

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

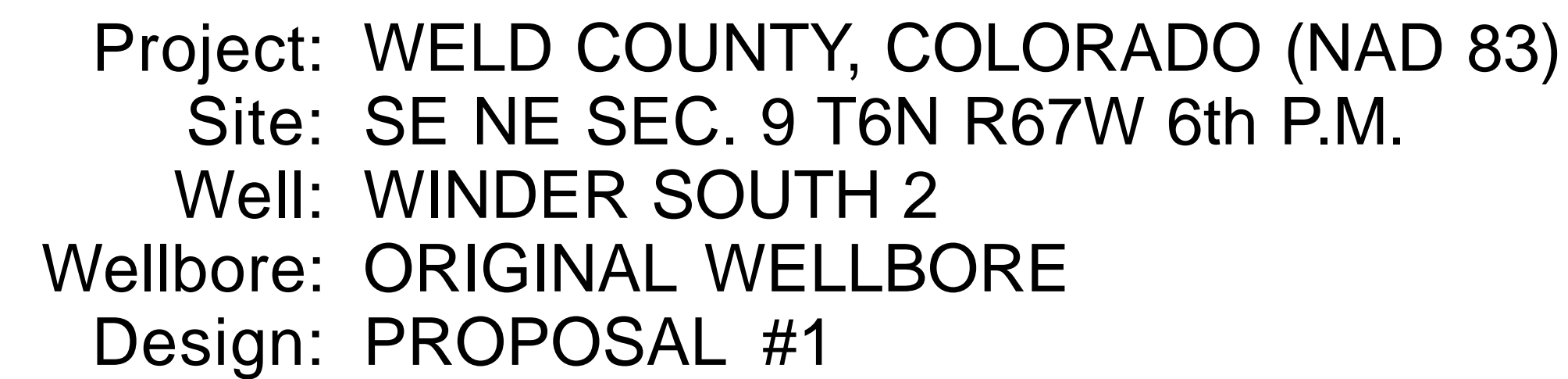
WINDER SOUTH 2

ORIGINAL WELLBORE

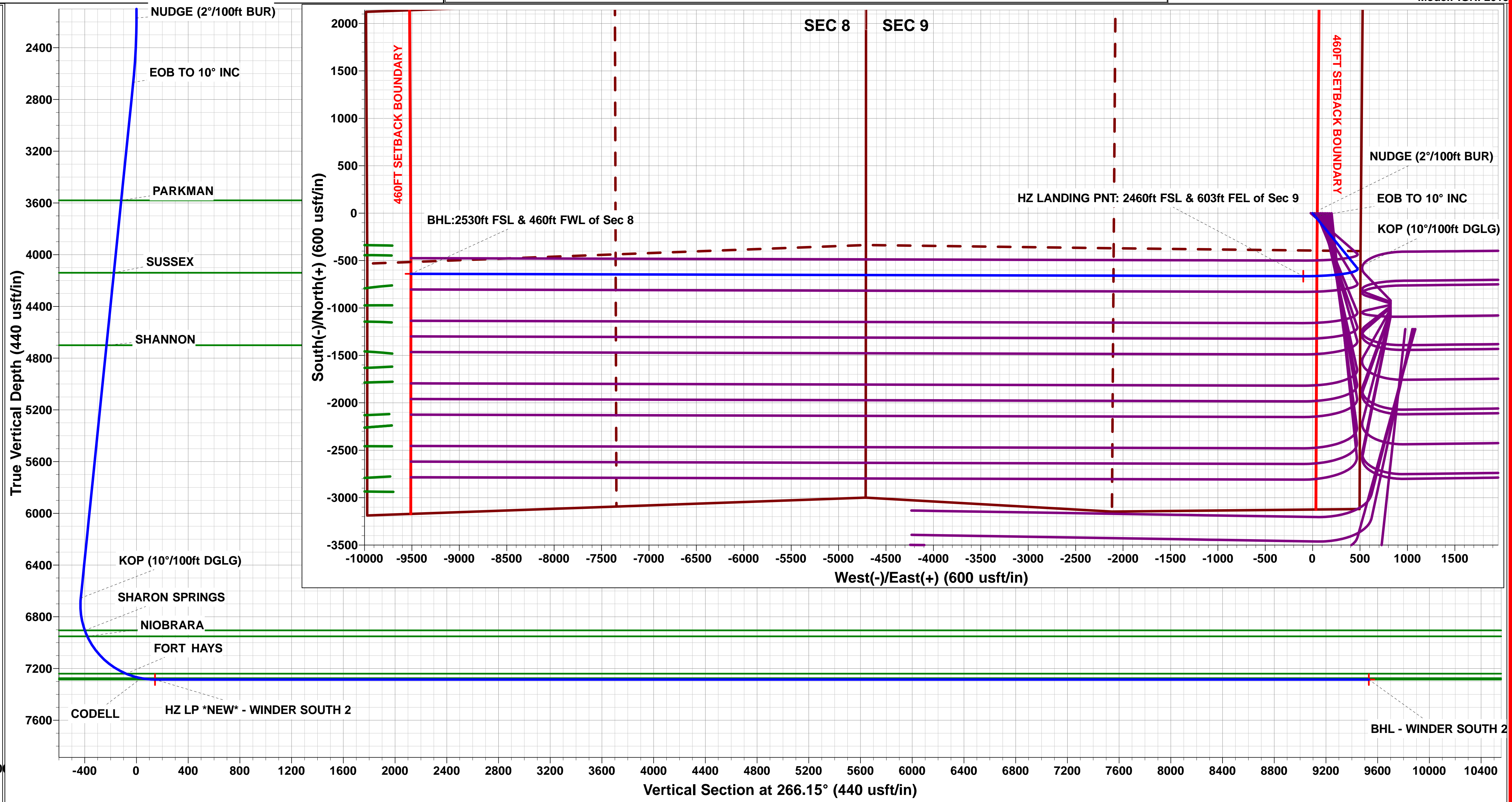
15 June, 2016

Plan: PROPOSAL #1





The graph displays the well path in a vertical section at 140.94°. The vertical axis represents True Vertical Depth (500 usft/in) from 0 to 6500, and the horizontal axis represents the Vertical Section at 140.94° (500 usft/in) from 0 to 3500. The blue curve shows the well path, which starts at the surface and ends at KOP (10°/100ft DGLG). Key points on the curve are labeled: START NUDGE (2°/100ft BUR), EOB TO 10° INC, PARKMAN, SUSSEX, SHANNON, and KOP (10°/100ft DGLG). Horizontal green lines indicate depths of 3600, 4100, and 4700 usft/in.



