



BISON IV OPERATING

LARIMER COUNTY, COLORADO (NAD 83)

SEC. 11 T5N R68W 6th P.M.

CE 5-68 11-10-8H

ORIGINAL WELLBORE

PROPOSAL #1

Anticollision Report

19 July, 2024



Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 3,280.83usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2024-07-19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,478.21	PROPOSAL #1 (ORIGINAL WELLBORE)	OWSG (Rev2) MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SEC. 11 T5N R68W 6th P.M.						
ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1	6,740.81	6,900.10	1,795.12	1,739.82	32.457	CC, ES
ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1	6,850.00	7,005.82	1,805.62	1,749.65	32.263	SF
ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1	6,744.28	7,029.08	1,391.68	1,335.22	24.650	CC
ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1	6,750.00	7,034.40	1,391.70	1,335.21	24.636	ES
ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1	6,850.00	7,129.30	1,399.98	1,342.94	24.546	SF
ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1	6,735.34	7,154.02	1,248.27	1,177.32	17.595	CC, ES
ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1	6,800.00	7,218.72	1,251.62	1,180.37	17.568	SF
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,670.98	7,003.86	2,173.01	2,102.56	30.846	CC
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,731.55	7,059.14	2,173.08	2,102.33	30.712	ES
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,850.00	7,168.10	2,180.09	2,108.81	30.582	SF
ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1	3,394.94	3,957.47	2,937.68	2,894.37	67.819	CC
ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1	3,500.00	4,025.42	2,938.60	2,894.13	66.089	ES
ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1	6,041.55	6,170.72	3,276.88	3,205.08	45.636	SF
ABDN VERT DONNAMITE 1 - Wellbore #1 - Design #1						Out of range
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	8,468.58	7,256.00	2,088.20	1,897.98	10.978	CC
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	8,500.00	7,256.00	2,088.44	1,897.46	10.935	ES
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	9,000.00	7,256.00	2,154.76	1,952.12	10.633	SF
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	12,764.35	7,210.99	3,158.46	2,858.68	10.536	CC
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	12,800.00	7,210.99	3,158.66	2,858.01	10.506	ES
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	13,300.00	7,210.98	3,203.56	2,892.84	10.310	SF
ABDN VERT MEAN 1 - Wellbore #1 - Design #1	15,478.21	6,727.00	2,999.25	2,720.98	10.778	CC, ES, SF
ABDN VERT NASTY 1 - Wellbore #1 - Design #1						Out of range
ABDN VERT RAUSLER 1 - Wellbore #1 - Design #1						Out of range
CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	29.14	27.42	16.938	CC, ES
CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOS	15,478.21	15,877.72	883.60	419.75	1.905	SF
CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	47.36	45.64	27.524	CC, ES
CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOS	15,478.21	15,554.81	1,314.77	856.46	2.869	SF
CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	61.93	60.21	35.992	CC, ES
CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOS	15,478.21	15,571.72	1,761.90	1,303.03	3.840	SF
CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	80.15	78.42	46.578	CC, ES
CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOS	15,478.21	15,721.69	2,190.67	1,730.01	4.756	SF
CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	94.72	93.00	55.047	CC, ES
CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOS	15,478.21	16,336.09	2,626.30	2,156.46	5.590	SF
CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	109.29	107.56	63.513	CC, ES
CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOS	15,478.21	16,263.31	3,065.51	2,596.42	6.535	SF
CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSA	4,102.22	4,178.89	39.20	5.12	1.150	Level 3, CC, ES, SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SEC. 11 T5N R68W 6th P.M.						
CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSA	4,522.26	4,599.18	41.05	3.22	1.085	Level 3, CC, ES, SF
CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSA	5,689.02	5,755.15	45.45	-2.47	0.948	Level 3, CC
CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSA	5,700.00	5,765.97	45.49	-2.54	0.947	Level 3, ES, SF
CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSA	300.00	300.00	14.57	12.85	8.469	CC, ES
CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSA	15,478.21	15,478.00	474.56	48.55	1.114	Level 3, SF
CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL	2,546.93	2,574.13	30.64	10.50	1.521	CC, ES, SF
CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL	300.00	300.00	37.63	35.91	21.869	CC
CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL	2,717.03	2,751.97	47.88	26.22	2.211	ES, SF
CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL	300.00	300.00	50.43	48.71	29.311	CC, ES
CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL	3,602.95	3,668.64	98.39	69.15	3.365	SF
CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL	300.00	300.00	62.64	60.92	36.407	CC, ES
CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL	15,478.21	16,598.86	1,776.33	1,309.10	3.802	SF
EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #	7,278.03	8,068.44	981.07	911.18	14.036	CC, ES
EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #	7,900.00	7,483.81	1,016.84	942.68	13.710	SF
EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore	7,244.62	7,848.63	1,324.76	1,255.65	19.169	CC
EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore	7,250.00	7,844.93	1,324.76	1,255.65	19.167	ES
EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore	8,100.00	7,294.56	1,402.07	1,325.32	18.267	SF
EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore	4,811.15	4,974.34	50.01	1.98	1.041	Level 3, CC, ES, SF
EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore	6,991.37	7,853.13	402.36	333.22	5.819	CC, ES, SF
EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #	7,378.35	7,716.59	236.32	171.65	3.654	CC, ES
EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #	7,400.00	7,702.00	236.87	172.03	3.653	SF
EXIST HZ MIRACLE 13C-12HZ - Wellbore #1 - Wellbore						Out of range
EXIST HZ MIRACLE 33N-12HZ - Wellbore #1 - Wellbore	6,889.09	11,657.00	3,037.37	2,887.90	20.322	CC, ES
EXIST HZ MIRACLE 33N-12HZ - Wellbore #1 - Wellbore	6,900.00	11,657.00	3,037.42	2,887.93	20.320	SF
EXIST HZ MIRACLE 40C-11HZ - ORIGINAL WELLBORE						Out of range
EXIST HZ MIRACLE 40C-11HZ - SIDETRACK - SIDETR	7,200.00	13,628.00	1,248.82	1,049.66	6.270	SF
EXIST HZ MIRACLE 40C-11HZ - SIDETRACK - SIDETR	7,206.26	13,628.00	1,248.80	1,049.64	6.270	CC, ES
EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore	7,133.07	13,558.00	1,602.73	1,401.95	7.983	CC, ES
EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore	7,150.00	13,558.00	1,602.83	1,402.03	7.982	SF
EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #	7,223.03	13,682.00	2,167.01	1,965.60	10.759	CC, ES
EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #	7,250.00	13,682.00	2,167.23	1,965.72	10.755	SF
EXIST HZ PROWANT 18-1HZ - Wellbore #1 - Wellbore #						Out of range
EXIST VERT JEFFERS 2-1 - Wellbore #1 - Design #1						Out of range
EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1	11,002.75	7,248.99	2,093.59	1,839.97	8.255	CC
EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1	11,100.00	7,248.99	2,095.85	1,839.47	8.175	ES
EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1	11,400.00	7,248.99	2,130.95	1,867.54	8.090	SF
EXIST VERT WICKED 1 - Wellbore #1 - Wellbore #1	15,478.21	7,105.23	2,288.10	2,102.19	12.307	CC, ES, SF

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1														Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD														Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:			Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
500.00	499.84	1,490.19	1,461.25	1.58	6.81	59.97	1,534.34	2,716.60	3,262.74	3,255.60	7.15	456.620			
600.00	599.45	1,595.56	1,561.83	1.95	7.46	60.83	1,515.81	2,691.26	3,228.99	3,221.09	7.91	408.384			
700.00	698.70	1,682.64	1,644.81	2.33	8.00	61.77	1,499.16	2,670.76	3,193.36	3,184.75	8.61	370.800			
715.65	714.19	1,691.00	1,652.78	2.39	8.05	61.91	1,497.55	2,668.81	3,187.67	3,178.96	8.71	366.056			
800.00	797.66	1,741.78	1,701.25	2.73	8.36	62.09	1,487.80	2,657.23	3,157.35	3,148.13	9.22	342.462			
900.00	896.61	1,804.69	1,761.48	3.13	8.75	62.34	1,475.79	2,643.58	3,122.41	3,112.56	9.85	317.010			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
1,000.00	995.56	1,942.85	1,893.80	3.54	9.59	62.88	1,449.57	2,613.77	3,088.01	3,077.23	10.78	286.414		
1,100.00	1,094.50	2,027.25	1,974.39	3.96	10.11	63.19	1,434.28	2,593.90	3,052.24	3,040.72	11.51	265.129		
1,200.00	1,193.45	2,113.76	2,057.16	4.38	10.65	63.49	1,419.77	2,573.34	3,016.95	3,004.70	12.26	246.177		
1,300.00	1,292.40	2,249.32	2,186.49	4.79	11.50	64.00	1,395.75	2,540.61	2,980.96	2,967.78	13.19	226.077		
1,400.00	1,391.35	2,316.00	2,250.09	5.22	11.92	64.26	1,383.98	2,524.38	2,944.98	2,931.11	13.87	212.338		
1,500.00	1,490.30	2,494.13	2,419.36	5.64	13.08	64.91	1,353.61	2,478.01	2,907.75	2,892.80	14.95	194.513		
1,600.00	1,589.25	2,585.00	2,505.38	6.06	13.69	65.23	1,338.72	2,452.80	2,869.59	2,853.87	15.72	182.526		
1,700.00	1,688.20	2,625.79	2,544.12	6.48	13.95	65.38	1,332.17	2,441.80	2,832.34	2,816.01	16.33	173.461		
1,800.00	1,787.15	2,676.00	2,592.10	6.91	14.27	65.56	1,324.57	2,429.11	2,796.86	2,779.88	16.97	164.799		
1,900.00	1,886.10	2,755.22	2,667.96	7.33	14.76	65.89	1,311.58	2,410.39	2,762.48	2,744.76	17.72	155.908		
2,000.00	1,985.05	2,871.09	2,778.55	7.75	15.50	66.44	1,289.39	2,383.90	2,727.79	2,709.18	18.60	146.616		
2,100.00	2,084.00	2,967.84	2,870.70	8.18	16.11	66.91	1,270.90	2,360.89	2,692.46	2,673.03	19.43	138.575		
2,200.00	2,182.95	3,034.00	2,933.96	8.60	16.53	67.21	1,259.59	2,345.17	2,658.06	2,637.91	20.15	131.902		
2,300.00	2,281.90	3,159.13	3,053.44	9.03	17.33	67.79	1,238.13	2,314.85	2,623.40	2,602.33	21.07	124.527		
2,400.00	2,380.85	3,211.00	3,102.86	9.45	17.66	68.06	1,228.51	2,302.36	2,588.75	2,566.99	21.76	118.979		
2,500.00	2,479.80	3,300.00	3,188.06	9.88	18.21	68.51	1,212.94	2,281.89	2,555.35	2,532.78	22.57	113.225		
2,600.00	2,578.74	3,414.33	3,297.59	10.31	18.92	69.08	1,193.55	2,255.49	2,522.33	2,498.87	23.46	107.519		
2,700.00	2,677.69	3,506.83	3,385.79	10.73	19.51	69.60	1,176.21	2,233.70	2,488.30	2,464.01	24.30	102.411		
2,800.00	2,776.64	3,567.00	3,443.25	11.16	19.89	69.95	1,164.70	2,220.00	2,455.09	2,430.05	25.04	98.033		
2,900.00	2,875.59	3,641.17	3,514.30	11.58	20.35	70.38	1,151.03	2,203.68	2,422.98	2,397.14	25.84	93.786		
3,000.00	2,974.54	3,835.21	3,699.32	12.01	21.60	71.48	1,116.75	2,156.43	2,388.72	2,361.74	26.98	88.549		
3,100.00	3,073.49	3,926.99	3,786.38	12.44	22.21	72.03	1,100.03	2,132.67	2,353.56	2,325.73	27.83	84.566		
3,200.00	3,172.44	4,007.00	3,862.32	12.86	22.74	72.52	1,085.29	2,112.26	2,318.88	2,290.22	28.66	80.902		
3,300.00	3,271.39	4,050.09	3,903.39	13.29	23.01	72.79	1,077.54	2,101.77	2,285.57	2,256.17	29.40	77.746		
3,400.00	3,370.34	4,096.00	3,947.43	13.72	23.30	73.08	1,069.76	2,091.38	2,254.38	2,224.24	30.14	74.796		
3,500.00	3,469.29	4,294.23	4,136.94	14.14	24.54	74.31	1,037.02	2,043.43	2,222.09	2,190.81	31.28	71.038		
3,600.00	3,568.24	4,371.64	4,210.61	14.57	25.05	74.80	1,024.31	2,023.34	2,188.44	2,156.31	32.12	68.125		
3,700.00	3,667.19	4,480.85	4,314.20	15.00	25.78	75.57	1,004.51	1,994.98	2,154.50	2,121.44	33.06	65.168		
3,800.00	3,766.14	4,560.35	4,389.57	15.42	26.31	76.14	989.96	1,974.33	2,120.83	2,086.89	33.94	62.486		
3,900.00	3,865.09	4,633.00	4,458.75	15.85	26.78	76.65	977.81	1,955.74	2,088.16	2,053.36	34.80	59.999		
4,000.00	3,964.03	4,692.83	4,515.97	16.28	27.16	77.06	968.53	1,940.95	2,056.87	2,021.24	35.63	57.722		
4,100.00	4,062.98	4,756.07	4,576.73	16.70	27.54	77.50	959.20	1,926.12	2,027.20	1,990.72	36.47	55.581		
4,200.00	4,161.93	4,811.00	4,629.71	17.13	27.87	77.88	951.36	1,913.89	1,999.12	1,961.83	37.29	53.608		
4,300.00	4,260.88	4,882.09	4,698.54	17.56	28.27	78.38	941.61	1,899.04	1,972.68	1,934.53	38.15	51.713		
4,400.00	4,359.83	4,936.76	4,751.72	17.98	28.56	78.76	934.50	1,888.55	1,948.19	1,909.23	38.95	50.012		
4,500.00	4,458.78	4,987.00	4,800.83	18.41	28.82	79.11	928.36	1,879.90	1,925.99	1,886.25	39.74	48.464		
4,600.00	4,557.73	5,039.37	4,852.27	18.84	29.07	79.47	922.60	1,871.95	1,906.23	1,865.72	40.51	47.055		
4,700.00	4,656.68	5,076.00	4,888.40	19.26	29.24	79.71	919.09	1,867.06	1,889.09	1,847.88	41.21	45.843		
4,800.00	4,755.63	5,164.00	4,975.53	19.69	29.60	80.27	911.77	1,857.14	1,873.98	1,831.92	42.06	44.554		
4,900.00	4,854.58	5,222.04	5,033.16	20.12	29.82	80.63	907.57	1,851.66	1,860.81	1,818.01	42.79	43.484		
5,000.00	4,953.53	5,284.57	5,095.35	20.55	30.04	81.00	903.56	1,846.52	1,849.39	1,805.87	43.52	42.492		
5,100.00	5,052.48	5,338.00	5,148.60	20.97	30.22	81.31	900.78	1,843.20	1,840.29	1,796.10	44.20	41.640		
5,200.00	5,151.43	5,416.36	5,226.82	21.40	30.45	81.74	897.96	1,839.55	1,833.05	1,788.10	44.94	40.787		
5,300.00	5,250.38	5,479.98	5,290.40	21.83	30.63	82.06	896.67	1,837.46	1,827.48	1,781.88	45.60	40.073		
5,400.00	5,349.32	5,551.98	5,362.38	22.25	30.81	82.41	895.68	1,836.48	1,823.92	1,777.64	46.28	39.407		
5,500.00	5,448.27	5,638.01	5,448.40	22.68	31.01	82.82	894.67	1,836.04	1,821.41	1,774.39	47.02	38.738		
5,600.00	5,547.22	5,744.15	5,554.53	23.11	31.26	83.34	893.54	1,835.98	1,819.52	1,771.67	47.84	38.031		
5,625.90	5,572.85	5,781.73	5,592.11	23.22	31.35	83.51	893.36	1,835.62	1,818.82	1,770.72	48.10	37.813		
5,700.00	5,646.30	5,864.56	5,674.93	23.53	31.56	83.81	893.12	1,834.30	1,816.53	1,767.81	48.71	37.290		
5,800.00	5,745.78	5,968.07	5,778.42	23.92	31.82	84.09	892.66	1,832.28	1,813.46	1,764.00	49.47	36.660		
5,900.00	5,845.55	6,070.20	5,880.53	24.28	32.09	84.26	892.20	1,830.08	1,810.60	1,760.43	50.17	36.092		
6,000.00	5,945.50	6,166.98	5,977.28	24.61	32.35	84.32	891.65	1,828.09	1,808.18	1,757.39	50.80	35.595		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
6,041.55	5,987.04	6,208.61	6,018.91	24.74	32.46	86.14	891.39	1,827.25	1,807.31	1,756.25	51.05	35.400		
6,100.00	6,045.49	6,264.27	6,074.55	24.91	32.61	86.15	891.05	1,826.16	1,806.14	1,754.75	51.40	35.142		
6,200.00	6,145.49	6,362.31	6,172.58	25.22	32.87	86.16	890.44	1,824.49	1,804.40	1,752.40	51.99	34.704		
6,300.00	6,245.49	6,466.05	6,276.30	25.52	33.14	86.18	889.93	1,822.55	1,802.50	1,749.88	52.62	34.255		
6,400.00	6,345.49	6,562.54	6,372.77	25.83	33.41	86.19	889.37	1,820.71	1,800.56	1,747.35	53.22	33.835		
6,500.00	6,445.49	6,657.56	6,467.77	26.14	33.66	86.20	888.90	1,819.18	1,798.91	1,745.11	53.81	33.432		
6,600.00	6,545.49	6,757.36	6,567.56	26.45	33.93	86.22	888.30	1,817.72	1,797.42	1,743.00	54.42	33.026		
6,700.00	6,645.49	6,862.14	6,672.33	26.76	34.22	86.23	887.64	1,816.00	1,795.74	1,740.67	55.07	32.610		
6,731.55	6,677.04	6,891.48	6,701.66	26.86	34.30	86.24	887.44	1,815.51	1,795.20	1,739.95	55.25	32.490		
6,740.81	6,686.30	6,900.10	6,710.28	26.89	34.32	176.71	887.38	1,815.38	1,795.12	1,739.82	55.31	32.457	CC, ES	
6,750.00	6,695.49	6,908.65	6,718.83	26.92	34.34	176.71	887.32	1,815.24	1,795.20	1,739.84	55.36	32.427		
6,800.00	6,745.33	6,956.35	6,766.52	27.06	34.48	176.71	886.99	1,814.55	1,798.24	1,742.58	55.66	32.308		
6,850.00	6,794.65	7,005.82	6,815.99	27.21	34.61	176.69	886.65	1,813.85	1,805.62	1,749.65	55.97	32.263	SF	
6,900.00	6,843.08	7,062.93	6,873.09	27.36	34.77	176.66	886.24	1,812.96	1,817.21	1,760.91	56.31	32.272		
6,950.00	6,890.24	7,125.82	6,935.96	27.50	34.95	176.63	885.60	1,811.52	1,832.64	1,775.96	56.68	32.335		
7,000.00	6,935.78	7,155.79	6,965.92	27.63	35.03	176.53	885.38	1,810.91	1,852.21	1,795.32	56.89	32.556		
7,050.00	6,979.35	7,188.81	6,998.93	27.76	35.12	176.40	885.25	1,810.38	1,875.97	1,818.85	57.12	32.844		
7,100.00	7,020.62	7,224.54	7,034.66	27.89	35.22	176.23	885.25	1,809.99	1,903.67	1,846.33	57.35	33.196		
7,150.00	7,059.27	7,262.09	7,072.21	28.01	35.32	176.03	885.24	1,809.63	1,934.95	1,877.37	57.58	33.605		
7,200.00	7,095.02	7,296.83	7,106.95	28.13	35.42	175.75	885.20	1,809.32	1,969.52	1,911.72	57.79	34.079		
7,250.00	7,127.58	7,328.61	7,138.73	28.27	35.50	175.40	885.12	1,809.06	2,007.12	1,949.13	57.99	34.612		
7,300.00	7,156.72	7,357.05	7,167.17	28.41	35.58	174.92	885.01	1,808.85	2,047.45	1,989.29	58.16	35.201		
7,350.00	7,182.21	7,381.94	7,192.06	28.58	35.65	174.25	884.89	1,808.67	2,090.21	2,031.90	58.32	35.842		
7,400.00	7,203.85	7,403.52	7,213.63	28.79	35.70	173.28	884.77	1,808.53	2,135.07	2,076.62	58.45	36.528		
7,450.00	7,221.48	7,421.18	7,231.29	29.05	35.75	171.77	884.65	1,808.41	2,181.66	2,123.10	58.56	37.254		
7,500.00	7,234.96	7,434.76	7,244.87	29.38	35.79	169.12	884.56	1,808.33	2,229.65	2,171.00	58.65	38.017		
7,550.00	7,244.21	7,444.16	7,254.27	29.79	35.82	163.49	884.49	1,808.27	2,278.66	2,219.95	58.72	38.809		
7,600.00	7,249.13	7,449.31	7,259.42	30.26	35.83	145.07	884.45	1,808.23	2,328.32	2,269.56	58.76	39.624		
7,631.55	7,250.00	7,450.35	7,260.47	30.59	35.83	98.78	884.44	1,808.23	2,359.82	2,301.04	58.78	40.147		
7,700.00	7,250.00	7,450.77	7,260.89	31.38	35.83	99.02	884.44	1,808.23	2,428.21	2,369.40	58.81	41.288		
7,800.00	7,250.00	7,451.38	7,261.50	32.73	35.83	99.36	884.43	1,808.22	2,528.13	2,469.27	58.86	42.955		
7,900.00	7,250.00	7,451.99	7,262.11	34.25	35.84	99.70	884.43	1,808.22	2,628.05	2,569.15	58.90	44.620		
8,000.00	7,250.00	7,452.60	7,262.72	35.92	35.84	100.04	884.42	1,808.21	2,727.98	2,669.04	58.94	46.285		
8,100.00	7,250.00	7,453.21	7,263.32	37.73	35.84	100.38	884.42	1,808.21	2,827.91	2,768.93	58.98	47.948		
8,200.00	7,250.00	7,453.82	7,263.93	39.64	35.84	100.71	884.41	1,808.21	2,927.85	2,868.83	59.02	49.610		
8,300.00	7,250.00	7,454.42	7,264.54	41.64	35.84	101.05	884.41	1,808.20	3,027.79	2,968.73	59.06	51.270		
8,400.00	7,250.00	7,455.03	7,265.14	43.72	35.84	101.38	884.40	1,808.20	3,127.74	3,068.64	59.09	52.929		
8,500.00	7,250.00	7,455.63	7,265.74	45.87	35.85	101.71	884.40	1,808.20	3,227.68	3,168.55	59.13	54.586		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
700.00	698.70	1,801.41	1,759.49	2.33	8.68	57.90	1,702.24	2,590.46	3,262.40	3,252.81	9.59	340.290		
715.65	714.19	1,830.07	1,786.11	2.39	8.89	57.99	1,701.54	2,579.89	3,256.11	3,246.33	9.79	332.744		
800.00	797.66	2,005.25	1,947.81	2.73	10.21	57.83	1,694.32	2,512.92	3,220.15	3,209.24	10.91	295.117		
900.00	896.61	2,095.50	2,030.96	3.13	10.91	57.78	1,689.11	2,478.24	3,177.00	3,165.30	11.70	271.562		
1,000.00	995.56	2,173.24	2,102.63	3.54	11.51	57.73	1,684.30	2,448.48	3,133.79	3,121.36	12.44	251.950		
1,100.00	1,094.50	2,237.13	2,161.73	3.96	12.00	57.70	1,680.51	2,424.53	3,091.34	3,078.21	13.13	235.515		
1,200.00	1,193.45	2,348.89	2,264.96	4.38	12.87	57.59	1,675.73	2,381.98	3,049.28	3,035.24	14.04	217.116		
1,300.00	1,292.40	2,529.50	2,428.83	4.79	14.40	57.28	1,671.32	2,306.21	3,004.34	2,989.01	15.33	195.942		
1,400.00	1,391.35	2,585.00	2,478.89	5.22	14.88	57.16	1,670.23	2,282.26	2,959.22	2,943.17	16.05	184.406		
1,500.00	1,490.30	2,638.64	2,527.56	5.64	15.34	57.06	1,669.25	2,259.74	2,915.17	2,898.42	16.75	173.999		
1,600.00	1,589.25	2,692.99	2,577.34	6.06	15.79	56.96	1,668.41	2,237.96	2,872.63	2,855.16	17.47	164.431		
1,700.00	1,688.20	2,821.23	2,694.29	6.48	16.87	56.68	1,667.66	2,185.34	2,829.86	2,811.32	18.54	152.619		
1,800.00	1,787.15	2,904.99	2,770.59	6.91	17.58	56.50	1,666.28	2,150.83	2,786.49	2,767.09	19.40	143.612		
1,900.00	1,886.10	2,978.11	2,837.75	7.33	18.18	56.39	1,663.68	2,122.04	2,743.73	2,723.52	20.20	135.798		
2,000.00	1,985.05	3,063.23	2,916.15	7.75	18.87	56.27	1,660.47	2,089.04	2,701.36	2,680.31	21.05	128.339		
2,100.00	2,084.00	3,162.22	3,007.39	8.18	19.67	56.14	1,656.13	2,050.90	2,658.91	2,636.96	21.95	121.142		
2,200.00	2,182.95	3,267.22	3,103.63	8.60	20.54	55.94	1,653.04	2,009.02	2,616.07	2,593.17	22.89	114.268		
2,300.00	2,281.90	3,334.48	3,165.11	9.03	21.10	55.79	1,651.52	1,981.79	2,573.16	2,549.47	23.70	108.593		
2,400.00	2,380.85	3,389.00	3,215.44	9.45	21.55	55.70	1,649.92	1,960.90	2,531.60	2,507.15	24.44	103.568		
2,500.00	2,479.80	3,476.06	3,296.19	9.88	22.23	55.56	1,647.05	1,928.49	2,490.81	2,465.51	25.31	98.430		
2,600.00	2,578.74	3,588.35	3,400.21	10.31	23.12	55.39	1,642.61	1,886.42	2,449.51	2,423.25	26.26	93.290		
2,700.00	2,677.69	3,679.51	3,484.41	10.73	23.85	55.23	1,639.48	1,851.62	2,407.90	2,380.76	27.14	88.716		
2,800.00	2,776.64	3,772.98	3,570.82	11.16	24.60	55.07	1,635.83	1,816.17	2,366.29	2,338.25	28.03	84.406		
2,900.00	2,875.59	3,876.27	3,666.25	11.58	25.42	54.90	1,631.37	1,776.91	2,324.41	2,295.45	28.96	80.273		
3,000.00	2,974.54	4,064.94	3,839.15	12.01	26.99	54.58	1,620.04	1,702.30	2,280.52	2,250.40	30.11	75.728		
3,100.00	3,073.49	4,133.69	3,901.57	12.44	27.58	54.46	1,615.05	1,673.92	2,234.58	2,203.64	30.93	72.235		
3,200.00	3,172.44	4,186.00	3,949.50	12.86	28.02	54.37	1,611.51	1,653.27	2,190.21	2,158.49	31.71	69.059		
3,300.00	3,271.39	4,242.99	4,001.97	13.29	28.49	54.27	1,608.52	1,631.23	2,147.29	2,114.78	32.52	66.038		
3,400.00	3,370.34	4,319.24	4,072.09	13.72	29.12	54.06	1,606.63	1,601.36	2,105.47	2,072.07	33.40	63.042		
3,500.00	3,469.29	4,462.24	4,202.42	14.14	30.35	53.54	1,605.61	1,542.52	2,063.22	2,028.69	34.53	59.744		
3,600.00	3,568.24	4,544.00	4,276.42	14.57	31.07	53.22	1,604.36	1,507.79	2,019.36	1,983.87	35.49	56.903		
3,700.00	3,667.19	4,622.09	4,347.39	15.00	31.75	52.92	1,602.76	1,475.23	1,975.93	1,939.51	36.42	54.247		
3,800.00	3,766.14	4,684.14	4,404.27	15.42	32.27	52.72	1,601.01	1,450.52	1,933.62	1,896.32	37.30	51.840		
3,900.00	3,865.09	4,747.89	4,463.30	15.85	32.78	52.55	1,598.71	1,426.57	1,892.70	1,854.54	38.16	49.594		
4,000.00	3,964.03	4,811.00	4,522.16	16.28	33.27	52.40	1,596.17	1,403.93	1,853.00	1,813.99	39.01	47.497		
4,100.00	4,062.98	4,880.79	4,587.73	16.70	33.77	52.27	1,593.01	1,380.25	1,814.57	1,774.71	39.85	45.532		
4,200.00	4,161.93	5,005.05	4,704.60	17.13	34.66	52.07	1,586.23	1,338.62	1,775.87	1,735.10	40.77	43.555		
4,300.00	4,260.88	5,076.00	4,771.51	17.56	35.17	51.97	1,582.19	1,315.35	1,737.53	1,695.92	41.61	41.758		
4,400.00	4,359.83	5,109.47	4,803.35	17.98	35.38	51.93	1,580.43	1,305.20	1,701.10	1,658.73	42.37	40.147		
4,500.00	4,458.78	5,164.00	4,855.72	18.41	35.72	51.90	1,577.98	1,290.20	1,667.49	1,624.35	43.14	38.653		
4,600.00	4,557.73	5,212.80	4,902.93	18.84	36.00	51.88	1,576.23	1,277.96	1,636.28	1,592.41	43.87	37.299		
4,700.00	4,656.68	5,274.56	4,962.92	19.26	36.33	51.86	1,574.64	1,263.40	1,607.10	1,562.50	44.60	36.031		
4,800.00	4,755.63	5,338.00	5,024.88	19.69	36.65	51.86	1,573.37	1,249.84	1,579.96	1,534.64	45.32	34.863		
4,900.00	4,854.58	5,400.94	5,086.66	20.12	36.94	51.90	1,572.24	1,237.92	1,554.86	1,508.87	46.00	33.804		
5,000.00	4,953.53	5,468.05	5,152.86	20.55	37.22	51.97	1,571.01	1,226.90	1,531.74	1,485.09	46.65	32.834		
5,100.00	5,052.48	5,538.62	5,222.69	20.97	37.50	52.09	1,569.82	1,216.88	1,510.45	1,463.17	47.28	31.945		
5,200.00	5,151.43	5,605.00	5,288.57	21.40	37.74	52.23	1,568.69	1,208.73	1,490.82	1,442.95	47.87	31.142		
5,300.00	5,250.38	5,696.00	5,379.06	21.83	38.04	52.47	1,566.97	1,199.30	1,472.52	1,424.01	48.51	30.358		
5,400.00	5,349.32	5,776.06	5,458.81	22.25	38.27	52.75	1,564.89	1,192.61	1,455.39	1,406.32	49.07	29.659		
5,500.00	5,448.27	5,835.18	5,517.79	22.68	38.43	52.99	1,563.22	1,189.00	1,440.06	1,390.53	49.53	29.073		
5,600.00	5,547.22	5,901.91	5,584.48	23.11	38.59	53.29	1,562.15	1,186.78	1,427.56	1,377.58	49.98	28.560		
5,625.90	5,572.85	5,925.00	5,607.56	23.22	38.64	53.39	1,561.84	1,186.21	1,424.59	1,374.47	50.12	28.424		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,700.00	5,646.30	5,992.64	5,675.17	23.53	38.78	53.55	1,560.95	1,184.77	1,416.89	1,366.38	50.51	28.051		
5,800.00	5,745.78	6,088.67	5,771.19	23.92	38.98	53.74	1,559.71	1,183.11	1,408.69	1,357.63	51.06	27.589		
5,900.00	5,845.55	6,186.84	5,869.33	24.28	39.19	53.87	1,558.46	1,181.52	1,402.67	1,351.06	51.62	27.174		
6,000.00	5,945.50	6,285.68	5,968.16	24.61	39.40	53.90	1,557.55	1,179.84	1,398.88	1,346.69	52.19	26.805		
6,041.55	5,987.04	6,316.00	5,998.47	24.74	39.46	55.71	1,557.21	1,179.38	1,397.95	1,345.58	52.38	26.691		
6,100.00	6,045.49	6,368.79	6,051.25	24.91	39.56	55.72	1,556.72	1,178.88	1,397.21	1,344.53	52.68	26.524		
6,135.86	6,081.35	6,395.92	6,078.38	25.02	39.62	55.72	1,556.57	1,178.85	1,397.07	1,344.24	52.84	26.442		
6,200.00	6,145.49	6,459.61	6,142.07	25.22	39.73	55.74	1,556.34	1,179.06	1,397.12	1,343.93	53.19	26.267		
6,300.00	6,245.49	6,566.07	6,248.53	25.52	39.92	55.76	1,555.71	1,179.14	1,396.84	1,343.07	53.78	25.975		
6,400.00	6,345.49	6,671.00	6,353.46	25.83	40.12	55.79	1,554.76	1,178.91	1,396.15	1,341.79	54.36	25.682		
6,500.00	6,445.49	6,776.36	6,458.80	26.14	40.34	55.80	1,553.83	1,178.19	1,395.09	1,340.12	54.97	25.381		
6,600.00	6,545.49	6,878.36	6,560.80	26.45	40.56	55.80	1,553.14	1,177.02	1,393.76	1,338.19	55.57	25.083		
6,700.00	6,645.49	6,981.51	6,663.94	26.76	40.79	55.79	1,552.42	1,175.71	1,392.32	1,336.15	56.18	24.784		
6,731.55	6,677.04	7,015.40	6,697.82	26.86	40.87	55.79	1,552.20	1,175.17	1,391.79	1,335.41	56.38	24.687		
6,744.28	6,689.77	7,029.08	6,711.50	26.90	40.90	146.26	1,552.12	1,174.92	1,391.68	1,335.22	56.46	24.650 CC		
6,750.00	6,695.49	7,034.40	6,716.82	26.92	40.92	146.26	1,552.09	1,174.82	1,391.70	1,335.21	56.49	24.636 ES		
6,800.00	6,745.33	7,081.87	6,764.28	27.06	41.03	146.21	1,551.88	1,173.97	1,393.99	1,337.22	56.77	24.556		
6,850.00	6,794.65	7,129.30	6,811.70	27.21	41.14	146.03	1,551.77	1,173.15	1,399.98	1,342.94	57.04	24.546 SF		
6,900.00	6,843.08	7,176.79	6,859.19	27.36	41.25	145.74	1,551.61	1,172.42	1,409.61	1,352.31	57.29	24.603		
6,950.00	6,890.24	7,223.02	6,905.41	27.50	41.35	145.33	1,551.36	1,171.82	1,422.83	1,365.29	57.54	24.728		
7,000.00	6,935.78	7,267.63	6,950.02	27.63	41.45	144.75	1,551.08	1,171.30	1,439.58	1,381.82	57.77	24.920		
7,050.00	6,979.35	7,309.75	6,992.14	27.76	41.55	143.98	1,550.81	1,170.86	1,459.79	1,401.81	57.98	25.178		
7,100.00	7,020.62	7,348.76	7,031.15	27.89	41.63	142.97	1,550.51	1,170.56	1,483.36	1,425.19	58.17	25.501		
7,150.00	7,059.27	7,385.23	7,067.61	28.01	41.71	141.68	1,550.18	1,170.38	1,510.17	1,451.82	58.35	25.882		
7,200.00	7,095.02	7,420.12	7,102.50	28.13	41.79	140.06	1,549.85	1,170.26	1,540.03	1,481.51	58.52	26.316		
7,250.00	7,127.58	7,451.90	7,134.27	28.27	41.85	137.99	1,549.56	1,170.16	1,572.75	1,514.06	58.68	26.801		
7,300.00	7,156.72	7,480.26	7,162.64	28.41	41.91	135.38	1,549.32	1,170.09	1,608.09	1,549.25	58.84	27.332		
7,350.00	7,182.21	7,504.93	7,187.30	28.58	41.97	132.04	1,549.14	1,170.03	1,645.81	1,586.84	58.98	27.906		
7,400.00	7,203.85	7,525.88	7,208.26	28.79	42.01	127.81	1,549.00	1,169.97	1,685.65	1,626.54	59.11	28.516		
7,450.00	7,221.48	7,542.97	7,225.35	29.05	42.05	122.44	1,548.90	1,169.93	1,727.31	1,668.07	59.24	29.160		
7,500.00	7,234.96	7,556.06	7,238.44	29.38	42.08	115.68	1,548.83	1,169.91	1,770.47	1,711.12	59.35	29.830		
7,550.00	7,244.21	7,565.28	7,247.66	29.79	42.10	107.35	1,548.78	1,169.88	1,814.79	1,755.34	59.46	30.523		
7,600.00	7,249.13	7,570.65	7,253.02	30.26	42.11	97.48	1,548.76	1,169.87	1,859.94	1,800.39	59.55	31.232		
7,631.55	7,250.00	7,571.66	7,254.03	30.59	42.11	90.60	1,548.75	1,169.87	1,888.69	1,829.08	59.61	31.686		
7,700.00	7,250.00	7,571.84	7,254.22	31.38	42.11	90.61	1,548.75	1,169.87	1,951.40	1,891.68	59.72	32.676		
7,800.00	7,250.00	7,572.12	7,254.50	32.73	42.11	90.63	1,548.75	1,169.87	2,043.67	1,983.77	59.90	34.121		
7,900.00	7,250.00	7,572.40	7,254.78	34.25	42.11	90.65	1,548.75	1,169.87	2,136.64	2,076.56	60.08	35.564		
8,000.00	7,250.00	7,572.68	7,255.06	35.92	42.11	90.67	1,548.75	1,169.87	2,230.22	2,169.95	60.26	37.008		
8,100.00	7,250.00	7,572.97	7,255.34	37.73	42.11	90.70	1,548.75	1,169.87	2,324.33	2,263.88	60.45	38.451		
8,200.00	7,250.00	7,573.25	7,255.63	39.64	42.11	90.72	1,548.75	1,169.87	2,418.92	2,358.28	60.63	39.894		
8,300.00	7,250.00	7,573.54	7,255.92	41.64	42.11	90.74	1,548.75	1,169.86	2,513.92	2,453.10	60.82	41.336		
8,400.00	7,250.00	7,573.83	7,256.21	43.72	42.11	90.76	1,548.74	1,169.86	2,609.30	2,548.30	60.99	42.779		
8,500.00	7,250.00	7,574.13	7,256.50	45.87	42.11	90.78	1,548.74	1,169.86	2,705.01	2,643.84	61.17	44.222		
8,600.00	7,250.00	7,574.42	7,256.80	48.08	42.12	90.80	1,548.74	1,169.86	2,801.02	2,739.68	61.34	45.666		
8,700.00	7,250.00	7,574.72	7,257.10	50.34	42.12	90.83	1,548.74	1,169.86	2,897.30	2,835.80	61.50	47.109		
8,800.00	7,250.00	7,575.02	7,257.40	52.64	42.12	90.85	1,548.74	1,169.86	2,993.83	2,932.17	61.66	48.552		
8,900.00	7,250.00	7,575.33	7,257.70	54.98	42.12	90.87	1,548.74	1,169.86	3,090.57	3,028.76	61.82	49.995		
9,000.00	7,250.00	7,575.63	7,258.01	57.35	42.12	90.89	1,548.74	1,169.86	3,187.52	3,125.55	61.97	51.438		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft			
Survey Program: 16-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft			
Reference				Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
300.00	300.00	1,840.60	1,756.90	0.86	10.42	61.81	1,372.37	2,560.14	3,251.90	3,243.52	8.38	388.273					
400.00	399.98	1,999.08	1,896.70	1.22	11.85	61.32	1,322.57	2,504.56	3,205.04	3,195.65	9.38	341.605					
500.00	499.84	2,063.36	1,953.12	1.58	12.44	62.54	1,301.82	2,481.77	3,156.16	3,146.18	9.97	316.418					
600.00	599.45	2,107.65	1,992.22	1.95	12.84	63.74	1,287.65	2,466.56	3,106.95	3,096.45	10.50	295.943					
700.00	698.70	2,160.65	2,039.30	2.33	13.31	65.05	1,270.84	2,448.96	3,057.57	3,046.47	11.09	275.672					
715.65	714.19	2,170.46	2,048.04	2.39	13.40	65.27	1,267.73	2,445.74	3,049.80	3,038.60	11.20	272.313					
800.00	797.66	2,222.00	2,093.98	2.73	13.85	65.59	1,251.45	2,429.01	3,008.17	2,996.43	11.74	256.128					
900.00	896.61	2,278.76	2,144.79	3.13	14.34	65.94	1,233.81	2,410.86	2,959.65	2,947.27	12.39	238.891					
1,000.00	995.56	2,311.00	2,173.77	3.54	14.62	66.14	1,224.03	2,400.67	2,912.29	2,899.35	12.94	225.074					
1,100.00	1,094.50	2,361.81	2,219.80	3.96	15.04	66.44	1,209.24	2,385.06	2,866.29	2,852.71	13.58	211.000					
1,200.00	1,193.45	2,401.00	2,255.69	4.38	15.36	66.68	1,198.52	2,373.53	2,822.08	2,807.89	14.19	198.865					
1,300.00	1,292.40	2,661.13	2,491.48	4.79	17.55	68.17	1,129.92	2,287.95	2,774.69	2,758.96	15.73	176.386					
1,400.00	1,391.35	2,720.98	2,545.10	5.22	18.07	68.52	1,113.95	2,266.70	2,726.22	2,709.77	16.44	165.783					
1,500.00	1,490.30	2,761.00	2,581.22	5.64	18.42	68.77	1,103.13	2,253.31	2,679.36	2,662.27	17.09	156.767					
1,600.00	1,589.25	2,844.87	2,657.20	6.06	19.13	69.32	1,080.46	2,225.97	2,633.44	2,615.52	17.93	146.888					
1,700.00	1,688.20	2,982.16	2,781.17	6.48	20.31	70.19	1,044.89	2,178.92	2,586.66	2,567.69	18.97	136.344					
1,800.00	1,787.15	3,053.11	2,845.06	6.91	20.93	70.65	1,026.71	2,153.98	2,539.56	2,519.80	19.77	128.484					
1,900.00	1,886.10	3,117.00	2,903.02	7.33	21.47	71.06	1,011.28	2,131.98	2,493.73	2,473.19	20.54	121.408					
2,000.00	1,985.05	3,170.79	2,952.07	7.75	21.92	71.41	998.58	2,113.92	2,448.99	2,427.70	21.29	115.050					
2,100.00	2,084.00	3,276.73	3,048.60	8.18	22.80	72.16	972.47	2,078.95	2,404.78	2,382.54	22.23	108.154					
2,200.00	2,182.95	3,355.10	3,119.76	8.60	23.46	72.73	952.71	2,052.72	2,360.15	2,337.05	23.10	102.164					
2,300.00	2,281.90	3,420.14	3,178.94	9.03	24.00	73.24	936.07	2,031.52	2,316.42	2,292.48	23.94	96.762					
2,400.00	2,380.85	3,486.61	3,239.55	9.45	24.55	73.80	918.18	2,010.89	2,273.87	2,249.07	24.80	91.676					
2,500.00	2,479.80	3,620.71	3,361.81	9.88	25.66	74.96	882.60	1,968.83	2,231.77	2,205.85	25.93	86.075					
2,600.00	2,578.74	3,708.41	3,441.15	10.31	26.41	75.72	859.68	1,939.32	2,187.88	2,160.99	26.89	81.355					
2,700.00	2,677.69	3,789.32	3,514.65	10.73	27.09	76.45	838.99	1,912.56	2,145.01	2,117.16	27.85	77.025					
2,800.00	2,776.64	3,933.28	3,644.58	11.16	28.34	77.80	801.61	1,863.15	2,101.31	2,072.29	29.02	72.406					
2,900.00	2,875.59	4,013.16	3,716.20	11.58	29.05	78.61	780.05	1,835.07	2,056.94	2,026.92	30.02	68.509					
3,000.00	2,974.54	4,112.28	3,804.65	12.01	29.94	79.68	752.30	1,800.00	2,012.50	1,981.38	31.12	64.664					
3,100.00	3,073.49	4,181.00	3,865.96	12.44	30.56	80.47	732.55	1,776.06	1,968.85	1,936.69	32.16	61.223					
3,200.00	3,172.44	4,235.01	3,914.35	12.86	31.04	81.12	716.90	1,757.88	1,926.72	1,893.54	33.17	58.082					
3,300.00	3,271.39	4,313.63	3,985.10	13.29	31.73	82.10	693.97	1,732.40	1,886.24	1,851.94	34.30	54.988					
3,400.00	3,370.34	4,403.99	4,065.94	13.72	32.52	83.30	666.51	1,702.80	1,845.85	1,810.33	35.52	51.969					
3,500.00	3,469.29	4,495.08	4,147.68	14.14	33.32	84.53	639.52	1,673.02	1,806.43	1,769.67	36.76	49.140					
3,600.00	3,568.24	4,610.26	4,250.75	14.57	34.35	86.12	606.70	1,633.46	1,766.43	1,728.34	38.09	46.374					
3,700.00	3,667.19	4,700.60	4,331.26	15.00	35.17	87.42	581.03	1,601.53	1,726.34	1,686.95	39.38	43.836					
3,800.00	3,766.14	4,776.65	4,398.45	15.42	35.87	88.63	557.10	1,575.13	1,687.15	1,646.44	40.71	41.445					
3,900.00	3,865.09	4,868.64	4,479.59	15.85	36.73	90.18	527.58	1,543.42	1,649.11	1,606.96	42.15	39.125					
4,000.00	3,964.03	4,972.93	4,571.34	16.28	37.71	91.99	494.71	1,506.29	1,611.20	1,567.53	43.67	36.897					
4,100.00	4,062.98	5,104.15	4,686.70	16.70	38.96	94.24	457.36	1,456.17	1,572.21	1,526.99	45.22	34.765					
4,200.00	4,161.93	5,179.87	4,753.29	17.13	39.68	95.55	437.31	1,426.19	1,533.27	1,486.62	46.65	32.865					
4,300.00	4,260.88	5,247.00	4,813.13	17.56	40.30	96.70	420.85	1,400.64	1,496.69	1,448.62	48.08	31.132					
4,400.00	4,359.83	5,276.86	4,840.15	17.98	40.54	97.21	413.96	1,389.95	1,462.96	1,413.54	49.42	29.603					
4,500.00	4,458.78	5,337.00	4,895.55	18.41	41.03	98.20	400.96	1,370.53	1,433.41	1,382.61	50.80	28.216					
4,600.00	4,557.73	5,367.19	4,923.72	18.84	41.25	98.69	394.70	1,361.66	1,407.02	1,354.94	52.08	27.016					
4,700.00	4,656.68	5,424.00	4,976.96	19.26	41.66	99.62	382.80	1,345.82	1,383.99	1,330.58	53.41	25.914					
4,800.00	4,755.63	5,509.67	5,057.66	19.69	42.26	101.04	365.18	1,323.08	1,363.17	1,308.34	54.82	24.865					
4,900.00	4,854.58	5,572.63	5,117.39	20.12	42.67	102.07	353.07	1,307.30	1,344.56	1,288.44	56.12	23.958					
5,000.00	4,953.53	5,645.13	5,186.83	20.55	43.12	103.20	340.34	1,290.80	1,328.76	1,271.35	57.41	23.145					
5,100.00	5,052.48	5,718.62	5,257.55	20.97	43.55	104.33	328.17	1,274.93	1,314.87	1,256.21	58.66	22.415					
5,200.00	5,151.43	5,782.00	5,319.09	21.40	43.89	105.24	318.90	1,262.99	1,303.88	1,244.07	59.81	21.800					
5,300.00	5,250.38	5,862.49	5,397.76	21.83	44.28	106.34	308.44	1,249.57	1,295.29	1,234.33	60.96	21.249					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,400.00	5,349.32	5,959.50	5,492.96	22.25	44.73	107.60	297.61	1,234.37	1,287.83	1,225.71	62.12	20.733		
5,500.00	5,448.27	6,037.18	5,569.49	22.68	45.05	108.54	290.47	1,223.17	1,281.54	1,218.40	63.14	20.296		
5,600.00	5,547.22	6,117.12	5,648.53	23.11	45.36	109.45	284.00	1,213.10	1,277.12	1,213.00	64.12	19.916		
5,625.90	5,572.85	6,136.00	5,667.23	23.22	45.43	109.66	282.58	1,210.92	1,276.26	1,211.90	64.37	19.828		
5,700.00	5,646.30	6,204.11	5,734.79	23.53	45.67	110.30	278.09	1,203.59	1,273.91	1,208.85	65.06	19.579		
5,800.00	5,745.78	6,296.18	5,826.33	23.92	45.97	110.96	273.59	1,194.81	1,270.46	1,204.55	65.91	19.277		
5,900.00	5,845.55	6,381.93	5,911.74	24.28	46.22	111.38	270.64	1,187.78	1,266.63	1,200.01	66.62	19.013		
6,000.00	5,945.50	6,466.70	5,996.31	24.61	46.44	111.60	268.76	1,182.35	1,262.78	1,195.55	67.23	18.783		
6,041.55	5,987.04	6,502.06	6,031.62	24.74	46.53	113.46	268.15	1,180.48	1,261.16	1,193.70	67.45	18.696		
6,100.00	6,045.49	6,551.86	6,081.37	24.91	46.64	113.52	267.51	1,178.25	1,259.06	1,191.31	67.75	18.583		
6,200.00	6,145.49	6,644.31	6,173.76	25.22	46.85	113.60	266.91	1,175.12	1,256.21	1,187.94	68.27	18.401		
6,300.00	6,245.49	6,736.04	6,265.45	25.52	47.04	113.66	266.61	1,172.62	1,253.84	1,185.07	68.77	18.233		
6,400.00	6,345.49	6,830.26	6,359.65	25.83	47.23	113.71	266.38	1,170.75	1,252.12	1,182.85	69.27	18.076		
6,500.00	6,445.49	6,930.12	6,459.50	26.14	47.42	113.74	266.32	1,169.09	1,250.62	1,180.83	69.79	17.920		
6,600.00	6,545.49	7,024.00	6,553.37	26.45	47.60	113.75	266.58	1,167.87	1,249.33	1,179.05	70.28	17.777		
6,700.00	6,645.49	7,119.44	6,648.81	26.76	47.78	113.76	266.77	1,167.07	1,248.48	1,177.71	70.77	17.642		
6,731.55	6,677.04	7,150.30	6,679.67	26.86	47.84	113.76	266.81	1,166.87	1,248.28	1,177.35	70.92	17.600		
6,735.34	6,680.84	7,154.02	6,683.39	26.87	47.84	-155.77	266.81	1,166.85	1,248.27	1,177.32	70.94	17.595	CC, ES	
6,750.00	6,695.49	7,168.35	6,697.72	26.92	47.87	-155.77	266.83	1,166.77	1,248.44	1,177.43	71.01	17.580		
6,800.00	6,745.33	7,218.72	6,748.08	27.06	47.96	-155.71	266.92	1,166.50	1,251.62	1,180.37	71.24	17.568	SF	
6,850.00	6,794.65	7,271.78	6,801.15	27.21	48.07	-155.58	267.02	1,166.10	1,258.65	1,187.19	71.46	17.613		
6,900.00	6,843.08	7,320.41	6,849.78	27.36	48.16	-155.34	267.12	1,165.63	1,269.50	1,197.87	71.63	17.722		
6,950.00	6,890.24	7,365.58	6,894.94	27.50	48.24	-154.98	267.23	1,165.26	1,284.27	1,212.51	71.77	17.895		
7,000.00	6,935.78	7,408.98	6,938.34	27.63	48.33	-154.49	267.34	1,164.99	1,302.89	1,231.02	71.87	18.128		
7,050.00	6,979.35	7,450.39	6,979.75	27.76	48.41	-153.83	267.39	1,164.79	1,325.24	1,253.30	71.94	18.421		
7,100.00	7,020.62	7,489.95	7,019.31	27.89	48.48	-152.97	267.41	1,164.66	1,351.16	1,279.17	71.99	18.770		
7,150.00	7,059.27	7,527.30	7,056.66	28.01	48.55	-151.87	267.51	1,164.61	1,380.45	1,308.46	72.00	19.173		
7,200.00	7,095.02	7,560.00	7,089.36	28.13	48.61	-150.41	267.69	1,164.64	1,412.92	1,340.95	71.98	19.631		
7,250.00	7,127.58	7,592.85	7,122.21	28.27	48.66	-148.59	267.95	1,164.72	1,448.33	1,376.39	71.94	20.133		
7,300.00	7,156.72	7,620.58	7,149.93	28.41	48.70	-146.16	268.22	1,164.84	1,486.42	1,414.55	71.87	20.682		
7,350.00	7,182.21	7,644.69	7,174.04	28.58	48.74	-142.94	268.49	1,164.98	1,526.92	1,455.13	71.78	21.271		
7,400.00	7,203.85	7,666.87	7,196.23	28.79	48.78	-138.72	268.76	1,165.12	1,569.50	1,497.81	71.69	21.893		
7,450.00	7,221.48	7,685.48	7,214.84	29.05	48.81	-132.99	268.99	1,165.22	1,613.82	1,542.24	71.58	22.546		
7,500.00	7,234.96	7,699.72	7,229.07	29.38	48.83	-125.11	269.16	1,165.28	1,659.57	1,588.11	71.46	23.225		
7,550.00	7,244.21	7,709.44	7,238.79	29.79	48.85	-114.34	269.28	1,165.32	1,706.38	1,635.06	71.32	23.925		
7,600.00	7,249.13	7,714.55	7,243.90	30.26	48.86	-100.24	269.34	1,165.34	1,753.92	1,682.74	71.18	24.641		
7,631.55	7,250.00	7,715.36	7,244.71	30.59	48.86	-89.97	269.35	1,165.35	1,784.11	1,713.03	71.08	25.099		
7,700.00	7,250.00	7,715.08	7,244.43	31.38	48.86	-89.93	269.34	1,165.35	1,849.81	1,778.93	70.88	26.097		
7,800.00	7,250.00	7,714.67	7,244.01	32.73	48.86	-89.89	269.34	1,165.34	1,946.14	1,875.52	70.62	27.559		
7,900.00	7,250.00	7,714.25	7,243.60	34.25	48.85	-89.84	269.33	1,165.34	2,042.81	1,972.43	70.38	29.024		
8,000.00	7,250.00	7,713.83	7,243.18	35.92	48.85	-89.79	269.33	1,165.34	2,139.80	2,069.62	70.17	30.493		
8,100.00	7,250.00	7,713.41	7,242.75	37.73	48.85	-89.75	269.32	1,165.34	2,237.04	2,167.05	69.99	31.963		
8,200.00	7,250.00	7,712.98	7,242.33	39.64	48.85	-89.70	269.32	1,165.34	2,334.52	2,264.70	69.82	33.435		
8,300.00	7,250.00	7,712.55	7,241.89	41.64	48.85	-89.65	269.31	1,165.34	2,432.21	2,362.53	69.67	34.909		
8,400.00	7,250.00	7,712.11	7,241.46	43.72	48.85	-89.60	269.31	1,165.33	2,530.07	2,460.53	69.54	36.384		
8,500.00	7,250.00	7,711.67	7,241.02	45.87	48.85	-89.55	269.30	1,165.33	2,628.10	2,558.68	69.42	37.859		
8,600.00	7,250.00	7,711.22	7,240.57	48.08	48.85	-89.50	269.30	1,165.33	2,726.27	2,656.96	69.31	39.335		
8,700.00	7,250.00	7,710.77	7,240.12	50.34	48.85	-89.45	269.29	1,165.33	2,824.57	2,755.36	69.21	40.811		
8,800.00	7,250.00	7,710.31	7,239.66	52.64	48.85	-89.40	269.29	1,165.33	2,922.98	2,853.86	69.12	42.287		
8,900.00	7,250.00	7,709.85	7,239.20	54.98	48.85	-89.35	269.28	1,165.33	3,021.50	2,952.46	69.04	43.763		
9,000.00	7,250.00	7,709.39	7,238.74	57.35	48.85	-89.30	269.28	1,165.32	3,120.11	3,051.14	68.97	45.239		
9,100.00	7,250.00	7,708.92	7,238.27	59.76	48.85	-89.24	269.27	1,165.32	3,218.81	3,149.90	68.90	46.714		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference		Measured Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Depth (usft)	Vertical Depth (usft)	Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
400.00	399.98	1,609.03	1,563.08	1.22	7.96	101.49	-661.47	2,979.51	3,274.00	3,266.32	7.69	425.879		
500.00	499.84	1,684.65	1,632.40	1.58	8.55	102.56	-669.51	2,950.39	3,239.11	3,230.74	8.37	387.078		
600.00	599.45	1,752.92	1,695.07	1.95	9.08	103.62	-677.11	2,924.38	3,205.61	3,196.55	9.05	354.192		
700.00	698.70	1,852.18	1,786.32	2.33	9.86	104.88	-688.25	2,886.94	3,173.51	3,163.59	9.93	319.680		
715.65	714.19	1,871.38	1,803.95	2.39	10.01	105.10	-690.30	2,879.64	3,168.53	3,158.45	10.08	314.229		
800.00	797.66	1,995.73	1,917.88	2.73	11.02	105.91	-702.78	2,831.38	3,141.12	3,130.06	11.06	284.004		
900.00	896.61	2,087.49	2,001.77	3.13	11.77	106.51	-711.06	2,795.15	3,108.14	3,096.19	11.95	260.043		
1,000.00	995.56	2,160.92	2,069.16	3.54	12.36	106.98	-717.00	2,766.57	3,075.84	3,063.08	12.77	240.938		
1,100.00	1,094.50	2,247.79	2,148.94	3.96	13.07	107.55	-724.45	2,733.04	3,044.25	3,030.59	13.66	222.890		
1,200.00	1,193.45	2,390.39	2,279.81	4.38	14.23	108.47	-734.22	2,677.25	3,012.14	2,997.32	14.82	203.227		
1,300.00	1,292.40	2,516.31	2,394.39	4.79	15.30	109.32	-743.47	2,625.87	2,978.83	2,962.89	15.93	186.977		
1,400.00	1,391.35	2,578.00	2,450.38	5.22	15.83	109.76	-748.06	2,600.37	2,945.56	2,928.81	16.75	175.884		
1,500.00	1,490.30	2,634.56	2,501.94	5.64	16.31	110.16	-752.36	2,577.51	2,913.57	2,896.02	17.55	166.060		
1,600.00	1,589.25	2,667.00	2,531.68	6.06	16.58	110.39	-755.04	2,564.86	2,883.48	2,865.25	18.23	158.144		
1,700.00	1,688.20	2,727.20	2,587.19	6.48	17.06	110.83	-760.37	2,542.16	2,855.01	2,835.95	19.06	149.759		
1,800.00	1,787.15	2,811.33	2,665.04	6.91	17.73	111.46	-768.63	2,511.36	2,828.07	2,808.04	20.03	141.198		
1,900.00	1,886.10	2,967.60	2,808.09	7.33	19.02	112.71	-785.71	2,450.86	2,799.78	2,778.37	21.41	130.784		
2,000.00	1,985.05	3,040.32	2,874.45	7.75	19.64	113.32	-793.83	2,422.22	2,771.64	2,749.28	22.37	123.918		
2,100.00	2,084.00	3,111.00	2,939.14	8.18	20.23	113.90	-801.54	2,394.84	2,744.51	2,721.19	23.32	117.682		
2,200.00	2,182.95	3,189.50	3,011.20	8.60	20.87	114.56	-809.99	2,364.88	2,718.34	2,694.02	24.32	111.761		
2,300.00	2,281.90	3,271.36	3,086.55	9.03	21.54	115.24	-818.57	2,334.04	2,693.02	2,667.68	25.35	106.249		
2,400.00	2,380.85	3,345.55	3,155.15	9.45	22.12	115.85	-825.56	2,306.67	2,668.55	2,642.23	26.32	101.378		
2,500.00	2,479.80	3,437.60	3,240.90	9.88	22.83	116.57	-832.32	2,273.91	2,644.97	2,617.60	27.37	96.643		
2,600.00	2,578.74	3,513.79	3,312.16	10.31	23.40	117.15	-836.56	2,247.29	2,621.76	2,593.43	28.33	92.546		
2,700.00	2,677.69	3,591.30	3,384.72	10.73	23.98	117.75	-841.83	2,220.55	2,599.78	2,570.47	29.31	88.714		
2,800.00	2,776.64	3,825.24	3,602.61	11.16	25.77	119.59	-853.90	2,136.35	2,577.05	2,546.07	30.98	83.182		
2,900.00	2,875.59	3,905.00	3,676.31	11.58	26.40	120.22	-856.42	2,105.96	2,551.35	2,519.36	31.99	79.758		
3,000.00	2,974.54	4,043.99	3,803.80	12.01	27.56	121.40	-862.10	2,050.91	2,525.16	2,491.87	33.29	75.854		
3,100.00	3,073.49	4,081.00	3,837.51	12.44	27.87	121.73	-863.87	2,035.74	2,499.23	2,465.06	34.17	73.146		
3,200.00	3,172.44	4,142.84	3,894.20	12.86	28.38	122.28	-867.18	2,011.27	2,475.00	2,439.84	35.16	70.397		
3,300.00	3,271.39	4,188.73	3,936.76	13.29	28.75	122.68	-869.99	1,994.34	2,453.46	2,417.39	36.07	68.017		
3,400.00	3,370.34	4,257.00	4,000.19	13.72	29.28	123.30	-874.93	1,969.59	2,433.62	2,396.53	37.09	65.607		
3,500.00	3,469.29	4,410.20	4,140.68	14.14	30.56	124.82	-888.90	1,910.13	2,412.83	2,374.19	38.64	62.445		
3,600.00	3,568.24	4,488.43	4,211.98	14.57	31.23	125.63	-896.58	1,878.88	2,392.47	2,352.67	39.81	60.101		
3,700.00	3,667.19	4,563.08	4,280.01	15.00	31.87	126.42	-904.53	1,849.19	2,373.38	2,332.41	40.97	57.929		
3,800.00	3,766.14	4,637.97	4,348.25	15.42	32.50	127.23	-913.04	1,819.55	2,355.56	2,313.41	42.14	55.893		
3,900.00	3,865.09	4,713.44	4,417.44	15.85	33.13	128.04	-921.12	1,790.50	2,339.04	2,295.73	43.32	53.998		
4,000.00	3,964.03	4,792.00	4,489.64	16.28	33.78	128.88	-929.56	1,760.73	2,323.77	2,279.27	44.50	52.215		
4,100.00	4,062.98	4,928.12	4,614.82	16.70	34.90	130.34	-943.38	1,709.08	2,309.12	2,263.08	46.04	50.152		
4,200.00	4,161.93	5,085.89	4,757.81	17.13	36.28	132.11	-957.09	1,643.88	2,291.21	2,243.47	47.74	47.989		
4,300.00	4,260.88	5,142.00	4,808.78	17.56	36.78	132.74	-961.81	1,620.88	2,274.75	2,225.90	48.86	46.560		
4,400.00	4,359.83	5,228.00	4,887.10	17.98	37.52	133.71	-969.23	1,586.13	2,259.72	2,209.58	50.14	45.067		
4,500.00	4,458.78	5,301.65	4,953.95	18.41	38.16	134.57	-976.28	1,556.05	2,245.80	2,194.43	51.37	43.715		
4,600.00	4,557.73	5,389.84	5,033.61	18.84	38.95	135.64	-986.11	1,519.50	2,233.31	2,180.58	52.73	42.356		
4,700.00	4,656.68	5,454.60	5,092.21	19.26	39.52	136.42	-993.30	1,492.90	2,222.03	2,168.12	53.91	41.215		
4,800.00	4,755.63	5,516.23	5,148.43	19.69	40.05	137.16	-1,000.18	1,468.62	2,212.83	2,157.78	55.06	40.193		
4,900.00	4,854.58	5,584.00	5,210.55	20.12	40.61	137.96	-1,008.00	1,442.68	2,205.54	2,149.32	56.22	39.231		
5,000.00	4,953.53	5,655.43	5,276.79	20.55	41.16	138.76	-1,015.49	1,417.03	2,199.95	2,142.60	57.35	38.358		
5,100.00	5,052.48	5,725.64	5,342.83	20.97	41.67	139.49	-1,021.59	1,393.98	2,195.89	2,137.47	58.42	37.586		
5,200.00	5,151.43	5,789.07	5,402.79	21.40	42.11	140.13	-1,027.20	1,374.08	2,193.55	2,134.14	59.42	36.917		
5,263.05	5,213.82	5,825.67	5,437.51	21.67	42.36	140.50	-1,030.66	1,363.01	2,193.13	2,133.13	60.01	36.548		
5,300.00	5,250.38	5,849.00	5,459.68	21.83	42.52	140.73	-1,032.97	1,356.13	2,193.28	2,132.92	60.36	36.336		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,400.00	5,349.32	5,987.64	5,591.90	22.25	43.41	142.05	-1,043.25	1,315.78	2,192.18	2,130.42	61.76	35.495		
5,431.99	5,380.98	6,009.01	5,612.42	22.39	43.54	142.24	-1,044.52	1,309.95	2,192.06	2,130.01	62.06	35.323		
5,500.00	5,448.27	6,059.14	5,660.69	22.68	43.85	142.67	-1,047.49	1,296.75	2,192.35	2,129.64	62.71	34.962		
5,600.00	5,547.22	6,136.70	5,735.42	23.11	44.30	143.35	-1,052.51	1,276.61	2,193.83	2,130.16	63.66	34.460		
5,625.90	5,572.85	6,157.18	5,755.22	23.22	44.41	143.52	-1,053.78	1,271.52	2,194.40	2,130.50	63.91	34.338		
5,700.00	5,646.30	6,220.12	5,816.33	23.53	44.75	144.02	-1,057.24	1,256.87	2,195.68	2,131.08	64.60	33.987		
5,800.00	5,745.78	6,312.06	5,906.31	23.92	45.20	144.61	-1,060.32	1,238.31	2,195.28	2,129.80	65.49	33.522		
5,900.00	5,845.55	6,380.00	5,973.30	24.28	45.49	144.92	-1,061.68	1,227.08	2,193.19	2,127.01	66.18	33.138		
6,000.00	5,945.50	6,452.48	6,045.11	24.61	45.75	145.14	-1,062.75	1,217.35	2,189.65	2,122.83	66.82	32.770		
6,041.55	5,987.04	6,482.86	6,075.29	24.74	45.85	147.02	-1,063.12	1,213.87	2,187.72	2,120.65	67.07	32.621		
6,100.00	6,045.49	6,526.29	6,118.49	24.91	45.99	147.12	-1,063.61	1,209.42	2,185.00	2,117.60	67.40	32.418		
6,200.00	6,145.49	6,605.13	6,197.04	25.22	46.22	147.28	-1,064.41	1,202.72	2,181.22	2,113.26	67.97	32.092		
6,300.00	6,245.49	6,688.94	6,280.67	25.52	46.45	147.42	-1,065.08	1,197.12	2,178.29	2,109.77	68.53	31.787		
6,400.00	6,345.49	6,776.36	6,367.97	25.83	46.67	147.52	-1,065.51	1,192.78	2,176.03	2,106.95	69.07	31.503		
6,500.00	6,445.49	6,866.00	6,457.55	26.14	46.87	147.60	-1,065.77	1,189.44	2,174.27	2,104.66	69.61	31.233		
6,600.00	6,545.49	6,946.16	6,537.68	26.45	47.04	147.65	-1,066.12	1,187.30	2,173.21	2,103.11	70.10	31.001		
6,670.98	6,616.47	7,003.86	6,595.36	26.67	47.17	147.68	-1,066.62	1,186.20	2,173.01	2,102.56	70.45	30.846	CC	
6,700.00	6,645.49	7,030.34	6,621.85	26.76	47.22	147.69	-1,066.90	1,185.80	2,173.03	2,102.43	70.60	30.781		
6,731.55	6,677.04	7,059.14	6,650.64	26.86	47.28	147.71	-1,067.22	1,185.40	2,173.08	2,102.33	70.76	30.712	ES	
6,750.00	6,695.49	7,075.98	6,667.48	26.92	47.31	-121.80	-1,067.41	1,185.18	2,173.29	2,102.44	70.85	30.675		
6,800.00	6,745.33	7,121.52	6,713.00	27.06	47.40	-121.67	-1,067.95	1,184.68	2,175.50	2,104.43	71.08	30.607		
6,850.00	6,794.65	7,168.10	6,759.59	27.21	47.49	-121.43	-1,068.55	1,184.25	2,180.09	2,108.81	71.29	30.582	SF	
6,900.00	6,843.08	7,214.32	6,805.79	27.36	47.58	-121.08	-1,069.17	1,183.88	2,187.02	2,115.56	71.47	30.601		
6,950.00	6,890.24	7,259.33	6,850.80	27.50	47.66	-120.59	-1,069.80	1,183.57	2,196.29	2,124.67	71.63	30.664		
7,000.00	6,935.78	7,304.20	6,895.67	27.63	47.74	-119.98	-1,070.31	1,183.48	2,207.86	2,136.12	71.75	30.773		
7,050.00	6,979.35	7,346.80	6,938.27	27.76	47.81	-119.22	-1,070.52	1,183.84	2,221.72	2,149.88	71.84	30.926		
7,100.00	7,020.62	7,386.58	6,978.04	27.89	47.88	-118.28	-1,070.47	1,184.57	2,237.85	2,165.95	71.90	31.124		
7,150.00	7,059.27	7,422.69	7,014.14	28.01	47.93	-117.10	-1,070.24	1,185.53	2,256.23	2,184.31	71.93	31.368		
7,200.00	7,095.02	7,455.37	7,046.80	28.13	47.97	-115.66	-1,069.94	1,186.59	2,276.83	2,204.91	71.93	31.655		
7,250.00	7,127.58	7,484.59	7,075.99	28.27	48.01	-113.93	-1,069.58	1,187.69	2,299.58	2,227.67	71.91	31.979		
7,300.00	7,156.72	7,510.16	7,101.54	28.41	48.05	-111.87	-1,069.21	1,188.76	2,324.37	2,252.49	71.87	32.339		
7,350.00	7,182.21	7,531.00	7,122.35	28.58	48.07	-109.41	-1,068.87	1,189.72	2,351.08	2,279.25	71.83	32.732		
7,400.00	7,203.85	7,548.38	7,139.71	28.79	48.10	-106.57	-1,068.58	1,190.55	2,379.56	2,307.79	71.77	33.154		
7,450.00	7,221.48	7,561.41	7,152.72	29.05	48.11	-103.29	-1,068.37	1,191.17	2,409.63	2,337.92	71.71	33.601		
7,500.00	7,234.96	7,570.84	7,162.14	29.38	48.12	-99.60	-1,068.23	1,191.63	2,441.07	2,369.42	71.65	34.068		
7,550.00	7,244.21	7,576.62	7,167.91	29.79	48.13	-95.52	-1,068.15	1,191.92	2,473.64	2,402.05	71.59	34.552		
7,600.00	7,249.13	7,578.71	7,170.00	30.26	48.13	-91.09	-1,068.12	1,192.02	2,507.09	2,435.56	71.53	35.048		
7,631.55	7,250.00	7,578.13	7,169.43	30.59	48.13	-88.15	-1,068.13	1,191.99	2,528.52	2,457.03	71.50	35.366		
7,700.00	7,250.00	7,575.30	7,166.60	31.38	48.13	-88.07	-1,068.17	1,191.85	2,575.72	2,504.28	71.43	36.058		
7,800.00	7,250.00	7,571.18	7,162.48	32.73	48.12	-87.94	-1,068.23	1,191.65	2,646.33	2,574.93	71.40	37.065		
7,900.00	7,250.00	7,567.08	7,158.39	34.25	48.12	-87.81	-1,068.29	1,191.45	2,718.77	2,647.36	71.41	38.070		
8,000.00	7,250.00	7,563.00	7,154.31	35.92	48.11	-87.68	-1,068.35	1,191.25	2,792.91	2,721.44	71.48	39.075		
8,100.00	7,250.00	7,558.94	7,150.26	37.73	48.11	-87.56	-1,068.41	1,191.06	2,868.62	2,797.05	71.57	40.081		
8,200.00	7,250.00	7,554.90	7,146.23	39.64	48.10	-87.43	-1,068.47	1,190.86	2,945.77	2,874.08	71.69	41.090		
8,300.00	7,250.00	7,550.89	7,142.22	41.64	48.10	-87.31	-1,068.54	1,190.67	3,024.25	2,952.42	71.83	42.103		
8,400.00	7,250.00	7,546.89	7,138.23	43.72	48.09	-87.19	-1,068.60	1,190.47	3,103.96	3,031.98	71.98	43.120		
8,500.00	7,250.00	7,542.92	7,134.26	45.87	48.09	-87.06	-1,068.67	1,190.28	3,184.81	3,112.66	72.15	44.143		
8,600.00	7,250.00	7,531.00	7,122.35	48.08	48.07	-86.70	-1,068.87	1,189.72	3,266.73	3,194.44	72.29	45.190		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
700.00	698.70	1,828.93	1,730.91	2.33	11.08	108.15	-897.91	2,935.48	3,252.73	3,240.75	11.98	271.432		
715.65	714.19	1,841.75	1,742.21	2.39	11.20	108.35	-901.18	2,930.39	3,248.29	3,236.15	12.14	267.563		
800.00	797.66	1,901.20	1,794.56	2.73	11.75	108.90	-916.60	2,906.80	3,224.79	3,211.84	12.95	248.984		
900.00	896.61	1,953.00	1,840.27	3.13	12.23	109.38	-930.02	2,886.47	3,198.04	3,184.24	13.80	231.746		
1,000.00	995.56	2,020.11	1,899.55	3.54	12.85	110.01	-947.84	2,860.52	3,172.62	3,157.83	14.78	214.624		
1,100.00	1,094.50	2,072.60	1,945.91	3.96	13.33	110.51	-962.31	2,840.61	3,148.75	3,133.08	15.67	200.940		
1,200.00	1,193.45	2,129.00	1,996.00	4.38	13.85	111.05	-977.78	2,819.83	3,126.53	3,109.94	16.60	188.363		
1,300.00	1,292.40	2,171.71	2,034.13	4.79	14.23	111.46	-989.50	2,804.56	3,106.02	3,088.60	17.42	178.258		
1,400.00	1,391.35	2,218.00	2,076.61	5.22	14.64	111.91	-1,002.30	2,788.51	3,087.32	3,069.04	18.28	168.863		
1,500.00	1,490.30	2,292.24	2,142.16	5.64	15.29	112.63	-1,023.30	2,763.19	3,070.09	3,050.73	19.36	158.542		
1,600.00	1,589.25	2,351.15	2,194.85	6.06	15.81	113.21	-1,040.54	2,743.26	3,054.19	3,033.85	20.34	150.163		
1,700.00	1,688.20	2,408.68	2,246.33	6.48	16.32	113.79	-1,057.79	2,724.22	3,039.96	3,018.65	21.31	142.656		
1,800.00	1,787.15	2,485.00	2,314.53	6.91	16.99	114.57	-1,081.25	2,699.26	3,027.17	3,004.73	22.44	134.898		
1,900.00	1,886.10	2,607.96	2,423.88	7.33	18.09	115.84	-1,119.56	2,658.11	3,014.88	2,990.90	23.98	125.734		
2,000.00	1,985.05	2,689.60	2,496.15	7.75	18.83	116.70	-1,145.02	2,629.93	3,002.72	2,977.54	25.18	119.233		
2,100.00	2,084.00	2,750.00	2,550.01	8.18	19.38	117.33	-1,163.53	2,609.82	2,992.25	2,966.04	26.21	114.175		
2,200.00	2,182.95	2,798.09	2,593.09	8.60	19.80	117.83	-1,178.23	2,594.32	2,983.53	2,956.42	27.12	110.023		
2,300.00	2,281.90	2,877.18	2,663.92	9.03	20.49	118.65	-1,202.91	2,569.23	2,976.46	2,948.17	28.29	105.213		
2,400.00	2,380.85	2,968.05	2,744.74	9.45	21.31	119.62	-1,231.96	2,539.53	2,969.93	2,940.35	29.58	100.404		
2,500.00	2,479.80	3,040.75	2,809.01	9.88	21.97	120.41	-1,256.09	2,515.59	2,964.74	2,934.02	30.72	96.494		
2,600.00	2,578.74	3,131.75	2,889.36	10.31	22.80	121.41	-1,286.40	2,485.49	2,960.57	2,928.53	32.04	92.409		
2,700.00	2,677.69	3,293.46	3,032.25	10.73	24.29	123.17	-1,338.85	2,430.94	2,956.99	2,923.01	33.98	87.025		
2,800.00	2,776.64	3,361.85	3,092.67	11.16	24.92	123.92	-1,360.35	2,407.16	2,952.94	2,917.85	35.09	84.154		
2,900.00	2,875.59	3,488.90	3,205.22	11.58	26.09	125.29	-1,399.09	2,362.74	2,949.39	2,912.68	36.70	80.354		
3,000.00	2,974.54	3,618.06	3,320.06	12.01	27.28	126.66	-1,436.44	2,316.94	2,945.90	2,907.59	38.32	76.880		
3,100.00	3,073.49	3,719.72	3,410.17	12.44	28.22	127.75	-1,465.16	2,279.66	2,942.17	2,902.47	39.70	74.108		
3,200.00	3,172.44	3,779.36	3,462.94	12.86	28.77	128.39	-1,482.24	2,257.76	2,939.63	2,898.90	40.73	72.180		
3,300.00	3,271.39	3,897.38	3,566.52	13.29	29.90	129.70	-1,517.54	2,213.56	2,938.45	2,896.16	42.28	69.494		
3,394.94	3,365.33	3,957.47	3,618.54	13.69	30.50	130.39	-1,536.21	2,189.98	2,937.68	2,894.37	43.32	67.819 CC		
3,400.00	3,370.34	3,960.61	3,621.26	13.72	30.53	130.42	-1,537.19	2,188.75	2,937.69	2,894.31	43.37	67.734		
3,500.00	3,469.29	4,025.42	3,677.34	14.14	31.18	131.17	-1,557.70	2,163.55	2,938.60	2,894.13	44.46	66.089 ES		
3,600.00	3,568.24	4,091.94	3,734.94	14.57	31.84	131.93	-1,578.93	2,137.94	2,941.08	2,895.52	45.56	64.553		
3,700.00	3,667.19	4,163.00	3,796.66	15.00	32.54	132.74	-1,601.67	2,111.05	2,945.16	2,898.47	46.69	63.085		
3,800.00	3,766.14	4,217.46	3,844.28	15.42	33.06	133.34	-1,618.96	2,091.05	2,950.87	2,903.25	47.62	61.968		
3,900.00	3,865.09	4,291.16	3,909.30	15.85	33.75	134.15	-1,641.92	2,065.06	2,958.21	2,909.50	48.71	60.729		
4,000.00	3,964.03	4,373.21	3,981.97	16.28	34.52	135.03	-1,667.09	2,036.44	2,966.54	2,916.68	49.86	59.492		
4,100.00	4,062.98	4,521.71	4,112.27	16.70	35.93	136.65	-1,713.68	1,982.59	2,975.94	2,924.29	51.66	57.611		
4,200.00	4,161.93	4,603.57	4,184.28	17.13	36.71	137.54	-1,738.13	1,952.30	2,984.69	2,931.89	52.80	56.526		
4,300.00	4,260.88	4,772.87	4,334.03	17.56	38.29	139.32	-1,785.21	1,888.93	2,992.63	2,937.91	54.72	54.690		
4,400.00	4,359.83	4,905.29	4,451.73	17.98	39.52	140.69	-1,818.91	1,838.49	2,999.81	2,943.53	56.27	53.309		
4,500.00	4,458.78	4,960.00	4,499.88	18.41	40.04	141.27	-1,833.34	1,816.90	3,008.07	2,950.92	57.15	52.633		
4,600.00	4,557.73	5,036.26	4,566.68	18.84	40.78	142.08	-1,854.19	1,786.59	3,017.80	2,959.57	58.22	51.832		
4,700.00	4,656.68	5,092.91	4,616.16	19.26	41.33	142.69	-1,870.11	1,764.05	3,029.06	2,969.96	59.09	51.258		
4,800.00	4,755.63	5,136.00	4,653.93	19.69	41.75	143.14	-1,882.37	1,747.33	3,042.13	2,982.31	59.82	50.858		
4,900.00	4,854.58	5,200.63	4,710.91	20.12	42.36	143.81	-1,900.92	1,723.12	3,056.90	2,996.19	60.71	50.355		
5,000.00	4,953.53	5,224.00	4,731.63	20.55	42.58	144.05	-1,907.66	1,714.66	3,073.66	3,012.48	61.18	50.243		
5,100.00	5,052.48	5,283.18	4,784.21	20.97	43.12	144.64	-1,925.22	1,693.95	3,092.17	3,030.21	61.96	49.909		
5,200.00	5,151.43	5,426.80	4,913.04	21.40	44.39	146.02	-1,967.16	1,646.37	3,111.98	3,048.46	63.51	48.997		
5,300.00	5,250.38	5,491.00	4,970.68	21.83	44.96	146.63	-1,985.50	1,624.84	3,131.71	3,067.41	64.30	48.702		
5,400.00	5,349.32	5,547.95	5,021.38	22.25	45.48	147.18	-2,002.51	1,605.28	3,152.86	3,087.83	65.03	48.487		
5,500.00	5,448.27	5,616.83	5,082.34	22.68	46.11	147.85	-2,023.67	1,581.17	3,175.26	3,109.41	65.85	48.219		
5,600.00	5,547.22	5,695.66	5,152.20	23.11	46.84	148.60	-2,048.02	1,553.95	3,198.77	3,132.01	66.77	47.910		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface	Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset		+N/-S	+E/-W	Between Centres	Between Ellipses			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
5,625.90	5,572.85	5,720.86	5,174.50	23.22	47.07	148.85	-2,055.81	1,545.18	3,204.98	3,137.93	67.05	47.800	
5,700.00	5,646.30	5,828.99	5,270.26	23.53	48.07	150.03	-2,088.68	1,507.19	3,221.91	3,153.70	68.21	47.235	
5,800.00	5,745.78	5,965.38	5,392.08	23.92	49.31	151.42	-2,127.18	1,459.47	3,240.93	3,171.29	69.64	46.539	
5,900.00	5,845.55	6,042.48	5,461.14	24.28	50.00	152.22	-2,148.60	1,432.69	3,257.48	3,187.00	70.48	46.221	
6,000.00	5,945.50	6,131.33	5,540.92	24.61	50.78	153.04	-2,173.21	1,402.31	3,271.72	3,200.32	71.40	45.821	
6,041.55	5,987.04	6,170.72	5,576.37	24.74	51.13	155.20	-2,184.05	1,388.98	3,276.88	3,205.08	71.80	45.636 SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN VERT KNESS 1 - Wellbore #1 - Design #1														Offset Site Error:	0.00 usft
Survey Program: 0-INC														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	6.00	6.00	0.00	0.07	-26.23	2,846.30	-1,402.65	3,173.15						
100.00	100.00	106.00	106.00	0.14	1.34	-26.23	2,846.30	-1,402.65	3,173.15	3,171.67	1.48	2,145.484			
200.00	200.00	206.00	206.00	0.50	3.61	-26.23	2,846.30	-1,402.65	3,173.15	3,169.03	4.11	771.224			
300.00	300.00	306.00	306.00	0.86	5.69	-26.23	2,846.30	-1,402.65	3,173.15	3,166.60	6.55	484.520			
400.00	399.98	405.98	405.98	1.22	7.73	-28.08	2,846.30	-1,402.65	3,171.61	3,162.66	8.95	354.397			
500.00	499.84	505.84	505.84	1.58	9.76	-28.17	2,846.30	-1,402.65	3,166.99	3,155.65	11.34	279.319			
600.00	599.45	605.45	605.45	1.95	11.77	-28.32	2,846.30	-1,402.65	3,159.31	3,145.59	13.72	230.285			
700.00	698.70	704.70	704.70	2.33	13.77	-28.52	2,846.30	-1,402.65	3,148.57	3,132.48	16.09	195.641			
715.65	714.19	720.19	720.19	2.39	14.09	-28.56	2,846.30	-1,402.65	3,146.62	3,130.15	16.47	191.073			
800.00	797.66	803.66	803.66	2.73	15.77	-28.67	2,846.30	-1,402.65	3,135.89	3,117.42	18.46	169.856			
900.00	896.61	902.61	902.61	3.13	17.76	-28.80	2,846.30	-1,402.65	3,123.18	3,102.35	20.83	149.954			
1,000.00	995.56	1,001.56	1,001.56	3.54	19.76	-28.92	2,846.30	-1,402.65	3,110.48	3,087.29	23.19	134.102			
1,100.00	1,094.50	1,100.50	1,100.50	3.96	21.75	-29.05	2,846.30	-1,402.65	3,097.81	3,072.24	25.56	121.179			
1,200.00	1,193.45	1,199.45	1,199.45	4.38	23.74	-29.18	2,846.30	-1,402.65	3,085.14	3,057.21	27.93	110.445			
1,300.00	1,292.40	1,298.40	1,298.40	4.79	25.74	-29.31	2,846.30	-1,402.65	3,072.50	3,042.19	30.30	101.388			
1,400.00	1,391.35	1,397.35	1,397.35	5.22	27.73	-29.45	2,846.30	-1,402.65	3,059.87	3,027.19	32.68	93.643			
1,500.00	1,490.30	1,496.30	1,496.30	5.64	29.72	-29.58	2,846.30	-1,402.65	3,047.25	3,012.20	35.05	86.945			
1,600.00	1,589.25	1,595.25	1,595.25	6.06	31.71	-29.71	2,846.30	-1,402.65	3,034.65	2,997.23	37.42	81.096			
1,700.00	1,688.20	1,694.20	1,694.20	6.48	33.70	-29.85	2,846.30	-1,402.65	3,022.07	2,982.28	39.79	75.943			
1,800.00	1,787.15	1,793.15	1,793.15	6.91	35.69	-29.99	2,846.30	-1,402.65	3,009.51	2,967.34	42.17	71.370			
1,900.00	1,886.10	1,892.10	1,892.10	7.33	37.68	-30.12	2,846.30	-1,402.65	2,996.96	2,952.42	44.54	67.285			
2,000.00	1,985.05	1,991.05	1,991.05	7.75	39.67	-30.26	2,846.30	-1,402.65	2,984.43	2,937.52	46.92	63.612			
2,100.00	2,084.00	2,090.00	2,090.00	8.18	41.66	-30.40	2,846.30	-1,402.65	2,971.92	2,922.63	49.29	60.294			
2,200.00	2,182.95	2,188.95	2,188.95	8.60	43.65	-30.54	2,846.30	-1,402.65	2,959.42	2,907.76	51.67	57.280			
2,300.00	2,281.90	2,287.90	2,287.90	9.03	45.64	-30.69	2,846.30	-1,402.65	2,946.95	2,892.91	54.04	54.531			
2,400.00	2,380.85	2,386.85	2,386.85	9.45	47.64	-30.83	2,846.30	-1,402.65	2,934.49	2,878.07	56.42	52.014			
2,500.00	2,479.80	2,485.80	2,485.80	9.88	49.63	-30.97	2,846.30	-1,402.65	2,922.05	2,863.26	58.79	49.700			
2,600.00	2,578.74	2,584.74	2,584.74	10.31	51.62	-31.12	2,846.30	-1,402.65	2,909.63	2,848.46	61.17	47.566			
2,700.00	2,677.69	2,683.69	2,683.69	10.73	53.61	-31.27	2,846.30	-1,402.65	2,897.23	2,833.68	63.55	45.592			
2,800.00	2,776.64	2,782.64	2,782.64	11.16	55.60	-31.42	2,846.30	-1,402.65	2,884.84	2,818.92	65.92	43.760			
2,900.00	2,875.59	2,881.59	2,881.59	11.58	57.59	-31.57	2,846.30	-1,402.65	2,872.48	2,804.18	68.30	42.055			
3,000.00	2,974.54	2,980.54	2,980.54	12.01	59.58	-31.72	2,846.30	-1,402.65	2,860.13	2,789.45	70.68	40.466			
3,100.00	3,073.49	3,079.49	3,079.49	12.44	61.57	-31.87	2,846.30	-1,402.65	2,847.81	2,774.75	73.06	38.980			
3,200.00	3,172.44	3,178.44	3,178.44	12.86	63.56	-32.02	2,846.30	-1,402.65	2,835.51	2,760.07	75.44	37.587			
3,300.00	3,271.39	3,277.39	3,277.39	13.29	65.55	-32.18	2,846.30	-1,402.65	2,823.22	2,745.41	77.82	36.280			
3,400.00	3,370.34	3,376.34	3,376.34	13.72	67.54	-32.34	2,846.30	-1,402.65	2,810.96	2,730.76	80.20	35.051			
3,500.00	3,469.29	3,475.29	3,475.29	14.14	69.53	-32.49	2,846.30	-1,402.65	2,798.72	2,716.14	82.58	33.893			
3,600.00	3,568.24	3,574.24	3,574.24	14.57	71.52	-32.65	2,846.30	-1,402.65	2,786.50	2,701.54	84.96	32.799			
3,700.00	3,667.19	3,673.19	3,673.19	15.00	73.51	-32.81	2,846.30	-1,402.65	2,774.30	2,686.96	87.34	31.765			
3,800.00	3,766.14	3,772.14	3,772.14	15.42	75.50	-32.98	2,846.30	-1,402.65	2,762.12	2,672.40	89.72	30.787			
3,900.00	3,865.09	3,871.09	3,871.09	15.85	77.49	-33.14	2,846.30	-1,402.65	2,749.96	2,657.86	92.10	29.859			
4,000.00	3,964.03	3,970.03	3,970.03	16.28	79.48	-33.30	2,846.30	-1,402.65	2,737.83	2,643.35	94.48	28.978			
4,100.00	4,062.98	4,068.98	4,068.98	16.70	81.47	-33.47	2,846.30	-1,402.65	2,725.72	2,628.86	96.86	28.140			
4,200.00	4,161.93	4,167.93	4,167.93	17.13	83.46	-33.64	2,846.30	-1,402.65	2,713.63	2,614.39	99.25	27.343			
4,300.00	4,260.88	4,266.88	4,266.88	17.56	85.45	-33.81	2,846.30	-1,402.65	2,701.57	2,599.94	101.63	26.583			
4,400.00	4,359.83	4,365.83	4,365.83	17.98	87.44	-33.98	2,846.30	-1,402.65	2,689.53	2,585.52	104.01	25.858			
4,500.00	4,458.78	4,464.78	4,464.78	18.41	89.43	-34.15	2,846.30	-1,402.65	2,677.51	2,571.12	106.40	25.166			
4,600.00	4,557.73	4,563.73	4,563.73	18.84	91.42	-34.32	2,846.30	-1,402.65	2,665.52	2,556.74	108.78	24.504			
4,700.00	4,656.68	4,662.68	4,662.68	19.26	93.41	-34.50	2,846.30	-1,402.65	2,653.55	2,542.39	111.16	23.871			
4,800.00	4,755.63	4,761.63	4,761.63	19.69	95.40	-34.68	2,846.30	-1,402.65	2,641.61	2,528.06	113.55	23.264			
4,900.00	4,854.58	4,860.58	4,860.58	20.12	97.39	-34.86	2,846.30	-1,402.65	2,629.69	2,513.76	115.93	22.683			
5,000.00	4,953.53	4,959.53	4,959.53	20.55	99.38	-35.04	2,846.30	-1,402.65	2,617.80	2,499.48	118.32	22.125			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN VERT KNESS 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,052.48	5,058.48	5,058.48	20.97	101.37	-35.22	2,846.30	-1,402.65	2,605.93	2,485.22	120.71	21.589		
5,200.00	5,151.43	5,157.43	5,157.43	21.40	103.36	-35.40	2,846.30	-1,402.65	2,594.09	2,471.00	123.09	21.074		
5,300.00	5,250.38	5,256.38	5,256.38	21.83	105.35	-35.59	2,846.30	-1,402.65	2,582.28	2,456.80	125.48	20.579		
5,400.00	5,349.32	5,355.32	5,355.32	22.25	107.34	-35.77	2,846.30	-1,402.65	2,570.49	2,442.62	127.87	20.103		
5,500.00	5,448.27	5,454.27	5,454.27	22.68	109.33	-35.96	2,846.30	-1,402.65	2,558.73	2,428.48	130.26	19.644		
5,600.00	5,547.22	5,553.22	5,553.22	23.11	111.32	-36.15	2,846.30	-1,402.65	2,547.00	2,414.36	132.64	19.202		
5,625.90	5,572.85	5,578.85	5,578.85	23.22	111.83	-36.20	2,846.30	-1,402.65	2,543.97	2,410.71	133.26	19.090		
5,700.00	5,646.30	5,652.30	5,652.30	23.53	113.31	-36.24	2,846.30	-1,402.65	2,536.07	2,401.04	135.03	18.781		
5,800.00	5,745.78	5,751.78	5,751.78	23.92	115.31	-36.28	2,846.30	-1,402.65	2,527.86	2,390.45	137.41	18.396		
5,900.00	5,845.55	5,851.55	5,851.55	24.28	117.32	-36.30	2,846.30	-1,402.65	2,522.47	2,382.69	139.78	18.046		
6,000.00	5,945.50	5,951.50	5,951.50	24.61	119.33	-36.31	2,846.30	-1,402.65	2,519.90	2,377.76	142.13	17.729		
6,041.55	5,987.04	5,993.04	5,993.04	24.74	120.16	-34.50	2,846.30	-1,402.65	2,519.65	2,376.55	143.11	17.607		
6,100.00	6,045.49	6,051.49	6,051.49	24.91	121.34	-34.50	2,846.30	-1,402.65	2,519.65	2,375.18	144.47	17.440		
6,200.00	6,145.49	6,151.49	6,151.49	25.22	123.35	-34.50	2,846.30	-1,402.65	2,519.65	2,372.84	146.81	17.162		
6,300.00	6,245.49	6,251.49	6,251.49	25.52	125.36	-34.50	2,846.30	-1,402.65	2,519.65	2,370.50	149.15	16.893		
6,400.00	6,345.49	6,351.49	6,351.49	25.83	127.37	-34.50	2,846.30	-1,402.65	2,519.65	2,368.16	151.50	16.632		
6,500.00	6,445.49	6,451.49	6,451.49	26.14	129.38	-34.50	2,846.30	-1,402.65	2,519.65	2,365.81	153.84	16.379		
6,600.00	6,545.49	6,551.49	6,551.49	26.45	131.39	-34.50	2,846.30	-1,402.65	2,519.65	2,363.47	156.18	16.133		
6,700.00	6,645.49	6,651.49	6,651.49	26.76	133.40	-34.50	2,846.30	-1,402.65	2,519.65	2,361.13	158.53	15.894		
6,731.55	6,677.04	6,683.04	6,683.04	26.86	134.04	-34.50	2,846.30	-1,402.65	2,519.65	2,360.39	159.26	15.821		
6,750.00	6,695.49	6,701.49	6,701.49	26.92	134.41	55.99	2,846.30	-1,402.65	2,519.49	2,359.79	159.70	15.777		
6,800.00	6,745.33	6,751.33	6,751.33	27.06	135.41	56.24	2,846.30	-1,402.65	2,517.37	2,356.52	160.84	15.651		
6,850.00	6,794.65	6,800.65	6,800.65	27.21	136.40	56.77	2,846.30	-1,402.65	2,512.85	2,350.88	161.97	15.514		
6,900.00	6,843.08	6,849.08	6,849.08	27.36	137.38	57.59	2,846.30	-1,402.65	2,505.98	2,342.92	163.06	15.368		
6,950.00	6,890.24	6,896.24	6,896.24	27.50	138.33	58.68	2,846.30	-1,402.65	2,496.86	2,332.75	164.11	15.214		
7,000.00	6,935.78	6,941.78	6,941.78	27.63	139.24	60.06	2,846.30	-1,402.65	2,485.63	2,320.51	165.12	15.053		
7,050.00	6,979.35	6,985.35	6,985.35	27.76	140.12	61.70	2,846.30	-1,402.65	2,472.42	2,306.35	166.08	14.887		
7,100.00	7,020.62	7,026.62	7,026.62	27.89	140.95	63.60	2,846.30	-1,402.65	2,457.44	2,290.46	166.98	14.717		
7,150.00	7,059.27	7,065.27	7,065.27	28.01	141.72	65.73	2,846.30	-1,402.65	2,440.88	2,273.05	167.83	14.544		
7,200.00	7,095.02	7,101.02	7,101.02	28.13	142.44	68.07	2,846.30	-1,402.65	2,422.98	2,254.34	168.63	14.368		
7,250.00	7,127.58	7,133.58	7,133.58	28.27	143.10	70.59	2,846.30	-1,402.65	2,403.97	2,234.58	169.38	14.193		
7,300.00	7,156.72	7,162.72	7,162.72	28.41	143.68	73.23	2,846.30	-1,402.65	2,384.11	2,214.02	170.09	14.017		
7,350.00	7,182.21	7,188.21	7,188.21	28.58	144.20	75.95	2,846.30	-1,402.65	2,363.66	2,192.91	170.75	13.843		
7,400.00	7,203.85	7,209.85	7,209.85	28.79	144.63	78.69	2,846.30	-1,402.65	2,342.89	2,171.51	171.38	13.671		
7,450.00	7,221.48	7,227.48	7,227.48	29.05	144.99	81.38	2,846.30	-1,402.65	2,322.05	2,150.08	171.98	13.502		
7,500.00	7,234.96	7,240.96	7,240.96	29.38	145.26	83.98	2,846.30	-1,402.65	2,301.41	2,128.86	172.55	13.338		
7,550.00	7,244.21	7,250.21	7,250.21	29.79	145.44	86.43	2,846.30	-1,402.65	2,281.20	2,108.10	173.10	13.179		
7,600.00	7,249.13	7,255.13	7,255.13	30.26	145.54	88.69	2,846.30	-1,402.65	2,261.63	2,088.01	173.62	13.026		
7,631.55	7,250.00	7,256.00	7,256.00	30.59	145.56	90.00	2,846.30	-1,402.65	2,249.71	2,075.77	173.94	12.934		
7,700.00	7,250.00	7,256.00	7,256.00	31.38	145.56	90.00	2,846.30	-1,402.65	2,225.15	2,050.47	174.68	12.738		
7,800.00	7,250.00	7,256.00	7,256.00	32.73	145.56	90.00	2,846.30	-1,402.65	2,192.62	2,016.59	176.03	12.456		
7,900.00	7,250.00	7,256.00	7,256.00	34.25	145.56	90.00	2,846.30	-1,402.65	2,164.22	1,986.58	177.64	12.183		
8,000.00	7,250.00	7,256.00	7,256.00	35.92	145.56	90.00	2,846.30	-1,402.65	2,140.13	1,960.62	179.50	11.923		
8,100.00	7,250.00	7,256.00	7,256.00	37.73	145.56	90.00	2,846.30	-1,402.65	2,120.48	1,938.91	181.56	11.679		
8,200.00	7,250.00	7,256.00	7,256.00	39.64	145.56	90.00	2,846.30	-1,402.65	2,105.40	1,921.62	183.78	11.456		
8,300.00	7,250.00	7,256.00	7,256.00	41.64	145.56	90.00	2,846.30	-1,402.65	2,094.99	1,908.87	186.12	11.256		
8,400.00	7,250.00	7,256.00	7,256.00	43.72	145.56	90.00	2,846.30	-1,402.65	2,089.32	1,900.79	188.53	11.082		
8,468.58	7,250.00	7,256.00	7,256.00	45.19	145.56	90.00	2,846.30	-1,402.65	2,088.20	1,897.98	190.22	10.978 CC		
8,500.00	7,250.00	7,256.00	7,256.00	45.87	145.56	90.00	2,846.30	-1,402.65	2,088.44	1,897.46	190.98	10.935 ES		
8,600.00	7,250.00	7,256.00	7,256.00	48.08	145.56	90.00	2,846.30	-1,402.65	2,092.33	1,898.90	193.43	10.817		
8,700.00	7,250.00	7,256.00	7,256.00	50.34	145.56	90.00	2,846.30	-1,402.65	2,100.98	1,905.14	195.84	10.728		
8,800.00	7,250.00	7,256.00	7,256.00	52.64	145.56	90.00	2,846.30	-1,402.65	2,114.34	1,916.14	198.20	10.668		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN VERT KNESS 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,900.00	7,250.00	7,256.00	7,256.00	54.98	145.56	90.00	2,846.30	-1,402.65	2,132.30	1,931.83	200.47	10.636		
9,000.00	7,250.00	7,256.00	7,256.00	57.35	145.56	90.00	2,846.30	-1,402.65	2,154.76	1,952.12	202.64	10.633 SF		
9,100.00	7,250.00	7,256.00	7,256.00	59.76	145.56	90.00	2,846.30	-1,402.65	2,181.57	1,976.88	204.70	10.658		
9,200.00	7,250.00	7,256.00	7,256.00	62.19	145.56	90.00	2,846.30	-1,402.65	2,212.59	2,005.96	206.63	10.708		
9,300.00	7,250.00	7,256.00	7,256.00	64.65	145.56	90.00	2,846.30	-1,402.65	2,247.63	2,039.20	208.43	10.784		
9,400.00	7,250.00	7,256.00	7,256.00	67.12	145.56	90.00	2,846.30	-1,402.65	2,286.51	2,076.41	210.09	10.883		
9,500.00	7,249.99	7,255.99	7,255.99	69.61	145.56	90.00	2,846.30	-1,402.65	2,329.03	2,117.41	211.63	11.005		
9,600.00	7,249.99	7,255.99	7,255.99	72.12	145.56	90.00	2,846.30	-1,402.65	2,375.01	2,161.98	213.03	11.149		
9,700.00	7,249.99	7,255.99	7,255.99	74.65	145.56	90.00	2,846.30	-1,402.65	2,424.25	2,209.94	214.31	11.312		
9,800.00	7,249.99	7,255.99	7,255.99	77.19	145.56	90.00	2,846.30	-1,402.65	2,476.54	2,261.08	215.47	11.494		
9,900.00	7,249.99	7,255.99	7,255.99	79.74	145.56	90.00	2,846.30	-1,402.65	2,531.71	2,315.20	216.51	11.693		
10,000.00	7,249.99	7,255.99	7,255.99	82.30	145.56	90.00	2,846.30	-1,402.65	2,589.56	2,372.11	217.45	11.909		
10,100.00	7,249.99	7,255.99	7,255.99	84.87	145.56	90.00	2,846.30	-1,402.65	2,649.93	2,431.64	218.29	12.140		
10,200.00	7,249.99	7,255.99	7,255.99	87.45	145.56	90.00	2,846.30	-1,402.65	2,712.64	2,493.60	219.04	12.384		
10,300.00	7,249.99	7,255.99	7,255.99	90.04	145.56	90.00	2,846.30	-1,402.65	2,777.53	2,557.82	219.71	12.642		
10,400.00	7,249.99	7,255.99	7,255.99	92.64	145.56	90.00	2,846.30	-1,402.65	2,844.46	2,624.16	220.30	12.912		
10,500.00	7,249.99	7,255.99	7,255.99	95.24	145.56	90.00	2,846.30	-1,402.65	2,913.29	2,692.46	220.82	13.193		
10,600.00	7,249.99	7,255.99	7,255.99	97.85	145.56	90.00	2,846.30	-1,402.65	2,983.88	2,762.59	221.29	13.484		
10,700.00	7,249.99	7,255.99	7,255.99	100.47	145.56	90.00	2,846.30	-1,402.65	3,056.11	2,834.42	221.69	13.785		
10,800.00	7,249.99	7,255.99	7,255.99	103.09	145.56	90.00	2,846.30	-1,402.65	3,129.87	2,907.82	222.05	14.095		
10,900.00	7,249.99	7,255.99	7,255.99	105.71	145.56	90.00	2,846.30	-1,402.65	3,205.06	2,982.70	222.36	14.414		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Measured Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
11,900.00	7,249.99	7,210.99	7,210.99	132.19	144.65	-90.00	-2,435.41	-5,655.25	3,274.60	3,000.63	273.96	11.953		
12,000.00	7,249.99	7,210.99	7,210.99	134.86	144.65	-90.00	-2,435.41	-5,655.25	3,249.63	2,972.34	277.29	11.719		
12,100.00	7,249.99	7,210.99	7,210.99	137.52	144.65	-90.00	-2,435.41	-5,655.25	3,227.57	2,947.01	280.56	11.504		
12,200.00	7,249.99	7,210.99	7,210.99	140.19	144.65	-90.00	-2,435.41	-5,655.25	3,208.48	2,924.73	283.76	11.307		
12,300.00	7,249.99	7,210.99	7,210.99	142.86	144.65	-90.00	-2,435.41	-5,655.25	3,192.41	2,905.55	286.86	11.129		
12,400.00	7,249.99	7,210.99	7,210.99	145.53	144.65	-90.00	-2,435.41	-5,655.25	3,179.41	2,889.54	289.87	10.969		
12,500.00	7,249.99	7,210.99	7,210.99	148.21	144.65	-90.00	-2,435.41	-5,655.25	3,169.50	2,876.75	292.76	10.826		
12,600.00	7,249.99	7,210.99	7,210.99	150.88	144.65	-90.00	-2,435.41	-5,655.25	3,162.73	2,867.21	295.53	10.702		
12,700.00	7,249.99	7,210.99	7,210.99	153.56	144.65	-90.00	-2,435.41	-5,655.25	3,159.12	2,860.96	298.16	10.595		
12,764.35	7,249.99	7,210.99	7,210.99	155.28	144.65	-90.00	-2,435.41	-5,655.25	3,158.46	2,858.68	299.78	10.536	CC	
12,800.00	7,249.99	7,210.99	7,210.99	156.24	144.65	-90.00	-2,435.41	-5,655.25	3,158.66	2,858.01	300.65	10.506	ES	
12,900.00	7,249.98	7,210.98	7,210.98	158.92	144.65	-90.00	-2,435.41	-5,655.25	3,161.37	2,858.38	302.99	10.434		
13,000.00	7,249.98	7,210.98	7,210.98	161.60	144.65	-90.00	-2,435.41	-5,655.25	3,167.24	2,862.07	305.17	10.379		
13,100.00	7,249.98	7,210.98	7,210.98	164.28	144.65	-90.00	-2,435.41	-5,655.25	3,176.24	2,869.06	307.19	10.340		
13,200.00	7,249.98	7,210.98	7,210.98	166.97	144.65	-90.00	-2,435.41	-5,655.25	3,188.36	2,879.33	309.04	10.317		
13,300.00	7,249.98	7,210.98	7,210.98	169.65	144.65	-90.00	-2,435.41	-5,655.25	3,203.56	2,892.84	310.72	10.310	SF	
13,400.00	7,249.98	7,210.98	7,210.98	172.34	144.65	-90.00	-2,435.41	-5,655.25	3,221.79	2,909.55	312.24	10.318		
13,500.00	7,249.98	7,210.98	7,210.98	175.03	144.65	-90.00	-2,435.41	-5,655.25	3,243.00	2,929.42	313.58	10.342		
13,600.00	7,249.98	7,210.98	7,210.98	177.72	144.65	-90.00	-2,435.41	-5,655.25	3,267.13	2,952.37	314.77	10.380		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - ABDN VERT MEAN 1 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,200.00	7,249.98	6,727.00	6,727.00	220.85	134.90	-74.95	-1,129.55	-10,720.40	3,220.93	2,955.58	265.35	12.138		
15,300.00	7,249.98	6,727.00	6,727.00	223.55	134.90	-74.95	-1,129.55	-10,720.40	3,140.17	2,870.35	269.82	11.638		
15,400.00	7,249.98	6,727.00	6,727.00	226.25	134.90	-74.95	-1,129.55	-10,720.40	3,060.55	2,786.07	274.48	11.150		
15,478.21	7,250.00	6,727.00	6,727.00	228.36	134.90	-74.95	-1,129.55	-10,720.40	2,999.25	2,720.98	278.27	10.778	CC, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	-180.00	-29.14	0.00	29.14	29.14	0.29	101.625				
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-29.14	0.00	29.14	28.86	1.00	29.036				
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-29.14	0.00	29.14	28.14	1.72	16.938 CC, ES				
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-29.14	0.00	29.14	27.42	2.43	12.805				
400.00	399.98	399.82	399.80	1.22	1.21	175.10	-29.34	1.73	31.13	28.70	3.15	11.913				
500.00	499.84	499.25	499.09	1.58	1.56	167.90	-29.91	6.88	37.49	34.34	3.87	12.604				
600.00	599.45	598.14	597.62	1.95	1.92	160.46	-30.84	15.21	48.83	44.95	4.61	13.928				
700.00	698.70	696.88	695.94	2.33	2.29	156.48	-31.84	24.24	64.17	59.56	5.34	15.292				
715.65	714.19	712.29	711.29	2.39	2.35	156.12	-32.00	25.65	66.88	62.15	6.08	16.343				
800.00	797.66	795.31	793.96	2.73	2.67	154.78	-32.84	33.25	81.70	76.35	6.82	17.158				
900.00	896.61	893.74	891.96	3.13	3.04	153.70	-33.84	42.25	99.30	93.23	7.56	17.807				
1,000.00	995.56	992.16	989.97	3.54	3.42	152.95	-34.85	51.26	116.93	110.12	8.30	18.336				
1,100.00	1,094.50	1,090.58	1,087.97	3.96	3.80	152.40	-35.85	60.27	134.58	127.02	9.05	18.774				
1,200.00	1,193.45	1,189.01	1,185.98	4.38	4.18	151.97	-36.85	69.27	152.23	143.93	9.80	19.457				
1,300.00	1,292.40	1,287.43	1,283.99	4.79	4.56	151.64	-37.85	78.28	169.89	160.84	10.55	19.728				
1,400.00	1,391.35	1,385.86	1,381.99	5.22	4.94	151.36	-38.85	87.29	187.56	177.76	11.30	19.965				
1,500.00	1,490.30	1,484.28	1,480.00	5.64	5.32	151.14	-39.86	96.29	205.22	194.68	12.05	20.173				
1,600.00	1,589.25	1,582.70	1,578.00	6.06	5.71	150.95	-40.86	105.30	222.90	211.60	12.80	20.521				
1,700.00	1,688.20	1,681.13	1,676.01	6.48	6.09	150.78	-41.86	114.31	240.57	228.52	13.55	20.668				
1,800.00	1,787.15	1,779.55	1,774.01	6.91	6.47	150.64	-42.86	123.31	258.24	245.44	14.31	20.800				
1,900.00	1,886.10	1,877.98	1,872.02	7.33	6.86	150.52	-43.87	132.32	275.92	262.36	15.06	20.921				
2,000.00	1,985.05	1,976.40	1,970.03	7.75	7.24	150.41	-44.87	141.33	293.60	279.29	15.81	21.030				
2,100.00	2,084.00	2,074.82	2,068.03	8.18	7.62	150.32	-45.87	150.33	311.27	296.21	16.57	21.130				
2,200.00	2,182.95	2,173.25	2,166.04	8.60	8.01	150.23	-46.87	159.34	328.95	313.14	17.32	21.130				
2,300.00	2,281.90	2,271.67	2,264.04	9.03	8.39	150.16	-47.87	168.35	346.63	330.06	18.08	21.222				
2,400.00	2,380.85	2,370.09	2,362.05	9.45	8.77	150.09	-48.88	177.35	364.31	346.99	18.83	21.307				
2,500.00	2,479.80	2,468.52	2,460.05	9.88	9.16	150.02	-49.88	186.36	381.99	363.91	19.59	21.385				
2,600.00	2,578.74	2,566.94	2,558.06	10.31	9.54	149.97	-50.88	195.36	399.67	380.84	20.34	21.458				
2,700.00	2,677.69	2,665.37	2,656.07	10.73	9.93	149.92	-51.88	204.37	417.35	397.76	21.10	21.525				
2,800.00	2,776.64	2,763.79	2,754.07	11.16	10.31	149.87	-52.88	213.38	435.03	414.69	21.85	21.588				
2,900.00	2,875.59	2,862.21	2,852.08	11.58	10.69	149.82	-53.89	222.38	452.71	431.62	22.61	21.646				
3,000.00	2,974.54	2,960.64	2,950.08	12.01	11.08	149.78	-54.89	231.39	470.40	448.54	23.36	21.701				
3,100.00	3,073.49	3,059.06	3,048.09	12.44	11.46	149.74	-55.89	240.40	488.08	465.47	24.12	21.752				
3,200.00	3,172.44	3,157.48	3,146.10	12.86	11.85	149.71	-56.89	249.40	505.76	482.40	24.88	21.801				
3,300.00	3,271.39	3,255.91	3,244.10	13.29	12.23	149.68	-57.89	258.41	523.44	499.32	25.63	21.846				
3,400.00	3,370.34	3,354.33	3,342.11	13.72	12.62	149.65	-58.90	267.42	541.13	516.25	26.39	21.889				
3,500.00	3,469.29	3,452.76	3,440.11	14.14	13.00	149.62	-59.90	276.42	558.81	533.18	27.14	21.930				
3,600.00	3,568.24	3,551.18	3,538.12	14.57	13.38	149.59	-60.90	285.43	576.49	550.10	27.88	21.968				
3,700.00	3,667.19	3,649.60	3,636.12	15.00	13.77	149.56	-61.90	294.44	594.17	567.03	28.62	22.004				
3,800.00	3,766.14	3,748.03	3,734.13	15.42	14.15	149.54	-62.90	303.44	611.86	583.96	29.37	22.038				
3,900.00	3,865.09	3,846.45	3,832.14	15.85	14.54	149.52	-63.91	312.45	629.54	600.88	30.12	22.071				
4,000.00	3,964.03	3,944.88	3,930.14	16.28	14.92	149.50	-64.91	321.46	647.22	617.81	30.87	22.102				
4,100.00	4,062.98	4,043.30	4,028.15	16.70	15.31	149.48	-65.91	330.46	664.91	634.74	31.62	22.132				
4,200.00	4,161.93	4,141.72	4,126.15	17.13	15.69	149.46	-66.91	339.47	682.59	651.66	32.37	22.160				
4,300.00	4,260.88	4,240.15	4,224.16	17.56	16.08	149.44	-67.91	348.48	700.27	668.59	33.12	22.187				
4,400.00	4,359.83	4,338.57	4,322.16	17.98	16.46	149.42	-68.92	357.48	717.96	685.52	33.87	22.213				
4,500.00	4,458.78	4,436.99	4,420.17	18.41	16.84	149.40	-69.92	366.49	735.64	702.44	34.62	22.237				
4,600.00	4,557.73	4,535.42	4,518.18	18.84	17.23	149.39	-70.92	375.49	753.32	719.37	35.37	22.261				
4,700.00	4,656.68	4,633.84	4,616.18	19.26	17.61	149.37	-71.92	384.50	771.01	736.30	36.12	22.283				
4,800.00	4,755.63	4,732.27	4,714.19	19.69	18.00	149.36	-72.92	393.51	788.69	753.22	36.87	22.283				
4,900.00	4,854.58	4,830.69	4,812.19	20.12	18.38	149.35	-73.93	402.51	806.37	770.15	37.62	22.261				
5,000.00	4,953.53	4,929.11	4,910.20	20.55	18.77	149.33	-74.93	411.52	824.06	787.08	38.37	22.283				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,100.00	5,052.48	5,027.54	5,008.20	20.97	19.15	149.32	-75.93	420.53	841.74	804.00	37.74	22.305			
5,200.00	5,151.43	5,125.96	5,106.21	21.40	19.54	149.31	-76.93	429.53	859.43	820.93	38.50	22.326			
5,300.00	5,250.38	5,224.39	5,204.22	21.83	19.92	149.30	-77.93	438.54	877.11	837.86	39.25	22.345			
5,400.00	5,349.32	5,322.81	5,302.22	22.25	20.31	149.29	-78.94	447.55	894.79	854.78	40.01	22.365			
5,500.00	5,448.27	5,421.23	5,400.23	22.68	20.69	149.27	-79.94	456.55	912.48	871.71	40.77	22.383			
5,600.00	5,547.22	5,519.66	5,498.23	23.11	21.08	149.26	-80.94	465.56	930.16	888.64	41.52	22.401			
5,625.90	5,572.85	5,545.14	5,523.61	23.22	21.17	149.26	-81.20	467.89	934.74	893.02	41.72	22.405			
5,700.00	5,646.30	5,618.22	5,596.38	23.53	21.46	149.35	-81.94	474.58	947.03	904.75	42.28	22.400			
5,800.00	5,745.78	5,717.20	5,694.94	23.92	21.85	149.35	-82.95	483.64	961.04	918.02	43.03	22.337			
5,900.00	5,845.55	5,816.50	5,793.81	24.28	22.24	149.22	-83.96	492.72	972.08	928.32	43.76	22.212			
6,000.00	5,945.50	5,915.99	5,892.89	24.61	22.62	148.96	-84.97	501.83	980.16	935.67	44.49	22.031			
6,041.55	5,987.04	5,957.36	5,934.08	24.74	22.79	150.63	-85.40	505.61	982.65	937.86	44.79	21.940			
6,100.00	6,045.49	6,015.57	5,992.04	24.91	23.01	150.38	-85.99	510.94	985.81	940.61	45.21	21.806			
6,200.00	6,145.49	6,115.14	6,091.19	25.22	23.40	149.95	-87.00	520.05	991.27	945.34	45.93	21.584			
6,300.00	6,245.49	6,214.72	6,190.34	25.52	23.79	149.53	-88.02	529.16	996.77	950.13	46.64	21.370			
6,400.00	6,345.49	6,314.29	6,289.49	25.83	24.18	149.11	-89.03	538.27	1,002.33	954.97	47.36	21.164			
6,500.00	6,445.49	6,413.87	6,388.64	26.14	24.57	148.69	-90.04	547.39	1,007.95	959.87	48.08	20.966			
6,600.00	6,545.49	6,513.44	6,487.80	26.45	24.96	148.28	-91.06	556.50	1,013.61	964.82	48.79	20.774			
6,700.00	6,645.49	7,149.49	7,043.55	26.76	26.29	161.27	-92.07	565.61	1,000.21	952.50	47.72	20.962			
6,731.55	6,677.04	7,252.18	7,094.84	26.86	26.63	166.70	-100.61	230.24	987.14	939.36	47.77	20.663			
6,750.00	6,695.49	7,290.97	7,109.95	26.92	26.80	-101.44	-101.09	194.53	979.37	931.34	48.03	20.392			
6,800.00	6,745.33	7,336.63	7,124.19	27.06	27.05	-100.90	-101.63	151.17	959.10	910.19	48.91	19.609			
6,850.00	6,794.65	7,417.93	7,142.00	27.21	27.59	-98.01	-102.52	71.95	940.68	890.65	50.03	18.801			
6,900.00	6,843.08	7,441.06	7,144.56	27.36	27.76	-98.31	-102.75	48.96	924.23	873.27	50.96	18.138			
6,950.00	6,890.24	7,497.76	7,147.99	27.50	28.23	-96.39	-103.29	-7.58	910.00	857.90	52.11	17.464			
7,000.00	6,935.78	7,519.85	7,148.00	27.63	28.45	-96.30	-103.48	-29.67	898.18	845.25	52.93	16.968			
7,050.00	6,979.35	7,544.35	7,148.00	27.76	28.69	-95.85	-103.69	-54.17	888.91	835.21	53.69	16.555			
7,100.00	7,020.62	7,572.55	7,148.00	27.89	28.97	-95.03	-103.94	-82.37	882.02	827.62	54.40	16.214			
7,150.00	7,059.27	7,604.24	7,148.00	28.01	29.30	-93.90	-104.22	-114.06	877.29	822.22	55.07	15.930			
7,200.00	7,095.02	7,639.17	7,148.00	28.13	29.73	-92.56	-104.53	-148.99	874.42	818.65	55.78	15.678			
7,250.00	7,127.58	7,677.09	7,148.00	28.27	30.19	-91.07	-104.86	-186.91	873.07	816.60	56.47	15.460			
7,283.13	7,147.29	7,703.72	7,148.00	28.36	30.52	-90.06	-105.09	-213.54	872.85	815.90	56.95	15.326			
7,300.00	7,156.72	7,717.71	7,148.00	28.41	30.71	-89.54	-105.21	-227.52	872.90	815.68	57.22	15.250			
7,350.00	7,182.21	7,760.71	7,148.00	28.58	31.31	-88.04	-105.59	-270.52	873.55	815.51	58.04	15.050			
7,400.00	7,203.85	7,805.76	7,148.00	28.79	31.96	-86.65	-105.99	-315.58	874.69	815.76	58.93	14.843			
7,450.00	7,221.48	7,852.54	7,148.00	29.05	32.69	-85.44	-106.40	-362.35	876.02	816.07	59.95	14.611			
7,500.00	7,234.96	7,900.67	7,148.00	29.38	33.44	-84.47	-106.82	-410.47	877.28	816.22	61.06	14.367			
7,550.00	7,244.21	7,949.79	7,148.00	29.79	34.28	-83.78	-107.25	-459.59	878.28	815.95	62.32	14.092			
7,600.00	7,249.13	7,999.53	7,148.00	30.26	35.13	-83.40	-107.69	-509.33	878.86	815.18	63.68	13.802			
7,631.55	7,250.00	8,031.06	7,148.00	30.59	35.71	-83.34	-107.96	-540.87	878.98	814.37	64.61	13.605			
7,700.00	7,250.00	8,099.51	7,148.00	31.38	36.96	-83.34	-108.56	-609.31	879.01	812.30	66.71	13.176			
7,800.00	7,250.00	8,199.51	7,148.00	32.73	38.89	-83.34	-109.44	-709.31	879.07	809.02	70.05	12.549			
7,900.00	7,250.00	8,299.51	7,148.00	34.25	40.91	-83.34	-110.32	-809.31	879.13	805.49	73.64	11.938			
8,000.00	7,250.00	8,399.51	7,148.00	35.92	43.01	-83.34	-111.19	-909.30	879.18	801.74	77.44	11.353			
8,100.00	7,250.00	8,499.51	7,148.00	37.73	45.18	-83.34	-112.07	-1,009.30	879.24	797.81	81.43	10.797			
8,200.00	7,250.00	8,599.51	7,148.00	39.64	47.40	-83.34	-112.95	-1,109.29	879.30	793.71	85.58	10.274			
8,300.00	7,250.00	8,699.51	7,148.00	41.64	49.68	-83.34	-113.82	-1,209.29	879.35	789.48	89.87	9.785			
8,400.00	7,250.00	8,799.51	7,148.00	43.72	51.99	-83.34	-114.70	-1,309.29	879.41	785.14	94.27	9.328			
8,500.00	7,250.00	8,899.51	7,148.00	45.87	54.35	-83.34	-115.58	-1,409.28	879.46	780.69	98.78	8.903			
8,600.00	7,250.00	8,999.51	7,148.00	48.08	56.74	-83.34	-116.46	-1,509.28	879.52	776.15	103.37	8.508			
8,700.00	7,250.00	9,099.51	7,148.00	50.34	59.15	-83.34	-117.33	-1,609.27	879.58	771.53	108.04	8.141			
8,800.00	7,250.00	9,199.51	7,148.00	52.64	61.59	-83.34	-118.21	-1,709.27	879.63	766.85	112.78	7.799			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
8,900.00	7,250.00	9,299.51	7,148.00	54.98	64.06	-83.34	-119.09	-1,809.27	879.69	762.11	117.58	7.482		
9,000.00	7,250.00	9,399.51	7,148.00	57.35	66.54	-83.34	-119.96	-1,909.26	879.75	757.32	122.43	7.186		
9,100.00	7,250.00	9,499.51	7,148.00	59.76	69.04	-83.34	-120.84	-2,009.26	879.80	752.48	127.32	6.910		
9,200.00	7,250.00	9,599.51	7,148.00	62.19	71.56	-83.34	-121.72	-2,109.26	879.86	747.60	132.26	6.652		
9,300.00	7,250.00	9,699.51	7,148.00	64.65	74.09	-83.34	-122.59	-2,209.25	879.91	742.68	137.23	6.412		
9,400.00	7,250.00	9,799.51	7,148.00	67.12	76.64	-83.34	-123.47	-2,309.25	879.97	737.73	142.24	6.187		
9,500.00	7,249.99	9,899.51	7,148.00	69.61	79.20	-83.34	-124.35	-2,409.24	880.03	732.76	147.27	5.976		
9,600.00	7,249.99	9,999.51	7,148.00	72.12	81.76	-83.34	-125.22	-2,509.24	880.08	727.75	152.33	5.777		
9,700.00	7,249.99	10,099.51	7,148.00	74.65	84.34	-83.35	-126.10	-2,609.24	880.14	722.73	157.41	5.591		
9,800.00	7,249.99	10,199.51	7,148.00	77.19	86.93	-83.35	-126.98	-2,709.23	880.20	717.68	162.52	5.416		
9,900.00	7,249.99	10,299.51	7,148.00	79.74	89.52	-83.35	-127.86	-2,809.23	880.25	712.61	167.64	5.251		
10,000.00	7,249.99	10,399.51	7,148.00	82.30	92.12	-83.35	-128.73	-2,909.22	880.31	707.53	172.78	5.095		
10,100.00	7,249.99	10,499.51	7,148.00	84.87	94.73	-83.35	-129.61	-3,009.22	880.36	702.43	177.94	4.948		
10,200.00	7,249.99	10,599.51	7,148.00	87.45	97.35	-83.35	-130.49	-3,109.22	880.42	697.31	183.11	4.808		
10,300.00	7,249.99	10,699.51	7,148.00	90.04	99.97	-83.35	-131.36	-3,209.21	880.48	692.18	188.29	4.676		
10,400.00	7,249.99	10,799.51	7,148.00	92.64	102.59	-83.35	-132.24	-3,309.21	880.53	687.04	193.49	4.551		
10,500.00	7,249.99	10,899.51	7,148.00	95.24	105.22	-83.35	-133.12	-3,409.21	880.59	681.89	198.70	4.432		
10,600.00	7,249.99	10,999.51	7,148.00	97.85	107.86	-83.35	-133.99	-3,509.20	880.65	676.73	203.92	4.319		
10,700.00	7,249.99	11,099.51	7,148.00	100.47	110.50	-83.35	-134.87	-3,609.20	880.70	671.55	209.15	4.211		
10,800.00	7,249.99	11,199.51	7,148.00	103.09	113.14	-83.35	-135.75	-3,709.19	880.76	666.37	214.39	4.108		
10,900.00	7,249.99	11,299.51	7,148.00	105.71	115.79	-83.35	-136.62	-3,809.19	880.82	661.18	219.63	4.010		
11,000.00	7,249.99	11,399.51	7,148.00	108.35	118.44	-83.35	-137.50	-3,909.19	880.87	655.98	224.89	3.917		
11,100.00	7,249.99	11,499.51	7,148.00	110.98	121.09	-83.35	-138.38	-4,009.18	880.93	650.78	230.15	3.828		
11,200.00	7,249.99	11,599.51	7,148.00	113.62	123.74	-83.35	-139.26	-4,109.18	880.98	645.57	235.42	3.742		
11,300.00	7,249.99	11,699.51	7,148.00	116.26	126.40	-83.35	-140.13	-4,209.17	881.04	640.35	240.69	3.660		
11,400.00	7,249.99	11,799.51	7,148.00	118.91	129.07	-83.35	-141.01	-4,309.17	881.10	635.13	245.97	3.582		
11,500.00	7,249.99	11,899.51	7,148.00	121.56	131.73	-83.35	-141.89	-4,409.17	881.15	629.90	251.26	3.507		
11,600.00	7,249.99	11,999.51	7,148.00	124.21	134.40	-83.35	-142.76	-4,509.16	881.21	624.66	256.55	3.435		
11,700.00	7,249.99	12,099.51	7,148.00	126.87	137.06	-83.35	-143.64	-4,609.16	881.27	619.42	261.84	3.366		
11,800.00	7,249.99	12,199.51	7,148.00	129.53	139.73	-83.35	-144.52	-4,709.16	881.32	614.18	267.14	3.299		
11,900.00	7,249.99	12,299.51	7,148.00	132.19	142.41	-83.36	-145.39	-4,809.15	881.38	608.93	272.45	3.235		
12,000.00	7,249.99	12,399.51	7,148.00	134.86	145.08	-83.36	-146.27	-4,909.15	881.43	603.68	277.76	3.173		
12,100.00	7,249.99	12,499.51	7,148.00	137.52	147.76	-83.36	-147.15	-5,009.14	881.49	598.42	283.07	3.114		
12,200.00	7,249.99	12,599.51	7,148.00	140.19	150.44	-83.36	-148.02	-5,109.14	881.55	593.16	288.39	3.057		
12,300.00	7,249.99	12,699.51	7,148.00	142.86	153.11	-83.36	-148.90	-5,209.14	881.60	587.90	293.71	3.002		
12,400.00	7,249.99	12,799.51	7,148.00	145.53	155.80	-83.36	-149.78	-5,309.13	881.66	582.63	299.03	2.948		
12,500.00	7,249.99	12,899.51	7,148.00	148.21	158.48	-83.36	-150.66	-5,409.13	881.72	577.36	304.35	2.897		
12,600.00	7,249.99	12,999.51	7,148.00	150.88	161.16	-83.36	-151.53	-5,509.12	881.77	572.09	309.68	2.847		
12,700.00	7,249.99	13,099.51	7,148.00	153.56	163.85	-83.36	-152.41	-5,609.12	881.83	566.81	315.01	2.799		
12,800.00	7,249.99	13,199.51	7,148.00	156.24	166.53	-83.36	-153.29	-5,709.12	881.89	561.54	320.35	2.753		
12,900.00	7,249.98	13,299.51	7,148.00	158.92	169.22	-83.36	-154.16	-5,809.11	881.94	556.26	325.68	2.708		
13,000.00	7,249.98	13,399.51	7,148.00	161.60	171.91	-83.36	-155.04	-5,909.11	882.00	550.97	331.02	2.664		
13,100.00	7,249.98	13,499.51	7,148.00	164.28	174.60	-83.36	-155.92	-6,009.10	882.05	545.69	336.36	2.622		
13,200.00	7,249.98	13,599.51	7,148.00	166.97	177.29	-83.36	-156.79	-6,109.10	882.11	540.40	341.71	2.581		
13,300.00	7,249.98	13,699.51	7,148.00	169.65	179.98	-83.36	-157.67	-6,209.10	882.17	535.11	347.05	2.542		
13,400.00	7,249.98	13,799.51	7,148.00	172.34	182.67	-83.36	-158.55	-6,309.09	882.22	529.82	352.40	2.503		
13,500.00	7,249.98	13,899.51	7,148.00	175.03	185.36	-83.36	-159.42	-6,409.09	882.28	524.53	357.75	2.466		
13,600.00	7,249.98	13,999.51	7,148.00	177.72	188.06	-83.36	-160.30	-6,509.09	882.34	519.24	363.10	2.430		
13,700.00	7,249.98	14,099.51	7,148.00	180.41	190.75	-83.36	-161.18	-6,609.08	882.39	513.94	368.45	2.395		
13,800.00	7,249.98	14,199.51	7,148.00	183.10	193.45	-83.36	-162.06	-6,709.08	882.45	508.64	373.81	2.361		
13,900.00	7,249.98	14,299.51	7,148.00	185.79	196.14	-83.36	-162.93	-6,809.07	882.50	503.34	379.16	2.328		
14,000.00	7,249.98	14,399.51	7,148.00	188.48	198.84	-83.36	-163.81	-6,909.07	882.56	498.04	384.52	2.295		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,100.00	7,249.98	14,499.51	7,148.00	191.18	201.54	-83.36	-164.69	-7,009.07	882.62	492.74	389.88	2.264		
14,200.00	7,249.98	14,599.51	7,148.00	193.87	204.23	-83.37	-165.56	-7,109.06	882.67	487.43	395.24	2.233		
14,300.00	7,249.98	14,699.51	7,148.00	196.56	206.93	-83.37	-166.44	-7,209.06	882.73	482.13	400.60	2.204		
14,400.00	7,249.98	14,799.51	7,148.00	199.26	209.63	-83.37	-167.32	-7,309.05	882.79	476.82	405.96	2.175		
14,500.00	7,249.98	14,899.51	7,148.00	201.96	212.33	-83.37	-168.19	-7,409.05	882.84	471.51	411.33	2.146		
14,600.00	7,249.98	14,999.51	7,148.00	204.65	215.03	-83.37	-169.07	-7,509.05	882.90	466.21	416.69	2.119		
14,700.00	7,249.98	15,099.51	7,148.00	207.35	217.73	-83.37	-169.95	-7,609.04	882.96	460.90	422.06	2.092		
14,800.00	7,249.98	15,199.51	7,148.00	210.05	220.43	-83.37	-170.82	-7,709.04	883.01	455.58	427.43	2.066		
14,900.00	7,249.98	15,299.51	7,148.00	212.75	223.14	-83.37	-171.70	-7,809.04	883.07	450.27	432.80	2.040		
15,000.00	7,249.98	15,399.51	7,148.00	215.45	225.84	-83.37	-172.58	-7,909.03	883.12	444.96	438.16	2.016		
15,100.00	7,249.98	15,499.51	7,148.00	218.15	228.54	-83.37	-173.46	-8,009.03	883.18	439.65	443.54	1.991		
15,200.00	7,249.98	15,599.51	7,148.00	220.85	231.24	-83.37	-174.33	-8,109.02	883.24	434.33	448.91	1.968		
15,300.00	7,249.98	15,699.51	7,148.00	223.55	233.95	-83.37	-175.21	-8,209.02	883.29	429.01	454.28	1.944		
15,400.00	7,249.98	15,799.51	7,148.00	226.25	236.65	-83.37	-176.09	-8,309.02	883.35	423.70	459.65	1.922		
15,478.21	7,250.00	15,877.72	7,148.00	228.36	238.77	-83.37	-176.77	-8,387.22	883.60	419.75	463.86	1.905 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance			Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-47.36	0.00	47.36						
100.00	100.00	100.00	100.00	0.14	0.14	180.00	-47.36	0.00	47.36	47.07	0.29	165.141			
200.00	200.00	200.00	200.00	0.50	0.50	180.00	-47.36	0.00	47.36	46.36	1.00	47.183			
300.00	300.00	300.00	300.00	0.86	0.86	180.00	-47.36	0.00	47.36	45.64	1.72	27.524 CC, ES			
400.00	399.98	399.98	399.98	1.22	1.22	178.25	-47.36	0.00	49.10	46.66	2.44	20.135			
500.00	499.84	499.84	499.84	1.58	1.58	178.41	-47.36	0.00	54.33	51.17	3.16	17.190			
600.00	599.45	599.45	599.45	1.95	1.93	178.63	-47.36	0.00	63.05	59.16	3.88	16.235			
700.00	698.70	698.70	698.70	2.33	2.29	178.84	-47.36	0.00	75.23	70.62	4.61	16.331			
715.65	714.19	713.84	713.84	2.39	2.34	178.87	-47.39	0.01	77.48	72.76	4.72	16.410			
800.00	797.66	794.80	794.79	2.73	2.62	178.71	-48.86	0.47	91.18	85.88	5.30	17.191			
900.00	896.61	889.77	889.64	3.13	2.94	178.11	-53.36	1.88	110.30	104.33	5.97	18.462			
1,000.00	995.56	985.81	985.38	3.54	3.26	177.32	-60.45	4.10	132.03	125.38	6.65	19.852			
1,100.00	1,094.50	1,083.34	1,082.60	3.96	3.60	176.72	-67.93	6.44	154.06	146.72	7.34	20.986			
1,200.00	1,193.45	1,180.87	1,179.81	4.38	3.95	176.27	-75.41	8.78	176.11	168.07	8.04	21.912			
1,300.00	1,292.40	1,278.40	1,277.03	4.79	4.30	175.92	-82.89	11.13	198.16	189.43	8.74	22.683			
1,400.00	1,391.35	1,375.93	1,374.24	5.22	4.66	175.64	-90.38	13.47	220.22	210.78	9.44	23.331			
1,500.00	1,490.30	1,473.46	1,471.46	5.64	5.02	175.41	-97.86	15.81	242.29	232.14	10.14	23.884			
1,600.00	1,589.25	1,571.00	1,568.67	6.06	5.38	175.22	-105.34	18.16	264.35	253.50	10.85	24.361			
1,700.00	1,688.20	1,668.53	1,665.89	6.48	5.74	175.06	-112.83	20.50	286.42	274.86	11.56	24.776			
1,800.00	1,787.15	1,766.06	1,763.11	6.91	6.11	174.92	-120.31	22.84	308.49	296.22	12.27	25.141			
1,900.00	1,886.10	1,863.59	1,860.32	7.33	6.47	174.80	-127.79	25.19	330.57	317.59	12.98	25.464			
2,000.00	1,985.05	1,961.12	1,957.54	7.75	6.84	174.69	-135.27	27.53	352.64	338.95	13.69	25.751			
2,100.00	2,084.00	2,058.65	2,054.75	8.18	7.21	174.60	-142.76	29.87	374.72	360.31	14.41	26.009			
2,200.00	2,182.95	2,156.18	2,151.97	8.60	7.58	174.52	-150.24	32.22	396.79	381.67	15.12	26.241			
2,300.00	2,281.90	2,253.72	2,249.18	9.03	7.95	174.45	-157.72	34.56	418.87	403.03	15.84	26.451			
2,400.00	2,380.85	2,351.25	2,346.40	9.45	8.32	174.38	-165.20	36.90	440.95	424.40	16.55	26.643			
2,500.00	2,479.80	2,448.78	2,443.62	9.88	8.69	174.32	-172.69	39.25	463.02	445.76	17.27	26.817			
2,600.00	2,578.74	2,546.31	2,540.83	10.31	9.06	174.26	-180.17	41.59	485.10	467.12	17.98	26.978			
2,700.00	2,677.69	2,643.84	2,638.05	10.73	9.43	174.22	-187.65	43.93	507.18	488.48	18.70	27.125			
2,800.00	2,776.64	2,741.37	2,735.26	11.16	9.81	174.17	-195.13	46.27	529.26	509.84	19.41	27.261			
2,900.00	2,875.59	2,838.90	2,832.48	11.58	10.18	174.13	-202.62	48.62	551.34	531.21	20.13	27.387			
3,000.00	2,974.54	2,936.44	2,929.69	12.01	10.55	174.09	-210.10	50.96	573.42	552.57	20.85	27.504			
3,100.00	3,073.49	3,033.97	3,026.91	12.44	10.93	174.05	-217.58	53.30	595.50	573.93	21.57	27.613			
3,200.00	3,172.44	3,131.50	3,124.13	12.86	11.30	174.02	-225.06	55.65	617.58	595.29	22.28	27.715			
3,300.00	3,271.39	3,229.03	3,221.34	13.29	11.67	173.99	-232.55	57.99	639.66	616.65	23.00	27.810			
3,400.00	3,370.34	3,326.56	3,318.56	13.72	12.05	173.96	-240.03	60.33	661.74	638.02	23.72	27.899			
3,500.00	3,469.29	3,424.09	3,415.77	14.14	12.42	173.93	-247.51	62.68	683.82	659.38	24.44	27.983			
3,600.00	3,568.24	3,521.62	3,512.99	14.57	12.79	173.91	-255.00	65.02	705.90	680.74	25.16	28.061			
3,700.00	3,667.19	3,619.15	3,610.20	15.00	13.17	173.88	-262.48	67.36	727.98	702.10	25.87	28.135			
3,800.00	3,766.14	3,716.69	3,707.42	15.42	13.54	173.86	-269.96	69.71	750.06	723.47	26.59	28.205			
3,900.00	3,865.09	3,814.22	3,804.63	15.85	13.92	173.84	-277.44	72.05	772.14	744.83	27.31	28.272			
4,000.00	3,964.03	3,911.75	3,901.85	16.28	14.29	173.82	-284.93	74.39	794.22	766.19	28.03	28.334			
4,100.00	4,062.98	4,009.28	3,999.07	16.70	14.67	173.80	-292.41	76.74	816.30	787.55	28.75	28.393			
4,200.00	4,161.93	4,106.81	4,096.28	17.13	15.04	173.78	-299.89	79.08	838.38	808.91	29.47	28.450			
4,300.00	4,260.88	4,204.34	4,193.50	17.56	15.42	173.77	-307.37	81.42	860.46	830.27	30.19	28.503			
4,400.00	4,359.83	4,301.87	4,290.71	17.98	15.79	173.75	-314.86	83.77	882.54	851.64	30.91	28.554			
4,500.00	4,458.78	4,399.41	4,387.93	18.41	16.17	173.73	-322.34	86.11	904.62	873.00	31.63	28.603			
4,600.00	4,557.73	4,496.94	4,485.14	18.84	16.54	173.72	-329.82	88.45	926.71	894.36	32.35	28.649			
4,700.00	4,656.68	4,594.47	4,582.36	19.26	16.92	173.71	-337.30	90.79	948.79	915.72	33.07	28.693			
4,800.00	4,755.63	4,692.00	4,679.58	19.69	17.29	173.69	-344.79	93.14	970.87	937.08	33.79	28.736			
4,900.00	4,854.58	4,789.53	4,776.79	20.12	17.67	173.68	-352.27	95.48	992.95	958.44	34.51	28.776			
5,000.00	4,953.53	4,887.06	4,874.01	20.55	18.04	173.67	-359.75	97.82	1,015.03	979.81	35.23	28.815			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
5,100.00	5,052.48	4,984.59	4,971.22	20.97	18.42	173.66	-367.24	100.17	1,037.11	1,001.17	35.95	28.852				
5,200.00	5,151.43	5,082.13	5,068.44	21.40	18.79	173.65	-374.72	102.51	1,059.19	1,022.53	36.67	28.887				
5,300.00	5,250.38	5,179.66	5,165.65	21.83	19.17	173.63	-382.20	104.85	1,081.28	1,043.89	37.39	28.921				
5,400.00	5,349.32	5,277.19	5,262.87	22.25	19.54	173.62	-389.68	107.20	1,103.36	1,065.25	38.11	28.954				
5,500.00	5,448.27	5,374.72	5,360.09	22.68	19.92	173.61	-397.17	109.54	1,125.44	1,086.61	38.83	28.985				
5,600.00	5,547.22	5,472.25	5,457.30	23.11	20.29	173.61	-404.65	111.88	1,147.52	1,107.97	39.55	29.016				
5,625.90	5,572.85	5,497.51	5,482.48	23.22	20.39	173.60	-406.59	112.49	1,153.24	1,113.50	39.74	29.023				
5,700.00	5,646.30	5,569.98	5,554.72	23.53	20.67	173.63	-412.15	114.23	1,168.67	1,128.40	40.27	29.022				
5,800.00	5,745.78	5,668.37	5,652.78	23.92	21.05	173.63	-419.69	116.59	1,186.53	1,145.55	40.98	28.951				
5,900.00	5,845.55	5,767.31	5,751.41	24.28	21.43	173.62	-427.29	118.97	1,200.98	1,159.28	41.70	28.801				
6,000.00	5,945.50	5,866.69	5,850.46	24.61	21.81	173.57	-434.91	121.36	1,211.98	1,169.57	42.41	28.579				
6,041.55	5,987.04	5,908.07	5,891.71	24.74	21.97	175.36	-438.08	122.35	1,215.53	1,172.83	42.70	28.466				
6,100.00	6,045.49	5,966.34	5,949.79	24.91	22.20	175.32	-442.56	123.75	1,220.12	1,177.00	43.11	28.300				
6,200.00	6,145.49	6,066.02	6,049.14	25.22	22.58	175.23	-450.20	126.15	1,227.96	1,184.14	43.82	28.024				
6,300.00	6,245.49	6,165.69	6,148.50	25.52	22.97	175.15	-457.85	128.54	1,235.81	1,191.28	44.53	27.755				
6,400.00	6,345.49	6,265.37	6,247.85	25.83	23.35	175.07	-465.50	130.94	1,243.66	1,198.43	45.23	27.495				
6,500.00	6,445.49	6,365.04	6,347.21	26.14	23.73	174.99	-473.14	133.33	1,251.51	1,205.57	45.94	27.243				
6,600.00	6,545.49	6,464.72	6,446.56	26.45	24.12	174.91	-480.79	135.73	1,259.37	1,212.72	46.65	26.998				
6,700.00	6,645.49	6,564.40	6,545.91	26.76	24.50	174.84	-488.44	138.12	1,267.22	1,219.87	47.35	26.761				
6,731.55	6,677.04	6,595.84	6,577.25	26.86	24.62	174.81	-490.85	138.88	1,269.70	1,222.13	47.58	26.687				
6,750.00	6,695.49	6,614.23	6,595.58	26.92	24.69	-94.60	-492.26	139.32	1,271.18	1,223.47	47.71	26.646				
6,800.00	6,745.33	6,663.82	6,645.01	27.06	24.89	-94.38	-496.07	140.51	1,275.42	1,227.37	48.05	26.544				
6,850.00	6,794.65	6,719.18	6,700.20	27.21	25.09	-94.34	-500.32	141.01	1,279.96	1,231.54	48.43	26.431				
6,900.00	6,843.08	6,781.73	6,762.31	27.36	25.32	-94.33	-505.16	135.73	1,284.46	1,235.62	48.84	26.301				
6,950.00	6,890.24	6,845.60	6,824.74	27.50	25.53	-94.28	-510.08	123.37	1,288.79	1,239.56	49.24	26.176				
7,000.00	6,935.78	6,910.65	6,886.52	27.63	25.72	-94.19	-515.01	103.70	1,292.90	1,243.28	49.62	26.055				
7,050.00	6,979.35	6,976.69	6,946.54	27.76	25.90	-94.05	-519.86	76.69	1,296.73	1,246.73	50.00	25.932				
7,100.00	7,020.62	7,043.48	7,003.68	27.89	26.07	-93.86	-524.56	42.50	1,300.24	1,249.85	50.39	25.801				
7,150.00	7,059.27	7,110.76	7,056.84	28.01	26.21	-93.63	-529.00	1.56	1,303.39	1,252.57	50.81	25.651				
7,200.00	7,095.02	7,178.23	7,104.97	28.13	26.35	-93.34	-533.11	-45.49	1,306.14	1,254.86	51.28	25.471				
7,250.00	7,127.58	7,245.60	7,147.19	28.27	26.48	-93.01	-536.80	-97.80	1,308.47	1,256.65	51.82	25.250				
7,300.00	7,156.72	7,312.55	7,182.80	28.41	26.63	-92.63	-540.02	-154.37	1,310.38	1,257.91	52.47	24.974				
7,350.00	7,182.21	7,378.82	7,211.33	28.58	26.88	-92.22	-542.71	-214.08	1,311.86	1,258.62	53.24	24.642				
7,400.00	7,203.85	7,444.16	7,232.55	28.79	27.29	-91.78	-544.86	-275.79	1,312.92	1,258.79	54.13	24.255				
7,450.00	7,221.48	7,508.34	7,246.44	29.05	27.83	-91.32	-546.45	-338.41	1,313.58	1,258.42	55.15	23.816				
7,500.00	7,234.96	7,571.22	7,253.19	29.38	28.47	-90.84	-547.49	-400.88	1,313.84	1,257.55	56.30	23.338				
7,550.00	7,244.21	7,626.70	7,254.00	29.79	29.12	-90.42	-548.02	-456.34	1,313.81	1,256.34	57.47	22.861				
7,600.00	7,249.13	7,676.44	7,254.00	30.26	29.74	-90.21	-548.43	-506.08	1,313.78	1,255.13	58.65	22.399				
7,613.95	7,249.73	7,690.38	7,254.00	30.40	29.91	-90.19	-548.55	-520.02	1,313.78	1,254.79	58.99	22.270				
7,631.55	7,250.00	7,707.98	7,254.00	30.59	30.15	-90.17	-548.69	-537.62	1,313.78	1,254.34	59.44	22.103				
7,700.00	7,250.00	7,776.43	7,254.00	31.38	31.13	-90.17	-549.26	-606.06	1,313.79	1,252.49	61.30	21.432				
7,800.00	7,250.00	7,876.43	7,254.00	32.73	32.69	-90.17	-550.09	-706.06	1,313.80	1,249.50	64.30	20.433				
7,900.00	7,250.00	7,976.43	7,254.00	34.25	34.39	-90.17	-550.92	-806.06	1,313.81	1,246.21	67.60	19.434				
8,000.00	7,250.00	8,076.43	7,254.00	35.92	36.22	-90.17	-551.75	-906.05	1,313.82	1,242.65	71.17	18.460				
8,100.00	7,250.00	8,176.43	7,254.00	37.73	38.15	-90.17	-552.58	-1,006.05	1,313.83	1,238.87	74.96	17.526				
8,200.00	7,250.00	8,276.43	7,254.00	39.64	40.18	-90.17	-553.41	-1,106.05	1,313.84	1,234.89	78.95	16.641				
8,300.00	7,250.00	8,376.43	7,254.00	41.64	42.28	-90.17	-554.24	-1,206.04	1,313.85	1,230.75	83.10	15.810				
8,400.00	7,250.00	8,476.43	7,254.00	43.72	44.45	-90.17	-555.07	-1,306.04	1,313.86	1,226.46	87.40	15.033				
8,500.00	7,250.00	8,576.43	7,254.00	45.87	46.68	-90.17	-555.90	-1,406.03	1,313.87	1,222.06	91.81	14.310				
8,600.00	7,250.00	8,676.43	7,254.00	48.08	48.96	-90.17	-556.73	-1,506.03	1,313.88	1,217.54	96.34	13.639				
8,700.00	7,250.00	8,776.43	7,254.00	50.34	51.28	-90.17	-557.56	-1,606.03	1,313.89	1,212.94	100.95	13.015				
8,800.00	7,250.00	8,876.43	7,254.00	52.64	53.64	-90.17	-558.39	-1,706.02	1,313.90	1,208.26	105.64	12.437				

