

BISON IV OPERATING

**WELD COUNTY, COLORADO (NAD 83)
SE SE SEC. 18 T11N R64W 6th P.M.
SALT RANCH FEE 18 E 11-6 18-29-6**

ORIGINAL WELLBORE

27 November, 2024

Plan: PROPOSAL #3





Project: WELD COUNTY, COLORADO (NAD 83)
 Site: SE SE SEC. 18 T11N R64W 6th P.M.
 Well: SALT RANCH FEE 18 E 11-6 18-29-6
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #3

ANNOTATIONS

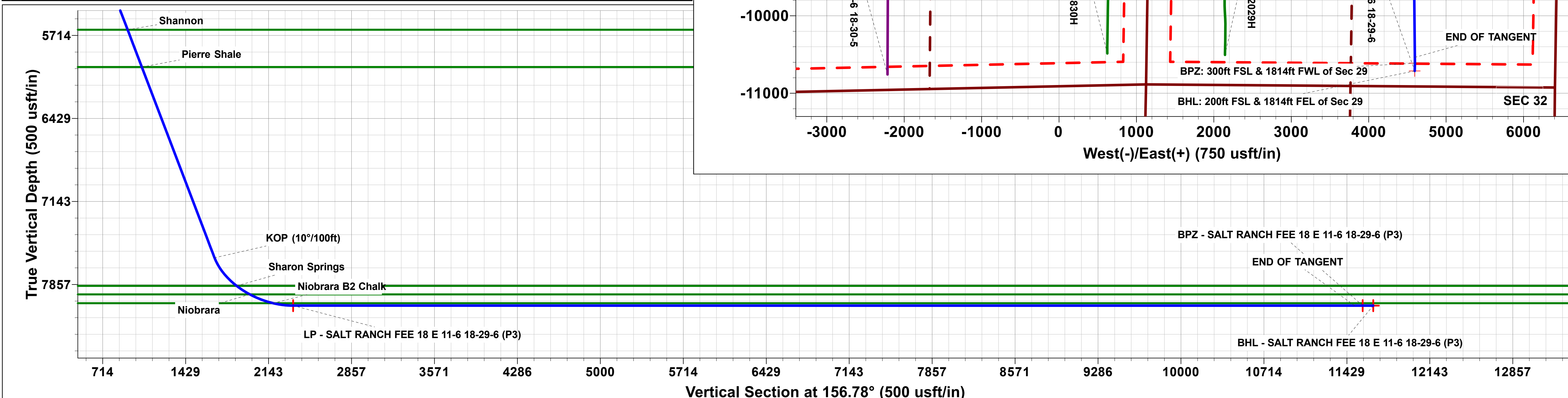
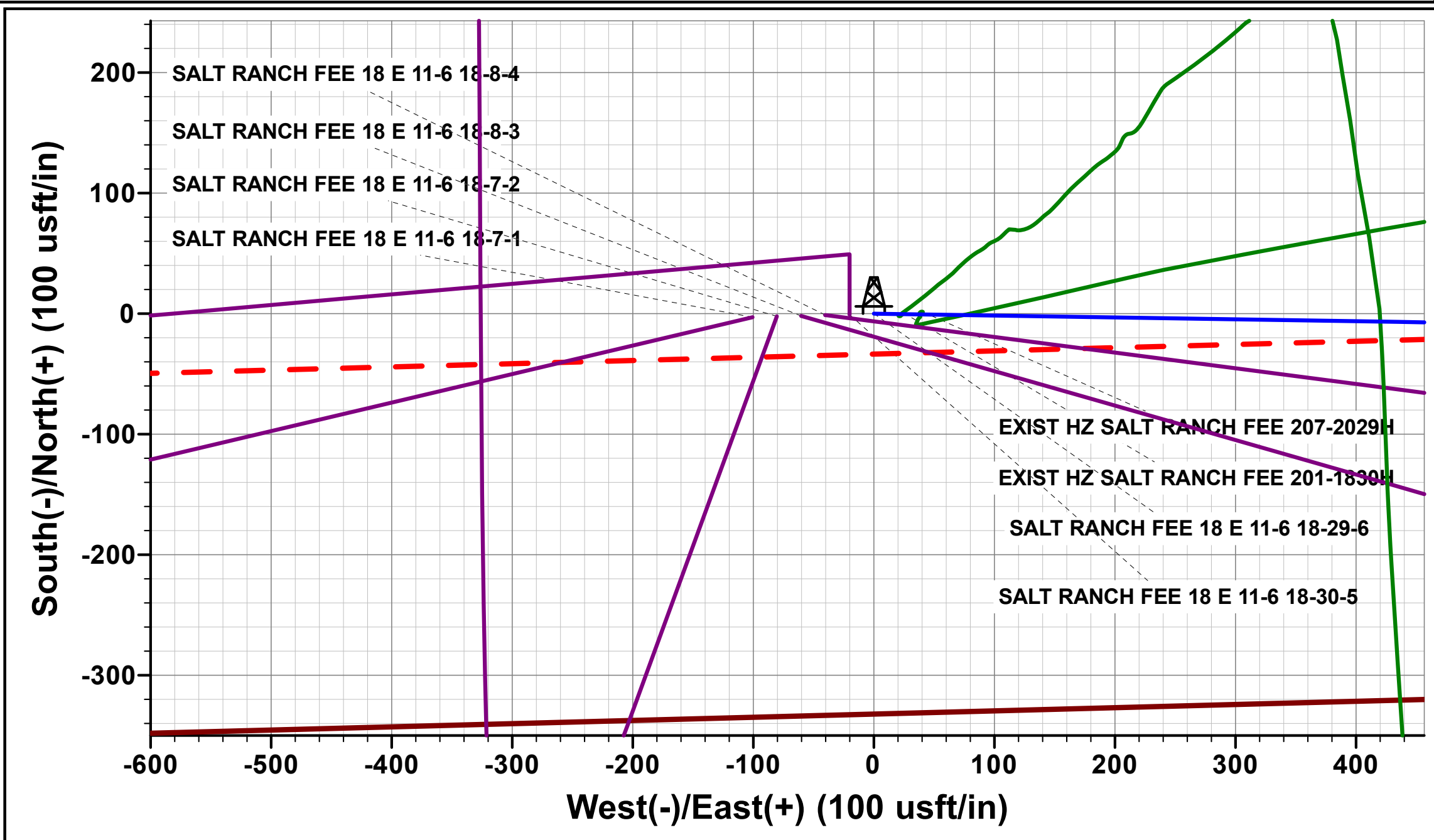
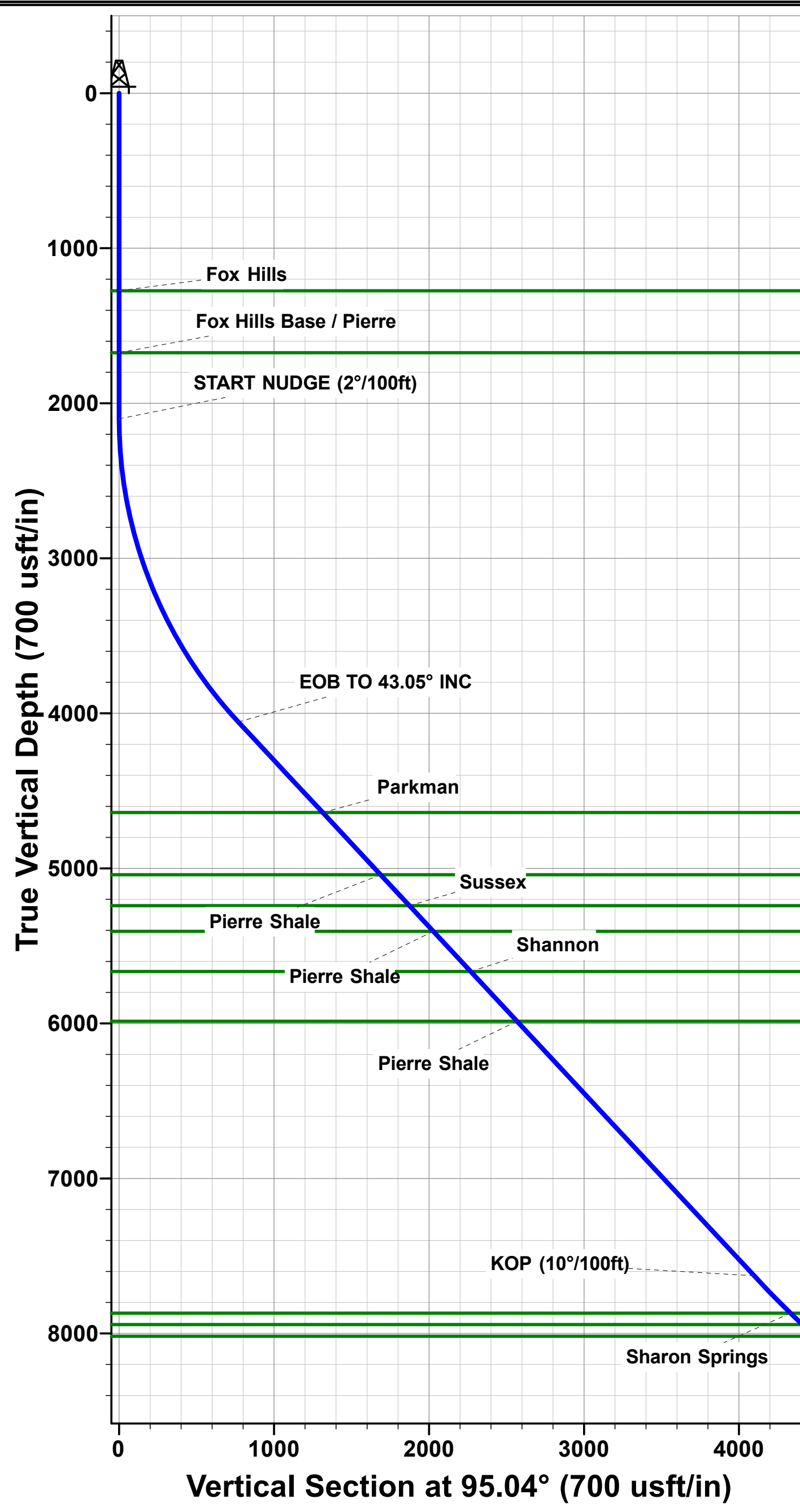
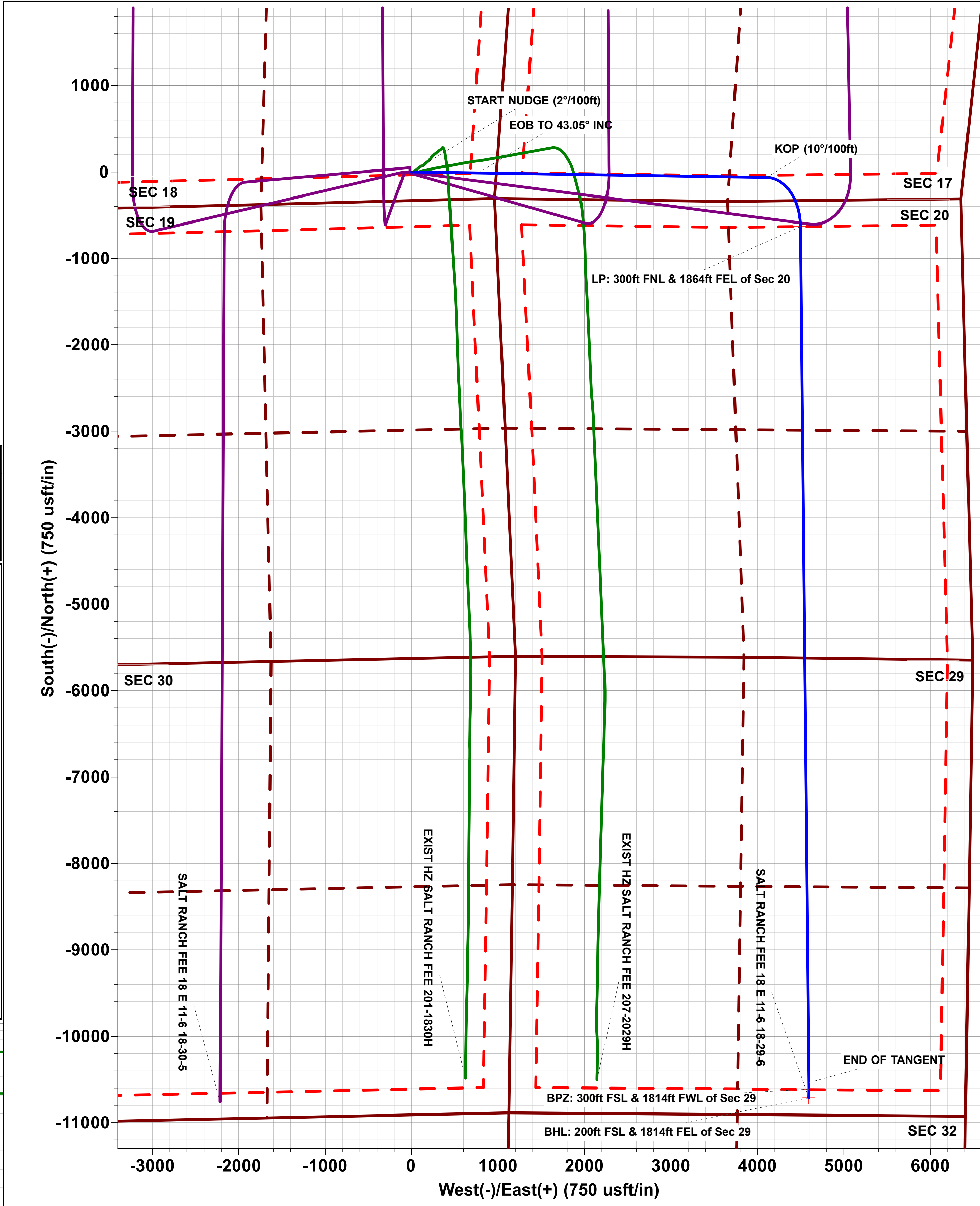
MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Dep	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL: 332ft FSL & 978ft FEL of Sec 18
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	START NUDDGE (2°/100ft)
4252.58	43.05	90.88	4055.67	-11.91	771.28	315.00	771.38	EOB TO 43.05° INC
9140.54	43.05	90.88	7627.50	-63.42	4107.68	1677.60	4108.17	KOP (10°/100ft)
10030.63	90.00	179.43	8039.00	-632.46	4497.64	2354.29	4865.46	LP: 300ft FNL & 1864ft FEL of Sec 20
19934.93	90.00	179.43	8039.00	-10536.26	4596.77	11495.13	14769.76	END OF TANGENT
20010.67	90.00	180.94	8039.00	-10612.00	4596.53	11564.64	14845.50	BPZ: 300ft FSL & 1814ft FWL of Sec 29
20110.52	90.00	180.94	8039.00	-10711.84	4594.89	11655.75	14945.34	BHL: 200ft FSL & 1814ft FEL of Sec 29

PROPOSED LOCAL COORDINATES:

SHL: 332ft FSL & 978ft FEL of Sec 18
 LP: 300ft FNL & 1864ft FEL of Sec 20
 BPZ: 300ft FSL & 1814ft FEL of Sec 29
 BHL: 200ft FSL & 1814ft FEL of Sec 29
SETBACK BOUNDARY
 300ft FNL of Sec 20 & 300ft FSL of Sec 29
 300ft FE/WL of Sec 20/29

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP - SALT RANCH FEE 18 E 11-6 18-29-6 (P3)	8039.00	-632.46	4497.64	40.912779	-104.567895
BPZ - SALT RANCH FEE 18 E 11-6 18-29-6 (P3)	8039.00	-10612.00	4596.53	40.885389	-104.567544
BHL - SALT RANCH FEE 18 E 11-6 18-29-6 (P3)	8039.00	-10711.84	4594.89	40.885115	-104.567550



Database:	Database 1	Local Co-ordinate Reference:	Well SALT RANCH FEE 18 E 11-6 18-29-6
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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		

Site	SE SE SEC. 18 T11N R64W 6th P.M.				
Site Position:		Northing:	1,577,317.22 usft	Latitude:	40.914516
From:	Lat/Long	Easting:	3,253,128.50 usft	Longitude:	-104.584167
Position Uncertainty:	0.00 usft	Slot Radius:	1.10 ft	Grid Convergence:	0.59 °

Well	SALT RANCH FEE 18 E 11-6 18-29-6					
Well Position	+N/-S	-0.01 usft	Northing:	1,577,317.21 usf	Latitude:	40.914516
	+E/-W	0.00 usft	Easting:	3,253,128.50 usf	Longitude:	-104.584167
Position Uncertainty		0.00 usft	Wellhead Elevation:	usf	Ground Level:	5,604.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2024-10-21	7.46	66.94	51,879.38088636

Design	PROPOSAL #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	156.78

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.00	0.00	0.00	0.00	-5,624.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	-3,524.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,252.58	43.05	90.88	4,055.66	-1,568.34	-11.91	771.28	2.00	2.00	0.00	90.88	
9,140.54	43.05	90.88	7,627.50	2,003.50	-63.42	4,107.68	0.00	0.00	0.00	0.00	
10,030.63	90.00	179.43	8,039.00	2,415.00	-632.46	4,497.64	10.00	5.27	9.95	88.94	LP - SALT RANCH
10,030.92	90.00	179.43	8,039.00	2,415.00	-632.75	4,497.64	2.00	0.00	-2.00	-90.00	
19,934.93	90.00	179.43	8,039.00	2,415.00	-10,536.26	4,596.77	0.00	0.00	0.00	0.00	
20,010.67	90.00	180.94	8,039.00	2,415.00	-10,612.00	4,596.53	2.00	0.00	2.00	90.00	BPZ - SALT RANCH
20,110.52	90.00	180.94	8,039.00	2,415.00	-10,711.84	4,594.89	0.00	0.00	0.00	0.00	BHL - SALT RANCH

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Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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: 332ft FSL & 978ft FEL of Sec 18										
0.00	0.00	0.00	0.00	5,624.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	5,524.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	5,424.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	5,324.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	5,224.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	5,124.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	5,024.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	4,924.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	4,824.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	4,724.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	4,624.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	4,524.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	4,424.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills										
1,274.00	0.00	0.00	1,274.00	4,350.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	4,324.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	4,224.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	4,124.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	4,024.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base / Pierre										
1,674.00	0.00	0.00	1,674.00	3,950.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	3,924.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	3,824.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	3,724.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	3,624.00	0.00	0.00	0.00	0.00	0.00	0.00
START NUDGE (2°/100ft)										
2,100.00	0.00	0.00	2,100.00	3,524.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	2.00	90.88	2,199.98	3,424.02	-0.03	1.74	0.71	2.00	2.00	0.00
2,300.00	4.00	90.88	2,299.84	3,324.16	-0.11	6.98	2.85	2.00	2.00	0.00
2,400.00	6.00	90.88	2,399.45	3,224.55	-0.24	15.69	6.41	2.00	2.00	0.00
2,500.00	8.00	90.88	2,498.70	3,125.30	-0.43	27.88	11.38	2.00	2.00	0.00
2,600.00	10.00	90.88	2,597.47	3,026.53	-0.67	43.52	17.77	2.00	2.00	0.00
2,700.00	12.00	90.88	2,695.62	2,928.38	-0.97	62.60	25.56	2.00	2.00	0.00
2,800.00	14.00	90.88	2,793.06	2,830.94	-1.31	85.09	34.75	2.00	2.00	0.00
2,900.00	16.00	90.88	2,889.64	2,734.36	-1.71	110.96	45.32	2.00	2.00	0.00
3,000.00	18.00	90.88	2,985.27	2,638.73	-2.16	140.20	57.26	2.00	2.00	0.00
3,100.00	20.00	90.88	3,079.82	2,544.18	-2.67	172.75	70.55	2.00	2.00	0.00
3,200.00	22.00	90.88	3,173.17	2,450.83	-3.22	208.58	85.18	2.00	2.00	0.00
3,300.00	24.00	90.88	3,265.21	2,358.79	-3.82	247.64	101.14	2.00	2.00	0.00
3,400.00	26.00	90.88	3,355.84	2,268.16	-4.48	289.90	118.40	2.00	2.00	0.00
3,500.00	28.00	90.88	3,444.94	2,179.06	-5.18	335.29	136.93	2.00	2.00	0.00
3,600.00	30.00	90.88	3,532.39	2,091.61	-5.93	383.76	156.73	2.00	2.00	0.00
3,700.00	32.00	90.88	3,618.11	2,005.89	-6.72	435.26	177.76	2.00	2.00	0.00
3,800.00	34.00	90.88	3,701.97	1,922.03	-7.56	489.71	200.00	2.00	2.00	0.00
3,900.00	36.00	90.88	3,783.88	1,840.12	-8.45	547.06	223.42	2.00	2.00	0.00
4,000.00	38.00	90.88	3,863.74	1,760.26	-9.38	607.23	248.00	2.00	2.00	0.00
4,100.00	40.00	90.88	3,941.45	1,682.55	-10.35	670.15	273.69	2.00	2.00	0.00
4,200.00	42.00	90.88	4,016.92	1,607.08	-11.36	735.75	300.48	2.00	2.00	0.00
EOB TO 43.05° INC										
4,252.58	43.05	90.88	4,055.67	1,568.33	-11.91	771.28	315.00	2.00	2.00	0.00
4,300.00	43.05	90.88	4,090.32	1,533.68	-12.41	803.65	328.22	0.00	0.00	0.00
4,400.00	43.05	90.88	4,163.39	1,460.61	-13.46	871.91	356.09	0.00	0.00	0.00
4,500.00	43.05	90.88	4,236.47	1,387.53	-14.52	940.17	383.97	0.00	0.00	0.00

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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)
4,600.00	43.05	90.88	4,309.54	1,314.46	-15.57	1,008.42	411.85	0.00	0.00	0.00
4,700.00	43.05	90.88	4,382.62	1,241.38	-16.62	1,076.68	439.72	0.00	0.00	0.00
4,800.00	43.05	90.88	4,455.69	1,168.31	-17.68	1,144.94	467.60	0.00	0.00	0.00
4,900.00	43.05	90.88	4,528.76	1,095.24	-18.73	1,213.20	495.48	0.00	0.00	0.00
5,000.00	43.05	90.88	4,601.84	1,022.16	-19.79	1,281.45	523.35	0.00	0.00	0.00
Parkman										
5,052.22	43.05	90.88	4,640.00	984.00	-20.34	1,317.10	537.91	0.00	0.00	0.00
5,100.00	43.05	90.88	4,674.91	949.09	-20.84	1,349.71	551.23	0.00	0.00	0.00
5,200.00	43.05	90.88	4,747.99	876.01	-21.89	1,417.97	579.11	0.00	0.00	0.00
5,300.00	43.05	90.88	4,821.06	802.94	-22.95	1,486.23	606.98	0.00	0.00	0.00
5,400.00	43.05	90.88	4,894.13	729.87	-24.00	1,554.48	634.86	0.00	0.00	0.00
5,500.00	43.05	90.88	4,967.21	656.79	-25.06	1,622.74	662.74	0.00	0.00	0.00
5,600.00	43.05	90.88	5,040.28	583.72	-26.11	1,691.00	690.61	0.00	0.00	0.00
Pierre Shale										
5,600.98	43.05	90.88	5,041.00	583.00	-26.12	1,691.67	690.89	0.00	0.00	0.00
5,700.00	43.05	90.88	5,113.36	510.64	-27.16	1,759.26	718.49	0.00	0.00	0.00
5,800.00	43.05	90.88	5,186.43	437.57	-28.22	1,827.51	746.37	0.00	0.00	0.00
Sussex										
5,873.31	43.05	90.88	5,240.00	384.00	-28.99	1,877.55	766.80	0.00	0.00	0.00
5,900.00	43.05	90.88	5,259.50	364.50	-29.27	1,895.77	774.24	0.00	0.00	0.00
6,000.00	43.05	90.88	5,332.58	291.42	-30.33	1,964.03	802.12	0.00	0.00	0.00
6,100.00	43.05	90.88	5,405.65	218.35	-31.38	2,032.28	830.00	0.00	0.00	0.00
Pierre Shale										
6,100.48	43.05	90.88	5,406.00	218.00	-31.38	2,032.61	830.13	0.00	0.00	0.00
6,200.00	43.05	90.88	5,478.73	145.27	-32.43	2,100.54	857.87	0.00	0.00	0.00
6,300.00	43.05	90.88	5,551.80	72.20	-33.49	2,168.80	885.75	0.00	0.00	0.00
6,400.00	43.05	90.88	5,624.87	-0.87	-34.54	2,237.06	913.63	0.00	0.00	0.00
Shannon										
6,454.91	43.05	90.88	5,665.00	-41.00	-35.12	2,274.54	928.94	0.00	0.00	0.00
6,500.00	43.05	90.88	5,697.95	-73.95	-35.59	2,305.31	941.51	0.00	0.00	0.00
6,600.00	43.05	90.88	5,771.02	-147.02	-36.65	2,373.57	969.38	0.00	0.00	0.00
6,700.00	43.05	90.88	5,844.10	-220.10	-37.70	2,441.83	997.26	0.00	0.00	0.00
6,800.00	43.05	90.88	5,917.17	-293.17	-38.76	2,510.09	1,025.14	0.00	0.00	0.00
Pierre Shale										
6,894.19	43.05	90.88	5,986.00	-362.00	-39.75	2,574.38	1,051.39	0.00	0.00	0.00
6,900.00	43.05	90.88	5,990.24	-366.24	-39.81	2,578.34	1,053.01	0.00	0.00	0.00
7,000.00	43.05	90.88	6,063.32	-439.32	-40.86	2,646.60	1,080.89	0.00	0.00	0.00
7,100.00	43.05	90.88	6,136.39	-512.39	-41.92	2,714.86	1,108.77	0.00	0.00	0.00
7,200.00	43.05	90.88	6,209.47	-585.47	-42.97	2,783.12	1,136.64	0.00	0.00	0.00
7,300.00	43.05	90.88	6,282.54	-658.54	-44.03	2,851.37	1,164.52	0.00	0.00	0.00
7,400.00	43.05	90.88	6,355.61	-731.61	-45.08	2,919.63	1,192.40	0.00	0.00	0.00
7,500.00	43.05	90.88	6,428.69	-804.69	-46.13	2,987.89	1,220.27	0.00	0.00	0.00
7,600.00	43.05	90.88	6,501.76	-877.76	-47.19	3,056.15	1,248.15	0.00	0.00	0.00
7,700.00	43.05	90.88	6,574.84	-950.84	-48.24	3,124.40	1,276.03	0.00	0.00	0.00
7,800.00	43.05	90.88	6,647.91	-1,023.91	-49.30	3,192.66	1,303.90	0.00	0.00	0.00
7,900.00	43.05	90.88	6,720.98	-1,096.98	-50.35	3,260.92	1,331.78	0.00	0.00	0.00
8,000.00	43.05	90.88	6,794.06	-1,170.06	-51.40	3,329.18	1,359.66	0.00	0.00	0.00
8,100.00	43.05	90.88	6,867.13	-1,243.13	-52.46	3,397.43	1,387.53	0.00	0.00	0.00
8,200.00	43.05	90.88	6,940.21	-1,316.21	-53.51	3,465.69	1,415.41	0.00	0.00	0.00
8,300.00	43.05	90.88	7,013.28	-1,389.28	-54.57	3,533.95	1,443.29	0.00	0.00	0.00
8,400.00	43.05	90.88	7,086.35	-1,462.35	-55.62	3,602.21	1,471.16	0.00	0.00	0.00
8,500.00	43.05	90.88	7,159.43	-1,535.43	-56.67	3,670.46	1,499.04	0.00	0.00	0.00
8,600.00	43.05	90.88	7,232.50	-1,608.50	-57.73	3,738.72	1,526.92	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well SALT RANCH FEE 18 E 11-6 18-29-6
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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)
8,700.00	43.05	90.88	7,305.58	-1,681.58	-58.78	3,806.98	1,554.79	0.00	0.00	0.00
8,800.00	43.05	90.88	7,378.65	-1,754.65	-59.83	3,875.24	1,582.67	0.00	0.00	0.00
8,900.00	43.05	90.88	7,451.72	-1,827.72	-60.89	3,943.49	1,610.55	0.00	0.00	0.00
9,000.00	43.05	90.88	7,524.80	-1,900.80	-61.94	4,011.75	1,638.42	0.00	0.00	0.00
9,100.00	43.05	90.88	7,597.87	-1,973.87	-63.00	4,080.01	1,666.30	0.00	0.00	0.00
KOP (10°/100ft)										
9,140.54	43.05	90.88	7,627.50	-2,003.50	-63.42	4,107.68	1,677.60	0.00	0.00	0.00
9,200.00	43.49	99.54	7,670.83	-2,046.83	-67.13	4,148.19	1,696.98	10.00	0.74	14.56
9,300.00	45.64	113.48	7,742.24	-2,118.24	-87.13	4,215.08	1,741.73	10.00	2.15	13.94
9,400.00	49.34	126.10	7,809.95	-2,185.95	-123.81	4,278.68	1,800.51	10.00	3.70	12.62
Sharon Springs										
9,495.06	53.99	136.68	7,869.00	-2,245.00	-173.14	4,334.32	1,867.78	10.00	4.89	11.14
9,500.00	54.26	137.20	7,871.89	-2,247.89	-176.07	4,337.05	1,871.54	10.00	5.39	10.40
9,600.00	60.06	146.90	7,926.19	-2,302.19	-242.31	4,388.42	1,952.67	10.00	5.81	9.70
Niobrara										
9,632.70	62.11	149.81	7,942.00	-2,318.00	-266.67	4,403.42	1,980.98	10.00	6.26	8.91
9,700.00	66.50	155.48	7,971.19	-2,347.19	-320.52	4,431.22	2,041.42	10.00	6.52	8.41
9,800.00	73.36	163.23	8,005.53	-2,381.53	-408.33	4,464.16	2,135.11	10.00	6.86	7.75
Niobrara B2 Chalk										
9,848.41	76.79	166.77	8,018.00	-2,394.00	-453.50	4,476.25	2,181.38	10.00	7.08	7.31
9,900.00	80.49	170.43	8,028.16	-2,404.16	-503.07	4,486.24	2,230.87	10.00	7.18	7.10
10,000.00	87.76	177.34	8,038.40	-2,414.40	-601.85	4,496.78	2,325.82	10.00	7.27	6.91
LP: 300ft FNL & 1864ft FEL of Sec 20										
10,030.63	90.00	179.43	8,039.00	-2,415.00	-632.46	4,497.64	2,354.29	10.00	7.31	6.83
10,030.92	90.00	179.43	8,039.00	-2,415.00	-632.75	4,497.64	2,354.55	1.99	0.01	-1.99
10,100.00	90.00	179.43	8,039.00	-2,415.00	-701.83	4,498.33	2,418.31	0.00	0.00	0.00
10,200.00	90.00	179.43	8,039.00	-2,415.00	-801.82	4,499.33	2,510.60	0.00	0.00	0.00
10,300.00	90.00	179.43	8,039.00	-2,415.00	-901.82	4,500.34	2,602.89	0.00	0.00	0.00
10,400.00	90.00	179.43	8,039.00	-2,415.00	-1,001.81	4,501.34	2,695.18	0.00	0.00	0.00
10,500.00	90.00	179.43	8,039.00	-2,415.00	-1,101.81	4,502.34	2,787.47	0.00	0.00	0.00
10,600.00	90.00	179.43	8,039.00	-2,415.00	-1,201.80	4,503.34	2,879.77	0.00	0.00	0.00
10,700.00	90.00	179.43	8,039.00	-2,415.00	-1,301.80	4,504.34	2,972.06	0.00	0.00	0.00
10,800.00	90.00	179.43	8,039.00	-2,415.00	-1,401.79	4,505.34	3,064.35	0.00	0.00	0.00
10,900.00	90.00	179.43	8,039.00	-2,415.00	-1,501.79	4,506.34	3,156.64	0.00	0.00	0.00
11,000.00	90.00	179.43	8,039.00	-2,415.00	-1,601.78	4,507.34	3,248.93	0.00	0.00	0.00
11,100.00	90.00	179.43	8,039.00	-2,415.00	-1,701.78	4,508.34	3,341.23	0.00	0.00	0.00
11,200.00	90.00	179.43	8,039.00	-2,415.00	-1,801.77	4,509.34	3,433.52	0.00	0.00	0.00
11,300.00	90.00	179.43	8,039.00	-2,415.00	-1,901.77	4,510.34	3,525.81	0.00	0.00	0.00
11,400.00	90.00	179.43	8,039.00	-2,415.00	-2,001.76	4,511.35	3,618.10	0.00	0.00	0.00
11,500.00	90.00	179.43	8,039.00	-2,415.00	-2,101.76	4,512.35	3,710.39	0.00	0.00	0.00
11,600.00	90.00	179.43	8,039.00	-2,415.00	-2,201.75	4,513.35	3,802.68	0.00	0.00	0.00
11,700.00	90.00	179.43	8,039.00	-2,415.00	-2,301.75	4,514.35	3,894.98	0.00	0.00	0.00
11,800.00	90.00	179.43	8,039.00	-2,415.00	-2,401.74	4,515.35	3,987.27	0.00	0.00	0.00
11,900.00	90.00	179.43	8,039.00	-2,415.00	-2,501.74	4,516.35	4,079.56	0.00	0.00	0.00
12,000.00	90.00	179.43	8,039.00	-2,415.00	-2,601.73	4,517.35	4,171.85	0.00	0.00	0.00
12,100.00	90.00	179.43	8,039.00	-2,415.00	-2,701.73	4,518.35	4,264.14	0.00	0.00	0.00
12,200.00	90.00	179.43	8,039.00	-2,415.00	-2,801.72	4,519.35	4,356.43	0.00	0.00	0.00
12,300.00	90.00	179.43	8,039.00	-2,415.00	-2,901.72	4,520.35	4,448.73	0.00	0.00	0.00
12,400.00	90.00	179.43	8,039.00	-2,415.00	-3,001.71	4,521.35	4,541.02	0.00	0.00	0.00
12,500.00	90.00	179.43	8,039.00	-2,415.00	-3,101.71	4,522.36	4,633.31	0.00	0.00	0.00
12,600.00	90.00	179.43	8,039.00	-2,415.00	-3,201.70	4,523.36	4,725.60	0.00	0.00	0.00
12,700.00	90.00	179.43	8,039.00	-2,415.00	-3,301.70	4,524.36	4,817.89	0.00	0.00	0.00
12,800.00	90.00	179.43	8,039.00	-2,415.00	-3,401.69	4,525.36	4,910.18	0.00	0.00	0.00
12,900.00	90.00	179.43	8,039.00	-2,415.00	-3,501.69	4,526.36	5,002.48	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well SALT RANCH FEE 18 E 11-6 18-29-6
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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)
13,000.00	90.00	179.43	8,039.00	-2,415.00	-3,601.68	4,527.36	5,094.77	0.00	0.00	0.00
13,100.00	90.00	179.43	8,039.00	-2,415.00	-3,701.68	4,528.36	5,187.06	0.00	0.00	0.00
13,200.00	90.00	179.43	8,039.00	-2,415.00	-3,801.67	4,529.36	5,279.35	0.00	0.00	0.00
13,300.00	90.00	179.43	8,039.00	-2,415.00	-3,901.67	4,530.36	5,371.64	0.00	0.00	0.00
13,400.00	90.00	179.43	8,039.00	-2,415.00	-4,001.66	4,531.36	5,463.93	0.00	0.00	0.00
13,500.00	90.00	179.43	8,039.00	-2,415.00	-4,101.66	4,532.36	5,556.23	0.00	0.00	0.00
13,600.00	90.00	179.43	8,039.00	-2,415.00	-4,201.65	4,533.36	5,648.52	0.00	0.00	0.00
13,700.00	90.00	179.43	8,039.00	-2,415.00	-4,301.65	4,534.37	5,740.81	0.00	0.00	0.00
13,800.00	90.00	179.43	8,039.00	-2,415.00	-4,401.64	4,535.37	5,833.10	0.00	0.00	0.00
13,900.00	90.00	179.43	8,039.00	-2,415.00	-4,501.64	4,536.37	5,925.39	0.00	0.00	0.00
14,000.00	90.00	179.43	8,039.00	-2,415.00	-4,601.63	4,537.37	6,017.69	0.00	0.00	0.00
14,100.00	90.00	179.43	8,039.00	-2,415.00	-4,701.63	4,538.37	6,109.98	0.00	0.00	0.00
14,200.00	90.00	179.43	8,039.00	-2,415.00	-4,801.62	4,539.37	6,202.27	0.00	0.00	0.00
14,300.00	90.00	179.43	8,039.00	-2,415.00	-4,901.62	4,540.37	6,294.56	0.00	0.00	0.00
14,400.00	90.00	179.43	8,039.00	-2,415.00	-5,001.61	4,541.37	6,386.85	0.00	0.00	0.00
14,500.00	90.00	179.43	8,039.00	-2,415.00	-5,101.61	4,542.37	6,479.14	0.00	0.00	0.00
14,600.00	90.00	179.43	8,039.00	-2,415.00	-5,201.60	4,543.37	6,571.44	0.00	0.00	0.00
14,700.00	90.00	179.43	8,039.00	-2,415.00	-5,301.60	4,544.37	6,663.73	0.00	0.00	0.00
14,800.00	90.00	179.43	8,039.00	-2,415.00	-5,401.59	4,545.38	6,756.02	0.00	0.00	0.00
14,900.00	90.00	179.43	8,039.00	-2,415.00	-5,501.59	4,546.38	6,848.31	0.00	0.00	0.00
15,000.00	90.00	179.43	8,039.00	-2,415.00	-5,601.58	4,547.38	6,940.60	0.00	0.00	0.00
15,100.00	90.00	179.43	8,039.00	-2,415.00	-5,701.58	4,548.38	7,032.89	0.00	0.00	0.00
15,200.00	90.00	179.43	8,039.00	-2,415.00	-5,801.57	4,549.38	7,125.19	0.00	0.00	0.00
15,300.00	90.00	179.43	8,039.00	-2,415.00	-5,901.57	4,550.38	7,217.48	0.00	0.00	0.00
15,400.00	90.00	179.43	8,039.00	-2,415.00	-6,001.56	4,551.38	7,309.77	0.00	0.00	0.00
15,500.00	90.00	179.43	8,039.00	-2,415.00	-6,101.56	4,552.38	7,402.06	0.00	0.00	0.00
15,600.00	90.00	179.43	8,039.00	-2,415.00	-6,201.55	4,553.38	7,494.35	0.00	0.00	0.00
15,700.00	90.00	179.43	8,039.00	-2,415.00	-6,301.55	4,554.38	7,586.64	0.00	0.00	0.00
15,800.00	90.00	179.43	8,039.00	-2,415.00	-6,401.54	4,555.38	7,678.94	0.00	0.00	0.00
15,900.00	90.00	179.43	8,039.00	-2,415.00	-6,501.54	4,556.39	7,771.23	0.00	0.00	0.00
16,000.00	90.00	179.43	8,039.00	-2,415.00	-6,601.53	4,557.39	7,863.52	0.00	0.00	0.00
16,100.00	90.00	179.43	8,039.00	-2,415.00	-6,701.53	4,558.39	7,955.81	0.00	0.00	0.00
16,200.00	90.00	179.43	8,039.00	-2,415.00	-6,801.52	4,559.39	8,048.10	0.00	0.00	0.00
16,300.00	90.00	179.43	8,039.00	-2,415.00	-6,901.52	4,560.39	8,140.39	0.00	0.00	0.00
16,400.00	90.00	179.43	8,039.00	-2,415.00	-7,001.51	4,561.39	8,232.69	0.00	0.00	0.00
16,500.00	90.00	179.43	8,039.00	-2,415.00	-7,101.51	4,562.39	8,324.98	0.00	0.00	0.00
16,600.00	90.00	179.43	8,039.00	-2,415.00	-7,201.50	4,563.39	8,417.27	0.00	0.00	0.00
16,700.00	90.00	179.43	8,039.00	-2,415.00	-7,301.50	4,564.39	8,509.56	0.00	0.00	0.00
16,800.00	90.00	179.43	8,039.00	-2,415.00	-7,401.49	4,565.39	8,601.85	0.00	0.00	0.00
16,900.00	90.00	179.43	8,039.00	-2,415.00	-7,501.49	4,566.39	8,694.15	0.00	0.00	0.00
17,000.00	90.00	179.43	8,039.00	-2,415.00	-7,601.48	4,567.40	8,786.44	0.00	0.00	0.00
17,100.00	90.00	179.43	8,039.00	-2,415.00	-7,701.48	4,568.40	8,878.73	0.00	0.00	0.00
17,200.00	90.00	179.43	8,039.00	-2,415.00	-7,801.47	4,569.40	8,971.02	0.00	0.00	0.00
17,300.00	90.00	179.43	8,039.00	-2,415.00	-7,901.47	4,570.40	9,063.31	0.00	0.00	0.00
17,400.00	90.00	179.43	8,039.00	-2,415.00	-8,001.46	4,571.40	9,155.60	0.00	0.00	0.00
17,500.00	90.00	179.43	8,039.00	-2,415.00	-8,101.46	4,572.40	9,247.90	0.00	0.00	0.00
17,600.00	90.00	179.43	8,039.00	-2,415.00	-8,201.45	4,573.40	9,340.19	0.00	0.00	0.00
17,700.00	90.00	179.43	8,039.00	-2,415.00	-8,301.45	4,574.40	9,432.48	0.00	0.00	0.00
17,800.00	90.00	179.43	8,039.00	-2,415.00	-8,401.44	4,575.40	9,524.77	0.00	0.00	0.00
17,900.00	90.00	179.43	8,039.00	-2,415.00	-8,501.44	4,576.40	9,617.06	0.00	0.00	0.00
18,000.00	90.00	179.43	8,039.00	-2,415.00	-8,601.43	4,577.40	9,709.35	0.00	0.00	0.00
18,100.00	90.00	179.43	8,039.00	-2,415.00	-8,701.43	4,578.41	9,801.65	0.00	0.00	0.00
18,200.00	90.00	179.43	8,039.00	-2,415.00	-8,801.42	4,579.41	9,893.94	0.00	0.00	0.00
18,300.00	90.00	179.43	8,039.00	-2,415.00	-8,901.42	4,580.41	9,986.23	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well SALT RANCH FEE 18 E 11-6 18-29-6
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

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)
18,400.00	90.00	179.43	8,039.00	-2,415.00	-9,001.41	4,581.41	10,078.52	0.00	0.00	0.00
18,500.00	90.00	179.43	8,039.00	-2,415.00	-9,101.41	4,582.41	10,170.81	0.00	0.00	0.00
18,600.00	90.00	179.43	8,039.00	-2,415.00	-9,201.40	4,583.41	10,263.10	0.00	0.00	0.00
18,700.00	90.00	179.43	8,039.00	-2,415.00	-9,301.40	4,584.41	10,355.40	0.00	0.00	0.00
18,800.00	90.00	179.43	8,039.00	-2,415.00	-9,401.39	4,585.41	10,447.69	0.00	0.00	0.00
18,900.00	90.00	179.43	8,039.00	-2,415.00	-9,501.39	4,586.41	10,539.98	0.00	0.00	0.00
19,000.00	90.00	179.43	8,039.00	-2,415.00	-9,601.38	4,587.41	10,632.27	0.00	0.00	0.00
19,100.00	90.00	179.43	8,039.00	-2,415.00	-9,701.38	4,588.41	10,724.56	0.00	0.00	0.00
19,200.00	90.00	179.43	8,039.00	-2,415.00	-9,801.37	4,589.41	10,816.85	0.00	0.00	0.00
19,300.00	90.00	179.43	8,039.00	-2,415.00	-9,901.37	4,590.42	10,909.15	0.00	0.00	0.00
19,400.00	90.00	179.43	8,039.00	-2,415.00	-10,001.36	4,591.42	11,001.44	0.00	0.00	0.00
19,500.00	90.00	179.43	8,039.00	-2,415.00	-10,101.36	4,592.42	11,093.73	0.00	0.00	0.00
19,600.00	90.00	179.43	8,039.00	-2,415.00	-10,201.35	4,593.42	11,186.02	0.00	0.00	0.00
19,700.00	90.00	179.43	8,039.00	-2,415.00	-10,301.35	4,594.42	11,278.31	0.00	0.00	0.00
19,800.00	90.00	179.43	8,039.00	-2,415.00	-10,401.34	4,595.42	11,370.61	0.00	0.00	0.00
19,900.00	90.00	179.43	8,039.00	-2,415.00	-10,501.34	4,596.42	11,462.90	0.00	0.00	0.00
END OF TANGENT										
19,934.93	90.00	179.43	8,039.00	-2,415.00	-10,536.26	4,596.77	11,495.13	0.00	0.00	0.00
20,000.00	90.00	180.73	8,039.00	-2,415.00	-10,601.33	4,596.68	11,554.90	2.00	0.00	2.00
BPZ: 300ft FSL & 1814ft FWL of Sec 29										
20,010.67	90.00	180.94	8,039.00	-2,415.00	-10,612.00	4,596.53	11,564.64	2.00	0.00	2.00
20,100.00	90.00	180.94	8,039.00	-2,415.00	-10,701.32	4,595.06	11,646.15	0.00	0.00	0.00
BHL: 200ft FSL & 1814ft FEL of Sec 29										
20,110.52	90.00	180.94	8,039.00	-2,415.00	-10,711.84	4,594.89	11,655.75	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,274.00	1,274.00	Fox Hills			
1,674.00	1,674.00	Fox Hills Base / Pierre			
5,052.22	4,640.00	Parkman			
5,600.98	5,041.00	Pierre Shale			
5,873.31	5,240.00	Sussex			
6,100.48	5,406.00	Pierre Shale			
6,454.91	5,665.00	Shannon			
6,894.19	5,986.00	Pierre Shale			
9,495.06	7,869.00	Sharon Springs			
9,632.70	7,942.00	Niobrara			
9,848.41	8,018.00	Niobrara B2 Chalk			

Database:	Database 1	Local Co-ordinate Reference:	Well SALT RANCH FEE 18 E 11-6 18-29-6
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5624.00usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5624.00usft
Site:	SE SE SEC. 18 T11N R64W 6th P.M.	North Reference:	True
Well:	SALT RANCH FEE 18 E 11-6 18-29-6	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #3		

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	SHL: 332ft FSL & 978ft FEL of Sec 18
2,100.00	2,100.00	0.00	0.00	START NUDGE (2°/100ft)
4,252.58	4,055.67	-11.91	771.28	EOB TO 43.05° INC
9,140.54	7,627.50	-63.42	4,107.68	KOP (10°/100ft)
10,030.63	8,039.00	-632.46	4,497.64	LP: 300ft FNL & 1864ft FEL of Sec 20
19,934.93	8,039.00	-10,536.26	4,596.77	END OF TANGENT
20,010.67	8,039.00	-10,612.00	4,596.53	BPZ: 300ft FSL & 1814ft FWL of Sec 29
20,110.52	8,039.00	-10,711.84	4,594.89	BHL: 200ft FSL & 1814ft FEL of Sec 29