

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

WINDER SOUTH 4

ORIGINAL WELLBORE

15 June, 2016

Plan: PROPOSAL #1

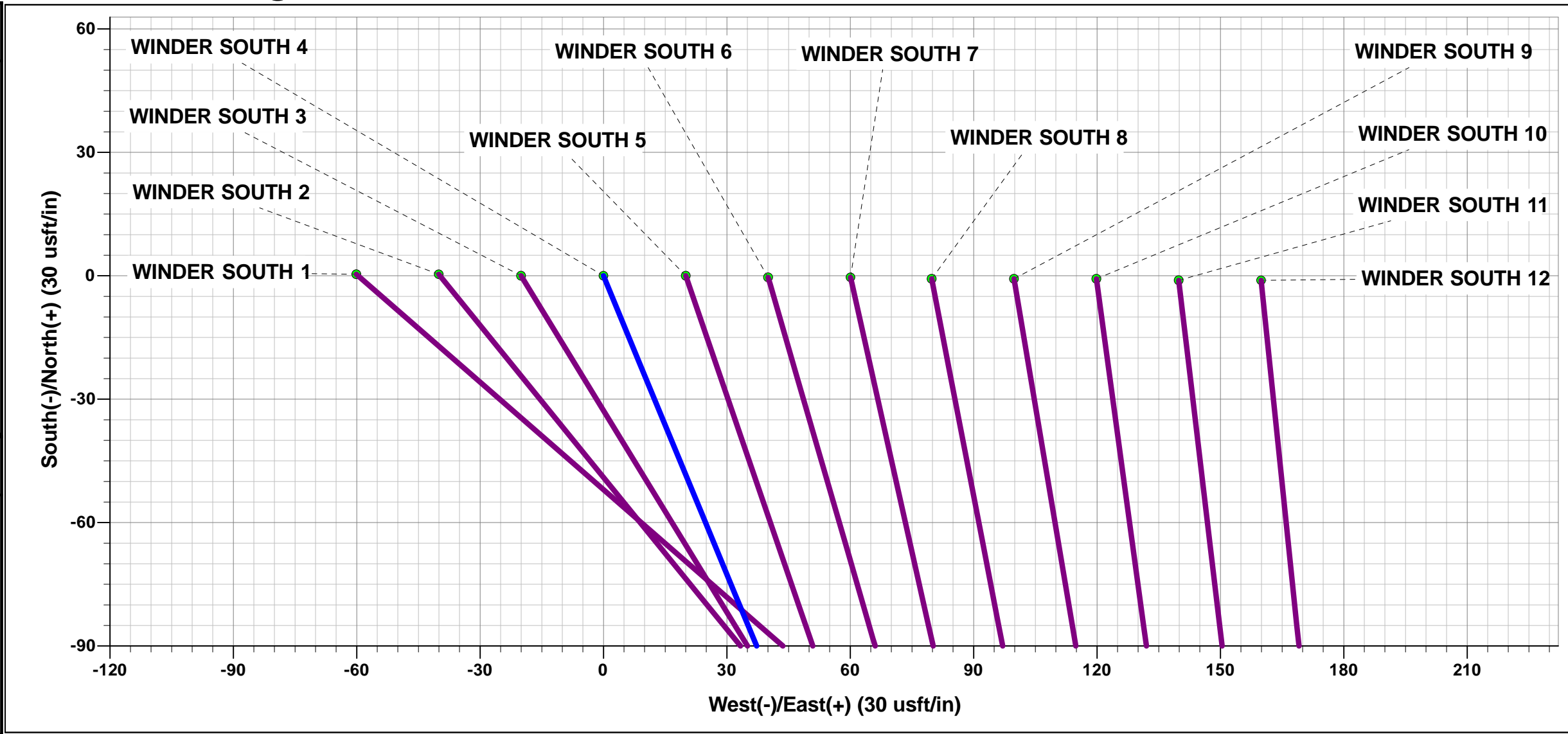




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 9 T6N R67W 6th P.M.
Well: WINDER SOUTH 4
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

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 & 468ft FEL of Sec 9	
900.0	900.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
1500.9	1505.4	12.11	157.52	-58.9	24.4	-17.2	63.7	EOB TO 12.11° INC	
6450.6	6567.7	12.11	157.52	-1040.1	430.3	-304.6	1125.6	KOP (10°/100ft DGLG)	
7058.0	7514.0	90.00	270.15	-1158.9	-141.1	276.8	1735.8	HZ LANDING PNT *NEW*: 1965ft FSL & 603ft FEL of Sec 9	
7058.0	16923.5	90.00	270.15	-1134.4	-9550.6	9617.7	11145.3	BHL: 2035ft FSL & 460ft FWL of Sec 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - WINDER SOUTH 4	7058.0	-1158.9	-141.1	40.499493	-104.891062
BHL - WINDER SOUTH 4	7058.0	-1134.4	-9550.6	40.499555	-104.924896



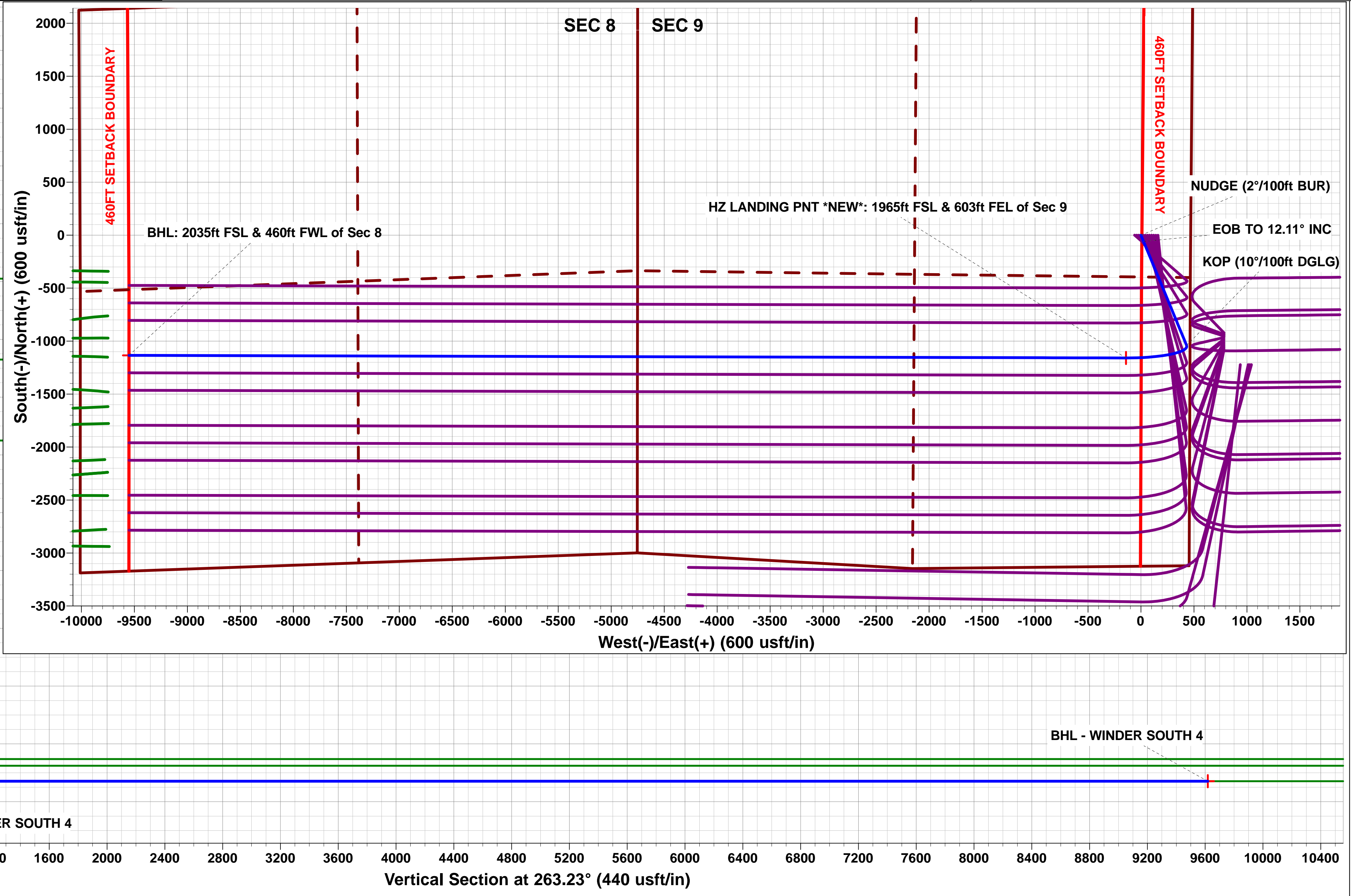
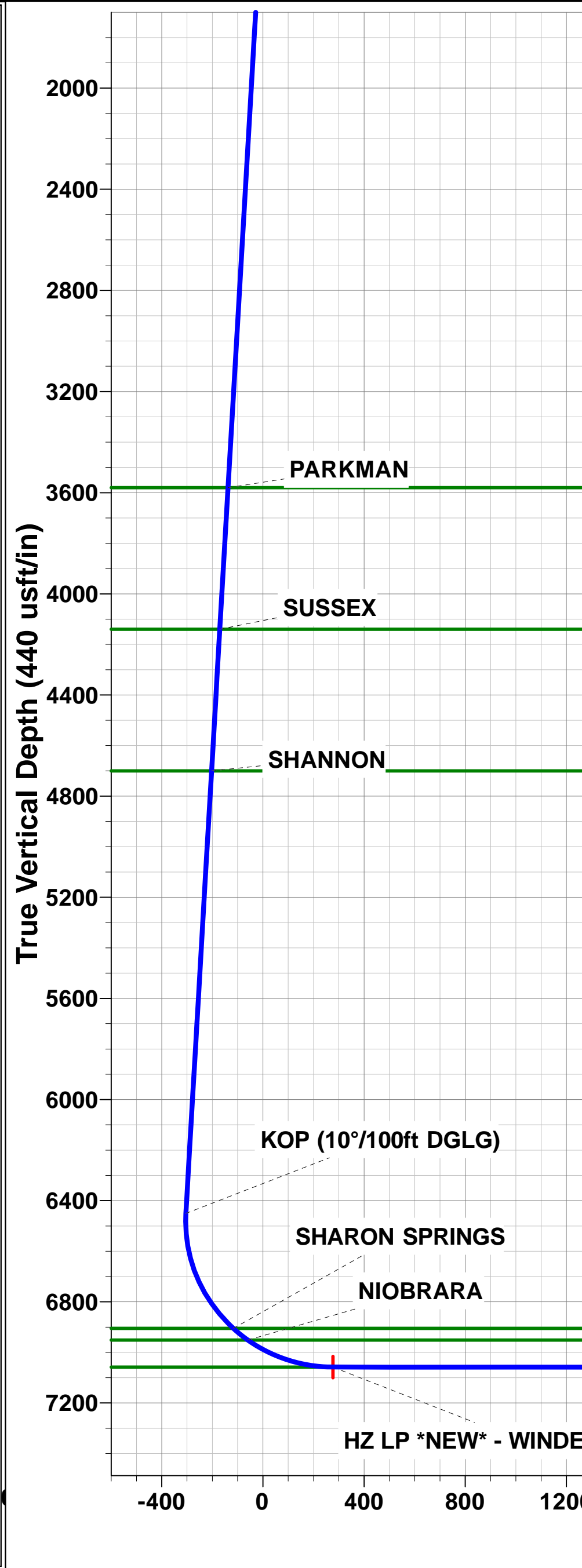
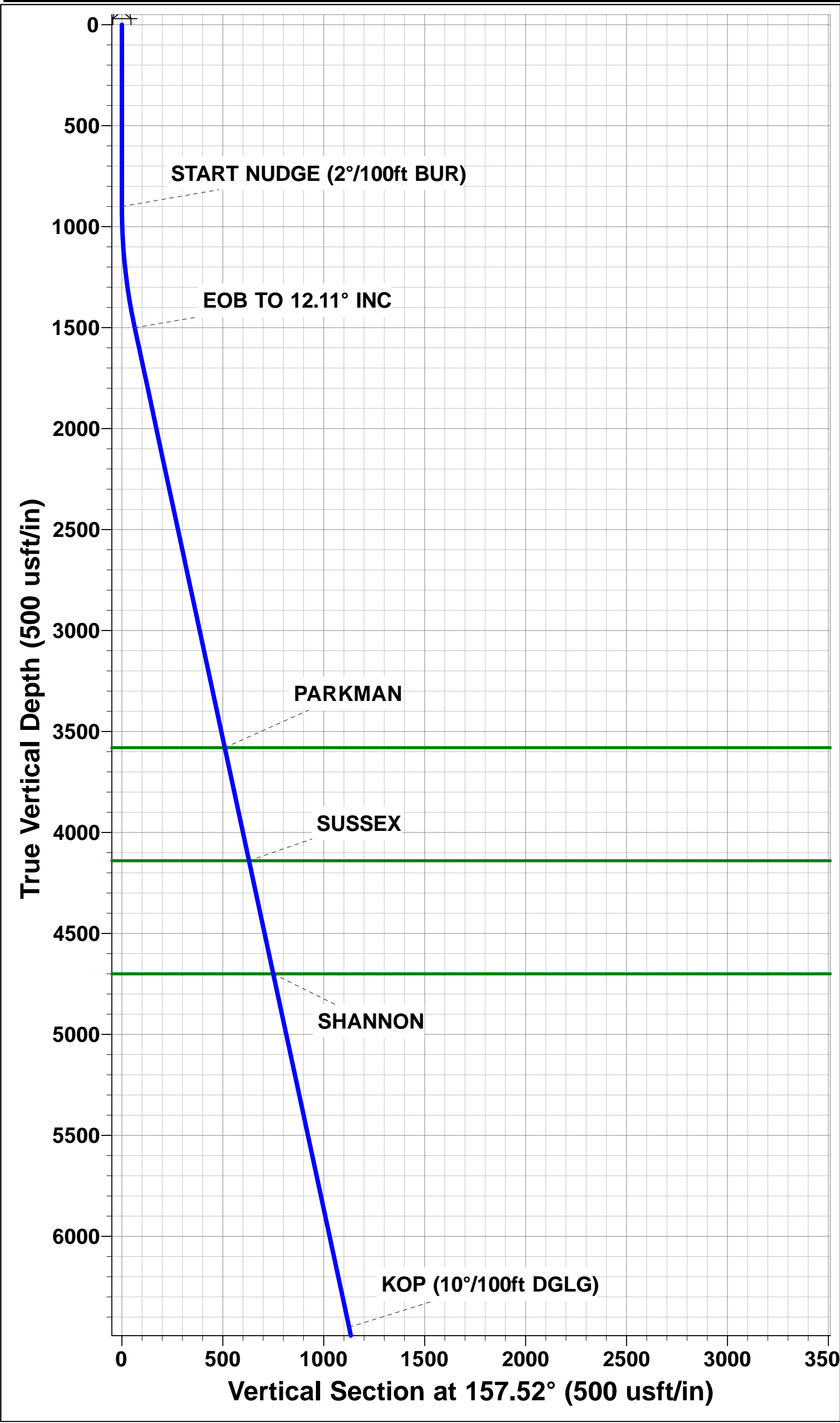
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3580.0	3631.8	PARKMAN
4140.0	4204.5	SUSSEX
4700.0	4777.3	SHANNON
6905.0	7081.0	SHARON SPRINGS
6951.0	7154.6	NIOBRARA
7058.0	7514.0	NIO B TARGET

PROPOSED LOCAL COORDINATES		
SHL: 2306ft FNL & 468ft FEL of Sec 9		
LP *NEW*: 1965ft FSL & 603ft FEL of Sec 9		
BHL: 2035ft 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 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4871.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4871.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 4	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 4					
Well Position	+N-S	-0.4 usft	Northing:	1,426,547.04 usfi	Latitude:	40.502674
	+E-W	60.1 usft	Easting:	3,169,478.34 usfi	Longitude:	-104.890555
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,855.0 usfi

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	263.23

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	-4,871.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	-3,971.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,505.4	12.11	157.52	1,500.9	-3,370.1	-58.9	24.4	2.00	2.00	0.00	157.52	
6,567.7	12.11	157.52	6,450.6	1,579.6	-1,040.1	430.3	0.00	0.00	0.00	0.00	
7,514.0	90.00	270.15	7,058.0	2,187.0	-1,158.9	-141.1	10.00	8.23	11.90	112.17	HZ LP *NEW* - WIND
16,923.5	90.00	270.15	7,058.0	2,187.0	-1,134.4	-9,550.6	0.00	0.00	0.00	0.00	BHL - WINDER SO

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4871.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4871.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 4	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 & 468ft FEL of Sec 9										
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
800.0	0.00	0.00	800.0	4,071.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
900.0	0.00	0.00	900.0	3,971.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	2.00	157.52	1,000.0	3,871.02	-1.6	0.7	-0.5	2.00	2.00	0.00
1,100.0	4.00	157.52	1,099.8	3,771.16	-6.4	2.7	-1.9	2.00	2.00	0.00
1,200.0	6.00	157.52	1,199.5	3,671.55	-14.5	6.0	-4.2	2.00	2.00	0.00
1,300.0	8.00	157.52	1,298.7	3,572.30	-25.8	10.7	-7.5	2.00	2.00	0.00
1,400.0	10.00	157.52	1,397.5	3,473.53	-40.2	16.6	-11.8	2.00	2.00	0.00
1,500.0	12.00	157.52	1,495.6	3,375.38	-57.8	23.9	-16.9	2.00	2.00	0.00
EOB TO 12.11° INC										
1,505.4	12.11	157.52	1,500.9	3,370.10	-58.9	24.4	-17.2	2.00	2.00	0.00
1,600.0	12.11	157.52	1,593.4	3,277.60	-77.2	31.9	-22.6	0.00	0.00	0.00
1,700.0	12.11	157.52	1,691.2	3,179.83	-96.6	40.0	-28.3	0.00	0.00	0.00
1,800.0	12.11	157.52	1,789.0	3,082.05	-116.0	48.0	-34.0	0.00	0.00	0.00
1,900.0	12.11	157.52	1,886.7	2,984.27	-135.4	56.0	-39.6	0.00	0.00	0.00
2,000.0	12.11	157.52	1,984.5	2,886.50	-154.8	64.0	-45.3	0.00	0.00	0.00
2,100.0	12.11	157.52	2,082.3	2,788.72	-174.1	72.0	-51.0	0.00	0.00	0.00
2,200.0	12.11	157.52	2,180.1	2,690.95	-193.5	80.1	-56.7	0.00	0.00	0.00
2,300.0	12.11	157.52	2,277.8	2,593.17	-212.9	88.1	-62.4	0.00	0.00	0.00
2,400.0	12.11	157.52	2,375.6	2,495.40	-232.3	96.1	-68.0	0.00	0.00	0.00
2,500.0	12.11	157.52	2,473.4	2,397.62	-251.7	104.1	-73.7	0.00	0.00	0.00
2,600.0	12.11	157.52	2,571.2	2,299.85	-271.1	112.1	-79.4	0.00	0.00	0.00
2,700.0	12.11	157.52	2,668.9	2,202.07	-290.4	120.2	-85.1	0.00	0.00	0.00
2,800.0	12.11	157.52	2,766.7	2,104.30	-309.8	128.2	-90.7	0.00	0.00	0.00
2,900.0	12.11	157.52	2,864.5	2,006.52	-329.2	136.2	-96.4	0.00	0.00	0.00
3,000.0	12.11	157.52	2,962.3	1,908.75	-348.6	144.2	-102.1	0.00	0.00	0.00
3,100.0	12.11	157.52	3,060.0	1,810.97	-368.0	152.2	-107.8	0.00	0.00	0.00
3,200.0	12.11	157.52	3,157.8	1,713.20	-387.3	160.2	-113.4	0.00	0.00	0.00
3,300.0	12.11	157.52	3,255.6	1,615.42	-406.7	168.3	-119.1	0.00	0.00	0.00
3,400.0	12.11	157.52	3,353.4	1,517.65	-426.1	176.3	-124.8	0.00	0.00	0.00
3,500.0	12.11	157.52	3,451.1	1,419.87	-445.5	184.3	-130.5	0.00	0.00	0.00
3,600.0	12.11	157.52	3,548.9	1,322.09	-464.9	192.3	-136.1	0.00	0.00	0.00
PARKMAN										
3,631.8	12.11	157.52	3,580.0	1,291.00	-471.0	194.9	-138.0	0.00	0.00	0.00
3,700.0	12.11	157.52	3,646.7	1,224.32	-484.3	200.3	-141.8	0.00	0.00	0.00
3,800.0	12.11	157.52	3,744.5	1,126.54	-503.6	208.4	-147.5	0.00	0.00	0.00
3,900.0	12.11	157.52	3,842.2	1,028.77	-523.0	216.4	-153.2	0.00	0.00	0.00
4,000.0	12.11	157.52	3,940.0	930.99	-542.4	224.4	-158.9	0.00	0.00	0.00
4,100.0	12.11	157.52	4,037.8	833.22	-561.8	232.4	-164.5	0.00	0.00	0.00
4,200.0	12.11	157.52	4,135.6	735.44	-581.2	240.4	-170.2	0.00	0.00	0.00
SUSSEX										
4,204.5	12.11	157.52	4,140.0	731.00	-582.1	240.8	-170.5	0.00	0.00	0.00
4,300.0	12.11	157.52	4,233.3	637.67	-600.6	248.5	-175.9	0.00	0.00	0.00
4,400.0	12.11	157.52	4,331.1	539.89	-619.9	256.5	-181.6	0.00	0.00	0.00
4,500.0	12.11	157.52	4,428.9	442.12	-639.3	264.5	-187.2	0.00	0.00	0.00

Planning Report



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Well:	WINDER SOUTH 4	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	12.11	157.52	4,526.7	344.34	-658.7	272.5	-192.9	0.00	0.00	0.00
4,700.0	12.11	157.52	4,624.4	246.57	-678.1	280.5	-198.6	0.00	0.00	0.00
SHANNON										
4,777.3	12.11	157.52	4,700.0	171.00	-693.1	286.7	-203.0	0.00	0.00	0.00
4,800.0	12.11	157.52	4,722.2	148.79	-697.5	288.6	-204.3	0.00	0.00	0.00
4,900.0	12.11	157.52	4,820.0	51.02	-716.9	296.6	-209.9	0.00	0.00	0.00
5,000.0	12.11	157.52	4,917.8	-46.76	-736.2	304.6	-215.6	0.00	0.00	0.00
5,100.0	12.11	157.52	5,015.5	-144.53	-755.6	312.6	-221.3	0.00	0.00	0.00
5,200.0	12.11	157.52	5,113.3	-242.31	-775.0	320.6	-227.0	0.00	0.00	0.00
5,300.0	12.11	157.52	5,211.1	-340.09	-794.4	328.6	-232.6	0.00	0.00	0.00
5,400.0	12.11	157.52	5,308.9	-437.86	-813.8	336.7	-238.3	0.00	0.00	0.00
5,500.0	12.11	157.52	5,406.6	-535.64	-833.2	344.7	-244.0	0.00	0.00	0.00
5,600.0	12.11	157.52	5,504.4	-633.41	-852.5	352.7	-249.7	0.00	0.00	0.00
5,700.0	12.11	157.52	5,602.2	-731.19	-871.9	360.7	-255.4	0.00	0.00	0.00
5,800.0	12.11	157.52	5,700.0	-828.96	-891.3	368.7	-261.0	0.00	0.00	0.00
5,900.0	12.11	157.52	5,797.7	-926.74	-910.7	376.8	-266.7	0.00	0.00	0.00
6,000.0	12.11	157.52	5,895.5	-1,024.51	-930.1	384.8	-272.4	0.00	0.00	0.00
6,100.0	12.11	157.52	5,993.3	-1,122.29	-949.4	392.8	-278.1	0.00	0.00	0.00
6,200.0	12.11	157.52	6,091.1	-1,220.06	-968.8	400.8	-283.7	0.00	0.00	0.00
6,300.0	12.11	157.52	6,188.8	-1,317.84	-988.2	408.8	-289.4	0.00	0.00	0.00
6,400.0	12.11	157.52	6,286.6	-1,415.61	-1,007.6	416.9	-295.1	0.00	0.00	0.00
6,500.0	12.11	157.52	6,384.4	-1,513.39	-1,027.0	424.9	-300.8	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
6,567.7	12.11	157.52	6,450.6	-1,579.58	-1,040.1	430.3	-304.6	0.00	0.00	0.00
6,600.0	11.29	172.98	6,482.2	-1,611.22	-1,046.4	432.0	-305.5	9.99	-2.54	47.84
6,700.0	14.09	218.05	6,580.0	-1,709.00	-1,065.7	425.7	-297.0	10.00	2.80	45.07
6,800.0	21.61	240.15	6,675.2	-1,804.22	-1,084.5	402.1	-271.4	10.00	7.52	22.10
6,900.0	30.54	250.54	6,765.0	-1,894.00	-1,102.2	362.1	-229.6	10.00	8.93	10.38
7,000.0	39.95	256.47	6,846.6	-1,975.60	-1,118.2	306.8	-172.8	10.00	9.41	5.93
SHARON SPRINGS										
7,081.0	47.72	259.78	6,905.0	-2,034.00	-1,129.6	251.9	-116.9	10.00	9.60	4.08
7,100.0	49.55	260.43	6,917.5	-2,046.55	-1,132.1	237.9	-102.7	10.00	9.66	3.45
NIOBRARA										
7,154.6	54.85	262.13	6,951.0	-2,080.00	-1,138.6	195.3	-59.6	10.00	9.69	3.12
7,200.0	59.26	263.39	6,975.7	-2,104.69	-1,143.4	157.5	-21.5	10.00	9.73	2.76
7,300.0	69.03	265.80	7,019.2	-2,148.25	-1,151.8	68.0	68.3	10.00	9.76	2.41
7,400.0	78.82	267.91	7,046.9	-2,175.91	-1,157.0	-27.8	164.1	10.00	9.79	2.11
7,500.0	88.63	269.88	7,057.8	-2,186.83	-1,158.9	-127.1	262.9	10.00	9.81	1.97
HZ LANDING PNT *NEW*: 1965ft FSL & 603ft FEL of Sec 9 - NIO B TARGET										
7,514.0	90.00	270.15	7,058.0	-2,187.00	-1,158.9	-141.1	276.8	10.00	9.81	1.94
7,600.0	90.00	270.15	7,058.0	-2,187.00	-1,158.7	-227.1	362.2	0.00	0.00	0.00
7,700.0	90.00	270.15	7,058.0	-2,187.00	-1,158.4	-327.1	461.5	0.00	0.00	0.00
7,800.0	90.00	270.15	7,058.0	-2,187.00	-1,158.2	-427.1	560.7	0.00	0.00	0.00
7,900.0	90.00	270.15	7,058.0	-2,187.00	-1,157.9	-527.1	660.0	0.00	0.00	0.00
8,000.0	90.00	270.15	7,058.0	-2,187.00	-1,157.6	-627.1	759.3	0.00	0.00	0.00
8,100.0	90.00	270.15	7,058.0	-2,187.00	-1,157.4	-727.1	858.5	0.00	0.00	0.00
8,200.0	90.00	270.15	7,058.0	-2,187.00	-1,157.1	-827.1	957.8	0.00	0.00	0.00
8,300.0	90.00	270.15	7,058.0	-2,187.00	-1,156.9	-927.1	1,057.1	0.00	0.00	0.00
8,400.0	90.00	270.15	7,058.0	-2,187.00	-1,156.6	-1,027.1	1,156.3	0.00	0.00	0.00
8,500.0	90.00	270.15	7,058.0	-2,187.00	-1,156.3	-1,127.1	1,255.6	0.00	0.00	0.00
8,600.0	90.00	270.15	7,058.0	-2,187.00	-1,156.1	-1,227.1	1,354.9	0.00	0.00	0.00
8,700.0	90.00	270.15	7,058.0	-2,187.00	-1,155.8	-1,327.1	1,454.2	0.00	0.00	0.00
8,800.0	90.00	270.15	7,058.0	-2,187.00	-1,155.6	-1,427.1	1,553.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4871.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4871.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 4	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	-2,187.00	-1,155.3	-1,527.1	1,652.7	0.00	0.00	0.00
9,000.0	90.00	270.15	7,058.0	-2,187.00	-1,155.0	-1,627.1	1,752.0	0.00	0.00	0.00
9,100.0	90.00	270.15	7,058.0	-2,187.00	-1,154.8	-1,727.1	1,851.2	0.00	0.00	0.00
9,200.0	90.00	270.15	7,058.0	-2,187.00	-1,154.5	-1,827.1	1,950.5	0.00	0.00	0.00
9,300.0	90.00	270.15	7,058.0	-2,187.00	-1,154.3	-1,927.1	2,049.8	0.00	0.00	0.00
9,400.0	90.00	270.15	7,058.0	-2,187.00	-1,154.0	-2,027.1	2,149.1	0.00	0.00	0.00
9,500.0	90.00	270.15	7,058.0	-2,187.00	-1,153.7	-2,127.1	2,248.3	0.00	0.00	0.00
9,600.0	90.00	270.15	7,058.0	-2,187.00	-1,153.5	-2,227.1	2,347.6	0.00	0.00	0.00
9,700.0	90.00	270.15	7,058.0	-2,187.00	-1,153.2	-2,327.1	2,446.9	0.00	0.00	0.00
9,800.0	90.00	270.15	7,058.0	-2,187.00	-1,153.0	-2,427.1	2,546.1	0.00	0.00	0.00
9,900.0	90.00	270.15	7,058.0	-2,187.00	-1,152.7	-2,527.1	2,645.4	0.00	0.00	0.00
10,000.0	90.00	270.15	7,058.0	-2,187.00	-1,152.4	-2,627.1	2,744.7	0.00	0.00	0.00
10,100.0	90.00	270.15	7,058.0	-2,187.00	-1,152.2	-2,727.1	2,844.0	0.00	0.00	0.00
10,200.0	90.00	270.15	7,058.0	-2,187.00	-1,151.9	-2,827.1	2,943.2	0.00	0.00	0.00
10,300.0	90.00	270.15	7,058.0	-2,187.00	-1,151.7	-2,927.1	3,042.5	0.00	0.00	0.00
10,400.0	90.00	270.15	7,058.0	-2,187.00	-1,151.4	-3,027.1	3,141.8	0.00	0.00	0.00
10,500.0	90.00	270.15	7,058.0	-2,187.00	-1,151.1	-3,127.1	3,241.0	0.00	0.00	0.00
10,600.0	90.00	270.15	7,058.0	-2,187.00	-1,150.9	-3,227.1	3,340.3	0.00	0.00	0.00
10,700.0	90.00	270.15	7,058.0	-2,187.00	-1,150.6	-3,327.1	3,439.6	0.00	0.00	0.00
10,800.0	90.00	270.15	7,058.0	-2,187.00	-1,150.4	-3,427.1	3,538.8	0.00	0.00	0.00
10,900.0	90.00	270.15	7,058.0	-2,187.00	-1,150.1	-3,527.1	3,638.1	0.00	0.00	0.00
11,000.0	90.00	270.15	7,058.0	-2,187.00	-1,149.8	-3,627.1	3,737.4	0.00	0.00	0.00
11,100.0	90.00	270.15	7,058.0	-2,187.00	-1,149.6	-3,727.1	3,836.7	0.00	0.00	0.00
11,200.0	90.00	270.15	7,058.0	-2,187.00	-1,149.3	-3,827.1	3,935.9	0.00	0.00	0.00
11,300.0	90.00	270.15	7,058.0	-2,187.00	-1,149.1	-3,927.1	4,035.2	0.00	0.00	0.00
11,400.0	90.00	270.15	7,058.0	-2,187.00	-1,148.8	-4,027.1	4,134.5	0.00	0.00	0.00
11,500.0	90.00	270.15	7,058.0	-2,187.00	-1,148.5	-4,127.1	4,233.7	0.00	0.00	0.00
11,600.0	90.00	270.15	7,058.0	-2,187.00	-1,148.3	-4,227.1	4,333.0	0.00	0.00	0.00
11,700.0	90.00	270.15	7,058.0	-2,187.00	-1,148.0	-4,327.1	4,432.3	0.00	0.00	0.00
11,800.0	90.00	270.15	7,058.0	-2,187.00	-1,147.8	-4,427.1	4,531.6	0.00	0.00	0.00
11,900.0	90.00	270.15	7,058.0	-2,187.00	-1,147.5	-4,527.1	4,630.8	0.00	0.00	0.00
12,000.0	90.00	270.15	7,058.0	-2,187.00	-1,147.2	-4,627.1	4,730.1	0.00	0.00	0.00
12,100.0	90.00	270.15	7,058.0	-2,187.00	-1,147.0	-4,727.1	4,829.4	0.00	0.00	0.00
12,200.0	90.00	270.15	7,058.0	-2,187.00	-1,146.7	-4,827.1	4,928.6	0.00	0.00	0.00
12,300.0	90.00	270.15	7,058.0	-2,187.00	-1,146.5	-4,927.1	5,027.9	0.00	0.00	0.00
12,400.0	90.00	270.15	7,058.0	-2,187.00	-1,146.2	-5,027.1	5,127.2	0.00	0.00	0.00
12,500.0	90.00	270.15	7,058.0	-2,187.00	-1,145.9	-5,127.1	5,226.5	0.00	0.00	0.00
12,600.0	90.00	270.15	7,058.0	-2,187.00	-1,145.7	-5,227.1	5,325.7	0.00	0.00	0.00
12,700.0	90.00	270.15	7,058.0	-2,187.00	-1,145.4	-5,327.1	5,425.0	0.00	0.00	0.00
12,800.0	90.00	270.15	7,058.0	-2,187.00	-1,145.2	-5,427.1	5,524.3	0.00	0.00	0.00
12,900.0	90.00	270.15	7,058.0	-2,187.00	-1,144.9	-5,527.1	5,623.5	0.00	0.00	0.00
13,000.0	90.00	270.15	7,058.0	-2,187.00	-1,144.6	-5,627.1	5,722.8	0.00	0.00	0.00
13,100.0	90.00	270.15	7,058.0	-2,187.00	-1,144.4	-5,727.1	5,822.1	0.00	0.00	0.00
13,200.0	90.00	270.15	7,058.0	-2,187.00	-1,144.1	-5,827.1	5,921.4	0.00	0.00	0.00
13,300.0	90.00	270.15	7,058.0	-2,187.00	-1,143.9	-5,927.1	6,020.6	0.00	0.00	0.00
13,400.0	90.00	270.15	7,058.0	-2,187.00	-1,143.6	-6,027.1	6,119.9	0.00	0.00	0.00
13,500.0	90.00	270.15	7,058.0	-2,187.00	-1,143.3	-6,127.1	6,219.2	0.00	0.00	0.00
13,600.0	90.00	270.15	7,058.0	-2,187.00	-1,143.1	-6,227.1	6,318.4	0.00	0.00	0.00
13,700.0	90.00	270.15	7,058.0	-2,187.00	-1,142.8	-6,327.1	6,417.7	0.00	0.00	0.00
13,800.0	90.00	270.15	7,058.0	-2,187.00	-1,142.6	-6,427.1	6,517.0	0.00	0.00	0.00
13,900.0	90.00	270.15	7,058.0	-2,187.00	-1,142.3	-6,527.1	6,616.2	0.00	0.00	0.00
14,000.0	90.00	270.15	7,058.0	-2,187.00	-1,142.0	-6,627.1	6,715.5	0.00	0.00	0.00
14,100.0	90.00	270.15	7,058.0	-2,187.00	-1,141.8	-6,727.1	6,814.8	0.00	0.00	0.00
14,200.0	90.00	270.15	7,058.0	-2,187.00	-1,141.5	-6,827.1	6,914.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4871.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4871.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 4	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	-2,187.00	-1,141.3	-6,927.1	7,013.3	0.00	0.00	0.00
14,400.0	90.00	270.15	7,058.0	-2,187.00	-1,141.0	-7,027.1	7,112.6	0.00	0.00	0.00
14,500.0	90.00	270.15	7,058.0	-2,187.00	-1,140.7	-7,127.1	7,211.9	0.00	0.00	0.00
14,600.0	90.00	270.15	7,058.0	-2,187.00	-1,140.5	-7,227.1	7,311.1	0.00	0.00	0.00
14,700.0	90.00	270.15	7,058.0	-2,187.00	-1,140.2	-7,327.1	7,410.4	0.00	0.00	0.00
14,800.0	90.00	270.15	7,058.0	-2,187.00	-1,140.0	-7,427.1	7,509.7	0.00	0.00	0.00
14,900.0	90.00	270.15	7,058.0	-2,187.00	-1,139.7	-7,527.1	7,609.0	0.00	0.00	0.00
15,000.0	90.00	270.15	7,058.0	-2,187.00	-1,139.4	-7,627.1	7,708.2	0.00	0.00	0.00
15,100.0	90.00	270.15	7,058.0	-2,187.00	-1,139.2	-7,727.1	7,807.5	0.00	0.00	0.00
15,200.0	90.00	270.15	7,058.0	-2,187.00	-1,138.9	-7,827.1	7,906.8	0.00	0.00	0.00
15,300.0	90.00	270.15	7,058.0	-2,187.00	-1,138.7	-7,927.1	8,006.0	0.00	0.00	0.00
15,400.0	90.00	270.15	7,058.0	-2,187.00	-1,138.4	-8,027.1	8,105.3	0.00	0.00	0.00
15,500.0	90.00	270.15	7,058.0	-2,187.00	-1,138.1	-8,127.1	8,204.6	0.00	0.00	0.00
15,600.0	90.00	270.15	7,058.0	-2,187.00	-1,137.9	-8,227.1	8,303.9	0.00	0.00	0.00
15,700.0	90.00	270.15	7,058.0	-2,187.00	-1,137.6	-8,327.1	8,403.1	0.00	0.00	0.00
15,800.0	90.00	270.15	7,058.0	-2,187.00	-1,137.4	-8,427.1	8,502.4	0.00	0.00	0.00
15,900.0	90.00	270.15	7,058.0	-2,187.00	-1,137.1	-8,527.1	8,601.7	0.00	0.00	0.00
16,000.0	90.00	270.15	7,058.0	-2,187.00	-1,136.8	-8,627.1	8,700.9	0.00	0.00	0.00
16,100.0	90.00	270.15	7,058.0	-2,187.00	-1,136.6	-8,727.1	8,800.2	0.00	0.00	0.00
16,200.0	90.00	270.15	7,058.0	-2,187.00	-1,136.3	-8,827.1	8,899.5	0.00	0.00	0.00
16,300.0	90.00	270.15	7,058.0	-2,187.00	-1,136.1	-8,927.1	8,998.8	0.00	0.00	0.00
16,400.0	90.00	270.15	7,058.0	-2,187.00	-1,135.8	-9,027.1	9,098.0	0.00	0.00	0.00
16,500.0	90.00	270.15	7,058.0	-2,187.00	-1,135.6	-9,127.1	9,197.3	0.00	0.00	0.00
16,600.0	90.00	270.15	7,058.0	-2,187.00	-1,135.3	-9,227.1	9,296.6	0.00	0.00	0.00
16,700.0	90.00	270.15	7,058.0	-2,187.00	-1,135.0	-9,327.1	9,395.8	0.00	0.00	0.00
16,800.0	90.00	270.15	7,058.0	-2,187.00	-1,134.8	-9,427.1	9,495.1	0.00	0.00	0.00
16,900.0	90.00	270.15	7,058.0	-2,187.00	-1,134.5	-9,527.1	9,594.4	0.00	0.00	0.00
BHL: 2035ft FSL & 460ft FWL of Sec 8										
16,923.5	90.00	270.15	7,058.0	-2,187.00	-1,134.4	-9,550.6	9,617.7	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,631.8	3,580.0	PARKMAN			
4,204.5	4,140.0	SUSSEX			
4,777.3	4,700.0	SHANNON			
7,081.0	6,905.0	SHARON SPRINGS			
7,154.6	6,951.0	NIOBRARA			
7,514.0	7,058.0	NIO B TARGET			

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 4
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4871.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4871.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 4	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 & 468ft FEL of Sec 9
900.0	900.0	0.0	0.0	START NUDGE (2°/100ft BUR)
1,505.4	1,500.9	-58.9	24.4	EOB TO 12.11° INC
6,567.7	6,450.6	-1,040.1	430.3	KOP (10°/100ft DGLG)
7,514.0	7,058.0	-1,158.9	-141.1	HZ LANDING PNT *NEW*: 1965ft FSL & 603ft FEL of Sec 9
16,923.5	7,058.0	-1,134.4	-9,550.6	BHL: 2035ft FSL & 460ft FWL of Sec 8