

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

WINDER SOUTH 9

ORIGINAL WELLBORE

15 June, 2016

Plan: PROPOSAL #1

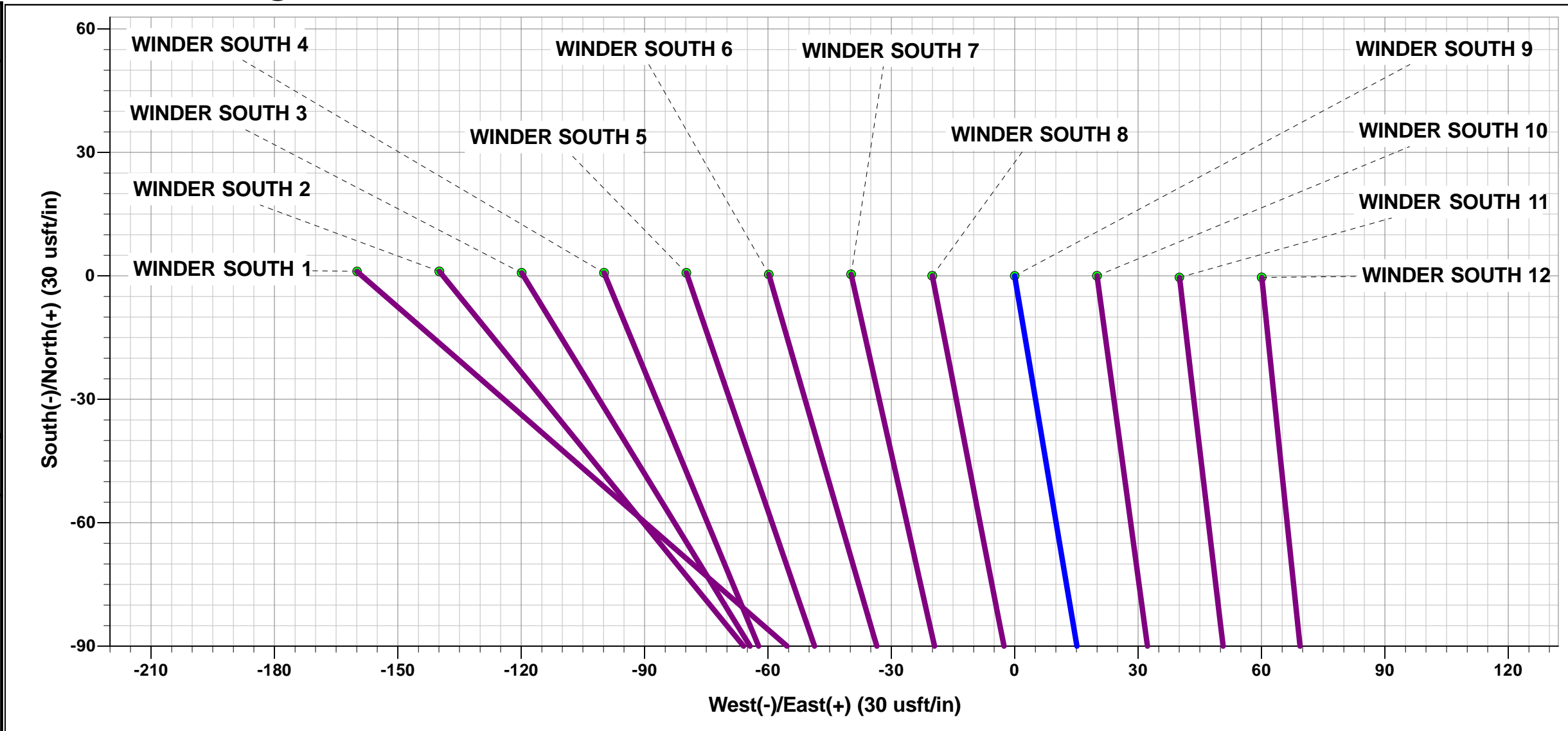




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 9 T6N R67W 6th P.M.
Well: WINDER SOUTH 9
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

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 & 368ft FEL of Sec 9	
400.0	400.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1354.9	1373.6	19.47	170.45	-161.6	27.2	8.2	163.8	EOB TO 19.47° INC	
6486.6	6816.5	19.47	170.45	-1950.8	328.1	98.8	1978.2	KOP (10°/100ft DGLG)	
7058.0	7748.7	90.00	270.15	-2148.4	-244.5	700.5	2626.0	HZ LANDING PNT *NEW*: 975ft FSL & 603ft FEL of Sec 9	
7058.0	17155.0	90.00	270.15	-2123.5	-9650.8	9881.7	12032.3	BHL: 1046ft FSL & 460ft FWL of Sec 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - WINDER SOUTH 9	7058.0	-2148.4	-244.5	40.496775	-104.891075
BHL - WINDER SOUTH 9	7058.0	-2123.5	-9650.8	40.496838	-104.924896