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,900.00	7,250.00	8,976.43	7,254.00	54.98	56.03	-90.17	-559.22	-1,806.02	1,313.91	1,203.51	110.40	11.901				
9,000.00	7,250.00	9,076.43	7,254.00	57.35	58.45	-90.17	-560.05	-1,906.02	1,313.92	1,198.70	115.22	11.403				
9,100.00	7,250.00	9,176.43	7,254.00	59.76	60.90	-90.17	-560.88	-2,006.01	1,313.93	1,193.83	120.10	10.940				
9,200.00	7,250.00	9,276.43	7,254.00	62.19	63.37	-90.17	-561.71	-2,106.01	1,313.94	1,188.92	125.02	10.510				
9,300.00	7,250.00	9,376.43	7,254.00	64.65	65.86	-90.17	-562.54	-2,206.01	1,313.95	1,183.97	129.98	10.109				
9,400.00	7,250.00	9,476.43	7,254.00	67.12	68.36	-90.17	-563.37	-2,306.00	1,313.96	1,178.98	134.98	9.734				
9,500.00	7,249.99	9,576.43	7,254.00	69.61	70.89	-90.17	-564.20	-2,406.00	1,313.97	1,173.95	140.02	9.384				
9,600.00	7,249.99	9,676.43	7,254.00	72.12	73.42	-90.17	-565.03	-2,506.00	1,313.98	1,168.90	145.08	9.057				
9,700.00	7,249.99	9,776.43	7,254.00	74.65	75.97	-90.17	-565.86	-2,605.99	1,313.99	1,163.82	150.17	8.750				
9,800.00	7,249.99	9,876.43	7,254.00	77.19	78.53	-90.17	-566.69	-2,705.99	1,314.00	1,158.71	155.29	8.462				
9,900.00	7,249.99	9,976.43	7,254.00	79.74	81.10	-90.17	-567.52	-2,805.99	1,314.01	1,153.59	160.42	8.191				
10,000.00	7,249.99	10,076.43	7,254.00	82.30	83.68	-90.17	-568.35	-2,905.98	1,314.02	1,148.44	165.58	7.936				
10,100.00	7,249.99	10,176.43	7,254.00	84.87	86.27	-90.17	-569.18	-3,005.98	1,314.03	1,143.28	170.75	7.696				
10,200.00	7,249.99	10,276.43	7,254.00	87.45	88.87	-90.17	-570.01	-3,105.98	1,314.04	1,138.10	175.94	7.469				
10,300.00	7,249.99	10,376.43	7,254.00	90.04	91.48	-90.17	-570.84	-3,205.97	1,314.05	1,132.91	181.14	7.254				
10,400.00	7,249.99	10,476.43	7,254.00	92.64	94.09	-90.17	-571.68	-3,305.97	1,314.06	1,127.70	186.36	7.051				
10,500.00	7,249.99	10,576.43	7,254.00	95.24	96.70	-90.17	-572.51	-3,405.97	1,314.07	1,122.48	191.59	6.859				
10,600.00	7,249.99	10,676.43	7,254.00	97.85	99.33	-90.17	-573.34	-3,505.96	1,314.08	1,117.25	196.84	6.676				
10,700.00	7,249.99	10,776.43	7,254.00	100.47	101.95	-90.17	-574.17	-3,605.96	1,314.09	1,112.00	202.09	6.503				
10,800.00	7,249.99	10,876.43	7,254.00	103.09	104.59	-90.17	-575.00	-3,705.96	1,314.10	1,106.75	207.35	6.338				
10,900.00	7,249.99	10,976.43	7,254.00	105.71	107.23	-90.17	-575.83	-3,805.95	1,314.11	1,101.49	212.62	6.180				
11,000.00	7,249.99	11,076.43	7,254.00	108.35	109.87	-90.17	-576.66	-3,905.95	1,314.12	1,096.22	217.90	6.031				
11,100.00	7,249.99	11,176.43	7,254.00	110.98	112.51	-90.17	-577.49	-4,005.95	1,314.13	1,090.94	223.19	5.888				
11,200.00	7,249.99	11,276.43	7,254.00	113.62	115.16	-90.17	-578.32	-4,105.94	1,314.14	1,085.65	228.49	5.751				
11,300.00	7,249.99	11,376.43	7,254.00	116.26	117.81	-90.17	-579.15	-4,205.94	1,314.15	1,080.36	233.79	5.621				
11,400.00	7,249.99	11,476.43	7,254.00	118.91	120.47	-90.17	-579.98	-4,305.94	1,314.16	1,075.06	239.10	5.496				
11,500.00	7,249.99	11,576.43	7,254.00	121.56	123.13	-90.17	-580.81	-4,405.93	1,314.17	1,069.76	244.41	5.377				
11,600.00	7,249.99	11,676.43	7,254.00	124.21	125.79	-90.17	-581.64	-4,505.93	1,314.18	1,064.45	249.73	5.262				
11,700.00	7,249.99	11,776.43	7,254.00	126.87	128.45	-90.17	-582.47	-4,605.92	1,314.19	1,059.13	255.06	5.153				
11,800.00	7,249.99	11,876.43	7,254.00	129.53	131.12	-90.17	-583.30	-4,705.92	1,314.20	1,053.81	260.39	5.047				
11,900.00	7,249.99	11,976.43	7,254.00	132.19	133.78	-90.17	-584.13	-4,805.92	1,314.21	1,048.49	265.72	4.946				
12,000.00	7,249.99	12,076.43	7,254.00	134.86	136.45	-90.17	-584.96	-4,905.91	1,314.22	1,043.16	271.06	4.848				
12,100.00	7,249.99	12,176.43	7,254.00	137.52	139.13	-90.17	-585.79	-5,005.91	1,314.23	1,037.83	276.40	4.755				
12,200.00	7,249.99	12,276.43	7,254.00	140.19	141.80	-90.17	-586.62	-5,105.91	1,314.24	1,032.49	281.75	4.665				
12,300.00	7,249.99	12,376.43	7,254.00	142.86	144.48	-90.17	-587.45	-5,205.90	1,314.25	1,027.15	287.10	4.578				
12,400.00	7,249.99	12,476.43	7,254.00	145.53	147.15	-90.17	-588.28	-5,305.90	1,314.26	1,021.80	292.46	4.494				
12,500.00	7,249.99	12,576.43	7,254.00	148.21	149.83	-90.18	-589.11	-5,405.90	1,314.27	1,016.46	297.81	4.413				
12,600.00	7,249.99	12,676.43	7,254.00	150.88	152.51	-90.18	-589.94	-5,505.89	1,314.28	1,011.11	303.17	4.335				
12,700.00	7,249.99	12,776.43	7,254.00	153.56	155.20	-90.18	-590.77	-5,605.89	1,314.29	1,005.75	308.54	4.260				
12,800.00	7,249.99	12,876.43	7,254.00	156.24	157.88	-90.18	-591.60	-5,705.89	1,314.30	1,000.40	313.90	4.187				
12,900.00	7,249.98	12,976.43	7,254.00	158.92	160.56	-90.18	-592.43	-5,805.88	1,314.31	995.04	319.27	4.117				
13,000.00	7,249.98	13,076.43	7,254.00	161.60	163.25	-90.18	-593.26	-5,905.88	1,314.32	989.68	324.64	4.048				
13,100.00	7,249.98	13,176.43	7,254.00	164.28	165.94	-90.18	-594.09	-6,005.88	1,314.33	984.31	330.02	3.983				
13,200.00	7,249.98	13,276.43	7,254.00	166.97	168.63	-90.18	-594.92	-6,105.87	1,314.34	978.95	335.39	3.919				
13,300.00	7,249.98	13,376.43	7,254.00	169.65	171.31	-90.18	-595.75	-6,205.87	1,314.35	973.58	340.77	3.857				
13,400.00	7,249.98	13,476.43	7,254.00	172.34	174.00	-90.18	-596.58	-6,305.87	1,314.36	968.21	346.15	3.797				
13,500.00	7,249.98	13,576.43	7,254.00	175.03	176.70	-90.18	-597.41	-6,405.86	1,314.37	962.84	351.53	3.739				
13,600.00	7,249.98	13,676.43	7,254.00	177.72	179.39	-90.18	-598.24	-6,505.86	1,314.38	957.46	356.92	3.683				
13,700.00	7,249.98	13,776.43	7,254.00	180.41	182.08	-90.18	-599.07	-6,605.86	1,314.39	952.09	362.30	3.628				
13,800.00	7,249.98	13,876.43	7,254.00	183.10	184.77	-90.18	-599.90	-6,705.85	1,314.40	946.71	367.69	3.575				
13,900.00	7,249.98	13,976.43	7,254.00	185.79	187.47	-90.18	-600.73	-6,805.85	1,314.41	941.33	373.08	3.523				
14,000.00	7,249.98	14,076.43	7,254.00	188.48	190.17	-90.18	-601.56	-6,905.85	1,314.42	935.95	378.47	3.473				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft				
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft				
Reference				Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
14,100.00	7,249.98	14,176.43	7,254.00	191.18	192.86	-90.18		-90.18	-602.39	-7,005.84	1,314.43	930.57	383.86	3.424				
14,200.00	7,249.98	14,276.43	7,254.00	193.87	195.56	-90.18		-90.18	-603.22	-7,105.84	1,314.44	925.18	389.26	3.377				
14,300.00	7,249.98	14,376.43	7,254.00	196.56	198.26	-90.18		-90.18	-604.05	-7,205.84	1,314.45	919.80	394.65	3.331				
14,400.00	7,249.98	14,476.43	7,254.00	199.26	200.95	-90.18		-90.18	-604.88	-7,305.83	1,314.46	914.41	400.05	3.286				
14,500.00	7,249.98	14,576.43	7,254.00	201.96	203.65	-90.18		-90.18	-605.71	-7,405.83	1,314.47	909.03	405.44	3.242				
14,600.00	7,249.98	14,676.43	7,254.00	204.65	206.35	-90.18		-90.18	-606.54	-7,505.82	1,314.48	903.64	410.84	3.199				
14,700.00	7,249.98	14,776.43	7,254.00	207.35	209.05	-90.18		-90.18	-607.37	-7,605.82	1,314.49	898.25	416.24	3.158				
14,800.00	7,249.98	14,876.43	7,254.00	210.05	211.75	-90.18		-90.18	-608.20	-7,705.82	1,314.50	892.86	421.64	3.118				
14,900.00	7,249.98	14,976.43	7,254.00	212.75	214.45	-90.18		-90.18	-609.03	-7,805.81	1,314.51	887.46	427.05	3.078				
15,000.00	7,249.98	15,076.43	7,254.00	215.45	217.16	-90.18		-90.18	-609.86	-7,905.81	1,314.52	882.07	432.45	3.040				
15,100.00	7,249.98	15,176.43	7,254.00	218.15	219.86	-90.18		-90.18	-610.69	-8,005.81	1,314.53	876.68	437.85	3.002				
15,200.00	7,249.98	15,276.43	7,254.00	220.85	222.56	-90.18		-90.18	-611.52	-8,105.80	1,314.54	871.28	443.26	2.966				
15,300.00	7,249.98	15,376.43	7,254.00	223.55	225.26	-90.18		-90.18	-612.36	-8,205.80	1,314.55	865.89	448.66	2.930				
15,400.00	7,249.98	15,476.43	7,254.00	226.25	227.97	-90.18		-90.18	-613.19	-8,305.80	1,314.56	860.49	454.07	2.895				
15,478.21	7,250.00	15,554.81	7,254.00	228.36	230.09	-90.17		-90.17	-613.83	-8,384.18	1,314.77	856.46	458.30	2.869 SF				

