

BONANZA CREEK ENERGY OPERATING

Well Name: **Antelope F-J-18HNB**

Surface Location: Antelope F-18 Pad Sec.18-T5N-R62W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

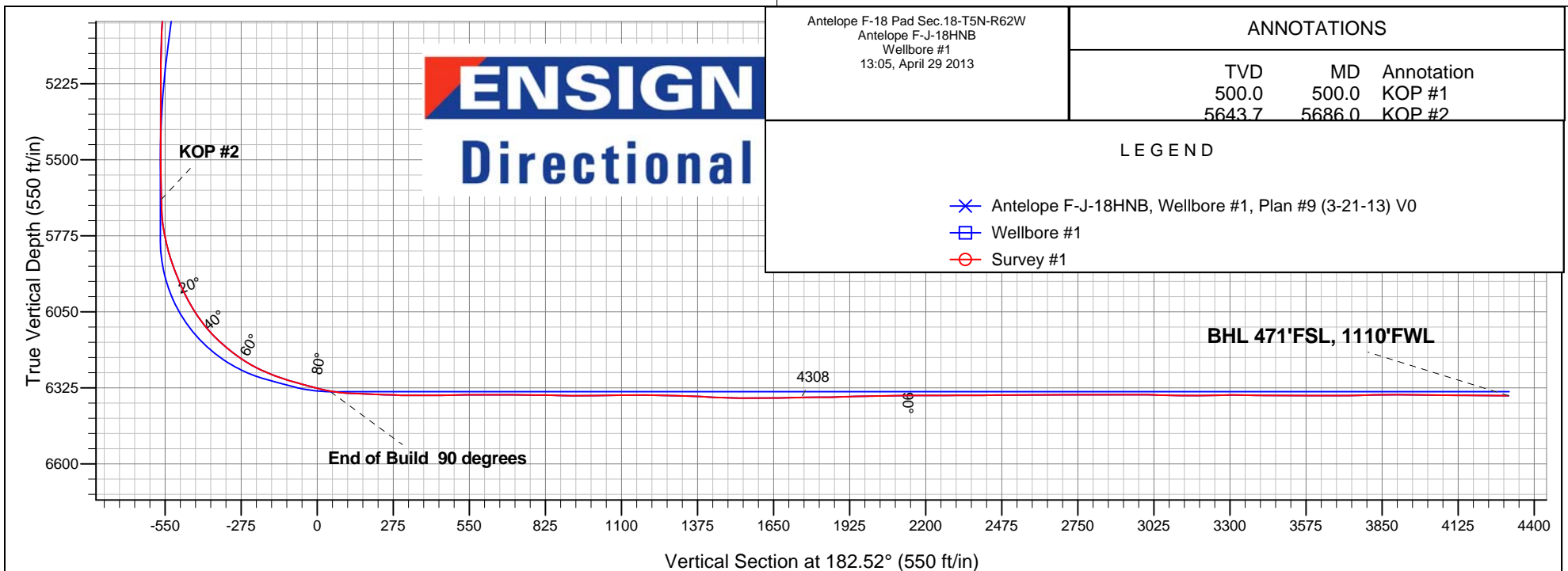
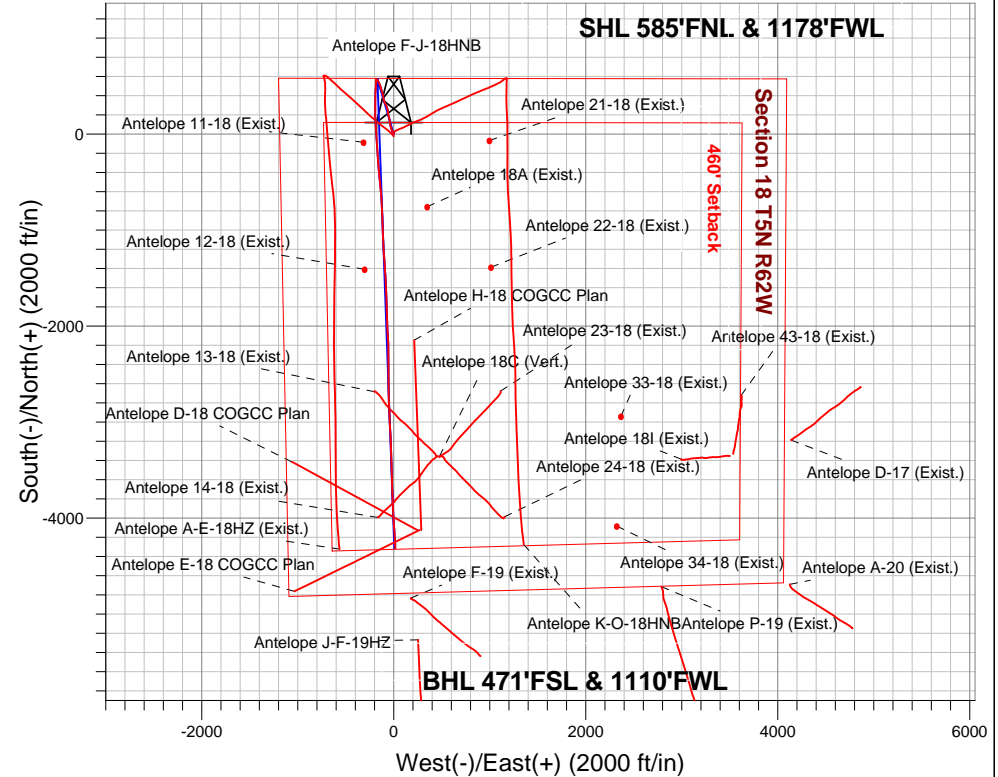
Ground Elevation: 4614.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1392397.36	3314358.98	40.405040	-104.371170	

Ensign 136 - RKB 12' WELL @ 4626.0ft (Ensign 136 - RKB 12')

FINAL SURVEY

Projected Bottom Hole Location
10982' MD 6354' TVD 4313' S & 15' E of SHL
89.2 degree Incl @ 178.8 degree AZM





BONANZA CREEK ENERGY OPERATING

SEC.18-T5N-R62W

Antelope F-18 Pad Sec.18-T5N-R62W

Antelope F-J-18HNB

Wellbore #1

Survey: Survey #1

Standard Survey Report

29 April, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Well:	Antelope F-J-18HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.18-T5N-R62W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Antelope F-18 Pad Sec.18-T5N-R62W				
Site Position:		Northing:	1,392,415.58 ft	Latitude:	40.405090
From:	Lat/Long	Easting:	3,314,358.75 ft	Longitude:	-104.371170
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.73 °

Well	Antelope F-J-18HNB					
Well Position	+N-S	0.0 ft	Northing:	1,392,397.36 ft	Latitude:	40.405040
	+E-W	0.0 ft	Easting:	3,314,358.98 ft	Longitude:	-104.371170
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,614.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/13/2013	8.42	67.06	52,993

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	182.52	

Survey Program	Date	4/29/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
165.0	10,982.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
165.0	0.50	217.40	165.0	-0.6	-0.4	0.6	0.30	0.30	0.00	
285.0	0.50	250.10	285.0	-1.2	-1.2	1.2	0.23	0.00	27.25	
424.0	0.40	279.50	424.0	-1.3	-2.3	1.4	0.18	-0.07	21.15	
474.0	0.40	277.60	474.0	-1.2	-2.6	1.4	0.03	0.00	-3.81	
9 5/8"										
500.0	0.40	276.60	500.0	-1.2	-2.8	1.3	0.03	0.00	-3.81	
KOP #1										
508.0	0.40	276.30	508.0	-1.2	-2.9	1.3	0.03	0.00	-3.81	
601.0	2.20	345.70	601.0	0.6	-3.6	-0.4	2.25	1.94	74.62	
694.0	4.90	339.10	693.8	6.0	-5.5	-5.7	2.93	2.90	-7.10	
788.0	6.10	332.20	787.3	14.2	-9.3	-13.7	1.46	1.28	-7.34	
881.0	8.80	341.50	879.6	25.3	-13.8	-24.7	3.17	2.90	10.00	

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Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Well:	Antelope F-J-18HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
987.0	8.90	342.80	984.3	40.8	-18.8	-39.9	0.21	0.09	1.23
1,114.0	8.80	343.10	1,109.8	59.5	-24.6	-58.3	0.09	-0.08	0.24
1,241.0	10.30	338.40	1,235.0	79.3	-31.6	-77.9	1.33	1.18	-3.70
1,368.0	9.60	352.20	1,360.1	100.4	-37.2	-98.7	1.95	-0.55	10.87
1,495.0	9.30	351.90	1,485.4	121.0	-40.1	-119.2	0.24	-0.24	-0.24
1,622.0	9.30	350.70	1,610.7	141.3	-43.2	-139.3	0.15	0.00	-0.94
1,749.0	8.60	351.40	1,736.2	160.8	-46.2	-158.7	0.56	-0.55	0.55
1,877.0	8.00	344.00	1,862.8	178.9	-50.1	-176.5	0.96	-0.47	-5.78
2,004.0	7.80	344.20	1,988.6	195.7	-54.9	-193.1	0.16	-0.16	0.16
2,132.0	8.90	352.10	2,115.3	213.8	-58.6	-211.0	1.24	0.86	6.17
2,247.0	9.50	358.60	2,228.8	232.1	-60.1	-229.3	1.04	0.52	5.65
2,338.0	9.10	349.60	2,318.6	246.7	-61.6	-243.8	1.66	-0.44	-9.89
2,428.0	9.00	343.50	2,407.5	260.5	-64.9	-257.4	1.07	-0.11	-6.78
2,520.0	8.50	341.70	2,498.4	273.8	-69.0	-270.5	0.62	-0.54	-1.96
2,649.0	8.30	338.20	2,626.0	291.5	-75.5	-287.9	0.43	-0.16	-2.71
2,777.0	8.10	334.50	2,752.7	308.2	-82.8	-304.3	0.44	-0.16	-2.89
2,905.0	7.10	335.00	2,879.6	323.5	-90.0	-319.3	0.78	-0.78	0.39
3,034.0	6.80	337.50	3,007.7	337.8	-96.3	-333.3	0.33	-0.23	1.94
3,162.0	6.20	337.80	3,134.8	351.2	-101.8	-346.4	0.47	-0.47	0.23
3,290.0	4.60	352.20	3,262.3	362.7	-105.1	-357.7	1.63	-1.25	11.25
3,419.0	7.00	354.90	3,390.6	375.7	-106.5	-370.6	1.87	1.86	2.09
3,547.0	7.60	349.40	3,517.6	391.8	-108.8	-386.6	0.72	0.47	-4.30
3,675.0	9.40	345.40	3,644.2	410.2	-113.0	-404.8	1.48	1.41	-3.13
3,804.0	9.00	344.30	3,771.5	430.1	-118.4	-424.5	0.34	-0.31	-0.85
3,932.0	8.70	343.10	3,898.0	449.0	-123.9	-443.1	0.28	-0.23	-0.94
4,060.0	8.00	343.80	4,024.6	466.8	-129.2	-460.7	0.55	-0.55	0.55
4,188.0	7.70	343.10	4,151.4	483.6	-134.2	-477.2	0.25	-0.23	-0.55
4,317.0	7.30	343.50	4,279.3	499.7	-139.0	-493.1	0.31	-0.31	0.31
4,445.0	6.90	340.30	4,406.3	514.7	-143.9	-507.9	0.44	-0.31	-2.50
4,573.0	6.60	333.30	4,533.4	528.5	-149.8	-521.4	0.68	-0.23	-5.47
4,702.0	6.20	334.00	4,661.6	541.4	-156.2	-534.0	0.32	-0.31	0.54
4,830.0	6.10	329.60	4,788.9	553.5	-162.7	-545.8	0.38	-0.08	-3.44
4,959.0	5.00	322.70	4,917.3	563.9	-169.5	-555.9	1.00	-0.85	-5.35
5,087.0	4.30	300.60	5,044.9	570.8	-177.0	-562.4	1.49	-0.55	-17.27
5,216.0	1.30	298.30	5,173.7	573.9	-182.5	-565.3	2.33	-2.33	-1.78
5,344.0	0.40	283.00	5,301.7	574.7	-184.2	-566.1	0.72	-0.70	-11.95
5,472.0	0.40	162.90	5,429.7	574.4	-184.5	-565.7	0.54	0.00	-93.83
5,600.0	1.00	126.90	5,557.7	573.3	-183.5	-564.7	0.56	0.47	-28.13
5,644.0	0.80	145.40	5,601.7	572.8	-183.0	-564.2	0.80	-0.45	42.05
5,686.0	0.40	172.10	5,643.7	572.4	-182.8	-563.8	1.14	-0.95	63.57
KOP #2									
5,729.0	2.90	174.90	5,686.7	571.2	-182.7	-562.6	5.82	5.81	6.51
5,771.0	7.60	187.90	5,728.5	567.4	-183.0	-558.8	11.47	11.19	30.95
5,815.0	11.30	186.70	5,771.9	560.2	-183.9	-551.6	8.42	8.41	-2.73
5,857.0	13.50	182.80	5,812.9	551.2	-184.6	-542.6	5.60	5.24	-9.29
5,900.0	17.50	181.00	5,854.3	539.7	-185.0	-531.1	9.37	9.30	-4.19
5,943.0	20.60	182.30	5,895.0	525.7	-185.4	-517.1	7.28	7.21	3.02
5,985.0	22.20	184.00	5,934.1	510.4	-186.2	-501.7	4.09	3.81	4.05
6,028.0	25.00	181.60	5,973.5	493.2	-187.1	-484.5	6.88	6.51	-5.58
6,071.0	28.60	183.50	6,011.8	473.9	-187.9	-465.1	8.60	8.37	4.42
6,114.0	32.30	183.80	6,048.9	452.1	-189.3	-443.4	8.61	8.60	0.70
6,156.0	36.70	181.60	6,083.5	428.4	-190.4	-419.6	10.89	10.48	-5.24
6,199.0	41.40	181.60	6,116.9	401.3	-191.2	-392.5	10.93	10.93	0.00
6,242.0	45.70	180.90	6,148.1	371.7	-191.8	-362.9	10.06	10.00	-1.63