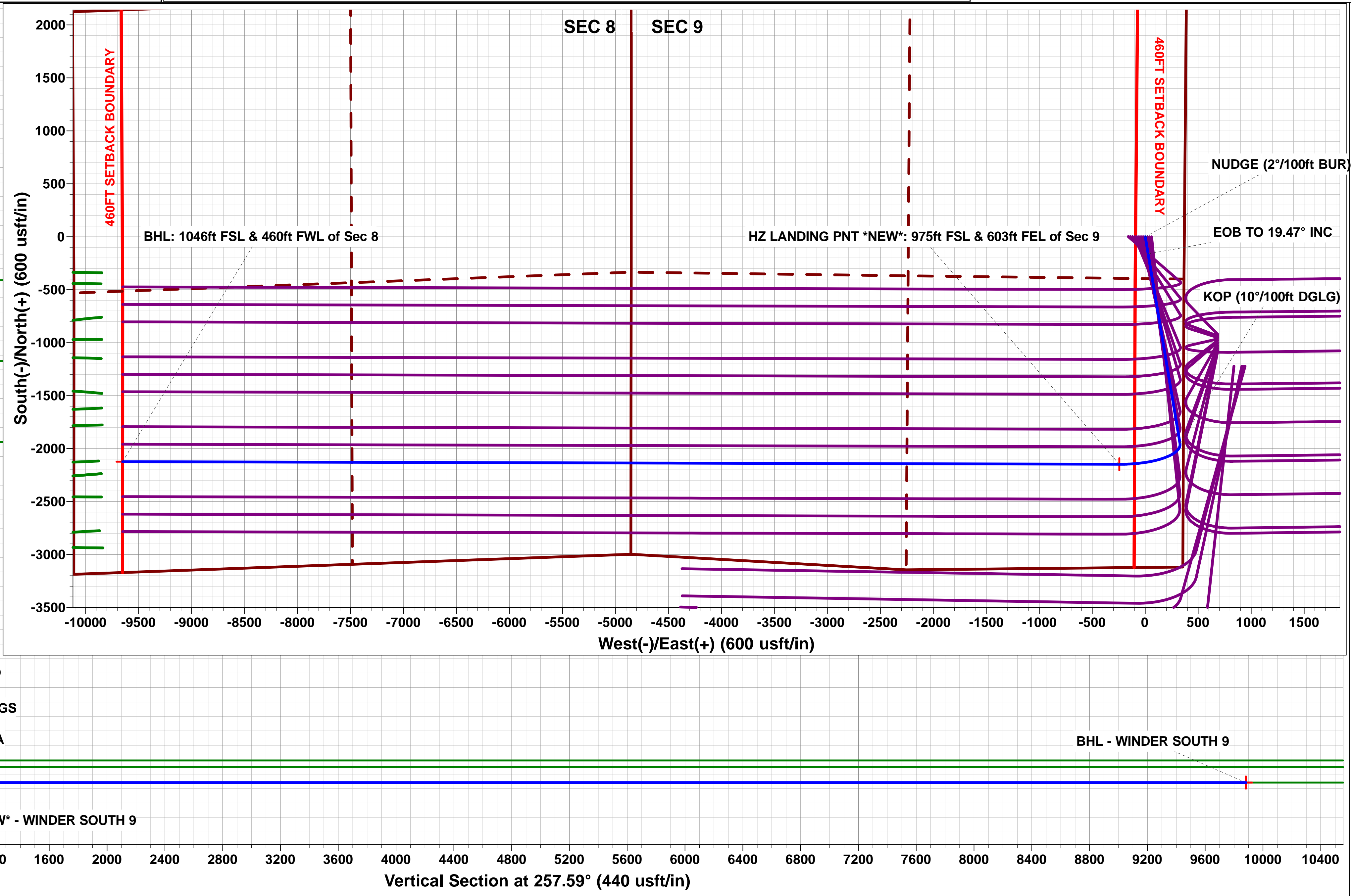
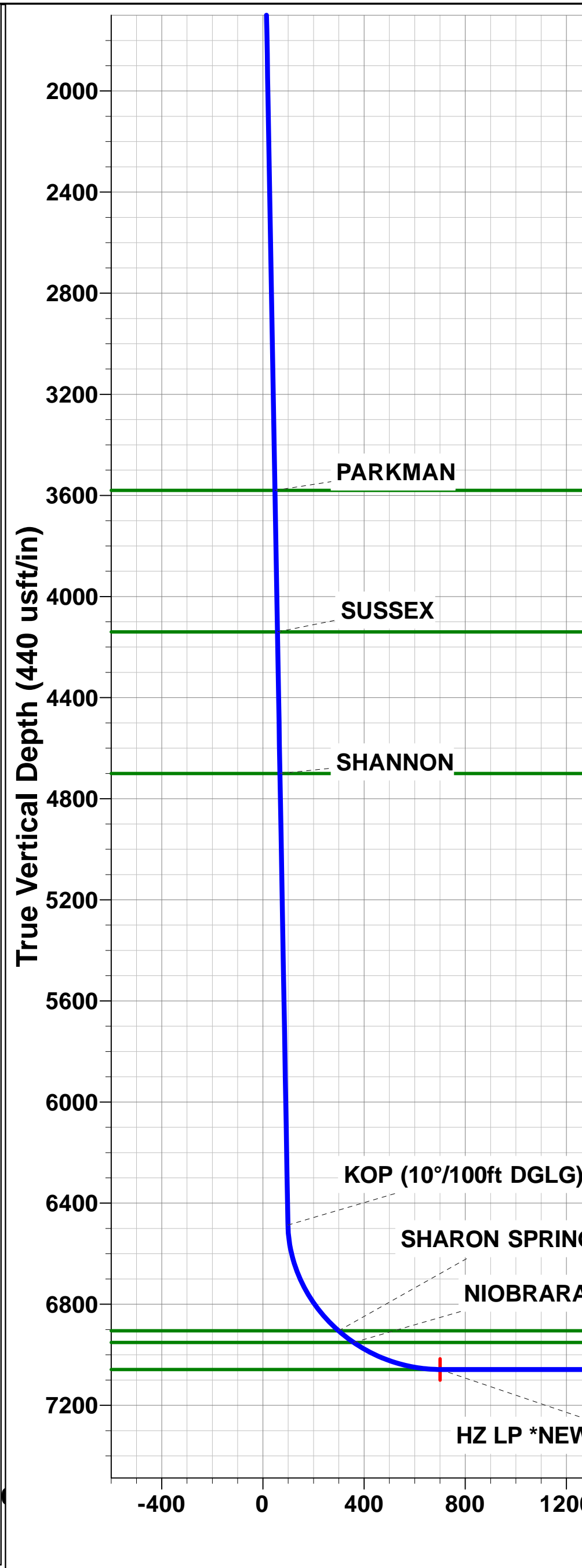
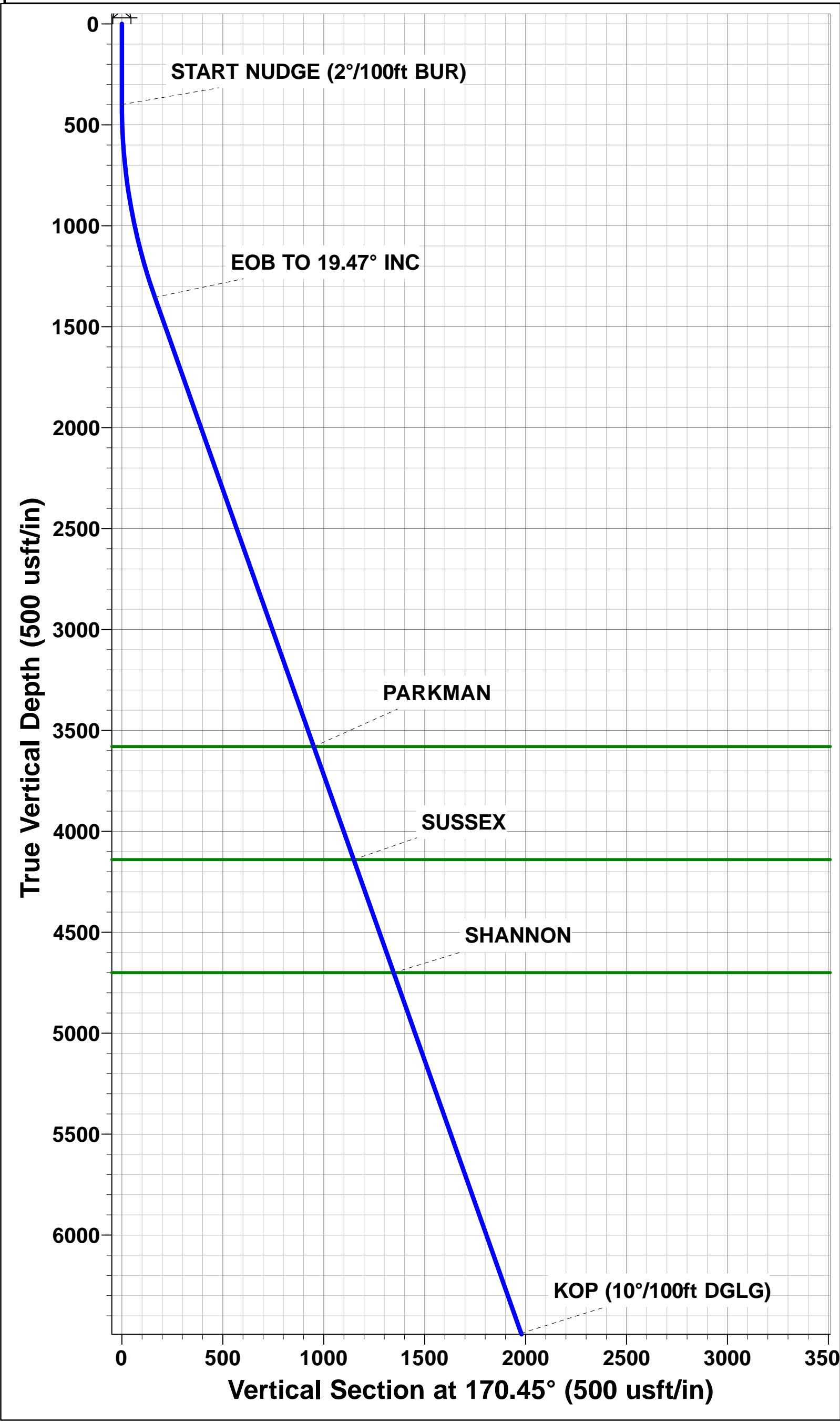
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3580.0	3733.6	PARKMAN
4140.0	4327.6	SUSSEX
4700.0	4921.5	SHANNON
6905.0	7306.9	SHARON SPRINGS
6951.0	7382.1	NIOBRARA
7058.0	7748.7	NIO B TARGET