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-180.00	-61.93	0.00	61.93	61.64	0.29	215.954			
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-61.93	0.00	61.93	60.93	1.00	61.701			
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-61.93	0.00	61.93	60.21	1.72	35.992 CC, ES			
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-61.93	0.00	61.93	61.24	2.44	26.110			
400.00	399.98	399.98	399.98	1.22	1.22	178.23	-61.93	0.00	63.67	65.75	3.16	21.801			
500.00	499.84	499.84	499.84	1.58	1.58	178.36	-61.93	0.00	68.91	73.73	3.88	19.987			
600.00	599.45	599.45	599.45	1.95	1.93	178.54	-61.93	0.00	77.62	86.76	4.59	19.920			
700.00	698.70	695.85	695.83	2.33	2.26	178.37	-63.44	0.54	91.35	89.39	4.70	20.019			
715.65	714.19	710.80	710.77	2.39	2.31	178.30	-63.95	0.73	94.09	105.14	5.27	20.959			
800.00	797.66	790.86	790.72	2.73	2.58	177.72	-67.91	2.15	110.41	126.63	5.94	22.336			
900.00	896.61	884.60	884.13	3.13	2.90	176.81	-75.22	4.79	132.57	151.17	6.59	23.922			
1,000.00	995.56	976.90	975.81	3.54	3.24	175.82	-85.22	8.39	157.76	178.58	7.25	25.616			
1,100.00	1,094.50	1,069.09	1,067.01	3.96	3.58	174.83	-97.88	12.94	185.84	206.79	7.95	27.023			
1,200.00	1,193.45	1,164.78	1,161.56	4.38	3.96	174.00	-111.77	17.95	214.74	235.04	8.64	28.206			
1,300.00	1,292.40	1,260.47	1,256.10	4.79	4.35	173.37	-125.65	22.95	243.68	263.29	9.34	29.188			
1,400.00	1,391.35	1,356.16	1,350.65	5.22	4.74	172.88	-139.54	27.95	272.63	291.56	10.04	30.030			
1,500.00	1,490.30	1,451.85	1,445.20	5.64	5.14	172.48	-153.43	32.95	301.60	319.84	10.75	30.755			
1,600.00	1,589.25	1,547.55	1,539.74	6.06	5.54	172.15	-167.31	37.95	330.59	348.12	11.46	31.387			
1,700.00	1,688.20	1,643.24	1,634.29	6.48	5.95	171.87	-181.20	42.95	359.58	376.41	12.17	31.942			
1,800.00	1,787.15	1,738.93	1,728.84	6.91	6.36	171.63	-195.09	47.95	388.58	404.70	12.88	32.432			
1,900.00	1,886.10	1,834.62	1,823.38	7.33	6.77	171.43	-208.98	52.95	417.58	433.00	13.59	32.868			
2,000.00	1,985.05	1,930.31	1,917.93	7.75	7.19	171.25	-222.86	57.95	446.59	461.30	14.30	33.259			
2,100.00	2,084.00	2,026.00	2,012.48	8.18	7.60	171.10	-236.75	62.95	475.60	489.60	15.01	33.611			
2,200.00	2,182.95	2,121.70	2,107.02	8.60	8.02	170.96	-250.64	67.95	504.61	517.90	15.73	33.929			
2,300.00	2,281.90	2,217.39	2,201.57	9.03	8.44	170.84	-264.53	72.95	533.63	546.20	16.44	34.219			
2,400.00	2,380.85	2,313.08	2,296.12	9.45	8.86	170.73	-278.41	77.95	562.65	574.51	17.16	34.483			
2,500.00	2,479.80	2,408.77	2,390.66	9.88	9.28	170.63	-292.30	82.96	591.67	602.81	17.87	34.725			
2,600.00	2,578.74	2,504.46	2,485.21	10.31	9.70	170.54	-306.19	87.96	620.69	631.12	18.59	34.948			
2,700.00	2,677.69	2,600.16	2,579.76	10.73	10.12	170.46	-320.07	92.96	649.71	659.43	19.31	35.154			
2,800.00	2,776.64	2,695.85	2,674.30	11.16	10.54	170.38	-333.96	97.96	678.73	687.73	20.03	35.344			
2,900.00	2,875.59	2,791.54	2,768.85	11.58	10.97	170.32	-347.85	102.96	707.76	716.04	20.74	35.520			
3,000.00	2,974.54	2,887.23	2,863.40	12.01	11.39	170.25	-361.74	107.96	736.78	744.35	21.46	35.684			
3,100.00	3,073.49	2,982.92	2,957.94	12.44	11.81	170.19	-375.62	112.96	765.81	772.66	22.18	35.837			
3,200.00	3,172.44	3,078.62	3,052.49	12.86	12.24	170.14	-389.51	117.96	794.84	800.97	22.90	35.980			
3,300.00	3,271.39	3,174.31	3,147.04	13.29	12.66	170.09	-403.40	122.96	823.86	829.28	23.62	36.114			
3,400.00	3,370.34	3,270.00	3,241.58	13.72	13.09	170.04	-417.28	127.96	852.89	857.59	24.34	36.240			
3,500.00	3,469.29	3,365.69	3,336.13	14.14	13.51	170.00	-431.17	132.96	881.92	885.90	25.05	36.358			
3,600.00	3,568.24	3,461.38	3,430.68	14.57	13.94	169.96	-445.06	137.96	910.95	914.21	25.77	36.469			
3,700.00	3,667.19	3,557.08	3,525.22	15.00	14.36	169.92	-458.95	142.96	939.98	942.52	26.49	36.574			
3,800.00	3,766.14	3,652.77	3,619.77	15.42	14.79	169.88	-472.83	147.97	969.01	970.83	27.21	36.674			
3,900.00	3,865.09	3,748.46	3,714.32	15.85	15.21	169.85	-486.72	152.97	998.04	1,027.07	27.93	36.767			
4,000.00	3,964.03	3,844.15	3,808.86	16.28	15.64	169.82	-500.61	157.97	1,026.10	1,027.45	28.65	36.856			
4,100.00	4,062.98	3,939.84	3,903.41	16.70	16.06	169.79	-514.50	162.97	1,055.13	1,055.76	29.37	36.941			
4,200.00	4,161.93	4,035.54	3,997.96	17.13	16.49	169.76	-528.38	167.97	1,084.16	1,084.07	30.10	37.021			
4,300.00	4,260.88	4,131.23	4,092.50	17.56	16.92	169.73	-542.27	172.97	1,113.19	1,112.38	30.82	37.097			
4,400.00	4,359.83	4,226.92	4,187.05	17.98	17.34	169.70	-556.16	177.97	1,142.22	1,140.69	31.54	37.169			
4,500.00	4,458.78	4,322.61	4,281.60	18.41	17.77	169.68	-570.04	182.97	1,171.25	1,169.00	32.26	37.239			
4,600.00	4,557.73	4,418.30	4,376.14	18.84	18.20	169.66	-583.93	187.97	1,200.28	1,197.31	32.98	37.305			
4,700.00	4,656.68	4,513.99	4,470.69	19.26	18.62	169.63	-597.82	192.97	1,229.31	1,225.62	33.70	37.368			
4,800.00	4,755.63	4,609.69	4,565.24	19.69	19.05	169.61	-611.71	197.97	1,258.34	1,253.93	34.42	37.428			
4,900.00	4,854.58	4,705.38	4,659.78	20.12	19.48	169.59	-625.59	202.97	1,287.37	1,282.24	35.14	37.485			
5,000.00	4,953.53	4,801.07	4,754.33	20.55	19.90	169.57	-639.48	207.97	1,316.40						

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,052.48	4,896.76	4,848.88	20.97	20.33	169.55	-653.37	212.98	1,346.42	1,310.55	35.87	37.540		
5,200.00	5,151.43	4,992.45	4,943.43	21.40	20.76	169.54	-667.25	217.98	1,375.45	1,338.86	36.59	37.593		
5,300.00	5,250.38	5,088.15	5,037.97	21.83	21.19	169.52	-681.14	222.98	1,404.48	1,367.17	37.31	37.644		
5,400.00	5,349.32	5,183.84	5,132.52	22.25	21.61	169.50	-695.03	227.98	1,433.52	1,395.49	38.03	37.692		
5,500.00	5,448.27	5,279.53	5,227.07	22.68	22.04	169.49	-708.92	232.98	1,462.55	1,423.80	38.75	37.739		
5,600.00	5,547.22	5,375.22	5,321.61	23.11	22.47	169.47	-722.80	237.98	1,491.58	1,452.11	39.48	37.784		
5,625.90	5,572.85	5,400.00	5,346.10	23.22	22.58	169.47	-726.40	239.27	1,499.10	1,459.44	39.66	37.795		
5,700.00	5,646.30	5,471.18	5,416.42	23.53	22.90	169.53	-736.73	242.99	1,519.71	1,479.51	40.20	37.805		
5,800.00	5,745.78	5,568.01	5,512.09	23.92	23.33	169.58	-750.78	248.05	1,544.64	1,503.73	40.92	37.750		
5,900.00	5,845.55	5,665.63	5,608.54	24.28	23.76	169.59	-764.95	253.16	1,566.24	1,524.60	41.64	37.618		
6,000.00	5,945.50	5,763.92	5,705.66	24.61	24.20	169.57	-779.21	258.29	1,584.47	1,542.12	42.35	37.414		
6,041.55	5,987.04	5,804.92	5,746.17	24.74	24.39	171.37	-785.16	260.43	1,591.05	1,548.41	42.64	37.309		
6,100.00	6,045.49	5,862.68	5,803.23	24.91	24.65	171.31	-793.55	263.45	1,599.90	1,556.84	43.06	37.155		
6,200.00	6,145.49	5,961.48	5,900.85	25.22	25.09	171.20	-807.88	268.62	1,615.05	1,571.27	43.77	36.896		
6,300.00	6,245.49	6,060.28	5,998.47	25.52	25.53	171.10	-822.22	273.78	1,630.20	1,585.71	44.49	36.646		
6,400.00	6,345.49	6,159.09	6,096.10	25.83	25.97	171.00	-836.56	278.94	1,645.35	1,600.15	45.20	36.403		
6,500.00	6,445.49	6,257.89	6,193.72	26.14	26.41	170.90	-850.90	284.11	1,660.51	1,614.60	45.91	36.168		
6,600.00	6,545.49	6,356.69	6,291.34	26.45	26.85	170.80	-865.24	289.27	1,675.68	1,629.05	46.63	35.939		
6,700.00	6,645.49	6,455.50	6,388.96	26.76	27.30	170.70	-879.58	294.43	1,690.85	1,643.51	47.34	35.717		
6,731.55	6,677.04	6,486.66	6,419.75	26.86	27.44	170.67	-884.10	296.06	1,695.63	1,648.07	47.56	35.649		
6,750.00	6,695.49	6,504.88	6,437.75	26.92	27.52	-98.60	-886.74	297.01	1,698.48	1,650.78	47.69	35.611		
6,800.00	6,745.33	6,570.51	6,502.63	27.06	27.80	-98.00	-896.28	299.33	1,706.54	1,658.39	48.15	35.442		
6,850.00	6,794.65	6,662.98	6,593.63	27.21	28.16	-97.39	-909.76	290.94	1,714.20	1,665.46	48.74	35.171		
6,900.00	6,843.08	6,756.28	6,682.86	27.36	28.46	-96.62	-923.10	267.62	1,721.16	1,671.90	49.26	34.937		
6,950.00	6,890.24	6,848.77	6,766.46	27.50	28.69	-95.70	-935.72	230.35	1,727.38	1,677.65	49.73	34.737		
7,000.00	6,935.78	6,938.97	6,841.23	27.63	28.87	-94.65	-947.15	181.38	1,732.84	1,682.68	50.16	34.546		
7,050.00	6,979.35	7,025.66	6,905.07	27.76	29.00	-93.52	-957.03	123.70	1,737.59	1,686.99	50.60	34.339		
7,100.00	7,020.62	7,108.06	6,957.11	27.89	29.10	-92.34	-965.22	60.43	1,741.70	1,690.62	51.08	34.097		
7,150.00	7,059.27	7,185.78	6,997.49	28.01	29.16	-91.14	-971.72	-5.59	1,745.23	1,693.57	51.65	33.787		
7,200.00	7,095.02	7,258.77	7,027.03	28.13	29.22	-89.95	-976.63	-72.09	1,748.25	1,695.94	52.31	33.421		
7,250.00	7,127.58	7,327.20	7,046.93	28.27	29.29	-88.79	-980.10	-137.44	1,750.84	1,697.78	53.06	32.998		
7,300.00	7,156.72	7,391.41	7,058.46	28.41	29.40	-87.67	-982.32	-200.53	1,753.03	1,699.15	53.89	32.532		
7,350.00	7,182.21	7,451.79	7,062.87	28.58	29.60	-86.61	-983.47	-260.71	1,754.88	1,700.10	54.78	32.035		
7,400.00	7,203.85	7,499.76	7,063.00	28.79	29.85	-85.77	-983.89	-308.68	1,756.50	1,700.86	55.64	31.571		
7,450.00	7,221.48	7,546.53	7,063.00	29.05	30.21	-85.09	-984.28	-355.45	1,758.00	1,701.40	56.60	31.060		
7,500.00	7,234.96	7,594.66	7,063.00	29.38	30.69	-84.54	-984.68	-403.57	1,759.28	1,701.64	57.63	30.525		
7,550.00	7,244.21	7,643.78	7,063.00	29.79	31.27	-84.15	-985.09	-452.69	1,760.21	1,701.39	58.82	29.928		
7,600.00	7,249.13	7,693.53	7,063.00	30.26	31.93	-83.94	-985.50	-502.43	1,760.73	1,700.66	60.07	29.313		
7,631.55	7,250.00	7,725.06	7,063.00	30.59	32.38	-83.90	-985.77	-533.97	1,760.82	1,699.90	60.92	28.902		
7,700.00	7,250.00	7,793.51	7,063.00	31.38	33.43	-83.90	-986.33	-602.41	1,760.83	1,697.96	62.87	28.006		
7,800.00	7,250.00	7,893.51	7,063.00	32.73	35.10	-83.90	-987.17	-702.41	1,760.84	1,694.84	66.01	26.677		
7,900.00	7,250.00	7,993.51	7,063.00	34.25	36.91	-83.90	-988.00	-802.41	1,760.85	1,691.43	69.42	25.364		
8,000.00	7,250.00	8,093.51	7,063.00	35.92	38.84	-83.90	-988.83	-902.40	1,760.86	1,687.78	73.08	24.094		
8,100.00	7,250.00	8,193.51	7,063.00	37.73	40.85	-83.90	-989.66	-1,002.40	1,760.88	1,683.93	76.95	22.884		
8,200.00	7,250.00	8,293.51	7,063.00	39.64	42.95	-83.90	-990.49	-1,102.40	1,760.89	1,679.89	80.99	21.741		
8,300.00	7,250.00	8,393.51	7,063.00	41.64	45.11	-83.90	-991.32	-1,202.39	1,760.90	1,675.70	85.19	20.670		
8,400.00	7,250.00	8,493.51	7,063.00	43.72	47.33	-83.90	-992.15	-1,302.39	1,760.91	1,671.39	89.52	19.670		
8,500.00	7,250.00	8,593.51	7,063.00	45.87	49.60	-83.90	-992.98	-1,402.39	1,760.92	1,666.95	93.97	18.740		
8,600.00	7,250.00	8,693.51	7,063.00	48.08	51.91	-83.90	-993.82	-1,502.38	1,760.93	1,662.42	98.51	17.876		
8,700.00	7,250.00	8,793.51	7,063.00	50.34	54.26	-83.90	-994.65	-1,602.38	1,760.94	1,657.81	103.13	17.075		
8,800.00	7,250.00	8,893.51	7,063.00	52.64	56.64	-83.90	-995.48	-1,702.38	1,760.95	1,653.12	107.83	16.331		
8,900.00	7,250.00	8,993.51	7,063.00	54.98	59.05	-83.90	-996.31	-1,802.37	1,760.96	1,648.37	112.59	15.640		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error: 0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error: 0.00 usft
Reference				Offset				Rule Assigned:					Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,000.00	7,250.00	9,093.51	7,063.00	57.35	61.49	-83.90	-997.14	-1,902.37	1,760.97	1,643.56	117.42	14.998	
9,100.00	7,250.00	9,193.51	7,063.00	59.76	63.95	-83.90	-997.97	-2,002.37	1,760.99	1,638.70	122.29	14.401	
9,200.00	7,250.00	9,293.51	7,063.00	62.19	66.43	-83.90	-998.80	-2,102.36	1,761.00	1,633.80	127.20	13.844	
9,300.00	7,250.00	9,393.51	7,063.00	64.65	68.93	-83.90	-999.64	-2,202.36	1,761.01	1,628.85	132.15	13.325	
9,400.00	7,250.00	9,493.51	7,063.00	67.12	71.45	-83.90	-1,000.47	-2,302.36	1,761.02	1,623.88	137.14	12.841	
9,500.00	7,249.99	9,593.51	7,063.00	69.61	73.98	-83.90	-1,001.30	-2,402.35	1,761.03	1,618.87	142.16	12.387	
9,600.00	7,249.99	9,693.51	7,063.00	72.12	76.52	-83.90	-1,002.13	-2,502.35	1,761.04	1,613.83	147.21	11.963	
9,700.00	7,249.99	9,793.51	7,063.00	74.65	79.08	-83.90	-1,002.96	-2,602.35	1,761.05	1,608.77	152.28	11.564	
9,800.00	7,249.99	9,893.51	7,063.00	77.19	81.64	-83.90	-1,003.79	-2,702.34	1,761.06	1,603.68	157.38	11.190	
9,900.00	7,249.99	9,993.51	7,063.00	79.74	84.22	-83.90	-1,004.62	-2,802.34	1,761.07	1,598.58	162.50	10.838	
10,000.00	7,249.99	10,093.51	7,063.00	82.30	86.80	-83.90	-1,005.45	-2,902.34	1,761.08	1,593.45	167.63	10.506	
10,100.00	7,249.99	10,193.51	7,063.00	84.87	89.39	-83.90	-1,006.29	-3,002.33	1,761.10	1,588.31	172.78	10.192	
10,200.00	7,249.99	10,293.51	7,063.00	87.45	91.99	-83.90	-1,007.12	-3,102.33	1,761.11	1,583.15	177.95	9.896	
10,300.00	7,249.99	10,393.51	7,063.00	90.04	94.60	-83.90	-1,007.95	-3,202.32	1,761.12	1,577.98	183.13	9.617	
10,400.00	7,249.99	10,493.51	7,063.00	92.64	97.21	-83.91	-1,008.78	-3,302.32	1,761.13	1,572.80	188.33	9.351	
10,500.00	7,249.99	10,593.51	7,063.00	95.24	99.83	-83.91	-1,009.61	-3,402.32	1,761.14	1,567.60	193.54	9.100	
10,600.00	7,249.99	10,693.51	7,063.00	97.85	102.45	-83.91	-1,010.44	-3,502.31	1,761.15	1,562.39	198.76	8.861	
10,700.00	7,249.99	10,793.51	7,063.00	100.47	105.08	-83.91	-1,011.27	-3,602.31	1,761.16	1,557.18	203.98	8.634	
10,800.00	7,249.99	10,893.51	7,063.00	103.09	107.72	-83.91	-1,012.10	-3,702.31	1,761.17	1,551.95	209.22	8.418	
10,900.00	7,249.99	10,993.51	7,063.00	105.71	110.35	-83.91	-1,012.94	-3,802.30	1,761.18	1,546.71	214.47	8.212	
11,000.00	7,249.99	11,093.51	7,063.00	108.35	113.00	-83.91	-1,013.77	-3,902.30	1,761.19	1,541.47	219.73	8.015	
11,100.00	7,249.99	11,193.51	7,063.00	110.98	115.64	-83.91	-1,014.60	-4,002.30	1,761.21	1,536.22	224.99	7.828	
11,200.00	7,249.99	11,293.51	7,063.00	113.62	118.29	-83.91	-1,015.43	-4,102.29	1,761.22	1,530.96	230.26	7.649	
11,300.00	7,249.99	11,393.51	7,063.00	116.26	120.94	-83.91	-1,016.26	-4,202.29	1,761.23	1,525.69	235.53	7.478	
11,400.00	7,249.99	11,493.51	7,063.00	118.91	123.60	-83.91	-1,017.09	-4,302.29	1,761.24	1,520.42	240.82	7.314	
11,500.00	7,249.99	11,593.51	7,063.00	121.56	126.25	-83.91	-1,017.92	-4,402.28	1,761.25	1,515.15	246.10	7.157	
11,600.00	7,249.99	11,693.51	7,063.00	124.21	128.91	-83.91	-1,018.76	-4,502.28	1,761.26	1,509.86	251.40	7.006	
11,700.00	7,249.99	11,793.51	7,063.00	126.87	131.58	-83.91	-1,019.59	-4,602.28	1,761.27	1,504.58	256.70	6.861	
11,800.00	7,249.99	11,893.51	7,063.00	129.53	134.24	-83.91	-1,020.42	-4,702.27	1,761.28	1,499.28	262.00	6.722	
11,900.00	7,249.99	11,993.51	7,063.00	132.19	136.91	-83.91	-1,021.25	-4,802.27	1,761.29	1,493.99	267.31	6.589	
12,000.00	7,249.99	12,093.51	7,063.00	134.86	139.58	-83.91	-1,022.08	-4,902.27	1,761.30	1,488.69	272.62	6.461	
12,100.00	7,249.99	12,193.51	7,063.00	137.52	142.25	-83.91	-1,022.91	-5,002.26	1,761.32	1,483.38	277.93	6.337	
12,200.00	7,249.99	12,293.51	7,063.00	140.19	144.93	-83.91	-1,023.74	-5,102.26	1,761.33	1,478.07	283.25	6.218	
12,300.00	7,249.99	12,393.51	7,063.00	142.86	147.60	-83.91	-1,024.57	-5,202.26	1,761.34	1,472.76	288.58	6.104	
12,400.00	7,249.99	12,493.51	7,063.00	145.53	150.28	-83.91	-1,025.41	-5,302.25	1,761.35	1,467.45	293.90	5.993	
12,500.00	7,249.99	12,593.51	7,063.00	148.21	152.96	-83.91	-1,026.24	-5,402.25	1,761.36	1,462.13	299.23	5.886	
12,600.00	7,249.99	12,693.51	7,063.00	150.88	155.64	-83.91	-1,027.07	-5,502.25	1,761.37	1,456.81	304.57	5.783	
12,700.00	7,249.99	12,793.51	7,063.00	153.56	158.32	-83.91	-1,027.90	-5,602.24	1,761.38	1,451.48	309.90	5.684	
12,800.00	7,249.99	12,893.51	7,063.00	156.24	161.00	-83.91	-1,028.73	-5,702.24	1,761.39	1,446.15	315.24	5.587	
12,900.00	7,249.98	12,993.51	7,063.00	158.92	163.68	-83.91	-1,029.56	-5,802.23	1,761.40	1,440.82	320.58	5.494	
13,000.00	7,249.98	13,093.51	7,063.00	161.60	166.37	-83.91	-1,030.39	-5,902.23	1,761.41	1,435.49	325.92	5.404	
13,100.00	7,249.98	13,193.51	7,063.00	164.28	169.06	-83.91	-1,031.22	-6,002.23	1,761.43	1,430.16	331.27	5.317	
13,200.00	7,249.98	13,293.51	7,063.00	166.97	171.74	-83.91	-1,032.06	-6,102.22	1,761.44	1,424.82	336.62	5.233	
13,300.00	7,249.98	13,393.51	7,063.00	169.65	174.43	-83.91	-1,032.89	-6,202.22	1,761.45	1,419.48	341.97	5.151	
13,400.00	7,249.98	13,493.51	7,063.00	172.34	177.12	-83.91	-1,033.72	-6,302.22	1,761.46	1,414.14	347.32	5.072	
13,500.00	7,249.98	13,593.51	7,063.00	175.03	179.81	-83.91	-1,034.55	-6,402.21	1,761.47	1,408.80	352.67	4.995	
13,600.00	7,249.98	13,693.51	7,063.00	177.72	182.50	-83.91	-1,035.38	-6,502.21	1,761.48	1,403.45	358.03	4.920	
13,700.00	7,249.98	13,793.51	7,063.00	180.41	185.20	-83.91	-1,036.21	-6,602.21	1,761.49	1,398.11	363.38	4.847	
13,800.00	7,249.98	13,893.51	7,063.00	183.10	187.89	-83.91	-1,037.04	-6,702.20	1,761.50	1,392.76	368.74	4.777	
13,900.00	7,249.98	13,993.51	7,063.00	185.79	190.58	-83.91	-1,037.88	-6,802.20	1,761.51	1,387.41	374.10	4.709	
14,000.00	7,249.98	14,093.51	7,063.00	188.48	193.28	-83.91	-1,038.71	-6,902.20	1,761.52	1,382.06	379.46	4.642	
14,100.00	7,249.98	14,193.51	7,063.00	191.18	195.97	-83.91	-1,039.54	-7,002.19	1,761.54	1,376.71	384.83	4.577	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Highside		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,249.98	14,293.51	7,063.00	193.87	198.67	-83.91	-1,040.37	-7,102.19	1,761.55	1,371.35	390.19	4.515			
14,300.00	7,249.98	14,393.51	7,063.00	196.56	201.37	-83.91	-1,041.20	-7,202.19	1,761.56	1,366.00	395.56	4.453			
14,400.00	7,249.98	14,493.51	7,063.00	199.26	204.06	-83.91	-1,042.03	-7,302.18	1,761.57	1,360.64	400.93	4.394			
14,500.00	7,249.98	14,593.51	7,063.00	201.96	206.76	-83.91	-1,042.86	-7,402.18	1,761.58	1,355.28	406.30	4.336			
14,600.00	7,249.98	14,693.51	7,063.00	204.65	209.46	-83.91	-1,043.69	-7,502.18	1,761.59	1,349.93	411.67	4.279			
14,700.00	7,249.98	14,793.51	7,063.00	207.35	212.16	-83.91	-1,044.53	-7,602.17	1,761.60	1,344.57	417.04	4.224			
14,800.00	7,249.98	14,893.51	7,063.00	210.05	214.86	-83.91	-1,045.36	-7,702.17	1,761.61	1,339.20	422.41	4.170			
14,900.00	7,249.98	14,993.51	7,063.00	212.75	217.56	-83.91	-1,046.19	-7,802.17	1,761.62	1,333.84	427.78	4.118			
15,000.00	7,249.98	15,093.51	7,063.00	215.45	220.26	-83.91	-1,047.02	-7,902.16	1,761.63	1,328.48	433.16	4.067			
15,100.00	7,249.98	15,193.51	7,063.00	218.15	222.96	-83.91	-1,047.85	-8,002.16	1,761.65	1,323.11	438.53	4.017			
15,200.00	7,249.98	15,293.51	7,063.00	220.85	225.66	-83.91	-1,048.68	-8,102.16	1,761.66	1,317.75	443.91	3.969			
15,300.00	7,249.98	15,393.51	7,063.00	223.55	228.37	-83.91	-1,049.51	-8,202.15	1,761.67	1,312.38	449.28	3.921			
15,400.00	7,249.98	15,493.51	7,063.00	226.25	231.07	-83.91	-1,050.34	-8,302.15	1,761.68	1,307.02	454.66	3.875			
15,478.21	7,250.00	15,571.72	7,063.00	228.36	233.18	-83.91	-1,050.99	-8,380.36	1,761.90	1,303.03	458.87	3.840 SF			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	-180.00	-80.15	0.00	80.15							
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-80.15	0.00	80.15	79.86	0.29	279.470				
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-80.15	0.00	80.15	79.14	1.00	79.849				
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-80.15	0.00	80.15	78.42	1.72	46.578	CC, ES			
400.00	399.98	399.98	399.98	1.22	1.22	178.22	-80.15	0.00	81.89	79.45	2.44	33.579				
500.00	499.84	499.84	499.84	1.58	1.58	178.32	-80.15	0.00	87.12	83.96	3.16	27.563				
600.00	599.45	596.28	596.26	1.95	1.91	178.25	-81.72	0.36	97.46	93.60	3.86	25.232				
700.00	698.70	691.39	691.24	2.33	2.23	177.87	-86.37	1.43	114.48	109.93	4.55	25.154				
715.65	714.19	706.11	705.93	2.39	2.28	177.80	-87.37	1.66	117.75	113.08	4.67	25.239				
800.00	797.66	784.84	784.37	2.73	2.55	177.35	-93.94	3.16	136.87	131.64	5.23	26.169				
900.00	896.61	876.82	875.74	3.13	2.88	176.76	-104.27	5.53	162.38	156.49	5.89	27.561				
1,000.00	995.56	967.18	965.12	3.54	3.23	176.16	-117.19	8.49	190.92	184.37	6.54	29.177				
1,100.00	1,094.50	1,055.80	1,052.32	3.96	3.60	175.57	-132.53	12.01	222.40	215.21	7.18	30.957				
1,200.00	1,193.45	1,145.62	1,140.23	4.38	3.98	175.02	-150.52	16.13	256.51	248.68	7.84	32.729				
1,300.00	1,292.40	1,239.41	1,231.91	4.79	4.41	174.56	-169.76	20.54	291.15	282.63	8.52	34.180				
1,400.00	1,391.35	1,333.20	1,323.60	5.22	4.84	174.19	-189.01	24.95	325.80	316.58	9.22	35.353				
1,500.00	1,490.30	1,426.99	1,415.28	5.64	5.28	173.90	-208.26	29.37	360.46	350.54	9.91	36.363				
1,600.00	1,589.25	1,520.77	1,506.97	6.06	5.73	173.65	-227.50	33.78	395.12	384.51	10.61	37.232				
1,700.00	1,688.20	1,614.56	1,598.65	6.48	6.18	173.45	-246.75	38.19	429.79	418.48	11.31	37.985				
1,800.00	1,787.15	1,708.35	1,690.34	6.91	6.64	173.28	-266.00	42.60	464.46	452.45	12.02	38.644				
1,900.00	1,886.10	1,802.14	1,782.02	7.33	7.10	173.13	-285.24	47.01	499.14	486.42	12.73	39.225				
2,000.00	1,985.05	1,895.92	1,873.71	7.75	7.56	173.00	-304.49	51.42	533.82	520.39	13.43	39.741				
2,100.00	2,084.00	1,989.71	1,965.39	8.18	8.03	172.88	-323.74	55.84	568.50	554.36	14.14	40.202				
2,200.00	2,182.95	2,083.50	2,057.08	8.60	8.49	172.78	-342.98	60.25	603.19	588.34	14.85	40.616				
2,300.00	2,281.90	2,177.29	2,148.77	9.03	8.96	172.69	-362.23	64.66	637.87	622.31	15.56	40.990				
2,400.00	2,380.85	2,271.07	2,240.45	9.45	9.43	172.61	-381.48	69.07	672.56	656.29	16.27	41.330				
2,500.00	2,479.80	2,364.86	2,332.14	9.88	9.90	172.54	-400.72	73.48	707.25	690.26	16.99	41.639				
2,600.00	2,578.74	2,458.65	2,423.82	10.31	10.37	172.47	-419.97	77.89	741.94	724.24	17.70	41.922				
2,700.00	2,677.69	2,552.44	2,515.51	10.73	10.84	172.41	-439.22	82.31	776.62	758.21	18.41	42.182				
2,800.00	2,776.64	2,646.22	2,607.19	11.16	11.32	172.36	-458.46	86.72	811.31	792.19	19.13	42.421				
2,900.00	2,875.59	2,740.01	2,698.88	11.58	11.79	172.31	-477.71	91.13	846.00	826.17	19.84	42.642				
3,000.00	2,974.54	2,833.80	2,790.56	12.01	12.26	172.26	-496.96	95.54	880.70	860.14	20.55	42.847				
3,100.00	3,073.49	2,927.59	2,882.25	12.44	12.74	172.22	-516.20	99.95	915.39	894.12	21.27	43.038				
3,200.00	3,172.44	3,021.37	2,973.93	12.86	13.21	172.18	-535.45	104.37	950.08	928.09	21.98	43.215				
3,300.00	3,271.39	3,115.16	3,065.62	13.29	13.68	172.14	-554.69	108.78	984.77	962.07	22.70	43.380				
3,400.00	3,370.34	3,208.95	3,157.30	13.72	14.16	172.11	-573.94	113.19	1,019.46	996.05	23.42	43.535				
3,500.00	3,469.29	3,302.74	3,248.99	14.14	14.64	172.07	-593.19	117.60	1,054.16	1,030.02	24.13	43.680				
3,600.00	3,568.24	3,396.52	3,340.67	14.57	15.11	172.04	-612.43	122.01	1,088.85	1,064.00	24.85	43.816				
3,700.00	3,667.19	3,490.31	3,432.36	15.00	15.59	172.01	-631.68	126.42	1,123.54	1,097.98	25.57	43.945				
3,800.00	3,766.14	3,584.10	3,524.05	15.42	16.06	171.99	-650.93	130.84	1,158.24	1,131.95	26.28	44.065				
3,900.00	3,865.09	3,677.89	3,615.73	15.85	16.54	171.96	-670.17	135.25	1,192.93	1,165.93	27.00	44.179				
4,000.00	3,964.03	3,771.67	3,707.42	16.28	17.02	171.94	-689.42	139.66	1,227.63	1,199.91	27.72	44.287				
4,100.00	4,062.98	3,865.46	3,799.10	16.70	17.49	171.92	-708.67	144.07	1,262.32	1,233.88	28.44	44.389				
4,200.00	4,161.93	3,959.25	3,890.79	17.13	17.97	171.90	-727.91	148.48	1,297.01	1,267.86	29.16	44.485				
4,300.00	4,260.88	4,053.04	3,982.47	17.56	18.45	171.88	-747.16	152.89	1,331.71	1,301.83	29.87	44.577				
4,400.00	4,359.83	4,146.82	4,074.16	17.98	18.93	171.86	-766.41	157.31	1,366.40	1,335.81	30.59	44.664				
4,500.00	4,458.78	4,240.61	4,165.84	18.41	19.40	171.84	-785.65	161.72	1,401.10	1,369.79	31.31	44.746				
4,600.00	4,557.73	4,334.40	4,257.53	18.84	19.88	171.82	-804.90	166.13	1,435.79	1,403.76	32.03	44.825				
4,700.00	4,656.68	4,428.19	4,349.21	19.26	20.36	171.80	-824.15	170.54	1,470.49	1,437.74	32.75	44.900				
4,800.00	4,755.63	4,521.97	4,440.90	19.69	20.84	171.79	-843.39	174.95	1,505.18	1,471.71	33.47	44.972				
4,900.00	4,854.58	4,615.76	4,532.58	20.12	21.31	171.77	-862.64	179.36	1,539.88	1,505.69	34.19	45.040				
5,000.00	4,953.53	4,709.55	4,624.27	20.55	21.79	171.76	-881.89	183.78	1,574.57	1,539.67	34.91	45.105				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,100.00	5,052.48	4,803.34	4,715.96	20.97	22.27	171.75	-901.13	188.19	1,609.27	1,573.64	35.63	45.167			
5,200.00	5,151.43	4,897.12	4,807.64	21.40	22.75	171.73	-920.38	192.60	1,643.97	1,607.62	36.35	45.227			
5,300.00	5,250.38	4,990.91	4,899.33	21.83	23.23	171.72	-939.63	197.01	1,678.66	1,641.59	37.07	45.284			
5,400.00	5,349.32	5,084.70	4,991.01	22.25	23.71	171.71	-958.87	201.42	1,713.36	1,675.57	37.79	45.339			
5,500.00	5,448.27	5,178.49	5,082.70	22.68	24.18	171.70	-978.12	205.83	1,748.05	1,709.54	38.51	45.391			
5,600.00	5,547.22	5,272.27	5,174.38	23.11	24.66	171.69	-997.36	210.25	1,782.75	1,743.52	39.23	45.442			
5,625.90	5,572.85	5,296.56	5,198.12	23.22	24.79	171.68	-1,002.35	211.39	1,791.73	1,752.32	39.42	45.455			
5,700.00	5,646.30	5,366.38	5,266.38	23.53	25.14	171.75	-1,016.68	214.67	1,816.55	1,776.60	39.95	45.469			
5,800.00	5,745.78	5,461.56	5,359.43	23.92	25.63	171.81	-1,036.21	219.15	1,847.20	1,806.52	40.67	45.417			
5,900.00	5,845.55	5,557.74	5,453.45	24.28	26.12	171.84	-1,055.95	223.67	1,874.53	1,833.14	41.39	45.288			
6,000.00	5,945.50	5,654.79	5,548.32	24.61	26.61	171.85	-1,075.86	228.24	1,898.53	1,856.42	42.11	45.085			
6,041.55	5,987.04	5,695.34	5,587.97	24.74	26.82	173.67	-1,084.18	230.15	1,907.52	1,865.11	42.41	44.981			
6,100.00	6,045.49	5,752.49	5,643.83	24.91	27.11	173.63	-1,095.91	232.83	1,919.75	1,876.92	42.83	44.826			
6,200.00	6,145.49	5,850.24	5,739.40	25.22	27.61	173.56	-1,115.97	237.43	1,940.67	1,897.12	43.55	44.566			
6,300.00	6,245.49	5,948.00	5,834.97	25.52	28.11	173.49	-1,136.03	242.03	1,961.60	1,917.33	44.26	44.315			
6,400.00	6,345.49	6,045.76	5,930.53	25.83	28.61	173.42	-1,156.10	246.63	1,982.53	1,937.54	44.98	44.071			
6,500.00	6,445.49	6,143.52	6,026.10	26.14	29.11	173.35	-1,176.16	251.23	2,003.46	1,957.75	45.70	43.835			
6,600.00	6,545.49	6,241.28	6,121.67	26.45	29.61	173.29	-1,196.22	255.83	2,024.39	1,977.97	46.42	43.606			
6,700.00	6,645.49	6,339.04	6,217.24	26.76	30.11	173.22	-1,216.28	260.43	2,045.33	1,998.19	47.15	43.383			
6,731.55	6,677.04	6,369.88	6,247.38	26.86	30.27	173.20	-1,222.61	261.88	2,051.94	2,004.56	47.37	43.314			
6,750.00	6,695.49	6,387.90	6,265.00	26.92	30.36	173.17	-1,226.31	262.72	2,055.83	2,008.33	47.50	43.277			
6,800.00	6,745.33	6,436.45	6,312.47	27.06	30.61	173.10	-1,236.27	265.01	2,066.68	2,018.83	47.85	43.189			
6,850.00	6,794.65	6,484.30	6,359.24	27.21	30.85	173.03	-1,246.09	267.26	2,077.93	2,029.74	48.19	43.119			
6,900.00	6,843.08	6,531.08	6,404.97	27.36	31.09	172.96	-1,255.69	269.46	2,089.54	2,041.02	48.52	43.065			
6,950.00	6,890.24	6,576.43	6,449.31	27.50	31.32	172.89	-1,265.00	271.59	2,101.51	2,052.66	48.84	43.028			
7,000.00	6,935.78	6,620.02	6,491.92	27.63	31.54	172.82	-1,273.94	273.64	2,113.83	2,064.68	49.15	43.008			
7,050.00	6,979.35	6,661.50	6,532.47	27.76	31.75	172.75	-1,282.45	275.59	2,126.53	2,077.08	49.45	43.003			
7,100.00	7,020.62	6,700.56	6,570.66	27.89	31.95	172.68	-1,290.47	277.43	2,139.65	2,089.90	49.75	43.011			
7,150.00	7,059.27	6,787.01	6,655.18	28.01	32.38	172.61	-1,308.25	276.60	2,152.91	2,102.53	50.38	42.731			
7,200.00	7,095.02	6,888.11	6,752.40	28.13	32.80	172.54	-1,328.85	258.93	2,165.16	2,114.08	51.08	42.385			
7,250.00	7,127.58	7,091.91	6,932.01	28.27	33.45	172.47	-1,367.34	173.33	2,175.55	2,123.35	52.20	41.678			
7,300.00	7,156.72	7,294.17	7,070.02	28.41	33.85	172.40	-1,397.55	30.06	2,183.07	2,129.80	53.28	40.977			
7,350.00	7,182.21	7,500.63	7,151.95	28.58	34.14	172.33	-1,416.35	-157.29	2,187.16	2,132.30	54.86	39.869			
7,400.00	7,203.85	7,649.70	7,168.00	28.79	34.42	172.26	-1,420.95	-305.01	2,188.21	2,131.60	56.61	38.656			
7,450.00	7,221.48	7,696.47	7,168.00	29.05	34.56	172.19	-1,421.34	-351.78	2,188.58	2,131.02	57.55	38.027			
7,500.00	7,234.96	7,744.60	7,168.00	29.38	34.75	172.12	-1,421.74	-399.91	2,188.95	2,130.32	58.63	37.335			
7,550.00	7,244.21	7,793.72	7,168.00	29.79	35.00	172.05	-1,422.15	-449.03	2,189.26	2,129.49	59.77	36.628			
7,600.00	7,249.13	7,843.46	7,168.00	30.26	35.32	171.98	-1,422.57	-498.77	2,189.45	2,128.41	61.04	35.871			
7,631.55	7,250.00	7,875.00	7,168.00	30.59	35.56	171.91	-1,422.83	-530.30	2,189.48	2,127.62	61.86	35.393			
7,700.00	7,250.00	7,943.45	7,168.00	31.38	36.19	171.84	-1,423.40	-598.75	2,189.49	2,125.70	63.79	34.326			
7,800.00	7,250.00	8,043.45	7,168.00	32.73	37.38	171.77	-1,424.23	-698.75	2,189.50	2,122.64	66.87	32.745			
7,900.00	7,250.00	8,143.45	7,168.00	34.25	38.83	171.70	-1,425.06	-798.74	2,189.51	2,119.28	70.23	31.175			
8,000.00	7,250.00	8,243.45	7,168.00	35.92	40.49	171.63	-1,425.90	-898.74	2,189.53	2,115.68	73.85	29.648			
8,100.00	7,250.00	8,343.45	7,168.00	37.73	42.30	171.56	-1,426.73	-998.74	2,189.54	2,111.86	77.68	28.187			
8,200.00	7,250.00	8,443.45	7,168.00	39.64	44.23	171.49	-1,427.56	-1,098.73	2,189.55	2,107.86	81.69	26.802			
8,300.00	7,250.00	8,543.45	7,168.00	41.64	46.26	171.42	-1,428.40	-1,198.73	2,189.56	2,103.70	85.87	25.500			
8,400.00	7,250.00	8,643.45	7,168.00	43.72	48.37	171.35	-1,429.23	-1,298.73	2,189.58	2,099.40	90.17	24.282			
8,500.00	7,250.00	8,743.45	7,168.00	45.87	50.54	171.28	-1,430.06	-1,398.72	2,189.59	2,094.99	94.60	23.146			
8,600.00	7,250.00	8,843.45	7,168.00	48.08	52.77	171.21	-1,430.89	-1,498.72	2,189.60	2,090.48	99.13	22.089			
8,700.00	7,250.00	8,943.45	7,168.00	50.34	55.05	171.14	-1,431.73	-1,598.72	2,189.61	2,085.87	103.74	21.107			
8,800.00	7,250.00	9,043.45	7,168.00	52.64	57.36	171.07	-1,432.56	-1,698.71	2,189.63	2,081.19	108.43	20.193			
8,900.00	7,250.00	9,143.45	7,168.00	54.98	59.72	171.00	-1,433.39	-1,798.71	2,189.64	2,076.45	113.19	19.345			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error: 0.00 usft
Survey Program: 0-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,000.00	7,250.00	9,243.45	7,168.00	57.35	62.10	-87.85	-1,434.22	-1,898.71	2,189.65	2,071.64	118.01	18.555	
9,100.00	7,250.00	9,343.45	7,168.00	59.76	64.51	-87.85	-1,435.06	-1,998.70	2,189.66	2,066.79	122.88	17.820	
9,200.00	7,250.00	9,443.45	7,168.00	62.19	66.95	-87.85	-1,435.89	-2,098.70	2,189.68	2,061.88	127.80	17.134	
9,300.00	7,250.00	9,543.45	7,168.00	64.65	69.40	-87.85	-1,436.72	-2,198.69	2,189.69	2,056.94	132.75	16.495	
9,400.00	7,250.00	9,643.45	7,168.00	67.12	71.88	-87.85	-1,437.55	-2,298.69	2,189.70	2,051.96	137.75	15.897	
9,500.00	7,249.99	9,743.45	7,168.00	69.61	74.38	-87.85	-1,438.39	-2,398.69	2,189.71	2,046.94	142.77	15.337	
9,600.00	7,249.99	9,843.45	7,168.00	72.12	76.89	-87.85	-1,439.22	-2,498.68	2,189.73	2,041.90	147.83	14.813	
9,700.00	7,249.99	9,943.45	7,168.00	74.65	79.41	-87.85	-1,440.05	-2,598.68	2,189.74	2,036.83	152.91	14.321	
9,800.00	7,249.99	10,043.45	7,168.00	77.19	81.95	-87.85	-1,440.89	-2,698.68	2,189.75	2,031.74	158.02	13.858	
9,900.00	7,249.99	10,143.45	7,168.00	79.74	84.50	-87.85	-1,441.72	-2,798.67	2,189.76	2,026.62	163.14	13.422	
10,000.00	7,249.99	10,243.45	7,168.00	82.30	87.05	-87.85	-1,442.55	-2,898.67	2,189.78	2,021.49	168.29	13.012	
10,100.00	7,249.99	10,343.45	7,168.00	84.87	89.62	-87.85	-1,443.38	-2,998.67	2,189.79	2,016.33	173.45	12.625	
10,200.00	7,249.99	10,443.45	7,168.00	87.45	92.20	-87.85	-1,444.22	-3,098.66	2,189.80	2,011.17	178.64	12.258	
10,300.00	7,249.99	10,543.45	7,168.00	90.04	94.79	-87.85	-1,445.05	-3,198.66	2,189.81	2,005.98	183.83	11.912	
10,400.00	7,249.99	10,643.45	7,168.00	92.64	97.38	-87.85	-1,445.88	-3,298.66	2,189.83	2,000.78	189.04	11.584	
10,500.00	7,249.99	10,743.45	7,168.00	95.24	99.98	-87.85	-1,446.71	-3,398.65	2,189.84	1,995.57	194.26	11.272	
10,600.00	7,249.99	10,843.45	7,168.00	97.85	102.59	-87.85	-1,447.55	-3,498.65	2,189.85	1,990.35	199.50	10.977	
10,700.00	7,249.99	10,943.45	7,168.00	100.47	105.20	-87.85	-1,448.38	-3,598.65	2,189.86	1,985.12	204.74	10.696	
10,800.00	7,249.99	11,043.45	7,168.00	103.09	107.81	-87.85	-1,449.21	-3,698.64	2,189.88	1,979.88	210.00	10.428	
10,900.00	7,249.99	11,143.45	7,168.00	105.71	110.44	-87.85	-1,450.05	-3,798.64	2,189.89	1,974.63	215.26	10.173	
11,000.00	7,249.99	11,243.45	7,168.00	108.35	113.06	-87.85	-1,450.88	-3,898.64	2,189.90	1,969.37	220.54	9.930	
11,100.00	7,249.99	11,343.45	7,168.00	110.98	115.70	-87.85	-1,451.71	-3,998.63	2,189.91	1,964.10	225.82	9.698	
11,200.00	7,249.99	11,443.45	7,168.00	113.62	118.33	-87.85	-1,452.54	-4,098.63	2,189.93	1,958.82	231.10	9.476	
11,300.00	7,249.99	11,543.45	7,168.00	116.26	120.97	-87.85	-1,453.38	-4,198.63	2,189.94	1,953.54	236.40	9.264	
11,400.00	7,249.99	11,643.45	7,168.00	118.91	123.61	-87.85	-1,454.21	-4,298.62	2,189.95	1,948.25	241.70	9.061	
11,500.00	7,249.99	11,743.45	7,168.00	121.56	126.26	-87.85	-1,455.04	-4,398.62	2,189.96	1,942.96	247.01	8.866	
11,600.00	7,249.99	11,843.45	7,168.00	124.21	128.91	-87.85	-1,455.87	-4,498.62	2,189.98	1,937.66	252.32	8.679	
11,700.00	7,249.99	11,943.45	7,168.00	126.87	131.56	-87.85	-1,456.71	-4,598.61	2,189.99	1,932.35	257.64	8.500	
11,800.00	7,249.99	12,043.45	7,168.00	129.53	134.22	-87.85	-1,457.54	-4,698.61	2,190.00	1,927.04	262.96	8.328	
11,900.00	7,249.99	12,143.45	7,168.00	132.19	136.88	-87.85	-1,458.37	-4,798.60	2,190.01	1,921.73	268.29	8.163	
12,000.00	7,249.99	12,243.45	7,168.00	134.86	139.54	-87.85	-1,459.21	-4,898.60	2,190.03	1,916.41	273.62	8.004	
12,100.00	7,249.99	12,343.45	7,168.00	137.52	142.20	-87.85	-1,460.04	-4,998.60	2,190.04	1,911.08	278.96	7.851	
12,200.00	7,249.99	12,443.45	7,168.00	140.19	144.86	-87.85	-1,460.87	-5,098.59	2,190.05	1,905.75	284.30	7.703	
12,300.00	7,249.99	12,543.45	7,168.00	142.86	147.53	-87.85	-1,461.70	-5,198.59	2,190.06	1,900.42	289.64	7.561	
12,400.00	7,249.99	12,643.45	7,168.00	145.53	150.20	-87.85	-1,462.54	-5,298.59	2,190.08	1,895.09	294.99	7.424	
12,500.00	7,249.99	12,743.45	7,168.00	148.21	152.87	-87.85	-1,463.37	-5,398.58	2,190.09	1,889.75	300.34	7.292	
12,600.00	7,249.99	12,843.45	7,168.00	150.88	155.54	-87.85	-1,464.20	-5,498.58	2,190.10	1,884.41	305.69	7.164	
12,700.00	7,249.99	12,943.45	7,168.00	153.56	158.22	-87.85	-1,465.03	-5,598.58	2,190.11	1,879.06	311.05	7.041	
12,800.00	7,249.99	13,043.45	7,168.00	156.24	160.89	-87.85	-1,465.87	-5,698.57	2,190.13	1,873.72	316.41	6.922	
12,900.00	7,249.98	13,143.45	7,168.00	158.92	163.57	-87.85	-1,466.70	-5,798.57	2,190.14	1,868.37	321.77	6.806	
13,000.00	7,249.98	13,243.45	7,168.00	161.60	166.25	-87.85	-1,467.53	-5,898.57	2,190.15	1,863.01	327.14	6.695	
13,100.00	7,249.98	13,343.45	7,168.00	164.28	168.93	-87.85	-1,468.37	-5,998.56	2,190.16	1,857.66	332.51	6.587	
13,200.00	7,249.98	13,443.45	7,168.00	166.97	171.61	-87.85	-1,469.20	-6,098.56	2,190.18	1,852.30	337.88	6.482	
13,300.00	7,249.98	13,543.45	7,168.00	169.65	174.29	-87.85	-1,470.03	-6,198.56	2,190.19	1,846.94	343.25	6.381	
13,400.00	7,249.98	13,643.45	7,168.00	172.34	176.98	-87.85	-1,470.86	-6,298.55	2,190.20	1,841.58	348.62	6.282	
13,500.00	7,249.98	13,743.45	7,168.00	175.03	179.66	-87.85	-1,471.70	-6,398.55	2,190.21	1,836.22	354.00	6.187	
13,600.00	7,249.98	13,843.45	7,168.00	177.72	182.35	-87.85	-1,472.53	-6,498.55	2,190.23	1,830.85	359.38	6.095	
13,700.00	7,249.98	13,943.45	7,168.00	180.41	185.03	-87.85	-1,473.36	-6,598.54	2,190.24	1,825.48	364.75	6.005	
13,800.00	7,249.98	14,043.45	7,168.00	183.10	187.72	-87.85	-1,474.19	-6,698.54	2,190.25	1,820.12	370.14	5.917	
13,900.00	7,249.98	14,143.45	7,168.00	185.79	190.41	-87.85	-1,475.03	-6,798.54	2,190.26	1,814.74	375.52	5.833	
14,000.00	7,249.98	14,243.45	7,168.00	188.48	193.10	-87.85	-1,475.86	-6,898.53	2,190.28	1,809.37	380.90	5.750	
14,100.00	7,249.98	14,343.45	7,168.00	191.18	195.79	-87.85	-1,476.69	-6,998.53	2,190.29	1,804.00	386.29	5.670	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft			
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft			
Reference				Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,200.00	7,249.98	14,443.45	7,168.00	193.87	198.48	-87.85	-1,477.53	-7,098.52	2,190.30	1,798.62	391.68	5.592					
14,300.00	7,249.98	14,543.45	7,168.00	196.56	201.17	-87.85	-1,478.36	-7,198.52	2,190.31	1,793.25	397.07	5.516					
14,400.00	7,249.98	14,643.45	7,168.00	199.26	203.87	-87.86	-1,479.19	-7,298.52	2,190.33	1,787.87	402.46	5.442					
14,500.00	7,249.98	14,743.45	7,168.00	201.96	206.56	-87.86	-1,480.02	-7,398.51	2,190.34	1,782.49	407.85	5.370					
14,600.00	7,249.98	14,843.45	7,168.00	204.65	209.26	-87.86	-1,480.86	-7,498.51	2,190.35	1,777.11	413.24	5.300					
14,700.00	7,249.98	14,943.45	7,168.00	207.35	211.95	-87.86	-1,481.69	-7,598.51	2,190.36	1,771.73	418.64	5.232					
14,800.00	7,249.98	15,043.45	7,168.00	210.05	214.65	-87.86	-1,482.52	-7,698.50	2,190.38	1,766.34	424.03	5.166					
14,900.00	7,249.98	15,143.45	7,168.00	212.75	217.34	-87.86	-1,483.35	-7,798.50	2,190.39	1,760.96	429.43	5.101					
15,000.00	7,249.98	15,243.45	7,168.00	215.45	220.04	-87.86	-1,484.19	-7,898.50	2,190.40	1,755.57	434.83	5.037					
15,100.00	7,249.98	15,343.45	7,168.00	218.15	222.74	-87.86	-1,485.02	-7,998.49	2,190.41	1,750.19	440.23	4.976					
15,200.00	7,249.98	15,443.45	7,168.00	220.85	225.44	-87.86	-1,485.85	-8,098.49	2,190.43	1,744.80	445.63	4.915					
15,300.00	7,249.98	15,543.45	7,168.00	223.55	228.14	-87.86	-1,486.68	-8,198.49	2,190.44	1,739.41	451.03	4.857					
15,400.00	7,249.98	15,643.45	7,168.00	226.25	230.84	-87.86	-1,487.52	-8,298.48	2,190.45	1,734.02	456.43	4.799					
15,478.21	7,250.00	15,721.69	7,168.00	228.36	232.95	-87.85	-1,488.17	-8,376.72	2,190.67	1,730.01	460.65	4.756 SF					

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-94.72	0.00	94.72	94.72	0.29	330.282			
100.00	100.00	100.00	100.00	0.14	0.14	180.00	-94.72	0.00	94.72	94.43	1.00	94.366			
200.00	200.00	200.00	200.00	0.50	0.50	180.00	-94.72	0.00	94.72	93.71	1.72	55.047	CC, ES		
300.00	300.00	300.00	300.00	0.86	0.86	180.00	-94.72	0.00	94.72	93.00	2.44	39.555			
400.00	399.98	399.98	399.98	1.22	1.22	178.21	-94.72	0.00	96.46	94.02	3.14	32.879			
500.00	499.84	496.65	496.63	1.58	1.55	177.94	-96.22	0.64	103.24	100.10	3.83	30.400			
600.00	599.45	592.35	592.21	1.95	1.88	177.14	-100.65	2.55	116.58	112.74	4.53	30.122			
700.00	698.70	686.48	686.00	2.33	2.21	176.08	-107.87	5.65	136.41	131.88	4.64	30.189			
715.65	714.19	700.00	699.45	2.39	2.25	175.92	-109.14	6.20	140.10	135.46	5.21	30.984			
800.00	797.66	778.77	777.66	2.73	2.55	174.99	-117.69	9.87	161.43	156.22	5.87	32.257			
900.00	896.61	869.47	867.37	3.13	2.91	173.89	-129.98	15.16	189.45	183.58	6.53	33.764			
1,000.00	995.56	958.46	954.93	3.54	3.28	172.84	-144.57	21.43	220.37	213.84	7.17	35.444			
1,100.00	1,094.50	1,045.61	1,040.16	3.96	3.67	171.85	-161.27	28.61	254.13	246.96	7.80	37.258			
1,200.00	1,193.45	1,130.83	1,122.93	4.38	4.08	170.95	-179.90	36.62	290.65	282.85	8.41	39.199			
1,300.00	1,292.40	1,214.04	1,203.13	4.79	4.50	170.13	-200.26	45.37	329.85	321.44	9.09	40.767			
1,400.00	1,391.35	1,303.85	1,289.24	5.22	4.99	169.35	-223.70	55.45	370.74	361.64	9.79	42.050			
1,500.00	1,490.30	1,395.00	1,376.62	5.64	5.49	168.71	-247.51	65.68	411.69	401.90	10.49	43.148			
1,600.00	1,589.25	1,486.14	1,464.00	6.06	6.01	168.19	-271.32	75.91	452.69	442.19	11.20	44.098			
1,700.00	1,688.20	1,577.28	1,551.38	6.48	6.53	167.76	-295.12	86.15	493.70	482.51	11.90	44.926			
1,800.00	1,787.15	1,668.42	1,638.76	6.91	7.06	167.39	-318.93	96.38	534.74	522.84	12.61	45.654			
1,900.00	1,886.10	1,759.56	1,726.14	7.33	7.59	167.08	-342.74	106.62	575.80	563.18	13.32	46.299			
2,000.00	1,985.05	1,850.71	1,813.52	7.75	8.13	166.80	-366.55	116.85	616.86	603.54	14.04	46.873			
2,100.00	2,084.00	1,941.85	1,900.90	8.18	8.67	166.56	-390.36	127.09	657.94	643.90	14.75	47.388			
2,200.00	2,182.95	2,032.99	1,988.28	8.60	9.21	166.35	-414.17	137.32	699.02	684.27	15.47	47.852			
2,300.00	2,281.90	2,124.13	2,075.66	9.03	9.75	166.16	-437.97	147.56	740.12	724.65	16.18	48.272			
2,400.00	2,380.85	2,215.27	2,163.04	9.45	10.30	165.99	-461.78	157.79	781.21	765.03	16.90	48.653			
2,500.00	2,479.80	2,306.41	2,250.42	9.88	10.85	165.84	-485.59	168.03	822.32	805.42	17.62	49.002			
2,600.00	2,578.74	2,397.56	2,337.80	10.31	11.39	165.71	-509.40	178.26	863.42	845.80	18.34	49.321			
2,700.00	2,677.69	2,488.70	2,425.18	10.73	11.94	165.58	-533.21	188.50	904.53	886.20	19.06	49.614			
2,800.00	2,776.64	2,579.84	2,512.56	11.16	12.49	165.47	-557.02	198.73	945.65	926.59	19.78	49.885			
2,900.00	2,875.59	2,670.98	2,599.94	11.58	13.04	165.36	-580.82	208.96	986.77	966.99	20.50	50.135			
3,000.00	2,974.54	2,762.12	2,687.32	12.01	13.59	165.27	-604.63	219.20	1,027.89	1,007.38	21.22	50.367			
3,100.00	3,073.49	2,853.26	2,774.70	12.44	14.14	165.18	-628.44	229.43	1,069.01	1,047.78	21.95	50.582			
3,200.00	3,172.44	2,944.41	2,862.08	12.86	14.70	165.10	-652.25	239.67	1,110.13	1,088.18	22.67	50.783			
3,300.00	3,271.39	3,035.55	2,949.46	13.29	15.25	165.02	-676.06	249.90	1,151.26	1,128.59	23.39	50.971			
3,400.00	3,370.34	3,126.69	3,036.84	13.72	15.80	164.95	-699.87	260.14	1,192.38	1,168.99	24.12	51.147			
3,500.00	3,469.29	3,217.83	3,124.22	14.14	16.36	164.89	-723.67	270.37	1,233.51	1,209.40	24.84	51.311			
3,600.00	3,568.24	3,308.97	3,211.60	14.57	16.91	164.82	-747.48	280.61	1,274.64	1,249.80	25.57	51.466			
3,700.00	3,667.19	3,400.11	3,298.98	15.00	17.46	164.77	-771.29	290.84	1,315.77	1,290.21	26.29	51.611			
3,800.00	3,766.14	3,491.26	3,386.36	15.42	18.02	164.71	-795.10	301.08	1,356.91	1,330.61	27.02	51.748			
3,900.00	3,865.09	3,582.40	3,473.74	15.85	18.57	164.66	-818.91	311.31	1,398.04	1,371.02	27.74	51.878			
4,000.00	3,964.03	3,673.54	3,561.12	16.28	19.13	164.61	-842.72	321.54	1,439.17	1,411.43	28.47	52.000			
4,100.00	4,062.98	3,764.68	3,648.50	16.70	19.68	164.57	-866.52	331.78	1,480.31	1,451.84	29.19	52.115			
4,200.00	4,161.93	3,855.82	3,735.88	17.13	20.24	164.52	-890.33	342.01	1,521.44	1,492.25	29.92	52.225			
4,300.00	4,260.88	3,946.96	3,823.26	17.56	20.79	164.48	-914.14	352.25	1,562.58	1,532.66	30.65	52.328			
4,400.00	4,359.83	4,038.11	3,910.64	17.98	21.35	164.44	-937.95	362.48	1,603.72	1,573.07	31.37	52.427			
4,500.00	4,458.78	4,129.25	3,998.02	18.41	21.90	164.41	-961.76	372.72	1,644.85	1,613.48	32.10	52.521			
4,600.00	4,557.73	4,220.39	4,085.40	18.84	22.46	164.37	-985.56	382.95	1,685.99	1,653.89	32.83	52.610			
4,700.00	4,656.68	4,311.53	4,172.78	19.26	23.02	164.34	-1,009.37	393.19	1,727.13	1,694.30	33.56	52.695			
4,800.00	4,755.63	4,402.67	4,260.16	19.69	23.57	164.31	-1,033.18	403.42	1,768.27	1,734.71	34.28	52.775			
4,900.00	4,854.58	4,493.82	4,347.54	20.12	24.13	164.28	-1,056.99	413.66	1,809.41	1,775.12	35.01	52.853			
5,000.00	4,953.53	4,584.96	4,434.92	20.55	24.69	164.25	-1,080.80	423.89	1,850.55	1,815.53					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
5,100.00	5,052.48	4,676.10	4,522.30	20.97	25.24	164.22	-1,104.61	434.12	1,891.69	1,855.94	35.74	52.926		
5,200.00	5,151.43	4,767.24	4,609.68	21.40	25.80	164.19	-1,128.41	444.36	1,932.83	1,896.36	36.47	52.996		
5,300.00	5,250.38	4,858.38	4,697.06	21.83	26.36	164.17	-1,152.22	454.59	1,973.97	1,936.77	37.20	53.064		
5,400.00	5,349.32	4,949.52	4,784.44	22.25	26.91	164.14	-1,176.03	464.83	2,015.11	1,977.18	37.93	53.128		
5,500.00	5,448.27	5,040.67	4,871.82	22.68	27.47	164.12	-1,199.84	475.06	2,056.25	2,017.59	38.66	53.189		
5,600.00	5,547.22	5,131.81	4,959.20	23.11	28.03	164.10	-1,223.65	485.30	2,097.39	2,058.00	39.39	53.248		
5,625.90	5,572.85	5,155.41	4,981.82	23.22	28.17	164.09	-1,229.81	487.95	2,108.05	2,068.47	39.58	53.263		
5,700.00	5,646.30	5,223.32	5,046.93	23.53	28.58	164.24	-1,247.55	495.57	2,137.69	2,097.57	40.12	53.285		
5,800.00	5,745.78	5,316.07	5,135.86	23.92	29.15	164.41	-1,271.78	505.99	2,175.00	2,134.15	40.85	53.248		
5,900.00	5,845.55	5,410.01	5,225.91	24.28	29.73	164.52	-1,296.32	516.54	2,209.17	2,167.59	41.58	53.137		
6,000.00	5,945.50	5,505.00	5,316.99	24.61	30.31	164.59	-1,321.14	527.20	2,240.16	2,197.86	42.30	52.957		
6,041.55	5,987.04	5,544.75	5,355.10	24.74	30.55	166.43	-1,331.52	531.67	2,252.10	2,209.49	42.60	52.863		
6,100.00	6,045.49	5,600.80	5,408.83	24.91	30.89	166.36	-1,346.16	537.96	2,268.50	2,225.47	43.03	52.723		
6,200.00	6,145.49	5,696.67	5,500.74	25.22	31.48	166.24	-1,371.20	548.73	2,296.57	2,252.82	43.75	52.488		
6,300.00	6,245.49	5,792.54	5,592.66	25.52	32.06	166.12	-1,396.25	559.49	2,324.65	2,280.17	44.48	52.260		
6,400.00	6,345.49	5,888.41	5,684.57	25.83	32.65	166.01	-1,421.29	570.26	2,352.74	2,307.53	45.21	52.040		
6,500.00	6,445.49	5,984.29	5,776.49	26.14	33.24	165.90	-1,446.34	581.02	2,380.83	2,334.89	45.94	51.826		
6,600.00	6,545.49	6,080.16	5,868.40	26.45	33.82	165.79	-1,471.38	591.79	2,408.94	2,362.27	46.67	51.618		
6,700.00	6,645.49	6,176.03	5,960.32	26.76	34.41	165.69	-1,496.42	602.56	2,437.05	2,389.65	47.40	51.416		
6,731.55	6,677.04	6,206.27	5,989.31	26.86	34.60	165.66	-1,504.32	605.95	2,445.92	2,398.29	47.63	51.354		
6,750.00	6,695.49	6,223.93	6,006.24	26.92	34.70	-103.37	-1,508.94	607.94	2,451.17	2,403.41	47.76	51.322		
6,800.00	6,745.33	6,271.30	6,051.65	27.06	34.99	-101.98	-1,521.31	613.25	2,466.07	2,417.96	48.11	51.261		
6,850.00	6,794.65	6,317.69	6,096.13	27.21	35.28	-100.59	-1,533.43	618.46	2,481.85	2,433.41	48.44	51.236		
6,900.00	6,843.08	6,362.75	6,139.33	27.36	35.55	-99.18	-1,545.20	623.52	2,498.45	2,449.69	48.76	51.245		
6,950.00	6,890.24	6,406.14	6,180.93	27.50	35.82	-97.75	-1,556.53	628.40	2,515.80	2,466.75	49.05	51.287		
7,000.00	6,935.78	6,447.53	6,220.62	27.63	36.07	-96.29	-1,567.35	633.04	2,533.86	2,484.53	49.33	51.361		
7,050.00	6,979.35	6,486.61	6,258.08	27.76	36.31	-94.79	-1,577.55	637.43	2,552.58	2,502.98	49.60	51.463		
7,100.00	7,020.62	6,523.07	6,293.03	27.89	36.53	-93.24	-1,587.08	641.53	2,571.91	2,522.05	49.85	51.589		
7,150.00	7,059.27	6,556.64	6,325.21	28.01	36.74	-91.62	-1,595.85	645.30	2,591.81	2,541.71	50.10	51.736		
7,200.00	7,095.02	6,587.06	6,354.38	28.13	36.93	-89.93	-1,603.79	648.71	2,612.23	2,561.90	50.34	51.896		
7,250.00	7,127.58	6,613.46	6,383.00	28.27	37.10	-88.17	-1,611.94	651.79	2,632.36	2,582.67	50.57	52.066		
7,300.00	7,156.72	6,639.83	6,411.11	28.41	37.26	-86.43	-1,620.27	654.56	2,652.10	2,603.04	50.78	52.246		
7,350.00	7,182.21	6,665.70	6,438.22	28.56	37.41	-84.70	-1,628.78	657.04	2,671.44	2,622.92	50.97	52.436		
7,400.00	7,203.85	6,691.11	6,464.83	28.70	37.55	-83.00	-1,637.46	659.24	2,690.38	2,642.30	51.14	52.636		
7,450.00	7,221.48	6,716.06	6,490.94	28.85	37.68	-81.30	-1,646.31	661.17	2,708.82	2,661.28	51.28	52.846		
7,500.00	7,234.96	6,740.56	6,516.55	29.00	37.80	-79.60	-1,655.32	662.84	2,726.76	2,679.76	51.40	53.066		
7,550.00	7,244.21	6,764.61	6,541.66	29.15	37.91	-77.90	-1,664.49	664.27	2,744.20	2,697.74	51.50	53.296		
7,587.24	7,248.29	6,788.21	6,566.27	29.30	38.02	-76.20	-1,673.82	665.47	2,761.24	2,715.22	51.58	53.536		
7,600.00	7,249.13	6,811.36	6,590.38	29.45	38.12	-74.50	-1,683.31	666.45	2,777.88	2,732.30	51.65	53.786		
7,631.55	7,250.00	6,834.06	6,613.99	29.60	38.22	-72.80	-1,692.96	667.22	2,794.12	2,748.98	51.70	54.046		
7,700.00	7,250.00	6,857.31	6,637.10	29.75	38.31	-71.10	-1,702.77	667.79	2,810.06	2,765.22	51.73	54.316		
7,800.00	7,250.00	6,881.12	6,659.71	29.90	38.40	-69.40	-1,712.74	668.17	2,825.70	2,781.02	51.74	54.596		
7,900.00	7,250.00	6,905.49	6,681.82	30.05	38.48	-67.70	-1,722.87	668.37	2,841.04	2,796.40	51.73	54.886		
8,000.00	7,250.00	6,930.32	6,703.53	30.20	38.56	-66.00	-1,733.16	668.40	2,856.08	2,811.40	51.70	55.186		
8,100.00	7,250.00	6,955.61	6,724.84	30.35	38.63	-64.30	-1,743.61	668.27	2,870.82	2,826.42	51.65	55.496		
8,200.00	7,250.00	6,981.36	6,745.75	30.50	38.70	-62.60	-1,754.22	668.00	2,885.26	2,841.00	51.58	55.816		
8,300.00	7,250.00	7,007.57	6,766.26	30.65	38.76	-60.90	-1,765.00	667.60	2,899.40	2,855.14	51.49	56.146		
8,400.00	7,250.00	7,034.24	6,786.37	30.80	38.82	-59.20	-1,775.94	667.07	2,913.24	2,868.84	51.38	56.486		
8,500.00	7,250.00	7,061.37	6,806.08	30.95	38.87	-57.50	-1,787.04	666.42	2,926.78	2,882.10	51.25	56.836		
8,600.00	7,250.00	7,088.96	6,825.39	31.10	38.92	-55.80	-1,798.30	665.65	2,939.92	2,895.02	51.10	57.196		
8,700.00	7,250.00	7,117.00	6,844.20	31.25	38.96	-54.10	-1,809.72	664.77	2,952.66	2,907.50	50.93	57.566		
8,800.00	7,250.00	7,145.59	6,862.61	31.40	39.00	-52.40	-1,821.31	663.78	2,965.00	2,919.64	50.74	57.946		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,900.00	7,250.00	9,757.88	7,254.00	54.98	68.36	-90.09	-1,870.25	-1,794.96	2,624.98	2,502.82	122.16	21.488				
9,000.00	7,250.00	9,857.88	7,254.00	57.35	70.80	-90.09	-1,871.09	-1,894.95	2,625.00	2,497.99	127.01	20.668				
9,100.00	7,250.00	9,957.88	7,254.00	59.76	73.26	-90.09	-1,871.92	-1,994.95	2,625.02	2,493.11	131.90	19.901				
9,200.00	7,250.00	10,057.88	7,254.00	62.19	75.74	-90.09	-1,872.76	-2,094.95	2,625.03	2,488.19	136.84	19.184				
9,300.00	7,250.00	10,157.88	7,254.00	64.65	78.23	-90.09	-1,873.60	-2,194.94	2,625.05	2,483.24	141.81	18.511				
9,400.00	7,250.00	10,257.88	7,254.00	67.12	80.74	-90.09	-1,874.44	-2,294.94	2,625.07	2,478.24	146.82	17.879				
9,500.00	7,249.99	10,357.88	7,254.00	69.61	83.26	-90.09	-1,875.27	-2,394.93	2,625.08	2,473.22	151.86	17.286				
9,600.00	7,249.99	10,457.88	7,254.00	72.12	85.80	-90.09	-1,876.11	-2,494.93	2,625.10	2,468.17	156.93	16.728				
9,700.00	7,249.99	10,557.88	7,254.00	74.65	88.34	-90.09	-1,876.95	-2,594.93	2,625.12	2,463.10	162.02	16.203				
9,800.00	7,249.99	10,657.88	7,254.00	77.19	90.89	-90.09	-1,877.78	-2,694.92	2,625.13	2,458.00	167.13	15.707				
9,900.00	7,249.99	10,757.88	7,254.00	79.74	93.45	-90.09	-1,878.62	-2,794.92	2,625.15	2,452.89	172.26	15.239				
10,000.00	7,249.99	10,857.88	7,254.00	82.30	96.03	-90.09	-1,879.46	-2,894.92	2,625.17	2,447.75	177.42	14.797				
10,100.00	7,249.99	10,957.88	7,254.00	84.87	98.60	-90.09	-1,880.29	-2,994.91	2,625.18	2,442.60	182.59	14.378				
10,200.00	7,249.99	11,057.88	7,254.00	87.45	101.19	-90.09	-1,881.13	-3,094.91	2,625.20	2,437.43	187.77	13.981				
10,300.00	7,249.99	11,157.88	7,254.00	90.04	103.78	-90.09	-1,881.97	-3,194.91	2,625.22	2,432.25	192.97	13.604				
10,400.00	7,249.99	11,257.88	7,254.00	92.64	106.38	-90.09	-1,882.81	-3,294.90	2,625.23	2,427.05	198.18	13.247				
10,500.00	7,249.99	11,357.88	7,254.00	95.24	108.99	-90.09	-1,883.64	-3,394.90	2,625.25	2,421.84	203.41	12.906				
10,600.00	7,249.99	11,457.88	7,254.00	97.85	111.60	-90.09	-1,884.48	-3,494.90	2,625.27	2,416.62	208.64	12.583				
10,700.00	7,249.99	11,557.88	7,254.00	100.47	114.21	-90.09	-1,885.32	-3,594.89	2,625.29	2,411.39	213.89	12.274				
10,800.00	7,249.99	11,657.88	7,254.00	103.09	116.83	-90.09	-1,886.15	-3,694.89	2,625.30	2,406.16	219.15	11.980				
10,900.00	7,249.99	11,757.88	7,254.00	105.71	119.46	-90.09	-1,886.99	-3,794.89	2,625.32	2,400.91	224.41	11.699				
11,000.00	7,249.99	11,857.88	7,254.00	108.35	122.09	-90.09	-1,887.83	-3,894.88	2,625.34	2,395.65	229.69	11.430				
11,100.00	7,249.99	11,957.88	7,254.00	110.98	124.72	-90.09	-1,888.67	-3,994.88	2,625.35	2,390.39	234.97	11.173				
11,200.00	7,249.99	12,057.88	7,254.00	113.62	127.35	-90.09	-1,889.50	-4,094.88	2,625.37	2,385.11	240.25	10.927				
11,300.00	7,249.99	12,157.88	7,254.00	116.26	129.99	-90.09	-1,890.34	-4,194.87	2,625.39	2,379.84	245.55	10.692				
11,400.00	7,249.99	12,257.88	7,254.00	118.91	132.64	-90.09	-1,891.18	-4,294.87	2,625.40	2,374.55	250.85	10.466				
11,500.00	7,249.99	12,357.88	7,254.00	121.56	135.28	-90.09	-1,892.01	-4,394.86	2,625.42	2,369.26	256.16	10.249				
11,600.00	7,249.99	12,457.88	7,254.00	124.21	137.93	-90.09	-1,892.85	-4,494.86	2,625.44	2,363.96	261.47	10.041				
11,700.00	7,249.99	12,557.88	7,254.00	126.87	140.58	-90.09	-1,893.69	-4,594.86	2,625.45	2,358.66	266.79	9.841				
11,800.00	7,249.99	12,657.88	7,254.00	129.53	143.24	-90.09	-1,894.53	-4,694.85	2,625.47	2,353.36	272.11	9.648				
11,900.00	7,249.99	12,757.88	7,254.00	132.19	145.89	-90.09	-1,895.36	-4,794.85	2,625.49	2,348.05	277.44	9.463				
12,000.00	7,249.99	12,857.88	7,254.00	134.86	148.55	-90.09	-1,896.20	-4,894.85	2,625.50	2,342.73	282.78	9.285				
12,100.00	7,249.99	12,957.88	7,254.00	137.52	151.21	-90.09	-1,897.04	-4,994.84	2,625.52	2,337.41	288.11	9.113				
12,200.00	7,249.99	13,057.88	7,254.00	140.19	153.88	-90.09	-1,897.87	-5,094.84	2,625.54	2,332.09	293.45	8.947				
12,300.00	7,249.99	13,157.88	7,254.00	142.86	156.54	-90.09	-1,898.71	-5,194.84	2,625.56	2,326.76	298.80	8.787				
12,400.00	7,249.99	13,257.88	7,254.00	145.53	159.21	-90.09	-1,899.55	-5,294.83	2,625.57	2,321.43	304.14	8.633				
12,500.00	7,249.99	13,357.88	7,254.00	148.21	161.88	-90.09	-1,900.38	-5,394.83	2,625.59	2,316.09	309.50	8.483				
12,600.00	7,249.99	13,457.88	7,254.00	150.88	164.55	-90.09	-1,901.22	-5,494.83	2,625.61	2,310.76	314.85	8.339				
12,700.00	7,249.99	13,557.88	7,254.00	153.56	167.22	-90.09	-1,902.06	-5,594.82	2,625.62	2,305.42	320.21	8.200				
12,800.00	7,249.99	13,657.88	7,254.00	156.24	169.89	-90.09	-1,902.90	-5,694.82	2,625.64	2,300.07	325.57	8.065				
12,900.00	7,249.98	13,757.88	7,254.00	158.92	172.57	-90.09	-1,903.73	-5,794.82	2,625.66	2,294.73	330.93	7.934				
13,000.00	7,249.98	13,857.88	7,254.00	161.60	175.24	-90.09	-1,904.57	-5,894.81	2,625.67	2,289.38	336.30	7.808				
13,100.00	7,249.98	13,957.88	7,254.00	164.28	177.92	-90.09	-1,905.41	-5,994.81	2,625.69	2,284.03	341.66	7.685				
13,200.00	7,249.98	14,057.88	7,254.00	166.97	180.60	-90.09	-1,906.24	-6,094.81	2,625.71	2,278.67	347.03	7.566				
13,300.00	7,249.98	14,157.88	7,254.00	169.65	183.28	-90.09	-1,907.08	-6,194.80	2,625.72	2,273.32	352.41	7.451				
13,400.00	7,249.98	14,257.88	7,254.00	172.34	185.96	-90.09	-1,907.92	-6,294.80	2,625.74	2,267.96	357.78	7.339				
13,500.00	7,249.98	14,357.88	7,254.00	175.03	188.64	-90.09	-1,908.76	-6,394.79	2,625.76	2,262.60	363.16	7.230				
13,600.00	7,249.98	14,457.88	7,254.00	177.72	191.33	-90.09	-1,909.59	-6,494.79	2,625.77	2,257.24	368.54	7.125				
13,700.00	7,249.98	14,557.88	7,254.00	180.41	194.01	-90.09	-1,910.43	-6,594.79	2,625.79	2,251.87	373.92	7.022				
13,800.00	7,249.98	14,657.88	7,254.00	183.10	196.70	-90.09	-1,911.27	-6,694.78	2,625.81	2,246.51	379.30	6.923				
13,900.00	7,249.98	14,757.88	7,254.00	185.79	199.38	-90.09	-1,912.10	-6,794.78	2,625.83	2,241.14	384.68	6.826				
14,000.00	7,249.98	14,857.88	7,254.00	188.48	202.07	-90.09	-1,912.94	-6,894.78	2,625.84	2,235.77	390.07	6.732				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	7,249.98	14,957.88	7,254.00	191.18	204.76	-90.09	-1,913.78	-6,994.77	2,625.86	2,230.40	395.46	6.640		
14,200.00	7,249.98	15,057.88	7,254.00	193.87	207.45	-90.09	-1,914.62	-7,094.77	2,625.88	2,225.03	400.85	6.551		
14,300.00	7,249.98	15,157.88	7,254.00	196.56	210.14	-90.09	-1,915.45	-7,194.77	2,625.89	2,219.66	406.24	6.464		
14,400.00	7,249.98	15,257.88	7,254.00	199.26	212.83	-90.09	-1,916.29	-7,294.76	2,625.91	2,214.28	411.63	6.379		
14,500.00	7,249.98	15,357.88	7,254.00	201.96	215.52	-90.09	-1,917.13	-7,394.76	2,625.93	2,208.90	417.02	6.297		
14,600.00	7,249.98	15,457.88	7,254.00	204.65	218.21	-90.09	-1,917.96	-7,494.76	2,625.94	2,203.53	422.42	6.216		
14,700.00	7,249.98	15,557.88	7,254.00	207.35	220.91	-90.09	-1,918.80	-7,594.75	2,625.96	2,198.15	427.81	6.138		
14,800.00	7,249.98	15,657.88	7,254.00	210.05	223.60	-90.09	-1,919.64	-7,694.75	2,625.98	2,192.77	433.21	6.062		
14,900.00	7,249.98	15,757.88	7,254.00	212.75	226.29	-90.09	-1,920.47	-7,794.75	2,625.99	2,187.39	438.61	5.987		
15,000.00	7,249.98	15,857.88	7,254.00	215.45	228.99	-90.09	-1,921.31	-7,894.74	2,626.01	2,182.01	444.01	5.914		
15,100.00	7,249.98	15,957.88	7,254.00	218.15	231.69	-90.09	-1,922.15	-7,994.74	2,626.03	2,176.62	449.41	5.843		
15,200.00	7,249.98	16,057.88	7,254.00	220.85	234.38	-90.09	-1,922.99	-8,094.74	2,626.04	2,171.24	454.81	5.774		
15,300.00	7,249.98	16,157.88	7,254.00	223.55	237.08	-90.09	-1,923.82	-8,194.73	2,626.06	2,165.85	460.21	5.706		
15,400.00	7,249.98	16,257.88	7,254.00	226.25	239.78	-90.09	-1,924.66	-8,294.73	2,626.08	2,160.47	465.61	5.640		
15,478.21	7,250.00	16,336.09	7,254.00	228.36	241.89	-90.09	-1,925.32	-8,372.94	2,626.30	2,156.46	469.84	5.590 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	0.00	0.00	0.00	0.00	-180.00	-109.29	0.00	109.29	109.00	0.29	381.081				
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-109.29	0.00	109.29	108.28	1.00	108.880				
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-109.29	0.00	109.29	107.56	1.72	63.513 CC, ES				
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-109.29	0.00	109.29	110.21	2.42	46.621				
400.00	399.98	396.41	396.39	1.22	1.19	177.94	-110.82	0.53	112.62	119.51	3.11	39.376				
500.00	499.84	492.16	492.02	1.58	1.52	177.29	-115.38	2.09	122.62	135.41	3.81	36.499				
600.00	599.45	586.64	586.16	1.95	1.86	176.41	-122.84	4.64	139.22	157.83	4.51	36.000				
700.00	698.70	679.23	678.12	2.33	2.21	175.48	-133.00	8.12	162.34	161.91	4.63	36.006				
715.65	714.19	693.51	692.28	2.39	2.26	175.34	-134.82	8.74	166.53	185.43	5.19	36.743				
800.00	797.66	769.75	767.65	2.73	2.57	174.62	-145.64	12.44	190.62	216.02	5.84	37.962				
900.00	896.61	858.52	854.99	3.13	2.95	173.80	-160.63	17.58	221.87	249.47	6.49	39.435				
1,000.00	995.56	945.44	940.00	3.54	3.35	173.02	-177.79	23.45	255.97	285.70	7.13	41.076				
1,100.00	1,094.50	1,030.42	1,022.53	3.96	3.76	172.31	-196.91	29.99	292.83	324.63	7.74	42.927				
1,200.00	1,193.45	1,113.37	1,102.49	4.38	4.20	171.66	-217.80	37.14	332.38	366.16	8.35	44.848				
1,300.00	1,292.40	1,194.23	1,179.78	4.79	4.65	171.06	-240.26	44.83	374.51	410.19	8.94	46.859				
1,400.00	1,391.35	1,272.96	1,254.36	5.22	5.12	170.52	-264.11	52.99	419.14	456.27	9.58	48.626				
1,500.00	1,490.30	1,355.82	1,332.21	5.64	5.64	170.00	-290.97	62.19	465.85	502.59	10.27	49.937				
1,600.00	1,589.25	1,444.02	1,414.98	6.06	6.21	169.54	-319.78	72.05	512.86	548.93	10.96	51.065				
1,700.00	1,688.20	1,532.21	1,497.75	6.48	6.79	169.16	-348.59	81.91	559.89	595.28	11.66	52.904				
1,800.00	1,787.15	1,620.40	1,580.51	6.91	7.38	168.84	-377.41	91.77	606.94	641.64	12.36	52.041				
1,900.00	1,886.10	1,708.59	1,663.28	7.33	7.97	168.56	-406.22	101.63	654.00	688.01	13.07	53.656				
2,000.00	1,985.05	1,796.79	1,746.05	7.75	8.57	168.32	-435.03	111.50	701.07	734.38	13.77	54.325				
2,100.00	2,084.00	1,884.98	1,828.82	8.18	9.16	168.11	-463.85	121.36	748.16	780.76	14.48	54.923				
2,200.00	2,182.95	1,973.17	1,911.58	8.60	9.77	167.92	-492.66	131.22	795.24	827.15	15.19	55.459				
2,300.00	2,281.90	2,061.36	1,994.35	9.03	10.37	167.76	-521.47	141.08	842.34	873.54	15.90	55.944				
2,400.00	2,380.85	2,149.56	2,077.12	9.45	10.97	167.61	-550.29	150.95	889.43	919.93	16.61	56.382				
2,500.00	2,479.80	2,237.75	2,159.89	9.88	11.58	167.48	-579.10	160.81	936.54	966.32	17.32	56.782				
2,600.00	2,578.74	2,325.94	2,242.65	10.31	12.19	167.36	-607.91	170.67	983.64	1,012.71	18.04	57.146				
2,700.00	2,677.69	2,414.13	2,325.42	10.73	12.80	167.25	-636.73	180.53	1,030.75	1,059.11	18.75	57.481				
2,800.00	2,776.64	2,502.33	2,408.19	11.16	13.41	167.15	-665.54	190.39	1,077.86	1,105.51	19.47	57.788				
2,900.00	2,875.59	2,590.52	2,490.96	11.58	14.02	167.06	-694.35	200.26	1,124.98	1,151.91	20.18	58.072				
3,000.00	2,974.54	2,678.71	2,573.72	12.01	14.63	166.98	-723.17	210.12	1,172.09	1,198.31	20.90	58.334				
3,100.00	3,073.49	2,766.90	2,656.49	12.44	15.25	166.90	-751.98	219.98	1,219.21	1,244.71	21.62	58.577				
3,200.00	3,172.44	2,855.10	2,739.26	12.86	15.86	166.83	-780.79	229.84	1,266.33	1,291.11	22.34	58.804				
3,300.00	3,271.39	2,943.29	2,822.03	13.29	16.47	166.76	-809.61	239.71	1,313.45	1,337.52	23.05	59.014				
3,400.00	3,370.34	3,031.48	2,904.79	13.72	17.09	166.70	-838.42	249.57	1,360.57	1,383.92	23.77	59.211				
3,500.00	3,469.29	3,119.68	2,987.56	14.14	17.70	166.64	-867.23	259.43	1,407.69	1,430.32	24.49	59.395				
3,600.00	3,568.24	3,207.87	3,070.33	14.57	18.32	166.59	-896.05	269.29	1,454.82	1,476.73	25.21	59.568				
3,700.00	3,667.19	3,296.06	3,153.10	15.00	18.93	166.54	-924.86	279.15	1,501.94	1,523.13	25.93	59.729				
3,800.00	3,766.14	3,384.25	3,235.86	15.42	19.55	166.49	-953.67	289.02	1,549.07	1,569.54	26.66	59.882				
3,900.00	3,865.09	3,472.45	3,318.63	15.85	20.16	166.45	-982.49	298.88	1,596.19	1,615.94	27.38	60.025				
4,000.00	3,964.03	3,560.64	3,401.40	16.28	20.78	166.41	-1,011.30	308.74	1,643.32	1,662.35	28.10	60.160				
4,100.00	4,062.98	3,648.83	3,484.17	16.70	21.39	166.37	-1,040.11	318.60	1,690.45	1,708.76	28.82	60.288				
4,200.00	4,161.93	3,737.02	3,566.93	17.13	22.01	166.33	-1,068.93	328.47	1,737.58	1,755.16	29.54	60.408				
4,300.00	4,260.88	3,825.22	3,649.70	17.56	22.63	166.29	-1,097.74	338.33	1,784.71	1,801.57	30.27	60.522				
4,400.00	4,359.83	3,913.41	3,732.47	17.98	23.24	166.26	-1,126.55	348.19	1,831.84	1,847.97	30.99	60.630				
4,500.00	4,458.78	4,001.60	3,815.24	18.41	23.86	166.23	-1,155.37	358.05	1,878.97	1,894.38	31.71	60.733				
4,600.00	4,557.73	4,089.79	3,898.00	18.84	24.48	166.20	-1,184.18	367.92	1,926.10	1,940.79	32.44	60.830				
4,700.00	4,656.68	4,177.99	3,980.77	19.26	25.10	166.17	-1,212.99	377.78	1,973.23	1,987.20	33.16	60.922				
4,800.00	4,755.63	4,266.18	4,063.54	19.69	25.71	166.14	-1,241.81	387.64	2,020.36	2,033.60	33.89	61.010				
4,900.00	4,854.58	4,354.37	4,146.31	20.12	26.33	166.11	-1,270.62	397.50	2,067.49							
5,000.00	4,953.53	4,442.56	4,229.07	20.55	26.95	166.09	-1,299.43	407.36	2,114.62							

