

WELL	Nichols 19-9H	FIELD	CO, Mesa Co.(NAD83UTM13)	STRUCTURE	Encana 31-09S-95W (PL31SE)
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Magnetic Parameters Model: BGGM 2011 Dip: 65.499° Mag Dec: 10.296°	Date: November 01, 2011 FS: 52027 2nT	Surface Location Lat: N 39 13 42.647 Lon: W 108 14 1.556	NAD83 UTM Zone 13N, US Feet 14260162.45 NUS 782816.40 EUS Grid Conv: -1.91616850° Scale Fact: 1.00044340	Miscellaneous Stat: Nichols 19-9H Plan: R2 on 01-Dec-11	TVD Ref: RKB(5937ft above MSL) Srvy Date: November 01, 2011
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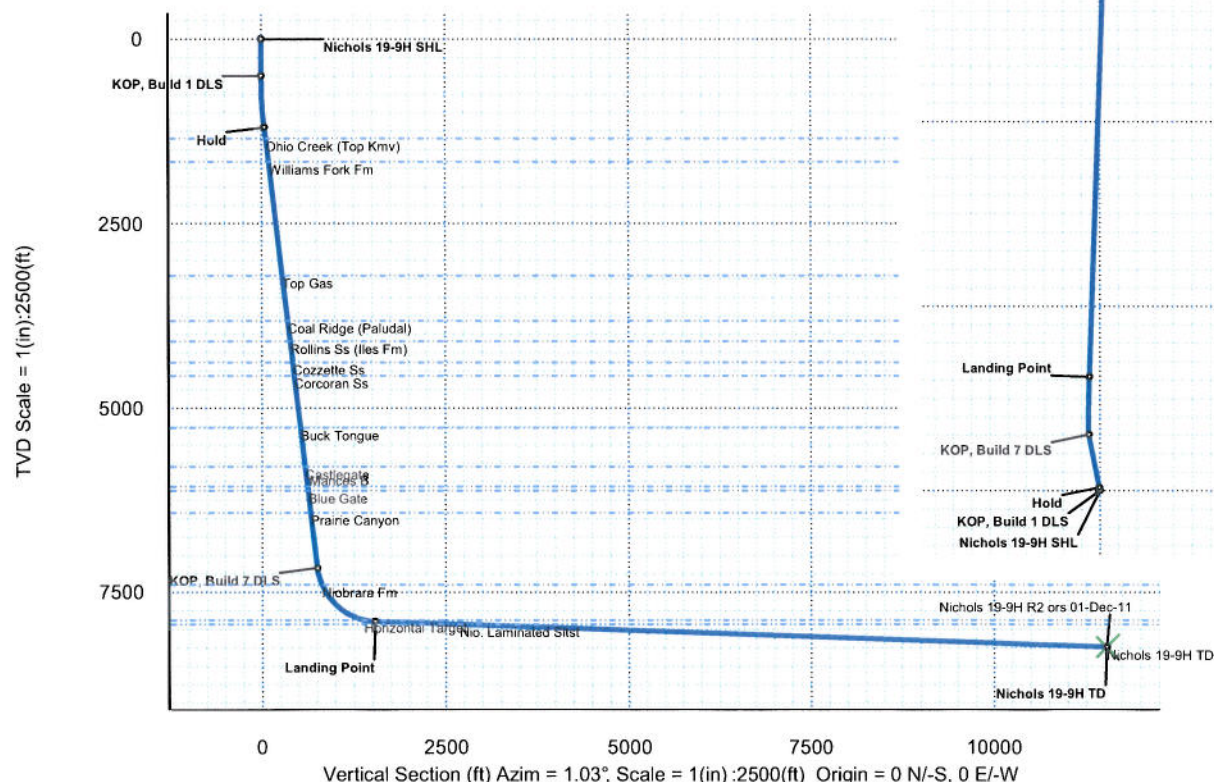
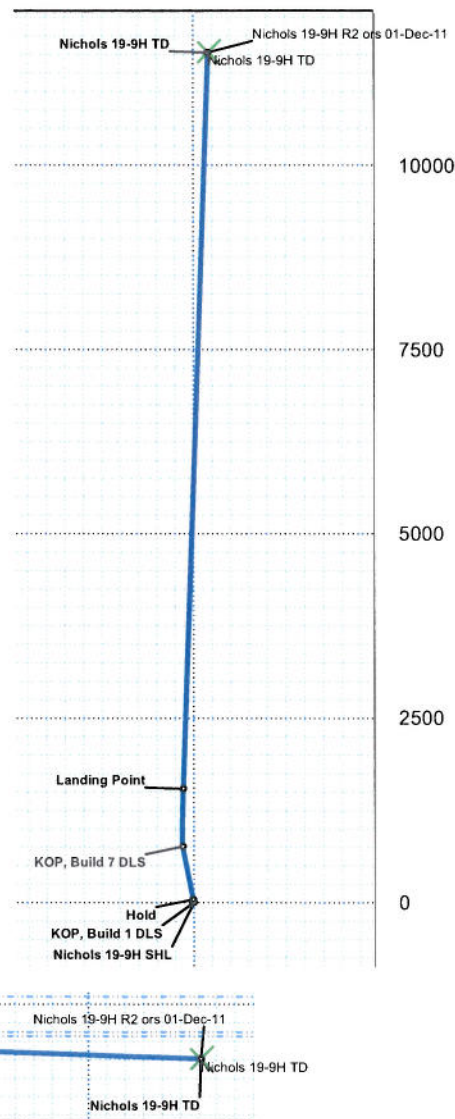
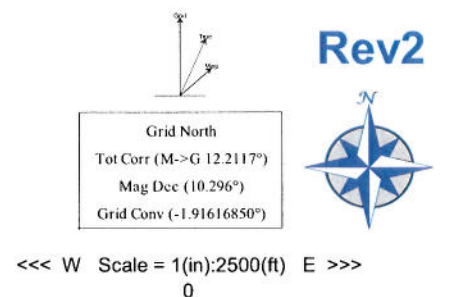
Surface Location
Northing: 14260162.45 Easting: 782816.40