PROPOSED LOCAL COORDINATES	
SHL: 2306ft FNL & 368ft FEL of Sec 9	
LP *NEW*: 975ft FSL & 603ft FEL of Sec 9	
BHL: 1046ft 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



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4872.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4872.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 9					
Well Position	+N/-S	-1.1 usft	Northing:	1,426,547.00 usft	Latitude:	40.502672
	+E/-W	159.9 usft	Easting:	3,169,578.17 usft	Longitude:	-104.890196
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,856.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	14/06/2016	8.39	66.94	52,547

Design	PROPOSAL #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	257.59

Plan Sections											
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	
400.0	0.00	0.00	400.0	-4,472.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,373.6	19.47	170.45	1,354.9	-3,517.1	-161.6	27.2	2.00	2.00	0.00	170.45	
6,816.5	19.47	170.45	6,486.6	1,614.6	-1,950.8	328.1	0.00	0.00	0.00	0.00	
7,748.7	90.00	270.15	7,058.0	2,186.0	-2,148.4	-244.5	10.00	7.57	10.70	99.15	HZ LP *NEW* - WIND
17,155.0	90.00	270.15	7,058.0	2,186.0	-2,123.5	-9,650.8	0.00	0.00	0.00	0.00	BHL - WINDER SO

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4872.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4872.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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)
SHL: 2306ft FNL & 368ft FEL of Sec 9										
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
START NUDGE (2°/100ft BUR)										
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	2.00	170.45	500.0	4,372.02	-1.7	0.3	0.1	2.00	2.00	0.00
600.0	4.00	170.45	599.8	4,272.16	-6.9	1.2	0.3	2.00	2.00	0.00
700.0	6.00	170.45	699.5	4,172.55	-15.5	2.6	0.8	2.00	2.00	0.00
800.0	8.00	170.45	798.7	4,073.30	-27.5	4.6	1.4	2.00	2.00	0.00
900.0	10.00	170.45	897.5	3,974.53	-42.9	7.2	2.2	2.00	2.00	0.00
1,000.0	12.00	170.45	995.6	3,876.38	-61.7	10.4	3.1	2.00	2.00	0.00
1,100.0	14.00	170.45	1,093.1	3,778.94	-83.9	14.1	4.3	2.00	2.00	0.00
1,200.0	16.00	170.45	1,189.6	3,682.36	-109.4	18.4	5.5	2.00	2.00	0.00
1,300.0	18.00	170.45	1,285.3	3,586.73	-138.3	23.3	7.0	2.00	2.00	0.00
EOB TO 19.47° INC										
1,373.6	19.47	170.45	1,354.9	3,517.06	-161.6	27.2	8.2	2.00	2.00	0.00
1,400.0	19.47	170.45	1,379.9	3,492.14	-170.3	28.6	8.6	0.00	0.00	0.00
1,500.0	19.47	170.45	1,474.1	3,397.86	-203.1	34.2	10.3	0.00	0.00	0.00
1,600.0	19.47	170.45	1,568.4	3,303.58	-236.0	39.7	12.0	0.00	0.00	0.00
1,700.0	19.47	170.45	1,662.7	3,209.30	-268.9	45.2	13.6	0.00	0.00	0.00
1,800.0	19.47	170.45	1,757.0	3,115.02	-301.7	50.7	15.3	0.00	0.00	0.00
1,900.0	19.47	170.45	1,851.3	3,020.74	-334.6	56.3	16.9	0.00	0.00	0.00
2,000.0	19.47	170.45	1,945.5	2,926.46	-367.5	61.8	18.6	0.00	0.00	0.00
2,100.0	19.47	170.45	2,039.8	2,832.18	-400.4	67.3	20.3	0.00	0.00	0.00
2,200.0	19.47	170.45	2,134.1	2,737.90	-433.2	72.9	21.9	0.00	0.00	0.00
2,300.0	19.47	170.45	2,228.4	2,643.62	-466.1	78.4	23.6	0.00	0.00	0.00
2,400.0	19.47	170.45	2,322.7	2,549.34	-499.0	83.9	25.3	0.00	0.00	0.00
2,500.0	19.47	170.45	2,416.9	2,455.05	-531.9	89.4	26.9	0.00	0.00	0.00
2,600.0	19.47	170.45	2,511.2	2,360.77	-564.7	95.0	28.6	0.00	0.00	0.00
2,700.0	19.47	170.45	2,605.5	2,266.49	-597.6	100.5	30.3	0.00	0.00	0.00
2,800.0	19.47	170.45	2,699.8	2,172.21	-630.5	106.0	31.9	0.00	0.00	0.00
2,900.0	19.47	170.45	2,794.1	2,077.93	-663.3	111.6	33.6	0.00	0.00	0.00
3,000.0	19.47	170.45	2,888.3	1,983.65	-696.2	117.1	35.3	0.00	0.00	0.00
3,100.0	19.47	170.45	2,982.6	1,889.37	-729.1	122.6	36.9	0.00	0.00	0.00
3,200.0	19.47	170.45	3,076.9	1,795.09	-762.0	128.1	38.6	0.00	0.00	0.00
3,300.0	19.47	170.45	3,171.2	1,700.81	-794.8	133.7	40.3	0.00	0.00	0.00
3,400.0	19.47	170.45	3,265.5	1,606.53	-827.7	139.2	41.9	0.00	0.00	0.00
3,500.0	19.47	170.45	3,359.8	1,512.25	-860.6	144.7	43.6	0.00	0.00	0.00
3,600.0	19.47	170.45	3,454.0	1,417.97	-893.4	150.3	45.2	0.00	0.00	0.00
3,700.0	19.47	170.45	3,548.3	1,323.68	-926.3	155.8	46.9	0.00	0.00	0.00
PARKMAN										
3,733.6	19.47	170.45	3,580.0	1,292.00	-937.4	157.6	47.5	0.00	0.00	0.00
3,800.0	19.47	170.45	3,642.6	1,229.40	-959.2	161.3	48.6	0.00	0.00	0.00
3,900.0	19.47	170.45	3,736.9	1,135.12	-992.1	166.8	50.2	0.00	0.00	0.00
4,000.0	19.47	170.45	3,831.2	1,040.84	-1,024.9	172.4	51.9	0.00	0.00	0.00
4,100.0	19.47	170.45	3,925.4	946.56	-1,057.8	177.9	53.6	0.00	0.00	0.00
4,200.0	19.47	170.45	4,019.7	852.28	-1,090.7	183.4	55.2	0.00	0.00	0.00
4,300.0	19.47	170.45	4,114.0	758.00	-1,123.5	189.0	56.9	0.00	0.00	0.00
SUSSEX										
4,327.6	19.47	170.45	4,140.0	732.00	-1,132.6	190.5	57.4	0.00	0.00	0.00
4,400.0	19.47	170.45	4,208.3	663.72	-1,156.4	194.5	58.6	0.00	0.00	0.00
4,500.0	19.47	170.45	4,302.6	569.44	-1,189.3	200.0	60.2	0.00	0.00	0.00

