



BISON IV OPERATING

LARIMER COUNTY, COLORADO (NAD 83)

SEC. 11 T5N R68W 6th P.M.

CE 5-68 11-10-9H

ORIGINAL WELLBORE

PROPOSAL #1

Anticollision Report

19 July, 2024



Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	15,495.74	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	6,527.21	6,724.37	1,670.30	1,621.03	33.904	CC, ES
ABDN DD ENCORE 18-12 - Wellbore #1 - Wellbore #1	6,650.00	6,851.77	1,682.52	1,632.37	33.551	SF
ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1	6,558.54	6,877.61	1,551.56	1,493.41	26.682	CC, ES
ABDN DD ENCORE 4-12 - Wellbore #1 - Wellbore #1	6,650.00	6,969.88	1,556.01	1,497.46	26.579	SF
ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1	6,512.62	6,976.44	916.41	855.15	14.958	CC, ES
ABDN DD ENCORE 5-12 - Wellbore #1 - Wellbore #1	6,550.00	7,011.74	917.67	856.17	14.920	SF
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,394.24	6,801.20	1,659.83	1,591.66	24.347	CC
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,482.24	6,879.92	1,660.06	1,591.33	24.154	ES
ABDN DD MIRACLE 12-12 - Wellbore #1 - Wellbore #1	6,600.00	6,978.37	1,668.13	1,598.82	24.067	SF
ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1	4,602.57	5,091.30	2,614.66	2,556.54	44.990	CC, ES
ABDN DD MIRACLE 13-12 - Wellbore #1 - Wellbore #1	6,850.00	7,410.92	2,880.01	2,799.84	35.923	SF
ABDN VERT DONNAMITE 1 - Wellbore #1 - Design #1	15,495.74	7,025.00	2,911.68	2,551.42	8.082	CC, ES, SF
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	8,468.00	7,071.00	2,523.76	2,334.28	13.319	CC
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	8,500.00	7,071.00	2,523.97	2,333.72	13.267	ES
ABDN VERT KNESS 1 - Wellbore #1 - Design #1	9,100.00	7,071.00	2,601.69	2,397.93	12.768	SF
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	12,764.71	7,026.00	2,722.13	2,421.97	9.069	CC
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	12,800.00	7,026.00	2,722.36	2,421.31	9.043	ES
ABDN VERT MCWHINNEY-VANDERWATER1 - Wellbor	13,200.00	7,026.00	2,756.71	2,447.42	8.913	SF
ABDN VERT MEAN 1 - Wellbore #1 - Design #1	15,495.74	6,727.00	2,715.70	2,458.79	10.571	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	14.57	12.85	8.469	CC
CE 5-68 11-10-10H - ORIGINAL WELLBORE - PROPOS	15,495.74	15,895.63	448.43	-16.59	0.964	Level 3, ES, SF
CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOS	400.00	400.00	32.79	30.35	13.450	CC, ES
CE 5-68 11-10-11H - ORIGINAL WELLBORE - PROPOS	15,495.74	15,572.45	897.85	443.80	1.977	SF
CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOS	400.00	400.00	47.36	44.92	19.428	CC, ES
CE 5-68 11-10-12H - ORIGINAL WELLBORE - PROPOS	15,495.74	15,589.42	1,314.92	848.49	2.819	SF
CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOS	400.00	400.00	65.57	63.14	26.901	CC, ES
CE 5-68 11-10-13H - ORIGINAL WELLBORE - PROPOS	15,495.74	15,739.39	1,755.14	1,289.90	3.773	SF
CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOS	400.00	400.00	80.15	77.71	32.879	CC, ES
CE 5-68 11-10-14H - ORIGINAL WELLBORE - PROPOS	15,495.74	16,353.82	2,197.42	1,724.27	4.644	SF
CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOS	300.00	300.00	94.71	92.99	55.045	CC, ES
CE 5-68 11-10-15H - ORIGINAL WELLBORE - PROPOS	15,495.74	16,280.86	2,622.83	2,148.00	5.524	SF
CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSA	400.00	400.00	62.64	60.21	25.699	CC, ES
CE 5-68 11-10-5H - ORIGINAL WELLBORE - PROPOSA	15,495.74	15,837.79	1,763.67	1,306.52	3.858	SF
CE 5-68 11-10-6H - ORIGINAL WELLBORE - PROPOSA	400.00	400.00	79.04	76.60	32.425	CC, ES

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 11-10-9H
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 11-10-9H	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	15,495.74	15,496.19	1,312.08	851.78	2.850	SF
CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSA	400.00	400.00	92.64	90.20	38.005	CC, ES
CE 5-68 11-10-7H - ORIGINAL WELLBORE - PROPOSA	15,495.74	15,455.54	879.17	421.58	1.921	SF
CE 5-68 11-10-8H - ORIGINAL WELLBORE - PROPOSA	300.00	300.00	14.57	12.85	8.469	CC, ES
CE 5-68 11-10-8H - ORIGINAL WELLBORE - PROPOSA	15,495.74	15,478.21	474.90	48.37	1.113	Level 3, SF
CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL	400.00	400.00	31.49	29.05	12.917	CC, ES
CE 5-68 11-3-1H - ORIGINAL WELLBORE - PROPOSAL	2,000.00	2,003.63	75.02	60.83	5.287	SF
CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL	400.00	400.00	31.48	29.05	12.916	CC, ES
CE 5-68 11-3-2H - ORIGINAL WELLBORE - PROPOSAL	2,200.00	2,206.94	74.31	58.57	4.721	SF
CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL	400.00	400.00	39.85	37.42	16.349	CC, ES
CE 5-68 11-3-3H - ORIGINAL WELLBORE - PROPOSAL	3,018.70	3,038.06	85.19	63.35	3.900	SF
CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL	400.00	400.00	50.44	48.00	20.692	CC, ES
CE 5-68 11-3-4H - ORIGINAL WELLBORE - PROPOSAL	3,200.00	3,224.07	75.78	52.48	3.252	SF
EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #	7,235.25	8,132.00	1,421.98	1,351.80	20.262	CC, ES
EXIST HZ ENCORE 1C-12HZ - Wellbore #1 - Wellbore #	8,300.00	7,177.00	1,485.27	1,402.27	17.895	SF
EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore	7,700.12	7,383.34	1,758.41	1,685.85	24.232	CC, ES
EXIST HZ ENCORE 26N-12HZ - Wellbore #1 - Wellbore	8,600.00	6,945.00	1,909.37	1,821.82	21.809	SF
EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore	7,024.64	7,240.22	289.39	234.82	5.303	CC, ES
EXIST HZ ENCORE 40N-12HZ - Wellbore #1 - Wellbore	7,050.00	7,240.04	290.35	235.24	5.269	SF
EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore	6,950.00	7,975.90	846.95	776.83	12.078	SF
EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore	7,050.00	7,900.95	843.60	774.01	12.122	ES
EXIST HZ ENCORE 41N-12HZ - Wellbore #1 - Wellbore	7,063.84	7,889.64	843.56	774.06	12.137	CC
EXIST HZ ENCORE 8C-12HZ - Wellbore #1 - Wellbore #	7,570.79	7,500.73	204.16	136.60	3.022	CC, ES, SF
EXIST HZ MIRACLE 13C-12HZ - Wellbore #1 - Wellbore	6,765.12	11,892.00	3,003.28	2,851.55	19.795	CC, ES
EXIST HZ MIRACLE 13C-12HZ - Wellbore #1 - Wellbore	6,850.00	11,892.00	3,006.14	2,854.16	19.779	SF
EXIST HZ MIRACLE 33N-12HZ - Wellbore #1 - Wellbore	6,713.37	11,657.00	2,560.94	2,412.35	17.236	CC, ES
EXIST HZ MIRACLE 33N-12HZ - Wellbore #1 - Wellbore	6,750.00	11,657.00	2,561.55	2,412.84	17.225	SF
EXIST HZ MIRACLE 40C-11HZ - ORIGINAL WELLBORE						Out of range
EXIST HZ MIRACLE 40C-11HZ - SIDETRACK - SIDETR	7,179.24	13,628.00	830.30	636.42	4.283	CC, ES, SF
EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore	7,128.84	13,558.00	1,166.53	966.39	5.829	CC, ES
EXIST HZ MIRACLE 40N-11HZ - Wellbore #1 - Wellbore	7,150.00	13,558.00	1,166.74	966.46	5.826	SF
EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #	7,180.98	13,682.00	1,738.03	1,538.03	8.690	CC
EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #	7,200.00	13,682.00	1,738.17	1,538.01	8.684	ES
EXIST HZ MIRACLE 9C-11HZ - Wellbore #1 - Wellbore #	7,250.00	13,682.00	1,739.79	1,539.34	8.679	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	11,002.17	7,064.00	2,529.61	2,275.77	9.965	CC
EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1	11,100.00	7,064.00	2,531.50	2,275.03	9.871	ES
EXIST VERT JEFFERS 2-2 - Wellbore #1 - Design #1	11,500.00	7,064.00	2,578.13	2,312.74	9.714	SF
EXIST VERT WICKED 1 - Wellbore #1 - Wellbore #1	15,495.74	6,920.00	1,944.96	1,777.96	11.646	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	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)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
500.00	499.98	1,492.34	1,463.30	1.58	6.82	22.23	1,548.55	2,716.07	3,271.48	3,264.34	7.14	458.091	
594.97	594.82	1,594.81	1,561.12	1.92	7.45	22.60	1,530.52	2,691.44	3,239.10	3,231.22	7.88	411.104	
600.00	599.84	1,601.29	1,567.29	1.94	7.49	22.61	1,529.29	2,689.90	3,237.29	3,229.35	7.93	408.010	
700.00	699.61	1,687.40	1,649.34	2.30	8.03	22.73	1,512.81	2,669.65	3,201.41	3,192.81	8.60	372.199	

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 11-10-9H
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 11-10-9H	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)				
800.00	799.37	1,746.03	1,705.31	2.66	8.39	22.83	1,501.56	2,656.28	3,166.15	3,156.98	9.17	345.280		
900.00	899.14	1,811.87	1,768.35	3.03	8.79	22.94	1,488.99	2,642.05	3,131.91	3,122.14	9.78	320.397		
1,000.00	998.91	1,928.53	1,880.07	3.40	9.50	23.14	1,466.86	2,616.80	3,097.77	3,087.19	10.58	292.701		
1,100.00	1,098.68	2,035.36	1,982.15	3.77	10.16	23.30	1,447.47	2,591.98	3,062.64	3,051.29	11.35	269.719		
1,200.00	1,198.45	2,125.13	2,068.04	4.14	10.72	23.41	1,432.43	2,570.65	3,027.80	3,015.73	12.06	251.024		
1,300.00	1,298.22	2,259.02	2,195.73	4.51	11.56	23.60	1,408.57	2,538.23	2,991.94	2,979.01	12.94	231.286		
1,400.00	1,397.99	2,350.29	2,282.81	4.88	12.14	23.72	1,392.67	2,515.97	2,956.27	2,942.62	13.65	216.504		
1,500.00	1,497.75	2,514.23	2,438.38	5.26	13.22	23.89	1,364.92	2,472.40	2,918.82	2,904.19	14.63	199.530		
1,600.00	1,597.52	2,585.00	2,505.38	5.63	13.69	23.96	1,353.29	2,452.80	2,880.83	2,865.56	15.28	188.588		
1,700.00	1,697.29	2,632.89	2,550.88	6.00	14.00	24.00	1,345.64	2,439.95	2,843.90	2,828.06	15.85	179.474		
1,800.00	1,797.06	2,676.00	2,592.10	6.37	14.27	24.04	1,339.15	2,429.11	2,808.69	2,792.29	16.40	171.241		
1,900.00	1,896.83	2,785.13	2,696.55	6.75	14.95	24.21	1,320.57	2,403.59	2,774.13	2,756.94	17.19	161.401		
2,000.00	1,996.60	2,906.44	2,812.24	7.12	15.72	24.46	1,297.10	2,375.61	2,738.76	2,720.74	18.02	151.960		
2,100.00	2,096.37	2,983.76	2,885.88	7.49	16.21	24.60	1,282.62	2,357.08	2,702.98	2,684.27	18.71	144.480		
2,200.00	2,196.13	3,060.48	2,959.32	7.86	16.70	24.72	1,269.87	2,338.91	2,668.32	2,648.93	19.39	137.610		
2,300.00	2,295.90	3,186.29	3,079.32	8.24	17.50	24.94	1,247.71	2,308.28	2,632.60	2,612.37	20.23	130.114		
2,400.00	2,395.67	3,247.08	3,137.30	8.61	17.88	25.06	1,236.47	2,293.88	2,597.27	2,576.40	20.87	124.443		
2,500.00	2,495.44	3,300.00	3,188.06	8.98	18.21	25.16	1,227.51	2,281.89	2,563.45	2,541.96	21.48	119.316		
2,600.00	2,595.21	3,457.53	3,338.81	9.36	19.20	25.46	1,200.19	2,245.28	2,528.85	2,506.42	22.42	112.770		
2,700.00	2,694.98	3,535.64	3,413.29	9.73	19.69	25.64	1,185.26	2,227.08	2,493.59	2,470.47	23.13	107.818		
2,800.00	2,794.75	3,603.27	3,477.95	10.10	20.12	25.81	1,172.46	2,211.96	2,459.24	2,435.44	23.80	103.327		
2,900.00	2,894.51	3,768.09	3,635.58	10.48	21.15	26.17	1,143.32	2,173.69	2,425.24	2,400.49	24.75	97.986		
3,000.00	2,994.28	3,874.20	3,736.31	10.85	21.86	26.39	1,124.25	2,146.33	2,388.38	2,362.85	25.53	93.541		
3,100.00	3,094.05	3,961.54	3,819.16	11.22	22.44	26.58	1,108.25	2,123.79	2,351.39	2,325.13	26.27	89.515		
3,200.00	3,193.82	4,007.00	3,862.32	11.60	22.74	26.68	1,099.86	2,112.26	2,315.17	2,288.27	26.90	86.076		
3,300.00	3,293.59	4,071.04	3,923.45	11.97	23.14	26.83	1,088.50	2,096.93	2,280.37	2,252.80	27.57	82.707		
3,400.00	3,393.36	4,187.85	4,035.56	12.35	23.86	27.10	1,069.36	2,070.30	2,247.08	2,218.70	28.38	79.175		
3,500.00	3,493.12	4,322.63	4,163.97	12.72	24.73	27.38	1,046.88	2,036.08	2,211.09	2,181.86	29.23	75.648		
3,600.00	3,592.89	4,435.50	4,271.27	13.09	25.48	27.63	1,027.74	2,006.75	2,174.71	2,144.69	30.02	72.434		
3,700.00	3,692.66	4,524.66	4,355.71	13.47	26.07	27.87	1,010.93	1,983.60	2,137.53	2,106.75	30.78	69.454		
3,800.00	3,792.43	4,595.66	4,423.16	13.84	26.54	28.05	998.48	1,965.25	2,101.04	2,069.55	31.49	66.723		
3,900.00	3,892.20	4,660.95	4,485.44	14.21	26.96	28.20	987.99	1,948.74	2,065.70	2,033.51	32.19	64.179		
4,000.00	3,991.97	4,722.00	4,543.97	14.59	27.34	28.33	978.75	1,934.01	2,031.78	1,998.90	32.87	61.808		
4,100.00	4,091.74	4,788.19	4,607.69	14.96	27.73	28.48	969.16	1,918.90	1,999.29	1,965.72	33.56	59.565		
4,200.00	4,191.50	4,851.65	4,669.03	15.33	28.10	28.62	960.30	1,905.25	1,968.23	1,933.98	34.25	57.470		
4,300.00	4,291.27	4,898.00	4,713.99	15.71	28.36	28.73	954.07	1,895.88	1,938.86	1,903.98	34.89	55.578		
4,400.00	4,391.04	4,964.60	4,778.90	16.08	28.71	28.89	945.62	1,883.64	1,911.33	1,875.77	35.56	53.746		
4,500.00	4,490.81	5,015.42	4,828.71	16.46	28.96	29.01	939.70	1,875.44	1,886.11	1,849.93	36.18	52.124		
4,600.00	4,590.58	5,076.00	4,888.40	16.83	29.24	29.15	933.66	1,867.06	1,863.41	1,826.59	36.82	50.607		
4,700.00	4,690.35	5,122.66	4,934.56	17.20	29.43	29.25	929.63	1,861.51	1,842.94	1,805.54	37.39	49.286		
4,800.00	4,790.12	5,186.31	4,997.67	17.58	29.68	29.38	924.68	1,854.97	1,824.54	1,786.53	38.01	48.007		
4,900.00	4,889.88	5,252.00	5,062.94	17.95	29.93	29.51	920.14	1,849.06	1,807.78	1,769.16	38.61	46.818		
5,000.00	4,989.65	5,311.93	5,122.60	18.32	30.13	29.63	916.63	1,844.69	1,793.00	1,753.82	39.18	45.764		
5,100.00	5,089.42	5,375.55	5,186.07	18.70	30.33	29.74	913.80	1,841.35	1,780.50	1,740.76	39.74	44.802		
5,200.00	5,189.19	5,428.00	5,238.45	19.07	30.49	29.82	912.26	1,839.08	1,769.84	1,729.61	40.23	43.990		
5,300.00	5,288.96	5,515.00	5,325.40	19.45	30.72	29.93	910.72	1,836.85	1,760.96	1,720.09	40.87	43.091		
5,400.00	5,388.73	5,589.88	5,400.28	19.82	30.90	30.04	909.80	1,836.21	1,753.71	1,712.28	41.43	42.326		
5,500.00	5,488.49	5,678.47	5,488.86	20.19	31.10	30.17	908.77	1,836.03	1,747.21	1,705.14	42.06	41.539		
5,600.00	5,588.26	5,798.00	5,608.38	20.57	31.39	30.32	907.90	1,835.39	1,740.58	1,697.74	42.84	40.628		
5,700.00	5,688.03	5,906.64	5,717.01	20.94	31.66	30.43	907.52	1,833.50	1,732.97	1,689.40	43.57	39.774		
5,800.00	5,787.80	6,009.67	5,820.01	21.31	31.93	30.54	907.03	1,831.41	1,725.04	1,680.77	44.27	38.963		
5,900.00	5,887.57	6,108.97	5,919.28	21.69	32.19	30.64	906.58	1,829.25	1,717.00	1,672.04	44.96	38.189		

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 11-10-9H
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 11-10-9H	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													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			
6,000.00	5,987.34	6,207.74	6,018.04	22.06	32.46	30.75	905.97	1,827.27	1,709.06	1,663.41	45.65	37.440			
6,100.00	6,087.11	6,302.42	6,112.70	22.44	32.71	30.86	905.38	1,825.49	1,701.24	1,654.93	46.32	36.731			
6,200.00	6,186.87	6,403.72	6,213.98	22.81	32.98	30.98	904.81	1,823.74	1,693.59	1,646.58	47.02	36.021			
6,300.00	6,286.64	6,505.93	6,316.17	23.18	33.25	31.09	904.25	1,821.77	1,685.77	1,638.04	47.72	35.324			
6,400.00	6,386.41	6,599.80	6,410.02	23.56	33.51	31.20	903.77	1,820.08	1,678.08	1,629.69	48.39	34.678			
6,482.24	6,468.46	6,679.47	6,489.68	23.86	33.72	31.30	903.33	1,818.86	1,671.96	1,623.01	48.95	34.155			
6,500.00	6,486.19	6,697.19	6,507.40	23.93	33.77	57.75	903.22	1,818.60	1,670.91	1,621.83	49.08	34.047			
6,527.21	6,513.35	6,724.37	6,534.57	24.02	33.84	104.20	903.06	1,818.21	1,670.30	1,621.03	49.27	33.904	CC, ES		
6,550.00	6,536.08	6,747.11	6,557.31	24.10	33.90	125.12	902.93	1,817.87	1,670.73	1,621.30	49.42	33.803			
6,600.00	6,585.64	6,799.32	6,609.52	24.26	34.04	142.13	902.63	1,817.08	1,674.62	1,624.84	49.78	33.637			
6,650.00	6,634.49	6,851.77	6,661.96	24.40	34.19	148.10	902.29	1,816.18	1,682.52	1,632.37	50.15	33.551	SF		
6,700.00	6,682.26	6,896.38	6,706.56	24.53	34.31	150.90	901.97	1,815.44	1,694.46	1,643.99	50.48	33.570			
6,750.00	6,728.60	6,940.13	6,750.30	24.64	34.43	152.37	901.67	1,814.78	1,710.46	1,659.66	50.80	33.670			
6,800.00	6,773.14	6,984.97	6,795.14	24.75	34.55	153.11	901.37	1,814.15	1,730.36	1,679.23	51.13	33.842			
6,850.00	6,815.54	7,027.75	6,837.91	24.84	34.67	153.34	901.08	1,813.54	1,753.99	1,702.54	51.45	34.091			
6,900.00	6,855.49	7,081.48	6,891.63	24.92	34.82	153.30	900.64	1,812.59	1,781.03	1,729.21	51.82	34.368			
6,950.00	6,892.68	7,115.00	6,925.14	24.99	34.92	152.70	900.30	1,811.81	1,811.25	1,759.15	52.10	34.767			
7,000.00	6,926.83	7,149.92	6,960.05	25.07	35.01	151.73	899.98	1,811.02	1,844.67	1,792.30	52.37	35.221			
7,050.00	6,957.68	7,172.84	6,982.97	25.19	35.08	150.11	899.87	1,810.61	1,881.21	1,828.62	52.59	35.769			
7,100.00	6,984.98	7,204.00	7,014.12	25.42	35.17	148.06	899.82	1,810.20	1,920.57	1,867.72	52.85	36.341			
7,150.00	7,008.54	7,212.57	7,022.70	25.72	35.19	144.65	899.82	1,810.11	1,962.25	1,909.26	52.99	37.028			
7,200.00	7,028.18	7,232.15	7,042.27	26.06	35.24	140.33	899.83	1,809.92	2,006.01	1,952.82	53.19	37.714			
7,250.00	7,043.74	7,247.73	7,057.85	26.46	35.28	134.16	899.82	1,809.77	2,051.44	1,998.07	53.37	38.441			
7,300.00	7,055.11	7,259.23	7,069.35	26.91	35.31	125.21	899.81	1,809.66	2,098.19	2,044.67	53.52	39.203			
7,350.00	7,062.20	7,266.55	7,076.68	27.40	35.33	112.27	899.81	1,809.59	2,145.90	2,092.24	53.66	39.994			
7,400.00	7,064.96	7,269.67	7,079.79	27.94	35.34	94.74	899.80	1,809.56	2,194.20	2,140.42	53.77	40.806			
7,406.67	7,065.00	7,269.77	7,079.89	28.01	35.34	92.13	899.80	1,809.56	2,200.66	2,146.88	53.79	40.916			
7,500.00	7,065.00	7,270.59	7,080.71	29.15	35.34	92.21	899.80	1,809.55	2,291.29	2,237.32	53.97	42.452			
7,600.00	7,065.00	7,271.46	7,081.58	30.55	35.35	92.31	899.80	1,809.55	2,388.63	2,334.46	54.17	44.095			
7,700.00	7,065.00	7,272.33	7,082.45	32.12	35.35	92.40	899.80	1,809.54	2,486.18	2,431.82	54.36	45.734			
7,800.00	7,065.00	7,273.20	7,083.32	33.83	35.35	92.49	899.80	1,809.53	2,583.91	2,529.37	54.55	47.370			
7,900.00	7,065.00	7,274.07	7,084.19	35.67	35.35	92.58	899.80	1,809.52	2,681.82	2,627.09	54.73	49.004			
8,000.00	7,065.00	7,274.93	7,085.05	37.61	35.36	92.68	899.80	1,809.51	2,779.87	2,724.97	54.90	50.635			
8,100.00	7,065.00	7,275.79	7,085.91	39.65	35.36	92.77	899.80	1,809.51	2,878.05	2,822.98	55.07	52.264			
8,200.00	7,065.00	7,276.64	7,086.76	41.76	35.36	92.86	899.80	1,809.50	2,976.36	2,921.13	55.23	53.891			
8,300.00	7,065.00	7,277.49	7,087.61	43.94	35.36	92.95	899.80	1,809.49	3,074.77	3,019.39	55.39	55.516			
8,400.00	7,065.00	7,278.34	7,088.46	46.18	35.37	93.04	899.80	1,809.48	3,173.29	3,117.75	55.54	57.140			
8,500.00	7,065.00	7,279.18	7,089.30	48.46	35.37	93.13	899.79	1,809.48	3,271.89	3,216.21	55.68	58.761			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	699.61	1,798.86	1,757.11	2.30	8.66	18.68	1,716.87	2,591.40	3,272.40	3,262.84	9.57	342.093		
800.00	799.37	2,004.67	1,947.28	2.66	10.21	18.06	1,708.92	2,513.14	3,231.77	3,220.88	10.88	296.976		
900.00	899.14	2,094.97	2,030.48	3.03	10.90	17.80	1,703.72	2,478.44	3,190.25	3,178.60	11.66	273.701		
1,000.00	998.91	2,172.91	2,102.32	3.40	11.50	17.58	1,698.89	2,448.61	3,148.74	3,136.36	12.38	254.353		
1,100.00	1,098.68	2,236.40	2,161.06	3.77	11.99	17.40	1,695.12	2,424.80	3,108.01	3,094.96	13.05	238.232		
1,200.00	1,198.45	2,333.16	2,250.49	4.14	12.74	17.08	1,690.83	2,388.13	3,067.79	3,053.91	13.88	221.010		
1,300.00	1,298.22	2,524.17	2,424.03	4.51	14.35	16.29	1,686.00	2,308.52	3,025.00	3,009.78	15.22	198.713		
1,400.00	1,397.99	2,585.00	2,478.89	4.88	14.88	16.01	1,684.80	2,282.26	2,981.95	2,966.00	15.95	186.949		
1,500.00	1,497.75	2,635.38	2,524.58	5.26	15.31	15.78	1,683.88	2,261.08	2,940.04	2,923.41	16.63	176.818		
1,600.00	1,597.52	2,682.18	2,567.43	5.63	15.70	15.57	1,683.13	2,242.26	2,899.69	2,882.40	17.29	167.677		
1,700.00	1,697.29	2,808.15	2,682.39	6.00	16.76	14.97	1,682.34	2,190.77	2,859.48	2,841.12	18.37	155.698		
1,800.00	1,797.06	2,899.39	2,765.47	6.37	17.53	14.52	1,681.00	2,153.08	2,818.64	2,799.37	19.27	146.285		
1,900.00	1,896.83	2,973.42	2,833.44	6.75	18.14	14.20	1,678.43	2,123.87	2,778.37	2,758.30	20.08	138.395		
2,000.00	1,996.60	3,057.63	2,910.99	7.12	18.83	13.83	1,675.26	2,091.20	2,738.59	2,717.67	20.92	130.886		
2,100.00	2,096.37	3,155.78	3,001.47	7.49	19.62	13.41	1,670.96	2,053.41	2,698.82	2,676.98	21.84	123.594		
2,200.00	2,196.13	3,255.66	3,093.06	7.86	20.45	12.92	1,667.89	2,013.70	2,658.90	2,636.11	22.78	116.705		
2,300.00	2,295.90	3,329.11	3,160.19	8.24	21.06	12.53	1,666.23	1,983.92	2,618.98	2,595.35	23.63	110.848		
2,400.00	2,395.67	3,389.00	3,215.44	8.61	21.55	12.23	1,664.49	1,960.90	2,580.39	2,555.98	24.41	105.724		
2,500.00	2,495.44	3,468.61	3,289.29	8.98	22.17	11.85	1,661.86	1,931.27	2,542.71	2,517.45	25.26	100.648		
2,600.00	2,595.21	3,582.38	3,394.69	9.36	23.07	11.30	1,657.43	1,888.68	2,504.68	2,478.41	26.27	95.351		
2,700.00	2,694.98	3,670.42	3,476.01	9.73	23.77	10.84	1,654.35	1,855.10	2,466.49	2,439.30	27.18	90.744		
2,800.00	2,794.75	3,765.86	3,564.23	10.10	24.54	10.33	1,650.70	1,818.86	2,428.39	2,400.26	28.13	86.323		
2,900.00	2,894.51	3,868.14	3,658.75	10.48	25.36	9.78	1,646.31	1,780.01	2,390.17	2,361.06	29.11	82.104		
3,000.00	2,994.28	4,059.42	3,834.13	10.85	26.95	8.71	1,635.01	1,704.58	2,350.21	2,319.78	30.43	77.233		
3,100.00	3,094.05	4,131.92	3,899.95	11.22	27.57	8.27	1,629.75	1,674.64	2,308.15	2,276.83	31.32	73.696		
3,200.00	3,193.82	4,186.00	3,949.50	11.60	28.02	7.96	1,626.08	1,653.27	2,267.73	2,235.58	32.15	70.537		
3,300.00	3,293.59	4,236.78	3,996.25	11.97	28.44	7.65	1,623.34	1,633.64	2,228.93	2,195.95	32.98	67.591		
3,400.00	3,393.36	4,301.75	4,056.04	12.35	28.97	7.20	1,621.47	1,608.29	2,191.64	2,157.75	33.88	64.684		
3,500.00	3,493.12	4,412.34	4,157.14	12.72	29.91	6.34	1,620.73	1,563.49	2,155.00	2,119.95	35.04	61.497		
3,600.00	3,592.89	4,530.65	4,264.35	13.09	30.96	5.36	1,619.14	1,513.47	2,116.82	2,080.54	36.28	58.354		
3,700.00	3,692.66	4,606.81	4,333.45	13.47	31.62	4.71	1,617.69	1,481.50	2,078.94	2,041.62	37.32	55.709		
3,800.00	3,792.43	4,674.32	4,395.23	13.84	32.19	4.16	1,615.89	1,454.34	2,042.14	2,003.83	38.31	53.306		
3,900.00	3,892.20	4,740.76	4,456.68	14.21	32.73	3.66	1,613.55	1,429.19	2,006.71	1,967.43	39.28	51.089		
4,000.00	3,991.97	4,811.00	4,522.16	14.59	33.27	3.14	1,610.74	1,403.93	1,972.53	1,932.29	40.24	49.014		
4,100.00	4,091.74	4,880.34	4,587.31	14.96	33.77	2.67	1,607.60	1,380.40	1,939.61	1,898.43	41.18	47.099		
4,200.00	4,191.50	5,005.43	4,704.96	15.33	34.67	1.81	1,600.78	1,338.49	1,906.52	1,864.22	42.29	45.080		
4,300.00	4,291.27	5,076.00	4,771.51	15.71	35.17	1.33	1,596.76	1,315.35	1,873.89	1,830.65	43.24	43.337		
4,400.00	4,391.04	5,111.99	4,805.76	16.08	35.40	1.10	1,594.88	1,304.47	1,843.25	1,799.19	44.06	41.837		
4,500.00	4,490.81	5,164.00	4,855.72	16.46	35.72	0.79	1,592.55	1,290.20	1,815.31	1,770.41	44.90	40.430		
4,600.00	4,590.58	5,216.73	4,906.73	16.83	36.02	0.49	1,590.68	1,277.00	1,789.74	1,744.03	45.71	39.156		
4,700.00	4,690.35	5,278.45	4,966.71	17.20	36.35	0.15	1,589.12	1,262.52	1,766.21	1,719.68	46.52	37.963		
4,800.00	4,790.12	5,338.00	5,024.88	17.58	36.65	-0.16	1,587.94	1,249.84	1,744.63	1,697.32	47.31	36.877		
4,900.00	4,889.88	5,410.12	5,095.70	17.95	36.98	-0.49	1,586.64	1,236.31	1,724.87	1,676.78	48.09	35.866		
5,000.00	4,989.65	5,480.65	5,165.31	18.32	37.27	-0.77	1,585.36	1,225.00	1,706.81	1,657.98	48.83	34.953		
5,100.00	5,089.42	5,555.13	5,239.07	18.70	37.56	-1.03	1,584.11	1,214.74	1,690.30	1,640.75	49.55	34.114		
5,200.00	5,189.19	5,634.83	5,318.20	19.07	37.83	-1.26	1,582.74	1,205.44	1,675.07	1,624.82	50.25	33.337		
5,300.00	5,288.96	5,721.17	5,404.11	19.45	38.11	-1.46	1,580.99	1,197.02	1,660.80	1,609.87	50.93	32.610		
5,400.00	5,388.73	5,785.00	5,467.72	19.82	38.30	-1.57	1,579.17	1,191.96	1,647.33	1,595.81	51.52	31.977		
5,500.00	5,488.49	5,874.00	5,556.58	20.19	38.53	-1.65	1,577.10	1,187.53	1,635.72	1,583.59	52.12	31.383		
5,600.00	5,588.26	5,940.74	5,623.29	20.57	38.67	-1.69	1,576.20	1,185.84	1,626.07	1,573.43	52.64	30.893		
5,700.00	5,688.03	6,034.91	5,717.44	20.94	38.87	-1.72	1,574.98	1,184.00	1,617.06	1,563.85	53.21	30.388		
5,800.00	5,787.80	6,134.11	5,816.61	21.31	39.08	-1.75	1,573.67	1,182.38	1,608.24	1,554.44	53.80	29.892		

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 11-10-9H
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 11-10-9H	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)				
5,900.00	5,887.57	6,229.00	5,911.48	21.69	39.28	-1.78	1,572.64	1,180.79	1,599.58	1,545.20	54.38	29.414		
6,000.00	5,987.34	6,316.00	5,998.47	22.06	39.46	-1.81	1,571.78	1,179.38	1,591.08	1,536.14	54.94	28.960		
6,100.00	6,087.11	6,407.00	6,089.46	22.44	39.64	-1.81	1,571.10	1,178.89	1,583.38	1,527.89	55.49	28.535		
6,200.00	6,186.87	6,506.66	6,189.12	22.81	39.81	-1.81	1,570.68	1,179.14	1,576.40	1,520.35	56.05	28.124		
6,300.00	6,286.64	6,613.45	6,295.91	23.18	40.01	-1.80	1,569.87	1,179.08	1,568.96	1,512.31	56.65	27.698		
6,400.00	6,386.41	6,717.23	6,399.68	23.56	40.22	-1.80	1,568.90	1,178.68	1,561.18	1,503.94	57.24	27.275		
6,482.24	6,468.46	6,800.89	6,483.33	23.86	40.39	-1.81	1,568.21	1,177.94	1,554.62	1,496.89	57.73	26.928		
6,500.00	6,486.19	6,818.71	6,501.15	23.93	40.43	24.69	1,568.09	1,177.75	1,553.37	1,495.53	57.84	26.857		
6,550.00	6,536.08	6,869.01	6,551.45	24.10	40.54	92.19	1,567.77	1,177.13	1,551.60	1,493.49	58.11	26.702		
6,558.54	6,544.57	6,877.61	6,560.05	24.13	40.56	96.89	1,567.72	1,177.03	1,551.56	1,493.41	58.15	26.682	CC, ES	
6,600.00	6,585.64	6,919.21	6,601.65	24.26	40.65	109.31	1,567.44	1,176.52	1,552.47	1,494.13	58.34	26.610		
6,650.00	6,634.49	6,969.88	6,652.30	24.40	40.77	115.41	1,567.07	1,175.88	1,556.01	1,497.46	58.54	26.579	SF	
6,700.00	6,682.26	7,020.24	6,702.66	24.53	40.88	118.38	1,566.74	1,175.08	1,562.19	1,503.47	58.72	26.605		
6,750.00	6,728.60	7,064.61	6,747.03	24.64	40.99	119.95	1,566.51	1,174.28	1,571.11	1,512.27	58.85	26.699		
6,800.00	6,773.14	7,106.51	6,788.92	24.75	41.08	120.74	1,566.39	1,173.54	1,582.90	1,523.95	58.94	26.854		
6,850.00	6,815.54	7,148.97	6,831.37	24.84	41.18	121.03	1,566.29	1,172.83	1,597.51	1,538.48	59.03	27.064		
6,900.00	6,855.49	7,189.57	6,871.96	24.92	41.28	120.90	1,566.12	1,172.24	1,614.89	1,555.80	59.09	27.330		
6,950.00	6,892.68	7,226.75	6,909.14	24.99	41.36	120.36	1,565.91	1,171.77	1,635.01	1,575.88	59.13	27.652		
7,000.00	6,926.83	7,260.58	6,942.97	25.07	41.44	119.41	1,565.70	1,171.38	1,657.84	1,598.68	59.16	28.024		
7,050.00	6,957.68	7,291.15	6,973.54	25.19	41.51	118.02	1,565.51	1,171.05	1,683.28	1,624.10	59.18	28.443		
7,100.00	6,984.98	7,317.78	7,000.17	25.42	41.57	116.14	1,565.33	1,170.79	1,711.22	1,652.02	59.20	28.907		
7,150.00	7,008.54	7,340.66	7,023.04	25.72	41.62	113.71	1,565.15	1,170.61	1,741.50	1,682.29	59.22	29.409		
7,200.00	7,028.18	7,359.66	7,042.04	26.06	41.66	110.68	1,564.99	1,170.50	1,773.93	1,714.70	59.24	29.946		
7,250.00	7,043.74	7,374.68	7,057.06	26.46	41.69	106.98	1,564.85	1,170.42	1,808.29	1,749.02	59.26	30.513		
7,300.00	7,055.11	7,385.67	7,068.05	26.91	41.71	102.57	1,564.75	1,170.38	1,844.30	1,785.01	59.29	31.105		
7,350.00	7,062.20	7,392.68	7,075.06	27.40	41.73	97.44	1,564.68	1,170.35	1,881.69	1,822.37	59.32	31.719		
7,400.00	7,064.96	7,395.51	7,077.89	27.94	41.73	91.63	1,564.65	1,170.34	1,920.14	1,860.79	59.36	32.348		
7,406.67	7,065.00	7,395.57	7,077.95	28.01	41.74	90.81	1,564.65	1,170.34	1,925.34	1,865.97	59.36	32.433		
7,500.00	7,065.00	7,395.89	7,078.27	29.15	41.74	90.82	1,564.65	1,170.34	1,998.94	1,939.48	59.45	33.622		
7,600.00	7,065.00	7,396.23	7,078.62	30.55	41.74	90.84	1,564.64	1,170.34	2,079.56	2,019.96	59.60	34.891		
7,700.00	7,065.00	7,396.58	7,078.96	32.12	41.74	90.85	1,564.64	1,170.34	2,161.80	2,102.01	59.79	36.158		
7,800.00	7,065.00	7,396.92	7,079.30	33.83	41.74	90.87	1,564.64	1,170.34	2,245.48	2,185.48	60.00	37.425		
7,900.00	7,065.00	7,397.26	7,079.64	35.67	41.74	90.89	1,564.63	1,170.34	2,330.45	2,270.22	60.23	38.693		
8,000.00	7,065.00	7,397.60	7,079.98	37.61	41.74	90.90	1,564.63	1,170.34	2,416.57	2,356.10	60.47	39.963		
8,100.00	7,065.00	7,397.94	7,080.33	39.65	41.74	90.92	1,564.63	1,170.34	2,503.72	2,443.00	60.72	41.236		
8,200.00	7,065.00	7,398.28	7,080.66	41.76	41.74	90.93	1,564.62	1,170.33	2,591.80	2,530.83	60.97	42.512		
8,300.00	7,065.00	7,398.62	7,081.00	43.94	41.74	90.95	1,564.62	1,170.33	2,680.71	2,619.49	61.22	43.791		
8,400.00	7,065.00	7,398.96	7,081.34	46.18	41.74	90.97	1,564.62	1,170.33	2,770.38	2,708.92	61.46	45.074		
8,500.00	7,065.00	7,399.30	7,081.68	48.46	41.74	90.98	1,564.62	1,170.33	2,860.74	2,799.03	61.71	46.360		
8,600.00	7,065.00	7,399.63	7,082.02	50.79	41.74	91.00	1,564.61	1,170.33	2,951.72	2,889.77	61.95	47.650		
8,700.00	7,065.00	7,399.97	7,082.35	53.16	41.74	91.01	1,564.61	1,170.33	3,043.26	2,981.08	62.18	48.943		
8,800.00	7,065.00	7,400.31	7,082.69	55.56	41.75	91.03	1,564.61	1,170.33	3,135.32	3,072.91	62.41	50.240		
8,900.00	7,065.00	7,400.64	7,083.02	57.99	41.75	91.05	1,564.60	1,170.33	3,227.85	3,165.23	62.63	51.539		

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 11-10-9H
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 11-10-9H	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)				
300.00	300.00	1,843.70	1,759.66	0.86	10.45	61.56	1,386.00	2,559.07	3,258.07	3,249.69	8.39	388.547		
400.00	400.00	2,004.28	1,901.26	1.22	11.90	61.92	1,335.46	2,502.71	3,211.82	3,202.44	9.39	342.062		
500.00	499.98	2,066.64	1,956.00	1.58	12.47	24.18	1,315.34	2,480.63	3,163.74	3,153.78	9.97	317.357		
594.97	594.82	2,109.03	1,993.44	1.92	12.85	24.76	1,301.78	2,466.09	3,116.51	3,106.03	10.47	297.532		
600.00	599.84	2,131.00	2,012.94	1.94	13.05	24.83	1,294.80	2,458.75	3,114.09	3,103.48	10.61	293.486		
700.00	699.61	2,166.88	2,044.85	2.30	13.37	24.96	1,283.44	2,446.92	3,064.05	3,052.97	11.08	276.539		
800.00	799.37	2,222.00	2,093.98	2.66	13.85	25.15	1,266.02	2,429.01	3,014.87	3,003.21	11.66	258.582		
900.00	899.14	2,287.16	2,152.33	3.03	14.42	25.38	1,245.82	2,408.20	2,966.47	2,954.17	12.30	241.218		
1,000.00	998.91	2,311.00	2,173.77	3.40	14.62	25.46	1,238.60	2,400.67	2,919.31	2,906.55	12.76	228.812		
1,100.00	1,098.68	2,368.56	2,225.96	3.77	15.09	25.66	1,221.92	2,383.04	2,873.33	2,859.95	13.38	214.802		
1,200.00	1,198.45	2,469.93	2,318.86	4.14	15.92	25.97	1,194.73	2,352.93	2,829.04	2,814.86	14.19	199.403		
1,300.00	1,298.22	2,670.00	2,499.43	4.51	17.63	26.52	1,142.16	2,284.79	2,780.33	2,764.93	15.40	180.541		
1,400.00	1,397.99	2,730.54	2,553.71	4.88	18.16	26.69	1,125.94	2,263.44	2,731.51	2,715.47	16.04	170.244		
1,500.00	1,497.75	2,784.01	2,602.06	5.26	18.62	26.86	1,111.46	2,245.81	2,684.28	2,667.61	16.67	161.033		
1,600.00	1,597.52	2,888.55	2,696.75	5.63	19.51	27.21	1,083.41	2,211.51	2,637.49	2,619.99	17.50	150.701		
1,700.00	1,697.29	3,007.67	2,804.13	6.00	20.54	27.56	1,052.93	2,169.93	2,589.38	2,571.00	18.38	140.873		
1,800.00	1,797.06	3,067.66	2,858.21	6.37	21.05	27.74	1,037.66	2,148.92	2,541.41	2,522.37	19.04	133.472		
1,900.00	1,896.83	3,117.00	2,903.02	6.75	21.47	27.88	1,025.85	2,131.98	2,494.71	2,475.04	19.67	126.855		
2,000.00	1,996.60	3,194.22	2,973.45	7.12	22.11	28.10	1,007.48	2,106.20	2,448.89	2,428.50	20.39	120.087		
2,100.00	2,096.37	3,310.56	3,079.30	7.49	23.08	28.49	978.53	2,067.57	2,402.80	2,381.53	21.27	112.981		
2,200.00	2,196.13	3,383.00	3,145.13	7.86	23.69	28.75	960.22	2,043.52	2,356.61	2,334.61	22.00	107.136		
2,300.00	2,295.90	3,448.32	3,204.63	8.24	24.24	29.01	943.16	2,022.65	2,311.19	2,288.48	22.71	101.754		
2,400.00	2,395.67	3,529.04	3,278.28	8.61	24.90	29.38	921.33	1,997.85	2,266.53	2,243.03	23.50	96.463		
2,500.00	2,495.44	3,674.93	3,410.83	8.98	26.12	30.02	882.93	1,950.55	2,220.74	2,196.24	24.50	90.651		
2,600.00	2,595.21	3,739.00	3,468.93	9.36	26.67	30.30	866.41	1,929.19	2,174.50	2,149.27	25.23	86.180		
2,700.00	2,694.98	3,854.91	3,574.11	9.73	27.65	30.82	836.67	1,890.64	2,128.55	2,102.42	26.13	81.460		
2,800.00	2,794.75	3,974.41	3,681.46	10.10	28.70	31.40	805.18	1,848.62	2,080.50	2,053.46	27.04	76.935		
2,900.00	2,894.51	4,082.58	3,778.20	10.48	29.67	31.98	775.29	1,810.56	2,032.23	2,004.29	27.94	72.740		
3,000.00	2,994.28	4,155.14	3,842.87	10.85	30.33	32.42	754.60	1,784.99	1,983.64	1,954.89	28.76	68.981		
3,100.00	3,094.05	4,217.53	3,898.66	11.22	30.88	32.82	736.53	1,763.69	1,936.00	1,906.44	29.56	65.489		
3,200.00	3,193.82	4,281.68	3,956.37	11.60	31.45	33.26	717.96	1,742.73	1,889.74	1,859.35	30.39	62.185		
3,300.00	3,293.59	4,389.58	4,053.04	11.97	32.39	34.08	685.44	1,707.52	1,843.23	1,811.86	31.37	58.759		
3,400.00	3,393.36	4,467.19	4,122.66	12.35	33.08	34.69	662.26	1,682.23	1,797.11	1,764.84	32.28	55.678		
3,500.00	3,493.12	4,582.20	4,225.65	12.72	34.10	35.60	629.03	1,643.30	1,750.42	1,717.14	33.28	52.597		
3,600.00	3,592.89	4,686.10	4,318.41	13.09	35.04	36.42	599.98	1,606.62	1,703.01	1,668.76	34.26	49.714		
3,700.00	3,692.66	4,772.27	4,394.58	13.47	35.83	37.25	573.06	1,576.63	1,655.16	1,619.90	35.25	46.948		
3,800.00	3,792.43	4,868.42	4,479.41	13.84	36.73	38.26	542.22	1,543.49	1,607.65	1,571.33	36.32	44.264		
3,900.00	3,892.20	4,962.19	4,561.85	14.21	37.61	39.29	512.48	1,510.20	1,559.64	1,522.25	37.40	41.707		
4,000.00	3,991.97	5,085.55	4,670.40	14.59	38.78	40.57	477.06	1,463.50	1,510.80	1,472.33	38.47	39.270		
4,100.00	4,091.74	5,160.00	4,735.76	14.96	39.50	41.33	457.01	1,434.04	1,461.18	1,421.68	39.50	36.991		
4,200.00	4,191.50	5,217.75	4,786.93	15.33	40.03	41.91	442.44	1,411.59	1,412.99	1,372.46	40.53	34.862		
4,300.00	4,291.27	5,247.00	4,813.13	15.71	40.30	42.20	435.42	1,400.64	1,367.42	1,325.86	41.57	32.898		
4,400.00	4,391.04	5,304.56	4,865.51	16.08	40.76	42.76	422.39	1,380.65	1,324.57	1,281.97	42.60	31.094		
4,500.00	4,490.81	5,350.35	4,908.00	16.46	41.13	43.21	412.77	1,366.57	1,285.49	1,241.87	43.62	29.468		
4,600.00	4,590.58	5,424.00	4,976.96	16.83	41.66	43.96	397.37	1,345.82	1,249.16	1,204.47	44.69	27.951		
4,700.00	4,690.35	5,491.59	5,040.60	17.20	42.13	44.68	383.39	1,327.83	1,214.62	1,168.85	45.76	26.540		
4,800.00	4,790.12	5,557.64	5,103.11	17.58	42.57	45.39	370.42	1,310.92	1,181.76	1,134.93	46.83	25.234		
4,900.00	4,889.88	5,623.74	5,166.30	17.95	42.99	46.07	358.58	1,295.56	1,151.63	1,103.74	47.89	24.050		
5,000.00	4,989.65	5,693.00	5,232.84	18.32	43.41	46.78	346.87	1,280.32	1,123.34	1,074.41	48.93	22.957		
5,100.00	5,089.42	5,761.74	5,299.36	18.70	43.78	47.46	336.29	1,266.59	1,097.52	1,047.57	49.95	21.974		
5,200.00	5,189.19	5,835.86	5,371.70	19.07	44.15	48.15	326.37	1,253.90	1,074.70	1,023.76	50.94	21.098		
5,300.00	5,288.96	5,921.41	5,455.53	19.45	44.55	48.90	316.12	1,240.27	1,053.47	1,001.53	51.94	20.283		

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 11-10-9H
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 11-10-9H	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		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			
5,400.00	5,388.73	6,003.38	5,536.15	19.82	44.91	49.56	308.03	1,227.86	1,033.40	980.52	52.88	19.541			
5,500.00	5,488.49	6,081.63	5,613.42	20.19	45.23	50.15	301.36	1,217.41	1,015.31	961.53	53.78	18.878			
5,600.00	5,588.26	6,162.84	5,693.83	20.57	45.53	50.73	295.24	1,207.94	999.09	944.43	54.66	18.279			
5,700.00	5,688.03	6,247.42	5,777.83	20.94	45.82	51.26	290.37	1,199.34	984.52	929.02	55.50	17.739			
5,800.00	5,787.80	6,334.05	5,864.03	21.31	46.08	51.75	286.71	1,191.51	971.23	914.93	56.30	17.251			
5,900.00	5,887.57	6,415.59	5,945.31	21.69	46.31	52.15	284.39	1,185.46	959.61	902.57	57.03	16.825			
6,000.00	5,987.34	6,500.11	6,029.68	22.06	46.53	52.53	282.75	1,180.57	949.68	891.94	57.74	16.447			
6,100.00	6,087.11	6,584.49	6,113.97	22.44	46.72	52.86	281.81	1,177.06	941.40	882.99	58.41	16.116			
6,200.00	6,186.87	6,678.98	6,208.41	22.81	46.92	53.21	281.35	1,174.09	934.17	875.06	59.11	15.803			
6,300.00	6,286.64	6,770.94	6,300.35	23.18	47.11	53.54	281.10	1,171.88	927.71	867.92	59.79	15.516			
6,400.00	6,386.41	6,867.47	6,396.86	23.56	47.30	53.89	280.86	1,170.10	921.85	861.36	60.49	15.239			
6,482.24	6,468.46	6,947.75	6,477.13	23.86	47.45	54.16	280.93	1,168.82	917.24	856.18	61.06	15.021			
6,500.00	6,486.19	6,964.52	6,493.90	23.93	47.49	80.61	280.98	1,168.58	916.56	855.37	61.18	14.981			
6,512.62	6,498.79	6,976.44	6,505.82	23.97	47.51	104.07	281.01	1,168.42	916.41	855.15	61.26	14.958 CC, ES			
6,550.00	6,536.08	7,011.74	6,541.11	24.10	47.58	148.02	281.11	1,168.00	917.67	856.17	61.50	14.920 SF			
6,600.00	6,585.64	7,059.47	6,588.84	24.26	47.67	165.15	281.24	1,167.54	923.27	861.45	61.82	14.936			
6,650.00	6,634.49	7,106.80	6,636.17	24.40	47.75	171.35	281.32	1,167.16	933.26	871.15	62.11	15.025			
6,700.00	6,682.26	7,153.64	6,683.01	24.53	47.84	174.54	281.38	1,166.85	947.54	885.15	62.40	15.186			
6,750.00	6,728.60	7,199.14	6,728.51	24.64	47.93	176.52	281.45	1,166.60	965.99	903.33	62.66	15.416			
6,800.00	6,773.14	7,246.37	6,775.74	24.75	48.02	177.92	281.54	1,166.31	988.37	925.45	62.92	15.708			
6,850.00	6,815.54	7,291.66	6,821.03	24.84	48.10	178.99	281.63	1,165.91	1,014.44	951.28	63.16	16.061			
6,900.00	6,855.49	7,330.24	6,859.60	24.92	48.18	179.88	281.72	1,165.54	1,044.10	980.75	63.35	16.482			
6,950.00	6,892.68	7,366.07	6,895.44	24.99	48.25	-179.32	281.81	1,165.26	1,077.20	1,013.69	63.51	16.961			
7,000.00	6,926.83	7,399.09	6,928.45	25.07	48.31	-178.53	281.89	1,165.05	1,113.47	1,049.83	63.65	17.495			
7,050.00	6,957.68	7,428.98	6,958.35	25.19	48.37	-177.70	281.94	1,164.89	1,152.63	1,088.87	63.76	18.078			
7,100.00	6,984.98	7,455.42	6,984.78	25.42	48.42	-176.74	281.96	1,164.77	1,194.36	1,130.51	63.85	18.706			
7,150.00	7,008.54	7,478.02	7,007.38	25.72	48.46	-175.54	281.97	1,164.69	1,238.33	1,174.42	63.91	19.376			
7,200.00	7,028.18	7,496.50	7,025.86	26.06	48.49	-173.86	281.99	1,164.64	1,284.22	1,220.27	63.95	20.082			
7,250.00	7,043.74	7,511.10	7,040.46	26.46	48.52	-171.23	282.03	1,164.62	1,331.65	1,267.69	63.97	20.818			
7,300.00	7,055.11	7,521.72	7,051.08	26.91	48.54	-166.34	282.06	1,164.61	1,380.27	1,316.30	63.97	21.578			
7,350.00	7,062.20	7,528.31	7,057.67	27.40	48.55	-154.04	282.09	1,164.61	1,429.69	1,365.74	63.95	22.356			
7,400.00	7,064.96	7,530.87	7,060.23	27.94	48.55	-103.00	282.10	1,164.61	1,479.54	1,415.62	63.92	23.147			
7,406.67	7,065.00	7,530.90	7,060.26	28.01	48.55	-90.20	282.10	1,164.61	1,486.20	1,422.28	63.92	23.252			
7,500.00	7,065.00	7,530.90	7,060.26	29.15	48.55	-90.19	282.10	1,164.61	1,579.41	1,515.56	63.85	24.736			
7,600.00	7,065.00	7,530.89	7,060.25	30.55	48.55	-90.19	282.10	1,164.61	1,679.30	1,615.51	63.79	26.325			
7,700.00	7,065.00	7,530.89	7,060.25	32.12	48.55	-90.19	282.10	1,164.61	1,779.20	1,715.47	63.74	27.914			
7,800.00	7,065.00	7,530.88	7,060.24	33.83	48.55	-90.18	282.10	1,164.61	1,879.12	1,815.42	63.69	29.502			
7,900.00	7,065.00	7,530.88	7,060.24	35.67	48.55	-90.18	282.10	1,164.61	1,979.04	1,915.38	63.66	31.089			
8,000.00	7,065.00	7,530.87	7,060.23	37.61	48.55	-90.17	282.10	1,164.61	2,078.97	2,015.34	63.62	32.676			
8,100.00	7,065.00	7,530.87	7,060.23	39.65	48.55	-90.17	282.10	1,164.61	2,178.90	2,115.31	63.60	34.261			
8,200.00	7,065.00	7,530.86	7,060.22	41.76	48.55	-90.17	282.10	1,164.61	2,278.84	2,215.27	63.57	35.846			
8,300.00	7,065.00	7,530.86	7,060.22	43.94	48.55	-90.16	282.10	1,164.61	2,378.79	2,315.24	63.55	37.429			
8,400.00	7,065.00	7,530.85	7,060.21	46.18	48.55	-90.16	282.10	1,164.61	2,478.74	2,415.20	63.54	39.012			
8,500.00	7,065.00	7,530.85	7,060.21	48.46	48.55	-90.16	282.10	1,164.61	2,578.69	2,515.17	63.53	40.593			
8,600.00	7,065.00	7,530.84	7,060.20	50.79	48.55	-90.15	282.10	1,164.61	2,678.65	2,615.14	63.52	42.172			
8,700.00	7,065.00	7,530.84	7,060.20	53.16	48.55	-90.15	282.10	1,164.61	2,778.61	2,715.10	63.51	43.751			
8,800.00	7,065.00	7,530.83	7,060.19	55.56	48.55	-90.15	282.10	1,164.61	2,878.58	2,815.07	63.51	45.328			
8,900.00	7,065.00	7,530.83	7,060.19	57.99	48.55	-90.14	282.10	1,164.61	2,978.54	2,915.04	63.50	46.903			
9,000.00	7,065.00	7,530.83	7,060.19	60.44	48.55	-90.14	282.10	1,164.61	3,078.51	3,015.01	63.50	48.477			
9,100.00	7,065.00	7,530.82	7,060.18	62.91	48.55	-90.14	282.10	1,164.61	3,178.48	3,114.97	63.51	50.049			
9,200.00	7,065.00	7,530.82	7,060.18	65.41	48.55	-90.13	282.10	1,164.61	3,278.45	3,214.94	63.51	51.619			

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 11-10-9H
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 11-10-9H	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)				
400.00	400.00	1,611.03	1,564.92	1.22	7.97	102.26	-647.10	2,978.73	3,270.78	3,263.09	7.69	425.072		
500.00	499.98	1,693.00	1,640.06	1.58	8.61	64.94	-655.85	2,947.18	3,234.13	3,225.71	8.41	384.392		
594.97	594.82	1,750.84	1,693.16	1.92	9.07	65.91	-662.30	2,925.17	3,198.60	3,189.58	9.02	354.417		
600.00	599.84	1,754.20	1,696.24	1.94	9.09	65.93	-662.68	2,923.90	3,196.71	3,187.64	9.06	352.645		
700.00	699.61	1,854.01	1,788.00	2.30	9.88	66.43	-673.87	2,886.25	3,159.23	3,149.31	9.91	318.684		
800.00	799.37	1,996.95	1,918.99	2.66	11.03	67.15	-688.33	2,830.90	3,120.76	3,109.77	10.99	283.846		
900.00	899.14	2,087.96	2,002.20	3.03	11.77	67.61	-696.52	2,794.96	3,081.59	3,069.77	11.82	260.633		
1,000.00	998.91	2,161.41	2,069.60	3.40	12.37	67.97	-702.46	2,766.39	3,042.97	3,030.40	12.57	242.009		
1,100.00	1,098.68	2,248.78	2,149.85	3.77	13.07	68.42	-709.96	2,732.66	3,004.90	2,991.50	13.40	224.231		
1,200.00	1,198.45	2,389.06	2,278.59	4.14	14.22	69.12	-719.56	2,677.78	2,966.19	2,951.71	14.48	204.852		
1,300.00	1,298.22	2,515.66	2,393.81	4.51	15.29	69.79	-728.85	2,626.14	2,926.12	2,910.60	15.52	188.596		
1,400.00	1,397.99	2,578.00	2,450.38	4.88	15.83	70.14	-733.49	2,600.37	2,885.91	2,869.65	16.26	177.494		
1,500.00	1,497.75	2,634.70	2,502.06	5.26	16.31	70.46	-737.80	2,577.45	2,846.82	2,829.84	16.98	167.629		
1,600.00	1,597.52	2,667.00	2,531.68	5.63	16.58	70.64	-740.46	2,564.86	2,809.49	2,791.89	17.60	159.652		
1,700.00	1,697.29	2,728.87	2,588.73	6.00	17.07	71.00	-745.95	2,541.54	2,773.61	2,755.25	18.36	151.064		
1,800.00	1,797.06	2,818.41	2,671.57	6.37	17.79	71.55	-754.79	2,508.73	2,739.05	2,719.78	19.27	142.123		
1,900.00	1,896.83	2,971.39	2,811.55	6.75	19.05	72.57	-771.56	2,449.36	2,702.76	2,682.22	20.54	131.586		
2,000.00	1,996.60	3,044.50	2,878.26	7.12	19.67	73.08	-779.72	2,420.59	2,666.57	2,645.15	21.42	124.498		
2,100.00	2,096.37	3,117.88	2,945.46	7.49	20.28	73.59	-787.71	2,392.20	2,631.21	2,608.90	22.31	117.964		
2,200.00	2,196.13	3,198.00	3,019.02	7.86	20.94	74.16	-796.34	2,361.65	2,596.63	2,573.40	23.23	111.769		
2,300.00	2,295.90	3,276.35	3,091.15	8.24	21.58	74.72	-804.50	2,332.17	2,562.72	2,538.57	24.15	106.098		
2,400.00	2,395.67	3,348.56	3,157.94	8.61	22.15	75.22	-811.24	2,305.58	2,529.55	2,504.51	25.04	101.022		
2,500.00	2,495.44	3,437.29	3,240.61	8.98	22.83	75.80	-817.73	2,274.02	2,497.17	2,471.19	25.98	96.101		
2,600.00	2,595.21	3,514.25	3,312.59	9.36	23.40	76.28	-822.02	2,247.13	2,465.10	2,438.23	26.87	91.743		
2,700.00	2,694.98	3,593.54	3,386.83	9.73	23.99	76.81	-827.41	2,219.78	2,434.03	2,406.25	27.78	87.633		
2,800.00	2,794.75	3,825.48	3,602.82	10.10	25.77	78.35	-839.32	2,136.24	2,402.29	2,372.99	29.30	81.977		
2,900.00	2,894.51	3,890.47	3,662.87	10.48	26.29	78.79	-841.37	2,111.45	2,367.18	2,337.01	30.17	78.453		
3,000.00	2,994.28	4,032.97	3,793.74	10.85	27.46	79.82	-847.02	2,055.40	2,331.60	2,300.23	31.37	74.326		
3,100.00	3,094.05	4,081.00	3,837.51	11.22	27.87	80.20	-849.30	2,035.74	2,295.66	2,263.43	32.23	71.226		
3,200.00	3,193.82	4,141.17	3,892.65	11.60	28.37	80.68	-852.51	2,011.91	2,261.31	2,228.16	33.15	68.224		
3,300.00	3,293.59	4,188.60	3,936.64	11.97	28.75	81.06	-855.41	1,994.39	2,229.52	2,195.51	34.01	65.556		
3,400.00	3,393.36	4,267.82	4,010.24	12.35	29.37	81.71	-861.23	1,965.66	2,199.24	2,164.22	35.02	62.792		
3,500.00	3,493.12	4,414.47	4,144.57	12.72	30.59	83.09	-874.73	1,908.43	2,167.45	2,131.01	36.43	59.489		
3,600.00	3,592.89	4,493.77	4,216.84	13.09	31.27	83.88	-882.56	1,876.75	2,135.98	2,098.43	37.55	56.881		
3,700.00	3,692.66	4,571.10	4,287.31	13.47	31.94	84.68	-890.85	1,846.01	2,105.55	2,066.87	38.68	54.431		
3,800.00	3,792.43	4,646.76	4,356.28	13.84	32.58	85.49	-899.44	1,816.11	2,076.19	2,036.37	39.82	52.136		
3,900.00	3,892.20	4,722.37	4,425.64	14.21	33.21	86.29	-907.48	1,787.11	2,048.06	2,007.10	40.96	49.998		
4,000.00	3,991.97	4,804.50	4,501.13	14.59	33.88	87.17	-916.36	1,756.00	2,021.02	1,978.88	42.14	47.954		
4,100.00	4,091.74	4,946.65	4,631.73	14.96	35.06	88.73	-930.62	1,701.72	1,994.24	1,950.59	43.66	45.682		
4,200.00	4,191.50	5,083.81	4,755.93	15.33	36.26	90.32	-942.35	1,644.74	1,964.11	1,918.93	45.17	43.479		
4,300.00	4,291.27	5,142.00	4,808.78	15.71	36.78	91.01	-947.24	1,620.88	1,935.35	1,889.03	46.31	41.788		
4,400.00	4,391.04	5,228.00	4,887.10	16.08	37.52	92.04	-954.66	1,586.13	1,907.92	1,860.32	47.60	40.084		
4,500.00	4,490.81	5,307.99	4,959.69	16.46	38.22	93.04	-962.40	1,553.43	1,881.42	1,832.53	48.89	38.481		
4,600.00	4,590.58	5,398.90	5,041.78	16.83	39.03	94.26	-972.55	1,515.73	1,856.09	1,805.80	50.29	36.905		
4,700.00	4,690.35	5,462.30	5,099.21	17.20	39.58	95.11	-979.58	1,489.81	1,832.07	1,780.54	51.53	35.552		
4,800.00	4,790.12	5,527.54	5,158.79	17.58	40.14	95.98	-986.89	1,464.24	1,810.20	1,757.43	52.77	34.305		
4,900.00	4,889.88	5,596.59	5,222.14	17.95	40.71	96.90	-994.88	1,437.97	1,790.27	1,736.26	54.01	33.147		
5,000.00	4,989.65	5,673.00	5,293.27	18.32	41.30	97.86	-1,002.48	1,411.13	1,772.24	1,716.99	55.25	32.078		
5,100.00	5,089.42	5,738.80	5,355.24	18.70	41.77	98.64	-1,008.17	1,389.78	1,755.97	1,699.60	56.36	31.154		
5,200.00	5,189.19	5,804.00	5,416.95	19.07	42.21	99.40	-1,014.01	1,369.52	1,741.63	1,684.18	57.45	30.315		
5,300.00	5,288.96	5,914.37	5,521.91	19.45	42.95	100.66	-1,024.05	1,336.94	1,729.20	1,670.43	58.77	29.422		
5,400.00	5,388.73	5,998.18	5,602.02	19.82	43.48	101.57	-1,029.31	1,312.88	1,715.94	1,656.04	59.90	28.648		

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 11-10-9H
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 11-10-9H	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		Distance		Minimum Separation		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	Warning
5,500.00	5,488.49	6,074.83	5,675.81	20.19	43.94	102.36			-1,033.89	1,292.65	1,704.45	1,643.50	60.95	27.965	
5,600.00	5,588.26	6,154.81	5,752.93	20.57	44.40	103.18			-1,039.07	1,272.10	1,694.31	1,632.32	61.99	27.330	
5,700.00	5,688.03	6,240.50	5,836.21	20.94	44.86	103.99			-1,043.57	1,252.46	1,685.49	1,622.48	63.01	26.750	
5,800.00	5,787.80	6,323.98	5,918.04	21.31	45.25	104.66			-1,046.02	1,236.18	1,677.45	1,613.52	63.93	26.239	
5,900.00	5,887.57	6,395.56	5,988.69	21.69	45.54	105.16			-1,047.36	1,224.82	1,671.03	1,606.29	64.74	25.812	
6,000.00	5,987.34	6,467.00	6,059.54	22.06	45.80	105.60			-1,048.36	1,215.65	1,666.30	1,600.81	65.48	25.446	
6,100.00	6,087.11	6,556.00	6,148.08	22.44	46.09	106.06			-1,049.35	1,206.71	1,663.10	1,596.86	66.23	25.109	
6,200.00	6,186.87	6,629.95	6,221.79	22.81	46.30	106.41			-1,050.06	1,200.91	1,661.11	1,594.21	66.89	24.832	
6,300.00	6,286.64	6,716.46	6,308.14	23.18	46.52	106.76			-1,050.67	1,195.61	1,660.10	1,592.53	67.56	24.571	
6,394.24	6,380.66	6,801.20	6,392.79	23.53	46.72	107.07			-1,051.02	1,191.75	1,659.83	1,591.66	68.17	24.347 CC	
6,400.00	6,386.41	6,806.43	6,398.02	23.56	46.74	107.09			-1,051.04	1,191.54	1,659.83	1,591.62	68.21	24.334	
6,482.24	6,468.46	6,879.92	6,471.46	23.86	46.90	107.33			-1,051.23	1,189.02	1,660.06	1,591.33	68.73	24.154 ES	
6,500.00	6,486.19	6,894.79	6,486.33	23.93	46.94	107.38			-1,051.28	1,188.59	1,660.33	1,591.50	68.83	24.121	
6,550.00	6,536.08	6,936.69	6,528.21	24.10	47.02	107.50			-1,051.49	1,187.51	1,662.91	1,593.82	69.09	24.068	
6,600.00	6,585.64	6,978.37	6,569.88	24.26	47.11	107.56			-1,051.80	1,186.64	1,668.13	1,598.82	69.31	24.067 SF	
6,650.00	6,634.49	7,021.79	6,613.29	24.40	47.20	107.60			-1,052.24	1,185.92	1,675.95	1,606.46	69.50	24.116	
6,700.00	6,682.26	7,066.34	6,657.84	24.53	47.29	107.63			-1,052.72	1,185.30	1,686.25	1,616.60	69.65	24.211	
6,750.00	6,728.60	7,109.53	6,701.02	24.64	47.38	107.66			-1,053.23	1,184.80	1,698.98	1,629.22	69.76	24.354	
6,800.00	6,773.14	7,151.71	6,743.20	24.75	47.46	107.69			-1,053.76	1,184.40	1,714.10	1,644.26	69.84	24.543	
6,850.00	6,815.54	7,192.65	6,784.13	24.84	47.54	107.71			-1,054.30	1,184.05	1,731.57	1,661.68	69.89	24.777	
6,900.00	6,855.49	7,231.20	6,822.68	24.92	47.61	107.73			-1,054.83	1,183.76	1,751.33	1,681.42	69.90	25.054	
6,950.00	6,892.68	7,267.05	6,858.52	24.99	47.68	107.75			-1,055.34	1,183.52	1,773.32	1,703.43	69.89	25.373	
7,000.00	6,926.83	7,299.44	6,890.91	25.07	47.73	107.76			-1,055.70	1,183.47	1,797.48	1,727.64	69.84	25.737	
7,050.00	6,957.68	7,328.20	6,919.67	25.14	47.78	107.77			-1,055.89	1,183.63	1,823.73	1,753.96	69.77	26.140	
7,100.00	6,984.98	7,353.15	6,944.62	25.22	47.82	107.78			-1,055.96	1,183.93	1,851.96	1,782.27	69.68	26.578	
7,150.00	7,008.54	7,374.17	6,965.64	25.27	47.85	107.79			-1,055.94	1,184.30	1,882.01	1,812.43	69.58	27.048	
7,200.00	7,028.18	7,397.00	6,988.46	26.06	47.89	107.80			-1,055.85	1,184.82	1,913.73	1,844.24	69.49	27.539	
7,250.00	7,043.74	7,404.22	6,995.67	26.46	47.90	107.81			-1,055.81	1,185.01	1,946.88	1,877.53	69.35	28.072	
7,300.00	7,055.11	7,413.30	7,004.75	26.91	47.91	107.82			-1,055.74	1,185.26	1,981.26	1,912.03	69.23	28.617	
7,350.00	7,062.20	7,418.40	7,009.85	27.40	47.92	107.83			-1,055.71	1,185.41	2,016.59	1,947.48	69.11	29.177	
7,400.00	7,064.96	7,419.56	7,011.00	27.94	47.92	107.84			-1,055.70	1,185.44	2,052.61	1,983.61	69.00	29.749	
7,406.67	7,065.00	7,419.42	7,010.87	28.01	47.92	107.84			-1,055.70	1,185.44	2,052.61	1,983.61	68.98	29.826	
7,500.00	7,065.00	7,417.03	7,008.47	29.15	47.92	107.85			-1,055.72	1,185.37	2,126.18	2,057.38	68.80	30.903	
7,600.00	7,065.00	7,414.53	7,005.98	30.55	47.92	107.86			-1,055.73	1,185.29	2,201.83	2,133.16	68.67	32.064	
7,700.00	7,065.00	7,412.11	7,003.56	32.12	47.91	107.87			-1,055.75	1,185.23	2,279.35	2,210.76	68.59	33.233	
7,800.00	7,065.00	7,409.75	7,001.20	33.83	47.91	107.88			-1,055.77	1,185.16	2,358.57	2,290.02	68.55	34.408	
7,900.00	7,065.00	7,397.00	6,988.46	35.67	47.89	107.89			-1,055.85	1,184.82	2,439.33	2,370.83	68.50	35.613	
8,000.00	7,065.00	7,397.00	6,988.46	37.61	47.89	107.90			-1,055.85	1,184.82	2,521.44	2,452.92	68.52	36.799	
8,100.00	7,065.00	7,397.00	6,988.46	39.65	47.89	107.91			-1,055.85	1,184.82	2,604.80	2,536.24	68.56	37.993	
8,200.00	7,065.00	7,397.00	6,988.46	41.76	47.89	107.92			-1,055.85	1,184.82	2,689.29	2,620.68	68.61	39.195	
8,300.00	7,065.00	7,397.00	6,988.46	43.94	47.89	107.93			-1,055.85	1,184.82	2,774.81	2,706.14	68.68	40.404	
8,400.00	7,065.00	7,397.00	6,988.46	46.18	47.89	107.94			-1,055.85	1,184.82	2,861.28	2,792.53	68.75	41.619	
8,500.00	7,065.00	7,397.00	6,988.46	48.46	47.89	107.95			-1,055.85	1,184.82	2,948.59	2,879.77	68.83	42.841	
8,600.00	7,065.00	7,397.00	6,988.46	50.79	47.89	107.96			-1,055.85	1,184.82	3,036.70	2,967.79	68.91	44.069	
8,700.00	7,065.00	7,397.00	6,988.46	53.16	47.89	107.97			-1,055.85	1,184.82	3,125.51	3,056.52	68.99	45.303	
8,800.00	7,065.00	7,397.00	6,988.46	55.56	47.89	107.98			-1,055.85	1,184.82	3,214.99	3,145.91	69.08	46.542	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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)				
594.97	594.82	1,757.11	1,667.42	1.92	10.42	69.39	-865.55	2,963.96	3,273.69	3,262.65	11.04	296.539		
600.00	599.84	1,759.84	1,669.83	1.94	10.44	69.41	-866.21	2,962.87	3,271.89	3,260.81	11.08	295.230		
700.00	699.61	1,834.64	1,735.95	2.30	11.13	70.00	-884.79	2,933.21	3,236.64	3,224.65	11.99	269.849		
800.00	799.37	1,907.11	1,799.77	2.66	11.80	70.58	-903.57	2,904.46	3,202.04	3,189.13	12.92	247.898		
900.00	899.14	1,970.77	1,855.98	3.03	12.39	71.11	-920.07	2,879.55	3,168.42	3,154.63	13.80	229.659		
1,000.00	998.91	2,040.00	1,917.09	3.40	13.03	71.69	-938.73	2,852.92	3,136.05	3,121.32	14.74	212.820		
1,100.00	1,098.68	2,081.16	1,953.49	3.77	13.41	72.05	-950.09	2,837.41	3,104.98	3,089.50	15.48	200.592		
1,200.00	1,198.45	2,129.00	1,996.00	4.14	13.85	72.46	-963.21	2,819.83	3,075.42	3,059.14	16.28	188.886		
1,300.00	1,298.22	2,182.07	2,043.40	4.51	14.32	72.91	-977.78	2,800.92	3,047.43	3,030.31	17.13	177.945		
1,400.00	1,397.99	2,238.13	2,093.68	4.88	14.82	73.40	-993.34	2,781.64	3,021.07	3,003.07	18.00	167.832		
1,500.00	1,497.75	2,308.00	2,156.26	5.26	15.43	74.02	-1,013.30	2,757.82	2,995.86	2,976.87	18.99	157.755		
1,600.00	1,597.52	2,369.25	2,211.05	5.63	15.97	74.57	-1,031.35	2,737.22	2,971.91	2,951.98	19.93	149.121		
1,700.00	1,697.29	2,434.51	2,269.43	6.00	16.54	75.18	-1,051.08	2,715.75	2,949.42	2,928.51	20.91	141.053		
1,800.00	1,797.06	2,529.95	2,354.60	6.37	17.39	76.08	-1,080.68	2,684.47	2,927.98	2,905.83	22.15	132.195		
1,900.00	1,896.83	2,657.84	2,468.03	6.75	18.55	77.33	-1,120.56	2,640.89	2,906.22	2,882.54	23.68	122.729		
2,000.00	1,996.60	2,712.76	2,516.75	7.12	19.04	77.87	-1,137.59	2,622.11	2,885.11	2,860.49	24.61	117.214		
2,100.00	2,096.37	2,768.15	2,566.26	7.49	19.54	78.40	-1,154.48	2,603.94	2,865.73	2,840.18	25.55	112.162		
2,200.00	2,196.13	2,838.00	2,628.87	7.86	20.15	79.09	-1,176.04	2,581.68	2,847.99	2,821.39	26.60	107.064		
2,300.00	2,295.90	2,939.27	2,719.21	8.24	21.05	80.10	-1,208.07	2,549.00	2,831.04	2,803.11	27.93	101.350		
2,400.00	2,395.67	3,017.00	2,788.04	8.61	21.75	80.91	-1,233.57	2,523.41	2,814.79	2,785.70	29.09	96.760		
2,500.00	2,495.44	3,101.17	2,862.35	8.98	22.52	81.80	-1,261.67	2,495.63	2,799.57	2,769.26	30.32	92.342		
2,600.00	2,595.21	3,191.46	2,942.11	9.36	23.35	82.76	-1,291.58	2,465.68	2,785.07	2,753.46	31.60	88.131		
2,700.00	2,694.98	3,335.35	3,069.27	9.73	24.68	84.29	-1,337.43	2,416.37	2,769.88	2,736.52	33.36	83.033		
2,800.00	2,794.75	3,448.82	3,169.62	10.10	25.73	85.50	-1,372.63	2,376.82	2,755.15	2,720.30	34.84	79.069		
2,900.00	2,894.51	3,552.17	3,261.49	10.48	26.67	86.59	-1,402.99	2,340.50	2,740.34	2,704.11	36.23	75.640		
3,000.00	2,994.28	3,683.32	3,377.93	10.85	27.88	87.98	-1,440.31	2,293.07	2,725.16	2,687.31	37.85	72.004		
3,100.00	3,094.05	3,758.98	3,444.92	11.22	28.58	88.80	-1,461.77	2,265.21	2,710.49	2,671.48	39.01	69.477		
3,200.00	3,193.82	3,843.49	3,519.53	11.60	29.38	89.73	-1,486.60	2,234.25	2,697.34	2,657.07	40.27	66.985		
3,300.00	3,293.59	3,945.98	3,608.59	11.97	30.39	90.92	-1,518.04	2,194.47	2,684.21	2,642.49	41.72	64.339		
3,400.00	3,393.36	4,012.92	3,666.52	12.35	31.05	91.71	-1,539.15	2,168.39	2,672.55	2,629.69	42.86	62.355		
3,500.00	3,493.12	4,076.00	3,721.13	12.72	31.68	92.46	-1,559.26	2,144.05	2,662.46	2,618.50	43.96	60.568		
3,600.00	3,592.89	4,150.21	3,785.53	13.09	32.41	93.34	-1,583.01	2,115.85	2,653.94	2,608.79	45.15	58.783		
3,700.00	3,692.66	4,212.30	3,839.75	13.47	33.01	94.07	-1,602.76	2,092.92	2,647.11	2,600.91	46.20	57.298		
3,800.00	3,792.43	4,284.53	3,903.44	13.84	33.69	94.90	-1,625.30	2,067.37	2,642.03	2,594.71	47.32	55.833		
3,900.00	3,892.20	4,370.20	3,979.31	14.21	34.49	95.87	-1,651.58	2,037.50	2,638.01	2,589.46	48.55	54.338		
4,000.00	3,991.97	4,499.75	4,093.06	14.59	35.72	97.38	-1,692.38	1,990.83	2,635.04	2,584.84	50.20	52.492		
4,100.00	4,091.74	4,596.66	4,178.17	14.96	36.64	98.51	-1,721.54	1,954.82	2,631.38	2,579.85	51.53	51.061		
4,200.00	4,191.50	4,751.14	4,314.64	15.33	38.09	100.27	-1,764.99	1,896.93	2,627.26	2,573.91	53.36	49.241		
4,300.00	4,291.27	4,890.37	4,438.58	15.71	39.37	101.83	-1,800.48	1,844.38	2,622.52	2,567.53	54.99	47.688		
4,400.00	4,391.04	4,960.00	4,499.88	16.08	40.04	102.64	-1,818.77	1,816.90	2,618.31	2,562.25	56.06	46.704		
4,500.00	4,490.81	5,028.15	4,559.60	16.46	40.70	103.44	-1,837.36	1,789.83	2,615.68	2,558.57	57.11	45.797		
4,600.00	4,590.58	5,089.83	4,613.47	16.83	41.30	104.17	-1,854.67	1,765.26	2,614.66	2,556.57	58.09	45.009		
4,602.57	4,593.14	5,091.30	4,614.75	16.84	41.31	104.19	-1,855.08	1,764.68	2,614.66	2,556.54	58.12	44.990 CC, ES		
4,700.00	4,690.35	5,136.00	4,653.93	17.20	41.75	104.72	-1,867.80	1,747.33	2,615.63	2,556.73	58.90	44.407		
4,800.00	4,790.12	5,203.87	4,713.78	17.58	42.39	105.50	-1,887.28	1,721.94	2,618.51	2,558.64	59.87	43.733		
4,900.00	4,889.88	5,251.17	4,755.76	17.95	42.83	106.04	-1,901.03	1,705.03	2,623.49	2,562.87	60.62	43.277		
5,000.00	4,989.65	5,313.00	4,810.72	18.32	43.39	106.73	-1,919.87	1,683.90	2,631.02	2,569.54	61.47	42.799		
5,100.00	5,089.42	5,434.46	4,919.95	18.70	44.46	108.03	-1,954.72	1,643.83	2,638.97	2,576.12	62.85	41.990		
5,200.00	5,189.19	5,491.00	4,970.68	19.07	44.96	108.64	-1,970.92	1,624.84	2,647.56	2,583.96	63.60	41.629		
5,300.00	5,288.96	5,569.01	5,040.05	19.45	45.67	109.50	-1,994.36	1,597.92	2,657.68	2,593.12	64.56	41.167		
5,400.00	5,388.73	5,642.64	5,105.19	19.82	46.35	110.32	-2,017.06	1,572.22	2,669.18	2,603.72	65.46	40.775		
5,500.00	5,488.49	5,733.04	5,185.27	20.19	47.19	111.32	-2,045.00	1,540.92	2,681.83	2,615.31	66.52	40.318		

