

Shell Exploration & Production Co. Inc.

Harper Co. (NAD-27)

Sec 15-T34S-R07W

Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors
774

Wellbore #1

Design 011711 A1

Sperry Drilling Services

Ellipse Separation Anticollision Report

17 January, 2012

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Reference Design: Sec 15-T34S-R07W - Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Wellbore #1 - Design 011711
A1

Well Coordinates: 151,007.51 N, 2,124,600.36 E (37° 04' 50.17" N, 098° 04' 22.47" W)

Datum Height: well @ 1419.00ft

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Version: 2003.21 Build: 43

HALLIBURTON



Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Croft Farms 3407 15-2H/ Job# 9199274/ Nabors 774 - Wellbore #1 - Design 011712 A1

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)				
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
100.00	100.00	0.00	0.00	0.09	100.00	100.00	-0.03	25.00	0.09	25.00	24.83	90.08	146.352
200.00	200.00	0.00	0.00	0.31	200.00	200.00	-0.03	25.00	0.31	25.00	24.38	90.08	40.300
300.00	300.00	0.00	0.00	0.53	300.00	300.00	-0.03	25.00	0.53	25.00	23.93	90.08	23.367
400.00	399.97	0.00	-2.18	0.75	399.90	399.87	-2.21	25.00	0.74	27.27	25.78	-175.34	18.297
500.00	499.77	0.00	-8.37	0.97	499.27	499.02	-8.69	25.00	0.94	34.49	32.58	-165.35	18.053
600.00	599.53	0.00	-15.35	1.20	598.64	598.01	-17.35	25.00	1.16	43.95	41.59	-156.62	18.653
700.00	699.29	0.00	-22.32	1.44	698.02	697.01	-26.01	25.00	1.40	54.05	51.24	-151.06	19.197
800.00	799.04	0.00	-29.30	1.68	798.27	796.98	-33.49	25.00	1.63	63.83	60.56	-148.20	19.528
900.00	898.80	0.00	-36.28	1.93	898.86	897.45	-38.36	25.00	1.85	72.30	68.59	-147.85	19.485
1,000.00	998.55	0.00	-43.25	2.18	999.63	998.20	-40.57	25.00	2.06	79.40	75.25	-149.20	19.126
1,100.00	1,098.31	0.00	-50.23	2.43	1,099.75	1,098.31	-40.72	25.00	2.26	85.54	80.96	-151.51	18.663
1,200.00	1,198.08	0.00	-56.99	2.66	1,199.52	1,198.08	-40.72	25.00	2.47	91.55	86.54	-153.55	18.273
1,300.00	1,297.97	0.00	-61.62	2.85	1,299.41	1,297.97	-40.72	25.00	2.67	95.71	90.31	-154.81	17.720
1,400.00	1,397.95	0.00	-63.62	3.03	1,399.39	1,397.95	-40.72	25.00	2.89	97.53	91.73	-155.32	16.821
1,500.00	1,497.95	0.00	-63.72	3.23	1,499.39	1,497.95	-40.72	25.00	3.10	97.62	91.41	114.66	15.719
1,600.00	1,597.95	0.00	-63.72	3.43	1,599.39	1,597.95	-40.72	25.00	3.31	97.62	90.98	114.66	14.714
1,700.00	1,697.95	0.00	-63.72	3.64	1,699.39	1,697.95	-40.72	25.00	3.53	97.62	90.56	114.66	13.824
1,800.00	1,797.95	0.00	-63.72	3.85	1,799.39	1,797.95	-40.72	25.00	3.75	97.62	90.13	114.66	13.031
1,900.00	1,897.95	0.00	-63.72	4.06	1,899.39	1,897.95	-40.72	25.00	3.96	97.62	89.69	114.66	12.320
2,000.00	1,997.95	0.00	-63.72	4.27	1,999.39	1,997.95	-40.72	25.00	4.18	97.62	89.26	114.66	11.680
2,100.00	2,097.95	0.00	-63.72	4.48	2,099.39	2,097.95	-40.72	25.00	4.40	97.62	88.82	114.66	11.102
2,200.00	2,197.95	0.00	-63.72	4.70	2,199.39	2,197.95	-40.72	25.00	4.62	97.62	88.39	114.66	10.577
2,300.00	2,297.95	0.00	-63.72	4.91	2,299.39	2,297.95	-40.72	25.00	4.84	97.62	87.95	114.66	10.097
2,400.00	2,397.95	0.00	-63.72	5.13	2,399.39	2,397.95	-40.72	25.00	5.06	97.62	87.51	114.66	9.659
2,500.00	2,497.95	0.00	-63.72	5.34	2,499.39	2,497.95	-40.72	25.00	5.28	97.62	87.07	114.66	9.256
2,600.00	2,597.95	0.00	-63.72	5.56	2,599.39	2,597.95	-40.72	25.00	5.50	97.62	86.63	114.66	8.885
2,700.00	2,697.95	0.00	-63.72	5.78	2,699.39	2,697.95	-40.72	25.00	5.73	97.62	86.19	114.66	8.542
2,800.00	2,797.95	0.00	-63.72	6.00	2,799.39	2,797.95	-40.72	25.00	5.95	97.62	85.75	114.66	8.224
2,900.00	2,897.95	0.00	-63.72	6.22	2,899.39	2,897.95	-40.72	25.00	6.17	97.62	85.30	114.66	7.928
3,000.00	2,997.95	0.00	-63.72	6.44	2,999.39	2,997.95	-40.72	25.00	6.39	97.62	84.86	114.66	7.653
3,100.00	3,097.95	0.00	-63.72	6.66	3,099.39	3,097.95	-40.72	25.00	6.61	97.62	84.42	114.66	7.396

Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Croft Farms 3407 15-2H/ Job# 9199274/ Nabors 774 - Wellbore #1 - Design 011712 A1

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)				
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
3,200.00	3,197.95	0.00	-63.72	6.88	3,199.39	3,197.95	-40.72	25.00	6.84	97.62	83.97	114.66	7.155
3,300.00	3,297.95	0.00	-63.72	7.10	3,299.39	3,297.95	-40.72	25.00	7.06	97.62	83.53	114.66	6.929
3,400.00	3,397.95	0.00	-63.72	7.32	3,399.39	3,397.95	-40.72	25.00	7.28	97.62	83.08	114.66	6.717
3,500.00	3,497.95	0.00	-63.72	7.54	3,499.39	3,497.95	-40.72	25.00	7.50	97.62	82.64	114.66	6.518
3,600.00	3,597.95	0.00	-63.72	7.76	3,599.39	3,597.95	-40.72	25.00	7.73	97.62	82.19	114.66	6.330
3,700.00	3,697.95	0.00	-63.72	7.98	3,699.39	3,697.95	-40.72	25.00	7.95	97.62	81.75	114.66	6.152
3,800.00	3,797.95	0.00	-63.72	8.20	3,799.39	3,797.95	-40.72	25.00	8.17	97.62	81.30	114.66	5.984
3,900.00	3,897.95	0.00	-63.72	8.42	3,899.39	3,897.95	-40.72	25.00	8.40	97.62	80.86	114.66	5.825
3,936.55	3,934.50	0.00	-63.72	8.50	3,935.93	3,934.50	-40.72	25.00	8.48	97.62	80.70	114.66	5.769
4,000.00	3,997.95	0.00	-63.72	8.64	3,996.69	3,995.22	-42.16	25.01	8.61	98.28	81.09	115.42	5.717
4,100.00	4,097.95	0.00	-63.72	8.87	4,089.52	4,087.22	-54.02	25.13	8.78	104.53	86.94	121.30	5.941
4,200.00	4,197.95	0.00	-63.72	9.09	4,177.90	4,172.70	-76.28	25.34	8.97	119.95	101.94	130.58	6.661
4,300.00	4,297.95	0.00	-63.72	9.31	4,259.70	4,248.81	-106.11	25.62	9.17	147.16	128.74	139.90	7.989
4,400.00	4,397.95	0.00	-63.72	9.53	4,333.75	4,314.39	-140.45	25.95	9.40	186.40	167.59	147.44	9.906
4,500.00	4,497.95	0.00	-63.72	9.76	4,400.00	4,369.77	-176.75	26.29	9.64	236.16	216.97	153.01	12.305
4,600.00	4,597.95	0.00	-63.72	9.98	4,458.03	4,415.35	-212.64	26.63	9.90	294.49	274.94	156.98	15.066
4,700.00	4,697.95	0.00	-63.72	10.20	4,509.18	4,453.01	-247.25	26.96	10.17	359.66	339.78	159.86	18.092
4,800.00	4,797.95	0.00	-63.72	10.42	4,550.00	4,481.22	-276.74	27.24	10.41	430.32	410.13	161.81	21.316
4,900.00	4,897.95	0.00	-63.72	10.65	4,600.00	4,513.42	-314.97	27.60	10.74	505.38	484.87	163.83	24.640