Planning Report



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Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	19.47	170.45	4,396.8	475.16	-1,222.2	205.5	61.9	0.00	0.00	0.00
4,700.0	19.47	170.45	4,491.1	380.88	-1,255.0	211.1	63.6	0.00	0.00	0.00
4,800.0	19.47	170.45	4,585.4	286.60	-1,287.9	216.6	65.2	0.00	0.00	0.00
4,900.0	19.47	170.45	4,679.7	192.31	-1,320.8	222.1	66.9	0.00	0.00	0.00
SHANNON										
4,921.5	19.47	170.45	4,700.0	172.00	-1,327.9	223.3	67.3	0.00	0.00	0.00
5,000.0	19.47	170.45	4,774.0	98.03	-1,353.7	227.7	68.6	0.00	0.00	0.00
5,100.0	19.47	170.45	4,868.2	3.75	-1,386.5	233.2	70.2	0.00	0.00	0.00
5,200.0	19.47	170.45	4,962.5	-90.53	-1,419.4	238.7	71.9	0.00	0.00	0.00
5,300.0	19.47	170.45	5,056.8	-184.81	-1,452.3	244.2	73.6	0.00	0.00	0.00
5,400.0	19.47	170.45	5,151.1	-279.09	-1,485.1	249.8	75.2	0.00	0.00	0.00
5,500.0	19.47	170.45	5,245.4	-373.37	-1,518.0	255.3	76.9	0.00	0.00	0.00
5,600.0	19.47	170.45	5,339.7	-467.65	-1,550.9	260.8	78.5	0.00	0.00	0.00
5,700.0	19.47	170.45	5,433.9	-561.93	-1,583.8	266.4	80.2	0.00	0.00	0.00
5,800.0	19.47	170.45	5,528.2	-656.21	-1,616.6	271.9	81.9	0.00	0.00	0.00
5,900.0	19.47	170.45	5,622.5	-750.49	-1,649.5	277.4	83.5	0.00	0.00	0.00
6,000.0	19.47	170.45	5,716.8	-844.77	-1,682.4	282.9	85.2	0.00	0.00	0.00
6,100.0	19.47	170.45	5,811.1	-939.06	-1,715.2	288.5	86.9	0.00	0.00	0.00
6,200.0	19.47	170.45	5,905.3	-1,033.34	-1,748.1	294.0	88.5	0.00	0.00	0.00
6,300.0	19.47	170.45	5,999.6	-1,127.62	-1,781.0	299.5	90.2	0.00	0.00	0.00
6,400.0	19.47	170.45	6,093.9	-1,221.90	-1,813.9	305.1	91.9	0.00	0.00	0.00
6,500.0	19.47	170.45	6,188.2	-1,316.18	-1,846.7	310.6	93.5	0.00	0.00	0.00
6,600.0	19.47	170.45	6,282.5	-1,410.46	-1,879.6	316.1	95.2	0.00	0.00	0.00
6,700.0	19.47	170.45	6,376.7	-1,504.74	-1,912.5	321.6	96.9	0.00	0.00	0.00
6,800.0	19.47	170.45	6,471.0	-1,599.02	-1,945.3	327.2	98.5	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
6,816.5	19.47	170.45	6,486.6	-1,614.58	-1,950.8	328.1	98.8	0.00	0.00	0.00
6,900.0	19.86	195.41	6,565.3	-1,693.35	-1,978.2	326.6	106.1	10.00	0.47	29.89
7,000.0	24.28	219.56	6,658.2	-1,786.18	-2,010.5	309.0	130.3	10.00	4.42	24.15
7,100.0	31.25	235.10	6,746.7	-1,874.73	-2,041.3	274.5	170.6	10.00	6.97	15.54
7,200.0	39.44	245.09	6,828.3	-1,956.30	-2,069.6	224.3	225.7	10.00	8.19	9.99
7,300.0	48.23	252.01	6,900.4	-2,028.41	-2,094.5	159.9	294.0	10.00	8.79	6.93
SHARON SPRINGS										
7,306.9	48.85	252.42	6,905.0	-2,033.00	-2,096.1	154.9	299.2	10.00	8.98	5.86
NIOBRARA										
7,382.1	55.68	256.39	6,951.0	-2,079.00	-2,112.0	97.7	358.5	10.00	9.09	5.28
7,400.0	57.33	257.24	6,960.9	-2,088.86	-2,115.4	83.1	373.4	10.00	9.19	4.73
7,500.0	66.60	261.48	7,007.8	-2,135.83	-2,131.6	-3.5	461.5	10.00	9.28	4.24
7,600.0	75.98	265.16	7,039.9	-2,167.88	-2,142.5	-97.5	555.6	10.00	9.37	3.68
7,700.0	85.40	268.55	7,056.0	-2,184.05	-2,147.8	-195.9	652.9	10.00	9.43	3.39
HZ LANDING PNT *NEW*: 975ft FSL & 603ft FEL of Sec 9 - NIO B TARGET										