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
5,100.00	5,052.48	4,530.76	4,311.84	20.97	27.57	166.07	-1,328.25	417.23	2,161.75	2,126.42	35.34	61.173		
5,200.00	5,151.43	4,618.95	4,394.61	21.40	28.18	166.04	-1,357.06	427.09	2,208.89	2,172.82	36.06	61.249		
5,300.00	5,250.38	4,707.14	4,477.38	21.83	28.80	166.02	-1,385.87	436.95	2,256.02	2,219.23	36.79	61.321		
5,400.00	5,349.32	4,795.33	4,560.14	22.25	29.42	166.00	-1,414.69	446.81	2,303.15	2,265.63	37.52	61.390		
5,500.00	5,448.27	4,883.53	4,642.91	22.68	30.04	165.98	-1,443.50	456.68	2,350.28	2,312.04	38.24	61.456		
5,600.00	5,547.22	4,971.72	4,725.68	23.11	30.66	165.96	-1,472.31	466.54	2,397.42	2,358.45	38.97	61.519		
5,625.90	5,572.85	4,994.56	4,747.11	23.22	30.82	165.95	-1,479.77	469.09	2,409.62	2,370.46	39.16	61.535		
5,700.00	5,646.30	5,060.34	4,808.85	23.53	31.28	166.12	-1,501.27	476.45	2,443.73	2,404.03	39.70	61.559		
5,800.00	5,745.78	5,150.42	4,893.39	23.92	31.91	166.30	-1,530.70	486.52	2,487.11	2,446.68	40.43	61.522		
5,900.00	5,845.55	5,241.89	4,979.23	24.28	32.55	166.45	-1,560.58	496.75	2,527.42	2,486.26	41.16	61.409		
6,000.00	5,945.50	5,334.66	5,066.29	24.61	33.20	166.55	-1,590.89	507.12	2,564.60	2,522.71	41.89	61.223		
6,041.55	5,987.04	5,373.55	5,102.79	24.74	33.47	168.40	-1,603.59	511.47	2,579.11	2,536.92	42.19	61.127		
6,100.00	6,045.49	5,428.41	5,154.27	24.91	33.86	168.35	-1,621.52	517.61	2,599.16	2,556.54	42.62	60.982		
6,200.00	6,145.49	5,522.26	5,242.35	25.22	34.52	168.25	-1,652.18	528.10	2,633.45	2,590.09	43.36	60.738		
6,300.00	6,245.49	5,616.11	5,330.43	25.52	35.18	168.16	-1,682.84	538.60	2,667.75	2,623.65	44.09	60.502		
6,400.00	6,345.49	5,709.95	5,418.50	25.83	35.83	168.07	-1,713.50	549.09	2,702.05	2,657.22	44.83	60.273		
6,500.00	6,445.49	5,803.80	5,506.58	26.14	36.49	167.98	-1,744.16	559.59	2,736.36	2,690.79	45.57	60.050		
6,600.00	6,545.49	5,897.65	5,594.65	26.45	37.15	167.90	-1,774.82	570.08	2,770.68	2,724.37	46.31	59.834		
6,700.00	6,645.49	5,991.50	5,682.73	26.76	37.81	167.81	-1,805.48	580.58	2,805.00	2,757.95	47.04	59.625		
6,731.55	6,677.04	6,021.10	5,710.51	26.86	38.02	167.79	-1,815.16	583.89	2,815.82	2,768.55	47.28	59.560		
6,750.00	6,695.49	6,038.39	5,726.73	26.92	38.14	-101.10	-1,820.80	585.82	2,822.22	2,774.80	47.41	59.526		
6,800.00	6,745.33	6,084.75	5,770.24	27.06	38.46	-99.34	-1,835.95	591.00	2,840.05	2,792.29	47.76	59.461		
6,850.00	6,794.65	6,130.15	5,812.85	27.21	38.78	-97.57	-1,850.78	596.08	2,858.57	2,810.47	48.10	59.428		
6,900.00	6,843.08	6,174.25	5,854.23	27.36	39.09	-95.80	-1,865.19	601.01	2,877.68	2,829.25	48.42	59.427		
6,950.00	6,890.24	6,216.70	5,894.08	27.50	39.39	-94.03	-1,879.06	605.76	2,897.27	2,848.54	48.73	59.457		
7,000.00	6,935.78	6,257.19	5,932.07	27.63	39.67	-92.26	-1,892.29	610.29	2,917.28	2,868.26	49.02	59.515		
7,050.00	6,979.35	6,295.41	5,967.94	27.76	39.94	-90.48	-1,904.77	614.56	2,937.63	2,888.34	49.29	59.596		
7,100.00	7,020.62	6,331.06	6,001.40	27.89	40.19	-88.68	-1,916.42	618.55	2,958.26	2,908.70	49.55	59.696		
7,150.00	7,059.27	6,363.88	6,032.20	28.01	40.42	-86.88	-1,927.14	622.22	2,979.10	2,929.29	49.81	59.810		
7,200.00	7,095.02	6,393.61	6,060.10	28.13	40.63	-85.04	-1,936.86	625.54	3,000.08	2,950.02	50.06	59.929		
7,250.00	7,127.58	6,420.03	6,084.90	28.27	40.82	-83.18	-1,945.49	628.50	3,021.15	2,970.84	50.31	60.046		
7,300.00	7,156.72	6,442.94	6,106.40	28.41	40.98	-81.29	-1,952.98	631.06	3,042.22	2,991.65	50.57	60.153		
7,350.00	7,182.21	6,462.17	6,124.44	28.58	41.11	-79.37	-1,959.26	633.21	3,063.23	3,012.38	50.85	60.244		
7,400.00	7,203.85	6,477.35	6,142.00	28.79	41.22	-77.59	-1,965.26	635.00	3,084.23	3,033.53	51.14	60.322		
7,450.00	7,221.48	6,493.12	6,160.00	29.05	41.33	-75.80	-1,971.00	636.50	3,105.23	3,054.73	51.43	60.390		
7,500.00	7,234.96	6,509.00	6,178.00	29.38	41.44	-74.00	-1,976.50	637.75	3,126.23	3,075.93	51.72	60.445		
7,550.00	7,244.21	6,525.00	6,196.00	29.79	41.55	-72.20	-1,981.75	638.75	3,147.23	3,097.13	52.01	60.490		
7,600.00	7,249.13	6,541.00	6,214.00	30.26	41.66	-70.40	-1,986.75	639.50	3,168.23	3,118.13	52.30	60.525		
7,631.55	7,250.00	6,557.00	6,232.00	30.59	41.77	-68.60	-1,991.50	640.00	3,189.23	3,139.13	52.59	60.550		
7,700.00	7,250.00	6,573.00	6,250.00	31.38	41.88	-66.80	-1,996.00	640.25	3,210.23	3,160.13	52.88	60.565		
7,800.00	7,250.00	6,589.00	6,268.00	32.73	41.99	-65.00	-2,000.25	640.25	3,231.23	3,181.13	53.17	60.570		
7,900.00	7,250.00	6,605.00	6,286.00	34.25	42.10	-63.20	-2,004.25	640.00	3,252.23	3,202.13	53.46	60.565		
8,000.00	7,250.00	6,621.00	6,304.00	35.92	42.21	-61.40	-2,008.00	639.75	3,273.23	3,223.13	53.75	60.550		
8,100.00	7,250.00	6,637.00	6,322.00	37.73	42.32	-59.60	-2,011.50	639.50	3,294.23	3,244.13	54.04	60.525		
8,200.00	7,250.00	6,653.00	6,340.00	39.64	42.43	-57.80	-2,014.75	639.25	3,315.23	3,265.13	54.33	60.490		
8,300.00	7,250.00	6,669.00	6,358.00	41.64	42.54	-56.00	-2,017.75	639.00	3,336.23	3,286.13	54.62	60.445		
8,400.00	7,250.00	6,685.00	6,376.00	43.72	42.65	-54.20	-2,020.50	638.75	3,357.23	3,307.13	54.91	60.390		
8,500.00	7,250.00	6,701.00	6,394.00	45.87	42.76	-52.40	-2,023.00	638.50	3,378.23	3,328.13	55.20	60.325		
8,600.00	7,250.00	6,717.00	6,412.00	48.08	42.87	-50.60	-2,025.25	638.25	3,399.23	3,349.13	55.49	60.250		
8,700.00	7,250.00	6,733.00	6,430.00	50.34	42.98	-48.80	-2,027.25	638.00	3,420.23	3,370.13	55.78	60.165		
8,800.00	7,250.00	6,749.00	6,448.00	52.64	43.09	-47.00	-2,029.00	637.75	3,441.23	3,391.13	56.07	60.070		
8,900.00	7,250.00	6,765.00	6,466.00	54.98	43.20	-45.20	-2,030.50	637.50	3,462.23	3,412.13	56.36	60.000		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft					
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft					
Reference													Rule Assigned:		Warning				
Measured Depth (usft)		Vertical Depth (usft)		Measured Depth (usft)		Vertical Depth (usft)		Semi Major Axis Reference Offset (usft)		Highside Toolface (°)		Offset Wellbore Centre (+N/-S (usft) +E/-W (usft))		Distance Between Centres (usft) Ellipses (usft)		Minimum Separation (usft) Separation Factor		Warning	
9,000.00	7,250.00	9,785.10	7,064.00	57.35	71.34	-86.52	-2,307.33	-1,892.57	3,066.89	2,939.76	127.12	24.125							
9,100.00	7,250.00	9,885.10	7,064.00	59.76	73.76	-86.52	-2,308.12	-1,992.56	3,066.86	2,934.86	132.00	23.234							
9,200.00	7,250.00	9,985.10	7,064.00	62.19	76.21	-86.52	-2,308.92	-2,092.56	3,066.84	2,929.92	136.91	22.400							
9,300.00	7,250.00	10,085.10	7,064.00	64.65	78.68	-86.52	-2,309.71	-2,192.56	3,066.81	2,924.94	141.87	21.617							
9,400.00	7,250.00	10,185.10	7,064.00	67.12	81.17	-86.52	-2,310.51	-2,292.55	3,066.79	2,919.93	146.86	20.883							
9,500.00	7,249.99	10,285.10	7,064.00	69.61	83.67	-86.52	-2,311.31	-2,392.55	3,066.76	2,914.88	151.88	20.192							
9,600.00	7,249.99	10,385.10	7,064.00	72.12	86.18	-86.52	-2,312.10	-2,492.55	3,066.74	2,909.81	156.93	19.542							
9,700.00	7,249.99	10,485.10	7,064.00	74.65	88.71	-86.52	-2,312.90	-2,592.55	3,066.71	2,904.71	162.00	18.930							
9,800.00	7,249.99	10,585.10	7,064.00	77.19	91.24	-86.52	-2,313.69	-2,692.54	3,066.69	2,899.59	167.10	18.353							
9,900.00	7,249.99	10,685.10	7,064.00	79.74	93.79	-86.52	-2,314.49	-2,792.54	3,066.67	2,894.45	172.21	17.807							
10,000.00	7,249.99	10,785.10	7,064.00	82.30	96.35	-86.52	-2,315.28	-2,892.54	3,066.64	2,889.29	177.35	17.292							
10,100.00	7,249.99	10,885.10	7,064.00	84.87	98.91	-86.52	-2,316.08	-2,992.53	3,066.62	2,884.11	182.50	16.803							
10,200.00	7,249.99	10,985.10	7,064.00	87.45	101.49	-86.52	-2,316.88	-3,092.53	3,066.59	2,878.92	187.67	16.340							
10,300.00	7,249.99	11,085.10	7,064.00	90.04	104.07	-86.52	-2,317.67	-3,192.53	3,066.57	2,873.71	192.86	15.901							
10,400.00	7,249.99	11,185.10	7,064.00	92.64	106.65	-86.52	-2,318.47	-3,292.52	3,066.54	2,868.49	198.05	15.483							
10,500.00	7,249.99	11,285.10	7,064.00	95.24	109.25	-86.52	-2,319.26	-3,392.52	3,066.52	2,863.26	203.26	15.086							
10,600.00	7,249.99	11,385.10	7,064.00	97.85	111.85	-86.52	-2,320.06	-3,492.52	3,066.49	2,858.01	208.48	14.709							
10,700.00	7,249.99	11,485.10	7,064.00	100.47	114.45	-86.52	-2,320.85	-3,592.51	3,066.47	2,852.75	213.72	14.348							
10,800.00	7,249.99	11,585.10	7,064.00	103.09	117.06	-86.52	-2,321.65	-3,692.51	3,066.44	2,847.49	218.96	14.005							
10,900.00	7,249.99	11,685.10	7,064.00	105.71	119.68	-86.52	-2,322.45	-3,792.51	3,066.42	2,842.21	224.21	13.677							
11,000.00	7,249.99	11,785.10	7,064.00	108.35	122.30	-86.52	-2,323.24	-3,892.50	3,066.40	2,836.93	229.47	13.363							
11,100.00	7,249.99	11,885.10	7,064.00	110.98	124.92	-86.52	-2,324.04	-3,992.50	3,066.37	2,831.64	234.73	13.063							
11,200.00	7,249.99	11,985.10	7,064.00	113.62	127.55	-86.52	-2,324.83	-4,092.50	3,066.35	2,826.34	240.01	12.776							
11,300.00	7,249.99	12,085.10	7,064.00	116.26	130.19	-86.52	-2,325.63	-4,192.49	3,066.32	2,821.03	245.29	12.501							
11,400.00	7,249.99	12,185.10	7,064.00	118.91	132.82	-86.52	-2,326.42	-4,292.49	3,066.30	2,815.72	250.58	12.237							
11,500.00	7,249.99	12,285.10	7,064.00	121.56	135.46	-86.52	-2,327.22	-4,392.49	3,066.27	2,810.40	255.87	11.984							
11,600.00	7,249.99	12,385.10	7,064.00	124.21	138.10	-86.52	-2,328.02	-4,492.49	3,066.25	2,805.08	261.17	11.740							
11,700.00	7,249.99	12,485.10	7,064.00	126.87	140.75	-86.52	-2,328.81	-4,592.48	3,066.22	2,799.75	266.48	11.506							
11,800.00	7,249.99	12,585.10	7,064.00	129.53	143.39	-86.52	-2,329.61	-4,692.48	3,066.20	2,794.41	271.79	11.282							
11,900.00	7,249.99	12,685.10	7,064.00	132.19	146.04	-86.52	-2,330.40	-4,792.48	3,066.18	2,789.07	277.11	11.065							
12,000.00	7,249.99	12,785.10	7,064.00	134.86	148.70	-86.52	-2,331.20	-4,892.47	3,066.15	2,783.73	282.42	10.857							
12,100.00	7,249.99	12,885.10	7,064.00	137.52	151.35	-86.52	-2,331.99	-4,992.47	3,066.13	2,778.38	287.75	10.656							
12,200.00	7,249.99	12,985.10	7,064.00	140.19	154.01	-86.52	-2,332.79	-5,092.47	3,066.10	2,773.03	293.08	10.462							
12,300.00	7,249.99	13,085.10	7,064.00	142.86	156.67	-86.52	-2,333.59	-5,192.46	3,066.08	2,767.67	298.41	10.275							
12,400.00	7,249.99	13,185.10	7,064.00	145.53	159.33	-86.52	-2,334.38	-5,292.46	3,066.05	2,762.31	303.74	10.094							
12,500.00	7,249.99	13,285.10	7,064.00	148.21	162.00	-86.52	-2,335.18	-5,392.46	3,066.03	2,756.95	309.08	9.920							
12,600.00	7,249.99	13,385.10	7,064.00	150.88	164.66	-86.52	-2,335.97	-5,492.45	3,066.00	2,751.58	314.43	9.751							
12,700.00	7,249.99	13,485.10	7,064.00	153.56	167.33	-86.52	-2,336.77	-5,592.45	3,065.98	2,746.21	319.77	9.588							
12,800.00	7,249.99	13,585.10	7,064.00	156.24	170.00	-86.52	-2,337.56	-5,692.45	3,065.96	2,740.84	325.12	9.430							
12,900.00	7,249.98	13,685.10	7,064.00	158.92	172.67	-86.52	-2,338.36	-5,792.44	3,065.93	2,735.46	330.47	9.277							
13,000.00	7,249.98	13,785.10	7,064.00	161.60	175.34	-86.52	-2,339.16	-5,892.44	3,065.91	2,730.08	335.82	9.130							
13,100.00	7,249.98	13,885.10	7,064.00	164.28	178.01	-86.52	-2,339.95	-5,992.44	3,065.88	2,724.70	341.18	8.986							
13,200.00	7,249.98	13,985.10	7,064.00	166.97	180.69	-86.52	-2,340.75	-6,092.43	3,065.86	2,719.32	346.54	8.847							
13,300.00	7,249.98	14,085.10	7,064.00	169.65	183.37	-86.52	-2,341.54	-6,192.43	3,065.83	2,713.93	351.90	8.712							
13,400.00	7,249.98	14,185.10	7,064.00	172.34	186.04	-86.52	-2,342.34	-6,292.43	3,065.81	2,708.55	357.26	8.581							
13,500.00	7,249.98	14,285.10	7,064.00	175.03	188.72	-86.52	-2,343.13	-6,392.43	3,065.78	2,703.16	362.63	8.454							
13,600.00	7,249.98	14,385.10	7,064.00	177.72	191.40	-86.52	-2,343.93	-6,492.42	3,065.76	2,697.77	367.99	8.331							
13,700.00	7,249.98	14,485.10	7,064.00	180.41	194.08	-86.52	-2,344.72	-6,592.42	3,065.73	2,692.37	373.36	8.211							
13,800.00	7,249.98	14,585.10	7,064.00	183.10	196.77	-86.52	-2,345.52	-6,692.42	3,065.71	2,686.98	378.73	8.095							
13,900.00	7,249.98	14,685.10	7,064.00	185.79	199.45	-86.52	-2,346.32	-6,792.41	3,065.69	2,681.58	384.11	7.981							
14,000.00	7,249.98	14,785.10	7,064.00	188.48	202.13	-86.52	-2,347.11	-6,892.41	3,065.66	2,676.18	389.48	7.871							
14,100.00	7,249.98	14,885.10	7,064.00	191.18	204.82	-86.52	-2,347.91	-6,992.41	3,065.64	2,670.78	394.86	7.764							