5,000.00	4,997.95	0.00	-63.72	10.87	4,627.95	4,530.23	-337.29	27.82	10.95	583.87	563.08	164.82	28.089
5,100.00	5,097.95	0.00	-63.72	11.09	4,650.00	4,542.87	-355.36	27.99	11.11	665.43	644.38	165.53	31.612
5,200.00	5,197.95	0.00	-63.72	11.32	4,685.48	4,562.03	-385.22	28.27	11.40	749.16	727.83	166.57	35.114
5,300.00	5,297.95	0.00	-63.72	11.54	4,719.09	4,578.99	-414.24	28.55	11.70	834.87	813.26	167.44	38.630
5,400.00	5,397.95	0.00	-63.72	11.76	4,769.09	4,603.99	-457.54	28.96	12.16	921.03	899.13	168.55	42.041
5,500.00	5,497.95	0.00	-63.72	11.99	4,819.09	4,628.99	-500.83	29.37	12.63	1,007.27	985.07	169.47	45.366
5,600.00	5,597.95	0.00	-63.72	12.21	4,851.27	4,645.08	-528.70	29.63	12.95	1,093.71	1,071.24	169.99	48.670
5,700.00	5,697.95	0.00	-63.72	12.43	4,876.92	4,657.50	-551.14	29.85	13.22	1,181.12	1,158.38	170.37	51.952
5,800.00	5,797.95	0.00	-63.72	12.66	4,900.00	4,667.99	-571.70	30.04	13.46	1,269.82	1,246.83	170.69	55.226
5,900.00	5,897.95	0.00	-63.72	12.88	4,900.00	4,667.99	-571.70	30.04	13.46	1,359.57	1,336.35	170.69	58.560
6,000.00	5,997.95	0.00	-63.72	13.10	4,923.49	4,677.98	-592.96	30.24	13.72	1,450.09	1,426.61	171.00	61.769
6,100.00	6,097.95	0.00	-63.72	13.33	4,950.00	4,688.40	-617.33	30.48	14.01	1,541.68	1,517.94	171.32	64.942
6,200.00	6,197.95	0.00	-63.72	13.55	4,950.00	4,688.40	-617.33	30.48	14.01	1,633.62	1,609.65	171.32	68.173



Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Croft Farms 3407 15-2H/ Job# 9199274/ Nabors 774 - Wellbore #1 - Design 011712 A1

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Measured Depth (ft)	Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)			
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2		Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)			+N/-S (ft)	+E/-W (ft)						
6,300.00	6,297.95	0.00	-63.72	13.77	4,950.00	4,688.40	-617.33	30.48	14.01	1,726.44	1,702.26	171.32	71.381
6,323.00	6,320.95	0.00	-63.72	13.82	4,950.00	4,688.40	-617.33	30.48	14.01	1,747.91	1,723.67	171.32	72.115



Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Farms 3407 #15-1H / Job# 9199272/ Nabors 774 - Wellbore #1 - Design 011212 A0

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)				
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
100.00	100.00	0.00	0.00	0.09	100.00	100.00	-0.03	10.00	0.09	10.00	9.83	90.20	58.540
200.00	200.00	0.00	0.00	0.31	200.00	200.00	-0.03	10.00	0.31	10.00	9.38	90.20	16.120
300.00	300.00	0.00	0.00	0.53	300.00	300.00	-0.03	10.00	0.53	10.00	8.93	90.20	9.347
400.00	399.97	0.00	-2.18	0.75	399.91	399.87	2.14	10.00	0.76	12.37	10.85	170.01	8.159
500.00	499.77	0.00	-8.37	0.97	499.27	499.02	8.62	10.00	1.00	20.31	18.34	154.74	10.315
600.00	599.53	0.00	-15.35	1.20	598.33	597.57	18.62	10.00	1.24	31.51	29.07	143.49	12.931
700.00	699.29	0.00	-22.32	1.44	697.54	696.24	28.99	10.00	1.49	43.52	40.62	137.86	14.983
800.00	799.04	0.00	-29.30	1.68	797.74	796.01	38.22	10.00	1.72	54.90	51.55	135.58	16.397
900.00	898.80	0.00	-36.28	1.93	898.38	896.43	44.85	10.00	1.92	64.49	60.72	135.72	17.111
1,000.00	998.55	0.00	-43.25	2.18	999.30	997.27	48.84	10.00	2.12	72.27	68.08	137.35	17.236
1,100.00	1,098.31	0.00	-50.23	2.43	1,100.36	1,098.31	50.17	10.00	2.31	78.39	73.77	140.14	16.978
1,200.00	1,198.08	0.00	-56.99	2.66	1,200.13	1,198.08	50.17	10.00	2.51	83.70	78.66	143.12	16.612
1,300.00	1,297.97	0.00	-61.62	2.85	1,300.02	1,297.97	50.17	10.00	2.72	87.44	82.00	144.97	16.084
1,400.00	1,397.95	0.00	-63.62	3.03	1,399.99	1,397.95	50.17	10.00	2.93	89.09	83.26	145.73	15.263
1,500.00	1,497.95	0.00	-63.72	3.23	1,499.99	1,497.95	50.17	10.00	3.14	89.17	82.92	55.76	14.269
1,600.00	1,597.95	0.00	-63.72	3.43	1,599.99	1,597.95	50.17	10.00	3.36	89.17	82.50	55.76	13.362
1,700.00	1,697.95	0.00	-63.72	3.64	1,699.99	1,697.95	50.17	10.00	3.57	89.17	82.07	55.76	12.558
1,800.00	1,797.95	0.00	-63.72	3.85	1,799.99	1,797.95	50.17	10.00	3.79	89.17	81.64	55.76	11.841
1,900.00	1,897.95	0.00	-63.72	4.06	1,899.99	1,897.95	50.17	10.00	4.00	89.17	81.21	55.76	11.198
2,000.00	1,997.95	0.00	-63.72	4.27	1,999.99	1,997.95	50.17	10.00	4.22	89.17	80.77	55.76	10.619
2,100.00	2,097.95	0.00	-63.72	4.48	2,099.99	2,097.95	50.17	10.00	4.44	89.17	80.34	55.76	10.096
2,200.00	2,197.95	0.00	-63.72	4.70	2,199.99	2,197.95	50.17	10.00	4.66	89.17	79.90	55.76	9.620
2,300.00	2,297.95	0.00	-63.72	4.91	2,299.99	2,297.95	50.17	10.00	4.88	89.17	79.46	55.76	9.186
2,400.00	2,397.95	0.00	-63.72	5.13	2,399.99	2,397.95	50.17	10.00	5.10	89.17	79.02	55.76	8.788
2,500.00	2,497.95	0.00	-63.72	5.34	2,499.99	2,497.95	50.17	10.00	5.32	89.17	78.58	55.76	8.423
2,600.00	2,597.95	0.00	-63.72	5.56	2,599.99	2,597.95	50.17	10.00	5.54	89.17	78.14	55.76	8.087
2,700.00	2,697.95	0.00	-63.72	5.78	2,699.99	2,697.95	50.17	10.00	5.76	89.17	77.70	55.76	7.775
2,800.00	2,797.95	0.00	-63.72	6.00	2,799.99	2,797.95	50.17	10.00	5.98	89.17	77.26	55.76	7.487
2,900.00	2,897.95	0.00	-63.72	6.22	2,899.99	2,897.95	50.17	10.00	6.21	89.17	76.82	55.76	7.219
3,000.00	2,997.95	0.00	-63.72	6.44	2,999.99	2,997.95	50.17	10.00	6.43	89.17	76.37	55.76	6.969
3,100.00	3,097.95	0.00	-63.72	6.66	3,099.99	3,097.95	50.17	10.00	6.65	89.17	75.93	55.76	6.735
3,200.00	3,197.95	0.00	-63.72	6.88	3,199.99	3,197.95	50.17	10.00	6.87	89.17	75.49	55.76	6.517



Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Farms 3407 #15-1H / Job# 9199272/ Nabors 774 - Wellbore #1 - Design 011212 A0

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)				
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
3,300.00	3,297.95	0.00	-63.72	7.10	3,299.99	3,297.95	50.17	10.00	7.10	89.17	75.04	55.76	6.312
3,400.00	3,397.95	0.00	-63.72	7.32	3,399.99	3,397.95	50.17	10.00	7.32	89.17	74.60	55.76	6.119
3,500.00	3,497.95	0.00	-63.72	7.54	3,499.99	3,497.95	50.17	10.00	7.54	89.17	74.15	55.76	5.938
3,600.00	3,597.95	0.00	-63.72	7.76	3,599.99	3,597.95	50.17	10.00	7.76	89.17	73.71	55.76	5.767
3,700.00	3,697.95	0.00	-63.72	7.98	3,699.99	3,697.95	50.17	10.00	7.99	89.17	73.26	55.76	5.606
3,800.00	3,797.95	0.00	-63.72	8.20	3,799.99	3,797.95	50.17	10.00	8.21	89.17	72.82	55.76	5.453
3,900.00	3,897.95	0.00	-63.72	8.42	3,899.99	3,897.95	50.17	10.00	8.43	89.17	72.37	55.76	5.308
3,962.15	3,960.09	0.00	-63.72	8.56	3,962.14	3,960.09	50.17	10.00	8.57	89.17	72.09	55.76	5.222
4,000.00	3,997.95	0.00	-63.72	8.64	3,999.22	3,997.18	50.26	10.00	8.65	89.22	71.98	55.72	5.174
4,100.00	4,097.95	0.00	-63.72	8.87	4,092.04	4,089.63	57.71	9.92	8.87	93.92	76.24	51.91	5.311
4,200.00	4,197.95	0.00	-63.72	9.09	4,181.49	4,177.10	76.13	9.71	9.09	107.81	89.68	43.96	5.946
4,300.00	4,297.95	0.00	-63.72	9.31	4,265.18	4,256.27	103.12	9.40	9.32	133.11	114.54	35.34	7.167
4,400.00	4,397.95	0.00	-63.72	9.53	4,341.61	4,325.38	135.68	9.04	9.56	170.20	151.21	28.20	8.961
4,500.00	4,497.95	0.00	-63.72	9.76	4,410.20	4,384.13	171.02	8.64	9.82	217.80	198.41	22.93	11.233
4,600.00	4,597.95	0.00	-63.72	9.98	4,471.02	4,433.19	206.93	8.24	10.08	274.12	254.36	19.17	13.871
4,700.00	4,697.95	0.00	-63.72	10.20	4,524.58	4,473.74	241.90	7.84	10.36	337.50	317.39	16.48	16.783
4,800.00	4,797.95	0.00	-63.72	10.42	4,571.61	4,507.10	275.04	7.47	10.63	406.58	386.14	14.51	19.893
4,900.00	4,897.95	0.00	-63.72	10.65	4,612.90	4,534.55	305.88	7.13	10.89	480.25	459.50	13.04	23.145
5,000.00	4,997.95	0.00	-63.72	10.87	4,650.00	4,557.65	334.89	6.80	11.14	557.66	536.61	11.89	26.494
5,100.00	5,097.95	0.00	-63.72	11.09	4,681.22	4,575.91	360.22	6.51	11.38	638.13	616.80	11.03	29.915
5,200.00	5,197.95	0.00	-63.72	11.32	4,709.56	4,591.52	383.87	6.25	11.60	721.12	699.51	10.33	33.373
5,300.00	5,297.95	0.00	-63.72	11.54	4,738.05	4,606.25	408.25	5.97	11.84	806.21	784.33	9.69	36.842
5,400.00	5,397.95	0.00	-63.72	11.76	4,781.05	4,627.75	445.48	5.56	12.22	892.45	870.28	8.84	40.252
5,500.00	5,497.95	0.00	-63.72	11.99	4,831.05	4,652.75	488.78	5.07	12.69	978.78	956.31	8.01	43.560
5,600.00	5,597.95	0.00	-63.72	12.21	4,881.05	4,677.75	532.08	4.58	13.17	1,065.15	1,042.38	7.31	46.786
5,700.00	5,697.95	0.00	-63.72	12.43	4,900.00	4,687.14	548.54	4.40	13.36	1,152.08	1,129.06	7.08	50.047
5,800.00	5,797.95	0.00	-63.72	12.66	4,922.14	4,697.59	568.06	4.18	13.59	1,240.20	1,216.93	6.82	53.278
5,900.00	5,897.95	0.00	-63.72	12.88	4,950.00	4,709.86	593.06	3.90	13.88	1,329.60	1,306.06	6.50	56.470
6,000.00	5,997.95	0.00	-63.72	13.10	4,950.00	4,709.86	593.06	3.90	13.88	1,419.67	1,395.90	6.50	59.728
6,100.00	6,097.95	0.00	-63.72	13.33	4,950.00	4,709.86	593.06	3.90	13.88	1,510.98	1,486.99	6.50	62.978
6,200.00	6,197.95	0.00	-63.72	13.55	4,978.86	4,721.55	619.45	3.60	14.20	1,602.50	1,578.24	6.20	66.058
6,300.00	6,297.95	0.00	-63.72	13.77	5,000.00	4,729.43	639.06	3.38	14.43	1,695.03	1,670.52	5.99	69.146

Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Sec 15-T34S-R07W - Albright Farms 3407 #15-1H / Job# 9199272/ Nabors 774 - Wellbore #1 - Design 011212 A0

Scan Range: 0.00 to 6,323.00 ft. Measured Depth.

Scan Radius is 4,000.00 ft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Measured Depth (ft)	Uncertainty Data for Reference Well				Measured Depth (ft)	Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)			
	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2		Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)			+N/-S (ft)	+E/-W (ft)						
6,323.00	6,320.95	0.00	-63.72	13.82	5,000.00	4,729.43	639.06	3.38	14.43	1,716.34	1,691.77	5.99	69.868

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	6,323.00	Design 011711 A1	MWD+SC

Anticollision Info

Error Model: ISCWSA **Output errors are at** 2.00 sigma
Scan Method: Closest Approach 3D

Ellipse error terms are correlated across survey tool tie-on points.
 Calculated ellipses incorporate surface errors.
 Separation is the actual distance between ellipsoids.
 Distance Between centres is the straight line distance between wellbore centres.
 Clearance Factor = Distance Between Profiles / (Distance Between Profiles - Ellipse Separation).
 All station coordinates were calculated using the Minimum Curvature method.

Anticollision Report for Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774 - Design 011711 A1

Direction and Coordinates are relative to True North Reference.

Vertical Depths are relative to well @ 1419.00ft. Northing and Easting are relative to Albright Croft Farms 3407 15-1 SWD/ Job# 9199564/ Nabors 774.

Coordinate System is US State Plane 1927 (Exact solution), Kansas South 1502.

Central Meridian is -98.00°, Grid Convergence at Surface is: 0.26 °.