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Well:	Antelope F-J-18HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,285.0	49.90	181.40	6,176.9	339.8	-192.5	-331.1	9.81	9.77	1.16
6,328.0	53.20	180.70	6,203.7	306.2	-193.1	-297.4	7.78	7.67	-1.63
6,370.0	57.20	180.30	6,227.6	271.7	-193.4	-262.9	9.56	9.52	-0.95
6,413.0	62.50	179.80	6,249.2	234.5	-193.4	-225.8	12.37	12.33	-1.16
6,456.0	66.50	178.40	6,267.7	195.7	-192.8	-187.1	9.76	9.30	-3.26
6,499.0	69.70	176.50	6,283.8	155.9	-191.0	-147.3	8.50	7.44	-4.42
6,541.0	73.60	177.30	6,297.0	116.1	-188.9	-107.7	9.46	9.29	1.90
6,584.0	74.50	176.30	6,308.8	74.8	-186.5	-66.5	3.06	2.09	-2.33
6,596.3	74.67	176.18	6,312.1	62.9	-185.8	-54.7	1.66	1.39	-0.93
T1 510'FNL, 1034'FWL									
6,627.0	75.10	175.90	6,320.1	33.4	-183.7	-25.3	1.66	1.40	-0.93
6,645.0	75.56	175.98	6,324.6	16.0	-182.5	-8.0	2.60	2.56	0.47
4-1/2"									
6,670.0	76.20	176.10	6,330.7	-8.1	-180.8	16.1	2.60	2.56	0.46
6,713.0	81.40	176.30	6,339.1	-50.2	-178.0	58.0	12.10	12.09	0.47
6,755.0	85.60	177.30	6,343.8	-91.9	-175.7	99.5	10.28	10.00	2.38
6,777.0	87.20	176.80	6,345.2	-113.8	-174.6	121.4	7.62	7.27	-2.27
6,809.9	87.58	176.59	6,346.7	-146.6	-172.7	154.1	1.34	1.17	-0.65
7"									
6,854.0	88.10	176.30	6,348.4	-190.6	-169.9	197.9	1.34	1.17	-0.65
6,896.0	88.10	176.30	6,349.8	-232.5	-167.2	239.6	0.00	0.00	0.00
6,939.0	87.80	175.20	6,351.3	-275.3	-164.0	282.3	2.65	-0.70	-2.56
6,981.0	89.40	175.60	6,352.3	-317.2	-160.7	324.0	3.93	3.81	0.95
7,024.0	90.30	175.60	6,352.4	-360.1	-157.4	366.6	2.09	2.09	0.00
7,066.0	90.00	174.20	6,352.3	-401.9	-153.6	408.3	3.41	-0.71	-3.33
7,108.0	90.40	173.70	6,352.2	-443.7	-149.2	449.8	1.52	0.95	-1.19
7,150.0	90.70	173.50	6,351.8	-485.4	-144.5	491.3	0.86	0.71	-0.48
7,193.0	91.40	174.90	6,351.0	-528.2	-140.2	533.8	3.64	1.63	3.26
7,235.0	90.70	175.20	6,350.2	-570.0	-136.6	575.5	1.81	-1.67	0.71
7,277.0	89.80	175.80	6,350.0	-611.9	-133.3	617.1	2.58	-2.14	1.43
7,320.0	89.60	175.80	6,350.3	-654.8	-130.1	659.8	0.47	-0.47	0.00
7,363.0	90.00	175.80	6,350.4	-697.6	-127.0	702.6	0.93	0.93	0.00
7,406.0	88.70	176.10	6,350.9	-740.5	-123.9	745.3	3.10	-3.02	0.70
7,449.0	89.70	176.50	6,351.5	-783.4	-121.2	788.0	2.50	2.33	0.93
7,491.0	89.40	178.20	6,351.8	-825.4	-119.2	829.8	4.11	-0.71	4.05
7,534.0	88.60	178.80	6,352.6	-868.4	-118.1	872.7	2.33	-1.86	1.40
7,577.0	88.90	178.80	6,353.5	-911.3	-117.2	915.6	0.70	0.70	0.00
7,620.0	89.90	178.40	6,354.0	-954.3	-116.1	958.5	2.50	2.33	-0.93
7,662.0	91.10	178.20	6,353.6	-996.3	-114.9	1,000.4	2.90	2.86	-0.48
7,705.0	91.40	177.90	6,352.7	-1,039.3	-113.4	1,043.3	0.99	0.70	-0.70
7,748.0	90.70	177.70	6,351.9	-1,082.2	-111.8	1,086.1	1.69	-1.63	-0.47
7,791.0	90.00	176.50	6,351.6	-1,125.2	-109.6	1,128.9	3.23	-1.63	-2.79
7,833.0	89.40	176.50	6,351.8	-1,167.1	-107.0	1,170.7	1.43	-1.43	0.00
7,876.0	90.00	175.90	6,352.1	-1,210.0	-104.2	1,213.4	1.97	1.40	-1.40
7,919.0	88.90	175.80	6,352.5	-1,252.9	-101.1	1,256.1	2.57	-2.56	-0.23
7,962.0	88.10	176.30	6,353.6	-1,295.8	-98.1	1,298.8	2.19	-1.86	1.16
8,005.0	87.90	176.10	6,355.1	-1,338.7	-95.3	1,341.5	0.66	-0.47	-0.47
8,047.0	87.60	176.80	6,356.8	-1,380.5	-92.7	1,383.3	1.81	-0.71	1.67
8,090.0	87.10	176.30	6,358.7	-1,423.4	-90.1	1,426.0	1.64	-1.16	-1.16
8,133.0	87.80	176.50	6,360.7	-1,466.3	-87.4	1,468.7	1.69	1.63	0.47
8,176.0	88.40	176.60	6,362.1	-1,509.2	-84.8	1,511.5	1.41	1.40	0.23
8,218.0	89.30	177.90	6,362.9	-1,551.1	-82.8	1,553.3	3.76	2.14	3.10
8,261.0	90.80	177.20	6,362.9	-1,594.1	-81.0	1,596.1	3.85	3.49	-1.63
8,304.0	91.60	177.30	6,362.0	-1,637.0	-78.9	1,638.9	1.87	1.86	0.23

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,347.0	91.20	178.20	6,360.9	-1,680.0	-77.2	1,681.8	2.29	-0.93	2.09
8,390.0	90.80	178.20	6,360.2	-1,723.0	-75.9	1,724.6	0.93	-0.93	0.00
8,432.0	90.50	178.60	6,359.7	-1,764.9	-74.7	1,766.5	1.19	-0.71	0.95
8,475.0	90.20	177.70	6,359.4	-1,807.9	-73.3	1,809.4	2.21	-0.70	-2.09
8,518.0	90.50	178.40	6,359.2	-1,850.9	-71.8	1,852.3	1.77	0.70	1.63
8,561.0	92.10	177.20	6,358.2	-1,893.8	-70.2	1,895.1	4.65	3.72	-2.79
8,603.0	92.20	177.50	6,356.6	-1,935.8	-68.2	1,936.9	0.75	0.24	0.71
8,646.0	91.60	177.90	6,355.2	-1,978.7	-66.5	1,979.7	1.68	-1.40	0.93
8,689.0	90.90	177.50	6,354.3	-2,021.7	-64.8	2,022.6	1.87	-1.63	-0.93
8,732.0	90.70	177.50	6,353.7	-2,064.6	-62.9	2,065.4	0.47	-0.47	0.00
8,775.0	90.60	177.70	6,353.2	-2,107.6	-61.1	2,108.2	0.52	-0.23	0.47
8,817.0	89.80	176.50	6,353.0	-2,149.5	-59.0	2,150.0	3.43	-1.90	-2.86
8,860.0	90.70	179.80	6,352.8	-2,192.5	-57.6	2,192.9	7.95	2.09	7.67
8,903.0	89.70	178.60	6,352.7	-2,235.5	-57.0	2,235.8	3.63	-2.33	-2.79
8,946.0	90.50	179.30	6,352.6	-2,278.5	-56.2	2,278.7	2.47	1.86	1.63
8,988.0	90.10	179.10	6,352.4	-2,320.5	-55.6	2,320.7	1.06	-0.95	-0.48
9,031.0	90.10	180.30	6,352.3	-2,363.5	-55.4	2,363.6	2.79	0.00	2.79
9,074.0	90.30	179.60	6,352.2	-2,406.5	-55.4	2,406.6	1.69	0.47	-1.63
9,117.0	90.50	179.80	6,351.9	-2,449.5	-55.1	2,449.5	0.66	0.47	0.47
9,160.0	90.20	179.30	6,351.6	-2,492.5	-54.8	2,492.5	1.36	-0.70	-1.16
9,202.0	90.70	180.00	6,351.3	-2,534.5	-54.5	2,534.4	2.05	1.19	1.67
9,245.0	90.30	179.30	6,350.9	-2,577.5	-54.3	2,577.4	1.87	-0.93	-1.63
9,298.0	90.00	178.90	6,350.8	-2,630.5	-53.5	2,630.3	0.94	-0.57	-0.75
9,331.0	90.00	178.60	6,350.8	-2,663.4	-52.7	2,663.2	0.91	0.00	-0.91
9,374.0	90.30	179.60	6,350.7	-2,706.4	-52.1	2,706.1	2.43	0.70	2.33
9,416.0	89.90	177.90	6,350.6	-2,748.4	-51.1	2,748.0	4.16	-0.95	-4.05
9,459.0	90.70	178.90	6,350.4	-2,791.4	-49.9	2,790.9	2.98	1.86	2.33
9,502.0	90.30	177.70	6,350.0	-2,834.4	-48.7	2,833.8	2.94	-0.93	-2.79
9,545.0	90.00	177.70	6,349.9	-2,877.4	-46.9	2,876.6	0.70	-0.70	0.00
9,588.0	90.30	177.70	6,349.8	-2,920.3	-45.2	2,919.5	0.70	0.70	0.00
9,630.0	89.80	177.20	6,349.7	-2,962.3	-43.3	2,961.3	1.68	-1.19	-1.19
9,673.0	89.30	176.60	6,350.1	-3,005.2	-41.0	3,004.1	1.82	-1.16	-1.40
9,716.0	88.40	175.90	6,350.9	-3,048.1	-38.2	3,046.8	2.65	-2.09	-1.63
9,759.0	88.10	175.60	6,352.2	-3,091.0	-35.0	3,089.5	0.99	-0.70	-0.70
9,801.0	88.90	176.30	6,353.3	-3,132.9	-32.1	3,131.2	2.53	1.90	1.67
9,844.0	90.60	179.10	6,353.5	-3,175.8	-30.3	3,174.1	7.62	3.95	6.51
9,887.0	91.10	180.20	6,352.9	-3,218.8	-30.1	3,217.0	2.81	1.16	2.56
9,930.0	91.60	178.60	6,351.9	-3,261.8	-29.6	3,259.9	3.90	1.16	-3.72
9,973.0	90.10	177.90	6,351.2	-3,304.8	-28.3	3,302.8	3.85	-3.49	-1.63
10,015.0	89.40	178.00	6,351.4	-3,346.7	-26.8	3,344.7	1.68	-1.67	0.24
10,058.0	89.30	177.70	6,351.9	-3,389.7	-25.2	3,387.5	0.74	-0.23	-0.70
10,101.0	88.60	176.60	6,352.7	-3,432.6	-23.1	3,430.3	3.03	-1.63	-2.56
10,144.0	89.70	178.60	6,353.3	-3,475.6	-21.3	3,473.2	5.31	2.56	4.65
10,187.0	90.90	178.90	6,353.1	-3,518.6	-20.3	3,516.1	2.88	2.79	0.70
10,229.0	89.90	177.70	6,352.8	-3,560.6	-19.1	3,558.0	3.72	-2.38	-2.86
10,272.0	89.30	176.60	6,353.1	-3,603.5	-16.9	3,600.8	2.91	-1.40	-2.56
10,315.0	89.60	178.40	6,353.5	-3,646.5	-15.1	3,643.6	4.24	0.70	4.19
10,358.0	90.60	178.90	6,353.4	-3,689.5	-14.0	3,686.5	2.60	2.33	1.16
10,400.0	90.50	178.80	6,353.0	-3,731.4	-13.2	3,728.4	0.34	-0.24	-0.24
10,443.0	92.00	179.50	6,352.1	-3,774.4	-12.6	3,771.3	3.85	3.49	1.63
10,486.0	91.80	178.90	6,350.7	-3,817.4	-12.0	3,814.2	1.47	-0.47	-1.40
10,529.0	89.40	177.70	6,350.2	-3,860.4	-10.7	3,857.1	6.24	-5.58	-2.79
10,572.0	89.20	176.80	6,350.8	-3,903.3	-8.6	3,899.9	2.14	-0.47	-2.09
10,614.0	90.00	176.50	6,351.1	-3,945.2	-6.2	3,941.7	2.03	1.90	-0.71

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Well:	Antelope F-J-18HNB	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,657.0	90.30	176.50	6,350.9	-3,988.2	-3.5	3,984.5	0.70	0.70	0.00
10,700.0	90.00	175.80	6,350.8	-4,031.1	-0.7	4,027.2	1.77	-0.70	-1.63
10,743.0	89.10	174.50	6,351.2	-4,073.9	3.0	4,069.8	3.68	-2.09	-3.02
10,786.0	88.90	174.70	6,351.9	-4,116.7	7.0	4,112.4	0.66	-0.47	0.47
10,828.0	89.90	177.50	6,352.4	-4,158.6	9.9	4,154.2	7.08	2.38	6.67
10,873.0	89.60	177.50	6,352.5	-4,203.6	11.8	4,199.0	0.67	-0.67	0.00
10,931.0	89.40	178.20	6,353.1	-4,261.5	14.0	4,256.8	1.26	-0.34	1.21
10,975.0	89.24	178.73	6,353.6	-4,305.5	15.2	4,300.7	1.27	-0.35	1.22
4-1/2"									
10,982.0	89.22	178.82	6,353.7	-4,312.5	15.3	4,307.7	1.27	-0.35	1.22
TD at 10982' - BHL 470'FSL, 1100'FWL									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
474.0	474.0	9 5/8"		9-5/8	12-1/4
6,809.9	6,346.7	7"		7	7-1/2
6,645.0	6,324.6	4-1/2"		4-1/2	6
10,975.0	6,353.6	4-1/2"		4-1/2	6

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
500.0	500.0	-1.2	-2.8	KOP #1	
5,686.0	5,643.7	572.4	-182.8	KOP #2	
10,982.0	6,353.7	-4,312.5	15.3	TD at 10982'	