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 11-10-9H
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 11-10-9H	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		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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,600.00	5,588.26	5,876.39	5,312.50	20.57	48.50	112.88			-2,087.81	1,490.65	2,694.52	2,626.45	68.07	39.585			
5,700.00	5,688.03	5,980.54	5,405.65	20.94	49.44	113.98			-2,116.80	1,454.18	2,706.46	2,637.25	69.21	39.107			
5,800.00	5,787.80	6,060.14	5,476.97	21.31	50.15	114.82			-2,138.93	1,426.61	2,719.43	2,649.34	70.09	38.799			
5,900.00	5,887.57	6,147.64	5,555.59	21.69	50.93	115.71			-2,163.13	1,396.78	2,733.35	2,662.32	71.03	38.483			
6,000.00	5,987.34	6,238.58	5,637.60	22.06	51.71	116.62			-2,187.97	1,366.31	2,747.98	2,676.02	71.97	38.184			
6,100.00	6,087.11	6,391.86	5,778.14	22.44	52.95	118.04			-2,226.59	1,318.99	2,762.64	2,689.25	73.39	37.643			
6,200.00	6,186.87	6,504.99	5,884.00	22.81	53.77	118.97			-2,251.55	1,287.90	2,776.23	2,701.85	74.38	37.325			
6,300.00	6,286.64	6,613.13	5,986.80	23.18	54.47	119.76			-2,272.97	1,262.08	2,789.48	2,714.21	75.27	37.059			
6,400.00	6,386.41	6,742.31	6,111.04	23.56	55.23	120.60			-2,296.15	1,235.40	2,802.57	2,726.33	76.24	36.759			
6,482.24	6,468.46	6,807.16	6,173.92	23.86	55.57	120.98			-2,306.93	1,223.74	2,813.22	2,736.48	76.74	36.658			
6,500.00	6,486.19	6,844.71	6,210.44	23.93	55.76	147.79			-2,312.94	1,217.44	2,815.64	2,738.66	76.98	36.576			
6,550.00	6,536.08	6,950.21	6,313.58	24.10	56.26	-143.88			-2,327.59	1,200.77	2,822.45	2,744.83	77.61	36.365			
6,600.00	6,585.64	7,020.43	6,382.58	24.26	56.57	-126.05			-2,336.08	1,190.95	2,830.24	2,752.19	78.05	36.263			
6,650.00	6,634.49	7,121.42	6,482.30	24.40	56.97	-119.27			-2,346.41	1,178.68	2,838.87	2,760.28	78.59	36.123			
6,700.00	6,682.26	7,206.57	6,566.67	24.53	57.27	-115.64			-2,353.00	1,169.31	2,847.62	2,768.57	79.04	36.027			
6,750.00	6,728.60	7,253.70	6,613.49	24.64	57.42	-113.13			-2,356.15	1,165.02	2,857.54	2,778.17	79.37	36.002			
6,800.00	6,773.14	7,335.69	6,695.15	24.75	57.66	-111.47			-2,360.56	1,159.17	2,868.44	2,788.65	79.79	35.950			
6,850.00	6,815.54	7,410.92	6,770.25	24.84	57.84	-110.19			-2,363.02	1,155.44	2,880.01	2,799.84	80.17	35.923 SF			
6,900.00	6,855.49	7,464.21	6,823.51	24.92	57.95	-108.94			-2,363.93	1,153.78	2,892.51	2,812.00	80.51	35.926			
6,950.00	6,892.68	7,505.16	6,864.45	24.99	58.03	-107.62			-2,364.39	1,152.89	2,906.24	2,825.40	80.84	35.949			
7,000.00	6,926.83	7,543.33	6,902.61	25.07	58.09	-106.29			-2,364.67	1,152.36	2,921.23	2,840.05	81.18	35.984			
7,050.00	6,957.68	7,578.27	6,937.54	25.19	58.15	-104.89			-2,364.76	1,152.15	2,937.45	2,855.92	81.53	36.030			
7,100.00	6,984.98	7,608.62	6,967.89	25.42	58.19	-103.36			-2,364.71	1,152.18	2,954.90	2,873.00	81.89	36.082			
7,150.00	7,008.54	7,633.33	6,992.61	25.72	58.23	-101.66			-2,364.58	1,152.35	2,973.53	2,891.26	82.27	36.143			
7,200.00	7,028.18	7,653.16	7,012.44	26.06	58.25	-99.78			-2,364.42	1,152.61	2,993.31	2,910.64	82.67	36.210			
7,250.00	7,043.74	7,668.33	7,027.60	26.46	58.27	-97.71			-2,364.26	1,152.87	3,014.13	2,931.05	83.08	36.280			
7,300.00	7,055.11	7,678.87	7,038.14	26.91	58.28	-95.45			-2,364.13	1,153.08	3,035.89	2,952.38	83.51	36.353			
7,350.00	7,062.20	7,684.87	7,044.13	27.40	58.28	-93.01			-2,364.05	1,153.22	3,058.45	2,974.50	83.96	36.430			
7,400.00	7,064.96	7,686.44	7,045.70	27.94	58.29	-90.41			-2,364.03	1,153.25	3,081.65	2,997.24	84.41	36.509			
7,406.67	7,065.00	7,686.32	7,045.58	28.01	58.29	-90.05			-2,364.03	1,153.25	3,084.78	3,000.31	84.47	36.520			
7,500.00	7,065.00	7,684.20	7,043.46	29.15	58.28	-90.01			-2,364.06	1,153.20	3,129.75	3,044.40	85.36	36.667			
7,600.00	7,065.00	7,682.03	7,041.29	30.55	58.28	-89.96			-2,364.09	1,153.15	3,180.27	3,093.90	86.38	36.819			
7,700.00	7,065.00	7,679.96	7,039.22	32.12	58.28	-89.92			-2,364.12	1,153.10	3,233.10	3,145.66	87.44	36.974			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 DONNAMITE 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)				
14,700.00	7,065.00	7,025.00	7,025.00	211.41	140.90	-90.00	-2,456.13	-9,409.37	3,277.12	2,958.02	319.10	10.270		
14,800.00	7,065.00	7,025.00	7,025.00	214.12	140.90	-90.00	-2,456.13	-9,409.37	3,222.69	2,898.46	324.23	9.940		
14,900.00	7,065.00	7,025.00	7,025.00	216.82	140.90	-90.00	-2,456.13	-9,409.37	3,170.48	2,841.08	329.40	9.625		
15,000.00	7,065.00	7,025.00	7,025.00	219.52	140.90	-90.00	-2,456.13	-9,409.37	3,120.60	2,785.99	334.61	9.326		
15,100.00	7,065.00	7,025.00	7,025.00	222.22	140.90	-90.00	-2,456.13	-9,409.37	3,073.17	2,733.33	339.84	9.043		
15,200.00	7,065.00	7,025.00	7,025.00	224.93	140.90	-90.00	-2,456.13	-9,409.37	3,028.29	2,683.24	345.06	8.776		
15,300.00	7,065.00	7,025.00	7,025.00	227.63	140.90	-90.00	-2,456.13	-9,409.37	2,986.09	2,635.84	350.25	8.526		
15,400.00	7,065.00	7,025.00	7,025.00	230.34	140.90	-90.00	-2,456.13	-9,409.37	2,946.69	2,591.29	355.40	8.291		
15,495.74	7,065.00	7,025.00	7,025.00	232.93	140.90	-90.00	-2,456.13	-9,409.37	2,911.68	2,551.42	360.26	8.082	CC, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	-26.12	2,860.88	-1,402.65	3,186.23				
100.00	100.00	106.00	106.00	0.14	1.34	-26.12	2,860.88	-1,402.65	3,186.23	3,184.75	1.48	2,154.326	
200.00	200.00	206.00	206.00	0.50	3.61	-26.12	2,860.88	-1,402.65	3,186.23	3,182.11	4.11	774.402	
300.00	300.00	306.00	306.00	0.86	5.69	-26.12	2,860.88	-1,402.65	3,186.23	3,179.68	6.55	486.517	
400.00	400.00	406.00	406.00	1.22	7.73	-26.12	2,860.88	-1,402.65	3,186.23	3,177.28	8.95	356.046	
500.00	499.98	505.98	505.98	1.58	9.76	-64.50	2,860.88	-1,402.65	3,185.47	3,174.14	11.33	281.049	
594.97	594.82	600.82	600.82	1.92	11.68	-64.62	2,860.88	-1,402.65	3,183.37	3,169.78	13.59	234.186	
600.00	599.84	605.84	605.84	1.94	11.78	-64.62	2,860.88	-1,402.65	3,183.23	3,169.51	13.71	232.124	
700.00	699.61	705.61	705.61	2.30	13.79	-64.73	2,860.88	-1,402.65	3,180.31	3,164.22	16.09	197.654	
800.00	799.37	805.37	805.37	2.66	15.80	-64.85	2,860.88	-1,402.65	3,177.41	3,158.94	18.47	172.051	
900.00	899.14	905.14	905.14	3.03	17.82	-64.96	2,860.88	-1,402.65	3,174.52	3,153.67	20.85	152.287	
1,000.00	998.91	1,004.91	1,004.91	3.40	19.83	-65.07	2,860.88	-1,402.65	3,171.64	3,148.42	23.22	136.570	
1,100.00	1,098.68	1,104.68	1,104.68	3.77	21.84	-65.18	2,860.88	-1,402.65	3,168.78	3,143.17	25.60	123.772	
1,200.00	1,198.45	1,204.45	1,204.45	4.14	23.84	-65.29	2,860.88	-1,402.65	3,165.92	3,137.94	27.98	113.149	
1,300.00	1,298.22	1,304.22	1,304.22	4.51	25.85	-65.40	2,860.88	-1,402.65	3,163.08	3,132.72	30.36	104.191	
1,400.00	1,397.99	1,403.99	1,403.99	4.88	27.86	-65.51	2,860.88	-1,402.65	3,160.25	3,127.51	32.74	96.535	
1,500.00	1,497.75	1,503.75	1,503.75	5.26	29.87	-65.63	2,860.88	-1,402.65	3,157.43	3,122.32	35.12	89.916	
1,600.00	1,597.52	1,603.52	1,603.52	5.63	31.88	-65.74	2,860.88	-1,402.65	3,154.63	3,117.13	37.49	84.137	
1,700.00	1,697.29	1,703.29	1,703.29	6.00	33.88	-65.85	2,860.88	-1,402.65	3,151.83	3,111.96	39.87	79.048	
1,800.00	1,797.06	1,803.06	1,803.06	6.37	35.89	-65.96	2,860.88	-1,402.65	3,149.05	3,106.80	42.25	74.532	
1,900.00	1,896.83	1,902.83	1,902.83	6.75	37.90	-66.08	2,860.88	-1,402.65	3,146.28	3,101.65	44.63	70.497	
2,000.00	1,996.60	2,002.60	2,002.60	7.12	39.91	-66.19	2,860.88	-1,402.65	3,143.52	3,096.52	47.01	66.871	
2,100.00	2,096.37	2,102.37	2,102.37	7.49	41.91	-66.30	2,860.88	-1,402.65	3,140.78	3,091.39	49.39	63.595	
2,200.00	2,196.13	2,202.13	2,202.13	7.86	43.92	-66.42	2,860.88	-1,402.65	3,138.05	3,086.28	51.77	60.620	
2,300.00	2,295.90	2,301.90	2,301.90	8.24	45.93	-66.53	2,860.88	-1,402.65	3,135.33	3,081.18	54.14	57.906	
2,400.00	2,395.67	2,401.67	2,401.67	8.61	47.93	-66.64	2,860.88	-1,402.65	3,132.62	3,076.10	56.52	55.421	
2,500.00	2,495.44	2,501.44	2,501.44	8.98	49.94	-66.76	2,860.88	-1,402.65	3,129.93	3,071.02	58.90	53.137	
2,600.00	2,595.21	2,601.21	2,601.21	9.36	51.95	-66.87	2,860.88	-1,402.65	3,127.24	3,065.96	61.28	51.031	
2,700.00	2,694.98	2,700.98	2,700.98	9.73	53.95	-66.99	2,860.88	-1,402.65	3,124.57	3,060.91	63.66	49.082	
2,800.00	2,794.75	2,800.75	2,800.75	10.10	55.96	-67.10	2,860.88	-1,402.65	3,121.91	3,055.88	66.04	47.273	
2,900.00	2,894.51	2,900.51	2,900.51	10.48	57.97	-67.22	2,860.88	-1,402.65	3,119.27	3,050.85	68.42	45.591	
3,000.00	2,994.28	3,000.28	3,000.28	10.85	59.97	-67.33	2,860.88	-1,402.65	3,116.64	3,045.84	70.80	44.022	
3,100.00	3,094.05	3,100.05	3,100.05	11.22	61.98	-67.45	2,860.88	-1,402.65	3,114.02	3,040.84	73.18	42.555	
3,200.00	3,193.82	3,199.82	3,199.82	11.60	63.99	-67.56	2,860.88	-1,402.65	3,111.41	3,035.85	75.56	41.180	
3,300.00	3,293.59	3,299.59	3,299.59	11.97	65.99	-67.68	2,860.88	-1,402.65	3,108.82	3,030.88	77.94	39.890	
3,400.00	3,393.36	3,399.36	3,399.36	12.35	68.00	-67.79	2,860.88	-1,402.65	3,106.23	3,025.92	80.31	38.676	
3,500.00	3,493.12	3,499.12	3,499.12	12.72	70.01	-67.91	2,860.88	-1,402.65	3,103.67	3,020.97	82.69	37.532	
3,600.00	3,592.89	3,598.89	3,598.89	13.09	72.01	-68.03	2,860.88	-1,402.65	3,101.11	3,016.04	85.07	36.452	
3,700.00	3,692.66	3,698.66	3,698.66	13.47	74.02	-68.14	2,860.88	-1,402.65	3,098.57	3,011.11	87.45	35.432	
3,800.00	3,792.43	3,798.43	3,798.43	13.84	76.03	-68.26	2,860.88	-1,402.65	3,096.04	3,006.20	89.83	34.465	
3,900.00	3,892.20	3,898.20	3,898.20	14.21	78.03	-68.37	2,860.88	-1,402.65	3,093.52	3,001.31	92.21	33.548	
4,000.00	3,991.97	3,997.97	3,997.97	14.59	80.04	-68.49	2,860.88	-1,402.65	3,091.01	2,996.42	94.59	32.678	
4,100.00	4,091.74	4,097.74	4,097.74	14.96	82.05	-68.61	2,860.88	-1,402.65	3,088.52	2,991.55	96.97	31.850	
4,200.00	4,191.50	4,197.50	4,197.50	15.33	84.05	-68.73	2,860.88	-1,402.65	3,086.04	2,986.69	99.35	31.063	
4,300.00	4,291.27	4,297.27	4,297.27	15.71	86.06	-68.84	2,860.88	-1,402.65	3,083.58	2,981.85	101.73	30.312	
4,400.00	4,391.04	4,397.04	4,397.04	16.08	88.07	-68.96	2,860.88	-1,402.65	3,081.12	2,977.02	104.11	29.596	
4,500.00	4,490.81	4,496.81	4,496.81	16.46	90.07	-69.08	2,860.88	-1,402.65	3,078.68	2,972.20	106.49	28.911	
4,600.00	4,590.58	4,596.58	4,596.58	16.83	92.08	-69.20	2,860.88	-1,402.65	3,076.26	2,967.39	108.87	28.257	
4,700.00	4,690.35	4,696.35	4,696.35	17.20	94.08	-69.32	2,860.88	-1,402.65	3,073.84	2,962.60	111.25	27.631	
4,800.00	4,790.12	4,796.12	4,796.12	17.58	96.09	-69.43	2,860.88	-1,402.65	3,071.44	2,957.82	113.63	27.031	
4,900.00	4,889.88	4,895.88	4,895.88	17.95	98.10	-69.55	2,860.88	-1,402.65	3,069.06	2,953.05	116.01	26.456	
5,000.00	4,989.65	4,995.65	4,995.65	18.32	100.10	-69.67	2,860.88	-1,402.65	3,066.68	2,948.30	118.39	25.904	

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 11-10-9H
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 11-10-9H	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	5,089.42	5,095.42	5,095.42	18.70	102.11	-69.79	2,860.88	-1,402.65	3,064.32	2,943.56	120.76	25.374		
5,200.00	5,189.19	5,195.19	5,195.19	19.07	104.12	-69.91	2,860.88	-1,402.65	3,061.97	2,938.83	123.14	24.865		
5,300.00	5,288.96	5,294.96	5,294.96	19.45	106.12	-70.03	2,860.88	-1,402.65	3,059.64	2,934.12	125.52	24.375		
5,400.00	5,388.73	5,394.73	5,394.73	19.82	108.13	-70.15	2,860.88	-1,402.65	3,057.32	2,929.42	127.90	23.903		
5,500.00	5,488.49	5,494.49	5,494.49	20.19	110.14	-70.27	2,860.88	-1,402.65	3,055.01	2,924.73	130.28	23.449		
5,600.00	5,588.26	5,594.26	5,594.26	20.57	112.14	-70.39	2,860.88	-1,402.65	3,052.72	2,920.05	132.66	23.011		
5,700.00	5,688.03	5,694.03	5,694.03	20.94	114.15	-70.51	2,860.88	-1,402.65	3,050.44	2,915.39	135.04	22.589		
5,800.00	5,787.80	5,793.80	5,793.80	21.31	116.16	-70.63	2,860.88	-1,402.65	3,048.17	2,910.75	137.42	22.181		
5,900.00	5,887.57	5,893.57	5,893.57	21.69	118.16	-70.75	2,860.88	-1,402.65	3,045.92	2,906.11	139.80	21.787		
6,000.00	5,987.34	5,993.34	5,993.34	22.06	120.17	-70.87	2,860.88	-1,402.65	3,043.68	2,901.49	142.18	21.407		
6,100.00	6,087.11	6,093.11	6,093.11	22.44	122.17	-70.99	2,860.88	-1,402.65	3,041.45	2,896.89	144.56	21.039		
6,200.00	6,186.87	6,192.87	6,192.87	22.81	124.18	-71.11	2,860.88	-1,402.65	3,039.24	2,892.30	146.94	20.683		
6,300.00	6,286.64	6,292.64	6,292.64	23.18	126.19	-71.23	2,860.88	-1,402.65	3,037.04	2,887.72	149.32	20.339		
6,400.00	6,386.41	6,392.41	6,392.41	23.56	128.19	-71.35	2,860.88	-1,402.65	3,034.85	2,883.15	151.70	20.005		
6,482.24	6,468.46	6,474.46	6,474.46	23.86	129.84	-71.45	2,860.88	-1,402.65	3,033.07	2,879.41	153.66	19.739		
6,500.00	6,486.19	6,492.19	6,492.19	23.93	130.20	-45.03	2,860.88	-1,402.65	3,032.53	2,878.45	154.08	19.681		
6,550.00	6,536.08	6,542.08	6,542.08	24.10	131.20	22.49	2,860.88	-1,402.65	3,029.44	2,874.18	155.26	19.513		
6,600.00	6,585.64	6,591.64	6,591.64	24.26	132.20	39.99	2,860.88	-1,402.65	3,024.02	2,867.62	156.40	19.335		
6,650.00	6,634.49	6,640.49	6,640.49	24.40	133.18	46.82	2,860.88	-1,402.65	3,016.33	2,858.80	157.52	19.148		
6,700.00	6,682.26	6,688.26	6,688.26	24.53	134.14	50.88	2,860.88	-1,402.65	3,006.45	2,847.84	158.61	18.955		
6,750.00	6,728.60	6,734.60	6,734.60	24.64	135.07	54.00	2,860.88	-1,402.65	2,994.50	2,834.84	159.65	18.757		
6,800.00	6,773.14	6,779.14	6,779.14	24.75	135.97	56.76	2,860.88	-1,402.65	2,980.61	2,819.96	160.65	18.554		
6,850.00	6,815.54	6,821.54	6,821.54	24.84	136.82	59.44	2,860.88	-1,402.65	2,964.96	2,803.37	161.59	18.348		
6,900.00	6,855.49	6,861.49	6,861.49	24.92	137.63	62.13	2,860.88	-1,402.65	2,947.74	2,785.25	162.49	18.141		
6,950.00	6,892.68	6,898.68	6,898.68	24.99	138.37	64.90	2,860.88	-1,402.65	2,929.16	2,765.83	163.33	17.934		
7,000.00	6,926.83	6,932.83	6,932.83	25.07	139.06	67.75	2,860.88	-1,402.65	2,909.44	2,745.32	164.12	17.727		
7,050.00	6,957.68	6,963.68	6,963.68	25.19	139.68	70.67	2,860.88	-1,402.65	2,888.83	2,723.97	164.86	17.522		
7,100.00	6,984.98	6,990.98	6,990.98	25.42	140.23	73.63	2,860.88	-1,402.65	2,867.58	2,702.01	165.56	17.320		
7,150.00	7,008.54	7,014.54	7,014.54	25.72	140.70	76.59	2,860.88	-1,402.65	2,845.93	2,679.71	166.22	17.122		
7,200.00	7,028.18	7,034.18	7,034.18	26.06	141.10	79.51	2,860.88	-1,402.65	2,824.15	2,657.31	166.84	16.927		
7,250.00	7,043.74	7,049.74	7,049.74	26.46	141.41	82.32	2,860.88	-1,402.65	2,802.48	2,635.05	167.43	16.739		
7,300.00	7,055.11	7,061.11	7,061.11	26.91	141.64	84.99	2,860.88	-1,402.65	2,781.16	2,613.17	167.98	16.556		
7,350.00	7,062.20	7,068.20	7,068.20	27.40	141.78	87.46	2,860.88	-1,402.65	2,760.41	2,591.90	168.51	16.382		
7,400.00	7,064.96	7,070.96	7,070.96	27.94	141.84	89.72	2,860.88	-1,402.65	2,740.44	2,571.45	169.00	16.216		
7,406.67	7,065.00	7,071.00	7,071.00	28.01	141.84	90.00	2,860.88	-1,402.65	2,737.85	2,568.79	169.06	16.195		
7,500.00	7,065.00	7,071.00	7,071.00	29.15	141.84	90.00	2,860.88	-1,402.65	2,703.04	2,532.99	170.05	15.896		
7,600.00	7,065.00	7,071.00	7,071.00	30.55	141.84	90.00	2,860.88	-1,402.65	2,668.86	2,497.51	171.35	15.575		
7,700.00	7,065.00	7,071.00	7,071.00	32.12	141.84	90.00	2,860.88	-1,402.65	2,638.03	2,465.14	172.89	15.258		
7,800.00	7,065.00	7,071.00	7,071.00	33.83	141.84	90.00	2,860.88	-1,402.65	2,610.67	2,436.03	174.64	14.949		
7,900.00	7,065.00	7,071.00	7,071.00	35.67	141.84	90.00	2,860.88	-1,402.65	2,586.89	2,410.32	176.57	14.651		
8,000.00	7,065.00	7,071.00	7,071.00	37.61	141.84	90.00	2,860.88	-1,402.65	2,566.79	2,388.14	178.65	14.368		
8,100.00	7,065.00	7,071.00	7,071.00	39.65	141.84	90.00	2,860.88	-1,402.65	2,550.45	2,369.61	180.84	14.103		
8,200.00	7,065.00	7,071.00	7,071.00	41.76	141.84	90.00	2,860.88	-1,402.65	2,537.95	2,354.83	183.13	13.859		
8,300.00	7,065.00	7,071.00	7,071.00	43.94	141.84	90.00	2,860.88	-1,402.65	2,529.35	2,343.88	185.47	13.637		
8,400.00	7,065.00	7,071.00	7,071.00	46.18	141.84	90.00	2,860.88	-1,402.65	2,524.68	2,336.83	187.85	13.440		
8,468.00	7,065.00	7,071.00	7,071.00	47.73	141.84	90.00	2,860.88	-1,402.65	2,523.76	2,334.28	189.49	13.319	CC	
8,500.00	7,065.00	7,071.00	7,071.00	48.46	141.84	90.00	2,860.88	-1,402.65	2,523.97	2,333.72	190.25	13.267	ES	
8,600.00	7,065.00	7,071.00	7,071.00	50.79	141.84	90.00	2,860.88	-1,402.65	2,527.21	2,334.58	192.63	13.120		
8,700.00	7,065.00	7,071.00	7,071.00	53.16	141.84	90.00	2,860.88	-1,402.65	2,534.41	2,339.42	194.98	12.998		
8,800.00	7,065.00	7,071.00	7,071.00	55.56	141.84	90.00	2,860.88	-1,402.65	2,545.51	2,348.22	197.28	12.903		
8,900.00	7,065.00	7,071.00	7,071.00	57.99	141.84	90.00	2,860.88	-1,402.65	2,560.47	2,360.95	199.52	12.833		
9,000.00	7,065.00	7,071.00	7,071.00	60.44	141.84	90.00	2,860.88	-1,402.65	2,579.23	2,377.54	201.69	12.788		

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 11-10-9H
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 11-10-9H	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)				
9,100.00	7,065.00	7,071.00	7,071.00	62.91	141.84	90.00	2,860.88	-1,402.65	2,601.69	2,397.93	203.76	12.768	SF	
9,200.00	7,065.00	7,071.00	7,071.00	65.41	141.84	90.00	2,860.88	-1,402.65	2,627.78	2,422.04	205.74	12.772		
9,300.00	7,065.00	7,071.00	7,071.00	67.92	141.84	90.00	2,860.88	-1,402.65	2,657.37	2,449.75	207.62	12.799		
9,400.00	7,065.00	7,071.00	7,071.00	70.45	141.84	90.00	2,860.88	-1,402.65	2,690.36	2,480.96	209.40	12.848		
9,500.00	7,065.00	7,071.00	7,071.00	72.99	141.84	90.00	2,860.88	-1,402.65	2,726.61	2,515.55	211.07	12.918		
9,600.00	7,065.00	7,071.00	7,071.00	75.54	141.84	90.00	2,860.88	-1,402.65	2,766.01	2,553.38	212.63	13.009		
9,700.00	7,065.00	7,071.00	7,071.00	78.11	141.84	90.00	2,860.88	-1,402.65	2,808.42	2,594.34	214.08	13.118		
9,800.00	7,065.00	7,071.00	7,071.00	80.68	141.84	90.00	2,860.88	-1,402.65	2,853.70	2,638.27	215.43	13.246		
9,900.00	7,065.00	7,071.00	7,071.00	83.27	141.84	90.00	2,860.88	-1,402.65	2,901.73	2,685.04	216.68	13.392		
10,000.00	7,065.00	7,071.00	7,071.00	85.86	141.84	90.00	2,860.88	-1,402.65	2,952.36	2,734.52	217.84	13.553		
10,100.00	7,065.00	7,071.00	7,071.00	88.46	141.84	90.00	2,860.88	-1,402.65	3,005.46	2,786.57	218.90	13.730		
10,200.00	7,065.00	7,071.00	7,071.00	91.07	141.84	90.00	2,860.88	-1,402.65	3,060.92	2,841.05	219.87	13.921		
10,300.00	7,065.00	7,071.00	7,071.00	93.68	141.84	90.00	2,860.88	-1,402.65	3,118.59	2,897.83	220.76	14.127		
10,400.00	7,065.00	7,071.00	7,071.00	96.30	141.84	90.00	2,860.88	-1,402.65	3,178.37	2,956.79	221.57	14.345		
10,500.00	7,065.00	7,071.00	7,071.00	98.93	141.84	90.00	2,860.88	-1,402.65	3,240.13	3,017.81	222.31	14.575		

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 11-10-9H
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 11-10-9H	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
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)				
11,000.00	7,065.00	7,026.00	7,026.00	112.13	140.93	-90.00	-2,420.84	-5,655.25	3,244.10	3,006.49	237.61	13.653		
11,100.00	7,065.00	7,026.00	7,026.00	114.78	140.93	-90.00	-2,420.84	-5,655.25	3,190.80	2,949.54	241.26	13.225		
11,200.00	7,065.00	7,026.00	7,026.00	117.43	140.93	-90.00	-2,420.84	-5,655.25	3,139.79	2,894.81	244.98	12.816		
11,300.00	7,065.00	7,026.00	7,026.00	120.09	140.93	-90.00	-2,420.84	-5,655.25	3,091.17	2,842.42	248.75	12.427		
11,400.00	7,065.00	7,026.00	7,026.00	122.75	140.93	-90.00	-2,420.84	-5,655.25	3,045.06	2,792.50	252.56	12.057		
11,500.00	7,065.00	7,026.00	7,026.00	125.41	140.93	-90.00	-2,420.84	-5,655.25	3,001.58	2,745.18	256.40	11.707		
11,600.00	7,065.00	7,026.00	7,026.00	128.08	140.93	-90.00	-2,420.84	-5,655.25	2,960.83	2,700.58	260.26	11.377		
11,700.00	7,065.00	7,026.00	7,026.00	130.74	140.93	-90.00	-2,420.84	-5,655.25	2,922.94	2,658.83	264.11	11.067		
11,800.00	7,065.00	7,026.00	7,026.00	133.41	140.93	-90.00	-2,420.84	-5,655.25	2,888.02	2,620.08	267.94	10.779		
11,900.00	7,065.00	7,026.00	7,026.00	136.09	140.93	-90.00	-2,420.84	-5,655.25	2,856.17	2,584.43	271.74	10.511		
12,000.00	7,065.00	7,026.00	7,026.00	138.76	140.93	-90.00	-2,420.84	-5,655.25	2,827.50	2,552.02	275.48	10.264		
12,100.00	7,065.00	7,026.00	7,026.00	141.44	140.93	-90.00	-2,420.84	-5,655.25	2,802.11	2,522.97	279.14	10.038		
12,200.00	7,065.00	7,026.00	7,026.00	144.11	140.93	-90.00	-2,420.84	-5,655.25	2,780.09	2,497.37	282.71	9.834		
12,300.00	7,065.00	7,026.00	7,026.00	146.79	140.93	-90.00	-2,420.84	-5,655.25	2,761.51	2,475.34	286.17	9.650		
12,400.00	7,065.00	7,026.00	7,026.00	149.47	140.93	-90.00	-2,420.84	-5,655.25	2,746.45	2,456.97	289.48	9.487		
12,500.00	7,065.00	7,026.00	7,026.00	152.15	140.93	-90.00	-2,420.84	-5,655.25	2,734.97	2,442.32	292.65	9.346		
12,600.00	7,065.00	7,026.00	7,026.00	154.84	140.93	-90.00	-2,420.84	-5,655.25	2,727.11	2,431.47	295.64	9.224		
12,700.00	7,065.00	7,026.00	7,026.00	157.52	140.93	-90.00	-2,420.84	-5,655.25	2,722.90	2,424.45	298.45	9.124		
12,764.71	7,065.00	7,026.00	7,026.00	159.26	140.93	-90.00	-2,420.84	-5,655.25	2,722.13	2,421.97	300.16	9.069 CC		
12,800.00	7,065.00	7,026.00	7,026.00	160.21	140.93	-90.00	-2,420.84	-5,655.25	2,722.36	2,421.31	301.05	9.043 ES		
12,900.00	7,065.00	7,026.00	7,026.00	162.89	140.93	-90.00	-2,420.84	-5,655.25	2,725.49	2,422.04	303.45	8.982		
13,000.00	7,065.00	7,026.00	7,026.00	165.58	140.93	-90.00	-2,420.84	-5,655.25	2,732.28	2,426.66	305.62	8.940		
13,100.00	7,065.00	7,026.00	7,026.00	168.27	140.93	-90.00	-2,420.84	-5,655.25	2,742.70	2,435.13	307.57	8.917		
13,200.00	7,065.00	7,026.00	7,026.00	170.96	140.93	-90.00	-2,420.84	-5,655.25	2,756.71	2,447.42	309.29	8.913 SF		
13,300.00	7,065.00	7,026.00	7,026.00	173.65	140.93	-90.00	-2,420.84	-5,655.25	2,774.26	2,463.48	310.78	8.927		
13,400.00	7,065.00	7,026.00	7,026.00	176.35	140.93	-90.00	-2,420.84	-5,655.25	2,795.28	2,483.23	312.05	8.958		
13,500.00	7,065.00	7,026.00	7,026.00	179.04	140.93	-90.00	-2,420.84	-5,655.25	2,819.69	2,506.59	313.10	9.006		
13,600.00	7,065.00	7,026.00	7,026.00	181.73	140.93	-90.00	-2,420.84	-5,655.25	2,847.40	2,533.47	313.93	9.070		
13,700.00	7,065.00	7,026.00	7,026.00	184.43	140.93	-90.00	-2,420.84	-5,655.25	2,878.33	2,563.77	314.56	9.150		
13,800.00	7,065.00	7,026.00	7,026.00	187.12	140.93	-90.00	-2,420.84	-5,655.25	2,912.36	2,597.36	314.99	9.246		
13,900.00	7,065.00	7,026.00	7,026.00	189.82	140.93	-90.00	-2,420.84	-5,655.25	2,949.39	2,634.14	315.24	9.356		
14,000.00	7,065.00	7,026.00	7,026.00	192.52	140.93	-90.00	-2,420.84	-5,655.25	2,989.30	2,673.98	315.32	9.480		
14,100.00	7,065.00	7,026.00	7,026.00	195.21	140.93	-90.00	-2,420.84	-5,655.25	3,031.99	2,716.75	315.24	9.618		
14,200.00	7,065.00	7,026.00	7,026.00	197.91	140.93	-90.00	-2,420.84	-5,655.25	3,077.34	2,762.32	315.02	9.769		
14,300.00	7,065.00	7,026.00	7,026.00	200.61	140.93	-90.00	-2,420.84	-5,655.25	3,125.24	2,810.57	314.67	9.932		
14,400.00	7,065.00	7,026.00	7,026.00	203.31	140.93	-90.00	-2,420.84	-5,655.25	3,175.56	2,861.36	314.20	10.107		
14,500.00	7,065.00	7,026.00	7,026.00	206.01	140.93	-90.00	-2,420.84	-5,655.25	3,228.19	2,914.57	313.62	10.293		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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)				
14,900.00	7,065.00	6,727.00	6,727.00	216.82	134.90	-77.60	-1,114.98	-10,720.40	3,240.02	3,007.79	232.24	13.951		
15,000.00	7,065.00	6,727.00	6,727.00	219.52	134.90	-77.60	-1,114.98	-10,720.40	3,150.24	2,914.40	235.84	13.358		
15,100.00	7,065.00	6,727.00	6,727.00	222.22	134.90	-77.60	-1,114.98	-10,720.40	3,061.09	2,821.45	239.64	12.774		
15,200.00	7,065.00	6,727.00	6,727.00	224.93	134.90	-77.60	-1,114.98	-10,720.40	2,972.63	2,728.97	243.66	12.200		
15,300.00	7,065.00	6,727.00	6,727.00	227.63	134.90	-77.60	-1,114.98	-10,720.40	2,884.92	2,637.02	247.90	11.638		
15,400.00	7,065.00	6,727.00	6,727.00	230.34	134.90	-77.60	-1,114.98	-10,720.40	2,798.04	2,545.65	252.38	11.087		
15,495.74	7,065.00	6,727.00	6,727.00	232.93	134.90	-77.60	-1,114.98	-10,720.40	2,715.70	2,458.79	256.91	10.571	CC, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	-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			
400.00	400.00	399.90	399.88	1.22	1.21	173.31	-14.76	1.73	14.87	12.44	2.43	6.119			
500.00	499.98	499.61	499.45	1.58	1.56	122.37	-15.34	6.91	17.70	14.57	3.14	5.642			
594.97	594.82	594.11	593.61	1.92	1.91	114.84	-16.22	14.84	23.99	20.17	3.82	6.279			
600.00	599.84	599.13	598.61	1.94	1.93	114.66	-16.27	15.30	24.38	20.53	3.86	6.320			
700.00	699.61	698.81	697.86	2.30	2.30	111.95	-17.29	24.42	32.31	27.73	4.58	7.050			
800.00	799.37	798.48	797.11	2.66	2.68	110.31	-18.30	33.54	40.28	34.97	5.31	7.580			
900.00	899.14	898.16	896.37	3.03	3.06	109.21	-19.32	42.66	48.28	42.23	6.05	7.980			
1,000.00	998.91	997.84	995.62	3.40	3.44	108.43	-20.33	51.78	56.28	49.50	6.79	8.292			
1,100.00	1,098.68	1,097.51	1,094.87	3.77	3.83	107.84	-21.35	60.90	64.30	56.77	7.53	8.541			
1,200.00	1,198.45	1,197.19	1,194.13	4.14	4.21	107.38	-22.36	70.02	72.32	64.05	8.27	8.746			
1,300.00	1,298.22	1,296.87	1,293.38	4.51	4.60	107.01	-23.38	79.14	80.34	71.33	9.01	8.916			
1,400.00	1,397.99	1,396.54	1,392.63	4.88	4.98	106.71	-24.39	88.26	88.37	78.61	9.75	9.059			
1,500.00	1,497.75	1,496.22	1,491.89	5.26	5.37	106.46	-25.41	97.39	96.39	85.90	10.50	9.182			
1,600.00	1,597.52	1,595.89	1,591.14	5.63	5.76	106.25	-26.42	106.51	104.42	93.18	11.24	9.289			
1,700.00	1,697.29	1,695.57	1,690.39	6.00	6.15	106.07	-27.44	115.63	112.45	100.47	11.99	9.381			
1,800.00	1,797.06	1,795.25	1,789.64	6.37	6.53	105.91	-28.45	124.75	120.48	107.75	12.73	9.463			
1,900.00	1,896.83	1,894.92	1,888.90	6.75	6.92	105.77	-29.47	133.87	128.52	115.04	13.48	9.536			
2,000.00	1,996.60	1,994.60	1,988.15	7.12	7.31	105.65	-30.48	142.99	136.55	122.33	14.22	9.601			
2,100.00	2,096.37	2,094.28	2,087.40	7.49	7.70	105.54	-31.50	152.11	144.58	129.61	14.97	9.659			
2,200.00	2,196.13	2,193.95	2,186.66	7.86	8.09	105.45	-32.51	161.23	152.62	136.90	15.71	9.712			
2,300.00	2,295.90	2,293.63	2,285.91	8.24	8.48	105.36	-33.52	170.35	160.65	144.19	16.46	9.760			
2,400.00	2,395.67	2,393.31	2,385.16	8.61	8.87	105.28	-34.54	179.48	168.68	151.48	17.21	9.804			
2,500.00	2,495.44	2,492.98	2,484.42	8.98	9.25	105.21	-35.55	188.60	176.72	158.77	17.95	9.844			
2,600.00	2,595.21	2,592.66	2,583.67	9.36	9.64	105.14	-36.57	197.72	184.75	166.06	18.70	9.881			
2,700.00	2,694.98	2,692.34	2,682.92	9.73	10.03	105.08	-37.58	206.84	192.79	173.34	19.45	9.915			
2,800.00	2,794.75	2,792.01	2,782.18	10.10	10.42	105.03	-38.60	215.96	200.83	180.63	20.19	9.946			
2,900.00	2,894.51	2,891.69	2,881.43	10.48	10.81	104.98	-39.61	225.08	208.86	187.92	20.94	9.975			
3,000.00	2,994.28	2,991.37	2,980.68	10.85	11.20	104.93	-40.63	234.20	216.90	195.21	21.68	10.002			
3,100.00	3,094.05	3,091.04	3,079.93	11.22	11.59	104.89	-41.64	243.32	224.93	202.50	22.43	10.027			
3,200.00	3,193.82	3,190.72	3,179.19	11.60	11.98	104.85	-42.66	252.45	232.97	209.79	23.18	10.051			
3,300.00	3,293.59	3,290.39	3,278.44	11.97	12.37	104.81	-43.67	261.57	241.00	217.08	23.93	10.073			
3,400.00	3,393.36	3,390.07	3,377.69	12.35	12.76	104.77	-44.69	270.69	249.04	224.37	24.67	10.094			
3,500.00	3,493.12	3,489.75	3,476.95	12.72	13.14	104.74	-45.70	279.81	257.08	231.66	25.42	10.114			
3,600.00	3,592.89	3,589.42	3,576.20	13.09	13.53	104.71	-46.72	288.93	265.11	238.95	26.17	10.132			
3,700.00	3,692.66	3,689.10	3,675.45	13.47	13.92	104.68	-47.73	298.05	273.15	246.24	26.91	10.149			
3,800.00	3,792.43	3,788.78	3,774.71	13.84	14.31	104.65	-48.75	307.17	281.19	253.53	27.66	10.166			
3,900.00	3,892.20	3,888.45	3,873.96	14.21	14.70	104.63	-49.76	316.29	289.22	260.82	28.41	10.181			
4,000.00	3,991.97	3,988.13	3,973.21	14.59	15.09	104.60	-50.78	325.41	297.26	268.11	29.15	10.196			
4,100.00	4,091.74	4,087.81	4,072.46	14.96	15.48	104.58	-51.79	334.54	305.30	275.40	29.90	10.210			
4,200.00	4,191.50	4,187.48	4,171.72	15.33	15.87	104.55	-52.81	343.66	313.33	282.68	30.65	10.223			
4,300.00	4,291.27	4,287.16	4,270.97	15.71	16.26	104.53	-53.82	352.78	321.37	289.97	31.40	10.236			
4,400.00	4,391.04	4,386.84	4,370.22	16.08	16.65	104.51	-54.83	361.90	329.41	297.26	32.14	10.248			
4,500.00	4,490.81	4,486.51	4,469.48	16.46	17.04	104.49	-55.85	371.02	337.44	304.55	32.89	10.260			
4,600.00	4,590.58	4,586.19	4,568.73	16.83	17.43	104.48	-56.86	380.14	345.48	311.84	33.64	10.271			
4,700.00	4,690.35	4,685.87	4,667.98	17.20	17.82	104.46	-57.88	389.26	353.52	319.13	34.38	10.281			
4,800.00	4,790.12	4,785.54	4,767.24	17.58	18.21	104.44	-58.89	398.38	361.56	326.42	35.13	10.291			
4,900.00	4,889.88	4,885.22	4,866.49	17.95	18.60	104.43	-59.91	407.50	369.59	333.71	35.88	10.301			
5,000.00	4,989.65	4,984.89	4,965.74	18.32	18.99	104.41	-60.92	416.63	377.63	341.00	36.63	10.310			

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 11-10-9H
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 11-10-9H	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		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	5,089.42	5,084.57	5,065.00	18.70	19.38	104.40	-61.94	425.75	385.67	348.29	37.37	10.319		
5,200.00	5,189.19	5,184.25	5,164.25	19.07	19.76	104.38	-62.95	434.87	393.70	355.58	38.12	10.328		
5,300.00	5,288.96	5,283.92	5,263.50	19.45	20.15	104.37	-63.97	443.99	401.74	362.87	38.87	10.336		
5,400.00	5,388.73	5,383.60	5,362.75	19.82	20.54	104.36	-64.98	453.11	409.78	370.16	39.62	10.344		
5,500.00	5,488.49	5,483.28	5,462.01	20.19	20.93	104.34	-66.00	462.23	417.81	377.45	40.36	10.351		
5,600.00	5,588.26	5,582.95	5,561.26	20.57	21.32	104.33	-67.01	471.35	425.85	384.74	41.11	10.359		
5,700.00	5,688.03	5,682.63	5,660.51	20.94	21.71	104.32	-68.03	480.47	433.89	392.03	41.86	10.366		
5,800.00	5,787.80	5,782.31	5,759.77	21.31	22.10	104.31	-69.04	489.59	441.93	399.32	42.61	10.372		
5,900.00	5,887.57	5,881.98	5,859.02	21.69	22.49	104.30	-70.06	498.72	449.96	406.61	43.35	10.379		
6,000.00	5,987.34	5,981.66	5,958.27	22.06	22.88	104.29	-71.07	507.84	458.00	413.90	44.10	10.385		
6,100.00	6,087.11	6,081.34	6,057.53	22.44	23.27	104.28	-72.09	516.96	466.04	421.19	44.85	10.391		
6,200.00	6,186.87	6,181.01	6,156.78	22.81	23.66	104.27	-73.10	526.08	474.08	428.48	45.60	10.397		
6,300.00	6,286.64	6,280.69	6,256.03	23.18	24.05	104.26	-74.12	535.20	482.11	435.77	46.34	10.403		
6,400.00	6,386.41	6,380.36	6,355.29	23.56	24.44	104.25	-75.13	544.32	490.15	443.06	47.09	10.409		
6,482.24	6,468.46	6,462.33	6,436.91	23.86	24.76	104.24	-75.96	551.82	496.76	449.05	47.71	10.413		
6,500.00	6,486.19	6,480.02	6,454.52	23.93	24.83	103.74	-76.14	553.44	498.35	450.52	47.84	10.418		
6,550.00	6,536.08	6,529.53	6,503.81	24.10	25.02	-161.84	-76.65	557.97	504.60	456.42	48.19	10.472		
6,600.00	6,585.64	6,614.37	6,588.50	24.26	25.32	-145.20	-77.55	561.95	512.43	463.79	48.64	10.535		
6,650.00	6,634.49	6,725.06	6,698.21	24.40	25.60	-139.14	-78.87	548.73	517.58	468.89	48.69	10.630		
6,700.00	6,682.26	6,836.89	6,804.39	24.53	25.80	-135.34	-80.35	514.24	519.40	471.20	48.20	10.776		
6,750.00	6,728.60	6,946.31	6,899.88	24.64	25.94	-132.04	-81.87	461.17	517.98	470.57	47.41	10.926		
6,800.00	6,773.14	7,050.34	6,979.76	24.75	26.09	-128.76	-83.33	394.77	513.71	467.04	46.66	11.009		
6,850.00	6,815.54	7,147.10	7,042.17	24.84	26.28	-125.38	-84.67	320.99	507.16	460.87	46.29	10.956		
6,900.00	6,855.49	7,235.85	7,087.76	24.92	26.56	-121.94	-85.83	244.95	499.03	452.57	46.46	10.741		
6,950.00	6,892.68	7,316.76	7,118.65	24.99	26.94	-118.49	-86.83	170.25	489.96	442.78	47.18	10.385		
7,000.00	6,926.83	7,390.48	7,137.38	25.07	27.39	-115.07	-87.66	99.01	480.56	432.22	48.34	9.941		
7,050.00	6,957.68	7,457.88	7,146.38	25.19	27.89	-111.71	-88.35	32.26	471.35	421.56	49.79	9.466		
7,100.00	6,984.98	7,514.33	7,148.00	25.42	28.39	-108.79	-88.86	-24.15	462.83	411.50	51.33	9.017		
7,150.00	7,008.54	7,558.39	7,148.00	25.72	28.83	-106.74	-89.25	-68.21	456.27	403.58	52.69	8.659		
7,200.00	7,028.18	7,604.35	7,148.00	26.06	29.30	-104.83	-89.65	-114.16	451.68	397.71	53.97	8.369		
7,250.00	7,043.74	7,651.84	7,148.00	26.46	29.88	-103.18	-90.07	-161.65	448.63	393.36	55.26	8.118		
7,300.00	7,055.11	7,700.51	7,148.00	26.91	30.47	-101.91	-90.49	-210.32	446.73	390.22	56.50	7.906		
7,350.00	7,062.20	7,749.98	7,148.00	27.40	31.16	-101.08	-90.93	-259.80	445.70	387.90	57.80	7.741		
7,400.00	7,064.96	7,799.89	7,148.00	27.94	31.86	-100.75	-91.36	-309.70	445.34	386.28	59.06	7.511		
7,405.03	7,065.00	7,804.93	7,148.00	27.99	31.94	-100.74	-91.41	-314.74	445.33	386.15	59.19	7.524		
7,406.67	7,065.00	7,806.56	7,148.00	28.01	31.97	-100.74	-91.42	-316.37	445.34	386.10	59.23	7.519		
7,500.00	7,065.00	7,899.89	7,148.00	29.15	33.43	-100.74	-92.24	-409.70	445.37	383.59	61.78	7.209		
7,600.00	7,065.00	7,999.89	7,148.00	30.55	35.14	-100.74	-93.12	-509.70	445.41	380.58	64.83	6.870		
7,700.00	7,065.00	8,099.89	7,148.00	32.12	36.96	-100.74	-93.99	-609.69	445.45	377.28	68.17	6.534		
7,800.00	7,065.00	8,199.89	7,148.00	33.83	38.90	-100.74	-94.87	-709.69	445.49	373.73	71.76	6.208		
7,900.00	7,065.00	8,299.89	7,148.00	35.67	40.92	-100.74	-95.75	-809.68	445.52	369.97	75.55	5.897		
8,000.00	7,065.00	8,399.89	7,148.00	37.61	43.02	-100.74	-96.63	-909.68	445.56	366.03	79.53	5.602		
8,100.00	7,065.00	8,499.89	7,148.00	39.65	45.19	-100.73	-97.50	-1,009.68	445.60	361.93	83.67	5.326		
8,200.00	7,065.00	8,599.89	7,148.00	41.76	47.41	-100.73	-98.38	-1,109.67	445.64	357.70	87.94	5.068		
8,300.00	7,065.00	8,699.89	7,148.00	43.94	49.69	-100.73	-99.26	-1,209.67	445.68	353.36	92.32	4.828		
8,400.00	7,065.00	8,799.89	7,148.00	46.18	52.00	-100.73	-100.13	-1,309.66	445.72	348.91	96.80	4.604		
8,500.00	7,065.00	8,899.89	7,148.00	48.46	54.36	-100.73	-101.01	-1,409.66	445.75	344.39	101.37	4.397		
8,600.00	7,065.00	8,999.89	7,148.00	50.79	56.74	-100.73	-101.89	-1,509.66	445.79	339.78	106.01	4.205		
8,700.00	7,065.00	9,099.89	7,148.00	53.16	59.16	-100.73	-102.76	-1,609.65	445.83	335.11	110.72	4.027		
8,800.00	7,065.00	9,199.89	7,148.00	55.56	61.60	-100.73	-103.64	-1,709.65	445.87	330.39	115.48	3.861		
8,900.00	7,065.00	9,299.89	7,148.00	57.99	64.07	-100.73	-104.52	-1,809.65	445.91	325.61	120.30	3.707		
9,000.00	7,065.00	9,399.89	7,148.00	60.44	66.55	-100.73	-105.39	-1,909.64	445.94	320.79	125.16	3.563		

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 11-10-9H
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 11-10-9H	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			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		
9,100.00	7,065.00	9,499.89	7,148.00	62.91	69.05	-100.73	-106.27	-2,009.64	445.98	315.93	130.05	3.429		
9,200.00	7,065.00	9,599.89	7,148.00	65.41	71.57	-100.72	-107.15	-2,109.63	446.02	311.03	134.99	3.304		
9,300.00	7,065.00	9,699.89	7,148.00	67.92	74.10	-100.72	-108.03	-2,209.63	446.06	306.11	139.95	3.187		
9,400.00	7,065.00	9,799.89	7,148.00	70.45	76.65	-100.72	-108.90	-2,309.63	446.10	301.15	144.95	3.078		
9,500.00	7,065.00	9,899.89	7,148.00	72.99	79.20	-100.72	-109.78	-2,409.62	446.14	296.17	149.96	2.975		
9,600.00	7,065.00	9,999.89	7,148.00	75.54	81.77	-100.72	-110.66	-2,509.62	446.17	291.17	155.01	2.878		
9,700.00	7,065.00	10,099.89	7,148.00	78.11	84.35	-100.72	-111.53	-2,609.61	446.21	286.14	160.07	2.788		
9,800.00	7,065.00	10,199.89	7,148.00	80.68	86.94	-100.72	-112.41	-2,709.61	446.25	281.10	165.15	2.702		
9,900.00	7,065.00	10,299.89	7,148.00	83.27	89.53	-100.72	-113.29	-2,809.61	446.29	276.04	170.25	2.621		
10,000.00	7,065.00	10,399.89	7,148.00	85.86	92.13	-100.72	-114.16	-2,909.60	446.33	270.97	175.36	2.545		
10,100.00	7,065.00	10,499.89	7,148.00	88.46	94.74	-100.72	-115.04	-3,009.60	446.37	265.88	180.49	2.473		
10,200.00	7,065.00	10,599.89	7,148.00	91.07	97.36	-100.72	-115.92	-3,109.60	446.40	260.77	185.63	2.405		
10,300.00	7,065.00	10,699.89	7,148.00	93.68	99.98	-100.71	-116.79	-3,209.59	446.44	255.66	190.78	2.340		
10,400.00	7,065.00	10,799.89	7,148.00	96.30	102.60	-100.71	-117.67	-3,309.59	446.48	250.53	195.95	2.279		
10,500.00	7,065.00	10,899.89	7,148.00	98.93	105.23	-100.71	-118.55	-3,409.58	446.52	245.40	201.12	2.220		
10,600.00	7,065.00	10,999.89	7,148.00	101.56	107.87	-100.71	-119.43	-3,509.58	446.56	240.25	206.31	2.165		
10,700.00	7,065.00	11,099.89	7,148.00	104.20	110.51	-100.71	-120.30	-3,609.58	446.59	235.10	211.50	2.112		
10,800.00	7,065.00	11,199.89	7,148.00	106.83	113.15	-100.71	-121.18	-3,709.57	446.63	229.93	216.70	2.061		
10,900.00	7,065.00	11,299.89	7,148.00	109.48	115.80	-100.71	-122.06	-3,809.57	446.67	224.76	221.91	2.013		
11,000.00	7,065.00	11,399.89	7,148.00	112.13	118.45	-100.71	-122.93	-3,909.56	446.71	219.59	227.12	1.967		
11,100.00	7,065.00	11,499.89	7,148.00	114.78	121.10	-100.71	-123.81	-4,009.56	446.75	214.40	232.35	1.923		
11,200.00	7,065.00	11,599.89	7,148.00	117.43	123.75	-100.71	-124.69	-4,109.56	446.79	209.21	237.57	1.881		
11,300.00	7,065.00	11,699.89	7,148.00	120.09	126.41	-100.71	-125.56	-4,209.55	446.82	204.02	242.81	1.840		
11,400.00	7,065.00	11,799.89	7,148.00	122.75	129.08	-100.70	-126.44	-4,309.55	446.86	198.82	248.05	1.802		
11,500.00	7,065.00	11,899.89	7,148.00	125.41	131.74	-100.70	-127.32	-4,409.55	446.90	193.61	253.29	1.764		
11,600.00	7,065.00	11,999.89	7,148.00	128.08	134.41	-100.70	-128.19	-4,509.54	446.94	188.40	258.54	1.729		
11,700.00	7,065.00	12,099.89	7,148.00	130.74	137.07	-100.70	-129.07	-4,609.54	446.98	183.18	263.79	1.694		
11,800.00	7,065.00	12,199.89	7,148.00	133.41	139.75	-100.70	-129.95	-4,709.53	447.02	177.96	269.05	1.661		
11,900.00	7,065.00	12,299.89	7,148.00	136.09	142.42	-100.70	-130.83	-4,809.53	447.05	172.74	274.31	1.630		
12,000.00	7,065.00	12,399.89	7,148.00	138.76	145.09	-100.70	-131.70	-4,909.53	447.09	167.51	279.58	1.599		
12,100.00	7,065.00	12,499.89	7,148.00	141.44	147.77	-100.70	-132.58	-5,009.52	447.13	162.28	284.85	1.570		
12,200.00	7,065.00	12,599.89	7,148.00	144.11	150.45	-100.70	-133.46	-5,109.52	447.17	157.05	290.12	1.541		
12,300.00	7,065.00	12,699.89	7,148.00	146.79	153.13	-100.70	-134.33	-5,209.51	447.21	151.81	295.40	1.514		
12,400.00	7,065.00	12,799.89	7,148.00	149.47	155.81	-100.69	-135.21	-5,309.51	447.25	146.57	300.68	1.487 Level 3		
12,500.00	7,065.00	12,899.89	7,148.00	152.15	158.49	-100.69	-136.09	-5,409.51	447.28	141.33	305.96	1.462 Level 3		
12,600.00	7,065.00	12,999.89	7,148.00	154.84	161.17	-100.69	-136.96	-5,509.50	447.32	136.08	311.24	1.437 Level 3		
12,700.00	7,065.00	13,099.89	7,148.00	157.52	163.86	-100.69	-137.84	-5,609.50	447.36	130.83	316.53	1.413 Level 3		
12,800.00	7,065.00	13,199.89	7,148.00	160.21	166.54	-100.69	-138.72	-5,709.50	447.40	125.58	321.82	1.390 Level 3		
12,900.00	7,065.00	13,299.89	7,148.00	162.89	169.23	-100.69	-139.59	-5,809.49	447.44	120.33	327.11	1.368 Level 3		
13,000.00	7,065.00	13,399.89	7,148.00	165.58	171.92	-100.69	-140.47	-5,909.49	447.47	115.07	332.40	1.346 Level 3		
13,100.00	7,065.00	13,499.89	7,148.00	168.27	174.61	-100.69	-141.35	-6,009.48	447.51	109.81	337.70	1.325 Level 3		
13,200.00	7,065.00	13,599.89	7,148.00	170.96	177.30	-100.69	-142.23	-6,109.48	447.55	104.56	343.00	1.305 Level 3		
13,300.00	7,065.00	13,699.89	7,148.00	173.65	179.99	-100.69	-143.10	-6,209.48	447.59	99.29	348.30	1.285 Level 3		
13,400.00	7,065.00	13,799.89	7,148.00	176.35	182.68	-100.69	-143.98	-6,309.47	447.63	94.03	353.60	1.266 Level 3		
13,500.00	7,065.00	13,899.89	7,148.00	179.04	185.37	-100.68	-144.86	-6,409.47	447.67	88.77	358.90	1.247 Level 3		
13,600.00	7,065.00	13,999.89	7,148.00	181.73	188.07	-100.68	-145.73	-6,509.46	447.70	83.50	364.21	1.229 Level 3		
13,700.00	7,065.00	14,099.89	7,148.00	184.43	190.76	-100.68	-146.61	-6,609.46	447.74	78.23	369.51	1.212 Level 3		
13,800.00	7,065.00	14,199.89	7,148.00	187.12	193.46	-100.68	-147.49	-6,709.46	447.78	72.96	374.82	1.195 Level 3		
13,900.00	7,065.00	14,299.89	7,148.00	189.82	196.15	-100.68	-148.36	-6,809.45	447.82	67.69	380.13	1.178 Level 3		
14,000.00	7,065.00	14,399.89	7,148.00	192.52	198.85	-100.68	-149.24	-6,909.45	447.86	62.42	385.44	1.162 Level 3		
14,100.00	7,065.00	14,499.89	7,148.00	195.21	201.55	-100.68	-150.12	-7,009.45	447.90	57.14	390.75	1.146 Level 3		
14,200.00	7,065.00	14,599.89	7,148.00	197.91	204.24	-100.68	-150.99	-7,109.44	447.93	51.87	396.07	1.131 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 11-10-9H
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 11-10-9H	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		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	
14,300.00	7,065.00	14,699.89	7,148.00	200.61	206.94	-100.68		-100.68	-151.87	-7,209.44	447.97	46.59	401.38	1.116	Level 3	
14,400.00	7,065.00	14,799.89	7,148.00	203.31	209.64	-100.68		-100.68	-152.75	-7,309.43	448.01	41.31	406.70	1.102	Level 3	
14,500.00	7,065.00	14,899.89	7,148.00	206.01	212.34	-100.68		-100.68	-153.63	-7,409.43	448.05	36.03	412.02	1.087	Level 3	
14,600.00	7,065.00	14,999.89	7,148.00	208.71	215.04	-100.67		-100.67	-154.50	-7,509.43	448.09	30.75	417.33	1.074	Level 3	
14,700.00	7,065.00	15,099.89	7,148.00	211.41	217.74	-100.67		-100.67	-155.38	-7,609.42	448.12	25.47	422.65	1.060	Level 3	
14,800.00	7,065.00	15,199.89	7,148.00	214.12	220.44	-100.67		-100.67	-156.26	-7,709.42	448.16	20.19	427.98	1.047	Level 3	
14,900.00	7,065.00	15,299.89	7,148.00	216.82	223.15	-100.67		-100.67	-157.13	-7,809.41	448.20	14.90	433.30	1.034	Level 3	
15,000.00	7,065.00	15,399.89	7,148.00	219.52	225.85	-100.67		-100.67	-158.01	-7,909.41	448.24	9.62	438.62	1.022	Level 3	
15,100.00	7,065.00	15,499.89	7,148.00	222.22	228.55	-100.67		-100.67	-158.89	-8,009.41	448.28	4.33	443.94	1.010	Level 3	
15,200.00	7,065.00	15,599.89	7,148.00	224.93	231.26	-100.67		-100.67	-159.76	-8,109.40	448.32	-0.95	449.27	0.998	Level 3	
15,300.00	7,065.00	15,699.89	7,148.00	227.63	233.96	-100.67		-100.67	-160.64	-8,209.40	448.35	-6.24	454.59	0.986	Level 3	
15,400.00	7,065.00	15,799.89	7,148.00	230.34	236.66	-100.67		-100.67	-161.52	-8,309.40	448.39	-11.53	459.92	0.975	Level 3	
15,495.74	7,065.00	15,895.63	7,148.00	232.93	239.25	-100.67		-100.67	-162.36	-8,405.13	448.43	-16.59	465.02	0.964	Level 3, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	-32.79	0.00	32.79					
100.00	100.00	100.00	100.00	0.14	0.14	180.00	-32.79	0.00	32.79	32.50	0.29	114.328		
200.00	200.00	200.00	200.00	0.50	0.50	180.00	-32.79	0.00	32.79	31.78	1.00	32.665		
300.00	300.00	300.00	300.00	0.86	0.86	180.00	-32.79	0.00	32.79	31.07	1.72	19.055		
400.00	400.00	400.00	400.00	1.22	1.22	180.00	-32.79	0.00	32.79	30.35	2.44	13.450	CC, ES	
500.00	499.98	499.98	499.98	1.58	1.58	143.46	-32.79	0.00	34.17	31.02	3.15	10.836		
594.97	594.82	594.82	594.82	1.92	1.92	147.78	-32.79	0.00	38.21	34.37	3.84	9.961		
600.00	599.84	599.84	599.84	1.94	1.94	148.05	-32.79	0.00	38.50	34.63	3.87	9.938		
700.00	699.61	699.61	699.61	2.30	2.29	152.70	-32.79	0.00	44.42	39.83	4.59	9.678		
800.00	799.37	797.87	797.85	2.66	2.63	155.21	-34.38	0.50	52.01	46.72	5.29	9.839		
900.00	899.14	895.64	895.49	3.03	2.95	155.40	-39.16	2.00	62.56	56.60	5.97	10.486		
1,000.00	998.91	994.13	993.68	3.40	3.29	154.47	-46.51	4.30	75.42	68.77	6.66	11.332		
1,100.00	1,098.68	1,093.27	1,092.49	3.77	3.64	153.74	-54.12	6.68	88.49	81.13	7.36	12.030		
1,200.00	1,198.45	1,192.41	1,191.31	4.14	3.99	153.20	-61.72	9.06	101.56	93.50	8.06	12.600		
1,300.00	1,298.22	1,291.54	1,290.13	4.51	4.35	152.78	-69.33	11.44	114.64	105.87	8.77	13.075		
1,400.00	1,397.99	1,390.68	1,388.94	4.88	4.71	152.45	-76.94	13.83	127.73	118.25	9.48	13.475		
1,500.00	1,497.75	1,489.82	1,487.76	5.26	5.08	152.18	-84.54	16.21	140.81	130.62	10.19	13.816		
1,600.00	1,597.52	1,588.96	1,586.58	5.63	5.45	151.95	-92.15	18.59	153.91	143.00	10.91	14.111		
1,700.00	1,697.29	1,688.09	1,685.39	6.00	5.82	151.76	-99.75	20.97	167.00	155.38	11.62	14.367		
1,800.00	1,797.06	1,787.23	1,784.21	6.37	6.19	151.60	-107.36	23.35	180.09	167.75	12.34	14.593		
1,900.00	1,896.83	1,886.37	1,883.03	6.75	6.56	151.46	-114.97	25.73	193.19	180.13	13.06	14.793		
2,000.00	1,996.60	1,985.51	1,981.84	7.12	6.93	151.34	-122.57	28.12	206.29	192.51	13.78	14.971		
2,100.00	2,096.37	2,084.65	2,080.66	7.49	7.31	151.23	-130.18	30.50	219.39	204.89	14.50	15.131		
2,200.00	2,196.13	2,183.78	2,179.48	7.86	7.68	151.14	-137.78	32.88	232.48	217.26	15.22	15.275		
2,300.00	2,295.90	2,282.92	2,278.29	8.24	8.06	151.05	-145.39	35.26	245.58	229.64	15.94	15.406		
2,400.00	2,395.67	2,382.06	2,377.11	8.61	8.44	150.97	-153.00	37.64	258.68	242.02	16.66	15.525		
2,500.00	2,495.44	2,481.20	2,475.93	8.98	8.81	150.90	-160.60	40.02	271.78	254.40	17.38	15.633		
2,600.00	2,595.21	2,580.33	2,574.75	9.36	9.19	150.84	-168.21	42.41	284.88	266.78	18.11	15.733		
2,700.00	2,694.98	2,679.47	2,673.56	9.73	9.57	150.78	-175.81	44.79	297.98	279.15	18.83	15.825		
2,800.00	2,794.75	2,778.61	2,772.38	10.10	9.95	150.73	-183.42	47.17	311.09	291.53	19.55	15.910		
2,900.00	2,894.51	2,877.75	2,871.20	10.48	10.33	150.68	-191.02	49.55	324.19	303.91	20.28	15.988		
3,000.00	2,994.28	2,976.89	2,970.01	10.85	10.71	150.64	-198.63	51.93	337.29	316.29	21.00	16.061		
3,100.00	3,094.05	3,076.02	3,068.83	11.22	11.09	150.60	-206.24	54.31	350.39	328.67	21.72	16.129		
3,200.00	3,193.82	3,175.16	3,167.65	11.60	11.47	150.56	-213.84	56.70	363.49	341.04	22.45	16.193		
3,300.00	3,293.59	3,274.30	3,266.46	11.97	11.85	150.52	-221.45	59.08	376.59	353.42	23.17	16.252		
3,400.00	3,393.36	3,373.44	3,365.28	12.35	12.23	150.49	-229.05	61.46	389.70	365.80	23.90	16.308		
3,500.00	3,493.12	3,472.57	3,464.10	12.72	12.61	150.46	-236.66	63.84	402.80	378.18	24.62	16.360		
3,600.00	3,592.89	3,571.71	3,562.91	13.09	12.99	150.43	-244.27	66.22	415.90	390.56	25.34	16.410		
3,700.00	3,692.66	3,670.85	3,661.73	13.47	13.37	150.40	-251.87	68.60	429.00	402.93	26.07	16.456		
3,800.00	3,792.43	3,769.99	3,760.55	13.84	13.75	150.38	-259.48	70.99	442.11	415.31	26.79	16.500		
3,900.00	3,892.20	3,869.12	3,859.36	14.21	14.13	150.35	-267.08	73.37	455.21	427.69	27.52	16.542		
4,000.00	3,991.97	3,968.26	3,958.18	14.59	14.51	150.33	-274.69	75.75	468.31	440.07	28.24	16.581		
4,100.00	4,091.74	4,067.40	4,057.00	14.96	14.89	150.31	-282.30	78.13	481.41	452.44	28.97	16.618		
4,200.00	4,191.50	4,166.54	4,155.81	15.33	15.27	150.29	-289.90	80.51	494.52	464.82	29.69	16.654		
4,300.00	4,291.27	4,265.68	4,254.63	15.71	15.65	150.27	-297.51	82.90	507.62	477.20	30.42	16.687		
4,400.00	4,391.04	4,364.81	4,353.45	16.08	16.03	150.25	-305.11	85.28	520.72	489.58	31.14	16.719		
4,500.00	4,490.81	4,463.95	4,452.26	16.46	16.41	150.23	-312.72	87.66	533.82	501.95	31.87	16.750		
4,600.00	4,590.58	4,563.09	4,551.08	16.83	16.80	150.22	-320.33	90.04	546.93	514.33	32.60	16.779		
4,700.00	4,690.35	4,662.23	4,649.90	17.20	17.18	150.20	-327.93	92.42	560.03	526.71	33.32	16.807		
4,800.00	4,790.12	4,761.36	4,748.72	17.58	17.56	150.18	-335.54	94.80	573.13	539.09	34.05	16.834		
4,900.00	4,889.88	4,860.50	4,847.53	17.95	17.94	150.17	-343.14	97.19	586.24	551.47	34.77	16.859		
5,000.00	4,989.65	4,959.64	4,946.35	18.32	18.32	150.16	-350.75	99.57	599.34	563.84	35.50	16.884		

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 11-10-9H
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 11-10-9H	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											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	5,089.42	5,058.78	5,045.17	18.70	18.70	150.14	-358.35	101.95	612.44	576.22	36.22	16.907		
5,200.00	5,189.19	5,157.91	5,143.98	19.07	19.08	150.13	-365.96	104.33	625.55	588.60	36.95	16.930		
5,300.00	5,288.96	5,257.05	5,242.80	19.45	19.47	150.12	-373.57	106.71	638.65	600.97	37.68	16.951		
5,400.00	5,388.73	5,356.19	5,341.62	19.82	19.85	150.11	-381.17	109.09	651.75	613.35	38.40	16.972		
5,500.00	5,488.49	5,455.33	5,440.43	20.19	20.23	150.10	-388.78	111.48	664.86	625.73	39.13	16.992		
5,600.00	5,588.26	5,554.47	5,539.25	20.57	20.61	150.08	-396.38	113.86	677.96	638.11	39.85	17.011		
5,700.00	5,688.03	5,653.60	5,638.07	20.94	20.99	150.07	-403.99	116.24	691.06	650.48	40.58	17.030		
5,800.00	5,787.80	5,752.74	5,736.88	21.31	21.37	150.06	-411.60	118.62	704.17	662.86	41.31	17.048		
5,900.00	5,887.57	5,851.88	5,835.70	21.69	21.76	150.05	-419.20	121.00	717.27	675.24	42.03	17.065		
6,000.00	5,987.34	5,951.02	5,934.52	22.06	22.14	150.05	-426.81	123.38	730.37	687.62	42.76	17.082		
6,100.00	6,087.11	6,050.15	6,033.33	22.44	22.52	150.04	-434.41	125.77	743.48	699.99	43.48	17.098		
6,200.00	6,186.87	6,149.29	6,132.15	22.81	22.90	150.03	-442.02	128.15	756.58	712.37	44.21	17.113		
6,300.00	6,286.64	6,248.43	6,230.97	23.18	23.28	150.02	-449.63	130.53	769.68	724.75	44.94	17.128		
6,400.00	6,386.41	6,347.57	6,329.78	23.56	23.67	150.01	-457.23	132.91	782.79	737.12	45.66	17.143		
6,482.24	6,468.46	6,429.09	6,411.05	23.86	23.98	150.00	-463.49	134.87	793.56	747.30	46.26	17.154		
6,500.00	6,486.19	6,446.71	6,428.60	23.93	24.05	176.61	-464.84	135.29	795.85	749.46	46.39	17.156		
6,550.00	6,536.08	6,496.19	6,477.93	24.10	24.24	-115.81	-468.63	136.48	801.83	755.09	46.74	17.156		
6,600.00	6,585.64	6,545.25	6,526.83	24.26	24.43	-98.87	-472.40	137.66	807.15	760.08	47.07	17.148		
6,650.00	6,634.49	6,593.51	6,574.93	24.40	24.61	-93.21	-476.10	138.82	811.91	764.52	47.39	17.133		
6,700.00	6,682.26	6,640.59	6,621.86	24.53	24.80	-90.87	-479.71	139.95	816.25	768.56	47.70	17.114		
6,750.00	6,728.60	6,686.15	6,667.27	24.64	24.97	-89.98	-483.21	141.05	820.38	772.39	47.99	17.096		
6,800.00	6,773.14	6,726.81	6,707.80	24.75	25.12	-89.69	-486.34	140.73	824.62	776.38	48.24	17.093		
6,850.00	6,815.54	6,768.43	6,749.15	24.84	25.27	-89.77	-489.56	137.42	829.18	780.67	48.50	17.095		
6,900.00	6,855.49	6,811.42	6,791.50	24.92	25.42	-90.10	-492.88	130.85	834.06	785.27	48.78	17.098		
6,950.00	6,892.68	6,856.01	6,834.77	24.99	25.56	-90.62	-496.30	120.70	839.25	790.17	49.08	17.100		
7,000.00	6,926.83	6,902.44	6,878.85	25.07	25.70	-91.27	-499.82	106.57	844.76	795.35	49.40	17.099		
7,050.00	6,957.68	6,951.02	6,923.58	25.19	25.84	-92.04	-503.43	88.01	850.54	800.78	49.76	17.093		
7,100.00	6,984.98	7,002.09	6,968.73	25.42	25.97	-92.90	-507.11	64.48	856.56	806.41	50.15	17.080		
7,150.00	7,008.54	7,056.05	7,013.97	25.72	26.10	-93.86	-510.84	35.33	862.74	812.16	50.57	17.059		
7,200.00	7,028.18	7,113.36	7,058.80	26.06	26.22	-94.90	-514.59	-0.15	869.00	817.96	51.04	17.027		
7,250.00	7,043.74	7,174.52	7,102.47	26.46	26.34	-96.02	-518.32	-42.76	875.22	823.67	51.55	16.978		
7,300.00	7,055.11	7,240.06	7,143.96	26.91	26.47	-97.21	-521.94	-93.32	881.25	829.13	52.12	16.908		
7,350.00	7,062.20	7,310.51	7,181.81	27.40	26.63	-98.46	-525.35	-152.58	886.92	834.13	52.79	16.802		
7,400.00	7,064.96	7,386.30	7,214.11	27.94	26.92	-99.73	-528.41	-221.01	892.00	838.41	53.59	16.645		
7,406.67	7,065.00	7,396.83	7,217.88	28.01	26.98	-99.90	-528.78	-230.84	892.62	838.92	53.70	16.621		
7,500.00	7,065.00	7,556.45	7,252.22	29.15	28.31	-102.03	-532.72	-386.14	898.19	842.26	55.94	16.057		
7,600.00	7,065.00	7,676.60	7,254.00	30.55	29.74	-102.14	-533.86	-506.24	898.47	839.78	58.69	15.310		
7,700.00	7,065.00	7,776.60	7,254.00	32.12	31.13	-102.14	-534.69	-606.24	898.46	836.87	61.59	14.589		
7,800.00	7,065.00	7,876.60	7,254.00	33.83	32.69	-102.14	-535.52	-706.23	898.45	833.66	64.80	13.866		
7,900.00	7,065.00	7,976.60	7,254.00	35.67	34.39	-102.14	-536.35	-806.23	898.44	830.17	68.27	13.160		
8,000.00	7,065.00	8,076.60	7,254.00	37.61	36.22	-102.14	-537.18	-906.23	898.44	826.46	71.98	12.482		
8,100.00	7,065.00	8,176.60	7,254.00	39.65	38.16	-102.14	-538.01	-1,006.22	898.43	822.55	75.88	11.841		
8,200.00	7,065.00	8,276.60	7,254.00	41.76	40.18	-102.14	-538.84	-1,106.22	898.42	818.48	79.94	11.238		
8,300.00	7,065.00	8,376.60	7,254.00	43.94	42.29	-102.14	-539.67	-1,206.22	898.41	814.26	84.15	10.676		
8,400.00	7,065.00	8,476.60	7,254.00	46.18	44.46	-102.14	-540.50	-1,306.21	898.41	809.92	88.48	10.154		
8,500.00	7,065.00	8,576.60	7,254.00	48.46	46.69	-102.14	-541.33	-1,406.21	898.40	805.48	92.92	9.669		
8,600.00	7,065.00	8,676.60	7,254.00	50.79	48.96	-102.14	-542.16	-1,506.21	898.39	800.95	97.44	9.220		
8,700.00	7,065.00	8,776.60	7,254.00	53.16	51.29	-102.14	-542.99	-1,606.20	898.38	796.34	102.04	8.804		
8,800.00	7,065.00	8,876.60	7,254.00	55.56	53.65	-102.14	-543.82	-1,706.20	898.37	791.66	106.72	8.418		
8,900.00	7,065.00	8,976.60	7,254.00	57.99	56.04	-102.14	-544.65	-1,806.20	898.37	786.92	111.45	8.061		
9,000.00	7,065.00	9,076.60	7,254.00	60.44	58.46	-102.14	-545.48	-1,906.19	898.36	782.13	116.23	7.729		
9,100.00	7,065.00	9,176.60	7,254.00	62.91	60.90	-102.14	-546.31	-2,006.19	898.35	777.29	121.06	7.421		

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 11-10-9H
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 11-10-9H	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						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)					
9,200.00	7,065.00	9,276.60	7,254.00	65.41	63.37	-102.15	-547.14	-2,106.19	898.34	772.41	125.93	7.134			
9,300.00	7,065.00	9,376.60	7,254.00	67.92	65.86	-102.15	-547.97	-2,206.18	898.34	767.50	130.84	6.866			
9,400.00	7,065.00	9,476.60	7,254.00	70.45	68.37	-102.15	-548.80	-2,306.18	898.33	762.55	135.78	6.616			
9,500.00	7,065.00	9,576.60	7,254.00	72.99	70.89	-102.15	-549.63	-2,406.18	898.32	757.58	140.75	6.383			
9,600.00	7,065.00	9,676.60	7,254.00	75.54	73.43	-102.15	-550.46	-2,506.17	898.31	752.57	145.74	6.164			
9,700.00	7,065.00	9,776.60	7,254.00	78.11	75.98	-102.15	-551.29	-2,606.17	898.31	747.55	150.76	5.959			
9,800.00	7,065.00	9,876.60	7,254.00	80.68	78.54	-102.15	-552.12	-2,706.16	898.30	742.50	155.79	5.766			
9,900.00	7,065.00	9,976.60	7,254.00	83.27	81.11	-102.15	-552.95	-2,806.16	898.29	737.44	160.85	5.585			
10,000.00	7,065.00	10,076.60	7,254.00	85.86	83.69	-102.15	-553.78	-2,906.16	898.28	732.36	165.93	5.414			
10,100.00	7,065.00	10,176.60	7,254.00	88.46	86.28	-102.15	-554.61	-3,006.15	898.28	727.26	171.02	5.253			
10,200.00	7,065.00	10,276.60	7,254.00	91.07	88.88	-102.15	-555.44	-3,106.15	898.27	722.15	176.12	5.100			
10,300.00	7,065.00	10,376.60	7,254.00	93.68	91.48	-102.15	-556.27	-3,206.15	898.26	717.02	181.24	4.956			
10,400.00	7,065.00	10,476.60	7,254.00	96.30	94.09	-102.15	-557.10	-3,306.14	898.25	711.88	186.37	4.820			
10,500.00	7,065.00	10,576.60	7,254.00	98.93	96.71	-102.15	-557.93	-3,406.14	898.25	706.73	191.51	4.690			
10,600.00	7,065.00	10,676.60	7,254.00	101.56	99.33	-102.15	-558.77	-3,506.14	898.24	701.57	196.66	4.567			
10,700.00	7,065.00	10,776.60	7,254.00	104.20	101.96	-102.15	-559.60	-3,606.13	898.23	696.41	201.82	4.451			
10,800.00	7,065.00	10,876.60	7,254.00	106.83	104.59	-102.15	-560.43	-3,706.13	898.22	691.23	206.99	4.339			
10,900.00	7,065.00	10,976.60	7,254.00	109.48	107.23	-102.15	-561.26	-3,806.13	898.21	686.04	212.17	4.233			
11,000.00	7,065.00	11,076.60	7,254.00	112.13	109.87	-102.15	-562.09	-3,906.12	898.21	680.85	217.36	4.132			
11,100.00	7,065.00	11,176.60	7,254.00	114.78	112.52	-102.15	-562.92	-4,006.12	898.20	675.65	222.55	4.036			
11,200.00	7,065.00	11,276.60	7,254.00	117.43	115.17	-102.15	-563.75	-4,106.12	898.19	670.44	227.75	3.944			
11,300.00	7,065.00	11,376.60	7,254.00	120.09	117.82	-102.15	-564.58	-4,206.11	898.18	665.23	232.96	3.856			
11,400.00	7,065.00	11,476.60	7,254.00	122.75	120.47	-102.15	-565.41	-4,306.11	898.18	660.01	238.17	3.771			
11,500.00	7,065.00	11,576.60	7,254.00	125.41	123.13	-102.15	-566.24	-4,406.11	898.17	654.79	243.38	3.690			
11,600.00	7,065.00	11,676.60	7,254.00	128.08	125.79	-102.15	-567.07	-4,506.10	898.16	649.56	248.60	3.613			
11,700.00	7,065.00	11,776.60	7,254.00	130.74	128.46	-102.15	-567.90	-4,606.10	898.15	644.32	253.83	3.538			
11,800.00	7,065.00	11,876.60	7,254.00	133.41	131.12	-102.15	-568.73	-4,706.10	898.15	639.09	259.06	3.467			
11,900.00	7,065.00	11,976.60	7,254.00	136.09	133.79	-102.15	-569.56	-4,806.09	898.14	633.84	264.29	3.398			
12,000.00	7,065.00	12,076.60	7,254.00	138.76	136.46	-102.15	-570.39	-4,906.09	898.13	628.60	269.53	3.332			
12,100.00	7,065.00	12,176.60	7,254.00	141.44	139.13	-102.15	-571.22	-5,006.09	898.12	623.35	274.78	3.269			
12,200.00	7,065.00	12,276.60	7,254.00	144.11	141.81	-102.15	-572.05	-5,106.08	898.12	618.09	280.02	3.207			
12,300.00	7,065.00	12,376.60	7,254.00	146.79	144.48	-102.15	-572.88	-5,206.08	898.11	612.84	285.27	3.148			
12,400.00	7,065.00	12,476.60	7,254.00	149.47	147.16	-102.15	-573.71	-5,306.08	898.10	607.58	290.52	3.091			
12,500.00	7,065.00	12,576.60	7,254.00	152.15	149.84	-102.15	-574.54	-5,406.07	898.09	602.32	295.78	3.036			
12,600.00	7,065.00	12,676.60	7,254.00	154.84	152.52	-102.15	-575.37	-5,506.07	898.09	597.05	301.03	2.983			
12,700.00	7,065.00	12,776.60	7,254.00	157.52	155.20	-102.15	-576.20	-5,606.07	898.08	591.78	306.29	2.932			
12,800.00	7,065.00	12,876.60	7,254.00	160.21	157.88	-102.15	-577.03	-5,706.06	898.07	586.51	311.56	2.883			
12,900.00	7,065.00	12,976.60	7,254.00	162.89	160.57	-102.15	-577.86	-5,806.06	898.06	581.24	316.82	2.835			
13,000.00	7,065.00	13,076.60	7,254.00	165.58	163.25	-102.15	-578.69	-5,906.05	898.05	575.96	322.09	2.788			
13,100.00	7,065.00	13,176.60	7,254.00	168.27	165.94	-102.15	-579.52	-6,006.05	898.05	570.69	327.36	2.743			
13,200.00	7,065.00	13,276.60	7,254.00	170.96	168.63	-102.15	-580.35	-6,106.05	898.04	565.41	332.63	2.700			
13,300.00	7,065.00	13,376.60	7,254.00	173.65	171.32	-102.15	-581.18	-6,206.04	898.03	560.13	337.91	2.658			
13,400.00	7,065.00	13,476.60	7,254.00	176.35	174.01	-102.15	-582.01	-6,306.04	898.02	554.84	343.18	2.617			
13,500.00	7,065.00	13,576.60	7,254.00	179.04	176.70	-102.15	-582.84	-6,406.04	898.02	549.56	348.46	2.577			
13,600.00	7,065.00	13,676.60	7,254.00	181.73	179.39	-102.15	-583.67	-6,506.03	898.01	544.27	353.74	2.539			
13,700.00	7,065.00	13,776.60	7,254.00	184.43	182.09	-102.15	-584.50	-6,606.03	898.00	538.98	359.02	2.501			
13,800.00	7,065.00	13,876.60	7,254.00	187.12	184.78	-102.15	-585.33	-6,706.03	897.99	533.69	364.30	2.465			
13,900.00	7,065.00	13,976.60	7,254.00	189.82	187.47	-102.15	-586.16	-6,806.02	897.99	528.40	369.58	2.430			
14,000.00	7,065.00	14,076.60	7,254.00	192.52	190.17	-102.15	-586.99	-6,906.02	897.98	523.11	374.87	2.395			
14,100.00	7,065.00	14,176.60	7,254.00	195.21	192.87	-102.15	-587.82	-7,006.02	897.97	517.82	380.15	2.362			
14,200.00	7,065.00	14,276.60	7,254.00	197.91	195.56	-102.15	-588.65	-7,106.01	897.96	512.52	385.44	2.330			
14,300.00	7,065.00	14,376.60	7,254.00	200.61	198.26	-102.15	-589.48	-7,206.01	897.96	507.22	390.73	2.298			

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 11-10-9H
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 11-10-9H	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			
14,400.00	7,065.00	14,476.60	7,254.00	203.31	200.96	-102.15	-590.31	-7,306.01	897.95	501.93	396.02	2.267			
14,500.00	7,065.00	14,576.60	7,254.00	206.01	203.66	-102.15	-591.14	-7,406.00	897.94	496.63	401.31	2.238			
14,600.00	7,065.00	14,676.60	7,254.00	208.71	206.36	-102.15	-591.97	-7,506.00	897.93	491.33	406.61	2.208			
14,700.00	7,065.00	14,776.60	7,254.00	211.41	209.06	-102.15	-592.80	-7,606.00	897.92	486.03	411.90	2.180			
14,800.00	7,065.00	14,876.60	7,254.00	214.12	211.76	-102.15	-593.63	-7,705.99	897.92	480.72	417.19	2.152			
14,900.00	7,065.00	14,976.60	7,254.00	216.82	214.46	-102.15	-594.46	-7,805.99	897.91	475.42	422.49	2.125			
15,000.00	7,065.00	15,076.60	7,254.00	219.52	217.16	-102.15	-595.29	-7,905.99	897.90	470.12	427.79	2.099			
15,100.00	7,065.00	15,176.60	7,254.00	222.22	219.86	-102.15	-596.12	-8,005.98	897.89	464.81	433.08	2.073			
15,200.00	7,065.00	15,276.60	7,254.00	224.93	222.57	-102.15	-596.95	-8,105.98	897.89	459.51	438.38	2.048			
15,300.00	7,065.00	15,376.60	7,254.00	227.63	225.27	-102.15	-597.78	-8,205.98	897.88	454.20	443.68	2.024			
15,400.00	7,065.00	15,476.60	7,254.00	230.34	227.97	-102.15	-598.61	-8,305.97	897.87	448.89	448.98	2.000			
15,495.74	7,065.00	15,572.45	7,254.00	232.93	230.56	-102.15	-599.40	-8,401.82	897.85	443.80	454.06	1.977 SF			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		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	47.07	0.29	165.141		
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-47.36	0.00	47.36	46.36	1.00	47.183		
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-47.36	0.00	47.36	45.64	1.72	27.524		
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-47.36	0.00	47.36	44.92	2.44	19.428	CC, ES	
400.00	400.00	400.00	400.00	1.22	1.22	-180.00	-47.36	0.00	48.74	45.59	3.15	15.456		
500.00	499.98	499.98	499.98	1.58	1.58	142.91	-47.36	0.00	52.72	48.89	3.84	13.745		
594.97	594.82	594.82	594.82	1.92	1.92	146.07	-47.36	0.00	53.01	49.13	3.87	13.683		
600.00	599.84	599.84	599.84	1.94	1.94	146.28	-47.36	0.00	60.29	55.72	4.57	13.192		
700.00	699.61	697.80	697.78	2.30	2.27	149.15	-48.93	0.57	70.67	65.42	5.25	13.454		
800.00	799.37	795.29	795.14	2.66	2.60	150.05	-53.62	2.25	84.02	78.09	5.94	14.157		
900.00	899.14	892.09	891.58	3.03	2.93	149.63	-61.36	5.04	100.34	93.73	6.62	15.169		
1,000.00	998.91	987.99	986.81	3.40	3.28	148.45	-72.04	8.89	119.40	112.09	7.30	16.350		
1,100.00	1,098.68	1,084.28	1,082.02	3.77	3.64	146.97	-85.51	13.74	139.02	131.01	8.01	17.353		
1,200.00	1,198.45	1,182.30	1,178.87	4.14	4.03	145.78	-99.74	18.86	158.68	149.96	8.72	18.193		
1,300.00	1,298.22	1,280.32	1,275.71	4.51	4.43	144.88	-113.96	23.98	178.38	168.94	9.44	18.896		
1,400.00	1,397.99	1,378.34	1,372.56	4.88	4.83	144.18	-128.19	29.11	198.09	187.93	10.16	19.499		
1,500.00	1,497.75	1,476.36	1,469.41	5.26	5.24	143.62	-142.41	34.23	217.82	206.94	10.88	20.020		
1,600.00	1,597.52	1,574.38	1,566.26	5.63	5.66	143.16	-156.64	39.35	237.56	225.96	11.60	20.474		
1,700.00	1,697.29	1,672.40	1,663.10	6.00	6.07	142.78	-170.86	44.47	257.31	244.98	12.33	20.873		
1,800.00	1,797.06	1,770.42	1,759.95	6.37	6.50	142.45	-185.09	49.60	277.06	264.01	13.05	21.226		
1,900.00	1,896.83	1,868.44	1,856.80	6.75	6.92	142.18	-199.31	54.72	296.82	283.05	13.78	21.541		
2,000.00	1,996.60	1,966.46	1,953.65	7.12	7.34	141.93	-213.54	59.84	316.59	302.08	14.51	21.824		
2,100.00	2,096.37	2,064.48	2,050.50	7.49	7.77	141.72	-227.76	64.96	336.36	321.12	15.23	22.079		
2,200.00	2,196.13	2,162.51	2,147.34	7.86	8.20	141.54	-241.99	70.09	356.13	340.17	15.96	22.309		
2,300.00	2,295.90	2,260.53	2,244.19	8.24	8.63	141.37	-256.21	75.21	375.91	359.21	16.69	22.519		
2,400.00	2,395.67	2,358.55	2,341.04	8.61	9.06	141.22	-270.44	80.33	395.68	378.26	17.42	22.711		
2,500.00	2,495.44	2,456.57	2,437.89	8.98	9.49	141.09	-284.66	85.45	415.46	397.31	18.15	22.887		
2,600.00	2,595.21	2,554.59	2,534.74	9.36	9.92	140.97	-298.89	90.58	435.24	416.36	18.88	23.049		
2,700.00	2,694.98	2,652.61	2,631.58	9.73	10.35	140.86	-313.11	95.70	455.02	435.41	19.61	23.199		
2,800.00	2,794.75	2,750.63	2,728.43	10.10	10.78	140.76	-327.34	100.82	474.81	454.46	20.35	23.338		
2,900.00	2,894.51	2,848.65	2,825.28	10.48	11.22	140.67	-341.56	105.94	494.59	473.52	21.08	23.466		
3,000.00	2,994.28	2,946.67	2,922.13	10.85	11.65	140.59	-355.79	111.07	514.38	492.57	21.81	23.586		
3,100.00	3,094.05	3,044.69	3,018.97	11.22	12.09	140.51	-370.02	116.19	534.16	511.62	22.54	23.698		
3,200.00	3,193.82	3,142.71	3,115.82	11.60	12.52	140.44	-384.24	121.31	553.95	530.68	23.27	23.803		
3,300.00	3,293.59	3,240.74	3,212.67	11.97	12.96	140.37	-398.47	126.43	573.74	549.73	24.00	23.901		
3,400.00	3,393.36	3,338.76	3,309.52	12.35	13.39	140.31	-412.69	131.56	593.52	568.79	24.74	23.993		
3,500.00	3,493.12	3,436.78	3,406.37	12.72	13.83	140.25	-426.92	136.68	613.31	587.84	25.47	24.080		
3,600.00	3,592.89	3,534.80	3,503.21	13.09	14.26	140.19	-441.14	141.80	633.10	606.90	26.20	24.162		
3,700.00	3,692.66	3,632.82	3,600.06	13.47	14.70	140.14	-455.37	146.92	652.89	625.96	26.94	24.239		
3,800.00	3,792.43	3,730.84	3,696.91	13.84	15.13	140.09	-469.59	152.05	672.68	645.01	27.67	24.312		
3,900.00	3,892.20	3,828.86	3,793.76	14.21	15.57	140.05	-483.82	157.17	692.47	664.07	28.40	24.381		
4,000.00	3,991.97	3,926.88	3,890.61	14.59	16.01	140.01	-498.04	162.29	712.26	683.13	29.14	24.447		
4,100.00	4,091.74	4,024.90	3,987.45	14.96	16.44	139.97	-512.27	167.41	732.05	702.18	29.87	24.509		
4,200.00	4,191.50	4,122.92	4,084.30	15.33	16.88	139.93	-526.49	172.54	751.84	721.24	30.60	24.568		
4,300.00	4,291.27	4,220.94	4,181.15	15.71	17.32	139.89	-540.72	177.66	771.64	740.30	31.34	24.624		
4,400.00	4,391.04	4,318.97	4,278.00	16.08	17.75	139.86	-554.94	182.78	791.43	759.36	32.07	24.678		
4,500.00	4,490.81	4,416.99	4,374.84	16.46	18.19	139.83	-569.17	187.90	811.22	778.42	32.80	24.729		
4,600.00	4,590.58	4,515.01	4,471.69	16.83	18.63	139.80	-583.39	193.03	831.01	797.47	33.54	24.778		
4,700.00	4,690.35	4,613.03	4,568.54	17.20	19.06	139.77	-597.62	198.15	850.80	816.53	34.27	24.825		
4,800.00	4,790.12	4,711.05	4,665.39	17.58	19.50	139.74	-611.84	203.27	870.60	835.59	35.01	24.870		
4,900.00	4,889.88	4,809.07	4,762.24	17.95	19.94	139.71	-626.07	208.39	890.39	854.65	35.74	24.913		
5,000.00	4,989.65	4,907.09	4,859.08	18.32	20.38	139.69	-640.29	213.52						

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 11-10-9H
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 11-10-9H	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	5,089.42	5,005.11	4,955.93	18.70	20.81	139.66	-654.52	218.64	910.18	873.71	36.47	24.954		
5,200.00	5,189.19	5,103.13	5,052.78	19.07	21.25	139.64	-668.74	223.76	929.98	892.77	37.21	24.993		
5,300.00	5,288.96	5,201.15	5,149.63	19.45	21.69	139.62	-682.97	228.88	949.77	911.82	37.94	25.031		
5,400.00	5,388.73	5,299.17	5,246.47	19.82	22.13	139.59	-697.20	234.01	969.56	930.88	38.68	25.067		
5,500.00	5,488.49	5,397.20	5,343.32	20.19	22.57	139.57	-711.42	239.13	989.36	949.94	39.41	25.102		
5,600.00	5,588.26	5,495.22	5,440.17	20.57	23.00	139.55	-725.65	244.25	1,009.15	969.00	40.15	25.136		
5,700.00	5,688.03	5,593.24	5,537.02	20.94	23.44	139.53	-739.87	249.37	1,028.94	988.06	40.88	25.168		
5,800.00	5,787.80	5,691.26	5,633.87	21.31	23.88	139.52	-754.10	254.50	1,048.74	1,007.12	41.62	25.200		
5,900.00	5,887.57	5,789.28	5,730.71	21.69	24.32	139.50	-768.32	259.62	1,068.53	1,026.18	42.35	25.230		
6,000.00	5,987.34	5,887.30	5,827.56	22.06	24.76	139.48	-782.55	264.74	1,088.32	1,045.24	43.09	25.259		
6,100.00	6,087.11	5,985.32	5,924.41	22.44	25.19	139.46	-796.77	269.86	1,108.12	1,064.30	43.82	25.287		
6,200.00	6,186.87	6,083.34	6,021.26	22.81	25.63	139.45	-811.00	274.98	1,127.91	1,083.35	44.56	25.314		
6,300.00	6,286.64	6,181.36	6,118.11	23.18	26.07	139.43	-825.22	280.11	1,147.71	1,102.41	45.29	25.340		
6,400.00	6,386.41	6,279.38	6,214.95	23.56	26.51	139.42	-839.45	285.23	1,167.50	1,121.47	46.03	25.365		
6,482.24	6,468.46	6,359.99	6,294.60	23.86	26.87	139.41	-851.15	289.44	1,183.78	1,137.15	46.63	25.385		
6,500.00	6,486.19	6,377.40	6,311.80	23.93	26.95	136.14	-853.67	290.35	1,187.30	1,140.54	46.76	25.390		
6,550.00	6,536.08	6,426.22	6,360.04	24.10	27.17	-125.76	-860.76	292.90	1,197.29	1,150.18	47.11	25.415		
6,600.00	6,585.64	6,474.50	6,407.74	24.26	27.38	-108.15	-867.76	295.43	1,207.37	1,159.93	47.43	25.453		
6,650.00	6,634.49	6,521.87	6,454.54	24.40	27.59	-101.67	-874.64	297.90	1,217.53	1,169.79	47.74	25.503		
6,700.00	6,682.26	6,572.52	6,504.62	24.53	27.81	-98.38	-882.00	299.30	1,227.78	1,179.72	48.05	25.550		
6,750.00	6,728.60	6,626.25	6,557.66	24.64	28.03	-96.37	-889.85	299.05	1,237.92	1,189.55	48.37	25.592		
6,800.00	6,773.14	6,681.94	6,612.05	24.75	28.22	-94.98	-897.93	287.40	1,247.87	1,199.19	48.68	25.632		
6,850.00	6,815.54	6,739.74	6,667.34	24.84	28.41	-93.97	-906.20	272.82	1,257.53	1,208.54	48.99	25.667		
6,900.00	6,855.49	6,799.79	6,722.93	24.92	28.58	-93.20	-914.56	251.79	1,266.79	1,217.49	49.31	25.692		
6,950.00	6,892.68	6,862.20	6,778.06	24.99	28.72	-92.59	-922.92	223.83	1,275.56	1,225.93	49.63	25.701		
7,000.00	6,926.83	6,927.02	6,831.78	25.07	28.85	-92.11	-931.12	188.55	1,283.71	1,233.73	49.98	25.686		
7,050.00	6,957.68	6,994.24	6,882.94	25.19	28.96	-91.71	-939.02	145.73	1,291.13	1,240.77	50.37	25.635		
7,100.00	6,984.98	7,063.75	6,930.24	25.42	29.05	-91.37	-946.40	95.40	1,297.73	1,246.90	50.83	25.532		
7,150.00	7,008.54	7,135.31	6,972.27	25.72	29.12	-91.08	-953.07	37.92	1,303.40	1,252.01	51.39	25.364		
7,200.00	7,028.18	7,208.59	7,007.62	26.06	29.19	-90.81	-958.81	-25.95	1,308.05	1,255.98	52.07	25.121		
7,250.00	7,043.74	7,283.11	7,034.99	26.46	29.24	-90.56	-963.42	-95.05	1,311.60	1,258.67	52.93	24.781		
7,300.00	7,055.11	7,358.32	7,053.39	26.91	29.34	-90.32	-966.73	-167.85	1,314.01	1,260.06	53.95	24.356		
7,350.00	7,062.20	7,433.59	7,062.20	27.40	29.52	-90.07	-968.65	-242.53	1,315.24	1,260.11	55.13	23.856		
7,400.00	7,064.96	7,493.69	7,063.00	27.94	29.81	-89.91	-969.27	-302.60	1,315.46	1,259.17	56.29	23.369		
7,406.67	7,065.00	7,500.36	7,063.00	28.01	29.86	-89.91	-969.33	-309.27	1,315.47	1,259.03	56.44	23.309		
7,500.00	7,065.00	7,593.69	7,063.00	29.15	30.68	-89.91	-970.10	-402.60	1,315.46	1,256.74	58.72	22.403		
7,600.00	7,065.00	7,693.69	7,063.00	30.55	31.93	-89.91	-970.93	-502.60	1,315.45	1,253.92	61.53	21.379		
7,700.00	7,065.00	7,793.69	7,063.00	32.12	33.43	-89.91	-971.76	-602.59	1,315.45	1,250.77	64.68	20.338		
7,800.00	7,065.00	7,893.69	7,063.00	33.83	35.11	-89.91	-972.60	-702.59	1,315.44	1,247.32	68.12	19.311		
7,900.00	7,065.00	7,993.69	7,063.00	35.67	36.92	-89.91	-973.43	-802.59	1,315.43	1,243.63	71.81	18.319		
8,000.00	7,065.00	8,093.69	7,063.00	37.61	38.84	-89.91	-974.26	-902.58	1,315.43	1,239.72	75.71	17.375		
8,100.00	7,065.00	8,193.69	7,063.00	39.65	40.85	-89.91	-975.09	-1,002.58	1,315.42	1,235.63	79.79	16.487		
8,200.00	7,065.00	8,293.69	7,063.00	41.76	42.95	-89.91	-975.92	-1,102.58	1,315.41	1,231.39	84.02	15.656		
8,300.00	7,065.00	8,393.69	7,063.00	43.94	45.11	-89.91	-976.75	-1,202.57	1,315.41	1,227.02	88.39	14.882		
8,400.00	7,065.00	8,493.69	7,063.00	46.18	47.33	-89.91	-977.58	-1,302.57	1,315.40	1,222.53	92.87	14.164		
8,500.00	7,065.00	8,593.69	7,063.00	48.46	49.60	-89.91	-978.41	-1,402.57	1,315.39	1,217.94	97.45	13.498		
8,600.00	7,065.00	8,693.69	7,063.00	50.79	51.91	-89.91	-979.25	-1,502.56	1,315.39	1,213.27	102.12	12.881		
8,700.00	7,065.00	8,793.69	7,063.00	53.16	54.26	-89.91	-980.08	-1,602.56	1,315.38	1,208.53	106.85	12.310		
8,800.00	7,065.00	8,893.69	7,063.00	55.56	56.65	-89.91	-980.91	-1,702.56	1,315.37	1,203.72	111.66	11.781		
8,900.00	7,065.00	8,993.69	7,063.00	57.99	59.06	-89.91	-981.74	-1,802.55	1,315.37	1,198.85	116.52	11.289		
9,000.00	7,065.00	9,093.69	7,063.00	60.44	61.50	-89.91	-982.57	-1,902.55	1,315.36	1,193.94	121.42	10.833		
9,100.00	7,065.00	9,193.69	7,063.00	62.91	63.96	-89.91	-983.40	-2,002.55	1,315.35	1,188.98	126.38	10.408		

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 11-10-9H
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 11-10-9H	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				
9,200.00	7,065.00	9,293.69	7,063.00	65.41	66.44	-89.91	-984.23	-2,102.54	1,315.35	1,183.98	131.37	10.013				
9,300.00	7,065.00	9,393.69	7,063.00	67.92	68.94	-89.91	-985.06	-2,202.54	1,315.34	1,178.95	136.39	9.644				
9,400.00	7,065.00	9,493.69	7,063.00	70.45	71.45	-89.91	-985.90	-2,302.54	1,315.33	1,173.88	141.45	9.299				
9,500.00	7,065.00	9,593.69	7,063.00	72.99	73.98	-89.91	-986.73	-2,402.53	1,315.33	1,168.79	146.53	8.976				
9,600.00	7,065.00	9,693.69	7,063.00	75.54	76.53	-89.91	-987.56	-2,502.53	1,315.32	1,163.68	151.64	8.674				
9,700.00	7,065.00	9,793.69	7,063.00	78.11	79.08	-89.91	-988.39	-2,602.53	1,315.31	1,158.54	156.78	8.390				
9,800.00	7,065.00	9,893.69	7,063.00	80.68	81.65	-89.91	-989.22	-2,702.52	1,315.31	1,153.38	161.93	8.123				
9,900.00	7,065.00	9,993.69	7,063.00	83.27	84.22	-89.91	-990.05	-2,802.52	1,315.30	1,148.20	167.10	7.871				
10,000.00	7,065.00	10,093.69	7,063.00	85.86	86.81	-89.91	-990.88	-2,902.51	1,315.29	1,143.01	172.29	7.634				
10,100.00	7,065.00	10,193.69	7,063.00	88.46	89.40	-89.91	-991.72	-3,002.51	1,315.29	1,137.80	177.49	7.411				
10,200.00	7,065.00	10,293.69	7,063.00	91.07	92.00	-89.91	-992.55	-3,102.51	1,315.28	1,132.57	182.71	7.199				
10,300.00	7,065.00	10,393.69	7,063.00	93.68	94.60	-89.91	-993.38	-3,202.50	1,315.27	1,127.34	187.94	6.999				
10,400.00	7,065.00	10,493.69	7,063.00	96.30	97.22	-89.91	-994.21	-3,302.50	1,315.27	1,122.09	193.18	6.809				
10,500.00	7,065.00	10,593.69	7,063.00	98.93	99.83	-89.91	-995.04	-3,402.50	1,315.26	1,116.83	198.43	6.628				
10,600.00	7,065.00	10,693.69	7,063.00	101.56	102.46	-89.91	-995.87	-3,502.49	1,315.25	1,111.56	203.69	6.457				
10,700.00	7,065.00	10,793.69	7,063.00	104.20	105.09	-89.91	-996.70	-3,602.49	1,315.25	1,106.28	208.96	6.294				
10,800.00	7,065.00	10,893.69	7,063.00	106.83	107.72	-89.91	-997.53	-3,702.49	1,315.24	1,100.99	214.24	6.139				
10,900.00	7,065.00	10,993.69	7,063.00	109.48	110.36	-89.91	-998.37	-3,802.48	1,315.23	1,095.70	219.53	5.991				
11,000.00	7,065.00	11,093.69	7,063.00	112.13	113.00	-89.91	-999.20	-3,902.48	1,315.23	1,090.40	224.83	5.850				
11,100.00	7,065.00	11,193.69	7,063.00	114.78	115.65	-89.91	-1,000.03	-4,002.48	1,315.22	1,085.09	230.13	5.715				
11,200.00	7,065.00	11,293.69	7,063.00	117.43	118.29	-89.91	-1,000.86	-4,102.47	1,315.21	1,079.77	235.44	5.586				
11,300.00	7,065.00	11,393.69	7,063.00	120.09	120.95	-89.91	-1,001.69	-4,202.47	1,315.21	1,074.45	240.75	5.463				
11,400.00	7,065.00	11,493.69	7,063.00	122.75	123.60	-89.91	-1,002.52	-4,302.47	1,315.20	1,069.12	246.07	5.345				
11,500.00	7,065.00	11,593.69	7,063.00	125.41	126.26	-89.91	-1,003.35	-4,402.46	1,315.19	1,063.79	251.40	5.231				
11,600.00	7,065.00	11,693.69	7,063.00	128.08	128.92	-89.91	-1,004.18	-4,502.46	1,315.18	1,058.45	256.73	5.123				
11,700.00	7,065.00	11,793.69	7,063.00	130.74	131.58	-89.91	-1,005.02	-4,602.46	1,315.18	1,053.11	262.07	5.018				
11,800.00	7,065.00	11,893.69	7,063.00	133.41	134.25	-89.91	-1,005.85	-4,702.45	1,315.17	1,047.76	267.41	4.918				
11,900.00	7,065.00	11,993.69	7,063.00	136.09	136.92	-89.91	-1,006.68	-4,802.45	1,315.16	1,042.41	272.75	4.822				
12,000.00	7,065.00	12,093.69	7,063.00	138.76	139.59	-89.91	-1,007.51	-4,902.45	1,315.16	1,037.06	278.10	4.729				
12,100.00	7,065.00	12,193.69	7,063.00	141.44	142.26	-89.91	-1,008.34	-5,002.44	1,315.15	1,031.70	283.45	4.640				
12,200.00	7,065.00	12,293.69	7,063.00	144.11	144.93	-89.91	-1,009.17	-5,102.44	1,315.14	1,026.34	288.81	4.554				
12,300.00	7,065.00	12,393.69	7,063.00	146.79	147.61	-89.91	-1,010.00	-5,202.44	1,315.14	1,020.97	294.16	4.471				
12,400.00	7,065.00	12,493.69	7,063.00	149.47	150.28	-89.91	-1,010.84	-5,302.43	1,315.13	1,015.61	299.52	4.391				
12,500.00	7,065.00	12,593.69	7,063.00	152.15	152.96	-89.91	-1,011.67	-5,402.43	1,315.12	1,010.24	304.89	4.313				
12,600.00	7,065.00	12,693.69	7,063.00	154.84	155.64	-89.91	-1,012.50	-5,502.42	1,315.12	1,004.86	310.26	4.239				
12,700.00	7,065.00	12,793.69	7,063.00	157.52	158.32	-89.91	-1,013.33	-5,602.42	1,315.11	999.49	315.62	4.167				
12,800.00	7,065.00	12,893.69	7,063.00	160.21	161.00	-89.91	-1,014.16	-5,702.42	1,315.10	994.11	321.00	4.097				
12,900.00	7,065.00	12,993.69	7,063.00	162.89	163.69	-89.91	-1,014.99	-5,802.41	1,315.10	988.73	326.37	4.029				
13,000.00	7,065.00	13,093.69	7,063.00	165.58	166.37	-89.91	-1,015.82	-5,902.41	1,315.09	983.34	331.75	3.964				
13,100.00	7,065.00	13,193.69	7,063.00	168.27	169.06	-89.91	-1,016.65	-6,002.41	1,315.08	977.96	337.13	3.901				
13,200.00	7,065.00	13,293.69	7,063.00	170.96	171.75	-89.91	-1,017.49	-6,102.40	1,315.08	972.57	342.51	3.840				
13,300.00	7,065.00	13,393.69	7,063.00	173.65	174.44	-89.91	-1,018.32	-6,202.40	1,315.07	967.18	347.89	3.780				
13,400.00	7,065.00	13,493.69	7,063.00	176.35	177.13	-89.91	-1,019.15	-6,302.40	1,315.06	961.79	353.27	3.722				
13,500.00	7,065.00	13,593.69	7,063.00	179.04	179.82	-89.91	-1,019.98	-6,402.39	1,315.06	956.40	358.66	3.667				
13,600.00	7,065.00	13,693.69	7,063.00	181.73	182.51	-89.91	-1,020.81	-6,502.39	1,315.05	951.00	364.05	3.612				
13,700.00	7,065.00	13,793.69	7,063.00	184.43	185.20	-89.91	-1,021.64	-6,602.39	1,315.04	945.61	369.44	3.560				
13,800.00	7,065.00	13,893.69	7,063.00	187.12	187.89	-89.91	-1,022.47	-6,702.38	1,315.04	940.21	374.83	3.508				
13,900.00	7,065.00	13,993.69	7,063.00	189.82	190.59	-89.91	-1,023.30	-6,802.38	1,315.03	934.81	380.22	3.459				
14,000.00	7,065.00	14,093.69	7,063.00	192.52	193.28	-89.91	-1,024.14	-6,902.38	1,315.02	929.41	385.62	3.410				
14,100.00	7,065.00	14,193.69	7,063.00	195.21	195.98	-89.91	-1,024.97	-7,002.37	1,315.02	924.00	391.01	3.363				
14,200.00	7,065.00	14,293.69	7,063.00	197.91	198.67	-89.91	-1,025.80	-7,102.37	1,315.01	918.60	396.41	3.317				
14,300.00	7,065.00	14,393.69	7,063.00	200.61	201.37	-89.91	-1,026.63	-7,202.37	1,315.00	913.20	401.81	3.273				

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 11-10-9H
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 11-10-9H	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)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,400.00	7,065.00	14,493.69	7,063.00	203.31	204.07	-89.91		-89.91	-1,027.46	-7,302.36	1,315.00	907.79	407.21	3.229		
14,500.00	7,065.00	14,593.69	7,063.00	206.01	206.77	-89.91		-89.91	-1,028.29	-7,402.36	1,314.99	902.38	412.61	3.187		
14,600.00	7,065.00	14,693.69	7,063.00	208.71	209.46	-89.91		-89.91	-1,029.12	-7,502.36	1,314.98	896.97	418.01	3.146		
14,700.00	7,065.00	14,793.69	7,063.00	211.41	212.16	-89.91		-89.91	-1,029.96	-7,602.35	1,314.98	891.57	423.41	3.106		
14,800.00	7,065.00	14,893.69	7,063.00	214.12	214.86	-89.91		-89.91	-1,030.79	-7,702.35	1,314.97	886.15	428.82	3.067		
14,900.00	7,065.00	14,993.69	7,063.00	216.82	217.56	-89.91		-89.91	-1,031.62	-7,802.35	1,314.96	880.74	434.22	3.028		
15,000.00	7,065.00	15,093.69	7,063.00	219.52	220.27	-89.91		-89.91	-1,032.45	-7,902.34	1,314.96	875.33	439.63	2.991		
15,100.00	7,065.00	15,193.69	7,063.00	222.22	222.97	-89.91		-89.91	-1,033.28	-8,002.34	1,314.95	869.92	445.03	2.955		
15,200.00	7,065.00	15,293.69	7,063.00	224.93	225.67	-89.91		-89.91	-1,034.11	-8,102.34	1,314.94	864.50	450.44	2.919		
15,300.00	7,065.00	15,393.69	7,063.00	227.63	228.37	-89.91		-89.91	-1,034.94	-8,202.33	1,314.94	859.09	455.85	2.885		
15,400.00	7,065.00	15,493.69	7,063.00	230.34	231.07	-89.91		-89.91	-1,035.77	-8,302.33	1,314.93	853.67	461.26	2.851		
15,495.74	7,065.00	15,589.42	7,063.00	232.93	233.66	-89.91		-89.91	-1,036.57	-8,398.06	1,314.92	848.49	466.44	2.819 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		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	-65.57	0.00	65.57					
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-65.57	0.00	65.57	65.29	0.29	228.657		
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-65.57	0.00	65.57	64.57	1.00	65.331		
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-65.57	0.00	65.57	63.85	1.72	38.110		
400.00	400.00	400.00	400.00	1.22	1.22	-180.00	-65.57	0.00	65.57	63.14	2.44	26.901	CC, ES	
500.00	499.98	499.98	499.98	1.58	1.58	142.57	-65.57	0.00	66.95	63.80	3.15	21.231		
594.97	594.82	592.58	592.57	1.92	1.89	144.52	-67.03	0.33	72.37	68.55	3.82	18.965		
600.00	599.84	597.48	597.46	1.94	1.91	144.64	-67.19	0.37	72.81	68.95	3.85	18.892		
700.00	699.61	694.38	694.23	2.30	2.24	146.34	-72.00	1.47	83.28	78.74	4.54	18.359		
800.00	799.37	790.56	790.06	2.66	2.57	147.03	-79.92	3.29	96.98	91.76	5.22	18.584		
900.00	899.14	885.81	884.65	3.03	2.92	147.01	-90.86	5.80	113.81	107.91	5.90	19.299		
1,000.00	998.91	979.94	977.70	3.40	3.28	146.57	-104.67	8.96	133.73	127.16	6.57	20.352		
1,100.00	1,098.68	1,072.77	1,068.97	3.77	3.67	145.90	-121.20	12.75	156.70	149.47	7.24	21.650		
1,200.00	1,198.45	1,167.59	1,161.70	4.14	4.08	145.15	-140.45	17.16	182.11	174.18	7.93	22.971		
1,300.00	1,298.22	1,264.22	1,256.17	4.51	4.52	144.55	-160.29	21.71	207.75	199.12	8.63	24.070		
1,400.00	1,397.99	1,360.86	1,350.64	4.88	4.97	144.09	-180.12	26.26	233.41	224.06	9.35	24.964		
1,500.00	1,497.75	1,457.50	1,445.11	5.26	5.43	143.71	-199.95	30.80	259.09	249.02	10.07	25.732		
1,600.00	1,597.52	1,554.13	1,539.58	5.63	5.89	143.41	-219.78	35.35	284.77	273.98	10.79	26.393		
1,700.00	1,697.29	1,650.77	1,634.05	6.00	6.36	143.15	-239.61	39.89	310.45	298.94	11.51	26.967		
1,800.00	1,797.06	1,747.41	1,728.52	6.37	6.83	142.94	-259.44	44.44	336.14	323.91	12.24	27.470		
1,900.00	1,896.83	1,844.04	1,822.99	6.75	7.31	142.75	-279.27	48.98	361.84	348.88	12.96	27.913		
2,000.00	1,996.60	1,940.68	1,917.46	7.12	7.78	142.59	-299.10	53.53	387.54	373.85	13.69	28.308		
2,100.00	2,096.37	2,037.31	2,011.93	7.49	8.26	142.45	-318.93	58.08	413.24	398.82	14.42	28.660		
2,200.00	2,196.13	2,133.95	2,106.40	7.86	8.75	142.32	-338.76	62.62	438.94	423.80	15.15	28.977		
2,300.00	2,295.90	2,230.59	2,200.87	8.24	9.23	142.21	-358.60	67.17	464.65	448.77	15.88	29.264		
2,400.00	2,395.67	2,327.22	2,295.34	8.61	9.71	142.11	-378.43	71.71	490.35	473.75	16.61	29.524		
2,500.00	2,495.44	2,423.86	2,389.81	8.98	10.20	142.02	-398.26	76.26	516.06	498.72	17.34	29.762		
2,600.00	2,595.21	2,520.50	2,484.28	9.36	10.68	141.94	-418.09	80.80	541.77	523.70	18.07	29.979		
2,700.00	2,694.98	2,617.13	2,578.75	9.73	11.17	141.87	-437.92	85.35	567.48	548.68	18.80	30.179		
2,800.00	2,794.75	2,713.77	2,673.22	10.10	11.66	141.80	-457.75	89.90	593.19	573.65	19.54	30.363		
2,900.00	2,894.51	2,810.40	2,767.69	10.48	12.14	141.74	-477.58	94.44	618.90	598.63	20.27	30.534		
3,000.00	2,994.28	2,907.04	2,862.16	10.85	12.63	141.69	-497.41	98.99	644.61	623.61	21.00	30.692		
3,100.00	3,094.05	3,003.68	2,956.63	11.22	13.12	141.63	-517.24	103.53	670.32	648.59	21.74	30.839		
3,200.00	3,193.82	3,100.31	3,051.10	11.60	13.61	141.59	-537.08	108.08	696.04	673.57	22.47	30.976		
3,300.00	3,293.59	3,196.95	3,145.57	11.97	14.10	141.54	-556.91	112.62	721.75	698.55	23.20	31.104		
3,400.00	3,393.36	3,293.58	3,240.04	12.35	14.59	141.50	-576.74	117.17	747.46	723.52	23.94	31.224		
3,500.00	3,493.12	3,390.22	3,334.51	12.72	15.08	141.46	-596.57	121.72	773.18	748.50	24.67	31.336		
3,600.00	3,592.89	3,486.86	3,428.98	13.09	15.57	141.42	-616.40	126.26	798.89	773.48	25.41	31.442		
3,700.00	3,692.66	3,583.49	3,523.45	13.47	16.06	141.39	-636.23	130.81	824.61	798.46	26.14	31.541		
3,800.00	3,792.43	3,680.13	3,617.92	13.84	16.55	141.36	-656.06	135.35	850.32	823.44	26.88	31.635		
3,900.00	3,892.20	3,776.77	3,712.39	14.21	17.04	141.33	-675.89	139.90	876.04	848.42	27.61	31.724		
4,000.00	3,991.97	3,873.40	3,806.86	14.59	17.53	141.30	-695.72	144.44	901.75	873.40	28.35	31.807		
4,100.00	4,091.74	3,970.04	3,901.33	14.96	18.03	141.27	-715.56	148.99	927.47	898.38	29.09	31.887		
4,200.00	4,191.50	4,066.67	3,995.80	15.33	18.52	141.25	-735.39	153.54	953.18	923.36	29.82	31.962		
4,300.00	4,291.27	4,163.31	4,090.27	15.71	19.01	141.22	-755.22	158.08	978.90	948.34	30.56	32.034		
4,400.00	4,391.04	4,259.95	4,184.75	16.08	19.50	141.20	-775.05	162.63	1,004.61	973.32	31.29	32.102		
4,500.00	4,490.81	4,356.58	4,279.22	16.46	19.99	141.18	-794.88	167.17	1,030.33	998.30	32.03	32.167		
4,600.00	4,590.58	4,453.22	4,373.69	16.83	20.49	141.16	-814.71	171.72	1,056.04	1,023.28	32.77	32.229		
4,700.00	4,690.35	4,549.86	4,468.16	17.20	20.98	141.14	-834.54	176.26	1,081.76	1,048.26	33.50	32.288		
4,800.00	4,790.12	4,646.49	4,562.63	17.58	21.47	141.12	-854.37	180.81	1,107.48	1,073.24	34.24	32.344		
4,900.00	4,889.88	4,743.13	4,657.10	17.95	21.96	141.10	-874.20	185.36	1,133.19	1,098.22	34.98	32.398		
5,000.00	4,989.65	4,839.76	4,751.57	18.32	22.46	141.08	-894.04	189.90	1,158.91	1,123.19	35.71	32.449		

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 11-10-9H
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 11-10-9H	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	5,089.42	4,936.40	4,846.04	18.70	22.95	141.07	-913.87	194.45	1,184.63	1,148.17	36.45	32.498			
5,200.00	5,189.19	5,033.04	4,940.51	19.07	23.44	141.05	-933.70	198.99	1,210.34	1,173.15	37.19	32.546			
5,300.00	5,288.96	5,129.67	5,034.98	19.45	23.93	141.03	-953.53	203.54	1,236.06	1,198.13	37.93	32.591			
5,400.00	5,388.73	5,226.31	5,129.45	19.82	24.43	141.02	-973.36	208.08	1,261.78	1,223.11	38.66	32.634			
5,500.00	5,488.49	5,322.94	5,223.92	20.19	24.92	141.01	-993.19	212.63	1,287.49	1,248.09	39.40	32.676			
5,600.00	5,588.26	5,419.58	5,318.39	20.57	25.41	140.99	-1,013.02	217.18	1,313.21	1,273.07	40.14	32.716			
5,700.00	5,688.03	5,516.22	5,412.86	20.94	25.91	140.98	-1,032.85	221.72	1,338.93	1,298.05	40.88	32.755			
5,800.00	5,787.80	5,612.85	5,507.33	21.31	26.40	140.97	-1,052.68	226.27	1,364.64	1,323.03	41.61	32.792			
5,900.00	5,887.57	5,709.49	5,601.80	21.69	26.89	140.96	-1,072.52	230.81	1,390.36	1,348.01	42.35	32.828			
6,000.00	5,987.34	5,806.13	5,696.27	22.06	27.39	140.94	-1,092.35	235.36	1,416.08	1,372.99	43.09	32.862			
6,100.00	6,087.11	5,902.76	5,790.74	22.44	27.88	140.93	-1,112.18	239.90	1,441.80	1,397.97	43.83	32.896			
6,200.00	6,186.87	5,999.40	5,885.21	22.81	28.37	140.92	-1,132.01	244.45	1,467.51	1,422.95	44.57	32.928			
6,300.00	6,286.64	6,096.03	5,979.68	23.18	28.87	140.91	-1,151.84	249.00	1,493.23	1,447.92	45.31	32.959			
6,400.00	6,386.41	6,192.67	6,074.15	23.56	29.36	140.90	-1,171.67	253.54	1,518.95	1,472.90	46.04	32.988			
6,482.24	6,468.46	6,272.14	6,151.84	23.86	29.77	140.89	-1,187.98	257.28	1,540.10	1,493.44	46.65	33.012			
6,500.00	6,486.19	6,289.30	6,168.62	23.93	29.85	167.75	-1,191.50	258.09	1,544.67	1,497.88	46.78	33.018			
6,550.00	6,536.08	6,337.46	6,215.69	24.10	30.10	-123.81	-1,201.38	260.35	1,557.51	1,510.38	47.13	33.046			
6,600.00	6,585.64	6,385.09	6,262.26	24.26	30.34	-105.82	-1,211.16	262.59	1,570.29	1,522.83	47.46	33.088			
6,650.00	6,634.49	6,431.85	6,307.97	24.40	30.58	-98.93	-1,220.75	264.79	1,582.97	1,535.20	47.77	33.140			
6,700.00	6,682.26	6,477.38	6,352.48	24.53	30.81	-95.21	-1,230.10	266.93	1,595.54	1,547.49	48.05	33.203			
6,750.00	6,728.60	6,521.33	6,395.44	24.64	31.04	-92.84	-1,239.12	269.00	1,608.04	1,559.72	48.32	33.276			
6,800.00	6,773.14	6,563.36	6,436.53	24.75	31.25	-91.16	-1,247.74	270.98	1,620.51	1,571.93	48.58	33.357			
6,850.00	6,815.54	6,603.16	6,475.44	24.84	31.46	-89.89	-1,255.91	272.85	1,633.03	1,584.21	48.83	33.446			
6,900.00	6,855.49	6,640.42	6,511.86	24.92	31.65	-88.85	-1,263.56	274.60	1,645.67	1,596.60	49.06	33.541			
6,950.00	6,892.68	6,674.86	6,545.53	24.99	31.82	-87.96	-1,270.62	276.22	1,658.50	1,609.20	49.30	33.638			
7,000.00	6,926.83	6,706.21	6,576.18	25.07	31.98	-87.11	-1,277.06	277.70	1,671.62	1,622.07	49.55	33.735			
7,050.00	6,957.68	6,751.59	6,620.57	25.19	32.21	-86.75	-1,286.39	278.47	1,684.98	1,635.05	49.94	33.743			
7,100.00	6,984.98	6,807.36	6,674.98	25.42	32.47	-86.73	-1,297.86	274.54	1,698.32	1,647.89	50.42	33.682			
7,150.00	7,008.54	6,873.50	6,738.64	25.72	32.75	-87.01	-1,311.35	262.90	1,711.46	1,660.46	50.99	33.561			
7,200.00	7,028.18	6,955.69	6,815.22	26.06	33.05	-87.70	-1,327.66	238.13	1,724.17	1,672.51	51.66	33.376			
7,250.00	7,043.74	7,036.34	6,886.01	26.46	33.30	-88.31	-1,342.84	202.80	1,735.97	1,683.66	52.31	33.184			
7,300.00	7,055.11	7,183.89	7,000.57	26.91	33.66	-90.25	-1,367.68	114.06	1,746.13	1,692.93	53.20	32.822			
7,350.00	7,062.20	7,383.48	7,113.14	27.40	33.98	-92.35	-1,392.70	-47.40	1,753.25	1,698.82	54.43	32.210			
7,400.00	7,064.96	7,628.31	7,167.68	27.94	34.37	-93.36	-1,406.14	-283.63	1,755.55	1,698.86	56.69	30.968			
7,406.67	7,065.00	7,650.30	7,168.00	28.01	34.42	-93.36	-1,406.39	-305.62	1,755.56	1,698.59	56.98	30.812			
7,500.00	7,065.00	7,743.63	7,168.00	29.15	34.74	-93.36	-1,407.16	-398.94	1,755.56	1,696.37	59.19	29.660			
7,600.00	7,065.00	7,843.63	7,168.00	30.55	35.32	-93.36	-1,408.00	-498.94	1,755.55	1,693.64	61.92	28.354			
7,700.00	7,065.00	7,943.63	7,168.00	32.12	36.19	-93.36	-1,408.83	-598.94	1,755.55	1,690.57	64.98	27.015			
7,800.00	7,065.00	8,043.63	7,168.00	33.83	37.38	-93.36	-1,409.66	-698.93	1,755.54	1,687.20	68.35	25.686			
7,900.00	7,065.00	8,143.63	7,168.00	35.67	38.83	-93.36	-1,410.49	-798.93	1,755.54	1,683.57	71.96	24.395			
8,000.00	7,065.00	8,243.63	7,168.00	37.61	40.49	-93.36	-1,411.33	-898.93	1,755.53	1,679.73	75.80	23.161			
8,100.00	7,065.00	8,343.63	7,168.00	39.65	42.30	-93.36	-1,412.16	-998.92	1,755.53	1,675.71	79.82	21.994			
8,200.00	7,065.00	8,443.63	7,168.00	41.76	44.24	-93.36	-1,412.99	-1,098.92	1,755.52	1,671.52	84.00	20.899			
8,300.00	7,065.00	8,543.63	7,168.00	43.94	46.26	-93.36	-1,413.82	-1,198.92	1,755.52	1,667.20	88.32	19.878			
8,400.00	7,065.00	8,643.63	7,168.00	46.18	48.37	-93.36	-1,414.66	-1,298.91	1,755.51	1,662.76	92.75	18.927			
8,500.00	7,065.00	8,743.63	7,168.00	48.46	50.55	-93.36	-1,415.49	-1,398.91	1,755.51	1,658.22	97.29	18.045			
8,600.00	7,065.00	8,843.63	7,168.00	50.79	52.77	-93.36	-1,416.32	-1,498.90	1,755.50	1,653.59	101.91	17.226			
8,700.00	7,065.00	8,943.63	7,168.00	53.16	55.05	-93.36	-1,417.16	-1,598.90	1,755.50	1,648.88	106.61	16.466			
8,800.00	7,065.00	9,043.63	7,168.00	55.56	57.37	-93.36	-1,417.99	-1,698.90	1,755.49	1,644.11	111.38	15.761			
8,900.00	7,065.00	9,143.63	7,168.00	57.99	59.72	-93.36	-1,418.82	-1,798.89	1,755.49	1,639.28	116.21	15.106			
9,000.00	7,065.00	9,243.63	7,168.00	60.44	62.10	-93.36	-1,419.65	-1,898.89	1,755.48	1,634.39	121.09	14.498			
9,100.00	7,065.00	9,343.63	7,168.00	62.91	64.52	-93.36	-1,420.49	-1,998.89	1,755.47	1,629.46	126.01	13.931			

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 11-10-9H
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 11-10-9H	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)					
9,200.00	7,065.00	9,443.63	7,168.00	65.41	66.95	-93.36	-1,421.32	-2,098.88	1,755.47	1,624.50	130.97	13.403			
9,300.00	7,065.00	9,543.63	7,168.00	67.92	69.41	-93.36	-1,422.15	-2,198.88	1,755.46	1,619.49	135.97	12.910			
9,400.00	7,065.00	9,643.63	7,168.00	70.45	71.89	-93.36	-1,422.98	-2,298.88	1,755.46	1,614.45	141.01	12.449			
9,500.00	7,065.00	9,743.63	7,168.00	72.99	74.38	-93.36	-1,423.82	-2,398.87	1,755.45	1,609.38	146.07	12.018			
9,600.00	7,065.00	9,843.63	7,168.00	75.54	76.89	-93.36	-1,424.65	-2,498.87	1,755.45	1,604.29	151.16	11.613			
9,700.00	7,065.00	9,943.63	7,168.00	78.11	79.41	-93.36	-1,425.48	-2,598.87	1,755.44	1,599.18	156.27	11.234			
9,800.00	7,065.00	10,043.63	7,168.00	80.68	81.95	-93.36	-1,426.32	-2,698.86	1,755.44	1,594.04	161.40	10.876			
9,900.00	7,065.00	10,143.63	7,168.00	83.27	84.50	-93.36	-1,427.15	-2,798.86	1,755.43	1,588.88	166.55	10.540			
10,000.00	7,065.00	10,243.63	7,168.00	85.86	87.06	-93.36	-1,427.98	-2,898.86	1,755.43	1,583.71	171.72	10.223			
10,100.00	7,065.00	10,343.63	7,168.00	88.46	89.63	-93.36	-1,428.81	-2,998.85	1,755.42	1,578.52	176.90	9.923			
10,200.00	7,065.00	10,443.63	7,168.00	91.07	92.21	-93.36	-1,429.65	-3,098.85	1,755.42	1,573.31	182.10	9.640			
10,300.00	7,065.00	10,543.63	7,168.00	93.68	94.79	-93.36	-1,430.48	-3,198.85	1,755.41	1,568.09	187.32	9.371			
10,400.00	7,065.00	10,643.63	7,168.00	96.30	97.38	-93.36	-1,431.31	-3,298.84	1,755.41	1,562.86	192.54	9.117			
10,500.00	7,065.00	10,743.63	7,168.00	98.93	99.98	-93.36	-1,432.14	-3,398.84	1,755.40	1,557.62	197.78	8.876			
10,600.00	7,065.00	10,843.63	7,168.00	101.56	102.59	-93.36	-1,432.98	-3,498.84	1,755.40	1,552.37	203.03	8.646			
10,700.00	7,065.00	10,943.63	7,168.00	104.20	105.20	-93.36	-1,433.81	-3,598.83	1,755.39	1,547.11	208.28	8.428			
10,800.00	7,065.00	11,043.63	7,168.00	106.83	107.82	-93.36	-1,434.64	-3,698.83	1,755.38	1,541.84	213.55	8.220			
10,900.00	7,065.00	11,143.63	7,168.00	109.48	110.44	-93.36	-1,435.48	-3,798.83	1,755.38	1,536.56	218.82	8.022			
11,000.00	7,065.00	11,243.63	7,168.00	112.13	113.07	-93.36	-1,436.31	-3,898.82	1,755.37	1,531.27	224.10	7.833			
11,100.00	7,065.00	11,343.63	7,168.00	114.78	115.70	-93.36	-1,437.14	-3,998.82	1,755.37	1,525.98	229.39	7.652			
11,200.00	7,065.00	11,443.63	7,168.00	117.43	118.34	-93.36	-1,437.97	-4,098.81	1,755.36	1,520.67	234.69	7.480			
11,300.00	7,065.00	11,543.63	7,168.00	120.09	120.98	-93.36	-1,438.81	-4,198.81	1,755.36	1,515.37	239.99	7.314			
11,400.00	7,065.00	11,643.63	7,168.00	122.75	123.62	-93.36	-1,439.64	-4,298.81	1,755.35	1,510.05	245.30	7.156			
11,500.00	7,065.00	11,743.63	7,168.00	125.41	126.27	-93.36	-1,440.47	-4,398.80	1,755.35	1,504.74	250.61	7.004			
11,600.00	7,065.00	11,843.63	7,168.00	128.08	128.91	-93.36	-1,441.30	-4,498.80	1,755.34	1,499.41	255.93	6.859			
11,700.00	7,065.00	11,943.63	7,168.00	130.74	131.57	-93.36	-1,442.14	-4,598.80	1,755.34	1,494.08	261.25	6.719			
11,800.00	7,065.00	12,043.63	7,168.00	133.41	134.22	-93.36	-1,442.97	-4,698.79	1,755.33	1,488.75	266.58	6.585			
11,900.00	7,065.00	12,143.63	7,168.00	136.09	136.88	-93.36	-1,443.80	-4,798.79	1,755.33	1,483.41	271.91	6.455			
12,000.00	7,065.00	12,243.63	7,168.00	138.76	139.54	-93.36	-1,444.64	-4,898.79	1,755.32	1,478.07	277.25	6.331			
12,100.00	7,065.00	12,343.63	7,168.00	141.44	142.20	-93.36	-1,445.47	-4,998.78	1,755.32	1,472.73	282.59	6.212			
12,200.00	7,065.00	12,443.63	7,168.00	144.11	144.87	-93.36	-1,446.30	-5,098.78	1,755.31	1,467.38	287.93	6.096			
12,300.00	7,065.00	12,543.63	7,168.00	146.79	147.53	-93.36	-1,447.13	-5,198.78	1,755.31	1,462.03	293.28	5.985			
12,400.00	7,065.00	12,643.63	7,168.00	149.47	150.20	-93.36	-1,447.97	-5,298.77	1,755.30	1,456.67	298.63	5.878			
12,500.00	7,065.00	12,743.63	7,168.00	152.15	152.87	-93.36	-1,448.80	-5,398.77	1,755.30	1,451.31	303.98	5.774			
12,600.00	7,065.00	12,843.63	7,168.00	154.84	155.55	-93.36	-1,449.63	-5,498.77	1,755.29	1,445.95	309.34	5.674			
12,700.00	7,065.00	12,943.63	7,168.00	157.52	158.22	-93.36	-1,450.46	-5,598.76	1,755.28	1,440.59	314.70	5.578			
12,800.00	7,065.00	13,043.63	7,168.00	160.21	160.90	-93.36	-1,451.30	-5,698.76	1,755.28	1,435.22	320.06	5.484			
12,900.00	7,065.00	13,143.63	7,168.00	162.89	163.57	-93.36	-1,452.13	-5,798.76	1,755.27	1,429.85	325.42	5.394			
13,000.00	7,065.00	13,243.63	7,168.00	165.58	166.25	-93.36	-1,452.96	-5,898.75	1,755.27	1,424.48	330.79	5.306			
13,100.00	7,065.00	13,343.63	7,168.00	168.27	168.93	-93.36	-1,453.79	-5,998.75	1,755.26	1,419.11	336.16	5.222			
13,200.00	7,065.00	13,443.63	7,168.00	170.96	171.61	-93.36	-1,454.63	-6,098.75	1,755.26	1,413.73	341.53	5.139			
13,300.00	7,065.00	13,543.63	7,168.00	173.65	174.30	-93.36	-1,455.46	-6,198.74	1,755.25	1,408.35	346.90	5.060			
13,400.00	7,065.00	13,643.63	7,168.00	176.35	176.98	-93.36	-1,456.29	-6,298.74	1,755.25	1,402.97	352.27	4.983			
13,500.00	7,065.00	13,743.63	7,168.00	179.04	179.66	-93.36	-1,457.13	-6,398.73	1,755.24	1,397.59	357.65	4.908			
13,600.00	7,065.00	13,843.63	7,168.00	181.73	182.35	-93.36	-1,457.96	-6,498.73	1,755.24	1,392.21	363.03	4.835			
13,700.00	7,065.00	13,943.63	7,168.00	184.43	185.04	-93.36	-1,458.79	-6,598.73	1,755.23	1,386.83	368.41	4.764			
13,800.00	7,065.00	14,043.63	7,168.00	187.12	187.73	-93.36	-1,459.62	-6,698.72	1,755.23	1,381.44	373.79	4.696			
13,900.00	7,065.00	14,143.63	7,168.00	189.82	190.42	-93.36	-1,460.46	-6,798.72	1,755.22	1,376.05	379.17	4.629			
14,000.00	7,065.00	14,243.63	7,168.00	192.52	193.10	-93.36	-1,461.29	-6,898.72	1,755.22	1,370.66	384.56	4.564			
14,100.00	7,065.00	14,343.63	7,168.00	195.21	195.80	-93.36	-1,462.12	-6,998.71	1,755.21	1,365.27	389.94	4.501			
14,200.00	7,065.00	14,443.63	7,168.00	197.91	198.49	-93.36	-1,462.95	-7,098.71	1,755.21	1,359.88	395.33	4.440			
14,300.00	7,065.00	14,543.63	7,168.00	200.61	201.18	-93.36	-1,463.79	-7,198.71	1,755.20	1,354.48	400.72	4.380			

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 11-10-9H
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 11-10-9H	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			
14,400.00	7,065.00	14,643.63	7,168.00	203.31	203.87	-93.36	-1,464.62	-7,298.70	1,755.19	1,349.09	406.11	4.322			
14,500.00	7,065.00	14,743.63	7,168.00	206.01	206.57	-93.36	-1,465.45	-7,398.70	1,755.19	1,343.69	411.50	4.265			
14,600.00	7,065.00	14,843.63	7,168.00	208.71	209.26	-93.36	-1,466.29	-7,498.70	1,755.18	1,338.30	416.89	4.210			
14,700.00	7,065.00	14,943.63	7,168.00	211.41	211.96	-93.36	-1,467.12	-7,598.69	1,755.18	1,332.90	422.28	4.156			
14,800.00	7,065.00	15,043.63	7,168.00	214.12	214.65	-93.36	-1,467.95	-7,698.69	1,755.17	1,327.50	427.68	4.104			
14,900.00	7,065.00	15,143.63	7,168.00	216.82	217.35	-93.36	-1,468.78	-7,798.69	1,755.17	1,322.10	433.07	4.053			
15,000.00	7,065.00	15,243.63	7,168.00	219.52	220.05	-93.36	-1,469.62	-7,898.68	1,755.16	1,316.70	438.47	4.003			
15,100.00	7,065.00	15,343.63	7,168.00	222.22	222.74	-93.36	-1,470.45	-7,998.68	1,755.16	1,311.29	443.86	3.954			
15,200.00	7,065.00	15,443.63	7,168.00	224.93	225.44	-93.36	-1,471.28	-8,098.68	1,755.15	1,305.89	449.26	3.907			
15,300.00	7,065.00	15,543.63	7,168.00	227.63	228.14	-93.36	-1,472.11	-8,198.67	1,755.15	1,300.49	454.66	3.860			
15,400.00	7,065.00	15,643.63	7,168.00	230.34	230.84	-93.36	-1,472.95	-8,298.67	1,755.14	1,295.08	460.06	3.815			
15,495.74	7,065.00	15,739.39	7,168.00	232.93	233.43	-93.36	-1,473.74	-8,394.42	1,755.14	1,289.90	465.23	3.773 SF			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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											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	-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		
400.00	400.00	400.00	400.00	1.22	1.22	-180.00	-80.15	0.00	80.15	77.71	2.44	32.879	CC, ES	
500.00	499.98	497.41	497.39	1.58	1.55	141.90	-81.67	0.65	83.08	79.95	3.13	26.529		
594.97	594.82	589.45	589.32	1.92	1.87	142.48	-85.90	2.47	91.28	87.49	3.79	24.095		
600.00	599.84	594.31	594.16	1.94	1.88	142.53	-86.20	2.60	91.86	88.03	3.83	24.005		
700.00	699.61	690.45	689.95	2.30	2.22	142.88	-93.66	5.81	104.95	100.43	4.51	23.245		
800.00	799.37	785.73	784.56	2.66	2.58	142.51	-103.97	10.24	121.04	115.84	5.20	23.265		
900.00	899.14	879.95	877.71	3.03	2.95	141.69	-116.99	15.84	140.12	134.23	5.89	23.798		
1,000.00	998.91	972.93	969.12	3.40	3.34	140.65	-132.60	22.55	162.17	155.61	6.57	24.693		
1,100.00	1,098.68	1,064.51	1,058.56	3.77	3.76	139.51	-150.63	30.30	187.19	179.95	7.24	25.853		
1,200.00	1,198.45	1,154.52	1,145.83	4.14	4.20	138.36	-170.90	39.01	215.12	207.22	7.90	27.226		
1,300.00	1,298.22	1,244.22	1,232.07	4.51	4.66	137.25	-193.55	48.75	245.89	237.32	8.56	28.709		
1,400.00	1,397.99	1,338.95	1,322.89	4.88	5.18	136.26	-218.30	59.39	277.63	268.35	9.29	29.901		
1,500.00	1,497.75	1,433.68	1,413.72	5.26	5.71	135.48	-243.04	70.02	309.44	299.43	10.01	30.914		
1,600.00	1,597.52	1,528.42	1,504.54	5.63	6.25	134.84	-267.79	80.66	341.29	330.55	10.74	31.784		
1,700.00	1,697.29	1,623.15	1,595.36	6.00	6.80	134.31	-292.53	91.30	373.17	361.70	11.47	32.538		
1,800.00	1,797.06	1,717.88	1,686.18	6.37	7.35	133.86	-317.28	101.94	405.07	392.87	12.20	33.178		
1,900.00	1,896.83	1,812.61	1,777.00	6.75	7.91	133.48	-342.03	112.58	436.99	424.06	12.94	33.999		
2,000.00	1,996.60	1,907.34	1,867.82	7.12	8.46	133.15	-366.77	123.21	468.93	455.26	13.67	34.295		
2,100.00	2,096.37	2,002.07	1,958.64	7.49	9.03	132.87	-391.52	133.85	500.88	486.47	14.41	34.756		
2,200.00	2,196.13	2,096.80	2,049.46	7.86	9.59	132.62	-416.26	144.49	532.84	517.69	15.15	35.169		
2,300.00	2,295.90	2,191.53	2,140.28	8.24	10.16	132.39	-441.01	155.13	564.80	548.91	15.89	35.543		
2,400.00	2,395.67	2,286.26	2,231.10	8.61	10.72	132.19	-465.76	165.76	596.78	580.15	16.63	35.881		
2,500.00	2,495.44	2,380.99	2,321.92	8.98	11.29	132.01	-490.50	176.40	628.76	611.39	17.37	36.190		
2,600.00	2,595.21	2,475.73	2,412.75	9.36	11.86	131.85	-515.25	187.04	660.74	642.63	18.12	36.472		
2,700.00	2,694.98	2,570.46	2,503.57	9.73	12.43	131.70	-539.99	197.68	692.73	673.87	18.86	36.731		
2,800.00	2,794.75	2,665.19	2,594.39	10.10	13.01	131.57	-564.74	208.31	724.73	705.12	19.60	36.969		
2,900.00	2,894.51	2,759.92	2,685.21	10.48	13.58	131.44	-589.48	218.95	756.72	736.38	20.35	37.189		
3,000.00	2,994.28	2,854.65	2,776.03	10.85	14.15	131.33	-614.23	229.59	788.72	767.63	21.09	37.393		
3,100.00	3,094.05	2,949.38	2,866.85	11.22	14.73	131.23	-638.98	240.23	820.73	798.89	21.84	37.583		
3,200.00	3,193.82	3,044.11	2,957.67	11.60	15.30	131.13	-663.72	250.86	852.73	830.15	22.58	37.759		
3,300.00	3,293.59	3,138.84	3,048.49	11.97	15.88	131.04	-688.47	261.50	884.74	861.41	23.33	37.924		
3,400.00	3,393.36	3,233.57	3,139.31	12.35	16.45	130.96	-713.21	272.14	916.74	892.67	24.08	38.078		
3,500.00	3,493.12	3,328.30	3,230.13	12.72	17.03	130.88	-737.96	282.78	948.75	923.93	24.82	38.222		
3,600.00	3,592.89	3,423.03	3,320.95	13.09	17.60	130.81	-762.71	293.41	980.76	955.20	25.57	38.358		
3,700.00	3,692.66	3,517.77	3,411.77	13.47	18.18	130.74	-787.45	304.05	1,012.78	986.46	26.32	38.485		
3,800.00	3,792.43	3,612.50	3,502.60	13.84	18.76	130.68	-812.20	314.69	1,044.79	1,017.73	27.06	38.605		
3,900.00	3,892.20	3,707.23	3,593.42	14.21	19.33	130.62	-836.94	325.33	1,076.81	1,048.99	27.81	38.719		
4,000.00	3,991.97	3,801.96	3,684.24	14.59	19.91	130.56	-861.69	335.96	1,108.82	1,080.26	28.56	38.826		
4,100.00	4,091.74	3,896.69	3,775.06	14.96	20.49	130.51	-886.43	346.60	1,140.84	1,111.53	29.31	38.927		
4,200.00	4,191.50	3,991.42	3,865.88	15.33	21.06	130.46	-911.18	357.24	1,172.85	1,142.80	30.05	39.024		
4,300.00	4,291.27	4,086.15	3,956.70	15.71	21.64	130.41	-935.93	367.88	1,204.87	1,174.07	30.80	39.115		
4,400.00	4,391.04	4,180.88	4,047.52	16.08	22.22	130.36	-960.67	378.52	1,236.89	1,205.34	31.55	39.202		
4,500.00	4,490.81	4,275.61	4,138.34	16.46	22.80	130.32	-985.42	389.15	1,268.91	1,236.61	32.30	39.284		
4,600.00	4,590.58	4,370.34	4,229.16	16.83	23.38	130.28	-1,010.16	399.79	1,300.93	1,267.88	33.05	39.362		
4,700.00	4,690.35	4,465.08	4,319.98	17.20	23.95	130.24	-1,034.91	410.43	1,332.95	1,299.15	33.80	39.437		
4,800.00	4,790.12	4,559.81	4,410.80	17.58	24.53	130.20	-1,059.66	421.07	1,364.97	1,330.43	34.55	39.509		
4,900.00	4,889.88	4,654.54	4,501.63	17.95	25.11	130.17	-1,084.40	431.70	1,397.00	1,361.70	35.30	39.577		
5,000.00	4,989.65	4,749.27	4,592.45	18.32	25.69	130.13	-1,109.15	442.34	1,429.02	1,392.97	36.05	39.642		

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 11-10-9H
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 11-10-9H	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											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	5,089.42	4,844.00	4,683.27	18.70	26.27	130.10	-1,133.89	452.98	1,461.04	1,424.24	36.80	39.704			
5,200.00	5,189.19	4,938.73	4,774.09	19.07	26.85	130.07	-1,158.64	463.62	1,493.06	1,455.52	37.55	39.764			
5,300.00	5,288.96	5,033.46	4,864.91	19.45	27.42	130.04	-1,183.39	474.25	1,525.09	1,486.79	38.30	39.821			
5,400.00	5,388.73	5,128.19	4,955.73	19.82	28.00	130.01	-1,208.13	484.89	1,557.11	1,518.06	39.05	39.876			
5,500.00	5,488.49	5,222.92	5,046.55	20.19	28.58	129.99	-1,232.88	495.53	1,589.14	1,549.34	39.80	39.929			
5,600.00	5,588.26	5,317.65	5,137.37	20.57	29.16	129.96	-1,257.62	506.17	1,621.16	1,580.61	40.55	39.979			
5,700.00	5,688.03	5,412.38	5,228.19	20.94	29.74	129.94	-1,282.37	516.80	1,653.18	1,611.88	41.30	40.028			
5,800.00	5,787.80	5,507.12	5,319.01	21.31	30.32	129.91	-1,307.12	527.44	1,685.21	1,643.16	42.05	40.074			
5,900.00	5,887.57	5,601.85	5,409.83	21.69	30.90	129.89	-1,331.86	538.08	1,717.23	1,674.43	42.80	40.119			
6,000.00	5,987.34	5,696.58	5,500.66	22.06	31.48	129.87	-1,356.61	548.72	1,749.26	1,705.71	43.55	40.162			
6,100.00	6,087.11	5,791.31	5,591.48	22.44	32.06	129.84	-1,381.35	559.35	1,781.29	1,736.98	44.31	40.204			
6,200.00	6,186.87	5,886.04	5,682.30	22.81	32.64	129.82	-1,406.10	569.99	1,813.31	1,768.25	45.06	40.244			
6,300.00	6,286.64	5,980.77	5,773.12	23.18	33.22	129.80	-1,430.84	580.63	1,845.34	1,799.53	45.81	40.282			
6,400.00	6,386.41	6,075.50	5,863.94	23.56	33.80	129.78	-1,455.59	591.27	1,877.36	1,830.80	46.56	40.320			
6,482.24	6,468.46	6,153.40	5,938.63	23.86	34.27	129.77	-1,475.94	600.02	1,903.70	1,856.52	47.18	40.349			
6,500.00	6,486.19	6,170.21	5,954.74	23.93	34.37	156.74	-1,480.33	601.90	1,909.44	1,862.13	47.31	40.358			
6,550.00	6,536.08	6,217.17	5,999.76	24.10	34.66	-134.38	-1,492.60	607.18	1,926.11	1,878.45	47.66	40.410			
6,600.00	6,585.64	6,263.34	6,044.02	24.26	34.94	-115.83	-1,504.66	612.36	1,943.47	1,895.48	47.99	40.499			
6,650.00	6,634.49	6,308.37	6,087.19	24.40	35.22	-108.26	-1,516.42	617.42	1,961.42	1,913.13	48.29	40.621			
6,700.00	6,682.26	6,351.91	6,128.94	24.53	35.49	-103.76	-1,527.79	622.31	1,979.91	1,931.36	48.56	40.773			
6,750.00	6,728.60	6,393.64	6,168.95	24.64	35.74	-100.50	-1,538.70	626.99	1,998.90	1,950.09	48.81	40.954			
6,800.00	6,773.14	6,433.24	6,206.91	24.75	35.98	-97.86	-1,549.04	631.44	2,018.35	1,969.31	49.04	41.158			
6,850.00	6,815.54	6,470.40	6,242.54	24.84	36.21	-95.56	-1,558.75	635.61	2,038.23	1,988.98	49.25	41.384			
6,900.00	6,855.49	6,504.85	6,275.56	24.92	36.42	-93.44	-1,567.75	639.48	2,058.52	2,009.07	49.45	41.626			
6,950.00	6,892.68	6,536.31	6,305.73	24.99	36.61	-91.42	-1,575.96	643.01	2,079.20	2,029.55	49.65	41.878			
7,000.00	6,926.83	6,564.56	6,332.81	25.07	36.79	-89.43	-1,583.33	646.19	2,100.23	2,050.39	49.85	42.134			
7,050.00	6,957.68	6,589.38	6,356.60	25.19	36.94	-87.44	-1,589.83	648.97	2,121.60	2,071.54	50.05	42.388			
7,100.00	6,984.98	6,610.57	6,376.92	25.42	37.07	-85.40	-1,595.36	651.35	2,143.23	2,092.96	50.27	42.634			
7,150.00	7,008.54	6,627.98	6,393.61	25.72	37.18	-83.32	-1,599.91	653.31	2,165.09	2,114.58	50.51	42.866			
7,200.00	7,028.18	6,641.47	6,406.55	26.06	37.26	-81.17	-1,603.44	654.82	2,187.08	2,136.31	50.77	43.081			
7,250.00	7,043.74	8,110.03	7,254.00	26.46	39.88	-95.51	-1,841.88	-147.16	2,198.30	2,138.90	59.40	37.009			
7,300.00	7,055.11	8,158.70	7,254.00	26.91	39.86	-95.21	-1,842.29	-195.83	2,197.84	2,137.30	60.54	36.304			
7,350.00	7,062.20	8,208.18	7,254.00	27.40	39.87	-95.01	-1,842.71	-245.31	2,197.59	2,135.86	61.73	35.602			
7,400.00	7,064.96	8,258.09	7,254.00	27.94	39.89	-94.94	-1,843.12	-295.21	2,197.49	2,134.48	63.01	34.875			
7,406.67	7,065.00	8,264.76	7,254.00	28.01	39.89	-94.93	-1,843.18	-301.88	2,197.49	2,134.31	63.18	34.780			
7,500.00	7,065.00	8,358.09	7,254.00	29.15	40.09	-94.93	-1,843.96	-395.21	2,197.49	2,131.71	65.78	33.407			
7,600.00	7,065.00	8,458.09	7,254.00	30.55	40.75	-94.93	-1,844.80	-495.21	2,197.49	2,128.62	68.87	31.907			
7,700.00	7,065.00	8,558.09	7,254.00	32.12	42.08	-94.93	-1,845.63	-595.20	2,197.49	2,125.24	72.25	30.417			
7,800.00	7,065.00	8,658.09	7,254.00	33.83	43.82	-94.93	-1,846.47	-695.20	2,197.49	2,121.63	75.86	28.967			
7,900.00	7,065.00	8,758.09	7,254.00	35.67	45.74	-94.93	-1,847.31	-795.20	2,197.49	2,117.80	79.69	27.576			
8,000.00	7,065.00	8,858.09	7,254.00	37.61	47.77	-94.93	-1,848.15	-895.19	2,197.49	2,113.79	83.69	26.256			
8,100.00	7,065.00	8,958.09	7,254.00	39.65	49.88	-94.93	-1,848.98	-995.19	2,197.49	2,109.63	87.85	25.013			
8,200.00	7,065.00	9,058.09	7,254.00	41.76	52.05	-94.93	-1,849.82	-1,095.19	2,197.48	2,105.33	92.15	23.847			
8,300.00	7,065.00	9,158.09	7,254.00	43.94	54.27	-94.93	-1,850.66	-1,195.18	2,197.48	2,100.92	96.56	22.758			
8,400.00	7,065.00	9,258.09	7,254.00	46.18	56.54	-94.93	-1,851.49	-1,295.18	2,197.48	2,096.41	101.07	21.742			
8,500.00	7,065.00	9,358.09	7,254.00	48.46	58.84	-94.93	-1,852.33	-1,395.17	2,197.48	2,091.81	105.67	20.796			
8,600.00	7,065.00	9,458.09	7,254.00	50.79	61.18	-94.93	-1,853.17	-1,495.17	2,197.48	2,087.14	110.34	19.915			
8,700.00	7,065.00	9,558.09	7,254.00	53.16	63.55	-94.93	-1,854.01	-1,595.17	2,197.48	2,082.40	115.08	19.095			
8,800.00	7,065.00	9,658.09	7,254.00	55.56	65.95	-94.93	-1,854.84	-1,695.16	2,197.48	2,077.60	119.88	18.330			
8,900.00	7,065.00	9,758.09	7,254.00	57.99	68.37	-94.93	-1,855.68	-1,795.16	2,197.48	2,072.74	124.73	17.617			
9,000.00	7,065.00	9,858.09	7,254.00	60.44	70.81	-94.93	-1,856.52	-1,895.16	2,197.48	2,067.85	129.63	16.952			
9,100.00	7,065.00	9,958.09	7,254.00	62.91	73.27	-94.93	-1,857.35	-1,995.15	2,197.48	2,062.91	134.57	16.330			

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 11-10-9H
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 11-10-9H	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			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	
9,200.00	7,065.00	10,058.09	7,254.00	65.41	75.75	-94.93	-1,858.19	-2,095.15	2,197.48	2,057.93	139.54	15.748	
9,300.00	7,065.00	10,158.09	7,254.00	67.92	78.24	-94.93	-1,859.03	-2,195.15	2,197.47	2,052.93	144.55	15.202	
9,400.00	7,065.00	10,258.09	7,254.00	70.45	80.75	-94.93	-1,859.86	-2,295.14	2,197.47	2,047.89	149.59	14.690	
9,500.00	7,065.00	10,358.09	7,254.00	72.99	83.27	-94.93	-1,860.70	-2,395.14	2,197.47	2,042.83	154.65	14.210	
9,600.00	7,065.00	10,458.09	7,254.00	75.54	85.80	-94.93	-1,861.54	-2,495.14	2,197.47	2,037.74	159.73	13.757	
9,700.00	7,065.00	10,558.09	7,254.00	78.11	88.34	-94.93	-1,862.38	-2,595.13	2,197.47	2,032.63	164.84	13.331	
9,800.00	7,065.00	10,658.09	7,254.00	80.68	90.90	-94.93	-1,863.21	-2,695.13	2,197.47	2,027.50	169.97	12.929	
9,900.00	7,065.00	10,758.09	7,254.00	83.27	93.46	-94.93	-1,864.05	-2,795.13	2,197.47	2,022.35	175.12	12.549	
10,000.00	7,065.00	10,858.09	7,254.00	85.86	96.03	-94.93	-1,864.89	-2,895.12	2,197.47	2,017.19	180.28	12.189	
10,100.00	7,065.00	10,958.09	7,254.00	88.46	98.61	-94.93	-1,865.72	-2,995.12	2,197.47	2,012.01	185.46	11.849	
10,200.00	7,065.00	11,058.09	7,254.00	91.07	101.20	-94.93	-1,866.56	-3,095.12	2,197.47	2,006.82	190.65	11.526	
10,300.00	7,065.00	11,158.09	7,254.00	93.68	103.79	-94.93	-1,867.40	-3,195.11	2,197.47	2,001.61	195.85	11.220	
10,400.00	7,065.00	11,258.09	7,254.00	96.30	106.39	-94.93	-1,868.24	-3,295.11	2,197.46	1,996.40	201.07	10.929	
10,500.00	7,065.00	11,358.09	7,254.00	98.93	108.99	-94.93	-1,869.07	-3,395.10	2,197.46	1,991.17	206.29	10.652	
10,600.00	7,065.00	11,458.09	7,254.00	101.56	111.60	-94.93	-1,869.91	-3,495.10	2,197.46	1,985.93	211.53	10.388	
10,700.00	7,065.00	11,558.09	7,254.00	104.20	114.22	-94.93	-1,870.75	-3,595.10	2,197.46	1,980.69	216.78	10.137	
10,800.00	7,065.00	11,658.09	7,254.00	106.83	116.84	-94.93	-1,871.58	-3,695.09	2,197.46	1,975.43	222.03	9.897	
10,900.00	7,065.00	11,758.09	7,254.00	109.48	119.46	-94.93	-1,872.42	-3,795.09	2,197.46	1,970.17	227.29	9.668	
11,000.00	7,065.00	11,858.09	7,254.00	112.13	122.09	-94.93	-1,873.26	-3,895.09	2,197.46	1,964.90	232.56	9.449	
11,100.00	7,065.00	11,958.09	7,254.00	114.78	124.72	-94.93	-1,874.10	-3,995.08	2,197.46	1,959.62	237.84	9.239	
11,200.00	7,065.00	12,058.09	7,254.00	117.43	127.36	-94.93	-1,874.93	-4,095.08	2,197.46	1,954.33	243.12	9.038	
11,300.00	7,065.00	12,158.09	7,254.00	120.09	130.00	-94.93	-1,875.77	-4,195.08	2,197.46	1,949.04	248.41	8.846	
11,400.00	7,065.00	12,258.09	7,254.00	122.75	132.64	-94.93	-1,876.61	-4,295.07	2,197.46	1,943.75	253.71	8.661	
11,500.00	7,065.00	12,358.09	7,254.00	125.41	135.29	-94.93	-1,877.44	-4,395.07	2,197.45	1,938.44	259.01	8.484	
11,600.00	7,065.00	12,458.09	7,254.00	128.08	137.94	-94.93	-1,878.28	-4,495.07	2,197.45	1,933.14	264.32	8.314	
11,700.00	7,065.00	12,558.09	7,254.00	130.74	140.59	-94.93	-1,879.12	-4,595.06	2,197.45	1,927.83	269.63	8.150	
11,800.00	7,065.00	12,658.09	7,254.00	133.41	143.24	-94.93	-1,879.95	-4,695.06	2,197.45	1,922.51	274.94	7.992	
11,900.00	7,065.00	12,758.09	7,254.00	136.09	145.90	-94.93	-1,880.79	-4,795.06	2,197.45	1,917.19	280.26	7.841	
12,000.00	7,065.00	12,858.09	7,254.00	138.76	148.56	-94.93	-1,881.63	-4,895.05	2,197.45	1,911.86	285.59	7.695	
12,100.00	7,065.00	12,958.09	7,254.00	141.44	151.22	-94.93	-1,882.47	-4,995.05	2,197.45	1,906.54	290.91	7.554	
12,200.00	7,065.00	13,058.09	7,254.00	144.11	153.88	-94.93	-1,883.30	-5,095.05	2,197.45	1,901.20	296.24	7.418	
12,300.00	7,065.00	13,158.09	7,254.00	146.79	156.55	-94.93	-1,884.14	-5,195.04	2,197.45	1,895.87	301.58	7.286	
12,400.00	7,065.00	13,258.09	7,254.00	149.47	159.21	-94.93	-1,884.98	-5,295.04	2,197.45	1,890.53	306.92	7.160	
12,500.00	7,065.00	13,358.09	7,254.00	152.15	161.88	-94.93	-1,885.81	-5,395.03	2,197.45	1,885.19	312.26	7.037	
12,600.00	7,065.00	13,458.09	7,254.00	154.84	164.55	-94.93	-1,886.65	-5,495.03	2,197.44	1,879.85	317.60	6.919	
12,700.00	7,065.00	13,558.09	7,254.00	157.52	167.22	-94.93	-1,887.49	-5,595.03	2,197.44	1,874.50	322.95	6.804	
12,800.00	7,065.00	13,658.09	7,254.00	160.21	169.90	-94.93	-1,888.33	-5,695.02	2,197.44	1,869.15	328.29	6.694	
12,900.00	7,065.00	13,758.09	7,254.00	162.89	172.57	-94.93	-1,889.16	-5,795.02	2,197.44	1,863.80	333.65	6.586	
13,000.00	7,065.00	13,858.09	7,254.00	165.58	175.25	-94.93	-1,890.00	-5,895.02	2,197.44	1,858.44	339.00	6.482	
13,100.00	7,065.00	13,958.09	7,254.00	168.27	177.93	-94.93	-1,890.84	-5,995.01	2,197.44	1,853.08	344.36	6.381	
13,200.00	7,065.00	14,058.09	7,254.00	170.96	180.60	-94.93	-1,891.67	-6,095.01	2,197.44	1,847.73	349.71	6.284	
13,300.00	7,065.00	14,158.09	7,254.00	173.65	183.28	-94.93	-1,892.51	-6,195.01	2,197.44	1,842.36	355.07	6.189	
13,400.00	7,065.00	14,258.09	7,254.00	176.35	185.97	-94.93	-1,893.35	-6,295.00	2,197.44	1,837.00	360.44	6.097	
13,500.00	7,065.00	14,358.09	7,254.00	179.04	188.65	-94.93	-1,894.19	-6,395.00	2,197.44	1,831.64	365.80	6.007	
13,600.00	7,065.00	14,458.09	7,254.00	181.73	191.33	-94.93	-1,895.02	-6,495.00	2,197.44	1,826.27	371.17	5.920	
13,700.00	7,065.00	14,558.09	7,254.00	184.43	194.02	-94.93	-1,895.86	-6,594.99	2,197.43	1,820.90	376.53	5.836	
13,800.00	7,065.00	14,658.09	7,254.00	187.12	196.70	-94.93	-1,896.70	-6,694.99	2,197.43	1,815.53	381.90	5.754	
13,900.00	7,065.00	14,758.09	7,254.00	189.82	199.39	-94.93	-1,897.53	-6,794.99	2,197.43	1,810.16	387.27	5.674	
14,000.00	7,065.00	14,858.09	7,254.00	192.52	202.08	-94.93	-1,898.37	-6,894.98	2,197.43	1,804.79	392.64	5.596	
14,100.00	7,065.00	14,958.09	7,254.00	195.21	204.77	-94.93	-1,899.21	-6,994.98	2,197.43	1,799.41	398.02	5.521	
14,200.00	7,065.00	15,058.09	7,254.00	197.91	207.45	-94.93	-1,900.05	-7,094.98	2,197.43	1,794.04	403.39	5.447	
14,300.00	7,065.00	15,158.09	7,254.00	200.61	210.14	-94.93	-1,900.88	-7,194.97	2,197.43	1,788.66	408.77	5.376	