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 2
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 2	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 2					
Well Position	+N-S	0.0 usft	Northing:	1,426,547.13 usft	Latitude:	40.502675
	+E-W	20.0 usft	Easting:	3,169,438.29 usft	Longitude:	-104.890699
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	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 (°)
	0.0	0.0	0.0	266.15

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	
2,170.0	0.00	0.00	2,170.0	-2,700.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,670.1	10.00	140.94	2,667.6	-2,202.4	-33.8	27.4	2.00	2.00	0.00	140.94	
6,719.1	10.00	140.94	6,655.0	1,785.0	-579.9	470.6	0.00	0.00	0.00	0.00	
7,682.1	90.00	270.15	7,285.0	2,415.0	-664.5	-99.1	10.00	8.31	13.42	128.78	HZ LP *NEW* - WIND
17,093.1	90.00	270.15	7,285.0	2,415.0	-639.7	-9,510.1	0.00	0.00	0.00	0.00	BHL - WINDER SO

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Site:	SE NE SEC. 9 T6N R67W 6th P.M.	North Reference:	True
Well:	WINDER SOUTH 2	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 & 508ft 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
START NUDGE (2°/100ft BUR)										
2,170.0	0.00	0.00	2,170.0	2,700.00	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.60	140.94	2,200.0	2,670.00	-0.1	0.1	-0.1	2.00	2.00	0.00
2,300.0	2.60	140.94	2,300.0	2,570.04	-2.3	1.9	-1.7	2.00	2.00	0.00
2,400.0	4.60	140.94	2,399.8	2,470.25	-7.2	5.8	-5.3	2.00	2.00	0.00
2,500.0	6.60	140.94	2,499.3	2,370.73	-14.7	12.0	-10.9	2.00	2.00	0.00
2,600.0	8.60	140.94	2,598.4	2,271.61	-25.0	20.3	-18.6	2.00	2.00	0.00
EOB TO 10° INC										
2,670.1	10.00	140.94	2,667.6	2,202.44	-33.8	27.4	-25.1	2.00	2.00	0.00
2,700.0	10.00	140.94	2,697.0	2,172.99	-37.8	30.7	-28.1	0.00	0.00	0.00
2,800.0	10.00	140.94	2,795.5	2,074.51	-51.3	41.7	-38.1	0.00	0.00	0.00
2,900.0	10.00	140.94	2,894.0	1,976.03	-64.8	52.6	-48.1	0.00	0.00	0.00
3,000.0	10.00	140.94	2,992.4	1,877.55	-78.3	63.5	-58.1	0.00	0.00	0.00
3,100.0	10.00	140.94	3,090.9	1,779.07	-91.8	74.5	-68.2	0.00	0.00	0.00
3,200.0	10.00	140.94	3,189.4	1,680.59	-105.3	85.4	-78.2	0.00	0.00	0.00
3,300.0	10.00	140.94	3,287.9	1,582.11	-118.8	96.4	-88.2	0.00	0.00	0.00
3,400.0	10.00	140.94	3,386.4	1,483.63	-132.3	107.3	-98.2	0.00	0.00	0.00
3,500.0	10.00	140.94	3,484.8	1,385.15	-145.7	118.3	-108.2	0.00	0.00	0.00
PARKMAN										
3,596.6	10.00	140.94	3,580.0	1,290.00	-158.8	128.8	-117.9	0.00	0.00	0.00
3,600.0	10.00	140.94	3,583.3	1,286.67	-159.2	129.2	-118.2	0.00	0.00	0.00
3,700.0	10.00	140.94	3,681.8	1,188.19	-172.7	140.2	-128.3	0.00	0.00	0.00
3,800.0	10.00	140.94	3,780.3	1,089.71	-186.2	151.1	-138.3	0.00	0.00	0.00
3,900.0	10.00	140.94	3,878.8	991.23	-199.7	162.1	-148.3	0.00	0.00	0.00
4,000.0	10.00	140.94	3,977.2	892.75	-213.2	173.0	-158.3	0.00	0.00	0.00
4,100.0	10.00	140.94	4,075.7	794.27	-226.7	183.9	-168.3	0.00	0.00	0.00
SUSSEX										
4,165.3	10.00	140.94	4,140.0	730.00	-235.5	191.1	-174.9	0.00	0.00	0.00
4,200.0	10.00	140.94	4,174.2	695.79	-240.1	194.9	-178.3	0.00	0.00	0.00
4,300.0	10.00	140.94	4,272.7	597.31	-253.6	205.8	-188.4	0.00	0.00	0.00
4,400.0	10.00	140.94	4,371.2	498.83	-267.1	216.8	-198.4	0.00	0.00	0.00

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4,500.0	10.00	140.94	4,469.6	400.35	-280.6	227.7	-208.4	0.00	0.00	0.00
4,600.0	10.00	140.94	4,568.1	301.87	-294.1	238.7	-218.4	0.00	0.00	0.00
4,700.0	10.00	140.94	4,666.6	203.39	-307.6	249.6	-228.4	0.00	0.00	0.00
SHANNON										
4,733.9	10.00	140.94	4,700.0	170.00	-312.2	253.3	-231.8	0.00	0.00	0.00
4,800.0	10.00	140.94	4,765.1	104.91	-321.1	260.6	-238.4	0.00	0.00	0.00
4,900.0	10.00	140.94	4,863.6	6.43	-334.6	271.5	-248.4	0.00	0.00	0.00
5,000.0	10.00	140.94	4,962.0	-92.05	-348.0	282.5	-258.5	0.00	0.00	0.00
5,100.0	10.00	140.94	5,060.5	-190.53	-361.5	293.4	-268.5	0.00	0.00	0.00
5,200.0	10.00	140.94	5,159.0	-289.01	-375.0	304.3	-278.5	0.00	0.00	0.00
5,300.0	10.00	140.94	5,257.5	-387.49	-388.5	315.3	-288.5	0.00	0.00	0.00
5,400.0	10.00	140.94	5,356.0	-485.97	-402.0	326.2	-298.5	0.00	0.00	0.00
5,500.0	10.00	140.94	5,454.4	-584.45	-415.5	337.2	-308.5	0.00	0.00	0.00
5,600.0	10.00	140.94	5,552.9	-682.93	-429.0	348.1	-318.6	0.00	0.00	0.00
5,700.0	10.00	140.94	5,651.4	-781.41	-442.5	359.1	-328.6	0.00	0.00	0.00
5,800.0	10.00	140.94	5,749.9	-879.89	-455.9	370.0	-338.6	0.00	0.00	0.00
5,900.0	10.00	140.94	5,848.4	-978.37	-469.4	381.0	-348.6	0.00	0.00	0.00
6,000.0	10.00	140.94	5,946.8	-1,076.85	-482.9	391.9	-358.6	0.00	0.00	0.00
6,100.0	10.00	140.94	6,045.3	-1,175.33	-496.4	402.9	-368.6	0.00	0.00	0.00
6,200.0	10.00	140.94	6,143.8	-1,273.81	-509.9	413.8	-378.6	0.00	0.00	0.00
6,300.0	10.00	140.94	6,242.3	-1,372.29	-523.4	424.7	-388.7	0.00	0.00	0.00
6,400.0	10.00	140.94	6,340.8	-1,470.77	-536.9	435.7	-398.7	0.00	0.00	0.00
6,500.0	10.00	140.94	6,439.2	-1,569.25	-550.4	446.6	-408.7	0.00	0.00	0.00
6,600.0	10.00	140.94	6,537.7	-1,667.73	-563.8	457.6	-418.7	0.00	0.00	0.00
6,700.0	10.00	140.94	6,636.2	-1,766.21	-577.3	468.5	-428.7	0.00	0.00	0.00