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Highside		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,200.00	7,249.98	14,985.10	7,064.00	193.87	207.51	-86.52		-86.52	-2,348.70	-7,092.40	3,065.61	2,665.38	400.23	7.660		
14,300.00	7,249.98	15,085.10	7,064.00	196.56	210.19	-86.52		-86.52	-2,349.50	-7,192.40	3,065.59	2,659.97	405.61	7.558		
14,400.00	7,249.98	15,185.10	7,064.00	199.26	212.88	-86.52		-86.52	-2,350.29	-7,292.40	3,065.56	2,654.57	410.99	7.459		
14,500.00	7,249.98	15,285.10	7,064.00	201.96	215.57	-86.52		-86.52	-2,351.09	-7,392.39	3,065.54	2,649.16	416.38	7.362		
14,600.00	7,249.98	15,385.10	7,064.00	204.65	218.26	-86.52		-86.52	-2,351.89	-7,492.39	3,065.51	2,643.76	421.76	7.268		
14,700.00	7,249.98	15,485.10	7,064.00	207.35	220.95	-86.52		-86.52	-2,352.68	-7,592.39	3,065.49	2,638.35	427.14	7.177		
14,800.00	7,249.98	15,585.10	7,064.00	210.05	223.64	-86.52		-86.52	-2,353.48	-7,692.38	3,065.47	2,632.94	432.53	7.087		
14,900.00	7,249.98	15,685.10	7,064.00	212.75	226.33	-86.52		-86.52	-2,354.27	-7,792.38	3,065.44	2,627.52	437.92	7.000		
15,000.00	7,249.98	15,785.10	7,064.00	215.45	229.03	-86.52		-86.52	-2,355.07	-7,892.38	3,065.42	2,622.11	443.30	6.915		
15,100.00	7,249.98	15,885.10	7,064.00	218.15	231.72	-86.52		-86.52	-2,355.86	-7,992.37	3,065.39	2,616.70	448.69	6.832		
15,200.00	7,249.98	15,985.10	7,064.00	220.85	234.41	-86.52		-86.52	-2,356.66	-8,092.37	3,065.37	2,611.28	454.08	6.751		
15,300.00	7,249.98	16,085.10	7,064.00	223.55	237.11	-86.52		-86.52	-2,357.46	-8,192.37	3,065.34	2,605.87	459.48	6.671		
15,400.00	7,249.98	16,185.10	7,064.00	226.25	239.80	-86.52		-86.52	-2,358.25	-8,292.36	3,065.32	2,600.45	464.87	6.594		
15,440.33	7,249.98	16,225.43	7,064.00	227.34	240.89	-86.52		-86.52	-2,358.57	-8,332.69	3,065.31	2,598.27	467.04	6.563		
15,478.21	7,250.00	16,263.31	7,064.00	228.36	241.91	-86.52		-86.52	-2,358.87	-8,370.57	3,065.51	2,596.42	469.09	6.535 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Highside		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-156.13	-69.22	-30.63	75.69						
100.00	100.00	100.00	100.00	0.14	0.14	-156.13	-69.22	-30.63	75.69	75.40	0.29	263.935			
200.00	200.00	200.00	200.00	0.50	0.50	-156.13	-69.22	-30.63	75.69	74.69	1.00	75.410			
300.00	300.00	300.00	300.00	0.86	0.86	-156.13	-69.22	-30.63	75.69	73.97	1.72	43.989			
400.00	399.98	399.98	399.98	1.22	1.22	-158.42	-69.22	-30.63	77.31	74.87	2.44	31.704			
500.00	499.84	499.84	499.84	1.58	1.58	-159.73	-69.22	-30.63	82.20	79.04	3.16	26.011			
600.00	599.45	599.45	599.45	1.95	1.93	-161.59	-69.22	-30.63	90.43	86.55	3.88	23.286			
700.00	698.70	698.70	698.70	2.33	2.29	-163.68	-69.22	-30.63	102.07	97.46	4.61	22.152			
715.65	714.19	714.19	714.19	2.39	2.35	-164.01	-69.22	-30.63	104.20	99.48	4.73	22.052			
800.00	797.66	797.66	797.66	2.73	2.64	-165.67	-69.22	-30.63	115.98	110.65	5.33	21.763			
900.00	896.61	896.61	896.61	3.13	3.00	-167.25	-69.22	-30.63	130.05	124.00	6.05	21.508			
1,000.00	995.56	995.56	995.56	3.54	3.35	-168.52	-69.22	-30.63	144.19	137.43	6.76	21.315			
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-169.56	-69.22	-30.63	158.39	150.91	7.48	21.164			
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-170.43	-69.22	-30.63	172.64	164.43	8.20	21.042			
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-171.16	-69.22	-30.63	186.91	177.99	8.92	20.943			
1,400.00	1,391.35	1,391.35	1,391.35	5.22	4.77	-171.80	-69.22	-30.63	201.21	191.57	9.65	20.860			
1,500.00	1,490.30	1,490.30	1,490.30	5.64	5.13	-172.34	-69.22	-30.63	215.54	205.17	10.37	20.790			
1,600.00	1,589.25	1,589.25	1,589.25	6.06	5.48	-172.82	-69.22	-30.63	229.88	218.79	11.09	20.730			
1,700.00	1,688.20	1,688.20	1,688.20	6.48	5.84	-173.25	-69.22	-30.63	244.23	232.42	11.81	20.678			
1,800.00	1,787.15	1,787.15	1,787.15	6.91	6.19	-173.62	-69.22	-30.63	258.60	246.06	12.53	20.633			
1,900.00	1,886.10	1,886.10	1,886.10	7.33	6.55	-173.96	-69.22	-30.63	272.97	259.72	13.26	20.593			
2,000.00	1,985.05	1,985.05	1,985.05	7.75	6.90	-174.26	-69.22	-30.63	287.35	273.38	13.98	20.558			
2,100.00	2,084.00	2,084.00	2,084.00	8.18	7.26	-174.54	-69.22	-30.63	301.74	287.04	14.70	20.526			
2,200.00	2,182.95	2,182.95	2,182.95	8.60	7.61	-174.79	-69.22	-30.63	316.14	300.72	15.42	20.497			
2,300.00	2,281.90	2,292.48	2,292.46	9.03	8.00	-175.01	-67.72	-30.61	329.23	313.03	16.20	20.320			
2,400.00	2,380.85	2,405.11	2,404.93	9.45	8.41	-175.15	-61.88	-30.53	338.51	321.53	16.98	19.937			
2,500.00	2,479.80	2,518.39	2,517.74	9.88	8.81	-175.20	-51.54	-30.39	343.87	326.14	17.74	19.386			
2,600.00	2,578.74	2,631.98	2,630.35	10.31	9.22	-175.18	-36.71	-30.19	345.30	326.83	18.48	18.690			
2,700.00	2,677.69	2,745.52	2,742.23	10.73	9.64	-175.08	-17.44	-29.93	342.79	323.60	19.19	17.864			
2,800.00	2,776.64	2,858.65	2,852.86	11.16	10.07	-174.90	6.16	-29.62	336.35	316.47	19.88	16.923			
2,900.00	2,875.59	2,971.02	2,961.75	11.58	10.51	-174.63	33.90	-29.24	326.01	305.47	20.53	15.876			
3,000.00	2,974.54	3,082.31	3,068.43	12.01	10.98	-174.24	65.57	-28.82	311.83	290.66	21.17	14.732			
3,100.00	3,073.49	3,192.19	3,172.48	12.44	11.47	-173.72	100.88	-28.34	293.88	272.11	21.77	13.499			
3,200.00	3,172.44	3,300.39	3,273.53	12.86	11.98	-173.00	139.51	-27.82	272.26	249.91	22.35	12.182			
3,300.00	3,271.39	3,406.62	3,371.26	13.29	12.53	-172.03	181.14	-27.26	247.07	224.17	22.90	10.787			
3,400.00	3,370.34	3,510.67	3,465.43	13.72	13.10	-170.66	225.39	-26.67	218.48	195.03	23.45	9.318			
3,500.00	3,469.29	3,605.58	3,550.63	14.14	13.66	-168.92	267.18	-26.11	188.45	164.22	24.23	7.778			
3,600.00	3,568.24	3,700.78	3,636.09	14.57	14.23	-166.51	309.11	-25.55	158.64	133.60	25.04	6.334			
3,700.00	3,667.19	3,795.98	3,721.56	15.00	14.83	-163.02	351.04	-24.98	129.20	103.27	25.94	4.982			
3,800.00	3,766.14	3,891.18	3,807.03	15.42	15.44	-157.51	392.97	-24.42	100.47	73.48	26.99	3.722			
3,900.00	3,865.09	3,986.38	3,892.50	15.85	16.06	-147.88	434.90	-23.85	73.26	44.80	28.46	2.574			
4,000.00	3,964.03	4,081.58	3,977.96	16.28	16.70	-128.74	476.83	-23.29	50.15	19.15	31.01	1.617			
4,100.00	4,062.98	4,176.78	4,063.43	16.70	17.35	-92.45	518.76	-22.73	39.20	5.16	34.05	1.151 Level 3			
4,102.22	4,065.18	4,178.89	4,065.33	16.71	17.36	-91.51	519.69	-22.72	39.20	5.12	34.07	1.150 Level 3, CC, ES, SF			
4,200.00	4,161.93	4,271.98	4,148.90	17.13	18.01	-55.49	560.69	-22.16	49.32	16.17	33.15	1.488 Level 3			
4,300.00	4,260.88	4,367.18	4,234.37	17.56	18.67	-35.73	602.62	-21.60	72.12	40.08	32.04	2.251			
4,400.00	4,359.83	4,462.38	4,319.83	17.98	19.35	-25.82	644.55	-21.04	99.22	67.27	31.95	3.105			
4,500.00	4,458.78	4,557.58	4,405.30	18.41	20.03	-20.19	686.48	-20.47	127.91	95.60	32.31	3.959			
4,600.00	4,557.73	4,652.78	4,490.77	18.84	20.72	-16.63	728.41	-19.91	157.32	124.47	32.85	4.789			
4,700.00	4,656.68	4,747.98	4,576.24	19.26	21.41	-14.19	770.34	-19.35	187.12	153.63	33.49	5.587			
4,800.00	4,755.63	4,843.18	4,661.70	19.69	22.11	-12.42	812.27	-18.78	217.15	182.97	34.18	6.353			
4,900.00	4,854.58	4,938.38	4,747.17	20.12	22.82	-11.08	854.20	-18.22	247.31	212.42	34.90	7.087			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program:		0-OWSG (Rev2) MWD			Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		Offset Well Error:	0.00 usft
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	+N/-S	+E/-W	Between	Between	Minimum	Separation	Warning			
Depth	Depth	Depth	Depth			Toolface	(usft)	(usft)	Centres	Ellipses	Separation	Factor				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)			(usft)	(usft)	(usft)					
5,000.00	4,953.53	5,033.58	4,832.64	20.55	23.52	-10.03	896.13	-17.66	277.58	241.95	35.63	7.790				
5,100.00	5,052.48	5,128.78	4,918.11	20.97	24.24	-9.18	938.06	-17.09	307.91	271.53	36.38	8.464				
5,200.00	5,151.43	5,223.98	5,003.57	21.40	24.95	-8.49	979.99	-16.53	338.29	301.16	37.13	9.111				
5,300.00	5,250.38	5,319.19	5,089.04	21.83	25.67	-7.91	1,021.92	-15.97	368.71	330.82	37.89	9.730				
5,400.00	5,349.32	5,414.39	5,174.51	22.25	26.40	-7.42	1,063.85	-15.40	399.16	360.50	38.66	10.325				
5,500.00	5,448.27	5,509.59	5,259.98	22.68	27.12	-7.00	1,105.78	-14.84	429.63	390.20	39.43	10.896				
5,600.00	5,547.22	5,604.79	5,345.44	23.11	27.85	-6.64	1,147.71	-14.28	460.12	419.91	40.21	11.444				
5,625.90	5,572.85	5,629.44	5,367.58	23.22	28.04	-6.55	1,158.57	-14.13	468.02	427.61	40.41	11.583				
5,700.00	5,646.30	5,699.69	5,430.64	23.53	28.58	-6.36	1,189.51	-13.71	491.53	450.55	40.98	11.995				
5,800.00	5,745.78	5,793.47	5,514.84	23.92	29.30	-6.11	1,230.81	-13.16	526.11	484.37	41.74	12.604				
5,900.00	5,845.55	5,885.98	5,597.89	24.28	30.01	-5.86	1,271.56	-12.61	563.95	521.46	42.49	13.273				
6,000.00	5,945.50	5,977.11	5,679.71	24.61	30.72	-5.63	1,311.70	-12.07	605.00	561.77	43.22	13.997				
6,041.55	5,987.04	6,014.54	5,713.31	24.74	31.01	-3.72	1,328.18	-11.85	622.98	579.46	43.52	14.314				
6,100.00	6,045.49	6,067.02	5,760.42	24.91	31.42	-3.54	1,351.30	-11.54	648.67	604.72	43.94	14.762				
6,200.00	6,145.49	6,156.80	5,841.02	25.22	32.12	-3.26	1,390.84	-11.01	692.62	647.96	44.66	15.508				
6,300.00	6,245.49	6,246.57	5,921.62	25.52	32.81	-3.02	1,430.38	-10.48	736.59	691.20	45.38	16.231				
6,400.00	6,345.49	6,336.35	6,002.22	25.83	33.51	-2.81	1,469.92	-9.95	780.56	734.46	46.10	16.930				
6,500.00	6,445.49	6,426.13	6,082.81	26.14	34.22	-2.62	1,509.46	-9.41	824.54	777.71	46.83	17.607				
6,600.00	6,545.49	6,515.90	6,163.41	26.45	34.92	-2.45	1,549.00	-8.88	868.53	820.98	47.56	18.264				
6,700.00	6,645.49	6,605.68	6,244.01	26.76	35.62	-2.29	1,588.54	-8.35	912.53	864.24	48.28	18.899				
6,731.55	6,677.04	6,634.00	6,269.43	26.86	35.85	-2.25	1,601.02	-8.18	926.41	877.89	48.51	19.096				
6,750.00	6,695.49	6,650.56	6,284.30	26.92	35.98	87.37	1,608.31	-8.09	934.52	885.87	48.65	19.210				
6,800.00	6,745.33	6,695.27	6,324.44	27.06	36.33	85.26	1,628.00	-7.82	956.35	907.36	49.00	19.519				
6,850.00	6,794.65	6,739.47	6,364.12	27.21	36.67	83.46	1,647.47	-7.56	977.92	928.58	49.34	19.819				
6,900.00	6,843.08	6,782.83	6,403.05	27.36	37.02	81.92	1,666.57	-7.30	999.17	949.48	49.69	20.110				
6,950.00	6,890.24	6,825.01	6,440.92	27.50	37.35	80.62	1,685.15	-7.05	1,020.08	970.05	50.04	20.387				
7,000.00	6,935.78	6,865.70	6,477.45	27.63	37.67	79.51	1,703.07	-6.81	1,040.69	990.30	50.40	20.650				
7,050.00	6,979.35	6,904.58	6,512.35	27.76	37.97	78.53	1,720.19	-6.58	1,061.06	1,010.27	50.78	20.894				
7,100.00	7,020.62	6,941.36	6,545.37	27.89	38.26	77.65	1,736.39	-6.36	1,081.24	1,030.04	51.20	21.117				
7,150.00	7,059.27	6,975.76	6,576.26	28.01	38.54	76.81	1,751.54	-6.16	1,101.34	1,049.67	51.67	21.316				
7,200.00	7,095.02	7,007.52	6,604.77	28.13	38.79	75.96	1,765.53	-5.97	1,121.43	1,069.24	52.19	21.489				
7,250.00	7,127.58	7,036.39	6,630.69	28.27	39.01	75.07	1,778.25	-5.80	1,141.60	1,088.83	52.77	21.635				
7,300.00	7,156.72	7,062.16	6,653.83	28.41	39.22	74.08	1,789.60	-5.65	1,161.91	1,108.50	53.42	21.752				
7,350.00	7,182.21	7,084.63	6,674.00	28.58	39.40	72.97	1,799.49	-5.52	1,182.42	1,128.29	54.14	21.841				
7,400.00	7,203.85	7,103.63	6,691.05	28.79	39.55	71.71	1,807.86	-5.40	1,203.16	1,148.23	54.93	21.905				
7,450.00	7,221.48	7,119.02	6,704.86	29.05	39.67	70.28	1,814.64	-5.31	1,224.12	1,168.34	55.78	21.947				
7,500.00	7,234.96	7,130.67	6,715.32	29.38	39.76	68.67	1,819.77	-5.24	1,245.27	1,188.59	56.68	21.972				
7,550.00	7,244.21	7,138.49	6,722.35	29.79	39.82	66.88	1,823.22	-5.20	1,266.55	1,208.94	57.61	21.984				
7,600.00	7,249.13	7,142.44	6,725.90	30.26	39.85	64.93	1,824.95	-5.17	1,287.87	1,229.30	58.57	21.989				
7,631.55	7,250.00	7,142.92	6,726.33	30.59	39.86	63.62	1,825.17	-5.17	1,301.28	1,242.11	59.17	21.991				
7,700.00	7,250.00	8,110.02	7,258.00	31.38	45.80	90.35	2,080.75	-628.00	1,316.34	1,253.36	62.99	20.899				
7,800.00	7,250.00	8,210.02	7,258.00	32.73	46.36	90.35	2,079.91	-728.00	1,316.33	1,250.60	65.73	20.027				
7,900.00	7,250.00	8,310.02	7,258.00	34.25	47.06	90.35	2,079.08	-827.99	1,316.31	1,247.52	68.79	19.136				
8,000.00	7,250.00	8,410.02	7,258.00	35.92	47.88	90.35	2,078.24	-927.99	1,316.29	1,244.16	72.13	18.249				
8,100.00	7,250.00	8,510.02	7,258.00	37.73	48.85	90.35	2,077.40	-1,027.99	1,316.27	1,240.56	75.72	17.384				
8,200.00	7,250.00	8,610.02	7,258.00	39.64	49.96	90.35	2,076.56	-1,127.98	1,316.26	1,236.74	79.52	16.553				
8,300.00	7,250.00	8,710.02	7,258.00	41.64	51.22	90.35	2,075.72	-1,227.98	1,316.24	1,232.74	83.50	15.764				
8,400.00	7,250.00	8,810.02	7,258.00	43.72	52.62	90.35	2,074.89	-1,327.98	1,316.22	1,228.59	87.63	15.020				
8,500.00	7,250.00	8,910.02	7,258.00	45.87	54.15	90.35	2,074.05	-1,427.97	1,316.20	1,224.30	91.91	14.321				
8,600.00	7,250.00	9,010.02	7,258.00	48.08	55.79	90.35	2,073.21	-1,527.97	1,316.18	1,219.89	96.30	13.668				
8,700.00	7,250.00	9,110.02	7,258.00	50.34	57.55	90.35	2,072.37	-1,627.97	1,316.17	1,215.38	100.79	13.058				
8,800.00	7,250.00	9,210.02	7,258.00	52.64	59.40	90.35	2,071.53	-1,727.96	1,316.15	1,210.77	105.37	12.490				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	+N/-S (usft)	+E/-W (usft)		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
8,900.00	7,250.00	9,310.02	7,258.00	54.98	61.33	90.35	2,070.70	-1,827.96	1,316.13	1,206.10	110.04	11.961		
9,000.00	7,250.00	9,410.02	7,258.00	57.35	63.34	90.35	2,069.86	-1,927.96	1,316.11	1,201.35	114.77	11.468		
9,100.00	7,250.00	9,510.02	7,258.00	59.76	65.42	90.35	2,069.02	-2,027.95	1,316.09	1,196.54	119.56	11.008		
9,200.00	7,250.00	9,610.02	7,258.00	62.19	67.55	90.35	2,068.18	-2,127.95	1,316.08	1,191.68	124.40	10.579		
9,300.00	7,250.00	9,710.02	7,258.00	64.65	69.73	90.35	2,067.34	-2,227.94	1,316.06	1,186.77	129.29	10.179		
9,400.00	7,250.00	9,810.02	7,258.00	67.12	71.96	90.35	2,066.51	-2,327.94	1,316.04	1,181.81	134.23	9.804		
9,500.00	7,249.99	9,910.02	7,258.00	69.61	74.23	90.35	2,065.67	-2,427.94	1,316.02	1,176.82	139.20	9.454		
9,600.00	7,249.99	10,010.02	7,258.00	72.12	76.53	90.35	2,064.83	-2,527.93	1,316.01	1,171.80	144.21	9.126		
9,700.00	7,249.99	10,110.02	7,258.00	74.65	78.86	90.35	2,063.99	-2,627.93	1,315.99	1,166.74	149.25	8.818		
9,800.00	7,249.99	10,210.02	7,258.00	77.19	81.22	90.35	2,063.15	-2,727.93	1,315.97	1,161.66	154.31	8.528		
9,900.00	7,249.99	10,310.02	7,258.00	79.74	83.61	90.35	2,062.32	-2,827.92	1,315.95	1,156.55	159.40	8.256		
10,000.00	7,249.99	10,410.02	7,258.00	82.30	86.02	90.35	2,061.48	-2,927.92	1,315.93	1,151.42	164.51	7.999		
10,100.00	7,249.99	10,510.02	7,258.00	84.87	88.45	90.35	2,060.64	-3,027.92	1,315.92	1,146.27	169.64	7.757		
10,200.00	7,249.99	10,610.02	7,258.00	87.45	90.90	90.35	2,059.80	-3,127.91	1,315.90	1,141.10	174.80	7.528		
10,300.00	7,249.99	10,710.02	7,258.00	90.04	93.36	90.35	2,058.96	-3,227.91	1,315.88	1,135.92	179.97	7.312		
10,400.00	7,249.99	10,810.02	7,258.00	92.64	95.84	90.35	2,058.13	-3,327.91	1,315.86	1,130.71	185.15	7.107		
10,500.00	7,249.99	10,910.02	7,258.00	95.24	98.34	90.35	2,057.29	-3,427.90	1,315.85	1,125.50	190.35	6.913		
10,600.00	7,249.99	11,010.02	7,258.00	97.85	100.85	90.35	2,056.45	-3,527.90	1,315.83	1,120.27	195.56	6.728		
10,700.00	7,249.99	11,110.02	7,258.00	100.47	103.37	90.35	2,055.61	-3,627.90	1,315.81	1,115.02	200.79	6.553		
10,800.00	7,249.99	11,210.02	7,258.00	103.09	105.90	90.35	2,054.77	-3,727.89	1,315.79	1,109.77	206.02	6.387		
10,900.00	7,249.99	11,310.02	7,258.00	105.71	108.44	90.35	2,053.94	-3,827.89	1,315.77	1,104.51	211.27	6.228		
11,000.00	7,249.99	11,410.02	7,258.00	108.35	110.99	90.35	2,053.10	-3,927.89	1,315.76	1,099.23	216.52	6.077		
11,100.00	7,249.99	11,510.02	7,258.00	110.98	113.54	90.35	2,052.26	-4,027.88	1,315.74	1,093.95	221.79	5.932		
11,200.00	7,249.99	11,610.02	7,258.00	113.62	116.11	90.35	2,051.42	-4,127.88	1,315.72	1,088.66	227.06	5.795		
11,300.00	7,249.99	11,710.02	7,258.00	116.26	118.68	90.35	2,050.58	-4,227.87	1,315.70	1,083.36	232.34	5.663		
11,400.00	7,249.99	11,810.02	7,258.00	118.91	121.26	90.35	2,049.75	-4,327.87	1,315.68	1,078.05	237.63	5.537		
11,500.00	7,249.99	11,910.02	7,258.00	121.56	123.85	90.35	2,048.91	-4,427.87	1,315.67	1,072.74	242.93	5.416		
11,600.00	7,249.99	12,010.02	7,258.00	124.21	126.44	90.35	2,048.07	-4,527.86	1,315.65	1,067.42	248.23	5.300		
11,700.00	7,249.99	12,110.02	7,258.00	126.87	129.04	90.35	2,047.23	-4,627.86	1,315.63	1,062.09	253.54	5.189		
11,800.00	7,249.99	12,210.02	7,258.00	129.53	131.65	90.35	2,046.39	-4,727.86	1,315.61	1,056.76	258.85	5.082		
11,900.00	7,249.99	12,310.02	7,258.00	132.19	134.26	90.35	2,045.56	-4,827.85	1,315.60	1,051.42	264.17	4.980		
12,000.00	7,249.99	12,410.02	7,258.00	134.86	136.87	90.35	2,044.72	-4,927.85	1,315.58	1,046.08	269.50	4.882		
12,100.00	7,249.99	12,510.02	7,258.00	137.52	139.49	90.35	2,043.88	-5,027.85	1,315.56	1,040.74	274.82	4.787		
12,200.00	7,249.99	12,610.02	7,258.00	140.19	142.11	90.35	2,043.04	-5,127.84	1,315.54	1,035.39	280.16	4.696		
12,300.00	7,249.99	12,710.02	7,258.00	142.86	144.73	90.35	2,042.20	-5,227.84	1,315.52	1,030.03	285.49	4.608		
12,400.00	7,249.99	12,810.02	7,258.00	145.53	147.36	90.35	2,041.37	-5,327.84	1,315.51	1,024.67	290.83	4.523		
12,500.00	7,249.99	12,910.02	7,258.00	148.21	150.00	90.35	2,040.53	-5,427.83	1,315.49	1,019.31	296.18	4.442		
12,600.00	7,249.99	13,010.02	7,258.00	150.88	152.63	90.35	2,039.69	-5,527.83	1,315.47	1,013.94	301.53	4.363		
12,700.00	7,249.99	13,110.02	7,258.00	153.56	155.27	90.35	2,038.85	-5,627.83	1,315.45	1,008.57	306.88	4.287		
12,800.00	7,249.99	13,210.02	7,258.00	156.24	157.91	90.35	2,038.01	-5,727.82	1,315.43	1,003.20	312.23	4.213		
12,900.00	7,249.98	13,310.02	7,258.00	158.92	160.56	90.35	2,037.17	-5,827.82	1,315.42	997.83	317.59	4.142		
13,000.00	7,249.98	13,410.02	7,258.00	161.60	163.20	90.35	2,036.34	-5,927.81	1,315.40	992.45	322.95	4.073		
13,100.00	7,249.98	13,510.02	7,258.00	164.28	165.85	90.35	2,035.50	-6,027.81	1,315.38	987.07	328.32	4.006		
13,200.00	7,249.98	13,610.02	7,258.00	166.97	168.51	90.35	2,034.66	-6,127.81	1,315.36	981.68	333.68	3.942		
13,300.00	7,249.98	13,710.02	7,258.00	169.65	171.16	90.35	2,033.82	-6,227.80	1,315.35	976.30	339.05	3.879		
13,400.00	7,249.98	13,810.02	7,258.00	172.34	173.82	90.35	2,032.98	-6,327.80	1,315.33	970.91	344.42	3.819		
13,500.00	7,249.98	13,910.02	7,258.00	175.03	176.47	90.35	2,032.15	-6,427.80	1,315.31	965.52	349.79	3.760		
13,600.00	7,249.98	14,010.02	7,258.00	177.72	179.13	90.35	2,031.31	-6,527.79	1,315.29	960.12	355.17	3.703		
13,700.00	7,249.98	14,110.02	7,258.00	180.41	181.80	90.35	2,030.47	-6,627.79	1,315.27	954.73	360.55	3.648		
13,800.00	7,249.98	14,210.02	7,258.00	183.10	184.46	90.35	2,029.63	-6,727.79	1,315.26	949.33	365.93	3.594		
13,900.00	7,249.98	14,310.02	7,258.00	185.79	187.13	90.35	2,028.79	-6,827.78	1,315.24	943.93	371.31	3.542		
14,000.00	7,249.98	14,410.02	7,258.00	188.48	189.79	90.35	2,027.96	-6,927.78	1,315.22	938.53	376.69	3.492		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Highside		Rule Assigned:				Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference	Offset	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	7,249.98	14,510.02	7,258.00	191.18	192.46	90.35		90.35	2,027.12	-7,027.78	1,315.20	933.13	382.07	3.442	
14,200.00	7,249.98	14,610.02	7,258.00	193.87	195.13	90.35		90.35	2,026.28	-7,127.77	1,315.19	927.72	387.46	3.394	
14,300.00	7,249.98	14,710.02	7,258.00	196.56	197.81	90.35		90.35	2,025.44	-7,227.77	1,315.17	922.32	392.85	3.348	
14,400.00	7,249.98	14,810.02	7,258.00	199.26	200.48	90.35		90.35	2,024.60	-7,327.77	1,315.15	916.91	398.24	3.302	
14,500.00	7,249.98	14,910.02	7,258.00	201.96	203.15	90.35		90.35	2,023.77	-7,427.76	1,315.13	911.50	403.63	3.258	
14,600.00	7,249.98	15,010.02	7,258.00	204.65	205.83	90.35		90.35	2,022.93	-7,527.76	1,315.11	906.09	409.02	3.215	
14,700.00	7,249.98	15,110.02	7,258.00	207.35	208.51	90.35		90.35	2,022.09	-7,627.76	1,315.10	900.68	414.41	3.173	
14,800.00	7,249.98	15,210.02	7,258.00	210.05	211.19	90.35		90.35	2,021.25	-7,727.75	1,315.08	895.27	419.81	3.133	
14,900.00	7,249.98	15,310.02	7,258.00	212.75	213.86	90.35		90.35	2,020.41	-7,827.75	1,315.06	889.86	425.20	3.093	
15,000.00	7,249.98	15,410.02	7,258.00	215.45	216.54	90.35		90.35	2,019.58	-7,927.74	1,315.04	884.44	430.60	3.054	
15,100.00	7,249.98	15,510.02	7,258.00	218.15	219.23	90.35		90.35	2,018.74	-8,027.74	1,315.02	879.02	436.00	3.016	
15,200.00	7,249.98	15,610.02	7,258.00	220.85	221.91	90.35		90.35	2,017.90	-8,127.74	1,315.01	873.61	441.40	2.979	
15,300.00	7,249.98	15,710.02	7,258.00	223.55	224.59	90.35		90.35	2,017.06	-8,227.73	1,314.99	868.19	446.80	2.943	
15,400.00	7,249.98	15,809.99	7,258.00	226.25	227.28	90.35		90.35	2,016.22	-8,327.70	1,314.97	862.77	452.20	2.908	
15,428.01	7,249.98	15,837.79	7,258.00	227.01	228.02	90.35		90.35	2,015.99	-8,355.49	1,314.97	861.25	453.71	2.898	
15,478.21	7,250.00	15,837.79	7,258.00	228.36	228.02	90.35		90.35	2,015.99	-8,355.49	1,315.72	859.85	455.87	2.886	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Highside		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-160.69	-87.44	-30.63	92.65						
100.00	100.00	100.00	100.00	0.14	0.14	-160.69	-87.44	-30.63	92.65	92.36	0.29	323.056			
200.00	200.00	200.00	200.00	0.50	0.50	-160.69	-87.44	-30.63	92.65	91.64	1.00	92.302			
300.00	300.00	300.00	300.00	0.86	0.86	-160.69	-87.44	-30.63	92.65	90.92	1.72	53.843			
400.00	399.98	399.98	399.98	1.22	1.22	-162.82	-87.44	-30.63	94.31	91.87	2.44	38.675			
500.00	499.84	499.84	499.84	1.58	1.58	-163.68	-87.44	-30.63	99.32	96.16	3.16	31.428			
600.00	599.45	599.45	599.45	1.95	1.93	-164.94	-87.44	-30.63	107.72	103.83	3.88	27.738			
700.00	698.70	698.70	698.70	2.33	2.29	-166.40	-87.44	-30.63	119.53	114.92	4.61	25.943			
715.65	714.19	714.19	714.19	2.39	2.35	-166.64	-87.44	-30.63	121.69	116.97	4.73	25.754			
800.00	797.66	797.66	797.66	2.73	2.64	-167.85	-87.44	-30.63	133.59	128.26	5.33	25.070			
900.00	896.61	896.61	896.61	3.13	3.00	-169.03	-87.44	-30.63	147.76	141.72	6.05	24.442			
1,000.00	995.56	995.56	995.56	3.54	3.35	-170.00	-87.44	-30.63	161.99	155.22	6.76	23.950			
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-170.82	-87.44	-30.63	176.25	168.76	7.48	23.554			
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-171.51	-87.44	-30.63	190.54	182.33	8.20	23.228			
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-172.11	-87.44	-30.63	204.85	195.93	8.92	22.957			
1,400.00	1,391.35	1,391.35	1,391.35	5.22	4.77	-172.63	-87.44	-30.63	219.18	209.54	9.64	22.726			
1,500.00	1,490.30	1,490.30	1,490.30	5.64	5.13	-173.08	-87.44	-30.63	233.53	223.16	10.37	22.529			
1,600.00	1,589.25	1,589.25	1,589.25	6.06	5.48	-173.48	-87.44	-30.63	247.89	236.80	11.09	22.358			
1,700.00	1,688.20	1,688.20	1,688.20	6.48	5.84	-173.84	-87.44	-30.63	262.26	250.45	11.81	22.208			
1,800.00	1,787.15	1,787.15	1,787.15	6.91	6.19	-174.16	-87.44	-30.63	276.64	264.11	12.53	22.075			
1,900.00	1,886.10	1,886.10	1,886.10	7.33	6.55	-174.45	-87.44	-30.63	291.03	277.78	13.25	21.958			
2,000.00	1,985.05	1,985.05	1,985.05	7.75	6.90	-174.71	-87.44	-30.63	305.43	291.45	13.98	21.852			
2,100.00	2,084.00	2,084.00	2,084.00	8.18	7.26	-174.95	-87.44	-30.63	319.83	305.13	14.70	21.758			
2,200.00	2,182.95	2,182.95	2,182.95	8.60	7.61	-175.17	-87.44	-30.63	334.23	318.81	15.42	21.672			
2,300.00	2,281.90	2,281.90	2,281.90	9.03	7.96	-175.37	-87.44	-30.63	348.64	332.50	16.15	21.594			
2,400.00	2,380.85	2,392.48	2,392.47	9.45	8.36	-175.55	-85.94	-30.61	361.76	344.83	16.93	21.369			
2,500.00	2,479.80	2,506.58	2,506.41	9.88	8.77	-175.66	-79.99	-30.54	371.02	353.31	17.71	20.947			
2,600.00	2,578.74	2,621.35	2,620.68	10.31	9.18	-175.70	-69.43	-30.41	376.31	357.84	18.48	20.369			
2,700.00	2,677.69	2,736.42	2,734.74	10.73	9.59	-175.67	-54.26	-30.23	377.61	358.40	19.21	19.652			
2,800.00	2,776.64	2,851.43	2,848.03	11.16	10.02	-175.58	-34.53	-30.00	374.92	354.99	19.93	18.813			
2,900.00	2,875.59	2,966.00	2,960.01	11.58	10.45	-175.41	-10.37	-29.71	368.24	347.63	20.61	17.864			
3,000.00	2,974.54	3,079.77	3,070.18	12.01	10.90	-175.16	18.03	-29.37	357.61	336.34	21.27	16.814			
3,100.00	3,073.49	3,192.40	3,178.03	12.44	11.37	-174.82	50.43	-28.98	343.10	321.20	21.89	15.670			
3,200.00	3,172.44	3,303.56	3,283.16	12.86	11.87	-174.36	86.54	-28.55	324.76	302.27	22.49	14.440			
3,300.00	3,271.39	3,412.95	3,385.17	13.29	12.39	-173.74	126.03	-28.08	302.70	279.65	23.06	13.128			
3,400.00	3,370.34	3,511.24	3,475.97	13.72	12.89	-173.02	163.64	-27.63	278.44	254.66	23.77	11.712			
3,500.00	3,469.29	3,608.18	3,565.53	14.14	13.40	-172.19	200.76	-27.18	254.19	229.67	24.52	10.367			
3,600.00	3,568.24	3,705.12	3,655.08	14.57	13.92	-171.17	237.88	-26.74	230.01	204.73	25.28	9.100			
3,700.00	3,667.19	3,802.07	3,744.63	15.00	14.47	-169.91	275.00	-26.29	205.91	179.86	26.05	7.905			
3,800.00	3,766.14	3,899.01	3,834.18	15.42	15.02	-168.33	312.12	-25.85	181.93	155.09	26.84	6.778			
3,900.00	3,865.09	3,995.95	3,923.74	15.85	15.59	-166.27	349.24	-25.41	158.12	130.45	27.67	5.715			
4,000.00	3,964.03	4,092.89	4,013.29	16.28	16.17	-163.48	386.36	-24.96	134.57	106.03	28.54	4.715			
4,100.00	4,062.98	4,189.84	4,102.84	16.70	16.76	-159.54	423.48	-24.52	111.46	81.94	29.52	3.776			
4,200.00	4,161.93	4,286.78	4,192.40	17.13	17.36	-153.60	460.60	-24.08	89.10	58.41	30.69	2.903			
4,300.00	4,260.88	4,383.72	4,281.95	17.56	17.96	-143.94	497.72	-23.63	68.26	35.98	32.29	2.114			
4,400.00	4,359.83	4,480.66	4,371.50	17.98	18.57	-127.08	534.84	-23.19	50.85	16.13	34.71	1.465	Level 3		
4,500.00	4,458.78	4,577.60	4,461.06	18.41	19.19	-99.12	571.96	-22.74	41.41	3.92	37.49	1.105	Level 3		
4,522.26	4,480.81	4,599.18	4,480.99	18.50	19.33	-91.77	580.22	-22.64	41.05	3.22	37.83	1.085	Level 3, CC, ES, SF		
4,600.00	4,557.73	4,674.55	4,550.61	18.84	19.82	-67.52	609.08	-22.30	45.27	7.55	37.72	1.200	Level 3		
4,700.00	4,656.68	4,771.49	4,640.16	19.26	20.44	-45.92	646.20	-21.86	59.90	23.29	36.61	1.636			
4,800.00	4,755.63	4,868.43	4,729.72	19.69	21.08	-33.62	683.32	-21.41	79.56	43.40	36.16	2.200			
4,900.00	4,854.58	4,965.37	4,819.27	20.12	21.72	-26.32	720.44	-20.97	101.38	65.10	36.27	2.795			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program:		0-OWSG (Rev2) MWD					Rule Assigned:						Offset Well Error:	0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,000.00	4,953.53	5,062.32	4,908.82	20.55	22.36	-21.63	757.56	-20.52	124.21	87.54	36.67	3.387			
5,100.00	5,052.48	5,159.26	4,998.37	20.97	23.01	-18.40	794.68	-20.08	147.60	110.38	37.22	3.966			
5,200.00	5,151.43	5,256.20	5,087.93	21.40	23.66	-16.05	831.80	-19.64	171.30	133.46	37.85	4.526			
5,300.00	5,250.38	5,353.14	5,177.48	21.83	24.31	-14.28	868.92	-19.19	195.22	156.70	38.52	5.068			
5,400.00	5,349.32	5,450.09	5,267.03	22.25	24.96	-12.89	906.04	-18.75	219.27	180.05	39.22	5.590			
5,500.00	5,448.27	5,547.03	5,356.59	22.68	25.62	-11.78	943.16	-18.30	243.42	203.47	39.94	6.094			
5,600.00	5,547.22	5,643.97	5,446.14	23.11	26.28	-10.86	980.28	-17.86	267.64	226.96	40.68	6.579			
5,625.90	5,572.85	5,669.07	5,469.33	23.22	26.45	-10.65	989.89	-17.75	273.92	233.04	40.87	6.702			
5,700.00	5,646.30	5,740.67	5,535.47	23.53	26.94	-10.14	1,017.30	-17.42	292.82	251.40	41.42	7.069			
5,800.00	5,745.78	5,836.45	5,623.95	23.92	27.60	-9.47	1,053.98	-16.98	321.26	279.10	42.16	7.621			
5,900.00	5,845.55	5,931.18	5,711.46	24.28	28.25	-8.84	1,090.25	-16.55	353.03	310.15	42.88	8.233			
6,000.00	5,945.50	6,024.73	5,797.87	24.61	28.90	-8.25	1,126.07	-16.12	388.10	344.51	43.59	8.904			
6,041.55	5,987.04	6,063.22	5,833.43	24.74	29.16	-6.21	1,140.81	-15.94	403.63	359.75	43.88	9.198			
6,100.00	6,045.49	6,117.22	5,883.31	24.91	29.54	-5.85	1,161.48	-15.69	425.88	381.59	44.29	9.615			
6,200.00	6,145.49	6,209.60	5,968.65	25.22	30.18	-5.31	1,196.86	-15.27	463.98	418.98	45.00	10.311			
6,300.00	6,245.49	6,301.97	6,053.99	25.52	30.82	-4.85	1,232.23	-14.85	502.11	456.40	45.71	10.985			
6,400.00	6,345.49	6,394.35	6,139.32	25.83	31.46	-4.46	1,267.60	-14.42	540.26	493.84	46.42	11.638			
6,500.00	6,445.49	6,486.73	6,224.66	26.14	32.11	-4.12	1,302.97	-14.00	578.43	531.29	47.14	12.271			
6,600.00	6,545.49	6,579.11	6,310.00	26.45	32.75	-3.82	1,338.34	-13.58	616.62	568.76	47.86	12.885			
6,700.00	6,645.49	6,671.49	6,395.33	26.76	33.40	-3.56	1,373.72	-13.16	654.81	606.24	48.58	13.479			
6,731.55	6,677.04	6,700.63	6,422.25	26.86	33.60	-3.48	1,384.87	-13.02	666.87	618.06	48.81	13.663			
6,750.00	6,695.49	6,717.67	6,438.00	26.92	33.72	86.30	1,391.40	-12.94	673.90	624.96	48.94	13.771			
6,800.00	6,745.33	6,763.68	6,480.50	27.06	34.04	84.71	1,409.02	-12.73	692.78	643.50	49.28	14.058			
6,850.00	6,794.65	6,809.17	6,522.52	27.21	34.36	83.50	1,426.44	-12.52	711.37	661.75	49.62	14.337			
6,900.00	6,843.08	6,853.24	6,563.21	27.36	34.67	82.47	1,443.29	-14.02	729.70	679.75	49.94	14.610			
6,950.00	6,890.24	6,898.19	6,604.48	27.50	34.98	81.50	1,460.35	-19.02	747.71	697.40	50.31	14.863			
7,000.00	6,935.78	6,944.18	6,646.20	27.63	35.30	80.62	1,477.57	-27.74	765.30	714.59	50.71	15.092			
7,050.00	6,979.35	6,991.37	6,688.22	27.76	35.62	79.81	1,494.87	-40.43	782.34	731.18	51.16	15.292			
7,100.00	7,020.62	7,039.93	6,730.31	27.89	35.93	79.10	1,512.17	-57.34	798.71	747.05	51.66	15.460			
7,150.00	7,059.27	7,090.03	6,772.20	28.01	36.25	78.49	1,529.35	-78.76	814.30	762.07	52.22	15.593			
7,200.00	7,095.02	7,141.85	6,813.55	28.13	36.56	77.97	1,546.25	-104.98	828.96	776.13	52.84	15.690			
7,250.00	7,127.58	7,195.52	6,853.90	28.27	36.88	77.56	1,562.71	-136.28	842.59	789.08	53.51	15.747			
7,300.00	7,156.72	7,251.18	6,892.71	28.41	37.20	77.25	1,578.48	-172.89	855.03	800.80	54.24	15.765			
7,350.00	7,182.21	7,308.92	6,929.32	28.58	37.51	77.04	1,593.29	-214.99	866.18	811.15	55.03	15.739			
7,400.00	7,203.85	7,368.80	6,962.97	28.79	37.83	76.93	1,606.82	-262.60	875.89	820.00	55.89	15.671			
7,450.00	7,221.48	7,430.77	6,992.77	29.05	38.15	76.90	1,618.71	-315.58	884.04	827.22	56.82	15.559			
7,500.00	7,234.96	7,494.74	7,017.82	29.38	38.48	76.96	1,628.59	-373.57	890.51	832.71	57.81	15.405			
7,550.00	7,244.21	7,560.49	7,037.19	29.79	38.83	77.09	1,636.08	-435.92	895.20	836.33	58.87	15.207			
7,600.00	7,249.13	7,627.74	7,050.06	30.26	39.19	77.28	1,640.84	-501.71	898.02	838.03	59.99	14.969			
7,631.55	7,250.00	7,670.76	7,054.51	30.59	39.43	77.44	1,642.32	-544.46	898.81	838.08	60.72	14.802			
7,700.00	7,250.00	7,750.90	7,056.00	31.38	39.90	77.54	1,642.24	-624.57	898.98	836.57	62.41	14.405			
7,800.00	7,250.00	7,850.90	7,056.00	32.73	40.61	77.54	1,641.38	-724.56	898.93	833.79	65.14	13.799			
7,900.00	7,250.00	7,950.90	7,056.00	34.25	41.48	77.54	1,640.51	-824.56	898.89	830.71	68.18	13.184			
8,000.00	7,250.00	8,050.90	7,056.00	35.92	42.53	77.54	1,639.65	-924.56	898.85	827.36	71.49	12.574			
8,100.00	7,250.00	8,150.90	7,056.00	37.73	43.74	77.54	1,638.78	-1,024.55	898.80	823.78	75.03	11.980			
8,200.00	7,250.00	8,250.90	7,056.00	39.64	45.12	77.53	1,637.91	-1,124.55	898.76	819.99	78.77	11.410			
8,300.00	7,250.00	8,350.90	7,056.00	41.64	46.65	77.53	1,637.05	-1,224.55	898.71	816.03	82.68	10.870			
8,400.00	7,250.00	8,450.90	7,056.00	43.72	48.31	77.53	1,636.18	-1,324.54	898.67	811.92	86.75	10.360			
8,500.00	7,250.00	8,550.90	7,056.00	45.87	50.09	77.53	1,635.32	-1,424.54	898.62	807.68	90.94	9.881			
8,600.00	7,250.00	8,650.90	7,056.00	48.08	51.97	77.53	1,634.45	-1,524.53	898.58	803.33	95.25	9.434			
8,700.00	7,250.00	8,750.90	7,056.00	50.34	53.94	77.53	1,633.59	-1,624.53	898.53	798.87	99.66	9.016			
8,800.00	7,250.00	8,850.90	7,056.00	52.64	55.99	77.53	1,632.72	-1,724.53	898.49	794.34	104.15	8.626			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,900.00	7,250.00	8,950.90	7,056.00	54.98	58.10	77.53	1,631.86	-1,824.52	898.45	789.72	108.72	8.264				
9,000.00	7,250.00	9,050.90	7,056.00	57.35	60.28	77.53	1,630.99	-1,924.52	898.40	785.04	113.36	7.925				
9,100.00	7,250.00	9,150.90	7,056.00	59.76	62.50	77.53	1,630.12	-2,024.52	898.36	780.30	118.05	7.610				
9,200.00	7,250.00	9,250.90	7,056.00	62.19	64.76	77.53	1,629.26	-2,124.51	898.31	775.51	122.80	7.315				
9,300.00	7,250.00	9,350.90	7,056.00	64.65	67.07	77.53	1,628.39	-2,224.51	898.27	770.68	127.59	7.040				
9,400.00	7,250.00	9,450.90	7,056.00	67.12	69.41	77.53	1,627.53	-2,324.50	898.22	765.80	132.42	6.783				
9,500.00	7,249.99	9,550.90	7,056.00	69.61	71.77	77.53	1,626.66	-2,424.50	898.18	760.88	137.29	6.542				
9,600.00	7,249.99	9,650.90	7,056.00	72.12	74.17	77.53	1,625.80	-2,524.50	898.13	755.94	142.20	6.316				
9,700.00	7,249.99	9,750.90	7,056.00	74.65	76.59	77.53	1,624.93	-2,624.49	898.09	750.96	147.13	6.104				
9,800.00	7,249.99	9,850.90	7,056.00	77.19	79.03	77.52	1,624.06	-2,724.49	898.05	745.96	152.09	5.905				
9,900.00	7,249.99	9,950.90	7,056.00	79.74	81.49	77.52	1,623.20	-2,824.49	898.00	740.93	157.07	5.717				
10,000.00	7,249.99	10,050.90	7,056.00	82.30	83.97	77.52	1,622.33	-2,924.48	897.96	735.88	162.07	5.540				
10,100.00	7,249.99	10,150.90	7,056.00	84.87	86.46	77.52	1,621.47	-3,024.48	897.91	730.81	167.10	5.374				
10,200.00	7,249.99	10,250.90	7,056.00	87.45	88.97	77.52	1,620.60	-3,124.47	897.87	725.73	172.14	5.216				
10,300.00	7,249.99	10,350.90	7,056.00	90.04	91.49	77.52	1,619.74	-3,224.47	897.82	720.62	177.20	5.067				
10,400.00	7,249.99	10,450.90	7,056.00	92.64	94.02	77.52	1,618.87	-3,324.47	897.78	715.50	182.28	4.925				
10,500.00	7,249.99	10,550.90	7,056.00	95.24	96.56	77.52	1,618.00	-3,424.46	897.73	710.37	187.37	4.791				
10,600.00	7,249.99	10,650.90	7,056.00	97.85	99.12	77.52	1,617.14	-3,524.46	897.69	705.22	192.47	4.664				
10,700.00	7,249.99	10,750.90	7,056.00	100.47	101.68	77.52	1,616.27	-3,624.46	897.65	700.07	197.58	4.543				
10,800.00	7,249.99	10,850.90	7,056.00	103.09	104.25	77.52	1,615.41	-3,724.45	897.60	694.90	202.71	4.428				
10,900.00	7,249.99	10,950.90	7,056.00	105.71	106.83	77.52	1,614.54	-3,824.45	897.56	689.72	207.84	4.318				
11,000.00	7,249.99	11,050.90	7,056.00	108.35	109.41	77.52	1,613.68	-3,924.44	897.51	684.53	212.98	4.214				
11,100.00	7,249.99	11,150.90	7,056.00	110.98	112.00	77.52	1,612.81	-4,024.44	897.47	679.33	218.14	4.114				
11,200.00	7,249.99	11,250.90	7,056.00	113.62	114.60	77.52	1,611.95	-4,124.44	897.42	674.12	223.30	4.019				
11,300.00	7,249.99	11,350.90	7,056.00	116.26	117.21	77.52	1,611.08	-4,224.43	897.38	668.91	228.47	3.928				
11,400.00	7,249.99	11,450.90	7,056.00	118.91	119.82	77.52	1,610.21	-4,324.43	897.33	663.69	233.64	3.841				
11,500.00	7,249.99	11,550.90	7,056.00	121.56	122.43	77.51	1,609.35	-4,424.43	897.29	658.46	238.83	3.757				
11,600.00	7,249.99	11,650.90	7,056.00	124.21	125.05	77.51	1,608.48	-4,524.42	897.25	653.23	244.02	3.677				
11,700.00	7,249.99	11,750.90	7,056.00	126.87	127.68	77.51	1,607.62	-4,624.42	897.20	647.99	249.21	3.600				
11,800.00	7,249.99	11,850.90	7,056.00	129.53	130.30	77.51	1,606.75	-4,724.41	897.16	642.75	254.41	3.526				
11,900.00	7,249.99	11,950.90	7,056.00	132.19	132.94	77.51	1,605.89	-4,824.41	897.11	637.50	259.62	3.456				
12,000.00	7,249.99	12,050.90	7,056.00	134.86	135.57	77.51	1,605.02	-4,924.41	897.07	632.24	264.83	3.387				
12,100.00	7,249.99	12,150.90	7,056.00	137.52	138.21	77.51	1,604.15	-5,024.40	897.02	626.98	270.04	3.322				
12,200.00	7,249.99	12,250.90	7,056.00	140.19	140.85	77.51	1,603.29	-5,124.40	896.98	621.72	275.26	3.259				
12,300.00	7,249.99	12,350.90	7,056.00	142.86	143.50	77.51	1,602.42	-5,224.40	896.93	616.45	280.48	3.198				
12,400.00	7,249.99	12,450.90	7,056.00	145.53	146.15	77.51	1,601.56	-5,324.39	896.89	611.18	285.71	3.139				
12,500.00	7,249.99	12,550.90	7,056.00	148.21	148.80	77.51	1,600.69	-5,424.39	896.85	605.91	290.94	3.083				
12,600.00	7,249.99	12,650.90	7,056.00	150.88	151.45	77.51	1,599.83	-5,524.38	896.80	600.63	296.17	3.028				
12,700.00	7,249.99	12,750.90	7,056.00	153.56	154.11	77.51	1,598.96	-5,624.38	896.76	595.35	301.41	2.975				
12,800.00	7,249.99	12,850.90	7,056.00	156.24	156.76	77.51	1,598.09	-5,724.38	896.71	590.06	306.65	2.924				
12,900.00	7,249.98	12,950.90	7,056.00	158.92	159.42	77.51	1,597.23	-5,824.37	896.67	584.77	311.89	2.875				
13,000.00	7,249.98	13,050.90	7,056.00	161.60	162.09	77.51	1,596.36	-5,924.37	896.62	579.48	317.14	2.827				
13,100.00	7,249.98	13,150.90	7,056.00	164.28	164.75	77.50	1,595.50	-6,024.37	896.58	574.19	322.39	2.781				
13,200.00	7,249.98	13,250.90	7,056.00	166.97	167.42	77.50	1,594.63	-6,124.36	896.53	568.90	327.64	2.736				
13,300.00	7,249.98	13,350.90	7,056.00	169.65	170.09	77.50	1,593.77	-6,224.36	896.49	563.60	332.89	2.693				
13,400.00	7,249.98	13,450.90	7,056.00	172.34	172.76	77.50	1,592.90	-6,324.35	896.45	558.30	338.15	2.651				
13,500.00	7,249.98	13,550.90	7,056.00	175.03	175.43	77.50	1,592.04	-6,424.35	896.40	552.99	343.41	2.610				
13,600.00	7,249.98	13,650.90	7,056.00	177.72	178.10	77.50	1,591.17	-6,524.35	896.36	547.69	348.67	2.571				
13,700.00	7,249.98	13,750.90	7,056.00	180.41	180.77	77.50	1,590.30	-6,624.34	896.31	542.38	353.93	2.532				
13,800.00	7,249.98	13,850.90	7,056.00	183.10	183.45	77.50	1,589.44	-6,724.34	896.27	537.08	359.19	2.495				
13,900.00	7,249.98	13,950.90	7,056.00	185.79	186.13	77.50	1,588.57	-6,824.34	896.22	531.77	364.46	2.459				
14,000.00	7,249.98	14,050.90	7,056.00	188.48	188.81	77.50	1,587.71	-6,924.33	896.18	526.45	369.73	2.424				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,249.98	14,150.90	7,056.00	191.18	191.49	77.50	1,586.84	-7,024.33	896.13	521.14	374.99	2.390			
14,200.00	7,249.98	14,250.90	7,056.00	193.87	194.17	77.50	1,585.98	-7,124.32	896.09	515.82	380.27	2.356			
14,300.00	7,249.98	14,350.90	7,056.00	196.56	196.85	77.50	1,585.11	-7,224.32	896.05	510.51	385.54	2.324			
14,400.00	7,249.98	14,450.90	7,056.00	199.26	199.53	77.50	1,584.24	-7,324.32	896.00	505.19	390.81	2.293			
14,500.00	7,249.98	14,550.90	7,056.00	201.96	202.22	77.50	1,583.38	-7,424.31	895.96	499.87	396.09	2.262			
14,600.00	7,249.98	14,650.90	7,056.00	204.65	204.90	77.50	1,582.51	-7,524.31	895.91	494.55	401.36	2.232			
14,700.00	7,249.98	14,750.90	7,056.00	207.35	207.59	77.49	1,581.65	-7,624.31	895.87	489.23	406.64	2.203			
14,800.00	7,249.98	14,850.90	7,056.00	210.05	210.27	77.49	1,580.78	-7,724.30	895.82	483.90	411.92	2.175			
14,900.00	7,249.98	14,950.90	7,056.00	212.75	212.96	77.49	1,579.92	-7,824.30	895.78	478.58	417.20	2.147			
15,000.00	7,249.98	15,050.90	7,056.00	215.45	215.65	77.49	1,579.05	-7,924.29	895.73	473.25	422.48	2.120			
15,100.00	7,249.98	15,150.90	7,056.00	218.15	218.34	77.49	1,578.18	-8,024.29	895.69	467.93	427.76	2.094			
15,200.00	7,249.98	15,250.90	7,056.00	220.85	221.03	77.49	1,577.32	-8,124.29	895.65	462.60	433.05	2.068			
15,300.00	7,249.98	15,350.90	7,056.00	223.55	223.72	77.49	1,576.45	-8,224.28	895.60	457.27	438.33	2.043			
15,400.00	7,249.98	15,450.90	7,056.00	226.25	226.41	77.49	1,575.59	-8,324.28	895.56	451.94	443.62	2.019			
15,445.72	7,249.98	15,496.19	7,056.00	227.49	227.63	77.49	1,575.20	-8,369.57	895.54	449.50	446.03	2.008			
15,478.21	7,250.00	15,496.19	7,056.00	228.36	227.63	77.49	1,575.20	-8,369.57	895.93	448.44	447.50	2.002			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	-163.29	-102.00	-30.63	106.50	106.50	0.29	371.378		
100.00	100.00	100.00	100.00	0.14	0.14	-163.29	-102.00	-30.63	106.50	106.22	1.00	106.108		
200.00	200.00	200.00	200.00	0.50	0.50	-163.29	-102.00	-30.63	106.50	105.50	1.00	106.108		
300.00	300.00	300.00	300.00	0.86	0.86	-163.29	-102.00	-30.63	106.50	104.78	1.72	61.896		
400.00	399.98	399.98	399.98	1.22	1.22	-165.33	-102.00	-30.63	108.19	105.75	2.44	44.365		
500.00	499.84	499.84	499.84	1.58	1.58	-165.98	-102.00	-30.63	113.26	110.10	3.16	35.837		
600.00	599.45	599.45	599.45	1.95	1.93	-166.93	-102.00	-30.63	121.74	117.85	3.88	31.347		
700.00	698.70	698.70	698.70	2.33	2.29	-168.06	-102.00	-30.63	133.64	129.03	4.61	29.006		
715.65	714.19	714.19	714.19	2.39	2.35	-168.25	-102.00	-30.63	135.81	131.09	4.72	28.743		
800.00	797.66	797.66	797.66	2.73	2.64	-169.21	-102.00	-30.63	147.78	142.45	5.33	27.735		
900.00	896.61	896.61	896.61	3.13	3.00	-170.17	-102.00	-30.63	162.01	155.96	6.04	26.802		
1,000.00	995.56	995.56	995.56	3.54	3.35	-170.97	-102.00	-30.63	176.27	169.51	6.76	26.066		
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-171.65	-102.00	-30.63	190.57	183.09	7.48	25.471		
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-172.24	-102.00	-30.63	204.89	196.69	8.20	24.981		
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-172.75	-102.00	-30.63	219.23	210.30	8.92	24.570		
1,400.00	1,391.35	1,391.35	1,391.35	5.22	4.77	-173.20	-102.00	-30.63	233.58	223.93	9.64	24.221		
1,500.00	1,490.30	1,490.30	1,490.30	5.64	5.13	-173.59	-102.00	-30.63	247.94	237.58	10.36	23.921		
1,600.00	1,589.25	1,589.25	1,589.25	6.06	5.48	-173.95	-102.00	-30.63	262.32	251.23	11.09	23.660		
1,700.00	1,688.20	1,688.20	1,688.20	6.48	5.84	-174.26	-102.00	-30.63	276.70	264.89	11.81	23.432		
1,800.00	1,787.15	1,787.15	1,787.15	6.91	6.19	-174.55	-102.00	-30.63	291.09	278.56	12.53	23.230		
1,900.00	1,886.10	1,886.10	1,886.10	7.33	6.55	-174.80	-102.00	-30.63	305.49	292.23	13.25	23.050		
2,000.00	1,985.05	1,985.05	1,985.05	7.75	6.90	-175.04	-102.00	-30.63	319.89	305.91	13.98	22.888		
2,100.00	2,084.00	2,084.00	2,084.00	8.18	7.26	-175.25	-102.00	-30.63	334.30	319.60	14.70	22.743		
2,200.00	2,182.95	2,182.95	2,182.95	8.60	7.61	-175.45	-102.00	-30.63	348.71	333.29	15.42	22.612		
2,300.00	2,281.90	2,281.90	2,281.90	9.03	7.96	-175.63	-102.00	-30.63	363.12	346.98	16.14	22.492		
2,400.00	2,380.85	2,380.85	2,380.85	9.45	8.32	-175.80	-102.00	-30.63	377.54	360.67	16.87	22.382		
2,500.00	2,479.80	2,479.80	2,479.80	9.88	8.72	-175.95	-100.52	-30.61	390.68	373.03	17.66	22.127		
2,600.00	2,578.74	2,607.79	2,607.61	10.31	9.13	-176.04	-94.47	-30.55	399.93	381.48	18.44	21.682		
2,700.00	2,677.69	2,723.91	2,723.22	10.73	9.55	-176.07	-83.71	-30.44	405.16	385.95	19.21	21.090		
2,800.00	2,776.64	2,840.33	2,838.60	11.16	9.96	-176.04	-68.23	-30.28	406.35	386.40	19.95	20.365		
2,900.00	2,875.59	2,956.68	2,953.18	11.58	10.39	-175.94	-48.09	-30.06	403.49	382.83	20.67	19.524		
3,000.00	2,974.54	3,072.55	3,066.39	12.01	10.83	-175.78	-23.42	-29.81	396.61	375.26	21.35	18.576		
3,100.00	3,073.49	3,187.59	3,177.71	12.44	11.29	-175.55	5.57	-29.50	385.73	363.73	22.00	17.532		
3,200.00	3,172.44	3,293.63	3,279.35	12.86	11.73	-175.27	35.78	-29.18	371.47	348.78	22.68	16.376		
3,300.00	3,271.39	3,392.53	3,374.02	13.29	12.15	-174.98	64.39	-28.88	356.79	333.37	23.42	15.237		
3,400.00	3,370.34	3,491.43	3,468.69	13.72	12.59	-174.66	93.00	-28.58	342.12	317.97	24.15	14.165		
3,500.00	3,469.29	3,590.33	3,563.36	14.14	13.05	-174.31	121.61	-28.28	327.46	302.57	24.89	13.155		
3,600.00	3,568.24	3,689.23	3,658.03	14.57	13.51	-173.93	150.22	-27.98	312.82	287.18	25.64	12.202		
3,700.00	3,667.19	3,788.13	3,752.70	15.00	13.98	-173.51	178.84	-27.68	298.19	271.81	26.38	11.302		
3,800.00	3,766.14	3,887.03	3,847.37	15.42	14.46	-173.05	207.45	-27.38	283.58	256.44	27.14	10.450		
3,900.00	3,865.09	3,985.93	3,942.04	15.85	14.95	-172.54	236.06	-27.08	268.98	241.09	27.89	9.644		
4,000.00	3,964.03	4,084.83	4,036.71	16.28	15.44	-171.97	264.67	-26.78	254.42	225.76	28.65	8.880		
4,100.00	4,062.98	4,183.73	4,131.38	16.70	15.95	-171.33	293.28	-26.48	239.87	210.46	29.42	8.155		
4,200.00	4,161.93	4,282.63	4,226.05	17.13	16.45	-170.61	321.90	-26.18	225.36	195.18	30.19	7.466		
4,300.00	4,260.88	4,381.53	4,320.72	17.56	16.97	-169.79	350.51	-25.88	210.90	179.93	30.96	6.811		
4,400.00	4,359.83	4,480.43	4,415.39	17.98	17.48	-168.85	379.12	-25.58	196.48	164.72	31.75	6.188		
4,500.00	4,458.78	4,579.33	4,510.06	18.41	18.00	-167.76	407.73	-25.28	182.11	149.57	32.55	5.595		
4,600.00	4,557.73	4,678.23	4,604.73	18.84	18.53	-166.49	436.34	-24.98	167.83	134.47	33.36	5.031		
4,700.00	4,656.68	4,777.13	4,699.40	19.26	19.06	-164.98	464.96	-24.68	153.64	119.45	34.19	4.493		
4,800.00	4,755.63	4,876.03	4,794.07	19.69	19.59	-163.17	493.57	-24.38	139.58	104.53	35.05	3.982		
4,900.00	4,854.58	4,974.93	4,888.74	20.12	20.13	-160.95	522.18	-24.08	125.68	89.73	35.95	3.496		
5,000.00	4,953.53	5,073.83	4,983.41	20.55	20.67	-158.19	550.79	-23.78	112.02	75.11	36.91	3.035		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	(usft)			
5,100.00	5,052.48	5,172.72	5,078.08	20.97	21.21	-154.68	579.40	-23.48	98.68	60.72	37.96	2.600		
5,200.00	5,151.43	5,271.62	5,172.75	21.40	21.75	-150.10	608.02	-23.18	85.82	46.68	39.14	2.193		
5,300.00	5,250.38	5,370.52	5,267.42	21.83	22.30	-143.97	636.63	-22.88	73.70	33.15	40.54	1.818		
5,400.00	5,349.32	5,469.42	5,362.09	22.25	22.85	-135.59	665.24	-22.58	62.72	20.47	42.25	1.485 Level 3		
5,500.00	5,448.27	5,568.32	5,456.76	22.68	23.40	-124.08	693.85	-22.28	53.62	9.30	44.31	1.210 Level 3		
5,600.00	5,547.22	5,667.22	5,551.43	23.11	23.95	-108.86	722.46	-21.98	47.47	0.98	46.49	1.021 Level 3		
5,625.90	5,572.85	5,692.83	5,575.95	23.22	24.09	-104.38	729.87	-21.90	46.52	-0.47	46.99	0.990 Level 3		
5,689.02	5,635.40	5,755.15	5,635.60	23.48	24.44	-92.07	747.90	-21.72	45.45	-2.47	47.92	0.948 Level 3, CC		
5,700.00	5,646.30	5,765.97	5,645.96	23.53	24.50	-89.73	751.03	-21.68	45.49	-2.54	48.03	0.947 Level 3, ES, SF		
5,800.00	5,745.78	5,864.13	5,739.92	23.92	25.06	-67.77	779.43	-21.38	49.97	2.04	47.94	1.043 Level 3		
5,900.00	5,845.55	5,961.57	5,833.19	24.28	25.60	-49.08	807.62	-21.09	62.65	15.86	46.80	1.339 Level 3		
6,000.00	5,945.50	6,058.16	5,925.65	24.61	26.15	-36.06	835.56	-20.80	82.52	36.53	45.99	1.794		
6,041.55	5,987.04	6,098.02	5,963.80	24.74	26.38	-30.24	847.09	-20.68	92.50	46.66	45.84	2.018		
6,100.00	6,045.49	6,153.97	6,017.37	24.91	26.69	-25.65	863.28	-20.51	107.52	61.72	45.80	2.348		
6,200.00	6,145.49	6,249.70	6,109.00	25.22	27.23	-20.21	890.97	-20.21	134.25	88.21	46.03	2.916		
6,300.00	6,245.49	6,345.42	6,200.63	25.52	27.78	-16.58	918.67	-19.92	161.74	115.26	46.48	3.480		
6,400.00	6,345.49	6,441.14	6,292.25	25.83	28.32	-14.01	946.36	-19.63	189.66	142.63	47.03	4.033		
6,500.00	6,445.49	6,536.87	6,383.88	26.14	28.87	-12.09	974.05	-19.34	217.84	170.21	47.64	4.573		
6,600.00	6,545.49	6,632.59	6,475.51	26.45	29.42	-10.61	1,001.75	-19.05	246.20	197.92	48.28	5.099		
6,700.00	6,645.49	6,728.31	6,567.14	26.76	29.96	-9.44	1,029.44	-18.76	274.68	225.73	48.95	5.612		
6,731.55	6,677.04	6,758.51	6,596.05	26.86	30.14	-9.12	1,038.18	-18.67	283.68	234.52	49.16	5.771		
6,750.00	6,695.49	6,775.38	6,612.20	26.92	30.23	81.02	1,043.06	-18.73	288.92	239.66	49.26	5.865		
6,800.00	6,745.33	6,820.12	6,654.95	27.06	30.49	80.16	1,055.96	-21.20	303.04	253.53	49.51	6.121		
6,850.00	6,794.65	6,864.99	6,697.52	27.21	30.74	79.39	1,068.77	-27.18	316.96	267.21	49.76	6.370		
6,900.00	6,843.08	6,910.07	6,739.72	27.36	30.99	78.69	1,081.45	-36.66	330.61	280.60	50.01	6.611		
6,950.00	6,890.24	6,955.42	6,781.32	27.50	31.24	78.07	1,093.91	-49.67	343.88	293.60	50.28	6.839		
7,000.00	6,935.78	7,000.00	6,821.15	27.63	31.47	77.50	1,105.82	-65.76	356.70	306.15	50.56	7.055		
7,050.00	6,979.35	7,047.19	6,861.87	27.76	31.71	77.04	1,117.95	-86.27	368.98	318.06	50.92	7.246		
7,100.00	7,020.62	7,093.74	6,900.32	27.89	31.94	76.65	1,129.38	-109.84	380.63	329.33	51.30	7.419		
7,150.00	7,059.27	7,140.79	6,937.21	28.01	32.17	76.33	1,140.31	-136.90	391.59	339.85	51.74	7.568		
7,200.00	7,095.02	7,188.39	6,972.25	28.13	32.39	76.08	1,150.65	-167.40	401.76	349.52	52.24	7.691		
7,250.00	7,127.58	7,236.57	7,005.13	28.27	32.62	75.92	1,160.31	-201.25	411.08	358.28	52.80	7.785		
7,300.00	7,156.72	7,285.36	7,035.54	28.41	32.84	75.83	1,169.19	-238.33	419.48	366.03	53.45	7.848		
7,350.00	7,182.21	7,334.77	7,063.15	28.58	33.07	75.83	1,177.21	-278.50	426.89	372.72	54.17	7.880		
7,400.00	7,203.85	7,384.81	7,087.64	28.79	33.32	75.90	1,184.26	-321.55	433.25	378.27	54.98	7.880		
7,450.00	7,221.48	7,435.47	7,108.68	29.05	33.57	76.05	1,190.24	-367.22	438.50	382.63	55.87	7.848		
7,500.00	7,234.96	7,486.72	7,125.96	29.38	33.85	76.29	1,195.07	-415.20	442.60	385.75	56.85	7.785		
7,550.00	7,244.21	7,538.52	7,139.19	29.79	34.15	76.60	1,198.66	-465.14	445.51	387.61	57.90	7.694		
7,600.00	7,249.13	7,590.83	7,148.11	30.26	34.49	76.99	1,200.93	-516.61	447.20	388.17	59.02	7.577		
7,631.55	7,250.00	7,624.07	7,151.43	30.59	34.71	77.28	1,201.67	-549.68	447.62	387.86	59.76	7.490		
7,700.00	7,250.00	7,694.98	7,153.00	31.38	35.25	77.49	1,201.56	-620.55	447.73	386.31	61.42	7.289		
7,800.00	7,250.00	7,794.98	7,153.00	32.73	36.17	77.49	1,200.74	-720.54	447.73	383.57	64.16	6.978		
7,900.00	7,250.00	7,894.98	7,153.00	34.25	37.29	77.49	1,199.92	-820.54	447.73	380.53	67.21	6.662		
8,000.00	7,250.00	7,994.98	7,153.00	35.92	38.60	77.49	1,199.11	-920.54	447.74	377.21	70.53	6.348		
8,100.00	7,250.00	8,094.98	7,153.00	37.73	40.09	77.49	1,198.29	-1,020.53	447.74	373.66	74.08	6.044		
8,200.00	7,250.00	8,194.98	7,153.00	39.64	41.73	77.49	1,197.47	-1,120.53	447.74	369.90	77.84	5.752		
8,300.00	7,250.00	8,294.98	7,153.00	41.64	43.50	77.49	1,196.65	-1,220.53	447.74	365.97	81.77	5.476		
8,400.00	7,250.00	8,394.98	7,153.00	43.72	45.38	77.49	1,195.83	-1,320.52	447.74	361.89	85.85	5.216		
8,500.00	7,250.00	8,494.98	7,153.00	45.87	47.35	77.49	1,195.01	-1,420.52	447.74	357.68	90.06	4.972		
8,600.00	7,250.00	8,594.98	7,153.00	48.08	49.41	77.49	1,194.19	-1,520.52	447.74	353.36	94.38	4.744		
8,700.00	7,250.00	8,694.98	7,153.00	50.34	51.53	77.49	1,193.38	-1,620.51	447.75	348.94	98.81	4.532		
8,800.00	7,250.00	8,794.98	7,153.00	52.64	53.71	77.49	1,192.56	-1,720.51	447.75	344.43	103.31	4.334		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD													Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)					
8,900.00	7,250.00	8,894.98	7,153.00	54.98	55.95	77.49	1,191.74	-1,820.51	447.75	339.85	107.90	4.150				
9,000.00	7,250.00	8,994.98	7,153.00	57.35	58.23	77.49	1,190.92	-1,920.50	447.75	335.21	112.55	3.978				
9,100.00	7,250.00	9,094.98	7,153.00	59.76	60.54	77.49	1,190.10	-2,020.50	447.75	330.50	117.25	3.819				
9,200.00	7,250.00	9,194.98	7,153.00	62.19	62.90	77.49	1,189.28	-2,120.50	447.75	325.75	122.01	3.670				
9,300.00	7,250.00	9,294.98	7,153.00	64.65	65.28	77.49	1,188.47	-2,220.49	447.76	320.94	126.81	3.531				
9,400.00	7,250.00	9,394.98	7,153.00	67.12	67.69	77.49	1,187.65	-2,320.49	447.76	316.10	131.65	3.401				
9,500.00	7,249.99	9,494.98	7,153.00	69.61	70.12	77.49	1,186.83	-2,420.49	447.76	311.23	136.53	3.279				
9,600.00	7,249.99	9,594.98	7,153.00	72.12	72.58	77.49	1,186.01	-2,520.48	447.76	306.32	141.45	3.166				
9,700.00	7,249.99	9,694.98	7,153.00	74.65	75.05	77.49	1,185.19	-2,620.48	447.76	301.38	146.39	3.059				
9,800.00	7,249.99	9,794.98	7,153.00	77.19	77.54	77.49	1,184.37	-2,720.48	447.76	296.41	151.35	2.958				
9,900.00	7,249.99	9,894.98	7,153.00	79.74	80.05	77.49	1,183.55	-2,820.47	447.77	291.42	156.34	2.864				
10,000.00	7,249.99	9,994.98	7,153.00	82.30	82.57	77.49	1,182.74	-2,920.47	447.77	286.41	161.36	2.775				
10,100.00	7,249.99	10,094.98	7,153.00	84.87	85.10	77.49	1,181.92	-3,020.47	447.77	281.38	166.39	2.691				
10,200.00	7,249.99	10,194.98	7,153.00	87.45	87.65	77.49	1,181.10	-3,120.46	447.77	276.33	171.44	2.612				
10,300.00	7,249.99	10,294.98	7,153.00	90.04	90.20	77.49	1,180.28	-3,220.46	447.77	271.27	176.50	2.537				
10,400.00	7,249.99	10,394.98	7,153.00	92.64	92.77	77.49	1,179.46	-3,320.46	447.77	266.19	181.58	2.466				
10,500.00	7,249.99	10,494.98	7,153.00	95.24	95.34	77.49	1,178.64	-3,420.45	447.78	261.10	186.68	2.399				
10,600.00	7,249.99	10,594.98	7,153.00	97.85	97.92	77.49	1,177.82	-3,520.45	447.78	255.99	191.79	2.335				
10,700.00	7,249.99	10,694.98	7,153.00	100.47	100.51	77.49	1,177.01	-3,620.45	447.78	250.87	196.91	2.274				
10,800.00	7,249.99	10,794.98	7,153.00	103.09	103.11	77.49	1,176.19	-3,720.44	447.78	245.74	202.04	2.216				
10,900.00	7,249.99	10,894.98	7,153.00	105.71	105.71	77.49	1,175.37	-3,820.44	447.78	240.61	207.18	2.161				
11,000.00	7,249.99	10,994.98	7,153.00	108.35	108.32	77.49	1,174.55	-3,920.44	447.78	235.46	212.32	2.109				
11,100.00	7,249.99	11,094.98	7,153.00	110.98	110.93	77.49	1,173.73	-4,020.43	447.79	230.30	217.48	2.059				
11,200.00	7,249.99	11,194.98	7,153.00	113.62	113.55	77.49	1,172.91	-4,120.43	447.79	225.14	222.65	2.011				
11,300.00	7,249.99	11,294.98	7,153.00	116.26	116.18	77.49	1,172.10	-4,220.43	447.79	219.97	227.82	1.966				
11,400.00	7,249.99	11,394.98	7,153.00	118.91	118.81	77.49	1,171.28	-4,320.42	447.79	214.79	233.00	1.922				
11,500.00	7,249.99	11,494.98	7,153.00	121.56	121.44	77.49	1,170.46	-4,420.42	447.79	209.60	238.19	1.880				
11,600.00	7,249.99	11,594.98	7,153.00	124.21	124.08	77.49	1,169.64	-4,520.42	447.79	204.41	243.38	1.840				
11,700.00	7,249.99	11,694.98	7,153.00	126.87	126.72	77.49	1,168.82	-4,620.41	447.79	199.22	248.58	1.801				
11,800.00	7,249.99	11,794.98	7,153.00	129.53	129.36	77.49	1,168.00	-4,720.41	447.80	194.01	253.78	1.764				
11,900.00	7,249.99	11,894.98	7,153.00	132.19	132.01	77.49	1,167.18	-4,820.41	447.80	188.81	258.99	1.729				
12,000.00	7,249.99	11,994.98	7,153.00	134.86	134.66	77.49	1,166.37	-4,920.40	447.80	183.59	264.21	1.695				
12,100.00	7,249.99	12,094.98	7,153.00	137.52	137.31	77.49	1,165.55	-5,020.40	447.80	178.38	269.42	1.662				
12,200.00	7,249.99	12,194.98	7,153.00	140.19	139.97	77.49	1,164.73	-5,120.40	447.80	173.16	274.65	1.630				
12,300.00	7,249.99	12,294.98	7,153.00	142.86	142.62	77.49	1,163.91	-5,220.39	447.80	167.93	279.87	1.600				
12,400.00	7,249.99	12,394.98	7,153.00	145.53	145.28	77.49	1,163.09	-5,320.39	447.81	162.70	285.10	1.571				
12,500.00	7,249.99	12,494.98	7,153.00	148.21	147.95	77.49	1,162.27	-5,420.39	447.81	157.47	290.34	1.542				
12,600.00	7,249.99	12,594.98	7,153.00	150.88	150.61	77.49	1,161.45	-5,520.38	447.81	152.24	295.57	1.515				
12,700.00	7,249.99	12,694.98	7,153.00	153.56	153.28	77.49	1,160.64	-5,620.38	447.81	147.00	300.81	1.489 Level 3				
12,800.00	7,249.99	12,794.98	7,153.00	156.24	155.95	77.49	1,159.82	-5,720.38	447.81	141.76	306.06	1.463 Level 3				
12,900.00	7,249.98	12,894.98	7,153.00	158.92	158.62	77.49	1,159.00	-5,820.37	447.81	136.51	311.30	1.439 Level 3				
13,000.00	7,249.98	12,994.98	7,153.00	161.60	161.29	77.49	1,158.18	-5,920.37	447.82	131.26	316.55	1.415 Level 3				
13,100.00	7,249.98	13,094.98	7,153.00	164.28	163.96	77.49	1,157.36	-6,020.37	447.82	126.01	321.80	1.392 Level 3				
13,200.00	7,249.98	13,194.98	7,153.00	166.97	166.64	77.49	1,156.54	-6,120.36	447.82	120.76	327.06	1.369 Level 3				
13,300.00	7,249.98	13,294.98	7,153.00	169.65	169.32	77.49	1,155.73	-6,220.36	447.82	115.51	332.31	1.348 Level 3				
13,400.00	7,249.98	13,394.98	7,153.00	172.34	172.00	77.49	1,154.91	-6,320.36	447.82	110.25	337.57	1.327 Level 3				
13,500.00	7,249.98	13,494.98	7,153.00	175.03	174.68	77.49	1,154.09	-6,420.35	447.82	104.99	342.83	1.306 Level 3				
13,600.00	7,249.98	13,594.98	7,153.00	177.72	177.36	77.49	1,153.27	-6,520.35	447.83	99.73	348.09	1.287 Level 3				
13,700.00	7,249.98	13,694.98	7,153.00	180.41	180.04	77.49	1,152.45	-6,620.35	447.83	94.47	353.36	1.267 Level 3				
13,800.00	7,249.98	13,794.98	7,153.00	183.10	182.72	77.49	1,151.63	-6,720.34	447.83	89.20	358.63	1.249 Level 3				
13,900.00	7,249.98	13,894.98	7,153.00	185.79	185.41	77.49	1,150.81	-6,820.34	447.83	83.94	363.89	1.231 Level 3				
14,000.00	7,249.98	13,994.98	7,153.00	188.48	188.09	77.49	1,150.00	-6,920.34	447.83	78.67	369.16	1.213 Level 3				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
14,100.00	7,249.98	14,094.98	7,153.00	191.18	190.78	77.49	1,149.18	-7,020.33	447.83	73.40	374.44	1.196	Level 3		
14,200.00	7,249.98	14,194.98	7,153.00	193.87	193.47	77.49	1,148.36	-7,120.33	447.83	68.13	379.71	1.179	Level 3		
14,300.00	7,249.98	14,294.98	7,153.00	196.56	196.16	77.49	1,147.54	-7,220.33	447.84	62.85	384.98	1.163	Level 3		
14,400.00	7,249.98	14,394.98	7,153.00	199.26	198.84	77.49	1,146.72	-7,320.32	447.84	57.58	390.26	1.148	Level 3		
14,500.00	7,249.98	14,494.98	7,153.00	201.96	201.54	77.49	1,145.90	-7,420.32	447.84	52.30	395.54	1.132	Level 3		
14,600.00	7,249.98	14,594.98	7,153.00	204.65	204.23	77.49	1,145.08	-7,520.32	447.84	47.02	400.82	1.117	Level 3		
14,700.00	7,249.98	14,694.98	7,153.00	207.35	206.92	77.49	1,144.27	-7,620.31	447.84	41.75	406.10	1.103	Level 3		
14,800.00	7,249.98	14,794.98	7,153.00	210.05	209.61	77.49	1,143.45	-7,720.31	447.84	36.47	411.38	1.089	Level 3		
14,900.00	7,249.98	14,894.98	7,153.00	212.75	212.30	77.49	1,142.63	-7,820.31	447.85	31.19	416.66	1.075	Level 3		
15,000.00	7,249.98	14,994.98	7,153.00	215.45	215.00	77.49	1,141.81	-7,920.30	447.85	25.90	421.94	1.061	Level 3		
15,100.00	7,249.98	15,094.98	7,153.00	218.15	217.69	77.49	1,140.99	-8,020.30	447.85	20.62	427.23	1.048	Level 3		
15,200.00	7,249.98	15,194.98	7,153.00	220.85	220.39	77.49	1,140.17	-8,120.30	447.85	15.34	432.51	1.035	Level 3		
15,300.00	7,249.98	15,294.98	7,153.00	223.55	223.09	77.49	1,139.36	-8,220.29	447.85	10.05	437.80	1.023	Level 3		
15,400.00	7,249.98	15,394.98	7,153.00	226.25	225.78	77.49	1,138.54	-8,320.29	447.85	4.76	443.09	1.011	Level 3		
15,405.88	7,249.98	15,400.86	7,153.00	226.41	225.94	77.49	1,138.49	-8,326.16	447.85	4.45	443.40	1.010	Level 3		
15,478.21	7,250.00	15,455.54	7,153.00	228.36	227.42	77.49	1,138.04	-8,380.85	448.01	0.81	447.20	1.002	Level 3		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSAL #1														Offset Site Error: 0.00 usft
Survey Program: 0-OWSG (Rev2) MWD										Rule Assigned:				Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	180.00	-14.57	0.00	14.57					
100.00	100.00	100.00	100.00	0.14	0.14	180.00	-14.57	0.00	14.57	14.29	0.29	50.813		
200.00	200.00	200.00	200.00	0.50	0.50	180.00	-14.57	0.00	14.57	13.57	1.00	14.518		
300.00	300.00	300.00	300.00	0.86	0.86	180.00	-14.57	0.00	14.57	12.85	1.72	8.469 CC, ES		
400.00	399.98	399.98	399.98	1.22	1.22	178.38	-14.57	0.00	16.32	13.88	2.44	6.691		
500.00	499.84	500.39	500.37	1.58	1.58	175.71	-13.19	1.09	20.19	17.04	3.16	6.394		
600.00	599.45	600.78	600.61	1.95	1.94	169.31	-9.06	4.36	25.07	21.19	3.88	6.465		
700.00	698.70	700.46	700.07	2.33	2.30	164.47	-3.74	8.56	32.56	27.95	4.61	7.067		
715.65	714.19	716.04	715.61	2.39	2.36	164.05	-2.91	9.22	34.05	29.32	4.72	7.206		
800.00	797.66	799.98	799.35	2.73	2.66	162.44	1.56	12.76	42.32	36.98	5.34	7.925		
900.00	896.61	899.49	898.63	3.13	3.03	161.19	6.87	16.96	52.15	46.07	6.07	8.587		
1,000.00	995.56	999.00	997.91	3.54	3.40	160.33	12.18	21.16	61.99	55.19	6.81	9.105		
1,100.00	1,094.50	1,098.51	1,097.19	3.96	3.76	159.72	17.49	25.36	71.85	64.30	7.55	9.519		
1,200.00	1,193.45	1,198.02	1,196.47	4.38	4.13	159.25	22.79	29.55	81.72	73.43	8.29	9.858		
1,300.00	1,292.40	1,297.53	1,295.75	4.79	4.50	158.88	28.10	33.75	91.59	82.55	9.03	10.139		
1,400.00	1,391.35	1,397.04	1,395.03	5.22	4.87	158.58	33.41	37.95	101.46	91.68	9.78	10.378		
1,500.00	1,490.30	1,496.55	1,494.31	5.64	5.24	158.34	38.72	42.15	111.33	100.81	10.52	10.581		
1,600.00	1,589.25	1,596.06	1,593.59	6.06	5.61	158.13	44.03	46.35	121.21	109.94	11.27	10.758		
1,700.00	1,688.20	1,695.57	1,692.87	6.48	5.98	157.96	49.33	50.54	131.08	119.07	12.01	10.912		
1,800.00	1,787.15	1,795.08	1,792.15	6.91	6.35	157.81	54.64	54.74	140.96	128.20	12.76	11.047		
1,900.00	1,886.10	1,894.59	1,891.43	7.33	6.73	157.68	59.95	58.94	150.84	137.33	13.51	11.168		
2,000.00	1,985.05	1,994.10	1,990.71	7.75	7.10	157.56	65.26	63.14	160.72	146.46	14.25	11.275		
2,100.00	2,084.00	2,093.61	2,089.99	8.18	7.47	157.46	70.56	67.34	170.60	155.59	15.00	11.372		
2,200.00	2,182.95	2,193.12	2,189.27	8.60	7.84	157.37	75.87	71.53	180.48	164.73	15.75	11.459		
2,300.00	2,281.90	2,292.63	2,288.55	9.03	8.21	157.29	81.18	75.73	190.36	173.86	16.50	11.538		
2,400.00	2,380.85	2,392.14	2,387.83	9.45	8.58	157.22	86.49	79.93	200.24	182.99	17.25	11.610		
2,500.00	2,479.80	2,491.65	2,487.11	9.88	8.95	157.16	91.79	84.13	210.12	192.12	18.00	11.676		
2,600.00	2,578.74	2,591.16	2,586.39	10.31	9.32	157.10	97.10	88.33	220.00	201.26	18.74	11.737		
2,700.00	2,677.69	2,690.67	2,685.67	10.73	9.70	157.04	102.41	92.52	229.88	210.39	19.49	11.793		
2,800.00	2,776.64	2,790.18	2,784.95	11.16	10.07	156.99	107.72	96.72	239.76	219.52	20.24	11.845		
2,900.00	2,875.59	2,889.69	2,884.23	11.58	10.44	156.95	113.02	100.92	249.65	228.65	20.99	11.893		
3,000.00	2,974.54	2,989.20	2,983.51	12.01	10.81	156.90	118.33	105.12	259.53	237.79	21.74	11.938		
3,100.00	3,073.49	3,088.71	3,082.79	12.44	11.18	156.86	123.64	109.31	269.41	246.92	22.49	11.979		
3,200.00	3,172.44	3,188.22	3,182.07	12.86	11.55	156.83	128.95	113.51	279.29	256.05	23.24	12.018		
3,300.00	3,271.39	3,287.73	3,281.35	13.29	11.93	156.79	134.25	117.71	289.17	265.19	23.99	12.055		
3,400.00	3,370.34	3,387.24	3,380.63	13.72	12.30	156.76	139.56	121.91	299.06	274.32	24.74	12.089		
3,500.00	3,469.29	3,486.75	3,479.91	14.14	12.67	156.73	144.87	126.11	308.94	283.45	25.49	12.121		
3,600.00	3,568.24	3,586.27	3,579.19	14.57	13.04	156.70	150.18	130.30	318.82	292.59	26.24	12.152		
3,700.00	3,667.19	3,685.78	3,678.47	15.00	13.41	156.68	155.48	134.50	328.71	301.72	26.99	12.180		
3,800.00	3,766.14	3,785.29	3,777.75	15.42	13.78	156.65	160.79	138.70	338.59	310.85	27.74	12.207		
3,900.00	3,865.09	3,884.80	3,877.03	15.85	14.16	156.63	166.10	142.90	348.47	319.98	28.49	12.233		
4,000.00	3,964.03	3,984.31	3,976.31	16.28	14.53	156.61	171.41	147.10	358.35	329.12	29.24	12.257		
4,100.00	4,062.98	4,083.82	4,075.59	16.70	14.90	156.59	176.72	151.29	368.24	338.25	29.99	12.280		
4,200.00	4,161.93	4,183.33	4,174.87	17.13	15.27	156.57	182.02	155.49	378.12	347.38	30.74	12.302		
4,300.00	4,260.88	4,282.84	4,274.15	17.56	15.64	156.55	187.33	159.69	388.00	356.52	31.49	12.323		
4,400.00	4,359.83	4,382.35	4,373.43	17.98	16.02	156.53	192.64	163.89	397.89	365.65	32.24	12.343		
4,500.00	4,458.78	4,481.86	4,472.71	18.41	16.39	156.51	197.95	168.09	407.77	374.78	32.99	12.362		
4,600.00	4,557.73	4,581.37	4,571.99	18.84	16.76	156.50	203.25	172.28	417.65	383.92	33.74	12.380		
4,700.00	4,656.68	4,680.88	4,671.27	19.26	17.13	156.48	208.56	176.48	427.54	393.05	34.49	12.397		
4,800.00	4,755.63	4,780.39	4,770.55	19.69	17.50	156.47	213.87	180.68	437.42	402.18	35.24	12.414		
4,900.00	4,854.58	4,879.90	4,869.83	20.12	17.88	156.45	219.18	184.88	447.30	411.32	35.99	12.430		
5,000.00	4,953.53	4,979.41	4,969.11	20.55	18.25	156.44	224.48	189.08	457.19	420.45	36.74	12.445		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,100.00	5,052.48	5,078.92	5,068.39	20.97	18.62	156.42	229.79	193.27	467.07	429.58	37.49	12.460			
5,200.00	5,151.43	5,178.43	5,167.67	21.40	18.99	156.41	235.10	197.47	476.95	438.72	38.24	12.474			
5,300.00	5,250.38	5,277.94	5,266.95	21.83	19.36	156.40	240.41	201.67	486.84	447.85	38.99	12.487			
5,400.00	5,349.32	5,377.45	5,366.23	22.25	19.73	156.39	245.71	205.87	496.72	456.98	39.74	12.500			
5,500.00	5,448.27	5,476.96	5,465.51	22.68	20.11	156.38	251.02	210.06	506.60	466.11	40.49	12.513			
5,600.00	5,547.22	5,576.47	5,564.79	23.11	20.48	156.37	256.33	214.26	516.49	475.25	41.24	12.525			
5,625.90	5,572.85	5,602.24	5,590.50	23.22	20.57	156.37	257.70	215.35	519.05	477.61	41.43	12.528			
5,700.00	5,646.30	5,676.06	5,664.15	23.53	20.85	156.37	261.64	218.46	525.49	483.51	41.99	12.516			
5,800.00	5,745.78	5,775.86	5,763.72	23.92	21.22	156.22	266.96	222.67	531.43	488.69	42.73	12.436			
5,900.00	5,845.55	5,875.77	5,863.39	24.28	21.60	155.90	272.29	226.89	534.18	490.70	43.48	12.286			
6,000.00	5,945.50	5,975.66	5,963.05	24.61	21.97	155.40	277.62	231.10	533.77	489.56	44.22	12.072			
6,041.55	5,987.04	6,017.12	6,004.42	24.74	22.13	156.95	279.83	232.85	532.69	488.16	44.52	11.964			
6,100.00	6,045.49	6,075.44	6,062.60	24.91	22.34	156.58	282.94	235.31	530.79	485.84	44.95	11.808			
6,200.00	6,145.49	6,175.21	6,162.14	25.22	22.72	155.93	288.26	239.52	527.60	481.91	45.69	11.548			
6,300.00	6,245.49	6,274.98	6,261.68	25.52	23.09	155.27	293.59	243.73	524.48	478.06	46.42	11.298			
6,400.00	6,345.49	6,374.75	6,361.21	25.83	23.46	154.60	298.91	247.94	521.43	474.27	47.16	11.056			
6,500.00	6,445.49	6,474.51	6,460.75	26.14	23.84	153.93	304.23	252.15	518.45	470.55	47.90	10.824			
6,600.00	6,545.49	6,631.75	6,616.77	26.45	24.35	154.83	312.41	239.33	510.31	461.70	48.61	10.497			
6,700.00	6,645.49	6,776.23	6,752.21	26.76	24.70	159.75	319.19	190.62	491.94	443.16	48.78	10.085			
6,731.55	6,677.04	6,815.89	6,786.86	26.86	24.78	161.87	320.87	171.42	484.93	436.08	48.85	9.927			
6,750.00	6,695.49	6,837.90	6,805.50	26.92	24.82	-106.78	321.76	159.74	480.81	431.90	48.91	9.831			
6,800.00	6,745.33	6,894.75	6,851.42	27.06	24.91	-104.35	323.92	126.35	470.34	421.20	49.13	9.572			
6,850.00	6,794.65	6,948.01	6,891.26	27.21	24.99	-101.87	325.74	91.08	461.08	411.62	49.46	9.323			
6,900.00	6,843.08	6,998.23	6,925.68	27.36	25.07	-99.34	327.26	54.55	453.24	403.38	49.86	9.090			
6,950.00	6,890.24	7,045.88	6,955.27	27.50	25.18	-96.77	328.52	17.24	446.94	396.64	50.30	8.885			
7,000.00	6,935.78	7,091.35	6,980.52	27.63	25.38	-94.16	329.55	-20.54	442.28	391.53	50.74	8.716			
7,050.00	6,979.35	7,134.96	7,001.86	27.76	25.63	-91.51	330.36	-58.55	439.26	388.12	51.14	8.589			
7,100.00	7,020.62	7,176.98	7,019.64	27.89	25.90	-88.86	330.99	-96.61	437.87	386.40	51.47	8.508			
7,119.88	7,036.32	7,193.30	7,025.78	27.93	26.02	-87.80	331.19	-111.72	437.75	386.18	51.57	8.488			
7,150.00	7,059.27	7,217.63	7,034.14	28.01	26.20	-86.20	331.44	-134.58	438.01	386.31	51.70	8.472			
7,200.00	7,095.02	7,257.12	7,045.62	28.13	26.52	-83.56	331.73	-172.35	439.59	387.75	51.84	8.480			
7,250.00	7,127.58	7,295.59	7,054.28	28.27	26.87	-80.97	331.88	-209.82	442.45	390.55	51.90	8.525			
7,300.00	7,156.72	7,333.18	7,060.30	28.41	27.23	-78.44	331.89	-246.92	446.42	394.52	51.90	8.602			
7,350.00	7,182.21	7,370.01	7,063.83	28.58	27.61	-76.00	331.77	-283.58	451.33	399.46	51.86	8.703			
7,400.00	7,203.85	7,406.67	7,065.00	28.79	28.01	-73.63	331.52	-320.21	456.98	405.16	51.82	8.818			
7,450.00	7,221.48	7,452.81	7,065.00	29.05	28.57	-71.15	331.13	-366.35	462.65	410.59	52.06	8.887			
7,500.00	7,234.96	7,500.94	7,065.00	29.38	29.16	-69.19	330.73	-414.48	467.39	414.90	52.49	8.905			
7,550.00	7,244.21	7,550.07	7,065.00	29.79	29.85	-67.83	330.32	-463.60	470.84	417.64	53.20	8.850			
7,600.00	7,249.13	7,599.81	7,065.00	30.26	30.54	-67.11	329.90	-513.34	472.74	418.61	54.13	8.733			
7,631.55	7,250.00	7,631.34	7,065.00	30.59	31.04	-66.98	329.64	-544.87	473.09	418.20	54.89	8.619			
7,700.00	7,250.00	7,699.79	7,065.00	31.38	32.11	-66.98	329.07	-613.32	473.10	416.43	56.67	8.349			
7,800.00	7,250.00	7,799.79	7,065.00	32.73	33.83	-66.98	328.23	-713.32	473.12	413.56	59.56	7.944			
7,900.00	7,250.00	7,899.79	7,065.00	34.25	35.66	-66.98	327.39	-813.31	473.13	410.41	62.72	7.544			
8,000.00	7,250.00	7,999.79	7,065.00	35.92	37.61	-66.98	326.55	-913.31	473.15	407.03	66.12	7.156			
8,100.00	7,250.00	8,099.79	7,065.00	37.73	39.64	-66.98	325.71	-1,013.31	473.16	403.45	69.71	6.787			
8,200.00	7,250.00	8,199.79	7,065.00	39.64	41.76	-66.98	324.88	-1,113.30	473.18	399.70	73.48	6.440			
8,300.00	7,250.00	8,299.79	7,065.00	41.64	43.94	-66.98	324.04	-1,213.30	473.20	395.80	77.40	6.114			
8,400.00	7,250.00	8,399.79	7,065.00	43.72	46.17	-66.98	323.20	-1,313.30	473.21	391.78	81.43	5.811			
8,500.00	7,250.00	8,499.79	7,065.00	45.87	48.46	-66.98	322.36	-1,413.29	473.23	387.65	85.58	5.530			
8,600.00	7,250.00	8,599.79	7,065.00	48.08	50.79	-66.98	321.52	-1,513.29	473.25	383.43	89.82	5.269			
8,700.00	7,250.00	8,699.79	7,065.00	50.34	53.15	-66.98	320.69	-1,613.29	473.26	379.13	94.14	5.027			
8,800.00	7,250.00	8,799.79	7,065.00	52.64	55.55	-66.98	319.85	-1,713.28	473.28	374.75	98.52	4.804			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program:		0-OWSG (Rev2) MWD					Rule Assigned:						Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
Measured	Vertical	Measured	Vertical	Reference	Offset		+N/-S	+E/-W	Between	Between				Separation	Factor
Depth	Depth	Depth	Depth	(usft)	(usft)	(°)	(usft)	(usft)	Centres	Ellipses	(usft)				
(usft)	(usft)	(usft)	(usft)						(usft)	(usft)	(usft)				
8,900.00	7,250.00	8,899.79	7,065.00	54.98	57.98	-66.99	319.01	-1,813.28	473.30	370.32	102.97	4.596			
9,000.00	7,250.00	8,999.79	7,065.00	57.35	60.43	-66.99	318.17	-1,913.28	473.31	365.84	107.47	4.404			
9,100.00	7,250.00	9,099.79	7,065.00	59.76	62.91	-66.99	317.33	-2,013.27	473.33	361.31	112.02	4.225			
9,200.00	7,250.00	9,199.79	7,065.00	62.19	65.40	-66.99	316.50	-2,113.27	473.34	356.73	116.61	4.059			
9,300.00	7,250.00	9,299.79	7,065.00	64.65	67.91	-66.99	315.66	-2,213.26	473.36	352.12	121.24	3.904			
9,400.00	7,250.00	9,399.79	7,065.00	67.12	70.44	-67.00	314.82	-2,313.26	473.38	347.48	125.89	3.760			
9,500.00	7,249.99	9,499.79	7,065.00	69.61	72.98	-67.00	313.98	-2,413.26	473.39	342.81	130.58	3.625			
9,600.00	7,249.99	9,599.79	7,065.00	72.12	75.54	-67.00	313.14	-2,513.25	473.41	338.12	135.29	3.499			
9,700.00	7,249.99	9,699.79	7,065.00	74.65	78.10	-67.00	312.31	-2,613.25	473.43	333.40	140.03	3.381			
9,800.00	7,249.99	9,799.79	7,065.00	77.19	80.68	-67.00	311.47	-2,713.25	473.44	328.66	144.78	3.270			
9,900.00	7,249.99	9,899.79	7,065.00	79.74	83.26	-67.00	310.63	-2,813.24	473.46	323.90	149.56	3.166			
10,000.00	7,249.99	9,999.79	7,065.00	82.30	85.85	-67.00	309.79	-2,913.24	473.47	319.12	154.35	3.068			
10,100.00	7,249.99	10,099.79	7,065.00	84.87	88.45	-67.00	308.95	-3,013.24	473.49	314.33	159.16	2.975			
10,200.00	7,249.99	10,199.79	7,065.00	87.45	91.06	-67.00	308.12	-3,113.23	473.51	309.52	163.98	2.888			
10,300.00	7,249.99	10,299.79	7,065.00	90.04	93.68	-67.00	307.28	-3,213.23	473.52	304.71	168.82	2.805			
10,400.00	7,249.99	10,399.79	7,065.00	92.64	96.30	-67.00	306.44	-3,313.23	473.54	299.87	173.67	2.727			
10,500.00	7,249.99	10,499.79	7,065.00	95.24	98.92	-67.01	305.60	-3,413.22	473.56	295.03	178.52	2.653			
10,600.00	7,249.99	10,599.79	7,065.00	97.85	101.55	-67.01	304.76	-3,513.22	473.57	290.18	183.39	2.582			
10,700.00	7,249.99	10,699.79	7,065.00	100.47	104.19	-67.01	303.93	-3,613.22	473.59	285.32	188.27	2.515			
10,800.00	7,249.99	10,799.79	7,065.00	103.09	106.83	-67.01	303.09	-3,713.21	473.60	280.45	193.16	2.452			
10,900.00	7,249.99	10,899.79	7,065.00	105.71	109.47	-67.01	302.25	-3,813.21	473.62	275.57	198.05	2.391			
11,000.00	7,249.99	10,999.79	7,065.00	108.35	112.12	-67.01	301.41	-3,913.20	473.64	270.68	202.96	2.334			
11,100.00	7,249.99	11,099.79	7,065.00	110.98	114.77	-67.01	300.57	-4,013.20	473.65	265.79	207.86	2.279			
11,200.00	7,249.99	11,199.79	7,065.00	113.62	117.43	-67.01	299.74	-4,113.20	473.67	260.89	212.78	2.226			
11,300.00	7,249.99	11,299.79	7,065.00	116.26	120.08	-67.01	298.90	-4,213.19	473.69	255.98	217.70	2.176			
11,400.00	7,249.99	11,399.79	7,065.00	118.91	122.74	-67.01	298.06	-4,313.19	473.70	251.07	222.63	2.128			
11,500.00	7,249.99	11,499.79	7,065.00	121.56	125.41	-67.01	297.22	-4,413.19	473.72	246.16	227.56	2.082			
11,600.00	7,249.99	11,599.79	7,065.00	124.21	128.07	-67.02	296.38	-4,513.18	473.73	241.24	232.50	2.038			
11,700.00	7,249.99	11,699.79	7,065.00	126.87	130.74	-67.02	295.54	-4,613.18	473.75	236.31	237.44	1.995			
11,800.00	7,249.99	11,799.79	7,065.00	129.53	133.41	-67.02	294.71	-4,713.18	473.77	231.38	242.39	1.955			
11,900.00	7,249.99	11,899.79	7,065.00	132.19	136.08	-67.02	293.87	-4,813.17	473.78	226.45	247.34	1.916			
12,000.00	7,249.99	11,999.79	7,065.00	134.86	138.75	-67.02	293.03	-4,913.17	473.80	221.51	252.29	1.878			
12,100.00	7,249.99	12,099.79	7,065.00	137.52	141.43	-67.02	292.19	-5,013.17	473.82	216.57	257.25	1.842			
12,200.00	7,249.99	12,199.79	7,065.00	140.19	144.11	-67.02	291.35	-5,113.16	473.83	211.62	262.21	1.807			
12,300.00	7,249.99	12,299.79	7,065.00	142.86	146.79	-67.02	290.52	-5,213.16	473.85	206.67	267.18	1.774			
12,400.00	7,249.99	12,399.79	7,065.00	145.53	149.47	-67.02	289.68	-5,313.16	473.86	201.72	272.14	1.741			
12,500.00	7,249.99	12,499.79	7,065.00	148.21	152.15	-67.02	288.84	-5,413.15	473.88	196.77	277.11	1.710			
12,600.00	7,249.99	12,599.79	7,065.00	150.88	154.83	-67.02	288.00	-5,513.15	473.90	191.81	282.09	1.680			
12,700.00	7,249.99	12,699.79	7,065.00	153.56	157.52	-67.02	287.16	-5,613.15	473.91	186.85	287.06	1.651			
12,800.00	7,249.99	12,799.79	7,065.00	156.24	160.20	-67.03	286.33	-5,713.14	473.93	181.89	292.04	1.623			
12,900.00	7,249.98	12,899.79	7,065.00	158.92	162.89	-67.03	285.49	-5,813.14	473.95	176.92	297.02	1.596			
13,000.00	7,249.98	12,999.79	7,065.00	161.60	165.58	-67.03	284.65	-5,913.13	473.96	171.96	302.01	1.569			
13,100.00	7,249.98	13,099.79	7,065.00	164.28	168.27	-67.03	283.81	-6,013.13	473.98	166.99	306.99	1.544			
13,200.00	7,249.98	13,199.79	7,065.00	166.97	170.96	-67.03	282.97	-6,113.13	473.99	162.02	311.98	1.519			
13,300.00	7,249.98	13,299.79	7,065.00	169.65	173.65	-67.03	282.14	-6,213.12	474.01	157.04	316.97	1.495	Level 3		
13,400.00	7,249.98	13,399.79	7,065.00	172.34	176.34	-67.03	281.30	-6,313.12	474.03	152.07	321.96	1.472	Level 3		
13,500.00	7,249.98	13,499.79	7,065.00	175.03	179.03	-67.03	280.46	-6,413.12	474.04	147.09	326.95	1.450	Level 3		
13,600.00	7,249.98	13,599.79	7,065.00	177.72	181.73	-67.03	279.62	-6,513.11	474.06	142.11	331.95	1.428	Level 3		
13,700.00	7,249.98	13,699.79	7,065.00	180.41	184.42	-67.03	278.78	-6,613.11	474.08	137.13	336.94	1.407	Level 3		
13,800.00	7,249.98	13,799.79	7,065.00	183.10	187.12	-67.03	277.95	-6,713.11	474.09	132.15	341.94	1.386	Level 3		
13,900.00	7,249.98	13,899.79	7,065.00	185.79	189.81	-67.04	277.11	-6,813.10	474.11	127.17	346.94	1.367	Level 3		
14,000.00	7,249.98	13,999.79	7,065.00	188.48	192.51	-67.04	276.27	-6,913.10	474.13	122.19	351.94	1.347	Level 3		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-10-9H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,100.00	7,249.98	14,099.79	7,065.00	191.18	195.21	-67.04	275.43	-7,013.10	474.14	117.20	356.94	1.328	Level 3	
14,200.00	7,249.98	14,199.79	7,065.00	193.87	197.91	-67.04	274.59	-7,113.09	474.16	112.21	361.94	1.310	Level 3	
14,300.00	7,249.98	14,299.79	7,065.00	196.56	200.61	-67.04	273.76	-7,213.09	474.17	107.23	366.95	1.292	Level 3	
14,400.00	7,249.98	14,399.79	7,065.00	199.26	203.31	-67.04	272.92	-7,313.09	474.19	102.24	371.95	1.275	Level 3	
14,500.00	7,249.98	14,499.79	7,065.00	201.96	206.01	-67.04	272.08	-7,413.08	474.21	97.25	376.96	1.258	Level 3	
14,600.00	7,249.98	14,599.79	7,065.00	204.65	208.71	-67.04	271.24	-7,513.08	474.22	92.25	381.97	1.242	Level 3	
14,700.00	7,249.98	14,699.79	7,065.00	207.35	211.41	-67.04	270.40	-7,613.07	474.24	87.26	386.98	1.225	Level 3	
14,800.00	7,249.98	14,799.79	7,065.00	210.05	214.11	-67.04	269.57	-7,713.07	474.26	82.27	391.99	1.210	Level 3	
14,900.00	7,249.98	14,899.79	7,065.00	212.75	216.81	-67.04	268.73	-7,813.07	474.27	77.27	397.00	1.195	Level 3	
15,000.00	7,249.98	14,999.79	7,065.00	215.45	219.51	-67.04	267.89	-7,913.06	474.29	72.28	402.01	1.180	Level 3	
15,100.00	7,249.98	15,099.79	7,065.00	218.15	222.22	-67.05	267.05	-8,013.06	474.30	67.28	407.02	1.165	Level 3	
15,200.00	7,249.98	15,199.79	7,065.00	220.85	224.92	-67.05	266.21	-8,113.06	474.32	62.28	412.04	1.151	Level 3	
15,300.00	7,249.98	15,299.79	7,065.00	223.55	227.63	-67.05	265.38	-8,213.05	474.34	57.28	417.05	1.137	Level 3	
15,400.00	7,249.98	15,399.79	7,065.00	226.25	230.33	-67.05	264.54	-8,313.05	474.35	52.28	422.07	1.124	Level 3	
15,478.21	7,250.00	15,478.00	7,065.00	228.36	232.45	-67.06	263.88	-8,391.26	474.56	48.55	426.01	1.114	Level 3, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft			
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft			
Reference				Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Minimum Separation	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
0.00	0.00	0.00	0.00	0.00	0.00	-103.37	-7.28	-30.63	31.48								
100.00	100.00	100.00	100.00	0.14	0.14	-103.37	-7.28	-30.63	31.48	31.20	0.29	109.778					
200.00	200.00	200.00	200.00	0.50	0.50	-103.37	-7.28	-30.63	31.48	30.48	1.00	31.365					
300.00	300.00	300.00	300.00	0.86	0.86	-103.37	-7.28	-30.63	31.48	29.76	1.72	18.296					
400.00	399.98	399.98	399.98	1.22	1.22	-108.19	-7.28	-30.63	31.98	29.55	2.44	13.123					
500.00	499.84	499.84	499.84	1.58	1.58	-116.56	-7.28	-30.63	33.98	30.83	3.16	10.766					
600.00	599.45	599.45	599.45	1.95	1.93	-128.08	-7.28	-30.63	38.68	34.80	3.88	9.964					
700.00	698.70	698.70	698.70	2.33	2.29	-139.66	-7.28	-30.63	47.20	42.59	4.61	10.235					
715.65	714.19	714.19	714.19	2.39	2.35	-141.31	-7.28	-30.63	48.92	44.19	4.73	10.345					
800.00	797.66	797.66	797.66	2.73	2.64	-148.72	-7.28	-30.63	58.97	53.63	5.34	11.045					
900.00	896.61	896.61	896.61	3.13	3.00	-154.71	-7.28	-30.63	71.75	65.69	6.06	11.842					
1,000.00	995.56	995.56	995.56	3.54	3.35	-158.87	-7.28	-30.63	85.07	78.29	6.78	12.551					
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-161.89	-7.28	-30.63	98.71	91.21	7.50	13.167					
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-164.18	-7.28	-30.63	112.55	104.34	8.22	13.699					
1,300.00	1,292.40	1,294.36	1,294.36	4.79	4.42	-165.99	-6.94	-30.55	126.21	117.26	8.95	14.109					
1,400.00	1,391.35	1,398.51	1,398.45	5.22	4.80	-167.46	-3.53	-29.74	136.95	127.26	9.69	14.139					
1,500.00	1,490.30	1,503.36	1,503.03	5.64	5.18	-168.72	3.62	-28.06	144.13	133.71	10.42	13.830					
1,600.00	1,589.25	1,608.62	1,607.69	6.06	5.55	-169.89	14.54	-25.48	147.70	136.55	11.15	13.248					
1,700.00	1,688.20	1,714.02	1,711.99	6.48	5.94	-171.07	29.22	-22.01	147.66	135.79	11.87	12.443					
1,800.00	1,787.15	1,819.26	1,815.52	6.91	6.35	-172.34	47.59	-17.67	144.01	131.43	12.57	11.455					
1,900.00	1,886.10	1,924.07	1,917.86	7.33	6.77	-173.81	69.55	-12.48	136.77	123.51	13.26	10.313					
2,000.00	1,985.05	2,028.16	2,018.63	7.75	7.21	-175.65	94.95	-6.49	126.03	112.09	13.94	9.040					
2,100.00	2,084.00	2,131.28	2,117.45	8.18	7.68	-178.11	123.61	0.28	111.88	97.27	14.61	7.658					
2,200.00	2,182.95	2,233.18	2,213.99	8.60	8.18	178.24	155.31	7.77	94.52	79.24	15.28	6.187					
2,300.00	2,281.90	2,333.62	2,307.97	9.03	8.71	172.18	189.81	15.92	74.37	58.38	15.99	4.650					
2,400.00	2,380.85	2,432.40	2,399.11	9.45	9.27	160.11	226.85	24.67	52.58	35.63	16.95	3.102					
2,500.00	2,479.80	2,529.32	2,487.22	9.88	9.85	130.61	266.14	33.95	33.85	14.91	18.94	1.787					
2,546.93	2,526.24	2,574.13	2,527.48	10.08	10.14	106.32	285.28	38.47	30.64	10.50	20.14	1.521 CC, ES, SF					
2,600.00	2,578.74	2,624.23	2,572.13	10.31	10.47	78.37	307.40	43.69	35.09	14.75	20.35	1.725					
2,700.00	2,677.69	2,716.98	2,653.71	10.73	11.12	48.35	350.35	53.84	60.13	40.51	19.61	3.065					
2,800.00	2,776.64	2,807.46	2,731.87	11.16	11.78	36.14	394.70	64.31	94.45	74.89	19.56	4.830					
2,900.00	2,875.59	2,895.58	2,806.57	11.58	12.47	30.09	440.18	75.05	133.38	113.57	19.81	6.733					
3,000.00	2,974.54	2,981.27	2,877.80	12.01	13.19	26.53	486.54	86.00	175.74	155.56	20.17	8.716					
3,100.00	3,073.49	3,064.48	2,945.58	12.44	13.91	24.20	533.51	97.10	221.05	200.48	20.57	10.742					
3,200.00	3,172.44	3,145.19	3,009.94	12.86	14.64	22.56	580.88	108.28	269.06	248.08	20.98	12.826					
3,300.00	3,271.39	3,229.59	3,076.20	13.29	15.44	21.28	631.77	120.30	318.97	297.38	21.60	14.770					
3,400.00	3,370.34	3,315.99	3,143.97	13.72	16.27	20.31	683.93	132.62	369.07	346.76	22.31	16.542					
3,500.00	3,469.29	3,402.39	3,211.74	14.14	17.11	19.58	736.09	144.94	419.23	396.18	23.04	18.194					
3,600.00	3,568.24	3,488.80	3,279.51	14.57	17.96	19.00	788.25	157.26	469.42	445.64	23.78	19.738					
3,700.00	3,667.19	3,575.20	3,347.29	15.00	18.82	18.54	840.41	169.58	519.65	495.11	24.53	21.181					
3,800.00	3,766.14	3,661.60	3,415.06	15.42	19.69	18.15	892.57	181.90	569.89	544.60	25.29	22.534					
3,900.00	3,865.09	3,748.00	3,482.83	15.85	20.57	17.83	944.73	194.22	620.15	594.10	26.05	23.803					
4,000.00	3,964.03	3,834.41	3,550.60	16.28	21.45	17.56	996.89	206.54	670.43	643.61	26.82	24.996					
4,100.00	4,062.98	3,920.81	3,618.37	16.70	22.34	17.32	1,049.05	218.86	720.71	693.12	27.59	26.118					
4,200.00	4,161.93	4,007.21	3,686.15	17.13	23.23	17.12	1,101.21	231.18	771.00	742.63	28.37	27.175					
4,300.00	4,260.88	4,093.61	3,753.92	17.56	24.12	16.94	1,153.36	243.50	821.30	792.15	29.15	28.173					
4,400.00	4,359.83	4,180.02	3,821.69	17.98	25.02	16.78	1,205.52	255.81	871.61	841.67	29.94	29.116					
4,500.00	4,458.78	4,266.42	3,889.46	18.41	25.93	16.64	1,257.68	268.13	921.92	891.19	30.72	30.008					
4,600.00	4,557.73	4,352.82	3,957.24	18.84	26.83	16.51	1,309.84	280.45	972.23	940.72	31.51	30.853					
4,700.00	4,656.68	4,439.22	4,025.01	19.26	27.74	16.40	1,362.00	292.77	1,022.54	990.24	32.30	31.654					
4,800.00	4,755.63	4,525.63	4,092.78	19.69	28.65	16.29	1,414.16	305.09	1,072.86	1,039.76	33.10	32.415					
4,900.00	4,854.58	4,612.03	4,160.55	20.12	29.57	16.20	1,466.32	317.41	1,123.18	1,089.29	33.89	33.139					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,000.00	4,953.53	4,698.43	4,228.32	20.55	30.48	16.11	1,518.48	329.73	1,173.51	1,138.81	34.69	33.827			
5,100.00	5,052.48	4,784.83	4,296.10	20.97	31.40	16.03	1,570.64	342.05	1,223.83	1,188.34	35.49	34.482			
5,200.00	5,151.43	4,871.24	4,363.87	21.40	32.32	15.96	1,622.80	354.37	1,274.16	1,237.86	36.29	35.107			
5,300.00	5,250.38	4,957.64	4,431.64	21.83	33.24	15.89	1,674.96	366.69	1,324.48	1,287.39	37.10	35.704			
5,400.00	5,349.32	5,044.04	4,499.41	22.25	34.16	15.83	1,727.11	379.01	1,374.81	1,336.91	37.90	36.274			
5,500.00	5,448.27	5,130.44	4,567.18	22.68	35.08	15.77	1,779.27	391.32	1,425.14	1,386.44	38.71	36.818			
5,600.00	5,547.22	5,216.85	4,634.96	23.11	36.01	15.72	1,831.43	403.64	1,475.47	1,435.96	39.51	37.340			
5,625.90	5,572.85	5,239.22	4,652.51	23.22	36.25	15.70	1,844.94	406.83	1,488.51	1,448.78	39.72	37.471			
5,700.00	5,646.30	5,302.77	4,702.36	23.53	36.93	15.90	1,883.31	415.90	1,526.60	1,486.28	40.32	37.864			
5,800.00	5,745.78	5,386.98	4,768.40	23.92	37.83	16.15	1,934.14	427.90	1,580.49	1,539.38	41.10	38.453			
5,900.00	5,845.55	5,469.30	4,832.97	24.28	38.72	16.41	1,983.83	439.64	1,637.17	1,595.31	41.86	39.109			
6,000.00	5,945.50	5,549.63	4,895.99	24.61	39.58	16.67	2,032.33	451.09	1,696.59	1,653.99	42.60	39.829			
6,041.55	5,987.04	5,582.40	4,921.69	24.74	39.93	18.59	2,052.11	455.76	1,722.06	1,679.17	42.90	40.145			
6,100.00	6,045.49	5,628.25	4,957.65	24.91	40.43	18.48	2,079.79	462.30	1,758.23	1,714.92	43.31	40.595			
6,200.00	6,145.49	5,706.69	5,019.18	25.22	41.27	18.31	2,127.14	473.49	1,820.11	1,776.08	44.02	41.345			
6,300.00	6,245.49	5,785.13	5,080.70	25.52	42.11	18.14	2,174.49	484.67	1,881.99	1,837.26	44.74	42.069			
6,400.00	6,345.49	5,863.56	5,142.23	25.83	42.96	17.99	2,221.84	495.85	1,943.89	1,898.44	45.45	42.769			
6,500.00	6,445.49	5,942.00	5,203.75	26.14	43.81	17.84	2,269.19	507.04	2,005.79	1,959.62	46.17	43.446			
6,600.00	6,545.49	6,020.44	5,265.28	26.45	44.65	17.71	2,316.54	518.22	2,067.70	2,020.82	46.89	44.100			
6,700.00	6,645.49	6,098.88	5,326.80	26.76	45.50	17.58	2,363.89	529.40	2,129.62	2,082.01	47.61	44.733			
6,731.55	6,677.04	6,123.62	5,346.21	26.86	45.77	17.54	2,378.83	532.93	2,149.16	2,101.32	47.84	44.928			
6,750.00	6,695.49	6,138.05	5,357.53	26.92	45.92	106.59	2,387.54	534.99	2,160.65	2,112.69	47.97	45.043			
6,800.00	6,745.33	6,176.58	5,387.75	27.06	46.34	102.67	2,410.80	540.48	2,192.44	2,144.11	48.33	45.363			
6,850.00	6,794.65	6,214.07	5,417.16	27.21	46.74	98.66	2,433.44	545.83	2,224.96	2,176.26	48.70	45.687			
6,900.00	6,843.08	6,250.23	5,445.52	27.36	47.13	94.62	2,455.26	550.98	2,258.01	2,208.93	49.08	46.010			
6,950.00	6,890.24	6,284.78	5,472.62	27.50	47.51	90.57	2,476.12	555.91	2,291.38	2,241.92	49.46	46.329			
7,000.00	6,935.78	6,317.46	5,498.25	27.63	47.86	86.57	2,495.85	560.57	2,324.90	2,275.05	49.85	46.637			
7,050.00	6,979.35	6,348.02	5,522.22	27.76	48.19	82.66	2,514.30	564.93	2,358.38	2,308.13	50.25	46.930			
7,100.00	7,020.62	6,376.23	5,544.35	27.89	48.50	78.85	2,531.33	568.95	2,391.67	2,341.00	50.67	47.200			
7,150.00	7,059.27	6,401.88	5,564.47	28.01	48.77	75.18	2,546.81	572.60	2,424.61	2,373.51	51.11	47.441			
7,200.00	7,095.02	6,424.76	5,582.42	28.13	49.02	71.65	2,560.62	575.87	2,457.06	2,405.49	51.57	47.648			
7,250.00	7,127.58	6,444.71	5,598.06	28.27	49.24	68.29	2,572.67	578.71	2,488.86	2,436.80	52.05	47.815			
7,300.00	7,156.72	6,461.57	5,611.29	28.41	49.42	65.11	2,582.84	581.12	2,519.87	2,467.31	52.57	47.937			
7,350.00	7,182.21	6,475.22	5,621.99	28.58	49.57	62.09	2,591.08	583.06	2,549.97	2,496.85	53.11	48.013			
7,400.00	7,203.85	6,485.55	5,630.09	28.79	49.68	59.26	2,597.32	584.53	2,578.99	2,525.31	53.69	48.039			
7,450.00	7,221.48	6,492.48	5,635.53	29.05	49.75	56.60	2,601.50	585.52	2,606.81	2,552.52	54.29	48.018			
7,500.00	7,234.96	6,495.95	5,638.26	29.38	49.79	54.13	2,603.60	586.02	2,633.28	2,578.36	54.92	47.950			
7,550.00	7,244.21	6,495.96	5,638.26	29.79	49.79	51.82	2,603.60	586.02	2,658.25	2,602.68	55.57	47.839			
7,600.00	7,249.13	6,492.48	5,635.54	30.26	49.75	49.70	2,601.50	585.52	2,681.58	2,625.35	56.23	47.690			
7,631.55	7,250.00	6,488.51	5,632.42	30.59	49.71	48.44	2,599.11	584.96	2,695.39	2,638.74	56.65	47.580			
7,700.00	7,250.00	6,478.41	5,624.50	31.38	49.60	48.21	2,593.01	583.52	2,725.24	2,667.65	57.59	47.321			
7,800.00	7,250.00	6,463.66	5,612.93	32.73	49.44	47.87	2,584.10	581.41	2,771.25	2,712.23	59.02	46.952			
7,900.00	7,250.00	6,448.91	5,601.36	34.25	49.28	47.53	2,575.20	579.31	2,819.97	2,759.48	60.49	46.616			
8,000.00	7,250.00	6,434.15	5,589.78	35.92	49.12	47.19	2,566.29	577.21	2,871.28	2,809.30	61.98	46.328			
8,100.00	7,250.00	6,419.40	5,578.21	37.73	48.96	46.84	2,557.39	575.10	2,925.03	2,861.58	63.45	46.096			
8,200.00	7,250.00	6,404.65	5,566.64	39.64	48.80	46.50	2,548.48	573.00	2,981.10	2,916.19	64.91	45.927			
8,300.00	7,250.00	6,389.90	5,555.07	41.64	48.64	46.16	2,539.58	570.90	3,039.35	2,973.02	66.33	45.823			
8,400.00	7,250.00	10,431.76	7,252.00	43.72	74.24	90.04	3,825.98	-1,343.98	3,067.36	2,962.96	104.40	29.381			
8,500.00	7,250.00	10,531.76	7,252.00	45.87	75.35	90.04	3,825.10	-1,443.97	3,067.30	2,958.49	108.82	28.188			
8,600.00	7,250.00	10,631.76	7,252.00	48.08	76.62	90.04	3,824.22	-1,543.97	3,067.24	2,953.92	113.32	27.066			
8,700.00	7,250.00	10,731.76	7,252.00	50.34	78.05	90.04	3,823.34	-1,643.97	3,067.18	2,949.27	117.91	26.012			
8,800.00	7,250.00	10,831.76	7,252.00	52.64	79.62	90.04	3,822.46	-1,743.96	3,067.12	2,944.55	122.57	25.023			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
8,900.00	7,250.00	10,931.76	7,252.00	54.98	81.32	90.04	3,821.58	-1,843.96	3,067.06	2,939.76	127.30	24.094		
9,000.00	7,250.00	11,031.76	7,252.00	57.35	83.13	90.04	3,820.69	-1,943.95	3,067.00	2,934.92	132.08	23.221		
9,100.00	7,250.00	11,131.76	7,252.00	59.76	85.05	90.04	3,819.81	-2,043.95	3,066.94	2,930.03	136.91	22.401		
9,200.00	7,250.00	11,231.76	7,252.00	62.19	87.04	90.04	3,818.93	-2,143.95	3,066.88	2,925.09	141.78	21.631		
9,300.00	7,250.00	11,331.76	7,252.00	64.65	89.11	90.04	3,818.05	-2,243.94	3,066.81	2,920.11	146.70	20.905		
9,400.00	7,250.00	11,431.76	7,252.00	67.12	91.25	90.04	3,817.17	-2,343.94	3,066.75	2,915.10	151.65	20.222		
9,500.00	7,249.99	11,531.76	7,252.00	69.61	93.43	90.04	3,816.29	-2,443.94	3,066.69	2,910.05	156.64	19.578		
9,600.00	7,249.99	11,631.76	7,252.00	72.12	95.66	90.04	3,815.41	-2,543.93	3,066.63	2,904.98	161.65	18.970		
9,700.00	7,249.99	11,731.76	7,252.00	74.65	97.94	90.04	3,814.53	-2,643.93	3,066.57	2,899.87	166.70	18.396		
9,800.00	7,249.99	11,831.76	7,252.00	77.19	100.24	90.04	3,813.64	-2,743.92	3,066.51	2,894.75	171.76	17.853		
9,900.00	7,249.99	11,931.76	7,252.00	79.74	102.58	90.04	3,812.76	-2,843.92	3,066.45	2,889.60	176.85	17.339		
10,000.00	7,249.99	12,031.76	7,252.00	82.30	104.94	90.04	3,811.88	-2,943.92	3,066.39	2,884.42	181.96	16.852		
10,100.00	7,249.99	12,131.76	7,252.00	84.87	107.33	90.04	3,811.00	-3,043.91	3,066.33	2,879.23	187.09	16.389		
10,200.00	7,249.99	12,231.76	7,252.00	87.45	109.74	90.04	3,810.12	-3,143.91	3,066.26	2,874.03	192.24	15.950		
10,300.00	7,249.99	12,331.76	7,252.00	90.04	112.17	90.04	3,809.24	-3,243.90	3,066.20	2,868.80	197.40	15.533		
10,400.00	7,249.99	12,431.76	7,252.00	92.64	114.61	90.04	3,808.36	-3,343.90	3,066.14	2,863.57	202.58	15.136		
10,500.00	7,249.99	12,531.76	7,252.00	95.24	117.07	90.04	3,807.47	-3,443.90	3,066.08	2,858.32	207.77	14.757		
10,600.00	7,249.99	12,631.76	7,252.00	97.85	119.55	90.04	3,806.59	-3,543.89	3,066.02	2,853.05	212.97	14.397		
10,700.00	7,249.99	12,731.76	7,252.00	100.47	122.04	90.04	3,805.71	-3,643.89	3,065.96	2,847.78	218.18	14.052		
10,800.00	7,249.99	12,831.76	7,252.00	103.09	124.54	90.04	3,804.83	-3,743.88	3,065.90	2,842.49	223.41	13.723		
10,900.00	7,249.99	12,931.76	7,252.00	105.71	127.05	90.04	3,803.95	-3,843.88	3,065.84	2,837.19	228.64	13.409		
11,000.00	7,249.99	13,031.76	7,252.00	108.35	129.57	90.04	3,803.07	-3,943.88	3,065.78	2,831.89	233.89	13.108		
11,100.00	7,249.99	13,131.76	7,252.00	110.98	132.10	90.04	3,802.19	-4,043.87	3,065.71	2,826.57	239.14	12.820		
11,200.00	7,249.99	13,231.76	7,252.00	113.62	134.64	90.04	3,801.31	-4,143.87	3,065.65	2,821.25	244.40	12.543		
11,300.00	7,249.99	13,331.76	7,252.00	116.26	137.19	90.04	3,800.42	-4,243.87	3,065.59	2,815.92	249.67	12.278		
11,400.00	7,249.99	13,431.76	7,252.00	118.91	139.74	90.04	3,799.54	-4,343.86	3,065.53	2,810.58	254.95	12.024		
11,500.00	7,249.99	13,531.76	7,252.00	121.56	142.30	90.04	3,798.66	-4,443.86	3,065.47	2,805.23	260.24	11.780		
11,600.00	7,249.99	13,631.76	7,252.00	124.21	144.87	90.04	3,797.78	-4,543.85	3,065.41	2,799.88	265.53	11.545		
11,700.00	7,249.99	13,731.76	7,252.00	126.87	147.44	90.04	3,796.90	-4,643.85	3,065.35	2,794.53	270.82	11.319		
11,800.00	7,249.99	13,831.76	7,252.00	129.53	150.02	90.04	3,796.02	-4,743.85	3,065.29	2,789.16	276.12	11.101		
11,900.00	7,249.99	13,931.76	7,252.00	132.19	152.61	90.04	3,795.14	-4,843.84	3,065.23	2,783.79	281.43	10.892		
12,000.00	7,249.99	14,031.76	7,252.00	134.86	155.20	90.04	3,794.26	-4,943.84	3,065.17	2,778.42	286.74	10.690		
12,100.00	7,249.99	14,131.76	7,252.00	137.52	157.79	90.04	3,793.37	-5,043.83	3,065.10	2,773.04	292.06	10.495		
12,200.00	7,249.99	14,231.76	7,252.00	140.19	160.39	90.04	3,792.49	-5,143.83	3,065.04	2,767.66	297.38	10.307		
12,300.00	7,249.99	14,331.76	7,252.00	142.86	163.00	90.04	3,791.61	-5,243.83	3,064.98	2,762.27	302.71	10.125		
12,400.00	7,249.99	14,431.76	7,252.00	145.53	165.60	90.04	3,790.73	-5,343.82	3,064.92	2,756.88	308.04	9.950		
12,500.00	7,249.99	14,531.76	7,252.00	148.21	168.22	90.04	3,789.85	-5,443.82	3,064.86	2,751.49	313.37	9.780		
12,600.00	7,249.99	14,631.76	7,252.00	150.88	170.83	90.04	3,788.97	-5,543.81	3,064.80	2,746.09	318.71	9.616		
12,700.00	7,249.99	14,731.76	7,252.00	153.56	173.45	90.04	3,788.09	-5,643.81	3,064.74	2,740.69	324.05	9.458		
12,800.00	7,249.99	14,831.76	7,252.00	156.24	176.07	90.04	3,787.21	-5,743.81	3,064.68	2,735.28	329.40	9.304		
12,900.00	7,249.98	14,931.76	7,252.00	158.92	178.69	90.04	3,786.32	-5,843.80	3,064.62	2,729.87	334.74	9.155		
13,000.00	7,249.98	15,031.76	7,252.00	161.60	181.32	90.04	3,785.44	-5,943.80	3,064.55	2,724.46	340.09	9.011		
13,100.00	7,249.98	15,131.76	7,252.00	164.28	183.95	90.04	3,784.56	-6,043.80	3,064.49	2,719.05	345.45	8.871		
13,200.00	7,249.98	15,231.76	7,252.00	166.97	186.59	90.04	3,783.68	-6,143.79	3,064.43	2,713.63	350.80	8.735		
13,300.00	7,249.98	15,331.76	7,252.00	169.65	189.22	90.04	3,782.80	-6,243.79	3,064.37	2,708.21	356.16	8.604		
13,400.00	7,249.98	15,431.76	7,252.00	172.34	191.86	90.04	3,781.92	-6,343.78	3,064.31	2,702.79	361.52	8.476		
13,500.00	7,249.98	15,531.76	7,252.00	175.03	194.50	90.04	3,781.04	-6,443.78	3,064.25	2,697.36	366.89	8.352		
13,600.00	7,249.98	15,631.76	7,252.00	177.72	197.14	90.04	3,780.15	-6,543.78	3,064.19	2,691.93	372.25	8.231		
13,700.00	7,249.98	15,731.76	7,252.00	180.41	199.79	90.04	3,779.27	-6,643.77	3,064.13	2,686.50	377.62	8.114		
13,800.00	7,249.98	15,831.76	7,252.00	183.10	202.44	90.04	3,778.39	-6,743.77	3,064.07	2,681.07	382.99	8.000		
13,900.00	7,249.98	15,931.76	7,252.00	185.79	205.09	90.04	3,777.51	-6,843.76	3,064.00	2,675.64	388.37	7.889		
14,000.00	7,249.98	16,031.76	7,252.00	188.48	207.74	90.04	3,776.63	-6,943.76	3,063.94	2,670.20	393.74	7.782		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance			Rule Assigned:	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,249.98	16,131.76	7,252.00	191.18	210.39	90.04	3,775.75	-7,043.76	3,063.88	2,664.77	399.12	7.677			
14,200.00	7,249.98	16,231.76	7,252.00	193.87	213.04	90.04	3,774.87	-7,143.75	3,063.82	2,659.33	404.49	7.574			
14,300.00	7,249.98	16,331.76	7,252.00	196.56	215.70	90.04	3,773.99	-7,243.75	3,063.76	2,653.89	409.87	7.475			
14,400.00	7,249.98	16,431.76	7,252.00	199.26	218.36	90.04	3,773.10	-7,343.74	3,063.70	2,648.44	415.26	7.378			
14,500.00	7,249.98	16,531.76	7,252.00	201.96	221.02	90.04	3,772.22	-7,443.74	3,063.64	2,643.00	420.64	7.283			
14,600.00	7,249.98	16,631.76	7,252.00	204.65	223.68	90.04	3,771.34	-7,543.74	3,063.58	2,637.55	426.02	7.191			
14,700.00	7,249.98	16,731.76	7,252.00	207.35	226.34	90.04	3,770.46	-7,643.73	3,063.52	2,632.11	431.41	7.101			
14,800.00	7,249.98	16,831.76	7,252.00	210.05	229.00	90.04	3,769.58	-7,743.73	3,063.45	2,626.66	436.80	7.013			
14,900.00	7,249.98	16,931.76	7,252.00	212.75	231.67	90.04	3,768.70	-7,843.72	3,063.39	2,621.21	442.19	6.928			
15,000.00	7,249.98	17,031.76	7,252.00	215.45	234.34	90.04	3,767.82	-7,943.72	3,063.33	2,615.76	447.58	6.844			
15,100.00	7,249.98	17,131.76	7,252.00	218.15	237.00	90.04	3,766.94	-8,043.72	3,063.27	2,610.31	452.97	6.763			
15,200.00	7,249.98	17,231.76	7,252.00	220.85	239.67	90.04	3,766.05	-8,143.71	3,063.21	2,604.85	458.36	6.683			
15,300.00	7,249.98	17,331.76	7,252.00	223.55	242.34	90.04	3,765.17	-8,243.71	3,063.15	2,599.40	463.75	6.605			
15,365.74	7,249.98	17,395.63	7,252.00	225.33	244.05	90.04	3,764.61	-8,307.57	3,063.11	2,595.84	467.27	6.555			
15,400.00	7,249.98	17,395.63	7,252.00	226.25	244.05	90.04	3,764.61	-8,307.57	3,063.30	2,594.72	468.58	6.537			
15,478.21	7,250.00	17,395.63	7,252.00	228.36	244.05	90.04	3,764.61	-8,307.57	3,064.97	2,593.61	471.36	6.502			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft					
Survey Program:		0-OWSG (Rev2) MWD			Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		Offset Well Error:	0.00 usft			
Reference		Offset		Reference		Offset				Between Centres		Between Ellipses		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)											
0.00	0.00	0.00	0.00	0.00	0.00	-125.51	-21.86	-30.63			37.63								
100.00	100.00	100.00	100.00	0.14	0.14	-125.51	-21.86	-30.63			37.63	37.34	0.29	131.212					
200.00	200.00	200.00	200.00	0.50	0.50	-125.51	-21.86	-30.63			37.63	36.62	1.00	37.489					
300.00	300.00	300.00	300.00	0.86	0.86	-125.51	-21.86	-30.63			37.63	35.91	1.72	21.869 CC					
400.00	399.98	399.98	399.98	1.22	1.22	-129.37	-21.86	-30.63			38.71	36.27	2.44	15.880					
500.00	499.84	499.84	499.84	1.58	1.58	-134.81	-21.86	-30.63			42.23	39.07	3.16	13.371					
600.00	599.45	599.45	599.45	1.95	1.93	-142.00	-21.86	-30.63			48.77	44.89	3.88	12.561					
700.00	698.70	698.70	698.70	2.33	2.29	-149.21	-21.86	-30.63			58.87	54.26	4.61	12.769					
715.65	714.19	714.19	714.19	2.39	2.35	-150.26	-21.86	-30.63			60.79	56.06	4.73	12.859					
800.00	797.66	797.66	797.66	2.73	2.64	-155.09	-21.86	-30.63			71.66	66.32	5.33	13.432					
900.00	896.61	896.61	896.61	3.13	3.00	-159.19	-21.86	-30.63			85.01	78.96	6.05	14.043					
1,000.00	995.56	995.56	995.56	3.54	3.35	-162.17	-21.86	-30.63			98.68	91.90	6.77	14.570					
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-164.43	-21.86	-30.63			112.54	105.05	7.49	15.021					
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-166.18	-21.86	-30.63			126.53	118.32	8.21	15.409					
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-167.59	-21.86	-30.63			140.62	131.69	8.93	15.744					
1,400.00	1,391.35	1,393.71	1,393.71	5.22	4.78	-168.77	-21.54	-30.54			154.47	144.80	9.66	15.984					
1,500.00	1,490.30	1,498.95	1,498.88	5.64	5.16	-169.84	-18.11	-29.64			165.35	154.94	10.41	15.883					
1,600.00	1,589.25	1,604.89	1,604.56	6.06	5.54	-170.86	-10.90	-27.74			172.61	161.46	11.15	15.481					
1,700.00	1,688.20	1,711.24	1,710.29	6.48	5.92	-171.90	0.13	-24.82			176.23	164.35	11.88	14.833					
1,800.00	1,787.15	1,817.72	1,815.64	6.91	6.31	-173.03	14.98	-20.91			176.21	163.61	12.60	13.985					
1,900.00	1,886.10	1,924.02	1,920.19	7.33	6.72	-174.32	33.56	-16.00			172.56	159.25	13.31	12.968					
2,000.00	1,985.05	2,029.86	2,023.49	7.75	7.14	-175.86	55.77	-10.14			165.34	151.34	14.00	11.811					
2,100.00	2,084.00	2,134.95	2,125.16	8.18	7.59	-177.78	81.47	-3.35			154.63	139.95	14.68	10.534					
2,200.00	2,182.95	2,239.02	2,224.82	8.60	8.06	179.67	110.45	4.30			140.56	125.21	15.35	9.156					
2,300.00	2,281.90	2,341.82	2,322.13	9.03	8.56	176.11	142.49	12.76			123.37	107.34	16.03	7.695					
2,400.00	2,380.85	2,443.11	2,416.78	9.45	9.09	170.72	177.35	21.96			103.49	86.73	16.76	6.174					
2,500.00	2,479.80	2,542.68	2,508.53	9.88	9.65	161.75	214.74	31.83			81.84	64.18	17.66	4.635					
2,600.00	2,578.74	2,640.34	2,597.15	10.31	10.24	145.14	254.39	42.30			60.93	41.84	19.08	3.193					
2,700.00	2,677.69	2,735.91	2,682.48	10.73	10.86	114.45	296.00	53.28			48.23	26.89	21.34	2.260					
2,717.03	2,694.54	2,751.97	2,696.68	10.80	10.97	107.95	303.26	55.20			47.88	26.22	21.66	2.211 ES, SF					
2,800.00	2,776.64	2,829.27	2,764.40	11.16	11.51	78.09	339.28	64.70			56.13	34.08	22.05	2.546					
2,900.00	2,875.59	2,920.29	2,842.83	11.58	12.18	55.26	383.94	76.49			82.62	61.15	21.47	3.848					
3,000.00	2,974.54	3,008.89	2,917.72	12.01	12.87	43.34	429.70	88.57			118.37	97.10	21.27	5.565					
3,100.00	3,073.49	3,095.00	2,989.08	12.44	13.58	36.57	476.30	100.88			159.31	137.94	21.37	7.454					
3,200.00	3,172.44	3,178.57	3,056.91	12.86	14.30	32.32	523.49	113.33			203.98	182.37	21.62	9.436					
3,300.00	3,271.39	3,265.83	3,126.87	13.29	15.09	29.32	573.93	126.65			250.75	228.57	22.18	11.304					
3,400.00	3,370.34	3,353.57	3,197.20	13.72	15.89	27.24	624.64	140.03			297.91	275.08	22.83	13.048					
3,500.00	3,469.29	3,441.32	3,267.54	14.14	16.71	25.73	675.36	153.42			345.29	321.77	23.52	14.681					
3,600.00	3,568.24	3,529.06	3,337.88	14.57	17.54	24.58	726.08	166.81			392.81	368.58	24.23	16.211					
3,700.00	3,667.19	3,616.81	3,408.22	15.00	18.38	23.67	776.80	180.20			440.44	415.48	24.96	17.646					
3,800.00	3,766.14	3,704.55	3,478.56	15.42	19.22	22.95	827.51	193.59			488.12	462.42	25.70	18.992					
3,900.00	3,865.09	3,792.29	3,548.89	15.85	20.08	22.35	878.23	206.98			535.86	509.41	26.45	20.257					
4,000.00	3,964.03	3,880.04	3,619.23	16.28	20.94	21.85	928.95	220.36			583.64	556.43	27.21	21.448					
4,100.00	4,062.98	3,967.78	3,689.57	16.70	21.81	21.42	979.66	233.75			631.44	603.47	27.98	22.569					
4,200.00	4,161.93	4,055.52	3,759.91	17.13	22.68	21.06	1,030.38	247.14			679.27	650.52	28.75	23.627					
4,300.00	4,260.88	4,143.27	3,830.25	17.56	23.56	20.74	1,081.10	260.53			727.12	697.60	29.53	24.627					
4,400.00	4,359.83	4,231.01	3,900.59	17.98	24.44	20.46	1,131.82	273.92			774.98	744.68	30.31	25.572					
4,500.00	4,458.78	4,318.75	3,970.92	18.41	25.32	20.22	1,182.53	287.31			822.86	791.77	31.09	26.468					
4,600.00	4,557.73	4,406.50	4,041.26	18.84	26.21	20.00	1,233.25	300.70			870.74	838.87	31.88	27.316					
4,700.00	4,656.68	4,494.24	4,111.60	19.26	27.10	19.80	1,283.97	314.08			918.64	885.97	32.67	28.122					
4,800.00	4,755.63	4,581.99	4,181.94	19.69	27.99	19.63	1,334.69	327.47			966.54	933.08	33.46	28.887					
4,900.00	4,854.58	4,669.73	4,252.28	20.12	28.89	19.47	1,385.40	340.86			1,014.45	980.19	34.25	29.615					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	4,953.53	4,757.47	4,322.61	20.55	29.79	19.32	1,436.12	354.25	1,062.36	1,027.31	35.05	30.308		
5,100.00	5,052.48	4,845.22	4,392.95	20.97	30.69	19.19	1,486.84	367.64	1,110.28	1,074.43	35.85	30.969		
5,200.00	5,151.43	4,932.96	4,463.29	21.40	31.59	19.07	1,537.56	381.03	1,158.20	1,121.55	36.65	31.599		
5,300.00	5,250.38	5,020.70	4,533.63	21.83	32.49	18.96	1,588.27	394.41	1,206.13	1,168.67	37.46	32.201		
5,400.00	5,349.32	5,108.45	4,603.97	22.25	33.39	18.85	1,638.99	407.80	1,254.06	1,215.80	38.26	32.777		
5,500.00	5,448.27	5,196.19	4,674.30	22.68	34.30	18.76	1,689.71	421.19	1,301.99	1,262.92	39.07	33.327		
5,600.00	5,547.22	5,283.93	4,744.64	23.11	35.21	18.67	1,740.43	434.58	1,349.92	1,310.05	39.87	33.854		
5,625.90	5,572.85	5,306.66	4,762.86	23.22	35.44	18.64	1,753.56	438.05	1,362.34	1,322.25	40.08	33.987		
5,700.00	5,646.30	5,371.23	4,814.62	23.53	36.11	18.84	1,790.88	447.90	1,398.65	1,357.98	40.68	34.383		
5,800.00	5,745.78	5,456.89	4,883.29	23.92	37.00	19.09	1,840.40	460.97	1,450.15	1,408.69	41.46	34.977		
5,900.00	5,845.55	5,540.76	4,950.52	24.28	37.87	19.33	1,888.88	473.77	1,504.46	1,462.24	42.22	35.635		
6,000.00	5,945.50	5,622.74	5,016.24	24.61	38.72	19.57	1,936.26	486.28	1,561.51	1,518.56	42.95	36.356		
6,041.55	5,987.04	5,656.22	5,043.08	24.74	39.07	21.49	1,955.61	491.38	1,586.01	1,542.76	43.25	36.672		
6,100.00	6,045.49	5,703.08	5,080.64	24.91	39.56	21.35	1,982.70	498.53	1,620.80	1,577.14	43.66	37.121		
6,200.00	6,145.49	5,783.24	5,149.90	25.22	40.39	21.12	2,029.04	510.77	1,680.34	1,635.97	44.37	37.870		
6,300.00	6,245.49	5,863.41	5,209.17	25.52	41.23	20.90	2,075.37	523.00	1,739.89	1,694.81	45.08	38.594		
6,400.00	6,345.49	5,943.57	5,273.43	25.83	42.06	20.70	2,121.71	535.23	1,799.46	1,753.67	45.80	39.294		
6,500.00	6,445.49	6,023.73	5,337.69	26.14	42.90	20.51	2,168.04	547.46	1,859.05	1,812.54	46.51	39.970		
6,600.00	6,545.49	6,103.90	5,401.95	26.45	43.73	20.33	2,214.38	559.69	1,918.64	1,871.41	47.23	40.624		
6,700.00	6,645.49	6,184.06	5,466.21	26.76	44.57	20.16	2,260.71	571.93	1,978.25	1,930.30	47.95	41.257		
6,731.55	6,677.04	6,209.35	5,486.48	26.86	44.84	20.11	2,275.33	575.78	1,997.06	1,948.88	48.18	41.453		
6,750.00	6,695.49	6,224.09	5,498.30	26.92	44.99	109.26	2,283.85	578.03	2,008.14	1,959.83	48.31	41.568		
6,800.00	6,745.33	6,263.45	5,529.85	27.06	45.40	105.58	2,306.60	584.04	2,038.92	1,990.25	48.67	41.889		
6,850.00	6,794.65	6,301.71	5,560.52	27.21	45.80	101.79	2,328.72	589.88	2,070.63	2,021.58	49.05	42.216		
6,900.00	6,843.08	6,338.58	5,590.08	27.36	46.19	97.93	2,350.03	595.50	2,103.04	2,053.61	49.43	42.544		
6,950.00	6,890.24	6,373.78	5,618.30	27.50	46.56	94.02	2,370.38	600.87	2,135.97	2,086.15	49.82	42.871		
7,000.00	6,935.78	6,407.05	5,644.96	27.63	46.90	90.10	2,389.60	605.95	2,169.24	2,119.02	50.23	43.190		
7,050.00	6,979.35	6,438.12	5,669.87	27.76	47.23	86.21	2,407.57	610.69	2,202.68	2,152.04	50.64	43.496		
7,100.00	7,020.62	6,466.77	5,692.84	27.89	47.53	82.36	2,424.12	615.06	2,236.12	2,185.05	51.07	43.784		
7,150.00	7,059.27	6,492.77	5,713.68	28.01	47.80	78.60	2,439.15	619.03	2,269.42	2,217.89	51.52	44.046		
7,200.00	7,095.02	6,515.93	5,732.25	28.13	48.04	74.93	2,452.54	622.56	2,302.42	2,250.42	52.00	44.280		
7,250.00	7,127.58	6,536.07	5,748.39	28.27	48.25	71.38	2,464.18	625.64	2,334.98	2,282.48	52.50	44.478		
7,300.00	7,156.72	6,553.03	5,761.99	28.41	48.43	67.96	2,473.99	628.22	2,366.95	2,313.92	53.03	44.638		
7,350.00	7,182.21	6,566.70	5,772.95	28.58	48.57	64.69	2,481.89	630.31	2,398.19	2,344.60	53.58	44.756		
7,400.00	7,203.85	6,576.96	5,781.17	28.79	48.68	61.58	2,487.82	631.88	2,428.54	2,374.37	54.17	44.832		
7,450.00	7,221.48	6,583.73	5,786.60	29.05	48.75	58.64	2,491.73	632.91	2,457.87	2,403.08	54.78	44.865		
7,500.00	7,234.96	6,586.97	5,789.20	29.38	48.79	55.86	2,493.61	633.40	2,486.00	2,430.58	55.42	44.859		
7,550.00	7,244.21	6,586.65	5,788.94	29.79	48.78	53.27	2,493.42	633.35	2,512.79	2,456.72	56.07	44.814		
7,600.00	7,249.13	6,582.78	5,785.83	30.26	48.74	50.86	2,491.18	632.76	2,538.08	2,481.34	56.73	44.736		
7,631.55	7,250.00	6,578.51	5,782.42	30.59	48.70	49.43	2,488.71	632.11	2,553.18	2,496.03	57.15	44.673		
7,700.00	7,250.00	6,567.74	5,773.78	31.38	48.59	49.16	2,482.49	630.47	2,585.90	2,527.82	58.09	44.519		
7,800.00	7,250.00	6,552.01	5,761.17	32.73	48.42	48.77	2,473.40	628.07	2,636.08	2,576.59	59.49	44.311		
7,900.00	7,250.00	9,532.19	7,058.00	34.25	64.11	85.83	3,393.36	-840.14	2,637.62	2,553.52	84.11	31.361		
8,000.00	7,250.00	9,632.19	7,058.00	35.92	64.69	85.83	3,392.48	-940.14	2,637.56	2,549.73	87.83	30.031		
8,100.00	7,250.00	9,732.19	7,058.00	37.73	65.42	85.83	3,391.60	-1,040.14	2,637.50	2,545.77	91.73	28.753		
8,200.00	7,250.00	9,832.19	7,058.00	39.64	66.33	85.83	3,390.72	-1,140.13	2,637.44	2,541.65	95.79	27.534		
8,300.00	7,250.00	9,932.19	7,058.00	41.64	67.43	85.83	3,389.84	-1,240.13	2,637.38	2,537.39	99.99	26.377		
8,400.00	7,250.00	10,032.19	7,058.00	43.72	68.72	85.83	3,388.96	-1,340.13	2,637.32	2,533.02	104.30	25.285		
8,500.00	7,250.00	10,132.19	7,058.00	45.87	70.20	85.83	3,388.07	-1,440.12	2,637.26	2,528.54	108.72	24.257		
8,600.00	7,250.00	10,232.19	7,058.00	48.08	71.83	85.82	3,387.19	-1,540.12	2,637.20	2,523.96	113.23	23.290		
8,700.00	7,250.00	10,332.19	7,058.00	50.34	73.61	85.82	3,386.31	-1,640.11	2,637.14	2,519.31	117.82	22.382		
8,800.00	7,250.00	10,432.19	7,058.00	52.64	75.50	85.82	3,385.43	-1,740.11	2,637.08	2,514.59	122.49	21.530		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL #1														Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD														Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
8,900.00	7,250.00	10,532.19	7,058.00	54.98	77.49	85.82	3,384.55	-1,840.11	2,637.01	2,509.80	127.21	20.730					
9,000.00	7,250.00	10,632.19	7,058.00	57.35	79.57	85.82	3,383.67	-1,940.10	2,636.95	2,504.96	131.99	19.978					
9,100.00	7,250.00	10,732.19	7,058.00	59.76	81.71	85.82	3,382.79	-2,040.10	2,636.89	2,500.07	136.82	19.273					
9,200.00	7,250.00	10,832.19	7,058.00	62.19	83.92	85.82	3,381.91	-2,140.09	2,636.83	2,495.14	141.69	18.609					
9,300.00	7,250.00	10,932.19	7,058.00	64.65	86.17	85.82	3,381.03	-2,240.09	2,636.77	2,490.16	146.61	17.985					
9,400.00	7,250.00	11,032.19	7,058.00	67.12	88.46	85.82	3,380.14	-2,340.09	2,636.71	2,485.15	151.56	17.398					
9,500.00	7,249.99	11,132.19	7,058.00	69.61	90.78	85.82	3,379.26	-2,440.08	2,636.65	2,480.11	156.54	16.843					
9,600.00	7,249.99	11,232.19	7,058.00	72.12	93.14	85.82	3,378.38	-2,540.08	2,636.59	2,475.04	161.55	16.321					
9,700.00	7,249.99	11,332.19	7,058.00	74.65	95.52	85.82	3,377.50	-2,640.07	2,636.53	2,469.94	166.59	15.827					
9,800.00	7,249.99	11,432.19	7,058.00	77.19	97.93	85.82	3,376.62	-2,740.07	2,636.47	2,464.82	171.65	15.360					
9,900.00	7,249.99	11,532.19	7,058.00	79.74	100.35	85.82	3,375.74	-2,840.07	2,636.41	2,459.67	176.73	14.918					
10,000.00	7,249.99	11,632.19	7,058.00	82.30	102.80	85.82	3,374.86	-2,940.06	2,636.34	2,454.51	181.83	14.499					
10,100.00	7,249.99	11,732.19	7,058.00	84.87	105.26	85.82	3,373.98	-3,040.06	2,636.28	2,449.33	186.96	14.101					
10,200.00	7,249.99	11,832.19	7,058.00	87.45	107.74	85.82	3,373.09	-3,140.05	2,636.22	2,444.13	192.10	13.723					
10,300.00	7,249.99	11,932.19	7,058.00	90.04	110.23	85.82	3,372.21	-3,240.05	2,636.16	2,438.91	197.25	13.364					
10,400.00	7,249.99	12,032.19	7,058.00	92.64	112.73	85.82	3,371.33	-3,340.05	2,636.10	2,433.68	202.42	13.023					
10,500.00	7,249.99	12,132.19	7,058.00	95.24	115.25	85.82	3,370.45	-3,440.04	2,636.04	2,428.44	207.60	12.698					
10,600.00	7,249.99	12,232.19	7,058.00	97.85	117.77	85.82	3,369.57	-3,540.04	2,635.98	2,423.18	212.80	12.387					
10,700.00	7,249.99	12,332.19	7,058.00	100.47	120.31	85.82	3,368.69	-3,640.04	2,635.92	2,417.91	218.00	12.091					
10,800.00	7,249.99	12,432.19	7,058.00	103.09	122.85	85.82	3,367.81	-3,740.03	2,635.86	2,412.64	223.22	11.808					
10,900.00	7,249.99	12,532.19	7,058.00	105.71	125.40	85.82	3,366.93	-3,840.03	2,635.80	2,407.35	228.45	11.538					
11,000.00	7,249.99	12,632.19	7,058.00	108.35	127.96	85.82	3,366.04	-3,940.02	2,635.74	2,402.05	233.69	11.279					
11,100.00	7,249.99	12,732.19	7,058.00	110.98	130.53	85.82	3,365.16	-4,040.02	2,635.67	2,396.74	238.93	11.031					
11,200.00	7,249.99	12,832.19	7,058.00	113.62	133.10	85.82	3,364.28	-4,140.02	2,635.61	2,391.43	244.18	10.794					
11,300.00	7,249.99	12,932.19	7,058.00	116.26	135.68	85.82	3,363.40	-4,240.01	2,635.55	2,386.11	249.44	10.566					
11,400.00	7,249.99	13,032.19	7,058.00	118.91	138.27	85.82	3,362.52	-4,340.01	2,635.49	2,380.78	254.71	10.347					
11,500.00	7,249.99	13,132.19	7,058.00	121.56	140.86	85.82	3,361.64	-4,440.00	2,635.43	2,375.44	259.99	10.137					
11,600.00	7,249.99	13,232.19	7,058.00	124.21	143.45	85.82	3,360.76	-4,540.00	2,635.37	2,370.10	265.27	9.935					
11,700.00	7,249.99	13,332.19	7,058.00	126.87	146.05	85.82	3,359.88	-4,640.00	2,635.31	2,364.76	270.55	9.740					
11,800.00	7,249.99	13,432.19	7,058.00	129.53	148.66	85.82	3,358.99	-4,739.99	2,635.25	2,359.40	275.85	9.553					
11,900.00	7,249.99	13,532.19	7,058.00	132.19	151.27	85.82	3,358.11	-4,839.99	2,635.19	2,354.04	281.14	9.373					
12,000.00	7,249.99	13,632.19	7,058.00	134.86	153.88	85.82	3,357.23	-4,939.98	2,635.13	2,348.68	286.45	9.199					
12,100.00	7,249.99	13,732.19	7,058.00	137.52	156.50	85.82	3,356.35	-5,039.98	2,635.07	2,343.31	291.75	9.032					
12,200.00	7,249.99	13,832.19	7,058.00	140.19	159.12	85.82	3,355.47	-5,139.98	2,635.01	2,337.94	297.07	8.870					
12,300.00	7,249.99	13,932.19	7,058.00	142.86	161.74	85.82	3,354.59	-5,239.97	2,634.94	2,332.56	302.38	8.714					
12,400.00	7,249.99	14,032.19	7,058.00	145.53	164.37	85.82	3,353.71	-5,339.97	2,634.88	2,327.18	307.70	8.563					
12,500.00	7,249.99	14,132.19	7,058.00	148.21	167.00	85.82	3,352.83	-5,439.97	2,634.82	2,321.80	313.02	8.417					
12,600.00	7,249.99	14,232.19	7,058.00	150.88	169.63	85.82	3,351.94	-5,539.96	2,634.76	2,316.41	318.35	8.276					
12,700.00	7,249.99	14,332.19	7,058.00	153.56	172.27	85.82	3,351.06	-5,639.96	2,634.70	2,311.02	323.68	8.140					
12,800.00	7,249.99	14,432.19	7,058.00	156.24	174.91	85.82	3,350.18	-5,739.95	2,634.64	2,305.62	329.02	8.008					
12,900.00	7,249.98	14,532.19	7,058.00	158.92	177.55	85.82	3,349.30	-5,839.95	2,634.58	2,300.23	334.35	7.880					
13,000.00	7,249.98	14,632.19	7,058.00	161.60	180.19	85.82	3,348.42	-5,939.95	2,634.52	2,294.82	339.69	7.756					
13,100.00	7,249.98	14,732.19	7,058.00	164.28	182.84	85.82	3,347.54	-6,039.94	2,634.46	2,289.42	345.04	7.635					
13,200.00	7,249.98	14,832.19	7,058.00	166.97	185.49	85.82	3,346.66	-6,139.94	2,634.40	2,284.01	350.38	7.519					
13,300.00	7,249.98	14,932.19	7,058.00	169.65	188.14	85.82	3,345.78	-6,239.93	2,634.34	2,278.61	355.73	7.405					
13,400.00	7,249.98	15,032.19	7,058.00	172.34	190.79	85.82	3,344.89	-6,339.93	2,634.27	2,273.19	361.08	7.296					
13,500.00	7,249.98	15,132.19	7,058.00	175.03	193.44	85.82	3,344.01	-6,439.93	2,634.21	2,267.78	366.43	7.189					
13,600.00	7,249.98	15,232.19	7,058.00	177.72	196.10	85.82	3,343.13	-6,539.92	2,634.15	2,262.36	371.79	7.085					
13,700.00	7,249.98	15,332.19	7,058.00	180.41	198.75	85.82	3,342.25	-6,639.92	2,634.09	2,256.95	377.15	6.984					
13,800.00	7,249.98	15,432.19	7,058.00	183.10	201.41	85.82	3,341.37	-6,739.91	2,634.03	2,251.53	382.51	6.886					
13,900.00	7,249.98	15,532.19	7,058.00	185.79	204.07	85.82	3,340.49	-6,839.91	2,633.97	2,246.10	387.87	6.791					
14,000.00	7,249.98	15,632.19	7,058.00	188.48	206.74	85.82	3,339.61	-6,939.91	2,633.91	2,240.68	393.23	6.698					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,249.98	15,732.19	7,058.00	191.18	209.40	85.82	3,338.73	-7,039.90	2,633.85	2,235.25	398.60	6.608			
14,200.00	7,249.98	15,832.19	7,058.00	193.87	212.07	85.82	3,337.84	-7,139.90	2,633.79	2,229.83	403.96	6.520			
14,300.00	7,249.98	15,932.19	7,058.00	196.56	214.73	85.82	3,336.96	-7,239.90	2,633.73	2,224.40	409.33	6.434			
14,400.00	7,249.98	16,032.19	7,058.00	199.26	217.40	85.82	3,336.08	-7,339.89	2,633.67	2,218.96	414.70	6.351			
14,500.00	7,249.98	16,132.19	7,058.00	201.96	220.07	85.82	3,335.20	-7,439.89	2,633.60	2,213.53	420.07	6.269			
14,600.00	7,249.98	16,232.19	7,058.00	204.65	222.74	85.82	3,334.32	-7,539.88	2,633.54	2,208.10	425.45	6.190			
14,700.00	7,249.98	16,332.19	7,058.00	207.35	225.41	85.82	3,333.44	-7,639.88	2,633.48	2,202.66	430.82	6.113			
14,800.00	7,249.98	16,432.19	7,058.00	210.05	228.09	85.82	3,332.56	-7,739.88	2,633.42	2,197.23	436.20	6.037			
14,900.00	7,249.98	16,532.19	7,058.00	212.75	230.76	85.82	3,331.68	-7,839.87	2,633.36	2,191.79	441.57	5.964			
15,000.00	7,249.98	16,632.19	7,058.00	215.45	233.44	85.82	3,330.80	-7,939.87	2,633.30	2,186.35	446.95	5.892			
15,100.00	7,249.98	16,732.19	7,058.00	218.15	236.11	85.82	3,329.91	-8,039.86	2,633.24	2,180.91	452.33	5.821			
15,200.00	7,249.98	16,832.19	7,058.00	220.85	238.79	85.82	3,329.03	-8,139.86	2,633.18	2,175.47	457.71	5.753			
15,300.00	7,249.98	16,932.19	7,058.00	223.55	241.47	85.82	3,328.15	-8,239.86	2,633.12	2,170.02	463.10	5.686			
15,380.61	7,249.98	17,011.19	7,058.00	225.73	243.58	85.82	3,327.46	-8,318.86	2,633.07	2,165.66	467.41	5.633			
15,400.00	7,249.98	17,011.19	7,058.00	226.25	243.58	85.82	3,327.46	-8,318.86	2,633.14	2,164.97	468.17	5.624			
15,478.21	7,250.00	17,011.19	7,058.00	228.36	243.58	85.82	3,327.46	-8,318.86	2,634.67	2,163.71	470.96	5.594			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.00 usft		
Survey Program: 0-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
0.00	0.00	0.00	0.00	0.00	0.00	-142.61	-40.07	-30.63	50.43						
100.00	100.00	100.00	100.00	0.14	0.14	-142.61	-40.07	-30.63	50.43	50.15	0.29	175.866			
200.00	200.00	200.00	200.00	0.50	0.50	-142.61	-40.07	-30.63	50.43	49.43	1.00	50.248			
300.00	300.00	300.00	300.00	0.86	0.86	-142.61	-40.07	-30.63	50.43	48.71	1.72	29.311	CC, ES		
400.00	399.98	399.98	399.98	1.22	1.22	-145.53	-40.07	-30.63	51.86	49.43	2.44	21.271			
500.00	499.84	499.84	499.84	1.58	1.58	-148.50	-40.07	-30.63	56.26	53.10	3.16	17.806			
600.00	599.45	599.45	599.45	1.95	1.93	-152.51	-40.07	-30.63	63.85	59.97	3.88	16.444			
700.00	698.70	698.70	698.70	2.33	2.29	-156.73	-40.07	-30.63	74.89	70.28	4.61	16.249			
715.65	714.19	714.19	714.19	2.39	2.35	-157.37	-40.07	-30.63	76.94	72.21	4.73	16.278			
800.00	797.66	797.66	797.66	2.73	2.64	-160.41	-40.07	-30.63	88.33	83.00	5.33	16.567			
900.00	896.61	896.61	896.61	3.13	3.00	-163.13	-40.07	-30.63	102.08	96.03	6.05	16.873			
1,000.00	995.56	995.56	995.56	3.54	3.35	-165.20	-40.07	-30.63	116.00	109.24	6.77	17.139			
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-166.83	-40.07	-30.63	130.04	122.56	7.49	17.367			
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-168.13	-40.07	-30.63	144.17	135.96	8.21	17.564			
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-169.21	-40.07	-30.63	158.35	149.42	8.93	17.735			
1,400.00	1,391.35	1,391.35	1,391.35	5.22	4.77	-170.11	-40.07	-30.63	172.58	162.93	9.65	17.885			
1,500.00	1,490.30	1,490.30	1,490.30	5.64	5.13	-170.87	-40.07	-30.63	186.84	176.47	10.37	18.017			
1,600.00	1,589.25	1,589.25	1,589.25	6.06	5.48	-171.52	-40.07	-30.63	201.13	190.04	11.09	18.133			
1,700.00	1,688.20	1,688.20	1,688.20	6.48	5.84	-172.09	-40.07	-30.63	215.45	203.63	11.81	18.237			
1,800.00	1,787.15	1,787.15	1,787.15	6.91	6.19	-172.59	-40.07	-30.63	229.78	217.24	12.54	18.330			
1,900.00	1,886.10	1,886.10	1,886.10	7.33	6.55	-173.02	-40.07	-30.63	244.12	230.87	13.26	18.413			
2,000.00	1,985.05	1,985.05	1,985.05	7.75	6.90	-173.41	-40.07	-30.63	258.48	244.50	13.98	18.489			
2,100.00	2,084.00	2,092.69	2,092.68	8.18	7.29	-173.84	-38.63	-30.20	271.51	256.76	14.75	18.409			
2,200.00	2,182.95	2,202.71	2,202.54	8.60	7.68	-174.37	-33.21	-28.56	280.84	265.33	15.51	18.103			
2,300.00	2,281.90	2,313.32	2,312.69	9.03	8.08	-175.01	-23.68	-25.68	286.41	270.14	16.26	17.610			
2,400.00	2,380.85	2,424.19	2,422.64	9.45	8.47	-175.77	-10.06	-21.57	288.20	271.21	16.99	16.958			
2,500.00	2,479.80	2,534.99	2,531.89	9.88	8.88	-176.70	7.61	-16.23	286.25	268.54	17.71	16.166			
2,600.00	2,578.74	2,645.40	2,639.95	10.31	9.30	-177.82	29.23	-9.70	280.59	262.19	18.40	15.250			
2,700.00	2,677.69	2,755.08	2,746.37	10.73	9.74	-179.20	54.64	-2.02	271.31	252.24	19.07	14.226			
2,800.00	2,776.64	2,863.74	2,850.71	11.16	10.20	179.09	83.64	6.73	258.52	238.79	19.73	13.103			
2,900.00	2,875.59	2,971.07	2,952.58	11.58	10.68	176.92	115.98	16.50	242.38	222.00	20.38	11.894			
3,000.00	2,974.54	3,076.80	3,051.62	12.01	11.19	174.12	151.39	27.20	223.14	202.10	21.03	10.609			
3,100.00	3,073.49	3,180.70	3,147.55	12.44	11.72	170.38	189.57	38.73	201.14	179.42	21.72	9.259			
3,200.00	3,172.44	3,282.53	3,240.12	12.86	12.29	165.24	230.20	51.00	176.98	154.47	22.51	7.863			
3,300.00	3,271.39	3,382.12	3,329.12	13.29	12.88	157.88	272.95	63.91	151.66	128.15	23.50	6.452			
3,400.00	3,370.34	3,479.30	3,414.43	13.72	13.50	147.04	317.50	77.37	127.09	102.17	24.93	5.099			
3,500.00	3,469.29	3,573.95	3,495.95	14.14	14.15	131.12	363.53	91.27	107.12	80.12	27.00	3.968			
3,600.00	3,568.24	3,665.96	3,573.64	14.57	14.82	110.02	410.72	105.53	98.40	69.20	29.19	3.371			
3,602.95	3,571.16	3,668.64	3,575.87	14.58	14.84	109.35	412.13	105.95	98.39	69.15	29.24	3.365	SF		
3,700.00	3,667.19	3,755.26	3,647.49	15.00	15.51	88.03	458.79	120.04	107.26	77.31	29.96	3.581			
3,800.00	3,766.14	3,841.97	3,717.65	15.42	16.21	70.43	507.54	134.77	132.96	103.59	29.37	4.527			
3,900.00	3,865.09	3,929.63	3,787.91	15.85	16.96	58.15	557.72	149.92	169.00	140.11	28.89	5.850			
4,000.00	3,964.03	4,017.29	3,858.18	16.28	17.72	50.05	607.90	165.08	209.94	181.14	28.80	7.290			
4,100.00	4,062.98	4,104.95	3,928.44	16.70	18.49	44.52	658.08	180.23	253.42	224.42	29.00	8.739			
4,200.00	4,161.93	4,192.61	3,998.70	17.13	19.28	40.56	708.26	195.39	298.33	268.95	29.38	10.153			
4,300.00	4,260.88	4,280.27	4,068.96	17.56	20.08	37.62	758.44	210.55	344.10	314.23	29.88	11.516			
4,400.00	4,359.83	4,367.93	4,139.22	17.98	20.90	35.35	808.62	225.70	390.45	360.00	30.45	12.823			
4,500.00	4,458.78	4,455.59	4,209.48	18.41	21.72	33.57	858.80	240.86	437.17	406.10	31.07	14.070			
4,600.00	4,557.73	4,543.25	4,279.74	18.84	22.55	32.12	908.98	256.02	484.17	452.44	31.73	15.261			
4,700.00	4,656.68	4,630.91	4,350.00	19.26	23.39	30.92	959.16	271.17	531.37	498.96	32.41	16.396			
4,800.00	4,755.63	4,718.57	4,420.26	19.69	24.24	29.92	1,009.34	286.33	578.72	545.61	33.11	17.478			
4,900.00	4,854.58	4,806.23	4,490.52	20.12	25.09	29.07	1,059.52	301.48	626.19	592.36	33.83	18.510			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	4,953.53	4,893.89	4,560.78	20.55	25.95	28.34	1,109.70	316.64	673.76	639.19	34.56	19.495		
5,100.00	5,052.48	4,981.55	4,631.04	20.97	26.81	27.71	1,159.88	331.80	721.39	686.09	35.30	20.435		
5,200.00	5,151.43	5,069.21	4,701.30	21.40	27.68	27.15	1,210.06	346.95	769.09	733.04	36.05	21.332		
5,300.00	5,250.38	5,156.87	4,771.56	21.83	28.55	26.66	1,260.24	362.11	816.83	780.02	36.81	22.191		
5,400.00	5,349.32	5,244.53	4,841.82	22.25	29.43	26.22	1,310.42	377.26	864.62	827.05	37.57	23.012		
5,500.00	5,448.27	5,332.19	4,912.08	22.68	30.31	25.83	1,360.60	392.42	912.45	874.10	38.34	23.798		
5,600.00	5,547.22	5,419.85	4,982.34	23.11	31.19	25.47	1,410.78	407.58	960.30	921.18	39.11	24.551		
5,625.90	5,572.85	5,442.55	5,000.54	23.22	31.42	25.39	1,423.78	411.50	972.69	933.38	39.32	24.740		
5,700.00	5,646.30	5,507.07	5,052.25	23.53	32.07	25.48	1,460.71	422.66	1,008.93	969.05	39.88	25.296		
5,800.00	5,745.78	5,592.67	5,120.86	23.92	32.93	25.60	1,509.71	437.46	1,060.24	1,019.61	40.63	26.095		
5,900.00	5,845.55	5,676.50	5,188.05	24.28	33.79	25.70	1,557.70	451.95	1,114.26	1,072.92	41.35	26.949		
6,000.00	5,945.50	5,758.45	5,253.73	24.61	34.62	25.79	1,604.61	466.12	1,170.96	1,128.93	42.04	27.856		
6,041.55	5,987.04	5,791.92	5,280.56	24.74	34.96	27.65	1,623.77	471.91	1,195.29	1,152.98	42.32	28.246		
6,100.00	6,045.49	5,838.77	5,318.11	24.91	35.44	27.35	1,650.59	480.01	1,229.85	1,187.15	42.71	28.798		
6,200.00	6,145.49	5,918.92	5,382.35	25.22	36.26	26.86	1,696.47	493.86	1,289.03	1,245.65	43.38	29.717		
6,300.00	6,245.49	5,999.07	5,446.59	25.52	37.08	26.42	1,742.35	507.72	1,348.26	1,304.21	44.05	30.606		
6,400.00	6,345.49	6,079.22	5,510.84	25.83	37.90	26.02	1,788.24	521.58	1,407.54	1,362.80	44.73	31.464		
6,500.00	6,445.49	6,159.37	5,575.08	26.14	38.72	25.65	1,834.12	535.44	1,466.85	1,421.43	45.42	32.294		
6,600.00	6,545.49	6,239.53	5,639.32	26.45	39.55	25.30	1,880.00	549.30	1,526.21	1,480.10	46.11	33.097		
6,700.00	6,645.49	6,319.68	5,703.56	26.76	40.37	24.98	1,925.88	563.15	1,585.60	1,538.79	46.81	33.874		
6,731.55	6,677.04	6,344.96	5,723.83	26.86	40.64	24.89	1,940.35	567.53	1,604.34	1,557.31	47.03	34.114		
6,750.00	6,695.49	6,359.70	5,735.64	26.92	40.79	114.06	1,948.79	570.07	1,615.41	1,568.25	47.16	34.255		
6,800.00	6,745.33	6,398.97	5,767.12	27.06	41.19	110.42	1,971.27	576.86	1,646.33	1,598.81	47.52	34.648		
6,850.00	6,794.65	6,437.06	5,797.65	27.21	41.59	106.64	1,993.08	583.45	1,678.43	1,630.54	47.89	35.047		
6,900.00	6,843.08	6,473.68	5,826.99	27.36	41.96	102.73	2,014.04	589.78	1,711.50	1,663.22	48.28	35.451		
6,950.00	6,890.24	6,508.54	5,854.93	27.50	42.33	98.71	2,033.99	595.81	1,745.35	1,696.67	48.68	35.855		
7,000.00	6,935.78	6,541.38	5,881.26	27.63	42.67	94.61	2,052.79	601.48	1,779.78	1,730.69	49.09	36.253		
7,050.00	6,979.35	6,571.95	5,905.76	27.76	42.98	90.47	2,070.29	606.77	1,814.63	1,765.11	49.52	36.641		
7,100.00	7,020.62	6,600.02	5,928.26	27.89	43.27	86.30	2,086.36	611.62	1,849.73	1,799.76	49.98	37.013		
7,150.00	7,059.27	6,625.37	5,948.58	28.01	43.53	82.13	2,100.87	616.01	1,884.93	1,834.49	50.45	37.365		
7,200.00	7,095.02	6,647.82	5,966.57	28.13	43.77	78.00	2,113.72	619.89	1,920.07	1,869.13	50.94	37.692		
7,250.00	7,127.58	6,667.19	5,982.09	28.27	43.97	73.94	2,124.81	623.24	1,955.00	1,903.54	51.46	37.989		
7,300.00	7,156.72	6,683.33	5,995.03	28.41	44.14	69.97	2,134.05	626.03	1,989.56	1,937.55	52.01	38.254		
7,350.00	7,182.21	6,696.12	6,005.28	28.58	44.27	66.13	2,141.37	628.24	2,023.59	1,971.01	52.58	38.486		
7,400.00	7,203.85	6,705.46	6,012.77	28.79	44.36	62.44	2,146.72	629.85	2,056.93	2,003.75	53.18	38.681		
7,450.00	7,221.48	6,711.29	6,017.44	29.05	44.43	58.93	2,150.05	630.86	2,089.41	2,035.62	53.79	38.842		
7,500.00	7,234.96	6,713.55	6,019.25	29.38	44.45	55.60	2,151.35	631.25	2,120.86	2,066.44	54.42	38.969		
7,550.00	7,244.21	6,712.23	6,018.20	29.79	44.43	52.49	2,150.60	631.03	2,151.10	2,096.03	55.06	39.065		
7,600.00	7,249.13	6,707.35	6,014.28	30.26	44.38	49.58	2,147.80	630.18	2,179.94	2,124.24	55.71	39.132		
7,631.55	7,250.00	9,214.99	7,162.00	30.59	56.78	87.70	2,955.39	-566.89	2,192.20	2,118.54	73.66	29.761		
7,700.00	7,250.00	9,283.44	7,162.00	31.38	57.01	87.70	2,954.82	-635.33	2,192.18	2,116.40	75.78	28.928		
7,800.00	7,250.00	9,383.44	7,162.00	32.73	57.46	87.70	2,953.98	-735.33	2,192.16	2,113.06	79.11	27.712		
7,900.00	7,250.00	9,483.44	7,162.00	34.25	58.08	87.70	2,953.14	-835.33	2,192.15	2,109.48	82.67	26.517		
8,000.00	7,250.00	9,583.44	7,162.00	35.92	58.91	87.70	2,952.30	-935.32	2,192.13	2,105.69	86.44	25.360		
8,100.00	7,250.00	9,683.44	7,162.00	37.73	59.98	87.70	2,951.46	-1,035.32	2,192.11	2,101.72	90.39	24.252		
8,200.00	7,250.00	9,783.44	7,162.00	39.64	61.29	87.70	2,950.63	-1,135.32	2,192.09	2,097.60	94.49	23.198		
8,300.00	7,250.00	9,883.44	7,162.00	41.64	62.81	87.70	2,949.79	-1,235.31	2,192.07	2,093.34	98.73	22.202		
8,400.00	7,250.00	9,983.44	7,162.00	43.72	64.52	87.70	2,948.95	-1,335.31	2,192.06	2,088.96	103.09	21.263		
8,500.00	7,250.00	10,083.44	7,162.00	45.87	66.38	87.70	2,948.11	-1,435.31	2,192.04	2,084.48	107.55	20.381		
8,600.00	7,250.00	10,183.44	7,162.00	48.08	68.36	87.70	2,947.27	-1,535.30	2,192.02	2,079.91	112.10	19.553		
8,700.00	7,250.00	10,283.44	7,162.00	50.34	70.44	87.70	2,946.43	-1,635.30	2,192.00	2,075.27	116.73	18.778		
8,800.00	7,250.00	10,383.44	7,162.00	52.64	72.59	87.70	2,945.60	-1,735.30	2,191.98	2,070.55	121.43	18.051		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error: 0.00 usft	
Survey Program: Reference		0-OWSG (Rev2) MWD Offset		Semi Major Axis			Highside		Offset Wellbore Centre		Rule Assigned: Distance			Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
8,900.00	7,250.00	10,483.44	7,162.00	54.98	74.80	87.70	2,944.76	-1,835.29	2,191.96	2,065.77	126.19	17.370		
9,000.00	7,250.00	10,583.44	7,162.00	57.35	77.06	87.70	2,943.92	-1,935.29	2,191.95	2,060.94	131.01	16.731		
9,100.00	7,250.00	10,683.44	7,162.00	59.76	79.36	87.70	2,943.08	-2,035.29	2,191.93	2,056.06	135.87	16.133		
9,200.00	7,250.00	10,783.44	7,162.00	62.19	81.70	87.70	2,942.24	-2,135.28	2,191.91	2,051.13	140.78	15.570		
9,300.00	7,250.00	10,883.44	7,162.00	64.65	84.07	87.70	2,941.40	-2,235.28	2,191.89	2,046.17	145.72	15.042		
9,400.00	7,250.00	10,983.44	7,162.00	67.12	86.46	87.70	2,940.56	-2,335.27	2,191.87	2,041.17	150.70	14.545		
9,500.00	7,249.99	11,083.44	7,162.00	69.61	88.88	87.70	2,939.73	-2,435.27	2,191.85	2,036.15	155.71	14.077		
9,600.00	7,249.99	11,183.44	7,162.00	72.12	91.32	87.70	2,938.89	-2,535.27	2,191.84	2,031.09	160.75	13.635		
9,700.00	7,249.99	11,283.44	7,162.00	74.65	93.78	87.70	2,938.05	-2,635.26	2,191.82	2,026.01	165.81	13.219		
9,800.00	7,249.99	11,383.44	7,162.00	77.19	96.25	87.70	2,937.21	-2,735.26	2,191.80	2,020.90	170.90	12.825		
9,900.00	7,249.99	11,483.44	7,162.00	79.74	98.74	87.70	2,936.37	-2,835.26	2,191.78	2,015.77	176.01	12.453		
10,000.00	7,249.99	11,583.44	7,162.00	82.30	101.24	87.70	2,935.53	-2,935.25	2,191.76	2,010.63	181.14	12.100		
10,100.00	7,249.99	11,683.44	7,162.00	84.87	103.75	87.70	2,934.70	-3,035.25	2,191.75	2,005.46	186.28	11.766		
10,200.00	7,249.99	11,783.44	7,162.00	87.45	106.28	87.70	2,933.86	-3,135.25	2,191.73	2,000.28	191.44	11.448		
10,300.00	7,249.99	11,883.44	7,162.00	90.04	108.81	87.70	2,933.02	-3,235.24	2,191.71	1,995.09	196.62	11.147		
10,400.00	7,249.99	11,983.44	7,162.00	92.64	111.36	87.70	2,932.18	-3,335.24	2,191.69	1,989.88	201.81	10.860		
10,500.00	7,249.99	12,083.44	7,162.00	95.24	113.91	87.70	2,931.34	-3,435.24	2,191.67	1,984.66	207.02	10.587		
10,600.00	7,249.99	12,183.44	7,162.00	97.85	116.47	87.70	2,930.50	-3,535.23	2,191.65	1,979.42	212.23	10.327		
10,700.00	7,249.99	12,283.44	7,162.00	100.47	119.04	87.70	2,929.67	-3,635.23	2,191.64	1,974.18	217.46	10.078		
10,800.00	7,249.99	12,383.44	7,162.00	103.09	121.61	87.70	2,928.83	-3,735.23	2,191.62	1,968.92	222.70	9.841		
10,900.00	7,249.99	12,483.44	7,162.00	105.71	124.19	87.70	2,927.99	-3,835.22	2,191.60	1,963.66	227.94	9.615		
11,000.00	7,249.99	12,583.44	7,162.00	108.35	126.78	87.70	2,927.15	-3,935.22	2,191.58	1,958.38	233.20	9.398		
11,100.00	7,249.99	12,683.44	7,162.00	110.98	129.37	87.70	2,926.31	-4,035.22	2,191.56	1,953.10	238.46	9.190		
11,200.00	7,249.99	12,783.44	7,162.00	113.62	131.97	87.70	2,925.47	-4,135.21	2,191.55	1,947.81	243.73	8.992		
11,300.00	7,249.99	12,883.44	7,162.00	116.26	134.57	87.70	2,924.63	-4,235.21	2,191.53	1,942.52	249.01	8.801		
11,400.00	7,249.99	12,983.44	7,162.00	118.91	137.18	87.70	2,923.80	-4,335.20	2,191.51	1,937.21	254.30	8.618		
11,500.00	7,249.99	13,083.44	7,162.00	121.56	139.79	87.70	2,922.96	-4,435.20	2,191.49	1,931.90	259.59	8.442		
11,600.00	7,249.99	13,183.44	7,162.00	124.21	142.41	87.70	2,922.12	-4,535.20	2,191.47	1,926.59	264.89	8.273		
11,700.00	7,249.99	13,283.44	7,162.00	126.87	145.03	87.70	2,921.28	-4,635.19	2,191.45	1,921.26	270.19	8.111		
11,800.00	7,249.99	13,383.44	7,162.00	129.53	147.65	87.70	2,920.44	-4,735.19	2,191.44	1,915.94	275.50	7.954		
11,900.00	7,249.99	13,483.44	7,162.00	132.19	150.28	87.70	2,919.60	-4,835.19	2,191.42	1,910.60	280.81	7.804		
12,000.00	7,249.99	13,583.44	7,162.00	134.86	152.91	87.70	2,918.77	-4,935.18	2,191.40	1,905.27	286.13	7.659		
12,100.00	7,249.99	13,683.44	7,162.00	137.52	155.54	87.70	2,917.93	-5,035.18	2,191.38	1,899.93	291.45	7.519		
12,200.00	7,249.99	13,783.44	7,162.00	140.19	158.18	87.70	2,917.09	-5,135.18	2,191.36	1,894.58	296.78	7.384		
12,300.00	7,249.99	13,883.44	7,162.00	142.86	160.82	87.70	2,916.25	-5,235.17	2,191.34	1,889.23	302.11	7.253		
12,400.00	7,249.99	13,983.44	7,162.00	145.53	163.46	87.70	2,915.41	-5,335.17	2,191.33	1,883.88	307.45	7.127		
12,500.00	7,249.99	14,083.44	7,162.00	148.21	166.11	87.70	2,914.57	-5,435.17	2,191.31	1,878.52	312.79	7.006		
12,600.00	7,249.99	14,183.44	7,162.00	150.88	168.75	87.70	2,913.74	-5,535.16	2,191.29	1,873.16	318.13	6.888		
12,700.00	7,249.99	14,283.44	7,162.00	153.56	171.40	87.70	2,912.90	-5,635.16	2,191.27	1,867.80	323.47	6.774		
12,800.00	7,249.99	14,383.44	7,162.00	156.24	174.05	87.70	2,912.06	-5,735.16	2,191.25	1,862.43	328.82	6.664		
12,900.00	7,249.98	14,483.44	7,162.00	158.92	176.71	87.70	2,911.22	-5,835.15	2,191.24	1,857.06	334.17	6.557		
13,000.00	7,249.98	14,583.44	7,162.00	161.60	179.36	87.70	2,910.38	-5,935.15	2,191.22	1,851.69	339.53	6.454		
13,100.00	7,249.98	14,683.44	7,162.00	164.28	182.02	87.70	2,909.54	-6,035.14	2,191.20	1,846.31	344.88	6.353		
13,200.00	7,249.98	14,783.44	7,162.00	166.97	184.68	87.70	2,908.70	-6,135.14	2,191.18	1,840.94	350.24	6.256		
13,300.00	7,249.98	14,883.44	7,162.00	169.65	187.34	87.70	2,907.87	-6,235.14	2,191.16	1,835.56	355.61	6.162		
13,400.00	7,249.98	14,983.44	7,162.00	172.34	190.00	87.70	2,907.03	-6,335.13	2,191.14	1,830.17	360.97	6.070		
13,500.00	7,249.98	15,083.44	7,162.00	175.03	192.67	87.70	2,906.19	-6,435.13	2,191.13	1,824.79	366.34	5.981		
13,600.00	7,249.98	15,183.44	7,162.00	177.72	195.33	87.70	2,905.35	-6,535.13	2,191.11	1,819.40	371.71	5.895		
13,700.00	7,249.98	15,283.44	7,162.00	180.41	198.00	87.70	2,904.51	-6,635.12	2,191.09	1,814.01	377.08	5.811		
13,800.00	7,249.98	15,383.44	7,162.00	183.10	200.67	87.70	2,903.67	-6,735.12	2,191.07	1,808.62	382.45	5.729		
13,900.00	7,249.98	15,483.44	7,162.00	185.79	203.34	87.70	2,902.84	-6,835.12	2,191.05	1,803.23	387.82	5.650		
14,000.00	7,249.98	15,583.44	7,162.00	188.48	206.01	87.70	2,902.00	-6,935.11	2,191.04	1,797.84	393.20	5.572		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,249.98	15,683.44	7,162.00	191.18	208.68	87.70	2,901.16	-7,035.11	2,191.02	1,792.44	398.58	5.497			
14,200.00	7,249.98	15,783.44	7,162.00	193.87	211.36	87.70	2,900.32	-7,135.11	2,191.00	1,787.04	403.96	5.424			
14,300.00	7,249.98	15,883.44	7,162.00	196.56	214.03	87.70	2,899.48	-7,235.10	2,190.98	1,781.64	409.34	5.353			
14,400.00	7,249.98	15,983.44	7,162.00	199.26	216.71	87.70	2,898.64	-7,335.10	2,190.96	1,776.24	414.72	5.283			
14,500.00	7,249.98	16,083.44	7,162.00	201.96	219.38	87.70	2,897.80	-7,435.10	2,190.94	1,770.84	420.10	5.215			
14,600.00	7,249.98	16,183.44	7,162.00	204.65	222.06	87.70	2,896.97	-7,535.09	2,190.93	1,765.44	425.49	5.149			
14,700.00	7,249.98	16,283.44	7,162.00	207.35	224.74	87.70	2,896.13	-7,635.09	2,190.91	1,760.03	430.88	5.085			
14,800.00	7,249.98	16,383.44	7,162.00	210.05	227.42	87.70	2,895.29	-7,735.09	2,190.89	1,754.62	436.27	5.022			
14,900.00	7,249.98	16,483.44	7,162.00	212.75	230.10	87.70	2,894.45	-7,835.08	2,190.87	1,749.22	441.65	4.961			
15,000.00	7,249.98	16,583.44	7,162.00	215.45	232.79	87.70	2,893.61	-7,935.08	2,190.85	1,743.81	447.05	4.901			
15,100.00	7,249.98	16,683.44	7,162.00	218.15	235.47	87.70	2,892.77	-8,035.07	2,190.83	1,738.40	452.44	4.842			
15,200.00	7,249.98	16,783.44	7,162.00	220.85	238.15	87.70	2,891.94	-8,135.07	2,190.82	1,732.99	457.83	4.785			
15,300.00	7,249.98	16,883.44	7,162.00	223.55	240.84	87.70	2,891.10	-8,235.07	2,190.80	1,727.57	463.22	4.729			
15,393.06	7,249.98	16,976.49	7,162.00	226.06	243.34	87.70	2,890.32	-8,328.12	2,190.78	1,722.54	468.24	4.679			
15,400.00	7,249.98	16,978.51	7,162.00	226.25	243.39	87.70	2,890.30	-8,330.14	2,190.79	1,722.23	468.55	4.676			
15,478.21	7,250.00	16,978.51	7,162.00	228.36	243.39	87.70	2,890.30	-8,330.14	2,192.14	1,720.74	471.40	4.650			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft
Survey Program: Reference		0-OWSG (Rev2) MWD Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-150.73	-54.64	-30.63	62.64					
100.00	100.00	100.00	100.00	0.14	0.14	-150.73	-54.64	-30.63	62.64	62.36	0.29	218.439		
200.00	200.00	200.00	200.00	0.50	0.50	-150.73	-54.64	-30.63	62.64	61.64	1.00	62.411		
300.00	300.00	300.00	300.00	0.86	0.86	-150.73	-54.64	-30.63	62.64	60.92	1.72	36.407	CC, ES	
400.00	399.98	399.98	399.98	1.22	1.22	-153.25	-54.64	-30.63	64.20	61.76	2.44	26.327		
500.00	499.84	499.84	499.84	1.58	1.58	-155.17	-54.64	-30.63	68.91	65.75	3.16	21.808		
600.00	599.45	599.45	599.45	1.95	1.93	-157.83	-54.64	-30.63	76.91	73.03	3.88	19.806		
700.00	698.70	698.70	698.70	2.33	2.29	-160.74	-54.64	-30.63	88.32	83.72	4.61	19.167		
715.65	714.19	714.19	714.19	2.39	2.35	-161.19	-54.64	-30.63	90.42	85.70	4.73	19.134		
800.00	797.66	797.66	797.66	2.73	2.64	-163.40	-54.64	-30.63	102.06	96.73	5.33	19.146		
900.00	896.61	896.61	896.61	3.13	3.00	-165.44	-54.64	-30.63	116.00	109.95	6.05	19.179		
1,000.00	995.56	995.56	995.56	3.54	3.35	-167.04	-54.64	-30.63	130.05	123.28	6.77	19.219		
1,100.00	1,094.50	1,094.50	1,094.50	3.96	3.71	-168.33	-54.64	-30.63	144.18	136.69	7.49	19.260		
1,200.00	1,193.45	1,193.45	1,193.45	4.38	4.06	-169.38	-54.64	-30.63	158.37	150.17	8.21	19.300		
1,300.00	1,292.40	1,292.40	1,292.40	4.79	4.42	-170.27	-54.64	-30.63	172.61	163.68	8.93	19.337		
1,400.00	1,391.35	1,391.35	1,391.35	5.22	4.77	-171.02	-54.64	-30.63	186.88	177.23	9.65	19.371		
1,500.00	1,490.30	1,490.30	1,490.30	5.64	5.13	-171.66	-54.64	-30.63	201.17	190.81	10.37	19.402		
1,600.00	1,589.25	1,589.25	1,589.25	6.06	5.48	-172.22	-54.64	-30.63	215.49	204.40	11.09	19.431		
1,700.00	1,688.20	1,688.20	1,688.20	6.48	5.84	-172.71	-54.64	-30.63	229.83	218.02	11.81	19.457		
1,800.00	1,787.15	1,787.15	1,787.15	6.91	6.19	-173.14	-54.64	-30.63	244.18	231.64	12.53	19.483		
1,900.00	1,886.10	1,886.10	1,886.10	7.33	6.55	-173.52	-54.64	-30.63	258.54	245.28	13.26	19.501		
2,000.00	1,985.05	1,985.05	1,985.05	7.75	6.90	-173.86	-54.64	-30.63	272.91	258.93	13.98	19.523		
2,100.00	2,084.00	2,084.00	2,084.00	8.18	7.26	-174.17	-54.64	-30.63	287.29	272.59	14.70	19.542		
2,200.00	2,182.95	2,192.44	2,192.43	8.60	7.64	-174.53	-53.24	-30.14	300.37	284.90	15.47	19.412		
2,300.00	2,281.90	2,303.54	2,303.37	9.03	8.04	-175.04	-47.82	-28.24	309.76	293.52	16.24	19.070		
2,400.00	2,380.85	2,415.22	2,414.58	9.45	8.44	-175.69	-38.29	-24.91	315.39	298.40	17.00	18.556		
2,500.00	2,479.80	2,527.15	2,525.57	9.88	8.84	-176.51	-24.64	-20.13	317.27	299.54	17.73	17.892		
2,600.00	2,578.74	2,638.98	2,635.81	10.31	9.25	-177.51	-6.93	-13.93	315.42	296.97	18.45	17.098		
2,700.00	2,677.69	2,750.39	2,744.82	10.73	9.68	-178.74	14.74	-6.35	309.90	290.76	19.14	16.189		
2,800.00	2,776.64	2,861.03	2,852.11	11.16	10.12	179.75	40.20	2.57	300.81	280.99	19.82	15.177		
2,900.00	2,875.59	2,970.59	2,957.25	11.58	10.58	177.89	69.25	12.73	288.30	267.81	20.49	14.074		
3,000.00	2,974.54	3,078.77	3,059.84	12.01	11.06	175.55	101.64	24.07	272.55	251.40	21.15	12.888		
3,100.00	3,073.49	3,185.29	3,159.52	12.44	11.57	172.58	137.08	36.47	253.85	232.03	21.82	11.632		
3,200.00	3,172.44	3,289.91	3,255.99	12.86	12.11	168.75	175.27	49.84	232.61	210.06	22.55	10.317		
3,300.00	3,271.39	3,392.40	3,349.00	13.29	12.68	163.68	215.87	64.05	209.45	186.08	23.37	8.962		
3,400.00	3,370.34	3,492.57	3,438.37	13.72	13.27	156.84	258.58	78.99	185.37	160.98	24.40	7.599		
3,500.00	3,469.29	3,590.27	3,523.96	14.14	13.90	147.52	303.04	94.55	162.08	136.31	25.77	6.290		
3,600.00	3,568.24	3,685.37	3,605.68	14.57	14.55	134.93	348.94	110.62	142.47	114.86	27.61	5.160		
3,700.00	3,667.19	3,777.76	3,683.48	15.00	15.22	119.02	395.96	127.08	131.09	101.38	29.71	4.413		
3,738.36	3,705.14	3,812.47	3,712.29	15.16	15.48	112.32	414.24	133.47	130.01	99.62	30.39	4.278		
3,800.00	3,766.14	3,867.58	3,757.69	15.42	15.91	101.53	443.73	143.79	132.90	101.74	31.16	4.265		
3,900.00	3,865.09	3,956.87	3,831.19	15.85	16.62	85.75	491.58	160.54	148.90	117.36	31.55	4.720		
4,000.00	3,964.03	4,046.15	3,904.68	16.28	17.35	73.32	539.42	177.29	175.32	143.89	31.44	5.577		
4,100.00	4,062.98	4,135.43	3,978.18	16.70	18.10	64.08	587.27	194.03	208.23	176.89	31.35	6.643		
4,200.00	4,161.93	4,224.72	4,051.68	17.13	18.86	57.28	635.12	210.78	245.03	213.60	31.43	7.796		
4,300.00	4,260.88	4,314.00	4,125.17	17.56	19.64	52.19	682.97	227.52	284.21	252.53	31.68	8.971		
4,400.00	4,359.83	4,403.28	4,198.67	17.98	20.42	48.30	730.81	244.27	324.91	292.86	32.06	10.135		
4,500.00	4,458.78	4,492.57	4,272.17	18.41	21.22	45.26	778.66	261.02	366.63	334.10	32.53	11.269		
4,600.00	4,557.73	4,581.85	4,345.66	18.84	22.02	42.82	826.51	277.76	409.06	375.98	33.08	12.367		
4,700.00	4,656.68	4,671.13	4,419.16	19.26	22.83	40.83	874.36	294.51	451.99	418.31	33.67	13.423		
4,800.00	4,755.63	4,760.42	4,492.66	19.69	23.65	39.19	922.20	311.25	495.29	460.98	34.30	14.438		
4,900.00	4,854.58	4,849.70	4,566.15	20.12	24.48	37.80	970.05	328.00	538.88	503.91	34.97	15.411		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,000.00	4,953.53	4,938.99	4,639.65	20.55	25.31	36.62	1,017.90	344.74	582.69	547.04	35.65	16.344			
5,100.00	5,052.48	5,028.27	4,713.15	20.97	26.15	35.60	1,065.75	361.49	626.67	590.32	36.35	17.238			
5,200.00	5,151.43	5,117.55	4,786.64	21.40	26.99	34.72	1,113.59	378.24	670.79	633.72	37.07	18.094			
5,300.00	5,250.38	5,206.84	4,860.14	21.83	27.83	33.94	1,161.44	394.98	715.03	677.23	37.80	18.915			
5,400.00	5,349.32	5,296.12	4,933.64	22.25	28.68	33.26	1,209.29	411.73	759.36	720.82	38.54	19.702			
5,500.00	5,448.27	5,385.40	5,007.13	22.68	29.54	32.64	1,257.13	428.47	803.77	764.48	39.29	20.456			
5,600.00	5,547.22	5,474.69	5,080.63	23.11	30.40	32.10	1,304.98	445.22	848.25	808.20	40.05	21.180			
5,625.90	5,572.85	5,497.81	5,099.66	23.22	30.62	31.96	1,317.37	449.56	859.78	819.53	40.25	21.363			
5,700.00	5,646.30	5,563.56	5,153.79	23.53	31.25	31.97	1,352.61	461.89	893.51	852.71	40.80	21.898			
5,800.00	5,745.78	5,650.95	5,225.73	23.92	32.10	31.95	1,399.44	478.28	941.37	899.84	41.53	22.670			
5,900.00	5,845.55	5,736.70	5,296.32	24.28	32.93	31.91	1,445.40	494.36	991.90	949.68	42.22	23.495			
6,000.00	5,945.50	5,820.70	5,365.47	24.61	33.74	31.86	1,490.41	510.12	1,045.06	1,002.18	42.88	24.373			
6,041.55	5,987.04	5,855.07	5,393.75	24.74	34.08	33.66	1,508.83	516.56	1,067.92	1,024.77	43.15	24.752			
6,100.00	6,045.49	5,903.18	5,433.36	24.91	34.55	33.23	1,534.62	525.59	1,100.41	1,056.90	43.52	25.287			
6,200.00	6,145.49	5,985.50	5,501.12	25.22	35.35	32.56	1,578.73	541.03	1,156.10	1,111.94	44.16	26.179			
6,300.00	6,245.49	6,067.82	5,568.89	25.52	36.15	31.95	1,622.84	556.47	1,211.88	1,167.07	44.81	27.042			
6,400.00	6,345.49	6,150.14	5,636.65	25.83	36.96	31.39	1,666.96	571.91	1,267.76	1,222.28	45.48	27.877			
6,500.00	6,445.49	6,232.46	5,704.41	26.14	37.77	30.88	1,711.07	587.35	1,323.71	1,277.56	46.15	28.685			
6,600.00	6,545.49	6,314.78	5,772.18	26.45	38.58	30.41	1,755.19	602.78	1,379.72	1,332.90	46.82	29.467			
6,700.00	6,645.49	6,397.09	5,839.94	26.76	39.39	29.97	1,799.30	618.22	1,435.80	1,388.30	47.50	30.225			
6,731.55	6,677.04	6,423.06	5,861.32	26.86	39.65	29.84	1,813.22	623.09	1,453.50	1,405.78	47.72	30.458			
6,750.00	6,695.49	6,438.19	5,873.77	26.92	39.79	119.15	1,821.33	625.93	1,463.98	1,416.13	47.85	30.596			
6,800.00	6,745.33	6,478.49	5,906.95	27.06	40.19	115.85	1,842.93	633.49	1,493.54	1,445.33	48.21	30.983			
6,850.00	6,794.65	6,517.54	5,939.09	27.21	40.58	112.38	1,863.85	640.81	1,524.60	1,476.02	48.58	31.381			
6,900.00	6,843.08	6,555.02	5,969.94	27.36	40.95	108.72	1,883.94	647.85	1,556.97	1,508.00	48.98	31.789			
6,950.00	6,890.24	6,590.67	5,999.29	27.50	41.30	104.90	1,903.04	654.53	1,590.44	1,541.05	49.39	32.202			
7,000.00	6,935.78	6,624.20	6,026.89	27.63	41.63	100.91	1,921.01	660.82	1,624.83	1,575.01	49.82	32.615			
7,050.00	6,979.35	6,655.36	6,052.54	27.76	41.94	96.77	1,937.71	666.66	1,659.96	1,609.70	50.27	33.024			
7,100.00	7,020.62	6,683.92	6,076.05	27.89	42.22	92.49	1,953.02	672.02	1,695.66	1,644.93	50.73	33.424			
7,150.00	7,059.27	6,709.66	6,097.24	28.01	42.48	88.10	1,966.81	676.85	1,731.78	1,680.56	51.22	33.812			
7,200.00	7,095.02	6,735.71	6,118.00	28.13	42.72	83.85	1,980.16	681.68	1,768.44	1,717.20	51.71	34.199			
7,250.00	7,127.58	6,763.63	6,138.00	28.27	42.97	79.77	1,993.05	686.51	1,805.11	1,753.71	52.20	34.586			
7,300.00	7,156.72	6,792.46	6,158.00	28.41	43.22	75.77	2,005.48	691.34	1,841.78	1,790.22	52.69	34.973			
7,350.00	7,182.21	6,821.29	6,178.00	28.58	43.47	71.87	2,017.45	696.17	1,878.45	1,826.73	53.18	35.360			
7,400.00	7,203.85	6,850.12	6,198.00	28.79	43.72	68.07	2,028.98	701.00	1,916.12	1,864.24	53.67	35.747			
7,450.00	7,221.48	6,878.95	6,218.00	29.05	43.97	64.27	2,040.05	705.83	1,954.79	1,902.75	54.16	36.134			
7,500.00	7,234.96	6,907.78	6,238.00	29.38	44.22	60.47	2,050.66	710.66	1,993.40	1,941.36	54.65	36.521			
7,550.00	7,244.21	6,936.61	6,258.00	29.79	44.47	56.67	2,060.81	715.49	2,032.01	1,980.97	55.14	36.908			
7,600.00	7,249.13	6,965.44	6,278.00	30.26	44.72	52.87	2,070.50	720.32	2,071.62	2,020.58	55.63	37.295			
7,631.55	7,250.00	6,994.27	6,298.00	30.59	44.97	49.07	2,079.83	725.15	2,112.23	2,060.19	56.12	37.682			
7,700.00	7,250.00	7,023.10	6,318.00	31.38	45.22	45.27	2,088.80	730.00	2,153.84	2,100.80	56.61	38.069			
7,800.00	7,250.00	7,052.23	6,338.00	32.73	45.47	41.47	2,097.41	734.85	2,195.45	2,141.41	57.10	38.456			
7,900.00	7,250.00	7,081.36	6,358.00	34.25	45.72	37.67	2,105.66	739.70	2,237.06	2,182.02	57.59	38.843			
8,000.00	7,250.00	7,110.49	6,378.00	35.92	45.97	33.87	2,113.55	744.55	2,278.67	2,222.63	58.08	39.230			
8,100.00	7,250.00	7,139.62	6,398.00	37.73	46.22	30.07	2,121.08	749.40	2,320.28	2,263.24	58.57	39.617			
8,200.00	7,250.00	7,168.75	6,418.00	39.64	46.47	26.27	2,128.25	754.25	2,361.89	2,303.85	59.06	40.004			
8,300.00	7,250.00	7,197.88	6,438.00	41.64	46.72	22.47	2,135.06	759.10	2,403.50	2,344.46	59.55	40.391			
8,400.00	7,250.00	7,227.01	6,458.00	43.72	46.97	18.67	2,141.51	763.95	2,445.11	2,385.07	60.04	40.778			
8,500.00	7,250.00	7,256.14	6,478.00	45.87	47.22	14.87	2,147.60	768.80	2,486.72	2,425.68	60.53	41.165			
8,600.00	7,250.00	7,285.27	6,498.00	48.08	47.47	11.07	2,153.33	773.65	2,528.33	2,466.29	61.02	41.552			
8,700.00	7,250.00	7,314.40	6,518.00	50.34	47.72	7.27	2,158.70	778.50	2,570.94	2,506.90	61.51	41.939			
8,800.00	7,250.00	7,343.53	6,538.00	52.64	47.97	3.47	2,163.71	783.35	2,613.55	2,547.51	62.00	42.326			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL #1														Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD										Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)						
8,900.00	7,250.00	10,086.05	6,963.00	54.98	72.56	80.70	2,507.75	-1,831.63	1,776.51	1,651.08	125.43	14.163				
9,000.00	7,250.00	10,186.05	6,963.00	57.35	74.94	80.70	2,506.91	-1,931.62	1,776.49	1,646.29	130.20	13.645				
9,100.00	7,250.00	10,286.05	6,963.00	59.76	77.34	80.70	2,506.07	-2,031.62	1,776.47	1,641.46	135.01	13.158				
9,200.00	7,250.00	10,386.05	6,963.00	62.19	79.77	80.70	2,505.23	-2,131.62	1,776.45	1,636.59	139.87	12.701				
9,300.00	7,250.00	10,486.05	6,963.00	64.65	82.22	80.70	2,504.39	-2,231.61	1,776.44	1,631.68	144.76	12.272				
9,400.00	7,250.00	10,586.05	6,963.00	67.12	84.68	80.70	2,503.56	-2,331.61	1,776.42	1,626.73	149.69	11.868				
9,500.00	7,249.99	10,686.05	6,963.00	69.61	87.17	80.70	2,502.72	-2,431.61	1,776.40	1,621.75	154.65	11.487				
9,600.00	7,249.99	10,786.05	6,963.00	72.12	89.66	80.70	2,501.88	-2,531.60	1,776.38	1,616.75	159.63	11.128				
9,700.00	7,249.99	10,886.05	6,963.00	74.65	92.17	80.70	2,501.04	-2,631.60	1,776.36	1,611.72	164.64	10.789				
9,800.00	7,249.99	10,986.05	6,963.00	77.19	94.69	80.70	2,500.20	-2,731.60	1,776.35	1,606.67	169.68	10.469				
9,900.00	7,249.99	11,086.05	6,963.00	79.74	97.23	80.70	2,499.36	-2,831.59	1,776.33	1,601.60	174.73	10.166				
10,000.00	7,249.99	11,186.05	6,963.00	82.30	99.77	80.70	2,498.53	-2,931.59	1,776.31	1,596.51	179.80	9.879				
10,100.00	7,249.99	11,286.05	6,963.00	84.87	102.32	80.70	2,497.69	-3,031.58	1,776.29	1,591.40	184.89	9.607				
10,200.00	7,249.99	11,386.05	6,963.00	87.45	104.88	80.70	2,496.85	-3,131.58	1,776.27	1,586.27	190.00	9.349				
10,300.00	7,249.99	11,486.05	6,963.00	90.04	107.45	80.70	2,496.01	-3,231.58	1,776.26	1,581.13	195.12	9.103				
10,400.00	7,249.99	11,586.05	6,963.00	92.64	110.02	80.70	2,495.17	-3,331.57	1,776.24	1,575.98	200.26	8.870				
10,500.00	7,249.99	11,686.05	6,963.00	95.24	112.61	80.70	2,494.33	-3,431.57	1,776.22	1,570.81	205.41	8.647				
10,600.00	7,249.99	11,786.05	6,963.00	97.85	115.20	80.70	2,493.49	-3,531.57	1,776.20	1,565.64	210.57	8.435				
10,700.00	7,249.99	11,886.05	6,963.00	100.47	117.79	80.70	2,492.66	-3,631.56	1,776.18	1,560.45	215.74	8.233				
10,800.00	7,249.99	11,986.05	6,963.00	103.09	120.39	80.70	2,491.82	-3,731.56	1,776.17	1,555.25	220.92	8.040				
10,900.00	7,249.99	12,086.05	6,963.00	105.71	123.00	80.70	2,490.98	-3,831.56	1,776.15	1,550.04	226.11	7.855				
11,000.00	7,249.99	12,186.05	6,963.00	108.35	125.61	80.70	2,490.14	-3,931.55	1,776.13	1,544.82	231.31	7.679				
11,100.00	7,249.99	12,286.05	6,963.00	110.98	128.22	80.70	2,489.30	-4,031.55	1,776.11	1,539.60	236.51	7.510				
11,200.00	7,249.99	12,386.05	6,963.00	113.62	130.84	80.70	2,488.46	-4,131.55	1,776.09	1,534.37	241.73	7.348				
11,300.00	7,249.99	12,486.05	6,963.00	116.26	133.46	80.70	2,487.63	-4,231.54	1,776.08	1,529.13	246.95	7.192				
11,400.00	7,249.99	12,586.05	6,963.00	118.91	136.09	80.70	2,486.79	-4,331.54	1,776.06	1,523.88	252.18	7.043				
11,500.00	7,249.99	12,686.05	6,963.00	121.56	138.72	80.70	2,485.95	-4,431.54	1,776.04	1,518.63	257.41	6.900				
11,600.00	7,249.99	12,786.05	6,963.00	124.21	141.35	80.70	2,485.11	-4,531.53	1,776.02	1,513.37	262.65	6.762				
11,700.00	7,249.99	12,886.05	6,963.00	126.87	143.99	80.70	2,484.27	-4,631.53	1,776.00	1,508.11	267.90	6.629				
11,800.00	7,249.99	12,986.05	6,963.00	129.53	146.63	80.70	2,483.43	-4,731.53	1,775.99	1,502.84	273.15	6.502				
11,900.00	7,249.99	13,086.05	6,963.00	132.19	149.27	80.70	2,482.60	-4,831.52	1,775.97	1,497.57	278.40	6.379				
12,000.00	7,249.99	13,186.05	6,963.00	134.86	151.92	80.70	2,481.76	-4,931.52	1,775.95	1,492.29	283.66	6.261				
12,100.00	7,249.99	13,286.05	6,963.00	137.52	154.56	80.70	2,480.92	-5,031.51	1,775.93	1,487.01	288.93	6.147				
12,200.00	7,249.99	13,386.05	6,963.00	140.19	157.21	80.70	2,480.08	-5,131.51	1,775.91	1,481.72	294.20	6.037				
12,300.00	7,249.99	13,486.05	6,963.00	142.86	159.87	80.70	2,479.24	-5,231.51	1,775.90	1,476.43	299.47	5.930				
12,400.00	7,249.99	13,586.05	6,963.00	145.53	162.52	80.70	2,478.40	-5,331.50	1,775.88	1,471.13	304.75	5.827				
12,500.00	7,249.99	13,686.05	6,963.00	148.21	165.18	80.70	2,477.57	-5,431.50	1,775.86	1,465.84	310.03	5.728				
12,600.00	7,249.99	13,786.05	6,963.00	150.88	167.84	80.70	2,476.73	-5,531.50	1,775.84	1,460.53	315.31	5.632				
12,700.00	7,249.99	13,886.05	6,963.00	153.56	170.50	80.70	2,475.89	-5,631.49	1,775.83	1,455.23	320.60	5.539				
12,800.00	7,249.99	13,986.05	6,963.00	156.24	173.16	80.70	2,475.05	-5,731.49	1,775.81	1,449.92	325.89	5.449				
12,900.00	7,249.98	14,086.05	6,963.00	158.92	175.83	80.70	2,474.21	-5,831.49	1,775.79	1,444.61	331.18	5.362				
13,000.00	7,249.98	14,186.05	6,963.00	161.60	178.49	80.70	2,473.37	-5,931.48	1,775.77	1,439.30	336.47	5.278				
13,100.00	7,249.98	14,286.05	6,963.00	164.28	181.16	80.70	2,472.54	-6,031.48	1,775.75	1,433.98	341.77	5.196				
13,200.00	7,249.98	14,386.05	6,963.00	166.97	183.83	80.70	2,471.70	-6,131.48	1,775.74	1,428.66	347.07	5.116				
13,300.00	7,249.98	14,486.05	6,963.00	169.65	186.50	80.70	2,470.86	-6,231.47	1,775.72	1,423.34	352.37	5.039				
13,400.00	7,249.98	14,586.05	6,963.00	172.34	189.17	80.70	2,470.02	-6,331.47	1,775.70	1,418.02	357.68	4.964				
13,500.00	7,249.98	14,686.05	6,963.00	175.03	191.85	80.70	2,469.18	-6,431.47	1,775.68	1,412.69	362.99	4.892				
13,600.00	7,249.98	14,786.05	6,963.00	177.72	194.52	80.70	2,468.34	-6,531.46	1,775.66	1,407.37	368.30	4.821				
13,700.00	7,249.98	14,886.05	6,963.00	180.41	197.20	80.70	2,467.51	-6,631.46	1,775.65	1,402.04	373.61	4.753				
13,800.00	7,249.98	14,986.05	6,963.00	183.10	199.87	80.70	2,466.67	-6,731.45	1,775.63	1,396.71	378.92	4.686				
13,900.00	7,249.98	15,086.05	6,963.00	185.79	202.55	80.70	2,465.83	-6,831.45	1,775.61	1,391.37	384.24	4.621				
14,000.00	7,249.98	15,186.05	6,963.00	188.48	205.23	80.70	2,464.99	-6,931.45	1,775.59	1,386.04	389.55	4.558				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,100.00	7,249.98	15,286.05	6,963.00	191.18	207.91	80.70	2,464.15	-7,031.44	1,775.57	1,380.70	394.87	4.497			
14,200.00	7,249.98	15,386.05	6,963.00	193.87	210.59	80.70	2,463.31	-7,131.44	1,775.56	1,375.36	400.19	4.437			
14,300.00	7,249.98	15,486.05	6,963.00	196.56	213.28	80.70	2,462.48	-7,231.44	1,775.54	1,370.02	405.51	4.378			
14,400.00	7,249.98	15,586.05	6,963.00	199.26	215.96	80.70	2,461.64	-7,331.43	1,775.52	1,364.68	410.84	4.322			
14,500.00	7,249.98	15,686.05	6,963.00	201.96	218.64	80.70	2,460.80	-7,431.43	1,775.50	1,359.34	416.16	4.266			
14,600.00	7,249.98	15,786.05	6,963.00	204.65	221.33	80.70	2,459.96	-7,531.43	1,775.48	1,354.00	421.49	4.212			
14,700.00	7,249.98	15,886.05	6,963.00	207.35	224.02	80.70	2,459.12	-7,631.42	1,775.47	1,348.65	426.82	4.160			
14,800.00	7,249.98	15,986.05	6,963.00	210.05	226.70	80.70	2,458.28	-7,731.42	1,775.45	1,343.30	432.14	4.108			
14,900.00	7,249.98	16,086.05	6,963.00	212.75	229.39	80.70	2,457.45	-7,831.42	1,775.43	1,337.96	437.47	4.058			
15,000.00	7,249.98	16,186.05	6,963.00	215.45	232.08	80.70	2,456.61	-7,931.41	1,775.41	1,332.61	442.81	4.009			
15,100.00	7,249.98	16,286.05	6,963.00	218.15	234.77	80.70	2,455.77	-8,031.41	1,775.39	1,327.26	448.14	3.962			
15,200.00	7,249.98	16,386.05	6,963.00	220.85	237.46	80.70	2,454.93	-8,131.41	1,775.38	1,321.90	453.47	3.915			
15,300.00	7,249.98	16,486.05	6,963.00	223.55	240.15	80.70	2,454.09	-8,231.40	1,775.36	1,316.55	458.81	3.870			
15,400.00	7,249.98	16,586.05	6,963.00	226.25	242.84	80.70	2,453.25	-8,331.40	1,775.34	1,311.20	464.14	3.825			
15,413.16	7,249.98	16,598.86	6,963.00	226.61	243.19	80.70	2,453.15	-8,344.21	1,775.34	1,310.50	464.84	3.819			
15,478.21	7,250.00	16,598.86	6,963.00	228.36	243.19	80.70	2,453.15	-8,344.21	1,776.33	1,309.10	467.23	3.802 SF			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	6.00	6.00	0.00	0.00	24.12	1,772.69	793.79	1,942.30					
100.00	100.00	91.32	91.32	0.14	0.27	24.12	1,772.94	793.93	1,942.64	1,942.22	0.42	4,661.916		
200.00	200.00	190.02	190.02	0.50	0.62	24.12	1,773.91	794.08	1,943.59	1,942.47	1.13	1,727.336		
300.00	300.00	340.50	340.42	0.86	1.15	23.99	1,775.32	790.09	1,943.50	1,941.49	2.02	964.345		
400.00	399.98	496.13	495.64	1.22	1.72	21.95	1,774.21	779.04	1,938.17	1,935.23	2.94	658.929		
500.00	499.84	612.90	611.67	1.58	2.17	21.75	1,773.46	766.06	1,928.26	1,924.51	3.75	514.147		
600.00	599.45	740.41	737.91	1.95	2.69	21.49	1,772.73	748.06	1,914.05	1,909.43	4.63	413.675		
700.00	698.70	873.62	869.05	2.33	3.28	21.17	1,771.29	724.80	1,894.89	1,889.32	5.57	340.397		
715.65	714.19	893.28	888.32	2.39	3.37	21.12	1,771.08	720.89	1,891.46	1,885.74	5.72	330.743		
800.00	797.66	996.80	989.34	2.73	3.86	20.64	1,769.94	698.35	1,872.20	1,865.72	6.49	288.624		
900.00	896.61	1,116.71	1,105.93	3.13	4.47	20.03	1,767.92	670.39	1,848.38	1,840.96	7.42	249.126		
1,000.00	995.56	1,253.88	1,238.53	3.54	5.20	19.24	1,764.22	635.51	1,823.06	1,814.60	8.46	215.397		
1,100.00	1,094.50	1,329.09	1,310.75	3.96	5.64	18.73	1,762.32	614.58	1,797.19	1,787.95	9.24	194.399		
1,200.00	1,193.45	1,406.31	1,384.59	4.38	6.09	18.15	1,761.76	592.04	1,772.63	1,762.58	10.05	176.385		
1,300.00	1,292.40	1,495.16	1,469.30	4.79	6.64	17.42	1,762.01	565.21	1,748.94	1,737.99	10.94	159.799		
1,400.00	1,391.35	1,591.62	1,561.03	5.22	7.24	16.59	1,762.58	535.40	1,725.61	1,713.71	11.90	144.965		
1,500.00	1,490.30	1,686.08	1,650.48	5.64	7.86	15.71	1,763.46	505.05	1,702.58	1,689.70	12.87	132.248		
1,600.00	1,589.25	1,781.14	1,740.44	6.06	8.48	14.80	1,764.35	474.36	1,679.92	1,666.05	13.86	121.183		
1,700.00	1,688.20	1,860.95	1,816.05	6.48	9.01	14.03	1,765.17	448.82	1,657.87	1,643.11	14.76	112.293		
1,800.00	1,787.15	1,951.54	1,902.22	6.91	9.59	13.16	1,766.71	420.91	1,637.15	1,621.43	15.72	104.120		
1,900.00	1,886.10	2,048.77	1,994.88	7.33	10.22	12.23	1,767.85	391.46	1,616.52	1,599.79	16.72	96.653		
2,000.00	1,985.05	2,167.78	2,107.42	7.75	11.02	10.97	1,769.31	352.82	1,595.94	1,578.05	17.89	89.222		
2,100.00	2,084.00	2,276.94	2,210.15	8.18	11.78	9.73	1,769.21	315.90	1,574.30	1,555.28	19.01	82.802		
2,200.00	2,182.95	2,372.29	2,299.49	8.60	12.47	8.58	1,768.80	282.62	1,552.74	1,532.67	20.08	77.338		
2,300.00	2,281.90	2,469.02	2,389.40	9.03	13.20	7.32	1,768.56	246.93	1,531.65	1,510.46	21.19	72.286		
2,400.00	2,380.85	2,566.19	2,479.62	9.45	13.93	6.00	1,768.00	210.86	1,510.98	1,488.67	22.31	67.724		
2,500.00	2,479.80	2,656.00	2,563.57	9.88	14.60	4.82	1,767.15	178.97	1,490.96	1,467.59	23.37	63.807		
2,600.00	2,578.74	2,741.72	2,644.49	10.31	15.19	3.75	1,766.32	150.70	1,471.93	1,447.57	24.36	60.426		
2,700.00	2,677.69	2,823.17	2,721.50	10.73	15.76	2.72	1,766.05	124.16	1,454.18	1,428.85	25.33	57.411		
2,800.00	2,776.64	2,915.23	2,808.16	11.16	16.41	1.50	1,766.38	93.11	1,437.69	1,411.32	26.37	54.523		
2,900.00	2,875.59	3,037.66	2,923.73	11.58	17.27	-0.13	1,765.60	52.74	1,421.10	1,393.51	27.59	51.505		
3,000.00	2,974.54	3,142.47	3,022.64	12.01	18.00	-1.57	1,763.16	18.17	1,403.62	1,374.91	28.70	48.902		
3,100.00	3,073.49	3,228.00	3,103.22	12.44	18.60	-2.78	1,761.25	-10.44	1,386.99	1,357.29	29.70	46.694		
3,200.00	3,172.44	3,320.13	3,189.68	12.86	19.27	-4.15	1,759.45	-42.21	1,371.49	1,340.73	30.76	44.586		
3,300.00	3,271.39	3,415.47	3,279.44	13.29	19.95	-5.56	1,757.35	-74.29	1,356.61	1,324.79	31.82	42.633		
3,400.00	3,370.34	3,504.05	3,363.04	13.72	20.57	-6.87	1,755.48	-103.48	1,342.64	1,309.81	32.83	40.902		
3,500.00	3,469.29	3,586.66	3,440.87	14.14	21.16	-8.13	1,754.13	-131.14	1,330.05	1,296.25	33.80	39.355		
3,600.00	3,568.24	3,657.34	3,507.19	14.57	21.68	-9.25	1,753.66	-155.59	1,319.45	1,284.76	34.69	38.038		
3,700.00	3,667.19	3,724.53	3,569.92	15.00	22.19	-10.35	1,754.42	-179.64	1,311.65	1,276.11	35.54	36.904		
3,800.00	3,766.14	3,800.00	3,639.73	15.42	22.78	-11.66	1,756.44	-208.23	1,306.69	1,270.23	36.46	35.843		
3,900.00	3,865.09	3,887.56	3,720.21	15.85	23.49	-13.23	1,759.20	-242.61	1,303.71	1,266.24	37.47	34.791		
4,000.00	3,964.03	3,981.70	3,806.70	16.28	24.26	-14.93	1,761.82	-279.70	1,301.72	1,263.19	38.53	33.782		
4,100.00	4,062.98	4,124.23	3,938.92	16.70	25.36	-17.41	1,764.08	-332.81	1,299.52	1,259.58	39.94	32.534		
4,200.00	4,161.93	4,234.57	4,042.55	17.13	26.17	-19.24	1,762.65	-370.69	1,294.80	1,253.77	41.03	31.554		
4,300.00	4,260.88	4,311.77	4,114.91	17.56	26.74	-20.54	1,762.03	-397.56	1,291.91	1,250.04	41.86	30.860		
4,378.84	4,338.89	4,372.00	4,171.27	17.89	27.19	-21.56	1,762.12	-418.81	1,291.18	1,248.69	42.50	30.383		
4,400.00	4,359.83	4,389.59	4,187.72	17.98	27.32	-21.86	1,762.24	-425.06	1,291.22	1,248.54	42.68	30.256		
4,500.00	4,458.78	4,470.38	4,263.15	18.41	27.93	-23.23	1,763.17	-453.96	1,292.59	1,249.10	43.49	29.722		
4,600.00	4,557.73	4,556.81	4,343.81	18.84	28.58	-24.68	1,764.75	-484.97	1,295.71	1,251.38	44.33	29.200		
4,700.00	4,656.68	4,643.56	4,424.85	19.26	29.23	-26.12	1,766.90	-515.86	1,300.35	1,255.21	45.14	28.806		
4,800.00	4,755.63	4,762.58	4,536.41	19.69	30.11	-28.04	1,769.55	-557.25	1,305.50	1,259.29	46.21	28.252		
4,900.00	4,854.58	4,834.96	4,604.13	20.12	30.65	-29.22	1,770.84	-582.75	1,311.46	1,264.60	46.86	27.986		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	4,953.53	4,936.68	4,699.01	20.55	31.43	-30.89	1,772.56	-619.39	1,318.85	1,271.10	47.76	27.616		
5,100.00	5,052.48	5,062.55	4,816.88	20.97	32.36	-32.94	1,772.83	-663.52	1,325.62	1,276.79	48.83	27.147		
5,200.00	5,151.43	5,172.46	4,920.74	21.40	33.13	-34.63	1,772.29	-699.48	1,331.57	1,281.84	49.73	26.777		
5,300.00	5,250.38	5,269.68	5,013.09	21.83	33.79	-36.06	1,772.02	-729.84	1,337.78	1,287.28	50.50	26.492		
5,400.00	5,349.32	5,359.43	5,098.58	22.25	34.38	-37.32	1,772.34	-757.20	1,344.87	1,293.67	51.19	26.271		
5,500.00	5,448.27	5,441.26	5,176.36	22.68	34.93	-38.48	1,772.87	-782.58	1,353.32	1,301.52	51.81	26.122		
5,600.00	5,547.22	5,518.58	5,249.78	23.11	35.45	-39.54	1,774.49	-806.77	1,363.75	1,311.38	52.37	26.041		
5,625.90	5,572.85	5,557.41	5,286.73	23.22	35.71	-40.06	1,775.48	-818.71	1,366.57	1,313.90	52.67	25.948		
5,700.00	5,646.30	5,672.74	5,397.14	23.53	36.44	-41.60	1,777.14	-851.95	1,374.13	1,320.62	53.51	25.680		
5,800.00	5,745.78	5,795.13	5,515.38	23.92	37.15	-43.06	1,777.71	-883.51	1,384.28	1,329.93	54.35	25.470		
5,900.00	5,845.55	5,955.14	5,671.74	24.28	37.96	-44.57	1,777.12	-917.43	1,393.23	1,337.91	55.32	25.185		
6,000.00	5,945.50	6,091.59	5,805.39	24.61	38.62	-45.74	1,773.57	-944.66	1,403.11	1,347.00	56.11	25.007		
6,041.55	5,987.04	6,170.47	5,882.91	24.74	38.98	-44.51	1,769.81	-958.70	1,406.70	1,350.22	56.48	24.906		
6,100.00	6,045.49	6,270.42	5,981.49	24.91	39.38	-45.13	1,763.57	-973.92	1,410.42	1,353.50	56.92	24.780		
6,200.00	6,145.49	6,425.95	6,135.94	25.22	39.89	-45.83	1,754.38	-989.33	1,413.31	1,355.79	57.52	24.571		
6,300.00	6,245.49	6,274.00	7,258.26	25.52	46.36	2.63	1,731.05	68.52	1,392.71	1,342.81	49.90	27.913		
6,400.00	6,345.49	8,259.16	7,258.50	25.83	46.20	1.74	1,731.23	53.68	1,322.11	1,270.02	52.09	25.382		
6,500.00	6,445.49	8,257.85	7,258.52	26.14	46.18	1.67	1,731.25	52.37	1,255.62	1,201.02	54.60	22.996		
6,600.00	6,545.49	8,256.51	7,258.55	26.45	46.17	1.58	1,731.27	51.03	1,193.80	1,136.56	57.24	20.856		
6,700.00	6,645.49	8,255.11	7,258.57	26.76	46.15	1.50	1,731.29	49.63	1,137.43	1,077.47	59.96	18.970		
6,731.55	6,677.04	8,254.66	7,258.58	26.86	46.14	1.48	1,731.30	49.18	1,120.91	1,060.09	60.82	18.429		
6,750.00	6,695.49	8,254.17	7,258.59	26.92	46.14	93.00	1,731.30	48.69	1,111.56	1,050.24	61.32	18.126		
6,800.00	6,745.33	8,250.52	7,258.66	27.06	46.10	95.52	1,731.36	45.05	1,087.55	1,024.91	62.64	17.362		
6,850.00	6,794.65	8,243.46	7,258.80	27.21	46.02	97.52	1,731.47	37.98	1,065.68	1,001.80	63.89	16.681		
6,900.00	6,843.08	8,232.95	7,259.04	27.36	45.90	99.03	1,731.66	27.48	1,046.18	981.15	65.03	16.087		
6,950.00	6,890.24	8,218.99	7,259.39	27.50	45.74	100.05	1,731.93	13.52	1,029.20	963.14	66.06	15.579		
7,000.00	6,935.78	8,201.61	7,259.89	27.63	45.54	100.62	1,732.33	-3.84	1,014.83	947.87	66.96	15.157		
7,050.00	6,979.35	8,179.00	7,260.64	27.76	45.29	100.70	1,732.94	-26.43	1,003.07	935.39	67.68	14.820		
7,100.00	7,020.62	8,160.06	7,261.34	27.89	45.10	100.74	1,733.56	-45.35	993.91	925.53	68.38	14.535		
7,150.00	7,059.27	8,137.04	7,262.23	28.01	44.87	100.39	1,734.53	-68.33	987.31	918.38	68.93	14.324		
7,200.00	7,095.02	8,111.76	7,263.26	28.13	44.61	99.79	1,735.86	-93.55	983.14	913.77	69.37	14.173		
7,250.00	7,127.58	8,084.00	7,264.46	28.27	44.34	98.98	1,737.64	-121.23	981.23	911.52	69.71	14.076		
7,278.03	7,144.35	8,068.44	7,265.08	28.34	44.20	98.48	1,738.79	-136.74	981.07	911.18	69.90	14.036 CC, ES		
7,300.00	7,156.72	8,055.69	7,265.47	28.41	44.09	98.04	1,739.83	-149.43	981.39	911.36	70.03	14.014		
7,350.00	7,182.21	8,026.12	7,266.00	28.58	43.84	96.98	1,742.57	-178.88	983.44	913.14	70.30	13.988		
7,400.00	7,203.85	7,971.02	7,264.38	28.79	43.38	95.16	1,748.41	-233.57	987.12	916.72	70.40	14.021		
7,450.00	7,221.48	7,907.02	7,259.57	29.05	42.90	93.23	1,754.82	-297.03	991.53	921.05	70.48	14.068		
7,500.00	7,234.96	7,771.33	7,225.24	29.38	42.01	89.09	1,757.93	-427.90	991.99	921.81	70.18	14.135		
7,550.00	7,244.21	7,733.93	7,212.05	29.79	41.82	87.92	1,757.47	-462.90	992.51	921.95	70.56	14.067		
7,600.00	7,249.13	7,695.30	7,197.61	30.26	41.63	86.77	1,757.19	-498.72	993.72	922.76	70.96	14.004		
7,631.55	7,250.00	7,669.31	7,187.23	30.59	41.53	86.03	1,757.05	-522.55	994.73	923.50	71.23	13.964		
7,700.00	7,250.00	7,614.38	7,163.25	31.38	41.31	84.66	1,756.85	-571.97	997.71	925.84	71.87	13.882		
7,800.00	7,250.00	7,547.73	7,130.09	32.73	41.12	82.77	1,756.93	-629.75	1,005.01	932.01	73.00	13.767		
7,900.00	7,250.00	7,483.81	7,093.73	34.25	40.97	80.72	1,757.57	-682.30	1,016.84	942.68	74.17	13.710 SF		
8,000.00	7,250.00	7,416.00	7,050.70	35.92	40.87	78.34	1,758.06	-734.68	1,033.19	957.93	75.26	13.729		
8,100.00	7,250.00	7,366.82	7,016.60	37.73	40.83	76.47	1,758.15	-770.10	1,054.59	978.27	76.32	13.817		
8,200.00	7,250.00	7,321.00	6,982.56	39.64	40.80	74.63	1,758.00	-800.76	1,081.66	1,004.45	77.21	14.010		
8,300.00	7,250.00	7,281.05	6,951.42	41.64	40.80	72.98	1,757.82	-825.79	1,114.58	1,036.66	77.93	14.303		
8,400.00	7,250.00	7,226.00	6,906.81	43.72	40.79	70.67	1,757.75	-858.02	1,153.51	1,075.20	78.31	14.730		
8,500.00	7,250.00	7,212.24	6,895.36	45.87	40.80	70.08	1,757.76	-865.64	1,197.36	1,118.56	78.80	15.195		
8,600.00	7,250.00	7,177.00	6,865.44	48.08	40.80	68.58	1,757.70	-884.27	1,246.60	1,167.64	78.96	15.788		
8,700.00	7,250.00	7,156.03	6,847.27	50.34	40.81	67.68	1,757.62	-894.73	1,300.51	1,221.44	79.07	16.448		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,800.00	7,250.00	7,130.00	6,824.35	52.64	40.81	66.55	1,757.47	-907.06	1,358.77	1,279.75	79.01	17.196		
8,900.00	7,250.00	7,107.43	6,804.18	54.98	40.82	65.58	1,757.27	-917.19	1,420.89	1,342.00	78.89	18.011		
9,000.00	7,250.00	7,084.55	6,783.51	57.35	40.82	64.60	1,756.96	-926.98	1,486.44	1,407.75	78.70	18.888		
9,100.00	7,250.00	7,063.79	6,764.56	59.76	40.83	63.71	1,756.58	-935.45	1,555.08	1,476.62	78.46	19.819		
9,200.00	7,250.00	7,035.00	6,737.98	62.19	40.84	62.48	1,755.91	-946.51	1,626.55	1,548.42	78.13	20.817		
9,300.00	7,250.00	7,035.00	6,737.98	64.65	40.84	62.48	1,755.91	-946.51	1,700.41	1,622.40	78.01	21.798		
9,400.00	7,250.00	7,035.00	6,737.98	67.12	40.84	62.48	1,755.91	-946.51	1,776.82	1,698.98	77.85	22.824		
9,500.00	7,249.99	7,035.00	6,737.98	69.61	40.84	62.48	1,755.91	-946.51	1,855.48	1,777.81	77.67	23.888		
9,600.00	7,249.99	6,993.08	6,698.69	72.12	40.84	60.70	1,754.91	-961.09	1,934.73	1,857.51	77.23	25.053		
9,700.00	7,249.99	6,982.77	6,688.93	74.65	40.84	60.27	1,754.69	-964.38	2,016.35	1,939.36	76.99	26.188		
9,800.00	7,249.99	6,973.17	6,679.79	77.19	40.84	59.87	1,754.50	-967.34	2,099.41	2,022.64	76.77	27.346		
9,900.00	7,249.99	6,940.00	6,648.00	79.74	40.84	58.51	1,753.92	-976.76	2,184.21	2,107.81	76.40	28.588		
10,000.00	7,249.99	6,940.00	6,648.00	82.30	40.84	58.51	1,753.92	-976.76	2,269.46	2,193.20	76.26	29.759		
10,100.00	7,249.99	6,940.00	6,648.00	84.87	40.84	58.51	1,753.92	-976.76	2,355.86	2,279.74	76.12	30.949		
10,200.00	7,249.99	6,940.00	6,648.00	87.45	40.84	58.51	1,753.92	-976.76	2,443.31	2,367.32	75.99	32.155		
10,300.00	7,249.99	6,940.00	6,648.00	90.04	40.84	58.51	1,753.92	-976.76	2,531.68	2,455.83	75.85	33.375		
10,400.00	7,249.99	6,940.00	6,648.00	92.64	40.84	58.51	1,753.92	-976.76	2,620.90	2,545.17	75.73	34.609		
10,500.00	7,249.99	6,940.00	6,648.00	95.24	40.84	58.51	1,753.92	-976.76	2,710.86	2,635.25	75.61	35.855		
10,600.00	7,249.99	6,940.00	6,648.00	97.85	40.84	58.51	1,753.92	-976.76	2,801.50	2,726.01	75.49	37.110		
10,700.00	7,249.99	6,940.00	6,648.00	100.47	40.84	58.51	1,753.92	-976.76	2,892.77	2,817.38	75.38	38.375		
10,800.00	7,249.99	6,940.00	6,648.00	103.09	40.84	58.51	1,753.92	-976.76	2,984.59	2,909.31	75.28	39.648		
10,900.00	7,249.99	6,940.00	6,648.00	105.71	40.84	58.51	1,753.92	-976.76	3,076.92	3,001.74	75.18	40.928		
11,000.00	7,249.99	6,940.00	6,648.00	108.35	40.84	58.51	1,753.92	-976.76	3,169.71	3,094.63	75.09	42.215		
11,100.00	7,249.99	6,940.00	6,648.00	110.98	40.84	58.51	1,753.92	-976.76	3,262.94	3,187.94	75.00	43.508		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	6.00	6.00	0.00	0.00	23.77	1,803.29	794.07	1,970.38					
100.00	100.00	100.77	100.76	0.14	0.31	23.76	1,803.46	793.96	1,970.50	1,970.05	0.45	4,369.110		
200.00	200.00	203.35	203.34	0.50	0.68	23.73	1,804.07	793.23	1,970.76	1,969.58	1.18	1,674.957		
300.00	300.00	323.23	323.15	0.86	1.11	23.62	1,805.35	789.57	1,970.53	1,968.56	1.97	1,001.569		
400.00	399.98	485.22	484.62	1.22	1.71	21.51	1,806.55	776.90	1,966.47	1,963.54	2.93	671.504		
500.00	499.84	602.20	600.79	1.58	2.17	21.28	1,806.68	763.22	1,957.07	1,953.32	3.75	521.727		
600.00	599.45	700.63	698.33	1.95	2.57	21.10	1,807.10	750.03	1,944.12	1,939.60	4.51	430.893		
700.00	698.70	794.35	791.00	2.33	2.97	20.93	1,808.23	736.07	1,928.12	1,922.84	5.27	365.521		
715.65	714.19	808.68	805.14	2.39	3.03	20.91	1,808.50	733.75	1,925.35	1,919.95	5.40	356.488		
800.00	797.66	885.67	880.93	2.73	3.38	20.63	1,810.53	720.32	1,910.40	1,904.36	6.04	316.150		
900.00	896.61	981.42	974.73	3.13	3.82	20.20	1,814.20	701.52	1,893.02	1,886.18	6.84	276.738		
1,000.00	995.56	1,101.59	1,092.04	3.54	4.40	19.58	1,819.05	675.89	1,875.37	1,867.59	7.79	240.855		
1,100.00	1,094.50	1,199.44	1,187.03	3.96	4.91	19.01	1,822.78	652.73	1,856.80	1,848.15	8.65	214.624		
1,200.00	1,193.45	1,301.36	1,285.57	4.38	5.46	18.35	1,827.41	627.12	1,838.58	1,829.02	9.57	192.215		
1,300.00	1,292.40	1,446.07	1,424.42	4.79	6.30	17.27	1,833.27	586.80	1,819.35	1,808.60	10.75	169.253		
1,400.00	1,391.35	1,604.28	1,574.82	5.22	7.28	15.93	1,835.58	537.82	1,796.90	1,784.84	12.05	149.059		
1,500.00	1,490.30	1,687.65	1,653.38	5.64	7.83	15.15	1,836.05	509.93	1,773.43	1,760.46	12.97	136.727		
1,600.00	1,589.25	1,756.91	1,718.64	6.06	8.30	14.48	1,837.43	486.76	1,751.62	1,737.81	13.82	126.791		
1,700.00	1,688.20	1,831.45	1,788.89	6.48	8.80	13.74	1,839.88	461.95	1,731.49	1,716.79	14.70	117.795		
1,800.00	1,787.15	1,928.79	1,880.65	6.91	9.47	12.75	1,843.55	429.69	1,712.34	1,696.61	15.73	108.846		
1,900.00	1,886.10	2,031.53	1,977.44	7.33	10.18	11.69	1,846.65	395.37	1,692.92	1,676.11	16.81	100.710		
2,000.00	1,985.05	2,118.51	2,058.85	7.75	10.79	10.71	1,849.92	364.91	1,674.37	1,656.57	17.81	94.015		
2,100.00	2,084.00	2,230.75	2,163.66	8.18	11.61	9.41	1,853.80	324.97	1,656.09	1,637.09	18.99	87.199		
2,200.00	2,182.95	2,332.91	2,259.02	8.60	12.37	8.20	1,856.05	288.38	1,637.22	1,617.10	20.12	81.373		
2,300.00	2,281.90	2,420.20	2,339.73	9.03	13.04	7.07	1,858.45	255.22	1,619.21	1,598.03	21.18	76.467		
2,400.00	2,380.85	2,527.42	2,438.52	9.45	13.89	5.62	1,861.44	213.65	1,601.96	1,579.57	22.39	71.546		
2,500.00	2,479.80	2,605.02	2,510.01	9.88	14.50	4.56	1,862.89	183.50	1,584.76	1,561.36	23.40	67.733		
2,600.00	2,578.74	2,661.00	2,561.67	10.31	14.94	3.79	1,865.11	162.06	1,570.31	1,546.07	24.24	64.788		
2,700.00	2,677.69	2,742.83	2,637.30	10.73	15.58	2.66	1,869.52	131.13	1,558.09	1,532.83	25.26	61.687		
2,800.00	2,776.64	2,825.18	2,713.50	11.16	16.23	1.52	1,874.47	100.30	1,547.33	1,521.06	26.28	58.890		
2,900.00	2,875.59	2,915.24	2,797.05	11.58	16.93	0.28	1,880.29	67.19	1,537.90	1,510.57	27.33	56.266		
3,000.00	2,974.54	3,026.04	2,900.64	12.01	17.75	-1.18	1,886.96	28.46	1,528.95	1,500.44	28.51	53.630		
3,100.00	3,073.49	3,126.10	2,994.84	12.44	18.46	-2.46	1,891.97	-4.92	1,519.78	1,490.20	29.58	51.384		
3,200.00	3,172.44	3,206.49	3,070.32	12.86	19.05	-3.51	1,896.16	-32.24	1,511.60	1,481.09	30.51	49.545		
3,300.00	3,271.39	3,322.68	3,179.21	13.29	19.90	-5.07	1,902.32	-72.30	1,504.40	1,472.71	31.69	47.470		
3,400.00	3,370.34	3,400.11	3,252.27	13.72	20.44	-6.07	1,906.03	-97.67	1,497.31	1,464.74	32.57	45.973		
3,500.00	3,469.29	3,491.28	3,338.49	14.14	21.08	-7.22	1,911.29	-126.82	1,491.80	1,458.27	33.52	44.500		
3,600.00	3,568.24	3,569.70	3,412.62	14.57	21.63	-8.23	1,916.00	-151.97	1,487.28	1,452.90	34.38	43.261		
3,700.00	3,667.19	3,637.67	3,476.59	15.00	22.11	-9.11	1,921.06	-174.37	1,484.97	1,449.82	35.15	42.248		
3,738.27	3,705.05	3,661.91	3,499.29	15.16	22.29	-9.44	1,923.14	-182.61	1,484.77	1,449.34	35.43	41.910		
3,800.00	3,766.14	3,710.00	3,544.12	15.42	22.65	-10.10	1,927.77	-199.40	1,485.33	1,449.39	35.94	41.326		
3,900.00	3,865.09	3,770.00	3,599.76	15.85	23.11	-10.94	1,934.30	-220.86	1,488.22	1,451.60	36.62	40.641		
4,000.00	3,964.03	3,859.19	3,682.21	16.28	23.81	-12.19	1,944.92	-253.20	1,493.17	1,455.63	37.54	39.778		
4,100.00	4,062.98	3,958.65	3,774.07	16.70	24.59	-13.59	1,956.14	-289.64	1,498.53	1,459.99	38.54	38.884		
4,200.00	4,161.93	4,067.76	3,875.15	17.13	25.43	-15.10	1,968.10	-328.93	1,504.37	1,464.77	39.60	37.989		
4,300.00	4,260.88	4,202.22	4,001.00	17.56	26.43	-16.85	1,980.75	-374.52	1,508.95	1,468.11	40.84	36.948		
4,400.00	4,359.83	4,292.88	4,085.44	17.98	27.12	-18.10	1,987.72	-406.80	1,513.33	1,471.62	41.71	36.282		
4,500.00	4,458.78	4,406.93	4,191.56	18.41	28.00	-19.69	1,995.65	-447.81	1,518.09	1,475.32	42.77	35.492		
4,600.00	4,557.73	4,516.03	4,293.66	18.84	28.81	-21.16	2,001.92	-485.72	1,522.16	1,478.40	43.76	34.783		
4,700.00	4,656.68	4,612.86	4,384.67	19.26	29.51	-22.42	2,007.75	-518.26	1,526.92	1,482.29	44.63	34.214		
4,800.00	4,755.63	4,712.26	4,478.42	19.69	30.22	-23.68	2,013.55	-550.79	1,531.92	1,486.42	45.49	33.673		
4,900.00	4,854.58	4,798.28	4,559.45	20.12	30.84	-24.77	2,018.51	-579.24	1,537.76	1,491.51	46.25	33.248		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	4,953.53	4,882.71	4,638.41	20.55	31.47	-25.89	2,023.29	-608.74	1,545.08	1,498.10	46.99	32.884		
5,100.00	5,052.48	4,989.09	4,738.13	20.97	32.25	-27.26	2,029.66	-645.22	1,553.22	1,505.34	47.88	32.438		
5,200.00	5,151.43	5,101.78	4,844.92	21.40	33.03	-28.59	2,036.43	-680.60	1,560.66	1,511.87	48.79	31.986		
5,300.00	5,250.38	5,205.08	4,943.16	21.83	33.72	-29.77	2,042.57	-711.92	1,568.19	1,518.58	49.61	31.611		
5,400.00	5,349.32	5,289.87	5,023.82	22.25	34.28	-30.72	2,047.47	-737.56	1,576.17	1,525.90	50.27	31.351		
5,500.00	5,448.27	5,426.84	5,154.55	22.68	35.17	-32.19	2,056.04	-777.53	1,584.80	1,533.50	51.30	30.893		
5,600.00	5,547.22	5,549.07	5,271.93	23.11	35.92	-33.47	2,061.32	-811.19	1,591.31	1,539.13	52.19	30.494		
5,625.90	5,572.85	5,591.61	5,312.94	23.22	36.17	-33.91	2,062.66	-822.43	1,592.67	1,540.19	52.47	30.352		
5,700.00	5,646.30	5,706.96	5,424.59	23.53	36.83	-35.08	2,064.69	-851.30	1,596.11	1,542.88	53.23	29.987		
5,800.00	5,745.78	5,851.82	5,565.66	23.92	37.58	-36.45	2,063.05	-884.17	1,599.58	1,545.47	54.12	29.557		
5,900.00	5,845.55	5,963.43	5,674.91	24.28	38.12	-37.34	2,062.98	-906.92	1,606.21	1,551.37	54.83	29.292		
6,000.00	5,945.50	6,073.13	5,783.16	24.61	38.59	-38.01	2,064.16	-924.63	1,614.10	1,558.58	55.52	29.074		
6,041.55	5,987.04	6,151.35	5,860.60	24.74	38.89	-36.54	2,065.30	-935.59	1,617.92	1,562.05	55.87	28.960		
6,100.00	6,045.49	6,233.12	5,941.92	24.91	39.17	-36.76	2,066.23	-944.13	1,622.03	1,565.75	56.27	28.823		
6,200.00	6,145.49	6,341.60	6,049.87	25.22	39.53	-37.05	2,067.00	-954.80	1,628.53	1,571.63	56.89	28.625		
6,300.00	6,245.49	6,168.32	7,118.79	25.52	46.24	4.06	2,088.15	118.05	1,580.87	1,523.07	57.80	27.351		
6,400.00	6,345.49	8,165.66	7,118.84	25.83	46.21	3.95	2,088.30	115.39	1,528.30	1,468.43	59.87	25.528		
6,500.00	6,445.49	8,163.20	7,118.89	26.14	46.18	3.84	2,088.44	112.94	1,480.62	1,418.69	61.93	23.909		
6,600.00	6,545.49	8,160.93	7,118.93	26.45	46.15	3.74	2,088.57	110.67	1,438.31	1,374.38	63.94	22.496		
6,700.00	6,645.49	8,158.81	7,118.97	26.76	46.12	3.65	2,088.69	108.56	1,401.87	1,336.03	65.84	21.291		
6,731.55	6,677.04	8,158.18	7,118.98	26.86	46.12	3.62	2,088.73	107.93	1,391.67	1,325.26	66.42	20.954		
6,750.00	6,695.49	8,157.47	7,118.99	26.92	46.11	94.65	2,088.77	107.22	1,386.02	1,319.29	66.74	20.768		
6,800.00	6,745.33	8,152.16	7,119.07	27.06	46.04	95.87	2,089.08	101.92	1,372.09	1,304.56	67.53	20.319		
6,850.00	6,794.65	8,142.14	7,119.21	27.21	45.92	96.66	2,089.65	91.92	1,360.24	1,292.04	68.21	19.943		
6,900.00	6,843.08	8,127.72	7,119.35	27.36	45.75	97.04	2,090.48	77.52	1,350.54	1,281.78	68.76	19.641		
6,950.00	6,890.24	8,109.18	7,119.45	27.50	45.53	97.05	2,091.53	59.02	1,342.98	1,273.78	69.20	19.408		
7,000.00	6,935.78	8,071.95	7,119.45	27.63	45.10	96.15	2,093.53	21.83	1,337.47	1,268.13	69.34	19.289		
7,050.00	6,979.35	7,976.00	7,122.76	27.76	44.11	93.08	2,094.40	-74.02	1,332.53	1,263.84	68.69	19.398		
7,100.00	7,020.62	7,946.30	7,124.52	27.89	43.84	92.44	2,093.96	-103.66	1,328.84	1,259.98	68.86	19.298		
7,150.00	7,059.27	7,912.97	7,126.68	28.01	43.54	91.63	2,093.47	-136.93	1,326.44	1,257.49	68.95	19.239		
7,200.00	7,095.02	7,878.80	7,128.93	28.13	43.26	90.78	2,093.00	-171.02	1,325.11	1,256.09	69.02	19.198		
7,244.62	7,124.24	7,848.63	7,130.32	28.25	43.02	90.00	2,092.69	-201.16	1,324.76	1,255.65	69.11	19.169 CC		
7,250.00	7,127.58	7,844.93	7,130.45	28.27	42.99	89.91	2,092.66	-204.85	1,324.76	1,255.65	69.12	19.167 ES		
7,300.00	7,156.72	7,810.12	7,131.15	28.41	42.73	89.01	2,092.47	-239.65	1,325.25	1,256.03	69.22	19.147		
7,350.00	7,182.21	7,761.81	7,129.14	28.58	42.40	87.77	2,092.17	-287.89	1,326.26	1,257.03	69.23	19.157		
7,400.00	7,203.85	7,714.81	7,121.35	28.79	42.09	86.48	2,091.34	-334.20	1,327.45	1,258.16	69.29	19.157		
7,450.00	7,221.48	7,683.01	7,113.40	29.05	41.89	85.53	2,090.63	-364.99	1,329.04	1,259.48	69.56	19.107		
7,500.00	7,234.96	7,652.95	7,105.27	29.38	41.72	84.64	2,090.18	-393.92	1,331.22	1,261.34	69.88	19.049		
7,550.00	7,244.21	7,622.08	7,096.35	29.79	41.54	83.77	2,089.96	-423.47	1,333.88	1,263.62	70.25	18.986		
7,600.00	7,249.13	7,587.96	7,085.50	30.26	41.38	82.88	2,089.92	-455.82	1,336.84	1,266.17	70.67	18.917		
7,631.55	7,250.00	7,565.77	7,077.36	30.59	41.29	82.32	2,089.89	-476.46	1,338.78	1,267.83	70.95	18.869		
7,700.00	7,250.00	7,523.28	7,059.31	31.38	41.09	81.55	2,089.75	-514.91	1,343.67	1,272.02	71.65	18.754		
7,800.00	7,250.00	7,421.00	7,002.73	32.73	40.79	79.16	2,086.82	-599.80	1,352.27	1,279.75	72.52	18.647		
7,900.00	7,250.00	7,375.63	6,973.18	34.25	40.70	77.91	2,084.66	-634.16	1,364.05	1,290.13	73.92	18.453		
8,000.00	7,250.00	7,326.00	6,939.89	35.92	40.61	76.53	2,083.32	-670.93	1,380.69	1,305.41	75.28	18.340		
8,100.00	7,250.00	7,294.56	6,918.27	37.73	40.57	75.64	2,083.05	-693.75	1,402.07	1,325.32	76.75	18.267 SF		
8,200.00	7,250.00	7,257.38	6,892.16	39.64	40.53	74.59	2,083.32	-720.22	1,428.26	1,350.16	78.11	18.286		
8,300.00	7,250.00	7,217.97	6,863.85	41.64	40.50	73.46	2,084.26	-747.62	1,459.07	1,379.71	79.36	18.387		
8,400.00	7,250.00	7,171.44	6,829.24	43.72	40.48	72.11	2,085.35	-778.70	1,493.90	1,413.44	80.45	18.568		
8,500.00	7,250.00	7,126.92	6,794.87	45.87	40.47	70.79	2,086.10	-806.97	1,532.57	1,451.15	81.43	18.821		
8,600.00	7,250.00	7,075.24	6,753.31	48.08	40.48	69.20	2,085.89	-837.69	1,574.72	1,492.51	82.21	19.154		
8,700.00	7,250.00	7,040.00	6,724.00	50.34	40.48	68.08	2,084.86	-857.21	1,620.30	1,537.36	82.94	19.536		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,800.00	7,250.00	6,993.67	6,684.52	52.64	40.49	66.60	2,082.74	-881.36	1,669.27	1,585.83	83.44	20.006		
8,900.00	7,250.00	6,945.00	6,642.16	54.98	40.51	65.02	2,079.85	-905.15	1,721.72	1,637.94	83.77	20.552		
9,000.00	7,250.00	6,945.00	6,642.16	57.35	40.51	65.02	2,079.85	-905.15	1,777.31	1,692.93	84.39	21.061		
9,100.00	7,250.00	6,945.00	6,642.16	59.76	40.51	65.02	2,079.85	-905.15	1,836.67	1,751.80	84.87	21.640		
9,200.00	7,250.00	6,910.69	6,611.54	62.19	40.52	63.90	2,077.66	-920.46	1,898.36	1,813.35	85.01	22.331		
9,300.00	7,250.00	6,899.21	6,601.10	64.65	40.52	63.53	2,076.97	-925.18	1,963.35	1,878.11	85.23	23.035		
9,400.00	7,250.00	6,888.66	6,591.42	67.12	40.53	63.18	2,076.35	-929.33	2,030.97	1,945.57	85.39	23.784		
9,500.00	7,249.99	6,850.00	6,555.36	69.61	40.54	61.90	2,074.25	-943.08	2,101.77	2,016.50	85.28	24.646		
9,600.00	7,249.99	6,850.00	6,555.36	72.12	40.54	61.90	2,074.25	-943.08	2,173.56	2,088.15	85.41	25.447		
9,700.00	7,249.99	6,850.00	6,555.36	74.65	40.54	61.90	2,074.25	-943.08	2,247.51	2,162.01	85.50	26.286		
9,800.00	7,249.99	6,850.00	6,555.36	77.19	40.54	61.90	2,074.25	-943.08	2,323.41	2,237.86	85.55	27.159		
9,900.00	7,249.99	6,850.00	6,555.36	79.74	40.54	61.90	2,074.25	-943.08	2,401.08	2,315.52	85.56	28.063		
10,000.00	7,249.99	6,850.00	6,555.36	82.30	40.54	61.90	2,074.25	-943.08	2,480.34	2,394.80	85.55	28.994		
10,100.00	7,249.99	6,850.00	6,555.36	84.87	40.54	61.90	2,074.25	-943.08	2,561.06	2,475.55	85.51	29.950		
10,200.00	7,249.99	6,850.00	6,555.36	87.45	40.54	61.90	2,074.25	-943.08	2,643.10	2,557.64	85.46	30.928		
10,300.00	7,249.99	6,850.00	6,555.36	90.04	40.54	61.90	2,074.25	-943.08	2,726.33	2,640.94	85.40	31.926		
10,400.00	7,249.99	6,850.00	6,555.36	92.64	40.54	61.90	2,074.25	-943.08	2,810.66	2,725.34	85.32	32.943		
10,500.00	7,249.99	6,850.00	6,555.36	95.24	40.54	61.90	2,074.25	-943.08	2,895.99	2,810.75	85.24	33.976		
10,600.00	7,249.99	6,850.00	6,555.36	97.85	40.54	61.90	2,074.25	-943.08	2,982.23	2,897.08	85.15	35.024		
10,700.00	7,249.99	6,850.00	6,555.36	100.47	40.54	61.90	2,074.25	-943.08	3,069.30	2,984.24	85.06	36.086		
10,800.00	7,249.99	6,850.00	6,555.36	103.09	40.54	61.90	2,074.25	-943.08	3,157.14	3,072.18	84.96	37.160		
10,900.00	7,249.99	6,850.00	6,555.36	105.71	40.54	61.90	2,074.25	-943.08	3,245.68	3,160.82	84.86	38.246		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	6.00	6.00	0.00	0.00	25.23	1,684.16	793.52	1,861.74					
100.00	100.00	105.34	105.34	0.14	0.32	25.23	1,684.13	793.63	1,861.76	1,861.29	0.46	4,015.177		
200.00	200.00	239.93	239.92	0.50	0.79	25.24	1,683.20	793.52	1,861.18	1,859.88	1.30	1,433.481		
300.00	300.00	451.44	451.16	0.86	1.56	25.24	1,674.23	789.22	1,856.61	1,854.19	2.42	767.138		
400.00	399.98	636.75	635.38	1.22	2.27	23.46	1,657.77	777.92	1,843.95	1,840.49	3.46	533.316		
500.00	499.84	787.20	784.42	1.58	2.88	23.59	1,641.16	765.99	1,826.08	1,821.70	4.37	417.463		
600.00	599.45	1,012.62	1,005.72	1.95	3.89	23.88	1,605.38	742.70	1,799.50	1,793.93	5.57	322.923		
700.00	698.70	1,105.66	1,096.54	2.33	4.36	24.25	1,588.17	732.19	1,767.17	1,760.89	6.28	281.371		
715.65	714.19	1,123.89	1,114.31	2.39	4.45	24.32	1,584.64	730.15	1,761.74	1,755.32	6.41	274.659		
800.00	797.66	1,267.88	1,254.10	2.73	5.20	24.57	1,554.27	713.89	1,731.11	1,723.88	7.23	239.324		
900.00	896.61	1,410.06	1,390.63	3.13	5.99	24.86	1,518.84	695.98	1,690.51	1,682.41	8.09	208.854		
1,000.00	995.56	1,497.85	1,474.67	3.54	6.49	25.03	1,496.39	684.13	1,649.25	1,640.48	8.77	187.969		
1,100.00	1,094.50	1,582.05	1,555.38	3.96	6.98	25.19	1,475.42	672.49	1,608.42	1,598.97	9.45	170.212		
1,200.00	1,193.45	1,669.19	1,638.98	4.38	7.49	25.34	1,454.07	660.29	1,567.89	1,557.75	10.14	154.621		
1,300.00	1,292.40	1,765.44	1,731.36	4.79	8.05	25.51	1,430.74	646.69	1,527.54	1,516.68	10.86	140.625		
1,400.00	1,391.35	1,861.40	1,823.26	5.22	8.62	25.70	1,408.80	632.93	1,486.50	1,474.91	11.59	128.294		
1,500.00	1,490.30	1,980.58	1,937.20	5.64	9.34	25.96	1,376.27	615.97	1,445.03	1,432.66	12.37	116.784		
1,600.00	1,589.25	2,081.34	2,032.98	6.06	9.97	26.13	1,349.73	599.37	1,401.92	1,388.81	13.11	106.920		
1,700.00	1,688.20	2,164.54	2,112.02	6.48	10.49	26.23	1,328.17	584.85	1,358.76	1,344.95	13.81	98.386		
1,800.00	1,787.15	2,276.69	2,218.39	6.91	11.21	26.36	1,298.94	564.69	1,315.27	1,300.70	14.57	90.254		
1,900.00	1,886.10	2,369.24	2,305.83	7.33	11.81	26.44	1,274.26	547.05	1,270.78	1,255.48	15.30	83.081		
2,000.00	1,985.05	2,471.69	2,402.39	7.75	12.49	26.52	1,246.46	527.07	1,225.70	1,209.66	16.03	76.441		
2,100.00	2,084.00	2,561.00	2,486.32	8.18	13.10	26.61	1,221.63	509.34	1,179.91	1,163.15	16.75	70.424		
2,200.00	2,182.95	2,641.63	2,562.21	8.60	13.64	26.70	1,199.33	493.66	1,134.45	1,116.98	17.47	64.952		
2,300.00	2,281.90	2,722.78	2,638.87	9.03	14.17	26.82	1,177.44	478.58	1,089.91	1,071.73	18.18	59.948		
2,400.00	2,380.85	2,817.62	2,728.56	9.45	14.80	26.97	1,152.12	460.98	1,045.63	1,026.72	18.91	55.300		
2,500.00	2,479.80	2,903.64	2,809.74	9.88	15.37	27.06	1,129.16	444.15	1,000.92	981.28	19.63	50.983		
2,600.00	2,578.74	2,978.87	2,880.97	10.31	15.86	27.16	1,109.66	429.83	957.10	936.74	20.36	47.015		
2,700.00	2,677.69	3,055.17	2,953.69	10.73	16.35	27.29	1,090.96	416.26	914.97	893.88	21.09	43.390		
2,800.00	2,776.64	3,150.67	3,044.73	11.16	16.95	27.44	1,067.91	398.98	873.04	851.22	21.82	40.017		
2,900.00	2,875.59	3,240.48	3,130.32	11.58	17.52	27.59	1,046.16	382.62	831.01	808.46	22.55	36.854		
3,000.00	2,974.54	3,332.99	3,218.49	12.01	18.10	27.81	1,023.36	366.31	788.90	765.62	23.28	33.890		
3,100.00	3,073.49	3,423.56	3,304.80	12.44	18.68	28.12	1,000.60	351.01	746.72	722.71	24.01	31.101		
3,200.00	3,172.44	3,518.67	3,395.35	12.86	19.29	28.50	976.34	334.95	704.26	679.53	24.73	28.476		
3,300.00	3,271.39	3,612.19	3,484.21	13.29	19.89	28.82	952.61	317.97	661.34	635.89	25.46	25.980		
3,400.00	3,370.34	3,716.24	3,582.46	13.72	20.59	28.97	926.23	296.19	617.12	590.99	26.13	23.618		
3,500.00	3,469.29	3,811.42	3,671.76	14.14	21.24	28.99	901.46	274.49	571.47	544.64	26.83	21.302		
3,600.00	3,568.24	3,903.34	3,757.75	14.57	21.89	29.01	876.91	253.21	525.09	497.56	27.54	19.069		
3,700.00	3,667.19	3,989.00	3,837.80	15.00	22.50	29.11	853.52	233.68	478.41	450.11	28.30	16.908		
3,800.00	3,766.14	4,068.33	3,912.39	15.42	23.04	29.42	832.02	217.34	432.98	403.85	29.12	14.867		
3,900.00	3,865.09	4,146.29	3,986.50	15.85	23.54	30.09	811.86	203.92	390.18	360.19	29.98	13.013		
4,000.00	3,964.03	4,235.13	4,071.57	16.28	24.09	31.21	790.05	190.54	349.56	318.80	30.76	11.365		
4,100.00	4,062.98	4,328.60	4,160.88	16.70	24.68	32.57	766.86	175.61	308.43	276.94	31.50	9.793		
4,200.00	4,161.93	4,424.06	4,251.82	17.13	25.29	34.30	742.75	159.52	266.67	234.46	32.21	8.280		
4,300.00	4,260.88	4,514.46	4,337.46	17.56	25.88	36.55	718.72	143.34	223.54	190.50	33.04	6.766		
4,400.00	4,359.83	4,601.59	4,420.36	17.98	26.44	39.61	696.57	128.22	182.01	147.94	34.07	5.342		
4,500.00	4,458.78	4,691.51	4,506.26	18.41	27.01	44.41	674.68	113.16	142.37	107.10	35.28	4.036		
4,600.00	4,557.73	4,783.24	4,593.76	18.84	27.59	53.20	651.73	97.99	104.02	66.90	37.12	2.802		
4,700.00	4,656.68	4,874.17	4,680.21	19.26	28.17	71.17	628.04	82.69	69.48	28.33	41.15	1.689		
4,800.00	4,755.63	4,964.32	4,765.82	19.69	28.76	107.14	604.46	67.17	50.24	2.54	47.70	1.053 Level 3		
4,811.15	4,766.66	4,974.34	4,775.37	19.74	28.82	112.04	601.89	65.47	50.01	1.98	48.03	1.041 Level 3, CC, ES, SF		
4,900.00	4,854.58	5,055.09	4,852.51	20.12	29.33	145.85	581.89	52.46	62.49	16.56	45.93	1.361 Level 3		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore #1											Offset Site Error:	0.00 usft		
Survey Program: 16-OWSG (Rev2) MWD											Offset Well Error:	0.00 usft		
Reference				Offset			Semi Major Axis		Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
5,000.00	4,953.53	5,147.05	4,940.78	20.55	29.89	166.24	560.16	38.54	92.76	49.80	42.96	2.159		
5,100.00	5,052.48	5,238.79	5,028.80	20.97	30.44	176.69	538.83	23.99	128.34	86.49	41.85	3.067		
5,200.00	5,151.43	5,330.59	5,116.77	21.40	31.01	-177.01	517.73	8.41	165.97	124.34	41.63	3.987		
5,300.00	5,250.38	5,421.37	5,203.64	21.83	31.57	-172.85	496.87	-7.69	204.83	163.04	41.78	4.902		
5,400.00	5,349.32	5,514.61	5,292.99	22.25	32.14	-170.04	475.62	-23.78	244.06	201.80	42.26	5.776		
5,500.00	5,448.27	5,607.47	5,382.21	22.68	32.70	-168.19	454.82	-38.97	283.05	240.22	42.83	6.609		
5,600.00	5,547.22	5,701.54	5,472.70	23.11	33.26	-166.73	434.30	-54.41	321.72	278.23	43.48	7.398		
5,625.90	5,572.85	5,725.16	5,495.42	23.22	33.40	-166.38	429.27	-58.47	331.68	288.04	43.64	7.600		
5,700.00	5,646.30	5,792.83	5,560.34	23.53	33.81	-165.38	415.16	-71.35	359.49	315.42	44.07	8.157		
5,800.00	5,745.78	5,872.25	5,635.89	23.92	34.32	-164.03	397.92	-88.71	396.16	351.80	44.36	8.930		
5,900.00	5,845.55	5,965.17	5,723.67	24.28	34.94	-162.56	375.96	-109.86	432.07	387.09	44.98	9.607		
6,000.00	5,945.50	6,063.39	5,817.10	24.61	35.57	-161.57	352.35	-128.80	464.22	418.50	45.72	10.154		
6,041.55	5,987.04	6,102.79	5,854.72	24.74	35.82	-159.47	342.71	-135.46	476.50	430.50	46.00	10.360		
6,100.00	6,045.49	6,156.18	5,905.64	24.91	36.16	-159.03	329.39	-144.33	493.62	447.28	46.34	10.651		
6,200.00	6,145.49	6,252.83	5,997.80	25.22	36.77	-158.34	304.94	-160.21	523.21	476.15	47.06	11.118		
6,300.00	6,245.49	6,351.85	6,092.39	25.52	37.39	-157.72	280.33	-176.10	552.31	504.48	47.82	11.549		
6,400.00	6,345.49	6,444.28	6,180.74	25.83	37.97	-157.26	257.27	-190.37	581.31	532.84	48.47	11.994		
6,500.00	6,445.49	6,540.49	6,272.66	26.14	38.56	-157.01	232.18	-203.68	610.72	561.54	49.19	12.416		
6,600.00	6,545.49	6,625.07	6,353.33	26.45	39.08	-157.21	208.07	-211.55	640.64	590.93	49.71	12.888		
6,700.00	6,645.49	6,708.14	6,431.40	26.76	39.54	-158.14	179.93	-212.16	672.52	622.32	50.20	13.396		
6,731.55	6,677.04	6,733.86	6,455.04	26.86	39.68	-158.67	170.09	-209.78	682.94	632.59	50.35	13.564		
6,750.00	6,695.49	6,749.00	6,468.78	26.92	39.77	-67.98	164.06	-207.78	689.04	638.60	50.44	13.660		
6,800.00	6,745.33	6,969.15	6,664.76	27.06	40.39	-75.51	93.93	-139.34	699.76	646.57	53.19	13.157		
6,850.00	6,794.65	7,049.48	6,736.58	27.21	40.48	-78.94	79.61	-106.35	703.06	649.06	54.01	13.018		
6,900.00	6,843.08	7,093.03	6,775.29	27.36	40.51	-80.98	72.98	-87.53	705.88	651.25	54.64	12.920		
6,950.00	6,890.24	7,131.92	6,809.59	27.50	40.54	-82.92	67.30	-70.11	709.44	654.14	55.30	12.829		
7,000.00	6,935.78	7,149.65	6,825.02	27.63	40.56	-83.54	64.60	-61.81	714.66	658.90	55.77	12.815		
7,050.00	6,979.35	7,158.00	6,832.20	27.76	40.56	-83.35	63.23	-57.77	722.23	666.15	56.08	12.878		
7,100.00	7,020.62	7,176.64	6,848.01	27.89	40.58	-83.68	59.99	-48.46	732.15	675.58	56.57	12.943		
7,150.00	7,059.27	7,185.45	6,855.38	28.01	40.58	-83.07	58.35	-43.91	744.63	687.74	56.88	13.090		
7,200.00	7,095.02	7,191.48	6,860.38	28.13	40.59	-81.98	57.20	-40.75	759.56	702.40	57.16	13.288		
7,250.00	7,127.58	7,194.96	6,863.26	28.27	40.59	-80.44	56.52	-38.90	776.81	719.39	57.41	13.530		
7,300.00	7,156.72	7,196.15	6,864.23	28.41	40.59	-78.47	56.29	-38.27	796.15	738.48	57.66	13.807		
7,350.00	7,182.21	7,195.26	6,863.50	28.58	40.59	-76.12	56.46	-38.74	817.31	759.38	57.93	14.109		
7,400.00	7,203.85	7,192.51	6,861.23	28.79	40.59	-73.46	57.00	-40.20	839.99	781.77	58.22	14.429		
7,450.00	7,221.48	7,188.09	6,857.57	29.05	40.58	-70.54	57.85	-42.53	863.86	805.31	58.55	14.755		
7,500.00	7,234.96	7,182.16	6,852.63	29.38	40.58	-67.46	58.97	-45.62	888.60	829.68	58.92	15.081		
7,550.00	7,244.21	7,158.00	6,832.20	29.79	40.56	-63.20	63.23	-57.77	914.26	855.39	58.87	15.531		
7,600.00	7,249.13	7,158.00	6,832.20	30.26	40.56	-60.62	63.23	-57.77	939.49	879.91	59.58	15.769		
7,631.55	7,250.00	7,158.00	6,832.20	30.59	40.56	-59.02	63.23	-57.77	955.50	895.44	60.06	15.909		
7,700.00	7,250.00	7,147.54	6,823.20	31.38	40.56	-58.42	64.93	-62.82	991.85	931.03	60.82	16.309		
7,800.00	7,250.00	7,130.00	6,807.90	32.73	40.54	-57.43	67.57	-70.98	1,050.06	988.30	61.76	17.003		
7,900.00	7,250.00	7,094.17	6,776.30	34.25	40.51	-55.42	72.81	-87.03	1,113.13	1,050.99	62.14	17.912		
8,000.00	7,250.00	7,060.28	6,746.20	35.92	40.49	-53.57	77.94	-101.75	1,180.01	1,117.51	62.49	18.882		
8,100.00	7,250.00	7,023.39	6,713.25	37.73	40.45	-51.60	83.76	-117.27	1,250.17	1,187.47	62.70	19.939		
8,200.00	7,250.00	6,967.48	6,663.27	39.64	40.39	-48.67	94.28	-140.01	1,322.66	1,260.24	62.42	21.190		
8,300.00	7,250.00	6,917.61	6,618.82	41.64	40.31	-46.11	105.83	-159.43	1,397.04	1,334.83	62.21	22.458		
8,400.00	7,250.00	6,875.98	6,581.88	43.72	40.21	-43.97	117.67	-174.51	1,473.29	1,411.18	62.10	23.723		
8,500.00	7,250.00	6,844.00	6,553.67	45.87	40.14	-42.33	128.20	-185.29	1,551.38	1,489.21	62.17	24.954		
8,600.00	7,250.00	6,844.00	6,553.67	48.08	40.14	-42.33	128.20	-185.29	1,631.59	1,568.74	62.85	25.959		
8,700.00	7,250.00	6,844.00	6,553.67	50.34	40.14	-42.33	128.20	-185.29	1,713.87	1,650.44	63.44	27.017		
8,800.00	7,250.00	6,844.00	6,553.67	52.64	40.14	-42.33	128.20	-185.29	1,797.96	1,734.02	63.94	28.120		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,900.00	7,250.00	6,844.00	6,553.67	54.98	40.14	-42.33	128.20	-185.29	1,883.60	1,819.23	64.37	29.260		
9,000.00	7,250.00	6,803.54	6,517.81	57.35	39.98	-40.26	142.83	-196.95	1,968.90	1,904.88	64.01	30.758		
9,100.00	7,250.00	6,797.75	6,512.63	59.76	39.96	-39.96	145.00	-198.37	2,056.55	1,992.28	64.27	31.999		
9,200.00	7,250.00	6,792.45	6,507.88	62.19	39.94	-39.69	147.01	-199.61	2,145.22	2,080.72	64.50	33.261		
9,300.00	7,250.00	6,787.58	6,503.52	64.65	39.92	-39.44	148.87	-200.70	2,234.80	2,170.10	64.70	34.541		
9,400.00	7,250.00	6,749.00	6,468.78	67.12	39.77	-37.49	164.06	-207.78	2,326.39	2,262.07	64.32	36.168		
9,500.00	7,249.99	6,749.00	6,468.78	69.61	39.77	-37.49	164.06	-207.78	2,417.22	2,352.65	64.57	37.436		
9,600.00	7,249.99	6,749.00	6,468.78	72.12	39.77	-37.49	164.06	-207.78	2,508.74	2,443.95	64.79	38.721		
9,700.00	7,249.99	6,749.00	6,468.78	74.65	39.77	-37.49	164.06	-207.78	2,600.89	2,535.90	64.99	40.021		
9,800.00	7,249.99	6,749.00	6,468.78	77.19	39.77	-37.49	164.06	-207.78	2,693.60	2,628.43	65.17	41.333		
9,900.00	7,249.99	6,749.00	6,468.78	79.74	39.77	-37.49	164.06	-207.78	2,786.81	2,721.48	65.33	42.657		
10,000.00	7,249.99	6,749.00	6,468.78	82.30	39.77	-37.49	164.06	-207.78	2,880.48	2,815.00	65.48	43.991		
10,100.00	7,249.99	6,749.00	6,468.78	84.87	39.77	-37.49	164.06	-207.78	2,974.56	2,908.95	65.62	45.333		
10,200.00	7,249.99	6,749.00	6,468.78	87.45	39.77	-37.49	164.06	-207.78	3,069.02	3,003.28	65.74	46.684		
10,300.00	7,249.99	6,749.00	6,468.78	90.04	39.77	-37.49	164.06	-207.78	3,163.82	3,097.96	65.86	48.041		
10,400.00	7,249.99	6,749.00	6,468.78	92.64	39.77	-37.49	164.06	-207.78	3,258.92	3,192.96	65.96	49.404		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	6.00	6.00	0.00	0.00	24.50	1,742.82	794.35	1,915.31					
100.00	100.00	90.15	90.15	0.14	0.27	24.50	1,743.10	794.47	1,915.68	1,915.27	0.41	4,660.754		
200.00	200.00	189.38	189.38	0.50	0.62	24.50	1,744.08	794.82	1,916.72	1,915.60	1.12	1,705.631		
300.00	300.00	386.87	386.81	0.86	1.31	24.46	1,741.86	792.44	1,915.35	1,913.18	2.17	882.113		
400.00	399.98	549.60	549.14	1.22	1.88	22.57	1,735.33	783.40	1,907.74	1,904.63	3.11	613.852		
500.00	499.84	678.52	677.35	1.58	2.37	22.51	1,728.75	771.65	1,894.47	1,890.53	3.94	480.707		
600.00	599.45	802.95	800.59	1.95	2.87	22.39	1,722.72	755.61	1,876.77	1,871.99	4.78	392.705		
700.00	698.70	926.00	921.72	2.33	3.40	22.22	1,717.14	734.78	1,854.55	1,848.92	5.63	329.334		
715.65	714.19	936.67	932.19	2.39	3.45	22.21	1,716.70	732.79	1,850.73	1,844.99	5.74	322.272		
800.00	797.66	1,014.59	1,008.59	2.73	3.80	21.94	1,713.79	717.71	1,830.06	1,823.70	6.37	287.436		
900.00	896.61	1,146.51	1,137.44	3.13	4.43	21.41	1,708.19	690.00	1,804.47	1,797.17	7.30	247.303		
1,000.00	995.56	1,249.04	1,237.17	3.54	4.94	20.93	1,703.40	666.70	1,777.96	1,769.84	8.12	218.888		
1,100.00	1,094.50	1,385.17	1,369.07	3.96	5.65	20.21	1,696.58	633.73	1,750.85	1,741.73	9.12	192.011		
1,200.00	1,193.45	1,497.57	1,477.24	4.38	6.28	19.54	1,689.36	604.10	1,721.66	1,711.62	10.04	171.525		
1,300.00	1,292.40	1,587.72	1,563.68	4.79	6.81	18.93	1,683.91	579.06	1,692.47	1,681.59	10.88	155.625		
1,400.00	1,391.35	1,693.66	1,665.33	5.22	7.43	18.22	1,676.65	550.11	1,662.90	1,651.11	11.79	141.016		
1,500.00	1,490.30	1,770.83	1,739.63	5.64	7.87	17.71	1,671.37	529.97	1,633.98	1,621.40	12.58	129.923		
1,600.00	1,589.25	1,870.13	1,835.36	6.06	8.44	17.06	1,664.58	504.47	1,605.38	1,591.92	13.46	119.249		
1,700.00	1,688.20	2,003.00	1,962.75	6.48	9.24	16.07	1,654.98	467.99	1,576.16	1,561.64	14.52	108.552		
1,800.00	1,787.15	2,124.86	2,077.77	6.91	10.06	14.91	1,645.11	428.98	1,544.90	1,529.29	15.60	99.008		
1,900.00	1,886.10	2,231.67	2,177.37	7.33	10.81	13.73	1,635.75	391.57	1,512.47	1,495.82	16.65	90.815		
2,000.00	1,985.05	2,326.19	2,265.71	7.75	11.48	12.68	1,626.74	359.19	1,480.09	1,462.44	17.65	83.859		
2,100.00	2,084.00	2,425.25	2,358.61	8.18	12.18	11.57	1,616.67	326.31	1,447.89	1,429.23	18.67	77.571		
2,200.00	2,182.95	2,526.92	2,453.96	8.60	12.90	10.41	1,605.48	292.87	1,415.47	1,395.77	19.70	71.869		
2,300.00	2,281.90	2,612.38	2,534.37	9.03	13.49	9.43	1,595.54	265.66	1,383.21	1,362.57	20.65	66.997		
2,400.00	2,380.85	2,692.28	2,610.11	9.45	14.02	8.55	1,586.54	241.88	1,352.16	1,330.60	21.56	62.714		
2,500.00	2,479.80	2,787.74	2,701.12	9.88	14.64	7.52	1,576.09	215.01	1,322.15	1,299.62	22.53	58.682		
2,600.00	2,578.74	2,877.63	2,786.39	10.31	15.23	6.47	1,565.48	188.67	1,291.56	1,268.07	23.50	54.966		
2,700.00	2,677.69	2,941.00	2,846.49	10.73	15.65	5.66	1,559.55	169.44	1,263.43	1,239.05	24.38	51.831		
2,800.00	2,776.64	3,012.82	2,914.24	11.16	16.16	4.63	1,554.48	146.17	1,237.70	1,212.37	25.33	48.860		
2,900.00	2,875.59	3,099.66	2,995.52	11.58	16.78	3.25	1,549.35	116.02	1,213.55	1,187.15	26.39	45.980		
3,000.00	2,974.54	3,193.72	3,083.81	12.01	17.45	1.74	1,543.73	84.09	1,190.25	1,162.75	27.51	43.274		
3,100.00	3,073.49	3,286.37	3,170.63	12.44	18.12	0.17	1,538.04	52.27	1,167.66	1,139.04	28.62	40.801		
3,200.00	3,172.44	3,381.44	3,259.71	12.86	18.81	-1.49	1,532.10	19.57	1,145.92	1,116.16	29.76	38.502		
3,300.00	3,271.39	3,474.83	3,346.70	13.29	19.50	-3.24	1,525.99	-13.83	1,124.90	1,093.99	30.91	36.387		
3,400.00	3,370.34	3,578.49	3,443.62	13.72	20.27	-5.20	1,518.77	-49.90	1,104.64	1,072.51	32.13	34.380		
3,500.00	3,469.29	3,677.45	3,535.75	14.14	21.01	-7.19	1,510.62	-85.09	1,084.38	1,051.05	33.33	32.534		
3,600.00	3,568.24	3,768.65	3,620.66	14.57	21.70	-9.07	1,502.83	-117.47	1,065.12	1,030.63	34.49	30.884		
3,700.00	3,667.19	3,866.87	3,712.16	15.00	22.44	-11.16	1,494.26	-152.12	1,047.02	1,011.33	35.68	29.341		
3,800.00	3,766.14	3,963.49	3,802.27	15.42	23.16	-13.26	1,485.09	-185.75	1,029.52	992.66	36.86	27.928		
3,900.00	3,865.09	4,065.39	3,897.67	15.85	23.91	-15.49	1,474.97	-220.10	1,012.87	974.82	38.05	26.622		
4,000.00	3,964.03	4,168.28	3,994.96	16.28	24.62	-17.65	1,464.17	-251.77	996.45	957.28	39.18	25.434		
4,100.00	4,062.98	4,244.93	4,067.61	16.70	25.15	-19.27	1,456.28	-274.91	981.39	941.22	40.17	24.434		
4,200.00	4,161.93	4,329.38	4,147.01	17.13	25.74	-21.21	1,448.37	-302.57	969.19	928.00	41.19	23.528		
4,300.00	4,260.88	4,416.31	4,228.75	17.56	26.37	-23.23	1,440.37	-331.02	958.68	916.46	42.22	22.706		
4,400.00	4,359.83	4,498.26	4,305.59	17.98	26.97	-25.20	1,433.34	-358.63	950.64	907.44	43.20	22.007		
4,500.00	4,458.78	4,584.55	4,386.11	18.41	27.61	-27.36	1,426.22	-388.80	945.07	900.89	44.18	21.392		
4,600.00	4,557.73	4,678.69	4,474.17	18.84	28.31	-29.69	1,418.59	-421.20	941.18	895.99	45.20	20.825		
4,700.00	4,656.68	4,765.46	4,554.88	19.26	28.97	-31.93	1,411.06	-452.18	939.25	893.13	46.12	20.365		
4,740.63	4,696.88	4,802.17	4,588.88	19.44	29.26	-32.89	1,407.75	-465.62	939.09	892.59	46.50	20.194		
4,800.00	4,755.63	4,857.64	4,640.23	19.69	29.69	-34.36	1,402.69	-485.96	939.43	892.36	47.07	19.960		
4,900.00	4,854.58	4,965.93	4,740.92	20.12	30.52	-37.18	1,392.22	-524.43	940.55	892.44	48.11	19.552		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 16-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.00	4,953.53	5,068.94	4,837.46	20.55	31.28	-39.76	1,381.76	-558.77	941.91	892.87	49.04	19.208	
5,100.00	5,052.48	5,163.76	4,926.71	20.97	31.95	-42.07	1,372.32	-589.39	944.57	894.72	49.85	18.948	
5,200.00	5,151.43	5,259.88	5,017.81	21.40	32.61	-44.30	1,363.50	-618.74	948.25	897.62	50.63	18.730	
5,300.00	5,250.38	5,342.22	5,095.90	21.83	33.17	-46.18	1,356.38	-643.83	953.78	902.53	51.25	18.610	
5,400.00	5,349.32	5,418.00	5,167.49	22.25	33.70	-47.90	1,350.66	-668.02	962.44	910.67	51.77	18.589	
5,500.00	5,448.27	5,498.25	5,242.96	22.68	34.28	-49.71	1,345.09	-694.73	973.93	921.63	52.30	18.621	
5,600.00	5,547.22	5,626.80	5,364.58	23.11	35.17	-52.48	1,335.79	-735.24	985.34	932.07	53.28	18.495	
5,625.90	5,572.85	5,647.43	5,384.21	23.22	35.31	-52.91	1,334.22	-741.42	988.15	934.74	53.40	18.503	
5,700.00	5,646.30	5,704.00	5,437.81	23.53	35.69	-54.23	1,329.70	-758.92	997.67	943.94	53.73	18.569	
5,800.00	5,745.78	5,786.58	5,515.55	23.92	36.28	-56.15	1,322.59	-785.87	1,014.32	960.11	54.21	18.710	
5,900.00	5,845.55	5,874.47	5,597.71	24.28	36.94	-58.13	1,314.23	-815.95	1,034.77	980.03	54.74	18.902	
6,000.00	5,945.50	5,963.90	5,680.81	24.61	37.62	-60.09	1,304.57	-847.51	1,058.24	1,002.96	55.29	19.142	
6,041.55	5,987.04	7,896.48	6,935.59	24.74	44.92	-2.31	1,171.75	8.21	1,024.83	990.27	34.57	29.649	
6,100.00	6,045.49	7,897.54	6,935.61	24.91	44.94	-2.16	1,171.75	9.27	971.34	935.73	35.61	27.276	
6,200.00	6,145.49	7,899.32	6,935.64	25.22	44.96	-1.90	1,171.76	11.06	881.29	843.58	37.71	23.368	
6,300.00	6,245.49	7,901.06	6,935.67	25.52	44.97	-1.66	1,171.76	12.79	793.63	753.32	40.30	19.691	
6,400.00	6,345.49	7,902.75	6,935.69	25.83	44.99	-1.42	1,171.76	14.49	709.23	665.72	43.52	16.298	
6,500.00	6,445.49	7,904.41	6,935.72	26.14	45.01	-1.18	1,171.77	16.14	629.42	581.93	47.48	13.255	
6,600.00	6,545.49	7,906.02	6,935.74	26.45	45.03	-0.95	1,171.77	17.76	556.16	503.86	52.30	10.634	
6,700.00	6,645.49	7,907.60	6,935.77	26.76	45.05	-0.72	1,171.77	19.33	492.41	434.56	57.85	8.511	
6,731.55	6,677.04	7,908.09	6,935.78	26.86	45.05	-0.66	1,171.77	19.82	474.90	415.21	59.68	7.957	
6,750.00	6,695.49	7,908.07	6,935.78	26.92	45.05	90.93	1,171.77	19.80	465.34	404.59	60.75	7.660	
6,800.00	6,745.33	7,904.97	6,935.73	27.06	45.02	93.08	1,171.77	16.70	442.34	378.85	63.50	6.966	
6,850.00	6,794.65	7,897.50	6,935.61	27.21	44.94	93.99	1,171.75	9.24	424.17	358.27	65.89	6.437	
6,900.00	6,843.08	7,885.69	6,935.41	27.36	44.81	93.68	1,171.73	-2.57	411.36	343.63	67.73	6.074	
6,950.00	6,890.24	7,869.58	6,935.13	27.50	44.66	92.24	1,171.68	-18.69	404.16	335.33	68.84	5.871	
6,991.37	6,928.05	7,853.13	6,934.84	27.61	44.50	90.26	1,171.62	-35.13	402.36	333.22	69.14	5.819	CC, ES, SF
7,000.00	6,935.78	7,849.35	6,934.77	27.63	44.46	89.77	1,171.61	-38.91	402.44	333.30	69.14	5.821	
7,050.00	6,979.35	7,825.18	6,934.32	27.76	44.23	86.42	1,171.49	-63.08	405.68	336.99	68.69	5.906	
7,100.00	7,020.62	7,797.28	6,933.78	27.89	43.96	82.39	1,171.31	-90.97	413.08	345.44	67.64	6.107	
7,150.00	7,059.27	7,762.20	6,933.30	28.01	43.67	77.56	1,170.96	-126.04	423.53	357.27	66.26	6.392	
7,200.00	7,095.02	7,722.30	6,933.27	28.13	43.34	72.54	1,170.29	-165.93	435.72	371.01	64.72	6.733	
7,250.00	7,127.58	7,686.13	6,933.50	28.27	43.07	68.28	1,169.45	-202.10	448.67	385.56	63.11	7.109	
7,300.00	7,156.72	7,656.00	6,932.51	28.41	42.85	64.73	1,168.75	-232.20	462.51	401.05	61.46	7.525	
7,350.00	7,182.21	7,626.43	6,930.24	28.58	42.65	61.44	1,168.07	-261.67	476.93	417.06	59.88	7.965	
7,400.00	7,203.85	7,596.40	6,926.63	28.79	42.46	58.36	1,167.41	-291.47	491.57	433.15	58.41	8.415	
7,450.00	7,221.48	7,565.00	6,921.76	29.05	42.27	55.52	1,166.91	-322.49	506.01	448.88	57.14	8.856	
7,500.00	7,234.96	7,530.00	6,915.12	29.38	42.07	52.90	1,166.66	-356.85	519.97	463.90	56.07	9.273	
7,550.00	7,244.21	7,511.00	6,910.99	29.79	41.97	51.15	1,166.65	-375.40	533.16	477.92	55.24	9.651	
7,600.00	7,249.13	7,472.50	6,901.27	30.26	41.79	49.07	1,166.79	-412.65	545.25	490.62	54.62	9.982	
7,631.55	7,250.00	7,453.06	6,895.63	30.59	41.71	48.05	1,166.89	-431.25	552.37	498.03	54.33	10.166	
7,700.00	7,250.00	7,411.59	6,881.95	31.38	41.52	47.03	1,167.22	-470.39	568.86	515.07	53.79	10.576	
7,800.00	7,250.00	7,354.60	6,859.54	32.73	41.34	45.44	1,167.82	-522.76	598.53	545.48	53.05	11.282	
7,900.00	7,250.00	7,299.67	6,834.10	34.25	41.19	43.74	1,168.56	-571.42	634.75	582.38	52.36	12.123	
8,000.00	7,250.00	7,245.23	6,805.98	35.92	41.07	41.99	1,169.52	-618.03	676.71	624.94	51.77	13.073	
8,100.00	7,250.00	7,196.69	6,778.61	37.73	41.00	40.40	1,170.52	-658.09	724.04	672.67	51.37	14.094	
8,200.00	7,250.00	7,153.54	6,752.12	39.64	40.96	38.96	1,171.26	-692.14	776.65	725.49	51.16	15.181	
8,300.00	7,250.00	7,130.00	6,736.83	41.64	40.93	38.15	1,171.60	-710.03	834.43	783.00	51.43	16.225	
8,400.00	7,250.00	7,073.69	6,698.14	43.72	40.92	36.22	1,172.02	-750.94	895.75	844.64	51.12	17.524	
8,500.00	7,250.00	7,035.00	6,669.99	45.87	40.91	34.90	1,171.94	-777.46	961.12	909.91	51.21	18.768	
8,600.00	7,250.00	7,004.59	6,647.08	48.08	40.92	33.88	1,171.87	-797.46	1,029.79	978.26	51.53	19.984	
8,700.00	7,250.00	6,973.50	6,623.06	50.34	40.92	32.88	1,172.02	-817.19	1,101.38	1,049.51	51.87	21.234	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,800.00	7,250.00	6,940.00	6,596.53	52.64	40.93	31.85	1,172.43	-837.65	1,175.54	1,123.37	52.17	22.531		
8,900.00	7,250.00	6,940.00	6,596.53	54.98	40.93	31.85	1,172.43	-837.65	1,252.37	1,199.33	53.05	23.609		
9,000.00	7,250.00	6,902.78	6,566.20	57.35	40.95	30.80	1,173.64	-859.18	1,330.75	1,277.48	53.27	24.981		
9,100.00	7,250.00	6,884.50	6,550.96	59.76	40.96	30.31	1,174.66	-869.22	1,411.42	1,357.65	53.77	26.249		
9,200.00	7,250.00	6,844.00	6,516.45	62.19	40.98	29.34	1,177.95	-890.15	1,494.37	1,440.41	53.97	27.689		
9,300.00	7,250.00	6,844.00	6,516.45	64.65	40.98	29.34	1,177.95	-890.15	1,577.72	1,523.09	54.63	28.880		
9,400.00	7,250.00	6,844.00	6,516.45	67.12	40.98	29.34	1,177.95	-890.15	1,662.90	1,607.68	55.22	30.116		
9,500.00	7,249.99	6,844.00	6,516.45	69.61	40.98	29.34	1,177.95	-890.15	1,749.65	1,693.91	55.74	31.391		
9,600.00	7,249.99	6,844.00	6,516.45	72.12	40.98	29.34	1,177.95	-890.15	1,837.75	1,781.55	56.20	32.699		
9,700.00	7,249.99	6,799.36	6,477.32	74.65	41.00	28.40	1,183.04	-910.99	1,925.01	1,868.72	56.29	34.199		
9,800.00	7,249.99	6,788.40	6,467.54	77.19	41.01	28.18	1,184.50	-915.73	2,014.22	1,957.60	56.62	35.574		
9,900.00	7,249.99	6,749.00	6,431.92	79.74	41.03	27.48	1,190.45	-931.47	2,105.01	2,048.25	56.76	37.083		
10,000.00	7,249.99	6,749.00	6,431.92	82.30	41.03	27.48	1,190.45	-931.47	2,195.19	2,138.07	57.12	38.428		
10,100.00	7,249.99	6,749.00	6,431.92	84.87	41.03	27.48	1,190.45	-931.47	2,286.19	2,228.74	57.45	39.794		
10,200.00	7,249.99	6,749.00	6,431.92	87.45	41.03	27.48	1,190.45	-931.47	2,377.91	2,320.17	57.75	41.178		
10,300.00	7,249.99	6,749.00	6,431.92	90.04	41.03	27.48	1,190.45	-931.47	2,470.28	2,412.26	58.02	42.578		
10,400.00	7,249.99	6,749.00	6,431.92	92.64	41.03	27.48	1,190.45	-931.47	2,563.22	2,504.95	58.26	43.992		
10,500.00	7,249.99	6,749.00	6,431.92	95.24	41.03	27.48	1,190.45	-931.47	2,656.67	2,598.17	58.49	45.419		
10,600.00	7,249.99	6,749.00	6,431.92	97.85	41.03	27.48	1,190.45	-931.47	2,750.58	2,691.87	58.70	46.856		
10,700.00	7,249.99	6,749.00	6,431.92	100.47	41.03	27.48	1,190.45	-931.47	2,844.90	2,786.01	58.90	48.302		
10,800.00	7,249.99	6,749.00	6,431.92	103.09	41.03	27.48	1,190.45	-931.47	2,939.60	2,880.53	59.08	49.757		
10,900.00	7,249.99	6,705.40	6,391.62	105.71	41.03	26.77	1,197.81	-946.37	3,032.83	2,973.67	59.15	51.269		
11,000.00	7,249.99	6,700.22	6,386.78	108.35	41.03	26.69	1,198.71	-947.95	3,127.73	3,068.42	59.31	52.732		
11,100.00	7,249.99	6,695.31	6,382.16	110.98	41.03	26.61	1,199.57	-949.42	3,222.90	3,163.44	59.47	54.198		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program:		16-OWSG (Rev2) MWD						Rule Assigned:					Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	6.00	6.00	0.00	0.00	24.86	1,714.04	794.07	1,889.04					
100.00	100.00	99.59	99.59	0.14	0.30	24.85	1,714.26	793.92	1,889.19	1,888.75	0.44	4,261.218		
200.00	200.00	215.46	215.46	0.50	0.71	24.82	1,714.74	793.09	1,889.29	1,888.08	1.21	1,555.929		
300.00	300.00	415.19	414.99	0.86	1.43	24.67	1,711.00	785.90	1,886.01	1,883.72	2.29	822.616		
400.00	399.98	517.23	516.71	1.22	1.81	22.78	1,707.41	778.80	1,878.30	1,875.28	3.02	621.591		
500.00	499.84	648.56	647.44	1.58	2.31	22.67	1,703.57	766.91	1,867.16	1,863.29	3.88	481.403		
600.00	599.45	902.20	898.17	1.95	3.38	22.36	1,685.80	733.54	1,847.24	1,842.00	5.24	352.827		
700.00	698.70	1,084.72	1,076.18	2.33	4.25	22.16	1,663.20	700.29	1,817.00	1,810.68	6.33	287.192		
715.65	714.19	1,137.42	1,127.19	2.39	4.52	22.07	1,655.49	689.58	1,811.58	1,804.97	6.61	274.241		
800.00	797.66	1,270.53	1,255.42	2.73	5.24	21.74	1,633.15	661.75	1,780.77	1,773.33	7.44	239.450		
900.00	896.61	1,373.10	1,353.70	3.13	5.82	21.48	1,613.78	639.72	1,742.08	1,733.88	8.21	212.292		
1,000.00	995.56	1,466.32	1,442.96	3.54	6.36	21.22	1,596.23	619.35	1,703.36	1,694.41	8.95	190.330		
1,100.00	1,094.50	1,548.87	1,522.06	3.96	6.84	20.99	1,580.79	601.46	1,664.84	1,655.18	9.66	172.328		
1,200.00	1,193.45	1,633.65	1,603.39	4.38	7.34	20.73	1,565.46	583.09	1,626.91	1,616.52	10.39	156.597		
1,300.00	1,292.40	1,737.86	1,703.30	4.79	7.96	20.37	1,546.85	560.04	1,589.05	1,577.85	11.20	141.927		
1,400.00	1,391.35	1,841.57	1,802.29	5.22	8.59	19.96	1,527.60	535.84	1,550.12	1,538.11	12.01	129.051		
1,500.00	1,490.30	1,950.78	1,906.34	5.64	9.28	19.48	1,507.18	509.69	1,510.99	1,498.14	12.86	117.520		
1,600.00	1,589.25	2,115.67	2,060.94	6.06	10.41	18.45	1,473.40	463.45	1,468.88	1,454.96	13.93	105.473		
1,700.00	1,688.20	2,258.33	2,191.26	6.48	11.51	17.19	1,440.63	415.61	1,422.63	1,407.66	14.97	95.025		
1,800.00	1,787.15	2,348.58	2,272.63	6.91	12.24	16.23	1,418.89	383.19	1,374.89	1,359.03	15.86	86.669		
1,900.00	1,886.10	2,439.71	2,354.88	7.33	12.99	15.22	1,396.63	350.87	1,327.33	1,310.56	16.78	79.126		
2,000.00	1,985.05	2,531.40	2,437.56	7.75	13.75	14.15	1,373.68	318.56	1,279.65	1,261.95	17.70	72.286		
2,100.00	2,084.00	2,614.22	2,512.35	8.18	14.44	13.14	1,352.55	289.96	1,232.11	1,213.49	18.61	66.197		
2,200.00	2,182.95	2,694.65	2,585.39	8.60	15.09	12.15	1,332.01	263.25	1,185.30	1,165.78	19.52	60.718		
2,300.00	2,281.90	2,776.60	2,660.16	9.03	15.75	11.12	1,311.09	237.03	1,139.19	1,118.74	20.44	55.727		
2,400.00	2,380.85	2,863.94	2,740.19	9.45	16.45	10.00	1,288.78	210.09	1,093.72	1,072.33	21.39	51.126		
2,500.00	2,479.80	2,965.41	2,832.43	9.88	17.27	8.50	1,262.06	177.34	1,047.55	1,025.15	22.40	46.764		
2,600.00	2,578.74	3,043.18	2,903.17	10.31	17.90	7.25	1,241.54	152.39	1,001.90	978.51	23.39	42.840		
2,700.00	2,677.69	3,122.17	2,975.51	10.73	18.54	5.96	1,221.04	128.17	957.44	933.04	24.40	39.239		
2,800.00	2,776.64	3,201.48	3,048.61	11.16	19.15	4.64	1,200.84	105.00	914.21	888.79	25.42	35.969		
2,900.00	2,875.59	3,281.96	3,123.31	11.58	19.75	3.27	1,180.78	82.76	872.28	845.83	26.44	32.989		
3,000.00	2,974.54	3,365.68	3,201.57	12.01	20.36	1.83	1,160.30	61.15	831.57	804.09	27.47	30.270		
3,100.00	3,073.49	3,452.10	3,282.63	12.44	20.96	0.28	1,139.40	39.72	791.77	763.25	28.52	27.764		
3,200.00	3,172.44	3,539.56	3,364.91	12.86	21.58	-1.38	1,118.45	18.73	752.85	723.25	29.59	25.439		
3,300.00	3,271.39	3,631.19	3,450.94	13.29	22.23	-3.37	1,096.66	-4.07	714.71	683.99	30.72	23.263		
3,400.00	3,370.34	3,726.39	3,539.19	13.72	22.94	-5.95	1,073.10	-30.89	676.49	644.51	31.98	21.155		
3,500.00	3,469.29	3,805.82	3,612.12	14.14	23.57	-8.55	1,053.81	-55.75	640.03	606.67	33.36	19.186		
3,600.00	3,568.24	3,895.67	3,694.31	14.57	24.30	-11.89	1,032.22	-84.93	605.68	570.82	34.85	17.377		
3,700.00	3,667.19	3,984.16	3,775.15	15.00	25.02	-15.53	1,010.63	-113.71	573.22	536.80	36.42	15.739		
3,800.00	3,766.14	4,066.03	3,850.14	15.42	25.68	-19.16	990.93	-140.02	543.60	505.59	38.01	14.300		
3,900.00	3,865.09	4,153.08	3,930.55	15.85	26.35	-23.18	970.93	-166.68	517.50	477.89	39.60	13.066		
4,000.00	3,964.03	4,237.17	4,008.94	16.28	26.98	-27.16	952.36	-190.78	494.65	453.51	41.14	12.024		
4,100.00	4,062.98	4,321.33	4,087.35	16.70	27.61	-31.45	934.62	-215.67	476.27	433.63	42.65	11.168		
4,200.00	4,161.93	4,405.58	4,165.06	17.13	28.26	-36.22	916.40	-242.66	462.52	418.43	44.09	10.489		
4,300.00	4,260.88	4,490.26	4,242.84	17.56	28.94	-41.27	898.35	-270.85	454.27	408.88	45.40	10.007		
4,400.00	4,359.83	4,580.17	4,325.69	17.98	29.65	-46.67	879.57	-300.28	450.94	404.40	46.53	9.691		
4,421.25	4,380.85	4,599.02	4,343.07	18.07	29.80	-47.81	875.63	-306.39	450.83	404.09	46.74	9.645		
4,500.00	4,458.78	4,669.07	4,407.63	18.41	30.35	-52.03	860.81	-329.22	452.34	404.92	47.42	9.540		
4,600.00	4,557.73	4,759.60	4,490.74	18.84	31.07	-57.53	840.65	-358.90	458.34	410.26	48.08	9.533		
4,700.00	4,656.68	4,848.40	4,572.26	19.26	31.79	-62.80	820.52	-387.79	468.95	420.46	48.49	9.671		
4,800.00	4,755.63	4,937.83	4,654.52	19.69	32.50	-67.84	800.36	-416.51	483.89	435.17	48.72	9.932		
4,900.00	4,854.58	5,031.74	4,741.16	20.12	33.24	-72.82	779.18	-445.92	502.32	453.44	48.88	10.277		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.00	4,953.53	5,117.42	4,820.33	20.55	33.90	-77.05	759.84	-472.36	524.04	475.21	48.83	10.731		
5,100.00	5,052.48	5,211.99	4,907.76	20.97	34.63	-81.39	738.51	-501.39	548.87	499.99	48.89	11.228		
5,200.00	5,151.43	5,293.74	4,983.56	21.40	35.27	-84.81	720.47	-526.13	576.14	527.39	48.75	11.819		
5,300.00	5,250.38	5,388.65	5,071.37	21.83	35.99	-88.44	699.71	-555.56	606.48	557.64	48.85	12.416		
5,400.00	5,349.32	5,505.59	5,180.86	22.25	36.85	-92.39	675.12	-588.44	636.10	586.80	49.30	12.902		
5,500.00	5,448.27	5,599.02	5,269.20	22.68	37.48	-95.20	656.32	-612.34	664.84	615.38	49.46	13.442		
5,600.00	5,547.22	5,720.50	5,384.96	23.11	38.27	-98.48	632.78	-640.61	692.66	642.69	49.98	13.860		
5,625.90	5,572.85	5,743.09	5,406.60	23.22	38.41	-99.06	628.44	-645.44	699.62	649.60	50.02	13.987		
5,700.00	5,646.30	5,812.21	5,472.70	23.53	38.83	-101.13	614.86	-660.35	719.99	669.79	50.20	14.342		
5,800.00	5,745.78	5,936.51	5,592.31	23.92	39.56	-104.17	590.52	-683.82	745.09	694.32	50.76	14.677		
5,900.00	5,845.55	6,042.71	5,695.51	24.28	40.13	-106.11	573.36	-702.02	767.53	716.28	51.26	14.975		
6,000.00	5,945.50	6,153.57	5,803.83	24.61	40.68	-107.45	558.87	-720.64	788.19	736.34	51.86	15.200		
6,041.55	5,987.04	6,206.57	5,855.80	24.74	40.93	-106.11	552.24	-728.69	795.81	743.66	52.15	15.261		
6,100.00	6,045.49	6,288.94	5,936.98	24.91	41.29	-106.47	543.79	-739.72	805.03	752.44	52.59	15.307		
6,200.00	6,145.49	6,435.97	6,082.98	25.22	41.81	-106.75	535.32	-754.52	816.33	763.04	53.29	15.319		
6,300.00	6,245.49	6,581.86	6,228.64	25.52	42.20	-106.77	532.71	-762.12	821.80	767.95	53.85	15.262		
6,400.00	6,345.49	6,703.79	6,350.55	25.83	42.46	-106.79	532.04	-763.35	822.85	768.50	54.35	15.139		
6,500.00	6,445.49	6,840.69	6,487.41	26.14	42.68	-106.85	531.82	-761.01	821.46	766.77	54.69	15.021		
6,600.00	6,545.49	8,035.04	7,259.68	26.45	43.34	-174.37	521.50	-0.05	750.83	719.90	30.93	24.272		
6,700.00	6,645.49	8,043.41	7,259.94	26.76	43.37	-176.29	521.52	8.32	657.33	624.44	32.89	19.987		
6,731.55	6,677.04	8,026.27	7,259.21	26.86	43.31	-172.38	521.52	-8.80	628.24	595.18	33.06	19.002		
6,750.00	6,695.49	8,045.69	7,260.00	26.92	43.38	-90.56	521.52	10.60	611.33	577.25	34.08	17.937		
6,800.00	6,745.33	8,040.72	7,259.87	27.06	43.36	-100.06	521.51	5.63	566.06	530.71	35.35	16.014		
6,850.00	6,794.65	8,028.67	7,259.44	27.21	43.32	-106.61	521.50	-6.41	521.93	485.18	36.74	14.205		
6,900.00	6,843.08	8,011.21	7,258.60	27.36	43.26	-110.78	521.52	-23.85	479.35	440.99	38.36	12.497		
6,950.00	6,890.24	7,990.51	7,257.23	27.50	43.19	-113.31	521.59	-44.50	438.74	398.44	40.31	10.885		
7,000.00	6,935.78	7,952.99	7,253.44	27.63	43.09	-111.90	521.99	-81.83	400.30	358.13	42.17	9.492		
7,050.00	6,979.35	7,917.46	7,247.98	27.76	42.99	-110.12	522.81	-116.92	364.20	319.53	44.66	8.155		
7,100.00	7,020.62	7,884.89	7,241.40	27.89	42.92	-108.16	523.92	-148.79	330.99	283.22	47.76	6.930		
7,150.00	7,059.27	7,855.97	7,234.47	28.01	42.86	-106.14	525.06	-176.85	301.58	250.18	51.40	5.868		
7,200.00	7,095.02	7,825.97	7,226.29	28.13	42.81	-103.17	526.33	-205.68	276.81	221.61	55.20	5.015		
7,250.00	7,127.58	7,795.21	7,216.86	28.27	42.75	-99.31	527.73	-234.93	257.42	198.59	58.83	4.376		
7,300.00	7,156.72	7,765.00	7,206.55	28.41	42.72	-94.86	529.10	-263.29	244.13	182.20	61.93	3.942		
7,350.00	7,182.21	7,734.24	7,194.99	28.58	42.69	-89.68	530.41	-291.76	237.33	173.31	64.02	3.707		
7,378.35	7,194.96	7,716.59	7,187.88	28.69	42.67	-86.47	531.13	-307.89	236.32	171.65	64.67	3.654 CC, ES		
7,400.00	7,203.85	7,702.00	7,181.73	28.79	42.66	-83.75	531.70	-321.12	236.87	172.03	64.84	3.653 SF		
7,450.00	7,221.48	7,672.90	7,168.64	29.05	42.64	-78.09	532.73	-347.08	242.15	177.33	64.83	3.735		
7,500.00	7,234.96	7,643.04	7,153.97	29.38	42.63	-72.17	533.58	-373.08	252.32	188.25	64.07	3.938		
7,550.00	7,244.21	7,606.00	7,134.09	29.79	42.61	-65.37	534.35	-404.31	266.40	203.91	62.49	4.263		
7,600.00	7,249.13	7,584.27	7,121.59	30.26	42.61	-61.01	534.63	-422.08	282.93	220.86	62.07	4.558		
7,631.55	7,250.00	7,566.08	7,110.64	30.59	42.61	-57.84	534.75	-436.61	294.43	232.86	61.57	4.782		
7,700.00	7,250.00	7,528.56	7,086.75	31.38	42.62	-53.78	534.64	-465.52	323.12	262.45	60.67	5.326		
7,800.00	7,250.00	7,474.20	7,049.47	32.73	42.63	-48.28	533.78	-505.07	374.70	315.35	59.35	6.314		
7,900.00	7,250.00	7,416.00	7,007.40	34.25	42.66	-43.11	532.31	-545.26	434.47	376.52	57.95	7.497		
8,000.00	7,250.00	7,375.83	6,977.09	35.92	42.68	-39.96	531.14	-571.58	500.38	442.58	57.80	8.657		
8,100.00	7,250.00	7,321.00	6,933.97	37.73	42.72	-36.11	529.67	-605.40	571.57	514.62	56.95	10.037		
8,200.00	7,250.00	7,321.00	6,933.97	39.64	42.72	-36.11	529.67	-605.40	647.01	588.48	58.53	11.055		
8,300.00	7,250.00	7,270.29	6,892.11	41.64	42.75	-32.93	528.69	-633.99	724.95	667.05	57.90	12.521		
8,400.00	7,250.00	7,226.00	6,853.91	43.72	42.78	-30.39	528.35	-656.39	806.90	749.33	57.57	14.015		
8,500.00	7,250.00	7,226.00	6,853.91	45.87	42.78	-30.39	528.35	-656.39	890.41	831.83	58.57	15.201		
8,600.00	7,250.00	7,192.71	6,824.46	48.08	42.80	-28.64	528.33	-671.91	976.03	917.52	58.51	16.680		
8,700.00	7,250.00	7,167.40	6,801.81	50.34	42.81	-27.41	528.39	-683.18	1,063.07	1,004.42	58.64	18.128		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,800.00	7,250.00	7,130.00	6,767.92	52.64	42.83	-25.73	528.59	-699.02	1,151.45	1,092.94	58.50	19.682		
8,900.00	7,250.00	7,130.00	6,767.92	54.98	42.83	-25.73	528.59	-699.02	1,240.58	1,181.50	59.08	20.998		
9,000.00	7,250.00	7,130.00	6,767.92	57.35	42.83	-25.73	528.59	-699.02	1,331.25	1,271.71	59.55	22.357		
9,100.00	7,250.00	7,095.99	6,736.60	59.76	42.83	-24.33	528.84	-712.27	1,422.02	1,362.59	59.43	23.929		
9,200.00	7,250.00	7,083.58	6,725.03	62.19	42.84	-23.85	528.93	-716.75	1,514.02	1,454.39	59.63	25.391		
9,300.00	7,250.00	7,072.15	6,714.31	64.65	42.84	-23.42	529.02	-720.71	1,606.70	1,546.89	59.81	26.863		
9,400.00	7,250.00	7,035.00	6,679.07	67.12	42.84	-22.09	529.32	-732.45	1,700.67	1,641.00	59.67	28.500		
9,500.00	7,249.99	7,035.00	6,679.07	69.61	42.84	-22.09	529.32	-732.45	1,794.10	1,734.14	59.96	29.921		
9,600.00	7,249.99	7,035.00	6,679.07	72.12	42.84	-22.09	529.32	-732.45	1,888.21	1,828.00	60.21	31.360		
9,700.00	7,249.99	7,035.00	6,679.07	74.65	42.84	-22.09	529.32	-732.45	1,982.89	1,922.46	60.43	32.814		
9,800.00	7,249.99	7,035.00	6,679.07	77.19	42.84	-22.09	529.32	-732.45	2,078.07	2,017.45	60.62	34.280		
9,900.00	7,249.99	7,035.00	6,679.07	79.74	42.84	-22.09	529.32	-732.45	2,173.68	2,112.89	60.79	35.757		
10,000.00	7,249.99	7,035.00	6,679.07	82.30	42.84	-22.09	529.32	-732.45	2,269.67	2,208.72	60.94	37.242		
10,100.00	7,249.99	7,035.00	6,679.07	84.87	42.84	-22.09	529.32	-732.45	2,365.99	2,304.91	61.08	38.735		
10,200.00	7,249.99	7,035.00	6,679.07	87.45	42.84	-22.09	529.32	-732.45	2,462.61	2,401.40	61.21	40.234		
10,300.00	7,249.99	7,035.00	6,679.07	90.04	42.84	-22.09	529.32	-732.45	2,559.48	2,498.16	61.32	41.738		
10,400.00	7,249.99	7,035.00	6,679.07	92.64	42.84	-22.09	529.32	-732.45	2,656.59	2,595.16	61.43	43.247		
10,500.00	7,249.99	6,995.01	6,640.45	95.24	42.83	-20.79	529.73	-742.78	2,752.18	2,690.88	61.31	44.893		
10,600.00	7,249.99	6,991.35	6,636.88	97.85	42.82	-20.68	529.78	-743.59	2,849.37	2,787.98	61.39	46.414		
10,700.00	7,249.99	6,987.89	6,633.50	100.47	42.82	-20.57	529.82	-744.33	2,946.71	2,885.24	61.47	47.936		
10,800.00	7,249.99	6,984.62	6,630.30	103.09	42.82	-20.47	529.86	-745.01	3,044.20	2,982.65	61.55	49.459		
10,900.00	7,249.99	6,981.53	6,627.27	105.71	42.82	-20.38	529.90	-745.63	3,141.84	3,080.21	61.63	50.982		
11,000.00	7,249.99	6,940.00	6,586.31	108.35	42.80	-19.17	530.53	-752.40	3,241.15	3,179.63	61.53	52.678		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 33N-12HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft	
Survey Program: 17-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft	
Reference				Offset			Semi Major Axis		Highside		Distance		Minimum Separation		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,900.00	5,845.55	11,657.00	7,060.41	24.28	132.27	160.73	-2,105.49	947.43	3,264.00	3,126.07	137.93	23.665			
6,000.00	5,945.50	11,657.00	7,060.41	24.61	132.27	160.49	-2,105.49	947.43	3,229.96	3,090.37	139.58	23.140			
6,041.55	5,987.04	11,657.00	7,060.41	24.74	132.27	162.20	-2,105.49	947.43	3,215.70	3,075.47	140.24	22.931			
6,100.00	6,045.49	11,657.00	7,060.41	24.91	132.27	162.20	-2,105.49	947.43	3,196.08	3,054.96	141.13	22.647			
6,200.00	6,145.49	11,657.00	7,060.41	25.22	132.27	162.20	-2,105.49	947.43	3,164.74	3,022.15	142.59	22.195			
6,300.00	6,245.49	11,657.00	7,060.41	25.52	132.27	162.20	-2,105.49	947.43	3,136.27	2,992.30	143.97	21.785			
6,400.00	6,345.49	11,657.00	7,060.41	25.83	132.27	162.20	-2,105.49	947.43	3,110.75	2,965.51	145.24	21.418			
6,500.00	6,445.49	11,657.00	7,060.41	26.14	132.27	162.20	-2,105.49	947.43	3,088.27	2,941.86	146.41	21.093			
6,600.00	6,545.49	11,657.00	7,060.41	26.45	132.27	162.20	-2,105.49	947.43	3,068.88	2,921.41	147.47	20.810			
6,700.00	6,645.49	11,657.00	7,060.41	26.76	132.27	162.20	-2,105.49	947.43	3,052.65	2,904.24	148.40	20.570			
6,731.55	6,677.04	11,657.00	7,060.41	26.86	132.27	162.20	-2,105.49	947.43	3,048.19	2,899.52	148.67	20.503			
6,750.00	6,695.49	11,657.00	7,060.41	26.92	132.27	-107.56	-2,105.49	947.43	3,045.82	2,897.00	148.82	20.467			
6,800.00	6,745.33	11,657.00	7,060.41	27.06	132.27	-108.03	-2,105.49	947.43	3,040.84	2,891.71	149.14	20.390			
6,850.00	6,794.65	11,657.00	7,060.41	27.21	132.27	-108.30	-2,105.49	947.43	3,038.04	2,888.68	149.36	20.340			
6,889.09	6,832.61	11,657.00	7,060.41	27.32	132.27	-108.36	-2,105.49	947.43	3,037.37	2,887.90	149.46	20.322 CC, ES			
6,900.00	6,843.08	11,657.00	7,060.41	27.36	132.27	-108.36	-2,105.49	947.43	3,037.42	2,887.93	149.48	20.320 SF			
6,950.00	6,890.24	11,657.00	7,060.41	27.50	132.27	-108.21	-2,105.49	947.43	3,038.99	2,889.49	149.51	20.327			
7,000.00	6,935.78	11,657.00	7,060.41	27.63	132.27	-107.85	-2,105.49	947.43	3,042.75	2,893.32	149.43	20.362			
7,050.00	6,979.35	11,657.00	7,060.41	27.76	132.27	-107.28	-2,105.49	947.43	3,048.65	2,899.39	149.26	20.425			
7,100.00	7,020.62	11,657.00	7,060.41	27.89	132.27	-106.51	-2,105.49	947.43	3,056.64	2,907.63	149.01	20.513			
7,150.00	7,059.27	11,657.00	7,060.41	28.01	132.27	-105.53	-2,105.49	947.43	3,066.63	2,917.96	148.68	20.626			
7,200.00	7,095.02	11,657.00	7,060.41	28.13	132.27	-104.34	-2,105.49	947.43	3,078.54	2,930.26	148.28	20.762			
7,250.00	7,127.58	11,657.00	7,060.41	28.27	132.27	-102.96	-2,105.49	947.43	3,092.25	2,944.43	147.82	20.918			
7,300.00	7,156.72	11,657.00	7,060.41	28.41	132.27	-101.38	-2,105.49	947.43	3,107.64	2,960.31	147.33	21.093			
7,350.00	7,182.21	11,657.00	7,060.41	28.58	132.27	-99.61	-2,105.49	947.43	3,124.56	2,977.76	146.80	21.285			
7,400.00	7,203.85	11,657.00	7,060.41	28.79	132.27	-97.66	-2,105.49	947.43	3,142.86	2,996.61	146.25	21.489			
7,450.00	7,221.48	11,657.00	7,060.41	29.05	132.27	-95.56	-2,105.49	947.43	3,162.38	3,016.68	145.70	21.705			
7,500.00	7,234.96	11,657.00	7,060.41	29.38	132.27	-93.31	-2,105.49	947.43	3,182.95	3,037.81	145.14	21.930			
7,550.00	7,244.21	11,657.00	7,060.41	29.79	132.27	-90.94	-2,105.49	947.43	3,204.40	3,059.80	144.59	22.161			
7,600.00	7,249.13	11,657.00	7,060.41	30.26	132.27	-88.47	-2,105.49	947.43	3,226.54	3,082.48	144.06	22.398			
7,631.55	7,250.00	11,657.00	7,060.41	30.59	132.27	-86.87	-2,105.49	947.43	3,240.78	3,097.06	143.72	22.549			
7,700.00	7,250.00	11,657.00	7,060.41	31.38	132.27	-86.87	-2,105.49	947.43	3,272.45	3,129.42	143.03	22.879			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 40C-11HZ - SIDETRACK - SIDETRACK													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,200.00	4,161.93	13,628.00	7,212.49	17.13	176.18	179.98	-462.89	-14.27	3,243.58	3,160.20	83.38	38.902		
4,300.00	4,260.88	13,628.00	7,212.49	17.56	176.18	179.98	-462.89	-14.27	3,154.18	3,068.89	85.29	36.982		
4,400.00	4,359.83	13,628.00	7,212.49	17.98	176.18	179.98	-462.89	-14.27	3,065.43	2,978.09	87.34	35.099		
4,500.00	4,458.78	13,628.00	7,212.49	18.41	176.18	179.98	-462.89	-14.27	2,977.39	2,887.86	89.53	33.257		
4,600.00	4,557.73	13,628.00	7,212.49	18.84	176.18	179.98	-462.89	-14.27	2,890.13	2,798.26	91.87	31.459		
4,700.00	4,656.68	13,628.00	7,212.49	19.26	176.18	179.98	-462.89	-14.27	2,803.72	2,709.34	94.38	29.707		
4,800.00	4,755.63	13,628.00	7,212.49	19.69	176.18	179.98	-462.89	-14.27	2,718.24	2,621.18	97.06	28.005		
4,900.00	4,854.58	13,628.00	7,212.49	20.12	176.18	179.98	-462.89	-14.27	2,633.79	2,533.85	99.94	26.355		
5,000.00	4,953.53	13,628.00	7,212.49	20.55	176.18	179.98	-462.89	-14.27	2,550.46	2,447.45	103.01	24.759		
5,100.00	5,052.48	13,628.00	7,212.49	20.97	176.18	179.98	-462.89	-14.27	2,468.37	2,362.07	106.30	23.221		
5,200.00	5,151.43	13,628.00	7,212.49	21.40	176.18	179.98	-462.89	-14.27	2,387.65	2,277.84	109.81	21.744		
5,300.00	5,250.38	13,628.00	7,212.49	21.83	176.18	179.98	-462.89	-14.27	2,308.43	2,194.88	113.55	20.329		
5,400.00	5,349.32	13,628.00	7,212.49	22.25	176.18	179.98	-462.89	-14.27	2,230.89	2,113.34	117.54	18.979		
5,500.00	5,448.27	13,628.00	7,212.49	22.68	176.18	179.98	-462.89	-14.27	2,155.19	2,033.41	121.79	17.697		
5,600.00	5,547.22	13,628.00	7,212.49	23.11	176.18	179.98	-462.89	-14.27	2,081.55	1,955.27	126.29	16.483		
5,625.90	5,572.85	13,628.00	7,212.49	23.22	176.18	179.98	-462.89	-14.27	2,062.85	1,935.35	127.49	16.180		
5,700.00	5,646.30	13,628.00	7,212.49	23.53	176.18	179.98	-462.89	-14.27	2,009.51	1,878.52	131.00	15.340		
5,800.00	5,745.78	13,628.00	7,212.49	23.92	176.18	179.98	-462.89	-14.27	1,937.53	1,801.73	135.80	14.267		
5,900.00	5,845.55	13,628.00	7,212.49	24.28	176.18	179.98	-462.89	-14.27	1,865.61	1,724.93	140.69	13.261		
6,000.00	5,945.50	13,628.00	7,212.49	24.61	176.18	179.98	-462.89	-14.27	1,793.86	1,648.22	145.64	12.317		
6,041.55	5,987.04	13,628.00	7,212.49	24.74	176.18	-178.20	-462.89	-14.27	1,764.13	1,616.41	147.72	11.942		
6,100.00	6,045.49	13,628.00	7,212.49	24.91	176.18	-178.20	-462.89	-14.27	1,722.81	1,572.13	150.69	11.433		
6,200.00	6,145.49	13,628.00	7,212.49	25.22	176.18	-178.20	-462.89	-14.27	1,654.53	1,498.59	155.94	10.610		
6,300.00	6,245.49	13,628.00	7,212.49	25.52	176.18	-178.20	-462.89	-14.27	1,589.62	1,428.24	161.38	9.850		
6,400.00	6,345.49	13,628.00	7,212.49	25.83	176.18	-178.20	-462.89	-14.27	1,528.49	1,361.53	166.96	9.155		
6,500.00	6,445.49	13,628.00	7,212.49	26.14	176.18	-178.20	-462.89	-14.27	1,471.63	1,299.04	172.59	8.527		
6,600.00	6,545.49	13,628.00	7,212.49	26.45	176.18	-178.20	-462.89	-14.27	1,419.54	1,241.37	178.17	7.967		
6,700.00	6,645.49	13,628.00	7,212.49	26.76	176.18	-178.20	-462.89	-14.27	1,372.77	1,189.20	183.56	7.478		
6,731.55	6,677.04	13,628.00	7,212.49	26.86	176.18	-178.20	-462.89	-14.27	1,359.20	1,174.00	185.20	7.339		
6,750.00	6,695.49	13,628.00	7,212.49	26.92	176.18	-88.57	-462.89	-14.27	1,351.54	1,165.40	186.14	7.261		
6,800.00	6,745.33	13,628.00	7,212.49	27.06	176.18	-90.72	-462.89	-14.27	1,331.79	1,143.20	188.59	7.062		
6,850.00	6,794.65	13,628.00	7,212.49	27.21	176.18	-92.66	-462.89	-14.27	1,313.70	1,122.82	190.88	6.882		
6,900.00	6,843.08	13,628.00	7,212.49	27.36	176.18	-94.38	-462.89	-14.27	1,297.48	1,104.52	192.96	6.724		
6,950.00	6,890.24	13,628.00	7,212.49	27.50	176.18	-95.85	-462.89	-14.27	1,283.32	1,088.52	194.79	6.588		
7,000.00	6,935.78	13,628.00	7,212.49	27.63	176.18	-97.07	-462.89	-14.27	1,271.40	1,075.05	196.35	6.475		
7,050.00	6,979.35	13,628.00	7,212.49	27.76	176.18	-98.03	-462.89	-14.27	1,261.88	1,064.30	197.58	6.387		
7,100.00	7,020.62	13,628.00	7,212.49	27.89	176.18	-98.73	-462.89	-14.27	1,254.88	1,056.41	198.47	6.323		
7,150.00	7,059.27	13,628.00	7,212.49	28.01	176.18	-99.16	-462.89	-14.27	1,250.51	1,051.51	199.00	6.284		
7,200.00	7,095.02	13,628.00	7,212.49	28.13	176.18	-99.33	-462.89	-14.27	1,248.82	1,049.66	199.16	6.270 SF		
7,206.26	7,099.28	13,628.00	7,212.49	28.15	176.18	-99.33	-462.89	-14.27	1,248.80	1,049.64	199.16	6.270 CC, ES		
7,250.00	7,127.58	13,628.00	7,212.49	28.27	176.18	-99.23	-462.89	-14.27	1,249.83	1,050.88	198.95	6.282		
7,300.00	7,156.72	13,628.00	7,212.49	28.41	176.18	-98.86	-462.89	-14.27	1,253.54	1,055.15	198.38	6.319		
7,350.00	7,182.21	13,628.00	7,212.49	28.58	176.18	-98.23	-462.89	-14.27	1,259.88	1,062.40	197.48	6.380		
7,400.00	7,203.85	13,628.00	7,212.49	28.79	176.18	-97.33	-462.89	-14.27	1,268.78	1,072.51	196.27	6.465		
7,450.00	7,221.48	13,628.00	7,212.49	29.05	176.18	-96.18	-462.89	-14.27	1,280.11	1,085.33	194.78	6.572		
7,500.00	7,234.96	13,628.00	7,212.49	29.38	176.18	-94.77	-462.89	-14.27	1,293.73	1,100.67	193.05	6.701		
7,550.00	7,244.21	13,628.00	7,212.49	29.79	176.18	-93.12	-462.89	-14.27	1,309.45	1,118.33	191.13	6.851		
7,600.00	7,249.13	13,628.00	7,212.49	30.26	176.18	-91.23	-462.89	-14.27	1,327.09	1,138.06	189.03	7.020		
7,631.55	7,250.00	13,628.00	7,212.49	30.59	176.18	-89.93	-462.89	-14.27	1,339.12	1,151.48	187.65	7.136		
7,700.00	7,250.00	13,628.00	7,212.49	31.38	176.18	-89.93	-462.89	-14.27	1,367.37	1,182.86	184.50	7.411		
7,800.00	7,250.00	13,628.00	7,212.49	32.73	176.18	-89.93	-462.89	-14.27	1,413.58	1,233.90	179.68	7.867		
7,900.00	7,250.00	13,628.00	7,212.49	34.25	176.18	-89.93	-462.89	-14.27	1,465.17	1,290.48	174.70	8.387		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 40C-11HZ - SIDETRACK - SIDETRACK											Offset Site Error:	0.00 usft	
Survey Program: 16-OWSG (Rev2) MWD											Offset Well Error:	0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,000.00	7,250.00	13,628.00	7,212.49	35.92	176.18	-89.93	-462.89	-14.27	1,521.60	1,351.94	169.66	8.969	
8,100.00	7,250.00	13,628.00	7,212.49	37.73	176.18	-89.93	-462.89	-14.27	1,582.33	1,417.68	164.65	9.610	
8,200.00	7,250.00	13,628.00	7,212.49	39.64	176.18	-89.93	-462.89	-14.27	1,646.91	1,487.17	159.74	10.310	
8,300.00	7,250.00	13,628.00	7,212.49	41.64	176.18	-89.93	-462.89	-14.27	1,714.88	1,559.91	154.98	11.065	
8,400.00	7,250.00	13,628.00	7,212.49	43.72	176.18	-89.93	-462.89	-14.27	1,785.87	1,635.48	150.40	11.874	
8,500.00	7,250.00	13,628.00	7,212.49	45.87	176.18	-89.93	-462.89	-14.27	1,859.53	1,713.51	146.02	12.735	
8,600.00	7,250.00	13,628.00	7,212.49	48.08	176.18	-89.93	-462.89	-14.27	1,935.56	1,793.70	141.86	13.644	
8,700.00	7,250.00	13,628.00	7,212.49	50.34	176.18	-89.93	-462.89	-14.27	2,013.68	1,875.77	137.91	14.601	
8,800.00	7,250.00	13,628.00	7,212.49	52.64	176.18	-89.93	-462.89	-14.27	2,093.67	1,959.48	134.19	15.603	
8,900.00	7,250.00	13,628.00	7,212.49	54.98	176.18	-89.93	-462.89	-14.27	2,175.31	2,044.63	130.67	16.647	
9,000.00	7,250.00	13,628.00	7,212.49	57.35	176.18	-89.93	-462.89	-14.27	2,258.42	2,131.06	127.36	17.732	
9,100.00	7,250.00	13,628.00	7,212.49	59.76	176.18	-89.93	-462.89	-14.27	2,342.86	2,218.61	124.25	18.856	
9,200.00	7,250.00	13,628.00	7,212.49	62.19	176.18	-89.93	-462.89	-14.27	2,428.48	2,307.16	121.32	20.017	
9,300.00	7,250.00	13,628.00	7,212.49	64.65	176.18	-89.93	-462.89	-14.27	2,515.16	2,396.60	118.57	21.213	
9,400.00	7,250.00	13,628.00	7,212.49	67.12	176.18	-89.93	-462.89	-14.27	2,602.80	2,486.82	115.98	22.442	
9,500.00	7,249.99	13,628.00	7,212.49	69.61	176.18	-89.93	-462.89	-14.27	2,691.30	2,577.76	113.54	23.703	
9,600.00	7,249.99	13,628.00	7,212.49	72.12	176.18	-89.93	-462.89	-14.27	2,780.58	2,669.32	111.25	24.993	
9,700.00	7,249.99	13,628.00	7,212.49	74.65	176.18	-89.93	-462.89	-14.27	2,870.56	2,761.46	109.10	26.311	
9,800.00	7,249.99	13,628.00	7,212.49	77.19	176.18	-89.93	-462.89	-14.27	2,961.19	2,854.12	107.07	27.656	
9,900.00	7,249.99	13,628.00	7,212.49	79.74	176.18	-89.93	-462.89	-14.27	3,052.41	2,947.24	105.16	29.025	
10,000.00	7,249.99	13,628.00	7,212.49	82.30	176.18	-89.93	-462.89	-14.27	3,144.15	3,040.79	103.36	30.418	
10,100.00	7,249.99	13,628.00	7,212.49	84.87	176.18	-89.93	-462.89	-14.27	3,236.39	3,134.72	101.67	31.833	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,200.00	4,161.93	13,534.88	7,081.30	17.13	174.78	178.84	-829.64	9.51	3,254.63	3,157.07	97.57	33.358		
4,300.00	4,260.88	13,534.29	7,081.30	17.56	174.77	178.83	-829.64	10.09	3,171.31	3,071.27	100.03	31.702		
4,400.00	4,359.83	13,533.71	7,081.30	17.98	174.75	178.81	-829.64	10.68	3,088.97	2,986.33	102.64	30.095		
4,500.00	4,458.78	13,533.12	7,081.30	18.41	174.74	178.79	-829.64	11.26	3,007.70	2,902.31	105.39	28.539		
4,600.00	4,557.73	13,532.54	7,081.30	18.84	174.72	178.77	-829.64	11.84	2,927.60	2,819.31	108.29	27.036		
4,700.00	4,656.68	13,531.95	7,081.30	19.26	174.70	178.75	-829.64	12.43	2,848.75	2,737.41	111.34	25.586		
4,800.00	4,755.63	13,531.37	7,081.30	19.69	174.69	178.73	-829.64	13.01	2,771.26	2,656.71	114.55	24.192		
4,900.00	4,854.58	13,530.79	7,081.30	20.12	174.67	178.71	-829.65	13.60	2,695.26	2,577.33	117.93	22.855		
5,000.00	4,953.53	13,530.20	7,081.30	20.55	174.66	178.69	-829.65	14.18	2,620.87	2,499.40	121.48	21.575		
5,100.00	5,052.48	13,529.62	7,081.30	20.97	174.64	178.68	-829.65	14.77	2,548.24	2,423.05	125.19	20.355		
5,200.00	5,151.43	13,529.03	7,081.30	21.40	174.63	178.66	-829.65	15.35	2,477.51	2,348.44	129.07	19.195		
5,300.00	5,250.38	13,528.45	7,081.31	21.83	174.61	178.64	-829.65	15.94	2,408.86	2,275.74	133.11	18.096		
5,400.00	5,349.32	13,527.86	7,081.31	22.25	174.60	178.62	-829.65	16.52	2,342.46	2,205.15	137.31	17.059		
5,500.00	5,448.27	13,527.28	7,081.31	22.68	174.58	178.60	-829.65	17.10	2,278.52	2,136.86	141.66	16.085		
5,600.00	5,547.22	13,526.69	7,081.31	23.11	174.56	178.58	-829.65	17.69	2,217.25	2,071.12	146.13	15.173		
5,625.90	5,572.85	13,526.54	7,081.31	23.22	174.56	178.58	-829.65	17.84	2,201.85	2,054.54	147.31	14.947		
5,700.00	5,646.30	13,526.14	7,081.31	23.53	174.55	178.54	-829.66	18.24	2,158.09	2,007.40	150.69	14.322		
5,800.00	5,745.78	13,525.68	7,081.31	23.92	174.54	178.48	-829.66	18.70	2,099.23	1,944.01	155.22	13.524		
5,900.00	5,845.55	13,525.33	7,081.31	24.28	174.53	178.43	-829.66	19.06	2,040.66	1,880.95	159.72	12.777		
6,000.00	5,945.50	13,525.07	7,081.31	24.61	174.52	178.38	-829.66	19.31	1,982.49	1,818.34	164.15	12.077		
6,041.55	5,987.04	13,525.00	7,081.31	24.74	174.52	-179.82	-829.66	19.38	1,958.47	1,792.50	165.97	11.800		
6,100.00	6,045.49	13,524.91	7,081.31	24.91	174.52	-179.82	-829.66	19.48	1,925.33	1,756.81	168.52	11.425		
6,200.00	6,145.49	13,524.75	7,081.31	25.22	174.51	-179.83	-829.66	19.63	1,871.50	1,698.64	172.87	10.826		
6,300.00	6,245.49	13,524.59	7,081.31	25.52	174.51	-179.83	-829.66	19.79	1,821.58	1,644.43	177.15	10.283		
6,400.00	6,345.49	13,524.44	7,081.31	25.83	174.50	-179.84	-829.66	19.95	1,775.89	1,594.59	181.30	9.795		
6,500.00	6,445.49	13,524.28	7,081.31	26.14	174.50	-179.85	-829.66	20.10	1,734.77	1,549.52	185.25	9.364		
6,600.00	6,545.49	13,524.12	7,081.31	26.45	174.49	-179.85	-829.66	20.26	1,698.55	1,509.64	188.91	8.991		
6,700.00	6,645.49	13,523.96	7,081.31	26.76	174.49	-179.86	-829.66	20.42	1,667.55	1,475.35	192.20	8.676		
6,731.55	6,677.04	13,523.92	7,081.31	26.86	174.49	-179.86	-829.66	20.47	1,658.90	1,465.75	193.14	8.589		
6,750.00	6,695.49	13,524.18	7,081.31	26.92	174.50	-89.88	-829.66	20.20	1,654.09	1,460.41	193.68	8.540		
6,800.00	6,745.33	13,527.89	7,081.31	27.06	174.60	-90.98	-829.65	16.49	1,642.05	1,446.93	195.12	8.416		
6,850.00	6,794.65	13,535.93	7,081.29	27.21	174.81	-91.78	-829.64	8.45	1,631.50	1,434.97	196.53	8.302		
6,900.00	6,843.08	13,548.24	7,081.27	27.36	175.14	-92.27	-829.61	-3.86	1,622.49	1,424.59	197.90	8.199		
6,950.00	6,890.24	13,558.00	7,081.26	27.50	175.40	-92.69	-829.59	-13.62	1,615.03	1,415.99	199.05	8.114		
7,000.00	6,935.78	13,558.00	7,081.26	27.63	175.40	-93.27	-829.59	-13.62	1,609.27	1,409.50	199.77	8.056		
7,050.00	6,979.35	13,558.00	7,081.26	27.76	175.40	-93.67	-829.59	-13.62	1,605.28	1,404.98	200.30	8.014		
7,100.00	7,020.62	13,558.00	7,081.26	27.89	175.40	-93.89	-829.59	-13.62	1,603.13	1,402.49	200.65	7.990		
7,133.07	7,046.50	13,558.00	7,081.26	27.97	175.40	-93.93	-829.59	-13.62	1,602.73	1,401.95	200.77	7.983 CC, ES		
7,150.00	7,059.27	13,558.00	7,081.26	28.01	175.40	-93.92	-829.59	-13.62	1,602.83	1,402.03	200.80	7.982 SF		
7,200.00	7,095.02	13,558.00	7,081.26	28.13	175.40	-93.76	-829.59	-13.62	1,604.39	1,403.62	200.77	7.991		
7,250.00	7,127.58	13,558.00	7,081.26	28.27	175.40	-93.42	-829.59	-13.62	1,607.78	1,407.22	200.57	8.016		
7,300.00	7,156.72	13,558.00	7,081.26	28.41	175.40	-92.90	-829.59	-13.62	1,612.98	1,412.78	200.20	8.057		
7,350.00	7,182.21	13,558.00	7,081.26	28.58	175.40	-92.20	-829.59	-13.62	1,619.92	1,420.24	199.68	8.113		
7,400.00	7,203.85	13,558.00	7,081.26	28.79	175.40	-91.32	-829.59	-13.62	1,628.53	1,429.50	199.02	8.183		
7,450.00	7,221.48	13,558.00	7,081.26	29.05	175.40	-90.28	-829.59	-13.62	1,638.72	1,440.47	198.25	8.266		
7,500.00	7,234.96	13,558.00	7,081.26	29.38	175.40	-89.08	-829.59	-13.62	1,650.38	1,453.00	197.37	8.362		
7,550.00	7,244.21	13,558.00	7,081.26	29.79	175.40	-87.74	-829.59	-13.62	1,663.39	1,466.98	196.41	8.469		
7,600.00	7,249.13	13,558.00	7,081.26	30.26	175.40	-86.25	-829.59	-13.62	1,677.63	1,482.27	195.37	8.587		
7,631.55	7,250.00	13,558.00	7,081.26	30.59	175.40	-85.25	-829.59	-13.62	1,687.18	1,492.51	194.67	8.667		
7,700.00	7,250.00	13,558.00	7,081.26	31.38	175.40	-85.25	-829.59	-13.62	1,709.59	1,516.52	193.08	8.854		
7,800.00	7,250.00	13,558.00	7,081.26	32.73	175.40	-85.25	-829.59	-13.62	1,746.64	1,556.13	190.51	9.168		
7,900.00	7,250.00	13,558.00	7,081.26	34.25	175.40	-85.25	-829.59	-13.62	1,788.52	1,600.81	187.71	9.528		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 16-OWSG (Rev2) MWD											Rule Assigned:		Offset Well Error:	0.00 usft
Measured Reference		Measured Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Depth (usft)	Vertical Depth (usft)	Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,000.00	7,250.00	13,558.00	7,081.26	35.92	175.40	-85.25	-829.59	-13.62	1,834.90	1,650.18	184.72	9.933		
8,100.00	7,250.00	13,558.00	7,081.26	37.73	175.40	-85.25	-829.59	-13.62	1,885.45	1,703.85	181.60	10.382		
8,200.00	7,250.00	13,558.00	7,081.26	39.64	175.40	-85.25	-829.59	-13.62	1,939.84	1,761.45	178.38	10.874		
8,300.00	7,250.00	13,558.00	7,081.26	41.64	175.40	-85.25	-829.59	-13.62	1,997.75	1,822.63	175.12	11.408		
8,400.00	7,250.00	13,558.00	7,081.26	43.72	175.40	-85.25	-829.59	-13.62	2,058.90	1,887.06	171.84	11.982		
8,500.00	7,250.00	13,558.00	7,081.26	45.87	175.40	-85.25	-829.59	-13.62	2,123.00	1,954.42	168.58	12.594		
8,600.00	7,250.00	13,558.00	7,081.26	48.08	175.40	-85.25	-829.59	-13.62	2,189.79	2,024.44	165.35	13.243		
8,700.00	7,250.00	13,558.00	7,081.26	50.34	175.40	-85.25	-829.59	-13.62	2,259.03	2,096.84	162.19	13.928		
8,800.00	7,250.00	13,558.00	7,081.26	52.64	175.40	-85.25	-829.59	-13.62	2,330.51	2,171.41	159.10	14.648		
8,900.00	7,250.00	13,558.00	7,081.26	54.98	175.40	-85.25	-829.59	-13.62	2,404.02	2,247.92	156.10	15.400		
9,000.00	7,250.00	13,558.00	7,081.26	57.35	175.40	-85.25	-829.59	-13.62	2,479.39	2,326.20	153.19	16.185		
9,100.00	7,250.00	13,558.00	7,081.26	59.76	175.40	-85.25	-829.59	-13.62	2,556.45	2,406.06	150.39	16.999		
9,200.00	7,250.00	13,558.00	7,081.26	62.19	175.40	-85.25	-829.59	-13.62	2,635.05	2,487.36	147.68	17.842		
9,300.00	7,250.00	13,558.00	7,081.26	64.65	175.40	-85.25	-829.59	-13.62	2,715.06	2,569.97	145.08	18.714		
9,400.00	7,250.00	13,558.00	7,081.26	67.12	175.40	-85.25	-829.59	-13.62	2,796.35	2,653.76	142.59	19.611		
9,500.00	7,249.99	13,558.00	7,081.26	69.61	175.40	-85.25	-829.59	-13.62	2,878.83	2,738.63	140.19	20.535		
9,600.00	7,249.99	13,558.00	7,081.26	72.12	175.40	-85.25	-829.59	-13.62	2,962.38	2,824.48	137.90	21.482		
9,700.00	7,249.99	13,558.00	7,081.26	74.65	175.40	-85.25	-829.59	-13.62	3,046.92	2,911.22	135.71	22.453		
9,800.00	7,249.99	13,558.00	7,081.26	77.19	175.40	-85.25	-829.59	-13.62	3,132.38	2,998.77	133.60	23.445		
9,900.00	7,249.99	13,558.00	7,081.26	79.74	175.40	-85.25	-829.59	-13.62	3,218.67	3,087.08	131.59	24.459		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 128-OWSG (Rev2) MWD										Rule Assigned:			Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
4,800.00	4,755.63	13,682.00	7,228.58	19.69	176.01	179.48	-1,388.12	-22.78	3,214.09	3,083.71	130.38	24.651		
4,900.00	4,854.58	13,682.00	7,228.58	20.12	176.01	179.48	-1,388.12	-22.78	3,146.74	3,013.15	133.59	23.555		
5,000.00	4,953.53	13,682.00	7,228.58	20.55	176.01	179.48	-1,388.12	-22.78	3,081.16	2,944.27	136.89	22.508		
5,100.00	5,052.48	13,682.00	7,228.58	20.97	176.01	179.48	-1,388.12	-22.78	3,017.47	2,877.19	140.28	21.510		
5,200.00	5,151.43	13,682.00	7,228.58	21.40	176.01	179.48	-1,388.12	-22.78	2,955.79	2,812.04	143.75	20.562		
5,300.00	5,250.38	13,682.00	7,228.58	21.83	176.01	179.48	-1,388.12	-22.78	2,896.25	2,748.95	147.29	19.663		
5,400.00	5,349.32	13,682.00	7,228.58	22.25	176.01	179.48	-1,388.12	-22.78	2,838.98	2,688.09	150.89	18.814		
5,500.00	5,448.27	13,682.00	7,228.58	22.68	176.01	179.48	-1,388.12	-22.78	2,784.13	2,629.59	154.54	18.015		
5,600.00	5,547.22	13,682.00	7,228.58	23.11	176.01	179.48	-1,388.12	-22.78	2,731.84	2,573.62	158.23	17.266		
5,625.90	5,572.85	13,682.00	7,228.58	23.22	176.01	179.48	-1,388.12	-22.78	2,718.74	2,559.55	159.18	17.079		
5,700.00	5,646.30	13,682.00	7,228.58	23.53	176.01	179.47	-1,388.12	-22.78	2,681.42	2,519.52	161.90	16.562		
5,800.00	5,745.78	13,682.00	7,228.58	23.92	176.01	179.46	-1,388.12	-22.78	2,630.88	2,465.37	165.51	15.896		
5,900.00	5,845.55	13,682.00	7,228.58	24.28	176.01	179.45	-1,388.12	-22.78	2,580.14	2,411.11	169.03	15.264		
6,000.00	5,945.50	13,682.00	7,228.58	24.61	176.01	179.44	-1,388.12	-22.78	2,529.28	2,356.82	172.46	14.666		
6,041.55	5,987.04	13,682.00	7,228.58	24.74	176.01	-178.75	-1,388.12	-22.78	2,508.13	2,334.27	173.85	14.427		
6,100.00	6,045.49	13,682.00	7,228.58	24.91	176.01	-178.75	-1,388.12	-22.78	2,478.86	2,303.07	175.79	14.101		
6,200.00	6,145.49	13,682.00	7,228.58	25.22	176.01	-178.75	-1,388.12	-22.78	2,431.24	2,252.18	179.06	13.578		
6,300.00	6,245.49	13,682.00	7,228.58	25.52	176.01	-178.75	-1,388.12	-22.78	2,386.87	2,204.62	182.24	13.097		
6,400.00	6,345.49	13,682.00	7,228.58	25.83	176.01	-178.75	-1,388.12	-22.78	2,345.91	2,160.60	185.31	12.659		
6,500.00	6,445.49	13,682.00	7,228.58	26.14	176.01	-178.75	-1,388.12	-22.78	2,308.57	2,120.33	188.24	12.264		
6,600.00	6,545.49	13,682.00	7,228.58	26.45	176.01	-178.75	-1,388.12	-22.78	2,275.01	2,084.04	190.97	11.913		
6,700.00	6,645.49	13,682.00	7,228.58	26.76	176.01	-178.75	-1,388.12	-22.78	2,245.41	2,051.92	193.49	11.605		
6,731.55	6,677.04	13,682.00	7,228.58	26.86	176.01	-178.75	-1,388.12	-22.78	2,236.92	2,042.68	194.24	11.517		
6,750.00	6,695.49	13,682.00	7,228.58	26.92	176.01	-88.77	-1,388.12	-22.78	2,232.13	2,037.48	194.66	11.467		
6,800.00	6,745.33	13,682.00	7,228.58	27.06	176.01	-90.04	-1,388.12	-22.78	2,219.84	2,024.09	195.75	11.340		
6,850.00	6,794.65	13,682.00	7,228.58	27.21	176.01	-91.19	-1,388.12	-22.78	2,208.62	2,011.84	196.78	11.224		
6,900.00	6,843.08	13,682.00	7,228.58	27.36	176.01	-92.22	-1,388.12	-22.78	2,198.56	2,000.84	197.72	11.120		
6,950.00	6,890.24	13,682.00	7,228.58	27.50	176.01	-93.11	-1,388.12	-22.78	2,189.77	1,991.20	198.57	11.028		
7,000.00	6,935.78	13,682.00	7,228.58	27.63	176.01	-93.86	-1,388.12	-22.78	2,182.32	1,982.99	199.32	10.949		
7,050.00	6,979.35	13,682.00	7,228.58	27.76	176.01	-94.47	-1,388.12	-22.78	2,176.28	1,976.31	199.97	10.883		
7,100.00	7,020.62	13,682.00	7,228.58	27.89	176.01	-94.93	-1,388.12	-22.78	2,171.72	1,971.20	200.52	10.831		
7,150.00	7,059.27	13,682.00	7,228.58	28.01	176.01	-95.23	-1,388.12	-22.78	2,168.67	1,967.72	200.95	10.792		
7,200.00	7,095.02	13,682.00	7,228.58	28.13	176.01	-95.38	-1,388.12	-22.78	2,167.17	1,965.89	201.28	10.767		
7,223.03	7,110.43	13,682.00	7,228.58	28.19	176.01	-95.40	-1,388.12	-22.78	2,167.01	1,965.60	201.40	10.759 CC, ES		
7,250.00	7,127.58	13,682.00	7,228.58	28.27	176.01	-95.37	-1,388.12	-22.78	2,167.23	1,965.72	201.51	10.755 SF		
7,300.00	7,156.72	13,682.00	7,228.58	28.41	176.01	-95.21	-1,388.12	-22.78	2,168.86	1,967.22	201.64	10.756		
7,350.00	7,182.21	13,682.00	7,228.58	28.58	176.01	-94.90	-1,388.12	-22.78	2,172.02	1,970.34	201.68	10.770		
7,400.00	7,203.85	13,682.00	7,228.58	28.79	176.01	-94.43	-1,388.12	-22.78	2,176.70	1,975.07	201.63	10.796		
7,450.00	7,221.48	13,682.00	7,228.58	29.05	176.01	-93.81	-1,388.12	-22.78	2,182.85	1,981.35	201.50	10.833		
7,500.00	7,234.96	13,682.00	7,228.58	29.38	176.01	-93.05	-1,388.12	-22.78	2,190.41	1,989.11	201.30	10.881		
7,550.00	7,244.21	13,682.00	7,228.58	29.79	176.01	-92.14	-1,388.12	-22.78	2,199.31	1,998.27	201.04	10.940		
7,600.00	7,249.13	13,682.00	7,228.58	30.26	176.01	-91.11	-1,388.12	-22.78	2,209.46	2,008.76	200.70	11.009		
7,631.55	7,250.00	13,682.00	7,228.58	30.59	176.01	-90.39	-1,388.12	-22.78	2,216.47	2,016.01	200.46	11.057		
7,700.00	7,250.00	13,682.00	7,228.58	31.38	176.01	-90.39	-1,388.12	-22.78	2,233.15	2,033.29	199.87	11.173		
7,800.00	7,250.00	13,682.00	7,228.58	32.73	176.01	-90.39	-1,388.12	-22.78	2,261.03	2,062.17	198.86	11.370		
7,900.00	7,250.00	13,682.00	7,228.58	34.25	176.01	-90.39	-1,388.12	-22.78	2,292.94	2,095.24	197.70	11.598		
8,000.00	7,250.00	13,682.00	7,228.58	35.92	176.01	-90.39	-1,388.12	-22.78	2,328.71	2,132.33	196.38	11.858		
8,100.00	7,250.00	13,682.00	7,228.58	37.73	176.01	-90.39	-1,388.12	-22.78	2,368.16	2,173.25	194.91	12.150		
8,200.00	7,250.00	13,682.00	7,228.58	39.64	176.01	-90.39	-1,388.12	-22.78	2,411.12	2,217.80	193.31	12.473		
8,300.00	7,250.00	13,682.00	7,228.58	41.64	176.01	-90.39	-1,388.12	-22.78	2,457.40	2,265.80	191.60	12.826		
8,400.00	7,250.00	13,682.00	7,228.58	43.72	176.01	-90.39	-1,388.12	-22.78	2,506.81	2,317.03	189.78	13.209		
8,500.00	7,250.00	13,682.00	7,228.58	45.87	176.01	-90.39	-1,388.12	-22.78	2,559.18	2,371.30	187.88	13.621		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft				
Survey Program: 128-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft				
Reference				Offset			Semi Major Axis		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
8,600.00	7,250.00	13,682.00	7,228.58	48.08	176.01	-90.39		-90.39	-1,388.12	-22.78	2,614.33	2,428.41	185.91	14.062				
8,700.00	7,250.00	13,682.00	7,228.58	50.34	176.01	-90.39		-90.39	-1,388.12	-22.78	2,672.08	2,488.18	183.90	14.530				
8,800.00	7,250.00	13,682.00	7,228.58	52.64	176.01	-90.39		-90.39	-1,388.12	-22.78	2,732.27	2,550.43	181.85	15.025				
8,900.00	7,250.00	13,682.00	7,228.58	54.98	176.01	-90.39		-90.39	-1,388.12	-22.78	2,794.75	2,614.98	179.77	15.546				
9,000.00	7,250.00	13,682.00	7,228.58	57.35	176.01	-90.39		-90.39	-1,388.12	-22.78	2,859.36	2,681.67	177.69	16.092				
9,100.00	7,250.00	13,682.00	7,228.58	59.76	176.01	-90.39		-90.39	-1,388.12	-22.78	2,925.96	2,750.35	175.61	16.662				
9,200.00	7,250.00	13,682.00	7,228.58	62.19	176.01	-90.39		-90.39	-1,388.12	-22.78	2,994.42	2,820.88	173.54	17.255				
9,300.00	7,250.00	13,682.00	7,228.58	64.65	176.01	-90.39		-90.39	-1,388.12	-22.78	3,064.61	2,893.13	171.48	17.871				
9,400.00	7,250.00	13,682.00	7,228.58	67.12	176.01	-90.39		-90.39	-1,388.12	-22.78	3,136.42	2,966.96	169.46	18.509				
9,500.00	7,249.99	13,682.00	7,228.58	69.61	176.01	-90.39		-90.39	-1,388.12	-22.78	3,209.74	3,042.28	167.46	19.167				