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 11-10-9H
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 11-10-9H	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		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)				
14,400.00	7,065.00	15,258.09	7,254.00	203.31	212.84	-94.93	-1,901.72	-7,294.97	2,197.43	1,783.28	414.15	5.306		
14,500.00	7,065.00	15,358.09	7,254.00	206.01	215.53	-94.93	-1,902.56	-7,394.96	2,197.43	1,777.90	419.53	5.238		
14,600.00	7,065.00	15,458.09	7,254.00	208.71	218.22	-94.93	-1,903.39	-7,494.96	2,197.43	1,772.52	424.91	5.172		
14,700.00	7,065.00	15,558.09	7,254.00	211.41	220.91	-94.93	-1,904.23	-7,594.96	2,197.43	1,767.14	430.29	5.107		
14,800.00	7,065.00	15,658.09	7,254.00	214.12	223.61	-94.93	-1,905.07	-7,694.95	2,197.42	1,761.75	435.67	5.044		
14,900.00	7,065.00	15,758.09	7,254.00	216.82	226.30	-94.93	-1,905.90	-7,794.95	2,197.42	1,756.37	441.05	4.982		
15,000.00	7,065.00	15,858.09	7,254.00	219.52	229.00	-94.93	-1,906.74	-7,894.95	2,197.42	1,750.98	446.44	4.922		
15,100.00	7,065.00	15,958.09	7,254.00	222.22	231.69	-94.93	-1,907.58	-7,994.94	2,197.42	1,745.60	451.82	4.863		
15,200.00	7,065.00	16,058.09	7,254.00	224.93	234.39	-94.93	-1,908.42	-8,094.94	2,197.42	1,740.21	457.21	4.806		
15,300.00	7,065.00	16,158.09	7,254.00	227.63	237.08	-94.93	-1,909.25	-8,194.94	2,197.42	1,734.82	462.60	4.750		
15,400.00	7,065.00	16,258.09	7,254.00	230.34	239.78	-94.93	-1,910.09	-8,294.93	2,197.42	1,729.43	467.99	4.695		
15,495.74	7,065.00	16,353.82	7,254.00	232.93	242.36	-94.93	-1,910.89	-8,390.67	2,197.42	1,724.27	473.15	4.644 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	-94.71	0.00	94.71							
100.00	100.00	100.00	100.00	0.14	0.14	-180.00	-94.71	0.00	94.71	94.43	0.29	330.268				
200.00	200.00	200.00	200.00	0.50	0.50	-180.00	-94.71	0.00	94.71	93.71	1.00	94.362				
300.00	300.00	300.00	300.00	0.86	0.86	-180.00	-94.71	0.00	94.71	92.99	1.72	55.045 CC, ES				
400.00	400.00	396.93	396.91	1.22	1.19	179.68	-96.26	0.53	96.32	93.90	2.41	39.897				
500.00	499.98	493.56	493.41	1.58	1.53	140.98	-100.90	2.12	102.48	99.38	3.10	33.014				
594.97	594.82	584.59	584.12	1.92	1.85	141.13	-108.08	4.57	113.78	110.01	3.77	30.197				
600.00	599.84	589.38	588.89	1.94	1.87	141.16	-108.53	4.73	114.52	110.72	3.81	30.078				
700.00	699.61	684.19	683.04	2.30	2.23	141.38	-119.05	8.33	130.91	126.41	4.50	29.110				
800.00	799.37	777.93	775.71	2.66	2.60	141.16	-132.34	12.88	150.35	145.17	5.18	29.006				
900.00	899.14	870.41	866.65	3.03	3.00	140.67	-148.26	18.33	172.82	166.96	5.87	29.467				
1,000.00	998.91	961.49	955.62	3.40	3.43	140.02	-166.65	24.62	198.27	191.73	6.54	30.318				
1,100.00	1,098.68	1,051.00	1,042.42	3.77	3.87	139.30	-187.31	31.69	226.63	219.42	7.21	31.437				
1,200.00	1,198.45	1,138.82	1,126.88	4.14	4.34	138.57	-210.07	39.48	257.87	250.01	7.86	32.823				
1,300.00	1,298.22	1,224.83	1,208.85	4.51	4.83	137.85	-234.73	47.92	291.91	283.40	8.50	34.337				
1,400.00	1,397.99	1,308.95	1,288.22	4.88	5.34	137.16	-261.08	56.94	328.67	319.53	9.13	35.992				
1,500.00	1,497.75	1,401.19	1,374.79	5.26	5.93	136.49	-291.21	67.26	366.82	356.97	9.85	37.244				
1,600.00	1,597.52	1,493.55	1,461.46	5.63	6.54	135.95	-321.39	77.59	405.00	394.43	10.57	38.306				
1,700.00	1,697.29	1,585.91	1,548.14	6.00	7.15	135.50	-351.57	87.92	443.21	431.91	11.30	39.222				
1,800.00	1,797.06	1,678.27	1,634.82	6.37	7.77	135.13	-381.74	98.24	481.45	469.41	12.03	40.017				
1,900.00	1,896.83	1,770.63	1,721.50	6.75	8.39	134.80	-411.92	108.57	519.69	506.93	12.76	40.715				
2,000.00	1,996.60	1,862.99	1,808.18	7.12	9.02	134.53	-442.09	118.90	557.95	544.45	13.50	41.331				
2,100.00	2,096.37	1,955.35	1,894.86	7.49	9.64	134.28	-472.27	129.23	596.22	581.98	14.24	41.879				
2,200.00	2,196.13	2,047.71	1,981.54	7.86	10.28	134.07	-502.44	139.56	634.50	619.52	14.98	42.370				
2,300.00	2,295.90	2,140.07	2,068.22	8.24	10.91	133.88	-532.62	149.89	672.78	657.06	15.72	42.811				
2,400.00	2,395.67	2,232.43	2,154.90	8.61	11.54	133.71	-562.79	160.21	711.07	694.61	16.46	43.209				
2,500.00	2,495.44	2,324.79	2,241.58	8.98	12.18	133.56	-592.97	170.54	749.36	732.16	17.20	43.571				
2,600.00	2,595.21	2,417.15	2,328.26	9.36	12.82	133.43	-623.14	180.87	787.66	769.72	17.94	43.901				
2,700.00	2,694.98	2,509.51	2,414.93	9.73	13.46	133.30	-653.32	191.20	825.96	807.27	18.69	44.203				
2,800.00	2,794.75	2,601.88	2,501.61	10.10	14.10	133.19	-683.49	201.53	864.26	844.83	19.43	44.480				
2,900.00	2,894.51	2,694.24	2,588.29	10.48	14.74	133.09	-713.67	211.86	902.57	882.39	20.18	44.736				
3,000.00	2,994.28	2,786.60	2,674.97	10.85	15.38	132.99	-743.84	222.18	940.88	919.95	20.92	44.972				
3,100.00	3,094.05	2,878.96	2,761.65	11.22	16.02	132.90	-774.02	232.51	979.19	957.52	21.67	45.191				
3,200.00	3,193.82	2,971.32	2,848.33	11.60	16.67	132.82	-804.19	242.84	1,017.50	995.08	22.41	45.394				
3,300.00	3,293.59	3,063.68	2,935.01	11.97	17.31	132.75	-834.37	253.17	1,055.81	1,032.65	23.16	45.583				
3,400.00	3,393.36	3,156.04	3,021.69	12.35	17.95	132.68	-864.54	263.50	1,094.13	1,070.22	23.91	45.760				
3,500.00	3,493.12	3,248.40	3,108.37	12.72	18.60	132.61	-894.72	273.83	1,132.45	1,107.79	24.66	45.925				
3,600.00	3,592.89	3,340.76	3,195.05	13.09	19.24	132.55	-924.89	284.15	1,170.76	1,145.36	25.41	46.080				
3,700.00	3,692.66	3,433.12	3,281.72	13.47	19.89	132.50	-955.07	294.48	1,209.08	1,182.93	26.16	46.226				
3,800.00	3,792.43	3,525.48	3,368.40	13.84	20.53	132.44	-985.24	304.81	1,247.40	1,220.50	26.91	46.362				
3,900.00	3,892.20	3,617.84	3,455.08	14.21	21.18	132.39	-1,015.42	315.14	1,285.72	1,258.07	27.66	46.491				
4,000.00	3,991.97	3,710.20	3,541.76	14.59	21.82	132.34	-1,045.59	325.47	1,324.04	1,295.64	28.41	46.613				
4,100.00	4,091.74	3,802.56	3,628.44	14.96	22.47	132.30	-1,075.77	335.80	1,362.37	1,333.21	29.16	46.728				
4,200.00	4,191.50	3,894.92	3,715.12	15.33	23.11	132.26	-1,105.94	346.12	1,400.69	1,370.78	29.91	46.837				
4,300.00	4,291.27	3,987.28	3,801.80	15.71	23.76	132.22	-1,136.12	356.45	1,439.01	1,408.36	30.66	46.940				
4,400.00	4,391.04	4,079.64	3,888.48	16.08	24.41	132.18	-1,166.29	366.78	1,477.34	1,445.93	31.41	47.037				
4,500.00	4,490.81	4,172.00	3,975.16	16.46	25.05	132.14	-1,196.47	377.11	1,515.66	1,483.50	32.16	47.130				
4,600.00	4,590.58	4,264.36	4,061.84	16.83	25.70	132.11	-1,226.64	387.44	1,553.99	1,521.08	32.91	47.218				
4,700.00	4,690.35	4,356.72	4,148.52	17.20	26.35	132.08	-1,256.82	397.76	1,592.31	1,558.65	33.66	47.302				
4,800.00	4,790.12	4,449.09	4,235.19	17.58	26.99	132.05	-1,286.99	408.09	1,630.64	1,596.22	34.41	47.382				
4,900.00	4,889.88	4,541.45	4,321.87	17.95	27.64	132.02	-1,317.17	418.42	1,668.97	1,633.80	35.17	47.458				
5,000.00	4,989.65	4,633.81	4,408.55	18.32	28.29	131.99	-1,347.34	428.75	1,707.29	1,671.37	35.92	47.531				

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 11-10-9H
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 11-10-9H	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		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	5,089.42	4,726.17	4,495.23	18.70	28.94	131.96	-1,377.52	439.08	1,745.62	1,708.95	36.67	47.600		
5,200.00	5,189.19	4,818.53	4,581.91	19.07	29.58	131.94	-1,407.69	449.41	1,783.95	1,746.52	37.43	47.666		
5,300.00	5,288.96	4,910.89	4,668.59	19.45	30.23	131.91	-1,437.87	459.73	1,822.27	1,784.10	38.18	47.730		
5,400.00	5,388.73	5,003.25	4,755.27	19.82	30.88	131.89	-1,468.04	470.06	1,860.60	1,821.67	38.93	47.790		
5,500.00	5,488.49	5,095.61	4,841.95	20.19	31.52	131.86	-1,498.22	480.39	1,898.93	1,859.24	39.69	47.848		
5,600.00	5,588.26	5,187.97	4,928.63	20.57	32.17	131.84	-1,528.39	490.72	1,937.26	1,896.82	40.44	47.904		
5,700.00	5,688.03	5,280.33	5,015.31	20.94	32.82	131.82	-1,558.57	501.05	1,975.59	1,934.39	41.19	47.957		
5,800.00	5,787.80	5,372.69	5,101.98	21.31	33.47	131.80	-1,588.74	511.38	2,013.92	1,971.97	41.95	48.008		
5,900.00	5,887.57	5,465.05	5,188.66	21.69	34.12	131.78	-1,618.92	521.70	2,052.25	2,009.54	42.70	48.058		
6,000.00	5,987.34	5,557.41	5,275.34	22.06	34.76	131.76	-1,649.09	532.03	2,090.58	2,047.12	43.46	48.105		
6,100.00	6,087.11	5,649.77	5,362.02	22.44	35.41	131.74	-1,679.27	542.36	2,128.91	2,084.69	44.21	48.150		
6,200.00	6,186.87	5,742.13	5,448.70	22.81	36.06	131.73	-1,709.44	552.69	2,167.24	2,122.27	44.97	48.194		
6,300.00	6,286.64	5,834.49	5,535.38	23.18	36.71	131.71	-1,739.62	563.02	2,205.57	2,159.84	45.72	48.236		
6,400.00	6,386.41	5,926.85	5,622.06	23.56	37.36	131.69	-1,769.79	573.35	2,243.90	2,197.41	46.48	48.276		
6,482.24	6,468.46	6,002.81	5,693.34	23.86	37.89	131.68	-1,794.61	581.84	2,275.42	2,228.31	47.10	48.308		
6,500.00	6,486.19	6,019.19	5,708.72	23.93	38.00	158.80	-1,799.96	583.67	2,282.27	2,235.03	47.24	48.317		
6,550.00	6,536.08	6,064.97	5,751.68	24.10	38.32	-131.93	-1,814.92	588.79	2,301.95	2,254.36	47.59	48.371		
6,600.00	6,585.64	6,109.97	5,793.91	24.26	38.64	-112.98	-1,829.62	593.82	2,322.12	2,274.21	47.92	48.461		
6,650.00	6,634.49	6,153.85	5,835.09	24.40	38.95	-105.02	-1,843.95	598.73	2,342.68	2,294.46	48.22	48.584		
6,700.00	6,682.26	6,196.27	5,874.91	24.53	39.25	-100.14	-1,857.81	603.47	2,363.53	2,315.03	48.50	48.736		
6,750.00	6,728.60	6,236.92	5,913.06	24.64	39.53	-96.53	-1,871.09	608.02	2,384.59	2,335.84	48.75	48.912		
6,800.00	6,773.14	6,275.49	5,949.25	24.75	39.80	-93.57	-1,883.69	612.33	2,405.80	2,356.81	48.99	49.110		
6,850.00	6,815.54	6,311.67	5,983.21	24.84	40.06	-90.98	-1,895.52	616.38	2,427.09	2,377.88	49.21	49.323		
6,900.00	6,855.49	6,345.20	6,014.67	24.92	40.29	-88.62	-1,906.47	620.13	2,448.43	2,399.01	49.42	49.546		
6,950.00	6,892.68	6,375.82	6,043.41	24.99	40.51	-86.42	-1,916.47	623.55	2,469.75	2,420.13	49.62	49.772		
7,000.00	6,926.83	6,403.30	6,069.19	25.07	40.70	-84.31	-1,925.45	626.63	2,491.01	2,441.19	49.83	49.992		
7,050.00	6,957.68	6,427.42	6,091.83	25.19	40.87	-82.27	-1,933.33	629.32	2,512.17	2,462.12	50.05	50.198		
7,100.00	6,984.98	6,448.01	6,111.15	25.42	41.01	-80.26	-1,940.06	631.63	2,533.15	2,482.88	50.28	50.384		
7,150.00	7,008.54	6,464.90	6,127.01	25.72	41.13	-78.28	-1,945.58	633.51	2,553.91	2,503.37	50.53	50.541		
7,200.00	7,028.18	6,477.98	6,139.28	26.06	41.22	-76.31	-1,949.85	634.98	2,574.34	2,523.53	50.81	50.666		
7,250.00	7,043.74	6,487.13	6,147.87	26.46	41.29	-74.35	-1,952.84	636.00	2,594.38	2,543.27	51.12	50.754		
7,300.00	7,055.11	6,492.29	6,152.72	26.91	41.32	-72.41	-1,954.53	636.58	2,613.92	2,562.47	51.45	50.805		
7,350.00	7,062.20	8,135.22	7,064.00	27.40	45.51	-90.07	-2,279.63	-242.74	2,626.13	2,563.39	62.74	41.858		
7,400.00	7,064.96	8,185.13	7,064.00	27.94	45.52	-89.98	-2,280.02	-292.64	2,626.25	2,562.27	63.99	41.044		
7,406.67	7,065.00	8,191.79	7,064.00	28.01	45.52	-89.98	-2,280.08	-299.31	2,626.25	2,562.10	64.16	40.936		
7,500.00	7,065.00	8,285.13	7,064.00	29.15	45.60	-89.98	-2,280.82	-392.64	2,626.21	2,559.48	66.73	39.353		
7,600.00	7,065.00	8,385.13	7,064.00	30.55	45.79	-89.98	-2,281.62	-492.64	2,626.17	2,556.37	69.81	37.621		
7,700.00	7,065.00	8,485.13	7,064.00	32.12	46.16	-89.98	-2,282.41	-592.63	2,626.13	2,552.97	73.16	35.895		
7,800.00	7,065.00	8,585.13	7,064.00	33.83	46.84	-89.98	-2,283.21	-692.63	2,626.09	2,549.33	76.76	34.211		
7,900.00	7,065.00	8,685.13	7,064.00	35.67	47.94	-89.98	-2,284.00	-792.63	2,626.05	2,545.47	80.57	32.592		
8,000.00	7,065.00	8,785.13	7,064.00	37.61	49.43	-89.98	-2,284.80	-892.62	2,626.00	2,541.44	84.57	31.052		
8,100.00	7,065.00	8,885.13	7,064.00	39.65	51.20	-89.98	-2,285.59	-992.62	2,625.96	2,537.24	88.72	29.599		
8,200.00	7,065.00	8,985.13	7,064.00	41.76	53.15	-89.98	-2,286.39	-1,092.62	2,625.92	2,532.91	93.01	28.234		
8,300.00	7,065.00	9,085.13	7,064.00	43.94	55.23	-89.98	-2,287.19	-1,192.61	2,625.88	2,528.47	97.41	26.957		
8,400.00	7,065.00	9,185.13	7,064.00	46.18	57.39	-89.98	-2,287.98	-1,292.61	2,625.83	2,523.92	101.92	25.765		
8,500.00	7,065.00	9,285.13	7,064.00	48.46	59.61	-89.98	-2,288.78	-1,392.61	2,625.79	2,519.28	106.51	24.653		
8,600.00	7,065.00	9,385.13	7,064.00	50.79	61.88	-89.98	-2,289.57	-1,492.60	2,625.75	2,514.57	111.18	23.617		
8,700.00	7,065.00	9,485.13	7,064.00	53.16	64.20	-89.98	-2,290.37	-1,592.60	2,625.71	2,509.79	115.92	22.651		
8,800.00	7,065.00	9,585.13	7,064.00	55.56	66.55	-89.98	-2,291.16	-1,692.60	2,625.66	2,504.94	120.72	21.750		
8,900.00	7,065.00	9,685.13	7,064.00	57.99	68.93	-89.98	-2,291.96	-1,792.60	2,625.62	2,500.05	125.57	20.909		
9,000.00	7,065.00	9,785.13	7,064.00	60.44	71.34	-89.98	-2,292.76	-1,892.59	2,625.58	2,495.11	130.47	20.124		
9,100.00	7,065.00	9,885.13	7,064.00	62.91	73.77	-89.98	-2,293.55	-1,992.59	2,625.54	2,490.12	135.41	19.389		

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 11-10-9H
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 11-10-9H	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			
9,200.00	7,065.00	9,985.13	7,064.00	65.41	76.22	-89.98	-2,294.35	-2,092.59	2,625.50	2,485.10	140.39	18.701			
9,300.00	7,065.00	10,085.13	7,064.00	67.92	78.68	-89.98	-2,295.14	-2,192.58	2,625.45	2,480.05	145.40	18.056			
9,400.00	7,065.00	10,185.13	7,064.00	70.45	81.17	-89.98	-2,295.94	-2,292.58	2,625.41	2,474.97	150.45	17.451			
9,500.00	7,065.00	10,285.13	7,064.00	72.99	83.67	-89.98	-2,296.73	-2,392.58	2,625.37	2,469.85	155.51	16.882			
9,600.00	7,065.00	10,385.13	7,064.00	75.54	86.18	-89.98	-2,297.53	-2,492.57	2,625.33	2,464.72	160.61	16.346			
9,700.00	7,065.00	10,485.13	7,064.00	78.11	88.71	-89.98	-2,298.33	-2,592.57	2,625.28	2,459.56	165.72	15.841			
9,800.00	7,065.00	10,585.13	7,064.00	80.68	91.24	-89.98	-2,299.12	-2,692.57	2,625.24	2,454.38	170.86	15.365			
9,900.00	7,065.00	10,685.13	7,064.00	83.27	93.79	-89.98	-2,299.92	-2,792.56	2,625.20	2,449.18	176.01	14.915			
10,000.00	7,065.00	10,785.13	7,064.00	85.86	96.35	-89.98	-2,300.71	-2,892.56	2,625.16	2,443.97	181.19	14.489			
10,100.00	7,065.00	10,885.13	7,064.00	88.46	98.91	-89.98	-2,301.51	-2,992.56	2,625.11	2,438.74	186.37	14.085			
10,200.00	7,065.00	10,985.13	7,064.00	91.07	101.49	-89.98	-2,302.30	-3,092.55	2,625.07	2,433.50	191.57	13.703			
10,300.00	7,065.00	11,085.13	7,064.00	93.68	104.07	-89.98	-2,303.10	-3,192.55	2,625.03	2,428.24	196.79	13.339			
10,400.00	7,065.00	11,185.13	7,064.00	96.30	106.66	-89.98	-2,303.90	-3,292.55	2,624.99	2,422.97	202.01	12.994			
10,500.00	7,065.00	11,285.13	7,064.00	98.93	109.25	-89.98	-2,304.69	-3,392.54	2,624.95	2,417.69	207.25	12.665			
10,600.00	7,065.00	11,385.13	7,064.00	101.56	111.85	-89.98	-2,305.49	-3,492.54	2,624.90	2,412.40	212.50	12.352			
10,700.00	7,065.00	11,485.13	7,064.00	104.20	114.45	-89.98	-2,306.28	-3,592.54	2,624.86	2,407.10	217.76	12.054			
10,800.00	7,065.00	11,585.13	7,064.00	106.83	117.07	-89.98	-2,307.08	-3,692.53	2,624.82	2,401.79	223.02	11.769			
10,900.00	7,065.00	11,685.13	7,064.00	109.48	119.68	-89.98	-2,307.87	-3,792.53	2,624.78	2,396.48	228.30	11.497			
11,000.00	7,065.00	11,785.13	7,064.00	112.13	122.30	-89.98	-2,308.67	-3,892.53	2,624.73	2,391.15	233.58	11.237			
11,100.00	7,065.00	11,885.13	7,064.00	114.78	124.93	-89.98	-2,309.46	-3,992.53	2,624.69	2,385.82	238.87	10.988			
11,200.00	7,065.00	11,985.13	7,064.00	117.43	127.55	-89.98	-2,310.26	-4,092.52	2,624.65	2,380.48	244.17	10.749			
11,300.00	7,065.00	12,085.13	7,064.00	120.09	130.19	-89.98	-2,311.06	-4,192.52	2,624.61	2,375.14	249.47	10.521			
11,400.00	7,065.00	12,185.13	7,064.00	122.75	132.82	-89.98	-2,311.85	-4,292.52	2,624.56	2,369.79	254.78	10.301			
11,500.00	7,065.00	12,285.13	7,064.00	125.41	135.46	-89.98	-2,312.65	-4,392.51	2,624.52	2,364.43	260.09	10.091			
11,600.00	7,065.00	12,385.13	7,064.00	128.08	138.10	-89.98	-2,313.44	-4,492.51	2,624.48	2,359.07	265.41	9.888			
11,700.00	7,065.00	12,485.13	7,064.00	130.74	140.75	-89.98	-2,314.24	-4,592.51	2,624.44	2,353.70	270.74	9.694			
11,800.00	7,065.00	12,585.13	7,064.00	133.41	143.40	-89.98	-2,315.03	-4,692.50	2,624.40	2,348.33	276.06	9.506			
11,900.00	7,065.00	12,685.13	7,064.00	136.09	146.05	-89.98	-2,315.83	-4,792.50	2,624.35	2,342.95	281.40	9.326			
12,000.00	7,065.00	12,785.13	7,064.00	138.76	148.70	-89.98	-2,316.63	-4,892.50	2,624.31	2,337.58	286.74	9.152			
12,100.00	7,065.00	12,885.13	7,064.00	141.44	151.35	-89.98	-2,317.42	-4,992.49	2,624.27	2,332.19	292.08	8.985			
12,200.00	7,065.00	12,985.13	7,064.00	144.11	154.01	-89.98	-2,318.22	-5,092.49	2,624.23	2,326.80	297.42	8.823			
12,300.00	7,065.00	13,085.13	7,064.00	146.79	156.67	-89.98	-2,319.01	-5,192.49	2,624.18	2,321.41	302.77	8.667			
12,400.00	7,065.00	13,185.13	7,064.00	149.47	159.33	-89.98	-2,319.81	-5,292.48	2,624.14	2,316.02	308.12	8.517			
12,500.00	7,065.00	13,285.13	7,064.00	152.15	162.00	-89.98	-2,320.60	-5,392.48	2,624.10	2,310.62	313.48	8.371			
12,600.00	7,065.00	13,385.13	7,064.00	154.84	164.66	-89.98	-2,321.40	-5,492.48	2,624.06	2,305.22	318.84	8.230			
12,700.00	7,065.00	13,485.13	7,064.00	157.52	167.33	-89.98	-2,322.20	-5,592.47	2,624.01	2,299.82	324.20	8.094			
12,800.00	7,065.00	13,585.13	7,064.00	160.21	170.00	-89.98	-2,322.99	-5,692.47	2,623.97	2,294.41	329.56	7.962			
12,900.00	7,065.00	13,685.13	7,064.00	162.89	172.67	-89.98	-2,323.79	-5,792.47	2,623.93	2,289.00	334.93	7.834			
13,000.00	7,065.00	13,785.13	7,064.00	165.58	175.34	-89.98	-2,324.58	-5,892.47	2,623.89	2,283.59	340.30	7.711			
13,100.00	7,065.00	13,885.13	7,064.00	168.27	178.02	-89.98	-2,325.38	-5,992.46	2,623.85	2,278.18	345.67	7.591			
13,200.00	7,065.00	13,985.13	7,064.00	170.96	180.69	-89.98	-2,326.17	-6,092.46	2,623.80	2,272.76	351.04	7.474			
13,300.00	7,065.00	14,085.13	7,064.00	173.65	183.37	-89.98	-2,326.97	-6,192.46	2,623.76	2,267.35	356.41	7.362			
13,400.00	7,065.00	14,185.13	7,064.00	176.35	186.04	-89.98	-2,327.77	-6,292.45	2,623.72	2,261.93	361.79	7.252			
13,500.00	7,065.00	14,285.13	7,064.00	179.04	188.72	-89.98	-2,328.56	-6,392.45	2,623.68	2,256.50	367.17	7.146			
13,600.00	7,065.00	14,385.13	7,064.00	181.73	191.40	-89.98	-2,329.36	-6,492.45	2,623.63	2,251.08	372.55	7.042			
13,700.00	7,065.00	14,485.13	7,064.00	184.43	194.08	-89.98	-2,330.15	-6,592.44	2,623.59	2,245.66	377.94	6.942			
13,800.00	7,065.00	14,585.13	7,064.00	187.12	196.77	-89.98	-2,330.95	-6,692.44	2,623.55	2,240.23	383.32	6.844			
13,900.00	7,065.00	14,685.13	7,064.00	189.82	199.45	-89.98	-2,331.74	-6,792.44	2,623.51	2,234.80	388.71	6.749			
14,000.00	7,065.00	14,785.13	7,064.00	192.52	202.13	-89.98	-2,332.54	-6,892.43	2,623.46	2,229.37	394.09	6.657			
14,100.00	7,065.00	14,885.13	7,064.00	195.21	204.82	-89.98	-2,333.34	-6,992.43	2,623.42	2,223.94	399.48	6.567			
14,200.00	7,065.00	14,985.13	7,064.00	197.91	207.51	-89.98	-2,334.13	-7,092.43	2,623.38	2,218.51	404.87	6.479			
14,300.00	7,065.00	15,085.13	7,064.00	200.61	210.19	-89.98	-2,334.93	-7,192.42	2,623.34	2,213.07	410.27	6.394			

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 11-10-9H
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 11-10-9H	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)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
14,400.00	7,065.00	15,185.13	7,064.00	203.31	212.88	-89.98	-2,335.72	-7,292.42	2,623.30	2,207.64	415.66	6.311			
14,500.00	7,065.00	15,285.13	7,064.00	206.01	215.57	-89.98	-2,336.52	-7,392.42	2,623.25	2,202.20	421.05	6.230			
14,600.00	7,065.00	15,385.13	7,064.00	208.71	218.26	-89.98	-2,337.31	-7,492.41	2,623.21	2,196.76	426.45	6.151			
14,700.00	7,065.00	15,485.13	7,064.00	211.41	220.95	-89.98	-2,338.11	-7,592.41	2,623.17	2,191.32	431.85	6.074			
14,800.00	7,065.00	15,585.13	7,064.00	214.12	223.64	-89.98	-2,338.91	-7,692.41	2,623.13	2,185.88	437.25	5.999			
14,900.00	7,065.00	15,685.13	7,064.00	216.82	226.33	-89.98	-2,339.70	-7,792.40	2,623.08	2,180.44	442.65	5.926			
15,000.00	7,065.00	15,785.13	7,064.00	219.52	229.03	-89.98	-2,340.50	-7,892.40	2,623.04	2,174.99	448.05	5.854			
15,100.00	7,065.00	15,885.13	7,064.00	222.22	231.72	-89.98	-2,341.29	-7,992.40	2,623.00	2,169.55	453.45	5.785			
15,200.00	7,065.00	15,985.13	7,064.00	224.93	234.41	-89.98	-2,342.09	-8,092.40	2,622.96	2,164.11	458.85	5.716			
15,300.00	7,065.00	16,085.12	7,064.00	227.63	237.11	-89.98	-2,342.88	-8,192.39	2,622.91	2,158.66	464.25	5.650			
15,400.00	7,065.00	16,185.12	7,064.00	230.34	239.80	-89.98	-2,343.68	-8,292.39	2,622.87	2,153.21	469.66	5.585			
15,495.74	7,065.00	16,280.86	7,064.00	232.93	242.38	-89.98	-2,344.44	-8,388.12	2,622.83	2,148.00	474.83	5.524 SF			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		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	-150.73	-54.64	-30.63	62.64	62.64	0.29	218.439						
100.00	100.00	100.00	100.00	0.14	0.14	-150.73	-54.64	-30.63	62.64	62.36	1.00	62.411						
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						
400.00	400.00	400.00	400.00	1.22	1.22	-150.73	-54.64	-30.63	62.64	60.21	2.44	25.699 CC, ES						
500.00	499.98	499.98	499.98	1.58	1.58	171.17	-54.64	-30.63	64.37	61.21	3.15	20.410						
594.97	594.82	594.82	594.82	1.92	1.92	171.78	-54.64	-30.63	69.20	65.36	3.84	18.039						
600.00	599.84	599.84	599.84	1.94	1.94	171.82	-54.64	-30.63	69.54	65.66	3.87	17.946						
700.00	699.61	699.61	699.61	2.30	2.29	172.54	-54.64	-30.63	76.28	71.69	4.59	16.623						
800.00	799.37	799.37	799.37	2.66	2.65	173.15	-54.64	-30.63	83.02	77.72	5.30	15.655						
900.00	899.14	899.14	899.14	3.03	3.01	173.67	-54.64	-30.63	89.78	83.76	6.02	14.915						
1,000.00	998.91	998.91	998.91	3.40	3.37	174.12	-54.64	-30.63	96.54	89.81	6.74	14.333						
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	174.50	-54.64	-30.63	103.31	95.86	7.45	13.862						
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	174.84	-54.64	-30.63	110.08	101.91	8.17	13.474						
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	175.14	-54.64	-30.63	116.85	107.97	8.89	13.149						
1,400.00	1,397.99	1,397.99	1,397.99	4.88	4.80	175.41	-54.64	-30.63	123.63	114.03	9.60	12.872						
1,500.00	1,497.75	1,497.75	1,497.75	5.26	5.15	175.65	-54.64	-30.63	130.41	120.09	10.32	12.634						
1,600.00	1,597.52	1,597.52	1,597.52	5.63	5.51	175.86	-54.64	-30.63	137.19	126.15	11.04	12.427						
1,700.00	1,697.29	1,697.29	1,697.29	6.00	5.87	176.06	-54.64	-30.63	143.98	132.22	11.76	12.245						
1,800.00	1,797.06	1,797.06	1,797.06	6.37	6.23	176.24	-54.64	-30.63	150.76	138.29	12.48	12.084						
1,900.00	1,896.83	1,896.83	1,896.83	6.75	6.58	176.40	-54.64	-30.63	157.55	144.35	13.19	11.941						
2,000.00	1,996.60	1,996.60	1,996.60	7.12	6.94	176.55	-54.64	-30.63	164.34	150.42	13.91	11.812						
2,100.00	2,096.37	2,096.37	2,096.37	7.49	7.30	176.68	-54.64	-30.63	171.12	156.49	14.63	11.696						
2,200.00	2,196.13	2,196.13	2,196.13	7.86	7.66	176.81	-54.64	-30.63	177.91	162.57	15.35	11.591						
2,300.00	2,295.90	2,301.24	2,301.22	8.24	8.03	177.25	-52.86	-30.61	183.31	167.22	16.09	11.393						
2,400.00	2,395.67	2,406.70	2,406.52	8.61	8.41	178.36	-47.19	-30.53	185.73	168.91	16.82	11.041						
2,500.00	2,495.44	2,512.02	2,511.41	8.98	8.79	-179.85	-37.67	-30.40	185.28	167.74	17.54	10.563						
2,600.00	2,595.21	2,616.92	2,615.45	9.36	9.16	-177.29	-24.36	-30.22	182.17	163.92	18.25	9.982						
2,700.00	2,694.98	2,721.11	2,718.24	9.73	9.55	-173.83	-7.38	-29.99	176.75	157.79	18.96	9.323						
2,800.00	2,794.75	2,824.34	2,819.41	10.10	9.93	-169.28	13.11	-29.72	169.51	149.83	19.68	8.614						
2,900.00	2,894.51	2,926.36	2,918.60	10.48	10.33	-163.37	36.94	-29.40	161.23	140.80	20.43	7.893						
3,000.00	2,994.28	3,026.92	3,015.49	10.85	10.74	-155.86	63.86	-29.04	153.02	131.79	21.23	7.207						
3,100.00	3,094.05	3,125.83	3,109.80	11.22	11.17	-146.58	93.65	-28.64	146.46	124.35	22.11	6.625						
3,200.00	3,193.82	3,222.89	3,201.29	11.60	11.61	-135.68	126.02	-28.20	143.56	120.53	23.03	6.234						
3,205.79	3,199.60	3,228.45	3,206.50	11.62	11.64	-135.01	127.97	-28.18	143.55	120.47	23.08	6.219						
3,300.00	3,293.59	3,317.93	3,289.78	11.97	12.07	-123.80	160.71	-27.74	146.44	122.53	23.91	6.125						
3,400.00	3,393.36	3,410.83	3,375.10	12.35	12.55	-111.98	197.43	-27.24	156.70	132.06	24.64	6.359						
3,500.00	3,493.12	3,501.45	3,457.14	12.72	13.05	-101.23	235.90	-26.72	174.82	149.64	25.17	6.944						
3,600.00	3,592.89	3,593.24	3,539.55	13.09	13.59	-92.04	276.32	-26.18	199.50	173.84	25.66	7.773						
3,700.00	3,692.66	3,685.18	3,622.09	13.47	14.14	-84.84	316.82	-25.64	228.33	202.16	26.17	8.725						
3,800.00	3,792.43	3,777.12	3,704.64	13.84	14.71	-79.21	357.31	-25.09	259.92	233.21	26.71	9.732						
3,900.00	3,892.20	3,869.07	3,787.18	14.21	15.30	-74.78	397.81	-24.55	293.39	266.11	27.28	10.753						
4,000.00	3,991.97	3,961.01	3,869.72	14.59	15.90	-71.23	438.30	-24.00	328.16	300.27	27.89	11.766						
4,100.00	4,091.74	4,052.95	3,952.26	14.96	16.51	-68.35	478.80	-23.46	363.86	335.34	28.52	12.757						
4,200.00	4,191.50	4,144.90	4,034.81	15.33	17.13	-65.97	519.29	-22.92	400.24	371.07	29.18	13.718						
4,300.00	4,291.27	4,236.84	4,117.35	15.71	17.76	-63.99	559.79	-22.37	437.13	407.29	29.85	14.646						
4,400.00	4,391.04	4,328.78	4,199.89	16.08	18.40	-62.31	600.28	-21.83	474.42	443.89	30.53	15.539						
4,500.00	4,490.81	4,420.72	4,282.44	16.46	19.05	-60.87	640.78	-21.28	512.01	480.78	31.22	16.398						
4,600.00	4,590.58	4,512.67	4,364.98	16.83	19.71	-59.62	681.27	-20.74	549.84	517.91	31.93	17.221						
4,700.00	4,690.35	4,604.61	4,447.52	17.20	20.37	-58.54	721.77	-20.20	587.86	555.23	32.64	18.011						
4,800.00	4,790.12	4,696.55	4,530.06	17.58	21.04	-57.58	762.26	-19.65	626.05	592.70	33.36	18.768						
4,900.00	4,889.88	4,788.49	4,612.61	17.95	21.71	-56.74	802.76	-19.11	664.37	630.29	34.08	19.494						

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 11-10-9H
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 11-10-9H	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		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	4,989.65	4,880.44	4,695.15	18.32	22.39	-55.98	843.25	-18.56	702.80	668.00	34.81	20.191		
5,100.00	5,089.42	4,972.38	4,777.69	18.70	23.07	-55.31	883.75	-18.02	741.33	705.79	35.54	20.858		
5,200.00	5,189.19	5,064.32	4,860.24	19.07	23.75	-54.69	924.24	-17.47	779.94	743.66	36.28	21.499		
5,300.00	5,288.96	5,156.26	4,942.78	19.45	24.44	-54.14	964.74	-16.93	818.61	781.59	37.02	22.114		
5,400.00	5,388.73	5,248.21	5,025.32	19.82	25.14	-53.64	1,005.23	-16.39	857.34	819.58	37.76	22.705		
5,500.00	5,488.49	5,340.15	5,107.86	20.19	25.83	-53.18	1,045.73	-15.84	896.13	857.62	38.51	23.273		
5,600.00	5,588.26	5,432.09	5,190.41	20.57	26.53	-52.76	1,086.22	-15.30	934.96	895.71	39.25	23.818		
5,700.00	5,688.03	5,524.04	5,272.95	20.94	27.23	-52.37	1,126.72	-14.75	973.83	933.83	40.00	24.343		
5,800.00	5,787.80	5,615.98	5,355.49	21.31	27.94	-52.01	1,167.21	-14.21	1,012.74	971.98	40.76	24.848		
5,900.00	5,887.57	5,707.92	5,438.03	21.69	28.64	-51.68	1,207.71	-13.67	1,051.67	1,010.16	41.51	25.335		
6,000.00	5,987.34	5,799.86	5,520.58	22.06	29.35	-51.37	1,248.20	-13.12	1,090.64	1,048.37	42.27	25.803		
6,100.00	6,087.11	5,891.81	5,603.12	22.44	30.06	-51.08	1,288.70	-12.58	1,129.63	1,086.60	43.03	26.255		
6,200.00	6,186.87	5,983.75	5,685.66	22.81	30.77	-50.81	1,329.19	-12.03	1,168.64	1,124.85	43.79	26.690		
6,300.00	6,286.64	6,075.69	5,768.21	23.18	31.48	-50.56	1,369.69	-11.49	1,207.67	1,163.12	44.55	27.110		
6,400.00	6,386.41	6,167.63	5,850.75	23.56	32.20	-50.33	1,410.18	-10.94	1,246.72	1,201.41	45.31	27.516		
6,482.24	6,468.46	6,243.24	5,918.63	23.86	32.79	-50.15	1,443.48	-10.50	1,278.85	1,232.91	45.94	27.839		
6,500.00	6,486.19	6,259.58	5,933.30	23.93	32.92	-24.43	1,450.68	-10.40	1,285.74	1,239.67	46.07	27.908		
6,550.00	6,536.08	6,305.52	5,974.54	24.10	33.27	41.12	1,470.91	-10.13	1,304.56	1,258.13	46.42	28.102		
6,600.00	6,585.64	6,351.12	6,015.47	24.26	33.63	56.69	1,491.00	-9.86	1,322.46	1,275.72	46.74	28.293		
6,650.00	6,634.49	6,396.02	6,055.78	24.40	33.98	61.59	1,510.77	-9.59	1,339.40	1,292.37	47.03	28.478		
6,700.00	6,682.26	6,439.89	6,095.17	24.53	34.32	63.71	1,530.09	-9.33	1,355.38	1,308.08	47.30	28.656		
6,750.00	6,728.60	6,482.39	6,133.32	24.64	34.66	64.83	1,548.81	-9.08	1,370.42	1,322.88	47.54	28.825		
6,800.00	6,773.14	6,523.20	6,169.96	24.75	34.98	65.51	1,566.79	-8.84	1,384.59	1,336.82	47.77	28.984		
6,850.00	6,815.54	6,562.01	6,204.80	24.84	35.28	65.98	1,583.88	-8.61	1,397.97	1,349.97	47.99	29.129		
6,900.00	6,855.49	6,598.52	6,237.58	24.92	35.57	66.34	1,599.96	-8.39	1,410.64	1,362.43	48.21	29.257		
6,950.00	6,892.68	6,632.46	6,268.05	24.99	35.83	66.61	1,614.91	-8.19	1,422.74	1,374.29	48.45	29.365		
7,000.00	6,926.83	6,663.56	6,295.97	25.07	36.08	66.81	1,628.61	-8.01	1,434.36	1,385.65	48.71	29.448		
7,050.00	6,957.68	6,691.60	6,321.14	25.19	36.30	66.92	1,640.96	-7.84	1,445.63	1,396.63	49.00	29.502		
7,100.00	6,984.98	6,716.35	6,343.36	25.42	36.49	66.92	1,651.86	-7.70	1,456.64	1,407.30	49.34	29.523		
7,150.00	7,008.54	6,737.63	6,362.47	25.72	36.66	66.80	1,661.23	-7.57	1,467.50	1,417.77	49.73	29.508		
7,200.00	7,028.18	6,755.28	6,378.31	26.06	36.80	66.54	1,669.00	-7.47	1,478.28	1,428.10	50.19	29.456		
7,250.00	7,043.74	6,769.15	6,390.77	26.46	36.91	66.13	1,675.12	-7.38	1,489.03	1,438.33	50.70	29.370		
7,300.00	7,055.11	6,779.16	6,399.75	26.91	36.99	65.55	1,679.52	-7.32	1,499.78	1,448.51	51.27	29.252		
7,350.00	7,062.20	6,785.22	6,405.19	27.40	37.03	64.80	1,682.19	-7.29	1,510.52	1,458.62	51.89	29.108		
7,400.00	7,064.96	6,787.28	6,407.04	27.94	37.05	63.89	1,683.10	-7.28	1,521.21	1,468.66	52.56	28.943		
7,406.67	7,065.00	6,787.25	6,407.02	28.01	37.05	63.75	1,683.09	-7.28	1,522.64	1,469.99	52.65	28.921		
7,500.00	7,065.00	6,786.35	6,406.21	29.15	37.04	63.72	1,682.69	-7.28	1,545.20	1,491.17	54.02	28.602		
7,600.00	7,065.00	6,785.39	6,405.35	30.55	37.04	63.68	1,682.27	-7.29	1,575.16	1,519.50	55.66	28.302		
7,700.00	7,065.00	6,784.43	6,404.49	32.12	37.03	63.64	1,681.84	-7.29	1,610.78	1,553.40	57.38	28.072		
7,800.00	7,065.00	6,783.47	6,403.62	33.83	37.02	63.61	1,681.42	-7.30	1,651.69	1,592.56	59.13	27.931		
7,900.00	7,065.00	6,782.51	6,402.76	35.67	37.01	63.57	1,681.00	-7.30	1,697.52	1,636.65	60.87	27.888		
8,000.00	7,065.00	6,781.55	6,401.90	37.61	37.01	63.53	1,680.57	-7.31	1,747.87	1,685.32	62.55	27.943		
8,100.00	7,065.00	8,510.23	7,258.00	39.65	48.85	96.29	2,091.97	-1,028.20	1,762.35	1,685.55	76.80	22.948		
8,200.00	7,065.00	8,610.23	7,258.00	41.76	49.97	96.29	2,091.13	-1,128.19	1,762.35	1,681.60	80.75	21.825		
8,300.00	7,065.00	8,710.23	7,258.00	43.94	51.22	96.29	2,090.29	-1,228.19	1,762.35	1,677.49	84.86	20.767		
8,400.00	7,065.00	8,810.23	7,258.00	46.18	52.62	96.29	2,089.46	-1,328.19	1,762.35	1,673.24	89.11	19.776		
8,500.00	7,065.00	8,910.23	7,258.00	48.46	54.15	96.29	2,088.62	-1,428.18	1,762.35	1,668.86	93.49	18.851		
8,600.00	7,065.00	9,010.23	7,258.00	50.79	55.80	96.29	2,087.78	-1,528.18	1,762.35	1,664.39	97.96	17.990		
8,700.00	7,065.00	9,110.23	7,258.00	53.16	57.55	96.29	2,086.94	-1,628.17	1,762.35	1,659.82	102.53	17.189		
8,800.00	7,065.00	9,210.23	7,258.00	55.56	59.40	96.29	2,086.10	-1,728.17	1,762.35	1,655.17	107.18	16.443		
8,900.00	7,065.00	9,310.23	7,258.00	57.99	61.34	96.29	2,085.27	-1,828.17	1,762.35	1,650.46	111.89	15.751		
9,000.00	7,065.00	9,410.23	7,258.00	60.44	63.35	96.29	2,084.43	-1,928.16	1,762.35	1,645.68	116.67	15.106		

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 11-10-9H
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 11-10-9H	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		Offset Wellbore Centre		Distance		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
9,100.00	7,065.00	9,510.23	7,258.00	62.91	65.42	96.29		96.29	2,083.59	-2,028.16	1,762.35	1,640.85	121.50	14.505	
9,200.00	7,065.00	9,610.23	7,258.00	65.41	67.55	96.29		96.29	2,082.75	-2,128.16	1,762.35	1,635.98	126.37	13.946	
9,300.00	7,065.00	9,710.23	7,258.00	67.92	69.74	96.29		96.29	2,081.91	-2,228.15	1,762.35	1,631.06	131.29	13.423	
9,400.00	7,065.00	9,810.23	7,258.00	70.45	71.96	96.29		96.29	2,081.08	-2,328.15	1,762.35	1,626.10	136.25	12.935	
9,500.00	7,065.00	9,910.23	7,258.00	72.99	74.23	96.29		96.29	2,080.24	-2,428.15	1,762.35	1,621.11	141.24	12.478	
9,600.00	7,065.00	10,010.23	7,258.00	75.54	76.53	96.29		96.29	2,079.40	-2,528.14	1,762.35	1,616.09	146.26	12.049	
9,700.00	7,065.00	10,110.23	7,258.00	78.11	78.87	96.29		96.29	2,078.56	-2,628.14	1,762.35	1,611.04	151.31	11.648	
9,800.00	7,065.00	10,210.23	7,258.00	80.68	81.23	96.29		96.29	2,077.72	-2,728.14	1,762.35	1,605.97	156.38	11.270	
9,900.00	7,065.00	10,310.23	7,258.00	83.27	83.62	96.29		96.29	2,076.89	-2,828.13	1,762.35	1,600.88	161.47	10.914	
10,000.00	7,065.00	10,410.23	7,258.00	85.86	86.02	96.29		96.29	2,076.05	-2,928.13	1,762.35	1,595.76	166.59	10.579	
10,100.00	7,065.00	10,510.23	7,258.00	88.46	88.45	96.29		96.29	2,075.21	-3,028.13	1,762.35	1,590.63	171.72	10.263	
10,200.00	7,065.00	10,610.23	7,258.00	91.07	90.90	96.29		96.29	2,074.37	-3,128.12	1,762.35	1,585.48	176.87	9.964	
10,300.00	7,065.00	10,710.23	7,258.00	93.68	93.37	96.29		96.29	2,073.53	-3,228.12	1,762.35	1,580.32	182.03	9.681	
10,400.00	7,065.00	10,810.23	7,258.00	96.30	95.85	96.29		96.29	2,072.70	-3,328.12	1,762.35	1,575.14	187.21	9.414	
10,500.00	7,065.00	10,910.23	7,258.00	98.93	98.34	96.29		96.29	2,071.86	-3,428.11	1,762.35	1,569.95	192.40	9.160	
10,600.00	7,065.00	11,010.23	7,258.00	101.56	100.85	96.29		96.29	2,071.02	-3,528.11	1,762.35	1,564.74	197.61	8.918	
10,700.00	7,065.00	11,110.23	7,258.00	104.20	103.37	96.29		96.29	2,070.18	-3,628.10	1,762.35	1,559.53	202.82	8.689	
10,800.00	7,065.00	11,210.23	7,258.00	106.83	105.90	96.29		96.29	2,069.34	-3,728.10	1,762.35	1,554.30	208.05	8.471	
10,900.00	7,065.00	11,310.23	7,258.00	109.48	108.44	96.29		96.29	2,068.51	-3,828.10	1,762.35	1,549.07	213.28	8.263	
11,000.00	7,065.00	11,410.23	7,258.00	112.13	110.99	96.29		96.29	2,067.67	-3,928.09	1,762.35	1,543.83	218.52	8.065	
11,100.00	7,065.00	11,510.23	7,258.00	114.78	113.55	96.29		96.29	2,066.83	-4,028.09	1,762.35	1,538.58	223.77	7.876	
11,200.00	7,065.00	11,610.23	7,258.00	117.43	116.12	96.29		96.29	2,065.99	-4,128.09	1,762.35	1,533.32	229.03	7.695	
11,300.00	7,065.00	11,710.23	7,258.00	120.09	118.69	96.29		96.29	2,065.15	-4,228.08	1,762.35	1,528.05	234.30	7.522	
11,400.00	7,065.00	11,810.23	7,258.00	122.75	121.27	96.29		96.29	2,064.32	-4,328.08	1,762.35	1,522.78	239.57	7.356	
11,500.00	7,065.00	11,910.23	7,258.00	125.41	123.86	96.29		96.29	2,063.48	-4,428.08	1,762.35	1,517.50	244.85	7.198	
11,600.00	7,065.00	12,010.23	7,258.00	128.08	126.45	96.29		96.29	2,062.64	-4,528.07	1,762.35	1,512.22	250.13	7.046	
11,700.00	7,065.00	12,110.23	7,258.00	130.74	129.05	96.29		96.29	2,061.80	-4,628.07	1,762.35	1,506.93	255.42	6.900	
11,800.00	7,065.00	12,210.23	7,258.00	133.41	131.65	96.29		96.29	2,060.96	-4,728.07	1,762.35	1,501.63	260.71	6.760	
11,900.00	7,065.00	12,310.23	7,258.00	136.09	134.26	96.29		96.29	2,060.13	-4,828.06	1,762.35	1,496.34	266.01	6.625	
12,000.00	7,065.00	12,410.23	7,258.00	138.76	136.87	96.29		96.29	2,059.29	-4,928.06	1,762.35	1,491.03	271.32	6.496	
12,100.00	7,065.00	12,510.23	7,258.00	141.44	139.49	96.29		96.29	2,058.45	-5,028.06	1,762.35	1,485.72	276.62	6.371	
12,200.00	7,065.00	12,610.23	7,258.00	144.11	142.11	96.29		96.29	2,057.61	-5,128.05	1,762.35	1,480.41	281.93	6.251	
12,300.00	7,065.00	12,710.23	7,258.00	146.79	144.74	96.29		96.29	2,056.77	-5,228.05	1,762.35	1,475.10	287.25	6.135	
12,400.00	7,065.00	12,810.23	7,258.00	149.47	147.37	96.29		96.29	2,055.94	-5,328.04	1,762.35	1,469.78	292.57	6.024	
12,500.00	7,065.00	12,910.23	7,258.00	152.15	150.00	96.29		96.29	2,055.10	-5,428.04	1,762.35	1,464.46	297.89	5.916	
12,600.00	7,065.00	13,010.23	7,258.00	154.84	152.64	96.29		96.29	2,054.26	-5,528.04	1,762.35	1,459.13	303.22	5.812	
12,700.00	7,065.00	13,110.23	7,258.00	157.52	155.28	96.29		96.29	2,053.42	-5,628.03	1,762.35	1,453.80	308.55	5.712	
12,800.00	7,065.00	13,210.23	7,258.00	160.21	157.92	96.29		96.29	2,052.58	-5,728.03	1,762.35	1,448.47	313.88	5.615	
12,900.00	7,065.00	13,310.23	7,258.00	162.89	160.56	96.29		96.29	2,051.75	-5,828.03	1,762.35	1,443.14	319.21	5.521	
13,000.00	7,065.00	13,410.23	7,258.00	165.58	163.21	96.29		96.29	2,050.91	-5,928.02	1,762.35	1,437.80	324.55	5.430	
13,100.00	7,065.00	13,510.23	7,258.00	168.27	165.86	96.29		96.29	2,050.07	-6,028.02	1,762.35	1,432.46	329.89	5.342	
13,200.00	7,065.00	13,610.23	7,258.00	170.96	168.51	96.29		96.29	2,049.23	-6,128.02	1,762.35	1,427.12	335.23	5.257	
13,300.00	7,065.00	13,710.23	7,258.00	173.65	171.16	96.29		96.29	2,048.39	-6,228.01	1,762.35	1,421.77	340.57	5.175	
13,400.00	7,065.00	13,810.23	7,258.00	176.35	173.82	96.29		96.29	2,047.55	-6,328.01	1,762.35	1,416.43	345.92	5.095	
13,500.00	7,065.00	13,910.23	7,258.00	179.04	176.48	96.29		96.29	2,046.72	-6,428.01	1,762.35	1,411.08	351.27	5.017	
13,600.00	7,065.00	14,010.23	7,258.00	181.73	179.14	96.29		96.29	2,045.88	-6,528.00	1,762.35	1,405.73	356.62	4.942	
13,700.00	7,065.00	14,110.23	7,258.00	184.43	181.80	96.29		96.29	2,045.04	-6,628.00	1,762.35	1,400.38	361.97	4.869	
13,800.00	7,065.00	14,210.23	7,258.00	187.12	184.47	96.29		96.29	2,044.20	-6,728.00	1,762.35	1,395.03	367.32	4.798	
13,900.00	7,065.00	14,310.23	7,258.00	189.82	187.13	96.29		96.29	2,043.36	-6,827.99	1,762.35	1,389.67	372.68	4.729	
14,000.00	7,065.00	14,410.23	7,258.00	192.52	189.80	96.29		96.29	2,042.53	-6,927.99	1,762.35	1,384.31	378.03	4.662	
14,100.00	7,065.00	14,510.23	7,258.00	195.21	192.47	96.29		96.29	2,041.69	-7,027.99	1,762.35	1,378.95	383.39	4.597	
14,200.00	7,065.00	14,610.23	7,258.00	197.91	195.14	96.29		96.29	2,040.85	-7,127.98	1,762.35	1,373.59	388.75	4.533	

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 11-10-9H
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 11-10-9H	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)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,300.00	7,065.00	14,710.23	7,258.00	200.61	197.81	96.29		96.29	2,040.01	-7,227.98	1,762.35	1,368.23	394.11	4.472	
14,400.00	7,065.00	14,810.23	7,258.00	203.31	200.48	96.29		96.29	2,039.17	-7,327.97	1,762.35	1,362.87	399.48	4.412	
14,500.00	7,065.00	14,910.23	7,258.00	206.01	203.16	96.29		96.29	2,038.34	-7,427.97	1,762.35	1,357.51	404.84	4.353	
14,600.00	7,065.00	15,010.23	7,258.00	208.71	205.84	96.29		96.29	2,037.50	-7,527.97	1,762.35	1,352.14	410.21	4.296	
14,700.00	7,065.00	15,110.23	7,258.00	211.41	208.51	96.29		96.29	2,036.66	-7,627.96	1,762.35	1,346.77	415.57	4.241	
14,800.00	7,065.00	15,210.23	7,258.00	214.12	211.19	96.29		96.29	2,035.82	-7,727.96	1,762.35	1,341.41	420.94	4.187	
14,900.00	7,065.00	15,310.23	7,258.00	216.82	213.87	96.29		96.29	2,034.98	-7,827.96	1,762.35	1,336.04	426.31	4.134	
15,000.00	7,065.00	15,410.23	7,258.00	219.52	216.55	96.29		96.29	2,034.15	-7,927.95	1,762.35	1,330.67	431.68	4.083	
15,100.00	7,065.00	15,510.23	7,258.00	222.22	219.23	96.29		96.29	2,033.31	-8,027.95	1,762.35	1,325.30	437.05	4.032	
15,200.00	7,065.00	15,610.23	7,258.00	224.93	221.91	96.29		96.29	2,032.47	-8,127.95	1,762.35	1,319.93	442.42	3.983	
15,300.00	7,065.00	15,710.23	7,258.00	227.63	224.60	96.29		96.29	2,031.63	-8,227.94	1,762.35	1,314.55	447.79	3.936	
15,389.67	7,065.00	15,799.90	7,258.00	230.06	227.00	96.29		96.29	2,030.88	-8,317.61	1,762.35	1,309.73	452.61	3.894	
15,400.00	7,065.00	15,810.19	7,258.00	230.34	227.28	96.29		96.29	2,030.79	-8,327.90	1,762.35	1,309.18	453.17	3.889	
15,495.74	7,065.00	15,837.79	7,258.00	232.93	228.02	96.29		96.29	2,030.56	-8,355.49	1,763.67	1,306.52	457.14	3.858 SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		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	-157.20	-72.86	-30.63	79.04					
100.00	100.00	100.00	100.00	0.14	0.14	-157.20	-72.86	-30.63	79.04	78.75	0.29	275.613		
200.00	200.00	200.00	200.00	0.50	0.50	-157.20	-72.86	-30.63	79.04	78.04	1.00	78.747		
300.00	300.00	300.00	300.00	0.86	0.86	-157.20	-72.86	-30.63	79.04	77.32	1.72	45.936		
400.00	400.00	400.00	400.00	1.22	1.22	-157.20	-72.86	-30.63	79.04	76.60	2.44	32.425	CC, ES	
500.00	499.98	499.98	499.98	1.58	1.58	164.78	-72.86	-30.63	80.72	77.57	3.15	25.596		
594.97	594.82	594.82	594.82	1.92	1.92	165.62	-72.86	-30.63	85.45	81.61	3.84	22.274		
600.00	599.84	599.84	599.84	1.94	1.94	165.68	-72.86	-30.63	85.78	81.90	3.87	22.137		
700.00	699.61	699.61	699.61	2.30	2.29	166.72	-72.86	-30.63	92.38	87.80	4.59	20.132		
800.00	799.37	799.37	799.37	2.66	2.65	167.62	-72.86	-30.63	99.02	93.71	5.30	18.667		
900.00	899.14	899.14	899.14	3.03	3.01	168.41	-72.86	-30.63	105.67	99.65	6.02	17.551		
1,000.00	998.91	998.91	998.91	3.40	3.37	169.11	-72.86	-30.63	112.34	105.60	6.74	16.674		
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	169.73	-72.86	-30.63	119.02	111.57	7.45	15.967		
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	170.28	-72.86	-30.63	125.72	117.55	8.17	15.385		
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	170.78	-72.86	-30.63	132.43	123.54	8.89	14.897		
1,400.00	1,397.99	1,397.99	1,397.99	4.88	4.80	171.23	-72.86	-30.63	139.15	129.54	9.61	14.484		
1,500.00	1,497.75	1,497.75	1,497.75	5.26	5.15	171.63	-72.86	-30.63	145.87	135.55	10.33	14.128		
1,600.00	1,597.52	1,597.52	1,597.52	5.63	5.51	172.00	-72.86	-30.63	152.60	141.56	11.04	13.819		
1,700.00	1,697.29	1,697.29	1,697.29	6.00	5.87	172.34	-72.86	-30.63	159.34	147.58	11.76	13.548		
1,800.00	1,797.06	1,797.06	1,797.06	6.37	6.23	172.66	-72.86	-30.63	166.08	153.60	12.48	13.309		
1,900.00	1,896.83	1,896.83	1,896.83	6.75	6.58	172.95	-72.86	-30.63	172.83	159.63	13.20	13.096		
2,000.00	1,996.60	1,996.60	1,996.60	7.12	6.94	173.21	-72.86	-30.63	179.58	165.67	13.92	12.905		
2,100.00	2,096.37	2,096.37	2,096.37	7.49	7.30	173.46	-72.86	-30.63	186.34	171.70	14.63	12.733		
2,200.00	2,196.13	2,196.13	2,196.13	7.86	7.66	173.69	-72.86	-30.63	193.09	177.74	15.35	12.578		
2,300.00	2,295.90	2,295.90	2,295.90	8.24	8.02	173.90	-72.86	-30.63	199.86	183.79	16.07	12.436		
2,400.00	2,395.67	2,401.88	2,401.86	8.61	8.39	174.38	-71.05	-30.61	205.17	188.36	16.82	12.202		
2,500.00	2,495.44	2,508.26	2,508.07	8.98	8.78	175.42	-65.30	-30.54	207.39	189.84	17.55	11.818		
2,600.00	2,595.21	2,614.49	2,613.85	9.36	9.16	177.05	-55.62	-30.42	206.60	188.33	18.27	11.310		
2,700.00	2,694.98	2,720.28	2,718.77	9.73	9.53	179.33	-42.09	-30.26	202.98	184.01	18.97	10.698		
2,800.00	2,794.75	2,825.35	2,822.41	10.10	9.92	-177.62	-24.83	-30.05	196.83	177.15	19.67	10.004		
2,900.00	2,894.51	2,929.42	2,924.37	10.48	10.31	-173.61	-4.00	-29.81	188.57	168.18	20.38	9.252		
3,000.00	2,994.28	3,032.25	3,024.30	10.85	10.71	-168.43	20.20	-29.52	178.83	157.72	21.11	8.471		
3,100.00	3,094.05	3,133.59	3,121.88	11.22	11.12	-161.80	47.55	-29.19	168.58	146.69	21.89	7.701		
3,200.00	3,193.82	3,233.23	3,216.81	11.60	11.55	-153.46	77.79	-28.83	159.17	136.42	22.75	6.998		
3,300.00	3,293.59	3,330.97	3,308.86	11.97	12.00	-143.34	110.64	-28.43	152.49	128.80	23.68	6.439		
3,377.52	3,370.93	3,405.33	3,378.11	12.26	12.35	-134.47	137.73	-28.11	150.62	126.20	24.42	6.167		
3,400.00	3,393.36	3,426.65	3,397.83	12.35	12.46	-131.78	145.82	-28.01	150.80	126.16	24.63	6.121		
3,500.00	3,493.12	3,520.87	3,484.87	12.72	12.94	-120.08	181.90	-27.58	155.99	130.50	25.49	6.119		
3,600.00	3,592.89	3,615.10	3,571.92	13.09	13.43	-109.46	217.98	-27.15	167.84	141.62	26.22	6.401		
3,700.00	3,692.66	3,709.32	3,658.96	13.47	13.95	-100.38	254.06	-26.72	185.07	158.21	26.86	6.890		
3,800.00	3,792.43	3,803.55	3,746.00	13.84	14.47	-92.89	290.14	-26.29	206.34	178.87	27.46	7.513		
3,900.00	3,892.20	3,897.78	3,833.05	14.21	15.01	-86.80	326.22	-25.86	230.53	202.46	28.06	8.215		
4,000.00	3,991.97	3,992.00	3,920.09	14.59	15.57	-81.86	362.30	-25.43	256.81	228.14	28.67	8.957		
4,100.00	4,091.74	4,086.23	4,007.13	14.96	16.13	-77.81	398.38	-24.99	284.62	255.32	29.30	9.714		
4,200.00	4,191.50	4,180.45	4,094.17	15.33	16.70	-74.48	434.46	-24.56	313.53	283.59	29.94	10.471		
4,300.00	4,291.27	4,274.68	4,181.22	15.71	17.28	-71.71	470.54	-24.13	343.28	312.68	30.60	11.217		
4,400.00	4,391.04	4,368.90	4,268.26	16.08	17.87	-69.37	506.62	-23.70	373.66	342.39	31.28	11.947		
4,500.00	4,490.81	4,463.13	4,355.30	16.46	18.46	-67.37	542.69	-23.27	404.54	372.57	31.96	12.656		
4,600.00	4,590.58	4,557.35	4,442.35	16.83	19.06	-65.66	578.77	-22.84	435.80	403.14	32.66	13.344		
4,700.00	4,690.35	4,651.58	4,529.39	17.20	19.67	-64.18	614.85	-22.40	467.37	434.00	33.36	14.009		
4,800.00	4,790.12	4,745.80	4,616.43	17.58	20.28	-62.88	650.93	-21.97	499.19	465.11	34.07	14.651		
4,900.00	4,889.88	4,840.03	4,703.48	17.95	20.89	-61.73	687.01	-21.54	531.21	496.42	34.79	15.269		

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 11-10-9H
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 11-10-9H	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	4,989.65	4,934.25	4,790.52	18.32	21.51	-60.72	723.09	-21.11	563.41	527.89	35.51	15.865		
5,100.00	5,089.42	5,028.48	4,877.56	18.70	22.14	-59.81	759.17	-20.68	595.74	559.51	36.24	16.439		
5,200.00	5,189.19	5,122.70	4,964.61	19.07	22.76	-59.00	795.25	-20.25	628.20	591.23	36.97	16.992		
5,300.00	5,288.96	5,216.93	5,051.65	19.45	23.39	-58.26	831.33	-19.82	660.77	623.06	37.70	17.525		
5,400.00	5,388.73	5,311.16	5,138.69	19.82	24.03	-57.60	867.41	-19.38	693.42	654.97	38.44	18.038		
5,500.00	5,488.49	5,405.38	5,225.74	20.19	24.66	-56.99	903.49	-18.95	726.14	686.96	39.18	18.532		
5,600.00	5,588.26	5,499.61	5,312.78	20.57	25.30	-56.44	939.57	-18.52	758.94	719.01	39.93	19.009		
5,700.00	5,688.03	5,593.83	5,399.82	20.94	25.94	-55.93	975.65	-18.09	791.79	751.12	40.67	19.468		
5,800.00	5,787.80	5,688.06	5,486.87	21.31	26.58	-55.46	1,011.73	-17.66	824.69	783.27	41.42	19.911		
5,900.00	5,887.57	5,782.28	5,573.91	21.69	27.23	-55.03	1,047.81	-17.23	857.64	815.47	42.17	20.338		
6,000.00	5,987.34	5,876.51	5,660.95	22.06	27.88	-54.63	1,083.89	-16.80	890.63	847.71	42.92	20.751		
6,100.00	6,087.11	5,970.73	5,747.99	22.44	28.53	-54.26	1,119.97	-16.36	923.65	879.98	43.67	21.149		
6,200.00	6,186.87	6,064.96	5,835.04	22.81	29.18	-53.91	1,156.05	-15.93	956.71	912.28	44.43	21.534		
6,300.00	6,286.64	6,159.18	5,922.08	23.18	29.83	-53.59	1,192.13	-15.50	989.80	944.61	45.18	21.906		
6,400.00	6,386.41	6,253.41	6,009.12	23.56	30.48	-53.29	1,228.20	-15.07	1,022.91	976.97	45.94	22.265		
6,482.24	6,468.46	6,330.90	6,080.70	23.86	31.02	-53.05	1,257.88	-14.71	1,050.16	1,003.59	46.57	22.552		
6,500.00	6,486.19	6,347.64	6,096.17	23.93	31.14	-27.19	1,264.29	-14.64	1,055.98	1,009.28	46.70	22.613		
6,550.00	6,536.08	6,394.73	6,139.67	24.10	31.46	38.81	1,282.32	-14.42	1,071.66	1,024.61	47.04	22.780		
6,600.00	6,585.64	6,441.47	6,182.85	24.26	31.79	54.86	1,300.21	-14.21	1,086.24	1,038.89	47.35	22.938		
6,650.00	6,634.49	6,487.51	6,225.38	24.40	32.11	60.28	1,317.85	-14.00	1,099.74	1,052.11	47.63	23.087		
6,700.00	6,682.26	6,532.51	6,266.95	24.53	32.42	62.93	1,335.07	-13.79	1,112.20	1,064.32	47.89	23.226		
6,750.00	6,728.60	6,576.11	6,307.22	24.64	32.73	64.60	1,351.77	-13.59	1,123.71	1,075.59	48.11	23.355		
6,800.00	6,773.14	6,617.98	6,345.91	24.75	33.02	65.83	1,367.80	-13.40	1,134.39	1,086.06	48.33	23.473		
6,850.00	6,815.54	6,657.81	6,382.70	24.84	33.30	66.86	1,383.05	-13.22	1,144.38	1,095.85	48.53	23.581		
6,900.00	6,855.49	6,695.29	6,417.33	24.92	33.56	67.75	1,397.41	-13.05	1,153.87	1,105.13	48.73	23.677		
6,950.00	6,892.68	6,730.15	6,449.52	24.99	33.81	68.54	1,410.75	-12.89	1,163.02	1,114.07	48.95	23.758		
7,000.00	6,926.83	6,762.10	6,479.04	25.07	34.03	69.22	1,422.99	-12.74	1,172.03	1,122.83	49.20	23.822		
7,050.00	6,957.68	6,790.92	6,505.66	25.19	34.23	69.76	1,434.02	-12.61	1,181.07	1,131.58	49.49	23.867		
7,100.00	6,984.98	6,816.70	6,529.48	25.42	34.41	70.15	1,443.89	-12.54	1,190.31	1,140.48	49.83	23.888		
7,150.00	7,008.54	6,842.23	6,553.06	25.72	34.59	70.47	1,453.66	-13.33	1,199.85	1,149.58	50.27	23.866		
7,200.00	7,028.18	6,868.16	6,576.94	26.06	34.77	70.75	1,463.54	-15.29	1,209.72	1,158.89	50.83	23.798		
7,250.00	7,043.74	6,894.61	6,601.21	26.46	34.96	71.00	1,473.57	-18.49	1,219.95	1,168.44	51.51	23.685		
7,300.00	7,055.11	6,921.82	6,626.00	26.91	35.15	71.22	1,483.80	-23.05	1,230.54	1,178.24	52.29	23.531		
7,350.00	7,062.20	6,950.11	6,651.53	27.40	35.34	71.44	1,494.33	-29.13	1,241.51	1,188.34	53.17	23.348		
7,400.00	7,064.96	6,980.04	6,678.22	27.94	35.54	71.67	1,505.33	-37.04	1,252.88	1,198.74	54.14	23.141		
7,406.67	7,065.00	6,984.21	6,681.91	28.01	35.57	71.70	1,506.84	-38.26	1,254.43	1,200.15	54.28	23.112		
7,500.00	7,065.00	7,071.49	6,756.90	29.15	36.13	75.48	1,537.65	-70.37	1,278.42	1,221.97	56.45	22.647		
7,600.00	7,065.00	7,328.53	6,940.84	30.55	37.61	84.40	1,612.50	-230.15	1,305.22	1,245.77	59.45	21.955		
7,700.00	7,065.00	7,751.23	7,056.00	32.12	39.90	89.61	1,656.81	-624.90	1,313.26	1,250.14	63.12	20.806		
7,800.00	7,065.00	7,851.23	7,056.00	33.83	40.61	89.61	1,655.95	-724.89	1,313.23	1,247.04	66.19	19.840		
7,900.00	7,065.00	7,951.23	7,056.00	35.67	41.49	89.61	1,655.08	-824.89	1,313.20	1,243.66	69.55	18.883		
8,000.00	7,065.00	8,051.23	7,056.00	37.61	42.53	89.61	1,654.22	-924.89	1,313.17	1,240.02	73.15	17.951		
8,100.00	7,065.00	8,151.23	7,056.00	39.65	43.75	89.61	1,653.35	-1,024.88	1,313.15	1,236.17	76.97	17.060		
8,200.00	7,065.00	8,251.23	7,056.00	41.76	45.12	89.61	1,652.48	-1,124.88	1,313.12	1,232.14	80.98	16.215		
8,300.00	7,065.00	8,351.23	7,056.00	43.94	46.65	89.61	1,651.62	-1,224.87	1,313.09	1,227.94	85.15	15.421		
8,400.00	7,065.00	8,451.23	7,056.00	46.18	48.31	89.61	1,650.75	-1,324.87	1,313.06	1,223.61	89.46	14.678		
8,500.00	7,065.00	8,551.23	7,056.00	48.46	50.09	89.61	1,649.89	-1,424.87	1,313.04	1,219.15	93.88	13.986		
8,600.00	7,065.00	8,651.23	7,056.00	50.79	51.98	89.61	1,649.02	-1,524.86	1,313.01	1,214.60	98.41	13.343		
8,700.00	7,065.00	8,751.23	7,056.00	53.16	53.95	89.61	1,648.16	-1,624.86	1,312.98	1,209.96	103.02	12.744		
8,800.00	7,065.00	8,851.23	7,056.00	55.56	56.00	89.61	1,647.29	-1,724.86	1,312.95	1,205.24	107.72	12.189		
8,900.00	7,065.00	8,951.23	7,056.00	57.99	58.11	89.61	1,646.42	-1,824.85	1,312.92	1,200.45	112.48	11.673		
9,000.00	7,065.00	9,051.23	7,056.00	60.44	60.28	89.61	1,645.56	-1,924.85	1,312.90	1,195.60	117.30	11.193		