Quality Control
Date Drawn: December 01, 2011 03:55:59 PM
Drawn by: Oswaldo Salazar
Checked by:
Client OK:

Proposal

Target Description		Grid Coord		Local Coord	
Target Name	Shape	Major Axis	N(+)S(-)	E(+)W(-)	TVD
Nichols 19-9H TD	Point	0.00	39.26	-108.03	8243.00

Critical Point		MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
Nichols 19-9H SHL		0.00	0.00	348.90	0.00	0.00	0.00	0.00	
KOP, Build 1 DLS		500.00	0.00	348.90	500.00	0.00	0.00	0.00	
Hold		1197.38	6.97	348.90	1195.66	41.44	41.60	-8.16	1.00
Ohio Creek (Top Kmv)		1350.86	6.97	348.90	1348.00	59.66	59.88	-11.74	0.00
Williams Fork Fm		1668.20	6.97	348.90	1663.00	97.33	97.69	-19.16	0.00
Top Gas		3219.68	6.97	348.90	3203.00	281.50	282.54	-55.41	0.00
Coal Ridge (Paludal)		3838.26	6.97	348.90	3817.00	354.93	356.24	-69.86	0.00
Rollins Ss (Iles Fm)		4119.34	6.97	348.90	4096.00	388.29	389.73	-76.43	0.00
Cozzette Ss		4407.47	6.97	348.90	4382.00	422.49	424.06	-83.16	0.00
Corcoran Ss		4589.82	6.97	348.90	4563.00	444.14	445.79	-87.42	0.00
Buck Tongue		5301.08	6.97	348.90	5269.00	528.57	530.53	-104.04	0.00
Castlegate		5834.02	6.97	348.90	5798.00	591.83	594.03	-116.50	0.00
Mancos B		6101.00	6.97	348.90	6063.00	623.52	625.84	-122.73	0.00
Blue Gate		6159.43	6.97	348.90	6121.00	630.46	632.80	-124.10	0.00
Prairie Canyon		6458.64	6.97	348.90	6418.00	665.98	668.45	-131.09	0.00
KOP, Build 7 DLS		7219.32	6.97	348.90	7173.05	756.27	759.08	-148.87	0.00
Niobrara Fm		7450.88	23.05	358.31	7396.00	815.70	818.59	-152.94	7.00
Horizontal Target		8224.40	77.15	1.69	7874.00	1387.20	1390.05	-145.74	7.00
Landing Point		8379.45	88.00	2.00	7894.01	1540.70	1543.49	-140.79	7.00
Nio. Laminated Siltst		9525.45	88.00	2.00	7934.00	2685.84	2688.10	-100.82	0.00
Nichols 19-9H TD		18379.45	88.00	2.00	8243.00	11533.19	11531.31	207.99	0.00



Nichols 19-9H R2 ors 01-Dec-11 Proposal Report

(Def Plan)

Report Date: December 01, 2011 - 04:03 PM
Client: EnCana Oil & Gas (USA) Inc.
Field: CO, Mesa County (NAD 83 UTM 13) EnCana 2010
Structure / Slot: Encana 31-09S-95W (PL31SE Pad) / Nichols 19-9H
Well: Nichols 19-9H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Nichols 19-9H R2 ors 01-Dec-11
Survey Date: November 01, 2011
Tort / AHD / DDI / ERD Ratio: 88.183 ° / 11552.221 ft / 6.356 / 1.401
Coordinate Reference System: NAD83 UTM Zone 13N, US Feet
Location Lat / Long: N 39° 13' 42.6480", W 108° 1' 41.55602"
Location Grid N/E Y/X: N 14260162.455 RUS, E 782816.404 RUS
CRS Grid Convergence Angle: -1.91616850 °
Grid Scale Factor: 1.0004414

