

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

WINDER SOUTH 1

ORIGINAL WELLBORE

15 June, 2016

Plan: PROPOSAL #1

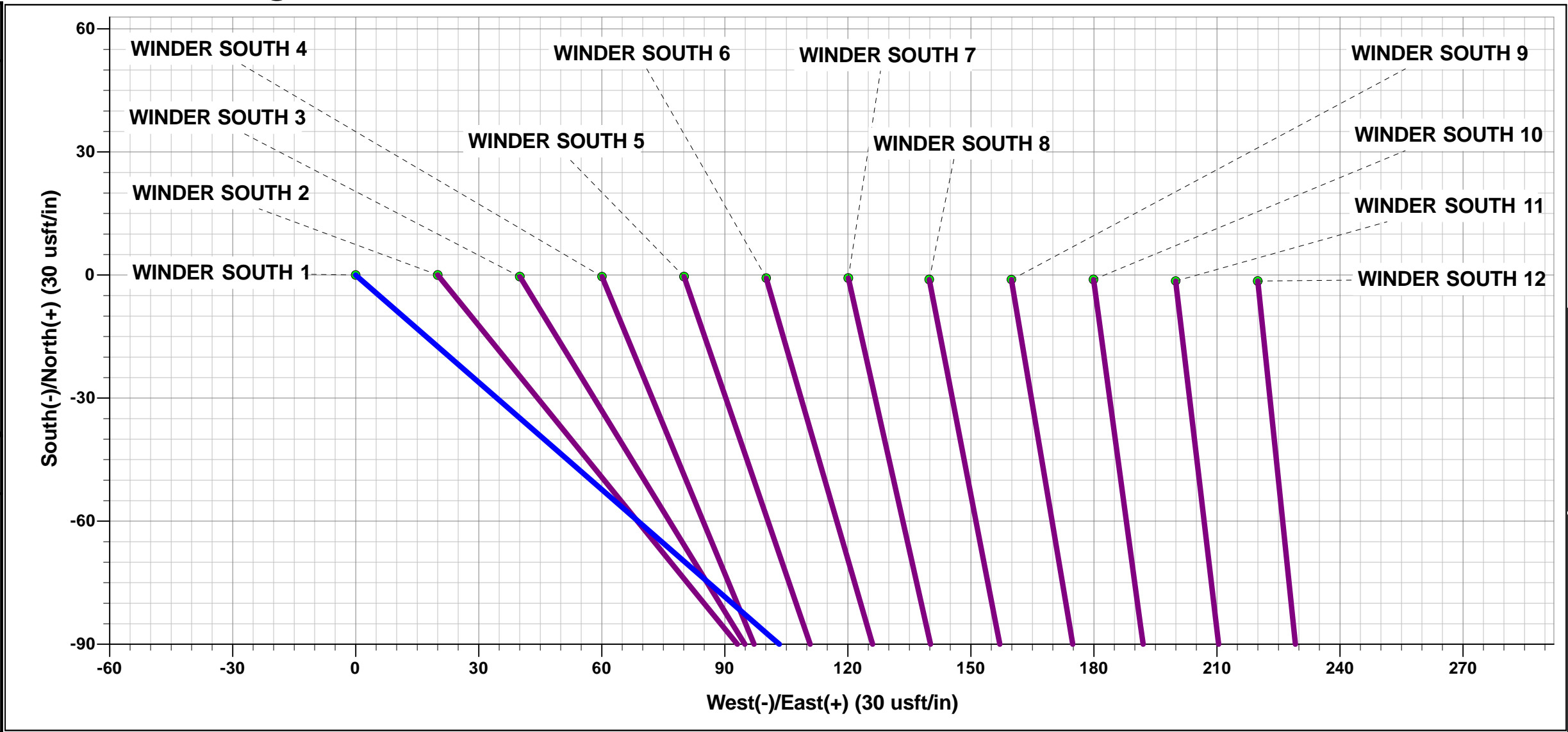




Project: WELD COUNTY, COLORADO (NAD 83)
Site: SE NE SEC. 9 T6N R67W 6th P.M.
