE		
<b>Design:</b>	PROPOSAL #1		

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

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

Well	WINDER SOUTH 7					
Well Position	+N/-S	-0.7 usft	Northing:	1,426,547.08 usft	Latitude:	40.502673
	+E/-W	120.1 usft	Easting:	3,169,538.41 usft	Longitude:	-104.890339
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,856.0 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	259.43

<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	-4,872.0	0.0	0.0	0.00	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	-4,272.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,460.2	17.20	167.36	1,447.3	-3,424.7	-125.1	28.0	2.00	2.00	0.00	167.36	
6,721.9	17.20	167.36	6,473.6	1,601.6	-1,643.6	368.6	0.00	0.00	0.00	0.00	
7,659.4	90.00	270.15	7,058.0	2,186.0	-1,818.6	-203.6	10.00	7.76	10.96	102.24	HZ LP *NEW* - WIND
17,066.8	90.00	270.15	7,058.0	2,186.0	-1,793.8	-9,610.9	0.00	0.00	0.00	0.00	BHL - WINDER SO

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<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; 408ft FEL of Sec 9</b>										
0.0	0.00	0.00	0.0	4,872.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,772.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,672.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,572.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,472.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,372.00	0.0	0.0	0.0	0.00	0.00	0.00
<b>START NUDGE (2°/100ft BUR)</b>										
600.0	0.00	0.00	600.0	4,272.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	2.00	167.36	700.0	4,172.02	-1.7	0.4	-0.1	2.00	2.00	0.00
800.0	4.00	167.36	799.8	4,072.16	-6.8	1.5	-0.3	2.00	2.00	0.00
900.0	6.00	167.36	899.5	3,972.55	-15.3	3.4	-0.6	2.00	2.00	0.00
1,000.0	8.00	167.36	998.7	3,873.30	-27.2	6.1	-1.0	2.00	2.00	0.00
1,100.0	10.00	167.36	1,097.5	3,774.53	-42.5	9.5	-1.6	2.00	2.00	0.00
1,200.0	12.00	167.36	1,195.6	3,676.38	-61.1	13.7	-2.3	2.00	2.00	0.00
1,300.0	14.00	167.36	1,293.1	3,578.94	-83.0	18.6	-3.1	2.00	2.00	0.00
1,400.0	16.00	167.36	1,389.6	3,482.36	-108.3	24.3	-4.0	2.00	2.00	0.00
<b>EOB TO 17.2° INC</b>										
1,460.2	17.20	167.36	1,447.3	3,424.67	-125.1	28.0	-4.6	2.00	2.00	0.00
1,500.0	17.20	167.36	1,485.4	3,386.65	-136.6	30.6	-5.0	0.00	0.00	0.00
1,600.0	17.20	167.36	1,580.9	3,291.12	-165.4	37.1	-6.1	0.00	0.00	0.00
1,700.0	17.20	167.36	1,676.4	3,195.60	-194.3	43.6	-7.2	0.00	0.00	0.00