Checked By: _____ Approved By: _____ Date: _____



BONANZA CREEK ENERGY OPERATING

SEC.18-T5N-R62W

Antelope F-18 Pad Sec.18-T5N-R62W

Antelope F-J-18HNB

Wellbore #1

Survey: Survey #1

Anticollision Report

29 April, 2013

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Reference	Survey: Survey #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Program	Date	4/29/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
165.0	10,982.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Antelope (Existing Wells) Pad Sec.18-T5N-R62W						
Antelope 11-18 (Exist.) - Wellbore #1 - Wellbore #1	6,738.2	6,327.7	138.5	-2.1	0.985	Level 1, CC, ES, SF
Antelope 12-18 (Exist.) - Wellbore #1 - Wellbore #1	8,058.9	6,342.3	212.3	55.9	1.357	Level 3, CC, ES, SF
Antelope 13-18 (Exist.) - Wellbore #1 - Wellbore #1	9,342.8	6,422.1	149.0	79.6	2.147	CC, ES, SF
Antelope 14-18 (Exist.) - Wellbore #1 - Wellbore #1	10,647.8	6,416.9	163.3	72.1	1.791	CC, ES, SF
Antelope 18A (Exist.) - Wellbore #1 - Wellbore #1	7,443.9	6,336.6	470.5	323.0	3.191	CC, ES, SF
Antelope 18C (Vert.) - Wellbore #1 - Wellbore #1	10,047.0	6,336.8	502.2	312.2	2.643	CC, ES, SF
Antelope 18I (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 21-18 (Exist.) - Wellbore #1 - Wellbore #1	0.0	0.0	999.3			
Antelope 21-18 (Exist.) - Wellbore #1 - Wellbore #1	200.0	185.0	999.8	995.8	252.443	ES, SF
Antelope 22-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 23-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 24-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 33-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 34-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope 43-18 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope A-20 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope D-17 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope F-19 (Exist.) - Wellbore #1 - Wellbore #1	10,982.0	6,443.3	549.6	452.0	5.632	CC, ES, SF
Antelope P-19 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Antelope D-18 Pad - Plans by another company						
Antelope D-18 COGCC Plan - Wellbore #1 - Wellbore #1						Out of range
Antelope E-18 COGCC Plan - Wellbore #1 - Wellbore #1						Out of range
Antelope H-18 COGCC Plan - Wellbore #1 - Wellbore #1	8,825.4	6,731.8	272.6	191.3	3.352	CC, ES, SF
Antelope F-18 Pad Sec.18-T5N-R62W						
Antelope A-E-18HZ (Exist.) - Wellbore #1 - Wellbore #1	509.4	509.5	19.5	18.1	13.172	CC, ES
Antelope A-E-18HZ (Exist.) - Wellbore #1 - Wellbore #1	10,982.0	11,128.0	581.4	421.1	3.628	SF
Antelope F-J-18HNB - Wellbore #1 - Plan #9 (3-21-13)	0.0	0.0	0.0	0.0	10,000.000	CC
Antelope F-J-18HNB - Wellbore #1 - Plan #9 (3-21-13)	10,800.0	10,840.1	16.0	-92.6	0.148	Level 1, SF
Antelope F-J-18HNB - Wellbore #1 - Plan #9 (3-21-13)	10,900.0	10,940.0	17.2	-97.3	0.150	Level 1, ES
Antelope K-O-18HNB - Wellbore #1 - Wellbore #1	0.0	0.0	18.2	18.2	10,000.000	CC, ES
Antelope K-O-18HNB - Wellbore #1 - Wellbore #1	700.0	698.0	27.6	24.9	10.405	SF
Antelope J-F-19HZ Pad Sec.19-T5N-R62W						
Antelope J-F-19HZ - Wellbore #1 - Plan #6 (OCT 23, 201	10,982.0	11,096.8	949.4	778.6	5.557	CC, ES, SF
Antelope J-F-19HZ - Wellbore #1 - Wellbore #1	10,982.0	11,046.0	983.9	820.3	6.013	CC, ES, SF

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0ft
Survey Program: 6349-UNKNOWN													Offset Well Error:	0.0ft
Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 11-18 (Exist.) - Wellbore #1 - Wellbore #1														
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-104.91	-83.8	-314.7	326.0					
100.0	100.0	85.0	85.0	0.1	1.7	37.72	-83.8	-314.7	325.5	323.7	1.81	179.522		
200.0	200.0	185.0	185.0	0.3	3.7	28.42	-83.8	-314.7	324.9	320.9	3.96	82.032		
300.0	300.0	285.0	285.0	0.5	5.7	2.63	-83.8	-314.7	324.0	317.9	6.17	52.515		
400.0	400.0	385.0	385.0	0.7	7.7	-18.33	-83.8	-314.7	323.3	314.9	8.38	38.592		
500.0	500.0	485.0	485.0	0.9	9.7	-21.44	-83.8	-314.7	322.6	312.1	10.58	30.487		
594.3	594.3	579.3	579.3	1.1	11.6	-90.16	-83.8	-314.7	322.3	309.7	12.67	25.448		
600.0	600.0	585.0	585.0	1.1	11.7	-90.76	-83.8	-314.7	322.3	309.5	12.79	25.197		
700.0	699.8	684.8	684.8	1.3	13.7	-84.87	-83.8	-314.7	321.9	306.9	15.01	21.451		
800.0	799.3	784.3	784.3	1.6	15.7	-81.90	-83.8	-314.7	320.6	303.3	17.24	18.594		
873.6	872.3	857.3	857.3	1.8	17.1	-89.78	-83.8	-314.7	319.9	301.0	18.90	16.926		
900.0	898.3	883.3	883.3	1.8	17.7	-92.16	-83.8	-314.7	320.1	300.6	19.50	16.421		
1,000.0	997.1	982.1	982.1	2.1	19.6	-95.95	-83.8	-314.7	321.3	299.5	21.76	14.761		
1,100.0	1,095.9	1,080.9	1,080.9	2.4	21.6	-98.87	-83.8	-314.7	323.3	299.2	24.03	13.452		
1,200.0	1,194.6	1,179.6	1,179.6	2.7	23.6	-98.34	-83.8	-314.7	325.7	299.4	26.32	12.377		
1,300.0	1,293.1	1,278.1	1,278.1	3.1	25.6	-106.05	-83.8	-314.7	329.0	300.4	28.59	11.507		
1,400.0	1,391.7	1,376.7	1,376.7	3.4	27.5	-116.20	-83.8	-314.7	335.4	304.6	30.83	10.878		
1,500.0	1,490.3	1,475.3	1,475.3	3.7	29.5	-118.37	-83.8	-314.7	343.0	309.9	33.09	10.365		
1,600.0	1,589.0	1,574.0	1,574.0	4.1	31.5	-119.74	-83.8	-314.7	350.9	315.6	35.35	9.928		
1,700.0	1,687.8	1,672.8	1,672.8	4.4	33.5	-122.16	-83.8	-314.7	359.2	321.5	37.60	9.551		
1,800.0	1,786.6	1,771.6	1,771.6	4.7	35.4	-121.64	-83.8	-314.7	367.3	327.4	39.87	9.211		
1,900.0	1,885.6	1,870.6	1,870.6	5.0	37.4	-119.02	-83.8	-314.7	374.4	332.2	42.15	8.883		
2,000.0	1,984.7	1,969.7	1,969.7	5.4	39.4	-120.98	-83.8	-314.7	381.3	336.9	44.39	8.590		
2,100.0	2,083.7	2,068.7	2,068.7	5.7	41.4	-128.74	-83.8	-314.7	389.5	342.9	46.54	8.368		
2,200.0	2,182.4	2,167.4	2,167.4	6.0	43.3	-136.08	-83.8	-314.7	400.1	351.4	48.67	8.220		
2,300.0	2,281.1	2,266.1	2,266.1	6.4	45.3	-135.02	-83.8	-314.7	412.1	361.2	50.90	8.096		
2,400.0	2,379.8	2,364.8	2,364.8	6.7	47.3	-128.63	-83.8	-314.7	422.7	369.4	53.21	7.943		
2,500.0	2,478.7	2,463.7	2,463.7	7.0	49.3	-126.99	-83.8	-314.7	432.1	376.6	55.48	7.788		
2,600.0	2,577.6	2,562.6	2,562.6	7.4	51.3	-126.00	-83.8	-314.7	440.9	383.2	57.72	7.638		
2,700.0	2,676.5	2,661.5	2,661.5	7.7	53.2	-124.72	-83.8	-314.7	449.3	389.3	59.97	7.492		
2,800.0	2,775.5	2,760.5	2,760.5	8.0	55.2	-124.05	-83.8	-314.7	457.3	395.1	62.21	7.350		
2,900.0	2,874.7	2,859.7	2,859.7	8.3	57.2	-125.82	-83.8	-314.7	464.8	400.4	64.45	7.212		
3,000.0	2,973.9	2,958.9	2,958.9	8.6	59.2	-128.86	-83.8	-314.7	472.2	405.6	66.65	7.085		
3,100.0	3,073.2	3,058.2	3,058.2	8.9	61.2	-130.78	-83.8	-314.7	479.8	410.9	68.87	6.967		
3,200.0	3,172.6	3,157.6	3,157.6	9.2	63.2	-135.34	-83.8	-314.7	487.0	415.9	71.08	6.852		
3,300.0	3,272.2	3,257.2	3,257.2	9.5	65.1	-147.32	-83.8	-314.7	493.9	420.6	73.28	6.740		
3,400.0	3,371.7	3,356.7	3,356.7	9.7	67.1	-149.96	-83.8	-314.7	502.5	427.2	75.31	6.672		
3,500.0	3,471.0	3,456.0	3,456.0	10.0	69.1	-147.31	-83.8	-314.7	513.1	435.7	77.44	6.626		
3,600.0	3,570.1	3,555.1	3,555.1	10.3	71.1	-144.29	-83.8	-314.7	524.3	444.7	79.56	6.589		
3,700.0	3,668.8	3,653.8	3,653.8	10.7	73.1	-142.88	-83.8	-314.7	536.8	455.2	81.65	6.575		
3,800.0	3,767.5	3,752.5	3,752.5	11.0	75.1	-143.04	-83.8	-314.7	549.6	465.7	83.88	6.552		
3,900.0	3,866.3	3,851.3	3,851.3	11.4	77.0	-143.08	-83.8	-314.7	562.0	475.9	86.11	6.527		
4,000.0	3,965.2	3,950.2	3,950.2	11.7	79.0	-144.06	-83.8	-314.7	574.1	485.7	88.35	6.497		
4,100.0	4,064.2	4,049.2	4,049.2	12.0	81.0	-145.02	-83.8	-314.7	585.6	495.0	90.59	6.464		
4,200.0	4,163.3	4,148.3	4,148.3	12.4	83.0	-145.33	-83.8	-314.7	596.7	503.9	92.82	6.429		
4,300.0	4,262.5	4,247.5	4,247.5	12.7	84.9	-146.36	-83.8	-314.7	607.6	512.5	95.05	6.392		
4,400.0	4,361.7	4,346.7	4,346.7	13.0	86.9	-145.05	-83.8	-314.7	618.0	520.7	97.30	6.351		
4,500.0	4,460.9	4,445.9	4,445.9	13.3	88.9	-141.61	-83.8	-314.7	627.7	528.1	99.57	6.304		
4,600.0	4,560.3	4,545.3	4,545.3	13.6	90.9	-138.37	-83.8	-314.7	636.5	534.6	101.83	6.250		
4,700.0	4,659.7	4,644.7	4,644.7	13.9	92.9	-139.58	-83.8	-314.7	644.8	540.8	104.05	6.197		
4,800.0	4,759.1	4,744.1	4,744.1	14.2	94.9	-136.87	-83.8	-314.7	652.9	546.6	106.29	6.143		