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 11-10-9H
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 11-10-9H	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		Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		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		
9,100.00	7,065.00	9,151.23	7,056.00	62.91	62.51	89.61	1,644.69	-2,024.84	1,312.87	1,190.70	122.17	10.746			
9,200.00	7,065.00	9,251.23	7,056.00	65.41	64.77	89.61	1,643.83	-2,124.84	1,312.84	1,185.75	127.09	10.330			
9,300.00	7,065.00	9,351.23	7,056.00	67.92	67.08	89.61	1,642.96	-2,224.84	1,312.81	1,180.76	132.05	9.941			
9,400.00	7,065.00	9,451.23	7,056.00	70.45	69.41	89.61	1,642.10	-2,324.83	1,312.79	1,175.73	137.05	9.579			
9,500.00	7,065.00	9,551.23	7,056.00	72.99	71.78	89.61	1,641.23	-2,424.83	1,312.76	1,170.68	142.08	9.239			
9,600.00	7,065.00	9,651.23	7,056.00	75.54	74.18	89.61	1,640.36	-2,524.83	1,312.73	1,165.59	147.14	8.921			
9,700.00	7,065.00	9,751.23	7,056.00	78.11	76.60	89.61	1,639.50	-2,624.82	1,312.70	1,160.47	152.23	8.623			
9,800.00	7,065.00	9,851.23	7,056.00	80.68	79.04	89.61	1,638.63	-2,724.82	1,312.68	1,155.34	157.34	8.343			
9,900.00	7,065.00	9,951.23	7,056.00	83.27	81.50	89.61	1,637.77	-2,824.81	1,312.65	1,150.18	162.47	8.079			
10,000.00	7,065.00	10,051.23	7,056.00	85.86	83.97	89.61	1,636.90	-2,924.81	1,312.62	1,145.00	167.63	7.831			
10,100.00	7,065.00	10,151.23	7,056.00	88.46	86.47	89.61	1,636.04	-3,024.81	1,312.59	1,139.80	172.80	7.596			
10,200.00	7,065.00	10,251.23	7,056.00	91.07	88.98	89.61	1,635.17	-3,124.80	1,312.57	1,134.58	177.98	7.375			
10,300.00	7,065.00	10,351.23	7,056.00	93.68	91.50	89.61	1,634.31	-3,224.80	1,312.54	1,129.35	183.18	7.165			
10,400.00	7,065.00	10,451.23	7,056.00	96.30	94.03	89.61	1,633.44	-3,324.80	1,312.51	1,124.11	188.40	6.967			
10,500.00	7,065.00	10,551.23	7,056.00	98.93	96.57	89.61	1,632.57	-3,424.79	1,312.48	1,118.86	193.63	6.778			
10,600.00	7,065.00	10,651.23	7,056.00	101.56	99.12	89.61	1,631.71	-3,524.79	1,312.45	1,113.59	198.87	6.600			
10,700.00	7,065.00	10,751.23	7,056.00	104.20	101.69	89.61	1,630.84	-3,624.78	1,312.43	1,108.31	204.12	6.430			
10,800.00	7,065.00	10,851.23	7,056.00	106.83	104.26	89.61	1,629.98	-3,724.78	1,312.40	1,103.02	209.38	6.268			
10,900.00	7,065.00	10,951.23	7,056.00	109.48	106.84	89.61	1,629.11	-3,824.78	1,312.37	1,097.73	214.64	6.114			
11,000.00	7,065.00	11,051.23	7,056.00	112.13	109.42	89.61	1,628.25	-3,924.77	1,312.34	1,092.42	219.92	5.967			
11,100.00	7,065.00	11,151.23	7,056.00	114.78	112.01	89.61	1,627.38	-4,024.77	1,312.32	1,087.11	225.21	5.827			
11,200.00	7,065.00	11,251.23	7,056.00	117.43	114.61	89.61	1,626.51	-4,124.77	1,312.29	1,081.79	230.50	5.693			
11,300.00	7,065.00	11,351.23	7,056.00	120.09	117.22	89.61	1,625.65	-4,224.76	1,312.26	1,076.46	235.80	5.565			
11,400.00	7,065.00	11,451.23	7,056.00	122.75	119.83	89.61	1,624.78	-4,324.76	1,312.23	1,071.13	241.11	5.443			
11,500.00	7,065.00	11,551.23	7,056.00	125.41	122.44	89.61	1,623.92	-4,424.75	1,312.21	1,065.79	246.42	5.325			
11,600.00	7,065.00	11,651.23	7,056.00	128.08	125.06	89.61	1,623.05	-4,524.75	1,312.18	1,060.44	251.74	5.213			
11,700.00	7,065.00	11,751.23	7,056.00	130.74	127.68	89.61	1,622.19	-4,624.75	1,312.15	1,055.09	257.06	5.104			
11,800.00	7,065.00	11,851.23	7,056.00	133.41	130.31	89.61	1,621.32	-4,724.74	1,312.12	1,049.74	262.39	5.001			
11,900.00	7,065.00	11,951.23	7,056.00	136.09	132.94	89.61	1,620.45	-4,824.74	1,312.10	1,044.37	267.72	4.901			
12,000.00	7,065.00	12,051.23	7,056.00	138.76	135.58	89.61	1,619.59	-4,924.74	1,312.07	1,039.01	273.06	4.805			
12,100.00	7,065.00	12,151.23	7,056.00	141.44	138.22	89.61	1,618.72	-5,024.73	1,312.04	1,033.64	278.40	4.713			
12,200.00	7,065.00	12,251.23	7,056.00	144.11	140.86	89.61	1,617.86	-5,124.73	1,312.01	1,028.27	283.74	4.624			
12,300.00	7,065.00	12,351.23	7,056.00	146.79	143.51	89.61	1,616.99	-5,224.72	1,311.98	1,022.89	289.09	4.538			
12,400.00	7,065.00	12,451.23	7,056.00	149.47	146.15	89.61	1,616.13	-5,324.72	1,311.96	1,017.51	294.44	4.456			
12,500.00	7,065.00	12,551.23	7,056.00	152.15	148.81	89.61	1,615.26	-5,424.72	1,311.93	1,012.13	299.80	4.376			
12,600.00	7,065.00	12,651.23	7,056.00	154.84	151.46	89.61	1,614.39	-5,524.71	1,311.90	1,006.74	305.16	4.299			
12,700.00	7,065.00	12,751.23	7,056.00	157.52	154.11	89.61	1,613.53	-5,624.71	1,311.87	1,001.35	310.52	4.225			
12,800.00	7,065.00	12,851.23	7,056.00	160.21	156.77	89.61	1,612.66	-5,724.71	1,311.85	995.96	315.88	4.153			
12,900.00	7,065.00	12,951.23	7,056.00	162.89	159.43	89.61	1,611.80	-5,824.70	1,311.82	990.57	321.25	4.083			
13,000.00	7,065.00	13,051.23	7,056.00	165.58	162.10	89.61	1,610.93	-5,924.70	1,311.79	985.17	326.62	4.016			
13,100.00	7,065.00	13,151.23	7,056.00	168.27	164.76	89.61	1,610.07	-6,024.70	1,311.76	979.77	331.99	3.951			
13,200.00	7,065.00	13,251.23	7,056.00	170.96	167.43	89.61	1,609.20	-6,124.69	1,311.74	974.37	337.37	3.888			
13,300.00	7,065.00	13,351.23	7,056.00	173.65	170.09	89.61	1,608.34	-6,224.69	1,311.71	968.96	342.74	3.827			
13,400.00	7,065.00	13,451.23	7,056.00	176.35	172.76	89.61	1,607.47	-6,324.68	1,311.68	963.56	348.12	3.768			
13,500.00	7,065.00	13,551.23	7,056.00	179.04	175.44	89.61	1,606.60	-6,424.68	1,311.65	958.15	353.50	3.710			
13,600.00	7,065.00	13,651.23	7,056.00	181.73	178.11	89.61	1,605.74	-6,524.68	1,311.63	952.74	358.89	3.655			
13,700.00	7,065.00	13,751.23	7,056.00	184.43	180.78	89.61	1,604.87	-6,624.67	1,311.60	947.33	364.27	3.601			
13,800.00	7,065.00	13,851.23	7,056.00	187.12	183.46	89.61	1,604.01	-6,724.67	1,311.57	941.91	369.66	3.548			
13,900.00	7,065.00	13,951.23	7,056.00	189.82	186.14	89.61	1,603.14	-6,824.67	1,311.54	936.50	375.04	3.497			
14,000.00	7,065.00	14,051.23	7,056.00	192.52	188.81	89.61	1,602.28	-6,924.66	1,311.51	931.08	380.43	3.447			
14,100.00	7,065.00	14,151.23	7,056.00	195.21	191.49	89.61	1,601.41	-7,024.66	1,311.49	925.66	385.82	3.399			
14,200.00	7,065.00	14,251.23	7,056.00	197.91	194.17	89.61	1,600.54	-7,124.65	1,311.46	920.24	391.22	3.352			

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 11-10-9H
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 11-10-9H	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 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)				
14,300.00	7,065.00	14,351.23	7,056.00	200.61	196.86	89.61	1,599.68	-7,224.65	1,311.43	914.82	396.61	3.307		
14,400.00	7,065.00	14,451.23	7,056.00	203.31	199.54	89.61	1,598.81	-7,324.65	1,311.40	909.40	402.00	3.262		
14,500.00	7,065.00	14,551.23	7,056.00	206.01	202.22	89.61	1,597.95	-7,424.64	1,311.38	903.98	407.40	3.219		
14,600.00	7,065.00	14,651.23	7,056.00	208.71	204.91	89.61	1,597.08	-7,524.64	1,311.35	898.55	412.80	3.177		
14,700.00	7,065.00	14,751.23	7,056.00	211.41	207.60	89.61	1,596.22	-7,624.64	1,311.32	893.12	418.20	3.136		
14,800.00	7,065.00	14,851.23	7,056.00	214.12	210.28	89.61	1,595.35	-7,724.63	1,311.29	887.70	423.60	3.096		
14,900.00	7,065.00	14,951.23	7,056.00	216.82	212.97	89.61	1,594.48	-7,824.63	1,311.27	882.27	429.00	3.057		
15,000.00	7,065.00	15,051.23	7,056.00	219.52	215.66	89.61	1,593.62	-7,924.62	1,311.24	876.84	434.40	3.019		
15,100.00	7,065.00	15,151.23	7,056.00	222.22	218.35	89.61	1,592.75	-8,024.62	1,311.21	871.41	439.80	2.981		
15,200.00	7,065.00	15,251.23	7,056.00	224.93	221.04	89.61	1,591.89	-8,124.62	1,311.18	865.98	445.21	2.945		
15,300.00	7,065.00	15,351.23	7,056.00	227.63	223.73	89.61	1,591.02	-8,224.61	1,311.16	860.54	450.61	2.910		
15,400.00	7,065.00	15,451.23	7,056.00	230.34	226.42	89.61	1,590.16	-8,324.61	1,311.13	855.11	456.02	2.875		
15,442.76	7,065.00	15,493.99	7,056.00	231.49	227.57	89.61	1,589.79	-8,367.36	1,311.12	852.79	458.33	2.861		
15,495.74	7,065.00	15,496.19	7,056.00	232.93	227.63	89.61	1,589.77	-8,369.57	1,312.08	851.78	460.31	2.850 SF		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		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				
0.00	0.00	0.00	0.00	0.00	0.00	-160.69	-87.43	-30.63	92.64	92.64	0.29	323.043				
100.00	100.00	100.00	100.00	0.14	0.14	-160.69	-87.43	-30.63	92.64	92.35	1.00	92.298				
200.00	200.00	200.00	200.00	0.50	0.50	-160.69	-87.43	-30.63	92.64	91.64	1.72	53.840				
300.00	300.00	300.00	300.00	0.86	0.86	-160.69	-87.43	-30.63	92.64	90.92	2.44	38.005 CC, ES				
400.00	400.00	400.00	400.00	1.22	1.22	-160.69	-87.43	-30.63	92.64	90.20	3.15	29.899				
500.00	499.98	499.98	499.98	1.58	1.58	161.30	-87.43	-30.63	94.29	91.14	3.84	25.790				
594.97	594.82	594.82	594.82	1.92	1.92	162.18	-87.43	-30.63	98.93	95.10	3.87	25.616				
600.00	599.84	599.84	599.84	1.94	1.94	162.24	-87.43	-30.63	99.26	95.39	4.59	23.045				
700.00	699.61	699.61	699.61	2.30	2.29	163.36	-87.43	-30.63	105.76	101.17	5.31	21.167				
800.00	799.37	799.37	799.37	2.66	2.65	164.36	-87.43	-30.63	112.29	106.99	6.02	19.738				
900.00	899.14	899.14	899.14	3.03	3.01	165.24	-87.43	-30.63	118.86	112.83	6.74	18.616				
1,000.00	998.91	998.91	998.91	3.40	3.37	166.03	-87.43	-30.63	125.44	118.71	7.46	17.711				
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	166.74	-87.43	-30.63	132.05	124.60	8.17	16.967				
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	167.39	-87.43	-30.63	138.68	130.51	8.89	16.345				
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	167.97	-87.43	-30.63	145.33	136.44	9.61	15.817				
1,400.00	1,397.99	1,397.99	1,397.99	4.88	4.80	168.51	-87.43	-30.63	151.99	142.38	10.33	15.363				
1,500.00	1,497.75	1,497.75	1,497.75	5.26	5.15	169.00	-87.43	-30.63	158.66	148.33	11.05	14.969				
1,600.00	1,597.52	1,597.52	1,597.52	5.63	5.51	169.45	-87.43	-30.63	165.34	154.29	11.76	14.624				
1,700.00	1,697.29	1,697.29	1,697.29	6.00	5.87	169.86	-87.43	-30.63	172.03	160.26	12.48	14.319				
1,800.00	1,797.06	1,797.06	1,797.06	6.37	6.23	170.25	-87.43	-30.63	178.73	166.25	13.20	14.048				
1,900.00	1,896.83	1,896.83	1,896.83	6.75	6.58	170.60	-87.43	-30.63	185.43	172.23	13.92	13.805				
2,000.00	1,996.60	1,996.60	1,996.60	7.12	6.94	170.93	-87.43	-30.63	192.15	178.23	14.64	13.587				
2,100.00	2,096.37	2,096.37	2,096.37	7.49	7.30	171.24	-87.43	-30.63	198.86	184.23	15.35	13.389				
2,200.00	2,196.13	2,196.13	2,196.13	7.86	7.66	171.53	-87.43	-30.63	205.59	190.23	16.07	13.209				
2,300.00	2,295.90	2,295.90	2,295.90	8.24	8.02	171.80	-87.43	-30.63	212.32	196.24	16.79	13.045				
2,400.00	2,395.67	2,395.67	2,395.67	8.61	8.37	172.05	-87.43	-30.63	219.05	202.26	17.54	12.789				
2,500.00	2,495.44	2,502.38	2,502.36	8.98	8.76	172.54	-85.60	-30.61	224.31	206.77	18.27	12.389				
2,600.00	2,595.21	2,609.55	2,609.36	9.36	9.14	173.53	-79.77	-30.55	226.39	208.12	18.99	11.866				
2,700.00	2,694.98	2,716.56	2,715.92	9.73	9.52	175.03	-69.96	-30.45	225.37	206.37	19.70	11.241				
2,800.00	2,794.75	2,823.12	2,821.58	10.10	9.90	177.12	-56.24	-30.30	221.41	201.71	20.39	10.531				
2,900.00	2,894.51	2,928.94	2,925.94	10.48	10.29	179.89	-38.74	-30.12	214.77	194.37	21.09	9.759				
3,000.00	2,994.28	3,033.74	3,028.58	10.85	10.68	-176.50	-17.62	-29.90	205.82	184.73	21.81	8.948				
3,100.00	3,094.05	3,137.26	3,129.15	11.22	11.08	-171.84	6.91	-29.64	195.12	173.31	22.56	8.133				
3,200.00	3,193.82	3,239.26	3,227.31	11.60	11.50	-165.87	34.62	-29.35	183.49	160.93	23.42	7.389				
3,300.00	3,293.59	3,336.38	3,320.28	11.97	11.91	-159.02	62.72	-29.05	173.01	149.59	24.30	6.806				
3,400.00	3,393.36	3,433.44	3,413.18	12.35	12.33	-151.46	90.80	-28.76	165.39	141.09	25.21	6.389				
3,500.00	3,493.12	3,530.50	3,506.09	12.72	12.77	-143.36	118.87	-28.47	161.05	135.84	26.11	6.138				
3,572.26	3,565.22	3,600.63	3,573.22	12.99	13.09	-137.34	139.16	-28.25	160.11	134.25	26.98	6.042				
3,600.00	3,592.89	3,627.56	3,599.00	13.09	13.22	-135.02	146.95	-28.17	160.25	134.14	27.82	6.084				
3,700.00	3,692.66	3,724.61	3,691.90	13.47	13.68	-126.78	175.03	-27.88	163.04	136.05	28.61	6.239				
3,800.00	3,792.43	3,821.67	3,784.81	13.84	14.14	-118.95	203.11	-27.58	169.24	141.42	29.36	6.483				
3,900.00	3,892.20	3,918.73	3,877.72	14.21	14.62	-111.78	231.19	-27.29	178.50	149.89	30.09	6.793				
4,000.00	3,991.97	4,015.79	3,970.62	14.59	15.10	-105.36	259.27	-26.99	190.38	161.01	30.80	7.148				
4,100.00	4,091.74	4,112.84	4,063.53	14.96	15.59	-99.73	287.35	-26.70	204.41	174.32	31.51	7.534				
4,200.00	4,191.50	4,209.90	4,156.44	15.33	16.08	-94.84	315.43	-26.40	220.19	189.39	32.21	7.938				
4,300.00	4,291.27	4,306.96	4,249.34	15.71	16.58	-90.61	343.51	-26.11	237.37	205.86	32.91	8.352				
4,400.00	4,391.04	4,404.02	4,342.25	16.08	17.08	-86.96	371.59	-25.82	255.66	223.45	33.61	8.770				
4,500.00	4,490.81	4,501.07	4,435.16	16.46	17.59	-83.79	399.66	-25.52	274.85	241.94	34.31	9.177				
4,600.00	4,590.58	4,598.13	4,528.06	16.83	18.10	-81.03	427.74	-25.23	294.75	261.14	35.02	9.599				
4,700.00	4,690.35	4,695.19	4,620.97	17.20	18.62	-78.62	455.82	-24.93	315.24	280.93	35.74	10.005				
4,800.00	4,790.12	4,792.25	4,713.88	17.58	19.14	-76.50	483.90	-24.64	336.21	301.18						
4,900.00	4,889.88	4,889.30	4,806.78	17.95	19.67	-74.64	511.98	-24.34	357.56	321.83						

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 11-10-9H
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 11-10-9H	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		Distance		Separation		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			
5,000.00	4,989.65	4,986.36	4,899.69	18.32	20.19	-72.98	540.06	-24.05	379.25	342.79	36.45	10.403			
5,100.00	5,089.42	5,083.42	4,992.60	18.70	20.72	-71.50	568.14	-23.75	401.21	364.03	37.17	10.792			
5,200.00	5,189.19	5,180.48	5,085.50	19.07	21.25	-70.17	596.22	-23.46	423.39	385.50	37.90	11.172			
5,300.00	5,288.96	5,277.54	5,178.41	19.45	21.79	-68.97	624.30	-23.16	445.78	407.15	38.62	11.541			
5,400.00	5,388.73	5,374.59	5,271.32	19.82	22.32	-67.89	652.38	-22.87	468.33	428.98	39.35	11.900			
5,500.00	5,488.49	5,471.65	5,364.22	20.19	22.86	-66.91	680.46	-22.58	491.03	450.94	40.09	12.249			
5,600.00	5,588.26	5,568.71	5,457.13	20.57	23.40	-66.01	708.53	-22.28	513.85	473.03	40.82	12.588			
5,700.00	5,688.03	5,665.77	5,550.04	20.94	23.94	-65.19	736.61	-21.99	536.79	495.23	41.56	12.917			
5,800.00	5,787.80	5,762.82	5,642.94	21.31	24.49	-64.44	764.69	-21.69	559.82	517.52	42.29	13.236			
5,900.00	5,887.57	5,859.88	5,735.85	21.69	25.03	-63.74	792.77	-21.40	582.93	539.90	43.03	13.546			
6,000.00	5,987.34	5,956.94	5,828.76	22.06	25.58	-63.10	820.85	-21.10	606.12	562.34	43.78	13.846			
6,100.00	6,087.11	6,054.00	5,921.66	22.44	26.13	-62.51	848.93	-20.81	629.38	584.86	44.52	14.137			
6,200.00	6,186.87	6,151.05	6,014.57	22.81	26.68	-61.96	877.01	-20.51	652.69	607.43	45.26	14.420			
6,300.00	6,286.64	6,248.11	6,107.48	23.18	27.23	-61.44	905.09	-20.22	676.06	630.05	46.01	14.694			
6,400.00	6,386.41	6,345.17	6,200.38	23.56	27.78	-60.96	933.17	-19.93	699.48	652.73	46.76	14.960			
6,482.24	6,468.46	6,424.98	6,276.79	23.86	28.23	-60.59	956.26	-19.68	718.77	671.40	47.37	15.173			
6,500.00	6,486.19	6,442.23	6,293.30	23.93	28.33	-34.49	961.25	-19.63	722.84	675.34	47.50	15.217			
6,550.00	6,536.08	6,490.75	6,339.73	24.10	28.61	32.28	975.28	-19.48	733.23	685.39	47.84	15.327			
6,600.00	6,585.64	6,538.91	6,385.84	24.26	28.88	49.19	989.22	-19.34	742.07	693.94	48.13	15.417			
6,650.00	6,634.49	6,586.37	6,431.27	24.40	29.15	55.56	1,002.95	-19.19	749.44	701.05	48.39	15.486			
6,700.00	6,682.26	6,632.76	6,475.68	24.53	29.42	59.25	1,016.37	-19.05	755.51	706.89	48.62	15.539			
6,750.00	6,728.60	6,677.72	6,518.71	24.64	29.67	62.01	1,029.38	-18.92	760.48	711.67	48.82	15.578			
6,800.00	6,773.14	6,720.92	6,560.06	24.75	29.92	64.40	1,041.87	-18.79	764.63	715.64	48.99	15.607			
6,850.00	6,815.54	6,762.02	6,599.40	24.84	30.16	66.60	1,053.76	-18.66	768.25	719.09	49.15	15.629			
6,900.00	6,855.49	6,793.71	6,629.73	24.92	30.34	68.30	1,062.92	-19.32	771.85	722.63	49.23	15.680			
6,950.00	6,892.68	6,825.51	6,660.09	24.99	30.52	69.86	1,072.08	-21.74	775.82	726.47	49.35	15.721			
7,000.00	6,926.83	6,858.05	6,690.97	25.07	30.70	71.35	1,081.37	-26.03	780.23	730.67	49.56	15.743			
7,050.00	6,957.68	6,891.49	6,722.42	25.19	30.89	72.79	1,090.83	-32.33	785.13	735.27	49.87	15.744			
7,100.00	6,984.98	6,926.02	6,754.47	25.42	31.08	74.20	1,100.44	-40.85	790.61	740.32	50.29	15.720			
7,150.00	7,008.54	6,961.89	6,787.18	25.72	31.27	75.60	1,110.24	-51.80	796.70	745.86	50.84	15.671			
7,200.00	7,028.18	6,999.41	6,820.63	26.06	31.47	77.00	1,120.23	-65.53	803.45	751.94	51.50	15.601			
7,250.00	7,043.74	7,039.00	6,854.92	26.46	31.67	78.42	1,130.46	-82.46	810.87	758.60	52.27	15.513			
7,300.00	7,055.11	7,081.23	6,890.17	26.91	31.88	79.88	1,140.94	-103.19	818.98	765.85	53.12	15.416			
7,350.00	7,062.20	7,126.85	6,926.50	27.40	32.10	81.42	1,151.71	-128.56	827.74	773.71	54.04	15.318			
7,400.00	7,064.96	7,176.92	6,964.03	27.94	32.34	83.07	1,162.80	-159.78	837.11	782.14	54.97	15.229			
7,406.67	7,065.00	7,184.01	6,969.13	28.01	32.37	83.31	1,164.30	-164.47	838.40	783.30	55.09	15.218			
7,500.00	7,065.00	7,306.48	7,047.74	29.15	32.94	88.82	1,187.32	-255.19	856.94	800.10	56.83	15.078			
7,600.00	7,065.00	7,497.33	7,129.02	30.55	33.91	94.23	1,210.48	-425.33	872.84	813.99	58.85	14.831			
7,700.00	7,065.00	7,695.10	7,153.00	32.12	35.25	95.76	1,216.13	-620.67	876.95	815.34	61.62	14.233			
7,800.00	7,065.00	7,795.10	7,153.00	33.83	36.17	95.76	1,215.31	-720.67	876.97	812.30	64.67	13.561			
7,900.00	7,065.00	7,895.10	7,153.00	35.67	37.29	95.76	1,214.50	-820.66	876.99	808.98	68.01	12.894			
8,000.00	7,065.00	7,995.10	7,153.00	37.61	38.60	95.76	1,213.68	-920.66	877.01	805.40	71.61	12.246			
8,100.00	7,065.00	8,095.10	7,153.00	39.65	40.09	95.76	1,212.86	-1,020.66	877.03	801.60	75.43	11.627			
8,200.00	7,065.00	8,195.10	7,153.00	41.76	41.73	95.76	1,212.04	-1,120.65	877.05	797.61	79.44	11.041			
8,300.00	7,065.00	8,295.10	7,153.00	43.94	43.50	95.76	1,211.22	-1,220.65	877.07	793.47	83.60	10.491			
8,400.00	7,065.00	8,395.10	7,153.00	46.18	45.38	95.76	1,210.40	-1,320.65	877.09	789.19	87.90	9.978			
8,500.00	7,065.00	8,495.10	7,153.00	48.46	47.35	95.76	1,209.58	-1,420.64	877.11	784.79	92.32	9.501			
8,600.00	7,065.00	8,595.10	7,153.00	50.79	49.41	95.76	1,208.77	-1,520.64	877.13	780.28	96.84	9.057			
8,700.00	7,065.00	8,695.10	7,153.00	53.16	51.53	95.76	1,207.95	-1,620.64	877.15	775.69	101.45	8.646			
8,800.00	7,065.00	8,795.10	7,153.00	55.56	53.72	95.76	1,207.13	-1,720.63	877.17	771.03	106.14	8.264			
8,900.00	7,065.00	8,895.10	7,153.00	57.99	55.95	95.76	1,206.31	-1,820.63	877.19	766.29	110.89	7.910			
9,000.00	7,065.00	8,995.10	7,153.00	60.44	58.23	95.76	1,205.49	-1,920.63	877.20	761.50	115.71	7.581			

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 11-10-9H
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 11-10-9H	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: Reference		0-OWSG (Rev2) MWD Offset				Semi Major Axis			Offset Wellbore Centre		Distance			Rule Assigned:		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				
9,100.00	7,065.00	9,095.10	7,153.00	62.91	60.55	95.76	1,204.67	-2,020.62	877.22	756.66	120.57	7.276					
9,200.00	7,065.00	9,195.10	7,153.00	65.41	62.90	95.76	1,203.85	-2,120.62	877.24	751.77	125.48	6.991					
9,300.00	7,065.00	9,295.10	7,153.00	67.92	65.28	95.76	1,203.04	-2,220.62	877.26	746.84	130.43	6.726					
9,400.00	7,065.00	9,395.10	7,153.00	70.45	67.69	95.76	1,202.22	-2,320.61	877.28	741.87	135.41	6.479					
9,500.00	7,065.00	9,495.10	7,153.00	72.99	70.12	95.76	1,201.40	-2,420.61	877.30	736.87	140.43	6.247					
9,600.00	7,065.00	9,595.10	7,153.00	75.54	72.58	95.76	1,200.58	-2,520.61	877.32	731.84	145.48	6.031					
9,700.00	7,065.00	9,695.10	7,153.00	78.11	75.05	95.76	1,199.76	-2,620.60	877.34	726.79	150.55	5.828					
9,800.00	7,065.00	9,795.10	7,153.00	80.68	77.54	95.76	1,198.94	-2,720.60	877.36	721.71	155.65	5.637					
9,900.00	7,065.00	9,895.10	7,153.00	83.27	80.05	95.76	1,198.13	-2,820.60	877.38	716.62	160.76	5.458					
10,000.00	7,065.00	9,995.10	7,153.00	85.86	82.57	95.76	1,197.31	-2,920.59	877.40	711.50	165.90	5.289					
10,100.00	7,065.00	10,095.10	7,153.00	88.46	85.10	95.76	1,196.49	-3,020.59	877.42	706.37	171.05	5.130					
10,200.00	7,065.00	10,195.10	7,153.00	91.07	87.65	95.76	1,195.67	-3,120.59	877.44	701.22	176.22	4.979					
10,300.00	7,065.00	10,295.10	7,153.00	93.68	90.20	95.76	1,194.85	-3,220.58	877.46	696.05	181.40	4.837					
10,400.00	7,065.00	10,395.10	7,153.00	96.30	92.77	95.76	1,194.03	-3,320.58	877.48	690.87	186.60	4.702					
10,500.00	7,065.00	10,495.10	7,153.00	98.93	95.34	95.76	1,193.21	-3,420.58	877.50	685.68	191.81	4.575					
10,600.00	7,065.00	10,595.10	7,153.00	101.56	97.92	95.76	1,192.40	-3,520.57	877.52	680.48	197.03	4.454					
10,700.00	7,065.00	10,695.10	7,153.00	104.20	100.51	95.76	1,191.58	-3,620.57	877.53	675.27	202.26	4.339					
10,800.00	7,065.00	10,795.10	7,153.00	106.83	103.11	95.76	1,190.76	-3,720.57	877.55	670.05	207.50	4.229					
10,900.00	7,065.00	10,895.10	7,153.00	109.48	105.71	95.76	1,189.94	-3,820.56	877.57	664.82	212.75	4.125					
11,000.00	7,065.00	10,995.10	7,153.00	112.13	108.32	95.75	1,189.12	-3,920.56	877.59	659.58	218.01	4.025					
11,100.00	7,065.00	11,095.10	7,153.00	114.78	110.94	95.75	1,188.30	-4,020.56	877.61	654.34	223.28	3.931					
11,200.00	7,065.00	11,195.10	7,153.00	117.43	113.56	95.75	1,187.48	-4,120.55	877.63	649.08	228.55	3.840					
11,300.00	7,065.00	11,295.10	7,153.00	120.09	116.18	95.75	1,186.67	-4,220.55	877.65	643.82	233.83	3.753					
11,400.00	7,065.00	11,395.10	7,153.00	122.75	118.81	95.75	1,185.85	-4,320.55	877.67	638.56	239.11	3.671					
11,500.00	7,065.00	11,495.10	7,153.00	125.41	121.44	95.75	1,185.03	-4,420.54	877.69	633.29	244.40	3.591					
11,600.00	7,065.00	11,595.10	7,153.00	128.08	124.08	95.75	1,184.21	-4,520.54	877.71	628.01	249.70	3.515					
11,700.00	7,065.00	11,695.10	7,153.00	130.74	126.72	95.75	1,183.39	-4,620.54	877.73	622.73	255.00	3.442					
11,800.00	7,065.00	11,795.10	7,153.00	133.41	129.36	95.75	1,182.57	-4,720.53	877.75	617.44	260.31	3.372					
11,900.00	7,065.00	11,895.10	7,153.00	136.09	132.01	95.75	1,181.76	-4,820.53	877.77	612.15	265.62	3.305					
12,000.00	7,065.00	11,995.10	7,153.00	138.76	134.66	95.75	1,180.94	-4,920.53	877.79	606.85	270.93	3.240					
12,100.00	7,065.00	12,095.10	7,153.00	141.44	137.31	95.75	1,180.12	-5,020.52	877.81	601.55	276.25	3.178					
12,200.00	7,065.00	12,195.10	7,153.00	144.11	139.97	95.75	1,179.30	-5,120.52	877.83	596.25	281.58	3.118					
12,300.00	7,065.00	12,295.10	7,153.00	146.79	142.63	95.75	1,178.48	-5,220.52	877.85	590.94	286.90	3.060					
12,400.00	7,065.00	12,395.10	7,153.00	149.47	145.29	95.75	1,177.66	-5,320.51	877.86	585.63	292.23	3.004					
12,500.00	7,065.00	12,495.10	7,153.00	152.15	147.95	95.75	1,176.84	-5,420.51	877.88	580.32	297.57	2.950					
12,600.00	7,065.00	12,595.10	7,153.00	154.84	150.62	95.75	1,176.03	-5,520.51	877.90	575.00	302.90	2.898					
12,700.00	7,065.00	12,695.10	7,153.00	157.52	153.28	95.75	1,175.21	-5,620.50	877.92	569.68	308.24	2.848					
12,800.00	7,065.00	12,795.10	7,153.00	160.21	155.95	95.75	1,174.39	-5,720.50	877.94	564.36	313.58	2.800					
12,900.00	7,065.00	12,895.10	7,153.00	162.89	158.62	95.75	1,173.57	-5,820.50	877.96	559.04	318.93	2.753					
13,000.00	7,065.00	12,995.10	7,153.00	165.58	161.29	95.75	1,172.75	-5,920.49	877.98	553.71	324.27	2.708					
13,100.00	7,065.00	13,095.10	7,153.00	168.27	163.97	95.75	1,171.93	-6,020.49	878.00	548.38	329.62	2.664					
13,200.00	7,065.00	13,195.10	7,153.00	170.96	166.64	95.75	1,171.11	-6,120.49	878.02	543.05	334.97	2.621					
13,300.00	7,065.00	13,295.10	7,153.00	173.65	169.32	95.75	1,170.30	-6,220.48	878.04	537.71	340.32	2.580					
13,400.00	7,065.00	13,395.10	7,153.00	176.35	172.00	95.75	1,169.48	-6,320.48	878.06	532.38	345.68	2.540					
13,500.00	7,065.00	13,495.10	7,153.00	179.04	174.68	95.75	1,168.66	-6,420.48	878.08	527.04	351.04	2.501					
13,600.00	7,065.00	13,595.10	7,153.00	181.73	177.36	95.75	1,167.84	-6,520.47	878.10	521.70	356.40	2.464					
13,700.00	7,065.00	13,695.10	7,153.00	184.43	180.04	95.75	1,167.02	-6,620.47	878.12	516.36	361.76	2.427					
13,800.00	7,065.00	13,795.10	7,153.00	187.12	182.73	95.75	1,166.20	-6,720.47	878.14	511.02	367.12	2.392					
13,900.00	7,065.00	13,895.10	7,153.00	189.82	185.41	95.75	1,165.39	-6,820.46	878.16	505.67	372.48	2.358					
14,000.00	7,065.00	13,995.10	7,153.00	192.52	188.10	95.75	1,164.57	-6,920.46	878.18	500.33	377.85	2.324					
14,100.00	7,065.00	14,095.10	7,153.00	195.21	190.78	95.75	1,163.75	-7,020.46	878.19	494.98	383.21	2.292					
14,200.00	7,065.00	14,195.10	7,153.00	197.91	193.47	95.75	1,162.93	-7,120.45	878.21	489.63	388.58	2.260					

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 11-10-9H
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 11-10-9H	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		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				
14,300.00	7,065.00	14,295.10	7,153.00	200.61	196.16	95.75	1,162.11	-7,220.45	878.23	484.28	393.95	2.229				
14,400.00	7,065.00	14,395.10	7,153.00	203.31	198.85	95.75	1,161.29	-7,320.45	878.25	478.93	399.32	2.199				
14,500.00	7,065.00	14,495.10	7,153.00	206.01	201.54	95.75	1,160.47	-7,420.44	878.27	473.58	404.70	2.170				
14,600.00	7,065.00	14,595.10	7,153.00	208.71	204.23	95.75	1,159.66	-7,520.44	878.29	468.22	410.07	2.142				
14,700.00	7,065.00	14,695.10	7,153.00	211.41	206.92	95.75	1,158.84	-7,620.44	878.31	462.87	415.44	2.114				
14,800.00	7,065.00	14,795.10	7,153.00	214.12	209.61	95.75	1,158.02	-7,720.43	878.33	457.51	420.82	2.087				
14,900.00	7,065.00	14,895.10	7,153.00	216.82	212.31	95.75	1,157.20	-7,820.43	878.35	452.15	426.20	2.061				
15,000.00	7,065.00	14,995.10	7,153.00	219.52	215.00	95.75	1,156.38	-7,920.43	878.37	446.80	431.57	2.035				
15,100.00	7,065.00	15,095.10	7,153.00	222.22	217.70	95.75	1,155.56	-8,020.42	878.39	441.44	436.95	2.010				
15,200.00	7,065.00	15,195.10	7,153.00	224.93	220.39	95.75	1,154.74	-8,120.42	878.41	436.08	442.33	1.986				
15,300.00	7,065.00	15,295.10	7,153.00	227.63	223.09	95.75	1,153.93	-8,220.42	878.43	430.72	447.71	1.962				
15,400.00	7,065.00	15,395.10	7,153.00	230.34	225.79	95.75	1,153.11	-8,320.41	878.45	425.35	453.09	1.939				
15,401.10	7,065.00	15,396.20	7,153.00	230.37	225.82	95.75	1,153.10	-8,321.51	878.45	425.29	453.15	1.939				
15,495.74	7,065.00	15,455.54	7,153.00	232.93	227.42	95.75	1,152.61	-8,380.85	879.17	421.58	457.60	1.921 SF				

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 11-10-8H - 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	0.00	14.57	0.00	14.57	14.57					
100.00	100.00	100.00	100.00	0.14	0.14	0.00	14.57	0.00	14.57	14.29	0.29	50.813			
200.00	200.00	200.00	200.00	0.50	0.50	0.00	14.57	0.00	14.57	13.57	1.00	14.518			
300.00	300.00	300.00	300.00	0.86	0.86	0.00	14.57	0.00	14.57	12.85	1.72	8.469 CC, ES			
400.00	400.00	399.45	399.43	1.22	1.22	0.19	16.30	0.05	16.31	13.87	2.44	6.688			
500.00	499.98	498.75	498.59	1.58	1.58	-40.73	21.46	0.22	20.16	17.01	3.15	6.395			
594.97	594.82	592.84	592.33	1.92	1.92	-46.63	29.52	0.47	24.71	20.89	3.83	6.460			
600.00	599.84	597.83	597.29	1.94	1.94	-46.99	30.03	0.49	24.99	21.13	3.86	6.474			
700.00	699.61	696.57	695.30	2.30	2.32	-51.83	41.96	0.87	32.38	27.80	4.57	7.078			
800.00	799.37	795.87	793.57	2.66	2.71	-53.89	56.25	1.32	42.11	36.81	5.30	7.945			
900.00	899.14	895.38	892.03	3.03	3.11	-55.15	70.63	1.78	51.94	45.91	6.03	8.609			
1,000.00	998.91	994.89	990.50	3.40	3.52	-56.01	85.01	2.23	61.79	55.02	6.77	9.127			
1,100.00	1,098.68	1,094.40	1,088.96	3.77	3.94	-56.63	99.39	2.69	71.65	64.14	7.51	9.541			
1,200.00	1,198.45	1,193.91	1,187.43	4.14	4.35	-57.10	113.77	3.15	81.51	73.26	8.25	9.879			
1,300.00	1,298.22	1,293.42	1,285.89	4.51	4.77	-57.47	128.15	3.60	91.38	82.39	8.99	10.160			
1,400.00	1,397.99	1,392.93	1,384.36	4.88	5.19	-57.77	142.53	4.06	101.25	91.52	9.74	10.398			
1,500.00	1,497.75	1,492.44	1,482.82	5.26	5.60	-58.02	156.91	4.52	111.13	100.64	10.48	10.601			
1,600.00	1,597.52	1,591.95	1,581.29	5.63	6.02	-58.22	171.29	4.97	121.00	109.77	11.23	10.776			
1,700.00	1,697.29	1,691.46	1,679.75	6.00	6.45	-58.40	185.67	5.43	130.88	118.90	11.97	10.930			
1,800.00	1,797.06	1,790.97	1,778.22	6.37	6.87	-58.55	200.05	5.88	140.76	128.03	12.72	11.064			
1,900.00	1,896.83	1,890.48	1,876.68	6.75	7.29	-58.68	214.43	6.34	150.63	137.17	13.47	11.184			
2,000.00	1,996.60	1,989.99	1,975.15	7.12	7.71	-58.79	228.81	6.80	160.51	146.30	14.22	11.291			
2,100.00	2,096.37	2,089.50	2,073.61	7.49	8.13	-58.89	243.19	7.25	170.39	155.43	14.96	11.387			
2,200.00	2,196.13	2,189.01	2,172.08	7.86	8.56	-58.98	257.57	7.71	180.27	164.56	15.71	11.474			
2,300.00	2,295.90	2,288.52	2,270.54	8.24	8.98	-59.06	271.95	8.17	190.15	173.69	16.46	11.552			
2,400.00	2,395.67	2,388.04	2,369.01	8.61	9.40	-59.13	286.33	8.62	200.03	182.83	17.21	11.624			
2,500.00	2,495.44	2,487.55	2,467.47	8.98	9.83	-59.20	300.71	9.08	209.92	191.96	17.96	11.690			
2,600.00	2,595.21	2,587.06	2,565.94	9.36	10.25	-59.26	315.09	9.53	219.80	201.09	18.71	11.750			
2,700.00	2,694.98	2,686.57	2,664.40	9.73	10.67	-59.31	329.47	9.99	229.68	210.22	19.45	11.806			
2,800.00	2,794.75	2,786.08	2,762.87	10.10	11.10	-59.36	343.85	10.45	239.56	219.36	20.20	11.857			
2,900.00	2,894.51	2,885.59	2,861.33	10.48	11.52	-59.41	358.23	10.90	249.44	228.49	20.95	11.905			
3,000.00	2,994.28	2,985.10	2,959.80	10.85	11.95	-59.45	372.61	11.36	259.32	237.62	21.70	11.949			
3,100.00	3,094.05	3,084.61	3,058.26	11.22	12.37	-59.49	386.99	11.81	269.21	246.75	22.45	11.991			
3,200.00	3,193.82	3,184.12	3,156.72	11.60	12.79	-59.53	401.37	12.27	279.09	255.89	23.20	12.029			
3,300.00	3,293.59	3,283.63	3,255.19	11.97	13.22	-59.56	415.75	12.73	288.97	265.02	23.95	12.065			
3,400.00	3,393.36	3,383.14	3,353.65	12.35	13.64	-59.59	430.13	13.18	298.85	274.15	24.70	12.099			
3,500.00	3,493.12	3,482.65	3,452.12	12.72	14.07	-59.62	444.51	13.64	308.74	283.29	25.45	12.131			
3,600.00	3,592.89	3,582.16	3,550.58	13.09	14.49	-59.65	458.89	14.10	318.62	292.42	26.20	12.161			
3,700.00	3,692.66	3,681.67	3,649.05	13.47	14.92	-59.68	473.27	14.55	328.50	301.55	26.95	12.190			
3,800.00	3,792.43	3,781.18	3,747.51	13.84	15.34	-59.70	487.65	15.01	338.38	310.69	27.70	12.217			
3,900.00	3,892.20	3,880.69	3,845.98	14.21	15.77	-59.73	502.03	15.46	348.27	319.82	28.45	12.242			
4,000.00	3,991.97	3,980.20	3,944.44	14.59	16.19	-59.75	516.41	15.92	358.15	328.95	29.20	12.266			
4,100.00	4,091.74	4,079.71	4,042.91	14.96	16.62	-59.77	530.79	16.38	368.03	338.09	29.95	12.289			
4,200.00	4,191.50	4,179.22	4,141.37	15.33	17.04	-59.79	545.17	16.83	377.92	347.22	30.70	12.311			
4,300.00	4,291.27	4,278.73	4,239.84	15.71	17.47	-59.81	559.55	17.29	387.80	356.35	31.45	12.331			
4,400.00	4,391.04	4,378.24	4,338.30	16.08	17.89	-59.83	573.93	17.75	397.68	365.48	32.20	12.351			
4,500.00	4,490.81	4,477.75	4,436.77	16.46	18.31	-59.84	588.31	18.20	407.57	374.62	32.95	12.370			
4,600.00	4,590.58	4,577.26	4,535.23	16.83	18.74	-59.86	602.69	18.66	417.45	383.75	33.70	12.388			
4,700.00	4,690.35	4,676.77	4,633.70	17.20	19.16	-59.88	617.07	19.11	427.33	392.88	34.45	12.405			
4,800.00	4,790.12	4,776.28	4,732.16	17.58	19.59	-59.89	631.45	19.57	437.22	402.02	35.20	12.421			
4,900.00	4,889.88	4,875.79	4,830.63	17.95	20.01	-59.90	645.83	20.03	447.10	411.15	35.95	12.437			
5,000.00	4,989.65	4,975.30	4,929.09	18.32	20.44	-59.92	660.21	20.48	456.98	420.28	36.70	12.452			

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 11-10-9H
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 11-10-9H	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 11-10-8H - 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	5,089.42	5,074.81	5,027.56	18.70	20.86	-59.93	674.59	20.94	466.87	429.42	37.45	12.467		
5,200.00	5,189.19	5,174.32	5,126.02	19.07	21.29	-59.94	688.97	21.40	476.75	438.55	38.20	12.481		
5,300.00	5,288.96	5,273.84	5,224.49	19.45	21.71	-59.95	703.35	21.85	486.63	447.68	38.95	12.494		
5,400.00	5,388.73	5,373.35	5,322.95	19.82	22.14	-59.97	717.73	22.31	496.52	456.82	39.70	12.507		
5,500.00	5,488.49	5,472.86	5,421.42	20.19	22.56	-59.98	732.11	22.76	506.40	465.95	40.45	12.519		
5,600.00	5,588.26	5,572.37	5,519.88	20.57	22.99	-59.99	746.49	23.22	516.28	475.08	41.20	12.531		
5,700.00	5,688.03	5,681.17	5,627.62	20.94	23.45	-60.02	761.69	23.70	525.76	483.75	42.01	12.514		
5,800.00	5,787.80	5,801.26	5,747.04	21.31	23.92	-60.24	774.25	24.10	531.97	489.11	42.86	12.411		
5,900.00	5,887.57	5,921.65	5,867.18	21.69	24.35	-60.68	781.80	24.34	534.36	490.71	43.65	12.241		
6,000.00	5,987.34	6,041.90	5,987.40	22.06	24.74	-61.34	784.31	24.42	532.96	488.57	44.39	12.007		
6,100.00	6,087.11	6,141.61	6,087.11	22.44	25.04	-61.98	784.31	24.42	529.73	484.60	45.13	11.739		
6,200.00	6,186.87	6,241.38	6,186.87	22.81	25.34	-62.63	784.31	24.42	526.56	480.70	45.86	11.481		
6,300.00	6,286.64	6,341.15	6,286.64	23.18	25.65	-63.29	784.31	24.42	523.46	476.86	46.60	11.233		
6,400.00	6,386.41	6,440.92	6,386.41	23.56	25.96	-63.96	784.31	24.42	520.44	473.10	47.34	10.993		
6,482.24	6,468.46	6,522.96	6,468.46	23.86	26.21	-64.51	784.31	24.42	518.00	470.05	47.95	10.803		
6,500.00	6,486.19	6,540.69	6,486.19	23.93	26.27	-38.16	784.31	24.42	517.36	469.28	48.08	10.761		
6,550.00	6,536.08	6,590.58	6,536.08	24.10	26.42	29.42	784.31	24.42	514.28	465.87	48.41	10.622		
6,600.00	6,585.64	6,640.14	6,585.64	24.26	26.57	47.31	784.31	24.42	509.35	460.64	48.71	10.456		
6,650.00	6,634.49	6,688.99	6,634.49	24.40	26.73	54.87	784.31	24.42	502.70	453.73	48.97	10.265		
6,700.00	6,682.26	6,735.46	6,680.95	24.53	26.87	59.97	784.31	24.41	494.59	445.39	49.20	10.053		
6,750.00	6,728.60	6,771.04	6,716.50	24.64	26.98	63.81	784.30	23.06	485.99	436.59	49.40	9.837		
6,800.00	6,773.14	6,807.13	6,752.40	24.75	27.09	67.21	784.27	19.44	477.55	427.98	49.57	9.634		
6,850.00	6,815.54	6,843.80	6,788.58	24.84	27.19	70.40	784.22	13.46	469.45	419.72	49.72	9.441		
6,900.00	6,855.49	6,881.13	6,824.94	24.92	27.30	73.50	784.15	5.00	461.85	411.98	49.88	9.260		
6,950.00	6,892.68	6,919.23	6,861.39	24.99	27.41	76.58	784.06	-6.05	454.97	404.91	50.06	9.089		
7,000.00	6,926.83	6,958.21	6,897.84	25.07	27.52	79.65	783.95	-19.83	448.99	398.72	50.27	8.931		
7,050.00	6,957.68	7,000.00	6,935.78	25.19	27.63	82.83	783.81	-37.33	444.12	393.58	50.54	8.788		
7,100.00	6,984.98	7,039.35	6,970.25	25.42	27.73	85.79	783.65	-56.29	440.52	389.66	50.86	8.661		
7,150.00	7,008.54	7,081.84	7,005.92	25.72	27.84	88.85	783.46	-79.36	438.35	387.13	51.23	8.557		
7,193.31	7,025.79	7,119.90	7,036.33	26.02	27.93	91.48	783.27	-102.23	437.75	386.18	51.57	8.488		
7,200.00	7,028.18	7,125.89	7,040.98	26.06	27.95	91.89	783.24	-106.01	437.76	386.14	51.62	8.481		
7,250.00	7,043.74	7,171.74	7,075.19	26.46	28.06	94.88	782.99	-136.52	438.82	386.82	52.00	8.438		
7,300.00	7,055.11	7,219.70	7,108.24	26.91	28.18	97.83	782.71	-171.24	441.56	389.22	52.34	8.436		
7,350.00	7,062.20	7,270.10	7,139.72	27.40	28.32	100.72	782.38	-210.59	445.97	393.37	52.60	8.479		
7,400.00	7,064.96	7,323.36	7,169.09	27.94	28.48	103.54	782.02	-254.99	451.95	399.20	52.75	8.568		
7,406.67	7,065.00	7,330.71	7,172.82	28.01	28.51	103.91	781.97	-261.32	452.86	400.10	52.76	8.584		
7,500.00	7,065.00	7,444.42	7,219.71	29.15	29.02	109.56	781.12	-364.70	465.03	412.02	53.00	8.773		
7,600.00	7,065.00	7,585.25	7,248.13	30.55	30.12	112.81	779.99	-502.27	472.59	418.42	54.17	8.725		
7,700.00	7,065.00	7,700.13	7,250.00	32.12	31.39	113.02	779.05	-617.10	473.10	416.43	56.67	8.348		
7,800.00	7,065.00	7,800.13	7,250.00	33.83	32.73	113.02	778.23	-717.10	473.12	413.55	59.56	7.943		
7,900.00	7,065.00	7,900.13	7,250.00	35.67	34.25	113.02	777.41	-817.09	473.13	410.41	62.73	7.543		
8,000.00	7,065.00	8,000.13	7,250.00	37.61	35.93	113.02	776.59	-917.09	473.15	407.03	66.12	7.156		
8,100.00	7,065.00	8,100.13	7,250.00	39.65	37.73	113.02	775.77	-1,017.09	473.17	403.44	69.72	6.787		
8,200.00	7,065.00	8,200.13	7,250.00	41.76	39.64	113.01	774.95	-1,117.08	473.18	399.69	73.49	6.439		
8,300.00	7,065.00	8,300.13	7,250.00	43.94	41.64	113.01	774.13	-1,217.08	473.20	395.79	77.40	6.113		
8,400.00	7,065.00	8,400.13	7,250.00	46.18	43.72	113.01	773.31	-1,317.08	473.21	391.77	81.44	5.810		
8,500.00	7,065.00	8,500.13	7,250.00	48.46	45.87	113.01	772.49	-1,417.07	473.23	387.64	85.59	5.529		
8,600.00	7,065.00	8,600.13	7,250.00	50.79	48.08	113.01	771.67	-1,517.07	473.25	383.42	89.83	5.268		
8,700.00	7,065.00	8,700.13	7,250.00	53.16	50.34	113.01	770.85	-1,617.07	473.26	379.12	94.15	5.027		
8,800.00	7,065.00	8,800.13	7,250.00	55.56	52.64	113.01	770.03	-1,717.06	473.28	374.74	98.53	4.803		
8,900.00	7,065.00	8,900.13	7,250.00	57.99	54.98	113.01	769.21	-1,817.06	473.30	370.31	102.98	4.596		
9,000.00	7,065.00	9,000.13	7,250.00	60.44	57.36	113.01	768.39	-1,917.06	473.31	365.83	107.48	4.404		

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 11-10-9H
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 11-10-9H	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 11-10-8H - 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)			
9,100.00	7,065.00	9,100.13	7,250.00	62.91	59.76	113.01	767.57	-2,017.05	473.33	361.30	112.03	4.225		
9,200.00	7,065.00	9,200.13	7,250.00	65.41	62.19	113.01	766.75	-2,117.05	473.34	356.72	116.62	4.059		
9,300.00	7,065.00	9,300.13	7,250.00	67.92	64.65	113.01	765.93	-2,217.05	473.36	352.12	121.24	3.904		
9,400.00	7,065.00	9,400.13	7,250.00	70.45	67.12	113.00	765.11	-2,317.04	473.38	347.47	125.90	3.760		
9,500.00	7,065.00	9,500.13	7,249.99	72.99	69.62	113.00	764.29	-2,417.04	473.39	342.80	130.59	3.625		
9,600.00	7,065.00	9,600.13	7,249.99	75.54	72.13	113.00	763.47	-2,517.04	473.41	338.11	135.30	3.499		
9,700.00	7,065.00	9,700.13	7,249.99	78.11	74.65	113.00	762.65	-2,617.03	473.43	333.39	140.04	3.381		
9,800.00	7,065.00	9,800.13	7,249.99	80.68	77.19	113.00	761.83	-2,717.03	473.44	328.65	144.79	3.270		
9,900.00	7,065.00	9,900.13	7,249.99	83.27	79.74	113.00	761.01	-2,817.03	473.46	323.89	149.57	3.166		
10,000.00	7,065.00	10,000.13	7,249.99	85.86	82.30	113.00	760.19	-2,917.02	473.47	319.11	154.36	3.067		
10,100.00	7,065.00	10,100.13	7,249.99	88.46	84.87	113.00	759.36	-3,017.02	473.49	314.32	159.17	2.975		
10,200.00	7,065.00	10,200.13	7,249.99	91.07	87.45	113.00	758.54	-3,117.02	473.51	309.51	163.99	2.887		
10,300.00	7,065.00	10,300.13	7,249.99	93.68	90.04	113.00	757.72	-3,217.01	473.52	304.70	168.83	2.805		
10,400.00	7,065.00	10,400.13	7,249.99	96.30	92.64	113.00	756.90	-3,317.01	473.54	299.86	173.68	2.727		
10,500.00	7,065.00	10,500.13	7,249.99	98.93	95.24	112.99	756.08	-3,417.01	473.56	295.02	178.53	2.652		
10,600.00	7,065.00	10,600.13	7,249.99	101.56	97.85	112.99	755.26	-3,517.00	473.57	290.17	183.40	2.582		
10,700.00	7,065.00	10,700.13	7,249.99	104.20	100.47	112.99	754.44	-3,617.00	473.59	285.31	188.28	2.515		
10,800.00	7,065.00	10,800.13	7,249.99	106.83	103.09	112.99	753.62	-3,717.00	473.60	280.44	193.17	2.452		
10,900.00	7,065.00	10,900.13	7,249.99	109.48	105.72	112.99	752.80	-3,816.99	473.62	275.56	198.06	2.391		
11,000.00	7,065.00	11,000.13	7,249.99	112.13	108.35	112.99	751.98	-3,916.99	473.64	270.67	202.97	2.334		
11,100.00	7,065.00	11,100.13	7,249.99	114.78	110.98	112.99	751.16	-4,016.99	473.65	265.78	207.87	2.279		
11,200.00	7,065.00	11,200.13	7,249.99	117.43	113.62	112.99	750.34	-4,116.98	473.67	260.88	212.79	2.226		
11,300.00	7,065.00	11,300.13	7,249.99	120.09	116.27	112.99	749.52	-4,216.98	473.69	255.97	217.71	2.176		
11,400.00	7,065.00	11,400.13	7,249.99	122.75	118.91	112.99	748.70	-4,316.98	473.70	251.06	222.64	2.128		
11,500.00	7,065.00	11,500.13	7,249.99	125.41	121.57	112.99	747.88	-4,416.97	473.72	246.15	227.57	2.082		
11,600.00	7,065.00	11,600.13	7,249.99	128.08	124.22	112.98	747.06	-4,516.97	473.73	241.23	232.51	2.037		
11,700.00	7,065.00	11,700.13	7,249.99	130.74	126.87	112.98	746.24	-4,616.97	473.75	236.30	237.45	1.995		
11,800.00	7,065.00	11,800.13	7,249.99	133.41	129.53	112.98	745.42	-4,716.96	473.77	231.37	242.40	1.955		
11,900.00	7,065.00	11,900.13	7,249.99	136.09	132.20	112.98	744.60	-4,816.96	473.78	226.44	247.35	1.915		
12,000.00	7,065.00	12,000.13	7,249.99	138.76	134.86	112.98	743.78	-4,916.96	473.80	221.50	252.30	1.878		
12,100.00	7,065.00	12,100.13	7,249.99	141.44	137.53	112.98	742.96	-5,016.95	473.82	216.56	257.26	1.842		
12,200.00	7,065.00	12,200.13	7,249.99	144.11	140.19	112.98	742.14	-5,116.95	473.83	211.61	262.22	1.807		
12,300.00	7,065.00	12,300.13	7,249.99	146.79	142.86	112.98	741.32	-5,216.95	473.85	206.66	267.19	1.773		
12,400.00	7,065.00	12,400.13	7,249.99	149.47	145.54	112.98	740.50	-5,316.94	473.86	201.71	272.15	1.741		
12,500.00	7,065.00	12,500.13	7,249.99	152.15	148.21	112.98	739.68	-5,416.94	473.88	196.76	277.12	1.710		
12,600.00	7,065.00	12,600.13	7,249.99	154.84	150.89	112.98	738.86	-5,516.94	473.90	191.80	282.10	1.680		
12,700.00	7,065.00	12,700.13	7,249.99	157.52	153.56	112.98	738.04	-5,616.93	473.91	186.84	287.07	1.651		
12,800.00	7,065.00	12,800.13	7,249.99	160.21	156.24	112.97	737.22	-5,716.93	473.93	181.88	292.05	1.623		
12,900.00	7,065.00	12,900.13	7,249.98	162.89	158.92	112.97	736.40	-5,816.93	473.95	176.91	297.03	1.596		
13,000.00	7,065.00	13,000.13	7,249.98	165.58	161.60	112.97	735.58	-5,916.92	473.96	171.95	302.02	1.569		
13,100.00	7,065.00	13,100.13	7,249.98	168.27	164.29	112.97	734.76	-6,016.92	473.98	166.98	307.00	1.544		
13,200.00	7,065.00	13,200.13	7,249.98	170.96	166.97	112.97	733.94	-6,116.92	473.99	162.01	311.99	1.519		
13,300.00	7,065.00	13,300.13	7,249.98	173.65	169.66	112.97	733.12	-6,216.91	474.01	157.03	316.98	1.495 Level 3		
13,400.00	7,065.00	13,400.13	7,249.98	176.35	172.34	112.97	732.30	-6,316.91	474.03	152.06	321.97	1.472 Level 3		
13,500.00	7,065.00	13,500.13	7,249.98	179.04	175.03	112.97	731.48	-6,416.91	474.04	147.08	326.96	1.450 Level 3		
13,600.00	7,065.00	13,600.13	7,249.98	181.73	177.72	112.97	730.66	-6,516.90	474.06	142.10	331.96	1.428 Level 3		
13,700.00	7,065.00	13,700.13	7,249.98	184.43	180.41	112.97	729.84	-6,616.90	474.08	137.12	336.95	1.407 Level 3		
13,800.00	7,065.00	13,800.13	7,249.98	187.12	183.10	112.97	729.02	-6,716.90	474.09	132.14	341.95	1.386 Level 3		
13,900.00	7,065.00	13,900.13	7,249.98	189.82	185.79	112.96	728.20	-6,816.89	474.11	127.16	346.95	1.367 Level 3		
14,000.00	7,065.00	14,000.13	7,249.98	192.52	188.49	112.96	727.38	-6,916.89	474.13	122.18	351.95	1.347 Level 3		
14,100.00	7,065.00	14,100.13	7,249.98	195.21	191.18	112.96	726.56	-7,016.89	474.14	117.19	356.95	1.328 Level 3		
14,200.00	7,065.00	14,200.13	7,249.98	197.91	193.87	112.96	725.74	-7,116.88	474.16	112.20	361.95	1.310 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 11-10-9H
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 11-10-9H	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 11-10-8H - 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)				
14,300.00	7,065.00	14,300.13	7,249.98	200.61	196.57	112.96	724.92	-7,216.88	474.17	107.22	366.96	1.292	Level 3	
14,400.00	7,065.00	14,400.13	7,249.98	203.31	199.26	112.96	724.10	-7,316.88	474.19	102.23	371.96	1.275	Level 3	
14,500.00	7,065.00	14,500.13	7,249.98	206.01	201.96	112.96	723.28	-7,416.87	474.21	97.23	376.97	1.258	Level 3	
14,600.00	7,065.00	14,600.13	7,249.98	208.71	204.66	112.96	722.46	-7,516.87	474.22	92.24	381.98	1.241	Level 3	
14,700.00	7,065.00	14,700.13	7,249.98	211.41	207.35	112.96	721.64	-7,616.87	474.24	87.25	386.99	1.225	Level 3	
14,800.00	7,065.00	14,800.13	7,249.98	214.12	210.05	112.96	720.82	-7,716.86	474.26	82.26	392.00	1.210	Level 3	
14,900.00	7,065.00	14,900.13	7,249.98	216.82	212.75	112.96	720.00	-7,816.86	474.27	77.26	397.01	1.195	Level 3	
15,000.00	7,065.00	15,000.13	7,249.98	219.52	215.45	112.96	719.17	-7,916.86	474.29	72.27	402.02	1.180	Level 3	
15,100.00	7,065.00	15,100.13	7,249.98	222.22	218.15	112.95	718.35	-8,016.85	474.30	67.27	407.04	1.165	Level 3	
15,200.00	7,065.00	15,200.13	7,249.98	224.93	220.85	112.95	717.53	-8,116.85	474.32	62.27	412.05	1.151	Level 3	
15,300.00	7,065.00	15,300.13	7,249.98	227.63	223.55	112.95	716.71	-8,216.85	474.34	57.27	417.06	1.137	Level 3	
15,400.00	7,065.00	15,400.00	7,249.98	230.34	226.25	112.95	715.90	-8,316.71	474.35	52.27	422.08	1.124	Level 3	
15,400.03	7,065.00	15,400.00	7,249.98	230.34	226.25	112.95	715.90	-8,316.71	474.35	52.27	422.08	1.124	Level 3	
15,495.74	7,065.00	15,478.21	7,250.00	232.93	228.36	112.94	715.46	-8,394.92	474.90	48.37	426.53	1.113	Level 3, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 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	-76.60	7.29	-30.63	31.49					
100.00	100.00	100.00	100.00	0.14	0.14	-76.60	7.29	-30.63	31.49	31.20	0.29	109.791		
200.00	200.00	200.00	200.00	0.50	0.50	-76.60	7.29	-30.63	31.49	30.48	1.00	31.369		
300.00	300.00	300.00	300.00	0.86	0.86	-76.60	7.29	-30.63	31.49	29.77	1.72	18.299		
400.00	400.00	400.00	400.00	1.22	1.22	-76.60	7.29	-30.63	31.49	29.05	2.44	12.917	CC, ES	
500.00	499.98	499.98	499.98	1.58	1.58	-117.74	7.29	-30.63	32.26	29.11	3.15	10.233		
594.97	594.82	594.82	594.82	1.92	1.92	-124.83	7.29	-30.63	34.81	30.97	3.83	9.082		
600.00	599.84	599.84	599.84	1.94	1.94	-125.29	7.29	-30.63	35.00	31.13	3.87	9.046		
700.00	699.61	699.61	699.61	2.30	2.29	-133.39	7.29	-30.63	39.33	34.74	4.59	8.576		
800.00	799.37	799.37	799.37	2.66	2.65	-139.79	7.29	-30.63	44.28	38.98	5.30	8.350		
900.00	899.14	899.14	899.14	3.03	3.01	-144.86	7.29	-30.63	49.68	43.66	6.02	8.251		
1,000.00	998.91	998.91	998.91	3.40	3.37	-148.91	7.29	-30.63	55.38	48.64	6.74	8.219		
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	-152.19	7.29	-30.63	61.31	53.85	7.46	8.223		
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	-154.89	7.29	-30.63	67.40	59.23	8.17	8.247		
1,300.00	1,298.22	1,299.06	1,299.06	4.51	4.44	-156.91	7.29	-30.53	73.34	64.45	8.89	8.247		
1,400.00	1,397.99	1,400.77	1,400.70	4.88	4.81	-156.96	11.15	-29.72	77.27	67.66	9.62	8.035		
1,500.00	1,497.75	1,502.55	1,502.23	5.26	5.17	-155.06	18.12	-28.07	78.87	68.53	10.34	7.628		
1,600.00	1,597.52	1,604.14	1,603.24	5.63	5.54	-151.17	28.57	-25.60	78.41	67.34	11.07	7.086		
1,700.00	1,697.29	1,705.28	1,703.37	6.00	5.91	-145.01	42.43	-22.33	76.46	64.66	11.80	6.477		
1,800.00	1,797.06	1,805.74	1,802.26	6.37	6.29	-136.15	59.59	-18.28	74.07	61.50	12.57	5.893		
1,897.22	1,894.06	1,902.51	1,896.88	6.74	6.68	-124.75	79.30	-13.62	72.88	59.52	13.35	5.459		
1,900.00	1,896.83	1,905.26	1,899.56	6.75	6.69	-124.38	79.91	-13.48	72.88	59.50	13.37	5.449		
2,000.00	1,996.60	2,003.63	1,994.97	7.12	7.10	-110.30	103.21	-7.97	75.02	60.83	14.19	5.287	SF	
2,100.00	2,096.37	2,100.64	2,088.20	7.49	7.53	-95.68	129.30	-1.81	82.50	67.55	14.95	5.519		
2,200.00	2,196.13	2,196.10	2,179.00	7.86	7.99	-82.54	157.96	4.96	96.30	80.70	15.60	6.171		
2,300.00	2,295.90	2,289.85	2,267.16	8.24	8.47	-71.93	188.95	12.28	116.21	100.04	16.18	7.185		
2,400.00	2,395.67	2,381.72	2,352.52	8.61	8.97	-63.80	222.04	20.09	141.48	124.79	16.70	8.474		
2,500.00	2,495.44	2,471.60	2,434.92	8.98	9.50	-57.66	256.96	28.34	171.35	154.16	17.19	9.967		
2,600.00	2,595.21	2,559.38	2,514.26	9.36	10.05	-52.99	293.48	36.96	205.21	187.54	17.67	11.612		
2,700.00	2,694.98	2,644.97	2,590.49	9.73	10.61	-49.39	331.35	45.91	242.63	224.49	18.14	13.374		
2,800.00	2,794.75	2,728.30	2,663.56	10.10	11.20	-46.56	370.34	55.12	283.27	264.67	18.60	15.231		
2,900.00	2,894.51	2,809.34	2,733.47	10.48	11.80	-44.30	410.22	64.53	326.89	307.84	19.04	17.165		
3,000.00	2,994.28	2,888.04	2,800.23	10.85	12.42	-42.47	450.77	74.11	373.26	353.78	19.48	19.164		
3,100.00	3,094.05	2,964.39	2,863.88	11.22	13.05	-40.95	491.81	83.81	422.21	402.31	19.90	21.217		
3,200.00	3,193.82	3,038.40	2,924.48	11.60	13.68	-39.69	533.15	93.57	473.59	453.28	20.31	23.320		
3,300.00	3,293.59	3,110.07	2,982.10	11.97	14.32	-38.63	574.63	103.37	527.25	506.55	20.70	25.466		
3,400.00	3,393.36	3,181.94	3,038.82	12.35	14.98	-37.69	617.58	113.51	583.03	561.89	21.14	27.578		
3,500.00	3,493.12	3,264.02	3,103.20	12.72	15.77	-36.77	667.13	125.21	639.59	617.77	21.82	29.311		
3,600.00	3,592.89	3,346.09	3,167.58	13.09	16.56	-36.01	716.68	136.92	696.23	673.72	22.51	30.930		
3,700.00	3,692.66	3,428.17	3,231.96	13.47	17.36	-35.36	766.23	148.62	752.95	729.75	23.21	32.446		
3,800.00	3,792.43	3,510.25	3,296.34	13.84	18.17	-34.80	815.77	160.32	809.73	785.82	23.91	33.865		
3,900.00	3,892.20	3,592.33	3,360.72	14.21	18.99	-34.31	865.32	172.02	866.55	841.93	24.62	35.196		
4,000.00	3,991.97	3,674.40	3,425.10	14.59	19.82	-33.88	914.87	183.73	923.41	898.08	25.34	36.445		
4,100.00	4,091.74	3,756.48	3,489.48	14.96	20.65	-33.51	964.42	195.43	980.30	954.25	26.06	37.621		
4,200.00	4,191.50	3,838.56	3,553.86	15.33	21.49	-33.17	1,013.97	207.13	1,037.22	1,010.44	26.78	38.727		
4,300.00	4,291.27	3,920.64	3,618.24	15.71	22.33	-32.87	1,063.51	218.83	1,094.16	1,066.65	27.51	39.771		
4,400.00	4,391.04	4,002.71	3,682.62	16.08	23.18	-32.60	1,113.06	230.54	1,151.12	1,122.87	28.24	40.756		
4,500.00	4,490.81	4,084.79	3,747.00	16.46	24.03	-32.35	1,162.61	242.24	1,208.09	1,179.11	28.98	41.687		
4,600.00	4,590.58	4,166.87	3,811.38	16.83	24.89	-32.13	1,212.16	253.94	1,265.08	1,235.36	29.72	42.568		
4,700.00	4,690.35	4,248.95	3,875.76	17.20	25.74	-31.92	1,261.71	265.64	1,322.07	1,291.61	30.46	43.402		
4,800.00	4,790.12	4,331.02	3,940.14	17.58	26.60	-31.73	1,311.26	277.34	1,379.08	1,347.88	31.21	44.194		
4,900.00	4,889.88	4,413.10	4,004.52	17.95	27.47	-31.56	1,360.80	289.05	1,436.10	1,404.15	31.95	44.946		

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 11-10-9H
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 11-10-9H	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			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	4,989.65	4,495.18	4,068.90	18.32	28.33	-31.40	1,410.35	300.75	1,493.13	1,460.43	32.70	45.661	
5,100.00	5,089.42	4,577.26	4,133.28	18.70	29.20	-31.25	1,459.90	312.45	1,550.16	1,516.71	33.45	46.341	
5,200.00	5,189.19	4,659.33	4,197.66	19.07	30.07	-31.11	1,509.45	324.15	1,607.20	1,573.00	34.20	46.988	
5,300.00	5,288.96	4,741.41	4,262.04	19.45	30.94	-30.99	1,559.00	335.86	1,664.25	1,629.29	34.96	47.606	
5,400.00	5,388.73	4,823.49	4,326.42	19.82	31.81	-30.87	1,608.54	347.56	1,721.30	1,685.58	35.72	48.195	
5,500.00	5,488.49	4,905.57	4,390.79	20.19	32.68	-30.75	1,658.09	359.26	1,778.36	1,741.88	36.47	48.757	
5,600.00	5,588.26	4,987.64	4,455.17	20.57	33.56	-30.65	1,707.64	370.96	1,835.42	1,798.18	37.23	49.295	
5,700.00	5,688.03	5,069.72	4,519.55	20.94	34.44	-30.55	1,757.19	382.67	1,892.48	1,854.49	37.99	49.809	
5,800.00	5,787.80	5,151.80	4,583.93	21.31	35.31	-30.46	1,806.74	394.37	1,949.55	1,910.79	38.76	50.301	
5,900.00	5,887.57	5,233.87	4,648.31	21.69	36.19	-30.37	1,856.28	406.07	2,006.62	1,967.10	39.52	50.773	
6,000.00	5,987.34	5,315.95	4,712.69	22.06	37.07	-30.29	1,905.83	417.77	2,063.69	2,023.41	40.29	51.225	
6,100.00	6,087.11	5,398.03	4,777.07	22.44	37.95	-30.21	1,955.38	429.48	2,120.77	2,079.72	41.05	51.659	
6,200.00	6,186.87	5,480.11	4,841.45	22.81	38.83	-30.13	2,004.93	441.18	2,177.85	2,136.03	41.82	52.075	
6,300.00	6,286.64	5,562.18	4,905.83	23.18	39.71	-30.06	2,054.48	452.88	2,234.93	2,192.34	42.59	52.475	
6,400.00	6,386.41	5,644.26	4,970.21	23.56	40.60	-30.00	2,104.03	464.58	2,292.02	2,248.65	43.36	52.859	
6,482.24	6,468.46	5,711.76	5,023.15	23.86	41.32	-29.94	2,144.77	474.21	2,338.96	2,294.97	43.99	53.164	
6,500.00	6,486.19	5,726.31	5,034.56	23.93	41.48	-4.76	2,153.55	476.28	2,349.13	2,305.00	44.13	53.231	
6,550.00	6,536.08	5,766.80	5,066.32	24.10	41.92	59.11	2,178.00	482.06	2,378.06	2,333.57	44.50	53.444	
6,600.00	6,585.64	5,806.38	5,097.37	24.26	42.34	72.74	2,201.89	487.70	2,407.27	2,362.44	44.84	53.687	
6,650.00	6,634.49	5,844.75	5,127.47	24.40	42.76	75.51	2,225.05	493.17	2,436.59	2,391.43	45.16	53.955	
6,700.00	6,682.26	5,881.61	5,156.38	24.53	43.15	75.34	2,247.31	498.43	2,465.85	2,420.39	45.46	54.241	
6,750.00	6,728.60	5,916.69	5,183.90	24.64	43.53	74.07	2,268.49	503.43	2,494.91	2,449.17	45.75	54.538	
6,800.00	6,773.14	5,949.72	5,209.81	24.75	43.89	72.31	2,288.43	508.14	2,523.65	2,477.63	46.02	54.839	
6,850.00	6,815.54	5,980.45	5,233.91	24.84	44.22	70.34	2,306.97	512.52	2,551.93	2,505.65	46.28	55.138	
6,900.00	6,855.49	6,008.64	5,256.02	24.92	44.52	68.27	2,323.99	516.54	2,579.65	2,533.11	46.54	55.423	
6,950.00	6,892.68	6,034.08	5,275.97	24.99	44.80	66.19	2,339.35	520.16	2,606.71	2,559.90	46.81	55.686	
7,000.00	6,926.83	6,056.57	5,293.62	25.07	45.04	64.13	2,352.93	523.37	2,633.01	2,585.92	47.09	55.916	
7,050.00	6,957.68	6,075.95	5,308.82	25.19	45.25	62.11	2,364.63	526.13	2,658.44	2,611.06	47.38	56.104	
7,100.00	6,984.98	6,092.07	5,321.46	25.42	45.42	60.15	2,374.36	528.43	2,682.91	2,635.21	47.70	56.242	
7,150.00	7,008.54	6,104.80	5,331.44	25.72	45.56	58.25	2,382.04	530.25	2,706.33	2,658.28	48.05	56.323	
7,200.00	7,028.18	6,114.04	5,338.70	26.06	45.66	56.42	2,387.62	531.57	2,728.58	2,680.16	48.43	56.344	
7,250.00	7,043.74	6,119.74	5,343.16	26.46	45.72	54.66	2,391.06	532.38	2,749.58	2,700.74	48.84	56.301	
7,300.00	7,055.11	6,121.83	5,344.81	26.91	45.75	52.99	2,392.32	532.68	2,769.20	2,719.92	49.28	56.198	
7,350.00	7,062.20	6,120.32	5,343.62	27.40	45.73	51.39	2,391.41	532.46	2,787.34	2,737.60	49.74	56.037	
7,400.00	7,064.96	6,115.20	5,339.61	27.94	45.67	49.88	2,388.32	531.73	2,803.89	2,753.67	50.23	55.826	
7,406.67	7,065.00	6,114.25	5,338.86	28.01	45.66	49.69	2,387.75	531.59	2,805.97	2,755.68	50.29	55.796	
7,500.00	7,065.00	6,100.47	5,328.05	29.15	45.52	49.39	2,379.43	529.63	2,836.23	2,784.94	51.29	55.300	
7,600.00	7,065.00	6,085.71	5,316.47	30.55	45.36	49.08	2,370.52	527.52	2,871.59	2,819.10	52.48	54.714	
7,700.00	7,065.00	6,070.94	5,304.89	32.12	45.20	48.77	2,361.60	525.42	2,909.88	2,856.10	53.78	54.112	
7,800.00	7,065.00	6,056.18	5,293.31	33.83	45.04	48.46	2,352.69	523.32	2,950.99	2,895.86	55.13	53.525	
7,900.00	7,065.00	6,041.42	5,281.73	35.67	44.88	48.14	2,343.78	521.21	2,994.80	2,938.27	56.53	52.977	
8,000.00	7,065.00	6,026.65	5,270.15	37.61	44.72	47.83	2,334.87	519.11	3,041.20	2,983.26	57.95	52.484	
8,100.00	7,065.00	6,011.89	5,258.57	39.65	44.56	47.52	2,325.95	517.00	3,090.07	3,030.71	59.36	52.057	
8,200.00	7,065.00	5,997.13	5,246.99	41.76	44.40	47.21	2,317.04	514.90	3,141.30	3,080.54	60.76	51.701	
8,300.00	7,065.00	5,982.36	5,235.41	43.94	44.24	46.90	2,308.13	512.79	3,194.77	3,132.63	62.13	51.418	
8,400.00	7,065.00	5,967.60	5,223.83	46.18	44.08	46.59	2,299.22	510.69	3,250.36	3,186.89	63.47	51.211	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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: Reference		0-OWSG (Rev2) MWD Offset		Semi Major Axis			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
0.00	0.00	0.00	0.00	0.00	0.00	-103.38	-7.29	-30.63	31.48				
100.00	100.00	100.00	100.00	0.14	0.14	-103.38	-7.29	-30.63	31.48	31.20	0.29	109.785	
200.00	200.00	200.00	200.00	0.50	0.50	-103.38	-7.29	-30.63	31.48	30.48	1.00	31.367	
300.00	300.00	300.00	300.00	0.86	0.86	-103.38	-7.29	-30.63	31.48	29.76	1.72	18.297	
400.00	400.00	400.00	400.00	1.22	1.22	-103.38	-7.29	-30.63	31.48	29.05	2.44	12.916	CC, ES
500.00	499.98	499.98	499.98	1.58	1.58	-143.59	-7.29	-30.63	32.87	29.72	3.15	10.426	
594.97	594.82	594.82	594.82	1.92	1.92	-148.05	-7.29	-30.63	36.92	33.09	3.83	9.630	
600.00	599.84	599.84	599.84	1.94	1.94	-148.33	-7.29	-30.63	37.21	33.34	3.87	9.610	
700.00	699.61	699.61	699.61	2.30	2.29	-153.07	-7.29	-30.63	43.15	38.56	4.59	9.408	
800.00	799.37	799.37	799.37	2.66	2.65	-156.65	-7.29	-30.63	49.31	44.01	5.30	9.301	
900.00	899.14	899.14	899.14	3.03	3.01	-159.43	-7.29	-30.63	55.62	49.60	6.02	9.243	
1,000.00	998.91	998.91	998.91	3.40	3.37	-161.64	-7.29	-30.63	62.04	55.30	6.73	9.212	
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	-163.43	-7.29	-30.63	68.53	61.07	7.45	9.196	
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	-164.91	-7.29	-30.63	75.07	66.90	8.17	9.190	
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	-166.15	-7.29	-30.63	81.66	72.77	8.89	9.189	
1,400.00	1,397.99	1,399.20	1,399.20	4.88	4.80	-167.06	-6.88	-30.52	87.94	78.33	9.61	9.153	
1,500.00	1,497.75	1,501.71	1,501.64	5.26	5.17	-166.70	-3.40	-29.60	91.76	81.42	10.33	8.880	
1,600.00	1,597.52	1,604.29	1,603.96	5.63	5.54	-165.00	3.62	-27.75	92.75	81.69	11.05	8.391	
1,700.00	1,697.29	1,706.68	1,705.76	6.00	5.90	-161.85	14.15	-24.97	91.11	79.34	11.77	7.740	
1,800.00	1,797.06	1,808.61	1,806.66	6.37	6.28	-156.94	28.13	-21.28	87.25	74.75	12.50	6.983	
1,900.00	1,896.83	1,909.84	1,906.28	6.75	6.66	-149.67	45.44	-16.71	81.91	68.67	13.24	6.187	
2,000.00	1,996.60	2,010.12	2,004.29	7.12	7.06	-139.31	65.92	-11.30	76.42	62.39	14.03	5.446	
2,100.00	2,096.37	2,109.22	2,100.37	7.49	7.47	-125.35	89.42	-5.10	72.92	58.04	14.88	4.899	
2,129.08	2,125.37	2,137.79	2,127.90	7.60	7.60	-120.68	96.78	-3.16	72.69	57.55	15.14	4.801	
2,200.00	2,196.13	2,206.94	2,194.22	7.86	7.91	-108.62	115.71	1.84	74.31	58.57	15.74	4.721	SF
2,300.00	2,295.90	2,303.07	2,285.59	8.24	8.36	-91.81	144.59	9.46	82.98	66.51	16.47	5.038	
2,400.00	2,395.67	2,397.45	2,374.27	8.61	8.84	-77.61	175.81	17.70	99.48	82.44	17.04	5.837	
2,500.00	2,495.44	2,489.93	2,460.08	8.98	9.34	-66.85	209.12	26.50	122.80	105.27	17.53	7.006	
2,600.00	2,595.21	2,580.36	2,542.89	9.36	9.87	-59.00	244.27	35.78	151.64	133.66	17.98	8.436	
2,700.00	2,694.98	2,668.66	2,622.59	9.73	10.42	-53.25	281.01	45.47	185.02	166.60	18.42	10.047	
2,800.00	2,794.75	2,754.73	2,699.11	10.10	10.99	-48.97	319.09	55.53	222.26	203.41	18.85	11.790	
2,900.00	2,894.51	2,838.50	2,772.42	10.48	11.57	-45.71	358.27	65.87	262.91	243.63	19.28	13.635	
3,000.00	2,994.28	2,919.93	2,842.52	10.85	12.17	-43.16	398.33	76.44	306.63	286.93	19.70	15.561	
3,100.00	3,094.05	3,000.00	2,910.28	11.22	12.79	-41.11	439.58	87.33	353.18	333.04	20.14	17.533	
3,200.00	3,193.82	3,075.66	2,973.18	11.60	13.42	-39.50	480.23	98.06	402.35	381.83	20.52	19.606	
3,300.00	3,293.59	3,149.95	3,033.84	11.97	14.05	-38.14	521.69	109.01	453.98	433.06	20.91	21.707	
3,400.00	3,393.36	3,228.14	3,096.65	12.35	14.74	-36.93	566.71	120.89	507.64	486.20	21.44	23.676	
3,500.00	3,493.12	3,311.84	3,163.75	12.72	15.51	-35.87	615.09	133.67	561.70	539.59	22.12	25.396	
3,600.00	3,592.89	3,395.55	3,230.85	13.09	16.28	-34.99	663.48	146.44	615.89	593.08	22.81	27.005	
3,700.00	3,692.66	3,479.25	3,297.95	13.47	17.07	-34.25	711.86	159.21	670.15	646.65	23.50	28.513	
3,800.00	3,792.43	3,562.96	3,365.05	13.84	17.86	-33.62	760.24	171.98	724.49	700.28	24.21	29.927	
3,900.00	3,892.20	3,646.66	3,432.15	14.21	18.66	-33.08	808.62	184.76	778.88	753.96	24.92	31.254	
4,000.00	3,991.97	3,730.37	3,499.25	14.59	19.48	-32.61	857.01	197.53	833.31	807.67	25.64	32.503	
4,100.00	4,091.74	3,814.07	3,566.35	14.96	20.29	-32.20	905.39	210.30	887.77	861.41	26.36	33.678	
4,200.00	4,191.50	3,897.77	3,633.45	15.33	21.11	-31.84	953.77	223.07	942.27	915.18	27.09	34.787	
4,300.00	4,291.27	3,981.48	3,700.55	15.71	21.94	-31.51	1,002.15	235.84	996.78	968.97	27.82	35.832	
4,400.00	4,391.04	4,065.18	3,767.65	16.08	22.78	-31.22	1,050.54	248.62	1,051.32	1,022.77	28.55	36.820	
4,500.00	4,490.81	4,148.89	3,834.75	16.46	23.61	-30.96	1,098.92	261.39	1,105.88	1,076.59	29.29	37.754	
4,600.00	4,590.58	4,232.59	3,901.85	16.83	24.45	-30.72	1,147.30	274.16	1,160.45	1,130.42	30.03	38.640	
4,700.00	4,690.35	4,316.30	3,968.95	17.20	25.30	-30.50	1,195.68	286.93	1,215.03	1,184.26	30.78	39.479	
4,800.00	4,790.12	4,400.00	4,036.05	17.58	26.14	-30.30	1,244.07	299.70	1,269.63	1,238.11	31.52	40.276	
4,900.00	4,889.88	4,483.70	4,103.15	17.95	26.99	-30.12	1,292.45	312.48	1,324.23	1,291.96	32.27	41.033	

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 11-10-9H
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 11-10-9H	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	4,989.65	4,567.41	4,170.25	18.32	27.84	-29.95	1,340.83	325.25	1,378.85	1,345.82	33.02	41.753			
5,100.00	5,089.42	4,651.11	4,237.35	18.70	28.70	-29.80	1,389.22	338.02	1,433.47	1,399.69	33.78	42.439			
5,200.00	5,189.19	4,734.82	4,304.45	19.07	29.55	-29.65	1,437.60	350.79	1,488.10	1,453.56	34.53	43.093			
5,300.00	5,288.96	4,818.52	4,371.55	19.45	30.41	-29.52	1,485.98	363.56	1,542.73	1,507.44	35.29	43.717			
5,400.00	5,388.73	4,902.23	4,438.65	19.82	31.27	-29.40	1,534.36	376.34	1,597.37	1,561.32	36.05	44.312			
5,500.00	5,488.49	4,985.93	4,505.75	20.19	32.13	-29.28	1,582.75	389.11	1,652.01	1,615.20	36.81	44.881			
5,600.00	5,588.26	5,069.63	4,572.85	20.57	32.99	-29.17	1,631.13	401.88	1,706.66	1,669.09	37.57	45.425			
5,700.00	5,688.03	5,153.34	4,639.95	20.94	33.86	-29.07	1,679.51	414.65	1,761.31	1,722.98	38.33	45.946			
5,800.00	5,787.80	5,237.04	4,707.05	21.31	34.72	-28.97	1,727.89	427.42	1,815.97	1,776.87	39.10	46.445			
5,900.00	5,887.57	5,320.75	4,774.15	21.69	35.59	-28.88	1,776.28	440.20	1,870.63	1,830.76	39.87	46.923			
6,000.00	5,987.34	5,404.45	4,841.25	22.06	36.46	-28.80	1,824.66	452.97	1,925.29	1,884.66	40.63	47.382			
6,100.00	6,087.11	5,488.15	4,908.35	22.44	37.32	-28.72	1,873.04	465.74	1,979.96	1,938.56	41.40	47.822			
6,200.00	6,186.87	5,571.86	4,975.45	22.81	38.19	-28.64	1,921.42	478.51	2,034.63	1,992.45	42.17	48.245			
6,300.00	6,286.64	5,655.56	5,042.55	23.18	39.06	-28.57	1,969.81	491.28	2,089.30	2,046.35	42.94	48.651			
6,400.00	6,386.41	5,739.27	5,109.65	23.56	39.93	-28.50	2,018.19	504.06	2,143.97	2,100.25	43.72	49.042			
6,482.24	6,468.46	5,808.10	5,164.83	23.86	40.65	-28.45	2,057.98	514.56	2,188.93	2,144.58	44.35	49.353			
6,500.00	6,486.19	5,822.94	5,176.72	23.93	40.80	-3.18	2,066.55	516.82	2,198.69	2,154.20	44.49	49.421			
6,550.00	6,536.08	5,864.20	5,209.80	24.10	41.23	60.90	2,090.40	523.12	2,226.50	2,181.65	44.86	49.637			
6,600.00	6,585.64	5,904.51	5,242.12	24.26	41.65	74.73	2,113.70	529.27	2,254.72	2,209.52	45.20	49.885			
6,650.00	6,634.49	5,943.56	5,273.42	24.40	42.06	77.67	2,136.27	535.23	2,283.17	2,237.65	45.52	50.157			
6,700.00	6,682.26	5,981.04	5,303.47	24.53	42.45	77.65	2,157.94	540.95	2,311.70	2,265.88	45.82	50.449			
6,750.00	6,728.60	6,016.68	5,332.03	24.64	42.82	76.50	2,178.54	546.38	2,340.19	2,294.08	46.11	50.754			
6,800.00	6,773.14	6,050.19	5,358.90	24.75	43.17	74.83	2,197.91	551.50	2,368.50	2,322.11	46.38	51.065			
6,850.00	6,815.54	6,081.34	5,383.86	24.84	43.50	72.90	2,215.91	556.25	2,396.52	2,349.87	46.65	51.375			
6,900.00	6,855.49	6,109.87	5,406.74	24.92	43.80	70.85	2,232.40	560.60	2,424.16	2,377.25	46.91	51.675			
6,950.00	6,892.68	6,135.57	5,427.34	24.99	44.07	68.75	2,247.26	564.53	2,451.31	2,404.13	47.18	51.955			
7,000.00	6,926.83	6,158.25	5,445.52	25.07	44.30	66.64	2,260.37	567.99	2,477.87	2,430.41	47.46	52.207			
7,050.00	6,957.68	6,177.74	5,461.14	25.19	44.51	64.54	2,271.63	570.96	2,503.76	2,455.99	47.76	52.421			
7,100.00	6,984.98	6,193.88	5,474.08	25.42	44.67	62.46	2,280.96	573.42	2,528.86	2,480.78	48.09	52.590			
7,150.00	7,008.54	6,206.55	5,484.24	25.72	44.81	60.43	2,288.28	575.36	2,553.09	2,504.65	48.44	52.707			
7,200.00	7,028.18	6,215.66	5,491.54	26.06	44.90	58.44	2,293.55	576.75	2,576.34	2,527.51	48.82	52.768			
7,250.00	7,043.74	6,221.13	5,495.93	26.46	44.96	56.51	2,296.71	577.58	2,598.49	2,549.25	49.24	52.773			
7,300.00	7,055.11	6,222.93	5,497.37	26.91	44.98	54.65	2,297.76	577.86	2,619.43	2,569.74	49.68	52.723			
7,350.00	7,062.20	6,221.04	5,495.86	27.40	44.96	52.86	2,296.66	577.57	2,639.04	2,588.88	50.15	52.621			
7,400.00	7,064.96	6,215.48	5,491.40	27.94	44.90	51.15	2,293.45	576.72	2,657.19	2,606.55	50.64	52.473			
7,406.67	7,065.00	6,214.47	5,490.59	28.01	44.89	50.93	2,292.86	576.56	2,659.49	2,608.79	50.70	52.452			
7,500.00	7,065.00	6,199.77	5,478.81	29.15	44.74	50.59	2,284.37	574.32	2,692.92	2,641.22	51.70	52.086			
7,600.00	7,065.00	6,184.03	5,466.19	30.55	44.57	50.24	2,275.27	571.92	2,731.74	2,678.85	52.89	51.651			
7,700.00	7,065.00	6,168.29	5,453.57	32.12	44.41	49.88	2,266.17	569.52	2,773.53	2,719.37	54.16	51.209			
7,800.00	7,065.00	6,152.55	5,440.95	33.83	44.24	49.53	2,257.07	567.12	2,818.16	2,762.67	55.49	50.787			
7,900.00	7,065.00	6,136.80	5,428.33	35.67	44.08	49.17	2,247.97	564.71	2,865.50	2,808.66	56.85	50.407			
8,000.00	7,065.00	6,121.06	5,415.71	37.61	43.91	48.82	2,238.87	562.31	2,915.42	2,857.21	58.21	50.081			
8,100.00	7,065.00	6,105.32	5,403.09	39.65	43.75	48.47	2,229.77	559.91	2,967.79	2,908.22	59.57	49.820			
8,200.00	7,065.00	6,089.58	5,390.47	41.76	43.59	48.11	2,220.67	557.51	3,022.48	2,961.57	60.90	49.626			
8,300.00	7,065.00	9,932.59	7,058.00	43.94	67.44	89.87	3,404.41	-1,240.53	3,065.93	2,964.13	101.79	30.119			
8,400.00	7,065.00	10,032.59	7,058.00	46.18	68.73	89.87	3,403.52	-1,340.52	3,065.88	2,959.62	106.26	28.852			
8,500.00	7,065.00	10,132.59	7,058.00	48.46	70.20	89.87	3,402.64	-1,440.52	3,065.84	2,955.02	110.82	27.664			
8,600.00	7,065.00	10,232.59	7,058.00	50.79	71.84	89.87	3,401.76	-1,540.51	3,065.80	2,950.34	115.46	26.553			
8,700.00	7,065.00	10,332.59	7,058.00	53.16	73.61	89.87	3,400.88	-1,640.51	3,065.75	2,945.59	120.16	25.513			
8,800.00	7,065.00	10,432.59	7,058.00	55.56	75.51	89.87	3,400.00	-1,740.51	3,065.71	2,940.78	124.93	24.539			
8,900.00	7,065.00	10,532.59	7,058.00	57.99	77.50	89.87	3,399.12	-1,840.50	3,065.67	2,935.92	129.75	23.628			
9,000.00	7,065.00	10,632.59	7,058.00	60.44	79.58	89.87	3,398.24	-1,940.50	3,065.62	2,931.01	134.62	22.773			

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 11-10-9H
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 11-10-9H	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		Highside		Offset Wellbore Centre		Distance		Rule Assigned:		Offset Well Error:	0.00 usft
Reference		Offset		Reference		Toolface		Between		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				
9,100.00	7,065.00	10,732.59	7,058.00	62.91	81.72	89.87	3,397.36	-2,040.49	3,065.58	2,926.05	139.53	21.971				
9,200.00	7,065.00	10,832.59	7,058.00	65.41	83.92	89.87	3,396.47	-2,140.49	3,065.54	2,921.06	144.47	21.219				
9,300.00	7,065.00	10,932.59	7,058.00	67.92	86.17	89.87	3,395.59	-2,240.49	3,065.49	2,916.04	149.46	20.511				
9,400.00	7,065.00	11,032.59	7,058.00	70.45	88.47	89.87	3,394.71	-2,340.48	3,065.45	2,910.98	154.47	19.845				
9,500.00	7,065.00	11,132.59	7,058.00	72.99	90.79	89.87	3,393.83	-2,440.48	3,065.41	2,905.90	159.51	19.217				
9,600.00	7,065.00	11,232.59	7,058.00	75.54	93.15	89.87	3,392.95	-2,540.48	3,065.36	2,900.78	164.58	18.626				
9,700.00	7,065.00	11,332.59	7,058.00	78.11	95.53	89.87	3,392.07	-2,640.47	3,065.32	2,895.65	169.67	18.066				
9,800.00	7,065.00	11,432.59	7,058.00	80.68	97.94	89.87	3,391.19	-2,740.47	3,065.28	2,890.50	174.78	17.538				
9,900.00	7,065.00	11,532.59	7,058.00	83.27	100.36	89.87	3,390.31	-2,840.46	3,065.23	2,885.32	179.91	17.037				
10,000.00	7,065.00	11,632.59	7,058.00	85.86	102.81	89.87	3,389.42	-2,940.46	3,065.19	2,880.13	185.06	16.563				
10,100.00	7,065.00	11,732.59	7,058.00	88.46	105.27	89.87	3,388.54	-3,040.46	3,065.15	2,874.92	190.23	16.113				
10,200.00	7,065.00	11,832.59	7,058.00	91.07	107.75	89.87	3,387.66	-3,140.45	3,065.10	2,869.70	195.41	15.686				
10,300.00	7,065.00	11,932.59	7,058.00	93.68	110.24	89.87	3,386.78	-3,240.45	3,065.06	2,864.46	200.60	15.279				
10,400.00	7,065.00	12,032.59	7,058.00	96.30	112.74	89.87	3,385.90	-3,340.44	3,065.02	2,859.21	205.81	14.893				
10,500.00	7,065.00	12,132.59	7,058.00	98.93	115.26	89.87	3,385.02	-3,440.44	3,064.97	2,853.95	211.03	14.524				
10,600.00	7,065.00	12,232.59	7,058.00	101.56	117.78	89.87	3,384.14	-3,540.44	3,064.93	2,848.68	216.26	14.173				
10,700.00	7,065.00	12,332.59	7,058.00	104.20	120.32	89.87	3,383.26	-3,640.43	3,064.89	2,843.39	221.50	13.837				
10,800.00	7,065.00	12,432.59	7,058.00	106.83	122.86	89.87	3,382.38	-3,740.43	3,064.84	2,838.10	226.75	13.517				
10,900.00	7,065.00	12,532.59	7,058.00	109.48	125.41	89.87	3,381.49	-3,840.42	3,064.80	2,832.80	232.00	13.210				
11,000.00	7,065.00	12,632.59	7,058.00	112.13	127.97	89.87	3,380.61	-3,940.42	3,064.76	2,827.49	237.27	12.917				
11,100.00	7,065.00	12,732.59	7,058.00	114.78	130.54	89.87	3,379.73	-4,040.42	3,064.72	2,822.17	242.54	12.636				
11,200.00	7,065.00	12,832.59	7,058.00	117.43	133.11	89.87	3,378.85	-4,140.41	3,064.67	2,816.85	247.83	12.366				
11,300.00	7,065.00	12,932.59	7,058.00	120.09	135.69	89.87	3,377.97	-4,240.41	3,064.63	2,811.51	253.11	12.108				
11,400.00	7,065.00	13,032.59	7,058.00	122.75	138.28	89.87	3,377.09	-4,340.41	3,064.59	2,806.18	258.41	11.859				
11,500.00	7,065.00	13,132.59	7,058.00	125.41	140.87	89.87	3,376.21	-4,440.40	3,064.54	2,800.83	263.71	11.621				
11,600.00	7,065.00	13,232.59	7,058.00	128.08	143.46	89.87	3,375.33	-4,540.40	3,064.50	2,795.48	269.02	11.391				
11,700.00	7,065.00	13,332.59	7,058.00	130.74	146.06	89.87	3,374.44	-4,640.39	3,064.46	2,790.13	274.33	11.171				
11,800.00	7,065.00	13,432.59	7,058.00	133.41	148.67	89.87	3,373.56	-4,740.39	3,064.41	2,784.77	279.65	10.958				
11,900.00	7,065.00	13,532.59	7,058.00	136.09	151.28	89.87	3,372.68	-4,840.39	3,064.37	2,779.40	284.97	10.753				
12,000.00	7,065.00	13,632.59	7,058.00	138.76	153.89	89.87	3,371.80	-4,940.38	3,064.33	2,774.03	290.29	10.556				
12,100.00	7,065.00	13,732.59	7,058.00	141.44	156.51	89.87	3,370.92	-5,040.38	3,064.28	2,768.66	295.62	10.365				
12,200.00	7,065.00	13,832.59	7,058.00	144.11	159.13	89.87	3,370.04	-5,140.37	3,064.24	2,763.28	300.96	10.182				
12,300.00	7,065.00	13,932.59	7,058.00	146.79	161.75	89.87	3,369.16	-5,240.37	3,064.20	2,757.90	306.30	10.004				
12,400.00	7,065.00	14,032.59	7,058.00	149.47	164.38	89.87	3,368.28	-5,340.37	3,064.15	2,752.51	311.64	9.832				
12,500.00	7,065.00	14,132.59	7,058.00	152.15	167.01	89.87	3,367.39	-5,440.36	3,064.11	2,747.13	316.98	9.666				
12,600.00	7,065.00	14,232.59	7,058.00	154.84	169.64	89.87	3,366.51	-5,540.36	3,064.07	2,741.73	322.33	9.506				
12,700.00	7,065.00	14,332.59	7,058.00	157.52	172.28	89.87	3,365.63	-5,640.35	3,064.02	2,736.34	327.68	9.351				
12,800.00	7,065.00	14,432.59	7,058.00	160.21	174.92	89.87	3,364.75	-5,740.35	3,063.98	2,730.94	333.04	9.200				
12,900.00	7,065.00	14,532.59	7,058.00	162.89	177.56	89.87	3,363.87	-5,840.35	3,063.94	2,725.54	338.40	9.054				
13,000.00	7,065.00	14,632.59	7,058.00	165.58	180.20	89.87	3,362.99	-5,940.34	3,063.89	2,720.14	343.76	8.913				
13,100.00	7,065.00	14,732.59	7,058.00	168.27	182.85	89.87	3,362.11	-6,040.34	3,063.85	2,714.73	349.12	8.776				
13,200.00	7,065.00	14,832.59	7,058.00	170.96	185.50	89.87	3,361.23	-6,140.34	3,063.81	2,709.32	354.48	8.643				
13,300.00	7,065.00	14,932.59	7,058.00	173.65	188.15	89.87	3,360.34	-6,240.33	3,063.76	2,703.91	359.85	8.514				
13,400.00	7,065.00	15,032.59	7,058.00	176.35	190.80	89.87	3,359.46	-6,340.33	3,063.72	2,698.50	365.22	8.389				
13,500.00	7,065.00	15,132.59	7,058.00	179.04	193.45	89.87	3,358.58	-6,440.32	3,063.68	2,693.08	370.59	8.267				
13,600.00	7,065.00	15,232.59	7,058.00	181.73	196.11	89.87	3,357.70	-6,540.32	3,063.63	2,687.67	375.97	8.149				
13,700.00	7,065.00	15,332.59	7,058.00	184.43	198.77	89.87	3,356.82	-6,640.32	3,063.59	2,682.25	381.34	8.034				
13,800.00	7,065.00	15,432.59	7,058.00	187.12	201.42	89.87	3,355.94	-6,740.31	3,063.55	2,676.83	386.72	7.922				
13,900.00	7,065.00	15,532.59	7,058.00	189.82	204.09	89.87	3,355.06	-6,840.31	3,063.50	2,671.41	392.10	7.813				
14,000.00	7,065.00	15,632.59	7,058.00	192.52	206.75	89.87	3,354.18	-6,940.30	3,063.46	2,665.98	397.48	7.707				
14,100.00	7,065.00	15,732.59	7,058.00	195.21	209.41	89.87	3,353.29	-7,040.30	3,063.42	2,660.55	402.86	7.604				
14,200.00	7,065.00	15,832.59	7,058.00	197.91	212.08	89.87	3,352.41	-7,140.30	3,063.38	2,655.13	408.25	7.504				

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 11-10-9H
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 11-10-9H	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		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)				
14,300.00	7,065.00	15,932.59	7,058.00	200.61	214.74	89.87	3,351.53	-7,240.29	3,063.33	2,649.70	413.63	7.406		
14,400.00	7,065.00	16,032.59	7,058.00	203.31	217.41	89.87	3,350.65	-7,340.29	3,063.29	2,644.27	419.02	7.311		
14,500.00	7,065.00	16,132.59	7,058.00	206.01	220.08	89.87	3,349.77	-7,440.28	3,063.25	2,638.83	424.41	7.218		
14,600.00	7,065.00	16,232.59	7,058.00	208.71	222.75	89.87	3,348.89	-7,540.28	3,063.20	2,633.40	429.80	7.127		
14,700.00	7,065.00	16,332.58	7,058.00	211.41	225.42	89.87	3,348.01	-7,640.28	3,063.16	2,627.97	435.19	7.039		
14,800.00	7,065.00	16,432.58	7,058.00	214.12	228.10	89.87	3,347.13	-7,740.27	3,063.12	2,622.53	440.59	6.952		
14,900.00	7,065.00	16,532.58	7,058.00	216.82	230.77	89.87	3,346.24	-7,840.27	3,063.07	2,617.09	445.98	6.868		
15,000.00	7,065.00	16,632.58	7,058.00	219.52	233.45	89.87	3,345.36	-7,940.27	3,063.03	2,611.65	451.38	6.786		
15,100.00	7,065.00	16,732.58	7,058.00	222.22	236.12	89.87	3,344.48	-8,040.26	3,062.99	2,606.21	456.77	6.706		
15,200.00	7,065.00	16,832.58	7,058.00	224.93	238.80	89.87	3,343.60	-8,140.26	3,062.94	2,600.77	462.17	6.627		
15,300.00	7,065.00	16,932.58	7,058.00	227.63	241.48	89.87	3,342.72	-8,240.25	3,062.90	2,595.33	467.57	6.551		
15,379.93	7,065.00	17,011.19	7,058.00	229.79	243.58	89.87	3,342.03	-8,318.86	3,062.87	2,591.01	471.86	6.491		
15,400.00	7,065.00	17,011.19	7,058.00	230.34	243.58	89.87	3,342.03	-8,318.86	3,062.93	2,590.34	472.59	6.481		
15,495.74	7,065.00	17,011.19	7,058.00	232.93	243.58	89.87	3,342.03	-8,318.86	3,065.05	2,589.28	475.78	6.442		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		Distance		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)			
0.00	0.00	0.00	0.00	0.00	0.00	-129.78	-25.50	-30.63	39.85					
100.00	100.00	100.00	100.00	0.14	0.14	-129.78	-25.50	-30.63	39.85	39.57	0.29	138.967		
200.00	200.00	200.00	200.00	0.50	0.50	-129.78	-25.50	-30.63	39.85	38.85	1.00	39.705		
300.00	300.00	300.00	300.00	0.86	0.86	-129.78	-25.50	-30.63	39.85	38.13	1.72	23.161		
400.00	400.00	400.00	400.00	1.22	1.22	-129.78	-25.50	-30.63	39.85	37.42	2.44	16.349	CC, ES	
500.00	499.98	499.98	499.98	1.58	1.58	-168.61	-25.50	-30.63	41.56	38.41	3.15	13.180		
594.97	594.82	594.82	594.82	1.92	1.92	-169.78	-25.50	-30.63	46.36	42.53	3.84	12.088		
600.00	599.84	599.84	599.84	1.94	1.94	-169.86	-25.50	-30.63	46.70	42.83	3.87	12.054		
700.00	699.61	699.61	699.61	2.30	2.29	-171.14	-25.50	-30.63	53.41	48.82	4.59	11.642		
800.00	799.37	799.37	799.37	2.66	2.65	-172.14	-25.50	-30.63	60.14	54.83	5.30	11.342		
900.00	899.14	899.14	899.14	3.03	3.01	-172.94	-25.50	-30.63	66.88	60.86	6.02	11.114		
1,000.00	998.91	998.91	998.91	3.40	3.37	-173.59	-25.50	-30.63	73.63	66.90	6.73	10.935		
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	-174.13	-25.50	-30.63	80.39	72.94	7.45	10.791		
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	-174.59	-25.50	-30.63	87.16	78.99	8.17	10.672		
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	-174.98	-25.50	-30.63	93.93	85.05	8.88	10.573		
1,400.00	1,397.99	1,397.99	1,397.99	4.88	4.80	-175.32	-25.50	-30.63	100.71	91.11	9.60	10.488		
1,500.00	1,497.75	1,497.75	1,497.75	5.26	5.15	-175.61	-25.50	-30.63	107.49	97.17	10.32	10.416		
1,600.00	1,597.52	1,597.52	1,597.52	5.63	5.51	-175.87	-25.50	-30.63	114.27	103.23	11.04	10.353		
1,700.00	1,697.29	1,697.29	1,697.29	6.00	5.87	-176.10	-25.50	-30.63	121.06	109.30	11.76	10.298		
1,800.00	1,797.06	1,797.06	1,797.06	6.37	6.23	-176.31	-25.50	-30.63	127.84	115.37	12.47	10.249		
1,900.00	1,896.83	1,896.83	1,896.83	6.75	6.58	-176.50	-25.50	-30.63	134.63	121.44	13.19	10.206		
2,000.00	1,996.60	1,996.60	1,996.60	7.12	6.94	-176.67	-25.50	-30.63	141.42	127.51	13.91	10.167		
2,100.00	2,096.37	2,101.08	2,101.05	7.49	7.32	-176.53	-23.79	-30.11	146.66	132.02	14.65	10.013		
2,200.00	2,196.13	2,205.93	2,205.75	7.86	7.69	-175.79	-18.41	-28.49	148.61	133.24	15.37	9.667		
2,300.00	2,295.90	2,310.72	2,310.11	8.24	8.07	-174.39	-9.38	-25.76	147.31	131.23	16.09	9.158		
2,400.00	2,395.67	2,415.16	2,413.71	8.61	8.44	-172.25	3.25	-21.95	142.90	126.11	16.79	8.513		
2,500.00	2,495.44	2,518.98	2,516.15	8.98	8.82	-169.16	19.38	-17.07	135.59	118.12	17.48	7.758		
2,600.00	2,595.21	2,621.92	2,617.05	9.36	9.21	-164.75	38.87	-11.19	125.79	107.61	18.18	6.921		
2,700.00	2,694.98	2,723.73	2,716.06	9.73	9.61	-158.47	61.55	-4.34	114.15	95.25	18.90	6.039		
2,800.00	2,794.75	2,824.17	2,812.85	10.10	10.03	-149.44	87.21	3.41	101.88	82.17	19.70	5.171		
2,900.00	2,894.51	2,923.03	2,907.14	10.48	10.46	-136.63	115.62	11.99	91.11	70.48	20.63	4.416		
3,000.00	2,994.28	3,020.11	2,998.69	10.85	10.91	-119.65	146.54	21.33	85.36	63.70	21.66	3.941		
3,018.70	3,012.94	3,038.06	3,015.49	10.92	11.00	-116.12	152.58	23.16	85.19	63.35	21.84	3.900 SF		
3,100.00	3,094.05	3,115.25	3,087.30	11.22	11.38	-100.49	179.70	31.35	88.72	66.20	22.52	3.939		
3,200.00	3,193.82	3,208.31	3,172.80	11.60	11.87	-83.09	214.84	41.96	103.11	80.10	23.01	4.481		
3,300.00	3,293.59	3,300.00	3,255.84	11.97	12.39	-69.62	252.05	53.20	127.18	103.88	23.30	5.459		
3,400.00	3,393.36	3,387.68	3,334.05	12.35	12.92	-60.18	290.00	64.66	158.53	135.06	23.47	6.754		
3,500.00	3,493.12	3,473.84	3,409.68	12.72	13.47	-53.40	329.49	76.59	195.32	171.62	23.70	8.241		
3,600.00	3,592.89	3,557.55	3,481.94	13.09	14.04	-48.48	369.94	88.81	236.40	212.44	23.96	9.866		
3,700.00	3,692.66	3,638.79	3,550.86	13.47	14.62	-44.82	411.11	101.24	281.06	256.83	24.23	11.597		
3,800.00	3,792.43	3,717.53	3,616.48	13.84	15.21	-42.02	452.78	113.83	328.84	304.32	24.52	13.413		
3,900.00	3,892.20	3,793.79	3,678.85	14.21	15.82	-39.82	494.77	126.51	379.42	354.61	24.80	15.298		
4,000.00	3,991.97	3,872.14	3,741.84	14.59	16.47	-37.97	539.38	139.98	432.35	407.12	25.23	17.138		
4,100.00	4,091.74	3,955.89	3,808.97	14.96	17.18	-36.39	587.32	154.46	485.93	460.07	25.86	18.792		
4,200.00	4,191.50	4,039.64	3,876.09	15.33	17.91	-35.12	635.26	168.94	539.72	513.21	26.51	20.361		
4,300.00	4,291.27	4,123.39	3,943.22	15.71	18.66	-34.08	683.20	183.42	593.67	566.50	27.17	21.849		
4,400.00	4,391.04	4,207.14	4,010.34	16.08	19.41	-33.21	731.15	197.90	647.74	619.89	27.85	23.260		
4,500.00	4,490.81	4,290.88	4,077.46	16.46	20.18	-32.47	779.09	212.38	701.89	673.36	28.53	24.598		
4,600.00	4,590.58	4,374.63	4,144.59	16.83	20.96	-31.84	827.03	226.86	756.12	726.89	29.23	25.868		
4,700.00	4,690.35	4,458.38	4,211.71	17.20	21.75	-31.30	874.97	241.34	810.40	780.47	29.93	27.075		
4,800.00	4,790.12	4,542.13	4,278.84	17.58	22.54	-30.82	922.91	255.82	864.73	834.09	30.64	28.223		
4,900.00	4,889.88	4,625.88	4,345.96	17.95	23.34	-30.40	970.85	270.30	919.10	887.75	31.35	29.315		

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 11-10-9H
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 11-10-9H	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	4,989.65	4,709.62	4,413.09	18.32	24.15	-30.02	1,018.79	284.78	973.50	941.43	32.07	30.355		
5,100.00	5,089.42	4,793.37	4,480.21	18.70	24.97	-29.68	1,066.73	299.26	1,027.92	995.13	32.79	31.345		
5,200.00	5,189.19	4,877.12	4,547.34	19.07	25.78	-29.38	1,114.67	313.74	1,082.37	1,048.85	33.52	32.290		
5,300.00	5,288.96	4,960.87	4,614.46	19.45	26.61	-29.11	1,162.61	328.22	1,136.83	1,102.58	34.25	33.191		
5,400.00	5,388.73	5,044.62	4,681.59	19.82	27.44	-28.86	1,210.55	342.70	1,191.32	1,156.33	34.98	34.052		
5,500.00	5,488.49	5,128.36	4,748.71	20.19	28.27	-28.63	1,258.49	357.18	1,245.81	1,210.09	35.72	34.876		
5,600.00	5,588.26	5,212.11	4,815.84	20.57	29.10	-28.43	1,306.44	371.66	1,300.32	1,263.86	36.46	35.663		
5,700.00	5,688.03	5,295.86	4,882.96	20.94	29.94	-28.24	1,354.38	386.14	1,354.84	1,317.64	37.20	36.417		
5,800.00	5,787.80	5,379.61	4,950.09	21.31	30.78	-28.06	1,402.32	400.62	1,409.37	1,371.42	37.95	37.138		
5,900.00	5,887.57	5,463.36	5,017.21	21.69	31.63	-27.90	1,450.26	415.10	1,463.91	1,425.22	38.70	37.830		
6,000.00	5,987.34	5,547.10	5,084.34	22.06	32.47	-27.75	1,498.20	429.58	1,518.46	1,479.01	39.45	38.494		
6,100.00	6,087.11	5,630.85	5,151.46	22.44	33.32	-27.60	1,546.14	444.06	1,573.01	1,532.81	40.20	39.131		
6,200.00	6,186.87	5,714.60	5,218.59	22.81	34.17	-27.47	1,594.08	458.54	1,627.57	1,586.62	40.95	39.743		
6,300.00	6,286.64	5,798.35	5,285.71	23.18	35.03	-27.35	1,642.02	473.02	1,682.14	1,640.43	41.71	40.331		
6,400.00	6,386.41	5,882.10	5,352.84	23.56	35.88	-27.24	1,689.96	487.50	1,736.71	1,694.24	42.47	40.896		
6,482.24	6,468.46	5,950.97	5,408.04	23.86	36.59	-27.15	1,729.39	499.40	1,781.59	1,738.50	43.09	41.345		
6,500.00	6,486.19	5,965.80	5,419.93	23.93	36.74	-1.87	1,737.88	501.97	1,791.33	1,748.10	43.22	41.443		
6,550.00	6,536.08	6,007.02	5,452.96	24.10	37.16	62.27	1,761.47	509.10	1,819.17	1,775.59	43.58	41.741		
6,600.00	6,585.64	6,047.18	5,485.16	24.26	37.57	76.16	1,784.47	516.04	1,847.50	1,803.59	43.92	42.068		
6,650.00	6,634.49	6,086.00	5,516.27	24.40	37.97	79.15	1,806.69	522.75	1,876.17	1,831.95	44.23	42.420		
6,700.00	6,682.26	6,123.17	5,546.06	24.53	38.35	79.18	1,827.96	529.18	1,905.04	1,860.52	44.52	42.790		
6,750.00	6,728.60	6,158.41	5,574.30	24.64	38.71	78.05	1,848.14	535.27	1,933.99	1,889.19	44.80	43.172		
6,800.00	6,773.14	6,191.45	5,600.79	24.75	39.05	76.38	1,867.05	540.98	1,962.91	1,917.84	45.06	43.561		
6,850.00	6,815.54	6,222.04	5,625.30	24.84	39.37	74.43	1,884.56	546.27	1,991.69	1,946.37	45.32	43.947		
6,900.00	6,855.49	6,249.95	5,647.67	24.92	39.66	72.32	1,900.54	551.10	2,020.26	1,974.68	45.58	44.325		
6,950.00	6,892.68	6,274.96	5,667.72	24.99	39.91	70.12	1,914.85	555.42	2,048.52	2,002.67	45.84	44.684		
7,000.00	6,926.83	6,296.89	5,685.29	25.07	40.14	67.87	1,927.41	559.21	2,076.37	2,030.25	46.12	45.018		
7,050.00	6,957.68	6,315.56	5,700.26	25.19	40.33	65.60	1,938.10	562.44	2,103.73	2,057.31	46.42	45.316		
7,100.00	6,984.98	6,330.84	5,712.51	25.42	40.49	63.32	1,946.84	565.08	2,130.50	2,083.75	46.75	45.574		
7,150.00	7,008.54	6,342.61	5,721.94	25.72	40.61	61.05	1,953.58	567.12	2,156.57	2,109.47	47.10	45.785		
7,200.00	7,028.18	6,350.78	5,728.49	26.06	40.70	58.81	1,958.26	568.53	2,181.84	2,134.35	47.49	45.945		
7,250.00	7,043.74	6,355.28	5,732.10	26.46	40.74	56.60	1,960.84	569.31	2,206.17	2,158.26	47.90	46.055		
7,300.00	7,055.11	6,356.09	5,732.75	26.91	40.75	54.44	1,961.30	569.45	2,229.44	2,181.09	48.34	46.116		
7,350.00	7,062.20	6,353.20	5,730.43	27.40	40.72	52.35	1,959.64	568.95	2,251.51	2,202.70	48.81	46.130		
7,400.00	7,064.96	6,346.63	5,725.16	27.94	40.65	50.33	1,955.88	567.81	2,272.24	2,222.95	49.29	46.102		
7,406.67	7,065.00	6,345.47	5,724.24	28.01	40.64	50.07	1,955.22	567.61	2,274.90	2,225.55	49.35	46.097		
7,500.00	7,065.00	6,328.89	5,710.95	29.15	40.47	49.62	1,945.73	564.75	2,313.40	2,263.08	50.32	45.976		
7,600.00	7,065.00	6,311.12	5,696.70	30.55	40.29	49.14	1,935.56	561.67	2,357.93	2,306.48	51.45	45.832		
7,700.00	7,065.00	6,293.35	5,682.46	32.12	40.10	48.67	1,925.38	558.60	2,405.67	2,353.03	52.64	45.704		
7,800.00	7,065.00	6,275.58	5,668.22	33.83	39.92	48.19	1,915.21	555.53	2,456.42	2,402.56	53.85	45.614		
7,900.00	7,065.00	6,257.82	5,653.98	35.67	39.74	47.72	1,905.04	552.46	2,510.00	2,454.93	55.07	45.578		
8,000.00	7,065.00	6,240.05	5,639.74	37.61	39.55	47.24	1,894.87	549.39	2,566.24	2,509.97	56.27	45.604		
8,100.00	7,065.00	6,222.28	5,625.50	39.65	39.37	46.77	1,884.70	546.31	2,624.97	2,567.53	57.44	45.698		
8,200.00	7,065.00	9,783.65	7,162.00	41.76	61.29	92.12	2,965.20	-1,135.53	2,627.63	2,531.58	96.05	27.356		
8,300.00	7,065.00	9,883.65	7,162.00	43.94	62.81	92.12	2,964.36	-1,235.52	2,627.63	2,527.18	100.46	26.157		
8,400.00	7,065.00	9,983.65	7,162.00	46.18	64.52	92.12	2,963.52	-1,335.52	2,627.63	2,522.67	104.96	25.035		
8,500.00	7,065.00	10,083.65	7,162.00	48.46	66.38	92.12	2,962.68	-1,435.52	2,627.63	2,518.09	109.55	23.986		
8,600.00	7,065.00	10,183.65	7,162.00	50.79	68.36	92.12	2,961.84	-1,535.51	2,627.63	2,513.42	114.21	23.007		
8,700.00	7,065.00	10,283.65	7,162.00	53.16	70.44	92.12	2,961.00	-1,635.51	2,627.63	2,508.69	118.94	22.092		
8,800.00	7,065.00	10,383.65	7,162.00	55.56	72.59	92.12	2,960.17	-1,735.51	2,627.63	2,503.90	123.73	21.237		
8,900.00	7,065.00	10,483.65	7,162.00	57.99	74.80	92.12	2,959.33	-1,835.50	2,627.63	2,499.06	128.57	20.437		
9,000.00	7,065.00	10,583.65	7,162.00	60.44	77.06	92.12	2,958.49	-1,935.50	2,627.63	2,494.17	133.46	19.688		

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 11-10-9H
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 11-10-9H	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 Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	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)			Warning	
9,100.00	7,065.00	10,683.65	7,162.00	62.91	79.37	92.12	2,957.65	-2,035.50	2,627.63	2,489.24	138.39	18.987		
9,200.00	7,065.00	10,783.65	7,162.00	65.41	81.70	92.12	2,956.81	-2,135.49	2,627.63	2,484.27	143.36	18.329		
9,300.00	7,065.00	10,883.65	7,162.00	67.92	84.07	92.12	2,955.97	-2,235.49	2,627.63	2,479.27	148.36	17.712		
9,400.00	7,065.00	10,983.65	7,162.00	70.45	86.47	92.12	2,955.13	-2,335.49	2,627.63	2,474.24	153.39	17.131		
9,500.00	7,065.00	11,083.65	7,162.00	72.99	88.89	92.12	2,954.30	-2,435.48	2,627.63	2,469.18	158.44	16.584		
9,600.00	7,065.00	11,183.65	7,162.00	75.54	91.33	92.12	2,953.46	-2,535.48	2,627.63	2,464.10	163.53	16.069		
9,700.00	7,065.00	11,283.65	7,162.00	78.11	93.78	92.12	2,952.62	-2,635.47	2,627.63	2,459.00	168.63	15.582		
9,800.00	7,065.00	11,383.65	7,162.00	80.68	96.26	92.12	2,951.78	-2,735.47	2,627.63	2,453.87	173.75	15.123		
9,900.00	7,065.00	11,483.65	7,162.00	83.27	98.74	92.12	2,950.94	-2,835.47	2,627.63	2,448.73	178.90	14.688		
10,000.00	7,065.00	11,583.65	7,162.00	85.86	101.25	92.12	2,950.10	-2,935.46	2,627.63	2,443.57	184.06	14.276		
10,100.00	7,065.00	11,683.65	7,162.00	88.46	103.76	92.12	2,949.27	-3,035.46	2,627.63	2,438.39	189.23	13.886		
10,200.00	7,065.00	11,783.65	7,162.00	91.07	106.28	92.12	2,948.43	-3,135.46	2,627.63	2,433.20	194.42	13.515		
10,300.00	7,065.00	11,883.65	7,162.00	93.68	108.82	92.12	2,947.59	-3,235.45	2,627.63	2,428.00	199.63	13.163		
10,400.00	7,065.00	11,983.65	7,162.00	96.30	111.36	92.12	2,946.75	-3,335.45	2,627.62	2,422.78	204.84	12.828		
10,500.00	7,065.00	12,083.65	7,162.00	98.93	113.91	92.12	2,945.91	-3,435.45	2,627.62	2,417.56	210.07	12.508		
10,600.00	7,065.00	12,183.65	7,162.00	101.56	116.47	92.12	2,945.07	-3,535.44	2,627.62	2,412.32	215.31	12.204		
10,700.00	7,065.00	12,283.65	7,162.00	104.20	119.04	92.12	2,944.24	-3,635.44	2,627.62	2,407.07	220.55	11.914		
10,800.00	7,065.00	12,383.65	7,162.00	106.83	121.62	92.12	2,943.40	-3,735.44	2,627.62	2,401.81	225.81	11.636		
10,900.00	7,065.00	12,483.65	7,162.00	109.48	124.20	92.12	2,942.56	-3,835.43	2,627.62	2,396.55	231.07	11.371		
11,000.00	7,065.00	12,583.65	7,162.00	112.13	126.79	92.12	2,941.72	-3,935.43	2,627.62	2,391.28	236.35	11.118		
11,100.00	7,065.00	12,683.65	7,162.00	114.78	129.38	92.12	2,940.88	-4,035.43	2,627.62	2,386.00	241.63	10.875		
11,200.00	7,065.00	12,783.65	7,162.00	117.43	131.98	92.12	2,940.04	-4,135.42	2,627.62	2,380.71	246.91	10.642		
11,300.00	7,065.00	12,883.65	7,162.00	120.09	134.58	92.12	2,939.20	-4,235.42	2,627.62	2,375.41	252.21	10.419		
11,400.00	7,065.00	12,983.65	7,162.00	122.75	137.19	92.12	2,938.37	-4,335.42	2,627.62	2,370.11	257.51	10.204		
11,500.00	7,065.00	13,083.65	7,162.00	125.41	139.80	92.12	2,937.53	-4,435.41	2,627.62	2,364.81	262.81	9.998		
11,600.00	7,065.00	13,183.65	7,162.00	128.08	142.41	92.12	2,936.69	-4,535.41	2,627.62	2,359.50	268.12	9.800		
11,700.00	7,065.00	13,283.65	7,162.00	130.74	145.03	92.12	2,935.85	-4,635.40	2,627.62	2,354.18	273.44	9.610		
11,800.00	7,065.00	13,383.65	7,162.00	133.41	147.66	92.12	2,935.01	-4,735.40	2,627.62	2,348.86	278.76	9.426		
11,900.00	7,065.00	13,483.65	7,162.00	136.09	150.29	92.12	2,934.17	-4,835.40	2,627.62	2,343.54	284.08	9.249		
12,000.00	7,065.00	13,583.65	7,162.00	138.76	152.92	92.12	2,933.34	-4,935.39	2,627.62	2,338.21	289.41	9.079		
12,100.00	7,065.00	13,683.65	7,162.00	141.44	155.55	92.12	2,932.50	-5,035.39	2,627.62	2,332.87	294.74	8.915		
12,200.00	7,065.00	13,783.65	7,162.00	144.11	158.19	92.12	2,931.66	-5,135.39	2,627.62	2,327.54	300.08	8.756		
12,300.00	7,065.00	13,883.65	7,162.00	146.79	160.82	92.12	2,930.82	-5,235.38	2,627.62	2,322.19	305.42	8.603		
12,400.00	7,065.00	13,983.65	7,162.00	149.47	163.47	92.12	2,929.98	-5,335.38	2,627.62	2,316.85	310.77	8.455		
12,500.00	7,065.00	14,083.65	7,162.00	152.15	166.11	92.12	2,929.14	-5,435.38	2,627.62	2,311.50	316.11	8.312		
12,600.00	7,065.00	14,183.65	7,162.00	154.84	168.76	92.12	2,928.31	-5,535.37	2,627.62	2,306.15	321.46	8.174		
12,700.00	7,065.00	14,283.65	7,162.00	157.52	171.41	92.12	2,927.47	-5,635.37	2,627.61	2,300.80	326.82	8.040		
12,800.00	7,065.00	14,383.65	7,162.00	160.21	174.06	92.12	2,926.63	-5,735.37	2,627.61	2,295.44	332.17	7.910		
12,900.00	7,065.00	14,483.65	7,162.00	162.89	176.71	92.12	2,925.79	-5,835.36	2,627.61	2,290.08	337.53	7.785		
13,000.00	7,065.00	14,583.65	7,162.00	165.58	179.37	92.12	2,924.95	-5,935.36	2,627.61	2,284.72	342.89	7.663		
13,100.00	7,065.00	14,683.65	7,162.00	168.27	182.02	92.12	2,924.11	-6,035.36	2,627.61	2,279.36	348.26	7.545		
13,200.00	7,065.00	14,783.65	7,162.00	170.96	184.68	92.12	2,923.27	-6,135.35	2,627.61	2,273.99	353.62	7.431		
13,300.00	7,065.00	14,883.65	7,162.00	173.65	187.34	92.12	2,922.44	-6,235.35	2,627.61	2,268.62	358.99	7.319		
13,400.00	7,065.00	14,983.65	7,162.00	176.35	190.01	92.12	2,921.60	-6,335.34	2,627.61	2,263.25	364.36	7.212		
13,500.00	7,065.00	15,083.65	7,162.00	179.04	192.67	92.12	2,920.76	-6,435.34	2,627.61	2,257.88	369.73	7.107		
13,600.00	7,065.00	15,183.65	7,162.00	181.73	195.34	92.12	2,919.92	-6,535.34	2,627.61	2,252.50	375.11	7.005		
13,700.00	7,065.00	15,283.65	7,162.00	184.43	198.00	92.12	2,919.08	-6,635.33	2,627.61	2,247.13	380.48	6.906		
13,800.00	7,065.00	15,383.65	7,162.00	187.12	200.67	92.12	2,918.24	-6,735.33	2,627.61	2,241.75	385.86	6.810		
13,900.00	7,065.00	15,483.65	7,162.00	189.82	203.34	92.12	2,917.41	-6,835.33	2,627.61	2,236.37	391.24	6.716		
14,000.00	7,065.00	15,583.65	7,162.00	192.52	206.01	92.12	2,916.57	-6,935.32	2,627.61	2,230.99	396.62	6.625		
14,100.00	7,065.00	15,683.65	7,162.00	195.21	208.69	92.12	2,915.73	-7,035.32	2,627.61	2,225.60	402.00	6.536		
14,200.00	7,065.00	15,783.65	7,162.00	197.91	211.36	92.12	2,914.89	-7,135.32	2,627.61	2,220.22	407.39	6.450		

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 11-10-9H
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 11-10-9H	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		Highside		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			
14,300.00	7,065.00	15,883.65	7,162.00	200.61	214.04	92.12	2,914.05	-7,235.31	2,627.61	2,214.83	412.77	6.366			
14,400.00	7,065.00	15,983.65	7,162.00	203.31	216.71	92.12	2,913.21	-7,335.31	2,627.61	2,209.45	418.16	6.284			
14,500.00	7,065.00	16,083.65	7,162.00	206.01	219.39	92.12	2,912.38	-7,435.31	2,627.61	2,204.06	423.55	6.204			
14,600.00	7,065.00	16,183.65	7,162.00	208.71	222.07	92.12	2,911.54	-7,535.30	2,627.61	2,198.67	428.94	6.126			
14,700.00	7,065.00	16,283.65	7,162.00	211.41	224.75	92.12	2,910.70	-7,635.30	2,627.61	2,193.28	434.33	6.050			
14,800.00	7,065.00	16,383.65	7,162.00	214.12	227.43	92.12	2,909.86	-7,735.30	2,627.61	2,187.88	439.72	5.976			
14,900.00	7,065.00	16,483.65	7,162.00	216.82	230.11	92.12	2,909.02	-7,835.29	2,627.61	2,182.49	445.12	5.903			
15,000.00	7,065.00	16,583.65	7,162.00	219.52	232.79	92.12	2,908.18	-7,935.29	2,627.61	2,177.09	450.51	5.832			
15,100.00	7,065.00	16,683.65	7,162.00	222.22	235.47	92.12	2,907.34	-8,035.29	2,627.60	2,171.70	455.91	5.763			
15,200.00	7,065.00	16,783.65	7,162.00	224.93	238.16	92.12	2,906.51	-8,135.28	2,627.60	2,166.30	461.30	5.696			
15,300.00	7,065.00	16,883.65	7,162.00	227.63	240.84	92.12	2,905.67	-8,235.28	2,627.60	2,160.90	466.70	5.630			
15,394.88	7,065.00	16,978.51	7,162.00	230.20	243.39	92.12	2,904.87	-8,330.14	2,627.60	2,155.78	471.82	5.569			
15,400.00	7,065.00	16,978.51	7,162.00	230.34	243.39	92.12	2,904.87	-8,330.14	2,627.61	2,155.60	472.01	5.567			
15,495.74	7,065.00	16,978.51	7,162.00	232.93	243.39	92.12	2,904.87	-8,330.14	2,629.54	2,154.34	475.20	5.534			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		Distance				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	-142.61	-40.07	-30.63	50.44							
100.00	100.00	100.00	100.00	0.14	0.14	-142.61	-40.07	-30.63	50.44	50.15	0.29	175.878				
200.00	200.00	200.00	200.00	0.50	0.50	-142.61	-40.07	-30.63	50.44	49.43	1.00	50.251				
300.00	300.00	300.00	300.00	0.86	0.86	-142.61	-40.07	-30.63	50.44	48.72	1.72	29.313				
400.00	400.00	400.00	400.00	1.22	1.22	-142.61	-40.07	-30.63	50.44	48.00	2.44	20.692	CC, ES			
500.00	499.98	499.98	499.98	1.58	1.58	179.08	-40.07	-30.63	52.18	49.03	3.15	16.547				
594.97	594.82	594.82	594.82	1.92	1.92	179.16	-40.07	-30.63	57.07	53.23	3.84	14.878				
600.00	599.84	599.84	599.84	1.94	1.94	179.16	-40.07	-30.63	57.41	53.54	3.87	14.817				
700.00	699.61	699.61	699.61	2.30	2.29	179.25	-40.07	-30.63	64.21	59.62	4.59	13.995				
800.00	799.37	799.37	799.37	2.66	2.65	179.32	-40.07	-30.63	71.01	65.71	5.30	13.391				
900.00	899.14	899.14	899.14	3.03	3.01	179.38	-40.07	-30.63	77.81	71.79	6.02	12.929				
1,000.00	998.91	998.91	998.91	3.40	3.37	179.43	-40.07	-30.63	84.61	77.88	6.73	12.564				
1,100.00	1,098.68	1,098.68	1,098.68	3.77	3.72	179.48	-40.07	-30.63	91.41	83.96	7.45	12.268				
1,200.00	1,198.45	1,198.45	1,198.45	4.14	4.08	179.51	-40.07	-30.63	98.21	90.04	8.17	12.023				
1,300.00	1,298.22	1,298.22	1,298.22	4.51	4.44	179.54	-40.07	-30.63	105.01	96.13	8.89	11.818				
1,400.00	1,397.99	1,397.99	1,397.99	4.88	4.80	179.57	-40.07	-30.63	111.81	102.21	9.60	11.643				
1,500.00	1,497.75	1,497.75	1,497.75	5.26	5.15	179.60	-40.07	-30.63	118.61	108.29	10.32	11.492				
1,600.00	1,597.52	1,597.52	1,597.52	5.63	5.51	179.62	-40.07	-30.63	125.41	114.37	11.04	11.361				
1,700.00	1,697.29	1,697.29	1,697.29	6.00	5.87	179.64	-40.07	-30.63	132.21	120.46	11.76	11.246				
1,800.00	1,797.06	1,797.06	1,797.06	6.37	6.23	179.65	-40.07	-30.63	139.01	126.54	12.47	11.144				
1,900.00	1,896.83	1,896.83	1,896.83	6.75	6.58	179.67	-40.07	-30.63	145.81	132.62	13.19	11.053				
2,000.00	1,996.60	1,996.60	1,996.60	7.12	6.94	179.69	-40.07	-30.63	152.61	138.70	13.91	10.971				
2,100.00	2,096.37	2,096.37	2,096.37	7.49	7.30	179.70	-40.07	-30.63	159.41	144.78	14.63	10.897				
2,200.00	2,196.13	2,201.68	2,201.66	7.86	7.68	179.91	-38.37	-30.03	164.60	149.23	15.37	10.709				
2,300.00	2,295.90	2,307.42	2,307.24	8.24	8.06	-179.44	-32.99	-28.15	166.31	150.21	16.10	10.332				
2,400.00	2,395.67	2,413.10	2,412.48	8.61	8.43	-178.35	-23.94	-24.98	164.58	147.78	16.81	9.792				
2,500.00	2,495.44	2,518.43	2,516.94	8.98	8.81	-176.71	-11.28	-20.55	159.50	142.00	17.50	9.114				
2,600.00	2,595.21	2,623.12	2,620.22	9.36	9.20	-174.39	4.88	-14.90	151.20	133.02	18.18	8.317				
2,700.00	2,694.98	2,726.92	2,721.93	9.73	9.59	-171.10	24.42	-8.06	139.94	121.09	18.85	7.423				
2,800.00	2,794.75	2,829.56	2,821.70	10.10	9.99	-166.40	47.14	-0.11	126.13	106.60	19.53	6.458				
2,900.00	2,894.51	2,930.80	2,919.21	10.48	10.41	-159.50	72.84	8.89	110.54	90.28	20.26	5.456				
3,000.00	2,994.28	3,030.43	3,014.16	10.85	10.84	-149.08	101.29	18.85	94.62	73.51	21.10	4.483				
3,100.00	3,094.05	3,128.24	3,106.31	11.22	11.30	-133.40	132.24	29.68	81.31	59.15	22.16	3.669				
3,197.02	3,190.85	3,221.25	3,192.84	11.59	11.75	-112.76	164.40	40.93	75.78	52.50	23.27	3.256				
3,200.00	3,193.82	3,224.07	3,195.45	11.60	11.77	-112.07	165.42	41.29	75.78	52.48	23.30	3.252 SF				
3,300.00	3,293.59	3,317.77	3,281.43	11.97	12.26	-89.44	200.57	53.59	83.28	59.29	23.99	3.472				
3,400.00	3,393.36	3,409.21	3,364.11	12.35	12.78	-71.42	237.41	66.49	103.96	79.80	24.16	4.302				
3,500.00	3,493.12	3,500.00	3,444.94	12.72	13.32	-58.92	276.43	80.14	134.20	109.87	24.33	5.516				
3,600.00	3,592.89	3,584.95	3,519.34	13.09	13.86	-50.92	315.12	93.68	170.84	146.46	24.38	7.007				
3,700.00	3,692.66	3,669.12	3,591.84	13.47	14.44	-45.32	355.49	107.81	212.17	187.59	24.58	8.631				
3,800.00	3,792.43	3,750.78	3,660.93	13.84	15.02	-41.32	396.56	122.18	257.23	232.41	24.82	10.363				
3,900.00	3,892.20	3,829.91	3,726.68	14.21	15.62	-38.37	438.11	136.73	305.45	280.37	25.08	12.179				
4,000.00	3,991.97	3,915.69	3,797.29	14.59	16.29	-35.93	484.08	152.82	355.37	329.70	25.67	13.842				
4,100.00	4,091.74	4,001.47	3,867.90	14.96	16.98	-34.09	530.05	168.91	405.67	379.37	26.30	15.425				
4,200.00	4,191.50	4,087.24	3,938.51	15.33	17.69	-32.65	576.02	184.99	456.21	429.25	26.95	16.928				
4,300.00	4,291.27	4,173.02	4,009.12	15.71	18.42	-31.49	621.99	201.08	506.92	479.30	27.62	18.355				
4,400.00	4,391.04	4,258.80	4,079.73	16.08	19.16	-30.55	667.96	217.17	557.76	529.46	28.30	19.710				
4,500.00	4,490.81	4,344.58	4,150.34	16.46	19.90	-29.76	713.92	233.26	608.69	579.70	28.99	20.998				
4,600.00	4,590.58	4,430.35	4,220.95	16.83	20.66	-29.09	759.89	249.35	659.70	630.01	29.69	22.222				
4,700.00	4,690.35	4,516.13	4,291.56	17.20	21.43	-28.52	805.86	265.43	710.76	680.37	30.39	23.386				
4,800.00	4,790.12	4,601.91	4,362.17	17.58	22.20	-28.02	851.83	281.52	761.87	730.77	31.10	24.494				
4,900.00	4,889.88	4,687.69	4,432.78	17.95	22.98	-27.59	897.80	297.61	813.02	781.20	31.82	25.549				

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 11-10-9H
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 11-10-9H	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	4,989.65	4,773.46	4,503.39	18.32	23.77	-27.21	943.77	313.70	864.19	831.65	32.54	26.555			
5,100.00	5,089.42	4,859.24	4,574.00	18.70	24.57	-26.87	989.73	329.79	915.40	882.13	33.27	27.514			
5,200.00	5,189.19	4,945.02	4,644.62	19.07	25.37	-26.56	1,035.70	345.88	966.62	932.62	34.00	28.429			
5,300.00	5,288.96	5,030.79	4,715.23	19.45	26.17	-26.29	1,081.67	361.96	1,017.86	983.13	34.73	29.304			
5,400.00	5,388.73	5,116.57	4,785.84	19.82	26.98	-26.04	1,127.64	378.05	1,069.12	1,033.65	35.47	30.140			
5,500.00	5,488.49	5,202.35	4,856.45	20.19	27.79	-25.82	1,173.61	394.14	1,120.39	1,084.18	36.21	30.939			
5,600.00	5,588.26	5,288.13	4,927.06	20.57	28.61	-25.61	1,219.58	410.23	1,171.67	1,134.72	36.96	31.705			
5,700.00	5,688.03	5,373.90	4,997.67	20.94	29.43	-25.42	1,265.54	426.32	1,222.96	1,185.26	37.70	32.438			
5,800.00	5,787.80	5,459.68	5,068.28	21.31	30.25	-25.25	1,311.51	442.41	1,274.26	1,235.81	38.45	33.141			
5,900.00	5,887.57	5,545.46	5,138.89	21.69	31.08	-25.09	1,357.48	458.49	1,325.57	1,286.37	39.20	33.816			
6,000.00	5,987.34	5,631.24	5,209.50	22.06	31.91	-24.94	1,403.45	474.58	1,376.89	1,336.94	39.95	34.463			
6,100.00	6,087.11	5,717.01	5,280.11	22.44	32.74	-24.81	1,449.42	490.67	1,428.21	1,387.50	40.71	35.085			
6,200.00	6,186.87	5,802.79	5,350.72	22.81	33.57	-24.68	1,495.39	506.76	1,479.54	1,438.08	41.46	35.683			
6,300.00	6,286.64	5,888.57	5,421.33	23.18	34.40	-24.56	1,541.35	522.85	1,530.87	1,488.65	42.22	36.258			
6,400.00	6,386.41	5,974.34	5,491.94	23.56	35.24	-24.45	1,587.32	538.93	1,582.21	1,539.23	42.98	36.811			
6,482.24	6,468.46	6,044.88	5,550.01	23.86	35.93	-24.36	1,625.12	552.16	1,624.43	1,580.82	43.61	37.250			
6,500.00	6,486.19	6,060.08	5,562.51	23.93	36.08	1.02	1,633.27	555.01	1,633.61	1,589.87	43.74	37.346			
6,550.00	6,536.08	6,102.25	5,597.23	24.10	36.49	65.43	1,655.87	562.92	1,660.00	1,615.90	44.10	37.639			
6,600.00	6,585.64	6,143.31	5,631.03	24.26	36.89	79.57	1,677.87	570.63	1,687.10	1,642.67	44.44	37.965			
6,650.00	6,634.49	6,182.95	5,663.66	24.40	37.28	82.79	1,699.11	578.06	1,714.76	1,670.01	44.75	38.317			
6,700.00	6,682.26	6,220.85	5,694.86	24.53	37.66	83.00	1,719.42	585.17	1,742.86	1,697.81	45.05	38.689			
6,750.00	6,728.60	6,256.73	5,724.40	24.64	38.01	82.00	1,738.66	591.90	1,771.28	1,725.95	45.33	39.078			
6,800.00	6,773.14	6,290.33	5,752.05	24.75	38.34	80.42	1,756.66	598.20	1,799.93	1,754.33	45.60	39.476			
6,850.00	6,815.54	6,321.38	5,777.61	24.84	38.64	78.50	1,773.30	604.02	1,828.72	1,782.86	45.86	39.876			
6,900.00	6,855.49	6,349.64	5,800.88	24.92	38.92	76.36	1,788.45	609.32	1,857.55	1,811.43	46.12	40.272			
6,950.00	6,892.68	6,374.91	5,821.68	24.99	39.17	74.08	1,801.99	614.06	1,886.35	1,839.96	46.40	40.656			
7,000.00	6,926.83	6,396.99	5,839.85	25.07	39.39	71.70	1,813.82	618.20	1,915.03	1,868.34	46.69	41.020			
7,050.00	6,957.68	6,415.71	5,855.26	25.19	39.57	69.23	1,823.85	621.72	1,943.48	1,896.48	46.99	41.357			
7,100.00	6,984.98	6,430.92	5,867.79	25.42	39.72	66.71	1,832.01	624.57	1,971.60	1,924.27	47.33	41.660			
7,150.00	7,008.54	6,442.53	5,877.34	25.72	39.84	64.16	1,838.22	626.75	1,999.27	1,951.59	47.69	41.925			
7,200.00	7,028.18	6,450.42	5,883.84	26.06	39.92	61.59	1,842.45	628.23	2,026.38	1,978.31	48.08	42.149			
7,250.00	7,043.74	6,454.55	5,887.24	26.46	39.96	59.04	1,844.67	629.00	2,052.78	2,004.29	48.49	42.331			
7,300.00	7,055.11	6,454.89	5,887.52	26.91	39.96	56.52	1,844.85	629.06	2,078.33	2,029.40	48.93	42.472			
7,350.00	7,062.20	6,451.43	5,884.67	27.40	39.93	54.05	1,842.99	628.41	2,102.87	2,053.48	49.39	42.574			
7,400.00	7,064.96	6,444.19	5,878.71	27.94	39.85	51.66	1,839.11	627.06	2,126.23	2,076.37	49.86	42.641			
7,406.67	7,065.00	6,442.94	5,877.68	28.01	39.84	51.34	1,838.45	626.82	2,129.25	2,079.33	49.92	42.649			
7,500.00	7,065.00	6,425.02	5,862.93	29.15	39.67	50.82	1,828.84	623.46	2,172.83	2,121.97	50.86	42.719			
7,600.00	7,065.00	8,786.26	6,963.00	30.55	50.11	87.33	2,533.22	-531.88	2,191.19	2,118.62	72.57	30.193			
7,700.00	7,065.00	8,886.26	6,963.00	32.12	50.59	87.33	2,532.38	-631.88	2,191.19	2,115.20	75.99	28.835			
7,800.00	7,065.00	8,986.26	6,963.00	33.83	51.33	87.33	2,531.54	-731.88	2,191.19	2,111.55	79.64	27.513			
7,900.00	7,065.00	9,086.26	6,963.00	35.67	52.37	87.33	2,530.70	-831.87	2,191.19	2,107.70	83.49	26.243			
8,000.00	7,065.00	9,186.26	6,963.00	37.61	53.74	87.33	2,529.86	-931.87	2,191.19	2,103.67	87.52	25.036			
8,100.00	7,065.00	9,286.26	6,963.00	39.65	55.36	87.33	2,529.02	-1,031.87	2,191.19	2,099.49	91.70	23.895			
8,200.00	7,065.00	9,386.26	6,963.00	41.76	57.19	87.33	2,528.19	-1,131.86	2,191.19	2,095.19	96.01	22.823			
8,300.00	7,065.00	9,486.26	6,963.00	43.94	59.16	87.33	2,527.35	-1,231.86	2,191.19	2,090.77	100.43	21.819			
8,400.00	7,065.00	9,586.26	6,963.00	46.18	61.24	87.33	2,526.51	-1,331.85	2,191.19	2,086.25	104.94	20.880			
8,500.00	7,065.00	9,686.26	6,963.00	48.46	63.40	87.33	2,525.67	-1,431.85	2,191.19	2,081.65	109.55	20.003			
8,600.00	7,065.00	9,786.26	6,963.00	50.79	65.62	87.33	2,524.83	-1,531.85	2,191.19	2,076.97	114.22	19.183			
8,700.00	7,065.00	9,886.26	6,963.00	53.16	67.90	87.33	2,523.99	-1,631.84	2,191.19	2,072.22	118.97	18.419			
8,800.00	7,065.00	9,986.26	6,963.00	55.56	70.21	87.33	2,523.16	-1,731.84	2,191.19	2,067.42	123.77	17.704			
8,900.00	7,065.00	10,086.26	6,963.00	57.99	72.56	87.33	2,522.32	-1,831.84	2,191.19	2,062.57	128.62	17.036			
9,000.00	7,065.00	10,186.26	6,963.00	60.44	74.94	87.33	2,521.48	-1,931.83	2,191.19	2,057.67	133.52	16.411			

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 11-10-9H
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 11-10-9H	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		Offset Wellbore Centre		Rule Assigned: Distance			Warning		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			
9,100.00	7,065.00	10,286.26	6,963.00	62.91	77.35	87.33	2,520.64	-2,031.83	2,191.19	2,052.73	138.46	15.826				
9,200.00	7,065.00	10,386.26	6,963.00	65.41	79.77	87.33	2,519.80	-2,131.83	2,191.19	2,047.76	143.43	15.277				
9,300.00	7,065.00	10,486.26	6,963.00	67.92	82.22	87.33	2,518.96	-2,231.82	2,191.19	2,042.75	148.44	14.762				
9,400.00	7,065.00	10,586.26	6,963.00	70.45	84.69	87.33	2,518.13	-2,331.82	2,191.19	2,037.71	153.48	14.277				
9,500.00	7,065.00	10,686.26	6,963.00	72.99	87.17	87.33	2,517.29	-2,431.82	2,191.19	2,032.65	158.54	13.821				
9,600.00	7,065.00	10,786.26	6,963.00	75.54	89.67	87.33	2,516.45	-2,531.81	2,191.19	2,027.56	163.63	13.391				
9,700.00	7,065.00	10,886.26	6,963.00	78.11	92.18	87.33	2,515.61	-2,631.81	2,191.19	2,022.45	168.74	12.986				
9,800.00	7,065.00	10,986.26	6,963.00	80.68	94.70	87.33	2,514.77	-2,731.81	2,191.19	2,017.32	173.87	12.603				
9,900.00	7,065.00	11,086.26	6,963.00	83.27	97.23	87.33	2,513.93	-2,831.80	2,191.19	2,012.17	179.01	12.240				
10,000.00	7,065.00	11,186.26	6,963.00	85.86	99.77	87.33	2,513.10	-2,931.80	2,191.19	2,007.01	184.18	11.897				
10,100.00	7,065.00	11,286.26	6,963.00	88.46	102.33	87.33	2,512.26	-3,031.80	2,191.19	2,001.83	189.36	11.572				
10,200.00	7,065.00	11,386.26	6,963.00	91.07	104.89	87.33	2,511.42	-3,131.79	2,191.19	1,996.63	194.55	11.263				
10,300.00	7,065.00	11,486.26	6,963.00	93.68	107.45	87.33	2,510.58	-3,231.79	2,191.19	1,991.42	199.76	10.969				
10,400.00	7,065.00	11,586.26	6,963.00	96.30	110.03	87.33	2,509.74	-3,331.78	2,191.18	1,986.20	204.98	10.690				
10,500.00	7,065.00	11,686.26	6,963.00	98.93	112.61	87.33	2,508.90	-3,431.78	2,191.18	1,980.97	210.21	10.424				
10,600.00	7,065.00	11,786.26	6,963.00	101.56	115.20	87.33	2,508.07	-3,531.78	2,191.18	1,975.73	215.45	10.170				
10,700.00	7,065.00	11,886.26	6,963.00	104.20	117.80	87.33	2,507.23	-3,631.77	2,191.18	1,970.48	220.70	9.928				
10,800.00	7,065.00	11,986.26	6,963.00	106.83	120.40	87.33	2,506.39	-3,731.77	2,191.18	1,965.22	225.96	9.697				
10,900.00	7,065.00	12,086.26	6,963.00	109.48	123.00	87.33	2,505.55	-3,831.77	2,191.18	1,959.96	231.23	9.476				
11,000.00	7,065.00	12,186.26	6,963.00	112.13	125.61	87.33	2,504.71	-3,931.76	2,191.18	1,954.68	236.50	9.265				
11,100.00	7,065.00	12,286.26	6,963.00	114.78	128.23	87.33	2,503.87	-4,031.76	2,191.18	1,949.40	241.79	9.063				
11,200.00	7,065.00	12,386.26	6,963.00	117.43	130.84	87.33	2,503.04	-4,131.76	2,191.18	1,944.11	247.07	8.869				
11,300.00	7,065.00	12,486.26	6,963.00	120.09	133.47	87.33	2,502.20	-4,231.75	2,191.18	1,938.81	252.37	8.682				
11,400.00	7,065.00	12,586.26	6,963.00	122.75	136.09	87.33	2,501.36	-4,331.75	2,191.18	1,933.51	257.67	8.504				
11,500.00	7,065.00	12,686.26	6,963.00	125.41	138.72	87.33	2,500.52	-4,431.75	2,191.18	1,928.20	262.98	8.332				
11,600.00	7,065.00	12,786.26	6,963.00	128.08	141.36	87.33	2,499.68	-4,531.74	2,191.18	1,922.89	268.29	8.167				
11,700.00	7,065.00	12,886.26	6,963.00	130.74	143.99	87.33	2,498.84	-4,631.74	2,191.18	1,917.57	273.61	8.008				
11,800.00	7,065.00	12,986.26	6,963.00	133.41	146.63	87.33	2,498.00	-4,731.74	2,191.18	1,912.25	278.93	7.856				
11,900.00	7,065.00	13,086.26	6,963.00	136.09	149.28	87.33	2,497.17	-4,831.73	2,191.18	1,906.92	284.26	7.708				
12,000.00	7,065.00	13,186.26	6,963.00	138.76	151.92	87.33	2,496.33	-4,931.73	2,191.18	1,901.59	289.59	7.567				
12,100.00	7,065.00	13,286.26	6,963.00	141.44	154.57	87.33	2,495.49	-5,031.72	2,191.18	1,896.26	294.92	7.430				
12,200.00	7,065.00	13,386.26	6,963.00	144.11	157.22	87.33	2,494.65	-5,131.72	2,191.18	1,890.92	300.26	7.298				
12,300.00	7,065.00	13,486.26	6,963.00	146.79	159.87	87.33	2,493.81	-5,231.72	2,191.18	1,885.58	305.60	7.170				
12,400.00	7,065.00	13,586.26	6,963.00	149.47	162.53	87.33	2,492.97	-5,331.71	2,191.18	1,880.23	310.94	7.047				
12,500.00	7,065.00	13,686.26	6,963.00	152.15	165.18	87.33	2,492.14	-5,431.71	2,191.18	1,874.88	316.29	6.928				
12,600.00	7,065.00	13,786.26	6,963.00	154.84	167.84	87.33	2,491.30	-5,531.71	2,191.18	1,869.53	321.64	6.812				
12,700.00	7,065.00	13,886.26	6,963.00	157.52	170.50	87.33	2,490.46	-5,631.70	2,191.18	1,864.18	327.00	6.701				
12,800.00	7,065.00	13,986.26	6,963.00	160.21	173.17	87.33	2,489.62	-5,731.70	2,191.18	1,858.82	332.35	6.593				
12,900.00	7,065.00	14,086.26	6,963.00	162.89	175.83	87.33	2,488.78	-5,831.70	2,191.18	1,853.46	337.71	6.488				
13,000.00	7,065.00	14,186.26	6,963.00	165.58	178.50	87.33	2,487.94	-5,931.69	2,191.18	1,848.10	343.08	6.387				
13,100.00	7,065.00	14,286.26	6,963.00	168.27	181.17	87.33	2,487.11	-6,031.69	2,191.18	1,842.74	348.44	6.289				
13,200.00	7,065.00	14,386.26	6,963.00	170.96	183.83	87.33	2,486.27	-6,131.69	2,191.18	1,837.37	353.81	6.193				
13,300.00	7,065.00	14,486.26	6,963.00	173.65	186.51	87.33	2,485.43	-6,231.68	2,191.17	1,832.00	359.18	6.101				
13,400.00	7,065.00	14,586.26	6,963.00	176.35	189.18	87.33	2,484.59	-6,331.68	2,191.17	1,826.63	364.55	6.011				
13,500.00	7,065.00	14,686.26	6,963.00	179.04	191.85	87.33	2,483.75	-6,431.68	2,191.17	1,821.26	369.92	5.923				
13,600.00	7,065.00	14,786.26	6,963.00	181.73	194.53	87.33	2,482.91	-6,531.67	2,191.17	1,815.88	375.29	5.839				
13,700.00	7,065.00	14,886.26	6,963.00	184.43	197.20	87.33	2,482.08	-6,631.67	2,191.17	1,810.50	380.67	5.756				
13,800.00	7,065.00	14,986.26	6,963.00	187.12	199.88	87.33	2,481.24	-6,731.67	2,191.17	1,805.13	386.05	5.676				
13,900.00	7,065.00	15,086.26	6,963.00	189.82	202.56	87.33	2,480.40	-6,831.66	2,191.17	1,799.75	391.43	5.598				
14,000.00	7,065.00	15,186.26	6,963.00	192.52	205.24	87.33	2,479.56	-6,931.66	2,191.17	1,794.36	396.81	5.522				
14,100.00	7,065.00	15,286.26	6,963.00	195.21	207.92	87.33	2,478.72	-7,031.65	2,191.17	1,788.98	402.19	5.448				
14,200.00	7,065.00	15,386.26	6,963.00	197.91	210.60	87.33	2,477.88	-7,131.65	2,191.17	1,783.60	407.58	5.376				

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 11-10-9H
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 11-10-9H	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			
14,300.00	7,065.00	15,486.26	6,963.00	200.61	213.28	87.33	2,477.05	-7,231.65	2,191.17	1,778.21	412.96	5.306			
14,400.00	7,065.00	15,586.26	6,963.00	203.31	215.97	87.33	2,476.21	-7,331.64	2,191.17	1,772.82	418.35	5.238			
14,500.00	7,065.00	15,686.26	6,963.00	206.01	218.65	87.33	2,475.37	-7,431.64	2,191.17	1,767.43	423.74	5.171			
14,600.00	7,065.00	15,786.26	6,963.00	208.71	221.34	87.33	2,474.53	-7,531.64	2,191.17	1,762.04	429.13	5.106			
14,700.00	7,065.00	15,886.26	6,963.00	211.41	224.02	87.33	2,473.69	-7,631.63	2,191.17	1,756.65	434.52	5.043			
14,800.00	7,065.00	15,986.26	6,963.00	214.12	226.71	87.33	2,472.85	-7,731.63	2,191.17	1,751.26	439.91	4.981			
14,900.00	7,065.00	16,086.26	6,963.00	216.82	229.40	87.33	2,472.02	-7,831.63	2,191.17	1,745.87	445.30	4.921			
15,000.00	7,065.00	16,186.26	6,963.00	219.52	232.08	87.33	2,471.18	-7,931.62	2,191.17	1,740.47	450.70	4.862			
15,100.00	7,065.00	16,286.26	6,963.00	222.22	234.77	87.33	2,470.34	-8,031.62	2,191.17	1,735.07	456.09	4.804			
15,200.00	7,065.00	16,386.26	6,963.00	224.93	237.46	87.33	2,469.50	-8,131.62	2,191.17	1,729.68	461.49	4.748			
15,300.00	7,065.00	16,486.26	6,963.00	227.63	240.15	87.33	2,468.66	-8,231.61	2,191.17	1,724.28	466.89	4.693			
15,400.00	7,065.00	16,586.26	6,963.00	230.34	242.85	87.33	2,467.82	-8,331.61	2,191.17	1,718.88	472.29	4.639			
15,412.56	7,065.00	16,598.81	6,963.00	230.68	243.18	87.33	2,467.72	-8,344.16	2,191.17	1,718.20	472.96	4.633			
15,495.74	7,065.00	16,598.86	6,963.00	232.93	243.19	87.33	2,467.72	-8,344.21	2,192.74	1,717.02	475.73	4.609			

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	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)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	6.00	6.00	0.00	0.00	23.95	1,787.26	793.79	1,955.61					
100.00	100.00	91.24	91.24	0.14	0.27	23.95	1,787.51	793.93	1,955.95	1,955.53	0.42	4,697.158		
200.00	200.00	189.84	189.83	0.50	0.62	23.94	1,788.48	794.08	1,956.90	1,955.78	1.12	1,740.175		
300.00	300.00	340.42	340.34	0.86	1.15	23.82	1,789.90	790.10	1,956.82	1,954.81	2.02	971.090		
400.00	400.00	496.34	495.85	1.22	1.72	23.53	1,788.78	779.02	1,953.12	1,950.18	2.94	664.726		
500.00	499.98	613.00	611.77	1.58	2.17	-15.20	1,788.03	766.04	1,946.42	1,942.68	3.74	520.558		
594.97	594.82	733.43	731.01	1.92	2.66	-15.76	1,787.37	749.12	1,936.00	1,931.44	4.56	424.164		
600.00	599.84	740.45	737.95	1.94	2.69	-15.79	1,787.30	748.06	1,935.33	1,930.71	4.62	419.192		
700.00	699.61	873.27	868.71	2.30	3.28	-16.50	1,785.87	724.87	1,921.09	1,915.55	5.54	346.834		
800.00	799.37	996.27	988.83	2.66	3.86	-17.30	1,784.52	698.47	1,905.53	1,899.08	6.45	295.504		
900.00	899.14	1,116.55	1,105.77	3.03	4.47	-18.15	1,782.49	670.43	1,889.03	1,881.65	7.38	255.829		
1,000.00	998.91	1,253.96	1,238.60	3.40	5.20	-19.22	1,778.79	635.49	1,871.20	1,862.77	8.43	221.886		
1,100.00	1,098.68	1,328.04	1,309.73	3.77	5.63	-19.86	1,776.91	614.89	1,853.04	1,843.83	9.21	201.208		
1,200.00	1,198.45	1,403.53	1,381.94	4.14	6.08	-20.57	1,776.34	592.87	1,836.40	1,826.40	10.01	183.543		
1,300.00	1,298.22	1,490.86	1,465.20	4.51	6.61	-21.43	1,776.56	566.53	1,820.87	1,809.98	10.89	167.159		
1,400.00	1,397.99	1,586.60	1,556.26	4.88	7.21	-22.42	1,777.12	536.97	1,805.95	1,794.10	11.85	152.387		
1,500.00	1,497.75	1,679.65	1,644.40	5.26	7.81	-23.43	1,777.96	507.15	1,791.57	1,778.76	12.82	139.782		
1,600.00	1,597.52	1,774.42	1,734.08	5.63	8.44	-24.47	1,778.87	476.52	1,777.80	1,763.99	13.81	128.741		
1,700.00	1,697.29	1,855.28	1,810.67	6.00	8.97	-25.37	1,779.66	450.60	1,764.77	1,750.06	14.72	119.909		
1,800.00	1,797.06	1,943.17	1,894.25	6.37	9.54	-26.33	1,781.16	423.45	1,753.27	1,737.61	15.66	111.924		
1,900.00	1,896.83	2,041.04	1,987.52	6.75	10.17	-27.39	1,782.31	393.85	1,742.06	1,725.38	16.67	104.475		
2,000.00	1,996.60	2,154.13	2,094.59	7.12	10.93	-28.70	1,783.80	357.45	1,731.29	1,713.48	17.81	97.208		
2,100.00	2,096.37	2,268.56	2,202.24	7.49	11.72	-30.10	1,783.84	318.67	1,719.72	1,700.74	18.98	90.599		
2,200.00	2,196.13	2,361.36	2,289.32	7.86	12.39	-31.27	1,783.39	286.61	1,708.38	1,688.35	20.03	85.284		
2,300.00	2,295.90	2,456.77	2,378.02	8.24	13.10	-32.56	1,783.17	251.49	1,697.84	1,676.70	21.13	80.335		
2,400.00	2,395.67	2,554.51	2,468.77	8.61	13.85	-33.90	1,782.66	215.18	1,687.93	1,665.66	22.26	75.812		
2,500.00	2,495.44	2,648.56	2,556.59	8.98	14.54	-35.16	1,781.80	181.51	1,678.71	1,655.36	23.35	71.901		
2,600.00	2,595.21	2,734.39	2,637.55	9.36	15.14	-36.25	1,780.95	153.04	1,670.44	1,646.11	24.34	68.642		
2,700.00	2,694.98	2,813.14	2,712.05	9.73	15.69	-37.23	1,780.60	127.54	1,663.52	1,638.25	25.27	65.823		
2,800.00	2,794.75	2,902.56	2,796.19	10.10	16.32	-38.39	1,780.92	97.28	1,658.12	1,631.83	26.28	63.089		
2,900.00	2,894.51	3,024.49	2,911.35	10.48	17.17	-39.95	1,780.39	57.24	1,652.87	1,625.36	27.51	60.080		
3,000.00	2,994.28	3,141.15	3,021.39	10.85	17.99	-41.47	1,777.76	18.62	1,646.71	1,618.02	28.70	57.383		
3,100.00	3,094.05	3,215.10	3,091.11	11.22	18.51	-42.44	1,776.06	-5.99	1,641.36	1,611.77	29.60	55.455		
3,200.00	3,193.82	3,310.16	3,180.32	11.60	19.20	-43.73	1,774.24	-38.79	1,637.35	1,606.70	30.65	53.418		
3,300.00	3,293.59	3,407.37	3,271.79	11.97	19.90	-45.03	1,772.11	-71.62	1,633.93	1,602.23	31.71	51.535		
3,400.00	3,393.36	3,495.66	3,355.13	12.35	20.52	-46.20	1,770.22	-100.71	1,631.34	1,598.66	32.68	49.917		
3,500.00	3,493.12	3,576.15	3,430.99	12.72	21.09	-47.27	1,768.84	-127.57	1,630.08	1,596.48	33.60	48.514		
3,525.60	3,518.67	3,596.22	3,449.86	12.81	21.23	-47.54	1,768.58	-134.40	1,630.03	1,596.20	33.83	48.183		
3,600.00	3,592.89	3,644.84	3,495.48	13.09	21.59	-48.20	1,768.22	-151.21	1,630.66	1,596.23	34.43	47.362		
3,700.00	3,692.66	3,705.00	3,551.73	13.47	22.03	-49.04	1,768.65	-172.55	1,633.81	1,598.63	35.18	46.444		
3,800.00	3,792.43	3,769.32	3,611.45	13.84	22.54	-49.96	1,770.05	-196.38	1,639.57	1,603.61	35.96	45.600		
3,900.00	3,892.20	3,849.65	3,685.38	14.21	23.18	-51.14	1,772.63	-227.69	1,647.68	1,610.82	36.86	44.695		
4,000.00	3,991.97	3,945.24	3,773.20	14.59	23.96	-52.56	1,775.40	-265.34	1,656.74	1,618.83	37.91	43.705		
4,100.00	4,091.74	4,073.88	3,891.91	14.96	24.98	-54.41	1,778.30	-314.79	1,666.16	1,626.95	39.22	42.486		
4,200.00	4,191.50	4,222.07	4,030.80	15.33	26.08	-56.38	1,777.39	-366.39	1,672.42	1,631.82	40.60	41.193		
4,300.00	4,291.27	4,295.29	4,099.48	15.71	26.62	-57.35	1,776.67	-391.78	1,679.60	1,638.23	41.37	40.598		
4,400.00	4,391.04	4,372.00	4,171.27	16.08	27.19	-58.36	1,776.69	-418.81	1,688.70	1,646.54	42.16	40.059		
4,500.00	4,490.81	4,444.82	4,239.30	16.46	27.74	-59.31	1,777.37	-444.78	1,699.59	1,656.70	42.89	39.625		
4,600.00	4,590.58	4,526.76	4,315.76	16.83	28.36	-60.37	1,778.72	-474.21	1,712.05	1,668.36	43.69	39.189		
4,700.00	4,690.35	4,610.82	4,394.25	17.20	28.99	-61.44	1,780.59	-504.24	1,725.76	1,681.28	44.48	38.798		
4,800.00	4,790.12	4,720.04	4,496.46	17.58	29.80	-62.77	1,783.42	-542.64	1,740.37	1,694.90	45.47	38.272		
4,900.00	4,889.88	4,807.59	4,578.57	17.95	30.45	-63.83	1,784.89	-572.99	1,754.73	1,708.46	46.27	37.925		

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 11-10-9H
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 11-10-9H	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	4,989.65	4,897.46	4,662.41	18.32	31.13	-64.93	1,786.58	-605.31	1,770.56	1,723.49	47.08	37.611		
5,100.00	5,089.42	5,032.76	4,788.91	18.70	32.14	-66.56	1,787.55	-653.28	1,786.08	1,737.82	48.26	37.011		
5,200.00	5,189.19	5,152.22	4,901.56	19.07	32.99	-67.92	1,786.95	-693.02	1,800.14	1,750.89	49.26	36.545		
5,300.00	5,288.96	5,251.35	4,995.66	19.45	33.66	-68.97	1,786.60	-724.19	1,814.05	1,763.98	50.07	36.229		
5,400.00	5,388.73	5,340.47	5,080.52	19.82	34.26	-69.88	1,786.82	-751.40	1,828.54	1,777.74	50.79	35.998		
5,500.00	5,488.49	5,418.00	5,154.27	20.19	34.78	-70.66	1,787.24	-775.31	1,843.99	1,792.58	51.42	35.862		
5,600.00	5,588.26	5,490.16	5,222.80	20.57	35.26	-71.38	1,788.30	-797.88	1,860.95	1,808.96	51.99	35.795		
5,700.00	5,688.03	5,637.99	5,363.76	20.94	36.23	-72.76	1,791.41	-842.30	1,878.41	1,825.29	53.12	35.364		
5,800.00	5,787.80	5,780.93	5,501.62	21.31	37.07	-73.97	1,792.18	-880.03	1,892.54	1,838.40	54.14	34.959		
5,900.00	5,887.57	5,962.47	5,678.91	21.69	38.00	-75.28	1,791.59	-918.91	1,903.05	1,847.77	55.27	34.430		
6,000.00	5,987.34	6,150.69	5,863.45	22.06	38.89	-76.63	1,785.43	-955.35	1,911.25	1,854.94	56.31	33.940		
6,100.00	6,087.11	8,442.21	7,257.77	22.44	48.57	-40.43	1,746.56	236.72	1,858.06	1,801.13	56.93	32.639		
6,200.00	6,186.87	8,448.05	7,257.73	22.81	48.65	-40.19	1,746.59	242.56	1,792.91	1,734.11	58.80	30.491		
6,300.00	6,286.64	8,453.61	7,257.70	23.18	48.73	-39.96	1,746.60	248.12	1,731.08	1,670.36	60.72	28.508		
6,400.00	6,386.41	8,458.92	7,257.65	23.56	48.80	-39.74	1,746.62	253.43	1,672.93	1,610.26	62.67	26.694		
6,482.24	6,468.46	8,463.10	7,257.62	23.86	48.86	-39.56	1,746.62	257.61	1,628.15	1,563.87	64.28	25.329		
6,500.00	6,486.19	8,463.58	7,257.61	23.93	48.86	-12.06	1,746.62	258.08	1,618.86	1,554.24	64.62	25.052		
6,550.00	6,536.08	8,460.56	7,257.64	24.10	48.82	58.01	1,746.62	255.06	1,593.53	1,528.02	65.51	24.327		
6,600.00	6,585.64	8,451.30	7,257.71	24.26	48.70	77.33	1,746.60	245.80	1,569.56	1,503.28	66.28	23.681		
6,650.00	6,634.49	8,436.07	7,257.80	24.40	48.49	85.24	1,746.54	230.58	1,547.15	1,480.21	66.94	23.113		
6,700.00	6,682.26	8,415.17	7,257.87	24.53	48.20	89.68	1,746.39	209.68	1,526.40	1,458.92	67.48	22.621		
6,750.00	6,728.60	8,388.91	7,257.87	24.64	47.84	92.50	1,746.12	183.42	1,507.38	1,439.49	67.89	22.204		
6,800.00	6,773.14	8,369.00	7,257.80	24.75	47.56	94.75	1,745.84	163.51	1,490.12	1,421.79	68.33	21.807		
6,850.00	6,815.54	8,345.77	7,257.74	24.84	47.27	96.34	1,745.56	140.29	1,474.79	1,406.09	68.70	21.466		
6,900.00	6,855.49	8,325.37	7,257.78	24.92	47.01	97.63	1,745.43	119.89	1,461.51	1,392.45	69.05	21.165		
6,950.00	6,892.68	8,302.44	7,257.93	24.99	46.72	98.53	1,745.43	96.95	1,450.27	1,380.94	69.33	20.920		
7,000.00	6,926.83	8,274.00	7,258.26	25.07	46.36	99.03	1,745.62	68.52	1,441.05	1,371.56	69.49	20.738		
7,050.00	6,957.68	8,247.61	7,258.72	25.19	46.06	99.39	1,745.97	42.13	1,433.75	1,364.07	69.68	20.576		
7,100.00	6,984.98	8,215.67	7,259.48	25.42	45.70	99.47	1,746.58	10.21	1,428.27	1,358.48	69.79	20.465		
7,150.00	7,008.54	8,179.00	7,260.64	25.72	45.29	99.36	1,747.51	-26.43	1,424.49	1,354.65	69.84	20.396		
7,200.00	7,028.18	8,152.72	7,261.62	26.06	45.02	99.31	1,748.42	-52.68	1,422.41	1,352.36	70.05	20.307		
7,235.25	7,039.59	8,132.00	7,262.43	26.34	44.82	99.18	1,749.35	-73.37	1,421.98	1,351.80	70.18	20.262	CC, ES	
7,250.00	7,043.74	8,123.22	7,262.78	26.46	44.73	99.11	1,749.80	-82.12	1,422.06	1,351.83	70.23	20.249		
7,300.00	7,055.11	8,084.00	7,264.46	26.91	44.34	98.76	1,752.21	-121.23	1,423.42	1,353.08	70.33	20.238		
7,350.00	7,062.20	8,062.61	7,265.27	27.40	44.15	98.43	1,753.83	-142.54	1,426.29	1,355.64	70.65	20.189		
7,400.00	7,064.96	8,032.06	7,265.94	27.94	43.89	97.95	1,756.56	-172.97	1,430.75	1,359.85	70.90	20.180		
7,406.67	7,065.00	8,027.99	7,265.98	28.01	43.86	97.88	1,756.96	-177.02	1,431.46	1,360.52	70.93	20.180		
7,500.00	7,065.00	7,716.36	7,205.59	29.15	41.73	95.39	1,771.89	-479.23	1,434.42	1,364.12	70.30	20.403		
7,600.00	7,065.00	7,619.82	7,165.75	30.55	41.33	93.80	1,771.43	-567.13	1,431.11	1,359.62	71.49	20.019		
7,700.00	7,065.00	7,540.12	7,125.99	32.12	41.10	92.21	1,771.56	-636.17	1,429.16	1,356.17	72.99	19.580		
7,726.68	7,065.00	7,520.88	7,115.34	32.57	41.04	91.78	1,771.73	-652.18	1,429.06	1,355.63	73.43	19.461		
7,800.00	7,065.00	7,456.25	7,076.78	33.83	40.93	90.23	1,772.39	-704.02	1,429.64	1,354.98	74.66	19.148		
7,900.00	7,065.00	7,374.96	7,022.42	35.67	40.83	88.05	1,772.72	-764.42	1,432.43	1,356.01	76.43	18.743		
8,000.00	7,065.00	7,310.57	6,974.54	37.61	40.80	86.14	1,772.51	-807.42	1,438.55	1,360.34	78.21	18.393		
8,100.00	7,065.00	7,263.11	6,937.10	39.65	40.80	84.65	1,772.35	-836.58	1,449.15	1,369.21	79.94	18.127		
8,200.00	7,065.00	7,226.00	6,906.81	41.76	40.79	83.45	1,772.33	-858.02	1,464.71	1,383.16	81.56	17.959		
8,300.00	7,065.00	7,177.00	6,865.44	43.94	40.80	81.82	1,772.27	-884.27	1,485.27	1,402.27	83.00	17.895	SF	
8,400.00	7,065.00	7,145.51	6,838.06	46.18	40.81	80.75	1,772.14	-899.80	1,510.90	1,426.62	84.28	17.927		
8,500.00	7,065.00	7,112.01	6,808.29	48.46	40.82	79.60	1,771.89	-915.17	1,541.57	1,456.21	85.36	18.059		
8,600.00	7,065.00	7,079.74	6,779.13	50.79	40.83	78.47	1,771.45	-928.98	1,577.05	1,490.81	86.25	18.286		
8,700.00	7,065.00	7,051.58	6,753.32	53.16	40.83	77.47	1,770.89	-940.24	1,617.17	1,530.22	86.95	18.599		
8,800.00	7,065.00	7,035.00	6,737.98	55.56	40.84	76.89	1,770.48	-946.51	1,661.76	1,574.24	87.51	18.988		

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 11-10-9H
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 11-10-9H	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		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	Warning	
8,900.00	7,065.00	7,035.00	6,737.98	57.99	40.84	57.99	40.84	76.89	1,770.48	-946.51	1,710.91	1,622.94	87.98	19.447		
9,000.00	7,065.00	6,998.07	6,703.41	60.44	40.84	60.44	40.84	75.57	1,769.59	-959.46	1,763.47	1,675.29	88.17	20.000		
9,100.00	7,065.00	6,984.66	6,690.73	62.91	40.84	62.91	40.84	75.09	1,769.30	-963.79	1,820.05	1,731.72	88.33	20.604		
9,200.00	7,065.00	6,972.41	6,679.08	65.41	40.84	65.41	40.84	74.66	1,769.06	-967.57	1,880.04	1,791.64	88.40	21.267		
9,300.00	7,065.00	6,940.00	6,648.00	67.92	40.84	67.92	40.84	73.50	1,768.49	-976.76	1,943.45	1,855.15	88.29	22.011		
9,400.00	7,065.00	6,940.00	6,648.00	70.45	40.84	70.45	40.84	73.50	1,768.49	-976.76	2,009.16	1,920.89	88.27	22.762		
9,500.00	7,065.00	6,940.00	6,648.00	72.99	40.84	72.99	40.84	73.50	1,768.49	-976.76	2,077.61	1,989.43	88.19	23.560		
9,600.00	7,065.00	6,940.00	6,648.00	75.54	40.84	75.54	40.84	73.50	1,768.49	-976.76	2,148.54	2,060.48	88.06	24.400		
9,700.00	7,065.00	6,940.00	6,648.00	78.11	40.84	78.11	40.84	73.50	1,768.49	-976.76	2,221.70	2,133.81	87.89	25.278		
9,800.00	7,065.00	6,940.00	6,648.00	80.68	40.84	80.68	40.84	73.50	1,768.49	-976.76	2,296.89	2,209.19	87.70	26.190		
9,900.00	7,065.00	6,940.00	6,648.00	83.27	40.84	83.27	40.84	73.50	1,768.49	-976.76	2,373.91	2,286.42	87.49	27.133		
10,000.00	7,065.00	6,940.00	6,648.00	85.86	40.84	85.86	40.84	73.50	1,768.49	-976.76	2,452.59	2,365.32	87.27	28.104		
10,100.00	7,065.00	6,940.00	6,648.00	88.46	40.84	88.46	40.84	73.50	1,768.49	-976.76	2,532.77	2,445.73	87.04	29.099		
10,200.00	7,065.00	6,940.00	6,648.00	91.07	40.84	91.07	40.84	73.50	1,768.49	-976.76	2,614.32	2,527.51	86.81	30.117		
10,300.00	7,065.00	6,940.00	6,648.00	93.68	40.84	93.68	40.84	73.50	1,768.49	-976.76	2,697.11	2,610.54	86.57	31.155		
10,400.00	7,065.00	6,898.46	6,607.55	96.30	40.81	96.30	40.81	72.01	1,767.78	-986.11	2,779.28	2,693.08	86.20	32.242		
10,500.00	7,065.00	6,895.33	6,604.46	98.93	40.81	98.93	40.81	71.90	1,767.72	-986.67	2,863.95	2,777.98	85.96	33.316		
10,600.00	7,065.00	6,892.40	6,601.58	101.56	40.81	101.56	40.81	71.79	1,767.66	-987.19	2,949.56	2,863.83	85.73	34.404		
10,700.00	7,065.00	6,889.65	6,598.88	104.20	40.81	104.20	40.81	71.69	1,767.61	-987.65	3,036.04	2,950.53	85.51	35.506		
10,800.00	7,065.00	6,887.08	6,596.34	106.83	40.81	106.83	40.81	71.60	1,767.55	-988.07	3,123.31	3,038.02	85.29	36.621		
10,900.00	7,065.00	6,844.00	6,553.59	109.48	40.78	109.48	40.78	70.06	1,766.63	-993.16	3,213.02	3,128.13	84.89	37.850		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	23.60	1,817.86	794.07	1,983.73					
100.00	100.00	100.71	100.71	0.14	0.31	23.59	1,818.04	793.96	1,983.85	1,983.40	0.45	4,400.653		
200.00	200.00	203.23	203.23	0.50	0.67	23.57	1,818.64	793.23	1,984.11	1,982.93	1.18	1,686.878		
300.00	300.00	322.93	322.85	0.86	1.11	23.45	1,819.91	789.59	1,983.89	1,981.92	1.97	1,008.931		
400.00	400.00	485.20	484.60	1.22	1.71	23.10	1,821.12	776.90	1,981.47	1,978.55	2.92	677.465		
500.00	499.98	602.19	600.79	1.58	2.17	-15.65	1,821.25	763.22	1,975.30	1,971.56	3.74	528.162		
594.97	594.82	695.51	693.26	1.92	2.55	-16.08	1,821.63	750.75	1,966.07	1,961.61	4.46	441.002		
600.00	599.84	700.29	698.00	1.94	2.57	-16.10	1,821.67	750.08	1,965.51	1,961.01	4.50	436.751		
700.00	699.61	793.50	790.16	2.30	2.97	-16.55	1,822.78	736.21	1,954.46	1,949.21	5.25	372.496		
800.00	799.37	884.07	879.35	2.66	3.37	-17.05	1,825.05	720.62	1,943.89	1,937.89	6.00	323.904		
900.00	899.14	978.60	971.98	3.03	3.80	-17.66	1,828.66	702.09	1,933.85	1,927.06	6.79	284.828		
1,000.00	998.91	1,096.92	1,087.49	3.40	4.38	-18.49	1,833.45	676.95	1,923.74	1,916.02	7.72	249.118		
1,100.00	1,098.68	1,195.63	1,183.34	3.77	4.89	-19.25	1,837.19	653.65	1,912.87	1,904.28	8.59	222.763		
1,200.00	1,198.45	1,294.72	1,279.18	4.14	5.42	-20.06	1,841.66	628.89	1,902.57	1,893.09	9.48	200.654		
1,300.00	1,298.22	1,435.03	1,413.86	4.51	6.23	-21.34	1,847.52	590.00	1,891.64	1,881.00	10.64	177.760		
1,400.00	1,397.99	1,596.70	1,567.66	4.88	7.23	-22.95	1,850.11	540.31	1,877.80	1,865.82	11.98	156.777		
1,500.00	1,497.75	1,682.64	1,648.66	5.26	7.80	-23.88	1,850.56	511.61	1,863.00	1,850.10	12.91	144.330		
1,600.00	1,597.52	1,750.11	1,712.23	5.63	8.25	-24.62	1,851.82	489.03	1,850.01	1,836.27	13.74	134.675		
1,700.00	1,697.29	1,820.85	1,778.90	6.00	8.73	-25.42	1,854.06	465.47	1,838.89	1,824.30	14.59	126.021		
1,800.00	1,797.06	1,913.61	1,866.33	6.37	9.36	-26.46	1,857.58	434.72	1,829.08	1,813.48	15.60	117.280		
1,900.00	1,896.83	2,021.06	1,967.60	6.75	10.10	-27.69	1,860.90	398.93	1,819.27	1,802.56	16.71	108.895		
2,000.00	1,996.60	2,101.34	2,042.81	7.12	10.67	-28.65	1,863.81	371.01	1,810.45	1,792.79	17.65	102.549		
2,100.00	2,096.37	2,210.58	2,144.82	7.49	11.46	-30.00	1,867.79	332.14	1,802.34	1,783.51	18.82	95.753		
2,200.00	2,196.13	2,318.94	2,246.03	7.86	12.26	-31.35	1,870.30	293.51	1,793.78	1,773.79	19.99	89.715		
2,300.00	2,295.90	2,402.50	2,323.40	8.24	12.90	-32.45	1,872.51	262.03	1,786.20	1,765.19	21.01	85.014		
2,400.00	2,395.67	2,500.31	2,413.55	8.61	13.67	-33.78	1,875.39	224.19	1,779.78	1,757.63	22.15	80.334		
2,500.00	2,495.44	2,593.24	2,499.14	8.98	14.41	-35.05	1,877.15	188.05	1,773.37	1,750.11	23.26	76.228		
2,600.00	2,595.21	2,661.00	2,561.67	9.36	14.94	-35.98	1,879.68	162.06	1,769.50	1,745.33	24.17	73.207		
2,700.00	2,694.98	2,718.68	2,614.97	9.73	15.40	-36.76	1,882.74	140.23	1,767.99	1,743.01	24.98	70.774		
2,738.31	2,733.20	2,749.43	2,643.40	9.87	15.64	-37.17	1,884.47	128.64	1,767.88	1,742.52	25.36	69.720		
2,800.00	2,794.75	2,799.03	2,689.29	10.10	16.03	-37.84	1,887.41	110.05	1,768.16	1,742.20	25.96	68.110		
2,900.00	2,894.51	2,884.28	2,768.28	10.48	16.69	-38.97	1,892.86	78.43	1,769.81	1,742.84	26.97	65.634		
3,000.00	2,994.28	2,990.15	2,866.96	10.85	17.48	-40.32	1,899.54	40.70	1,772.27	1,744.17	28.10	63.062		
3,100.00	3,094.05	3,099.54	2,969.83	11.22	18.27	-41.65	1,905.24	3.94	1,774.38	1,745.15	29.23	60.701		
3,200.00	3,193.82	3,182.40	3,047.75	11.60	18.87	-42.65	1,909.40	-23.92	1,777.15	1,747.00	30.15	58.941		
3,300.00	3,293.59	3,280.35	3,139.42	11.97	19.59	-43.86	1,914.91	-58.00	1,781.42	1,750.24	31.18	57.127		
3,400.00	3,393.36	3,377.77	3,231.17	12.35	20.29	-45.03	1,919.42	-90.43	1,785.34	1,753.15	32.19	55.464		
3,500.00	3,493.12	3,459.80	3,308.71	12.72	20.86	-45.97	1,924.05	-116.77	1,790.78	1,757.72	33.06	54.175		
3,600.00	3,592.89	3,545.29	3,389.58	13.09	21.45	-46.94	1,929.00	-144.07	1,797.06	1,763.12	33.93	52.958		
3,700.00	3,692.66	3,615.00	3,455.30	13.47	21.94	-47.73	1,933.82	-166.81	1,805.15	1,770.47	34.68	52.047		
3,800.00	3,792.43	3,669.17	3,506.08	13.84	22.35	-48.36	1,938.37	-185.10	1,815.53	1,780.23	35.30	51.428		
3,900.00	3,892.20	3,728.54	3,561.33	14.21	22.79	-49.07	1,944.28	-206.01	1,828.42	1,792.48	35.94	50.870		
4,000.00	3,991.97	3,805.00	3,632.14	14.59	23.38	-49.98	1,953.03	-233.50	1,843.55	1,806.83	36.73	50.199		
4,100.00	4,091.74	3,895.59	3,715.83	14.96	24.09	-51.06	1,963.66	-266.51	1,859.90	1,822.27	37.63	49.427		
4,200.00	4,191.50	3,989.11	3,802.21	15.33	24.83	-52.17	1,974.09	-300.82	1,876.56	1,838.01	38.55	48.678		
4,300.00	4,291.27	4,124.84	3,928.50	15.71	25.86	-53.68	1,988.57	-348.35	1,893.08	1,853.26	39.81	47.548		
4,400.00	4,391.04	4,242.10	4,038.26	16.08	26.73	-54.96	1,998.46	-388.42	1,907.83	1,866.93	40.89	46.654		
4,500.00	4,490.81	4,342.07	4,131.13	16.46	27.50	-56.10	2,005.83	-424.66	1,923.14	1,881.31	41.83	45.976		
4,600.00	4,590.58	4,476.68	4,256.78	16.83	28.52	-57.58	2,014.29	-472.20	1,937.92	1,894.88	43.04	45.027		
4,700.00	4,690.35	4,561.37	4,336.24	17.20	29.14	-58.48	2,019.19	-501.08	1,952.44	1,908.62	43.81	44.563		
4,800.00	4,790.12	4,671.23	4,439.71	17.58	29.93	-59.59	2,025.75	-537.39	1,967.33	1,922.56	44.77	43.946		
4,900.00	4,889.88	4,756.00	4,519.67	17.95	30.53	-60.43	2,030.65	-565.12	1,982.50	1,936.99	45.51	43.562		

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 11-10-9H
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 11-10-9H	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	4,989.65	4,835.76	4,594.57	18.32	31.12	-61.24	2,035.21	-592.18	1,998.70	1,952.48	46.22	43.246		
5,100.00	5,089.42	4,925.47	4,678.41	18.70	31.79	-62.16	2,040.38	-623.64	2,016.02	1,969.02	47.00	42.895		
5,200.00	5,189.19	5,059.61	4,804.88	19.07	32.75	-63.43	2,048.45	-667.59	2,033.16	1,985.05	48.11	42.262		
5,300.00	5,288.96	5,155.33	4,895.84	19.45	33.39	-64.27	2,054.27	-696.84	2,049.75	2,000.88	48.88	41.936		
5,400.00	5,388.73	5,253.19	4,988.92	19.82	34.04	-65.11	2,059.78	-726.53	2,066.32	2,016.66	49.66	41.610		
5,500.00	5,488.49	5,328.00	5,060.14	20.19	34.53	-65.73	2,064.73	-748.88	2,083.88	2,033.62	50.26	41.461		
5,600.00	5,588.26	5,499.20	5,223.96	20.57	35.62	-67.09	2,073.84	-797.71	2,099.83	2,048.30	51.53	40.751		
5,700.00	5,688.03	5,685.79	5,404.04	20.94	36.71	-68.49	2,079.01	-846.23	2,113.13	2,060.33	52.79	40.028		
5,800.00	5,787.80	5,854.51	5,568.28	21.31	37.59	-69.69	2,077.59	-884.76	2,121.49	2,067.64	53.85	39.397		
5,900.00	5,887.57	5,967.21	5,678.63	21.69	38.13	-70.41	2,077.57	-907.59	2,130.16	2,075.56	54.59	39.018		
6,000.00	5,987.34	6,322.95	7,118.88	22.06	48.32	-38.65	2,094.67	272.44	2,124.31	2,064.34	59.97	35.421		
6,100.00	6,087.11	8,327.08	7,119.02	22.44	48.38	-38.51	2,094.49	276.57	2,068.46	2,006.87	61.60	33.582		
6,200.00	6,186.87	8,331.43	7,119.17	22.81	48.45	-38.37	2,094.31	280.92	2,016.01	1,952.79	63.22	31.888		
6,300.00	6,286.64	8,336.03	7,119.34	23.18	48.51	-38.22	2,094.12	285.50	1,967.23	1,902.39	64.84	30.340		
6,400.00	6,386.41	8,340.87	7,119.53	23.56	48.58	-38.06	2,093.93	290.34	1,922.40	1,855.97	66.43	28.940		
6,482.24	6,468.46	8,345.07	7,119.71	23.86	48.65	-37.92	2,093.76	294.53	1,888.69	1,820.99	67.70	27.899		
6,500.00	6,486.19	8,345.82	7,119.74	23.93	48.66	-10.75	2,093.73	295.28	1,881.80	1,813.84	67.96	27.688		
6,550.00	6,536.08	8,346.08	7,119.75	24.10	48.66	58.51	2,093.72	295.54	1,863.29	1,794.63	68.66	27.137		
6,600.00	6,585.64	8,343.49	7,119.64	24.26	48.62	77.21	2,093.83	292.95	1,846.20	1,776.92	69.29	26.646		
6,650.00	6,634.49	8,337.92	7,119.42	24.40	48.54	84.67	2,094.05	287.40	1,830.69	1,760.87	69.82	26.218		
6,700.00	6,682.26	8,329.32	7,119.10	24.53	48.42	88.82	2,094.40	278.80	1,816.88	1,746.60	70.28	25.854		
6,750.00	6,728.60	8,317.60	7,118.72	24.64	48.25	91.46	2,094.90	267.10	1,804.84	1,734.21	70.63	25.552		
6,800.00	6,773.14	8,302.75	7,118.32	24.75	48.03	93.21	2,095.56	252.27	1,794.63	1,723.73	70.90	25.313		
6,850.00	6,815.54	8,279.00	7,117.89	24.84	47.69	94.21	2,096.69	228.56	1,786.25	1,715.27	70.99	25.162		
6,900.00	6,855.49	8,262.01	7,117.72	24.92	47.46	95.02	2,097.55	211.59	1,779.64	1,708.47	71.16	25.008		
6,950.00	6,892.68	8,235.31	7,117.70	24.99	47.11	95.31	2,098.95	184.92	1,774.71	1,703.54	71.18	24.934		
7,000.00	6,926.83	8,205.47	7,118.00	25.07	46.71	95.33	2,100.58	155.14	1,771.35	1,700.22	71.13	24.903		
7,050.00	6,957.68	8,169.19	7,118.77	25.19	46.25	95.09	2,102.67	118.92	1,769.42	1,698.41	71.01	24.918		
7,100.00	6,984.98	8,123.73	7,119.38	25.42	45.70	94.59	2,105.28	73.54	1,768.57	1,697.76	70.81	24.976		
7,150.00	7,008.54	7,958.13	7,123.80	25.72	43.95	92.50	2,108.71	-91.86	1,767.03	1,697.76	69.27	25.510		
7,200.00	7,028.18	7,912.42	7,126.72	26.06	43.54	92.36	2,108.03	-137.47	1,764.74	1,695.50	69.23	25.490		
7,250.00	7,043.74	7,869.26	7,129.44	26.46	43.18	92.26	2,107.46	-180.54	1,763.07	1,693.77	69.30	25.442		
7,300.00	7,055.11	7,827.46	7,130.91	26.91	42.86	92.16	2,107.12	-222.32	1,762.07	1,692.63	69.44	25.375		
7,350.00	7,062.20	7,753.86	7,128.23	27.40	42.35	91.86	2,106.64	-295.78	1,761.54	1,692.16	69.37	25.392		
7,400.00	7,064.96	7,686.78	7,114.39	27.94	41.91	91.40	2,105.27	-361.34	1,760.31	1,690.86	69.46	25.345		
7,406.67	7,065.00	7,682.26	7,113.21	28.01	41.89	91.37	2,105.19	-365.71	1,760.19	1,690.68	69.51	25.323		
7,493.25	7,065.00	7,624.11	7,096.96	29.06	41.55	90.85	2,104.54	-421.54	1,759.42	1,689.11	70.31	25.024		
7,500.00	7,065.00	7,619.64	7,095.62	29.15	41.53	90.80	2,104.52	-425.80	1,759.43	1,689.05	70.38	25.000		
7,600.00	7,065.00	7,523.32	7,059.34	30.55	41.10	89.62	2,104.34	-514.87	1,759.90	1,688.50	71.41	24.646		
7,700.00	7,065.00	7,383.39	6,978.30	32.12	40.72	86.98	2,099.54	-628.33	1,758.41	1,685.85	72.56	24.233		
7,700.12	7,065.00	7,383.34	6,978.27	32.12	40.72	86.98	2,099.54	-628.36	1,758.41	1,685.85	72.57	24.232	CC, ES	
7,800.00	7,065.00	7,326.00	6,939.89	33.83	40.61	85.73	2,097.90	-670.93	1,760.51	1,686.25	74.25	23.710		
7,900.00	7,065.00	7,303.48	6,924.44	35.67	40.58	85.23	2,097.65	-687.32	1,766.31	1,690.16	76.15	23.196		
8,000.00	7,065.00	7,273.00	6,903.20	37.61	40.55	84.54	2,097.70	-709.17	1,776.36	1,698.35	78.01	22.770		
8,100.00	7,065.00	7,231.00	6,873.29	39.65	40.51	83.58	2,098.47	-738.65	1,790.49	1,710.66	79.84	22.427		
8,200.00	7,065.00	7,172.31	6,829.90	41.76	40.48	82.19	2,099.90	-778.13	1,808.26	1,726.68	81.59	22.164		
8,300.00	7,065.00	7,099.13	6,772.75	43.94	40.47	80.38	2,100.75	-823.79	1,829.20	1,745.97	83.23	21.978		
8,400.00	7,065.00	7,017.06	6,704.55	46.18	40.49	78.22	2,098.46	-869.35	1,852.46	1,767.75	84.70	21.870		
8,500.00	7,065.00	6,965.24	6,659.89	48.46	40.50	76.81	2,095.70	-895.45	1,879.01	1,792.88	86.13	21.816		
8,600.00	7,065.00	6,945.00	6,642.16	50.79	40.51	76.25	2,094.42	-905.15	1,909.37	1,821.82	87.55	21.809	SF	
8,700.00	7,065.00	6,945.00	6,642.16	53.16	40.51	76.25	2,094.42	-905.15	1,944.30	1,855.40	88.90	21.871		
8,800.00	7,065.00	6,902.02	6,603.66	55.56	40.52	75.05	2,091.71	-924.04	1,982.35	1,892.43	89.92	22.046		

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 11-10-9H
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 11-10-9H	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													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	7,065.00	6,888.36	6,591.15	57.99	40.53	74.67	2,090.91	-929.45	2,024.84	1,933.92	90.92	22.271		
9,000.00	7,065.00	6,850.00	6,555.36	60.44	40.54	73.56	2,088.82	-943.08	2,071.57	1,979.92	91.65	22.603		
9,100.00	7,065.00	6,850.00	6,555.36	62.91	40.54	73.56	2,088.82	-943.08	2,120.94	2,028.49	92.45	22.941		
9,200.00	7,065.00	6,850.00	6,555.36	65.41	40.54	73.56	2,088.82	-943.08	2,173.80	2,080.68	93.12	23.343		
9,300.00	7,065.00	6,850.00	6,555.36	67.92	40.54	73.56	2,088.82	-943.08	2,229.90	2,136.21	93.68	23.803		
9,400.00	7,065.00	6,850.00	6,555.36	70.45	40.54	73.56	2,088.82	-943.08	2,288.99	2,194.85	94.14	24.316		
9,500.00	7,065.00	6,850.00	6,555.36	72.99	40.54	73.56	2,088.82	-943.08	2,350.84	2,256.35	94.50	24.877		
9,600.00	7,065.00	6,850.00	6,555.36	75.54	40.54	73.56	2,088.82	-943.08	2,415.26	2,320.48	94.78	25.483		
9,700.00	7,065.00	6,850.00	6,555.36	78.11	40.54	73.56	2,088.82	-943.08	2,482.04	2,387.04	94.99	26.128		
9,800.00	7,065.00	6,850.00	6,555.36	80.68	40.54	73.56	2,088.82	-943.08	2,550.98	2,455.84	95.15	26.811		
9,900.00	7,065.00	6,850.00	6,555.36	83.27	40.54	73.56	2,088.82	-943.08	2,621.93	2,526.69	95.25	27.528		
10,000.00	7,065.00	6,850.00	6,555.36	85.86	40.54	73.56	2,088.82	-943.08	2,694.73	2,599.42	95.30	28.275		
10,100.00	7,065.00	6,850.00	6,555.36	88.46	40.54	73.56	2,088.82	-943.08	2,769.22	2,673.90	95.32	29.050		
10,200.00	7,065.00	6,808.35	6,515.38	91.07	40.52	72.35	2,087.11	-954.55	2,843.01	2,747.83	95.19	29.868		
10,300.00	7,065.00	6,805.41	6,512.51	93.68	40.52	72.26	2,087.02	-955.20	2,920.17	2,825.02	95.15	30.692		
10,400.00	7,065.00	6,802.64	6,509.81	96.30	40.51	72.18	2,086.94	-955.80	2,998.65	2,903.57	95.08	31.537		
10,500.00	7,065.00	6,800.04	6,507.27	98.93	40.51	72.11	2,086.87	-956.34	3,078.36	2,983.36	95.01	32.402		
10,600.00	7,065.00	6,797.59	6,504.87	101.56	40.51	72.03	2,086.81	-956.84	3,159.22	3,064.30	94.91	33.285		
10,700.00	7,065.00	6,754.00	6,461.77	104.20	40.49	70.76	2,086.18	-963.20	3,243.39	3,148.75	94.64	34.271		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	25.04	1,698.74	793.52	1,874.93					
100.00	100.00	105.35	105.35	0.14	0.32	25.04	1,698.70	793.63	1,874.95	1,874.49	0.46	4,043.266		
200.00	200.00	240.41	240.40	0.50	0.80	25.05	1,697.76	793.52	1,874.37	1,873.07	1.30	1,441.742		
300.00	300.00	453.88	453.59	0.86	1.56	25.05	1,688.64	789.12	1,869.76	1,867.33	2.43	769.672		
400.00	400.00	638.48	637.09	1.22	2.27	24.95	1,672.17	777.79	1,858.63	1,855.18	3.46	537.935		
500.00	499.98	793.52	790.66	1.58	2.91	-13.61	1,654.92	765.43	1,843.77	1,839.39	4.38	420.981		
594.97	594.82	1,012.17	1,005.27	1.92	3.89	-14.01	1,620.04	742.76	1,821.23	1,815.70	5.53	329.228		
600.00	599.84	941.07	935.65	1.94	3.57	-13.90	1,632.10	750.50	1,819.74	1,814.44	5.30	343.338		
700.00	699.61	1,113.30	1,103.99	2.30	4.40	-14.15	1,601.27	731.34	1,791.85	1,785.57	6.28	285.506		
800.00	799.37	1,290.30	1,275.73	2.66	5.32	-14.35	1,563.57	711.20	1,761.70	1,754.43	7.27	242.357		
900.00	899.14	1,424.09	1,404.06	3.03	6.07	-14.49	1,529.80	694.12	1,726.99	1,718.89	8.10	213.113		
1,000.00	998.91	1,511.73	1,487.97	3.40	6.57	-14.61	1,507.47	682.23	1,691.94	1,683.16	8.78	192.600		
1,100.00	1,098.68	1,598.83	1,571.47	3.77	7.08	-14.75	1,485.86	670.15	1,657.37	1,647.90	9.47	175.016		
1,200.00	1,198.45	1,688.08	1,657.11	4.14	7.60	-14.91	1,464.05	657.63	1,623.09	1,612.92	10.17	159.652		
1,300.00	1,298.22	1,796.14	1,760.77	4.51	8.23	-15.12	1,437.72	642.24	1,588.82	1,577.89	10.93	145.427		
1,400.00	1,397.99	1,885.77	1,846.61	4.88	8.76	-15.28	1,415.25	629.59	1,553.96	1,542.33	11.63	133.624		
1,500.00	1,497.75	2,014.20	1,969.19	5.26	9.55	-15.55	1,381.93	610.68	1,518.06	1,505.61	12.45	121.936		
1,600.00	1,597.52	2,109.37	2,059.58	5.63	10.14	-15.84	1,357.00	594.45	1,481.06	1,467.88	13.18	112.385		
1,700.00	1,697.29	2,201.06	2,146.73	6.00	10.72	-16.15	1,333.35	578.52	1,444.33	1,430.43	13.90	103.892		
1,800.00	1,797.06	2,312.74	2,252.46	6.37	11.44	-16.59	1,303.91	557.86	1,406.67	1,391.98	14.68	95.810		
1,900.00	1,896.83	2,412.95	2,347.07	6.75	12.10	-17.03	1,277.07	538.60	1,368.45	1,353.01	15.44	88.652		
2,000.00	1,996.60	2,516.32	2,444.35	7.12	12.79	-17.52	1,248.68	518.23	1,329.48	1,313.28	16.20	82.062		
2,100.00	2,096.37	2,603.37	2,526.15	7.49	13.38	-17.97	1,224.40	501.00	1,290.19	1,273.25	16.94	76.184		
2,200.00	2,196.13	2,682.66	2,600.95	7.86	13.91	-18.37	1,202.79	485.98	1,251.83	1,234.17	17.66	70.894		
2,300.00	2,295.90	2,770.57	2,684.10	8.24	14.49	-18.82	1,179.26	469.86	1,214.22	1,195.81	18.40	65.987		
2,400.00	2,395.67	2,868.12	2,776.20	8.61	15.14	-19.39	1,153.15	451.08	1,176.35	1,157.18	19.17	61.369		
2,500.00	2,495.44	2,942.00	2,846.01	8.98	15.63	-19.87	1,133.69	436.76	1,138.99	1,119.09	19.91	57.219		
2,600.00	2,595.21	3,019.52	2,919.66	9.36	16.12	-20.37	1,114.14	422.49	1,103.10	1,082.45	20.65	53.416		
2,700.00	2,694.98	3,111.93	3,007.82	9.73	16.71	-20.99	1,091.84	406.10	1,068.47	1,047.04	21.43	49.869		
2,800.00	2,794.75	3,205.31	3,098.80	10.10	17.30	-21.68	1,069.25	388.98	1,033.72	1,011.51	22.21	46.542		
2,900.00	2,894.51	3,301.55	3,188.53	10.48	17.91	-22.41	1,045.75	371.78	999.04	976.04	23.00	43.428		
3,000.00	2,994.28	3,396.69	3,279.19	10.85	18.51	-23.14	1,021.96	355.48	964.18	940.38	23.80	40.514		
3,100.00	3,094.05	3,494.17	3,372.04	11.22	19.13	-23.91	997.19	339.14	929.19	904.59	24.60	37.773		
3,200.00	3,193.82	3,587.74	3,460.99	11.60	19.73	-24.77	973.34	322.57	894.02	868.60	25.42	35.175		
3,300.00	3,293.59	3,690.25	3,558.01	11.97	20.41	-25.96	947.44	301.97	858.65	832.38	26.27	32.682		
3,400.00	3,393.36	3,790.91	3,652.55	12.35	21.10	-27.42	921.43	279.22	822.43	795.26	27.17	30.266		
3,500.00	3,493.12	3,887.82	3,743.24	12.72	21.78	-28.98	895.67	256.81	785.82	757.72	28.11	27.958		
3,600.00	3,592.89	3,982.44	3,831.68	13.09	22.45	-30.63	869.90	235.16	749.17	720.10	29.07	25.769		
3,700.00	3,692.66	4,062.22	3,906.62	13.47	23.00	-32.01	848.22	218.49	713.50	683.44	30.06	23.735		
3,800.00	3,792.43	4,140.69	3,981.14	13.84	23.50	-33.26	827.84	204.81	679.98	648.94	31.04	21.908		
3,900.00	3,892.20	4,229.68	4,066.35	14.21	24.06	-34.62	805.96	191.37	648.49	616.49	32.00	20.264		
4,000.00	3,991.97	4,325.64	4,158.05	14.59	24.66	-36.30	782.17	176.10	617.15	584.15	33.00	18.701		
4,100.00	4,091.74	4,427.17	4,254.78	14.96	25.31	-38.37	756.50	158.98	585.84	551.79	34.05	17.206		
4,200.00	4,191.50	4,519.05	4,341.81	15.33	25.91	-40.56	732.09	142.52	553.91	518.72	35.19	15.739		
4,300.00	4,291.27	4,604.47	4,423.10	15.71	26.46	-42.75	710.43	127.73	523.99	487.59	36.41	14.393		
4,400.00	4,391.04	4,696.63	4,511.15	16.08	27.04	-45.29	688.00	112.32	496.00	458.34	37.65	13.172		
4,500.00	4,490.81	4,795.61	4,605.54	16.46	27.67	-48.31	663.13	95.93	468.32	429.36	38.96	12.022		
4,600.00	4,590.58	4,890.52	4,695.74	16.83	28.28	-51.64	638.31	79.89	441.01	400.64	40.37	10.925		
4,700.00	4,690.35	4,980.11	4,780.86	17.20	28.86	-55.17	614.99	64.50	415.47	373.58	41.89	9.918		
4,800.00	4,790.12	5,069.12	4,865.95	17.58	29.42	-58.85	593.09	50.29	392.81	349.36	43.45	9.041		
4,900.00	4,889.88	5,160.48	4,953.67	17.95	29.97	-62.84	571.61	36.50	372.87	327.85	45.02	8.283		
5,000.00	4,989.65	5,251.79	5,041.27	18.32	30.52	-67.31	550.40	21.83	355.80	309.16	46.64	7.628		

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 11-10-9H
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 11-10-9H	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)				
5,100.00	5,089.42	5,343.33	5,128.98	18.70	31.09	-72.26	529.39	6.19	342.14	293.86	48.28	7.087		
5,200.00	5,189.19	5,436.56	5,218.18	19.07	31.66	-77.71	507.95	-10.41	332.02	282.16	49.86	6.659		
5,300.00	5,288.96	5,531.83	5,309.53	19.45	32.25	-83.41	486.31	-26.62	325.16	273.86	51.30	6.339		
5,400.00	5,388.73	5,625.42	5,399.47	19.82	32.81	-89.05	465.41	-41.88	321.65	269.12	52.53	6.123		
5,436.27	5,424.91	5,658.52	5,431.31	19.95	33.00	-91.05	458.16	-47.29	321.36	268.44	52.92	6.073		
5,500.00	5,488.49	5,715.40	5,486.04	20.19	33.34	-94.46	445.91	-56.77	322.28	268.77	53.51	6.023		
5,600.00	5,588.26	5,798.55	5,565.81	20.57	33.85	-99.46	428.56	-72.53	328.77	274.62	54.15	6.072		
5,700.00	5,688.03	5,885.52	5,648.41	20.94	34.41	-104.83	409.41	-91.83	341.17	286.60	54.57	6.252		
5,800.00	5,787.80	5,990.16	5,747.38	21.31	35.10	-111.10	384.57	-115.02	356.70	301.59	55.11	6.472		
5,900.00	5,887.57	6,096.18	5,848.40	21.69	35.78	-116.81	358.91	-134.36	371.87	316.36	55.50	6.700		
6,000.00	5,987.34	6,190.64	5,938.49	22.06	36.38	-121.58	335.21	-150.02	388.31	332.69	55.62	6.981		
6,100.00	6,087.11	6,284.82	6,028.33	22.44	36.97	-125.96	311.52	-165.41	407.14	351.45	55.69	7.311		
6,200.00	6,186.87	6,380.95	6,120.22	22.81	37.57	-129.99	287.74	-180.65	427.75	371.97	55.78	7.669		
6,300.00	6,286.64	6,478.54	6,213.46	23.18	38.18	-133.79	263.05	-195.49	449.74	393.86	55.88	8.048		
6,400.00	6,386.41	6,597.35	6,326.97	23.56	38.91	-138.27	230.99	-209.57	470.74	414.57	56.17	8.381		
6,482.24	6,468.46	6,867.16	6,574.07	23.86	40.19	-151.86	135.02	-177.55	478.30	425.07	53.23	8.985		
6,500.00	6,486.19	6,898.78	6,602.09	23.93	40.26	-127.35	125.49	-166.39	475.21	422.52	52.69	9.019		
6,550.00	6,536.08	6,971.39	6,666.76	24.10	40.39	-64.80	108.04	-138.45	462.15	410.56	51.59	8.957		
6,600.00	6,585.64	7,028.58	6,717.89	24.26	40.46	-52.43	97.48	-115.12	444.77	393.84	50.93	8.733		
6,650.00	6,634.49	7,077.05	6,761.12	24.40	40.50	-51.42	89.95	-94.52	424.03	373.56	50.47	8.401		
6,700.00	6,682.26	7,120.19	6,799.27	24.53	40.53	-54.22	83.56	-75.43	401.03	350.93	50.11	8.003		
6,750.00	6,728.60	7,159.15	6,833.19	24.64	40.56	-59.10	77.61	-57.21	376.72	326.88	49.84	7.559		
6,800.00	6,773.14	7,189.33	6,858.61	24.75	40.58	-64.60	72.19	-41.88	352.47	302.51	49.96	7.055		
6,850.00	6,815.54	7,211.21	6,876.51	24.84	40.60	-69.65	67.80	-30.11	330.04	279.51	50.53	6.531		
6,900.00	6,855.49	7,226.00	6,888.36	24.92	40.61	-73.63	64.61	-21.85	311.17	259.67	51.50	6.042		
6,950.00	6,892.68	7,235.27	6,895.66	24.99	40.62	-76.31	62.52	-16.54	297.48	244.76	52.72	5.643		
7,000.00	6,926.83	7,239.56	6,899.00	25.07	40.62	-77.50	61.52	-14.04	290.29	236.30	53.99	5.377		
7,024.64	6,942.46	7,240.22	6,899.52	25.12	40.62	-77.58	61.37	-13.65	289.39	234.82	54.57	5.303 CC, ES		
7,050.00	6,957.68	7,240.04	6,899.38	25.19	40.62	-77.33	61.41	-13.75	290.35	235.24	55.10	5.269 SF		
7,100.00	6,984.98	7,237.49	6,897.39	25.42	40.62	-75.91	62.01	-15.25	297.67	241.71	55.95	5.320		
7,150.00	7,008.54	7,232.46	6,893.46	25.72	40.62	-73.40	63.16	-18.16	311.60	255.04	56.56	5.509		
7,200.00	7,028.18	7,226.00	6,888.36	26.06	40.61	-70.09	64.61	-21.85	331.05	274.00	57.05	5.803		
7,250.00	7,043.74	7,226.00	6,888.36	26.46	40.61	-67.52	64.61	-21.85	354.97	296.93	58.04	6.116		
7,300.00	7,055.11	7,204.68	6,871.22	26.91	40.59	-61.06	69.15	-33.68	381.49	323.79	57.70	6.612		
7,350.00	7,062.20	7,192.04	6,860.84	27.40	40.59	-56.20	71.67	-40.45	410.24	352.16	58.08	7.064		
7,400.00	7,064.96	7,178.12	6,849.25	27.94	40.58	-51.40	74.29	-47.70	440.15	381.64	58.51	7.523		
7,406.67	7,065.00	7,176.17	6,847.62	28.01	40.58	-50.78	74.64	-48.69	444.19	385.62	58.57	7.585		
7,500.00	7,065.00	7,150.44	6,825.71	29.15	40.56	-47.66	79.04	-61.43	505.02	445.67	59.35	8.509		
7,600.00	7,065.00	7,130.00	6,807.90	30.55	40.54	-45.32	82.15	-70.98	577.83	517.63	60.20	9.598		
7,700.00	7,065.00	7,086.38	6,769.39	32.12	40.51	-40.70	88.55	-90.46	655.47	595.63	59.84	10.954		
7,800.00	7,065.00	7,051.54	6,738.42	33.83	40.48	-37.37	93.87	-105.47	736.41	676.61	59.80	12.314		
7,900.00	7,065.00	7,014.32	6,705.13	35.67	40.44	-34.12	99.88	-121.02	819.77	760.13	59.64	13.745		
8,000.00	7,065.00	6,974.30	6,669.36	37.61	40.40	-30.88	107.44	-137.28	904.69	845.31	59.38	15.236		
8,100.00	7,065.00	6,939.00	6,637.87	39.65	40.35	-28.21	115.15	-151.23	990.87	931.61	59.26	16.722		
8,200.00	7,065.00	6,907.58	6,609.90	41.76	40.28	-25.95	123.06	-163.17	1,078.23	1,019.04	59.19	18.216		
8,300.00	7,065.00	6,881.10	6,586.40	43.94	40.22	-24.09	130.67	-172.72	1,166.75	1,107.53	59.23	19.699		
8,400.00	7,065.00	6,844.00	6,553.67	46.18	40.14	-21.56	142.77	-185.29	1,256.40	1,197.41	58.99	21.300		
8,500.00	7,065.00	6,844.00	6,553.67	48.46	40.14	-21.56	142.77	-185.29	1,346.79	1,287.23	59.56	22.613		
8,600.00	7,065.00	6,844.00	6,553.67	50.79	40.14	-21.56	142.77	-185.29	1,438.45	1,378.43	60.02	23.965		
8,700.00	7,065.00	6,844.00	6,553.67	53.16	40.14	-21.56	142.77	-185.29	1,531.16	1,470.76	60.41	25.347		
8,800.00	7,065.00	6,844.00	6,553.67	55.56	40.14	-21.56	142.77	-185.29	1,624.74	1,564.01	60.73	26.754		
8,900.00	7,065.00	6,844.00	6,553.67	57.99	40.14	-21.56	142.77	-185.29	1,719.03	1,658.03	61.00	28.181		

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 11-10-9H
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 11-10-9H	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)				
9,000.00	7,065.00	6,803.20	6,517.50	60.44	39.98	-18.91	157.53	-197.03	1,811.98	1,751.39	60.59	29.904		
9,100.00	7,065.00	6,797.68	6,512.57	62.91	39.96	-18.56	159.60	-198.38	1,906.86	1,846.11	60.75	31.390		
9,200.00	7,065.00	6,792.61	6,508.03	65.41	39.94	-18.24	161.52	-199.57	2,002.18	1,941.29	60.88	32.885		
9,300.00	7,065.00	6,787.94	6,503.84	67.92	39.92	-17.95	163.30	-200.62	2,097.88	2,036.87	61.01	34.386		
9,400.00	7,065.00	6,749.00	6,468.78	70.45	39.77	-15.62	178.63	-207.78	2,195.29	2,134.62	60.67	36.183		
9,500.00	7,065.00	6,749.00	6,468.78	72.99	39.77	-15.62	178.63	-207.78	2,291.33	2,230.48	60.85	37.657		
9,600.00	7,065.00	6,749.00	6,468.78	75.54	39.77	-15.62	178.63	-207.78	2,387.69	2,326.68	61.00	39.140		
9,700.00	7,065.00	6,749.00	6,468.78	78.11	39.77	-15.62	178.63	-207.78	2,484.33	2,423.19	61.15	40.629		
9,800.00	7,065.00	6,749.00	6,468.78	80.68	39.77	-15.62	178.63	-207.78	2,581.24	2,519.96	61.28	42.125		
9,900.00	7,065.00	6,749.00	6,468.78	83.27	39.77	-15.62	178.63	-207.78	2,678.37	2,616.97	61.40	43.625		
10,000.00	7,065.00	6,749.00	6,468.78	85.86	39.77	-15.62	178.63	-207.78	2,775.70	2,714.20	61.51	45.129		
10,100.00	7,065.00	6,749.00	6,468.78	88.46	39.77	-15.62	178.63	-207.78	2,873.22	2,811.61	61.61	46.637		
10,200.00	7,065.00	6,749.00	6,468.78	91.07	39.77	-15.62	178.63	-207.78	2,970.90	2,909.20	61.70	48.147		
10,300.00	7,065.00	6,749.00	6,468.78	93.68	39.77	-15.62	178.63	-207.78	3,068.74	3,006.94	61.80	49.660		
10,400.00	7,065.00	6,749.00	6,468.78	96.30	39.77	-15.62	178.63	-207.78	3,166.70	3,104.82	61.88	51.174		
10,500.00	7,065.00	6,749.00	6,468.78	98.93	39.77	-15.62	178.63	-207.78	3,264.79	3,202.83	61.96	52.690		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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	24.32	1,757.39	794.35	1,928.58					
100.00	100.00	90.06	90.06	0.14	0.27	24.32	1,757.67	794.47	1,928.95	1,928.54	0.41	4,696.819		
200.00	200.00	189.24	189.23	0.50	0.62	24.32	1,758.65	794.82	1,929.99	1,928.87	1.12	1,718.223		
300.00	300.00	387.67	387.61	0.86	1.31	24.28	1,756.41	792.41	1,928.61	1,926.44	2.17	887.085		
400.00	400.00	550.85	550.38	1.22	1.89	24.12	1,749.85	783.31	1,922.60	1,919.49	3.11	618.885		
500.00	499.98	679.77	678.59	1.58	2.38	-14.54	1,743.26	771.51	1,912.47	1,908.54	3.93	486.510		
594.97	594.82	797.97	795.66	1.92	2.85	-15.01	1,737.53	756.34	1,898.63	1,893.90	4.72	401.916		
600.00	599.84	804.20	801.83	1.94	2.88	-15.03	1,737.24	755.42	1,897.78	1,893.01	4.77	397.556		
700.00	699.61	927.01	922.71	2.30	3.40	-15.62	1,731.67	734.59	1,880.34	1,874.73	5.61	335.330		
800.00	799.37	1,015.88	1,009.85	2.66	3.80	-16.13	1,728.32	717.45	1,862.78	1,856.44	6.34	294.039		
900.00	899.14	1,148.18	1,139.07	3.03	4.43	-16.95	1,722.68	689.63	1,844.26	1,836.99	7.27	253.753		
1,000.00	998.91	1,250.54	1,238.63	3.40	4.95	-17.65	1,717.90	666.35	1,825.01	1,816.91	8.10	225.441		
1,100.00	1,098.68	1,389.84	1,373.58	3.77	5.68	-18.69	1,710.86	632.55	1,805.27	1,796.16	9.11	198.116		
1,200.00	1,198.45	1,499.86	1,479.44	4.14	6.30	-19.58	1,703.79	603.47	1,783.68	1,773.65	10.03	177.846		
1,300.00	1,298.22	1,590.68	1,566.51	4.51	6.82	-20.39	1,698.30	578.24	1,762.33	1,751.46	10.88	162.016		
1,400.00	1,397.99	1,697.03	1,668.56	4.88	7.44	-21.32	1,690.98	549.22	1,740.75	1,728.94	11.81	147.418		
1,500.00	1,497.75	1,776.09	1,744.70	5.26	7.90	-22.00	1,685.59	528.63	1,720.00	1,707.39	12.61	136.431		
1,600.00	1,597.52	1,874.77	1,839.83	5.63	8.47	-22.86	1,678.84	503.26	1,699.70	1,686.19	13.50	125.871		
1,700.00	1,697.29	2,007.94	1,967.45	6.00	9.28	-24.12	1,669.17	466.52	1,678.92	1,664.32	14.60	114.994		
1,800.00	1,797.06	2,129.64	2,082.24	6.37	10.09	-25.50	1,659.28	427.35	1,656.53	1,640.82	15.71	105.414		
1,900.00	1,896.83	2,236.55	2,181.92	6.75	10.85	-26.84	1,649.87	389.87	1,633.42	1,616.62	16.80	97.236		
2,000.00	1,996.60	2,333.04	2,272.13	7.12	11.53	-28.06	1,640.63	356.89	1,610.57	1,592.74	17.83	90.323		
2,100.00	2,096.37	2,435.04	2,367.79	7.49	12.25	-29.33	1,630.20	323.07	1,588.05	1,569.15	18.89	84.051		
2,200.00	2,196.13	2,539.19	2,465.49	7.86	12.98	-30.65	1,618.64	288.88	1,565.48	1,545.51	19.97	78.386		
2,300.00	2,295.90	2,623.38	2,544.76	8.24	13.56	-31.71	1,608.86	262.29	1,543.36	1,522.43	20.93	73.722		
2,400.00	2,395.67	2,704.73	2,621.96	8.61	14.10	-32.69	1,599.74	238.31	1,522.60	1,500.73	21.87	69.624		
2,500.00	2,495.44	2,810.40	2,722.66	8.98	14.79	-33.94	1,588.04	208.52	1,502.78	1,479.87	22.92	65.579		
2,600.00	2,595.21	2,885.97	2,794.30	9.36	15.28	-34.90	1,579.16	186.16	1,482.88	1,459.04	23.84	62.212		
2,700.00	2,694.98	2,941.00	2,846.49	9.73	15.65	-35.62	1,574.13	169.44	1,465.90	1,441.24	24.66	59.454		
2,800.00	2,794.75	3,014.01	2,915.35	10.10	16.16	-36.66	1,568.97	145.77	1,451.51	1,425.90	25.61	56.686		
2,900.00	2,894.51	3,100.16	2,995.99	10.48	16.78	-37.99	1,563.89	115.85	1,438.99	1,412.33	26.66	53.976		
3,000.00	2,994.28	3,194.71	3,084.73	10.85	17.46	-39.43	1,558.24	83.75	1,427.43	1,399.66	27.77	51.395		
3,100.00	3,094.05	3,287.67	3,171.85	11.22	18.12	-40.88	1,552.53	51.82	1,416.72	1,387.85	28.88	49.057		
3,200.00	3,193.82	3,382.09	3,260.32	11.60	18.81	-42.38	1,546.63	19.34	1,406.98	1,376.98	30.00	46.892		
3,300.00	3,293.59	3,476.27	3,348.05	11.97	19.51	-43.95	1,540.47	-14.34	1,398.13	1,366.99	31.14	44.901		
3,400.00	3,393.36	3,584.12	3,448.87	12.35	20.31	-45.72	1,532.91	-51.89	1,389.96	1,357.59	32.36	42.947		
3,500.00	3,493.12	3,684.13	3,541.97	12.72	21.06	-47.42	1,524.62	-87.47	1,381.84	1,348.30	33.54	41.198		
3,600.00	3,592.89	3,775.37	3,626.91	13.09	21.75	-48.98	1,516.83	-119.85	1,374.70	1,340.05	34.65	39.673		
3,700.00	3,692.66	3,878.14	3,722.66	13.47	22.52	-50.75	1,507.80	-156.06	1,368.53	1,332.70	35.83	38.191		
3,800.00	3,792.43	3,976.09	3,814.03	13.84	23.26	-52.43	1,498.44	-190.11	1,362.80	1,325.83	36.97	36.865		
3,900.00	3,892.20	4,087.05	3,918.07	14.21	24.06	-54.29	1,487.30	-227.01	1,357.52	1,319.36	38.16	35.577		
4,000.00	3,991.97	4,181.00	4,007.05	14.59	24.70	-55.78	1,477.39	-255.49	1,352.13	1,312.95	39.18	34.512		
4,100.00	4,091.74	4,257.49	4,079.44	14.96	25.23	-57.00	1,469.64	-278.94	1,348.33	1,308.25	40.08	33.637		
4,200.00	4,191.50	4,344.69	4,161.40	15.33	25.85	-58.46	1,461.52	-307.58	1,346.92	1,305.85	41.06	32.801		
4,258.01	4,249.38	4,394.89	4,208.62	15.55	26.21	-59.30	1,456.87	-323.96	1,346.61	1,304.99	41.62	32.352		
4,300.00	4,291.27	4,427.52	4,239.28	15.71	26.45	-59.85	1,453.95	-334.74	1,346.80	1,304.80	42.00	32.068		
4,400.00	4,391.04	4,506.82	4,313.60	16.08	27.03	-61.20	1,447.19	-361.57	1,348.73	1,305.84	42.90	31.442		
4,500.00	4,490.81	4,593.12	4,394.12	16.46	27.67	-62.70	1,440.09	-391.80	1,352.56	1,308.73	43.83	30.858		
4,600.00	4,590.58	4,687.55	4,482.45	16.83	28.38	-64.30	1,432.43	-424.27	1,357.45	1,312.64	44.82	30.287		
4,700.00	4,690.35	4,774.58	4,563.32	17.20	29.04	-65.83	1,424.81	-455.51	1,363.71	1,317.98	45.73	29.819		
4,800.00	4,790.12	4,870.95	4,652.57	17.58	29.80	-67.55	1,416.02	-490.81	1,371.31	1,324.59	46.72	29.354		
4,900.00	4,889.88	4,988.22	4,761.74	17.95	30.69	-69.56	1,404.56	-532.05	1,378.94	1,331.10	47.84	28.824		

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 11-10-9H
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 11-10-9H	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	4,989.65	5,090.61	4,857.84	18.32	31.43	-71.23	1,394.14	-565.83	1,386.32	1,337.52	48.80	28.411		
5,100.00	5,089.42	5,188.00	4,949.62	18.70	32.12	-72.77	1,384.59	-596.96	1,394.53	1,344.85	49.67	28.073		
5,200.00	5,189.19	5,279.53	5,036.46	19.07	32.74	-74.13	1,376.34	-624.68	1,403.36	1,352.88	50.48	27.800		
5,300.00	5,288.96	5,354.66	5,107.68	19.45	33.26	-75.23	1,369.94	-647.71	1,413.73	1,362.59	51.14	27.646		
5,400.00	5,388.73	5,418.00	5,167.49	19.82	33.70	-76.16	1,365.24	-668.02	1,426.62	1,374.95	51.67	27.611		
5,500.00	5,488.49	5,504.86	5,249.16	20.19	34.33	-77.45	1,359.20	-696.97	1,441.51	1,389.12	52.39	27.515		
5,600.00	5,588.26	5,642.34	5,379.37	20.57	35.27	-79.36	1,349.18	-739.88	1,455.49	1,401.97	53.52	27.197		
5,700.00	5,688.03	5,721.37	5,454.21	20.94	35.81	-80.45	1,342.82	-764.46	1,469.89	1,415.75	54.13	27.153		
5,800.00	5,787.80	5,804.22	5,938.44	21.31	47.13	-43.58	1,186.16	195.92	1,458.42	1,411.18	47.24	30.870		
5,900.00	5,887.57	5,893.54	6,938.73	21.69	47.25	-42.95	1,186.07	205.24	1,378.09	1,328.80	49.28	27.962		
6,000.00	5,987.34	6,102.56	6,939.00	22.06	47.37	-42.34	1,185.97	214.25	1,300.43	1,248.93	51.50	25.251		
6,100.00	6,087.11	6,111.29	6,939.25	22.44	47.49	-41.75	1,185.87	222.98	1,225.97	1,172.07	53.90	22.747		
6,200.00	6,186.87	6,119.75	6,939.49	22.81	47.61	-41.18	1,185.77	231.43	1,155.32	1,098.85	56.46	20.462		
6,300.00	6,286.64	6,127.94	6,939.71	23.18	47.72	-40.62	1,185.66	239.63	1,089.22	1,030.05	59.17	18.409		
6,400.00	6,386.41	6,135.89	6,939.91	23.56	47.83	-40.08	1,185.55	247.57	1,028.55	966.59	61.97	16.599		
6,482.24	6,468.46	6,142.24	6,940.07	23.86	47.91	-39.65	1,185.46	253.92	983.45	919.18	64.27	15.301		
6,500.00	6,486.19	6,143.27	6,940.09	23.93	47.93	-12.12	1,185.45	254.95	974.34	909.58	64.76	15.045		
6,550.00	6,536.08	6,142.76	6,940.08	24.10	47.92	57.88	1,185.45	254.44	950.05	883.99	66.06	14.382		
6,600.00	6,585.64	6,137.28	6,939.94	24.26	47.85	76.93	1,185.53	248.96	928.01	860.79	67.22	13.806		
6,650.00	6,634.49	6,126.98	6,939.68	24.40	47.71	84.38	1,185.68	238.67	908.48	840.27	68.21	13.318		
6,700.00	6,682.26	6,112.05	6,939.27	24.53	47.50	88.19	1,185.86	223.74	891.63	822.61	69.02	12.918		
6,750.00	6,728.60	6,092.68	6,938.71	24.64	47.24	90.19	1,186.08	204.39	877.54	807.92	69.63	12.604		
6,800.00	6,773.14	6,069.71	6,938.01	24.75	46.94	91.11	1,186.28	181.42	866.20	796.16	70.03	12.368		
6,850.00	6,815.54	6,042.62	6,937.34	24.84	46.61	91.23	1,186.45	154.35	857.49	787.25	70.25	12.207		
6,900.00	6,855.49	6,010.91	6,936.82	24.92	46.22	90.73	1,186.53	122.64	851.18	780.93	70.26	12.115		
6,950.00	6,892.68	6,975.90	6,936.53	24.99	45.80	89.82	1,186.48	87.63	846.95	776.83	70.12	12.078 SF		
7,000.00	6,926.83	7,939.72	6,936.19	25.07	45.40	88.71	1,186.41	51.45	844.53	774.63	69.90	12.082		
7,050.00	6,957.68	7,900.95	6,935.67	25.19	44.97	87.42	1,186.33	12.69	843.60	774.01	69.59	12.122 ES		
7,063.84	6,965.60	7,889.64	6,935.48	25.25	44.85	87.03	1,186.31	1.38	843.56	774.06	69.50	12.137 CC		
7,100.00	6,984.98	7,858.12	6,934.93	25.42	44.55	85.97	1,186.21	-30.14	843.79	774.52	69.27	12.182		
7,150.00	7,008.54	7,812.58	6,934.08	25.72	44.11	84.54	1,185.99	-75.67	844.66	775.73	68.93	12.253		
7,200.00	7,028.18	7,759.35	6,933.28	26.06	43.65	83.09	1,185.49	-128.89	845.77	777.12	68.66	12.319		
7,250.00	7,043.74	7,702.00	6,933.47	26.46	43.18	81.92	1,184.41	-186.23	846.43	777.97	68.45	12.365		
7,300.00	7,055.11	7,660.69	6,932.76	26.91	42.89	81.25	1,183.43	-227.52	846.86	778.47	68.39	12.384		
7,350.00	7,062.20	7,620.51	6,929.63	27.40	42.62	80.63	1,182.51	-267.56	847.50	779.12	68.38	12.393		
7,400.00	7,064.96	7,583.01	6,924.68	27.94	42.38	80.08	1,181.74	-304.72	848.35	779.89	68.45	12.393		
7,406.67	7,065.00	7,578.19	6,923.93	28.01	42.35	80.02	1,181.66	-309.48	848.48	780.01	68.47	12.392		
7,500.00	7,065.00	7,511.00	6,910.99	29.15	41.97	79.16	1,181.23	-375.40	851.94	783.19	68.76	12.390		
7,600.00	7,065.00	7,437.93	6,890.90	30.55	41.64	77.85	1,181.57	-445.61	858.94	789.76	69.18	12.415		
7,700.00	7,065.00	7,368.56	6,865.42	32.12	41.38	76.21	1,182.23	-510.10	869.60	799.97	69.63	12.490		
7,800.00	7,065.00	7,303.92	6,836.18	33.83	41.20	74.36	1,183.07	-567.72	884.57	814.56	70.01	12.636		
7,900.00	7,065.00	7,242.13	6,804.30	35.67	41.07	72.40	1,184.16	-620.63	904.23	833.93	70.30	12.862		
8,000.00	7,065.00	7,184.74	6,771.48	37.61	40.99	70.42	1,185.31	-667.68	928.88	858.41	70.47	13.181		
8,100.00	7,065.00	7,130.00	6,736.83	39.65	40.93	68.38	1,186.17	-710.03	958.80	888.35	70.45	13.609		
8,200.00	7,065.00	7,081.97	6,704.01	41.76	40.92	66.50	1,186.57	-745.08	994.00	923.70	70.30	14.140		
8,300.00	7,065.00	7,035.00	6,669.99	43.94	40.91	64.59	1,186.51	-777.46	1,034.35	964.38	69.98	14.781		
8,400.00	7,065.00	6,999.63	6,643.29	46.18	40.92	63.14	1,186.45	-800.65	1,079.91	1,010.29	69.62	15.511		
8,500.00	7,065.00	6,966.11	6,617.26	48.46	40.93	61.76	1,186.66	-821.78	1,130.51	1,061.29	69.21	16.334		
8,600.00	7,065.00	6,940.00	6,596.53	50.79	40.93	60.69	1,187.00	-837.65	1,185.73	1,116.91	68.82	17.230		
8,700.00	7,065.00	6,940.00	6,596.53	53.16	40.93	60.69	1,187.00	-837.65	1,246.01	1,177.45	68.56	18.175		
8,800.00	7,065.00	6,896.58	6,561.06	55.56	40.96	58.95	1,188.52	-862.62	1,309.01	1,240.92	68.10	19.223		
8,900.00	7,065.00	6,878.70	6,546.08	57.99	40.97	58.25	1,189.62	-872.33	1,376.27	1,308.48	67.79	20.303		

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 11-10-9H
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 11-10-9H	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)				
9,000.00	7,065.00	6,844.00	6,516.45	60.44	40.98	56.92	1,192.52	-890.15	1,447.05	1,379.60	67.44	21.456		
9,100.00	7,065.00	6,844.00	6,516.45	62.91	40.98	56.92	1,192.52	-890.15	1,519.88	1,452.61	67.27	22.592		
9,200.00	7,065.00	6,844.00	6,516.45	65.41	40.98	56.92	1,192.52	-890.15	1,595.66	1,528.55	67.12	23.774		
9,300.00	7,065.00	6,844.00	6,516.45	67.92	40.98	56.92	1,192.52	-890.15	1,673.99	1,607.01	66.98	24.994		
9,400.00	7,065.00	6,806.12	6,483.32	70.45	41.00	55.51	1,196.75	-907.99	1,753.01	1,686.24	66.78	26.252		
9,500.00	7,065.00	6,794.43	6,472.92	72.99	41.01	55.09	1,198.26	-913.14	1,834.41	1,767.75	66.66	27.518		
9,600.00	7,065.00	6,749.00	6,431.92	75.54	41.03	53.51	1,205.03	-931.47	1,918.54	1,852.02	66.52	28.844		
9,700.00	7,065.00	6,749.00	6,431.92	78.11	41.03	53.51	1,205.03	-931.47	2,002.16	1,935.69	66.47	30.121		
9,800.00	7,065.00	6,749.00	6,431.92	80.68	41.03	53.51	1,205.03	-931.47	2,087.23	2,020.80	66.43	31.420		
9,900.00	7,065.00	6,749.00	6,431.92	83.27	41.03	53.51	1,205.03	-931.47	2,173.56	2,107.16	66.40	32.736		
10,000.00	7,065.00	6,749.00	6,431.92	85.86	41.03	53.51	1,205.03	-931.47	2,261.02	2,194.66	66.37	34.068		
10,100.00	7,065.00	6,749.00	6,431.92	88.46	41.03	53.51	1,205.03	-931.47	2,349.49	2,283.14	66.34	35.414		
10,200.00	7,065.00	6,749.00	6,431.92	91.07	41.03	53.51	1,205.03	-931.47	2,438.84	2,372.52	66.32	36.773		
10,300.00	7,065.00	6,749.00	6,431.92	93.68	41.03	53.51	1,205.03	-931.47	2,528.99	2,462.69	66.30	38.142		
10,400.00	7,065.00	6,749.00	6,431.92	96.30	41.03	53.51	1,205.03	-931.47	2,619.86	2,553.57	66.29	39.521		
10,500.00	7,065.00	6,710.52	6,396.40	98.93	41.03	52.23	1,211.50	-944.77	2,709.95	2,643.65	66.30	40.875		
10,600.00	7,065.00	6,704.61	6,390.88	101.56	41.03	52.04	1,212.52	-946.62	2,801.58	2,735.28	66.30	42.256		
10,700.00	7,065.00	6,699.02	6,385.65	104.20	41.03	51.85	1,213.49	-948.32	2,893.70	2,827.40	66.31	43.642		
10,800.00	7,065.00	6,693.73	6,380.68	106.83	41.02	51.68	1,214.41	-949.88	2,986.28	2,919.97	66.31	45.033		
10,900.00	7,065.00	6,654.00	6,343.00	109.48	41.02	50.42	1,221.50	-960.27	3,080.41	3,014.06	66.34	46.431		
11,000.00	7,065.00	6,654.00	6,343.00	112.13	41.02	50.42	1,221.50	-960.27	3,173.49	3,107.13	66.36	47.824		
11,100.00	7,065.00	6,654.00	6,343.00	114.78	41.02	50.42	1,221.50	-960.27	3,266.98	3,200.61	66.37	49.222		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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)				
0.00	0.00	6.00	6.00	0.00	0.00	24.67	1,728.61	794.07	1,902.27					
100.00	100.00	99.52	99.52	0.14	0.30	24.67	1,728.84	793.92	1,902.43	1,901.98	0.44	4,293.591		
200.00	200.00	215.47	215.46	0.50	0.71	24.64	1,729.31	793.09	1,902.53	1,901.31	1.21	1,566.800		
300.00	300.00	416.17	415.96	0.86	1.43	24.49	1,725.53	785.84	1,899.24	1,896.94	2.30	827.114		
400.00	400.00	517.70	517.19	1.22	1.81	24.33	1,721.97	778.77	1,893.15	1,890.13	3.02	627.117		
500.00	499.98	650.68	649.55	1.58	2.32	-14.35	1,718.07	766.68	1,885.16	1,881.28	3.87	486.681		
594.97	594.82	896.03	892.11	1.92	3.35	-15.23	1,700.99	734.52	1,869.24	1,864.06	5.17	361.274		
600.00	599.84	907.68	903.55	1.94	3.40	-15.28	1,699.81	732.66	1,868.12	1,862.87	5.25	356.019		
700.00	699.61	1,122.00	1,112.30	2.30	4.44	-16.24	1,672.42	692.77	1,842.43	1,835.98	6.45	285.764		
800.00	799.37	1,283.99	1,268.33	2.66	5.31	-17.05	1,645.22	658.90	1,812.65	1,805.20	7.45	243.161		
900.00	899.14	1,381.57	1,361.81	3.03	5.87	-17.55	1,626.76	637.86	1,780.73	1,772.52	8.21	216.778		
1,000.00	998.91	1,476.74	1,452.95	3.40	6.42	-18.06	1,608.83	617.09	1,748.89	1,739.91	8.98	194.837		
1,100.00	1,098.68	1,558.99	1,531.76	3.77	6.90	-18.52	1,593.50	599.27	1,717.43	1,707.73	9.70	177.119		
1,200.00	1,198.45	1,645.62	1,614.88	4.14	7.41	-19.02	1,577.91	580.48	1,686.66	1,676.21	10.44	161.509		
1,300.00	1,298.22	1,756.42	1,721.05	4.51	8.07	-19.72	1,558.01	555.83	1,655.92	1,644.62	11.29	146.637		
1,400.00	1,397.99	1,856.72	1,816.74	4.88	8.68	-20.41	1,539.36	532.26	1,624.29	1,612.17	12.12	134.040		
1,500.00	1,497.75	1,978.55	1,932.63	5.26	9.45	-21.32	1,516.39	502.54	1,592.45	1,579.40	13.04	122.103		
1,600.00	1,597.52	2,152.41	2,094.81	5.63	10.68	-22.98	1,479.80	451.81	1,557.19	1,542.96	14.23	109.449		
1,700.00	1,697.29	2,290.19	2,219.96	6.00	11.76	-24.65	1,447.55	404.09	1,518.43	1,503.09	15.34	98.969		
1,800.00	1,797.06	2,372.11	2,293.87	6.37	12.44	-25.74	1,427.76	374.83	1,479.24	1,462.98	16.26	90.954		
1,900.00	1,896.83	2,468.13	2,380.51	6.75	13.23	-27.06	1,404.15	340.82	1,440.37	1,423.10	17.26	83.431		
2,000.00	1,996.60	2,562.49	2,465.60	7.12	14.01	-28.40	1,380.34	307.71	1,401.63	1,383.35	18.28	76.682		
2,100.00	2,096.37	2,643.61	2,539.00	7.49	14.68	-29.58	1,359.61	280.08	1,363.53	1,344.28	19.25	70.834		
2,200.00	2,196.13	2,727.21	2,615.06	7.86	15.35	-30.80	1,338.27	252.72	1,326.42	1,306.18	20.23	65.551		
2,300.00	2,295.90	2,811.92	2,692.49	8.24	16.03	-32.05	1,316.64	226.03	1,290.22	1,268.98	21.24	60.744		
2,400.00	2,395.67	2,915.76	2,787.44	8.61	16.87	-33.65	1,289.84	193.68	1,254.55	1,232.21	22.34	56.156		
2,500.00	2,495.44	3,002.94	2,866.51	8.98	17.58	-35.13	1,266.69	165.17	1,218.65	1,195.24	23.41	52.052		
2,600.00	2,595.21	3,083.09	2,939.66	9.36	18.22	-36.50	1,245.71	140.01	1,184.13	1,159.65	24.48	48.374		
2,700.00	2,694.98	3,164.01	3,014.01	9.73	18.87	-37.90	1,224.90	115.81	1,151.04	1,125.48	25.56	45.038		
2,800.00	2,794.75	3,245.54	3,089.45	10.10	19.49	-39.30	1,204.37	92.63	1,119.44	1,092.81	26.63	42.033		
2,900.00	2,894.51	3,329.23	3,167.45	10.48	20.10	-40.73	1,183.75	70.41	1,089.27	1,061.56	27.71	39.312		
3,000.00	2,994.28	3,417.47	3,250.12	10.85	20.72	-42.23	1,162.32	48.22	1,060.30	1,031.51	28.79	36.829		
3,100.00	3,094.05	3,506.39	3,333.69	11.22	21.35	-43.78	1,140.94	26.65	1,032.36	1,002.47	29.89	34.541		
3,200.00	3,193.82	3,595.23	3,417.23	11.60	21.97	-45.39	1,119.79	5.07	1,005.49	974.49	31.01	32.430		
3,300.00	3,293.59	3,697.60	3,512.65	11.97	22.72	-47.51	1,094.90	-22.38	979.28	947.04	32.24	30.377		
3,400.00	3,393.36	3,774.95	3,583.82	12.35	23.33	-49.35	1,075.76	-45.85	954.20	920.72	33.48	28.504		
3,500.00	3,493.12	3,861.93	3,663.46	12.72	24.02	-51.59	1,054.95	-73.95	931.62	896.82	34.81	26.767		
3,600.00	3,592.89	3,953.79	3,747.41	13.09	24.77	-54.07	1,032.64	-103.84	910.56	874.37	36.18	25.164		
3,700.00	3,692.66	4,038.36	3,824.74	13.47	25.45	-56.43	1,012.05	-131.21	891.34	853.81	37.53	23.751		
3,800.00	3,792.43	4,123.16	3,902.81	13.84	26.12	-58.80	992.30	-157.78	874.80	835.95	38.85	22.520		
3,900.00	3,892.20	4,210.06	3,983.65	14.21	26.78	-61.16	972.81	-182.99	860.30	820.18	40.12	21.442		
4,000.00	3,991.97	4,289.84	4,058.08	14.59	27.37	-63.35	955.84	-206.15	848.68	807.35	41.33	20.535		
4,100.00	4,091.74	4,376.35	4,138.17	14.96	28.03	-65.89	937.32	-233.10	839.76	797.18	42.58	19.723		
4,200.00	4,191.50	4,457.62	4,212.86	15.33	28.68	-68.40	919.83	-259.92	833.77	789.99	43.78	19.046		
4,300.00	4,291.27	4,547.91	4,295.91	15.71	29.39	-71.20	900.85	-289.82	830.64	785.64	44.99	18.462		
4,394.43	4,385.48	4,634.51	4,375.80	16.06	30.08	-73.86	882.73	-317.94	829.67	783.58	46.10	17.999		
4,400.00	4,391.04	4,639.61	4,380.49	16.08	30.12	-74.02	881.65	-319.60	829.67	783.52	46.16	17.974		
4,500.00	4,490.81	4,737.44	4,470.43	16.46	30.90	-77.07	860.28	-351.62	830.62	783.29	47.33	17.550		
4,600.00	4,590.58	4,828.00	4,553.51	16.83	31.62	-79.92	839.69	-381.20	833.39	785.02	48.37	17.230		
4,700.00	4,690.35	4,919.81	4,637.94	17.20	32.36	-82.76	819.01	-410.74	838.48	789.13	49.35	16.991		
4,800.00	4,790.12	5,015.55	4,726.18	17.58	33.11	-85.65	797.39	-440.94	845.48	795.20	50.29	16.813		
4,900.00	4,889.88	5,105.19	4,809.04	17.95	33.81	-88.29	777.19	-468.55	854.27	803.18	51.10	16.718		

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 11-10-9H
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 11-10-9H	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	4,989.65	5,199.33	4,896.03	18.32	34.54	-91.01	755.90	-497.58	865.23	813.34	51.88	16.676		
5,100.00	5,089.42	5,283.05	4,973.67	18.70	35.18	-93.33	737.40	-522.82	877.99	825.48	52.51	16.721		
5,200.00	5,189.19	5,374.95	5,058.65	19.07	35.89	-95.84	717.25	-551.42	893.53	840.38	53.16	16.809		
5,300.00	5,288.96	5,493.58	5,169.52	19.45	36.76	-98.83	692.15	-585.30	909.18	855.17	54.01	16.834		
5,400.00	5,388.73	5,590.22	5,260.87	19.82	37.42	-101.04	672.64	-610.10	924.29	869.68	54.61	16.926		
5,500.00	5,488.49	5,716.58	5,381.21	20.19	38.24	-103.71	648.10	-639.77	939.19	883.80	55.39	16.955		
5,600.00	5,588.26	5,814.85	5,475.23	20.57	38.85	-105.68	628.91	-660.91	953.47	897.54	55.93	17.047		
5,700.00	5,688.03	5,936.76	5,592.55	20.94	39.56	-107.98	605.04	-683.86	966.23	909.65	56.58	17.078		
5,800.00	5,787.80	6,025.46	5,678.71	21.31	40.04	-109.43	590.45	-699.07	979.47	922.44	57.03	17.175		
5,900.00	5,887.57	6,121.50	5,772.44	21.69	40.53	-110.80	577.54	-715.46	994.17	936.65	57.51	17.286		
6,000.00	5,987.34	6,240.20	5,888.88	22.06	41.08	-112.32	563.06	-733.41	1,007.90	949.79	58.11	17.346		
6,100.00	6,087.11	6,359.59	6,006.99	22.44	41.56	-113.49	553.26	-747.64	1,020.00	961.31	58.69	17.380		
6,200.00	6,186.87	6,491.96	6,138.83	22.81	41.98	-114.36	548.56	-758.38	1,029.83	970.55	59.28	17.373		
6,300.00	6,286.64	8,242.17	7,260.92	23.18	44.43	-61.93	542.13	206.94	996.55	964.95	31.60	31.537		
6,400.00	6,386.41	8,247.48	7,261.07	23.56	44.46	-60.48	542.41	212.24	898.73	866.23	32.49	27.659		
6,482.24	6,468.46	8,252.07	7,261.20	23.86	44.50	-59.20	542.65	216.83	818.64	785.26	33.38	24.526		
6,500.00	6,486.19	8,252.88	7,261.23	23.93	44.50	-25.53	542.69	217.64	801.37	767.78	33.59	23.858		
6,550.00	6,536.08	8,252.92	7,261.23	24.10	44.50	62.24	542.70	217.67	752.77	718.56	34.21	22.003		
6,600.00	6,585.64	8,249.53	7,261.13	24.26	44.48	96.02	542.52	214.29	704.51	669.63	34.88	20.199		
6,650.00	6,634.49	8,242.57	7,260.93	24.40	44.43	113.76	542.16	207.34	656.99	621.39	35.59	18.458		
6,700.00	6,682.26	8,231.95	7,260.67	24.53	44.36	124.47	541.61	196.74	610.63	574.26	36.37	16.792		
6,750.00	6,728.60	8,217.58	7,260.39	24.64	44.26	131.28	540.87	182.39	565.87	528.67	37.20	15.212		
6,800.00	6,773.14	8,199.44	7,260.14	24.75	44.14	135.72	539.96	164.28	523.15	485.05	38.10	13.730		
6,850.00	6,815.54	8,179.00	7,260.01	24.84	44.01	138.72	538.95	143.86	482.91	443.82	39.08	12.357		
6,900.00	6,855.49	8,151.18	7,259.99	24.92	43.87	140.32	537.76	116.06	445.51	405.36	40.15	11.097		
6,950.00	6,892.68	8,121.61	7,260.07	24.99	43.72	141.23	536.86	86.51	411.36	370.04	41.32	9.956		
7,000.00	6,926.83	8,089.01	7,260.26	25.07	43.56	141.51	536.31	53.92	380.81	338.23	42.58	8.943		
7,050.00	6,957.68	8,039.62	7,259.83	25.19	43.36	140.31	536.08	4.53	353.56	309.48	44.07	8.022		
7,100.00	6,984.98	7,987.11	7,256.97	25.42	43.18	138.52	536.18	-47.89	328.59	282.68	45.90	7.158		
7,150.00	7,008.54	7,928.45	7,249.87	25.72	43.02	135.70	537.08	-106.10	305.56	257.20	48.36	6.319		
7,200.00	7,028.18	7,873.38	7,238.76	26.06	42.89	132.40	538.94	-159.99	284.44	233.22	51.22	5.553		
7,250.00	7,043.74	7,820.86	7,224.80	26.46	42.80	128.73	541.13	-210.56	265.80	211.56	54.24	4.900		
7,300.00	7,055.11	7,767.99	7,207.62	26.91	42.73	124.49	543.54	-260.50	249.91	192.52	57.39	4.355		
7,350.00	7,062.20	7,716.40	7,187.76	27.40	42.66	119.90	545.70	-308.05	236.60	176.27	60.33	3.921		
7,400.00	7,064.96	7,660.35	7,162.62	27.94	42.64	114.30	547.68	-358.09	225.84	162.46	63.38	3.563		
7,406.67	7,065.00	7,653.08	7,159.04	28.01	42.63	113.53	547.89	-364.41	224.56	160.82	63.74	3.523		
7,500.00	7,065.00	7,559.79	7,106.75	29.15	42.61	99.93	549.33	-441.56	209.02	141.53	67.49	3.097		
7,570.79	7,065.00	7,500.73	7,067.94	30.14	42.62	89.14	548.84	-486.03	204.16	136.60	67.55	3.022 CC, ES, SF		
7,600.00	7,065.00	7,479.23	7,053.01	30.55	42.63	84.96	548.46	-501.49	205.13	138.45	66.68	3.076		
7,700.00	7,065.00	7,416.00	7,007.40	32.12	42.66	72.58	546.88	-545.26	223.64	162.55	61.09	3.661		
7,800.00	7,065.00	7,355.37	6,961.23	33.83	42.70	61.39	545.15	-584.49	263.90	209.04	54.86	4.811		
7,900.00	7,065.00	7,321.00	6,933.97	35.67	42.72	55.65	544.24	-605.40	320.95	268.90	52.05	6.166		
8,000.00	7,065.00	7,270.05	6,891.91	37.61	42.75	48.13	543.26	-634.12	388.58	338.18	50.40	7.710		
8,100.00	7,065.00	7,226.00	6,853.91	39.65	42.78	42.60	542.92	-656.39	464.47	414.32	50.15	9.262		
8,200.00	7,065.00	7,206.17	6,836.41	41.76	42.79	40.41	542.90	-665.73	544.92	493.56	51.35	10.611		
8,300.00	7,065.00	7,174.98	6,808.61	43.94	42.80	37.30	542.94	-679.85	628.80	576.81	51.98	12.096		
8,400.00	7,065.00	7,130.00	6,767.92	46.18	42.83	33.45	543.16	-699.02	715.28	663.18	52.11	13.728		
8,500.00	7,065.00	7,130.00	6,767.92	48.46	42.83	33.45	543.16	-699.02	803.04	749.53	53.50	15.009		
8,600.00	7,065.00	7,103.88	6,743.92	50.79	42.83	31.51	543.35	-709.32	892.55	838.56	53.98	16.534		
8,700.00	7,065.00	7,087.21	6,728.42	53.16	42.83	30.36	543.48	-715.46	983.46	928.87	54.58	18.017		
8,800.00	7,065.00	7,072.25	6,714.41	55.56	42.84	29.39	543.59	-720.67	1,075.45	1,020.34	55.11	19.513		
8,900.00	7,065.00	7,035.00	6,679.07	57.99	42.84	27.18	543.89	-732.45	1,168.96	1,113.76	55.21	21.175		

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 11-10-9H
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 11-10-9H	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)				
9,000.00	7,065.00	7,035.00	6,679.07	60.44	42.84	27.18	543.89	-732.45	1,262.15	1,206.31	55.84	22.603		
9,100.00	7,065.00	7,035.00	6,679.07	62.91	42.84	27.18	543.89	-732.45	1,356.31	1,299.94	56.37	24.062		
9,200.00	7,065.00	7,035.00	6,679.07	65.41	42.84	27.18	543.89	-732.45	1,451.25	1,394.44	56.81	25.545		
9,300.00	7,065.00	7,035.00	6,679.07	67.92	42.84	27.18	543.89	-732.45	1,546.83	1,489.64	57.19	27.047		
9,400.00	7,065.00	7,035.00	6,679.07	70.45	42.84	27.18	543.89	-732.45	1,642.93	1,585.42	57.52	28.564		
9,500.00	7,065.00	7,035.00	6,679.07	72.99	42.84	27.18	543.89	-732.45	1,739.48	1,681.67	57.80	30.093		
9,600.00	7,065.00	7,035.00	6,679.07	75.54	42.84	27.18	543.89	-732.45	1,836.39	1,778.34	58.06	31.632		
9,700.00	7,065.00	6,995.98	6,641.40	78.11	42.83	25.15	544.29	-742.56	1,931.86	1,873.85	58.01	33.305		
9,800.00	7,065.00	6,991.14	6,636.68	80.68	42.82	24.92	544.35	-743.63	2,028.92	1,970.72	58.20	34.863		
9,900.00	7,065.00	6,986.66	6,632.30	83.27	42.82	24.71	544.41	-744.59	2,126.20	2,067.82	58.37	36.424		
10,000.00	7,065.00	6,982.49	6,628.21	85.86	42.82	24.51	544.46	-745.44	2,223.68	2,165.14	58.54	37.988		
10,100.00	7,065.00	6,978.60	6,624.41	88.46	42.82	24.34	544.51	-746.21	2,321.34	2,262.65	58.69	39.553		
10,200.00	7,065.00	6,940.00	6,586.31	91.07	42.80	22.69	545.10	-752.40	2,420.52	2,361.86	58.66	41.267		
10,300.00	7,065.00	6,940.00	6,586.31	93.68	42.80	22.69	545.10	-752.40	2,518.23	2,459.41	58.82	42.815		
10,400.00	7,065.00	6,940.00	6,586.31	96.30	42.80	22.69	545.10	-752.40	2,616.11	2,557.15	58.97	44.366		
10,500.00	7,065.00	6,940.00	6,586.31	98.93	42.80	22.69	545.10	-752.40	2,714.15	2,655.04	59.11	45.920		
10,600.00	7,065.00	6,940.00	6,586.31	101.56	42.80	22.69	545.10	-752.40	2,812.33	2,753.09	59.24	47.476		
10,700.00	7,065.00	6,940.00	6,586.31	104.20	42.80	22.69	545.10	-752.40	2,910.63	2,851.27	59.36	49.034		
10,800.00	7,065.00	6,940.00	6,586.31	106.83	42.80	22.69	545.10	-752.40	3,009.04	2,949.56	59.48	50.592		
10,900.00	7,065.00	6,940.00	6,586.31	109.48	42.80	22.69	545.10	-752.40	3,107.55	3,047.96	59.59	52.151		
11,000.00	7,065.00	6,940.00	6,586.31	112.13	42.80	22.69	545.10	-752.40	3,206.16	3,146.46	59.69	53.711		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 13C-12HZ - Wellbore #1 - Wellbore #1											Offset Site Error:	0.00 usft	
Survey Program: 17-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)			
5,800.00	5,787.80	11,892.00	7,212.13	21.31	133.43	128.85	-2,532.72	939.77	3,249.77	3,113.43	136.34	23.836	
5,900.00	5,887.57	11,892.00	7,212.13	21.69	133.43	128.85	-2,532.72	939.77	3,210.04	3,071.67	138.38	23.198	
6,000.00	5,987.34	11,892.00	7,212.13	22.06	133.43	128.85	-2,532.72	939.77	3,172.98	3,032.61	140.36	22.605	
6,100.00	6,087.11	11,892.00	7,212.13	22.44	133.43	128.85	-2,532.72	939.77	3,138.66	2,996.37	142.29	22.058	
6,200.00	6,186.87	11,892.00	7,212.13	22.81	133.43	128.85	-2,532.72	939.77	3,107.18	2,963.04	144.14	21.557	
6,300.00	6,286.64	11,892.00	7,212.13	23.18	133.43	128.85	-2,532.72	939.77	3,078.63	2,932.73	145.91	21.100	
6,400.00	6,386.41	11,892.00	7,212.13	23.56	133.43	128.85	-2,532.72	939.77	3,053.10	2,905.52	147.58	20.688	
6,482.24	6,468.46	11,892.00	7,212.13	23.86	133.43	128.85	-2,532.72	939.77	3,034.40	2,885.53	148.87	20.383	
6,500.00	6,486.19	11,892.00	7,212.13	23.93	133.43	154.87	-2,532.72	939.77	3,030.70	2,881.57	149.14	20.322	
6,550.00	6,536.08	11,892.00	7,212.13	24.10	133.43	-138.78	-2,532.72	939.77	3,021.47	2,871.65	149.82	20.167	
6,600.00	6,585.64	11,892.00	7,212.13	24.26	133.43	-122.54	-2,532.72	939.77	3,014.06	2,863.64	150.42	20.038	
6,650.00	6,634.49	11,892.00	7,212.13	24.40	133.43	-117.05	-2,532.72	939.77	3,008.54	2,857.62	150.93	19.934	
6,700.00	6,682.26	11,892.00	7,212.13	24.53	133.43	-114.40	-2,532.72	939.77	3,004.97	2,853.63	151.34	19.856	
6,750.00	6,728.60	11,892.00	7,212.13	24.64	133.43	-112.79	-2,532.72	939.77	3,003.37	2,851.72	151.65	19.805	
6,765.12	6,742.27	11,892.00	7,212.13	24.67	133.43	-112.40	-2,532.72	939.77	3,003.28	2,851.55	151.72	19.795 CC, ES	
6,800.00	6,773.14	11,892.00	7,212.13	24.75	133.43	-111.59	-2,532.72	939.77	3,003.76	2,851.90	151.86	19.779	
6,850.00	6,815.54	11,892.00	7,212.13	24.84	133.43	-110.55	-2,532.72	939.77	3,006.14	2,854.16	151.99	19.779 SF	
6,900.00	6,855.49	11,892.00	7,212.13	24.92	133.43	-109.54	-2,532.72	939.77	3,010.49	2,858.47	152.02	19.803	
6,950.00	6,892.68	11,892.00	7,212.13	24.99	133.43	-108.49	-2,532.72	939.77	3,016.77	2,864.79	151.97	19.851	
7,000.00	6,926.83	11,892.00	7,212.13	25.07	133.43	-107.35	-2,532.72	939.77	3,024.90	2,873.05	151.85	19.920	
7,050.00	6,957.68	11,892.00	7,212.13	25.19	133.43	-106.09	-2,532.72	939.77	3,034.83	2,883.16	151.67	20.009	
7,100.00	6,984.98	11,892.00	7,212.13	25.42	133.43	-104.72	-2,532.72	939.77	3,046.45	2,895.01	151.44	20.117	
7,150.00	7,008.54	11,892.00	7,212.13	25.72	133.43	-103.21	-2,532.72	939.77	3,059.66	2,908.50	151.16	20.241	
7,200.00	7,028.18	11,892.00	7,212.13	26.06	133.43	-101.57	-2,532.72	939.77	3,074.34	2,923.48	150.86	20.379	
7,250.00	7,043.74	11,892.00	7,212.13	26.46	133.43	-99.80	-2,532.72	939.77	3,090.36	2,939.83	150.53	20.530	
7,300.00	7,055.11	11,892.00	7,212.13	26.91	133.43	-97.91	-2,532.72	939.77	3,107.57	2,957.38	150.18	20.692	
7,350.00	7,062.20	11,892.00	7,212.13	27.40	133.43	-95.92	-2,532.72	939.77	3,125.82	2,976.00	149.82	20.863	
7,400.00	7,064.96	11,892.00	7,212.13	27.94	133.43	-93.83	-2,532.72	939.77	3,144.96	2,995.51	149.46	21.043	
7,406.67	7,065.00	11,892.00	7,212.13	28.01	133.43	-93.55	-2,532.72	939.77	3,147.58	2,998.17	149.41	21.067	
7,500.00	7,065.00	11,892.00	7,212.13	29.15	133.43	-93.55	-2,532.72	939.77	3,185.38	3,036.63	148.75	21.414	
7,600.00	7,065.00	11,892.00	7,212.13	30.55	133.43	-93.55	-2,532.72	939.77	3,228.38	3,080.27	148.11	21.797	
7,700.00	7,065.00	11,892.00	7,212.13	32.12	133.43	-93.55	-2,532.72	939.77	3,273.88	3,126.36	147.52	22.192	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 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	4,989.65	11,657.00	7,060.41	18.32	132.27	126.29	-2,090.92	947.43	3,229.44	3,115.96	113.48	28.458		
5,100.00	5,089.42	11,657.00	7,060.41	18.70	132.27	126.29	-2,090.92	947.43	3,168.31	3,052.51	115.80	27.360		
5,200.00	5,189.19	11,657.00	7,060.41	19.07	132.27	126.29	-2,090.92	947.43	3,109.19	2,991.05	118.15	26.316		
5,300.00	5,288.96	11,657.00	7,060.41	19.45	132.27	126.29	-2,090.92	947.43	3,052.21	2,931.69	120.52	25.326		
5,400.00	5,388.73	11,657.00	7,060.41	19.82	132.27	126.29	-2,090.92	947.43	2,997.48	2,874.57	122.90	24.389		
5,500.00	5,488.49	11,657.00	7,060.41	20.19	132.27	126.29	-2,090.92	947.43	2,945.13	2,819.83	125.30	23.505		
5,600.00	5,588.26	11,657.00	7,060.41	20.57	132.27	126.29	-2,090.92	947.43	2,895.28	2,767.60	127.68	22.676		
5,700.00	5,688.03	11,657.00	7,060.41	20.94	132.27	126.29	-2,090.92	947.43	2,848.08	2,718.03	130.05	21.900		
5,800.00	5,787.80	11,657.00	7,060.41	21.31	132.27	126.29	-2,090.92	947.43	2,803.65	2,671.27	132.38	21.178		
5,900.00	5,887.57	11,657.00	7,060.41	21.69	132.27	126.29	-2,090.92	947.43	2,762.13	2,627.46	134.67	20.510		
6,000.00	5,987.34	11,657.00	7,060.41	22.06	132.27	126.29	-2,090.92	947.43	2,723.65	2,586.75	136.89	19.896		
6,100.00	6,087.11	11,657.00	7,060.41	22.44	132.27	126.29	-2,090.92	947.43	2,688.34	2,549.30	139.04	19.335		
6,200.00	6,186.87	11,657.00	7,060.41	22.81	132.27	126.29	-2,090.92	947.43	2,656.32	2,515.24	141.09	18.827		
6,300.00	6,286.64	11,657.00	7,060.41	23.18	132.27	126.29	-2,090.92	947.43	2,627.73	2,484.71	143.02	18.373		
6,400.00	6,386.41	11,657.00	7,060.41	23.56	132.27	126.29	-2,090.92	947.43	2,602.66	2,457.84	144.83	17.971		
6,482.24	6,468.46	11,657.00	7,060.41	23.86	132.27	126.29	-2,090.92	947.43	2,584.77	2,438.57	146.20	17.680		
6,500.00	6,486.19	11,657.00	7,060.41	23.93	132.27	152.35	-2,090.92	947.43	2,581.30	2,434.82	146.48	17.623		
6,550.00	6,536.08	11,657.00	7,060.41	24.10	132.27	-141.21	-2,090.92	947.43	2,572.95	2,425.78	147.18	17.482		
6,600.00	6,585.64	11,657.00	7,060.41	24.26	132.27	-124.84	-2,090.92	947.43	2,566.75	2,419.00	147.75	17.372		
6,650.00	6,634.49	11,657.00	7,060.41	24.40	132.27	-119.20	-2,090.92	947.43	2,562.76	2,414.56	148.20	17.292		
6,700.00	6,682.26	11,657.00	7,060.41	24.53	132.27	-116.37	-2,090.92	947.43	2,561.02	2,412.50	148.52	17.243		
6,713.37	6,694.81	11,657.00	7,060.41	24.56	132.27	-115.82	-2,090.92	947.43	2,560.94	2,412.35	148.58	17.236 CC, ES		
6,750.00	6,728.60	11,657.00	7,060.41	24.64	132.27	-114.55	-2,090.92	947.43	2,561.55	2,412.84	148.71	17.225 SF		
6,800.00	6,773.14	11,657.00	7,060.41	24.75	132.27	-113.13	-2,090.92	947.43	2,564.34	2,415.56	148.78	17.236		
6,850.00	6,815.54	11,657.00	7,060.41	24.84	132.27	-111.83	-2,090.92	947.43	2,569.36	2,420.65	148.71	17.277		
6,900.00	6,855.49	11,657.00	7,060.41	24.92	132.27	-110.54	-2,090.92	947.43	2,576.57	2,428.03	148.54	17.346		
6,950.00	6,892.68	11,657.00	7,060.41	24.99	132.27	-109.19	-2,090.92	947.43	2,585.89	2,437.63	148.26	17.442		
7,000.00	6,926.83	11,657.00	7,060.41	25.07	132.27	-107.72	-2,090.92	947.43	2,597.23	2,449.34	147.88	17.563		
7,050.00	6,957.68	11,657.00	7,060.41	25.19	132.27	-106.11	-2,090.92	947.43	2,610.47	2,463.04	147.43	17.706		
7,100.00	6,984.98	11,657.00	7,060.41	25.42	132.27	-104.36	-2,090.92	947.43	2,625.48	2,478.57	146.91	17.871		
7,150.00	7,008.54	11,657.00	7,060.41	25.72	132.27	-102.46	-2,090.92	947.43	2,642.14	2,495.79	146.34	18.054		
7,200.00	7,028.18	11,657.00	7,060.41	26.06	132.27	-100.41	-2,090.92	947.43	2,660.26	2,514.53	145.74	18.254		
7,250.00	7,043.74	11,657.00	7,060.41	26.46	132.27	-98.23	-2,090.92	947.43	2,679.70	2,534.60	145.10	18.468		
7,300.00	7,055.11	11,657.00	7,060.41	26.91	132.27	-95.91	-2,090.92	947.43	2,700.27	2,555.82	144.45	18.693		
7,350.00	7,062.20	11,657.00	7,060.41	27.40	132.27	-93.49	-2,090.92	947.43	2,721.80	2,578.01	143.79	18.928		
7,400.00	7,064.96	11,657.00	7,060.41	27.94	132.27	-90.98	-2,090.92	947.43	2,744.10	2,600.97	143.13	19.172		
7,406.67	7,065.00	11,657.00	7,060.41	28.01	132.27	-90.64	-2,090.92	947.43	2,747.13	2,604.08	143.04	19.205		
7,500.00	7,065.00	11,657.00	7,060.41	29.15	132.27	-90.64	-2,090.92	947.43	2,790.74	2,648.89	141.85	19.674		
7,600.00	7,065.00	11,657.00	7,060.41	30.55	132.27	-90.64	-2,090.92	947.43	2,840.12	2,699.49	140.63	20.196		
7,700.00	7,065.00	11,657.00	7,060.41	32.12	132.27	-90.64	-2,090.92	947.43	2,892.13	2,752.66	139.47	20.737		
7,800.00	7,065.00	11,657.00	7,060.41	33.83	132.27	-90.64	-2,090.92	947.43	2,946.61	2,808.26	138.35	21.298		
7,900.00	7,065.00	11,657.00	7,060.41	35.67	132.27	-90.64	-2,090.92	947.43	3,003.43	2,866.17	137.27	21.880		
8,000.00	7,065.00	11,657.00	7,060.41	37.61	132.27	-90.64	-2,090.92	947.43	3,062.47	2,926.26	136.21	22.483		
8,100.00	7,065.00	11,657.00	7,060.41	39.65	132.27	-90.64	-2,090.92	947.43	3,123.59	2,988.41	135.18	23.107		
8,200.00	7,065.00	11,657.00	7,060.41	41.76	132.27	-90.64	-2,090.92	947.43	3,186.68	3,052.51	134.16	23.752		
8,300.00	7,065.00	11,657.00	7,060.41	43.94	132.27	-90.64	-2,090.92	947.43	3,251.62	3,118.45	133.17	24.417		

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 11-10-9H
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 11-10-9H	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		Distance		Minimum Separation		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			
4,100.00	4,091.74	13,497.32	7,212.97	14.96	172.67	153.32	-455.06	116.24	3,223.09	3,153.77	69.32	46.496			
4,200.00	4,191.50	13,494.10	7,212.97	15.33	172.58	153.10	-455.24	119.45	3,126.58	3,056.35	70.23	44.518			
4,300.00	4,291.27	13,490.86	7,212.97	15.71	172.50	152.88	-455.42	122.68	3,030.30	2,959.08	71.22	42.549			
4,400.00	4,391.04	13,487.60	7,212.98	16.08	172.41	152.66	-455.60	125.94	2,934.26	2,861.97	72.29	40.592			
4,500.00	4,490.81	13,484.31	7,212.98	16.46	172.32	152.43	-455.79	129.23	2,838.48	2,765.04	73.44	38.649			
4,600.00	4,590.58	13,480.99	7,212.98	16.83	172.23	152.21	-455.98	132.54	2,743.01	2,668.31	74.70	36.720			
4,700.00	4,690.35	13,477.65	7,212.98	17.20	172.14	151.98	-456.17	135.87	2,647.86	2,571.79	76.07	34.808			
4,800.00	4,790.12	13,474.28	7,212.99	17.58	172.05	151.75	-456.36	139.24	2,553.08	2,475.52	77.56	32.916			
4,900.00	4,889.88	13,470.89	7,212.99	17.95	171.96	151.52	-456.55	142.62	2,458.71	2,379.51	79.20	31.045			
5,000.00	4,989.65	13,467.47	7,213.00	18.32	171.87	151.28	-456.75	146.04	2,364.79	2,283.81	80.99	29.200			
5,100.00	5,089.42	13,464.02	7,213.00	18.70	171.77	151.04	-456.95	149.48	2,271.39	2,188.44	82.95	27.383			
5,200.00	5,189.19	13,460.55	7,213.01	19.07	171.68	150.80	-457.16	152.95	2,178.56	2,093.46	85.11	25.597			
5,300.00	5,288.96	13,457.05	7,213.01	19.45	171.59	150.56	-457.36	156.44	2,086.40	1,998.91	87.49	23.847			
5,400.00	5,388.73	13,453.52	7,213.02	19.82	171.49	150.32	-457.57	159.97	1,994.98	1,904.86	90.12	22.137			
5,500.00	5,488.49	13,449.96	7,213.03	20.19	171.40	150.07	-457.78	163.52	1,904.41	1,811.38	93.03	20.471			
5,600.00	5,588.26	13,446.37	7,213.04	20.57	171.30	149.83	-458.00	167.10	1,814.83	1,718.57	96.26	18.854			
5,700.00	5,688.03	13,442.76	7,213.05	20.94	171.20	149.58	-458.21	170.71	1,726.39	1,626.55	99.84	17.292			
5,800.00	5,787.80	13,439.11	7,213.06	21.31	171.10	149.32	-458.43	174.34	1,639.26	1,535.44	103.82	15.789			
5,900.00	5,887.57	13,435.44	7,213.07	21.69	171.01	149.07	-458.66	178.01	1,553.68	1,445.43	108.25	14.353			
6,000.00	5,987.34	13,431.73	7,213.08	22.06	170.91	148.81	-458.88	181.71	1,469.90	1,356.73	113.17	12.988			
6,100.00	6,087.11	13,428.00	7,213.10	22.44	170.81	148.56	-459.11	185.44	1,388.26	1,269.63	118.64	11.702			
6,200.00	6,186.87	13,424.24	7,213.11	22.81	170.70	148.29	-459.34	189.19	1,309.17	1,184.48	124.69	10.499			
6,300.00	6,286.64	13,420.44	7,213.12	23.18	170.60	148.03	-459.58	192.98	1,233.10	1,101.74	131.36	9.387			
6,400.00	6,386.41	13,412.00	7,213.16	23.56	170.38	147.45	-460.11	201.40	1,160.66	1,022.08	138.57	8.376			
6,482.24	6,468.46	13,412.00	7,213.16	23.86	170.38	147.45	-460.11	201.40	1,104.29	959.22	145.07	7.612			
6,500.00	6,486.19	13,412.00	7,213.16	23.93	170.38	172.28	-460.11	201.40	1,092.52	946.00	146.52	7.457			
6,550.00	6,536.08	13,412.00	7,213.16	24.10	170.38	-124.71	-460.11	201.40	1,060.15	909.49	150.66	7.037			
6,600.00	6,585.64	13,419.76	7,213.13	24.26	170.58	-111.15	-459.62	193.66	1,029.13	874.12	155.01	6.639			
6,650.00	6,634.49	13,429.01	7,213.09	24.40	170.83	-108.12	-459.05	184.43	999.78	840.39	159.40	6.272			
6,700.00	6,682.26	13,442.12	7,213.05	24.53	171.19	-107.53	-458.25	171.34	972.36	808.55	163.81	5.936			
6,750.00	6,728.60	13,459.03	7,213.01	24.64	171.64	-107.59	-457.24	154.47	947.07	778.88	168.20	5.631			
6,800.00	6,773.14	13,479.61	7,212.98	24.75	172.19	-107.76	-456.05	133.92	924.08	751.59	172.49	5.357			
6,850.00	6,815.54	13,507.00	7,212.98	24.84	172.93	-107.64	-454.53	106.57	903.46	726.76	176.71	5.113			
6,900.00	6,855.49	13,533.10	7,212.95	24.92	173.63	-107.60	-453.14	80.51	885.21	704.57	180.63	4.901			
6,950.00	6,892.68	13,565.83	7,212.83	24.99	174.51	-107.19	-451.45	47.82	869.24	684.82	184.42	4.713			
7,000.00	6,926.83	13,602.14	7,212.63	25.07	175.49	-106.61	-449.62	11.56	855.44	667.45	187.99	4.551			
7,050.00	6,957.68	13,628.00	7,212.49	25.19	176.18	-106.44	-448.32	-14.27	843.72	652.75	190.97	4.418			
7,100.00	6,984.98	13,628.00	7,212.49	25.42	176.18	-107.06	-448.32	-14.27	835.38	642.66	192.72	4.335			
7,150.00	7,008.54	13,628.00	7,212.49	25.72	176.18	-107.33	-448.32	-14.27	830.99	637.30	193.69	4.290			
7,179.24	7,020.52	13,628.00	7,212.49	25.92	176.18	-107.32	-448.32	-14.27	830.30	636.42	193.88	4.283	CC, ES, SF		
7,200.00	7,028.18	13,628.00	7,212.49	26.06	176.18	-107.24	-448.32	-14.27	830.65	636.82	193.83	4.286			
7,250.00	7,043.74	13,628.00	7,212.49	26.46	176.18	-106.78	-448.32	-14.27	834.35	641.22	193.13	4.320			
7,300.00	7,055.11	13,628.00	7,212.49	26.91	176.18	-105.96	-448.32	-14.27	842.03	650.40	191.64	4.394			
7,350.00	7,062.20	13,628.00	7,212.49	27.40	176.18	-104.77	-448.32	-14.27	853.52	664.10	189.42	4.506			
7,400.00	7,064.96	13,628.00	7,212.49	27.94	176.18	-103.20	-448.32	-14.27	868.58	682.01	186.56	4.656			
7,406.67	7,065.00	13,628.00	7,212.49	28.01	176.18	-102.97	-448.32	-14.27	870.84	684.70	186.14	4.678			
7,500.00	7,065.00	13,628.00	7,212.49	29.15	176.18	-102.97	-448.32	-14.27	907.16	727.45	179.70	5.048			
7,600.00	7,065.00	13,628.00	7,212.49	30.55	176.18	-102.97	-448.32	-14.27	954.70	782.59	172.11	5.547			
7,700.00	7,065.00	13,628.00	7,212.49	32.12	176.18	-102.97	-448.32	-14.27	1,009.94	845.70	164.24	6.149			
7,800.00	7,065.00	13,628.00	7,212.49	33.83	176.18	-102.97	-448.32	-14.27	1,071.68	915.23	156.44	6.850			
7,900.00	7,065.00	13,628.00	7,212.49	35.67	176.18	-102.97	-448.32	-14.27	1,138.87	989.91	148.95	7.646			
8,000.00	7,065.00	13,628.00	7,212.49	37.61	176.18	-102.97	-448.32	-14.27	1,210.59	1,068.70	141.90	8.532			

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 11-10-9H
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 11-10-9H	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)			
8,100.00	7,065.00	13,628.00	7,212.49	39.65	176.18	-102.97	-448.32	-14.27	1,286.10	1,150.76	135.34	9.502	
8,200.00	7,065.00	13,628.00	7,212.49	41.76	176.18	-102.97	-448.32	-14.27	1,364.76	1,235.45	129.31	10.554	
8,300.00	7,065.00	13,628.00	7,212.49	43.94	176.18	-102.97	-448.32	-14.27	1,446.06	1,322.27	123.80	11.681	
8,400.00	7,065.00	13,628.00	7,212.49	46.18	176.18	-102.97	-448.32	-14.27	1,529.58	1,410.82	118.76	12.879	
8,500.00	7,065.00	13,628.00	7,212.49	48.46	176.18	-102.97	-448.32	-14.27	1,614.97	1,500.79	114.18	14.144	
8,600.00	7,065.00	13,628.00	7,212.49	50.79	176.18	-102.97	-448.32	-14.27	1,701.96	1,591.95	110.01	15.471	
8,700.00	7,065.00	13,628.00	7,212.49	53.16	176.18	-102.97	-448.32	-14.27	1,790.30	1,684.09	106.21	16.856	
8,800.00	7,065.00	13,628.00	7,212.49	55.56	176.18	-102.97	-448.32	-14.27	1,879.81	1,777.06	102.75	18.294	
8,900.00	7,065.00	13,628.00	7,212.49	57.99	176.18	-102.97	-448.32	-14.27	1,970.33	1,870.74	99.60	19.783	
9,000.00	7,065.00	13,628.00	7,212.49	60.44	176.18	-102.97	-448.32	-14.27	2,061.73	1,965.01	96.72	21.317	
9,100.00	7,065.00	13,628.00	7,212.49	62.91	176.18	-102.97	-448.32	-14.27	2,153.89	2,059.81	94.08	22.893	
9,200.00	7,065.00	13,628.00	7,212.49	65.41	176.18	-102.97	-448.32	-14.27	2,246.73	2,155.05	91.67	24.508	
9,300.00	7,065.00	13,628.00	7,212.49	67.92	176.18	-102.97	-448.32	-14.27	2,340.15	2,250.69	89.46	26.159	
9,400.00	7,065.00	13,628.00	7,212.49	70.45	176.18	-102.97	-448.32	-14.27	2,434.10	2,346.67	87.43	27.842	
9,500.00	7,065.00	13,628.00	7,212.49	72.99	176.18	-102.97	-448.32	-14.27	2,528.51	2,442.95	85.56	29.554	
9,600.00	7,065.00	13,628.00	7,212.49	75.54	176.18	-102.97	-448.32	-14.27	2,623.33	2,539.50	83.83	31.292	
9,700.00	7,065.00	13,628.00	7,212.49	78.11	176.18	-102.97	-448.32	-14.27	2,718.53	2,636.28	82.24	33.055	
9,800.00	7,065.00	13,628.00	7,212.49	80.68	176.18	-102.97	-448.32	-14.27	2,814.05	2,733.28	80.77	34.839	
9,900.00	7,065.00	13,628.00	7,212.49	83.27	176.18	-102.97	-448.32	-14.27	2,909.88	2,830.47	79.42	36.641	
10,000.00	7,065.00	13,628.00	7,212.49	85.86	176.18	-102.97	-448.32	-14.27	3,005.98	2,927.83	78.16	38.461	
10,100.00	7,065.00	13,628.00	7,212.49	88.46	176.18	-102.97	-448.32	-14.27	3,102.33	3,025.34	76.99	40.295	
10,200.00	7,065.00	13,628.00	7,212.49	91.07	176.18	-102.97	-448.32	-14.27	3,198.90	3,122.99	75.91	42.142	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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		Offset Wellbore Centre		Distance		Minimum Separation		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					
4,100.00	4,091.74	13,437.67	7,081.68	14.96	172.17	150.03	-815.67	106.71	3,189.68	3,108.02	81.66	39.061					
4,200.00	4,191.50	13,434.61	7,081.71	15.33	172.09	149.88	-815.72	109.77	3,097.00	3,013.78	83.22	37.216					
4,300.00	4,291.27	13,431.49	7,081.74	15.71	172.01	149.73	-815.77	112.89	3,004.78	2,919.89	84.89	35.397					
4,400.00	4,391.04	13,428.33	7,081.77	16.08	171.92	149.58	-815.83	116.05	2,913.07	2,826.39	86.68	33.609					
4,500.00	4,490.81	13,410.00	7,082.00	16.46	171.43	148.69	-816.21	134.37	2,821.98	2,733.58	88.40	31.922					
4,600.00	4,590.58	13,410.00	7,082.00	16.83	171.43	148.69	-816.21	134.37	2,731.41	2,640.91	90.50	30.181					
4,700.00	4,690.35	13,410.00	7,082.00	17.20	171.43	148.69	-816.21	134.37	2,641.53	2,548.78	92.75	28.479					
4,800.00	4,790.12	13,410.00	7,082.00	17.58	171.43	148.69	-816.21	134.37	2,552.40	2,457.22	95.18	26.818					
4,900.00	4,889.88	13,413.25	7,081.95	17.95	171.52	148.85	-816.14	131.12	2,464.10	2,366.27	97.83	25.189					
5,000.00	4,989.65	13,406.88	7,082.04	18.32	171.35	148.54	-816.28	137.49	2,376.73	2,276.19	100.54	23.639					
5,100.00	5,089.42	13,400.67	7,082.12	18.70	171.18	148.24	-816.43	143.70	2,290.38	2,186.91	103.47	22.136					
5,200.00	5,189.19	13,394.60	7,082.19	19.07	171.02	147.95	-816.57	149.77	2,205.16	2,098.54	106.63	20.681					
5,300.00	5,288.96	13,388.67	7,082.26	19.45	170.86	147.66	-816.72	155.69	2,121.23	2,011.19	110.03	19.278					
5,400.00	5,388.73	13,382.89	7,082.32	19.82	170.70	147.38	-816.86	161.48	2,038.72	1,925.02	113.70	17.931					
5,500.00	5,488.49	13,377.23	7,082.38	20.19	170.55	147.10	-817.00	167.13	1,957.84	1,840.19	117.65	16.642					
5,600.00	5,588.26	13,371.70	7,082.44	20.57	170.40	146.83	-817.14	172.65	1,878.78	1,756.89	121.89	15.414					
5,700.00	5,688.03	13,366.30	7,082.49	20.94	170.26	146.57	-817.28	178.05	1,801.79	1,675.35	126.44	14.251					
5,800.00	5,787.80	13,361.02	7,082.53	21.31	170.12	146.31	-817.42	183.33	1,727.14	1,595.85	131.29	13.155					
5,900.00	5,887.57	13,355.85	7,082.58	21.69	169.98	146.06	-817.56	188.50	1,655.15	1,518.70	136.46	12.129					
6,000.00	5,987.34	13,350.80	7,082.61	22.06	169.84	145.81	-817.69	193.55	1,586.19	1,444.28	141.92	11.177					
6,100.00	6,087.11	13,345.85	7,082.65	22.44	169.71	145.57	-817.83	198.50	1,520.67	1,373.03	147.64	10.300					
6,200.00	6,186.87	13,341.01	7,082.68	22.81	169.58	145.34	-817.96	203.34	1,459.04	1,305.48	153.57	9.501					
6,300.00	6,286.64	13,336.27	7,082.71	23.18	169.45	145.11	-818.09	208.07	1,401.83	1,242.20	159.63	8.782					
6,400.00	6,386.41	13,331.63	7,082.74	23.56	169.33	144.88	-818.23	212.71	1,349.60	1,183.89	165.72	8.144					
6,482.24	6,468.46	13,333.69	7,082.76	23.86	169.38	144.98	-818.10	210.65	1,310.77	1,140.02	170.75	7.677					
6,500.00	6,486.19	13,333.01	7,082.76	23.93	169.36	170.47	-818.12	211.33	1,302.91	1,131.11	171.79	7.584					
6,550.00	6,536.08	13,328.77	7,082.75	24.10	169.25	-124.82	-818.31	215.57	1,281.76	1,107.11	174.64	7.339					
6,600.00	6,585.64	13,334.40	7,082.72	24.26	169.40	-109.70	-818.15	209.94	1,262.17	1,084.60	177.58	7.108					
6,650.00	6,634.49	13,344.16	7,082.66	24.40	169.66	-105.12	-817.87	200.19	1,244.35	1,063.90	180.45	6.896					
6,700.00	6,682.26	13,357.89	7,082.56	24.53	170.03	-103.17	-817.50	186.46	1,228.40	1,045.17	183.23	6.704					
6,750.00	6,728.60	13,375.46	7,082.40	24.64	170.50	-102.06	-817.05	168.90	1,214.39	1,028.50	185.89	6.533					
6,800.00	6,773.14	13,396.68	7,082.17	24.75	171.07	-101.22	-816.52	147.69	1,202.31	1,013.90	188.41	6.381					
6,850.00	6,815.54	13,410.00	7,082.00	24.84	171.43	-100.88	-816.21	134.37	1,192.18	1,001.66	190.52	6.257					
6,900.00	6,855.49	13,441.34	7,081.64	24.92	172.27	-99.89	-815.61	103.04	1,183.86	991.04	192.81	6.140					
6,950.00	6,892.68	13,466.44	7,081.46	24.99	172.95	-99.19	-815.31	77.94	1,177.40	982.65	194.74	6.046					
7,000.00	6,926.83	13,495.00	7,081.36	25.07	173.71	-98.37	-815.15	49.38	1,172.62	976.07	196.55	5.966					
7,050.00	6,957.68	13,533.09	7,081.30	25.19	174.74	-97.30	-815.07	11.29	1,169.21	970.78	198.43	5.892					
7,100.00	6,984.98	13,558.00	7,081.26	25.42	175.40	-96.63	-815.02	-13.62	1,166.92	967.10	199.83	5.840					
7,128.84	6,999.04	13,558.00	7,081.26	25.59	175.40	-96.57	-815.02	-13.62	1,166.53	966.39	200.13	5.829 CC, ES					
7,150.00	7,008.54	13,558.00	7,081.26	25.72	175.40	-96.49	-815.02	-13.62	1,166.74	966.46	200.28	5.826 SF					
7,200.00	7,028.18	13,558.00	7,081.26	26.06	175.40	-96.15	-815.02	-13.62	1,168.93	968.55	200.38	5.833					
7,250.00	7,043.74	13,558.00	7,081.26	26.46	175.40	-95.60	-815.02	-13.62	1,173.47	973.32	200.15	5.863					
7,300.00	7,055.11	13,558.00	7,081.26	26.91	175.40	-94.85	-815.02	-13.62	1,180.30	980.70	199.60	5.913					
7,350.00	7,062.20	13,558.00	7,081.26	27.40	175.40	-93.89	-815.02	-13.62	1,189.32	990.58	198.74	5.984					
7,400.00	7,064.96	13,558.00	7,081.26	27.94	175.40	-92.74	-815.02	-13.62	1,200.41	1,002.83	197.59	6.075					
7,406.67	7,065.00	13,558.00	7,081.26	28.01	175.40	-92.57	-815.02	-13.62	1,202.04	1,004.63	197.41	6.089					
7,500.00	7,065.00	13,558.00	7,081.26	29.15	175.40	-92.57	-815.02	-13.62	1,228.43	1,033.83	194.60	6.313					
7,600.00	7,065.00	13,558.00	7,081.26	30.55	175.40	-92.57	-815.02	-13.62	1,263.75	1,072.85	190.91	6.620					
7,700.00	7,065.00	13,558.00	7,081.26	32.12	175.40	-92.57	-815.02	-13.62	1,305.80	1,119.13	186.67	6.995					
7,800.00	7,065.00	13,558.00	7,081.26	33.83	175.40	-92.57	-815.02	-13.62	1,353.94	1,171.88	182.06	7.437					
7,900.00	7,065.00	13,558.00	7,081.26	35.67	175.40	-92.57	-815.02	-13.62	1,407.54	1,230.32	177.22	7.942					
8,000.00	7,065.00	13,558.00	7,081.26	37.61	175.40	-92.57	-815.02	-13.62	1,466.02	1,293.73	172.29	8.509					

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 11-10-9H
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 11-10-9H	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													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)				
8,100.00	7,065.00	13,558.00	7,081.26	39.65	175.40	-92.57	-815.02	-13.62	1,528.81	1,361.44	167.37	9.134		
8,200.00	7,065.00	13,558.00	7,081.26	41.76	175.40	-92.57	-815.02	-13.62	1,595.40	1,432.87	162.53	9.816		
8,300.00	7,065.00	13,558.00	7,081.26	43.94	175.40	-92.57	-815.02	-13.62	1,665.33	1,507.50	157.83	10.551		
8,400.00	7,065.00	13,558.00	7,081.26	46.18	175.40	-92.57	-815.02	-13.62	1,738.21	1,584.89	153.32	11.337		
8,500.00	7,065.00	13,558.00	7,081.26	48.46	175.40	-92.57	-815.02	-13.62	1,813.67	1,664.67	149.00	12.172		
8,600.00	7,065.00	13,558.00	7,081.26	50.79	175.40	-92.57	-815.02	-13.62	1,891.41	1,746.51	144.90	13.053		
8,700.00	7,065.00	13,558.00	7,081.26	53.16	175.40	-92.57	-815.02	-13.62	1,971.16	1,830.13	141.03	13.977		
8,800.00	7,065.00	13,558.00	7,081.26	55.56	175.40	-92.57	-815.02	-13.62	2,052.68	1,915.32	137.37	14.943		
8,900.00	7,065.00	13,558.00	7,081.26	57.99	175.40	-92.57	-815.02	-13.62	2,135.78	2,001.86	133.92	15.948		
9,000.00	7,065.00	13,558.00	7,081.26	60.44	175.40	-92.57	-815.02	-13.62	2,220.26	2,089.59	130.68	16.990		
9,100.00	7,065.00	13,558.00	7,081.26	62.91	175.40	-92.57	-815.02	-13.62	2,305.99	2,178.36	127.63	18.067		
9,200.00	7,065.00	13,558.00	7,081.26	65.41	175.40	-92.57	-815.02	-13.62	2,392.83	2,268.06	124.77	19.178		
9,300.00	7,065.00	13,558.00	7,081.26	67.92	175.40	-92.57	-815.02	-13.62	2,480.66	2,358.58	122.08	20.320		
9,400.00	7,065.00	13,558.00	7,081.26	70.45	175.40	-92.57	-815.02	-13.62	2,569.38	2,449.82	119.56	21.491		
9,500.00	7,065.00	13,558.00	7,081.26	72.99	175.40	-92.57	-815.02	-13.62	2,658.90	2,541.72	117.18	22.690		
9,600.00	7,065.00	13,558.00	7,081.26	75.54	175.40	-92.57	-815.02	-13.62	2,749.14	2,634.19	114.95	23.915		
9,700.00	7,065.00	13,558.00	7,081.26	78.11	175.40	-92.57	-815.02	-13.62	2,840.04	2,727.19	112.86	25.165		
9,800.00	7,065.00	13,558.00	7,081.26	80.68	175.40	-92.57	-815.02	-13.62	2,931.53	2,820.65	110.88	26.439		
9,900.00	7,065.00	13,558.00	7,081.26	83.27	175.40	-92.57	-815.02	-13.62	3,023.56	2,914.54	109.02	27.734		
10,000.00	7,065.00	13,558.00	7,081.26	85.86	175.40	-92.57	-815.02	-13.62	3,116.08	3,008.81	107.27	29.050		
10,100.00	7,065.00	13,558.00	7,081.26	88.46	175.40	-92.57	-815.02	-13.62	3,209.05	3,103.43	105.61	30.385		

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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)				
4,500.00	4,490.81	13,676.02	7,228.88	16.46	175.85	151.51	-1,373.72	-16.81	3,201.43	3,093.05	108.37	29.541		
4,600.00	4,590.58	13,666.92	7,229.34	16.83	175.60	151.21	-1,373.98	-7.72	3,118.34	3,007.59	110.75	28.156		
4,700.00	4,690.35	13,657.81	7,229.80	17.20	175.36	150.92	-1,374.24	1.37	3,036.24	2,922.99	113.25	26.810		
4,800.00	4,790.12	13,648.70	7,230.26	17.58	175.12	150.63	-1,374.49	10.47	2,955.22	2,839.34	115.88	25.503		
4,900.00	4,889.88	13,639.59	7,230.72	17.95	174.87	150.33	-1,374.75	19.56	2,875.36	2,756.72	118.64	24.237		
5,000.00	4,989.65	13,630.48	7,231.18	18.32	174.63	150.04	-1,375.01	28.65	2,796.77	2,675.24	121.53	23.012		
5,100.00	5,089.42	13,621.38	7,231.64	18.70	174.38	149.74	-1,375.27	37.74	2,719.55	2,594.99	124.57	21.832		
5,200.00	5,189.19	13,611.97	7,232.12	19.07	174.13	149.44	-1,375.53	47.13	2,643.83	2,516.09	127.74	20.697		
5,300.00	5,288.96	13,602.42	7,232.61	19.45	173.88	149.13	-1,375.80	56.67	2,569.74	2,438.69	131.05	19.609		
5,400.00	5,388.73	13,592.81	7,233.10	19.82	173.62	148.82	-1,376.06	66.26	2,497.42	2,362.92	134.50	18.568		
5,500.00	5,488.49	13,583.15	7,233.59	20.19	173.36	148.50	-1,376.32	75.91	2,427.03	2,288.94	138.09	17.575		
5,600.00	5,588.26	13,573.44	7,234.09	20.57	173.10	148.19	-1,376.57	85.60	2,358.74	2,216.93	141.81	16.633		
5,700.00	5,688.03	13,563.67	7,234.60	20.94	172.84	147.87	-1,376.82	95.35	2,292.74	2,147.09	145.65	15.742		
5,800.00	5,787.80	13,553.85	7,235.11	21.31	172.57	147.55	-1,377.07	105.16	2,229.23	2,079.64	149.59	14.902		
5,900.00	5,887.57	13,543.97	7,235.62	21.69	172.31	147.23	-1,377.31	115.02	2,168.44	2,014.82	153.62	14.115		
6,000.00	5,987.34	13,534.04	7,236.14	22.06	172.04	146.90	-1,377.55	124.93	2,110.59	1,952.87	157.72	13.382		
6,100.00	6,087.11	13,524.06	7,236.67	22.44	171.78	146.58	-1,377.78	134.90	2,055.93	1,894.09	161.84	12.704		
6,200.00	6,186.87	13,517.30	7,237.01	22.81	171.59	146.36	-1,377.94	144.65	2,004.72	1,838.70	166.02	12.075		
6,300.00	6,286.64	13,503.21	7,237.77	23.18	171.22	145.90	-1,378.25	155.72	1,957.25	1,787.25	170.00	11.513		
6,400.00	6,386.41	13,490.33	7,238.42	23.56	170.87	145.47	-1,378.53	168.57	1,913.76	1,739.87	173.90	11.005		
6,482.24	6,468.46	13,480.55	7,238.88	23.86	170.61	145.15	-1,378.75	178.34	1,881.19	1,704.19	177.00	10.628		
6,500.00	6,486.19	13,478.89	7,238.95	23.93	170.57	170.78	-1,378.79	180.00	1,874.54	1,696.87	177.67	10.551		
6,550.00	6,536.08	13,478.17	7,238.99	24.10	170.55	-123.93	-1,378.80	180.72	1,856.45	1,676.87	179.58	10.338		
6,600.00	6,585.64	13,483.02	7,238.77	24.26	170.68	-108.60	-1,378.69	175.87	1,839.45	1,657.90	181.55	10.132		
6,650.00	6,634.49	13,493.09	7,238.29	24.40	170.95	-103.91	-1,378.47	165.82	1,823.67	1,640.12	183.55	9.935		
6,700.00	6,682.26	13,508.00	7,237.52	24.53	171.35	-101.96	-1,378.14	150.94	1,809.20	1,623.63	185.57	9.749		
6,750.00	6,728.60	13,525.39	7,236.60	24.64	171.81	-101.00	-1,377.75	133.57	1,796.09	1,608.55	187.54	9.577		
6,800.00	6,773.14	13,547.48	7,235.44	24.75	172.40	-100.39	-1,377.22	111.51	1,784.34	1,594.84	189.50	9.416		
6,850.00	6,815.54	13,573.89	7,234.07	24.84	173.11	-99.89	-1,376.56	85.15	1,773.93	1,582.49	191.45	9.266		
6,900.00	6,855.49	13,604.43	7,232.50	24.92	173.93	-99.40	-1,375.74	54.67	1,764.80	1,571.42	193.37	9.126		
6,950.00	6,892.68	13,637.14	7,230.85	24.99	174.81	-98.93	-1,374.82	22.01	1,756.84	1,561.59	195.25	8.998		
7,000.00	6,926.83	13,671.86	7,229.09	25.07	175.74	-98.46	-1,373.84	-12.65	1,749.99	1,552.91	197.08	8.879		
7,050.00	6,957.68	13,682.00	7,228.58	25.19	176.01	-98.54	-1,373.55	-22.78	1,744.35	1,546.09	198.26	8.798		
7,100.00	6,984.98	13,682.00	7,228.58	25.42	176.01	-98.72	-1,373.55	-22.78	1,740.46	1,541.40	199.05	8.744		
7,150.00	7,008.54	13,682.00	7,228.58	25.72	176.01	-98.77	-1,373.55	-22.78	1,738.39	1,538.70	199.68	8.706		
7,180.98	7,021.18	13,682.00	7,228.58	25.93	176.01	-98.72	-1,373.55	-22.78	1,738.03	1,538.03	200.00	8.690 CC		
7,200.00	7,028.18	13,682.00	7,228.58	26.06	176.01	-98.66	-1,373.55	-22.78	1,738.17	1,538.01	200.15	8.684 ES		
7,250.00	7,043.74	13,682.00	7,228.58	26.46	176.01	-98.41	-1,373.55	-22.78	1,739.79	1,539.34	200.46	8.679 SF		
7,300.00	7,055.11	13,682.00	7,228.58	26.91	176.01	-98.00	-1,373.55	-22.78	1,743.25	1,542.65	200.60	8.690		
7,350.00	7,062.20	13,682.00	7,228.58	27.40	176.01	-97.44	-1,373.55	-22.78	1,748.50	1,547.93	200.58	8.717		
7,400.00	7,064.96	13,682.00	7,228.58	27.94	176.01	-96.72	-1,373.55	-22.78	1,755.49	1,555.11	200.39	8.761		
7,406.67	7,065.00	13,682.00	7,228.58	28.01	176.01	-96.61	-1,373.55	-22.78	1,756.55	1,556.20	200.35	8.767		
7,500.00	7,065.00	13,682.00	7,228.58	29.15	176.01	-96.61	-1,373.55	-22.78	1,773.98	1,574.33	199.65	8.885		
7,600.00	7,065.00	13,682.00	7,228.58	30.55	176.01	-96.61	-1,373.55	-22.78	1,797.85	1,599.29	198.56	9.054		
7,700.00	7,065.00	13,682.00	7,228.58	32.12	176.01	-96.61	-1,373.55	-22.78	1,826.90	1,629.76	197.14	9.267		
7,800.00	7,065.00	13,682.00	7,228.58	33.83	176.01	-96.61	-1,373.55	-22.78	1,860.86	1,665.46	195.40	9.523		
7,900.00	7,065.00	13,682.00	7,228.58	35.67	176.01	-96.61	-1,373.55	-22.78	1,899.50	1,706.10	193.39	9.822		
8,000.00	7,065.00	13,682.00	7,228.58	37.61	176.01	-96.61	-1,373.55	-22.78	1,942.51	1,751.37	191.15	10.162		
8,100.00	7,065.00	13,682.00	7,228.58	39.65	176.01	-96.61	-1,373.55	-22.78	1,989.63	1,800.92	188.71	10.543		
8,200.00	7,065.00	13,682.00	7,228.58	41.76	176.01	-96.61	-1,373.55	-22.78	2,040.56	1,854.44	186.12	10.964		
8,300.00	7,065.00	13,682.00	7,228.58	43.94	176.01	-96.61	-1,373.55	-22.78	2,095.03	1,911.62	183.41	11.422		
8,400.00	7,065.00	13,682.00	7,228.58	46.18	176.01	-96.61	-1,373.55	-22.78	2,152.77	1,972.14	180.63	11.918		

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 11-10-9H
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 11-10-9H	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		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				
8,500.00	7,065.00	13,682.00	7,228.58	48.46	176.01	-96.61	-1,373.55	-22.78	2,213.53	2,035.72	177.81	12.449				
8,600.00	7,065.00	13,682.00	7,228.58	50.79	176.01	-96.61	-1,373.55	-22.78	2,277.05	2,102.09	174.97	13.014				
8,700.00	7,065.00	13,682.00	7,228.58	53.16	176.01	-96.61	-1,373.55	-22.78	2,343.12	2,170.99	172.13	13.613				
8,800.00	7,065.00	13,682.00	7,228.58	55.56	176.01	-96.61	-1,373.55	-22.78	2,411.53	2,242.21	169.32	14.242				
8,900.00	7,065.00	13,682.00	7,228.58	57.99	176.01	-96.61	-1,373.55	-22.78	2,482.09	2,315.53	166.56	14.902				
9,000.00	7,065.00	13,682.00	7,228.58	60.44	176.01	-96.61	-1,373.55	-22.78	2,554.61	2,390.77	163.85	15.592				
9,100.00	7,065.00	13,682.00	7,228.58	62.91	176.01	-96.61	-1,373.55	-22.78	2,628.94	2,467.74	161.20	16.309				
9,200.00	7,065.00	13,682.00	7,228.58	65.41	176.01	-96.61	-1,373.55	-22.78	2,704.92	2,546.29	158.62	17.052				
9,300.00	7,065.00	13,682.00	7,228.58	67.92	176.01	-96.61	-1,373.55	-22.78	2,782.42	2,626.29	156.13	17.822				
9,400.00	7,065.00	13,682.00	7,228.58	70.45	176.01	-96.61	-1,373.55	-22.78	2,861.31	2,707.61	153.71	18.615				
9,500.00	7,065.00	13,682.00	7,228.58	72.99	176.01	-96.61	-1,373.55	-22.78	2,941.49	2,790.12	151.37	19.433				
9,600.00	7,065.00	13,682.00	7,228.58	75.54	176.01	-96.61	-1,373.55	-22.78	3,022.85	2,873.74	149.11	20.272				
9,700.00	7,065.00	13,682.00	7,228.58	78.11	176.01	-96.61	-1,373.55	-22.78	3,105.30	2,958.36	146.94	21.133				
9,800.00	7,065.00	13,682.00	7,228.58	80.68	176.01	-96.61	-1,373.55	-22.78	3,188.76	3,043.91	144.85	22.014				
9,900.00	7,065.00	13,682.00	7,228.58	83.27	176.01	-96.61	-1,373.55	-22.78	3,273.14	3,130.30	142.84	22.915				

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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)				
9,000.00	7,065.00	7,064.00	7,064.00	60.44	141.70	90.00	2,845.48	-3,936.78	3,226.08	3,036.08	190.00	16.979		
9,100.00	7,065.00	7,064.00	7,064.00	62.91	141.70	90.00	2,845.48	-3,936.78	3,164.99	2,972.36	192.63	16.430		
9,200.00	7,065.00	7,064.00	7,064.00	65.41	141.70	90.00	2,845.48	-3,936.78	3,105.92	2,910.53	195.39	15.896		
9,300.00	7,065.00	7,064.00	7,064.00	67.92	141.70	90.00	2,845.48	-3,936.78	3,048.98	2,850.72	198.26	15.379		
9,400.00	7,065.00	7,064.00	7,064.00	70.45	141.70	90.00	2,845.48	-3,936.78	2,994.31	2,793.06	201.25	14.879		
9,500.00	7,065.00	7,064.00	7,064.00	72.99	141.70	90.00	2,845.48	-3,936.78	2,942.01	2,737.68	204.34	14.398		
9,600.00	7,065.00	7,064.00	7,064.00	75.54	141.70	90.00	2,845.48	-3,936.78	2,892.23	2,684.71	207.52	13.937		
9,700.00	7,065.00	7,064.00	7,064.00	78.11	141.70	90.00	2,845.48	-3,936.78	2,845.10	2,634.31	210.79	13.497		
9,800.00	7,065.00	7,064.00	7,064.00	80.68	141.70	90.00	2,845.48	-3,936.78	2,800.74	2,586.61	214.13	13.079		
9,900.00	7,065.00	7,064.00	7,064.00	83.27	141.70	90.00	2,845.48	-3,936.78	2,759.29	2,541.76	217.53	12.684		
10,000.00	7,065.00	7,064.00	7,064.00	85.86	141.70	90.00	2,845.48	-3,936.78	2,720.90	2,499.92	220.98	12.313		
10,100.00	7,065.00	7,064.00	7,064.00	88.46	141.70	90.00	2,845.48	-3,936.78	2,685.67	2,461.22	224.45	11.965		
10,200.00	7,065.00	7,064.00	7,064.00	91.07	141.70	90.00	2,845.48	-3,936.78	2,653.75	2,425.82	227.94	11.643		
10,300.00	7,065.00	7,064.00	7,064.00	93.68	141.70	90.00	2,845.48	-3,936.78	2,625.26	2,393.85	231.41	11.345		
10,400.00	7,065.00	7,064.00	7,064.00	96.30	141.70	90.00	2,845.48	-3,936.78	2,600.30	2,365.44	234.86	11.072		
10,500.00	7,065.00	7,064.00	7,064.00	98.93	141.70	90.00	2,845.48	-3,936.78	2,578.97	2,340.72	238.25	10.825		
10,600.00	7,065.00	7,064.00	7,064.00	101.56	141.70	90.00	2,845.48	-3,936.78	2,561.38	2,319.80	241.58	10.603		
10,700.00	7,065.00	7,064.00	7,064.00	104.20	141.70	90.00	2,845.48	-3,936.78	2,547.59	2,302.78	244.81	10.406		
10,800.00	7,065.00	7,064.00	7,064.00	106.83	141.70	90.00	2,845.48	-3,936.78	2,537.68	2,289.74	247.94	10.235		
10,900.00	7,065.00	7,064.00	7,064.00	109.48	141.70	90.00	2,845.48	-3,936.78	2,531.67	2,280.74	250.93	10.089		
11,000.00	7,065.00	7,064.00	7,064.00	112.13	141.70	90.00	2,845.48	-3,936.78	2,529.61	2,275.83	253.78	9.968		
11,002.17	7,065.00	7,064.00	7,064.00	112.18	141.70	90.00	2,845.48	-3,936.78	2,529.61	2,275.77	253.84	9.965	CC	
11,100.00	7,065.00	7,064.00	7,064.00	114.78	141.70	90.00	2,845.48	-3,936.78	2,531.50	2,275.03	256.47	9.871	ES	
11,200.00	7,065.00	7,064.00	7,064.00	117.43	141.70	90.00	2,845.48	-3,936.78	2,537.33	2,278.35	258.98	9.797		
11,300.00	7,065.00	7,064.00	7,064.00	120.09	141.70	90.00	2,845.48	-3,936.78	2,547.08	2,285.77	261.31	9.747		
11,400.00	7,065.00	7,064.00	7,064.00	122.75	141.70	90.00	2,845.48	-3,936.78	2,560.70	2,297.25	263.45	9.720		
11,500.00	7,065.00	7,064.00	7,064.00	125.41	141.70	90.00	2,845.48	-3,936.78	2,578.13	2,312.74	265.39	9.714	SF	
11,600.00	7,065.00	7,064.00	7,064.00	128.08	141.70	90.00	2,845.48	-3,936.78	2,599.29	2,332.16	267.14	9.730		
11,700.00	7,065.00	7,064.00	7,064.00	130.74	141.70	90.00	2,845.48	-3,936.78	2,624.10	2,355.41	268.69	9.766		
11,800.00	7,065.00	7,064.00	7,064.00	133.41	141.70	90.00	2,845.48	-3,936.78	2,652.45	2,382.40	270.04	9.822		
11,900.00	7,065.00	7,064.00	7,064.00	136.09	141.70	90.00	2,845.48	-3,936.78	2,684.22	2,413.01	271.21	9.897		
12,000.00	7,065.00	7,064.00	7,064.00	138.76	141.70	90.00	2,845.48	-3,936.78	2,719.30	2,447.10	272.20	9.990		
12,100.00	7,065.00	7,064.00	7,064.00	141.44	141.70	90.00	2,845.48	-3,936.78	2,757.56	2,484.54	273.02	10.100		
12,200.00	7,065.00	7,064.00	7,064.00	144.11	141.70	90.00	2,845.48	-3,936.78	2,798.88	2,525.20	273.68	10.227		
12,300.00	7,065.00	7,064.00	7,064.00	146.79	141.70	90.00	2,845.48	-3,936.78	2,843.11	2,568.92	274.20	10.369		
12,400.00	7,065.00	7,064.00	7,064.00	149.47	141.70	90.00	2,845.48	-3,936.78	2,890.13	2,615.56	274.57	10.526		
12,500.00	7,065.00	7,064.00	7,064.00	152.15	141.70	90.00	2,845.48	-3,936.78	2,939.80	2,664.98	274.82	10.697		
12,600.00	7,065.00	7,064.00	7,064.00	154.84	141.70	90.00	2,845.48	-3,936.78	2,991.99	2,717.04	274.95	10.882		
12,700.00	7,065.00	7,064.00	7,064.00	157.52	141.70	90.00	2,845.48	-3,936.78	3,046.57	2,771.59	274.97	11.079		
12,800.00	7,065.00	7,064.00	7,064.00	160.21	141.70	90.00	2,845.48	-3,936.78	3,103.41	2,828.50	274.91	11.289		
12,900.00	7,065.00	7,064.00	7,064.00	162.89	141.70	90.00	2,845.48	-3,936.78	3,162.39	2,887.63	274.76	11.510		
13,000.00	7,065.00	7,064.00	7,064.00	165.58	141.70	90.00	2,845.48	-3,936.78	3,223.39	2,948.86	274.53	11.741		

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

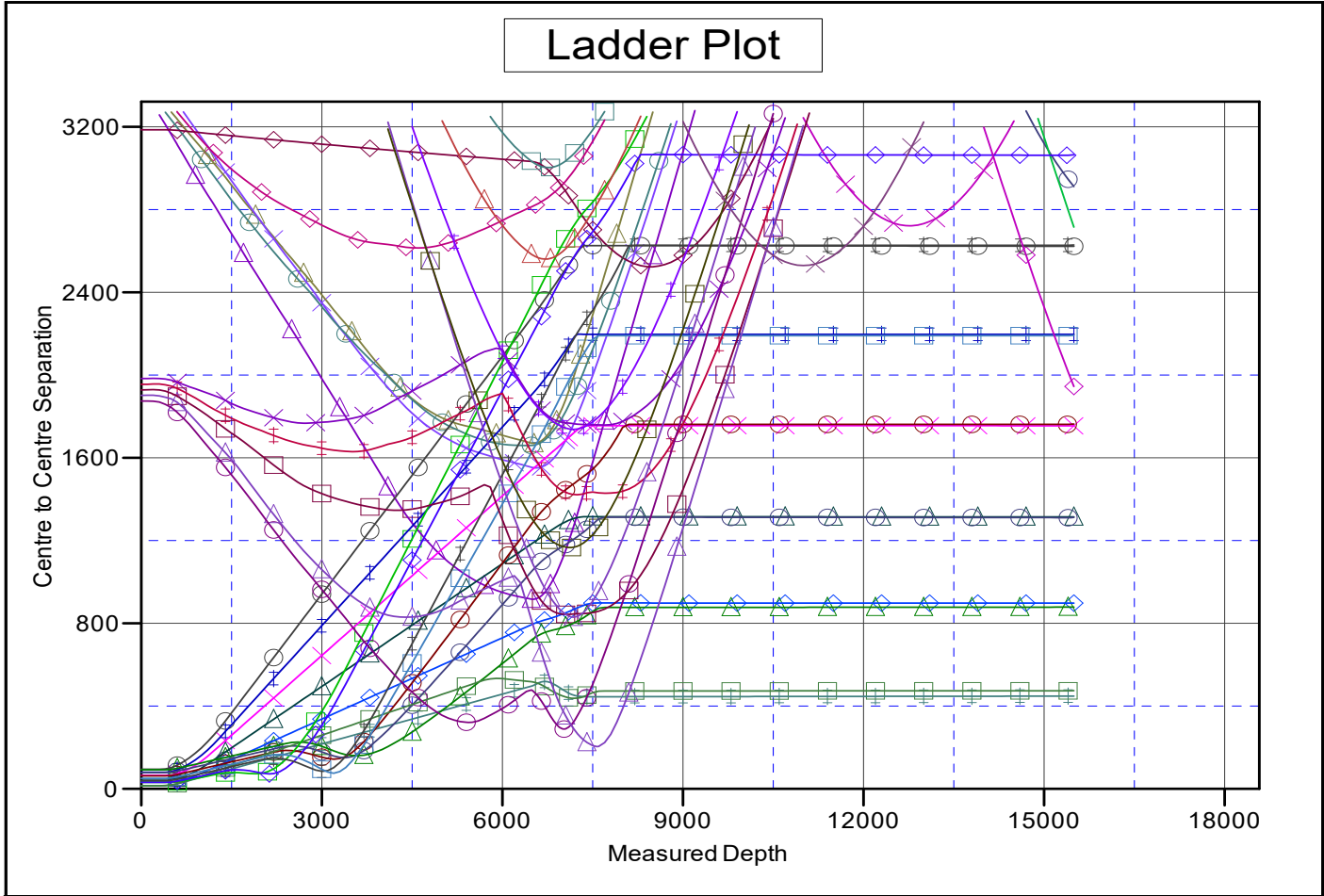
Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
Project:	LARIMER COUNTY, COLORADO (NAD 83)	TVD Reference:	KBE @ 5000.00usft
Reference Site:	SEC. 11 T5N R68W 6th P.M.	MD Reference:	KBE @ 5000.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	CE 5-68 11-10-9H	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)				
14,000.00	7,065.00	6,772.29	6,756.68	192.52	4.34	-78.19	-1,064.53	-9,796.07	3,197.63	3,107.02	90.61	35.291		
14,100.00	7,065.00	6,782.17	6,766.50	195.21	4.35	-78.60	-1,064.47	-9,797.05	3,107.40	3,013.48	93.91	33.088		
14,200.00	7,065.00	6,792.04	6,776.33	197.91	4.36	-79.00	-1,064.42	-9,798.02	3,017.75	2,920.34	97.41	30.980		
14,300.00	7,065.00	6,801.92	6,786.16	200.61	4.38	-79.41	-1,064.36	-9,799.00	2,928.74	2,827.63	101.11	28.965		
14,400.00	7,065.00	6,811.79	6,795.98	203.31	4.39	-79.82	-1,064.30	-9,799.98	2,840.43	2,735.40	105.03	27.043		
14,500.00	7,065.00	6,821.67	6,805.81	206.01	4.40	-80.23	-1,064.24	-9,800.95	2,752.88	2,643.70	109.19	25.213		
14,600.00	7,065.00	6,831.54	6,815.64	208.71	4.42	-80.64	-1,064.19	-9,801.93	2,666.18	2,552.58	113.59	23.472		
14,700.00	7,065.00	6,841.42	6,825.46	211.41	4.43	-81.05	-1,064.13	-9,802.90	2,580.39	2,462.13	118.26	21.819		
14,800.00	7,065.00	6,851.29	6,835.29	214.12	4.44	-81.46	-1,064.07	-9,803.88	2,495.63	2,372.41	123.22	20.253		
14,900.00	7,065.00	6,861.17	6,845.12	216.82	4.46	-81.88	-1,064.02	-9,804.85	2,411.99	2,283.51	128.48	18.773		
15,000.00	7,065.00	6,871.04	6,854.94	219.52	4.47	-82.29	-1,063.96	-9,805.83	2,329.60	2,195.54	134.06	17.377		
15,100.00	7,065.00	6,880.92	6,864.77	222.22	4.48	-82.71	-1,063.90	-9,806.80	2,248.60	2,108.62	139.98	16.064		
15,200.00	7,065.00	6,890.79	6,874.60	224.93	4.50	-83.12	-1,063.84	-9,807.78	2,169.13	2,022.88	146.25	14.831		
15,300.00	7,065.00	6,900.67	6,884.42	227.63	4.51	-83.54	-1,063.79	-9,808.76	2,091.39	1,938.49	152.90	13.678		
15,400.00	7,065.00	6,910.54	6,894.25	230.34	4.52	-83.96	-1,063.73	-9,809.73	2,015.55	1,855.63	159.92	12.604		
15,495.74	7,065.00	6,920.00	6,903.66	232.93	4.54	-84.36	-1,063.67	-9,810.67	1,944.96	1,777.96	167.00	11.646	CC, ES, SF	

Company:	BISON IV OPERATING	Local Co-ordinate Reference:	Well CE 5-68 11-10-9H
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 11-10-9H	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 11-10-9H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.35°



LEGEND

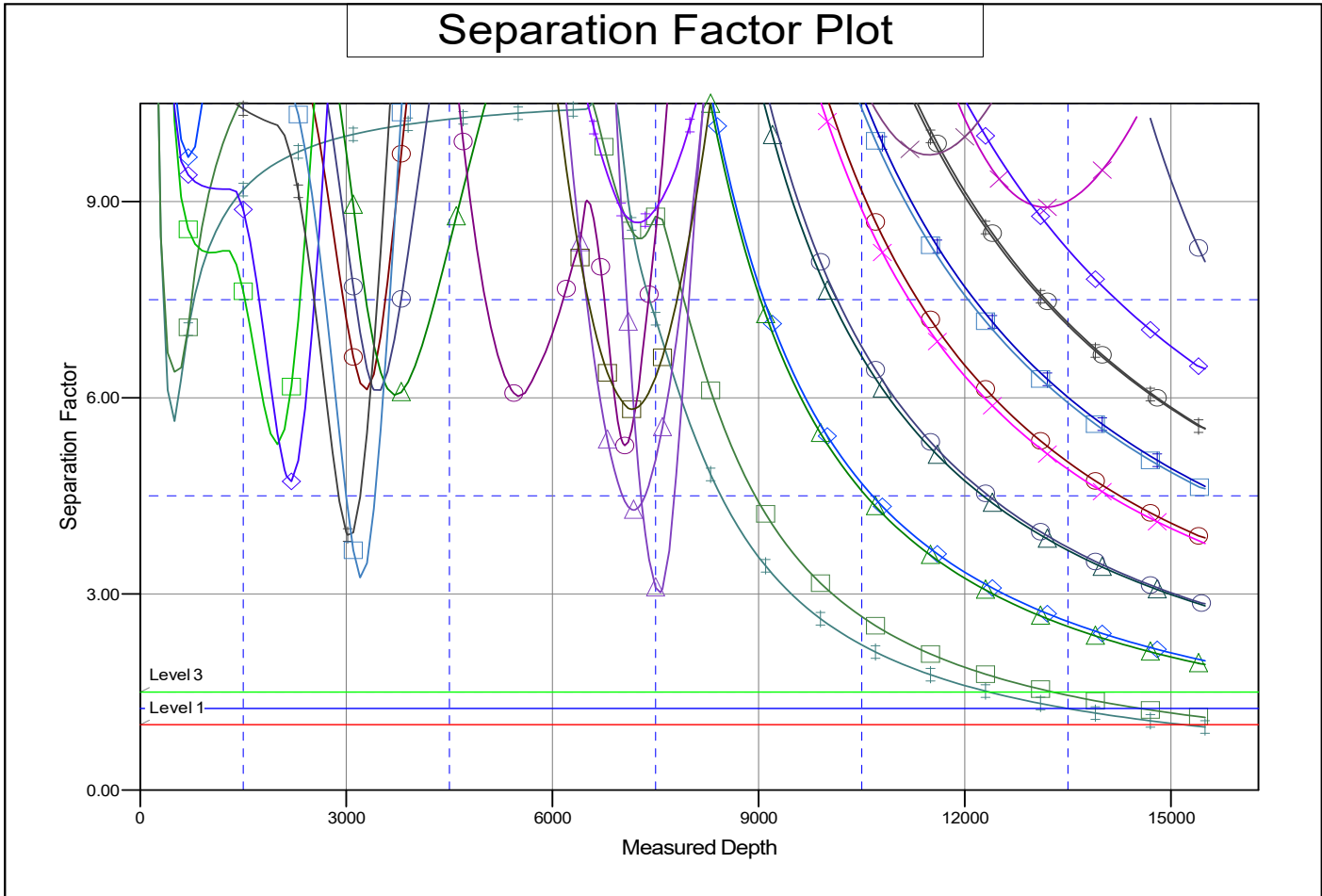
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|---|--|--|
| ABDN DD ENCORE 18-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-13H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 26N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD ENCORE 4-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-14H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 40N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD ENCORE 5-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-15H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 41N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD MIRACLE 12-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-6H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 8C-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD MIRACLE 13-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-8H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 13C-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT DONNAMITE 1, Wellbore #1, Design #1 V0 | CE 5-68 11-10-7H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 33N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT KNESS 1, Wellbore #1, Design #1 V0 | CE 5-68 11-10-8H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 40C-11HZ, SIDETRACK, SIDETRACK V0 |
| ABDN VERT MCWHINNEY-VANDERWATER1, Wellbore #1, Design #1 V0 | CE 5-68 11-3-1H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 40N-11HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT MEAN 1, Wellbore #1, Design #1 V0 | CE 5-68 11-3-2H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 9C-11HZ, Wellbore #1, Wellbore #1 V0 |
| CE 5-68 11-10-10H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | CE 5-68 11-3-3H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST VERT JEFFERS 2-2, Wellbore #1, Design #1 V0 |
| CE 5-68 11-10-11H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | CE 5-68 11-3-4H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST VERT WICKED 1, Wellbore #1, Wellbore #1 V0 |
| CE 5-68 11-10-12H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 1C-12HZ, 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 11-10-9H
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 11-10-9H	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 11-10-9H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.35°



LEGEND

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|---|--|--|
| ABDN DD ENCORE 18-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-13H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 26N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD ENCORE 4-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-14H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 40N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD ENCORE 5-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-15H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 41N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD MIRACLE 12-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-6H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 8C-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN DD MIRACLE 13-12, Wellbore #1, Wellbore #1 V0 | CE 5-68 11-10-6H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 13C-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT DONNAMITE 1, Wellbore #1, Design #1 V0 | CE 5-68 11-10-7H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 33N-12HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT KNESS 1, Wellbore #1, Design #1 V0 | CE 5-68 11-10-8H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 40C-11HZ, SIDETRACK, SIDETRACK V0 |
| ABDN VERT MCWHINNEY-VANDERWATER1, Wellbore #1, Design #1 V0 | CE 5-68 11-3-1H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 40N-11HZ, Wellbore #1, Wellbore #1 V0 |
| ABDN VERT MEAN1, Wellbore #1, Design #1 V0 | CE 5-68 11-3-2H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ MIRACLE 9C-11HZ, Wellbore #1, Wellbore #1 V0 |
| CE 5-68 11-10-10H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | CE 5-68 11-3-3H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST VERT JEFFERS 2-2, Wellbore #1, Design #1 V0 |
| CE 5-68 11-10-11H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | CE 5-68 11-3-4H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST VERT WICKED 1, Wellbore #1, Wellbore #1 V0 |
| CE 5-68 11-10-12H, ORIGINAL WELLBORE, PROPOSAL #1 V0 | EXIST HZ ENCORE 1C-12HZ, Wellbore #1, Wellbore #1 V0 | |

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