7,748.7	90.00	270.15	7,058.0	-2,186.00	-2,148.4	-244.5	700.5	10.00	9.44	3.30
7,800.0	90.00	270.15	7,058.0	-2,186.00	-2,148.3	-295.8	750.6	0.00	0.00	0.00
7,900.0	90.00	270.15	7,058.0	-2,186.00	-2,148.0	-395.8	848.2	0.00	0.00	0.00
8,000.0	90.00	270.15	7,058.0	-2,186.00	-2,147.7	-495.8	945.8	0.00	0.00	0.00
8,100.0	90.00	270.15	7,058.0	-2,186.00	-2,147.5	-595.8	1,043.4	0.00	0.00	0.00
8,200.0	90.00	270.15	7,058.0	-2,186.00	-2,147.2	-695.8	1,141.0	0.00	0.00	0.00
8,300.0	90.00	270.15	7,058.0	-2,186.00	-2,146.9	-795.8	1,238.6	0.00	0.00	0.00
8,400.0	90.00	270.15	7,058.0	-2,186.00	-2,146.7	-895.8	1,336.2	0.00	0.00	0.00
8,500.0	90.00	270.15	7,058.0	-2,186.00	-2,146.4	-995.8	1,433.8	0.00	0.00	0.00
8,600.0	90.00	270.15	7,058.0	-2,186.00	-2,146.1	-1,095.8	1,531.4	0.00	0.00	0.00
8,700.0	90.00	270.15	7,058.0	-2,186.00	-2,145.9	-1,195.8	1,629.0	0.00	0.00	0.00
8,800.0	90.00	270.15	7,058.0	-2,186.00	-2,145.6	-1,295.8	1,726.6	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4872.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4872.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	-2,145.4	-1,395.8	1,824.2	0.00	0.00	0.00
9,000.0	90.00	270.15	7,058.0	-2,186.00	-2,145.1	-1,495.8	1,921.8	0.00	0.00	0.00
9,100.0	90.00	270.15	7,058.0	-2,186.00	-2,144.8	-1,595.8	2,019.4	0.00	0.00	0.00
9,200.0	90.00	270.15	7,058.0	-2,186.00	-2,144.6	-1,695.8	2,117.0	0.00	0.00	0.00
9,300.0	90.00	270.15	7,058.0	-2,186.00	-2,144.3	-1,795.8	2,214.7	0.00	0.00	0.00
9,400.0	90.00	270.15	7,058.0	-2,186.00	-2,144.0	-1,895.8	2,312.3	0.00	0.00	0.00
9,500.0	90.00	270.15	7,058.0	-2,186.00	-2,143.8	-1,995.8	2,409.9	0.00	0.00	0.00
9,600.0	90.00	270.15	7,058.0	-2,186.00	-2,143.5	-2,095.8	2,507.5	0.00	0.00	0.00
9,700.0	90.00	270.15	7,058.0	-2,186.00	-2,143.2	-2,195.8	2,605.1	0.00	0.00	0.00
9,800.0	90.00	270.15	7,058.0	-2,186.00	-2,143.0	-2,295.8	2,702.7	0.00	0.00	0.00
9,900.0	90.00	270.15	7,058.0	-2,186.00	-2,142.7	-2,395.8	2,800.3	0.00	0.00	0.00
10,000.0	90.00	270.15	7,058.0	-2,186.00	-2,142.4	-2,495.8	2,897.9	0.00	0.00	0.00
10,100.0	90.00	270.15	7,058.0	-2,186.00	-2,142.2	-2,595.8	2,995.5	0.00	0.00	0.00
10,200.0	90.00	270.15	7,058.0	-2,186.00	-2,141.9	-2,695.8	3,093.1	0.00	0.00	0.00
10,300.0	90.00	270.15	7,058.0	-2,186.00	-2,141.7	-2,795.8	3,190.7	0.00	0.00	0.00
10,400.0	90.00	270.15	7,058.0	-2,186.00	-2,141.4	-2,895.8	3,288.3	0.00	0.00	0.00
10,500.0	90.00	270.15	7,058.0	-2,186.00	-2,141.1	-2,995.8	3,385.9	0.00	0.00	0.00
10,600.0	90.00	270.15	7,058.0	-2,186.00	-2,140.9	-3,095.8	3,483.5	0.00	0.00	0.00
10,700.0	90.00	270.15	7,058.0	-2,186.00	-2,140.6	-3,195.8	3,581.1	0.00	0.00	0.00
10,800.0	90.00	270.15	7,058.0	-2,186.00	-2,140.3	-3,295.8	3,678.7	0.00	0.00	0.00
10,900.0	90.00	270.15	7,058.0	-2,186.00	-2,140.1	-3,395.8	3,776.4	0.00	0.00	0.00
11,000.0	90.00	270.15	7,058.0	-2,186.00	-2,139.8	-3,495.8	3,874.0	0.00	0.00	0.00
11,100.0	90.00	270.15	7,058.0	-2,186.00	-2,139.5	-3,595.8	3,971.6	0.00	0.00	0.00
11,200.0	90.00	270.15	7,058.0	-2,186.00	-2,139.3	-3,695.8	4,069.2	0.00	0.00	0.00