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
8,500.00	7,250.00	7,249.00	7,249.00	45.87	145.42	90.00	2,830.91	-3,936.78	3,262.96	3,084.70	178.26	18.305		
8,600.00	7,250.00	7,249.00	7,249.00	48.08	145.42	90.00	2,830.91	-3,936.78	3,186.90	3,007.23	179.67	17.738		
8,700.00	7,250.00	7,249.00	7,249.00	50.34	145.42	90.00	2,830.91	-3,936.78	3,112.20	2,930.94	181.26	17.170		
8,800.00	7,250.00	7,249.00	7,249.00	52.64	145.42	90.00	2,830.91	-3,936.78	3,038.95	2,855.92	183.04	16.603		
8,900.00	7,250.00	7,249.00	7,249.00	54.98	145.42	90.00	2,830.91	-3,936.78	2,967.27	2,782.27	185.00	16.039		
9,000.00	7,250.00	7,249.00	7,249.00	57.35	145.42	90.00	2,830.91	-3,936.78	2,897.26	2,710.12	187.14	15.482		
9,100.00	7,250.00	7,249.00	7,249.00	59.76	145.42	90.00	2,830.91	-3,936.78	2,829.06	2,639.60	189.46	14.932		
9,200.00	7,250.00	7,249.00	7,249.00	62.19	145.42	90.00	2,830.91	-3,936.78	2,762.80	2,570.83	191.97	14.392		
9,300.00	7,250.00	7,249.00	7,249.00	64.65	145.42	90.00	2,830.91	-3,936.78	2,698.61	2,503.97	194.64	13.864		
9,400.00	7,250.00	7,249.00	7,249.00	67.12	145.42	90.00	2,830.91	-3,936.78	2,636.65	2,439.16	197.49	13.351		
9,500.00	7,249.99	7,248.99	7,248.99	69.61	145.42	90.00	2,830.91	-3,936.78	2,577.09	2,376.59	200.50	12.853		
9,600.00	7,249.99	7,248.99	7,248.99	72.12	145.42	90.00	2,830.91	-3,936.78	2,520.09	2,316.42	203.67	12.374		
9,700.00	7,249.99	7,248.99	7,248.99	74.65	145.42	90.00	2,830.91	-3,936.78	2,465.82	2,258.85	206.97	11.914		
9,800.00	7,249.99	7,248.99	7,248.99	77.19	145.42	90.00	2,830.91	-3,936.78	2,414.49	2,204.07	210.42	11.475		
9,900.00	7,249.99	7,248.99	7,248.99	79.74	145.42	90.00	2,830.91	-3,936.78	2,366.26	2,152.29	213.97	11.059		
10,000.00	7,249.99	7,248.99	7,248.99	82.30	145.42	90.00	2,830.91	-3,936.78	2,321.35	2,103.72	217.63	10.667		
10,100.00	7,249.99	7,248.99	7,248.99	84.87	145.42	90.00	2,830.91	-3,936.78	2,279.93	2,058.58	221.36	10.300		
10,200.00	7,249.99	7,248.99	7,248.99	87.45	145.42	90.00	2,830.91	-3,936.78	2,242.22	2,017.08	225.14	9.959		
10,300.00	7,249.99	7,248.99	7,248.99	90.04	145.42	90.00	2,830.91	-3,936.78	2,208.39	1,979.45	228.94	9.646		
10,400.00	7,249.99	7,248.99	7,248.99	92.64	145.42	90.00	2,830.91	-3,936.78	2,178.63	1,945.89	232.74	9.361		
10,500.00	7,249.99	7,248.99	7,248.99	95.24	145.42	90.00	2,830.91	-3,936.78	2,153.11	1,916.61	236.50	9.104		
10,600.00	7,249.99	7,248.99	7,248.99	97.85	145.42	90.00	2,830.91	-3,936.78	2,131.98	1,891.80	240.18	8.876		
10,700.00	7,249.99	7,248.99	7,248.99	100.47	145.42	90.00	2,830.91	-3,936.78	2,115.37	1,871.61	243.76	8.678		
10,800.00	7,249.99	7,248.99	7,248.99	103.09	145.42	90.00	2,830.91	-3,936.78	2,103.39	1,856.19	247.20	8.509		
10,900.00	7,249.99	7,248.99	7,248.99	105.71	145.42	90.00	2,830.91	-3,936.78	2,096.11	1,845.64	250.47	8.369		
11,000.00	7,249.99	7,248.99	7,248.99	108.35	145.42	90.00	2,830.91	-3,936.78	2,093.60	1,840.06	253.54	8.257		
11,002.75	7,249.99	7,248.99	7,248.99	108.42	145.42	90.00	2,830.91	-3,936.78	2,093.59	1,839.97	253.62	8.255 CC		
11,100.00	7,249.99	7,248.99	7,248.99	110.98	145.42	90.00	2,830.91	-3,936.78	2,095.85	1,839.47	256.38	8.175 ES		
11,200.00	7,249.99	7,248.99	7,248.99	113.62	145.42	90.00	2,830.91	-3,936.78	2,102.87	1,843.88	258.99	8.120		
11,300.00	7,249.99	7,248.99	7,248.99	116.26	145.42	90.00	2,830.91	-3,936.78	2,114.59	1,853.26	261.33	8.092		
11,400.00	7,249.99	7,248.99	7,248.99	118.91	145.42	90.00	2,830.91	-3,936.78	2,130.95	1,867.54	263.41	8.090 SF		
11,500.00	7,249.99	7,248.99	7,248.99	121.56	145.42	90.00	2,830.91	-3,936.78	2,151.83	1,886.61	265.22	8.113		
11,600.00	7,249.99	7,248.99	7,248.99	124.21	145.42	90.00	2,830.91	-3,936.78	2,177.12	1,910.35	266.77	8.161		
11,700.00	7,249.99	7,248.99	7,248.99	126.87	145.42	90.00	2,830.91	-3,936.78	2,206.65	1,938.59	268.06	8.232		
11,800.00	7,249.99	7,248.99	7,248.99	129.53	145.42	90.00	2,830.91	-3,936.78	2,240.25	1,971.16	269.10	8.325		
11,900.00	7,249.99	7,248.99	7,248.99	132.19	145.42	90.00	2,830.91	-3,936.78	2,277.76	2,007.85	269.91	8.439		
12,000.00	7,249.99	7,248.99	7,248.99	134.86	145.42	90.00	2,830.91	-3,936.78	2,318.97	2,048.48	270.50	8.573		
12,100.00	7,249.99	7,248.99	7,248.99	137.52	145.42	90.00	2,830.91	-3,936.78	2,363.70	2,092.81	270.89	8.726		
12,200.00	7,249.99	7,248.99	7,248.99	140.19	145.42	90.00	2,830.91	-3,936.78	2,411.75	2,140.64	271.11	8.896		
12,300.00	7,249.99	7,248.99	7,248.99	142.86	145.42	90.00	2,830.91	-3,936.78	2,462.92	2,191.75	271.17	9.083		
12,400.00	7,249.99	7,248.99	7,248.99	145.53	145.42	90.00	2,830.91	-3,936.78	2,517.03	2,245.94	271.09	9.285		
12,500.00	7,249.99	7,248.99	7,248.99	148.21	145.42	90.00	2,830.91	-3,936.78	2,573.89	2,303.01	270.88	9.502		
12,600.00	7,249.99	7,248.99	7,248.99	150.88	145.42	90.00	2,830.91	-3,936.78	2,633.31	2,362.75	270.57	9.733		
12,700.00	7,249.99	7,248.99	7,248.99	153.56	145.42	90.00	2,830.91	-3,936.78	2,695.14	2,424.98	270.17	9.976		
12,800.00	7,249.99	7,248.99	7,248.99	156.24	145.42	90.00	2,830.91	-3,936.78	2,759.21	2,489.52	269.69	10.231		
12,900.00	7,249.98	7,248.98	7,248.98	158.92	145.42	90.00	2,830.91	-3,936.78	2,825.37	2,556.22	269.14	10.498		
13,000.00	7,249.98	7,248.98	7,248.98	161.60	145.42	90.00	2,830.91	-3,936.78	2,893.47	2,624.92	268.55	10.775		
13,100.00	7,249.98	7,248.98	7,248.98	164.28	145.42	90.00	2,830.91	-3,936.78	2,963.37	2,695.47	267.91	11.061		
13,200.00	7,249.98	7,248.98	7,248.98	166.97	145.42	90.00	2,830.91	-3,936.78	3,034.97	2,767.73	267.24	11.357		
13,300.00	7,249.98	7,248.98	7,248.98	169.65	145.42	90.00	2,830.91	-3,936.78	3,108.13	2,841.59	266.54	11.661		
13,400.00	7,249.98	7,248.98	7,248.98	172.34	145.42	90.00	2,830.91	-3,936.78	3,182.76	2,916.93	265.82	11.973		
13,500.00	7,249.98	7,248.98	7,248.98	175.03	145.42	90.00	2,830.91	-3,936.78	3,258.74	2,993.64	265.10	12.293		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