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 11-18 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 6349-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
4,900.0	4,858.5	4,843.5	4,843.5	14.4	96.9	-133.08	-83.8	-314.7	660.2	551.6	108.57	6.081		
5,000.0	4,958.2	4,943.2	4,943.2	14.7	98.9	-123.89	-83.8	-314.7	665.8	555.0	110.87	6.006		
5,100.0	5,057.9	5,042.9	5,042.9	14.9	100.9	-108.68	-83.8	-314.7	669.2	556.1	113.13	5.915		
5,200.0	5,157.7	5,142.7	5,142.7	15.1	102.9	-107.63	-83.8	-314.7	670.8	555.4	115.33	5.816		
5,300.0	5,257.7	5,242.7	5,242.7	15.3	104.9	-101.40	-83.8	-314.7	671.3	553.7	117.52	5.712		
5,400.0	5,357.7	5,342.7	5,342.7	15.4	106.9	-44.00	-83.8	-314.7	671.3	551.6	119.70	5.608		
5,500.0	5,457.7	5,442.7	5,442.7	15.6	108.9	43.02	-83.8	-314.7	670.8	548.9	121.87	5.504		
5,600.0	5,557.7	5,542.7	5,542.7	15.7	110.9	64.40	-83.8	-314.7	670.1	546.0	124.05	5.402		
5,700.0	5,657.7	5,642.7	5,642.7	15.9	112.9	17.09	-83.8	-314.7	669.2	543.0	126.19	5.303		
5,800.0	5,757.1	5,742.1	5,742.1	15.9	114.8	4.52	-83.8	-314.7	659.9	533.6	126.31	5.225		
5,900.0	5,854.3	5,839.3	5,839.3	15.8	116.8	11.26	-83.8	-314.7	636.9	512.4	124.54	5.114		
6,000.0	5,947.9	5,932.9	5,932.9	15.6	118.7	9.97	-83.8	-314.7	602.2	480.2	122.00	4.936		
6,100.0	6,037.0	6,022.0	6,022.0	15.4	120.4	10.87	-83.8	-314.7	557.7	441.9	115.79	4.816		
6,200.0	6,117.6	6,102.6	6,102.6	15.0	122.1	16.77	-83.8	-314.7	499.9	394.4	105.52	4.738		
6,300.0	6,186.5	6,171.5	6,171.5	14.6	123.4	23.58	-83.8	-314.7	429.8	332.6	97.20	4.421		
6,400.0	6,243.1	6,228.1	6,228.1	14.2	124.6	37.17	-83.8	-314.7	351.4	250.9	100.46	3.497		
6,500.0	6,284.1	6,269.1	6,269.1	13.9	125.4	59.99	-83.8	-314.7	268.9	145.5	123.45	2.178		
6,600.0	6,313.0	6,298.0	6,298.0	13.7	126.0	75.68	-83.8	-314.7	192.9	57.0	135.89	1.419	Level 3	
6,700.0	6,337.0	6,322.0	6,322.0	14.1	126.4	87.27	-83.8	-314.7	143.5	3.3	140.28	1.023	Level 2	
6,738.2	6,342.7	6,327.7	6,327.7	14.3	126.6	90.00	-83.8	-314.7	138.5	-2.1	140.69	0.985	Level 1, CC, ES, SF	
6,800.0	6,346.3	6,331.3	6,331.3	14.6	126.6	91.12	-83.8	-314.7	151.0	10.0	141.00	1.071	Level 2	
6,900.0	6,349.9	6,334.9	6,334.9	15.3	126.7	92.28	-83.8	-314.7	212.5	70.8	141.65	1.500	Level 3	
7,000.0	6,352.5	6,337.5	6,337.5	16.1	126.7	90.39	-83.8	-314.7	296.4	153.8	142.58	2.079		
7,100.0	6,352.2	6,337.2	6,337.2	17.1	126.7	89.05	-83.8	-314.7	388.5	245.0	143.48	2.708		
7,200.0	6,350.8	6,335.8	6,335.8	18.2	126.7	85.58	-83.8	-314.7	484.1	339.8	144.28	3.355		
7,300.0	6,350.1	6,335.1	6,335.1	19.2	126.7	91.21	-83.8	-314.7	580.6	435.1	145.58	3.989		
7,400.0	6,350.8	6,335.8	6,335.8	20.3	126.7	95.09	-83.8	-314.7	678.0	531.8	146.21	4.637		
7,500.0	6,351.9	6,336.9	6,336.9	21.6	126.7	93.34	-83.8	-314.7	775.7	627.8	147.93	5.244		
7,600.0	6,353.9	6,338.9	6,338.9	23.0	126.8	92.73	-83.8	-314.7	873.3	723.9	149.44	5.844		
7,700.0	6,352.8	6,337.8	6,337.8	24.6	126.8	82.21	-83.8	-314.7	971.5	821.6	149.96	6.479		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 6349-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,100.0	6,352.2	6,337.2	6,337.2	17.1	126.7	91.19	-1,406.2	-303.6	982.6	839.2	143.44	6.850		
7,200.0	6,350.8	6,335.8	6,335.8	18.2	126.7	94.55	-1,406.2	-303.6	886.4	742.3	144.14	6.150		
7,300.0	6,350.1	6,335.1	6,335.1	19.2	126.7	88.98	-1,406.2	-303.6	790.4	644.8	145.61	5.428		
7,400.0	6,350.8	6,335.8	6,335.8	20.3	126.7	86.73	-1,406.2	-303.6	695.2	548.6	146.64	4.741		
7,500.0	6,351.9	6,336.9	6,336.9	21.6	126.7	87.84	-1,406.2	-303.6	600.9	452.8	148.15	4.056		
7,600.0	6,353.9	6,338.9	6,338.9	23.0	126.8	88.67	-1,406.2	-303.6	507.6	358.0	149.62	3.392		
7,700.0	6,352.8	6,337.8	6,337.8	24.6	126.8	92.45	-1,406.2	-303.6	417.7	266.7	151.02	2.766		
7,800.0	6,351.6	6,336.6	6,336.6	25.9	126.7	89.84	-1,406.2	-303.6	334.5	182.0	152.50	2.193		
7,900.0	6,352.2	6,337.2	6,337.2	27.4	126.7	89.55	-1,406.2	-303.6	264.8	110.9	153.97	1.720		
8,000.0	6,354.9	6,339.9	6,339.9	28.9	126.8	89.43	-1,406.2	-303.6	220.3	64.8	155.51	1.416 Level 3		
8,058.9	6,357.3	6,342.3	6,342.3	29.8	126.8	90.00	-1,406.2	-303.6	212.3	55.9	156.46	1.357 Level 3, CC, ES, SF		
8,100.0	6,359.2	6,344.2	6,344.2	30.4	126.9	90.53	-1,406.2	-303.6	215.8	58.7	157.12	1.374 Level 3		
8,200.0	6,362.6	6,347.6	6,347.6	32.0	127.0	90.70	-1,406.2	-303.6	254.0	95.1	158.87	1.599		
8,300.0	6,362.1	6,347.1	6,347.1	33.7	126.9	88.31	-1,406.2	-303.6	319.1	158.6	160.53	1.988		
8,400.0	6,360.1	6,345.1	6,345.1	35.3	126.9	88.89	-1,406.2	-303.6	398.4	236.2	162.16	2.457		
8,500.0	6,359.3	6,344.3	6,344.3	36.9	126.9	89.25	-1,406.2	-303.6	485.3	321.5	163.75	2.963		
8,600.0	6,356.7	6,341.7	6,341.7	38.6	126.8	84.47	-1,406.2	-303.6	576.7	411.9	164.73	3.501		
8,700.0	6,354.1	6,339.1	6,339.1	40.3	126.8	87.45	-1,406.2	-303.6	670.5	503.7	166.83	4.019		
8,800.0	6,353.0	6,338.0	6,338.0	41.9	126.8	89.55	-1,406.2	-303.6	766.1	597.5	168.55	4.545		
8,900.0	6,352.7	6,337.7	6,337.7	43.5	126.8	90.84	-1,406.2	-303.6	862.2	692.0	170.23	5.065		
9,000.0	6,352.4	6,337.4	6,337.4	45.2	126.7	89.61	-1,406.2	-303.6	958.9	786.9	171.94	5.577		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 13-18 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft
Survey Program: 469-MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
8,400.0	6,360.1	6,424.2	6,337.3	35.3	21.2	91.55	-2,678.5	-201.5	954.0	900.3	53.63	17.788	
8,500.0	6,359.3	6,424.2	6,337.3	36.9	21.2	89.44	-2,678.5	-201.5	855.5	800.1	55.32	15.465	
8,600.0	6,356.7	6,422.5	6,335.5	38.6	21.2	97.58	-2,678.5	-201.5	757.6	701.1	56.46	13.417	
8,700.0	6,354.1	6,420.6	6,333.7	40.3	21.1	91.40	-2,678.5	-201.4	660.3	601.7	58.62	11.264	
8,800.0	6,353.0	6,420.3	6,333.4	41.9	21.1	88.82	-2,678.5	-201.4	564.0	503.6	60.36	9.344	
8,900.0	6,352.7	6,420.7	6,333.8	43.5	21.1	87.89	-2,678.5	-201.4	468.8	406.9	61.90	7.574	
9,000.0	6,352.4	6,421.1	6,334.2	45.2	21.1	89.02	-2,678.5	-201.5	375.6	312.1	63.50	5.915	
9,100.0	6,352.0	6,421.5	6,334.6	46.9	21.1	89.77	-2,678.5	-201.5	286.2	221.1	65.15	4.393	
9,200.0	6,351.3	6,421.6	6,334.7	48.6	21.1	90.03	-2,678.5	-201.5	207.2	140.3	66.82	3.100	
9,300.0	6,350.8	6,421.8	6,334.9	50.3	21.1	89.66	-2,678.5	-201.5	155.0	86.4	68.62	2.259	
9,342.8	6,350.8	6,422.1	6,335.2	51.0	21.2	89.79	-2,678.5	-201.5	149.0	79.6	69.37	2.147 CC, ES, SF	
9,400.0	6,350.6	6,422.4	6,335.5	52.0	21.2	89.94	-2,678.5	-201.5	159.2	88.9	70.37	2.263	
9,500.0	6,350.0	6,422.6	6,335.6	53.8	21.2	89.91	-2,678.5	-201.5	216.8	144.6	72.17	3.004	
9,600.0	6,349.7	6,423.1	6,336.1	55.5	21.2	90.27	-2,678.5	-201.5	298.3	224.4	73.91	4.036	
9,700.0	6,350.5	6,424.6	6,337.7	57.3	21.2	94.22	-2,678.5	-201.5	389.0	313.6	75.47	5.155	
9,800.0	6,353.3	6,428.2	6,341.3	59.0	21.2	94.91	-2,678.6	-201.5	483.9	406.8	77.16	6.272	
9,900.0	6,352.6	6,428.3	6,341.4	60.8	21.2	87.16	-2,678.6	-201.5	579.2	500.2	79.03	7.329	
10,000.0	6,351.3	6,427.7	6,340.8	62.5	21.2	93.24	-2,678.6	-201.5	676.0	595.3	80.74	8.373	
10,100.0	6,352.7	6,429.0	6,342.1	64.3	21.2	99.68	-2,678.6	-201.5	773.9	692.4	81.56	9.489	
10,200.0	6,352.9	6,429.0	6,342.1	66.1	21.2	88.31	-2,678.6	-201.5	872.1	787.7	84.45	10.327	
10,300.0	6,353.4	6,432.0	6,345.1	67.8	21.2	95.81	-2,678.6	-201.5	970.9	885.1	85.76	11.321	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 14-18 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft
Survey Program: 439-MWD													Offset Well Error: 0.0 ft
Reference	Offset	Semi Major Axis		Distance									Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,700.0	6,350.5	6,410.9	6,329.2	57.3	20.4	81.91	-3,989.8	-166.9	966.1	892.2	73.94	13.066	
9,800.0	6,353.3	6,414.3	6,332.6	59.0	20.4	83.31	-3,989.8	-166.9	868.5	792.6	75.88	11.446	
9,900.0	6,352.6	6,414.1	6,332.4	60.8	20.4	94.61	-3,989.8	-166.9	770.3	692.3	78.04	9.871	
10,000.0	6,351.3	6,413.4	6,331.7	62.5	20.4	86.97	-3,989.8	-166.9	672.7	592.8	79.90	8.420	
10,100.0	6,352.7	6,415.3	6,333.6	64.3	20.4	84.39	-3,989.8	-166.9	576.4	495.2	81.28	7.092	
10,200.0	6,352.9	6,416.1	6,334.4	66.1	20.4	90.42	-3,989.8	-166.9	481.2	397.7	83.51	5.763	
10,300.0	6,353.4	6,417.2	6,335.4	67.8	20.4	87.89	-3,989.8	-166.9	389.0	303.8	85.22	4.565	
10,400.0	6,353.0	6,417.4	6,335.6	69.6	20.4	89.93	-3,989.8	-166.9	300.7	213.5	87.13	3.451	
10,500.0	6,350.3	6,415.2	6,333.5	71.4	20.4	90.32	-3,989.8	-166.9	221.8	133.0	88.86	2.497	
10,600.0	6,351.0	6,416.4	6,334.7	73.2	20.4	89.46	-3,989.8	-166.9	170.3	79.9	90.38	1.884	
10,647.8	6,351.2	6,416.9	6,335.1	74.1	20.4	89.64	-3,989.8	-166.9	163.3	72.1	91.17	1.791 CC, ES, SF	
10,700.0	6,350.8	6,416.8	6,335.1	75.0	20.4	89.73	-3,989.8	-166.9	171.3	79.3	92.04	1.861	
10,800.0	6,352.1	6,418.6	6,336.9	76.8	20.4	90.64	-3,989.9	-166.9	224.7	130.9	93.78	2.396	
10,900.0	6,352.8	6,419.8	6,338.1	78.6	20.4	90.82	-3,989.9	-166.9	300.5	204.6	95.91	3.133	
10,982.0	6,353.7	6,421.2	6,339.5	80.0	20.4	91.71	-3,989.9	-166.9	370.6	273.1	97.42	3.804	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 6349-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	155.22	-754.1	348.1	830.7					
100.0	100.0	85.0	85.0	0.1	1.7	-62.20	-754.1	348.1	830.5	828.7	1.81	458.062		
200.0	200.0	185.0	185.0	0.3	3.7	-71.62	-754.1	348.1	830.2	826.2	3.96	209.619		
270.7	270.7	255.7	255.7	0.4	5.1	-90.00	-754.1	348.1	830.1	824.5	5.52	150.297		
300.0	300.0	285.0	285.0	0.5	5.7	-97.51	-754.1	348.1	830.1	823.9	6.17	134.509		
400.0	400.0	385.0	385.0	0.7	7.7	-118.49	-754.1	348.1	830.3	821.9	8.38	99.105		
500.0	500.0	485.0	485.0	0.9	9.7	-121.60	-754.1	348.1	830.7	820.1	10.58	78.482		
600.0	600.0	585.0	585.0	1.1	11.7	169.41	-754.1	348.1	832.6	819.8	12.78	65.124		
700.0	699.8	684.8	684.8	1.3	13.7	176.48	-754.1	348.1	838.9	823.9	14.95	56.096		
800.0	799.3	784.3	784.3	1.6	15.7	-178.77	-754.1	348.1	848.7	831.5	17.12	49.577		
900.0	898.3	883.3	883.3	1.8	17.7	173.30	-754.1	348.1	862.2	843.0	19.21	44.880		
1,000.0	997.1	982.1	982.1	2.1	19.6	172.32	-754.1	348.1	877.5	856.2	21.39	41.034		
1,100.0	1,095.9	1,080.9	1,080.9	2.4	21.6	172.21	-754.1	348.1	892.8	869.2	23.56	37.892		
1,200.0	1,194.6	1,179.6	1,179.6	2.7	23.6	175.66	-754.1	348.1	908.7	883.1	25.67	35.407		
1,300.0	1,293.1	1,278.1	1,278.1	3.1	25.6	170.87	-754.1	348.1	926.2	898.3	27.84	33.268		
1,400.0	1,391.7	1,376.7	1,376.7	3.4	27.5	163.48	-754.1	348.1	942.5	912.4	30.07	31.344		
1,500.0	1,490.3	1,475.3	1,475.3	3.7	29.5	164.04	-754.1	348.1	958.2	925.9	32.26	29.700		
1,600.0	1,589.0	1,574.0	1,574.0	4.1	31.5	165.25	-754.1	348.1	973.8	939.3	34.44	28.277		
1,700.0	1,687.8	1,672.8	1,672.8	4.4	33.5	165.29	-754.1	348.1	989.1	952.5	36.66	26.981		
6,600.0	6,313.0	6,298.0	6,298.0	13.7	126.0	-64.95	-754.1	348.1	973.0	845.4	127.56	7.627		
6,700.0	6,337.0	6,322.0	6,322.0	14.1	126.4	-74.54	-754.1	348.1	889.6	754.1	135.47	6.567		
6,800.0	6,346.3	6,331.3	6,331.3	14.6	126.6	-86.63	-754.1	348.1	808.1	667.3	140.77	5.741		
6,900.0	6,349.9	6,334.9	6,334.9	15.3	126.7	-87.79	-754.1	348.1	730.3	588.6	141.66	5.155		
7,000.0	6,352.5	6,337.5	6,337.5	16.1	126.7	-89.81	-754.1	348.1	657.4	514.8	142.58	4.610		
7,100.0	6,352.2	6,337.2	6,337.2	17.1	126.7	-90.26	-754.1	348.1	591.3	447.8	143.49	4.121		
7,200.0	6,350.8	6,335.8	6,335.8	18.2	126.7	-90.72	-754.1	348.1	534.6	390.0	144.64	3.696		
7,300.0	6,350.1	6,335.1	6,335.1	19.2	126.7	-89.90	-754.1	348.1	494.3	348.7	145.62	3.395		
7,400.0	6,350.8	6,335.8	6,335.8	20.3	126.7	-89.88	-754.1	348.1	472.9	326.1	146.83	3.221		
7,443.9	6,351.6	6,336.6	6,336.6	20.9	126.7	-90.00	-754.1	348.1	470.5	323.0	147.45	3.191 CC, ES, SF		
7,500.0	6,351.9	6,336.9	6,336.9	21.6	126.7	-90.11	-754.1	348.1	473.9	325.7	148.22	3.197		
7,600.0	6,353.9	6,338.9	6,338.9	23.0	126.8	-90.20	-754.1	348.1	498.5	348.9	149.64	3.331		
7,700.0	6,352.8	6,337.8	6,337.8	24.6	126.8	-89.24	-754.1	348.1	540.1	388.9	151.16	3.573		
7,800.0	6,351.6	6,336.6	6,336.6	25.9	126.7	-90.09	-754.1	348.1	594.5	442.0	152.50	3.898		
7,900.0	6,352.2	6,337.2	6,337.2	27.4	126.7	-90.57	-754.1	348.1	658.2	504.3	153.97	4.275		
8,000.0	6,354.9	6,339.9	6,339.9	28.9	126.8	-92.36	-754.1	348.1	729.9	574.5	155.41	4.697		
8,100.0	6,359.2	6,344.2	6,344.2	30.4	126.9	-93.70	-754.1	348.1	808.0	651.2	156.85	5.151		
8,200.0	6,362.6	6,347.6	6,347.6	32.0	127.0	-91.76	-754.1	348.1	890.6	731.8	158.84	5.607		
8,300.0	6,362.1	6,347.1	6,347.1	33.7	126.9	-87.21	-754.1	348.1	977.2	816.9	160.36	6.094		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 6850-UNKNOWN												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,200.0	6,351.3	6,336.3	6,336.3	48.6	126.7	-91.05	-3,355.3	476.3	979.2	803.9	175.31	5.586	
9,300.0	6,350.8	6,335.8	6,335.8	50.3	126.7	-90.00	-3,355.3	476.3	896.2	719.2	176.99	5.063	
9,400.0	6,350.6	6,335.6	6,335.6	52.0	126.7	-90.07	-3,355.3	476.3	816.5	637.8	178.70	4.569	
9,500.0	6,350.0	6,335.0	6,335.0	53.8	126.7	-90.34	-3,355.3	476.3	741.0	560.6	180.40	4.108	
9,600.0	6,349.7	6,334.7	6,334.7	55.5	126.7	-90.14	-3,355.3	476.3	671.1	489.0	182.12	3.685	
9,700.0	6,350.5	6,335.5	6,335.5	57.3	126.7	-89.08	-3,355.3	476.3	608.5	424.7	183.78	3.311	
9,800.0	6,353.3	6,338.3	6,338.3	59.0	126.8	-89.42	-3,355.3	476.3	555.4	369.7	185.63	2.992	
9,900.0	6,352.6	6,337.6	6,337.6	60.8	126.8	-90.31	-3,355.3	476.3	521.2	333.7	187.53	2.779	
10,000.0	6,351.3	6,336.3	6,336.3	62.5	126.7	-89.97	-3,355.3	476.3	504.2	315.0	189.20	2.665	
10,047.0	6,351.8	6,336.8	6,336.8	63.4	126.7	-90.00	-3,355.3	476.3	502.2	312.2	190.01	2.643	CC, ES, SF
10,100.0	6,352.7	6,337.7	6,337.7	64.3	126.8	-90.13	-3,355.3	476.3	505.2	314.3	190.92	2.646	
10,200.0	6,352.9	6,337.9	6,337.9	66.1	126.8	-89.81	-3,355.3	476.3	526.7	333.9	192.80	2.732	
10,300.0	6,353.4	6,338.4	6,338.4	67.8	126.8	-90.26	-3,355.3	476.3	564.1	369.5	194.57	2.899	
10,400.0	6,353.0	6,338.0	6,338.0	69.6	126.8	-89.63	-3,355.3	476.3	617.3	421.0	196.36	3.144	
10,500.0	6,350.3	6,335.3	6,335.3	71.4	126.7	-89.06	-3,355.3	476.3	681.7	483.7	198.06	3.442	
10,600.0	6,351.0	6,336.0	6,336.0	73.2	126.7	-90.28	-3,355.3	476.3	751.9	552.1	199.81	3.763	
10,700.0	6,350.8	6,335.8	6,335.8	75.0	126.7	-90.00	-3,355.3	476.3	827.1	625.6	201.55	4.104	
10,800.0	6,352.1	6,337.1	6,337.1	76.8	126.7	-91.08	-3,355.3	476.3	905.7	702.4	203.34	4.454	
10,900.0	6,352.8	6,337.8	6,337.8	78.6	126.8	-90.85	-3,355.3	476.3	990.3	785.1	205.26	4.825	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope 21-18 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 6349-UNKNOWN													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	93.76	-65.6	997.0	999.3					
100.0	100.0	85.0	85.0	0.1	1.7	-123.65	-65.6	997.0	999.3	997.5	1.81	551.170		
200.0	200.0	185.0	185.0	0.3	3.7	-133.07	-65.6	997.0	999.8	995.8	3.96	252.443	ES, SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Antelope (Existing Wells) Pad Sec.18-T5N-R62W - Antelope F-19 (Exist.) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 501-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,600.0	6,351.0	6,445.8	6,348.7	73.2	21.3	-93.62	-4,836.5	180.9	924.6	833.7	90.93	10.168	
10,700.0	6,350.8	6,444.2	6,347.2	75.0	21.2	-95.31	-4,836.5	180.9	825.7	733.1	92.64	8.913	
10,800.0	6,352.1	6,444.2	6,347.1	76.8	21.2	-90.19	-4,836.5	180.9	726.7	632.1	94.62	7.680	
10,900.0	6,352.8	6,443.5	6,346.4	78.6	21.2	-91.33	-4,836.5	180.9	628.9	532.6	96.28	6.532	
10,982.0	6,353.7	6,443.3	6,346.2	80.0	21.2	-90.13	-4,836.5	180.9	549.6	452.0	97.59	5.632 CC, ES, SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design		Antelope D-18 Pad - Plans by another company - Antelope H-18 COGCC Plan - Wellbore #1 - Wellbore										Offset Site Error:		0.0 ft			
Survey Program: 100-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis				Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
7,900.0	6,352.2	6,731.0	6,331.2	27.4	39.1	-87.70	-2,145.6	213.6	964.9	898.7	66.24	14.568					
8,000.0	6,354.9	6,733.7	6,333.9	28.9	39.1	-83.23	-2,145.6	213.6	868.9	801.5	67.35	12.901					
8,100.0	6,359.2	6,738.0	6,338.2	30.4	39.1	-82.28	-2,145.6	213.6	774.1	705.3	68.74	11.260					
8,200.0	6,362.6	6,741.4	6,341.6	32.0	39.1	-87.47	-2,145.6	213.6	680.8	609.8	70.95	9.595					
8,300.0	6,362.1	6,740.9	6,341.1	33.7	39.1	-92.99	-2,145.6	213.6	590.3	517.6	72.69	8.121					
8,400.0	6,360.1	6,738.8	6,339.1	35.3	39.1	-91.11	-2,145.6	213.6	503.9	429.5	74.38	6.775					
8,500.0	6,359.3	6,738.1	6,338.3	36.9	39.1	-90.44	-2,145.6	213.6	423.8	347.8	75.97	5.578					
8,600.0	6,356.7	6,735.5	6,335.7	38.6	39.1	-91.81	-2,145.6	213.6	353.3	275.7	77.64	4.551					
8,700.0	6,354.1	6,732.9	6,333.1	40.3	39.1	-90.39	-2,145.6	213.6	300.0	220.7	79.27	3.785					
8,800.0	6,353.0	6,731.8	6,332.0	41.9	39.1	-90.01	-2,145.6	213.6	273.9	193.0	80.88	3.386					
8,825.4	6,353.0	6,731.8	6,332.0	42.3	39.1	-90.00	-2,145.6	213.6	272.6	191.3	81.32	3.352 CC, ES, SF					
8,900.0	6,352.7	6,731.5	6,331.7	43.5	39.1	-90.07	-2,145.6	213.6	284.3	201.7	82.60	3.442					
9,000.0	6,352.4	6,731.2	6,331.4	45.2	39.1	-89.93	-2,145.6	213.6	327.6	243.3	84.28	3.887					
9,100.0	6,352.0	6,730.8	6,331.0	46.9	39.1	-89.56	-2,145.6	213.6	393.1	307.1	85.96	4.573					
9,200.0	6,351.3	6,730.1	6,330.3	48.6	39.1	-89.03	-2,145.6	213.6	470.7	383.0	87.65	5.370					
9,300.0	6,350.8	6,729.5	6,329.8	50.3	39.1	-90.00	-2,145.6	213.6	555.2	465.9	89.36	6.213					
9,400.0	6,350.6	6,729.3	6,329.6	52.0	39.1	-89.89	-2,145.6	213.6	644.0	552.9	91.08	7.070					
9,500.0	6,350.0	6,728.8	6,329.0	53.8	39.1	-89.25	-2,145.6	213.6	735.2	642.4	92.78	7.924					
9,600.0	6,349.7	6,728.5	6,328.7	55.5	39.1	-89.58	-2,145.6	213.6	828.0	733.5	94.51	8.761					
9,700.0	6,350.5	6,729.3	6,329.5	57.3	39.1	-93.52	-2,145.6	213.6	921.9	825.8	96.05	9.598					