11,300.0	90.00	270.15	7,058.0	-2,186.00	-2,139.0	-3,795.8	4,166.8	0.00	0.00	0.00
11,400.0	90.00	270.15	7,058.0	-2,186.00	-2,138.7	-3,895.8	4,264.4	0.00	0.00	0.00
11,500.0	90.00	270.15	7,058.0	-2,186.00	-2,138.5	-3,995.8	4,362.0	0.00	0.00	0.00
11,600.0	90.00	270.15	7,058.0	-2,186.00	-2,138.2	-4,095.8	4,459.6	0.00	0.00	0.00
11,700.0	90.00	270.15	7,058.0	-2,186.00	-2,138.0	-4,195.8	4,557.2	0.00	0.00	0.00
11,800.0	90.00	270.15	7,058.0	-2,186.00	-2,137.7	-4,295.8	4,654.8	0.00	0.00	0.00
11,900.0	90.00	270.15	7,058.0	-2,186.00	-2,137.4	-4,395.8	4,752.4	0.00	0.00	0.00
12,000.0	90.00	270.15	7,058.0	-2,186.00	-2,137.2	-4,495.8	4,850.0	0.00	0.00	0.00
12,100.0	90.00	270.15	7,058.0	-2,186.00	-2,136.9	-4,595.8	4,947.6	0.00	0.00	0.00
12,200.0	90.00	270.15	7,058.0	-2,186.00	-2,136.6	-4,695.8	5,045.2	0.00	0.00	0.00
12,300.0	90.00	270.15	7,058.0	-2,186.00	-2,136.4	-4,795.8	5,142.8	0.00	0.00	0.00
12,400.0	90.00	270.15	7,058.0	-2,186.00	-2,136.1	-4,895.8	5,240.5	0.00	0.00	0.00
12,500.0	90.00	270.15	7,058.0	-2,186.00	-2,135.8	-4,995.8	5,338.1	0.00	0.00	0.00
12,600.0	90.00	270.15	7,058.0	-2,186.00	-2,135.6	-5,095.8	5,435.7	0.00	0.00	0.00
12,700.0	90.00	270.15	7,058.0	-2,186.00	-2,135.3	-5,195.8	5,533.3	0.00	0.00	0.00
12,800.0	90.00	270.15	7,058.0	-2,186.00	-2,135.0	-5,295.8	5,630.9	0.00	0.00	0.00
12,900.0	90.00	270.15	7,058.0	-2,186.00	-2,134.8	-5,395.8	5,728.5	0.00	0.00	0.00
13,000.0	90.00	270.15	7,058.0	-2,186.00	-2,134.5	-5,495.8	5,826.1	0.00	0.00	0.00
13,100.0	90.00	270.15	7,058.0	-2,186.00	-2,134.3	-5,595.8	5,923.7	0.00	0.00	0.00
13,200.0	90.00	270.15	7,058.0	-2,186.00	-2,134.0	-5,695.8	6,021.3	0.00	0.00	0.00
13,300.0	90.00	270.15	7,058.0	-2,186.00	-2,133.7	-5,795.8	6,118.9	0.00	0.00	0.00
13,400.0	90.00	270.15	7,058.0	-2,186.00	-2,133.5	-5,895.8	6,216.5	0.00	0.00	0.00
13,500.0	90.00	270.15	7,058.0	-2,186.00	-2,133.2	-5,995.8	6,314.1	0.00	0.00	0.00
13,600.0	90.00	270.15	7,058.0	-2,186.00	-2,132.9	-6,095.8	6,411.7	0.00	0.00	0.00
13,700.0	90.00	270.15	7,058.0	-2,186.00	-2,132.7	-6,195.8	6,509.3	0.00	0.00	0.00
13,800.0	90.00	270.15	7,058.0	-2,186.00	-2,132.4	-6,295.8	6,606.9	0.00	0.00	0.00
13,900.0	90.00	270.15	7,058.0	-2,186.00	-2,132.1	-6,395.8	6,704.6	0.00	0.00	0.00
14,000.0	90.00	270.15	7,058.0	-2,186.00	-2,131.9	-6,495.8	6,802.2	0.00	0.00	0.00
14,100.0	90.00	270.15	7,058.0	-2,186.00	-2,131.6	-6,595.8	6,899.8	0.00	0.00	0.00
14,200.0	90.00	270.15	7,058.0	-2,186.00	-2,131.3	-6,695.8	6,997.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 9
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4872.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4872.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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	-2,131.1	-6,795.8	7,095.0	0.00	0.00	0.00
14,400.0	90.00	270.15	7,058.0	-2,186.00	-2,130.8	-6,895.8	7,192.6	0.00	0.00	0.00
14,500.0	90.00	270.15	7,058.0	-2,186.00	-2,130.6	-6,995.8	7,290.2	0.00	0.00	0.00
14,600.0	90.00	270.15	7,058.0	-2,186.00	-2,130.3	-7,095.8	7,387.8	0.00	0.00	0.00
14,700.0	90.00	270.15	7,058.0	-2,186.00	-2,130.0	-7,195.8	7,485.4	0.00	0.00	0.00
14,800.0	90.00	270.15	7,058.0	-2,186.00	-2,129.8	-7,295.8	7,583.0	0.00	0.00	0.00
14,900.0	90.00	270.15	7,058.0	-2,186.00	-2,129.5	-7,395.8	7,680.6	0.00	0.00	0.00
15,000.0	90.00	270.15	7,058.0	-2,186.00	-2,129.2	-7,495.8	7,778.2	0.00	0.00	0.00
15,100.0	90.00	270.15	7,058.0	-2,186.00	-2,129.0	-7,595.8	7,875.8	0.00	0.00	0.00
15,200.0	90.00	270.15	7,058.0	-2,186.00	-2,128.7	-7,695.8	7,973.4	0.00	0.00	0.00
15,300.0	90.00	270.15	7,058.0	-2,186.00	-2,128.4	-7,795.8	8,071.0	0.00	0.00	0.00
15,400.0	90.00	270.15	7,058.0	-2,186.00	-2,128.2	-7,895.8	8,168.7	0.00	0.00	0.00
15,500.0	90.00	270.15	7,058.0	-2,186.00	-2,127.9	-7,995.8	8,266.3	0.00	0.00	0.00
15,600.0	90.00	270.15	7,058.0	-2,186.00	-2,127.6	-8,095.8	8,363.9	0.00	0.00	0.00
15,700.0	90.00	270.15	7,058.0	-2,186.00	-2,127.4	-8,195.8	8,461.5	0.00	0.00	0.00
15,800.0	90.00	270.15	7,058.0	-2,186.00	-2,127.1	-8,295.8	8,559.1	0.00	0.00	0.00
15,900.0	90.00	270.15	7,058.0	-2,186.00	-2,126.9	-8,395.8	8,656.7	0.00	0.00	0.00
16,000.0	90.00	270.15	7,058.0	-2,186.00	-2,126.6	-8,495.8	8,754.3	0.00	0.00	0.00
16,100.0	90.00	270.15	7,058.0	-2,186.00	-2,126.3	-8,595.8	8,851.9	0.00	0.00	0.00
16,200.0	90.00	270.15	7,058.0	-2,186.00	-2,126.1	-8,695.8	8,949.5	0.00	0.00	0.00
16,300.0	90.00	270.15	7,058.0	-2,186.00	-2,125.8	-8,795.8	9,047.1	0.00	0.00	0.00
16,400.0	90.00	270.15	7,058.0	-2,186.00	-2,125.5	-8,895.8	9,144.7	0.00	0.00	0.00
16,500.0	90.00	270.15	7,058.0	-2,186.00	-2,125.3	-8,995.8	9,242.3	0.00	0.00	0.00
16,600.0	90.00	270.15	7,058.0	-2,186.00	-2,125.0	-9,095.8	9,339.9	0.00	0.00	0.00
16,700.0	90.00	270.15	7,058.0	-2,186.00	-2,124.7	-9,195.8	9,437.5	0.00	0.00	0.00
16,800.0	90.00	270.15	7,058.0	-2,186.00	-2,124.5	-9,295.8	9,535.1	0.00	0.00	0.00
16,900.0	90.00	270.15	7,058.0	-2,186.00	-2,124.2	-9,395.8	9,632.7	0.00	0.00	0.00
17,000.0	90.00	270.15	7,058.0	-2,186.00	-2,123.9	-9,495.8	9,730.4	0.00	0.00	0.00
17,100.0	90.00	270.15	7,058.0	-2,186.00	-2,123.7	-9,595.8	9,828.0	0.00	0.00	0.00
BHL: 1046ft FSL & 460ft FWL of Sec 8										
17,155.0	90.00	270.15	7,058.0	-2,186.00	-2,123.5	-9,650.8	9,881.7	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,733.6	3,580.0	PARKMAN			
4,327.6	4,140.0	SUSSEX			
4,921.5	4,700.0	SHANNON			
7,306.9	6,905.0	SHARON SPRINGS			
7,382.1	6,951.0	NIOBRARA			
7,748.7	7,058.0	NIO B TARGET			

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4872.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 9	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	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 & 368ft FEL of Sec 9
400.0	400.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,373.6	1,354.9	-161.6	27.2	EOB TO 19.47° INC
6,816.5	6,486.6	-1,950.8	328.1	KOP (10°/100ft DGLG)
7,748.7	7,058.0	-2,148.4	-244.5	HZ LANDING PNT *NEW*: 975ft FSL & 603ft FEL of Sec 9
17,155.0	7,058.0	-2,123.5	-9,650.8	BHL: 1046ft FSL & 460ft FWL of Sec 8