

Endurance Resources, LLC

Lea County, NM (NAD 83)

Duo Sonic 29 Fed

Duo Sonic 29 Fed 2H

Wellbore #1

Plan #4

Sperry Drilling Services Ellipse Separation Anticollision Report

22 April, 2016

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

Reference Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 2H - Wellbore #1 - Plan #4

Well Coordinates: 399,398.34 N, 832,946.67 E (32° 05' 40.29" N, 103° 23' 30.02" W)

Datum Height: GL 3263.80' @ 3263.80usft (TBD)

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Version: 5000.1 Build: 81B

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Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Tele Delux 32 State - Tele Delux 32 State 3H - Wellbore #1 - Plan #2
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Centres (usft)	Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
100.00	100.00	0.00	0.00	0.11	111.20	100.00	-290.82	1,327.86	0.12	1,359.33	1,359.10	102.35	5,917.581
200.00	200.00	0.00	0.00	0.34	211.20	200.00	-290.82	1,327.86	0.34	1,359.33	1,358.65	102.35	2,001.247
300.00	300.00	0.00	0.00	0.56	311.20	300.00	-290.82	1,327.86	0.57	1,359.33	1,358.20	102.35	1,204.255
400.00	400.00	0.00	0.00	0.79	411.20	400.00	-290.82	1,327.86	0.79	1,359.33	1,357.75	102.35	861.260
500.00	500.00	0.00	0.00	1.01	511.20	500.00	-290.82	1,327.86	1.02	1,359.33	1,357.31	102.35	670.336
600.00	600.00	0.00	0.00	1.24	611.20	600.00	-290.82	1,327.86	1.24	1,359.33	1,356.86	102.35	548.700
700.00	700.00	0.00	0.00	1.46	711.20	700.00	-290.82	1,327.86	1.47	1,359.33	1,356.41	102.35	464.427
800.00	800.00	0.00	0.00	1.69	811.20	800.00	-290.82	1,327.86	1.69	1,359.33	1,355.96	102.35	402.594
900.00	900.00	0.00	0.00	1.91	911.20	900.00	-290.82	1,327.86	1.92	1,359.33	1,355.51	102.35	355.291
1,000.00	1,000.00	0.00	0.00	2.14	1,011.20	1,000.00	-290.82	1,327.86	2.14	1,359.33	1,355.06	102.35	317.936
1,100.00	1,100.00	0.00	0.00	2.36	1,111.20	1,100.00	-290.82	1,327.86	2.36	1,359.33	1,354.61	102.35	287.688
1,200.00	1,200.00	0.00	0.00	2.58	1,211.20	1,200.00	-290.82	1,327.86	2.59	1,359.33	1,354.16	102.35	262.695
1,300.00	1,300.00	0.00	0.00	2.81	1,311.20	1,300.00	-290.82	1,327.86	2.81	1,359.33	1,353.71	102.35	241.698
1,400.00	1,400.00	0.00	0.00	3.03	1,411.20	1,400.00	-290.82	1,327.86	3.04	1,359.33	1,353.26	102.35	223.809
1,500.00	1,500.00	0.00	0.00	3.26	1,511.20	1,500.00	-290.82	1,327.86	3.26	1,359.33	1,352.81	102.35	208.386
1,600.00	1,600.00	0.00	0.00	3.48	1,611.20	1,600.00	-290.82	1,327.86	3.49	1,359.33	1,352.36	102.35	194.951
1,700.00	1,700.00	0.00	0.00	3.71	1,711.20	1,700.00	-290.82	1,327.86	3.71	1,359.33	1,351.91	102.35	183.144
1,800.00	1,800.00	0.00	0.00	3.93	1,811.20	1,800.00	-290.82	1,327.86	3.94	1,359.33	1,351.46	102.35	172.685
1,900.00	1,900.00	0.00	0.00	4.16	1,911.20	1,900.00	-290.82	1,327.86	4.16	1,359.33	1,351.01	102.35	163.356
2,000.00	2,000.00	0.00	0.00	4.38	2,011.20	2,000.00	-290.82	1,327.86	4.39	1,359.33	1,350.56	102.35	154.984
2,100.00	2,100.00	0.00	0.00	4.61	2,111.20	2,100.00	-290.82	1,327.86	4.61	1,359.33	1,350.11	102.35	147.427
2,200.00	2,200.00	0.00	0.00	4.83	2,211.20	2,200.00	-290.82	1,327.86	4.84	1,359.33	1,349.66	102.35	140.574
2,300.00	2,300.00	0.00	0.00	5.06	2,311.20	2,300.00	-290.82	1,327.86	5.06	1,359.33	1,349.21	102.35	134.329
2,400.00	2,400.00	0.00	0.00	5.28	2,411.20	2,400.00	-290.82	1,327.86	5.29	1,359.33	1,348.76	102.35	128.616
2,500.00	2,500.00	0.00	0.00	5.51	2,511.20	2,500.00	-290.82	1,327.86	5.51	1,359.33	1,348.31	102.35	123.368
2,600.00	2,600.00	0.00	0.00	5.73	2,611.20	2,600.00	-290.82	1,327.86	5.74	1,359.33	1,347.87	102.35	118.533
2,700.00	2,700.00	0.00	0.00	5.96	2,711.20	2,700.00	-290.82	1,327.86	5.96	1,359.33	1,347.42	102.35	114.062
2,800.00	2,800.00	0.00	0.00	6.18	2,811.20	2,800.00	-290.82	1,327.86	6.19	1,359.33	1,346.97	102.35	109.915
2,900.00	2,900.00	0.00	0.00	6.41	2,911.20	2,900.00	-290.82	1,327.86	6.41	1,359.33	1,346.52	102.35	106.060
3,000.00	3,000.00	0.00	0.00	6.63	3,011.20	3,000.00	-290.82	1,327.86	6.64	1,359.33	1,346.07	102.35	102.466
3,100.00	3,100.00	0.00	0.00	6.86	3,111.20	3,100.00	-290.82	1,327.86	6.86	1,359.33	1,345.62	102.35	99.108

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Tele Delux 32 State - Tele Delux 32 State 3H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,211.20	3,200.00	-290.82	1,327.86	7.09	1,359.33	1,345.17	102.35	95.963
3,300.00	3,300.00	0.00	0.00	7.30	3,311.20	3,300.00	-290.82	1,327.86	7.31	1,359.33	1,344.72	102.35	93.011
3,400.00	3,400.00	0.00	0.00	7.53	3,411.20	3,400.00	-290.82	1,327.86	7.53	1,359.33	1,344.27	102.35	90.236
3,500.00	3,500.00	0.00	0.00	7.75	3,511.20	3,500.00	-290.82	1,327.86	7.76	1,359.33	1,343.82	102.35	87.621
3,600.00	3,600.00	0.00	0.00	7.98	3,611.20	3,600.00	-290.82	1,327.86	7.98	1,359.33	1,343.37	102.35	85.153
3,700.00	3,700.00	0.00	0.00	8.20	3,711.20	3,700.00	-290.82	1,327.86	8.21	1,359.33	1,342.92	102.35	82.821
3,800.00	3,800.00	0.00	0.00	8.43	3,811.20	3,800.00	-290.82	1,327.86	8.43	1,359.33	1,342.47	102.35	80.613
3,900.00	3,900.00	0.00	0.00	8.65	3,911.20	3,900.00	-290.82	1,327.86	8.66	1,359.33	1,342.02	102.35	78.520
4,000.00	4,000.00	0.00	0.00	8.88	4,011.20	4,000.00	-290.82	1,327.86	8.88	1,359.33	1,341.57	102.35	76.533
4,100.00	4,100.00	0.00	0.00	9.10	4,111.20	4,100.00	-290.82	1,327.86	9.11	1,359.33	1,341.12	102.35	74.644
4,200.00	4,200.00	0.00	0.00	9.33	4,211.20	4,200.00	-290.82	1,327.86	9.33	1,359.33	1,340.67	102.35	72.845
4,300.00	4,300.00	0.00	0.00	9.55	4,311.20	4,300.00	-290.82	1,327.86	9.56	1,359.33	1,340.22	102.35	71.132
4,400.00	4,400.00	0.00	0.00	9.78	4,411.20	4,400.00	-290.82	1,327.86	9.78	1,359.33	1,339.77	102.35	69.497
4,500.00	4,500.00	0.00	0.00	10.00	4,511.20	4,500.00	-290.82	1,327.86	10.01	1,359.33	1,339.32	102.35	67.936
4,600.00	4,600.00	0.00	0.00	10.23	4,611.20	4,600.00	-290.82	1,327.86	10.23	1,359.33	1,338.87	102.35	66.443
4,700.00	4,700.00	0.00	0.00	10.45	4,711.20	4,700.00	-290.82	1,327.86	10.46	1,359.33	1,338.43	102.35	65.014
4,800.00	4,800.00	0.00	0.00	10.68	4,811.20	4,800.00	-290.82	1,327.86	10.68	1,359.33	1,337.98	102.35	63.646
4,900.00	4,900.00	0.00	0.00	10.90	4,911.20	4,900.00	-290.82	1,327.86	10.91	1,359.33	1,337.53	102.35	62.334
5,000.00	5,000.00	0.00	0.00	11.13	5,011.20	5,000.00	-290.82	1,327.86	11.13	1,359.33	1,337.08	102.35	61.075
5,100.00	5,100.00	0.00	0.00	11.35	5,111.20	5,100.00	-290.82	1,327.86	11.36	1,359.33	1,336.63	102.35	59.866
5,200.00	5,200.00	0.00	0.00	11.58	5,211.20	5,200.00	-290.82	1,327.86	11.58	1,359.33	1,336.18	102.35	58.704
5,300.00	5,300.00	0.00	0.00	11.80	5,311.20	5,300.00	-290.82	1,327.86	11.81	1,359.33	1,335.73	102.35	57.586
5,400.00	5,400.00	0.00	0.00	12.02	5,411.20	5,400.00	-290.82	1,327.86	12.03	1,359.33	1,335.28	102.35	56.510
5,500.00	5,500.00	0.00	0.00	12.25	5,511.20	5,500.00	-290.82	1,327.86	12.25	1,359.33	1,334.83	102.35	55.473
5,600.00	5,600.00	0.00	0.00	12.47	5,611.20	5,600.00	-290.82	1,327.86	12.48	1,359.33	1,334.38	102.35	54.474
5,700.00	5,700.00	0.00	0.00	12.70	5,711.20	5,700.00	-290.82	1,327.86	12.70	1,359.33	1,333.93	102.35	53.510
5,800.00	5,800.00	0.00	0.00	12.92	5,811.20	5,800.00	-290.82	1,327.86	12.93	1,359.33	1,333.48	102.35	52.579
5,900.00	5,900.00	0.00	0.00	13.15	5,911.20	5,900.00	-290.82	1,327.86	13.15	1,359.33	1,333.03	102.35	51.681
6,000.00	6,000.00	0.00	0.00	13.37	6,011.20	6,000.00	-290.82	1,327.86	13.38	1,359.33	1,332.58	102.35	50.812
6,100.00	6,100.00	0.00	0.00	13.60	6,111.20	6,100.00	-290.82	1,327.86	13.60	1,359.33	1,332.13	102.35	49.972
6,200.00	6,200.00	0.00	0.00	13.82	6,211.20	6,200.00	-290.82	1,327.86	13.83	1,359.33	1,331.68	102.35	49.160
6,300.00	6,300.00	0.00	0.00	14.05	6,311.20	6,300.00	-290.82	1,327.86	14.05	1,359.33	1,331.23	102.35	48.374

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Tele Delux 32 State - Tele Delux 32 State 3H - Wellbore #1 - Plan #2
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,400.00	6,400.00	0.00	0.00	14.27	6,411.20	6,400.00	-290.82	1,327.86	14.28	1,359.33	1,330.78	102.35	47.612
6,500.00	6,500.00	0.00	0.00	14.50	6,511.20	6,500.00	-290.82	1,327.86	14.50	1,359.33	1,330.33	102.35	46.874
6,600.00	6,600.00	0.00	0.00	14.72	6,611.20	6,600.00	-290.82	1,327.86	14.73	1,359.33	1,329.88	102.35	46.158
6,700.00	6,700.00	0.00	0.00	14.95	6,711.20	6,700.00	-290.82	1,327.86	14.95	1,359.33	1,329.43	102.35	45.464
6,800.00	6,800.00	0.00	0.00	15.17	6,811.20	6,800.00	-290.82	1,327.86	15.18	1,359.33	1,328.98	102.35	44.791
6,900.00	6,900.00	0.00	0.00	15.40	6,911.20	6,900.00	-290.82	1,327.86	15.40	1,359.33	1,328.54	102.35	44.137
7,000.00	7,000.00	0.00	0.00	15.62	7,011.20	7,000.00	-290.82	1,327.86	15.63	1,359.33	1,328.09	102.35	43.502
7,100.00	7,100.00	0.00	0.00	15.85	7,111.20	7,100.00	-290.82	1,327.86	15.85	1,359.33	1,327.64	102.35	42.885
7,200.00	7,200.00	0.00	0.00	16.07	7,211.20	7,200.00	-290.82	1,327.86	16.08	1,359.33	1,327.19	102.35	42.286
7,300.00	7,300.00	0.00	0.00	16.30	7,311.20	7,300.00	-290.82	1,327.86	16.30	1,359.33	1,326.74	102.35	41.702
7,400.00	7,400.00	0.00	0.00	16.52	7,411.20	7,400.00	-290.82	1,327.86	16.53	1,359.33	1,326.29	102.35	41.135
7,500.00	7,500.00	0.00	0.00	16.75	7,511.20	7,500.00	-290.82	1,327.86	16.75	1,359.33	1,325.84	102.35	40.583
7,600.00	7,600.00	0.00	0.00	16.97	7,611.20	7,600.00	-290.82	1,327.86	16.97	1,359.33	1,325.39	102.35	40.046
7,700.00	7,700.00	0.00	0.00	17.19	7,711.20	7,700.00	-290.82	1,327.86	17.20	1,359.33	1,324.94	102.35	39.522
7,800.00	7,800.00	0.00	0.00	17.42	7,811.20	7,800.00	-290.82	1,327.86	17.42	1,359.33	1,324.49	102.35	39.012
7,900.00	7,900.00	0.00	0.00	17.64	7,911.20	7,900.00	-290.82	1,327.86	17.65	1,359.33	1,324.04	102.35	38.515
8,000.00	8,000.00	0.00	0.00	17.87	8,011.20	8,000.00	-290.82	1,327.86	17.87	1,359.33	1,323.59	102.35	38.031
8,100.00	8,100.00	0.00	0.00	18.09	8,111.20	8,100.00	-290.82	1,327.86	18.10	1,359.33	1,323.14	102.35	37.559
8,200.00	8,200.00	0.00	0.00	18.32	8,211.20	8,200.00	-290.82	1,327.86	18.32	1,359.33	1,322.69	102.35	37.098
8,300.00	8,300.00	0.00	0.00	18.54	8,311.20	8,300.00	-290.82	1,327.86	18.55	1,359.33	1,322.24	102.35	36.648
8,400.00	8,400.00	0.00	0.00	18.77	8,411.20	8,400.00	-290.82	1,327.86	18.77	1,359.33	1,321.79	102.35	36.209
8,500.00	8,500.00	0.00	0.00	18.99	8,511.20	8,500.00	-290.82	1,327.86	19.00	1,359.33	1,321.34	102.35	35.781
8,600.00	8,600.00	0.00	0.00	19.22	8,611.20	8,600.00	-290.82	1,327.86	19.22	1,359.33	1,320.89	102.35	35.363
8,700.00	8,700.00	0.00	0.00	19.44	8,711.20	8,700.00	-290.82	1,327.86	19.45	1,359.33	1,320.44	102.35	34.954
8,800.00	8,800.00	0.00	0.00	19.67	8,811.20	8,800.00	-290.82	1,327.86	19.67	1,359.33	1,319.99	102.35	34.554
8,900.00	8,900.00	0.00	0.00	19.89	8,911.20	8,900.00	-290.82	1,327.86	19.90	1,359.33	1,319.54	102.35	34.164
9,000.00	9,000.00	0.00	0.00	20.12	9,011.20	9,000.00	-290.82	1,327.86	20.12	1,359.33	1,319.10	102.35	33.782
9,100.00	9,100.00	0.00	0.00	20.34	9,111.20	9,100.00	-290.82	1,327.86	20.35	1,359.33	1,318.65	102.35	33.409
9,200.00	9,200.00	0.00	0.00	20.57	9,211.20	9,200.00	-290.82	1,327.86	20.57	1,359.33	1,318.20	102.35	33.044
9,300.00	9,300.00	0.00	0.00	20.79	9,311.20	9,300.00	-290.82	1,327.86	20.80	1,359.33	1,317.75	102.35	32.687
9,400.00	9,400.00	0.00	0.00	21.02	9,411.20	9,400.00	-290.82	1,327.86	21.02	1,359.33	1,317.30	102.35	32.337
9,500.00	9,500.00	0.00	0.00	21.24	9,511.20	9,500.00	-290.82	1,327.86	21.25	1,359.33	1,316.85	102.35	31.995

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Tele Delux 32 State - Tele Delux 32 State 3H - Wellbore #1 - Plan #2
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,600.00	9,600.00	0.00	0.00	21.47	9,611.20	9,600.00	-290.82	1,327.86	21.47	1,359.33	1,316.40	102.35	31.660
9,700.00	9,700.00	0.00	0.00	21.69	9,711.20	9,700.00	-290.82	1,327.86	21.69	1,359.33	1,315.95	102.35	31.332
9,800.00	9,800.00	0.00	0.00	21.91	9,811.20	9,800.00	-290.82	1,327.86	21.92	1,359.33	1,315.50	102.35	31.011
9,900.00	9,900.00	0.00	0.00	22.14	9,911.20	9,900.00	-290.82	1,327.86	22.14	1,359.33	1,315.05	102.35	30.696
10,000.00	10,000.00	0.00	0.00	22.36	10,011.20	10,000.00	-290.82	1,327.86	22.37	1,359.33	1,314.60	102.35	30.387
10,100.00	10,100.00	0.00	0.00	22.59	10,111.20	10,100.00	-290.82	1,327.86	22.59	1,359.33	1,314.15	102.35	30.085
10,200.00	10,200.00	0.00	0.00	22.81	10,211.20	10,200.00	-290.82	1,327.86	22.82	1,359.33	1,313.70	102.35	29.789
10,300.00	10,300.00	0.00	0.00	23.04	10,311.20	10,300.00	-290.82	1,327.86	23.04	1,359.33	1,313.25	102.35	29.498
10,400.00	10,400.00	0.00	0.00	23.26	10,411.20	10,400.00	-290.82	1,327.86	23.27	1,359.33	1,312.80	102.35	29.213
10,500.00	10,500.00	0.00	0.00	23.49	10,511.20	10,500.00	-290.82	1,327.86	23.49	1,359.33	1,312.35	102.35	28.934
10,600.00	10,600.00	0.00	0.00	23.71	10,611.20	10,600.00	-290.82	1,327.86	23.72	1,359.33	1,311.90	102.35	28.659
10,700.00	10,700.00	0.00	0.00	23.94	10,711.20	10,700.00	-290.82	1,327.86	23.94	1,359.33	1,311.45	102.35	28.390
10,800.00	10,800.00	0.00	0.00	24.16	10,811.20	10,800.00	-290.82	1,327.86	24.17	1,359.33	1,311.00	102.35	28.126
10,900.00	10,900.00	0.00	0.00	24.39	10,911.20	10,900.00	-290.82	1,327.86	24.39	1,359.33	1,310.55	102.35	27.867
11,000.00	11,000.00	0.00	0.00	24.61	11,011.20	11,000.00	-290.82	1,327.86	24.62	1,359.33	1,310.10	102.35	27.613
11,100.00	11,100.00	0.00	0.00	24.84	11,111.20	11,100.00	-290.82	1,327.86	24.84	1,359.33	1,309.66	102.35	27.363
11,200.00	11,200.00	0.00	0.00	25.06	11,211.20	11,200.00	-290.82	1,327.86	25.07	1,359.33	1,309.21	102.35	27.117
11,300.00	11,300.00	0.00	0.00	25.29	11,311.20	11,300.00	-290.82	1,327.86	25.29	1,359.33	1,308.76	102.35	26.876
11,400.00	11,400.00	0.00	0.00	25.51	11,411.20	11,400.00	-290.82	1,327.86	25.52	1,359.33	1,308.31	102.35	26.640
11,500.00	11,500.00	0.00	0.00	25.74	11,511.20	11,500.00	-290.82	1,327.86	25.74	1,359.33	1,307.86	102.35	26.407
11,506.12	11,506.12	0.00	0.00	25.75	11,517.32	11,506.12	-290.82	1,327.86	25.75	1,359.33	1,307.83	102.35	26.393
11,600.00	11,600.00	0.00	0.00	25.96	11,595.64	11,584.43	-291.26	1,327.90	25.92	1,359.55	1,307.67	102.37	26.205
11,700.00	11,700.00	0.00	0.00	26.19	11,650.00	11,638.57	-295.96	1,328.27	26.02	1,362.22	1,310.06	102.56	26.112
11,800.00	11,800.00	0.00	0.00	26.41	11,711.39	11,698.85	-307.39	1,329.16	26.12	1,367.99	1,315.55	103.02	26.086
11,900.00	11,899.88	3.35	-0.03	26.63	11,765.10	11,750.32	-322.61	1,330.36	26.21	1,377.88	1,325.22	103.57	26.166
12,000.00	11,997.85	22.74	-0.22	26.86	11,810.79	11,792.83	-339.29	1,331.67	26.28	1,395.36	1,342.55	102.83	26.423
12,100.00	12,090.97	58.85	-0.56	27.07	11,850.00	11,828.14	-356.26	1,333.01	26.34	1,421.20	1,368.29	101.39	26.865
12,200.00	12,176.40	110.57	-1.05	27.26	11,870.06	11,845.73	-365.86	1,333.77	26.37	1,455.36	1,402.46	98.53	27.512
12,300.00	12,251.55	176.35	-1.68	27.48	11,884.12	11,857.86	-372.96	1,334.32	26.39	1,497.21	1,444.31	94.51	28.306
12,400.00	12,314.14	254.18	-2.42	27.73	11,900.00	11,871.34	-381.32	1,334.98	26.42	1,545.50	1,492.53	89.69	29.181
12,500.00	12,362.26	341.69	-3.25	28.03	11,900.00	11,871.34	-381.32	1,334.98	26.42	1,598.31	1,545.28	83.48	30.139
12,600.00	12,394.45	436.23	-4.15	28.38	11,880.04	11,854.36	-370.87	1,334.16	26.39	1,653.53	1,600.45	76.12	31.152

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Tele Delux 32 State - Tele Delux 32 State 3H - Wellbore #1 - Plan #2
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N-S (usft)	Ellipse Centre +E/W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N-S (usft)	Ellipse Centre +E/W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,700.00	12,409.74	534.92	-5.08	28.79	11,867.70	11,843.68	-364.70	1,333.67	26.37	1,709.39	1,656.11	69.24	32.086
12,800.00	12,411.00	634.89	-6.03	29.25	11,850.00	11,828.14	-356.26	1,333.01	26.34	1,764.98	1,711.46	66.33	32.978
12,900.00	12,411.00	734.88	-6.99	29.79	11,850.00	11,828.14	-356.26	1,333.01	26.34	1,823.71	1,769.81	66.33	33.838
13,000.00	12,411.00	834.88	-7.94	30.40	11,825.60	11,806.30	-345.42	1,332.16	26.30	1,885.37	1,831.22	65.53	34.821

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 6H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse +N/-S (usft)	Ellipse Centre +E/-W (usft)	Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse +N/-S (usft)	Ellipse Centre +E/-W (usft)	Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	21.30	0.00	148.74	-176.29	0.02	230.65	230.63	-49.84	10,000.000
100.00	100.00	0.00	0.00	0.11	121.30	100.00	148.74	-176.29	0.14	230.65	230.40	-49.84	926.159
200.00	200.00	0.00	0.00	0.34	221.30	200.00	148.74	-176.29	0.36	230.65	229.95	-49.84	330.175
300.00	300.00	0.00	0.00	0.56	321.30	300.00	148.74	-176.29	0.59	230.65	229.50	-49.84	200.897
400.00	400.00	0.00	0.00	0.79	421.30	400.00	148.74	-176.29	0.81	230.65	229.05	-49.84	144.370
500.00	500.00	0.00	0.00	1.01	521.30	500.00	148.74	-176.29	1.04	230.65	228.60	-49.84	112.668
600.00	600.00	0.00	0.00	1.24	621.30	600.00	148.74	-176.29	1.26	230.65	228.15	-49.84	92.382
700.00	700.00	0.00	0.00	1.46	721.30	700.00	148.74	-176.29	1.49	230.65	227.71	-49.84	78.287
800.00	800.00	0.00	0.00	1.69	821.30	800.00	148.74	-176.29	1.71	230.65	227.26	-49.84	67.923
900.00	900.00	0.00	0.00	1.91	921.30	900.00	148.74	-176.29	1.93	230.65	226.81	-49.84	59.983
1,000.00	1,000.00	0.00	0.00	2.14	1,021.30	1,000.00	148.74	-176.29	2.16	230.65	226.36	-49.84	53.704
1,100.00	1,100.00	0.00	0.00	2.36	1,121.30	1,100.00	148.74	-176.29	2.38	230.65	225.91	-49.84	48.616
1,200.00	1,200.00	0.00	0.00	2.58	1,221.30	1,200.00	148.74	-176.29	2.61	230.65	225.46	-49.84	44.408
1,300.00	1,300.00	0.00	0.00	2.81	1,321.30	1,300.00	148.74	-176.29	2.83	230.65	225.01	-49.84	40.871
1,400.00	1,400.00	0.00	0.00	3.03	1,421.30	1,400.00	148.74	-176.29	3.06	230.65	224.56	-49.84	37.855
1,500.00	1,500.00	0.00	0.00	3.26	1,521.30	1,500.00	148.74	-176.29	3.28	230.65	224.11	-49.84	35.254
1,600.00	1,600.00	0.00	0.00	3.48	1,621.30	1,600.00	148.74	-176.29	3.51	230.65	223.66	-49.84	32.988
1,700.00	1,700.00	0.00	0.00	3.71	1,721.30	1,700.00	148.74	-176.29	3.73	230.65	223.21	-49.84	30.995
1,800.00	1,800.00	0.00	0.00	3.93	1,821.30	1,800.00	148.74	-176.29	3.96	230.65	222.76	-49.84	29.229
1,900.00	1,900.00	0.00	0.00	4.16	1,921.30	1,900.00	148.74	-176.29	4.18	230.65	222.31	-49.84	27.654
2,000.00	2,000.00	0.00	0.00	4.38	2,021.30	2,000.00	148.74	-176.29	4.41	230.65	221.86	-49.84	26.240
2,100.00	2,100.00	0.00	0.00	4.61	2,121.30	2,100.00	148.74	-176.29	4.63	230.65	221.41	-49.84	24.963
2,200.00	2,200.00	0.00	0.00	4.83	2,221.30	2,200.00	148.74	-176.29	4.86	230.65	220.96	-49.84	23.805
2,300.00	2,300.00	0.00	0.00	5.06	2,321.30	2,300.00	148.74	-176.29	5.08	230.65	220.51	-49.84	22.749
2,400.00	2,400.00	0.00	0.00	5.28	2,421.30	2,400.00	148.74	-176.29	5.31	230.65	220.06	-49.84	21.784
2,500.00	2,500.00	0.00	0.00	5.51	2,521.30	2,500.00	148.74	-176.29	5.53	230.65	219.61	-49.84	20.896
2,600.00	2,600.00	0.00	0.00	5.73	2,621.30	2,600.00	148.74	-176.29	5.76	230.65	219.16	-49.84	20.079
2,700.00	2,700.00	0.00	0.00	5.96	2,721.30	2,700.00	148.74	-176.29	5.98	230.65	218.71	-49.84	19.323
2,800.00	2,800.00	0.00	0.00	6.18	2,821.30	2,800.00	148.74	-176.29	6.21	230.65	218.26	-49.84	18.621
2,900.00	2,900.00	0.00	0.00	6.41	2,921.30	2,900.00	148.74	-176.29	6.43	230.65	217.82	-49.84	17.969
3,000.00	3,000.00	0.00	0.00	6.63	3,021.30	3,000.00	148.74	-176.29	6.65	230.65	217.37	-49.84	17.361
3,100.00	3,100.00	0.00	0.00	6.86	3,121.30	3,100.00	148.74	-176.29	6.88	230.65	216.92	-49.84	16.793

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 6H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	+E/-W (usft)	Ellipse Major Axis/2 (usft)	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	+E/-W (usft)	Ellipse Major Axis/2 (usft)	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,221.30	3,200.00	148.74	-176.29	7.10	230.65	216.47	-49.84	16.261
3,300.00	3,300.00	0.00	0.00	7.30	3,321.30	3,300.00	148.74	-176.29	7.33	230.65	216.02	-49.84	15.761
3,400.00	3,400.00	0.00	0.00	7.53	3,421.30	3,400.00	148.74	-176.29	7.55	230.65	215.57	-49.84	15.292
3,500.00	3,500.00	0.00	0.00	7.75	3,521.30	3,500.00	148.74	-176.29	7.78	230.65	215.12	-49.84	14.849
3,600.00	3,600.00	0.00	0.00	7.98	3,621.30	3,600.00	148.74	-176.29	8.00	230.65	214.67	-49.84	14.431
3,700.00	3,700.00	0.00	0.00	8.20	3,721.30	3,700.00	148.74	-176.29	8.23	230.65	214.22	-49.84	14.037
3,800.00	3,800.00	0.00	0.00	8.43	3,821.30	3,800.00	148.74	-176.29	8.45	230.65	213.77	-49.84	13.663
3,900.00	3,900.00	0.00	0.00	8.65	3,921.30	3,900.00	148.74	-176.29	8.68	230.65	213.32	-49.84	13.308
4,000.00	4,000.00	0.00	0.00	8.88	4,021.30	4,000.00	148.74	-176.29	8.90	230.65	212.87	-49.84	12.972
4,100.00	4,100.00	0.00	0.00	9.10	4,121.30	4,100.00	148.74	-176.29	9.13	230.65	212.42	-49.84	12.652
4,200.00	4,200.00	0.00	0.00	9.33	4,221.30	4,200.00	148.74	-176.29	9.35	230.65	211.97	-49.84	12.348
4,300.00	4,300.00	0.00	0.00	9.55	4,321.30	4,300.00	148.74	-176.29	9.58	230.65	211.52	-49.84	12.057
4,400.00	4,400.00	0.00	0.00	9.78	4,421.30	4,400.00	148.74	-176.29	9.80	230.65	211.07	-49.84	11.781
4,500.00	4,500.00	0.00	0.00	10.00	4,521.30	4,500.00	148.74	-176.29	10.03	230.65	210.62	-49.84	11.516
4,600.00	4,600.00	0.00	0.00	10.23	4,621.30	4,600.00	148.74	-176.29	10.25	230.65	210.17	-49.84	11.263
4,700.00	4,700.00	0.00	0.00	10.45	4,721.30	4,700.00	148.74	-176.29	10.48	230.65	209.72	-49.84	11.021
4,800.00	4,800.00	0.00	0.00	10.68	4,821.30	4,800.00	148.74	-176.29	10.70	230.65	209.27	-49.84	10.790
4,900.00	4,900.00	0.00	0.00	10.90	4,921.30	4,900.00	148.74	-176.29	10.93	230.65	208.82	-49.84	10.567
5,000.00	5,000.00	0.00	0.00	11.13	5,021.30	5,000.00	148.74	-176.29	11.15	230.65	208.38	-49.84	10.354
5,100.00	5,100.00	0.00	0.00	11.35	5,121.30	5,100.00	148.74	-176.29	11.37	230.65	207.93	-49.84	10.149
5,200.00	5,200.00	0.00	0.00	11.58	5,221.30	5,200.00	148.74	-176.29	11.60	230.65	207.48	-49.84	9.953
5,300.00	5,300.00	0.00	0.00	11.80	5,321.30	5,300.00	148.74	-176.29	11.82	230.65	207.03	-49.84	9.763
5,400.00	5,400.00	0.00	0.00	12.02	5,421.30	5,400.00	148.74	-176.29	12.05	230.65	206.58	-49.84	9.581
5,500.00	5,500.00	0.00	0.00	12.25	5,521.30	5,500.00	148.74	-176.29	12.27	230.65	206.13	-49.84	9.405
5,600.00	5,600.00	0.00	0.00	12.47	5,621.30	5,600.00	148.74	-176.29	12.50	230.65	205.68	-49.84	9.236
5,700.00	5,700.00	0.00	0.00	12.70	5,721.30	5,700.00	148.74	-176.29	12.72	230.65	205.23	-49.84	9.073
5,800.00	5,800.00	0.00	0.00	12.92	5,821.30	5,800.00	148.74	-176.29	12.95	230.65	204.78	-49.84	8.915
5,900.00	5,900.00	0.00	0.00	13.15	5,921.30	5,900.00	148.74	-176.29	13.17	230.65	204.33	-49.84	8.763
6,000.00	6,000.00	0.00	0.00	13.37	6,021.30	6,000.00	148.74	-176.29	13.40	230.65	203.88	-49.84	8.616
6,100.00	6,100.00	0.00	0.00	13.60	6,121.30	6,100.00	148.74	-176.29	13.62	230.65	203.43	-49.84	8.473
6,200.00	6,200.00	0.00	0.00	13.82	6,221.30	6,200.00	148.74	-176.29	13.85	230.65	202.98	-49.84	8.336

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 6H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor	
6,300.00	6,300.00	0.00	0.00	14.05	6,321.30	6,300.00	148.74	-176.29	14.07	230.65	202.53	-49.84	8.202	
6,400.00	6,400.00	0.00	0.00	14.27	6,421.30	6,400.00	148.74	-176.29	14.30	230.65	202.08	-49.84	8.073	
6,500.00	6,500.00	0.00	0.00	14.50	6,521.30	6,500.00	148.74	-176.29	14.52	230.65	201.63	-49.84	7.948	
6,600.00	6,600.00	0.00	0.00	14.72	6,621.30	6,600.00	148.74	-176.29	14.75	230.65	201.18	-49.84	7.827	
6,700.00	6,700.00	0.00	0.00	14.95	6,721.30	6,700.00	148.74	-176.29	14.97	230.65	200.73	-49.84	7.709	
6,800.00	6,800.00	0.00	0.00	15.17	6,821.30	6,800.00	148.74	-176.29	15.20	230.65	200.28	-49.84	7.595	
6,900.00	6,900.00	0.00	0.00	15.40	6,921.30	6,900.00	148.74	-176.29	15.42	230.65	199.83	-49.84	7.484	
7,000.00	7,000.00	0.00	0.00	15.62	7,021.30	7,000.00	148.74	-176.29	15.65	230.65	199.38	-49.84	7.377	
7,100.00	7,100.00	0.00	0.00	15.85	7,121.30	7,100.00	148.74	-176.29	15.87	230.65	198.94	-49.84	7.272	
7,200.00	7,200.00	0.00	0.00	16.07	7,221.30	7,200.00	148.74	-176.29	16.10	230.65	198.49	-49.84	7.171	
7,300.00	7,300.00	0.00	0.00	16.30	7,321.30	7,300.00	148.74	-176.29	16.32	230.65	198.04	-49.84	7.072	
7,400.00	7,400.00	0.00	0.00	16.52	7,421.30	7,400.00	148.74	-176.29	16.54	230.65	197.59	-49.84	6.976	
7,500.00	7,500.00	0.00	0.00	16.75	7,521.30	7,500.00	148.74	-176.29	16.77	230.65	197.14	-49.84	6.882	
7,600.00	7,600.00	0.00	0.00	16.97	7,621.30	7,600.00	148.74	-176.29	16.99	230.65	196.69	-49.84	6.791	
7,700.00	7,700.00	0.00	0.00	17.19	7,721.30	7,700.00	148.74	-176.29	17.22	230.65	196.24	-49.84	6.702	
7,800.00	7,800.00	0.00	0.00	17.42	7,821.30	7,800.00	148.74	-176.29	17.44	230.65	195.79	-49.84	6.616	
7,900.00	7,900.00	0.00	0.00	17.64	7,921.30	7,900.00	148.74	-176.29	17.67	230.65	195.34	-49.84	6.532	
8,000.00	8,000.00	0.00	0.00	17.87	8,021.30	8,000.00	148.74	-176.29	17.89	230.65	194.89	-49.84	6.450	
8,100.00	8,100.00	0.00	0.00	18.09	8,121.30	8,100.00	148.74	-176.29	18.12	230.65	194.44	-49.84	6.370	
8,200.00	8,200.00	0.00	0.00	18.32	8,221.30	8,200.00	148.74	-176.29	18.34	230.65	193.99	-49.84	6.291	
8,300.00	8,300.00	0.00	0.00	18.54	8,321.30	8,300.00	148.74	-176.29	18.57	230.65	193.54	-49.84	6.215	
8,400.00	8,400.00	0.00	0.00	18.77	8,421.30	8,400.00	148.74	-176.29	18.79	230.65	193.09	-49.84	6.141	
8,500.00	8,500.00	0.00	0.00	18.99	8,521.30	8,500.00	148.74	-176.29	19.02	230.65	192.64	-49.84	6.068	
8,600.00	8,600.00	0.00	0.00	19.22	8,621.30	8,600.00	148.74	-176.29	19.24	230.65	192.19	-49.84	5.997	
8,700.00	8,700.00	0.00	0.00	19.44	8,721.30	8,700.00	148.74	-176.29	19.47	230.65	191.74	-49.84	5.928	
8,800.00	8,800.00	0.00	0.00	19.67	8,821.30	8,800.00	151.31	-176.40	19.66	232.89	193.62	-49.38	5.932	
8,900.00	8,900.00	0.00	0.00	19.89	8,882.73	8,860.30	163.57	-176.92	19.83	244.19	204.87	-47.25	6.210	
9,000.00	9,000.00	0.00	0.00	20.12	8,954.73	8,929.23	184.19	-177.81	19.99	265.61	226.58	-43.99	6.806	
9,100.00	9,100.00	0.00	0.00	20.34	9,020.64	8,989.61	210.50	-178.93	20.13	297.51	259.15	-40.37	7.756	
9,200.00	9,200.00	0.00	0.00	20.57	9,079.70	9,040.83	239.82	-180.19	20.25	339.58	302.19	-36.92	9.080	
9,300.00	9,300.00	0.00	0.00	20.79	9,131.85	9,083.34	269.97	-181.48	20.36	390.85	354.57	-33.91	10.773	
9,400.00	9,400.00	0.00	0.00	21.02	9,177.53	9,118.19	299.46	-182.75	20.47	449.99	414.87	-31.39	12.811	

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 6H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,500.00	9,500.00	0.00	0.00	21.24	9,217.39	9,146.59	327.39	-183.95	20.58	515.67	481.63	-29.33	15.150
9,600.00	9,600.00	0.00	0.00	21.47	9,250.00	9,168.34	351.66	-184.99	20.67	586.70	553.71	-27.75	17.785
9,700.00	9,700.00	0.00	0.00	21.69	9,282.52	9,188.62	377.06	-186.07	20.77	662.05	629.84	-26.27	20.556
9,800.00	9,800.00	0.00	0.00	21.91	9,300.00	9,198.91	391.17	-186.68	20.82	741.06	709.82	-25.51	23.717
9,900.00	9,900.00	0.00	0.00	22.14	9,332.58	9,216.92	418.28	-187.84	20.94	822.70	791.81	-24.18	26.631
10,000.00	10,000.00	0.00	0.00	22.36	9,350.00	9,225.91	433.19	-188.48	21.00	906.86	876.52	-23.51	29.893
10,100.00	10,100.00	0.00	0.00	22.59	9,371.69	9,236.47	452.12	-189.29	21.08	992.94	962.92	-22.72	33.072
10,200.00	10,200.00	0.00	0.00	22.81	9,400.00	9,249.15	477.40	-190.38	21.19	1,080.87	1,050.93	-21.74	36.103
10,300.00	10,300.00	0.00	0.00	23.04	9,400.00	9,249.15	477.40	-190.38	21.19	1,169.80	1,140.35	-21.74	39.713
10,400.00	10,400.00	0.00	0.00	23.26	9,416.09	9,255.80	492.04	-191.01	21.26	1,260.07	1,230.73	-21.22	42.939
10,500.00	10,500.00	0.00	0.00	23.49	9,428.08	9,260.48	503.07	-191.48	21.31	1,351.35	1,322.11	-20.84	46.209
10,600.00	10,600.00	0.00	0.00	23.71	9,450.00	9,268.44	523.47	-192.35	21.40	1,443.63	1,414.30	-20.18	49.217
10,700.00	10,700.00	0.00	0.00	23.94	9,450.00	9,268.44	523.47	-192.35	21.40	1,536.35	1,507.15	-20.18	52.621
10,800.00	10,800.00	0.00	0.00	24.16	9,450.00	9,268.44	523.47	-192.35	21.40	1,629.93	1,600.81	-20.18	55.961
10,900.00	10,900.00	0.00	0.00	24.39	9,450.00	9,268.44	523.47	-192.35	21.40	1,724.24	1,695.13	-20.18	59.232
11,000.00	11,000.00	0.00	0.00	24.61	9,473.92	9,276.23	546.07	-193.32	21.51	1,818.50	1,789.14	-19.50	61.938

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
100.00	100.00	0.00	0.00	0.11	110.70	100.00	158.00	1,148.51	0.11	1,159.32	1,159.10	82.17	5,252.454
200.00	200.00	0.00	0.00	0.34	210.70	200.00	158.00	1,148.51	0.33	1,159.32	1,158.65	82.17	1,729.682
300.00	300.00	0.00	0.00	0.56	310.70	300.00	158.00	1,148.51	0.56	1,159.32	1,158.20	82.17	1,035.310
400.00	400.00	0.00	0.00	0.79	410.70	400.00	158.00	1,148.51	0.78	1,159.32	1,157.75	82.17	738.744
500.00	500.00	0.00	0.00	1.01	510.70	500.00	158.00	1,148.51	1.01	1,159.32	1,157.30	82.17	574.250
600.00	600.00	0.00	0.00	1.24	610.70	600.00	158.00	1,148.51	1.23	1,159.32	1,156.86	82.17	469.670
700.00	700.00	0.00	0.00	1.46	710.70	700.00	158.00	1,148.51	1.46	1,159.32	1,156.41	82.17	397.313
800.00	800.00	0.00	0.00	1.69	810.70	800.00	158.00	1,148.51	1.68	1,159.32	1,155.96	82.17	344.274
900.00	900.00	0.00	0.00	1.91	910.70	900.00	158.00	1,148.51	1.91	1,159.32	1,155.51	82.17	303.728
1,000.00	1,000.00	0.00	0.00	2.14	1,010.70	1,000.00	158.00	1,148.51	2.13	1,159.32	1,155.06	82.17	271.727
1,100.00	1,100.00	0.00	0.00	2.36	1,110.70	1,100.00	158.00	1,148.51	2.36	1,159.32	1,154.61	82.17	245.826
1,200.00	1,200.00	0.00	0.00	2.58	1,210.70	1,200.00	158.00	1,148.51	2.58	1,159.32	1,154.16	82.17	224.433
1,300.00	1,300.00	0.00	0.00	2.81	1,310.70	1,300.00	158.00	1,148.51	2.81	1,159.32	1,153.71	82.17	206.465
1,400.00	1,400.00	0.00	0.00	3.03	1,410.70	1,400.00	158.00	1,148.51	3.03	1,159.32	1,153.26	82.17	191.161
1,500.00	1,500.00	0.00	0.00	3.26	1,510.70	1,500.00	158.00	1,148.51	3.26	1,159.32	1,152.81	82.17	177.970
1,600.00	1,600.00	0.00	0.00	3.48	1,610.70	1,600.00	158.00	1,148.51	3.48	1,159.32	1,152.36	82.17	166.481
1,700.00	1,700.00	0.00	0.00	3.71	1,710.70	1,700.00	158.00	1,148.51	3.70	1,159.32	1,151.91	82.17	156.386
1,800.00	1,800.00	0.00	0.00	3.93	1,810.70	1,800.00	158.00	1,148.51	3.93	1,159.32	1,151.46	82.17	147.445
1,900.00	1,900.00	0.00	0.00	4.16	1,910.70	1,900.00	158.00	1,148.51	4.15	1,159.32	1,151.01	82.17	139.471
2,000.00	2,000.00	0.00	0.00	4.38	2,010.70	2,000.00	158.00	1,148.51	4.38	1,159.32	1,150.56	82.17	132.315
2,100.00	2,100.00	0.00	0.00	4.61	2,110.70	2,100.00	158.00	1,148.51	4.60	1,159.32	1,150.11	82.17	125.858
2,200.00	2,200.00	0.00	0.00	4.83	2,210.70	2,200.00	158.00	1,148.51	4.83	1,159.32	1,149.66	82.17	120.002
2,300.00	2,300.00	0.00	0.00	5.06	2,310.70	2,300.00	158.00	1,148.51	5.05	1,159.32	1,149.21	82.17	114.666
2,400.00	2,400.00	0.00	0.00	5.28	2,410.70	2,400.00	158.00	1,148.51	5.28	1,159.32	1,148.76	82.17	109.785
2,500.00	2,500.00	0.00	0.00	5.51	2,510.70	2,500.00	158.00	1,148.51	5.50	1,159.32	1,148.31	82.17	105.302
2,600.00	2,600.00	0.00	0.00	5.73	2,610.70	2,600.00	158.00	1,148.51	5.73	1,159.32	1,147.86	82.17	101.171
2,700.00	2,700.00	0.00	0.00	5.96	2,710.70	2,700.00	158.00	1,148.51	5.95	1,159.32	1,147.41	82.17	97.352
2,800.00	2,800.00	0.00	0.00	6.18	2,810.70	2,800.00	158.00	1,148.51	6.18	1,159.32	1,146.97	82.17	93.811
2,900.00	2,900.00	0.00	0.00	6.41	2,910.70	2,900.00	158.00	1,148.51	6.40	1,159.32	1,146.52	82.17	90.518
3,000.00	3,000.00	0.00	0.00	6.63	3,010.70	3,000.00	158.00	1,148.51	6.63	1,159.32	1,146.07	82.17	87.449
3,100.00	3,100.00	0.00	0.00	6.86	3,110.70	3,100.00	158.00	1,148.51	6.85	1,159.32	1,145.62	82.17	84.581
3,200.00	3,200.00	0.00	0.00	7.08	3,210.70	3,200.00	158.00	1,148.51	7.08	1,159.32	1,145.17	82.17	81.895

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,300.00	3,300.00	0.00	0.00	7.30	3,310.70	3,300.00	158.00	1,148.51	7.30	1,159.32	1,144.72	82.17	79.374
3,400.00	3,400.00	0.00	0.00	7.53	3,410.70	3,400.00	158.00	1,148.51	7.53	1,159.32	1,144.27	82.17	77.004
3,500.00	3,500.00	0.00	0.00	7.75	3,510.70	3,500.00	158.00	1,148.51	7.75	1,159.32	1,143.82	82.17	74.772
3,600.00	3,600.00	0.00	0.00	7.98	3,610.70	3,600.00	158.00	1,148.51	7.98	1,159.32	1,143.37	82.17	72.665
3,700.00	3,700.00	0.00	0.00	8.20	3,710.70	3,700.00	158.00	1,148.51	8.20	1,159.32	1,142.92	82.17	70.674
3,800.00	3,800.00	0.00	0.00	8.43	3,810.70	3,800.00	158.00	1,148.51	8.43	1,159.32	1,142.47	82.17	68.789
3,900.00	3,900.00	0.00	0.00	8.65	3,910.70	3,900.00	158.00	1,148.51	8.65	1,159.32	1,142.02	82.17	67.002
4,000.00	4,000.00	0.00	0.00	8.88	4,010.70	4,000.00	158.00	1,148.51	8.87	1,159.32	1,141.57	82.17	65.305
4,100.00	4,100.00	0.00	0.00	9.10	4,110.70	4,100.00	158.00	1,148.51	9.10	1,159.32	1,141.12	82.17	63.692
4,200.00	4,200.00	0.00	0.00	9.33	4,210.70	4,200.00	158.00	1,148.51	9.32	1,159.32	1,140.67	82.17	62.157
4,300.00	4,300.00	0.00	0.00	9.55	4,310.70	4,300.00	158.00	1,148.51	9.55	1,159.32	1,140.22	82.17	60.694
4,400.00	4,400.00	0.00	0.00	9.78	4,410.70	4,400.00	158.00	1,148.51	9.77	1,159.32	1,139.77	82.17	59.299
4,500.00	4,500.00	0.00	0.00	10.00	4,510.70	4,500.00	158.00	1,148.51	10.00	1,159.32	1,139.32	82.17	57.966
4,600.00	4,600.00	0.00	0.00	10.23	4,610.70	4,600.00	158.00	1,148.51	10.22	1,159.32	1,138.87	82.17	56.692
4,700.00	4,700.00	0.00	0.00	10.45	4,710.70	4,700.00	158.00	1,148.51	10.45	1,159.32	1,138.42	82.17	55.472
4,800.00	4,800.00	0.00	0.00	10.68	4,810.70	4,800.00	158.00	1,148.51	10.67	1,159.32	1,137.97	82.17	54.304
4,900.00	4,900.00	0.00	0.00	10.90	4,910.70	4,900.00	158.00	1,148.51	10.90	1,159.32	1,137.53	82.17	53.184
5,000.00	5,000.00	0.00	0.00	11.13	5,010.70	5,000.00	158.00	1,148.51	11.12	1,159.32	1,137.08	82.17	52.110
5,100.00	5,100.00	0.00	0.00	11.35	5,110.70	5,100.00	158.00	1,148.51	11.35	1,159.32	1,136.63	82.17	51.078
5,200.00	5,200.00	0.00	0.00	11.58	5,210.70	5,200.00	158.00	1,148.51	11.57	1,159.32	1,136.18	82.17	50.086
5,300.00	5,300.00	0.00	0.00	11.80	5,310.70	5,300.00	158.00	1,148.51	11.80	1,159.32	1,135.73	82.17	49.131
5,400.00	5,400.00	0.00	0.00	12.02	5,410.70	5,400.00	158.00	1,148.51	12.02	1,159.32	1,135.28	82.17	48.213
5,500.00	5,500.00	0.00	0.00	12.25	5,510.70	5,500.00	158.00	1,148.51	12.25	1,159.32	1,134.83	82.17	47.328
5,600.00	5,600.00	0.00	0.00	12.47	5,610.70	5,600.00	158.00	1,148.51	12.47	1,159.32	1,134.38	82.17	46.475
5,700.00	5,700.00	0.00	0.00	12.70	5,710.70	5,700.00	158.00	1,148.51	12.70	1,159.32	1,133.93	82.17	45.653
5,800.00	5,800.00	0.00	0.00	12.92	5,810.70	5,800.00	158.00	1,148.51	12.92	1,159.32	1,133.48	82.17	44.858
5,900.00	5,900.00	0.00	0.00	13.15	5,910.70	5,900.00	158.00	1,148.51	13.14	1,159.32	1,133.03	82.17	44.092
6,000.00	6,000.00	0.00	0.00	13.37	6,010.70	6,000.00	158.00	1,148.51	13.37	1,159.32	1,132.58	82.17	43.350
6,100.00	6,100.00	0.00	0.00	13.60	6,110.70	6,100.00	158.00	1,148.51	13.59	1,159.32	1,132.13	82.17	42.634
6,200.00	6,200.00	0.00	0.00	13.82	6,210.70	6,200.00	158.00	1,148.51	13.82	1,159.32	1,131.68	82.17	41.940
6,300.00	6,300.00	0.00	0.00	14.05	6,310.70	6,300.00	158.00	1,148.51	14.04	1,159.32	1,131.23	82.17	41.269
6,400.00	6,400.00	0.00	0.00	14.27	6,410.70	6,400.00	158.00	1,148.51	14.27	1,159.32	1,130.78	82.17	40.619

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,500.00	6,500.00	0.00	0.00	14.50	6,510.70	6,500.00	158.00	1,148.51	14.49	1,159.32	1,130.33	82.17	39.989
6,600.00	6,600.00	0.00	0.00	14.72	6,610.70	6,600.00	158.00	1,148.51	14.72	1,159.32	1,129.88	82.17	39.379
6,700.00	6,700.00	0.00	0.00	14.95	6,710.70	6,700.00	158.00	1,148.51	14.94	1,159.32	1,129.43	82.17	38.787
6,800.00	6,800.00	0.00	0.00	15.17	6,810.70	6,800.00	158.00	1,148.51	15.17	1,159.32	1,128.98	82.17	38.212
6,900.00	6,900.00	0.00	0.00	15.40	6,910.70	6,900.00	158.00	1,148.51	15.39	1,159.32	1,128.53	82.17	37.654
7,000.00	7,000.00	0.00	0.00	15.62	7,010.70	7,000.00	158.00	1,148.51	15.62	1,159.32	1,128.09	82.17	37.112
7,100.00	7,100.00	0.00	0.00	15.85	7,110.70	7,100.00	158.00	1,148.51	15.84	1,159.32	1,127.64	82.17	36.586
7,200.00	7,200.00	0.00	0.00	16.07	7,210.70	7,200.00	158.00	1,148.51	16.07	1,159.32	1,127.19	82.17	36.074
7,300.00	7,300.00	0.00	0.00	16.30	7,310.70	7,300.00	158.00	1,148.51	16.29	1,159.32	1,126.74	82.17	35.576
7,400.00	7,400.00	0.00	0.00	16.52	7,410.70	7,400.00	158.00	1,148.51	16.52	1,159.32	1,126.29	82.17	35.092
7,500.00	7,500.00	0.00	0.00	16.75	7,510.70	7,500.00	158.00	1,148.51	16.74	1,159.32	1,125.84	82.17	34.621
7,600.00	7,600.00	0.00	0.00	16.97	7,610.70	7,600.00	158.00	1,148.51	16.97	1,159.32	1,125.39	82.17	34.162
7,700.00	7,700.00	0.00	0.00	17.19	7,710.70	7,700.00	158.00	1,148.51	17.19	1,159.32	1,124.94	82.17	33.716
7,800.00	7,800.00	0.00	0.00	17.42	7,810.70	7,800.00	158.00	1,148.51	17.42	1,159.32	1,124.49	82.17	33.281
7,900.00	7,900.00	0.00	0.00	17.64	7,910.70	7,900.00	158.00	1,148.51	17.64	1,159.32	1,124.04	82.17	32.857
8,000.00	8,000.00	0.00	0.00	17.87	8,010.70	8,000.00	158.00	1,148.51	17.86	1,159.32	1,123.59	82.17	32.443
8,100.00	8,100.00	0.00	0.00	18.09	8,110.70	8,100.00	158.00	1,148.51	18.09	1,159.32	1,123.14	82.17	32.040
8,200.00	8,200.00	0.00	0.00	18.32	8,210.70	8,200.00	158.00	1,148.51	18.31	1,159.32	1,122.69	82.17	31.647
8,300.00	8,300.00	0.00	0.00	18.54	8,310.70	8,300.00	158.00	1,148.51	18.54	1,159.32	1,122.24	82.17	31.263
8,400.00	8,400.00	0.00	0.00	18.77	8,410.70	8,400.00	158.00	1,148.51	18.76	1,159.32	1,121.79	82.17	30.889
8,500.00	8,500.00	0.00	0.00	18.99	8,510.70	8,500.00	158.00	1,148.51	18.99	1,159.32	1,121.34	82.17	30.523
8,600.00	8,600.00	0.00	0.00	19.22	8,610.70	8,600.00	158.00	1,148.51	19.21	1,159.32	1,120.89	82.17	30.166
8,700.00	8,700.00	0.00	0.00	19.44	8,710.70	8,700.00	158.00	1,148.51	19.44	1,159.32	1,120.44	82.17	29.818
8,800.00	8,800.00	0.00	0.00	19.67	8,810.70	8,800.00	158.00	1,148.51	19.66	1,159.32	1,119.99	82.17	29.477
8,900.00	8,900.00	0.00	0.00	19.89	8,910.70	8,900.00	158.00	1,148.51	19.89	1,159.32	1,119.54	82.17	29.144
9,000.00	9,000.00	0.00	0.00	20.12	9,010.70	9,000.00	158.00	1,148.51	20.11	1,159.32	1,119.09	82.17	28.818
9,100.00	9,100.00	0.00	0.00	20.34	9,110.70	9,100.00	158.00	1,148.51	20.34	1,159.32	1,118.64	82.17	28.500
9,200.00	9,200.00	0.00	0.00	20.57	9,210.70	9,200.00	158.00	1,148.51	20.56	1,159.32	1,118.20	82.17	28.188
9,300.00	9,300.00	0.00	0.00	20.79	9,310.70	9,300.00	158.00	1,148.51	20.79	1,159.32	1,117.75	82.17	27.883
9,400.00	9,400.00	0.00	0.00	21.02	9,410.70	9,400.00	158.00	1,148.51	21.01	1,159.32	1,117.30	82.17	27.585
9,500.00	9,500.00	0.00	0.00	21.24	9,510.70	9,500.00	158.00	1,148.51	21.24	1,159.32	1,116.85	82.17	27.293
9,600.00	9,600.00	0.00	0.00	21.47	9,610.70	9,600.00	158.00	1,148.51	21.46	1,159.32	1,116.40	82.17	27.007

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,700.00	9,700.00	0.00	0.00	21.69	9,710.70	9,700.00	158.00	1,148.51	21.69	1,159.32	1,115.95	82.17	26.727
9,800.00	9,800.00	0.00	0.00	21.91	9,810.70	9,800.00	158.00	1,148.51	21.91	1,159.32	1,115.50	82.17	26.453
9,900.00	9,900.00	0.00	0.00	22.14	9,910.70	9,900.00	158.00	1,148.51	22.14	1,159.32	1,115.05	82.17	26.185
10,000.00	10,000.00	0.00	0.00	22.36	10,010.70	10,000.00	158.00	1,148.51	22.36	1,159.32	1,114.60	82.17	25.922
10,100.00	10,100.00	0.00	0.00	22.59	10,110.70	10,100.00	158.00	1,148.51	22.58	1,159.32	1,114.15	82.17	25.664
10,200.00	10,200.00	0.00	0.00	22.81	10,210.70	10,200.00	158.00	1,148.51	22.81	1,159.32	1,113.70	82.17	25.411
10,300.00	10,300.00	0.00	0.00	23.04	10,310.70	10,300.00	158.00	1,148.51	23.03	1,159.32	1,113.25	82.17	25.163
10,400.00	10,400.00	0.00	0.00	23.26	10,410.70	10,400.00	158.00	1,148.51	23.26	1,159.32	1,112.80	82.17	24.920
10,401.58	10,401.58	0.00	0.00	23.27	10,412.28	10,401.58	158.00	1,148.51	23.26	1,159.32	1,112.79	82.17	24.916
10,500.00	10,500.00	0.00	0.00	23.49	10,502.38	10,491.64	159.64	1,148.44	23.47	1,159.51	1,112.56	82.09	24.696
10,600.00	10,600.00	0.00	0.00	23.71	10,584.48	10,572.78	171.67	1,147.92	23.65	1,161.00	1,113.66	81.49	24.521
10,700.00	10,700.00	0.00	0.00	23.94	10,661.69	10,646.79	193.44	1,146.99	23.82	1,164.40	1,116.69	80.43	24.405
10,800.00	10,800.00	0.00	0.00	24.16	10,731.95	10,711.05	221.72	1,145.77	23.96	1,170.41	1,122.38	79.05	24.367
10,900.00	10,900.00	0.00	0.00	24.39	10,794.35	10,764.83	253.26	1,144.42	24.09	1,179.88	1,131.59	77.52	24.434
11,000.00	11,000.00	0.00	0.00	24.61	10,850.00	10,809.66	286.18	1,143.01	24.23	1,193.56	1,145.10	75.94	24.628
11,100.00	11,100.00	0.00	0.00	24.84	10,900.00	10,847.04	319.33	1,141.59	24.36	1,212.10	1,163.55	74.37	24.966
11,200.00	11,200.00	0.00	0.00	25.06	10,937.03	10,872.78	345.91	1,140.44	24.47	1,235.86	1,187.37	73.13	25.490
11,300.00	11,300.00	0.00	0.00	25.29	10,972.33	10,895.68	372.76	1,139.29	24.58	1,265.07	1,216.74	71.88	26.174
11,400.00	11,400.00	0.00	0.00	25.51	11,000.00	10,912.44	394.74	1,138.35	24.67	1,299.76	1,251.70	70.88	27.046
11,500.00	11,500.00	0.00	0.00	25.74	11,029.56	10,929.15	419.10	1,137.30	24.78	1,339.77	1,292.01	69.77	28.054
11,600.00	11,600.00	0.00	0.00	25.96	11,050.00	10,939.96	436.43	1,136.56	24.85	1,384.88	1,337.54	68.99	29.252
11,700.00	11,700.00	0.00	0.00	26.19	11,073.34	10,951.53	456.68	1,135.69	24.95	1,434.77	1,387.82	68.09	30.560
11,800.00	11,800.00	0.00	0.00	26.41	11,100.00	10,963.73	480.36	1,134.68	25.06	1,489.15	1,442.57	67.05	31.968
11,900.00	11,899.88	3.35	-0.03	26.63	11,100.00	10,963.73	480.36	1,134.68	25.06	1,546.44	1,500.44	63.64	33.620
12,000.00	11,997.85	22.74	-0.22	26.86	11,128.69	10,975.61	506.44	1,133.56	25.19	1,601.37	1,555.72	57.00	35.080
12,100.00	12,090.97	58.85	-0.56	27.07	11,150.00	10,983.59	526.19	1,132.71	25.29	1,651.97	1,606.72	51.70	36.509
12,200.00	12,176.40	110.57	-1.05	27.26	11,176.17	10,992.36	550.82	1,131.65	25.43	1,696.70	1,651.78	47.39	37.771
12,300.00	12,251.55	176.35	-1.68	27.48	11,200.00	10,999.37	573.57	1,130.68	25.55	1,734.35	1,689.72	44.13	38.861
12,400.00	12,314.14	254.18	-2.42	27.73	11,229.98	11,006.82	602.58	1,129.43	25.72	1,763.95	1,719.49	41.70	39.668
12,500.00	12,362.26	341.69	-3.25	28.03	11,250.00	11,010.96	622.15	1,128.59	25.83	1,784.87	1,740.52	40.14	40.248
12,600.00	12,394.45	436.23	-4.15	28.38	11,300.00	11,018.26	671.55	1,126.48	26.13	1,796.55	1,752.02	39.18	40.343
12,700.00	12,409.74	534.92	-5.08	28.79	11,300.00	11,018.26	671.55	1,126.48	26.13	1,798.70	1,754.10	39.04	40.334

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Ellipse Centre	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Ellipse Centre	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,800.00	12,411.00	634.89	-6.03	29.25	11,350.00	11,021.23	721.40	1,124.34	26.46	1,793.51	1,748.46	39.14	39.812
12,900.00	12,411.00	734.88	-6.99	29.79	11,411.96	11,021.30	783.30	1,121.68	26.90	1,790.95	1,745.32	39.09	39.253
13,000.00	12,411.00	834.88	-7.94	30.40	11,511.90	11,021.30	883.15	1,117.40	27.69	1,788.85	1,742.38	39.01	38.501
13,100.00	12,411.00	934.87	-8.89	31.09	11,611.84	11,021.30	983.01	1,113.11	28.57	1,786.75	1,739.34	38.93	37.690
13,200.00	12,411.00	1,034.87	-9.84	31.84	11,711.79	11,021.30	1,082.86	1,108.83	29.54	1,784.65	1,736.20	38.84	36.833
13,300.00	12,411.00	1,134.86	-10.79	32.65	11,811.73	11,021.30	1,182.71	1,104.55	30.59	1,782.56	1,732.97	38.76	35.944
13,400.00	12,411.00	1,234.86	-11.74	33.51	11,911.68	11,021.30	1,282.56	1,100.26	31.71	1,780.47	1,729.66	38.68	35.036
13,500.00	12,411.00	1,334.86	-12.69	34.43	12,011.62	11,021.30	1,382.42	1,095.98	32.90	1,778.39	1,726.27	38.59	34.119
13,600.00	12,411.00	1,434.85	-13.64	35.40	12,111.57	11,021.30	1,482.27	1,091.70	34.15	1,776.31	1,722.81	38.51	33.202
13,700.00	12,411.00	1,534.85	-14.59	36.41	12,211.51	11,021.30	1,582.12	1,087.41	35.45	1,774.23	1,719.29	38.42	32.292
13,800.00	12,411.00	1,634.84	-15.54	37.46	12,311.46	11,021.30	1,681.97	1,083.13	36.79	1,772.16	1,715.72	38.34	31.395
13,900.00	12,411.00	1,734.84	-16.49	38.55	12,411.40	11,021.30	1,781.83	1,078.85	38.17	1,770.09	1,712.09	38.25	30.516
14,000.00	12,411.00	1,834.83	-17.44	39.67	12,511.34	11,021.30	1,881.68	1,074.56	39.60	1,768.03	1,708.42	38.17	29.659
14,100.00	12,411.00	1,934.83	-18.39	40.82	12,611.29	11,021.30	1,981.53	1,070.28	41.05	1,765.97	1,704.70	38.08	28.825
14,200.00	12,411.00	2,034.82	-19.34	42.01	12,711.23	11,021.30	2,081.38	1,065.99	42.54	1,763.91	1,700.95	38.00	28.017
14,300.00	12,411.00	2,134.82	-20.29	43.22	12,811.18	11,021.30	2,181.24	1,061.71	44.05	1,761.86	1,697.17	37.91	27.236
14,400.00	12,411.00	2,234.81	-21.24	44.45	12,911.12	11,021.30	2,281.09	1,057.43	45.58	1,759.81	1,693.36	37.83	26.482
14,500.00	12,411.00	2,334.81	-22.19	45.71	13,011.07	11,021.30	2,380.94	1,053.14	47.14	1,757.77	1,689.52	37.74	25.756
14,600.00	12,411.00	2,434.81	-23.14	46.99	13,111.01	11,021.30	2,480.79	1,048.86	48.72	1,755.73	1,685.66	37.66	25.058
14,700.00	12,411.00	2,534.80	-24.09	48.28	13,210.95	11,021.30	2,580.65	1,044.58	50.31	1,753.69	1,681.78	37.57	24.387
14,800.00	12,411.00	2,634.80	-25.04	49.60	13,310.90	11,021.30	2,680.50	1,040.29	51.92	1,751.66	1,677.88	37.48	23.742
14,900.00	12,411.00	2,734.79	-26.00	50.93	13,410.84	11,021.30	2,780.35	1,036.01	53.55	1,749.63	1,673.96	37.40	23.123
15,000.00	12,411.00	2,834.79	-26.95	52.27	13,510.79	11,021.30	2,880.20	1,031.73	55.19	1,747.60	1,670.03	37.31	22.529
15,100.00	12,411.00	2,934.78	-27.90	53.63	13,610.73	11,021.30	2,980.06	1,027.44	56.84	1,745.58	1,666.09	37.22	21.959
15,200.00	12,411.00	3,034.78	-28.85	55.00	13,710.68	11,021.30	3,079.91	1,023.16	58.50	1,743.57	1,662.14	37.14	21.413
15,300.00	12,411.00	3,134.77	-29.80	56.38	13,810.62	11,021.30	3,179.76	1,018.88	60.17	1,741.55	1,658.18	37.05	20.888
15,400.00	12,411.00	3,234.77	-30.75	57.78	13,910.56	11,021.30	3,279.61	1,014.59	61.86	1,739.54	1,654.21	36.96	20.385
15,500.00	12,411.00	3,334.76	-31.70	59.18	14,010.51	11,021.30	3,379.47	1,010.31	63.55	1,737.54	1,650.24	36.87	19.902
15,600.00	12,411.00	3,434.76	-32.65	60.60	14,110.45	11,021.30	3,479.32	1,006.03	65.25	1,735.54	1,646.26	36.78	19.439
15,700.00	12,411.00	3,534.76	-33.60	62.02	14,210.40	11,021.30	3,579.17	1,001.74	66.95	1,733.54	1,642.27	36.70	18.994
15,800.00	12,411.00	3,634.75	-34.55	63.45	14,310.34	11,021.30	3,679.02	997.46	68.67	1,731.55	1,638.29	36.61	18.566
15,900.00	12,411.00	3,734.75	-35.50	64.89	14,410.29	11,021.30	3,778.88	993.17	70.39	1,729.56	1,634.30	36.52	18.156

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 503H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
16,000.00	12,411.00	3,834.74	-36.45	66.33	14,510.23	11,021.30	3,878.73	988.89	72.11	1,727.58	1,630.31	36.43	17.761
16,100.00	12,411.00	3,934.74	-37.40	67.79	14,610.17	11,021.30	3,978.58	984.61	73.84	1,725.60	1,626.32	36.34	17.381
16,200.00	12,411.00	4,034.73	-38.35	69.24	14,710.12	11,021.30	4,078.43	980.32	75.58	1,723.62	1,622.33	36.25	17.016
16,300.00	12,411.00	4,134.73	-39.30	70.71	14,810.06	11,021.30	4,178.29	976.04	77.32	1,721.65	1,618.34	36.16	16.665
16,400.00	12,411.00	4,234.72	-40.25	72.18	14,910.01	11,021.30	4,278.14	971.76	79.07	1,719.68	1,614.36	36.07	16.327
16,500.00	12,411.00	4,334.72	-41.20	73.65	15,009.95	11,021.30	4,377.99	967.47	80.81	1,717.72	1,610.37	35.98	16.001
16,600.00	12,411.00	4,434.72	-42.15	75.13	15,109.90	11,021.30	4,477.84	963.19	82.57	1,715.76	1,606.39	35.89	15.688
16,700.00	12,411.00	4,534.71	-43.10	76.62	15,209.84	11,021.30	4,577.70	958.91	84.33	1,713.81	1,602.41	35.80	15.385
16,800.00	12,411.00	4,634.71	-44.05	78.11	15,309.79	11,021.30	4,677.55	954.62	86.09	1,711.86	1,598.44	35.71	15.093
16,900.00	12,411.00	4,734.70	-45.01	79.60	15,409.73	11,021.30	4,777.40	950.34	87.85	1,709.91	1,594.47	35.62	14.812
16,961.36	12,411.00	4,796.06	-45.59	80.52	15,437.87	11,021.30	4,805.52	949.13	88.35	1,709.04	1,592.67	35.60	14.686
16,963.93	12,411.00	4,798.63	-45.61	80.56	15,437.87	11,021.30	4,805.52	949.13	88.35	1,709.04	1,592.65	35.60	14.683

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Tele Delux 32 State - Tele Delux 32 State 2H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	35.60	0.00	-300.03	3.00	0.03	300.04	300.01	179.43	9,999.286
100.00	100.00	0.00	0.00	0.11	135.60	100.00	-300.03	3.00	0.16	300.04	299.76	179.43	1,084.408
200.00	200.00	0.00	0.00	0.34	235.60	200.00	-300.03	3.00	0.39	300.04	299.32	179.43	413.156
300.00	300.00	0.00	0.00	0.56	335.60	300.00	-300.03	3.00	0.61	300.04	298.87	179.43	255.191
400.00	400.00	0.00	0.00	0.79	435.60	400.00	-300.03	3.00	0.84	300.04	298.42	179.43	184.609
500.00	500.00	0.00	0.00	1.01	535.60	500.00	-300.03	3.00	1.06	300.04	297.97	179.43	144.611
600.00	600.00	0.00	0.00	1.24	635.60	600.00	-300.03	3.00	1.29	300.04	297.52	179.43	118.859
700.00	700.00	0.00	0.00	1.46	735.60	700.00	-300.03	3.00	1.51	300.04	297.07	179.43	100.892
800.00	800.00	0.00	0.00	1.69	835.60	800.00	-300.03	3.00	1.74	300.04	296.62	179.43	87.644
900.00	900.00	0.00	0.00	1.91	935.60	900.00	-300.03	3.00	1.96	300.04	296.17	179.43	77.471
1,000.00	1,000.00	0.00	0.00	2.14	1,035.60	1,000.00	-300.03	3.00	2.19	300.04	295.72	179.43	69.414
1,100.00	1,100.00	0.00	0.00	2.36	1,135.60	1,100.00	-300.03	3.00	2.41	300.04	295.27	179.43	62.875
1,200.00	1,200.00	0.00	0.00	2.58	1,235.60	1,200.00	-300.03	3.00	2.64	300.04	294.82	179.43	57.462
1,300.00	1,300.00	0.00	0.00	2.81	1,335.60	1,300.00	-300.03	3.00	2.86	300.04	294.37	179.43	52.907
1,400.00	1,400.00	0.00	0.00	3.03	1,435.60	1,400.00	-300.03	3.00	3.09	300.04	293.92	179.43	49.022
1,500.00	1,500.00	0.00	0.00	3.26	1,535.60	1,500.00	-300.03	3.00	3.31	300.04	293.47	179.43	45.667
1,600.00	1,600.00	0.00	0.00	3.48	1,635.60	1,600.00	-300.03	3.00	3.54	300.04	293.02	179.43	42.743
1,700.00	1,700.00	0.00	0.00	3.71	1,735.60	1,700.00	-300.03	3.00	3.76	300.04	292.57	179.43	40.171
1,800.00	1,800.00	0.00	0.00	3.93	1,835.60	1,800.00	-300.03	3.00	3.99	300.04	292.12	179.43	37.890
1,900.00	1,900.00	0.00	0.00	4.16	1,935.60	1,900.00	-300.03	3.00	4.21	300.04	291.67	179.43	35.855
2,000.00	2,000.00	0.00	0.00	4.38	2,035.60	2,000.00	-300.03	3.00	4.43	300.04	291.22	179.43	34.027
2,100.00	2,100.00	0.00	0.00	4.61	2,135.60	2,100.00	-300.03	3.00	4.66	300.04	290.77	179.43	32.376
2,200.00	2,200.00	0.00	0.00	4.83	2,235.60	2,200.00	-300.03	3.00	4.88	300.04	290.32	179.43	30.878
2,300.00	2,300.00	0.00	0.00	5.06	2,335.60	2,300.00	-300.03	3.00	5.11	300.04	289.88	179.43	29.513
2,400.00	2,400.00	0.00	0.00	5.28	2,435.60	2,400.00	-300.03	3.00	5.33	300.04	289.43	179.43	28.263
2,500.00	2,500.00	0.00	0.00	5.51	2,535.60	2,500.00	-300.03	3.00	5.56	300.04	288.98	179.43	27.115
2,600.00	2,600.00	0.00	0.00	5.73	2,635.60	2,600.00	-300.03	3.00	5.78	300.04	288.53	179.43	26.057
2,700.00	2,700.00	0.00	0.00	5.96	2,735.60	2,700.00	-300.03	3.00	6.01	300.04	288.08	179.43	25.078
2,800.00	2,800.00	0.00	0.00	6.18	2,835.60	2,800.00	-300.03	3.00	6.23	300.04	287.63	179.43	24.170
2,900.00	2,900.00	0.00	0.00	6.41	2,935.60	2,900.00	-300.03	3.00	6.46	300.04	287.18	179.43	23.325
3,000.00	3,000.00	0.00	0.00	6.63	3,035.60	3,000.00	-300.03	3.00	6.68	300.04	286.73	179.43	22.537
3,100.00	3,100.00	0.00	0.00	6.86	3,135.60	3,100.00	-300.03	3.00	6.91	300.04	286.28	179.43	21.801

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Tele Delux 32 State - Tele Delux 32 State 2H - Wellbore #1 - Plan #2
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,235.60	3,200.00	-300.03	3.00	7.13	300.04	285.83	179.43	21.112
3,300.00	3,300.00	0.00	0.00	7.30	3,335.60	3,300.00	-300.03	3.00	7.36	300.04	285.38	179.43	20.464
3,400.00	3,400.00	0.00	0.00	7.53	3,435.60	3,400.00	-300.03	3.00	7.58	300.04	284.93	179.43	19.856
3,500.00	3,500.00	0.00	0.00	7.75	3,535.60	3,500.00	-300.03	3.00	7.81	300.04	284.48	179.43	19.282
3,600.00	3,600.00	0.00	0.00	7.98	3,635.60	3,600.00	-300.03	3.00	8.03	300.04	284.03	179.43	18.741
3,700.00	3,700.00	0.00	0.00	8.20	3,735.60	3,700.00	-300.03	3.00	8.26	300.04	283.58	179.43	18.229
3,800.00	3,800.00	0.00	0.00	8.43	3,835.60	3,800.00	-300.03	3.00	8.48	300.04	283.13	179.43	17.744
3,900.00	3,900.00	0.00	0.00	8.65	3,935.60	3,900.00	-300.03	3.00	8.71	300.04	282.68	179.43	17.285
4,000.00	4,000.00	0.00	0.00	8.88	4,035.60	4,000.00	-300.03	3.00	8.93	300.04	282.23	179.43	16.848
4,100.00	4,100.00	0.00	0.00	9.10	4,135.60	4,100.00	-300.03	3.00	9.15	300.04	281.78	179.43	16.433
4,200.00	4,200.00	0.00	0.00	9.33	4,235.60	4,200.00	-300.03	3.00	9.38	300.04	281.33	179.43	16.039
4,300.00	4,300.00	0.00	0.00	9.55	4,335.60	4,300.00	-300.03	3.00	9.60	300.04	280.88	179.43	15.662
4,400.00	4,400.00	0.00	0.00	9.78	4,435.60	4,400.00	-300.03	3.00	9.83	300.04	280.44	179.43	15.303
4,500.00	4,500.00	0.00	0.00	10.00	4,535.60	4,500.00	-300.03	3.00	10.05	300.04	279.99	179.43	14.960
4,600.00	4,600.00	0.00	0.00	10.23	4,635.60	4,600.00	-300.03	3.00	10.28	300.04	279.54	179.43	14.632
4,700.00	4,700.00	0.00	0.00	10.45	4,735.60	4,700.00	-300.03	3.00	10.50	300.04	279.09	179.43	14.318
4,800.00	4,800.00	0.00	0.00	10.68	4,835.60	4,800.00	-300.03	3.00	10.73	300.04	278.64	179.43	14.018
4,900.00	4,900.00	0.00	0.00	10.90	4,935.60	4,900.00	-300.03	3.00	10.95	300.04	278.19	179.43	13.729
5,000.00	5,000.00	0.00	0.00	11.13	5,035.60	5,000.00	-300.03	3.00	11.18	300.04	277.74	179.43	13.453
5,100.00	5,100.00	0.00	0.00	11.35	5,135.60	5,100.00	-300.03	3.00	11.40	300.04	277.29	179.43	13.187
5,200.00	5,200.00	0.00	0.00	11.58	5,235.60	5,200.00	-300.03	3.00	11.63	300.04	276.84	179.43	12.931
5,300.00	5,300.00	0.00	0.00	11.80	5,335.60	5,300.00	-300.03	3.00	11.85	300.04	276.39	179.43	12.685
5,400.00	5,400.00	0.00	0.00	12.02	5,435.60	5,400.00	-300.03	3.00	12.08	300.04	275.94	179.43	12.449
5,500.00	5,500.00	0.00	0.00	12.25	5,535.60	5,500.00	-300.03	3.00	12.30	300.04	275.49	179.43	12.221
5,600.00	5,600.00	0.00	0.00	12.47	5,635.60	5,600.00	-300.03	3.00	12.53	300.04	275.04	179.43	12.001
5,700.00	5,700.00	0.00	0.00	12.70	5,735.60	5,700.00	-300.03	3.00	12.75	300.04	274.59	179.43	11.789
5,800.00	5,800.00	0.00	0.00	12.92	5,835.60	5,800.00	-300.03	3.00	12.98	300.04	274.14	179.43	11.585
5,900.00	5,900.00	0.00	0.00	13.15	5,935.60	5,900.00	-300.03	3.00	13.20	300.04	273.69	179.43	11.387
6,000.00	6,000.00	0.00	0.00	13.37	6,035.60	6,000.00	-300.03	3.00	13.43	300.04	273.24	179.43	11.196
6,100.00	6,100.00	0.00	0.00	13.60	6,135.60	6,100.00	-300.03	3.00	13.65	300.04	272.79	179.43	11.011
6,200.00	6,200.00	0.00	0.00	13.82	6,235.60	6,200.00	-300.03	3.00	13.88	300.04	272.34	179.43	10.833
6,300.00	6,300.00	0.00	0.00	14.05	6,335.60	6,300.00	-300.03	3.00	14.10	300.04	271.89	179.43	10.660

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Tele Delux 32 State - Tele Delux 32 State 2H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	+E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	+E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,400.00	6,400.00	0.00	0.00	14.27	6,435.60	6,400.00	-300.03	3.00	14.32	300.04	271.44	179.43	10.492
6,500.00	6,500.00	0.00	0.00	14.50	6,535.60	6,500.00	-300.03	3.00	14.55	300.04	270.99	179.43	10.330
6,600.00	6,600.00	0.00	0.00	14.72	6,635.60	6,600.00	-300.03	3.00	14.77	300.04	270.55	179.43	10.172
6,700.00	6,700.00	0.00	0.00	14.95	6,735.60	6,700.00	-300.03	3.00	15.00	300.04	270.10	179.43	10.019
6,800.00	6,800.00	0.00	0.00	15.17	6,835.60	6,800.00	-300.03	3.00	15.22	300.04	269.65	179.43	9.871
6,900.00	6,900.00	0.00	0.00	15.40	6,935.60	6,900.00	-300.03	3.00	15.45	300.04	269.20	179.43	9.727
7,000.00	7,000.00	0.00	0.00	15.62	7,035.60	7,000.00	-300.03	3.00	15.67	300.04	268.75	179.43	9.588
7,100.00	7,100.00	0.00	0.00	15.85	7,135.60	7,100.00	-300.03	3.00	15.90	300.04	268.30	179.43	9.452
7,200.00	7,200.00	0.00	0.00	16.07	7,235.60	7,200.00	-300.03	3.00	16.12	300.04	267.85	179.43	9.320
7,300.00	7,300.00	0.00	0.00	16.30	7,335.60	7,300.00	-300.03	3.00	16.35	300.04	267.40	179.43	9.192
7,400.00	7,400.00	0.00	0.00	16.52	7,435.60	7,400.00	-300.03	3.00	16.57	300.04	266.95	179.43	9.067
7,500.00	7,500.00	0.00	0.00	16.75	7,535.60	7,500.00	-300.03	3.00	16.80	300.04	266.50	179.43	8.945
7,600.00	7,600.00	0.00	0.00	16.97	7,635.60	7,600.00	-300.03	3.00	17.02	300.04	266.05	179.43	8.827
7,700.00	7,700.00	0.00	0.00	17.19	7,735.60	7,700.00	-300.03	3.00	17.25	300.04	265.60	179.43	8.712
7,800.00	7,800.00	0.00	0.00	17.42	7,835.60	7,800.00	-300.03	3.00	17.47	300.04	265.15	179.43	8.599
7,900.00	7,900.00	0.00	0.00	17.64	7,935.60	7,900.00	-300.03	3.00	17.70	300.04	264.70	179.43	8.490
8,000.00	8,000.00	0.00	0.00	17.87	8,035.60	8,000.00	-300.03	3.00	17.92	300.04	264.25	179.43	8.383
8,100.00	8,100.00	0.00	0.00	18.09	8,135.60	8,100.00	-300.03	3.00	18.15	300.04	263.80	179.43	8.279
8,200.00	8,200.00	0.00	0.00	18.32	8,235.60	8,200.00	-300.03	3.00	18.37	300.04	263.35	179.43	8.178
8,300.00	8,300.00	0.00	0.00	18.54	8,335.60	8,300.00	-300.03	3.00	18.60	300.04	262.90	179.43	8.079
8,400.00	8,400.00	0.00	0.00	18.77	8,435.60	8,400.00	-300.03	3.00	18.82	300.04	262.45	179.43	7.982
8,500.00	8,500.00	0.00	0.00	18.99	8,535.60	8,500.00	-300.03	3.00	19.04	300.04	262.00	179.43	7.888
8,600.00	8,600.00	0.00	0.00	19.22	8,635.60	8,600.00	-300.03	3.00	19.27	300.04	261.55	179.43	7.796
8,700.00	8,700.00	0.00	0.00	19.44	8,735.60	8,700.00	-300.03	3.00	19.49	300.04	261.11	179.43	7.706
8,800.00	8,800.00	0.00	0.00	19.67	8,835.60	8,800.00	-300.03	3.00	19.72	300.04	260.66	179.43	7.618
8,900.00	8,900.00	0.00	0.00	19.89	8,935.60	8,900.00	-300.03	3.00	19.94	300.04	260.21	179.43	7.532
9,000.00	9,000.00	0.00	0.00	20.12	9,035.60	9,000.00	-300.03	3.00	20.17	300.04	259.76	179.43	7.448
9,100.00	9,100.00	0.00	0.00	20.34	9,135.60	9,100.00	-300.03	3.00	20.39	300.04	259.31	179.43	7.366
9,200.00	9,200.00	0.00	0.00	20.57	9,235.60	9,200.00	-300.03	3.00	20.62	300.04	258.86	179.43	7.285
9,300.00	9,300.00	0.00	0.00	20.79	9,335.60	9,300.00	-300.03	3.00	20.84	300.04	258.41	179.43	7.207
9,400.00	9,400.00	0.00	0.00	21.02	9,435.60	9,400.00	-300.03	3.00	21.07	300.04	257.96	179.43	7.130
9,500.00	9,500.00	0.00	0.00	21.24	9,535.60	9,500.00	-300.03	3.00	21.29	300.04	257.51	179.43	7.054

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Tele Delux 32 State - Tele Delux 32 State 2H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,600.00	9,600.00	0.00	0.00	21.47	9,635.60	9,600.00	-300.03	3.00	21.52	300.04	257.06	179.43	6.981
9,700.00	9,700.00	0.00	0.00	21.69	9,735.60	9,700.00	-300.03	3.00	21.74	300.04	256.61	179.43	6.908
9,800.00	9,800.00	0.00	0.00	21.91	9,835.60	9,800.00	-300.03	3.00	21.97	300.04	256.16	179.43	6.838
9,900.00	9,900.00	0.00	0.00	22.14	9,935.60	9,900.00	-300.03	3.00	22.19	300.04	255.71	179.43	6.768
10,000.00	10,000.00	0.00	0.00	22.36	10,035.60	10,000.00	-300.03	3.00	22.42	300.04	255.26	179.43	6.700
10,100.00	10,100.00	0.00	0.00	22.59	10,135.60	10,100.00	-300.03	3.00	22.64	300.04	254.81	179.43	6.634
10,200.00	10,200.00	0.00	0.00	22.81	10,235.60	10,200.00	-300.03	3.00	22.87	300.04	254.36	179.43	6.568
10,300.00	10,300.00	0.00	0.00	23.04	10,335.60	10,300.00	-300.03	3.00	23.09	300.04	253.91	179.43	6.504
10,400.00	10,400.00	0.00	0.00	23.26	10,435.60	10,400.00	-300.03	3.00	23.32	300.04	253.46	179.43	6.442
10,500.00	10,500.00	0.00	0.00	23.49	10,535.60	10,500.00	-300.03	3.00	23.54	300.04	253.01	179.43	6.380
10,600.00	10,600.00	0.00	0.00	23.71	10,635.60	10,600.00	-300.03	3.00	23.76	300.04	252.56	179.43	6.320
10,700.00	10,700.00	0.00	0.00	23.94	10,735.60	10,700.00	-300.03	3.00	23.99	300.04	252.11	179.43	6.260
10,800.00	10,800.00	0.00	0.00	24.16	10,835.60	10,800.00	-300.03	3.00	24.21	300.04	251.67	179.43	6.202
10,900.00	10,900.00	0.00	0.00	24.39	10,935.60	10,900.00	-300.03	3.00	24.44	300.04	251.22	179.43	6.145
11,000.00	11,000.00	0.00	0.00	24.61	11,035.60	11,000.00	-300.03	3.00	24.66	300.04	250.77	179.43	6.089
11,100.00	11,100.00	0.00	0.00	24.84	11,135.60	11,100.00	-300.03	3.00	24.89	300.04	250.32	179.43	6.034
11,200.00	11,200.00	0.00	0.00	25.06	11,235.60	11,200.00	-300.03	3.00	25.11	300.04	249.87	179.43	5.980
11,300.00	11,300.00	0.00	0.00	25.29	11,335.60	11,300.00	-300.03	3.00	25.34	300.04	249.42	179.43	5.927
11,400.00	11,400.00	0.00	0.00	25.51	11,435.60	11,400.00	-300.03	3.00	25.56	300.04	248.97	179.43	5.875
11,500.00	11,500.00	0.00	0.00	25.74	11,535.60	11,500.00	-300.03	3.00	25.79	300.04	248.52	179.43	5.823
11,600.00	11,600.00	0.00	0.00	25.96	11,635.60	11,600.00	-300.03	3.00	26.01	300.04	248.07	179.43	5.773
11,700.00	11,700.00	0.00	0.00	26.19	11,735.60	11,700.00	-300.03	3.00	26.24	300.04	247.62	179.43	5.724
11,800.00	11,800.00	0.00	0.00	26.41	11,835.60	11,800.00	-300.03	3.00	26.46	300.04	247.17	179.43	5.675
11,803.42	11,803.42	0.01	0.00	26.42	11,839.02	11,803.42	-300.03	3.00	26.47	300.05	247.16	179.97	5.673
11,900.00	11,899.88	3.35	-0.03	26.63	11,916.96	11,881.34	-301.09	3.08	26.63	305.01	251.80	179.96	5.732
12,000.00	11,997.85	22.74	-0.22	26.86	11,978.06	11,942.02	-308.03	3.63	26.73	335.47	282.26	179.87	6.304
12,100.00	12,090.97	58.85	-0.56	27.07	12,029.21	11,991.99	-318.76	4.48	26.82	390.40	337.39	179.72	7.364
12,200.00	12,176.40	110.57	-1.05	27.26	12,067.66	12,028.83	-329.74	5.34	26.88	464.43	411.66	179.53	8.802
12,300.00	12,251.55	176.35	-1.68	27.48	12,100.00	12,059.18	-340.86	6.22	26.93	551.88	499.18	179.22	10.471
12,400.00	12,314.14	254.18	-2.42	27.73	12,100.00	12,059.18	-340.86	6.22	26.93	647.41	595.03	178.57	12.360
12,500.00	12,362.26	341.69	-3.25	28.03	12,112.38	12,070.63	-345.57	6.59	26.95	746.64	694.10	162.68	14.211
12,600.00	12,394.45	436.23	-4.15	28.38	12,100.00	12,059.18	-340.86	6.22	26.93	846.39	793.85	1.22	16.109

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Tele Delux 32 State - Tele Delux 32 State 2H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,700.00	12,409.74	534.92	-5.08	28.79	12,100.00	12,059.18	-340.86	6.22	26.93	943.40	890.55	0.58	17.849
12,800.00	12,411.00	634.89	-6.03	29.25	12,100.00	12,059.18	-340.86	6.22	26.93	1,037.31	984.09	0.48	19.493
12,900.00	12,411.00	734.88	-6.99	29.79	12,075.78	12,036.51	-332.37	5.55	26.89	1,131.12	1,077.81	0.37	21.219
13,000.00	12,411.00	834.88	-7.94	30.40	12,050.00	12,012.00	-324.39	4.92	26.85	1,226.08	1,172.70	0.26	22.970
13,100.00	12,411.00	934.87	-8.89	31.09	12,050.00	12,012.00	-324.39	4.92	26.85	1,321.04	1,267.42	0.26	24.636
13,200.00	12,411.00	1,034.87	-9.84	31.84	12,050.00	12,012.00	-324.39	4.92	26.85	1,416.69	1,362.86	0.26	26.319
13,300.00	12,411.00	1,134.86	-10.79	32.65	12,050.00	12,012.00	-324.39	4.92	26.85	1,512.90	1,458.90	0.26	28.015
13,400.00	12,411.00	1,234.86	-11.74	33.51	12,032.23	11,994.91	-319.54	4.54	26.82	1,609.21	1,555.14	0.21	29.764
13,500.00	12,411.00	1,334.86	-12.69	34.43	12,025.72	11,988.61	-317.89	4.41	26.81	1,705.95	1,651.77	0.19	31.488
13,600.00	12,411.00	1,434.85	-13.64	35.40	12,019.74	11,982.81	-316.44	4.29	26.80	1,802.97	1,748.68	0.17	33.215

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 7H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	16.80	0.00	151.19	173.58	0.01	230.19	230.18	48.94	10,000.000
100.00	100.00	0.00	0.00	0.11	116.80	100.00	151.19	173.58	0.13	230.19	229.95	48.94	963.441
200.00	200.00	0.00	0.00	0.34	216.80	200.00	151.19	173.58	0.35	230.19	229.50	48.94	334.358
300.00	300.00	0.00	0.00	0.56	316.80	300.00	151.19	173.58	0.58	230.19	229.05	48.94	202.279
400.00	400.00	0.00	0.00	0.79	416.80	400.00	151.19	173.58	0.80	230.19	228.60	48.94	145.000
500.00	500.00	0.00	0.00	1.01	516.80	500.00	151.19	173.58	1.03	230.19	228.15	48.94	113.002
600.00	600.00	0.00	0.00	1.24	616.80	600.00	151.19	173.58	1.25	230.19	227.70	48.94	92.573
700.00	700.00	0.00	0.00	1.46	716.80	700.00	151.19	173.58	1.48	230.19	227.26	48.94	78.400
800.00	800.00	0.00	0.00	1.69	816.80	800.00	151.19	173.58	1.70	230.19	226.81	48.94	67.990
900.00	900.00	0.00	0.00	1.91	916.80	900.00	151.19	173.58	1.92	230.19	226.36	48.94	60.021
1,000.00	1,000.00	0.00	0.00	2.14	1,016.80	1,000.00	151.19	173.58	2.15	230.19	225.91	48.94	53.724
1,100.00	1,100.00	0.00	0.00	2.36	1,116.80	1,100.00	151.19	173.58	2.37	230.19	225.46	48.94	48.623
1,200.00	1,200.00	0.00	0.00	2.58	1,216.80	1,200.00	151.19	173.58	2.60	230.19	225.01	48.94	44.406
1,300.00	1,300.00	0.00	0.00	2.81	1,316.80	1,300.00	151.19	173.58	2.82	230.19	224.56	48.94	40.863
1,400.00	1,400.00	0.00	0.00	3.03	1,416.80	1,400.00	151.19	173.58	3.05	230.19	224.11	48.94	37.843
1,500.00	1,500.00	0.00	0.00	3.26	1,516.80	1,500.00	151.19	173.58	3.27	230.19	223.66	48.94	35.239
1,600.00	1,600.00	0.00	0.00	3.48	1,616.80	1,600.00	151.19	173.58	3.50	230.19	223.21	48.94	32.970
1,700.00	1,700.00	0.00	0.00	3.71	1,716.80	1,700.00	151.19	173.58	3.72	230.19	222.76	48.94	30.975
1,800.00	1,800.00	0.00	0.00	3.93	1,816.80	1,800.00	151.19	173.58	3.95	230.19	222.31	48.94	29.209
1,900.00	1,900.00	0.00	0.00	4.16	1,916.80	1,900.00	151.19	173.58	4.17	230.19	221.86	48.94	27.632
2,000.00	2,000.00	0.00	0.00	4.38	2,016.80	2,000.00	151.19	173.58	4.40	230.19	221.41	48.94	26.218
2,100.00	2,100.00	0.00	0.00	4.61	2,116.80	2,100.00	151.19	173.58	4.62	230.19	220.96	48.94	24.941
2,200.00	2,200.00	0.00	0.00	4.83	2,216.80	2,200.00	151.19	173.58	4.85	230.19	220.51	48.94	23.782
2,300.00	2,300.00	0.00	0.00	5.06	2,316.80	2,300.00	151.19	173.58	5.07	230.19	220.06	48.94	22.727
2,400.00	2,400.00	0.00	0.00	5.28	2,416.80	2,400.00	151.19	173.58	5.30	230.19	219.61	48.94	21.761
2,500.00	2,500.00	0.00	0.00	5.51	2,516.80	2,500.00	151.19	173.58	5.52	230.19	219.16	48.94	20.874
2,600.00	2,600.00	0.00	0.00	5.73	2,616.80	2,600.00	151.19	173.58	5.75	230.19	218.71	48.94	20.056
2,700.00	2,700.00	0.00	0.00	5.96	2,716.80	2,700.00	151.19	173.58	5.97	230.19	218.26	48.94	19.300
2,800.00	2,800.00	0.00	0.00	6.18	2,816.80	2,800.00	151.19	173.58	6.20	230.19	217.82	48.94	18.599
2,900.00	2,900.00	0.00	0.00	6.41	2,916.80	2,900.00	151.19	173.58	6.42	230.19	217.37	48.94	17.947
3,000.00	3,000.00	0.00	0.00	6.63	3,016.80	3,000.00	151.19	173.58	6.64	230.19	216.92	48.94	17.340
3,100.00	3,100.00	0.00	0.00	6.86	3,116.80	3,100.00	151.19	173.58	6.87	230.19	216.47	48.94	16.772

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 7H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,216.80	3,200.00	151.19	173.58	7.09	230.19	216.02	48.94	16.240
3,300.00	3,300.00	0.00	0.00	7.30	3,316.80	3,300.00	151.19	173.58	7.32	230.19	215.57	48.94	15.741
3,400.00	3,400.00	0.00	0.00	7.53	3,416.80	3,400.00	151.19	173.58	7.54	230.19	215.12	48.94	15.271
3,500.00	3,500.00	0.00	0.00	7.75	3,516.80	3,500.00	151.19	173.58	7.77	230.19	214.67	48.94	14.829
3,600.00	3,600.00	0.00	0.00	7.98	3,616.80	3,600.00	151.19	173.58	7.99	230.19	214.22	48.94	14.412
3,700.00	3,700.00	0.00	0.00	8.20	3,716.80	3,700.00	151.19	173.58	8.22	230.19	213.77	48.94	14.017
3,800.00	3,800.00	0.00	0.00	8.43	3,816.80	3,800.00	151.19	173.58	8.44	230.19	213.32	48.94	13.644
3,900.00	3,900.00	0.00	0.00	8.65	3,916.80	3,900.00	151.19	173.58	8.67	230.19	212.87	48.94	13.290
4,000.00	4,000.00	0.00	0.00	8.88	4,016.80	4,000.00	151.19	173.58	8.89	230.19	212.42	48.94	12.953
4,100.00	4,100.00	0.00	0.00	9.10	4,116.80	4,100.00	151.19	173.58	9.12	230.19	211.97	48.94	12.634
4,200.00	4,200.00	0.00	0.00	9.33	4,216.80	4,200.00	151.19	173.58	9.34	230.19	211.52	48.94	12.330
4,300.00	4,300.00	0.00	0.00	9.55	4,316.80	4,300.00	151.19	173.58	9.57	230.19	211.07	48.94	12.040
4,400.00	4,400.00	0.00	0.00	9.78	4,416.80	4,400.00	151.19	173.58	9.79	230.19	210.62	48.94	11.763
4,500.00	4,500.00	0.00	0.00	10.00	4,516.80	4,500.00	151.19	173.58	10.02	230.19	210.17	48.94	11.499
4,600.00	4,600.00	0.00	0.00	10.23	4,616.80	4,600.00	151.19	173.58	10.24	230.19	209.72	48.94	11.246
4,700.00	4,700.00	0.00	0.00	10.45	4,716.80	4,700.00	151.19	173.58	10.47	230.19	209.27	48.94	11.005
4,800.00	4,800.00	0.00	0.00	10.68	4,816.80	4,800.00	151.19	173.58	10.69	230.19	208.82	48.94	10.773
4,900.00	4,900.00	0.00	0.00	10.90	4,916.80	4,900.00	151.19	173.58	10.92	230.19	208.37	48.94	10.551
5,000.00	5,000.00	0.00	0.00	11.13	5,016.80	5,000.00	151.19	173.58	11.14	230.19	207.93	48.94	10.338
5,100.00	5,100.00	0.00	0.00	11.35	5,116.80	5,100.00	151.19	173.58	11.36	230.19	207.48	48.94	10.134
5,200.00	5,200.00	0.00	0.00	11.58	5,216.80	5,200.00	151.19	173.58	11.59	230.19	207.03	48.94	9.937
5,300.00	5,300.00	0.00	0.00	11.80	5,316.80	5,300.00	151.19	173.58	11.81	230.19	206.58	48.94	9.748
5,400.00	5,400.00	0.00	0.00	12.02	5,416.80	5,400.00	151.19	173.58	12.04	230.19	206.13	48.94	9.566
5,500.00	5,500.00	0.00	0.00	12.25	5,516.80	5,500.00	151.19	173.58	12.26	230.19	205.68	48.94	9.390
5,600.00	5,600.00	0.00	0.00	12.47	5,616.80	5,600.00	151.19	173.58	12.49	230.19	205.23	48.94	9.221
5,700.00	5,700.00	0.00	0.00	12.70	5,716.80	5,700.00	151.19	173.58	12.71	230.19	204.78	48.94	9.058
5,800.00	5,800.00	0.00	0.00	12.92	5,816.80	5,800.00	151.19	173.58	12.94	230.19	204.33	48.94	8.901
5,900.00	5,900.00	0.00	0.00	13.15	5,916.80	5,900.00	151.19	173.58	13.16	230.19	203.88	48.94	8.749
6,000.00	6,000.00	0.00	0.00	13.37	6,016.80	6,000.00	151.19	173.58	13.39	230.19	203.43	48.94	8.602
6,100.00	6,100.00	0.00	0.00	13.60	6,116.80	6,100.00	151.19	173.58	13.61	230.19	202.98	48.94	8.460
6,200.00	6,200.00	0.00	0.00	13.82	6,216.80	6,200.00	151.19	173.58	13.84	230.19	202.53	48.94	8.322
6,300.00	6,300.00	0.00	0.00	14.05	6,316.80	6,300.00	151.19	173.58	14.06	230.19	202.08	48.94	8.189

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 7H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,400.00	6,400.00	0.00	0.00	14.27	6,416.80	6,400.00	151.19	173.58	14.29	230.19	201.63	48.94	8.060
6,500.00	6,500.00	0.00	0.00	14.50	6,516.80	6,500.00	151.19	173.58	14.51	230.19	201.18	48.94	7.935
6,600.00	6,600.00	0.00	0.00	14.72	6,616.80	6,600.00	151.19	173.58	14.74	230.19	200.73	48.94	7.814
6,700.00	6,700.00	0.00	0.00	14.95	6,716.80	6,700.00	151.19	173.58	14.96	230.19	200.28	48.94	7.697
6,800.00	6,800.00	0.00	0.00	15.17	6,816.80	6,800.00	151.19	173.58	15.19	230.19	199.83	48.94	7.583
6,900.00	6,900.00	0.00	0.00	15.40	6,916.80	6,900.00	151.19	173.58	15.41	230.19	199.38	48.94	7.472
7,000.00	7,000.00	0.00	0.00	15.62	7,016.80	7,000.00	151.19	173.58	15.64	230.19	198.93	48.94	7.365
7,100.00	7,100.00	0.00	0.00	15.85	7,116.80	7,100.00	151.19	173.58	15.86	230.19	198.49	48.94	7.260
7,200.00	7,200.00	0.00	0.00	16.07	7,216.80	7,200.00	151.19	173.58	16.08	230.19	198.04	48.94	7.159
7,300.00	7,300.00	0.00	0.00	16.30	7,316.80	7,300.00	151.19	173.58	16.31	230.19	197.59	48.94	7.060
7,400.00	7,400.00	0.00	0.00	16.52	7,416.80	7,400.00	151.19	173.58	16.53	230.19	197.14	48.94	6.964
7,500.00	7,500.00	0.00	0.00	16.75	7,516.80	7,500.00	151.19	173.58	16.76	230.19	196.69	48.94	6.871
7,600.00	7,600.00	0.00	0.00	16.97	7,616.80	7,600.00	151.19	173.58	16.98	230.19	196.24	48.94	6.780
7,700.00	7,700.00	0.00	0.00	17.19	7,716.80	7,700.00	151.19	173.58	17.21	230.19	195.79	48.94	6.691
7,800.00	7,800.00	0.00	0.00	17.42	7,816.80	7,800.00	151.19	173.58	17.43	230.19	195.34	48.94	6.605
7,900.00	7,900.00	0.00	0.00	17.64	7,916.80	7,900.00	151.19	173.58	17.66	230.19	194.89	48.94	6.521
8,000.00	8,000.00	0.00	0.00	17.87	8,016.80	8,000.00	151.19	173.58	17.88	230.19	194.44	48.94	6.439
8,100.00	8,100.00	0.00	0.00	18.09	8,116.80	8,100.00	151.19	173.58	18.11	230.19	193.99	48.94	6.359
8,200.00	8,200.00	0.00	0.00	18.32	8,216.80	8,200.00	151.19	173.58	18.33	230.19	193.54	48.94	6.281
8,300.00	8,300.00	0.00	0.00	18.54	8,316.80	8,300.00	151.19	173.58	18.56	230.19	193.09	48.94	6.205
8,400.00	8,400.00	0.00	0.00	18.77	8,416.80	8,400.00	151.19	173.58	18.78	230.19	192.64	48.94	6.130
8,500.00	8,500.00	0.00	0.00	18.99	8,516.80	8,500.00	151.19	173.58	19.01	230.19	192.19	48.94	6.058
8,600.00	8,600.00	0.00	0.00	19.22	8,616.80	8,600.00	151.19	173.58	19.23	230.19	191.74	48.94	5.987
8,700.00	8,700.00	0.00	0.00	19.44	8,716.80	8,700.00	151.19	173.58	19.46	230.19	191.29	48.94	5.918
8,800.00	8,800.00	0.00	0.00	19.67	8,816.80	8,800.00	151.19	173.58	19.68	230.19	190.84	48.94	5.849
8,900.00	8,900.00	0.00	0.00	19.89	8,916.80	8,900.00	151.19	173.58	19.91	230.19	190.39	48.94	5.780
9,000.00	9,000.00	0.00	0.00	20.12	9,016.80	9,000.00	151.19	173.58	20.13	230.19	189.94	48.94	5.711
9,100.00	9,100.00	0.00	0.00	20.34	9,116.80	9,100.00	151.19	173.58	20.35	230.19	189.49	48.94	5.642
9,200.00	9,200.00	0.00	0.00	20.57	9,216.80	9,200.00	151.19	173.58	20.58	230.19	189.04	48.94	5.573
9,300.00	9,300.00	0.00	0.00	20.79	9,316.80	9,300.00	151.19	173.58	20.80	230.19	188.59	48.94	5.504
9,400.00	9,400.00	0.00	0.00	21.02	9,416.80	9,400.00	151.19	173.58	21.03	230.19	188.14	48.94	5.435

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 7H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,500.00	9,500.00	0.00	0.00	21.24	9,216.05	9,150.17	328.98	177.81	20.57	512.08	477.98	28.39	15.018
9,600.00	9,600.00	0.00	0.00	21.47	9,250.00	9,172.84	354.24	178.42	20.67	582.91	549.83	26.73	17.622
9,700.00	9,700.00	0.00	0.00	21.69	9,281.57	9,192.54	378.89	179.00	20.76	658.11	625.86	25.29	20.403
9,800.00	9,800.00	0.00	0.00	21.91	9,300.00	9,203.41	393.77	179.36	20.82	736.99	705.68	24.49	23.540
9,900.00	9,900.00	0.00	0.00	22.14	9,331.90	9,221.06	420.32	179.99	20.93	818.55	787.62	23.18	26.466
10,000.00	10,000.00	0.00	0.00	22.36	9,350.00	9,230.41	435.82	180.36	20.99	902.62	872.24	22.48	29.710
10,100.00	10,100.00	0.00	0.00	22.59	9,371.20	9,240.74	454.33	180.80	21.07	988.65	958.60	21.70	32.899
10,200.00	10,200.00	0.00	0.00	22.81	9,400.00	9,253.65	480.06	181.41	21.18	1,076.54	1,046.57	20.70	35.919
10,300.00	10,300.00	0.00	0.00	23.04	9,400.00	9,253.65	480.06	181.41	21.18	1,165.42	1,135.94	20.70	39.527
10,400.00	10,400.00	0.00	0.00	23.26	9,415.78	9,260.17	494.42	181.76	21.25	1,255.67	1,226.30	20.18	42.761
10,500.00	10,500.00	0.00	0.00	23.49	9,427.80	9,264.88	505.49	182.02	21.30	1,346.91	1,317.65	19.80	46.029
10,600.00	10,600.00	0.00	0.00	23.71	9,450.00	9,272.94	526.16	182.51	21.39	1,439.18	1,409.83	19.13	49.032
10,700.00	10,700.00	0.00	0.00	23.94	9,450.00	9,272.94	526.16	182.51	21.39	1,531.88	1,502.66	19.13	52.437
10,800.00	10,800.00	0.00	0.00	24.16	9,450.00	9,272.94	526.16	182.51	21.39	1,625.44	1,596.30	19.13	55.777
10,900.00	10,900.00	0.00	0.00	24.39	9,450.00	9,272.94	526.16	182.51	21.39	1,719.73	1,690.60	19.13	59.049
11,000.00	11,000.00	0.00	0.00	24.61	9,473.79	9,280.69	548.64	183.05	21.50	1,813.98	1,784.61	18.45	61.759

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	25.30	0.00	148.74	-176.29	0.02	230.65	230.63	-49.84	10,000.000
100.00	100.00	0.00	0.00	0.11	125.30	100.00	148.74	-176.29	0.14	230.65	230.40	-49.84	909.737
200.00	200.00	0.00	0.00	0.34	225.30	200.00	148.74	-176.29	0.37	230.65	229.95	-49.84	328.064
300.00	300.00	0.00	0.00	0.56	325.30	300.00	148.74	-176.29	0.59	230.65	229.50	-49.84	200.114
400.00	400.00	0.00	0.00	0.79	425.30	400.00	148.74	-176.29	0.82	230.65	229.05	-49.84	143.965
500.00	500.00	0.00	0.00	1.01	525.30	500.00	148.74	-176.29	1.04	230.65	228.60	-49.84	112.422
600.00	600.00	0.00	0.00	1.24	625.30	600.00	148.74	-176.29	1.26	230.65	228.15	-49.84	92.216
700.00	700.00	0.00	0.00	1.46	725.30	700.00	148.74	-176.29	1.49	230.65	227.70	-49.84	78.168
800.00	800.00	0.00	0.00	1.69	825.30	800.00	148.74	-176.29	1.71	230.65	227.25	-49.84	67.833
900.00	900.00	0.00	0.00	1.91	925.30	900.00	148.74	-176.29	1.94	230.65	226.80	-49.84	59.913
1,000.00	1,000.00	0.00	0.00	2.14	1,025.30	1,000.00	148.74	-176.29	2.16	230.65	226.35	-49.84	53.648
1,100.00	1,100.00	0.00	0.00	2.36	1,125.30	1,100.00	148.74	-176.29	2.39	230.65	225.90	-49.84	48.570
1,200.00	1,200.00	0.00	0.00	2.58	1,225.30	1,200.00	148.74	-176.29	2.61	230.65	225.45	-49.84	44.370
1,300.00	1,300.00	0.00	0.00	2.81	1,325.30	1,300.00	148.74	-176.29	2.84	230.65	225.00	-49.84	40.838
1,400.00	1,400.00	0.00	0.00	3.03	1,425.30	1,400.00	148.74	-176.29	3.06	230.65	224.55	-49.84	37.827
1,500.00	1,500.00	0.00	0.00	3.26	1,525.30	1,500.00	148.74	-176.29	3.29	230.65	224.10	-49.84	35.230
1,600.00	1,600.00	0.00	0.00	3.48	1,625.30	1,600.00	148.74	-176.29	3.51	230.65	223.65	-49.84	32.967
1,700.00	1,700.00	0.00	0.00	3.71	1,725.30	1,700.00	148.74	-176.29	3.74	230.65	223.21	-49.84	30.976
1,800.00	1,800.00	0.00	0.00	3.93	1,825.30	1,800.00	148.74	-176.29	3.96	230.65	222.76	-49.84	29.213
1,900.00	1,900.00	0.00	0.00	4.16	1,925.30	1,900.00	148.74	-176.29	4.19	230.65	222.31	-49.84	27.639
2,000.00	2,000.00	0.00	0.00	4.38	2,025.30	2,000.00	148.74	-176.29	4.41	230.65	221.86	-49.84	26.226
2,100.00	2,100.00	0.00	0.00	4.61	2,125.30	2,100.00	148.74	-176.29	4.64	230.65	221.41	-49.84	24.951
2,200.00	2,200.00	0.00	0.00	4.83	2,225.30	2,200.00	148.74	-176.29	4.86	230.65	220.96	-49.84	23.794
2,300.00	2,300.00	0.00	0.00	5.06	2,325.30	2,300.00	148.74	-176.29	5.09	230.65	220.51	-49.84	22.739
2,400.00	2,400.00	0.00	0.00	5.28	2,425.30	2,400.00	148.74	-176.29	5.31	230.65	220.06	-49.84	21.774
2,500.00	2,500.00	0.00	0.00	5.51	2,525.30	2,500.00	148.74	-176.29	5.54	230.65	219.61	-49.84	20.888
2,600.00	2,600.00	0.00	0.00	5.73	2,625.30	2,600.00	148.74	-176.29	5.76	230.65	219.16	-49.84	20.071
2,700.00	2,700.00	0.00	0.00	5.96	2,725.30	2,700.00	148.74	-176.29	5.99	230.65	218.71	-49.84	19.315
2,800.00	2,800.00	0.00	0.00	6.18	2,825.30	2,800.00	148.74	-176.29	6.21	230.65	218.26	-49.84	18.615
2,900.00	2,900.00	0.00	0.00	6.41	2,925.30	2,900.00	148.74	-176.29	6.43	230.65	217.81	-49.84	17.963
3,000.00	3,000.00	0.00	0.00	6.63	3,025.30	3,000.00	148.74	-176.29	6.66	230.65	217.36	-49.84	17.355
3,100.00	3,100.00	0.00	0.00	6.86	3,125.30	3,100.00	148.74	-176.29	6.88	230.65	216.91	-49.84	16.787

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,225.30	3,200.00	148.74	-176.29	7.11	230.65	216.46	-49.84	16.256
3,300.00	3,300.00	0.00	0.00	7.30	3,325.30	3,300.00	148.74	-176.29	7.33	230.65	216.01	-49.84	15.756
3,400.00	3,400.00	0.00	0.00	7.53	3,425.30	3,400.00	148.74	-176.29	7.56	230.65	215.56	-49.84	15.287
3,500.00	3,500.00	0.00	0.00	7.75	3,525.30	3,500.00	148.74	-176.29	7.78	230.65	215.11	-49.84	14.845
3,600.00	3,600.00	0.00	0.00	7.98	3,625.30	3,600.00	148.74	-176.29	8.01	230.65	214.66	-49.84	14.427
3,700.00	3,700.00	0.00	0.00	8.20	3,725.30	3,700.00	148.74	-176.29	8.23	230.65	214.21	-49.84	14.033
3,800.00	3,800.00	0.00	0.00	8.43	3,825.30	3,800.00	148.74	-176.29	8.46	230.65	213.77	-49.84	13.659
3,900.00	3,900.00	0.00	0.00	8.65	3,925.30	3,900.00	148.74	-176.29	8.68	230.65	213.32	-49.84	13.305
4,000.00	4,000.00	0.00	0.00	8.88	4,025.30	4,000.00	148.74	-176.29	8.91	230.65	212.87	-49.84	12.969
4,100.00	4,100.00	0.00	0.00	9.10	4,125.30	4,100.00	148.74	-176.29	9.13	230.65	212.42	-49.84	12.649
4,200.00	4,200.00	0.00	0.00	9.33	4,225.30	4,200.00	148.74	-176.29	9.36	230.65	211.97	-49.84	12.345
4,300.00	4,300.00	0.00	0.00	9.55	4,325.30	4,300.00	148.74	-176.29	9.58	230.65	211.52	-49.84	12.055
4,400.00	4,400.00	0.00	0.00	9.78	4,425.30	4,400.00	148.74	-176.29	9.81	230.65	211.07	-49.84	11.778
4,500.00	4,500.00	0.00	0.00	10.00	4,525.30	4,500.00	148.74	-176.29	10.03	230.65	210.62	-49.84	11.514
4,600.00	4,600.00	0.00	0.00	10.23	4,625.30	4,600.00	148.74	-176.29	10.26	230.65	210.17	-49.84	11.261
4,700.00	4,700.00	0.00	0.00	10.45	4,725.30	4,700.00	148.74	-176.29	10.48	230.65	209.72	-49.84	11.019
4,800.00	4,800.00	0.00	0.00	10.68	4,825.30	4,800.00	148.74	-176.29	10.71	230.65	209.27	-49.84	10.787
4,900.00	4,900.00	0.00	0.00	10.90	4,925.30	4,900.00	148.74	-176.29	10.93	230.65	208.82	-49.84	10.565
5,000.00	5,000.00	0.00	0.00	11.13	5,025.30	5,000.00	148.74	-176.29	11.15	230.65	208.37	-49.84	10.352
5,100.00	5,100.00	0.00	0.00	11.35	5,125.30	5,100.00	148.74	-176.29	11.38	230.65	207.92	-49.84	10.147
5,200.00	5,200.00	0.00	0.00	11.58	5,225.30	5,200.00	148.74	-176.29	11.60	230.65	207.47	-49.84	9.951
5,300.00	5,300.00	0.00	0.00	11.80	5,325.30	5,300.00	148.74	-176.29	11.83	230.65	207.02	-49.84	9.761
5,400.00	5,400.00	0.00	0.00	12.02	5,425.30	5,400.00	148.74	-176.29	12.05	230.65	206.57	-49.84	9.579
5,500.00	5,500.00	0.00	0.00	12.25	5,525.30	5,500.00	148.74	-176.29	12.28	230.65	206.12	-49.84	9.403
5,600.00	5,600.00	0.00	0.00	12.47	5,625.30	5,600.00	148.74	-176.29	12.50	230.65	205.67	-49.84	9.234
5,700.00	5,700.00	0.00	0.00	12.70	5,725.30	5,700.00	148.74	-176.29	12.73	230.65	205.22	-49.84	9.071
5,800.00	5,800.00	0.00	0.00	12.92	5,825.30	5,800.00	148.74	-176.29	12.95	230.65	204.77	-49.84	8.913
5,900.00	5,900.00	0.00	0.00	13.15	5,925.30	5,900.00	148.74	-176.29	13.18	230.65	204.32	-49.84	8.761
6,000.00	6,000.00	0.00	0.00	13.37	6,025.30	6,000.00	148.74	-176.29	13.40	230.65	203.88	-49.84	8.614
6,100.00	6,100.00	0.00	0.00	13.60	6,125.30	6,100.00	148.74	-176.29	13.63	230.65	203.43	-49.84	8.472
6,200.00	6,200.00	0.00	0.00	13.82	6,225.30	6,200.00	148.74	-176.29	13.85	230.65	202.98	-49.84	8.334

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,300.00	6,300.00	0.00	0.00	14.05	6,325.30	6,300.00	148.74	-176.29	14.08	230.65	202.53	-49.84	8.201
6,400.00	6,400.00	0.00	0.00	14.27	6,425.30	6,400.00	148.74	-176.29	14.30	230.65	202.08	-49.84	8.072
6,500.00	6,500.00	0.00	0.00	14.50	6,525.30	6,500.00	148.74	-176.29	14.53	230.65	201.63	-49.84	7.947
6,600.00	6,600.00	0.00	0.00	14.72	6,625.30	6,600.00	148.74	-176.29	14.75	230.65	201.18	-49.84	7.826
6,700.00	6,700.00	0.00	0.00	14.95	6,725.30	6,700.00	148.74	-176.29	14.98	230.65	200.73	-49.84	7.708
6,800.00	6,800.00	0.00	0.00	15.17	6,825.30	6,800.00	148.74	-176.29	15.20	230.65	200.28	-49.84	7.594
6,900.00	6,900.00	0.00	0.00	15.40	6,925.30	6,900.00	148.74	-176.29	15.43	230.65	199.83	-49.84	7.483
7,000.00	7,000.00	0.00	0.00	15.62	7,025.30	7,000.00	148.74	-176.29	15.65	230.65	199.38	-49.84	7.376
7,100.00	7,100.00	0.00	0.00	15.85	7,125.30	7,100.00	148.74	-176.29	15.87	230.65	198.93	-49.84	7.271
7,200.00	7,200.00	0.00	0.00	16.07	7,225.30	7,200.00	148.74	-176.29	16.10	230.65	198.48	-49.84	7.170
7,300.00	7,300.00	0.00	0.00	16.30	7,325.30	7,300.00	148.74	-176.29	16.32	230.65	198.03	-49.84	7.071
7,400.00	7,400.00	0.00	0.00	16.52	7,425.30	7,400.00	148.74	-176.29	16.55	230.65	197.58	-49.84	6.975
7,500.00	7,500.00	0.00	0.00	16.75	7,525.30	7,500.00	148.74	-176.29	16.77	230.65	197.13	-49.84	6.881
7,600.00	7,600.00	0.00	0.00	16.97	7,625.30	7,600.00	148.74	-176.29	17.00	230.65	196.68	-49.84	6.790
7,700.00	7,700.00	0.00	0.00	17.19	7,725.30	7,700.00	148.74	-176.29	17.22	230.65	196.23	-49.84	6.701
7,800.00	7,800.00	0.00	0.00	17.42	7,825.30	7,800.00	148.74	-176.29	17.45	230.65	195.78	-49.84	6.615
7,900.00	7,900.00	0.00	0.00	17.64	7,925.30	7,900.00	148.74	-176.29	17.67	230.65	195.33	-49.84	6.531
8,000.00	8,000.00	0.00	0.00	17.87	8,025.30	8,000.00	148.74	-176.29	17.90	230.65	194.88	-49.84	6.449
8,100.00	8,100.00	0.00	0.00	18.09	8,125.30	8,100.00	148.74	-176.29	18.12	230.65	194.44	-49.84	6.369
8,200.00	8,200.00	0.00	0.00	18.32	8,225.30	8,200.00	148.74	-176.29	18.35	230.65	193.99	-49.84	6.291
8,300.00	8,300.00	0.00	0.00	18.54	8,325.30	8,300.00	148.74	-176.29	18.57	230.65	193.54	-49.84	6.214
8,400.00	8,400.00	0.00	0.00	18.77	8,425.30	8,400.00	148.74	-176.29	18.80	230.65	193.09	-49.84	6.140
8,500.00	8,500.00	0.00	0.00	18.99	8,525.30	8,500.00	148.74	-176.29	19.02	230.65	192.64	-49.84	6.068
8,600.00	8,600.00	0.00	0.00	19.22	8,625.30	8,600.00	148.74	-176.29	19.25	230.65	192.19	-49.84	5.997
8,700.00	8,700.00	0.00	0.00	19.44	8,725.30	8,700.00	148.74	-176.29	19.47	230.65	191.74	-49.84	5.927
8,800.00	8,800.00	0.00	0.00	19.67	8,825.30	8,800.00	148.74	-176.29	19.70	230.65	191.29	-49.84	5.860
8,900.00	8,900.00	0.00	0.00	19.89	8,925.30	8,900.00	148.74	-176.29	19.92	230.65	190.84	-49.84	5.793
9,000.00	9,000.00	0.00	0.00	20.12	9,025.30	9,000.00	148.74	-176.29	20.15	230.65	190.39	-49.84	5.729
9,100.00	9,100.00	0.00	0.00	20.34	9,125.30	9,100.00	148.74	-176.29	20.37	230.65	189.94	-49.84	5.666
9,200.00	9,200.00	0.00	0.00	20.57	9,225.30	9,200.00	148.74	-176.29	20.59	230.65	189.49	-49.84	5.604
9,300.00	9,300.00	0.00	0.00	20.79	9,325.30	9,300.00	148.74	-176.29	20.82	230.65	189.04	-49.84	5.543
9,400.00	9,400.00	0.00	0.00	21.02	9,425.30	9,400.00	148.74	-176.29	21.04	230.65	188.59	-49.84	5.484

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,500.00	9,500.00	0.00	0.00	21.24	9,525.30	9,500.00	148.74	-176.29	21.27	230.65	188.14	-49.84	5.426
9,600.00	9,600.00	0.00	0.00	21.47	9,625.30	9,600.00	148.74	-176.29	21.49	230.65	187.69	-49.84	5.369
9,700.00	9,700.00	0.00	0.00	21.69	9,725.30	9,700.00	148.74	-176.29	21.72	230.65	187.24	-49.84	5.313
9,800.00	9,800.00	0.00	0.00	21.91	9,825.30	9,800.00	148.74	-176.29	21.94	230.65	186.79	-49.84	5.259
9,900.00	9,900.00	0.00	0.00	22.14	9,925.30	9,900.00	148.74	-176.29	22.17	230.65	186.34	-49.84	5.206
10,000.00	10,000.00	0.00	0.00	22.36	10,025.30	10,000.00	148.74	-176.29	22.39	230.65	185.89	-49.84	5.153
10,100.00	10,100.00	0.00	0.00	22.59	10,125.30	10,100.00	148.74	-176.29	22.62	230.65	185.44	-49.84	5.102
10,200.00	10,200.00	0.00	0.00	22.81	10,225.30	10,200.00	148.74	-176.29	22.84	230.65	185.00	-49.84	5.052
10,300.00	10,300.00	0.00	0.00	23.04	10,325.30	10,300.00	148.74	-176.29	23.07	230.65	184.55	-49.84	5.003
10,400.00	10,400.00	0.00	0.00	23.26	10,425.30	10,400.00	148.74	-176.29	23.29	230.65	184.10	-49.84	4.954
10,500.00	10,500.00	0.00	0.00	23.49	10,510.53	10,485.15	151.23	-176.39	23.48	232.82	185.91	-49.39	4.963
10,600.00	10,600.00	0.00	0.00	23.71	10,586.99	10,560.58	163.40	-176.91	23.66	244.03	197.06	-47.27	5.195
10,700.00	10,700.00	0.00	0.00	23.94	10,659.04	10,629.58	183.95	-177.79	23.81	265.34	218.66	-44.03	5.684
10,800.00	10,800.00	0.00	0.00	24.16	10,725.01	10,690.05	210.21	-178.92	23.95	297.14	251.11	-40.40	6.455
10,900.00	10,900.00	0.00	0.00	24.39	10,784.14	10,741.36	239.52	-180.18	24.07	339.12	294.01	-36.95	7.519
11,000.00	11,000.00	0.00	0.00	24.61	10,836.36	10,783.96	269.67	-181.47	24.20	390.29	346.26	-33.94	8.863
11,100.00	11,100.00	0.00	0.00	24.84	10,882.11	10,818.87	299.17	-182.74	24.31	449.37	406.41	-31.42	10.461
11,200.00	11,200.00	0.00	0.00	25.06	10,922.02	10,847.33	327.12	-183.93	24.43	514.99	473.03	-29.35	12.274
11,300.00	11,300.00	0.00	0.00	25.29	10,950.00	10,866.09	347.86	-184.82	24.51	586.04	545.16	-27.98	14.336
11,400.00	11,400.00	0.00	0.00	25.51	10,987.24	10,889.45	376.83	-186.07	24.63	661.28	620.93	-26.28	16.391
11,500.00	11,500.00	0.00	0.00	25.74	11,013.90	10,904.98	398.47	-186.99	24.72	740.13	700.39	-25.14	18.625
11,600.00	11,600.00	0.00	0.00	25.96	11,037.36	10,917.81	418.10	-187.83	24.81	821.87	782.61	-24.19	20.934
11,700.00	11,700.00	0.00	0.00	26.19	11,050.00	10,924.38	428.88	-188.30	24.86	906.08	867.34	-23.70	23.390
11,800.00	11,800.00	0.00	0.00	26.41	11,076.52	10,937.39	451.97	-189.29	24.97	992.07	953.45	-22.72	25.686
11,900.00	11,899.88	3.35	-0.03	26.63	11,100.00	10,948.00	472.89	-190.18	25.07	1,078.29	1,039.79	-18.00	28.011
12,000.00	11,997.85	22.74	-0.22	26.86	11,100.00	10,948.00	472.89	-190.18	25.07	1,157.98	1,120.03	-14.33	30.517
12,100.00	12,090.97	58.85	-0.56	27.07	11,150.00	10,967.70	518.79	-192.15	25.30	1,228.82	1,190.81	-11.62	32.332
12,200.00	12,176.40	110.57	-1.05	27.26	11,150.00	10,967.70	518.79	-192.15	25.30	1,290.01	1,252.60	-10.16	34.479
12,300.00	12,251.55	176.35	-1.68	27.48	11,200.00	10,983.31	566.23	-194.19	25.55	1,340.71	1,303.35	-9.04	35.888
12,400.00	12,314.14	254.18	-2.42	27.73	11,200.00	10,983.31	566.23	-194.19	25.55	1,380.31	1,343.46	-8.39	37.456
12,500.00	12,362.26	341.69	-3.25	28.03	11,250.00	10,994.73	614.85	-196.27	25.84	1,407.84	1,371.04	-7.96	38.254
12,600.00	12,394.45	436.23	-4.15	28.38	11,272.11	10,998.42	636.62	-197.20	25.97	1,423.50	1,386.88	-7.75	38.876

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,700.00	12,409.74	534.92	-5.08	28.79	11,300.00	11,001.86	664.28	-198.39	26.14	1,426.96	1,390.39	-7.74	39.026
12,800.00	12,411.00	634.89	-6.03	29.25	11,329.69	11,004.05	693.86	-199.66	26.34	1,421.44	1,384.81	-7.81	38.804
12,885.50	12,411.00	720.38	-6.85	29.71	11,354.41	11,004.69	718.54	-200.72	26.50	1,419.61	1,382.81	-7.85	38.583
12,900.00	12,411.00	734.88	-6.99	29.79	11,362.44	11,004.70	726.56	-201.06	26.55	1,419.65	1,382.82	-7.86	38.541
13,000.00	12,411.00	834.88	-7.94	30.40	11,462.38	11,004.70	826.41	-205.34	27.30	1,420.11	1,382.89	-7.99	38.147
13,100.00	12,411.00	934.87	-8.89	31.09	11,562.33	11,004.70	926.27	-209.62	28.14	1,420.58	1,382.90	-8.13	37.703
13,200.00	12,411.00	1,034.87	-9.84	31.84	11,662.27	11,004.70	1,026.12	-213.91	29.07	1,421.06	1,382.87	-8.26	37.211
13,300.00	12,411.00	1,134.86	-10.79	32.65	11,762.21	11,004.70	1,125.97	-218.19	30.08	1,421.54	1,382.78	-8.39	36.677
13,400.00	12,411.00	1,234.86	-11.74	33.51	11,862.16	11,004.70	1,225.82	-222.47	31.17	1,422.03	1,382.65	-8.53	36.107
13,500.00	12,411.00	1,334.86	-12.69	34.43	11,962.10	11,004.70	1,325.68	-226.75	32.33	1,422.53	1,382.47	-8.66	35.508
13,600.00	12,411.00	1,434.85	-13.64	35.40	12,062.05	11,004.70	1,425.53	-231.03	33.55	1,423.03	1,382.24	-8.79	34.884
13,700.00	12,411.00	1,534.85	-14.59	36.41	12,161.99	11,004.70	1,525.38	-235.31	34.82	1,423.55	1,381.97	-8.92	34.242
13,800.00	12,411.00	1,634.84	-15.54	37.46	12,261.94	11,004.70	1,625.23	-239.59	36.14	1,424.07	1,381.67	-9.06	33.586
13,900.00	12,411.00	1,734.84	-16.49	38.55	12,361.88	11,004.70	1,725.09	-243.88	37.51	1,424.60	1,381.32	-9.19	32.921
14,000.00	12,411.00	1,834.83	-17.44	39.67	12,461.82	11,004.70	1,824.94	-248.16	38.92	1,425.13	1,380.95	-9.32	32.252
14,100.00	12,411.00	1,934.83	-18.39	40.82	12,561.77	11,004.70	1,924.79	-252.44	40.35	1,425.68	1,380.53	-9.45	31.581
14,200.00	12,411.00	2,034.82	-19.34	42.01	12,661.71	11,004.70	2,024.65	-256.72	41.83	1,426.23	1,380.09	-9.58	30.912
14,300.00	12,411.00	2,134.82	-20.29	43.22	12,761.66	11,004.70	2,124.50	-261.00	43.32	1,426.79	1,379.62	-9.72	30.247
14,400.00	12,411.00	2,234.81	-21.24	44.45	12,861.60	11,004.70	2,224.35	-265.28	44.85	1,427.36	1,379.12	-9.85	29.590
14,500.00	12,411.00	2,334.81	-22.19	45.71	12,961.55	11,004.70	2,324.20	-269.56	46.40	1,427.93	1,378.59	-9.98	28.942
14,600.00	12,411.00	2,434.81	-23.14	46.99	13,061.49	11,004.70	2,424.06	-273.85	47.96	1,428.51	1,378.04	-10.11	28.305
14,700.00	12,411.00	2,534.80	-24.09	48.28	13,161.44	11,004.70	2,523.91	-278.13	49.55	1,429.10	1,377.47	-10.24	27.680
14,800.00	12,411.00	2,634.80	-25.04	49.60	13,261.38	11,004.70	2,623.76	-282.41	51.15	1,429.70	1,376.88	-10.37	27.067
14,900.00	12,411.00	2,734.79	-26.00	50.93	13,361.32	11,004.70	2,723.61	-286.69	52.77	1,430.30	1,376.26	-10.51	26.468
15,000.00	12,411.00	2,834.79	-26.95	52.27	13,461.27	11,004.70	2,823.47	-290.97	54.41	1,430.91	1,375.63	-10.64	25.884
15,100.00	12,411.00	2,934.78	-27.90	53.63	13,561.21	11,004.70	2,923.32	-295.25	56.05	1,431.53	1,374.98	-10.77	25.314
15,200.00	12,411.00	3,034.78	-28.85	55.00	13,661.16	11,004.70	3,023.17	-299.53	57.71	1,432.16	1,374.32	-10.90	24.760
15,300.00	12,411.00	3,134.77	-29.80	56.38	13,761.10	11,004.70	3,123.02	-303.82	59.38	1,432.80	1,373.64	-11.03	24.220
15,400.00	12,411.00	3,234.77	-30.75	57.78	13,861.05	11,004.70	3,222.88	-308.10	61.06	1,433.44	1,372.94	-11.16	23.696
15,500.00	12,411.00	3,334.76	-31.70	59.18	13,960.99	11,004.70	3,322.73	-312.38	62.74	1,434.09	1,372.24	-11.29	23.186
15,600.00	12,411.00	3,434.76	-32.65	60.60	14,060.94	11,004.70	3,422.58	-316.66	64.44	1,434.74	1,371.51	-11.42	22.691

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 502H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor	
15,700.00	12,411.00	3,534.76	-33.60	62.02	14,160.88	11,004.70	3,522.44	-320.94	66.14	1,435.41	1,370.78	-11.55	22.211	
15,800.00	12,411.00	3,634.75	-34.55	63.45	14,260.82	11,004.70	3,622.29	-325.22	67.85	1,436.08	1,370.04	-11.68	21.745	
15,900.00	12,411.00	3,734.75	-35.50	64.89	14,360.77	11,004.70	3,722.14	-329.50	69.57	1,436.76	1,369.28	-11.81	21.293	
16,000.00	12,411.00	3,834.74	-36.45	66.33	14,460.71	11,004.70	3,821.99	-333.79	71.29	1,437.45	1,368.52	-11.94	20.855	
16,100.00	12,411.00	3,934.74	-37.40	67.79	14,560.66	11,004.70	3,921.85	-338.07	73.02	1,438.14	1,367.75	-12.07	20.430	
16,200.00	12,411.00	4,034.73	-38.35	69.24	14,660.60	11,004.70	4,021.70	-342.35	74.75	1,438.84	1,366.96	-12.20	20.018	
16,300.00	12,411.00	4,134.73	-39.30	70.71	14,760.55	11,004.70	4,121.55	-346.63	76.49	1,439.55	1,366.17	-12.33	19.619	
16,400.00	12,411.00	4,234.72	-40.25	72.18	14,860.49	11,004.70	4,221.40	-350.91	78.23	1,440.27	1,365.37	-12.46	19.231	
16,500.00	12,411.00	4,334.72	-41.20	73.65	14,960.43	11,004.70	4,321.26	-355.19	79.98	1,440.99	1,364.57	-12.59	18.856	
16,600.00	12,411.00	4,434.72	-42.15	75.13	15,060.38	11,004.70	4,421.11	-359.47	81.73	1,441.72	1,363.75	-12.72	18.492	
16,700.00	12,411.00	4,534.71	-43.10	76.62	15,160.32	11,004.70	4,520.96	-363.76	83.49	1,442.46	1,362.93	-12.85	18.139	
16,800.00	12,411.00	4,634.71	-44.05	78.11	15,260.27	11,004.70	4,620.81	-368.04	85.25	1,443.20	1,362.11	-12.98	17.796	
16,900.00	12,411.00	4,734.70	-45.01	79.60	15,360.21	11,004.70	4,720.67	-372.32	87.01	1,443.96	1,361.28	-13.11	17.464	
16,963.93	12,411.00	4,798.63	-45.61	80.56	15,424.11	11,004.70	4,784.51	-375.06	88.14	1,444.44	1,360.74	-13.19	17.257	

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	50.60	0.00	-9.38	-1,319.72	0.04	1,319.75	1,319.71	-90.41	10,000.000
100.00	100.00	0.00	0.00	0.11	150.60	100.00	-9.38	-1,319.72	0.20	1,319.75	1,319.44	-90.41	4,251.752
200.00	200.00	0.00	0.00	0.34	250.60	200.00	-9.38	-1,319.72	0.42	1,319.75	1,318.99	-90.41	1,736.667
300.00	300.00	0.00	0.00	0.56	350.60	300.00	-9.38	-1,319.72	0.65	1,319.75	1,318.54	-90.41	1,091.186
400.00	400.00	0.00	0.00	0.79	450.60	400.00	-9.38	-1,319.72	0.87	1,319.75	1,318.09	-90.41	795.512
500.00	500.00	0.00	0.00	1.01	550.60	500.00	-9.38	-1,319.72	1.10	1,319.75	1,317.64	-90.41	625.911
600.00	600.00	0.00	0.00	1.24	650.60	600.00	-9.38	-1,319.72	1.32	1,319.75	1,317.19	-90.41	515.919
700.00	700.00	0.00	0.00	1.46	750.60	700.00	-9.38	-1,319.72	1.55	1,319.75	1,316.74	-90.41	438.807
800.00	800.00	0.00	0.00	1.69	850.60	800.00	-9.38	-1,319.72	1.77	1,319.75	1,316.30	-90.41	381.748
900.00	900.00	0.00	0.00	1.91	950.60	900.00	-9.38	-1,319.72	2.00	1,319.75	1,315.85	-90.41	337.821
1,000.00	1,000.00	0.00	0.00	2.14	1,050.60	1,000.00	-9.38	-1,319.72	2.22	1,319.75	1,315.40	-90.41	302.960
1,100.00	1,100.00	0.00	0.00	2.36	1,150.60	1,100.00	-9.38	-1,319.72	2.45	1,319.75	1,314.95	-90.41	274.621
1,200.00	1,200.00	0.00	0.00	2.58	1,250.60	1,200.00	-9.38	-1,319.72	2.67	1,319.75	1,314.50	-90.41	251.130
1,300.00	1,300.00	0.00	0.00	2.81	1,350.60	1,300.00	-9.38	-1,319.72	2.90	1,319.75	1,314.05	-90.41	231.341
1,400.00	1,400.00	0.00	0.00	3.03	1,450.60	1,400.00	-9.38	-1,319.72	3.12	1,319.75	1,313.60	-90.41	214.443
1,500.00	1,500.00	0.00	0.00	3.26	1,550.60	1,500.00	-9.38	-1,319.72	3.34	1,319.75	1,313.15	-90.41	199.846
1,600.00	1,600.00	0.00	0.00	3.48	1,650.60	1,600.00	-9.38	-1,319.72	3.57	1,319.75	1,312.70	-90.41	187.109
1,700.00	1,700.00	0.00	0.00	3.71	1,750.60	1,700.00	-9.38	-1,319.72	3.79	1,319.75	1,312.25	-90.41	175.899
1,800.00	1,800.00	0.00	0.00	3.93	1,850.60	1,800.00	-9.38	-1,319.72	4.02	1,319.75	1,311.80	-90.41	165.956
1,900.00	1,900.00	0.00	0.00	4.16	1,950.60	1,900.00	-9.38	-1,319.72	4.24	1,319.75	1,311.35	-90.41	157.076
2,000.00	2,000.00	0.00	0.00	4.38	2,050.60	2,000.00	-9.38	-1,319.72	4.47	1,319.75	1,310.90	-90.41	149.099
2,100.00	2,100.00	0.00	0.00	4.61	2,150.60	2,100.00	-9.38	-1,319.72	4.69	1,319.75	1,310.45	-90.41	141.893
2,200.00	2,200.00	0.00	0.00	4.83	2,250.60	2,200.00	-9.38	-1,319.72	4.92	1,319.75	1,310.00	-90.41	135.351
2,300.00	2,300.00	0.00	0.00	5.06	2,350.60	2,300.00	-9.38	-1,319.72	5.14	1,319.75	1,309.55	-90.41	129.386
2,400.00	2,400.00	0.00	0.00	5.28	2,450.60	2,400.00	-9.38	-1,319.72	5.37	1,319.75	1,309.10	-90.41	123.925
2,500.00	2,500.00	0.00	0.00	5.51	2,550.60	2,500.00	-9.38	-1,319.72	5.59	1,319.75	1,308.65	-90.41	118.905
2,600.00	2,600.00	0.00	0.00	5.73	2,650.60	2,600.00	-9.38	-1,319.72	5.82	1,319.75	1,308.20	-90.41	114.277
2,700.00	2,700.00	0.00	0.00	5.96	2,750.60	2,700.00	-9.38	-1,319.72	6.04	1,319.75	1,307.75	-90.41	109.996
2,800.00	2,800.00	0.00	0.00	6.18	2,850.60	2,800.00	-9.38	-1,319.72	6.27	1,319.75	1,307.30	-90.41	106.023
2,900.00	2,900.00	0.00	0.00	6.41	2,950.60	2,900.00	-9.38	-1,319.72	6.49	1,319.75	1,306.85	-90.41	102.023
3,000.00	3,000.00	0.00	0.00	6.63	3,050.60	3,000.00	-9.38	-1,319.72	6.72	1,319.75	1,306.41	-90.41	98.881

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,100.00	3,100.00	0.00	0.00	6.86	3,150.60	3,100.00	-9.38	-1,319.72	6.94	1,319.75	1,305.96	-90.41	95.659
3,200.00	3,200.00	0.00	0.00	7.08	3,250.60	3,200.00	-9.38	-1,319.72	7.17	1,319.75	1,305.51	-90.41	92.641
3,300.00	3,300.00	0.00	0.00	7.30	3,350.60	3,300.00	-9.38	-1,319.72	7.39	1,319.75	1,305.06	-90.41	89.807
3,400.00	3,400.00	0.00	0.00	7.53	3,450.60	3,400.00	-9.38	-1,319.72	7.62	1,319.75	1,304.61	-90.41	87.141
3,500.00	3,500.00	0.00	0.00	7.75	3,550.60	3,500.00	-9.38	-1,319.72	7.84	1,319.75	1,304.16	-90.41	84.629
3,600.00	3,600.00	0.00	0.00	7.98	3,650.60	3,600.00	-9.38	-1,319.72	8.06	1,319.75	1,303.71	-90.41	82.258
3,700.00	3,700.00	0.00	0.00	8.20	3,750.60	3,700.00	-9.38	-1,319.72	8.29	1,319.75	1,303.26	-90.41	80.016
3,800.00	3,800.00	0.00	0.00	8.43	3,850.60	3,800.00	-9.38	-1,319.72	8.51	1,319.75	1,302.81	-90.41	77.893
3,900.00	3,900.00	0.00	0.00	8.65	3,950.60	3,900.00	-9.38	-1,319.72	8.74	1,319.75	1,302.36	-90.41	75.880
4,000.00	4,000.00	0.00	0.00	8.88	4,050.60	4,000.00	-9.38	-1,319.72	8.96	1,319.75	1,301.91	-90.41	73.968
4,100.00	4,100.00	0.00	0.00	9.10	4,150.60	4,100.00	-9.38	-1,319.72	9.19	1,319.75	1,301.46	-90.41	72.150
4,200.00	4,200.00	0.00	0.00	9.33	4,250.60	4,200.00	-9.38	-1,319.72	9.41	1,319.75	1,301.01	-90.41	70.420
4,300.00	4,300.00	0.00	0.00	9.55	4,350.60	4,300.00	-9.38	-1,319.72	9.64	1,319.75	1,300.56	-90.41	68.770
4,400.00	4,400.00	0.00	0.00	9.78	4,450.60	4,400.00	-9.38	-1,319.72	9.86	1,319.75	1,300.11	-90.41	67.196
4,500.00	4,500.00	0.00	0.00	10.00	4,550.60	4,500.00	-9.38	-1,319.72	10.09	1,319.75	1,299.66	-90.41	65.693
4,600.00	4,600.00	0.00	0.00	10.23	4,650.60	4,600.00	-9.38	-1,319.72	10.31	1,319.75	1,299.21	-90.41	64.255
4,700.00	4,700.00	0.00	0.00	10.45	4,750.60	4,700.00	-9.38	-1,319.72	10.54	1,319.75	1,298.76	-90.41	62.879
4,800.00	4,800.00	0.00	0.00	10.68	4,850.60	4,800.00	-9.38	-1,319.72	10.76	1,319.75	1,298.31	-90.41	61.560
4,900.00	4,900.00	0.00	0.00	10.90	4,950.60	4,900.00	-9.38	-1,319.72	10.99	1,319.75	1,297.86	-90.41	60.296
5,000.00	5,000.00	0.00	0.00	11.13	5,050.60	5,000.00	-9.38	-1,319.72	11.21	1,319.75	1,297.41	-90.41	59.082
5,100.00	5,100.00	0.00	0.00	11.35	5,150.60	5,100.00	-9.38	-1,319.72	11.44	1,319.75	1,296.97	-90.41	57.917
5,200.00	5,200.00	0.00	0.00	11.58	5,250.60	5,200.00	-9.38	-1,319.72	11.66	1,319.75	1,296.52	-90.41	56.796
5,300.00	5,300.00	0.00	0.00	11.80	5,350.60	5,300.00	-9.38	-1,319.72	11.89	1,319.75	1,296.07	-90.41	55.719
5,400.00	5,400.00	0.00	0.00	12.02	5,450.60	5,400.00	-9.38	-1,319.72	12.11	1,319.75	1,295.62	-90.41	54.681
5,500.00	5,500.00	0.00	0.00	12.25	5,550.60	5,500.00	-9.38	-1,319.72	12.34	1,319.75	1,295.17	-90.41	53.681
5,600.00	5,600.00	0.00	0.00	12.47	5,650.60	5,600.00	-9.38	-1,319.72	12.56	1,319.75	1,294.72	-90.41	52.717
5,700.00	5,700.00	0.00	0.00	12.70	5,750.60	5,700.00	-9.38	-1,319.72	12.78	1,319.75	1,294.27	-90.41	51.787
5,800.00	5,800.00	0.00	0.00	12.92	5,850.60	5,800.00	-9.38	-1,319.72	13.01	1,319.75	1,293.82	-90.41	50.889
5,900.00	5,900.00	0.00	0.00	13.15	5,950.60	5,900.00	-9.38	-1,319.72	13.23	1,319.75	1,293.37	-90.41	50.022
6,000.00	6,000.00	0.00	0.00	13.37	6,050.60	6,000.00	-9.38	-1,319.72	13.46	1,319.75	1,292.92	-90.41	49.184
6,100.00	6,100.00	0.00	0.00	13.60	6,150.60	6,100.00	-9.38	-1,319.72	13.68	1,319.75	1,292.47	-90.41	48.374
6,200.00	6,200.00	0.00	0.00	13.82	6,250.60	6,200.00	-9.38	-1,319.72	13.91	1,319.75	1,292.02	-90.41	47.590

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,300.00	6,300.00	0.00	0.00	14.05	6,350.60	6,300.00	-9.38	-1,319.72	14.13	1,319.75	1,291.57	-90.41	46.831
6,400.00	6,400.00	0.00	0.00	14.27	6,450.60	6,400.00	-9.38	-1,319.72	14.36	1,319.75	1,291.12	-90.41	46.095
6,500.00	6,500.00	0.00	0.00	14.50	6,550.60	6,500.00	-9.38	-1,319.72	14.58	1,319.75	1,290.67	-90.41	45.383
6,600.00	6,600.00	0.00	0.00	14.72	6,650.60	6,600.00	-9.38	-1,319.72	14.81	1,319.75	1,290.22	-90.41	44.692
6,700.00	6,700.00	0.00	0.00	14.95	6,750.60	6,700.00	-9.38	-1,319.72	15.03	1,319.75	1,289.77	-90.41	44.022
6,800.00	6,800.00	0.00	0.00	15.17	6,850.60	6,800.00	-9.38	-1,319.72	15.26	1,319.75	1,289.32	-90.41	43.371
6,900.00	6,900.00	0.00	0.00	15.40	6,950.60	6,900.00	-9.38	-1,319.72	15.48	1,319.75	1,288.87	-90.41	42.740
7,000.00	7,000.00	0.00	0.00	15.62	7,050.60	7,000.00	-9.38	-1,319.72	15.71	1,319.75	1,288.42	-90.41	42.127
7,100.00	7,100.00	0.00	0.00	15.85	7,150.60	7,100.00	-9.38	-1,319.72	15.93	1,319.75	1,287.97	-90.41	41.531
7,200.00	7,200.00	0.00	0.00	16.07	7,250.60	7,200.00	-9.38	-1,319.72	16.16	1,319.75	1,287.53	-90.41	40.952
7,300.00	7,300.00	0.00	0.00	16.30	7,350.60	7,300.00	-9.38	-1,319.72	16.38	1,319.75	1,287.08	-90.41	40.388
7,400.00	7,400.00	0.00	0.00	16.52	7,450.60	7,400.00	-9.38	-1,319.72	16.61	1,319.75	1,286.63	-90.41	39.840
7,500.00	7,500.00	0.00	0.00	16.75	7,550.60	7,500.00	-9.38	-1,319.72	16.83	1,319.75	1,286.18	-90.41	39.307
7,600.00	7,600.00	0.00	0.00	16.97	7,650.60	7,600.00	-9.38	-1,319.72	17.06	1,319.75	1,285.73	-90.41	38.787
7,700.00	7,700.00	0.00	0.00	17.19	7,750.60	7,700.00	-9.38	-1,319.72	17.28	1,319.75	1,285.28	-90.41	38.282
7,800.00	7,800.00	0.00	0.00	17.42	7,850.60	7,800.00	-9.38	-1,319.72	17.51	1,319.75	1,284.83	-90.41	37.789
7,900.00	7,900.00	0.00	0.00	17.64	7,950.60	7,900.00	-9.38	-1,319.72	17.73	1,319.75	1,284.38	-90.41	37.309
8,000.00	8,000.00	0.00	0.00	17.87	8,050.60	8,000.00	-9.38	-1,319.72	17.95	1,319.75	1,283.93	-90.41	36.840
8,100.00	8,100.00	0.00	0.00	18.09	8,150.60	8,100.00	-9.38	-1,319.72	18.18	1,319.75	1,283.48	-90.41	36.384
8,200.00	8,200.00	0.00	0.00	18.32	8,250.60	8,200.00	-9.38	-1,319.72	18.40	1,319.75	1,283.03	-90.41	35.939
8,300.00	8,300.00	0.00	0.00	18.54	8,350.60	8,300.00	-9.38	-1,319.72	18.63	1,319.75	1,282.58	-90.41	35.504
8,400.00	8,400.00	0.00	0.00	18.77	8,450.60	8,400.00	-9.38	-1,319.72	18.85	1,319.75	1,282.13	-90.41	35.080
8,500.00	8,500.00	0.00	0.00	18.99	8,550.60	8,500.00	-9.38	-1,319.72	19.08	1,319.75	1,281.68	-90.41	34.665
8,600.00	8,600.00	0.00	0.00	19.22	8,650.60	8,600.00	-9.38	-1,319.72	19.30	1,319.75	1,281.23	-90.41	34.261
8,700.00	8,700.00	0.00	0.00	19.44	8,750.60	8,700.00	-9.38	-1,319.72	19.53	1,319.75	1,280.78	-90.41	33.866
8,800.00	8,800.00	0.00	0.00	19.67	8,850.60	8,800.00	-9.38	-1,319.72	19.75	1,319.75	1,280.33	-90.41	33.480
8,900.00	8,900.00	0.00	0.00	19.89	8,950.60	8,900.00	-9.38	-1,319.72	19.98	1,319.75	1,279.88	-90.41	33.102
9,000.00	9,000.00	0.00	0.00	20.12	9,050.60	9,000.00	-9.38	-1,319.72	20.20	1,319.75	1,279.43	-90.41	32.733
9,100.00	9,100.00	0.00	0.00	20.34	9,150.60	9,100.00	-9.38	-1,319.72	20.43	1,319.75	1,278.98	-90.41	32.372
9,200.00	9,200.00	0.00	0.00	20.57	9,250.60	9,200.00	-9.38	-1,319.72	20.65	1,319.75	1,278.53	-90.41	32.019
9,300.00	9,300.00	0.00	0.00	20.79	9,350.60	9,300.00	-9.38	-1,319.72	20.88	1,319.75	1,278.08	-90.41	31.674
9,400.00	9,400.00	0.00	0.00	21.02	9,450.60	9,400.00	-9.38	-1,319.72	21.10	1,319.75	1,277.64	-90.41	31.335

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well				Uncertainty Data for Comparison Well				Separation (Ref. > Comp.)					
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,500.00	9,500.00	0.00	0.00	21.24	9,550.60	9,500.00	-9.38	-1,319.72	21.33	1,319.75	1,277.19	-90.41	31.005
9,600.00	9,600.00	0.00	0.00	21.47	9,650.60	9,600.00	-9.38	-1,319.72	21.55	1,319.75	1,276.74	-90.41	30.681
9,700.00	9,700.00	0.00	0.00	21.69	9,750.60	9,700.00	-9.38	-1,319.72	21.78	1,319.75	1,276.29	-90.41	30.363
9,800.00	9,800.00	0.00	0.00	21.91	9,850.60	9,800.00	-9.38	-1,319.72	22.00	1,319.75	1,275.84	-90.41	30.052
9,900.00	9,900.00	0.00	0.00	22.14	9,950.60	9,900.00	-9.38	-1,319.72	22.23	1,319.75	1,275.39	-90.41	29.748
10,000.00	10,000.00	0.00	0.00	22.36	10,050.60	10,000.00	-9.38	-1,319.72	22.45	1,319.75	1,274.94	-90.41	29.450
10,100.00	10,100.00	0.00	0.00	22.59	10,150.60	10,100.00	-9.38	-1,319.72	22.67	1,319.75	1,274.49	-90.41	29.157
10,200.00	10,200.00	0.00	0.00	22.81	10,250.60	10,200.00	-9.38	-1,319.72	22.90	1,319.75	1,274.04	-90.41	28.870
10,300.00	10,300.00	0.00	0.00	23.04	10,350.60	10,300.00	-9.38	-1,319.72	23.12	1,319.75	1,273.59	-90.41	28.589
10,400.00	10,400.00	0.00	0.00	23.26	10,450.60	10,400.00	-9.38	-1,319.72	23.35	1,319.75	1,273.14	-90.41	28.313
10,500.00	10,500.00	0.00	0.00	23.49	10,550.60	10,500.00	-9.38	-1,319.72	23.57	1,319.75	1,272.69	-90.41	28.043
10,600.00	10,600.00	0.00	0.00	23.71	10,650.60	10,600.00	-9.38	-1,319.72	23.80	1,319.75	1,272.24	-90.41	27.778
10,700.00	10,700.00	0.00	0.00	23.94	10,750.60	10,700.00	-9.38	-1,319.72	24.02	1,319.75	1,271.79	-90.41	27.517
10,800.00	10,800.00	0.00	0.00	24.16	10,850.60	10,800.00	-9.38	-1,319.72	24.25	1,319.75	1,271.34	-90.41	27.262
10,900.00	10,900.00	0.00	0.00	24.39	10,950.60	10,900.00	-9.38	-1,319.72	24.47	1,319.75	1,270.89	-90.41	27.011
11,000.00	11,000.00	0.00	0.00	24.61	11,050.60	11,000.00	-9.38	-1,319.72	24.70	1,319.75	1,270.44	-90.41	26.765
11,100.00	11,100.00	0.00	0.00	24.84	11,150.60	11,100.00	-9.38	-1,319.72	24.92	1,319.75	1,269.99	-90.41	26.523
11,200.00	11,200.00	0.00	0.00	25.06	11,250.60	11,200.00	-9.38	-1,319.72	25.15	1,319.75	1,269.54	-90.41	26.285
11,300.00	11,300.00	0.00	0.00	25.29	11,350.60	11,300.00	-9.38	-1,319.72	25.37	1,319.75	1,269.09	-90.41	26.052
11,400.00	11,400.00	0.00	0.00	25.51	11,450.60	11,400.00	-9.38	-1,319.72	25.60	1,319.75	1,268.64	-90.41	25.823
11,500.00	11,500.00	0.00	0.00	25.74	11,550.60	11,500.00	-9.38	-1,319.72	25.82	1,319.75	1,268.20	-90.41	25.598
11,600.00	11,600.00	0.00	0.00	25.96	11,650.60	11,600.00	-9.38	-1,319.72	26.05	1,319.75	1,267.75	-90.41	25.377
11,700.00	11,700.00	0.00	0.00	26.19	11,750.60	11,700.00	-9.38	-1,319.72	26.27	1,319.75	1,267.30	-90.41	25.159
11,800.00	11,800.00	0.00	0.00	26.41	11,850.60	11,800.00	-9.38	-1,319.72	26.50	1,319.75	1,266.85	-90.41	24.945
11,876.56	11,876.47	3.17	-0.03	26.58	11,927.07	11,876.47	-9.38	-1,319.72	26.67	1,319.75	1,266.50	-90.00	24.785
11,900.00	11,899.88	3.35	-0.03	26.63	11,950.48	11,899.88	-9.38	-1,319.72	26.72	1,319.75	1,266.40	-90.01	24.736
12,000.00	11,997.85	22.74	-0.22	26.86	12,049.98	11,999.32	-7.37	-1,319.74	26.94	1,319.87	1,266.08	-90.75	24.538
12,100.00	12,090.97	58.85	-0.56	27.07	12,152.99	12,100.65	10.39	-1,319.91	27.17	1,320.27	1,266.06	-91.58	24.354
12,200.00	12,176.40	110.57	-1.05	27.26	12,259.94	12,200.72	47.69	-1,320.26	27.40	1,320.93	1,266.29	-92.39	24.176
12,300.00	12,251.55	176.35	-1.68	27.48	12,370.99	12,295.41	105.36	-1,320.81	27.63	1,321.77	1,266.68	-93.13	23.992
12,400.00	12,314.14	254.18	-2.42	27.73	12,486.10	12,379.93	183.21	-1,321.55	27.92	1,322.68	1,267.06	-93.78	23.782

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,500.00	12,362.26	341.69	-3.25	28.03	12,604.92	12,449.07	279.59	-1,322.47	28.30	1,323.53	1,267.27	-94.31	23.523
12,600.00	12,394.45	436.23	-4.15	28.38	12,726.79	12,497.81	391.03	-1,323.53	28.80	1,324.20	1,267.11	-94.69	23.195
12,700.00	12,409.74	534.92	-5.08	28.79	12,850.67	12,522.10	512.26	-1,324.68	29.42	1,324.57	1,266.46	-94.88	22.796
12,800.00	12,411.00	634.89	-6.03	29.25	12,960.81	12,524.40	622.32	-1,325.73	30.10	1,324.62	1,265.39	-94.91	22.362
12,900.00	12,411.00	734.88	-6.99	29.79	13,060.81	12,524.40	722.32	-1,326.68	30.80	1,324.62	1,264.15	-94.91	21.907
13,000.00	12,411.00	834.88	-7.94	30.40	13,160.81	12,524.40	822.31	-1,327.64	31.58	1,324.62	1,262.76	-94.91	21.412
13,100.00	12,411.00	934.87	-8.89	31.09	13,260.81	12,524.40	922.31	-1,328.59	32.46	1,324.62	1,261.21	-94.91	20.889
13,200.00	12,411.00	1,034.87	-9.84	31.84	13,360.81	12,524.40	1,022.31	-1,329.54	33.41	1,324.63	1,259.52	-94.91	20.346
13,300.00	12,411.00	1,134.86	-10.79	32.65	13,460.81	12,524.40	1,122.30	-1,330.49	34.43	1,324.63	1,257.70	-94.91	19.792
13,400.00	12,411.00	1,234.86	-11.74	33.51	13,560.81	12,524.40	1,222.30	-1,331.44	35.51	1,324.63	1,255.76	-94.91	19.233
13,500.00	12,411.00	1,334.86	-12.69	34.43	13,660.81	12,524.40	1,322.29	-1,332.40	36.66	1,324.63	1,253.70	-94.91	18.676
13,600.00	12,411.00	1,434.85	-13.64	35.40	13,760.81	12,524.40	1,422.29	-1,333.35	37.86	1,324.63	1,251.55	-94.91	18.125
13,700.00	12,411.00	1,534.85	-14.59	36.41	13,860.81	12,524.40	1,522.28	-1,334.30	39.10	1,324.63	1,249.30	-94.91	17.584
13,800.00	12,411.00	1,634.84	-15.54	37.46	13,960.81	12,524.40	1,622.28	-1,335.25	40.39	1,324.63	1,246.97	-94.91	17.055
13,900.00	12,411.00	1,734.84	-16.49	38.55	14,060.81	12,524.40	1,722.27	-1,336.20	41.73	1,324.64	1,244.56	-94.91	16.541
14,000.00	12,411.00	1,834.83	-17.44	39.67	14,160.81	12,524.40	1,822.27	-1,337.16	43.09	1,324.64	1,242.08	-94.91	16.044
14,100.00	12,411.00	1,934.83	-18.39	40.82	14,260.81	12,524.40	1,922.26	-1,338.11	44.50	1,324.64	1,239.53	-94.91	15.564
14,200.00	12,411.00	2,034.82	-19.34	42.01	14,360.81	12,524.40	2,022.26	-1,339.06	45.93	1,324.64	1,236.93	-94.91	15.102
14,300.00	12,411.00	2,134.82	-20.29	43.22	14,460.81	12,524.40	2,122.26	-1,340.01	47.39	1,324.64	1,234.27	-94.91	14.657
14,400.00	12,411.00	2,234.81	-21.24	44.45	14,560.81	12,524.40	2,222.25	-1,340.96	48.87	1,324.64	1,231.56	-94.91	14.231
14,500.00	12,411.00	2,334.81	-22.19	45.71	14,660.81	12,524.40	2,322.25	-1,341.92	50.38	1,324.64	1,228.81	-94.91	13.822
14,600.00	12,411.00	2,434.81	-23.14	46.99	14,760.81	12,524.40	2,422.24	-1,342.87	51.90	1,324.65	1,226.01	-94.91	13.430
14,700.00	12,411.00	2,534.80	-24.09	48.28	14,860.81	12,524.40	2,522.24	-1,343.82	53.45	1,324.65	1,223.18	-94.91	13.055
14,800.00	12,411.00	2,634.80	-25.04	49.60	14,960.81	12,524.40	2,622.23	-1,344.77	55.01	1,324.65	1,220.32	-94.91	12.696
14,900.00	12,411.00	2,734.79	-26.00	50.93	15,060.81	12,524.40	2,722.23	-1,345.72	56.59	1,324.65	1,217.42	-94.91	12.353
15,000.00	12,411.00	2,834.79	-26.95	52.27	15,160.81	12,524.40	2,822.22	-1,346.67	58.19	1,324.65	1,214.49	-94.91	12.025
15,100.00	12,411.00	2,934.78	-27.90	53.63	15,260.81	12,524.40	2,922.22	-1,347.63	59.79	1,324.65	1,211.54	-94.91	11.710
15,200.00	12,411.00	3,034.78	-28.85	55.00	15,360.81	12,524.40	3,022.22	-1,348.58	61.41	1,324.65	1,208.56	-94.91	11.410
15,300.00	12,411.00	3,134.77	-29.80	56.38	15,460.81	12,524.40	3,122.21	-1,349.53	63.04	1,324.66	1,205.55	-94.91	11.122
15,400.00	12,411.00	3,234.77	-30.75	57.78	15,560.81	12,524.40	3,222.21	-1,350.48	64.69	1,324.66	1,202.53	-94.91	10.846
15,500.00	12,411.00	3,334.76	-31.70	59.18	15,660.81	12,524.40	3,322.20	-1,351.43	66.34	1,324.66	1,199.48	-94.91	10.583
15,600.00	12,411.00	3,434.76	-32.65	60.60	15,760.81	12,524.40	3,422.20	-1,352.39	68.00	1,324.66	1,196.42	-94.91	10.330

HALLIBURTON

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)
Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 701H - Wellbore #1 - Plan #1
Scan Range: 0.00 to 16,963.93 usft. Measured Depth.
Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
15,700.00	12,411.00	3,534.76	-33.60	62.02	15,860.81	12,524.40	3,522.19	-1,353.34	69.67	1,324.66	1,193.34	-94.91	10.087
15,800.00	12,411.00	3,634.75	-34.55	63.45	15,960.81	12,524.40	3,622.19	-1,354.29	71.34	1,324.66	1,190.25	-94.91	9.855
15,900.00	12,411.00	3,734.75	-35.50	64.89	16,060.81	12,524.40	3,722.18	-1,355.24	73.03	1,324.66	1,187.13	-94.91	9.632
16,000.00	12,411.00	3,834.74	-36.45	66.33	16,160.81	12,524.40	3,822.18	-1,356.19	74.72	1,324.67	1,184.01	-94.91	9.418
16,100.00	12,411.00	3,934.74	-37.40	67.79	16,260.81	12,524.40	3,922.17	-1,357.15	76.42	1,324.67	1,180.87	-94.91	9.212
16,200.00	12,411.00	4,034.73	-38.35	69.24	16,360.81	12,524.40	4,022.17	-1,358.10	78.12	1,324.67	1,177.72	-94.91	9.015
16,300.00	12,411.00	4,134.73	-39.30	70.71	16,460.81	12,524.40	4,122.17	-1,359.05	79.83	1,324.67	1,174.56	-94.91	8.825
16,400.00	12,411.00	4,234.72	-40.25	72.18	16,560.81	12,524.40	4,222.16	-1,360.00	81.54	1,324.67	1,171.39	-94.91	8.642
16,500.00	12,411.00	4,334.72	-41.20	73.65	16,660.81	12,524.40	4,322.16	-1,360.95	83.26	1,324.67	1,168.20	-94.91	8.466
16,600.00	12,411.00	4,434.72	-42.15	75.13	16,760.81	12,524.40	4,422.15	-1,361.91	84.98	1,324.67	1,165.01	-94.91	8.297
16,700.00	12,411.00	4,534.71	-43.10	76.62	16,860.81	12,524.40	4,522.15	-1,362.86	86.71	1,324.68	1,161.81	-94.91	8.134
16,800.00	12,411.00	4,634.71	-44.05	78.11	16,960.81	12,524.40	4,622.14	-1,363.81	88.44	1,324.68	1,158.60	-94.91	7.976
16,900.00	12,411.00	4,734.70	-45.01	79.60	17,060.81	12,524.40	4,722.14	-1,364.76	90.18	1,324.68	1,155.38	-94.91	7.825
16,963.93	12,411.00	4,798.63	-45.61	80.56	17,124.75	12,524.40	4,786.07	-1,365.37	91.29	1,324.68	1,153.32	-94.91	7.730

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2 (usft)	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
0.00	0.00	0.00	0.00	0.00	14.80	0.00	151.19	173.58	0.01	230.19	230.18	48.94	10,000.000
100.00	100.00	0.00	0.00	0.11	114.80	100.00	151.19	173.58	0.12	230.19	229.96	48.94	1,001.112
200.00	200.00	0.00	0.00	0.34	214.80	200.00	151.19	173.58	0.34	230.19	229.51	48.94	338.782
300.00	300.00	0.00	0.00	0.56	314.80	300.00	151.19	173.58	0.57	230.19	229.06	48.94	203.890
400.00	400.00	0.00	0.00	0.79	414.80	400.00	151.19	173.58	0.79	230.19	228.61	48.94	145.826
500.00	500.00	0.00	0.00	1.01	514.80	500.00	151.19	173.58	1.02	230.19	228.16	48.94	113.503
600.00	600.00	0.00	0.00	1.24	614.80	600.00	151.19	173.58	1.24	230.19	227.71	48.94	92.909
700.00	700.00	0.00	0.00	1.46	714.80	700.00	151.19	173.58	1.47	230.19	227.26	48.94	78.641
800.00	800.00	0.00	0.00	1.69	814.80	800.00	151.19	173.58	1.69	230.19	226.81	48.94	68.171
900.00	900.00	0.00	0.00	1.91	914.80	900.00	151.19	173.58	1.92	230.19	226.37	48.94	60.162
1,000.00	1,000.00	0.00	0.00	2.14	1,014.80	1,000.00	151.19	173.58	2.14	230.19	225.92	48.94	53.837
1,100.00	1,100.00	0.00	0.00	2.36	1,114.80	1,100.00	151.19	173.58	2.37	230.19	225.47	48.94	48.715
1,200.00	1,200.00	0.00	0.00	2.58	1,214.80	1,200.00	151.19	173.58	2.59	230.19	225.02	48.94	44.483
1,300.00	1,300.00	0.00	0.00	2.81	1,314.80	1,300.00	151.19	173.58	2.81	230.19	224.57	48.94	40.928
1,400.00	1,400.00	0.00	0.00	3.03	1,414.80	1,400.00	151.19	173.58	3.04	230.19	224.12	48.94	37.899
1,500.00	1,500.00	0.00	0.00	3.26	1,514.80	1,500.00	151.19	173.58	3.26	230.19	223.67	48.94	35.287
1,600.00	1,600.00	0.00	0.00	3.48	1,614.80	1,600.00	151.19	173.58	3.49	230.19	223.22	48.94	33.012
1,700.00	1,700.00	0.00	0.00	3.71	1,714.80	1,700.00	151.19	173.58	3.71	230.19	222.77	48.94	31.013
1,800.00	1,800.00	0.00	0.00	3.93	1,814.80	1,800.00	151.19	173.58	3.94	230.19	222.32	48.94	29.242
1,900.00	1,900.00	0.00	0.00	4.16	1,914.80	1,900.00	151.19	173.58	4.16	230.19	221.87	48.94	27.662
2,000.00	2,000.00	0.00	0.00	4.38	2,014.80	2,000.00	151.19	173.58	4.39	230.19	221.42	48.94	26.244
2,100.00	2,100.00	0.00	0.00	4.61	2,114.80	2,100.00	151.19	173.58	4.61	230.19	220.97	48.94	24.965
2,200.00	2,200.00	0.00	0.00	4.83	2,214.80	2,200.00	151.19	173.58	4.84	230.19	220.52	48.94	23.804
2,300.00	2,300.00	0.00	0.00	5.06	2,314.80	2,300.00	151.19	173.58	5.06	230.19	220.07	48.94	22.747
2,400.00	2,400.00	0.00	0.00	5.28	2,414.80	2,400.00	151.19	173.58	5.29	230.19	219.62	48.94	21.780
2,500.00	2,500.00	0.00	0.00	5.51	2,514.80	2,500.00	151.19	173.58	5.51	230.19	219.17	48.94	20.891
2,600.00	2,600.00	0.00	0.00	5.73	2,614.80	2,600.00	151.19	173.58	5.74	230.19	218.72	48.94	20.072
2,700.00	2,700.00	0.00	0.00	5.96	2,714.80	2,700.00	151.19	173.58	5.96	230.19	218.27	48.94	19.315
2,800.00	2,800.00	0.00	0.00	6.18	2,814.80	2,800.00	151.19	173.58	6.19	230.19	217.82	48.94	18.613
2,900.00	2,900.00	0.00	0.00	6.41	2,914.80	2,900.00	151.19	173.58	6.41	230.19	217.37	48.94	17.960
3,000.00	3,000.00	0.00	0.00	6.63	3,014.80	3,000.00	151.19	173.58	6.64	230.19	216.93	48.94	17.352
3,100.00	3,100.00	0.00	0.00	6.86	3,114.80	3,100.00	151.19	173.58	6.86	230.19	216.48	48.94	16.783

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
3,200.00	3,200.00	0.00	0.00	7.08	3,214.80	3,200.00	151.19	173.58	7.09	230.19	216.03	48.94	16,250
3,300.00	3,300.00	0.00	0.00	7.30	3,314.80	3,300.00	151.19	173.58	7.31	230.19	215.58	48.94	15,750
3,400.00	3,400.00	0.00	0.00	7.53	3,414.80	3,400.00	151.19	173.58	7.53	230.19	215.13	48.94	15,280
3,500.00	3,500.00	0.00	0.00	7.75	3,514.80	3,500.00	151.19	173.58	7.76	230.19	214.68	48.94	14,838
3,600.00	3,600.00	0.00	0.00	7.98	3,614.80	3,600.00	151.19	173.58	7.98	230.19	214.23	48.94	14,420
3,700.00	3,700.00	0.00	0.00	8.20	3,714.80	3,700.00	151.19	173.58	8.21	230.19	213.78	48.94	14,025
3,800.00	3,800.00	0.00	0.00	8.43	3,814.80	3,800.00	151.19	173.58	8.43	230.19	213.33	48.94	13,651
3,900.00	3,900.00	0.00	0.00	8.65	3,914.80	3,900.00	151.19	173.58	8.66	230.19	212.88	48.94	13,297
4,000.00	4,000.00	0.00	0.00	8.88	4,014.80	4,000.00	151.19	173.58	8.88	230.19	212.43	48.94	12,960
4,100.00	4,100.00	0.00	0.00	9.10	4,114.80	4,100.00	151.19	173.58	9.11	230.19	211.98	48.94	12,640
4,200.00	4,200.00	0.00	0.00	9.33	4,214.80	4,200.00	151.19	173.58	9.33	230.19	211.53	48.94	12,336
4,300.00	4,300.00	0.00	0.00	9.55	4,314.80	4,300.00	151.19	173.58	9.56	230.19	211.08	48.94	12,045
4,400.00	4,400.00	0.00	0.00	9.78	4,414.80	4,400.00	151.19	173.58	9.78	230.19	210.63	48.94	11,769
4,500.00	4,500.00	0.00	0.00	10.00	4,514.80	4,500.00	151.19	173.58	10.01	230.19	210.18	48.94	11,504
4,600.00	4,600.00	0.00	0.00	10.23	4,614.80	4,600.00	151.19	173.58	10.23	230.19	209.73	48.94	11,251
4,700.00	4,700.00	0.00	0.00	10.45	4,714.80	4,700.00	151.19	173.58	10.46	230.19	209.28	48.94	11,010
4,800.00	4,800.00	0.00	0.00	10.68	4,814.80	4,800.00	151.19	173.58	10.68	230.19	208.83	48.94	10,778
4,900.00	4,900.00	0.00	0.00	10.90	4,914.80	4,900.00	151.19	173.58	10.91	230.19	208.38	48.94	10,556
5,000.00	5,000.00	0.00	0.00	11.13	5,014.80	5,000.00	151.19	173.58	11.13	230.19	207.93	48.94	10,342
5,100.00	5,100.00	0.00	0.00	11.35	5,114.80	5,100.00	151.19	173.58	11.36	230.19	207.48	48.94	10,138
5,200.00	5,200.00	0.00	0.00	11.58	5,214.80	5,200.00	151.19	173.58	11.58	230.19	207.04	48.94	9,941
5,300.00	5,300.00	0.00	0.00	11.80	5,314.80	5,300.00	151.19	173.58	11.81	230.19	206.59	48.94	9,752
5,400.00	5,400.00	0.00	0.00	12.02	5,414.80	5,400.00	151.19	173.58	12.03	230.19	206.14	48.94	9,569
5,500.00	5,500.00	0.00	0.00	12.25	5,514.80	5,500.00	151.19	173.58	12.25	230.19	205.69	48.94	9,394
5,600.00	5,600.00	0.00	0.00	12.47	5,614.80	5,600.00	151.19	173.58	12.48	230.19	205.24	48.94	9,225
5,700.00	5,700.00	0.00	0.00	12.70	5,714.80	5,700.00	151.19	173.58	12.70	230.19	204.79	48.94	9,061
5,800.00	5,800.00	0.00	0.00	12.92	5,814.80	5,800.00	151.19	173.58	12.93	230.19	204.34	48.94	8,904
5,900.00	5,900.00	0.00	0.00	13.15	5,914.80	5,900.00	151.19	173.58	13.15	230.19	203.89	48.94	8,752
6,000.00	6,000.00	0.00	0.00	13.37	6,014.80	6,000.00	151.19	173.58	13.38	230.19	203.44	48.94	8,605
6,100.00	6,100.00	0.00	0.00	13.60	6,114.80	6,100.00	151.19	173.58	13.60	230.19	202.99	48.94	8,462
6,200.00	6,200.00	0.00	0.00	13.82	6,214.80	6,200.00	151.19	173.58	13.83	230.19	202.54	48.94	8,325
6,300.00	6,300.00	0.00	0.00	14.05	6,314.80	6,300.00	151.19	173.58	14.05	230.19	202.09	48.94	8,192

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
6,400.00	6,400.00	0.00	0.00	14.27	6,414.80	6,400.00	151.19	173.58	14.28	230.19	201.64	48.94	8.063
6,500.00	6,500.00	0.00	0.00	14.50	6,514.80	6,500.00	151.19	173.58	14.50	230.19	201.19	48.94	7.938
6,600.00	6,600.00	0.00	0.00	14.72	6,614.80	6,600.00	151.19	173.58	14.73	230.19	200.74	48.94	7.816
6,700.00	6,700.00	0.00	0.00	14.95	6,714.80	6,700.00	151.19	173.58	14.95	230.19	200.29	48.94	7.699
6,800.00	6,800.00	0.00	0.00	15.17	6,814.80	6,800.00	151.19	173.58	15.18	230.19	199.84	48.94	7.585
6,900.00	6,900.00	0.00	0.00	15.40	6,914.80	6,900.00	151.19	173.58	15.40	230.19	199.39	48.94	7.474
7,000.00	7,000.00	0.00	0.00	15.62	7,014.80	7,000.00	151.19	173.58	15.63	230.19	198.94	48.94	7.367
7,100.00	7,100.00	0.00	0.00	15.85	7,114.80	7,100.00	151.19	173.58	15.85	230.19	198.49	48.94	7.262
7,200.00	7,200.00	0.00	0.00	16.07	7,214.80	7,200.00	151.19	173.58	16.08	230.19	198.04	48.94	7.161
7,300.00	7,300.00	0.00	0.00	16.30	7,314.80	7,300.00	151.19	173.58	16.30	230.19	197.60	48.94	7.062
7,400.00	7,400.00	0.00	0.00	16.52	7,414.80	7,400.00	151.19	173.58	16.53	230.19	197.15	48.94	6.966
7,500.00	7,500.00	0.00	0.00	16.75	7,514.80	7,500.00	151.19	173.58	16.75	230.19	196.70	48.94	6.872
7,600.00	7,600.00	0.00	0.00	16.97	7,614.80	7,600.00	151.19	173.58	16.98	230.19	196.25	48.94	6.781
7,700.00	7,700.00	0.00	0.00	17.19	7,714.80	7,700.00	151.19	173.58	17.20	230.19	195.80	48.94	6.693
7,800.00	7,800.00	0.00	0.00	17.42	7,814.80	7,800.00	151.19	173.58	17.42	230.19	195.35	48.94	6.606
7,900.00	7,900.00	0.00	0.00	17.64	7,914.80	7,900.00	151.19	173.58	17.65	230.19	194.90	48.94	6.522
8,000.00	8,000.00	0.00	0.00	17.87	8,014.80	8,000.00	151.19	173.58	17.87	230.19	194.45	48.94	6.440
8,100.00	8,100.00	0.00	0.00	18.09	8,114.80	8,100.00	151.19	173.58	18.10	230.19	194.00	48.94	6.360
8,200.00	8,200.00	0.00	0.00	18.32	8,214.80	8,200.00	151.19	173.58	18.32	230.19	193.55	48.94	6.282
8,300.00	8,300.00	0.00	0.00	18.54	8,314.80	8,300.00	151.19	173.58	18.55	230.19	193.10	48.94	6.206
8,400.00	8,400.00	0.00	0.00	18.77	8,414.80	8,400.00	151.19	173.58	18.77	230.19	192.65	48.94	6.132
8,500.00	8,500.00	0.00	0.00	18.99	8,514.80	8,500.00	151.19	173.58	19.00	230.19	192.20	48.94	6.059
8,600.00	8,600.00	0.00	0.00	19.22	8,614.80	8,600.00	151.19	173.58	19.22	230.19	191.75	48.94	5.988
8,700.00	8,700.00	0.00	0.00	19.44	8,714.80	8,700.00	151.19	173.58	19.45	230.19	191.30	48.94	5.919
8,800.00	8,800.00	0.00	0.00	19.67	8,814.80	8,800.00	151.19	173.58	19.67	230.19	190.85	48.94	5.851
8,900.00	8,900.00	0.00	0.00	19.89	8,914.80	8,900.00	151.19	173.58	19.90	230.19	190.40	48.94	5.785
9,000.00	9,000.00	0.00	0.00	20.12	9,014.80	9,000.00	151.19	173.58	20.12	230.19	189.95	48.94	5.721
9,100.00	9,100.00	0.00	0.00	20.34	9,114.80	9,100.00	151.19	173.58	20.35	230.19	189.50	48.94	5.658
9,200.00	9,200.00	0.00	0.00	20.57	9,214.80	9,200.00	151.19	173.58	20.57	230.19	189.05	48.94	5.596
9,300.00	9,300.00	0.00	0.00	20.79	9,314.80	9,300.00	151.19	173.58	20.80	230.19	188.60	48.94	5.535
9,400.00	9,400.00	0.00	0.00	21.02	9,414.80	9,400.00	151.19	173.58	21.02	230.19	188.16	48.94	5.476
9,500.00	9,500.00	0.00	0.00	21.24	9,514.80	9,500.00	151.19	173.58	21.25	230.19	187.71	48.94	5.418

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
9,600.00	9,600.00	0.00	0.00	21.47	9,614.80	9,600.00	151.19	173.58	21.47	230.19	187.26	48.94	5.361
9,700.00	9,700.00	0.00	0.00	21.69	9,714.80	9,700.00	151.19	173.58	21.70	230.19	186.81	48.94	5.306
9,800.00	9,800.00	0.00	0.00	21.91	9,814.80	9,800.00	151.19	173.58	21.92	230.19	186.36	48.94	5.251
9,900.00	9,900.00	0.00	0.00	22.14	9,914.80	9,900.00	151.19	173.58	22.14	230.19	185.91	48.94	5.198
10,000.00	10,000.00	0.00	0.00	22.36	10,014.80	10,000.00	151.19	173.58	22.37	230.19	185.46	48.94	5.146
10,100.00	10,100.00	0.00	0.00	22.59	10,114.80	10,100.00	151.19	173.58	22.59	230.19	185.01	48.94	5.095
10,200.00	10,200.00	0.00	0.00	22.81	10,214.80	10,200.00	151.19	173.58	22.82	230.19	184.56	48.94	5.044
10,300.00	10,300.00	0.00	0.00	23.04	10,314.80	10,300.00	151.19	173.58	23.04	230.19	184.11	48.94	4.995
10,400.00	10,400.00	0.00	0.00	23.26	10,414.80	10,400.00	151.19	173.58	23.27	230.19	183.66	48.94	4.947
10,500.00	10,500.00	0.00	0.00	23.49	10,514.80	10,500.00	151.19	173.58	23.49	230.19	183.21	48.94	4.900
10,600.00	10,600.00	0.00	0.00	23.71	10,614.80	10,600.00	151.19	173.58	23.72	230.19	182.76	48.94	4.853
10,700.00	10,700.00	0.00	0.00	23.94	10,714.80	10,700.00	151.19	173.58	23.94	230.19	182.31	48.94	4.808
10,800.00	10,800.00	0.00	0.00	24.16	10,814.80	10,800.00	151.19	173.58	24.17	230.19	181.86	48.94	4.763
10,900.00	10,900.00	0.00	0.00	24.39	10,914.80	10,900.00	151.19	173.58	24.39	230.19	181.41	48.94	4.719
11,000.00	11,000.00	0.00	0.00	24.61	11,014.80	11,000.00	151.19	173.58	24.62	230.19	180.96	48.94	4.676
11,100.00	11,100.00	0.00	0.00	24.84	11,114.80	11,100.00	151.19	173.58	24.84	230.19	180.51	48.94	4.634
11,200.00	11,200.00	0.00	0.00	25.06	11,214.80	11,200.00	151.19	173.58	25.07	230.19	180.06	48.94	4.592
11,300.00	11,300.00	0.00	0.00	25.29	11,314.80	11,300.00	151.19	173.58	25.29	230.19	179.61	48.94	4.551
11,400.00	11,400.00	0.00	0.00	25.51	11,414.80	11,400.00	151.19	173.58	25.52	230.19	179.16	48.94	4.511
11,500.00	11,500.00	0.00	0.00	25.74	11,514.80	11,500.00	151.19	173.58	25.74	230.19	178.71	48.94	4.472
11,600.00	11,600.00	0.00	0.00	25.96	11,614.80	11,600.00	151.19	173.58	25.97	230.19	178.27	48.94	4.433
11,700.00	11,700.00	0.00	0.00	26.19	11,714.80	11,700.00	151.19	173.58	26.19	230.19	177.82	48.94	4.395
11,800.00	11,800.00	0.00	0.00	26.41	11,814.80	11,800.00	151.19	173.58	26.42	230.19	177.37	48.94	4.358
11,900.00	11,900.00	3.35	-0.03	26.63	11,914.80	11,899.88	151.19	173.58	26.64	228.03	174.76	50.29	4.280
12,000.00	11,997.85	22.74	-0.22	26.86	12,009.72	11,994.92	151.33	173.58	26.85	216.22	162.52	54.96	4.026
12,100.00	12,090.97	58.85	-0.56	27.07	12,089.30	12,074.10	158.60	173.76	27.03	201.55	147.56	61.42	3.733
12,200.00	12,176.40	110.57	-1.05	27.26	12,171.53	12,154.04	177.55	174.21	27.21	188.95	134.68	69.46	3.482
12,300.00	12,251.55	176.35	-1.68	27.48	12,257.12	12,233.48	209.19	174.96	27.39	180.57	125.85	78.93	3.300
12,379.05	12,302.17	236.99	-2.25	27.68	12,327.72	12,294.86	243.97	175.79	27.53	178.33	123.14	87.10	3.231
12,400.00	12,314.14	254.18	-2.42	27.73	12,346.93	12,310.79	254.71	176.05	27.57	178.49	123.20	89.31	3.228
12,500.00	12,362.26	341.69	-3.25	28.03	12,442.03	12,383.83	315.43	177.49	27.80	183.91	128.28	99.75	3.306
12,600.00	12,394.45	436.23	-4.15	28.38	12,543.70	12,449.66	392.71	179.33	28.09	196.48	141.18	109.38	3.553

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
12,700.00	12,409.74	534.92	-5.08	28.79	12,653.41	12,504.18	487.69	181.60	28.48	214.47	160.15	117.63	3.948
12,800.00	12,411.00	634.89	-6.03	29.25	12,773.80	12,542.00	601.72	184.31	29.03	233.43	180.11	124.58	4.378
12,900.00	12,411.00	734.88	-6.99	29.79	12,903.31	12,555.20	730.25	187.37	29.74	242.05	188.32	126.58	4.505
13,000.00	12,411.00	834.88	-7.94	30.40	13,003.26	12,555.20	830.17	189.75	30.38	244.74	189.88	126.12	4.462
13,100.00	12,411.00	934.87	-8.89	31.09	13,103.20	12,555.20	930.09	192.13	31.11	247.44	191.32	125.66	4.410
13,200.00	12,411.00	1,034.87	-9.84	31.84	13,203.15	12,555.20	1,030.00	194.51	31.94	250.15	192.64	125.22	4.350
13,300.00	12,411.00	1,134.86	-10.79	32.65	13,303.09	12,555.20	1,129.92	196.89	32.84	252.88	193.85	124.78	4.284
13,400.00	12,411.00	1,234.86	-11.74	33.51	13,403.03	12,555.20	1,229.83	199.27	33.82	255.63	194.94	124.36	4.213
13,500.00	12,411.00	1,334.86	-12.69	34.43	13,502.98	12,555.20	1,329.75	201.65	34.86	258.38	195.94	123.94	4.138
13,600.00	12,411.00	1,434.85	-13.64	35.40	13,602.92	12,555.20	1,429.67	204.03	35.97	261.15	196.84	123.53	4.061
13,700.00	12,411.00	1,534.85	-14.59	36.41	13,702.87	12,555.20	1,529.58	206.41	37.13	263.94	197.66	123.13	3.982
13,800.00	12,411.00	1,634.84	-15.54	37.46	13,802.81	12,555.20	1,629.50	208.79	38.34	266.73	198.39	122.74	3.903
13,900.00	12,411.00	1,734.84	-16.49	38.55	13,902.76	12,555.20	1,729.41	211.17	39.60	269.54	199.05	122.36	3.824
14,000.00	12,411.00	1,834.83	-17.44	39.67	14,002.70	12,555.20	1,829.33	213.55	40.90	272.36	199.65	121.98	3.745
14,100.00	12,411.00	1,934.83	-18.39	40.82	14,102.65	12,555.20	1,929.25	215.93	42.24	275.20	200.17	121.61	3.668
14,200.00	12,411.00	2,034.82	-19.34	42.01	14,202.59	12,555.20	2,029.16	218.31	43.62	278.04	200.64	121.25	3.593
14,300.00	12,411.00	2,134.82	-20.29	43.22	14,302.54	12,555.20	2,129.08	220.69	45.02	280.89	201.06	120.90	3.519
14,400.00	12,411.00	2,234.81	-21.24	44.45	14,402.48	12,555.20	2,229.00	223.07	46.46	283.76	201.43	120.56	3.447
14,500.00	12,411.00	2,334.81	-22.19	45.71	14,502.42	12,555.20	2,328.91	225.45	47.92	286.63	201.75	120.22	3.377
14,600.00	12,411.00	2,434.81	-23.14	46.99	14,602.37	12,555.20	2,428.83	227.83	49.40	289.51	202.04	119.89	3.310
14,700.00	12,411.00	2,534.80	-24.09	48.28	14,702.31	12,555.20	2,528.74	230.21	50.91	292.41	202.28	119.56	3.244
14,800.00	12,411.00	2,634.80	-25.04	49.60	14,802.26	12,555.20	2,628.66	232.59	52.44	295.31	202.49	119.24	3.182
14,900.00	12,411.00	2,734.79	-26.00	50.93	14,902.20	12,555.20	2,728.58	234.97	53.98	298.22	202.67	118.93	3.121
15,000.00	12,411.00	2,834.79	-26.95	52.27	15,002.15	12,555.20	2,828.49	237.35	55.54	301.14	202.82	118.62	3.063
15,100.00	12,411.00	2,934.78	-27.90	53.63	15,102.09	12,555.20	2,928.41	239.73	57.12	304.07	202.94	118.32	3.007
15,200.00	12,411.00	3,034.78	-28.85	55.00	15,202.04	12,555.20	3,028.32	242.11	58.71	307.01	203.03	118.03	2.953
15,300.00	12,411.00	3,134.77	-29.80	56.38	15,301.98	12,555.20	3,128.24	244.49	60.31	309.95	203.11	117.74	2.901
15,400.00	12,411.00	3,234.77	-30.75	57.78	15,401.92	12,555.20	3,228.16	246.87	61.93	312.91	203.16	117.45	2.851
15,500.00	12,411.00	3,334.76	-31.70	59.18	15,501.87	12,555.20	3,328.07	249.25	63.55	315.87	203.19	117.18	2.803
15,600.00	12,411.00	3,434.76	-32.65	60.60	15,601.81	12,555.20	3,427.99	251.63	65.19	318.83	203.21	116.90	2.757
15,700.00	12,411.00	3,534.76	-33.60	62.02	15,701.76	12,555.20	3,527.91	254.01	66.83	321.81	203.21	116.63	2.713
15,800.00	12,411.00	3,634.75	-34.55	63.45	15,801.70	12,555.20	3,627.82	256.39	68.49	324.79	203.19	116.37	2.671

Anticollision Report for Duo Sonic 29 Fed 2H - Plan #4

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

Offset Design: Duo Sonic 29 Fed - Duo Sonic 29 Fed 702H - Wellbore #1 - Plan #2

Scan Range: 0.00 to 16,963.93 usft. Measured Depth.

Scan Radius is 1,896.39 usft . Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Measured Depth (usft)	Vertical Depth (usft)	Ellipse Centre +N/-S (usft)	Ellipse Centre +E/-W (usft)	Ellipse Major Axis/2	Between Centres (usft)	Between Ellipsoids (usft)	Relative Highside Bearing	Clearance Factor
15,900.00	12,411.00	3,734.75	-35.50	64.89	15,901.65	12,555.20	3,727.74	258.77	70.15	327.78	203.16	116.11	2.630
16,000.00	12,411.00	3,834.74	-36.45	66.33	16,001.59	12,555.20	3,827.65	261.15	71.82	330.77	203.11	115.86	2.591
16,100.00	12,411.00	3,934.74	-37.40	67.79	16,101.54	12,555.20	3,927.57	263.53	73.50	333.78	203.06	115.61	2.553
16,200.00	12,411.00	4,034.73	-38.35	69.24	16,201.48	12,555.20	4,027.49	265.91	75.18	336.78	202.99	115.36	2.517
16,300.00	12,411.00	4,134.73	-39.30	70.71	16,301.43	12,555.20	4,127.40	268.29	76.87	339.80	202.91	115.12	2.482
16,400.00	12,411.00	4,234.72	-40.25	72.18	16,401.37	12,555.20	4,227.32	270.67	78.57	342.82	202.82	114.89	2.449
16,500.00	12,411.00	4,334.72	-41.20	73.65	16,501.31	12,555.20	4,327.23	273.05	80.27	345.84	202.73	114.65	2.417
16,600.00	12,411.00	4,434.72	-42.15	75.13	16,601.26	12,555.20	4,427.15	275.43	81.97	348.87	202.62	114.43	2.385
16,700.00	12,411.00	4,534.71	-43.10	76.62	16,701.20	12,555.20	4,527.07	277.81	83.68	351.91	202.51	114.20	2.356
16,800.00	12,411.00	4,634.71	-44.05	78.11	16,801.15	12,555.20	4,626.98	280.19	85.40	354.95	202.39	113.98	2.327
16,900.00	12,411.00	4,734.70	-45.01	79.60	16,901.09	12,555.20	4,726.90	282.57	87.12	358.00	202.27	113.76	2.299
16,963.93	12,411.00	4,798.63	-45.61	80.56	16,964.99	12,555.20	4,790.78	284.09	88.22	359.95	202.18	113.63	2.282

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	16,963.93	Plan #4	MWD+SC

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 Duo Sonic 29 Fed 2H - Plan #4

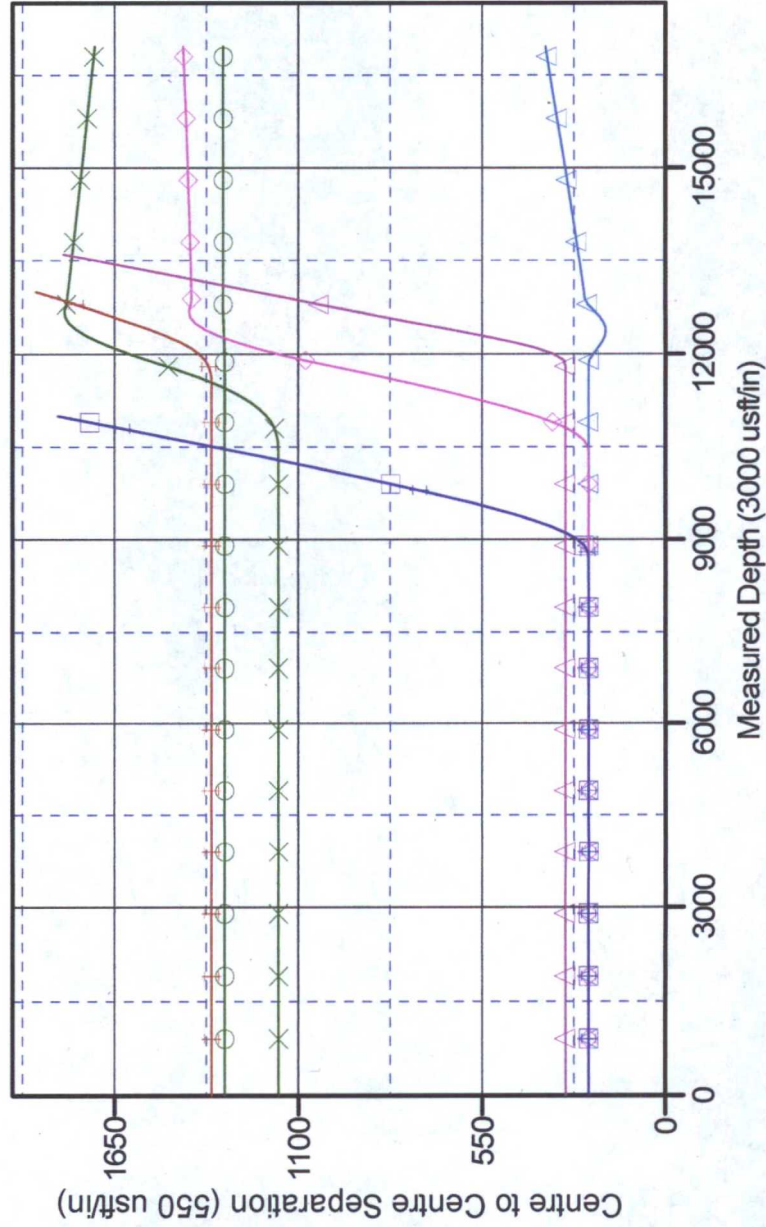
Direction and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GL 3263.80' @ 3263.80usft (TBD). Northing and Easting are relative to Duo Sonic 29 Fed 2H.

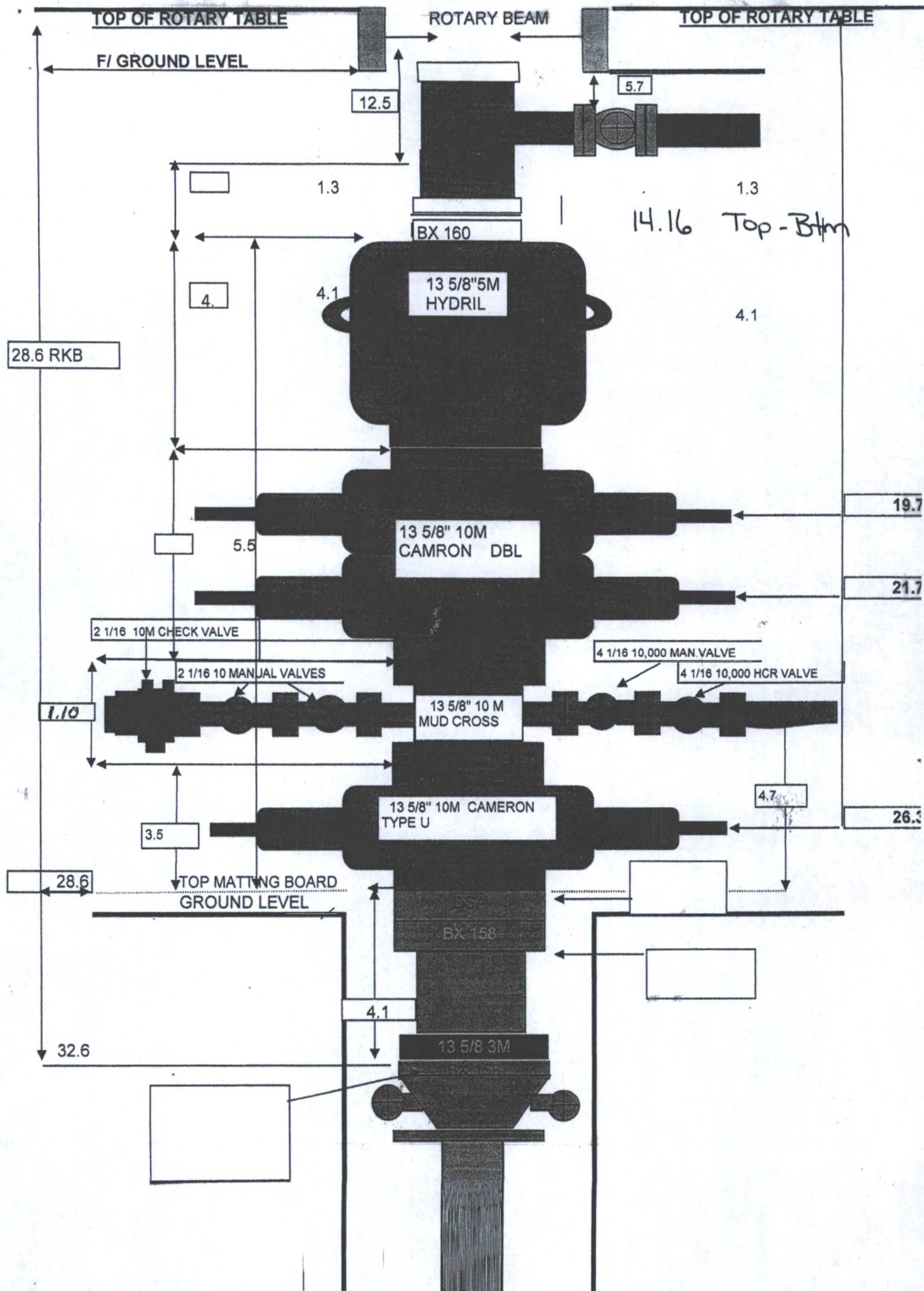
Coordinate System is US State Plane 1983, New Mexico Eastern Zone.

Central Meridian is -104.00°, Grid Convergence at Surface is: 0.50°.

Ladder Plot



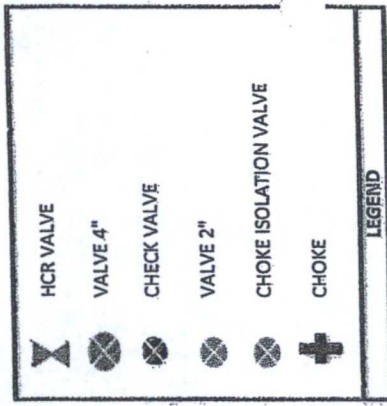
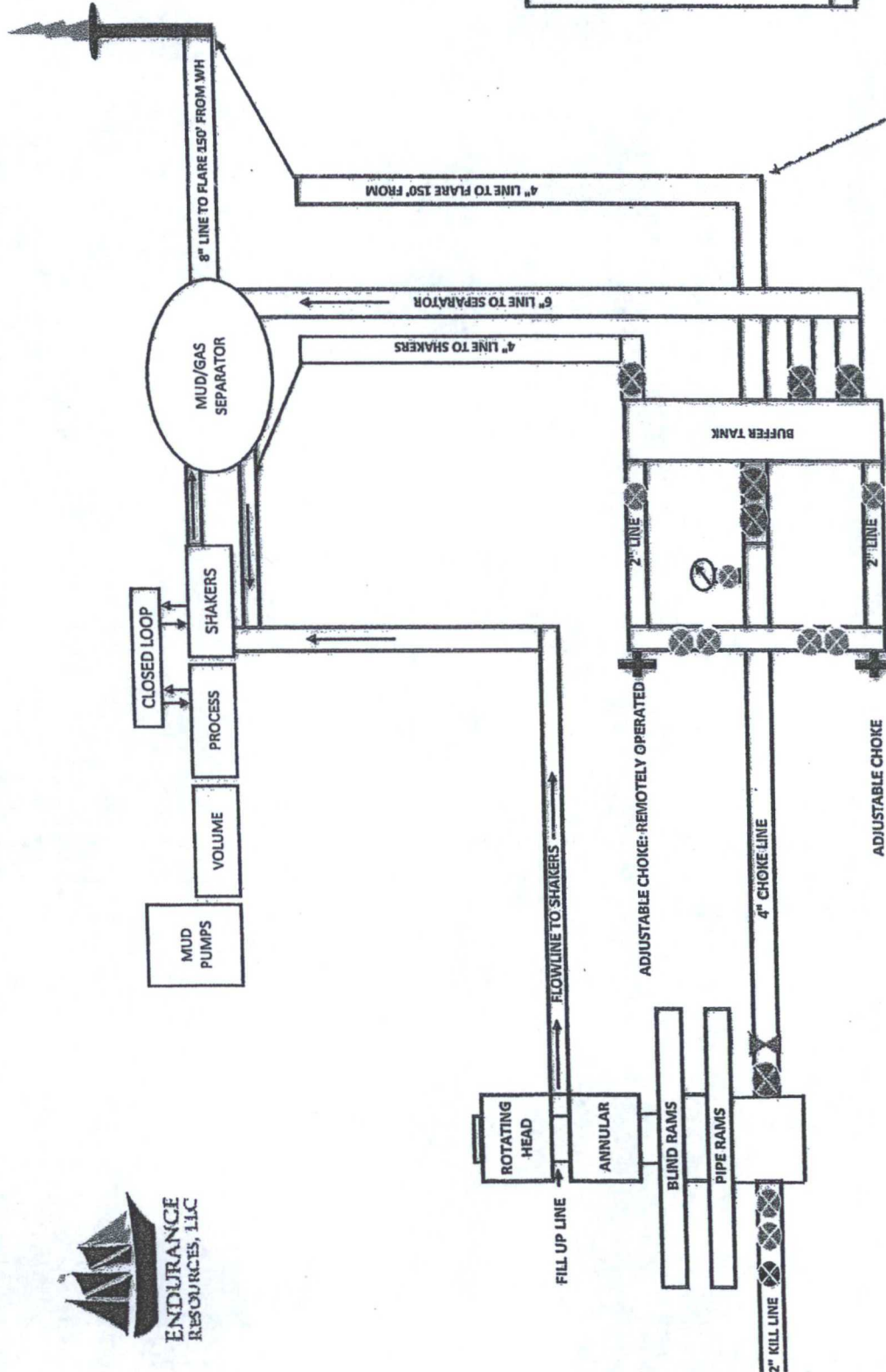
Duo Sonic 29 Federal #2H BOP Schematic



Duo Sonic 29 Federal #144

5M BOP, 5M CHOKE MANIFOLD, AND CLOSED LOOP EQUIPMENT SCHEMATIC FOR 13-5/8 BOP SYSTEM TESTED TO 340 PER ONSHORE ORDER #2

OCD Hobbs



TARGETED T'S. ALL TURNS WILL BE TARGETED.

OPTION TO USE FLEX HOUSE. TBD ONCE DRILLING RIG IS SECURED. WILL SUNDRY.

ALL CHOKE LINES WILL BE STRAIGHT LINES UNLESS TURNS THAT USE TEE BLOCKS OR ARE

TARGETED WITH RUNNING TEES, AND WILL BE ANCHORED TO PREVENT WHIP & REDUCE VIBRATION

ENDURANCE RESOURCES LLC
RIG LOCATION LAYOUT & H2S SAFETY EQUIPMENT LOCATION
WELL PADS 450' X 650'
NOTE: DRAWING NOT TO SCALE