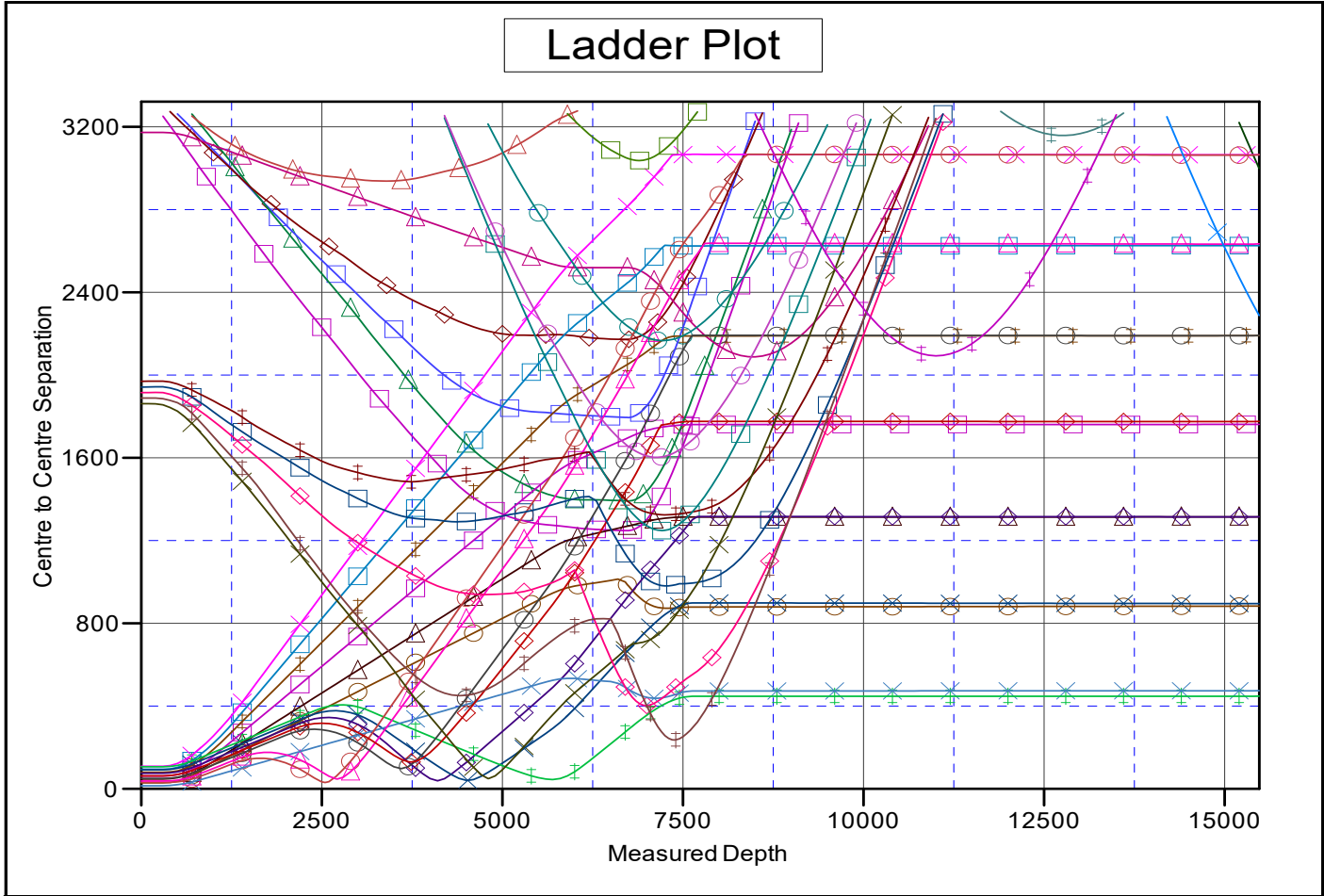
Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 11 T5N R68W 6th P.M. - EXIST VERT WICKED 1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,200.00	7,249.98	6,978.99	6,962.36	193.87	4.62	-81.70	-1,077.90	-9,816.49	3,248.96	3,130.86	118.10	27.511		
14,300.00	7,249.98	6,988.86	6,972.19	196.56	4.63	-82.02	-1,077.85	-9,817.47	3,165.88	3,043.72	122.16	25.916		
14,400.00	7,249.98	6,998.74	6,982.01	199.26	4.65	-82.33	-1,077.79	-9,818.45	3,083.77	2,957.35	126.41	24.394		
14,500.00	7,249.98	7,008.61	6,991.84	201.96	4.66	-82.64	-1,077.73	-9,819.42	3,002.71	2,871.85	130.87	22.945		
14,600.00	7,249.98	7,018.49	7,001.66	204.65	4.67	-82.96	-1,077.67	-9,820.40	2,922.80	2,787.27	135.53	21.566		
14,700.00	7,249.98	7,028.36	7,011.49	207.35	4.69	-83.27	-1,077.62	-9,821.37	2,844.11	2,703.72	140.40	20.258		
14,800.00	7,249.98	7,038.24	7,021.32	210.05	4.70	-83.58	-1,077.56	-9,822.35	2,766.78	2,621.29	145.49	19.017		
14,900.00	7,249.98	7,048.11	7,031.14	212.75	4.71	-83.90	-1,077.50	-9,823.32	2,690.90	2,540.09	150.80	17.844		
15,000.00	7,249.98	7,057.99	7,040.97	215.45	4.73	-84.21	-1,077.45	-9,824.30	2,616.60	2,460.26	156.34	16.736		
15,100.00	7,249.98	7,067.86	7,050.80	218.15	4.74	-84.53	-1,077.39	-9,825.28	2,544.03	2,381.91	162.11	15.693		
15,200.00	7,249.98	7,077.74	7,060.62	220.85	4.75	-84.84	-1,077.33	-9,826.25	2,473.33	2,305.22	168.11	14.713		
15,300.00	7,249.98	7,087.61	7,070.45	223.55	4.77	-85.16	-1,077.27	-9,827.23	2,404.67	2,230.35	174.32	13.794		
15,400.00	7,249.98	7,097.49	7,080.28	226.25	4.78	-85.48	-1,077.22	-9,828.20	2,338.23	2,157.48	180.75	12.937		
15,478.21	7,250.00	7,105.23	7,087.98	228.36	4.79	-85.73	-1,077.17	-9,828.97	2,288.10	2,102.19	185.91	12.307	CC, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 5000.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: CE 5-68 11-10-8H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.35°