Well: WINDER SOUTH 1
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #1

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 & 528ft FEL of Sec 9	
2480.0	2480.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE (2°/100ft BUR)	
2977.5	2980.0	10.00	131.06	-28.6	32.8	-31.3	43.5	EOB TO 10° INC	
6414.2	6469.7	10.00	131.06	-426.6	489.7	-467.8	649.5	KOP (10°/100ft DGLG)	
7058.0	7445.1	90.00	270.15	-499.5	-78.5	103.4	1244.8	HZ LANDING PNT *NEW*: 2625ft FSL & 603ft FEL of Sec 9	
7058.0	16856.9	90.00	270.15	-474.7	-9490.3	9502.1	10656.6	BHL: 2613ft FNL & 460ft FWL of Sec 8	

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
HZ LP *NEW* - WINDER SOUTH 1	7058.0	-499.5	-78.5	40.501304	-104.891053
BHL - WINDER SOUTH 1	7058.0	-474.7	-9490.3	40.501367	-104.924896



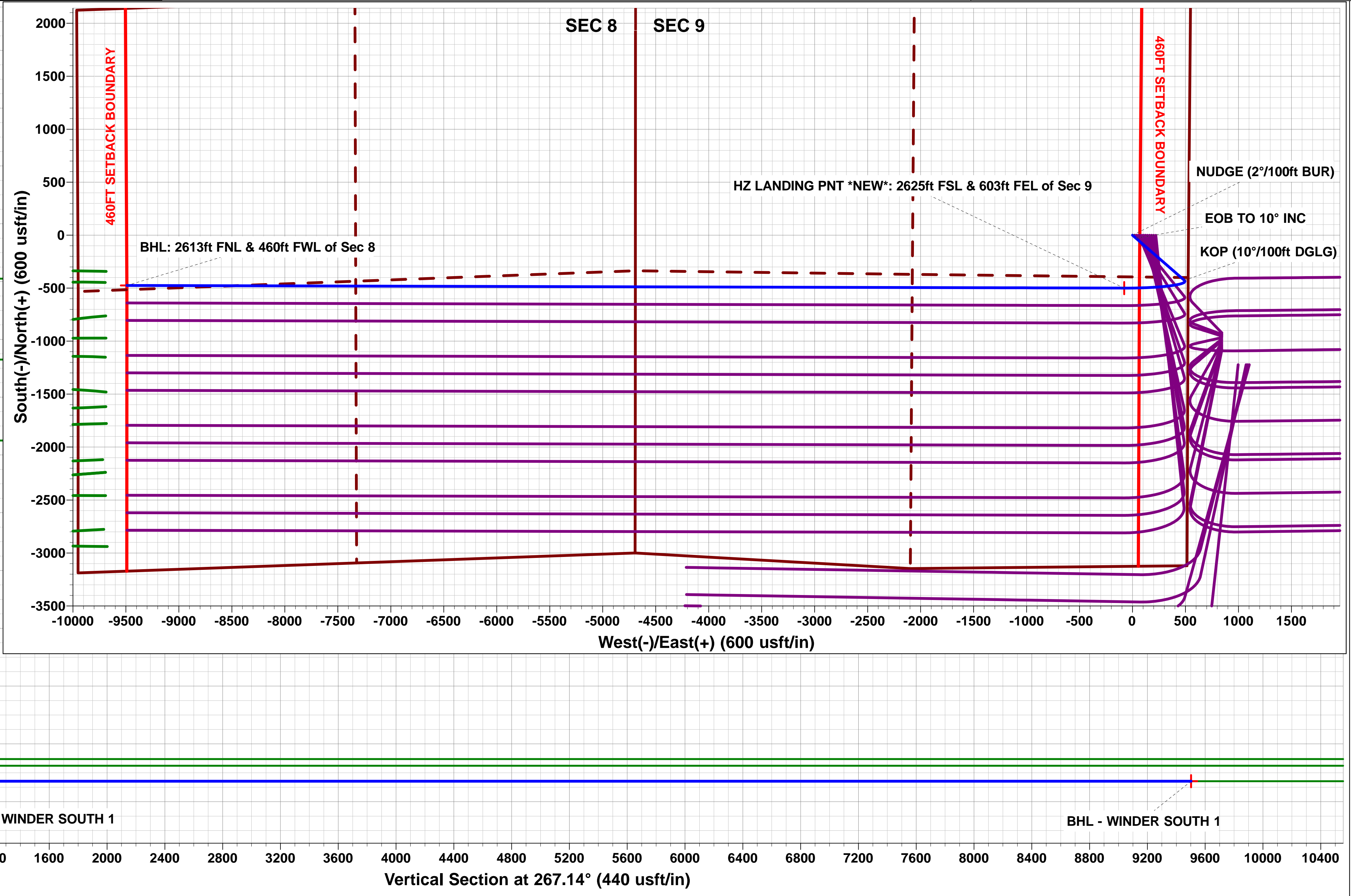
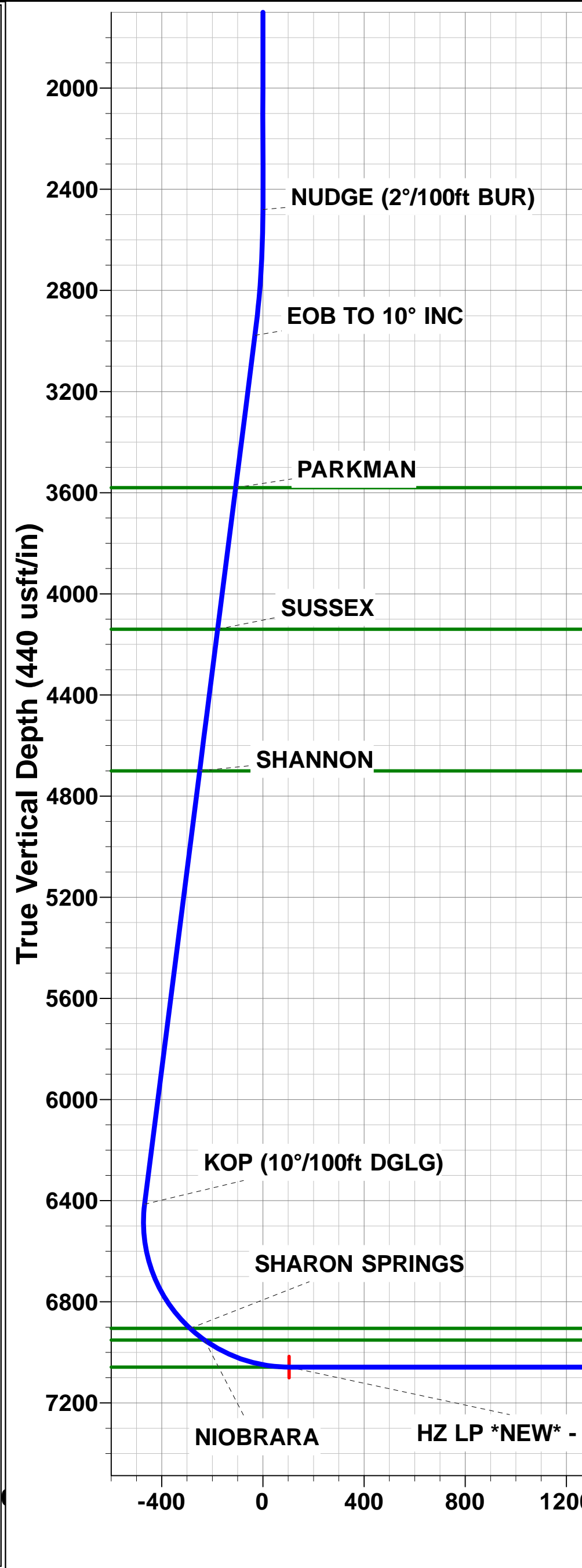
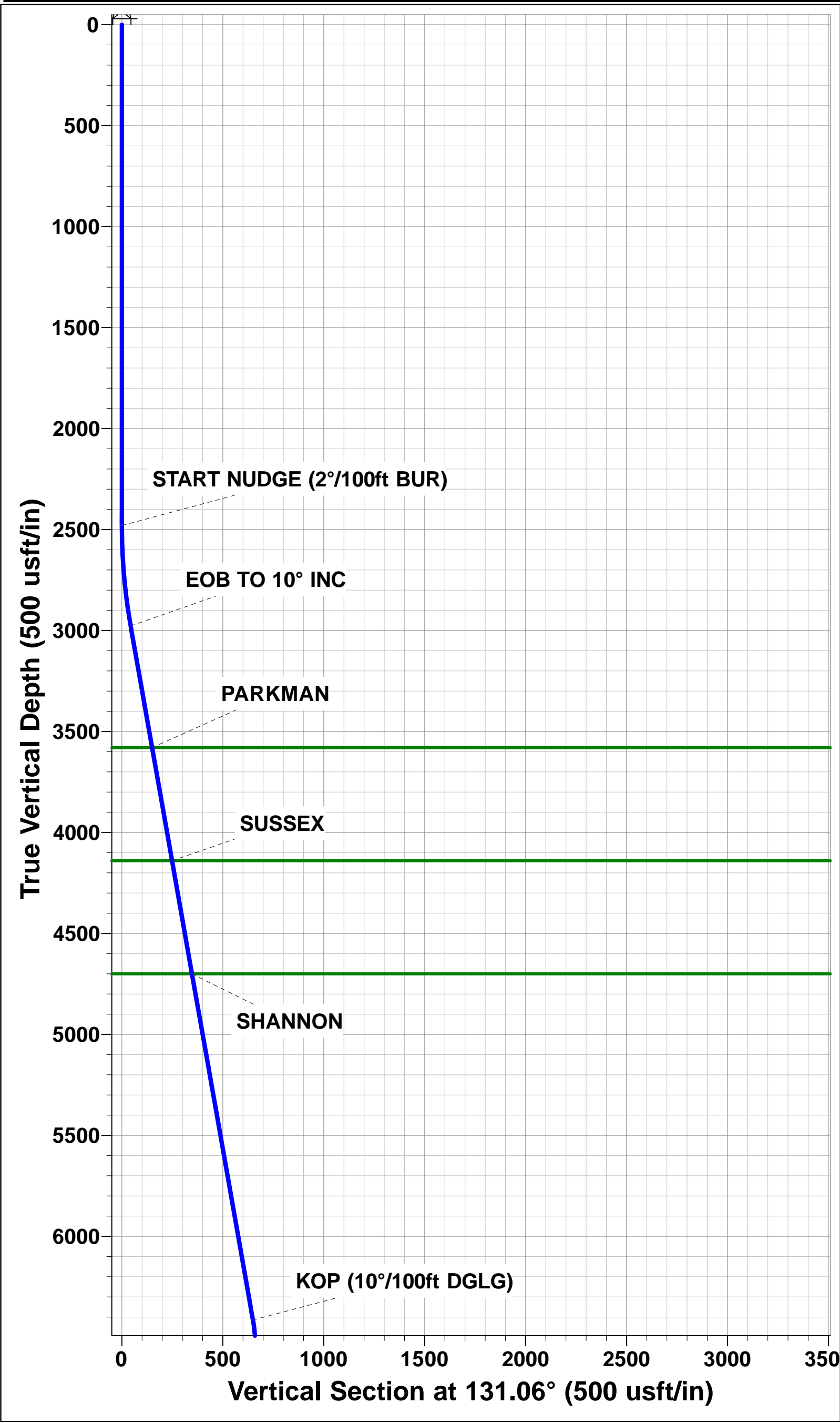
FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3580.0	3591.8	PARKMAN
4140.0	4160.5	SUSSEX
4700.0	4729.1	SHANNON
6905.0	7014.9	SHARON SPRINGS
6951.0	7088.0	NIOBRARA
7058.0	7445.1	NIO B TARGET

PROPOSED LOCAL COORDINATES	
SHL: 2306ft FNL & 528ft FEL of Sec 9	
LP *NEW*: 2625ft FSL & 603ft FEL of Sec 9	
BHL: 2613ft FNL & 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 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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
From:	Lat/Long	Easting:	3,169,418.27 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.502675
		Longitude:	-104.890771
		Grid Convergence:	0.39 °

Well	WINDER SOUTH 1		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	40.502675
		Longitude:	-104.890771
		Ground Level:	4,854.0 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 (°)
	-3.0	0.0	0.0	267.14

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	-4,870.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,480.0	0.00	0.00	2,480.0	-2,390.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,980.0	10.00	131.06	2,977.5	-1,892.5	-28.6	32.8	2.00	2.00	0.00	131.06	
6,469.7	10.00	131.06	6,414.1	1,544.1	-426.6	489.7	0.00	0.00	0.00	0.00	
7,445.1	90.00	270.15	7,058.0	2,188.0	-499.5	-78.5	10.00	8.20	14.26	138.65	HZ LP *NEW* - WIND
16,856.9	90.00	270.15	7,058.0	2,188.0	-474.7	-9,490.3	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 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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 & 528ft FEL of Sec 9										
0.0	0.00	0.00	0.0	4,870.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,770.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,670.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,570.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,470.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,370.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,270.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,170.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,070.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,970.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,870.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,770.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,670.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,570.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,470.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,370.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,270.00	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	3,170.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	3,070.00	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	2,970.00	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	2,870.00	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	2,770.00	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	2,670.00	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	2,570.00	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	2,470.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
2,480.0	0.00	0.00	2,480.0	2,390.00	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.40	131.06	2,500.0	2,370.00	0.0	0.1	-0.1	2.00	2.00	0.00
2,600.0	2.40	131.06	2,600.0	2,270.04	-1.7	1.9	-1.8	2.00	2.00	0.00
2,700.0	4.40	131.06	2,699.8	2,170.22	-5.5	6.4	-6.1	2.00	2.00	0.00
2,800.0	6.40	131.06	2,799.3	2,070.67	-11.7	13.5	-12.9	2.00	2.00	0.00
2,900.0	8.40	131.06	2,898.5	1,971.50	-20.2	23.2	-22.1	2.00	2.00	0.00
EOB TO 10° INC										
2,980.0	10.00	131.06	2,977.5	1,892.53	-28.6	32.8	-31.3	2.00	2.00	0.00
3,000.0	10.00	131.06	2,997.2	1,872.84	-30.9	35.4	-33.8	0.00	0.00	0.00
3,100.0	10.00	131.06	3,095.6	1,774.36	-42.3	48.5	-46.4	0.00	0.00	0.00
3,200.0	10.00	131.06	3,194.1	1,675.88	-53.7	61.6	-58.9	0.00	0.00	0.00
3,300.0	10.00	131.06	3,292.6	1,577.40	-65.1	74.7	-71.4	0.00	0.00	0.00
3,400.0	10.00	131.06	3,391.1	1,478.92	-76.5	87.8	-83.9	0.00	0.00	0.00
3,500.0	10.00	131.06	3,489.6	1,380.43	-87.9	100.9	-96.4	0.00	0.00	0.00
PARKMAN										
3,591.8	10.00	131.06	3,580.0	1,290.00	-98.4	112.9	-107.9	0.00	0.00	0.00
3,600.0	10.00	131.06	3,588.0	1,281.95	-99.3	114.0	-108.9	0.00	0.00	0.00
3,700.0	10.00	131.06	3,686.5	1,183.47	-110.7	127.1	-121.4	0.00	0.00	0.00
3,800.0	10.00	131.06	3,785.0	1,084.99	-122.1	140.2	-133.9	0.00	0.00	0.00
3,900.0	10.00	131.06	3,883.5	986.51	-133.5	153.3	-146.4	0.00	0.00	0.00
4,000.0	10.00	131.06	3,982.0	888.03	-144.9	166.4	-158.9	0.00	0.00	0.00
4,100.0	10.00	131.06	4,080.5	789.55	-156.3	179.4	-171.4	0.00	0.00	0.00
SUSSEX										
4,160.5	10.00	131.06	4,140.0	730.00	-163.2	187.4	-179.0	0.00	0.00	0.00
4,200.0	10.00	131.06	4,178.9	691.07	-167.8	192.5	-183.9	0.00	0.00	0.00
4,300.0	10.00	131.06	4,277.4	592.59	-179.2	205.6	-196.4	0.00	0.00	0.00
4,400.0	10.00	131.06	4,375.9	494.11	-190.6	218.7	-208.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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)
4,500.0	10.00	131.06	4,474.4	395.63	-202.0	231.8	-221.4	0.00	0.00	0.00
4,600.0	10.00	131.06	4,572.9	297.14	-213.4	244.9	-233.9	0.00	0.00	0.00
4,700.0	10.00	131.06	4,671.3	198.66	-224.8	258.0	-246.5	0.00	0.00	0.00
SHANNON										
4,729.1	10.00	131.06	4,700.0	170.00	-228.1	261.8	-250.1	0.00	0.00	0.00
4,800.0	10.00	131.06	4,769.8	100.18	-236.2	271.1	-259.0	0.00	0.00	0.00
4,900.0	10.00	131.06	4,868.3	1.70	-247.6	284.2	-271.5	0.00	0.00	0.00
5,000.0	10.00	131.06	4,966.8	-96.78	-259.0	297.3	-284.0	0.00	0.00	0.00
5,100.0	10.00	131.06	5,065.3	-195.26	-270.4	310.4	-296.5	0.00	0.00	0.00
5,200.0	10.00	131.06	5,163.7	-293.74	-281.8	323.5	-309.0	0.00	0.00	0.00
5,300.0	10.00	131.06	5,262.2	-392.22	-293.2	336.6	-321.5	0.00	0.00	0.00
5,400.0	10.00	131.06	5,360.7	-490.70	-304.6	349.7	-334.0	0.00	0.00	0.00
5,500.0	10.00	131.06	5,459.2	-589.18	-316.0	362.7	-346.5	0.00	0.00	0.00
5,600.0	10.00	131.06	5,557.7	-687.66	-327.4	375.8	-359.0	0.00	0.00	0.00
5,700.0	10.00	131.06	5,656.1	-786.14	-338.8	388.9	-371.5	0.00	0.00	0.00
5,800.0	10.00	131.06	5,754.6	-884.63	-350.3	402.0	-384.0	0.00	0.00	0.00
5,900.0	10.00	131.06	5,853.1	-983.11	-361.7	415.1	-396.5	0.00	0.00	0.00
6,000.0	10.00	131.06	5,951.6	-1,081.59	-373.1	428.2	-409.0	0.00	0.00	0.00
6,100.0	10.00	131.06	6,050.1	-1,180.07	-384.5	441.3	-421.5	0.00	0.00	0.00
6,200.0	10.00	131.06	6,148.5	-1,278.55	-395.9	454.4	-434.0	0.00	0.00	0.00
6,300.0	10.00	131.06	6,247.0	-1,377.03	-407.3	467.5	-446.6	0.00	0.00	0.00
6,400.0	10.00	131.06	6,345.5	-1,475.51	-418.7	480.6	-459.1	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
6,469.7	10.00	131.06	6,414.2	-1,544.15	-426.6	489.7	-467.8	0.00	0.00	0.00
6,500.0	7.98	145.65	6,444.1	-1,574.08	-430.1	492.9	-470.8	10.01	-6.68	48.13
6,600.0	8.57	220.12	6,543.3	-1,673.29	-441.6	492.0	-469.3	10.00	0.59	74.47
6,700.0	16.80	247.67	6,640.8	-1,770.85	-452.8	473.8	-450.6	10.00	8.23	27.55
6,800.0	26.27	256.62	6,733.8	-1,863.78	-463.4	438.8	-415.1	10.00	9.47	8.96
6,900.0	36.02	261.01	6,819.3	-1,949.28	-473.2	388.1	-364.0	10.00	9.74	4.39
7,000.0	45.86	263.72	6,894.7	-2,024.73	-481.7	323.2	-298.7	10.00	9.84	2.71
SHARON SPRINGS										
7,014.9	47.34	264.04	6,905.0	-2,035.00	-482.9	312.4	-287.9	10.00	9.87	2.17
NIOBRARA										
7,088.0	54.56	265.44	6,951.0	-2,081.00	-488.0	255.9	-231.2	10.00	9.89	1.91
7,100.0	55.75	265.64	6,957.8	-2,087.85	-488.8	246.1	-221.4	10.00	9.90	1.70
7,200.0	65.66	267.16	7,006.7	-2,136.72	-494.2	159.2	-134.3	10.00	9.91	1.52
7,300.0	75.59	268.45	7,039.8	-2,169.85	-497.8	65.0	-40.1	10.00	9.93	1.29
7,400.0	85.52	269.63	7,056.2	-2,186.24	-499.4	-33.5	58.4	10.00	9.93	1.18
HZ LANDING PNT *NEW*: 2625ft FSL & 603ft FEL of Sec 9 - NIO B TARGET										
7,445.1	90.00	270.15	7,058.0	-2,188.00	-499.5	-78.5	103.4	10.00	9.93	1.15
7,500.0	90.00	270.15	7,058.0	-2,188.00	-499.4	-133.4	158.2	0.00	0.00	0.00
7,600.0	90.00	270.15	7,058.0	-2,188.00	-499.1	-233.4	258.1	0.00	0.00	0.00
7,700.0	90.00	270.15	7,058.0	-2,188.00	-498.8	-333.4	357.9	0.00	0.00	0.00
7,800.0	90.00	270.15	7,058.0	-2,188.00	-498.6	-433.4	457.8	0.00	0.00	0.00
7,900.0	90.00	270.15	7,058.0	-2,188.00	-498.3	-533.4	557.6	0.00	0.00	0.00
8,000.0	90.00	270.15	7,058.0	-2,188.00	-498.0	-633.4	657.5	0.00	0.00	0.00
8,100.0	90.00	270.15	7,058.0	-2,188.00	-497.8	-733.4	757.4	0.00	0.00	0.00
8,200.0	90.00	270.15	7,058.0	-2,188.00	-497.5	-833.4	857.2	0.00	0.00	0.00
8,300.0	90.00	270.15	7,058.0	-2,188.00	-497.3	-933.4	957.1	0.00	0.00	0.00
8,400.0	90.00	270.15	7,058.0	-2,188.00	-497.0	-1,033.4	1,056.9	0.00	0.00	0.00
8,500.0	90.00	270.15	7,058.0	-2,188.00	-496.7	-1,133.4	1,156.8	0.00	0.00	0.00
8,600.0	90.00	270.15	7,058.0	-2,188.00	-496.5	-1,233.4	1,256.7	0.00	0.00	0.00
8,700.0	90.00	270.15	7,058.0	-2,188.00	-496.2	-1,333.4	1,356.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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)
8,800.0	90.00	270.15	7,058.0	-2,188.00	-495.9	-1,433.4	1,456.4	0.00	0.00	0.00
8,900.0	90.00	270.15	7,058.0	-2,188.00	-495.7	-1,533.4	1,556.3	0.00	0.00	0.00
9,000.0	90.00	270.15	7,058.0	-2,188.00	-495.4	-1,633.4	1,656.1	0.00	0.00	0.00
9,100.0	90.00	270.15	7,058.0	-2,188.00	-495.1	-1,733.4	1,756.0	0.00	0.00	0.00
9,200.0	90.00	270.15	7,058.0	-2,188.00	-494.9	-1,833.4	1,855.8	0.00	0.00	0.00
9,300.0	90.00	270.15	7,058.0	-2,188.00	-494.6	-1,933.4	1,955.7	0.00	0.00	0.00
9,400.0	90.00	270.15	7,058.0	-2,188.00	-494.4	-2,033.4	2,055.6	0.00	0.00	0.00
9,500.0	90.00	270.15	7,058.0	-2,188.00	-494.1	-2,133.4	2,155.4	0.00	0.00	0.00
9,600.0	90.00	270.15	7,058.0	-2,188.00	-493.8	-2,233.4	2,255.3	0.00	0.00	0.00
9,700.0	90.00	270.15	7,058.0	-2,188.00	-493.6	-2,333.4	2,355.1	0.00	0.00	0.00
9,800.0	90.00	270.15	7,058.0	-2,188.00	-493.3	-2,433.4	2,455.0	0.00	0.00	0.00
9,900.0	90.00	270.15	7,058.0	-2,188.00	-493.0	-2,533.4	2,554.9	0.00	0.00	0.00
10,000.0	90.00	270.15	7,058.0	-2,188.00	-492.8	-2,633.4	2,654.7	0.00	0.00	0.00
10,100.0	90.00	270.15	7,058.0	-2,188.00	-492.5	-2,733.4	2,754.6	0.00	0.00	0.00
10,200.0	90.00	270.15	7,058.0	-2,188.00	-492.3	-2,833.4	2,854.5	0.00	0.00	0.00
10,300.0	90.00	270.15	7,058.0	-2,188.00	-492.0	-2,933.4	2,954.3	0.00	0.00	0.00
10,400.0	90.00	270.15	7,058.0	-2,188.00	-491.7	-3,033.4	3,054.2	0.00	0.00	0.00
10,500.0	90.00	270.15	7,058.0	-2,188.00	-491.5	-3,133.4	3,154.0	0.00	0.00	0.00
10,600.0	90.00	270.15	7,058.0	-2,188.00	-491.2	-3,233.4	3,253.9	0.00	0.00	0.00
10,700.0	90.00	270.15	7,058.0	-2,188.00	-490.9	-3,333.4	3,353.8	0.00	0.00	0.00
10,800.0	90.00	270.15	7,058.0	-2,188.00	-490.7	-3,433.4	3,453.6	0.00	0.00	0.00
10,900.0	90.00	270.15	7,058.0	-2,188.00	-490.4	-3,533.4	3,553.5	0.00	0.00	0.00
11,000.0	90.00	270.15	7,058.0	-2,188.00	-490.1	-3,633.4	3,653.4	0.00	0.00	0.00
11,100.0	90.00	270.15	7,058.0	-2,188.00	-489.9	-3,733.4	3,753.2	0.00	0.00	0.00
11,200.0	90.00	270.15	7,058.0	-2,188.00	-489.6	-3,833.4	3,853.1	0.00	0.00	0.00
11,300.0	90.00	270.15	7,058.0	-2,188.00	-489.4	-3,933.4	3,952.9	0.00	0.00	0.00
11,400.0	90.00	270.15	7,058.0	-2,188.00	-489.1	-4,033.4	4,052.8	0.00	0.00	0.00
11,500.0	90.00	270.15	7,058.0	-2,188.00	-488.8	-4,133.4	4,152.7	0.00	0.00	0.00
11,600.0	90.00	270.15	7,058.0	-2,188.00	-488.6	-4,233.4	4,252.5	0.00	0.00	0.00
11,700.0	90.00	270.15	7,058.0	-2,188.00	-488.3	-4,333.4	4,352.4	0.00	0.00	0.00
11,800.0	90.00	270.15	7,058.0	-2,188.00	-488.0	-4,433.4	4,452.2	0.00	0.00	0.00
11,900.0	90.00	270.15	7,058.0	-2,188.00	-487.8	-4,533.4	4,552.1	0.00	0.00	0.00
12,000.0	90.00	270.15	7,058.0	-2,188.00	-487.5	-4,633.4	4,652.0	0.00	0.00	0.00
12,100.0	90.00	270.15	7,058.0	-2,188.00	-487.3	-4,733.4	4,751.8	0.00	0.00	0.00
12,200.0	90.00	270.15	7,058.0	-2,188.00	-487.0	-4,833.4	4,851.7	0.00	0.00	0.00
12,300.0	90.00	270.15	7,058.0	-2,188.00	-486.7	-4,933.4	4,951.6	0.00	0.00	0.00
12,400.0	90.00	270.15	7,058.0	-2,188.00	-486.5	-5,033.4	5,051.4	0.00	0.00	0.00
12,500.0	90.00	270.15	7,058.0	-2,188.00	-486.2	-5,133.4	5,151.3	0.00	0.00	0.00
12,600.0	90.00	270.15	7,058.0	-2,188.00	-485.9	-5,233.4	5,251.1	0.00	0.00	0.00
12,700.0	90.00	270.15	7,058.0	-2,188.00	-485.7	-5,333.4	5,351.0	0.00	0.00	0.00
12,800.0	90.00	270.15	7,058.0	-2,188.00	-485.4	-5,433.4	5,450.9	0.00	0.00	0.00
12,900.0	90.00	270.15	7,058.0	-2,188.00	-485.1	-5,533.4	5,550.7	0.00	0.00	0.00
13,000.0	90.00	270.15	7,058.0	-2,188.00	-484.9	-5,633.4	5,650.6	0.00	0.00	0.00
13,100.0	90.00	270.15	7,058.0	-2,188.00	-484.6	-5,733.4	5,750.4	0.00	0.00	0.00
13,200.0	90.00	270.15	7,058.0	-2,188.00	-484.4	-5,833.4	5,850.3	0.00	0.00	0.00
13,300.0	90.00	270.15	7,058.0	-2,188.00	-484.1	-5,933.4	5,950.2	0.00	0.00	0.00
13,400.0	90.00	270.15	7,058.0	-2,188.00	-483.8	-6,033.4	6,050.0	0.00	0.00	0.00
13,500.0	90.00	270.15	7,058.0	-2,188.00	-483.6	-6,133.4	6,149.9	0.00	0.00	0.00
13,600.0	90.00	270.15	7,058.0	-2,188.00	-483.3	-6,233.4	6,249.8	0.00	0.00	0.00
13,700.0	90.00	270.15	7,058.0	-2,188.00	-483.0	-6,333.4	6,349.6	0.00	0.00	0.00
13,800.0	90.00	270.15	7,058.0	-2,188.00	-482.8	-6,433.4	6,449.5	0.00	0.00	0.00
13,900.0	90.00	270.15	7,058.0	-2,188.00	-482.5	-6,533.4	6,549.3	0.00	0.00	0.00
14,000.0	90.00	270.15	7,058.0	-2,188.00	-482.3	-6,633.4	6,649.2	0.00	0.00	0.00
14,100.0	90.00	270.15	7,058.0	-2,188.00	-482.0	-6,733.4	6,749.1	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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)
14,200.0	90.00	270.15	7,058.0	-2,188.00	-481.7	-6,833.4	6,848.9	0.00	0.00	0.00
14,300.0	90.00	270.15	7,058.0	-2,188.00	-481.5	-6,933.4	6,948.8	0.00	0.00	0.00
14,400.0	90.00	270.15	7,058.0	-2,188.00	-481.2	-7,033.4	7,048.6	0.00	0.00	0.00
14,500.0	90.00	270.15	7,058.0	-2,188.00	-480.9	-7,133.4	7,148.5	0.00	0.00	0.00
14,600.0	90.00	270.15	7,058.0	-2,188.00	-480.7	-7,233.4	7,248.4	0.00	0.00	0.00
14,700.0	90.00	270.15	7,058.0	-2,188.00	-480.4	-7,333.4	7,348.2	0.00	0.00	0.00
14,800.0	90.00	270.15	7,058.0	-2,188.00	-480.1	-7,433.4	7,448.1	0.00	0.00	0.00
14,900.0	90.00	270.15	7,058.0	-2,188.00	-479.9	-7,533.4	7,548.0	0.00	0.00	0.00
15,000.0	90.00	270.15	7,058.0	-2,188.00	-479.6	-7,633.4	7,647.8	0.00	0.00	0.00
15,100.0	90.00	270.15	7,058.0	-2,188.00	-479.4	-7,733.4	7,747.7	0.00	0.00	0.00
15,200.0	90.00	270.15	7,058.0	-2,188.00	-479.1	-7,833.4	7,847.5	0.00	0.00	0.00
15,300.0	90.00	270.15	7,058.0	-2,188.00	-478.8	-7,933.4	7,947.4	0.00	0.00	0.00
15,400.0	90.00	270.15	7,058.0	-2,188.00	-478.6	-8,033.4	8,047.3	0.00	0.00	0.00
15,500.0	90.00	270.15	7,058.0	-2,188.00	-478.3	-8,133.4	8,147.1	0.00	0.00	0.00
15,600.0	90.00	270.15	7,058.0	-2,188.00	-478.0	-8,233.4	8,247.0	0.00	0.00	0.00
15,700.0	90.00	270.15	7,058.0	-2,188.00	-477.8	-8,333.4	8,346.8	0.00	0.00	0.00
15,800.0	90.00	270.15	7,058.0	-2,188.00	-477.5	-8,433.4	8,446.7	0.00	0.00	0.00
15,900.0	90.00	270.15	7,058.0	-2,188.00	-477.3	-8,533.4	8,546.6	0.00	0.00	0.00
16,000.0	90.00	270.15	7,058.0	-2,188.00	-477.0	-8,633.4	8,646.4	0.00	0.00	0.00
16,100.0	90.00	270.15	7,058.0	-2,188.00	-476.7	-8,733.4	8,746.3	0.00	0.00	0.00
16,200.0	90.00	270.15	7,058.0	-2,188.00	-476.5	-8,833.4	8,846.2	0.00	0.00	0.00
16,300.0	90.00	270.15	7,058.0	-2,188.00	-476.2	-8,933.4	8,946.0	0.00	0.00	0.00
16,400.0	90.00	270.15	7,058.0	-2,188.00	-475.9	-9,033.4	9,045.9	0.00	0.00	0.00
16,500.0	90.00	270.15	7,058.0	-2,188.00	-475.7	-9,133.4	9,145.7	0.00	0.00	0.00
16,600.0	90.00	270.15	7,058.0	-2,188.00	-475.4	-9,233.4	9,245.6	0.00	0.00	0.00
16,700.0	90.00	270.15	7,058.0	-2,188.00	-475.1	-9,333.4	9,345.5	0.00	0.00	0.00
16,800.0	90.00	270.15	7,058.0	-2,188.00	-474.9	-9,433.4	9,445.3	0.00	0.00	0.00
BHL: 2613ft FNL & 460ft FWL of Sec 8										
16,856.9	90.00	270.15	7,058.0	-2,188.00	-474.7	-9,490.3	9,502.1	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,591.8	3,580.0	PARKMAN				
4,160.5	4,140.0	SUSSEX				
4,729.1	4,700.0	SHANNON				
7,014.9	6,905.0	SHARON SPRINGS				
7,088.0	6,951.0	NIOBRARA				
7,445.1	7,058.0	NIO B TARGET				

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 1
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4870.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4870.0usft
Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 1	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 & 528ft FEL of Sec 9
2,480.0	2,480.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,980.0	2,977.5	-28.6	32.8	EOB TO 10° INC
6,469.7	6,414.2	-426.6	489.7	KOP (10°/100ft DGLG)
7,445.1	7,058.0	-499.5	-78.5	HZ LANDING PNT *NEW*: 2625ft FSL & 603ft FEL of Sec 9
16,856.9	7,058.0	-474.7	-9,490.3	BHL: 2613ft FNL & 460ft FWL of Sec 8