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 503-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-21.9	0.0	21.9	21.9	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	-37.82	-21.8	0.0	21.6	21.4	0.23	95.950	
200.0	200.0	200.0	200.0	0.3	0.2	-48.50	-21.7	0.0	20.9	20.4	0.48	43.067	
300.0	300.0	300.1	300.1	0.5	0.3	-76.42	-21.4	0.0	20.2	19.4	0.81	25.053	
400.0	400.0	400.1	400.1	0.7	0.4	-99.58	-21.0	0.0	19.8	18.7	1.13	17.598	
500.0	500.0	500.1	500.1	0.9	0.6	-104.71	-20.6	-0.1	19.6	18.1	1.45	13.518	
509.4	509.4	509.5	509.5	0.9	0.6	-128.62	-20.5	-0.1	19.5	18.1	1.48	13.172 CC, ES	
600.0	600.0	600.1	600.1	1.1	0.8	-175.56	-20.1	0.0	20.9	19.0	1.87	11.195	
700.0	699.8	700.0	700.0	1.3	1.0	-170.03	-19.5	-0.4	26.5	24.2	2.30	11.520	
800.0	799.3	800.1	800.1	1.6	1.2	-167.22	-18.2	-1.9	34.4	31.7	2.73	12.599	
900.0	898.3	900.6	900.5	1.8	1.4	-174.87	-15.1	-4.7	44.4	41.2	3.18	13.948	
1,000.0	997.1	1,001.4	1,001.0	2.1	1.7	-173.90	-9.6	-9.2	53.4	49.8	3.62	14.743	
1,100.0	1,095.9	1,102.3	1,101.4	2.4	1.9	-170.80	-2.6	-15.8	60.8	56.7	4.08	14.903	
1,200.0	1,194.6	1,203.8	1,202.1	2.7	2.2	-163.57	7.1	-24.7	66.2	61.6	4.57	14.461	
1,300.0	1,293.1	1,304.6	1,301.5	3.1	2.5	-163.57	18.5	-36.2	71.2	66.0	5.12	13.894	
1,400.0	1,391.7	1,405.6	1,400.7	3.4	2.9	-162.49	31.6	-50.6	75.6	69.9	5.78	13.089	
1,500.0	1,490.3	1,504.6	1,497.0	3.7	3.3	-151.86	46.8	-67.5	80.1	73.6	6.55	12.227	
1,600.0	1,589.0	1,601.9	1,591.3	4.1	3.7	-140.46	61.7	-87.0	88.1	80.7	7.42	11.882	
1,700.0	1,687.8	1,701.3	1,687.3	4.4	4.2	-131.59	76.9	-107.5	98.8	90.5	8.30	11.910	
1,800.0	1,786.6	1,798.9	1,781.4	4.7	4.6	-121.35	92.5	-127.7	110.5	101.3	9.14	12.081	
1,900.0	1,885.6	1,898.1	1,877.2	5.0	5.1	-110.40	108.3	-148.5	122.5	112.5	9.95	12.312	
2,000.0	1,984.7	1,997.6	1,973.1	5.4	5.6	-105.11	124.7	-168.7	134.5	123.8	10.71	12.562	
2,100.0	2,083.7	2,096.0	2,067.9	5.7	6.1	-106.31	142.0	-189.0	148.0	136.6	11.45	12.935	
2,200.0	2,182.4	2,194.5	2,162.8	6.0	6.6	-108.35	159.2	-209.1	164.2	152.0	12.15	13.509	
2,300.0	2,281.1	2,293.8	2,258.7	6.4	7.0	-103.18	176.1	-228.8	181.5	168.6	12.87	14.101	
2,400.0	2,379.8	2,393.0	2,354.3	6.7	7.5	-92.82	194.0	-248.1	196.3	182.7	13.61	14.419	
2,500.0	2,478.7	2,491.2	2,448.7	7.0	8.0	-87.27	212.4	-267.5	210.0	195.7	14.34	14.647	
2,600.0	2,577.6	2,589.6	2,543.4	7.4	8.6	-82.58	230.5	-287.1	223.6	208.6	15.03	14.878	
2,700.0	2,676.5	2,687.3	2,637.4	7.7	9.1	-77.79	248.6	-306.9	237.2	221.4	15.71	15.098	
2,800.0	2,775.5	2,784.4	2,730.5	8.0	9.6	-73.56	267.3	-327.1	251.0	234.6	16.37	15.327	
2,900.0	2,874.7	2,883.3	2,825.2	8.3	10.2	-71.76	286.9	-348.3	265.7	248.7	17.00	15.632	
3,000.0	2,973.9	2,982.8	2,920.6	8.6	10.7	-71.48	306.2	-369.0	280.7	263.2	17.56	15.986	
3,100.0	3,073.2	3,083.3	3,017.0	8.9	11.2	-70.37	325.6	-389.4	296.2	278.0	18.11	16.354	
3,200.0	3,172.6	3,183.2	3,113.1	9.2	11.8	-72.19	344.6	-408.9	311.6	293.0	18.63	16.729	
3,300.0	3,272.2	3,276.6	3,203.1	9.5	12.3	-81.88	361.5	-427.6	329.6	310.6	19.10	17.262	
3,400.0	3,371.7	3,371.4	3,294.2	9.7	12.8	-82.32	378.5	-447.7	350.1	330.5	19.58	17.883	
3,500.0	3,471.0	3,466.3	3,385.0	10.0	13.3	-78.00	396.3	-468.4	370.9	350.7	20.16	18.396	
3,600.0	3,570.1	3,557.4	3,471.7	10.3	13.9	-73.19	415.0	-489.2	391.9	371.1	20.76	18.874	
3,700.0	3,668.8	3,644.5	3,553.9	10.7	14.5	-69.97	434.3	-510.8	413.6	392.2	21.39	19.337	
3,800.0	3,767.5	3,732.7	3,636.1	11.0	15.1	-68.36	455.4	-534.6	437.4	415.4	22.05	19.837	
3,900.0	3,866.3	3,826.1	3,722.6	11.4	15.8	-66.50	478.9	-560.9	462.7	440.0	22.71	20.374	
4,000.0	3,965.2	3,928.8	3,817.7	11.7	16.5	-65.55	504.9	-589.6	488.0	464.6	23.37	20.875	
4,100.0	4,064.2	4,042.6	3,924.1	12.0	17.3	-64.67	532.7	-618.8	511.4	487.4	24.03	21.281	
4,200.0	4,163.3	4,162.6	4,038.3	12.4	18.0	-63.61	557.6	-646.0	531.4	506.7	24.70	21.513	
4,300.0	4,262.5	4,286.2	4,158.0	12.7	18.6	-63.79	577.5	-669.3	547.0	521.6	25.39	21.543	
4,400.0	4,361.7	4,404.4	4,273.7	13.0	19.1	-61.90	593.5	-687.5	558.8	532.7	26.06	21.445	
4,500.0	4,460.9	4,527.4	4,395.2	13.3	19.5	-58.30	604.8	-702.7	566.5	539.8	26.73	21.192	
4,600.0	4,560.3	4,646.7	4,513.9	13.6	19.8	-55.19	610.2	-713.8	570.0	542.6	27.39	20.809	
4,700.0	4,659.7	4,764.4	4,631.4	13.9	20.0	-56.81	611.4	-721.4	570.3	542.3	28.03	20.343	
4,800.0	4,759.1	4,876.0	4,742.8	14.2	20.1	-54.60	610.6	-725.8	568.1	539.4	28.66	19.825	
4,900.0	4,858.5	4,987.7	4,854.5	14.4	20.2	-51.23	609.2	-727.7	563.5	534.3	29.24	19.274	
5,000.0	4,958.2	5,085.6	4,952.4	14.7	20.3	-42.16	608.1	-728.6	558.4	528.7	29.73	18.784	

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 503-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,057.9	5,183.8	5,050.6	14.9	20.4	-26.81	607.4	-730.0	553.4	523.2	30.15	18.353		
5,200.0	5,157.7	5,289.4	5,156.2	15.1	20.6	-25.58	606.9	-730.8	549.7	519.2	30.49	18.026		
5,300.0	5,257.7	5,390.2	5,257.0	15.3	20.7	-19.34	606.2	-730.9	548.0	517.2	30.79	17.798		
5,400.0	5,357.7	5,490.8	5,357.6	15.4	20.8	38.03	605.4	-731.2	547.6	516.5	31.08	17.618		
5,461.9	5,419.6	5,554.0	5,420.8	15.5	20.8	111.25	604.9	-731.1	547.4	516.2	31.25	17.517		
5,500.0	5,457.7	5,591.6	5,458.4	15.6	20.9	125.00	604.6	-731.1	547.5	516.1	31.35	17.462		
5,600.0	5,557.7	5,690.2	5,556.9	15.7	21.0	146.27	603.7	-731.1	548.5	516.9	31.61	17.350		
5,700.0	5,657.7	5,791.7	5,658.5	15.9	21.1	98.89	602.6	-731.2	549.3	517.4	31.91	17.213		
5,800.0	5,757.1	5,944.3	5,809.5	15.9	21.0	86.50	586.3	-724.1	543.6	511.6	31.96	17.011		
5,900.0	5,854.3	6,025.0	5,886.9	15.8	20.9	92.61	564.4	-719.6	536.1	504.4	31.72	16.902		
6,000.0	5,947.9	6,127.3	5,981.8	15.6	20.7	90.77	526.5	-715.5	530.4	499.1	31.26	16.966		
6,100.0	6,037.0	6,214.6	6,058.2	15.4	20.4	90.34	484.3	-713.8	525.9	495.2	30.72	17.121		
6,168.9	6,093.6	6,270.1	6,104.2	15.1	20.3	91.87	453.3	-714.1	524.5	494.1	30.32	17.297		
6,200.0	6,117.6	6,302.1	6,129.3	15.0	20.2	92.35	433.6	-714.9	524.8	494.7	30.12	17.424		
6,300.0	6,186.5	6,419.5	6,211.2	14.6	19.7	92.85	349.6	-716.4	524.7	495.4	29.36	17.871		
6,400.0	6,243.1	6,572.7	6,290.9	14.2	19.1	93.26	219.9	-709.5	519.0	490.2	28.80	18.022		
6,500.0	6,284.1	6,673.7	6,322.2	13.9	18.7	94.02	124.3	-701.1	512.5	483.8	28.72	17.843		
6,600.0	6,313.0	6,778.7	6,343.2	13.7	18.3	93.17	21.8	-693.0	509.7	480.8	28.91	17.630		
6,700.0	6,337.0	6,876.7	6,349.2	14.1	18.1	91.27	-75.6	-684.9	507.6	478.1	29.56	17.174		
6,800.0	6,346.3	6,981.2	6,350.2	14.6	18.0	90.37	-179.8	-676.3	504.9	474.4	30.52	16.542		
6,900.0	6,349.9	7,093.0	6,349.1	15.3	18.4	89.83	-291.0	-665.2	501.2	469.2	32.07	15.630		
7,000.0	6,352.5	7,188.7	6,346.7	16.1	19.0	89.33	-386.2	-656.0	499.3	465.8	33.50	14.903		
7,096.2	6,352.4	7,287.4	6,344.0	17.0	19.9	89.04	-484.3	-645.7	498.1	463.0	35.13	14.178		
7,100.0	6,352.2	7,291.9	6,343.9	17.1	19.9	89.04	-488.8	-645.2	498.0	462.8	35.20	14.146		
7,200.0	6,350.8	7,394.2	6,343.3	18.2	20.9	89.17	-590.4	-633.8	497.4	460.0	37.37	13.310		
7,300.0	6,350.1	7,486.5	6,345.5	19.2	21.9	89.45	-682.2	-624.0	494.7	455.3	39.36	12.568		
7,379.5	6,351.0	7,553.1	6,347.8	20.1	22.7	89.63	-748.5	-618.1	493.4	452.3	41.11	12.000		
7,400.0	6,350.8	7,569.5	6,348.2	20.3	22.9	89.70	-764.9	-617.0	493.6	452.0	41.56	11.876		
7,500.0	6,351.9	7,658.9	6,350.8	21.6	24.0	89.86	-854.1	-612.4	493.8	449.6	44.19	11.174		
7,530.0	6,352.3	7,683.0	6,351.8	22.0	24.3	89.94	-878.2	-611.7	493.8	448.9	44.91	10.996		
7,600.0	6,353.9	7,740.8	6,354.0	23.0	25.0	90.03	-935.9	-611.0	494.3	447.7	46.66	10.594		
7,700.0	6,352.8	7,837.1	6,356.2	24.6	26.4	90.34	-1,032.2	-611.7	498.1	448.6	49.51	10.061		
7,800.0	6,351.6	7,942.4	6,356.4	25.9	27.9	90.55	-1,137.5	-611.4	502.4	450.2	52.17	9.629		
7,900.0	6,352.2	8,039.3	6,356.0	27.4	29.4	90.47	-1,234.4	-611.4	508.9	453.9	54.99	9.254		
8,000.0	6,354.9	8,136.6	6,353.5	28.9	30.8	89.99	-1,331.7	-611.3	515.7	457.7	58.01	8.890		
8,100.0	6,359.2	8,222.0	6,352.4	30.4	32.1	89.51	-1,417.0	-612.9	523.7	462.9	60.82	8.612		
8,200.0	6,362.6	8,325.1	6,354.7	32.0	33.6	89.22	-1,520.1	-616.2	532.9	468.7	64.15	8.307		
8,300.0	6,362.1	8,434.4	6,356.7	33.7	35.3	89.34	-1,629.3	-617.9	538.8	471.3	67.58	7.973		
8,400.0	6,360.1	8,529.7	6,357.6	35.3	36.8	89.71	-1,724.6	-618.9	543.4	472.5	70.90	7.665		
8,500.0	6,359.3	8,636.2	6,356.3	36.9	38.5	89.67	-1,831.1	-619.8	547.5	473.3	74.18	7.381		
8,600.0	6,356.7	8,730.0	6,355.0	38.6	40.0	89.69	-1,924.9	-620.7	552.4	475.1	77.24	7.151		
8,700.0	6,354.1	8,824.8	6,354.2	40.3	41.5	89.95	-2,019.6	-622.6	558.4	478.0	80.40	6.945		
8,800.0	6,353.0	8,942.7	6,352.4	41.9	43.5	89.93	-2,137.5	-623.5	563.6	479.7	83.86	6.720		
8,900.0	6,352.7	9,054.0	6,349.4	43.5	45.3	89.67	-2,248.8	-621.2	564.4	476.7	87.75	6.432		
8,927.5	6,352.8	9,076.2	6,349.1	44.0	45.7	89.63	-2,270.9	-620.7	564.3	475.7	88.61	6.368		
9,000.0	6,352.4	9,139.3	6,349.3	45.2	46.7	89.69	-2,334.0	-620.1	564.7	473.7	90.95	6.209		
9,100.0	6,352.0	9,254.9	6,349.0	46.9	48.6	89.70	-2,449.6	-618.6	563.6	469.0	94.64	5.956		
9,200.0	6,351.3	9,348.1	6,350.2	48.6	50.1	89.90	-2,542.8	-616.6	562.1	464.2	97.95	5.739		
9,300.0	6,350.8	9,458.2	6,351.3	50.3	52.0	90.06	-2,652.9	-613.7	560.7	459.4	101.31	5.534		
9,395.6	6,350.7	9,546.8	6,352.2	52.0	53.5	90.15	-2,741.4	-611.4	560.3	455.8	104.41	5.366		
9,400.0	6,350.6	9,551.5	6,352.1	52.0	53.6	90.16	-2,746.1	-611.3	559.8	455.2	104.57	5.353		
9,450.1	6,350.5	9,603.9	6,351.5	52.9	54.5	90.10	-2,798.5	-609.9	559.9	453.7	106.27	5.269		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope A-E-18HZ (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 503-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,500.0	6,350.0	9,651.6	6,351.2	53.8	55.2	90.12	-2,846.2	-608.6	560.0	452.2	107.84	5.193	
9,600.0	6,349.7	9,749.5	6,350.7	55.5	56.9	90.10	-2,944.1	-606.6	562.0	450.8	111.18	5.055	
9,700.0	6,350.5	9,840.0	6,351.3	57.3	58.4	90.16	-3,034.5	-604.9	565.6	451.5	114.12	4.956	
9,800.0	6,353.3	9,935.4	6,352.4	59.0	60.0	89.98	-3,129.9	-605.2	573.1	455.5	117.57	4.875	
9,900.0	6,352.6	10,032.4	6,353.5	60.8	61.7	90.07	-3,226.9	-605.8	575.8	454.0	121.78	4.728	
10,000.0	6,351.3	10,132.7	6,353.8	62.5	63.4	90.27	-3,327.2	-607.4	580.1	455.2	124.88	4.645	
10,100.0	6,352.7	10,242.3	6,353.5	64.3	65.3	90.15	-3,436.8	-607.0	583.9	455.6	128.26	4.552	
10,200.0	6,352.9	10,350.8	6,352.1	66.1	67.2	89.91	-3,545.3	-605.5	585.7	453.3	132.40	4.423	
10,300.0	6,353.4	10,449.8	6,350.8	67.8	68.9	89.76	-3,644.3	-603.1	587.7	451.9	135.76	4.329	
10,400.0	6,353.0	10,564.2	6,349.7	69.6	70.9	89.68	-3,758.6	-599.6	587.0	447.3	139.80	4.199	
10,500.0	6,350.3	10,658.1	6,348.7	71.4	72.5	89.85	-3,852.3	-596.2	585.0	441.8	143.15	4.087	
10,562.9	6,349.7	10,728.8	6,349.6	72.5	73.8	89.99	-3,923.0	-593.0	584.4	439.1	145.22	4.024	
10,600.0	6,351.0	10,766.7	6,350.0	73.2	74.4	89.90	-3,960.9	-591.1	584.9	438.5	146.38	3.995	
10,700.0	6,350.8	10,871.6	6,350.7	75.0	76.3	89.99	-4,065.5	-585.4	585.8	436.0	149.81	3.910	
10,800.0	6,352.1	10,981.6	6,350.4	76.8	78.2	89.83	-4,175.3	-578.1	588.0	434.4	153.55	3.829	
10,900.0	6,352.8	11,089.0	6,348.7	78.6	80.2	89.57	-4,282.4	-569.4	584.7	426.8	157.90	3.703	
10,978.2	6,353.6	11,128.0	6,347.5	79.9	80.9	89.40	-4,321.2	-566.0	581.4	421.2	160.19	3.629	
10,982.0	6,353.7	11,128.0	6,347.5	80.0	80.9	89.40	-4,321.2	-566.0	581.4	421.1	160.27	3.628 SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.0	0.0	0.0	0.0	0.00	N/A CC		
100.0	100.0	100.0	100.0	0.1	0.1	180.00	0.0	0.0	0.3	0.0	0.23	1.175 Level 2		
200.0	200.0	200.0	200.0	0.3	0.3	171.97	0.0	0.0	1.0	0.4	0.60	1.707		
300.0	300.0	300.0	300.0	0.5	0.6	155.99	0.0	0.0	1.8	0.8	1.03	1.769		
400.0	400.0	400.0	400.0	0.7	0.8	144.81	0.0	0.0	2.5	1.0	1.46	1.709		
500.0	500.0	500.0	500.0	0.9	1.0	150.04	0.0	0.0	3.1	1.2	1.89	1.623		
600.0	600.0	600.0	600.0	1.1	1.2	106.01	0.4	-0.1	3.5	1.2	2.33	1.508		
700.0	699.8	700.0	700.0	1.3	1.5	142.09	3.8	-1.1	5.3	2.6	2.77	1.921		
800.0	799.3	800.2	799.8	1.6	1.7	151.92	10.5	-3.1	8.4	5.1	3.22	2.596		
900.0	898.3	900.4	899.5	1.8	1.9	149.29	20.5	-6.1	11.6	7.9	3.67	3.145		
1,000.0	997.1	1,000.4	998.7	2.1	2.2	152.67	32.9	-9.7	13.9	9.8	4.14	3.360		
1,100.0	1,095.9	1,100.4	1,097.9	2.4	2.5	155.95	45.4	-13.4	16.2	11.6	4.60	3.512		
1,200.0	1,194.6	1,200.4	1,197.0	2.7	2.8	161.51	57.8	-17.0	19.2	14.1	5.06	3.793		
1,300.0	1,293.1	1,300.2	1,296.0	3.1	3.1	158.76	70.3	-20.7	23.8	18.2	5.54	4.291		
1,400.0	1,391.7	1,400.2	1,395.1	3.4	3.4	157.56	82.7	-24.4	26.9	20.9	5.99	4.486		
1,500.0	1,490.3	1,500.1	1,494.1	3.7	3.7	163.86	95.2	-28.0	29.6	23.1	6.43	4.599		
1,600.0	1,589.0	1,600.0	1,593.2	4.1	4.0	169.39	107.6	-31.7	32.4	25.5	6.88	4.706		
1,700.0	1,687.8	1,699.9	1,692.3	4.4	4.3	172.74	120.1	-35.4	35.1	27.8	7.35	4.775		
1,800.0	1,786.6	1,799.9	1,791.4	4.7	4.6	178.09	132.5	-39.1	37.0	29.2	7.83	4.729		
1,900.0	1,885.6	1,899.9	1,890.6	5.0	5.0	-176.67	145.0	-42.7	38.2	29.9	8.31	4.599		
2,000.0	1,984.7	1,999.9	1,989.7	5.4	5.3	-176.71	157.4	-46.4	39.0	30.2	8.78	4.436		
2,100.0	2,083.7	2,099.9	2,088.9	5.7	5.6	178.41	169.9	-50.1	40.2	31.0	9.25	4.348		
2,200.0	2,182.4	2,199.8	2,188.0	6.0	5.9	175.91	182.3	-53.7	42.9	33.2	9.75	4.402		
2,300.0	2,281.1	2,299.7	2,287.0	6.4	6.2	-177.53	194.8	-57.4	46.4	36.2	10.29	4.513		
2,400.0	2,379.8	2,399.7	2,386.1	6.7	6.6	-168.53	207.2	-61.1	49.5	38.7	10.80	4.581		
2,500.0	2,478.7	2,499.6	2,485.2	7.0	6.9	-165.96	219.7	-64.8	51.8	40.6	11.28	4.597		
2,600.0	2,577.6	2,599.6	2,584.4	7.4	7.2	-164.55	232.1	-68.4	53.4	41.6	11.74	4.546		
2,700.0	2,676.5	2,699.6	2,683.5	7.7	7.5	-163.46	244.6	-72.1	54.5	42.3	12.19	4.468		
2,800.0	2,775.5	2,799.6	2,782.6	8.0	7.9	-163.55	257.0	-75.8	55.2	42.5	12.64	4.366		
2,900.0	2,874.7	2,899.5	2,881.8	8.3	8.2	-166.02	269.5	-79.4	54.9	41.8	13.09	4.196		
3,000.0	2,973.9	2,999.5	2,980.9	8.6	8.5	-169.48	282.0	-83.1	53.9	40.3	13.54	3.979		
3,100.0	3,073.2	3,099.5	3,080.0	8.9	8.8	-171.57	294.4	-86.8	52.4	38.4	14.00	3.745		
3,200.0	3,172.6	3,199.5	3,179.1	9.2	9.2	-176.12	306.9	-90.5	50.1	35.7	14.45	3.468		
3,300.0	3,272.2	3,299.4	3,278.2	9.5	9.5	173.43	319.3	-94.1	46.0	31.0	14.92	3.081		
3,400.0	3,371.7	3,399.3	3,377.3	9.7	9.8	173.85	331.8	-97.8	42.9	27.5	15.41	2.782		
3,500.0	3,471.0	3,499.3	3,476.4	10.0	10.1	-179.93	344.2	-101.5	42.3	26.4	15.93	2.656		
3,502.2	3,473.2	3,501.5	3,478.6	10.0	10.1	-179.79	344.5	-101.6	42.3	26.4	15.94	2.654		
3,600.0	3,570.1	3,599.3	3,575.6	10.3	10.5	-174.49	356.7	-105.1	42.9	26.5	16.45	2.611		
3,700.0	3,668.8	3,699.2	3,674.7	10.7	10.8	-171.85	369.1	-108.8	45.7	28.7	16.93	2.698		
3,800.0	3,767.5	3,799.2	3,773.8	11.0	11.1	-171.20	381.6	-112.5	48.7	31.2	17.41	2.795		
3,900.0	3,866.3	3,899.2	3,872.9	11.4	11.4	-170.66	394.0	-116.2	51.1	33.2	17.89	2.858		
4,000.0	3,965.2	3,999.1	3,972.0	11.7	11.8	-171.13	406.5	-119.8	53.0	34.7	18.36	2.889		
4,100.0	4,064.2	4,099.1	4,071.2	12.0	12.1	-171.41	418.9	-123.5	54.1	35.3	18.84	2.872		
4,200.0	4,163.3	4,199.1	4,170.3	12.4	12.4	-171.12	431.4	-127.2	54.7	35.3	19.32	2.829		
4,300.0	4,262.5	4,299.1	4,269.5	12.7	12.7	-171.51	443.9	-130.8	54.7	34.9	19.80	2.764		
4,400.0	4,361.7	4,399.1	4,368.6	13.0	13.1	-169.68	456.3	-134.5	54.2	34.0	20.28	2.675		
4,500.0	4,460.9	4,499.1	4,467.8	13.3	13.4	-166.30	468.8	-138.2	53.1	32.4	20.73	2.562		
4,600.0	4,560.3	4,599.1	4,566.9	13.6	13.7	-164.13	481.2	-141.9	51.4	30.2	21.16	2.427		
4,700.0	4,659.7	4,699.1	4,666.0	13.9	14.0	-166.63	493.7	-145.5	49.1	27.5	21.59	2.276		
4,800.0	4,759.1	4,799.0	4,765.1	14.2	14.4	-165.66	506.1	-149.2	46.5	24.5	22.02	2.114		
4,900.0	4,858.5	4,898.9	4,864.2	14.4	14.7	-164.63	518.6	-152.9	43.5	21.0	22.48	1.933		
5,000.0	4,958.2	4,998.8	4,963.2	14.7	15.0	-159.75	531.0	-156.5	39.0	16.0	23.01	1.693		

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HNB - Wellbore #1 - Plan #9 (3-21-13)													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,057.9	5,098.4	5,062.0	14.9	15.3	-153.11	543.4	-160.2	33.2	9.3	23.89	1.390	Level 3	
5,200.0	5,157.7	5,197.7	5,160.4	15.1	15.7	-164.46	555.6	-163.8	25.9	0.5	25.44	1.019	Level 2	
5,300.0	5,257.7	5,296.6	5,258.9	15.3	15.9	-174.16	565.2	-166.6	19.6	-8.1	27.71	0.707	Level 1	
5,400.0	5,357.7	5,396.1	5,358.1	15.4	16.1	-134.29	571.6	-168.5	16.3	-13.8	30.04	0.542	Level 1	
5,500.0	5,457.7	5,495.8	5,457.8	15.6	16.2	-60.13	574.7	-169.4	15.0	-16.3	31.36	0.479	Level 1	
5,600.0	5,557.7	5,595.7	5,557.7	15.7	16.4	-43.86	575.0	-169.5	14.1	-17.8	31.89	0.442	Level 1	
5,682.1	5,639.8	5,677.8	5,639.8	15.8	16.5	-90.00	575.0	-169.5	13.6	-18.7	32.31	0.420	Level 1	
5,700.0	5,657.7	5,695.7	5,657.7	15.9	16.5	-96.05	575.0	-169.5	13.6	-18.8	32.35	0.420	Level 1	
5,800.0	5,757.1	5,795.2	5,757.1	15.9	16.7	-137.11	575.0	-169.5	18.5	-13.0	31.48	0.588	Level 1	
5,900.0	5,854.3	5,896.4	5,858.2	15.8	16.8	-154.10	570.8	-169.3	35.0	6.5	28.45	1.230	Level 2	
6,000.0	5,947.9	6,003.3	5,962.1	15.6	16.7	-160.61	546.6	-168.5	47.8	20.8	27.06	1.767		
6,100.0	6,037.0	6,112.8	6,061.1	15.4	16.5	-158.29	500.3	-166.8	52.3	26.3	26.03	2.010		
6,200.0	6,117.6	6,222.4	6,148.3	15.0	16.1	-150.79	434.4	-164.4	52.9	28.0	24.94	2.121		
6,300.0	6,186.5	6,331.1	6,219.4	14.6	15.7	-143.25	352.4	-161.5	51.4	27.0	24.40	2.106		
6,400.0	6,243.1	6,437.9	6,271.1	14.2	15.4	-131.29	259.3	-158.1	47.0	21.7	25.30	1.859		
6,500.0	6,284.1	6,541.1	6,302.9	13.9	15.3	-117.47	161.3	-154.6	41.4	14.3	27.05	1.530		
6,600.0	6,313.0	6,641.8	6,328.2	13.7	15.3	-113.59	63.8	-151.1	37.8	10.2	27.59	1.371	Level 3	
6,700.0	6,337.0	6,742.7	6,339.0	14.1	15.6	-93.39	-36.3	-147.5	31.4	1.9	29.56	1.063	Level 2	
6,800.0	6,346.3	6,842.2	6,339.0	14.6	16.1	-76.07	-135.7	-144.0	30.2	0.6	29.60	1.020	Level 2	
6,900.0	6,349.9	6,942.1	6,339.0	15.3	16.9	-67.74	-235.5	-140.4	28.7	-1.1	29.79	0.964	Level 1	
7,000.0	6,352.5	7,042.0	6,339.0	16.1	17.8	-59.06	-335.3	-136.8	26.1	-3.5	29.62	0.882	Level 1	
7,100.0	6,352.2	7,141.8	6,339.0	17.1	18.9	-51.87	-435.1	-133.2	21.4	-8.2	29.60	0.723	Level 1	
7,200.0	6,350.8	7,241.6	6,339.0	18.2	20.1	-40.00	-534.8	-129.7	15.4	-12.6	27.96	0.551	Level 1	
7,300.0	6,350.1	7,341.4	6,339.0	19.2	21.4	-26.26	-634.6	-126.1	12.4	-12.8	25.17	0.492	Level 1	
7,373.5	6,350.9	7,414.9	6,339.0	20.0	22.4	-13.48	-708.0	-123.5	12.2	-10.7	22.91	0.534	Level 1	
7,400.0	6,350.8	7,441.4	6,339.0	20.3	22.8	-8.79	-734.5	-122.5	11.9	-10.6	22.49	0.528	Level 1	
7,500.0	6,351.9	7,541.3	6,339.0	21.6	24.3	0.04	-834.4	-119.0	12.9	-10.5	23.40	0.552	Level 1	
7,600.0	6,353.9	7,641.3	6,339.0	23.0	25.8	-4.98	-934.3	-115.4	14.9	-9.8	24.72	0.602	Level 1	
7,700.0	6,352.8	7,741.3	6,339.0	24.6	27.4	-7.52	-1,034.2	-111.8	13.9	-12.6	26.45	0.525	Level 1	
7,798.1	6,351.7	7,839.4	6,339.0	25.9	29.0	-2.64	-1,132.2	-108.3	12.7	-14.6	27.25	0.466	Level 1	
7,800.0	6,351.6	7,841.3	6,339.0	25.9	29.0	-3.79	-1,134.1	-108.2	12.6	-14.7	27.31	0.462	Level 1	
7,900.0	6,352.2	7,941.2	6,339.0	27.4	30.7	9.42	-1,234.0	-104.7	13.3	-16.7	30.06	0.444	Level 1	
8,000.0	6,354.9	8,041.1	6,339.0	28.9	32.4	19.00	-1,333.9	-101.1	16.8	-18.1	34.95	0.481	Level 1	
8,100.0	6,359.2	8,141.0	6,339.0	30.4	34.1	21.77	-1,433.7	-97.5	21.8	-16.2	37.92	0.574	Level 1	
8,200.0	6,362.6	8,240.9	6,339.0	32.0	35.8	23.77	-1,533.5	-93.9	25.8	-15.3	41.08	0.628	Level 1	
8,300.0	6,362.1	8,340.9	6,339.0	33.7	37.6	26.06	-1,633.4	-90.4	25.7	-19.0	44.64	0.575	Level 1	
8,400.0	6,360.1	8,440.9	6,339.0	35.3	39.4	28.13	-1,733.3	-86.8	23.8	-24.0	47.89	0.498	Level 1	
8,500.0	6,359.3	8,540.9	6,339.0	36.9	41.2	28.09	-1,833.3	-83.2	23.0	-26.8	49.81	0.462	Level 1	
8,600.0	6,356.7	8,640.8	6,339.0	38.6	43.0	32.45	-1,933.2	-79.6	21.0	-34.3	55.27	0.380	Level 1	
8,700.0	6,354.1	8,740.8	6,339.0	40.3	44.8	37.93	-2,033.1	-76.1	19.1	-42.5	61.64	0.310	Level 1	
8,774.1	6,353.3	8,814.9	6,339.0	41.5	46.1	41.27	-2,107.2	-73.4	19.1	-46.9	66.01	0.289	Level 1	
8,800.0	6,353.0	8,840.8	6,339.0	41.9	46.6	41.82	-2,133.0	-72.5	18.8	-48.3	67.06	0.280	Level 1	
8,900.0	6,352.7	8,940.8	6,339.0	43.5	48.4	40.90	-2,232.9	-68.9	18.1	-50.9	68.93	0.262	Level 1	
9,000.0	6,352.4	9,040.7	6,339.0	45.2	50.3	36.41	-2,332.8	-65.3	16.6	-50.9	67.53	0.246	Level 1	
9,100.0	6,352.0	9,140.7	6,339.0	46.9	52.1	26.71	-2,432.7	-61.7	14.5	-46.3	60.88	0.239	Level 1	
9,200.0	6,351.3	9,240.6	6,339.0	48.6	54.0	16.44	-2,532.6	-58.2	12.8	-41.1	53.93	0.238	Level 1	
9,300.0	6,350.8	9,340.6	6,339.0	50.3	55.8	5.76	-2,632.5	-54.6	11.8	-37.3	49.13	0.240	Level 1	
9,400.0	6,350.6	9,440.6	6,339.0	52.0	57.7	-3.05	-2,732.4	-51.0	11.6	-37.9	49.52	0.234	Level 1	
9,500.0	6,350.0	9,540.6	6,339.0	53.8	59.6	-6.75	-2,832.3	-47.4	11.1	-40.9	51.93	0.213	Level 1	
9,600.0	6,349.7	9,640.6	6,339.0	55.5	61.5	-4.54	-2,932.3	-43.9	10.7	-42.0	52.70	0.204	Level 1	
9,614.8	6,349.7	9,655.4	6,339.0	55.8	61.7	-3.86	-2,947.1	-43.3	10.7	-42.0	52.75	0.203	Level 1	
9,700.0	6,350.5	9,740.6	6,339.0	57.3	63.3	4.85	-3,032.2	-40.3	11.5	-42.9	54.42	0.212	Level 1	

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

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope F-18 Pad Sec.18-T5N-R62W - Antelope F-J-18HNB - Wellbore #1 - Plan #9 (3-21-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,800.0	6,353.3	9,840.4	6,339.0	59.0	65.2	17.83	-3,132.0	-36.7	15.0	-50.1	65.09	0.231 Level 1	
9,900.0	6,352.6	9,940.4	6,339.0	60.8	67.1	12.77	-3,231.9	-33.1	14.0	-48.6	62.53	0.223 Level 1	
9,988.8	6,351.8	10,029.2	6,339.0	62.3	68.8	6.94	-3,320.6	-30.0	12.9	-46.9	59.74	0.215 Level 1	
10,000.0	6,351.3	10,040.4	6,339.0	62.5	69.0	10.32	-3,331.8	-29.6	12.5	-49.5	62.01	0.201 Level 1	
10,100.0	6,352.7	10,140.4	6,339.0	64.3	70.9	11.91	-3,431.7	-26.0	14.0	-50.7	64.62	0.216 Level 1	
10,200.0	6,352.9	10,240.3	6,339.0	66.1	72.8	9.74	-3,531.7	-22.4	14.1	-50.7	64.79	0.218 Level 1	
10,225.6	6,352.7	10,265.9	6,339.0	66.5	73.2	9.01	-3,557.2	-21.5	13.9	-50.7	64.63	0.215 Level 1	
10,300.0	6,353.4	10,340.3	6,339.0	67.8	74.6	12.84	-3,631.6	-18.8	14.8	-54.1	68.83	0.215 Level 1	
10,400.0	6,353.0	10,440.3	6,339.0	69.6	76.5	8.35	-3,731.5	-15.3	14.2	-52.7	66.86	0.212 Level 1	
10,500.0	6,350.3	10,540.3	6,339.0	71.4	78.4	0.20	-3,831.4	-11.7	11.3	-53.9	65.21	0.174 Level 1	
10,525.8	6,350.0	10,566.1	6,339.0	71.9	78.9	-0.53	-3,857.2	-10.8	10.9	-54.6	65.54	0.167 Level 1	
10,600.0	6,351.0	10,640.2	6,339.0	73.2	80.3	5.22	-3,931.3	-8.1	12.1	-55.8	67.88	0.178 Level 1	
10,700.0	6,350.8	10,740.2	6,339.0	75.0	82.2	18.15	-4,031.2	-4.5	12.4	-69.1	81.53	0.153 Level 1	
10,800.0	6,352.1	10,840.1	6,339.0	76.8	84.1	34.90	-4,131.0	-1.0	16.0	-92.6	108.59	0.148 Level 1, SF	
10,900.0	6,352.8	10,940.0	6,339.0	78.6	86.0	36.91	-4,230.9	2.6	17.2	-97.3	114.54	0.150 Level 1, ES	
10,982.0	6,353.7	11,022.0	6,339.0	80.0	87.6	33.75	-4,312.9	5.5	17.6	-93.7	111.36	0.158 Level 1	

Antelope F-18 Pad Sec.18-T5N-R62W - Antelope K-O-18HNB - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 136-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	18.2	0.0	18.2	18.2	0.00	N/A	CC, ES	
100.0	100.0	99.8	99.8	0.1	0.1	142.42	18.8	-0.2	19.0	18.8	0.23	83.804		
200.0	200.0	199.7	199.6	0.3	0.3	132.60	20.4	-0.9	21.2	20.6	0.56	38.026		
300.0	300.0	299.6	299.5	0.5	0.5	107.56	22.2	-1.3	23.4	22.4	0.98	23.968		
400.0	400.0	399.7	399.7	0.7	0.7	90.03	23.8	-0.6	25.2	23.8	1.38	18.251		
500.0	500.0	499.6	499.5	0.9	0.9	92.38	25.3	1.4	26.9	25.1	1.79	14.979		
600.0	600.0	599.5	599.3	1.1	1.1	31.86	26.6	4.6	27.4	25.2	2.22	12.362		
648.5	648.4	647.4	647.2	1.2	1.2	43.65	27.5	6.9	27.1	24.7	2.43	11.168		
700.0	699.8	698.0	697.7	1.3	1.4	55.62	29.2	9.9	27.6	24.9	2.65	10.405	SF	
800.0	799.3	796.6	795.9	1.6	1.6	81.90	33.6	17.5	33.1	29.9	3.13	10.575		
900.0	898.3	893.7	892.3	1.8	1.9	92.28	39.3	27.9	44.5	40.8	3.64	12.233		
1,000.0	997.1	989.7	987.1	2.1	2.2	102.56	45.9	41.4	61.7	57.6	4.18	14.771		
1,100.0	1,095.9	1,084.1	1,079.6	2.4	2.5	108.00	53.2	58.3	84.0	79.2	4.73	17.746		
1,200.0	1,194.6	1,177.2	1,170.1	2.7	2.9	113.90	61.3	78.4	110.7	105.4	5.32	20.826		
1,300.0	1,293.1	1,269.6	1,259.2	3.1	3.4	110.23	71.5	100.9	141.0	135.1	5.93	23.782		
1,400.0	1,391.7	1,362.4	1,348.0	3.4	3.9	103.01	83.3	125.4	170.5	164.0	6.57	25.951		
1,500.0	1,490.3	1,459.6	1,440.5	3.7	4.4	103.26	96.1	151.8	200.0	192.8	7.22	27.706		
1,600.0	1,589.0	1,558.7	1,535.6	4.1	4.9	104.28	108.6	177.4	228.2	220.4	7.86	29.024		
1,700.0	1,687.8	1,657.3	1,630.5	4.4	5.3	104.37	120.4	201.3	255.1	246.6	8.50	30.011		
1,800.0	1,786.6	1,750.8	1,720.7	4.7	5.8	107.37	129.8	224.0	282.1	272.9	9.12	30.918		
1,900.0	1,885.6	1,844.4	1,810.8	5.0	6.3	112.23	138.4	247.5	310.8	301.1	9.74	31.900		
2,000.0	1,984.7	1,938.7	1,901.3	5.4	6.8	111.79	149.2	272.0	340.3	329.9	10.38	32.800		
2,100.0	2,083.7	2,028.8	1,987.3	5.7	7.3	104.98	161.1	296.1	370.0	359.0	11.01	33.594		
2,200.0	2,182.4	2,121.5	2,075.4	6.0	7.9	98.99	172.8	322.2	400.0	388.3	11.69	34.209		
2,300.0	2,281.1	2,218.1	2,167.1	6.4	8.5	101.49	186.0	349.6	429.3	417.0	12.39	34.640		
2,400.0	2,379.8	2,312.0	2,255.8	6.7	9.1	109.14	200.9	376.5	460.6	447.5	13.08	35.225		
2,500.0	2,478.7	2,418.6	2,356.5	7.0	9.7	111.73	220.1	405.7	491.9	478.1	13.81	35.633		
2,600.0	2,577.6	2,508.9	2,442.2	7.4	10.2	113.74	235.7	429.5	522.6	508.2	14.45	36.162		
2,700.0	2,676.5	2,587.4	2,516.3	7.7	10.7	116.17	248.3	452.0	556.2	541.1	15.06	36.941		
2,800.0	2,775.5	2,673.1	2,597.0	8.0	11.3	118.10	260.6	478.4	592.4	576.7	15.69	37.762		
2,900.0	2,874.7	2,769.5	2,687.9	8.3	11.9	117.55	273.9	507.7	627.9	611.5	16.35	38.393		
3,000.0	2,973.9	2,856.4	2,769.6	8.6	12.5	115.46	285.0	535.0	663.8	646.9	16.96	39.150		
3,100.0	3,073.2	2,968.3	2,875.2	8.9	13.2	114.39	298.9	569.1	698.6	680.9	17.63	39.622		
3,200.0	3,172.6	3,061.6	2,963.9	9.2	13.7	110.76	310.1	595.8	730.9	712.6	18.25	40.044		
3,300.0	3,272.2	3,170.8	3,067.8	9.5	14.4	99.29	323.3	626.9	761.2	742.3	18.93	40.222		
3,400.0	3,371.7	3,273.9	3,166.2	9.7	15.0	96.31	336.6	654.5	789.0	769.5	19.49	40.484		
3,500.0	3,471.0	3,367.9	3,255.8	10.0	15.6	99.20	350.1	679.3	816.7	796.7	20.08	40.674		
3,600.0	3,570.1	3,452.3	3,336.1	10.3	16.1	102.56	362.3	702.4	846.5	825.8	20.64	41.001		
3,700.0	3,668.8	3,540.5	3,419.8	10.7	16.6	104.67	373.8	727.6	878.6	857.3	21.24	41.355		
3,800.0	3,767.5	3,636.2	3,510.8	11.0	17.2	105.79	385.5	754.9	911.1	889.2	21.94	41.520		
3,900.0	3,866.3	3,728.2	3,598.3	11.4	17.8	106.93	396.5	781.3	943.9	921.3	22.62	41.725		
4,000.0	3,965.2	3,826.1	3,691.3	11.7	18.4	107.10	408.5	809.4	976.8	953.4	23.33	41.869		

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Antelope J-F-19HZ Pad Sec.19-T5N-R62W - Antelope J-F-19HZ - Wellbore #1 - Plan #6 (OCT 23, 2012)												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,982.0	6,353.7	11,096.8	6,373.0	80.0	90.9	-91.02	-5,234.3	242.3	949.4	778.6	170.86	5.557	CC, ES, SF

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Offset Design Antelope J-F-19HZ Pad Sec.19-T5N-R62W - Antelope J-F-19HZ - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 192-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
10,982.0	6,353.7	11,046.0	6,375.5	80.0	83.7	-91.52	-5,267.3	252.1	983.9	820.3	163.65	6.013	CC, ES, SF	

Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

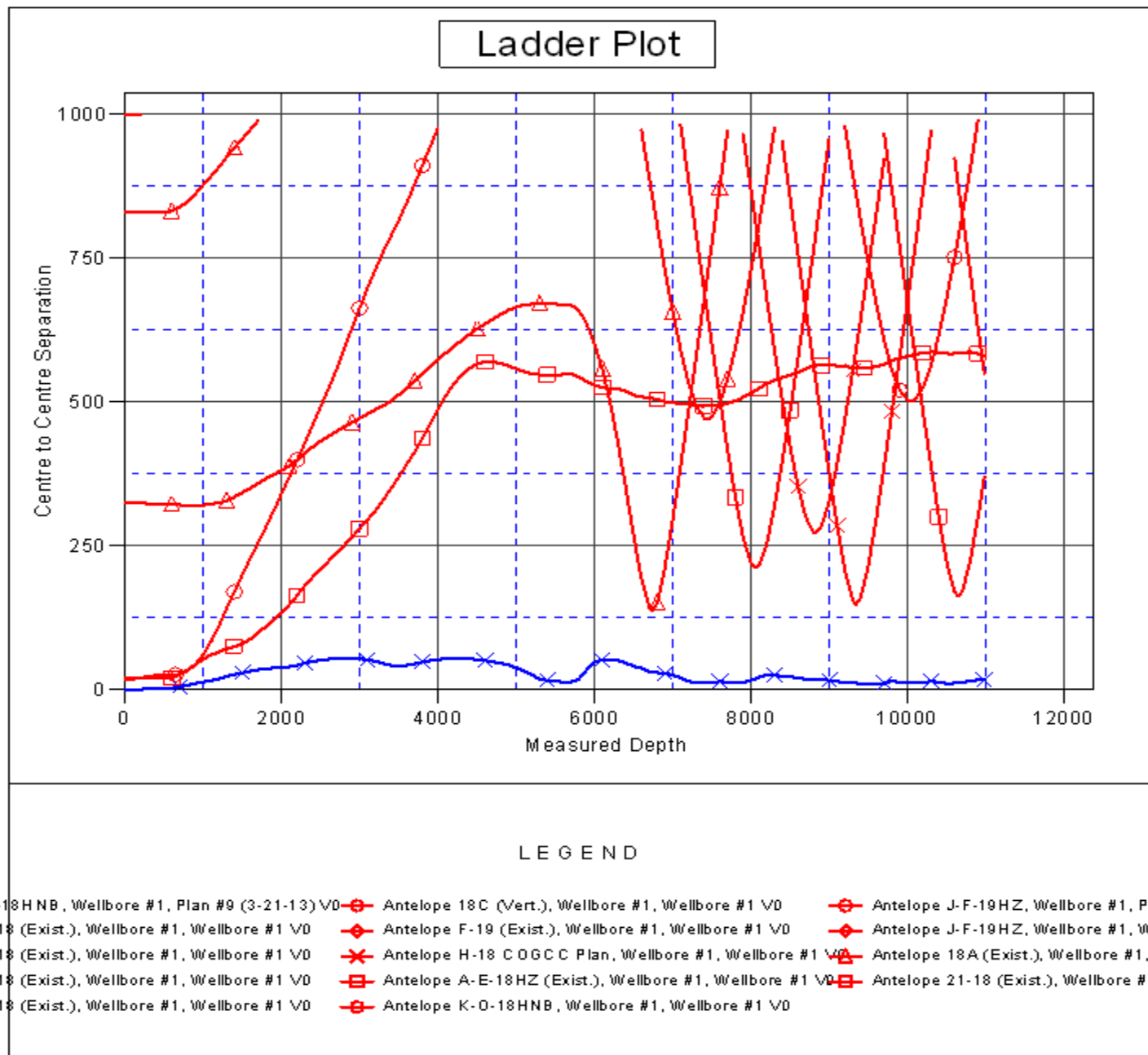
Reference Depths are relative to WELL @ 4626.0ft (Ensign 136 - RKB Coordinates are relative to: Antelope F-J-18HNB

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000 °

Grid Convergence at Surface is: 0.73°



Company:	BONANZA CREEK ENERGY OPERATING	Local Co-ordinate Reference:	Well Antelope F-J-18HNB
Project:	SEC.18-T5N-R62W	TVD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Reference Site:	Antelope F-18 Pad Sec.18-T5N-R62W	MD Reference:	WELL @ 4626.0ft (Ensign 136 - RKB 12')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Antelope F-J-18HNB	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Survey: Survey #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4626.0ft (Ensign 136 - RKB Coordinates are relative to: Antelope F-J-18HNB

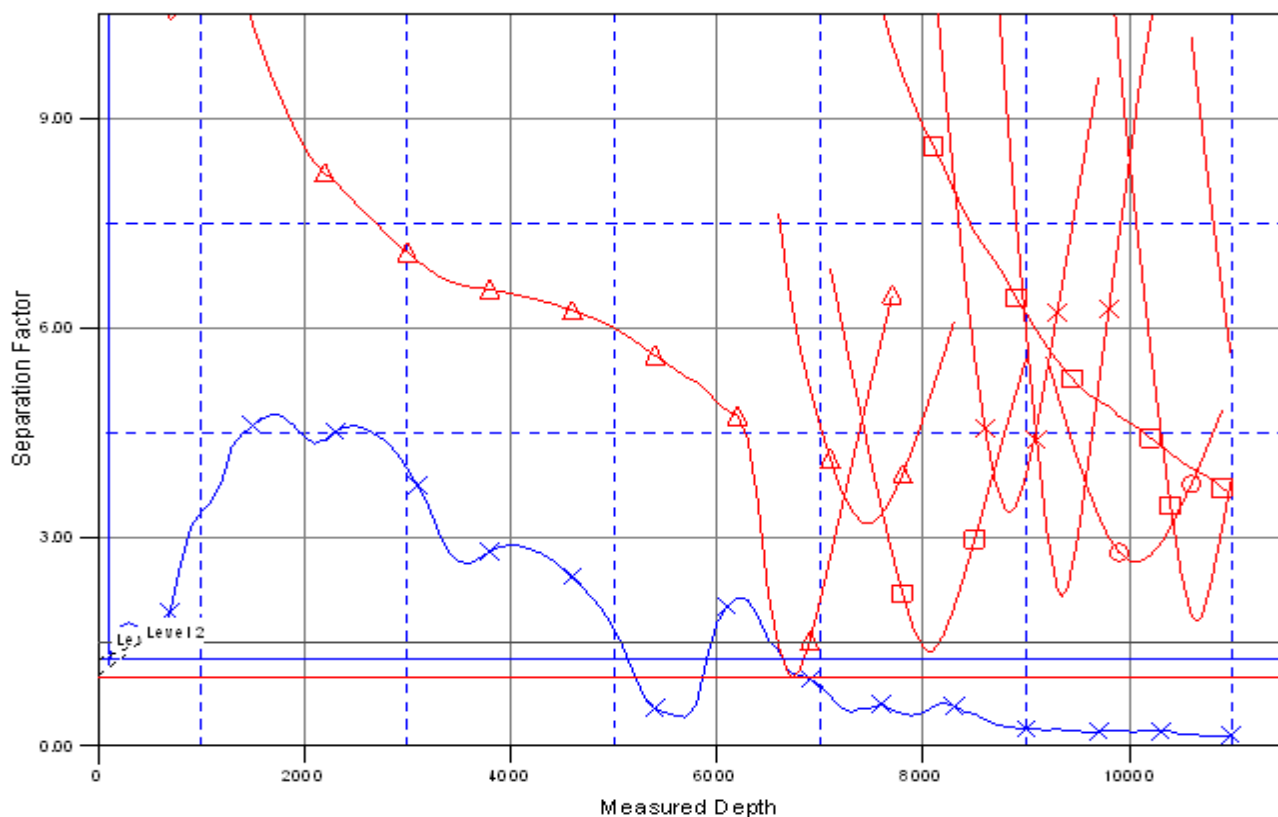
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000 °

Grid Convergence at Surface is: 0.73°

Separation Factor Plot



LEGEND

J-18 HNB, Wellbore #1, Plan #9 (3-21-13) V/D	Antelope 18 C (Vert.), Wellbore #1, Wellbore #1 V/D	Antelope J-F-19HZ, Wellbore #1, Pa
-18 (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope F-19 (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope J-F-19HZ, Wellbore #1, We
-18 (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope H-18 C O G C C Plan, Wellbore #1, Wellbore #1 V/D	Antelope 18A (Exist.), Wellbore #1, W
-18 (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope A-E-18HZ (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope 21-18 (Exist.), Wellbore #1,
-18 (Exist.), Wellbore #1, Wellbore #1 V/D	Antelope K-O-18HNB, Wellbore #1, Wellbore #1 V/D	