LEGEND

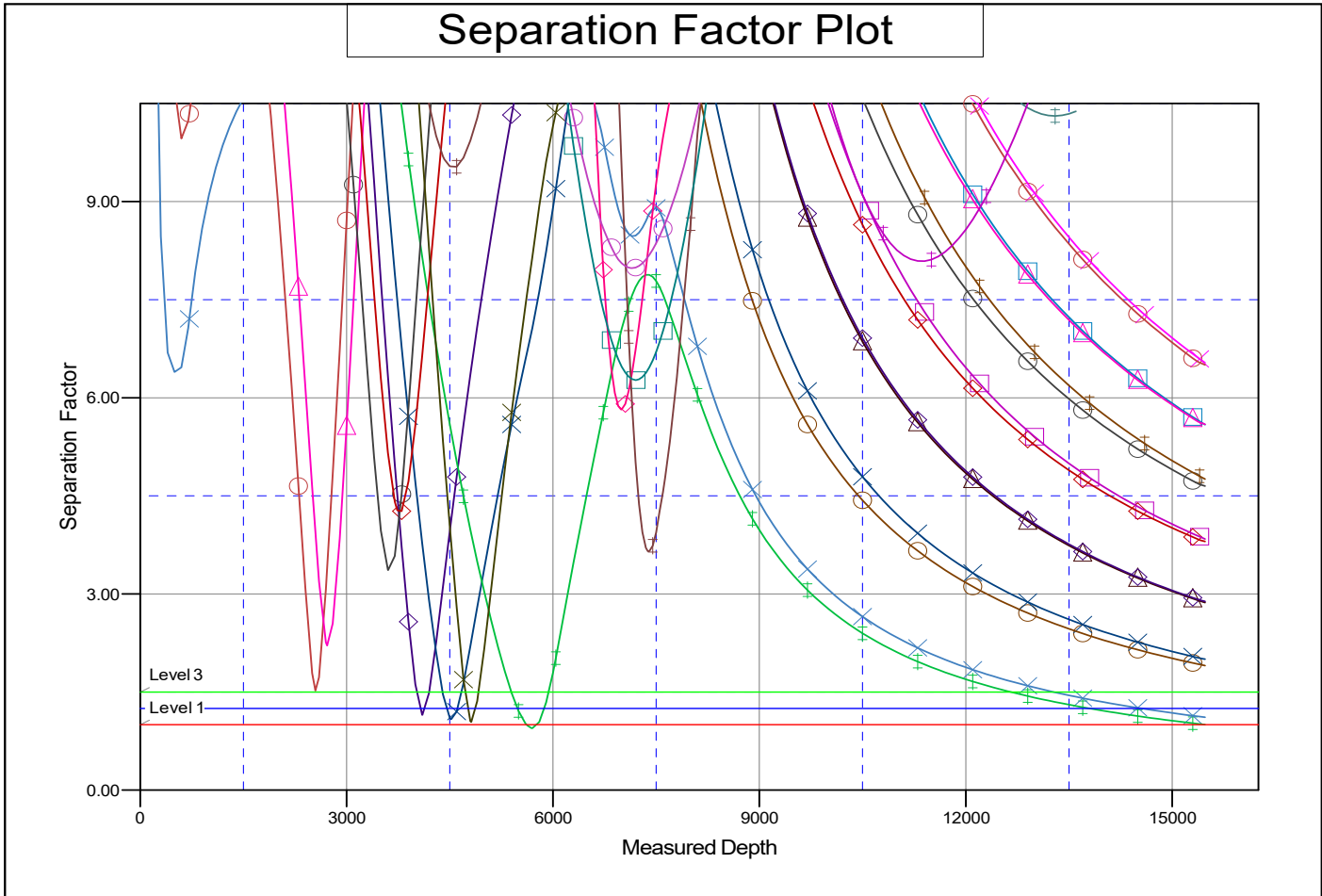
- | | | |
|--|--|---|
| <ul style="list-style-type: none"> ABDN DD ENCORE 18-12, Wellbore #1, Wellbore #1 V0 ABDN DD ENCORE 4-12, Wellbore #1, Wellbore #1 V0 ABDN DD ENCORE 5-12, Wellbore #1, Wellbore #1 V0 ABDN DD MIRACLE 12-12, Wellbore #1, Wellbore #1 V0 ABDN DD MIRACLE 13-12, Wellbore #1, Wellbore #1 V0 ABDN VERT KNESS 1, Wellbore #1, Design #1 V0 ABDN VERT MCWHINNEY-VANDERWATER1, Wellbore #1, Design #1 V0 ABDN VERT MEAN1, Wellbore #1, Design #1 V0 CE 5-68 11-10-10H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-11H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-12H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | <ul style="list-style-type: none"> CE 5-68 11-10-13H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-14H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-15H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-5H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-6H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-7H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-10-9H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-3-1H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-3-2H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-3-3H, ORIGINAL WELLBORE, PROPOSAL #1 V0 CE 5-68 11-3-4H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | <ul style="list-style-type: none"> EXIST HZ ENCORE 1C-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ ENCORE 26N-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ ENCORE 40N-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ ENCORE 41N-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ ENCORE 8C-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ MIRACLE 33N-12HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ MIRACLE 40C-11HZ, SIDETRACK, SIDETRACK V0 EXIST HZ MIRACLE 40N-11HZ, Wellbore #1, Wellbore #1 V0 EXIST HZ MIRACLE 9C-11HZ, Wellbore #1, Wellbore #1 V0 EXIST VERT JEFFERS 2-2, Wellbore #1, Design #1 V0 EXIST VERT WICKED 1, Wellbore #1, Wellbore #1 V0 |
|--|--|---|

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-8H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-8H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	Database 1
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KBE @ 5000.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: CE 5-68 11-10-8H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.35°



LEGEND

<ul style="list-style-type: none"> ■ ABDN DD ENCORE 18-12, Wellbore #1, Wellbore #1 V0 ■ ABDN DD ENCORE 4-12, Wellbore #1, Wellbore #1 V0 ■ ABDN DD ENCORE 5-12, Wellbore #1, Wellbore #1 V0 ■ ABDN DD MIRACLE 12-12, Wellbore #1, Wellbore #1 V0 ■ ABDN DD MIRACLE 13-12, Wellbore #1, Wellbore #1 V0 ■ ABDN VERT KNESS 1, Wellbore #1, Design #1 V0 ■ ABDN VERT MCWHINNEY-VANDERWATER1, Wellbore #1, Design #1 V0 ■ ABDN VERT MEAN1, Wellbore #1, Design #1 V0 ■ CE 5-68 11-10-10H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-11H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-12H, ORIGINAL WELLBORE, PROPOSAL #1 V0 	<ul style="list-style-type: none"> ■ CE 5-68 11-10-13H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-14H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-15H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-6H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-7H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-10-8H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-3-1H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-3-2H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-3-3H, ORIGINAL WELLBORE, PROPOSAL #1 V0 ■ CE 5-68 11-3-4H, ORIGINAL WELLBORE, PROPOSAL #1 V0 	<ul style="list-style-type: none"> ■ EXIST HZ ENCORE 1C-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ ENCORE 26N-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ ENCORE 40N-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ ENCORE 41N-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ ENCORE 8C-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ MIRACLE 33N-12HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ MIRACLE 40C-11HZ, SIDETRACK, SIDETRACK V0 ■ EXIST HZ MIRACLE 40N-11HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST HZ MIRACLE 9C-11HZ, Wellbore #1, Wellbore #1 V0 ■ EXIST VERT JEFFERS 2-2, Wellbore #1, Design #1 V0 ■ EXIST VERT WICKED 1, Wellbore #1, Wellbore #1 V0
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CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation