

BISON IV OPERATING

LARIMER COUNTY, COLORADO (NAD 83)

SEC. 11 T5N R68W 6th P.M.

CE 5-68 11-10-15H

ORIGINAL WELLBORE

19 July, 2024

Plan: PROPOSAL #1

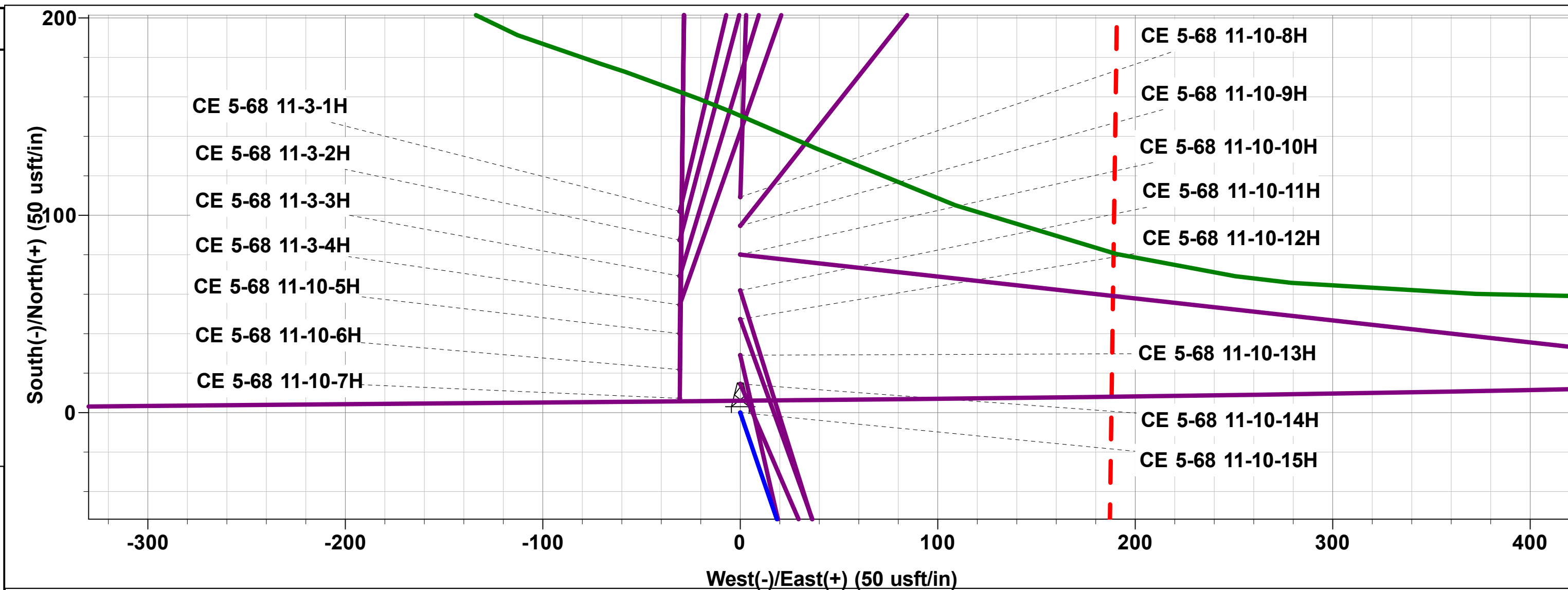




Project: LARIMER COUNTY, COLORADO (NAD 83)
 Site: SEC. 11 T5N R68W 6th P.M.
 Well: CE 5-68 11-10-15H
 Wellbore: ORIGINAL WELLBORE
 Design: PROPOSAL #1

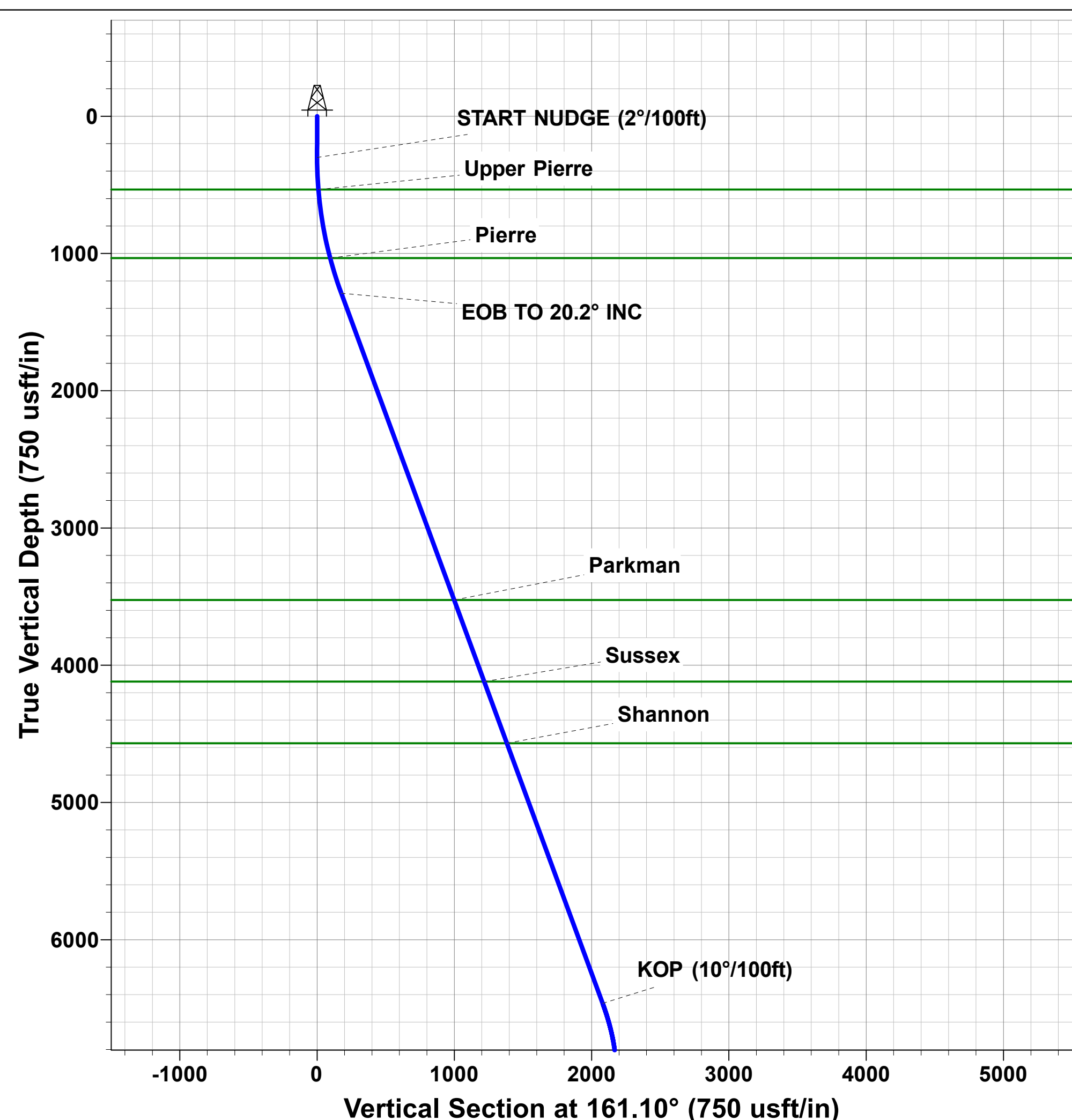
ANNOTATIONS

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: 2348ft FNL & 488ft FEL of Sec 11
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	START NUDDGE (2°/100ft)
1310.06	20.20	161.10	1289.26	-166.73	57.07	-12.05	176.22	EOB TO 20.2° INC
6823.95	20.20	161.10	6463.97	-1968.17	673.66	-142.29	2080.27	KOP (10°/100ft)
7786.65	90.00	269.54	7064.00	-2182.14	105.82	461.56	2738.62	EP: 750ft FSL & 350ft FEL of Sec 11
16305.41	90.00	269.54	7064.00	-2249.92	-8412.67	8708.34	11257.38	BHL: 750ft FSL & 1700ft FWL of Sec 10

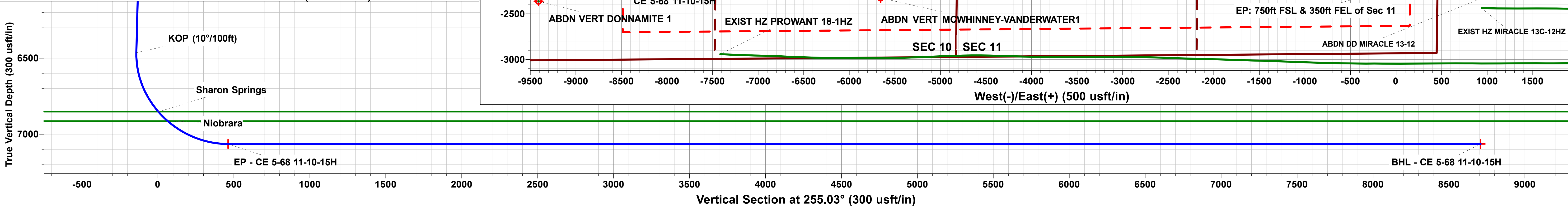
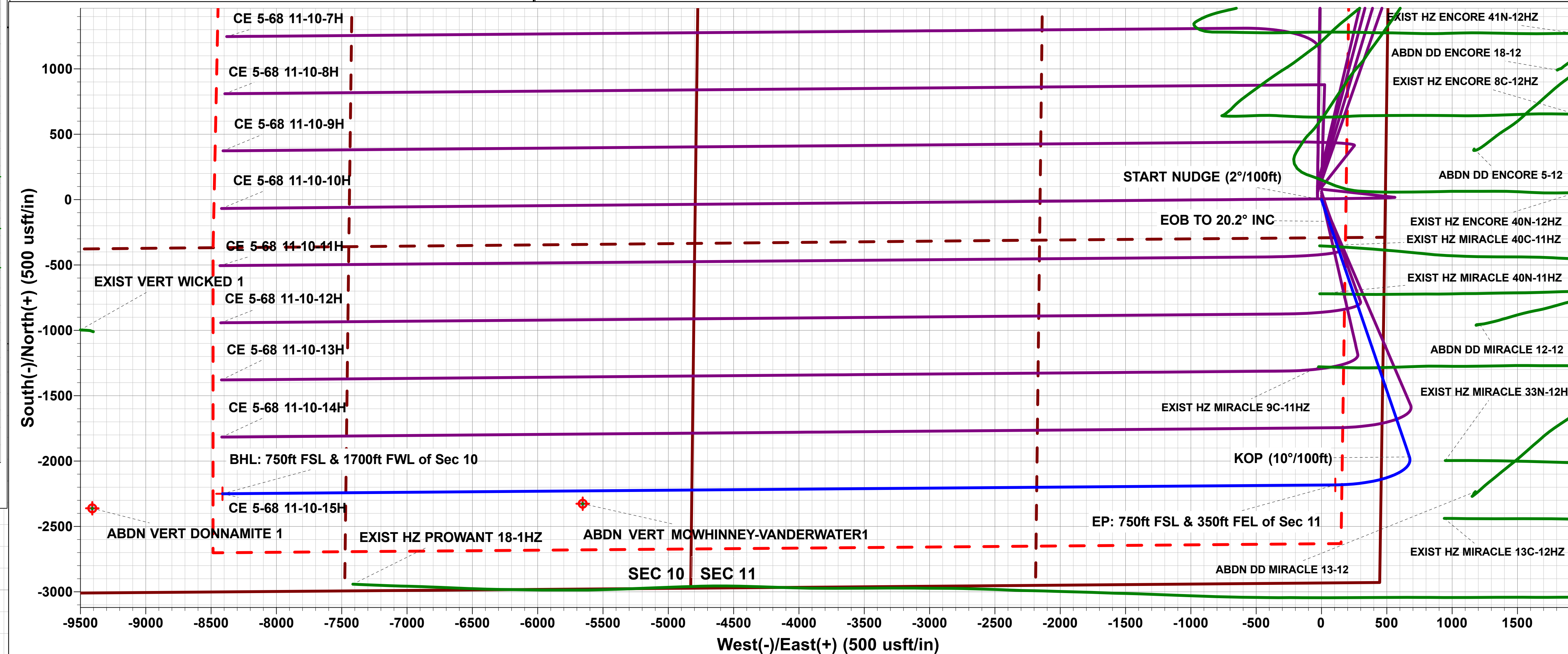


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - CE 5-68 11-10-15H	7064.00	-2249.92	-8412.67	1392270.47	3140307.87	40.409090	-104.996150
EP - CE 5-68 11-10-15H	7064.00	-2182.14	105.82	1392389.56	3148825.80	40.409280	-104.965560



PROPOSED LOCAL COORDINATES:
 SHL: 2348ft FNL & 488ft FEL of Sec 11
 EP: 750ft FSL & 350ft FEL of Sec 11
 BHL: 750ft FSL & 1700ft FWL of Sec 10
SETBACK BOUNDARY
 300ft FSL of Sec 11 & 300ft FNL of Sec 2
 300ft FEL of Sec 2/11 & 300ft FW 1/4 1/4 Sec 10/3



Database:	Database 1	Local Co-ordinate Reference:	Well CE 5-68 11-10-15H
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5000.00usft
Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #1		

Project	LARIMER 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	SEC. 11 T5N R68W 6th P.M.				
Site Position:		Northing:	1,394,672.84 usft	Latitude:	40.415550
From:	Lat/Long	Easting:	3,148,675.60 usft	Longitude:	-104.966050
Position Uncertainty:	0.00 usft	Slot Radius:	1.10 ft	Grid Convergence:	0.35 °

Well	CE 5-68 11-10-15H					
Well Position	+N/-S	-102.01 usft	Northing:	1,394,571.02 usft	Latitude:	40.415270
	+E/-W	30.63 usft	Easting:	3,148,706.84 usft	Longitude:	-104.965940
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,980.00 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2024-07-18	7.64	66.51	51,613.82687866

Design	PROPOSAL #1			
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	255.03

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
0.00	0.00	0.00	0.00	-5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	-4,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,310.06	20.20	161.10	1,289.26	-3,710.74	-166.73	57.07	2.00	2.00	0.00	161.10	
6,823.95	20.20	161.10	6,463.97	1,463.97	-1,968.17	673.66	0.00	0.00	0.00	0.00	
7,786.65	90.00	269.54	7,064.00	2,064.00	-2,182.14	105.82	10.00	7.25	11.26	107.38	EP - CE 5-68 11-10
16,305.41	90.00	269.54	7,064.00	2,064.00	-2,249.92	-8,412.67	0.00	0.00	0.00	0.00	BHL - CE 5-68 11-1

Database:	Database 1	Local Co-ordinate Reference:	Well CE 5-68 11-10-15H
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5000.00usft
Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	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: 2348ft FNL & 488ft FEL of Sec 11										
0.00	0.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
START NUDGE (2°/100ft)										
300.00	0.00	0.00	300.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	161.10	399.98	4,600.02	-1.65	0.57	-0.12	2.00	2.00	0.00
500.00	4.00	161.10	499.84	4,500.16	-6.60	2.26	-0.48	2.00	2.00	0.00
Upper Pierre										
534.26	4.69	161.10	534.00	4,466.00	-9.06	3.10	-0.65	2.00	2.00	0.00
600.00	6.00	161.10	599.45	4,400.55	-14.85	5.08	-1.07	2.00	2.00	0.00
700.00	8.00	161.10	698.70	4,301.30	-26.38	9.03	-1.91	2.00	2.00	0.00
800.00	10.00	161.10	797.47	4,202.53	-41.18	14.09	-2.98	2.00	2.00	0.00
900.00	12.00	161.10	895.62	4,104.38	-59.23	20.27	-4.28	2.00	2.00	0.00
1,000.00	14.00	161.10	993.06	4,006.94	-80.51	27.56	-5.82	2.00	2.00	0.00
Pierre										
1,042.28	14.85	161.10	1,034.00	3,966.00	-90.47	30.97	-6.54	2.00	2.00	0.00
1,100.00	16.00	161.10	1,089.64	3,910.36	-105.00	35.94	-7.59	2.00	2.00	0.00
1,200.00	18.00	161.10	1,185.27	3,814.73	-132.66	45.41	-9.59	2.00	2.00	0.00
1,300.00	20.00	161.10	1,279.82	3,720.18	-163.46	55.95	-11.82	2.00	2.00	0.00
EOB TO 20.2° INC										
1,310.06	20.20	161.10	1,289.26	3,710.74	-166.73	57.07	-12.05	2.00	2.00	0.00
1,400.00	20.20	161.10	1,373.67	3,626.33	-196.11	67.13	-14.18	0.00	0.00	0.00
1,500.00	20.20	161.10	1,467.52	3,532.48	-228.78	78.31	-16.54	0.00	0.00	0.00
1,600.00	20.20	161.10	1,561.37	3,438.63	-261.46	89.49	-18.90	0.00	0.00	0.00
1,700.00	20.20	161.10	1,655.22	3,344.78	-294.13	100.67	-21.26	0.00	0.00	0.00
1,800.00	20.20	161.10	1,749.06	3,250.94	-326.80	111.86	-23.63	0.00	0.00	0.00
1,900.00	20.20	161.10	1,842.91	3,157.09	-359.47	123.04	-25.99	0.00	0.00	0.00
2,000.00	20.20	161.10	1,936.76	3,063.24	-392.14	134.22	-28.35	0.00	0.00	0.00
2,100.00	20.20	161.10	2,030.61	2,969.39	-424.81	145.40	-30.71	0.00	0.00	0.00
2,200.00	20.20	161.10	2,124.46	2,875.54	-457.48	156.59	-33.07	0.00	0.00	0.00
2,300.00	20.20	161.10	2,218.31	2,781.69	-490.15	167.77	-35.44	0.00	0.00	0.00
2,400.00	20.20	161.10	2,312.16	2,687.84	-522.82	178.95	-37.80	0.00	0.00	0.00
2,500.00	20.20	161.10	2,406.00	2,594.00	-555.49	190.13	-40.16	0.00	0.00	0.00
2,600.00	20.20	161.10	2,499.85	2,500.15	-588.16	201.32	-42.52	0.00	0.00	0.00
2,700.00	20.20	161.10	2,593.70	2,406.30	-620.84	212.50	-44.88	0.00	0.00	0.00
2,800.00	20.20	161.10	2,687.55	2,312.45	-653.51	223.68	-47.25	0.00	0.00	0.00
2,900.00	20.20	161.10	2,781.40	2,218.60	-686.18	234.86	-49.61	0.00	0.00	0.00
3,000.00	20.20	161.10	2,875.25	2,124.75	-718.85	246.05	-51.97	0.00	0.00	0.00
3,100.00	20.20	161.10	2,969.10	2,030.90	-751.52	257.23	-54.33	0.00	0.00	0.00
3,200.00	20.20	161.10	3,062.94	1,937.06	-784.19	268.41	-56.69	0.00	0.00	0.00
3,300.00	20.20	161.10	3,156.79	1,843.21	-816.86	279.60	-59.05	0.00	0.00	0.00
3,400.00	20.20	161.10	3,250.64	1,749.36	-849.53	290.78	-61.42	0.00	0.00	0.00
3,500.00	20.20	161.10	3,344.49	1,655.51	-882.20	301.96	-63.78	0.00	0.00	0.00
3,600.00	20.20	161.10	3,438.34	1,561.66	-914.87	313.14	-66.14	0.00	0.00	0.00
Parkman										
3,691.28	20.20	161.10	3,524.00	1,476.00	-944.69	323.35	-68.30	0.00	0.00	0.00
3,700.00	20.20	161.10	3,532.19	1,467.81	-947.54	324.33	-68.50	0.00	0.00	0.00
3,800.00	20.20	161.10	3,626.04	1,373.96	-980.22	335.51	-70.86	0.00	0.00	0.00
3,900.00	20.20	161.10	3,719.89	1,280.11	-1,012.89	346.69	-73.23	0.00	0.00	0.00
4,000.00	20.20	161.10	3,813.73	1,186.27	-1,045.56	357.87	-75.59	0.00	0.00	0.00
4,100.00	20.20	161.10	3,907.58	1,092.42	-1,078.23	369.06	-77.95	0.00	0.00	0.00
4,200.00	20.20	161.10	4,001.43	998.57	-1,110.90	380.24	-80.31	0.00	0.00	0.00

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Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	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)
4,300.00	20.20	161.10	4,095.28	904.72	-1,143.57	391.42	-82.67	0.00	0.00	0.00
Sussex										
4,325.28	20.20	161.10	4,119.00	881.00	-1,151.83	394.25	-83.27	0.00	0.00	0.00
4,400.00	20.20	161.10	4,189.13	810.87	-1,176.24	402.60	-85.04	0.00	0.00	0.00
4,500.00	20.20	161.10	4,282.98	717.02	-1,208.91	413.79	-87.40	0.00	0.00	0.00
4,600.00	20.20	161.10	4,376.83	623.17	-1,241.58	424.97	-89.76	0.00	0.00	0.00
4,700.00	20.20	161.10	4,470.67	529.33	-1,274.25	436.15	-92.12	0.00	0.00	0.00
4,800.00	20.20	161.10	4,564.52	435.48	-1,306.92	447.33	-94.48	0.00	0.00	0.00
Shannon										
4,803.71	20.20	161.10	4,568.00	432.00	-1,308.14	447.75	-94.57	0.00	0.00	0.00
4,900.00	20.20	161.10	4,658.37	341.63	-1,339.60	458.52	-96.85	0.00	0.00	0.00
5,000.00	20.20	161.10	4,752.22	247.78	-1,372.27	469.70	-99.21	0.00	0.00	0.00
5,100.00	20.20	161.10	4,846.07	153.93	-1,404.94	480.88	-101.57	0.00	0.00	0.00
5,200.00	20.20	161.10	4,939.92	60.08	-1,437.61	492.07	-103.93	0.00	0.00	0.00
5,300.00	20.20	161.10	5,033.77	-33.77	-1,470.28	503.25	-106.29	0.00	0.00	0.00
5,400.00	20.20	161.10	5,127.61	-127.61	-1,502.95	514.43	-108.66	0.00	0.00	0.00
5,500.00	20.20	161.10	5,221.46	-221.46	-1,535.62	525.61	-111.02	0.00	0.00	0.00
5,600.00	20.20	161.10	5,315.31	-315.31	-1,568.29	536.80	-113.38	0.00	0.00	0.00
5,700.00	20.20	161.10	5,409.16	-409.16	-1,600.96	547.98	-115.74	0.00	0.00	0.00
5,800.00	20.20	161.10	5,503.01	-503.01	-1,633.63	559.16	-118.10	0.00	0.00	0.00
5,900.00	20.20	161.10	5,596.86	-596.86	-1,666.31	570.34	-120.47	0.00	0.00	0.00
6,000.00	20.20	161.10	5,690.71	-690.71	-1,698.98	581.53	-122.83	0.00	0.00	0.00
6,100.00	20.20	161.10	5,784.55	-784.55	-1,731.65	592.71	-125.19	0.00	0.00	0.00
6,200.00	20.20	161.10	5,878.40	-878.40	-1,764.32	603.89	-127.55	0.00	0.00	0.00
6,300.00	20.20	161.10	5,972.25	-972.25	-1,796.99	615.07	-129.91	0.00	0.00	0.00
6,400.00	20.20	161.10	6,066.10	-1,066.10	-1,829.66	626.26	-132.27	0.00	0.00	0.00
6,500.00	20.20	161.10	6,159.95	-1,159.95	-1,862.33	637.44	-134.64	0.00	0.00	0.00
6,600.00	20.20	161.10	6,253.80	-1,253.80	-1,895.00	648.62	-137.00	0.00	0.00	0.00
6,700.00	20.20	161.10	6,347.65	-1,347.65	-1,927.67	659.80	-139.36	0.00	0.00	0.00
6,800.00	20.20	161.10	6,441.49	-1,441.49	-1,960.34	670.99	-141.72	0.00	0.00	0.00
KOP (10°/100ft)										
6,823.95	20.20	161.10	6,463.97	-1,463.97	-1,968.17	673.66	-142.29	0.00	0.00	0.00
6,900.00	19.29	183.59	6,535.65	-1,535.65	-1,993.16	677.14	-139.18	10.00	-1.20	29.56
7,000.00	22.22	210.85	6,629.37	-1,629.37	-2,025.96	666.38	-120.32	10.00	2.94	27.27
7,100.00	28.43	229.39	6,719.86	-1,719.86	-2,057.77	638.54	-85.20	10.00	6.20	18.53
7,200.00	36.25	241.12	6,804.37	-1,804.37	-2,087.62	594.47	-34.92	10.00	7.83	11.73
Sharon Springs										
7,261.17	41.45	246.26	6,852.00	-1,852.00	-2,104.52	560.07	2.68	10.00	8.50	8.41
7,300.00	44.85	249.00	6,880.33	-1,880.33	-2,114.61	535.51	29.01	10.00	8.76	7.06
Niobrara										
7,347.91	49.13	251.96	6,913.00	-1,913.00	-2,126.27	502.49	63.92	10.00	8.92	6.17
7,400.00	53.85	254.77	6,945.43	-1,945.43	-2,137.90	463.44	104.65	10.00	9.07	5.39
7,500.00	63.07	259.33	6,997.70	-1,997.70	-2,156.81	380.47	189.69	10.00	9.22	4.56
7,600.00	72.41	263.19	7,035.55	-2,035.55	-2,170.75	289.10	281.56	10.00	9.34	3.86
7,700.00	81.82	266.67	7,057.83	-2,057.83	-2,179.30	192.12	377.46	10.00	9.41	3.48
EP: 750ft FSL & 350ft FEL of Sec 11										
7,786.65	90.00	269.54	7,064.00	-2,064.00	-2,182.14	105.82	461.56	10.00	9.44	3.32
7,800.00	90.00	269.54	7,064.00	-2,064.00	-2,182.25	92.47	474.48	0.00	0.00	0.00
7,900.00	90.00	269.54	7,064.00	-2,064.00	-2,183.04	-7.53	571.29	0.00	0.00	0.00
8,000.00	90.00	269.54	7,064.00	-2,064.00	-2,183.84	-107.52	668.10	0.00	0.00	0.00
8,100.00	90.00	269.54	7,064.00	-2,064.00	-2,184.63	-207.52	764.91	0.00	0.00	0.00
8,200.00	90.00	269.54	7,064.00	-2,064.00	-2,185.43	-307.52	861.71	0.00	0.00	0.00
8,300.00	90.00	269.54	7,064.00	-2,064.00	-2,186.22	-407.51	958.52	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well CE 5-68 11-10-15H
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5000.00usft
Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	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)
8,400.00	90.00	269.54	7,064.00	-2,064.00	-2,187.02	-507.51	1,055.33	0.00	0.00	0.00
8,500.00	90.00	269.54	7,064.00	-2,064.00	-2,187.82	-607.51	1,152.13	0.00	0.00	0.00
8,600.00	90.00	269.54	7,064.00	-2,064.00	-2,188.61	-707.50	1,248.94	0.00	0.00	0.00
8,700.00	90.00	269.54	7,064.00	-2,064.00	-2,189.41	-807.50	1,345.75	0.00	0.00	0.00
8,800.00	90.00	269.54	7,064.00	-2,064.00	-2,190.20	-907.50	1,442.56	0.00	0.00	0.00
8,900.00	90.00	269.54	7,064.00	-2,064.00	-2,191.00	-1,007.49	1,539.36	0.00	0.00	0.00
9,000.00	90.00	269.54	7,064.00	-2,064.00	-2,191.79	-1,107.49	1,636.17	0.00	0.00	0.00
9,100.00	90.00	269.54	7,064.00	-2,064.00	-2,192.59	-1,207.49	1,732.98	0.00	0.00	0.00
9,200.00	90.00	269.54	7,064.00	-2,064.00	-2,193.39	-1,307.49	1,829.79	0.00	0.00	0.00
9,300.00	90.00	269.54	7,064.00	-2,064.00	-2,194.18	-1,407.48	1,926.59	0.00	0.00	0.00
9,400.00	90.00	269.54	7,064.00	-2,064.00	-2,194.98	-1,507.48	2,023.40	0.00	0.00	0.00
9,500.00	90.00	269.54	7,064.00	-2,064.00	-2,195.77	-1,607.48	2,120.21	0.00	0.00	0.00
9,600.00	90.00	269.54	7,064.00	-2,064.00	-2,196.57	-1,707.47	2,217.01	0.00	0.00	0.00
9,700.00	90.00	269.54	7,064.00	-2,064.00	-2,197.36	-1,807.47	2,313.82	0.00	0.00	0.00
9,800.00	90.00	269.54	7,064.00	-2,064.00	-2,198.16	-1,907.47	2,410.63	0.00	0.00	0.00
9,900.00	90.00	269.54	7,064.00	-2,064.00	-2,198.96	-2,007.46	2,507.44	0.00	0.00	0.00
10,000.00	90.00	269.54	7,064.00	-2,064.00	-2,199.75	-2,107.46	2,604.24	0.00	0.00	0.00
10,100.00	90.00	269.54	7,064.00	-2,064.00	-2,200.55	-2,207.46	2,701.05	0.00	0.00	0.00
10,200.00	90.00	269.54	7,064.00	-2,064.00	-2,201.34	-2,307.45	2,797.86	0.00	0.00	0.00
10,300.00	90.00	269.54	7,064.00	-2,064.00	-2,202.14	-2,407.45	2,894.67	0.00	0.00	0.00
10,400.00	90.00	269.54	7,064.00	-2,064.00	-2,202.93	-2,507.45	2,991.47	0.00	0.00	0.00
10,500.00	90.00	269.54	7,064.00	-2,064.00	-2,203.73	-2,607.44	3,088.28	0.00	0.00	0.00
10,600.00	90.00	269.54	7,064.00	-2,064.00	-2,204.53	-2,707.44	3,185.09	0.00	0.00	0.00
10,700.00	90.00	269.54	7,064.00	-2,064.00	-2,205.32	-2,807.44	3,281.89	0.00	0.00	0.00
10,800.00	90.00	269.54	7,064.00	-2,064.00	-2,206.12	-2,907.43	3,378.70	0.00	0.00	0.00
10,900.00	90.00	269.54	7,064.00	-2,064.00	-2,206.91	-3,007.43	3,475.51	0.00	0.00	0.00
11,000.00	90.00	269.54	7,064.00	-2,064.00	-2,207.71	-3,107.43	3,572.32	0.00	0.00	0.00
11,100.00	90.00	269.54	7,064.00	-2,064.00	-2,208.50	-3,207.43	3,669.12	0.00	0.00	0.00
11,200.00	90.00	269.54	7,064.00	-2,064.00	-2,209.30	-3,307.42	3,765.93	0.00	0.00	0.00
11,300.00	90.00	269.54	7,064.00	-2,064.00	-2,210.10	-3,407.42	3,862.74	0.00	0.00	0.00
11,400.00	90.00	269.54	7,064.00	-2,064.00	-2,210.89	-3,507.42	3,959.55	0.00	0.00	0.00
11,500.00	90.00	269.54	7,064.00	-2,064.00	-2,211.69	-3,607.41	4,056.35	0.00	0.00	0.00
11,600.00	90.00	269.54	7,064.00	-2,064.00	-2,212.48	-3,707.41	4,153.16	0.00	0.00	0.00
11,700.00	90.00	269.54	7,064.00	-2,064.00	-2,213.28	-3,807.41	4,249.97	0.00	0.00	0.00
11,800.00	90.00	269.54	7,064.00	-2,064.00	-2,214.07	-3,907.40	4,346.77	0.00	0.00	0.00
11,900.00	90.00	269.54	7,064.00	-2,064.00	-2,214.87	-4,007.40	4,443.58	0.00	0.00	0.00
12,000.00	90.00	269.54	7,064.00	-2,064.00	-2,215.67	-4,107.40	4,540.39	0.00	0.00	0.00
12,100.00	90.00	269.54	7,064.00	-2,064.00	-2,216.46	-4,207.39	4,637.20	0.00	0.00	0.00
12,200.00	90.00	269.54	7,064.00	-2,064.00	-2,217.26	-4,307.39	4,734.00	0.00	0.00	0.00
12,300.00	90.00	269.54	7,064.00	-2,064.00	-2,218.05	-4,407.39	4,830.81	0.00	0.00	0.00
12,400.00	90.00	269.54	7,064.00	-2,064.00	-2,218.85	-4,507.38	4,927.62	0.00	0.00	0.00
12,500.00	90.00	269.54	7,064.00	-2,064.00	-2,219.64	-4,607.38	5,024.43	0.00	0.00	0.00
12,600.00	90.00	269.54	7,064.00	-2,064.00	-2,220.44	-4,707.38	5,121.23	0.00	0.00	0.00
12,700.00	90.00	269.54	7,064.00	-2,064.00	-2,221.24	-4,807.37	5,218.04	0.00	0.00	0.00
12,800.00	90.00	269.54	7,064.00	-2,064.00	-2,222.03	-4,907.37	5,314.85	0.00	0.00	0.00
12,900.00	90.00	269.54	7,064.00	-2,064.00	-2,222.83	-5,007.37	5,411.65	0.00	0.00	0.00
13,000.00	90.00	269.54	7,064.00	-2,064.00	-2,223.62	-5,107.37	5,508.46	0.00	0.00	0.00
13,100.00	90.00	269.54	7,064.00	-2,064.00	-2,224.42	-5,207.36	5,605.27	0.00	0.00	0.00
13,200.00	90.00	269.54	7,064.00	-2,064.00	-2,225.21	-5,307.36	5,702.08	0.00	0.00	0.00
13,300.00	90.00	269.54	7,064.00	-2,064.00	-2,226.01	-5,407.36	5,798.88	0.00	0.00	0.00
13,400.00	90.00	269.54	7,064.00	-2,064.00	-2,226.81	-5,507.35	5,895.69	0.00	0.00	0.00
13,500.00	90.00	269.54	7,064.00	-2,064.00	-2,227.60	-5,607.35	5,992.50	0.00	0.00	0.00
13,600.00	90.00	269.54	7,064.00	-2,064.00	-2,228.40	-5,707.35	6,089.31	0.00	0.00	0.00
13,700.00	90.00	269.54	7,064.00	-2,064.00	-2,229.19	-5,807.34	6,186.11	0.00	0.00	0.00

Database:	Database 1	Local Co-ordinate Reference:	Well CE 5-68 11-10-15H
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5000.00usft
Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	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)
13,800.00	90.00	269.54	7,064.00	-2,064.00	-2,229.99	-5,907.34	6,282.92	0.00	0.00	0.00
13,900.00	90.00	269.54	7,064.00	-2,064.00	-2,230.78	-6,007.34	6,379.73	0.00	0.00	0.00
14,000.00	90.00	269.54	7,064.00	-2,064.00	-2,231.58	-6,107.33	6,476.54	0.00	0.00	0.00
14,100.00	90.00	269.54	7,064.00	-2,064.00	-2,232.38	-6,207.33	6,573.34	0.00	0.00	0.00
14,200.00	90.00	269.54	7,064.00	-2,064.00	-2,233.17	-6,307.33	6,670.15	0.00	0.00	0.00
14,300.00	90.00	269.54	7,064.00	-2,064.00	-2,233.97	-6,407.32	6,766.96	0.00	0.00	0.00
14,400.00	90.00	269.54	7,064.00	-2,064.00	-2,234.76	-6,507.32	6,863.76	0.00	0.00	0.00
14,500.00	90.00	269.54	7,064.00	-2,064.00	-2,235.56	-6,607.32	6,960.57	0.00	0.00	0.00
14,600.00	90.00	269.54	7,064.00	-2,064.00	-2,236.35	-6,707.31	7,057.38	0.00	0.00	0.00
14,700.00	90.00	269.54	7,064.00	-2,064.00	-2,237.15	-6,807.31	7,154.19	0.00	0.00	0.00
14,800.00	90.00	269.54	7,064.00	-2,064.00	-2,237.95	-6,907.31	7,250.99	0.00	0.00	0.00
14,900.00	90.00	269.54	7,064.00	-2,064.00	-2,238.74	-7,007.30	7,347.80	0.00	0.00	0.00
15,000.00	90.00	269.54	7,064.00	-2,064.00	-2,239.54	-7,107.30	7,444.61	0.00	0.00	0.00
15,100.00	90.00	269.54	7,064.00	-2,064.00	-2,240.33	-7,207.30	7,541.42	0.00	0.00	0.00
15,200.00	90.00	269.54	7,064.00	-2,064.00	-2,241.13	-7,307.30	7,638.22	0.00	0.00	0.00
15,300.00	90.00	269.54	7,064.00	-2,064.00	-2,241.92	-7,407.29	7,735.03	0.00	0.00	0.00
15,400.00	90.00	269.54	7,064.00	-2,064.00	-2,242.72	-7,507.29	7,831.84	0.00	0.00	0.00
15,500.00	90.00	269.54	7,064.00	-2,064.00	-2,243.52	-7,607.29	7,928.64	0.00	0.00	0.00
15,600.00	90.00	269.54	7,064.00	-2,064.00	-2,244.31	-7,707.28	8,025.45	0.00	0.00	0.00
15,700.00	90.00	269.54	7,064.00	-2,064.00	-2,245.11	-7,807.28	8,122.26	0.00	0.00	0.00
15,800.00	90.00	269.54	7,064.00	-2,064.00	-2,245.90	-7,907.28	8,219.07	0.00	0.00	0.00
15,900.00	90.00	269.54	7,064.00	-2,064.00	-2,246.70	-8,007.27	8,315.87	0.00	0.00	0.00
16,000.00	90.00	269.54	7,064.00	-2,064.00	-2,247.49	-8,107.27	8,412.68	0.00	0.00	0.00
16,100.00	90.00	269.54	7,064.00	-2,064.00	-2,248.29	-8,207.27	8,509.49	0.00	0.00	0.00
16,200.00	90.00	269.54	7,064.00	-2,064.00	-2,249.08	-8,307.26	8,606.30	0.00	0.00	0.00
16,300.00	90.00	269.54	7,064.00	-2,064.00	-2,249.88	-8,407.26	8,703.10	0.00	0.00	0.00
BHL: 750ft FSL & 1700ft FWL of Sec 10										
16,305.41	90.00	269.54	7,064.00	-2,064.00	-2,249.92	-8,412.67	8,708.34	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
534.26	534.00	Upper Pierre			
1,042.28	1,034.00	Pierre			
3,691.28	3,524.00	Parkman			
4,325.28	4,119.00	Sussex			
4,803.71	4,568.00	Shannon			
7,261.17	6,852.00	Sharon Springs			
7,347.91	6,913.00	Niobrara			

Database:	Database 1	Local Co-ordinate Reference:	Well CE 5-68 11-10-15H
Company:	BISON IV OPERATING	TVD Reference:	KBE @ 5000.00usft
Project:	LARIMER COUNTY, COLORADO (NAD 83)	MD Reference:	KBE @ 5000.00usft
Site:	SEC. 11 T5N R68W 6th P.M.	North Reference:	True
Well:	CE 5-68 11-10-15H	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)	
0.00	0.00	0.00	0.00	SHL: 2348ft FNL & 488ft FEL of Sec 11
300.00	300.00	0.00	0.00	START NUDGE (2°/100ft)
1,310.06	1,289.26	-166.73	57.07	EOB TO 20.2° INC
6,823.95	6,463.97	-1,968.17	673.66	KOP (10°/100ft)
7,786.65	7,064.00	-2,182.14	105.82	EP: 750ft FSL & 350ft FEL of Sec 11
16,305.41	7,064.00	-2,249.92	-8,412.67	BHL: 750ft FSL & 1700ft FWL of Sec 10