KOP (10°/100ft DGLG)										
6,719.1	10.00	140.94	6,655.0	-1,785.01	-579.9	470.6	-430.6	0.00	0.00	0.00
6,800.0	7.98	193.14	6,735.0	-1,865.04	-590.9	473.8	-433.1	10.00	-2.50	64.53
6,900.0	14.10	237.18	6,833.3	-1,963.30	-604.2	461.9	-420.3	10.00	6.11	44.04
SHARON SPRINGS										
6,975.2	20.76	249.02	6,905.0	-2,035.00	-614.0	441.8	-399.6	10.00	8.87	15.75
7,000.0	23.07	251.44	6,928.0	-2,058.04	-617.1	433.1	-390.7	10.00	9.32	9.75
NIOBRARA										
7,025.2	25.45	253.46	6,951.0	-2,081.00	-620.2	423.2	-380.6	10.00	9.44	8.04
7,100.0	32.63	257.83	7,016.4	-2,146.37	-629.1	388.0	-344.9	10.00	9.60	5.83
7,200.0	42.38	261.54	7,095.6	-2,225.62	-639.7	328.2	-284.5	10.00	9.75	3.71
7,300.0	52.20	264.07	7,163.4	-2,293.37	-648.8	255.4	-211.2	10.00	9.83	2.53
7,400.0	62.07	266.00	7,217.6	-2,347.57	-656.0	171.8	-127.4	10.00	9.87	1.93
FORT HAYS										
7,452.4	67.26	266.87	7,240.0	-2,370.00	-658.9	124.5	-80.0	10.00	9.89	1.66
7,500.0	71.96	267.60	7,256.6	-2,386.57	-661.1	80.0	-35.4	10.00	9.90	1.54
CODELL										
7,574.4	79.33	268.68	7,275.0	-2,405.00	-663.4	8.0	36.6	10.00	9.90	1.45
7,600.0	81.87	269.03	7,279.2	-2,409.18	-663.9	-17.3	61.8	10.00	9.91	1.39
HZ LANDING PNT: 2460ft FSL & 603ft FEL of Sec 9 - CODELL TGT										
7,682.1	90.00	270.15	7,285.0	-2,415.00	-664.5	-99.1	143.5	10.00	9.91	1.36
7,700.0	90.00	270.15	7,285.0	-2,415.00	-664.5	-117.0	161.3	0.00	0.00	0.00
7,800.0	90.00	270.15	7,285.0	-2,415.00	-664.2	-217.0	261.1	0.00	0.00	0.00
7,900.0	90.00	270.15	7,285.0	-2,415.00	-663.9	-317.0	360.8	0.00	0.00	0.00
8,000.0	90.00	270.15	7,285.0	-2,415.00	-663.7	-417.0	460.6	0.00	0.00	0.00
8,100.0	90.00	270.15	7,285.0	-2,415.00	-663.4	-517.0	560.3	0.00	0.00	0.00
8,200.0	90.00	270.15	7,285.0	-2,415.00	-663.1	-617.0	660.1	0.00	0.00	0.00
8,300.0	90.00	270.15	7,285.0	-2,415.00	-662.9	-717.0	759.9	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 2
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Well:	WINDER SOUTH 2	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)
8,400.0	90.00	270.15	7,285.0	-2,415.00	-662.6	-817.0	859.6	0.00	0.00	0.00
8,500.0	90.00	270.15	7,285.0	-2,415.00	-662.3	-917.0	959.4	0.00	0.00	0.00
8,600.0	90.00	270.15	7,285.0	-2,415.00	-662.1	-1,017.0	1,059.1	0.00	0.00	0.00
8,700.0	90.00	270.15	7,285.0	-2,415.00	-661.8	-1,117.0	1,158.9	0.00	0.00	0.00
8,800.0	90.00	270.15	7,285.0	-2,415.00	-661.6	-1,217.0	1,258.6	0.00	0.00	0.00
8,900.0	90.00	270.15	7,285.0	-2,415.00	-661.3	-1,317.0	1,358.4	0.00	0.00	0.00
9,000.0	90.00	270.15	7,285.0	-2,415.00	-661.0	-1,417.0	1,458.2	0.00	0.00	0.00
9,100.0	90.00	270.15	7,285.0	-2,415.00	-660.8	-1,517.0	1,557.9	0.00	0.00	0.00
9,200.0	90.00	270.15	7,285.0	-2,415.00	-660.5	-1,617.0	1,657.7	0.00	0.00	0.00
9,300.0	90.00	270.15	7,285.0	-2,415.00	-660.2	-1,717.0	1,757.4	0.00	0.00	0.00
9,400.0	90.00	270.15	7,285.0	-2,415.00	-660.0	-1,817.0	1,857.2	0.00	0.00	0.00
9,500.0	90.00	270.15	7,285.0	-2,415.00	-659.7	-1,917.0	1,956.9	0.00	0.00	0.00
9,600.0	90.00	270.15	7,285.0	-2,415.00	-659.5	-2,017.0	2,056.7	0.00	0.00	0.00
9,700.0	90.00	270.15	7,285.0	-2,415.00	-659.2	-2,117.0	2,156.5	0.00	0.00	0.00
9,800.0	90.00	270.15	7,285.0	-2,415.00	-658.9	-2,217.0	2,256.2	0.00	0.00	0.00
9,900.0	90.00	270.15	7,285.0	-2,415.00	-658.7	-2,317.0	2,356.0	0.00	0.00	0.00
10,000.0	90.00	270.15	7,285.0	-2,415.00	-658.4	-2,417.0	2,455.7	0.00	0.00	0.00
10,100.0	90.00	270.15	7,285.0	-2,415.00	-658.1	-2,517.0	2,555.5	0.00	0.00	0.00
10,200.0	90.00	270.15	7,285.0	-2,415.00	-657.9	-2,617.0	2,655.2	0.00	0.00	0.00
10,300.0	90.00	270.15	7,285.0	-2,415.00	-657.6	-2,717.0	2,755.0	0.00	0.00	0.00
10,400.0	90.00	270.15	7,285.0	-2,415.00	-657.3	-2,817.0	2,854.7	0.00	0.00	0.00
10,500.0	90.00	270.15	7,285.0	-2,415.00	-657.1	-2,917.0	2,954.5	0.00	0.00	0.00
10,600.0	90.00	270.15	7,285.0	-2,415.00	-656.8	-3,017.0	3,054.3	0.00	0.00	0.00
10,700.0	90.00	270.15	7,285.0	-2,415.00	-656.6	-3,117.0	3,154.0	0.00	0.00	0.00
10,800.0	90.00	270.15	7,285.0	-2,415.00	-656.3	-3,217.0	3,253.8	0.00	0.00	0.00
10,900.0	90.00	270.15	7,285.0	-2,415.00	-656.0	-3,317.0	3,353.5	0.00	0.00	0.00
11,000.0	90.00	270.15	7,285.0	-2,415.00	-655.8	-3,417.0	3,453.3	0.00	0.00	0.00
11,100.0	90.00	270.15	7,285.0	-2,415.00	-655.5	-3,517.0	3,553.0	0.00	0.00	0.00
11,200.0	90.00	270.15	7,285.0	-2,415.00	-655.2	-3,617.0	3,652.8	0.00	0.00	0.00
11,300.0	90.00	270.15	7,285.0	-2,415.00	-655.0	-3,717.0	3,752.6	0.00	0.00	0.00
11,400.0	90.00	270.15	7,285.0	-2,415.00	-654.7	-3,817.0	3,852.3	0.00	0.00	0.00
11,500.0	90.00	270.15	7,285.0	-2,415.00	-654.4	-3,917.0	3,952.1	0.00	0.00	0.00
11,600.0	90.00	270.15	7,285.0	-2,415.00	-654.2	-4,017.0	4,051.8	0.00	0.00	0.00
11,700.0	90.00	270.15	7,285.0	-2,415.00	-653.9	-4,117.0	4,151.6	0.00	0.00	0.00
11,800.0	90.00	270.15	7,285.0	-2,415.00	-653.7	-4,217.0	4,251.3	0.00	0.00	0.00
11,900.0	90.00	270.15	7,285.0	-2,415.00	-653.4	-4,317.0	4,351.1	0.00	0.00	0.00
12,000.0	90.00	270.15	7,285.0	-2,415.00	-653.1	-4,417.0	4,450.9	0.00	0.00	0.00
12,100.0	90.00	270.15	7,285.0	-2,415.00	-652.9	-4,517.0	4,550.6	0.00	0.00	0.00
12,200.0	90.00	270.15	7,285.0	-2,415.00	-652.6	-4,617.0	4,650.4	0.00	0.00	0.00
12,300.0	90.00	270.15	7,285.0	-2,415.00	-652.3	-4,717.0	4,750.1	0.00	0.00	0.00
12,400.0	90.00	270.15	7,285.0	-2,415.00	-652.1	-4,817.0	4,849.9	0.00	0.00	0.00
12,500.0	90.00	270.15	7,285.0	-2,415.00	-651.8	-4,917.0	4,949.6	0.00	0.00	0.00
12,600.0	90.00	270.15	7,285.0	-2,415.00	-651.6	-5,017.0	5,049.4	0.00	0.00	0.00
12,700.0	90.00	270.15	7,285.0	-2,415.00	-651.3	-5,117.0	5,149.1	0.00	0.00	0.00
12,800.0	90.00	270.15	7,285.0	-2,415.00	-651.0	-5,217.0	5,248.9	0.00	0.00	0.00
12,900.0	90.00	270.15	7,285.0	-2,415.00	-650.8	-5,317.0	5,348.7	0.00	0.00	0.00
13,000.0	90.00	270.15	7,285.0	-2,415.00	-650.5	-5,417.0	5,448.4	0.00	0.00	0.00
13,100.0	90.00	270.15	7,285.0	-2,415.00	-650.2	-5,517.0	5,548.2	0.00	0.00	0.00
13,200.0	90.00	270.15	7,285.0	-2,415.00	-650.0	-5,617.0	5,647.9	0.00	0.00	0.00
13,300.0	90.00	270.15	7,285.0	-2,415.00	-649.7	-5,717.0	5,747.7	0.00	0.00	0.00
13,400.0	90.00	270.15	7,285.0	-2,415.00	-649.4	-5,817.0	5,847.4	0.00	0.00	0.00
13,500.0	90.00	270.15	7,285.0	-2,415.00	-649.2	-5,917.0	5,947.2	0.00	0.00	0.00
13,600.0	90.00	270.15	7,285.0	-2,415.00	-648.9	-6,017.0	6,047.0	0.00	0.00	0.00
13,700.0	90.00	270.15	7,285.0	-2,415.00	-648.7	-6,117.0	6,146.7	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 2
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 2	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)
13,800.0	90.00	270.15	7,285.0	-2,415.00	-648.4	-6,217.0	6,246.5	0.00	0.00	0.00
13,900.0	90.00	270.15	7,285.0	-2,415.00	-648.1	-6,317.0	6,346.2	0.00	0.00	0.00
14,000.0	90.00	270.15	7,285.0	-2,415.00	-647.9	-6,417.0	6,446.0	0.00	0.00	0.00
14,100.0	90.00	270.15	7,285.0	-2,415.00	-647.6	-6,517.0	6,545.7	0.00	0.00	0.00
14,200.0	90.00	270.15	7,285.0	-2,415.00	-647.3	-6,617.0	6,645.5	0.00	0.00	0.00
14,300.0	90.00	270.15	7,285.0	-2,415.00	-647.1	-6,717.0	6,745.3	0.00	0.00	0.00
14,400.0	90.00	270.15	7,285.0	-2,415.00	-646.8	-6,817.0	6,845.0	0.00	0.00	0.00
14,500.0	90.00	270.15	7,285.0	-2,415.00	-646.5	-6,917.0	6,944.8	0.00	0.00	0.00
14,600.0	90.00	270.15	7,285.0	-2,415.00	-646.3	-7,017.0	7,044.5	0.00	0.00	0.00
14,700.0	90.00	270.15	7,285.0	-2,415.00	-646.0	-7,117.0	7,144.3	0.00	0.00	0.00
14,800.0	90.00	270.15	7,285.0	-2,415.00	-645.8	-7,217.0	7,244.0	0.00	0.00	0.00
14,900.0	90.00	270.15	7,285.0	-2,415.00	-645.5	-7,317.0	7,343.8	0.00	0.00	0.00
15,000.0	90.00	270.15	7,285.0	-2,415.00	-645.2	-7,417.0	7,443.5	0.00	0.00	0.00