1,800.0	17.20	167.36	1,771.9	3,100.07	-223.1	50.0	-8.2	0.00	0.00	0.00
1,900.0	17.20	167.36	1,867.5	3,004.55	-252.0	56.5	-9.3	0.00	0.00	0.00
2,000.0	17.20	167.36	1,963.0	2,909.02	-280.9	63.0	-10.4	0.00	0.00	0.00
2,100.0	17.20	167.36	2,058.5	2,813.49	-309.7	69.5	-11.5	0.00	0.00	0.00
2,200.0	17.20	167.36	2,154.0	2,717.97	-338.6	75.9	-12.5	0.00	0.00	0.00
2,300.0	17.20	167.36	2,249.6	2,622.44	-367.4	82.4	-13.6	0.00	0.00	0.00
2,400.0	17.20	167.36	2,345.1	2,526.92	-396.3	88.9	-14.7	0.00	0.00	0.00
2,500.0	17.20	167.36	2,440.6	2,431.39	-425.2	95.3	-15.7	0.00	0.00	0.00
2,600.0	17.20	167.36	2,536.1	2,335.87	-454.0	101.8	-16.8	0.00	0.00	0.00
2,700.0	17.20	167.36	2,631.7	2,240.34	-482.9	108.3	-17.9	0.00	0.00	0.00
2,800.0	17.20	167.36	2,727.2	2,144.81	-511.8	114.8	-18.9	0.00	0.00	0.00
2,900.0	17.20	167.36	2,822.7	2,049.29	-540.6	121.2	-20.0	0.00	0.00	0.00
3,000.0	17.20	167.36	2,918.2	1,953.76	-569.5	127.7	-21.1	0.00	0.00	0.00
3,100.0	17.20	167.36	3,013.8	1,858.24	-598.3	134.2	-22.1	0.00	0.00	0.00
3,200.0	17.20	167.36	3,109.3	1,762.71	-627.2	140.6	-23.2	0.00	0.00	0.00
3,300.0	17.20	167.36	3,204.8	1,667.19	-656.1	147.1	-24.3	0.00	0.00	0.00
3,400.0	17.20	167.36	3,300.3	1,571.66	-684.9	153.6	-25.3	0.00	0.00	0.00
3,500.0	17.20	167.36	3,395.9	1,476.14	-713.8	160.1	-26.4	0.00	0.00	0.00
3,600.0	17.20	167.36	3,491.4	1,380.61	-742.6	166.5	-27.5	0.00	0.00	0.00
<b>PARKMAN</b>										
3,692.8	17.20	167.36	3,580.0	1,292.00	-769.4	172.5	-28.4	0.00	0.00	0.00
3,700.0	17.20	167.36	3,586.9	1,285.08	-771.5	173.0	-28.5	0.00	0.00	0.00
3,800.0	17.20	167.36	3,682.4	1,189.56	-800.4	179.5	-29.6	0.00	0.00	0.00
3,900.0	17.20	167.36	3,778.0	1,094.03	-829.2	186.0	-30.7	0.00	0.00	0.00
4,000.0	17.20	167.36	3,873.5	998.51	-858.1	192.4	-31.7	0.00	0.00	0.00
4,100.0	17.20	167.36	3,969.0	902.98	-886.9	198.9	-32.8	0.00	0.00	0.00
4,200.0	17.20	167.36	4,064.5	807.46	-915.8	205.4	-33.9	0.00	0.00	0.00
<b>SUSSEX</b>										
4,279.0	17.20	167.36	4,140.0	732.00	-938.6	210.5	-34.7	0.00	0.00	0.00
4,300.0	17.20	167.36	4,160.1	711.93	-944.7	211.8	-34.9	0.00	0.00	0.00
4,400.0	17.20	167.36	4,255.6	616.40	-973.5	218.3	-36.0	0.00	0.00	0.00
4,500.0	17.20	167.36	4,351.1	520.88	-1,002.4	224.8	-37.1	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<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	17.20	167.36	4,446.6	425.35	-1,031.2	231.3	-38.1	0.00	0.00	0.00
4,700.0	17.20	167.36	4,542.2	329.83	-1,060.1	237.7	-39.2	0.00	0.00	0.00
4,800.0	17.20	167.36	4,637.7	234.30	-1,089.0	244.2	-40.3	0.00	0.00	0.00
<b>SHANNON</b>										
<b>4,865.2</b>	<b>17.20</b>	<b>167.36</b>	<b>4,700.0</b>	<b>172.00</b>	<b>-1,107.8</b>	<b>248.4</b>	<b>-41.0</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
4,900.0	17.20	167.36	4,733.2	138.78	-1,117.8	250.7	-41.3	0.00	0.00	0.00
5,000.0	17.20	167.36	4,828.8	43.25	-1,146.7	257.1	-42.4	0.00	0.00	0.00
5,100.0	17.20	167.36	4,924.3	-52.28	-1,175.6	263.6	-43.5	0.00	0.00	0.00
5,200.0	17.20	167.36	5,019.8	-147.80	-1,204.4	270.1	-44.5	0.00	0.00	0.00
5,300.0	17.20	167.36	5,115.3	-243.33	-1,233.3	276.6	-45.6	0.00	0.00	0.00
5,400.0	17.20	167.36	5,210.9	-338.85	-1,262.1	283.0	-46.7	0.00	0.00	0.00
5,500.0	17.20	167.36	5,306.4	-434.38	-1,291.0	289.5	-47.7	0.00	0.00	0.00
5,600.0	17.20	167.36	5,401.9	-529.90	-1,319.9	296.0	-48.8	0.00	0.00	0.00
5,700.0	17.20	167.36	5,497.4	-625.43	-1,348.7	302.5	-49.9	0.00	0.00	0.00
5,800.0	17.20	167.36	5,593.0	-720.96	-1,377.6	308.9	-50.9	0.00	0.00	0.00
5,900.0	17.20	167.36	5,688.5	-816.48	-1,406.4	315.4	-52.0	0.00	0.00	0.00
6,000.0	17.20	167.36	5,784.0	-912.01	-1,435.3	321.9	-53.1	0.00	0.00	0.00
6,100.0	17.20	167.36	5,879.5	-1,007.53	-1,464.2	328.3	-54.1	0.00	0.00	0.00
6,200.0	17.20	167.36	5,975.1	-1,103.06	-1,493.0	334.8	-55.2	0.00	0.00	0.00
6,300.0	17.20	167.36	6,070.6	-1,198.58	-1,521.9	341.3	-56.3	0.00	0.00	0.00
6,400.0	17.20	167.36	6,166.1	-1,294.11	-1,550.7	347.8	-57.3	0.00	0.00	0.00
6,500.0	17.20	167.36	6,261.6	-1,389.64	-1,579.6	354.2	-58.4	0.00	0.00	0.00
6,600.0	17.20	167.36	6,357.2	-1,485.16	-1,608.5	360.7	-59.5	0.00	0.00	0.00
6,700.0	17.20	167.36	6,452.7	-1,580.69	-1,637.3	367.2	-60.5	0.00	0.00	0.00
<b>KOP (10°/100ft DGLG)</b>										
<b>6,721.9</b>	<b>17.20</b>	<b>167.36</b>	<b>6,473.6</b>	<b>-1,601.61</b>	<b>-1,643.6</b>	<b>368.6</b>	<b>-60.8</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
6,800.0	17.27	193.94	6,548.3	-1,676.31	-1,666.2	368.3	-56.4	10.00	0.09	34.03
6,900.0	21.78	221.05	6,642.7	-1,770.73	-1,694.7	352.5	-35.6	10.00	4.51	27.11
7,000.0	29.05	237.23	6,733.1	-1,861.10	-1,721.9	319.8	1.5	10.00	7.28	16.18
7,100.0	37.52	247.00	6,816.7	-1,944.68	-1,747.0	271.3	53.9	10.00	8.47	9.77
7,200.0	46.53	253.52	6,890.9	-2,018.92	-1,769.2	208.3	119.9	10.00	9.01	6.52
<b>SHARON SPRINGS</b>										
<b>7,220.8</b>	<b>48.45</b>	<b>254.63</b>	<b>6,905.0</b>	<b>-2,033.00</b>	<b>-1,773.4</b>	<b>193.5</b>	<b>135.2</b>	<b>10.00</b>	<b>9.20</b>	<b>5.32</b>
<b>NIOBRARA</b>										
<b>7,295.4</b>	<b>55.39</b>	<b>258.12</b>	<b>6,951.0</b>	<b>-2,079.00</b>	<b>-1,787.2</b>	<b>136.5</b>	<b>193.8</b>	<b>10.00</b>	<b>9.30</b>	<b>4.68</b>
7,300.0	55.81	258.31	6,953.6	-2,081.57	-1,788.0	132.8	197.5	10.00	9.37	4.25
7,400.0	65.24	262.15	7,002.7	-2,130.73	-1,802.6	47.1	284.4	10.00	9.43	3.83
7,500.0	74.76	265.43	7,036.9	-2,164.90	-1,812.6	-46.2	378.0	10.00	9.51	3.28
7,600.0	84.31	268.43	7,055.1	-2,183.05	-1,817.9	-144.3	475.4	10.00	9.56	3.00
<b>HZ LANDING PNT *NEW*: 1305ft FSL &amp; 603ft FEL of Sec 9 - NIO B TARGET</b>										
<b>7,659.4</b>	<b>90.00</b>	<b>270.15</b>	<b>7,058.0</b>	<b>-2,186.00</b>	<b>-1,818.6</b>	<b>-203.6</b>	<b>533.8</b>	<b>10.00</b>	<b>9.57</b>	<b>2.90</b>
7,700.0	90.00	270.15	7,058.0	-2,186.00	-1,818.5	-244.2	573.7	0.00	0.00	0.00
7,800.0	90.00	270.15	7,058.0	-2,186.00	-1,818.2	-344.2	671.9	0.00	0.00	0.00
7,900.0	90.00	270.15	7,058.0	-2,186.00	-1,818.0	-444.2	770.2	0.00	0.00	0.00
8,000.0	90.00	270.15	7,058.0	-2,186.00	-1,817.7	-544.2	868.4	0.00	0.00	0.00
8,100.0	90.00	270.15	7,058.0	-2,186.00	-1,817.4	-644.2	966.7	0.00	0.00	0.00
8,200.0	90.00	270.15	7,058.0	-2,186.00	-1,817.2	-744.2	1,065.0	0.00	0.00	0.00
8,300.0	90.00	270.15	7,058.0	-2,186.00	-1,816.9	-844.2	1,163.2	0.00	0.00	0.00
8,400.0	90.00	270.15	7,058.0	-2,186.00	-1,816.6	-944.2	1,261.5	0.00	0.00	0.00
8,500.0	90.00	270.15	7,058.0	-2,186.00	-1,816.4	-1,044.2	1,359.7	0.00	0.00	0.00
8,600.0	90.00	270.15	7,058.0	-2,186.00	-1,816.1	-1,144.2	1,458.0	0.00	0.00	0.00
8,700.0	90.00	270.15	7,058.0	-2,186.00	-1,815.9	-1,244.2	1,556.2	0.00	0.00	0.00
8,800.0	90.00	270.15	7,058.0	-2,186.00	-1,815.6	-1,344.2	1,654.5	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 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<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)
8,900.0	90.00	270.15	7,058.0	-2,186.00	-1,815.3	-1,444.2	1,752.7	0.00	0.00	0.00
9,000.0	90.00	270.15	7,058.0	-2,186.00	-1,815.1	-1,544.2	1,851.0	0.00	0.00	0.00
9,100.0	90.00	270.15	7,058.0	-2,186.00	-1,814.8	-1,644.2	1,949.2	0.00	0.00	0.00
9,200.0	90.00	270.15	7,058.0	-2,186.00	-1,814.5	-1,744.2	2,047.5	0.00	0.00	0.00
9,300.0	90.00	270.15	7,058.0	-2,186.00	-1,814.3	-1,844.2	2,145.7	0.00	0.00	0.00
9,400.0	90.00	270.15	7,058.0	-2,186.00	-1,814.0	-1,944.2	2,244.0	0.00	0.00	0.00
9,500.0	90.00	270.15	7,058.0	-2,186.00	-1,813.8	-2,044.2	2,342.3	0.00	0.00	0.00
9,600.0	90.00	270.15	7,058.0	-2,186.00	-1,813.5	-2,144.2	2,440.5	0.00	0.00	0.00
9,700.0	90.00	270.15	7,058.0	-2,186.00	-1,813.2	-2,244.2	2,538.8	0.00	0.00	0.00
9,800.0	90.00	270.15	7,058.0	-2,186.00	-1,813.0	-2,344.2	2,637.0	0.00	0.00	0.00
9,900.0	90.00	270.15	7,058.0	-2,186.00	-1,812.7	-2,444.2	2,735.3	0.00	0.00	0.00
10,000.0	90.00	270.15	7,058.0	-2,186.00	-1,812.4	-2,544.2	2,833.5	0.00	0.00	0.00
10,100.0	90.00	270.15	7,058.0	-2,186.00	-1,812.2	-2,644.2	2,931.8	0.00	0.00	0.00
10,200.0	90.00	270.15	7,058.0	-2,186.00	-1,811.9	-2,744.2	3,030.0	0.00	0.00	0.00
10,300.0	90.00	270.15	7,058.0	-2,186.00	-1,811.6	-2,844.2	3,128.3	0.00	0.00	0.00
10,400.0	90.00	270.15	7,058.0	-2,186.00	-1,811.4	-2,944.2	3,226.5	0.00	0.00	0.00
10,500.0	90.00	270.15	7,058.0	-2,186.00	-1,811.1	-3,044.2	3,324.8	0.00	0.00	0.00
10,600.0	90.00	270.15	7,058.0	-2,186.00	-1,810.9	-3,144.2	3,423.0	0.00	0.00	0.00
10,700.0	90.00	270.15	7,058.0	-2,186.00	-1,810.6	-3,244.2	3,521.3	0.00	0.00	0.00
10,800.0	90.00	270.15	7,058.0	-2,186.00	-1,810.3	-3,344.2	3,619.5	0.00	0.00	0.00
10,900.0	90.00	270.15	7,058.0	-2,186.00	-1,810.1	-3,444.2	3,717.8	0.00	0.00	0.00
11,000.0	90.00	270.15	7,058.0	-2,186.00	-1,809.8	-3,544.2	3,816.1	0.00	0.00	0.00
11,100.0	90.00	270.15	7,058.0	-2,186.00	-1,809.5	-3,644.2	3,914.3	0.00	0.00	0.00
11,200.0	90.00	270.15	7,058.0	-2,186.00	-1,809.3	-3,744.2	4,012.6	0.00	0.00	0.00
11,300.0	90.00	270.15	7,058.0	-2,186.00	-1,809.0	-3,844.2	4,110.8	0.00	0.00	0.00
11,400.0	90.00	270.15	7,058.0	-2,186.00	-1,808.8	-3,944.2	4,209.1	0.00	0.00	0.00
11,500.0	90.00	270.15	7,058.0	-2,186.00	-1,808.5	-4,044.2	4,307.3	0.00	0.00	0.00
11,600.0	90.00	270.15	7,058.0	-2,186.00	-1,808.2	-4,144.2	4,405.6	0.00	0.00	0.00
11,700.0	90.00	270.15	7,058.0	-2,186.00	-1,808.0	-4,244.2	4,503.8	0.00	0.00	0.00
11,800.0	90.00	270.15	7,058.0	-2,186.00	-1,807.7	-4,344.2	4,602.1	0.00	0.00	0.00
11,900.0	90.00	270.15	7,058.0	-2,186.00	-1,807.4	-4,444.2	4,700.3	0.00	0.00	0.00
12,000.0	90.00	270.15	7,058.0	-2,186.00	-1,807.2	-4,544.2	4,798.6	0.00	0.00	0.00
12,100.0	90.00	270.15	7,058.0	-2,186.00	-1,806.9	-4,644.2	4,896.8	0.00	0.00	0.00
12,200.0	90.00	270.15	7,058.0	-2,186.00	-1,806.6	-4,744.2	4,995.1	0.00	0.00	0.00
12,300.0	90.00	270.15	7,058.0	-2,186.00	-1,806.4	-4,844.2	5,093.4	0.00	0.00	0.00
12,400.0	90.00	270.15	7,058.0	-2,186.00	-1,806.1	-4,944.2	5,191.6	0.00	0.00	0.00
12,500.0	90.00	270.15	7,058.0	-2,186.00	-1,805.9	-5,044.2	5,289.9	0.00	0.00	0.00
12,600.0	90.00	270.15	7,058.0	-2,186.00	-1,805.6	-5,144.2	5,388.1	0.00	0.00	0.00
12,700.0	90.00	270.15	7,058.0	-2,186.00	-1,805.3	-5,244.2	5,486.4	0.00	0.00	0.00
12,800.0	90.00	270.15	7,058.0	-2,186.00	-1,805.1	-5,344.2	5,584.6	0.00	0.00	0.00
12,900.0	90.00	270.15	7,058.0	-2,186.00	-1,804.8	-5,444.2	5,682.9	0.00	0.00	0.00
13,000.0	90.00	270.15	7,058.0	-2,186.00	-1,804.5	-5,544.2	5,781.1	0.00	0.00	0.00
13,100.0	90.00	270.15	7,058.0	-2,186.00	-1,804.3	-5,644.2	5,879.4	0.00	0.00	0.00
13,200.0	90.00	270.15	7,058.0	-2,186.00	-1,804.0	-5,744.2	5,977.6	0.00	0.00	0.00
13,300.0	90.00	270.15	7,058.0	-2,186.00	-1,803.7	-5,844.2	6,075.9	0.00	0.00	0.00
13,400.0	90.00	270.15	7,058.0	-2,186.00	-1,803.5	-5,944.2	6,174.1	0.00	0.00	0.00
13,500.0	90.00	270.15	7,058.0	-2,186.00	-1,803.2	-6,044.2	6,272.4	0.00	0.00	0.00
13,600.0	90.00	270.15	7,058.0	-2,186.00	-1,803.0	-6,144.2	6,370.7	0.00	0.00	0.00
13,700.0	90.00	270.15	7,058.0	-2,186.00	-1,802.7	-6,244.2	6,468.9	0.00	0.00	0.00
13,800.0	90.00	270.15	7,058.0	-2,186.00	-1,802.4	-6,344.2	6,567.2	0.00	0.00	0.00
13,900.0	90.00	270.15	7,058.0	-2,186.00	-1,802.2	-6,444.2	6,665.4	0.00	0.00	0.00
14,000.0	90.00	270.15	7,058.0	-2,186.00	-1,801.9	-6,544.2	6,763.7	0.00	0.00	0.00
14,100.0	90.00	270.15	7,058.0	-2,186.00	-1,801.6	-6,644.2	6,861.9	0.00	0.00	0.00
14,200.0	90.00	270.15	7,058.0	-2,186.00	-1,801.4	-6,744.2	6,960.2	0.00	0.00	0.00

# Planning Report



<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<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)
14,300.0	90.00	270.15	7,058.0	-2,186.00	-1,801.1	-6,844.2	7,058.4	0.00	0.00	0.00
14,400.0	90.00	270.15	7,058.0	-2,186.00	-1,800.9	-6,944.2	7,156.7	0.00	0.00	0.00
14,500.0	90.00	270.15	7,058.0	-2,186.00	-1,800.6	-7,044.2	7,254.9	0.00	0.00	0.00
14,600.0	90.00	270.15	7,058.0	-2,186.00	-1,800.3	-7,144.2	7,353.2	0.00	0.00	0.00
14,700.0	90.00	270.15	7,058.0	-2,186.00	-1,800.1	-7,244.2	7,451.4	0.00	0.00	0.00
14,800.0	90.00	270.15	7,058.0	-2,186.00	-1,799.8	-7,344.2	7,549.7	0.00	0.00	0.00
14,900.0	90.00	270.15	7,058.0	-2,186.00	-1,799.5	-7,444.2	7,648.0	0.00	0.00	0.00
15,000.0	90.00	270.15	7,058.0	-2,186.00	-1,799.3	-7,544.2	7,746.2	0.00	0.00	0.00
15,100.0	90.00	270.15	7,058.0	-2,186.00	-1,799.0	-7,644.2	7,844.5	0.00	0.00	0.00
15,200.0	90.00	270.15	7,058.0	-2,186.00	-1,798.7	-7,744.2	7,942.7	0.00	0.00	0.00
15,300.0	90.00	270.15	7,058.0	-2,186.00	-1,798.5	-7,844.2	8,041.0	0.00	0.00	0.00
15,400.0	90.00	270.15	7,058.0	-2,186.00	-1,798.2	-7,944.2	8,139.2	0.00	0.00	0.00
15,500.0	90.00	270.15	7,058.0	-2,186.00	-1,798.0	-8,044.2	8,237.5	0.00	0.00	0.00
15,600.0	90.00	270.15	7,058.0	-2,186.00	-1,797.7	-8,144.2	8,335.7	0.00	0.00	0.00
15,700.0	90.00	270.15	7,058.0	-2,186.00	-1,797.4	-8,244.2	8,434.0	0.00	0.00	0.00
15,800.0	90.00	270.15	7,058.0	-2,186.00	-1,797.2	-8,344.2	8,532.2	0.00	0.00	0.00
15,900.0	90.00	270.15	7,058.0	-2,186.00	-1,796.9	-8,444.1	8,630.5	0.00	0.00	0.00
16,000.0	90.00	270.15	7,058.0	-2,186.00	-1,796.6	-8,544.1	8,728.7	0.00	0.00	0.00
16,100.0	90.00	270.15	7,058.0	-2,186.00	-1,796.4	-8,644.1	8,827.0	0.00	0.00	0.00
16,200.0	90.00	270.15	7,058.0	-2,186.00	-1,796.1	-8,744.1	8,925.3	0.00	0.00	0.00
16,300.0	90.00	270.15	7,058.0	-2,186.00	-1,795.8	-8,844.1	9,023.5	0.00	0.00	0.00
16,400.0	90.00	270.15	7,058.0	-2,186.00	-1,795.6	-8,944.1	9,121.8	0.00	0.00	0.00
16,500.0	90.00	270.15	7,058.0	-2,186.00	-1,795.3	-9,044.1	9,220.0	0.00	0.00	0.00
16,600.0	90.00	270.15	7,058.0	-2,186.00	-1,795.1	-9,144.1	9,318.3	0.00	0.00	0.00
16,700.0	90.00	270.15	7,058.0	-2,186.00	-1,794.8	-9,244.1	9,416.5	0.00	0.00	0.00
16,800.0	90.00	270.15	7,058.0	-2,186.00	-1,794.5	-9,344.1	9,514.8	0.00	0.00	0.00
16,900.0	90.00	270.15	7,058.0	-2,186.00	-1,794.3	-9,444.1	9,613.0	0.00	0.00	0.00
17,000.0	90.00	270.15	7,058.0	-2,186.00	-1,794.0	-9,544.1	9,711.3	0.00	0.00	0.00
<b>BHL: 1376ft FSL &amp; 460ft FWL of Sec 8</b>										
<b>17,066.8</b>	<b>90.00</b>	<b>270.15</b>	<b>7,058.0</b>	<b>-2,186.00</b>	<b>-1,793.8</b>	<b>-9,610.9</b>	<b>9,776.9</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

## Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,692.8	3,580.0	PARKMAN			
4,279.0	4,140.0	SUSSEX			
4,865.2	4,700.0	SHANNON			
7,220.8	6,905.0	SHARON SPRINGS			
7,295.4	6,951.0	NIOBRARA			
7,659.4	7,058.0	NIO B TARGET			

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well WINDER SOUTH 7
<b>Company:</b>	EXTRACTION OIL & GAS	<b>TVD Reference:</b>	KB-EST @ 4872.0usft
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>MD Reference:</b>	KB-EST @ 4872.0usft
<b>Site:</b>	SE NE SEC. 9 T6N R67W 6th P.M.	<b>North Reference:</b>	True
<b>Well:</b>	WINDER SOUTH 7	<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 & 408ft FEL of Sec 9
600.0	600.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,460.2	1,447.3	-125.1	28.0	EOB TO 17.2° INC
6,721.9	6,473.6	-1,643.6	368.6	KOP (10°/100ft DGLG)
7,659.4	7,058.0	-1,818.6	-203.6	HZ LANDING PNT *NEW*: 1305ft FSL & 603ft FEL of Sec 9
17,066.8	7,058.0	-1,793.8	-9,610.9	BHL: 1376ft FSL & 460ft FWL of Sec 8