15,100.0	90.00	270.15	7,285.0	-2,415.00	-645.0	-7,517.0	7,543.3	0.00	0.00	0.00
15,200.0	90.00	270.15	7,285.0	-2,415.00	-644.7	-7,617.0	7,643.1	0.00	0.00	0.00
15,300.0	90.00	270.15	7,285.0	-2,415.00	-644.4	-7,717.0	7,742.8	0.00	0.00	0.00
15,400.0	90.00	270.15	7,285.0	-2,415.00	-644.2	-7,817.0	7,842.6	0.00	0.00	0.00
15,500.0	90.00	270.15	7,285.0	-2,415.00	-643.9	-7,917.0	7,942.3	0.00	0.00	0.00
15,600.0	90.00	270.15	7,285.0	-2,415.00	-643.7	-8,017.0	8,042.1	0.00	0.00	0.00
15,700.0	90.00	270.15	7,285.0	-2,415.00	-643.4	-8,117.0	8,141.8	0.00	0.00	0.00
15,800.0	90.00	270.15	7,285.0	-2,415.00	-643.1	-8,217.0	8,241.6	0.00	0.00	0.00
15,900.0	90.00	270.15	7,285.0	-2,415.00	-642.9	-8,317.0	8,341.4	0.00	0.00	0.00
16,000.0	90.00	270.15	7,285.0	-2,415.00	-642.6	-8,417.0	8,441.1	0.00	0.00	0.00
16,100.0	90.00	270.15	7,285.0	-2,415.00	-642.3	-8,517.0	8,540.9	0.00	0.00	0.00
16,200.0	90.00	270.15	7,285.0	-2,415.00	-642.1	-8,617.0	8,640.6	0.00	0.00	0.00
16,300.0	90.00	270.15	7,285.0	-2,415.00	-641.8	-8,717.0	8,740.4	0.00	0.00	0.00
16,400.0	90.00	270.15	7,285.0	-2,415.00	-641.5	-8,817.0	8,840.1	0.00	0.00	0.00
16,500.0	90.00	270.15	7,285.0	-2,415.00	-641.3	-8,917.0	8,939.9	0.00	0.00	0.00
16,600.0	90.00	270.15	7,285.0	-2,415.00	-641.0	-9,017.0	9,039.7	0.00	0.00	0.00
16,700.0	90.00	270.15	7,285.0	-2,415.00	-640.8	-9,117.0	9,139.4	0.00	0.00	0.00
16,800.0	90.00	270.15	7,285.0	-2,415.00	-640.5	-9,217.0	9,239.2	0.00	0.00	0.00
16,900.0	90.00	270.15	7,285.0	-2,415.00	-640.2	-9,317.0	9,338.9	0.00	0.00	0.00
17,000.0	90.00	270.15	7,285.0	-2,415.00	-640.0	-9,417.0	9,438.7	0.00	0.00	0.00
BHL:2530ft FSL & 460ft FWL of Sec 8										
17,093.1	90.00	270.15	7,285.0	-2,415.00	-639.7	-9,510.1	9,531.5	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,596.6	3,580.0	PARKMAN				
4,165.3	4,140.0	SUSSEX				
4,733.9	4,700.0	SHANNON				
6,975.2	6,905.0	SHARON SPRINGS				
7,025.2	6,951.0	NIOBRARA				
7,452.4	7,240.0	FORT HAYS				
7,574.4	7,275.0	CODELL				
7,682.1	7,285.0	CODELL TGT				

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well WINDER SOUTH 2
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 2	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 & 508ft FEL of Sec 9
2,170.0	2,170.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,670.1	2,667.6	-33.8	27.4	EOB TO 10° INC
6,719.1	6,655.0	-579.9	470.6	KOP (10°/100ft DGLG)
7,682.1	7,285.0	-664.5	-99.1	HZ LANDING PNT: 2460ft FSL & 603ft FEL of Sec 9
17,093.1	7,285.0	-639.7	-9,510.1	BHL:2530ft FSL & 460ft FWL of Sec 8