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 1.033 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 5937.000 ft above MSL
Seabed / Ground Elevation: 5915.000 ft above MSL
Magnetic Declination: 10.296 °
Total Field Strength: 52027.155 nT
Magnetic Dip Angle: 65.499 °
Declination Date: November 01, 2011
Magnetic Declination Model: BGGM 2011
North Reference: Grid North
Grid Convergence Used: -1.916 °
Total Corr Mag North->Grid North: 12.212 °
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Nichols 19-9H SHL	0.00	0.00	348.90	0.00	0.00	0.00	0.00	N/A	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
	100.00	0.00	348.90	100.00	0.00	0.00	0.00	0.00	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
	200.00	0.00	348.90	200.00	0.00	0.00	0.00	0.00	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
	300.00	0.00	348.90	300.00	0.00	0.00	0.00	0.00	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
	400.00	0.00	348.90	400.00	0.00	0.00	0.00	0.00	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
KOP, Build 1 DLS	500.00	0.00	348.90	500.00	0.00	0.00	0.00	0.00	14260162.45	782816.40	N 39 13 42.65	W 108 1 41.56
	600.00	1.00	348.90	599.99	0.85	0.86	-0.17	1.00	14260163.31	782816.24	N 39 13 42.66	W 108 1 41.56
	700.00	2.00	348.90	699.96	3.41	3.43	-0.67	1.00	14260165.88	782815.73	N 39 13 42.68	W 108 1 41.57
	800.00	3.00	348.90	799.86	7.68	7.71	-1.51	1.00	14260170.16	782814.89	N 39 13 42.72	W 108 1 41.58
	900.00	4.00	348.90	899.68	13.65	13.70	-2.69	1.00	14260176.16	782813.72	N 39 13 42.78	W 108 1 41.60
	1000.00	5.00	348.90	999.37	21.32	21.40	-4.20	1.00	14260183.86	782812.21	N 39 13 42.86	W 108 1 41.62
	1100.00	6.00	348.90	1098.90	30.69	30.80	-6.04	1.00	14260193.27	782810.36	N 39 13 42.95	W 108 1 41.65
Hold	1197.38	6.97	348.90	1195.66	41.44	41.60	-8.16	1.00	14260204.07	782808.24	N 39 13 43.05	W 108 1 41.68
	1200.00	6.97	348.90	1198.26	41.75	41.91	-8.22	0.00	14260204.38	782808.18	N 39 13 43.06	W 108 1 41.68
	1300.00	6.97	348.90	1297.52	53.62	53.82	-10.56	0.00	14260216.30	782805.84	N 39 13 43.17	W 108 1 41.71
Ohio Creek (Top Kmv)	1350.86	6.97	348.90	1348.00	59.66	59.88	-11.74	0.00	14260222.36	782804.66	N 39 13 43.23	W 108 1 41.73
	1400.00	6.97	348.90	1396.78	65.49	65.74	-12.89	0.00	14260228.22	782803.51	N 39 13 43.29	W 108 1 41.75
	1500.00	6.97	348.90	1496.04	77.36	77.65	-15.23	0.00	14260240.14	782801.17	N 39 13 43.41	W 108 1 41.78
	1600.00	6.97	348.90	1595.30	89.24	89.57	-17.57	0.00	14260252.06	782798.83	N 39 13 43.53	W 108 1 41.82
Williams Fork Fm	1668.20	6.97	348.90	1663.00	97.33	97.69	-19.16	0.00	14260260.19	782797.24	N 39 13 43.61	W 108 1 41.84
	1700.00	6.97	348.90	1694.56	101.11	101.48	-19.90	0.00	14260263.98	782796.49	N 39 13 43.64	W 108 1 41.85
	1800.00	6.97	348.90	1793.82	112.98	113.40	-22.24	0.00	14260275.90	782794.16	N 39 13 43.76	W 108 1 41.89
	1900.00	6.97	348.90	1893.08	124.85	125.31	-24.57	0.00	14260287.82	782791.82	N 39 13 43.88	W 108 1 41.92
	2000.00	6.97	348.90	1992.34	136.72	137.22	-26.91	0.00	14260299.74	782789.48	N 39 13 43.99	W 108 1 41.96
	2100.00	6.97	348.90	2091.60	148.59	149.14	-29.25	0.00	14260311.66	782787.14	N 39 13 44.11	W 108 1 41.99
	2200.00	6.97	348.90	2190.86	160.46	161.05	-31.58	0.00	14260323.58	782784.81	N 39 13 44.23	W 108 1 42.03
	2300.00	6.97	348.90	2290.12	172.33	172.97	-33.92	0.00	14260335.50	782782.47	N 39 13 44.34	W 108 1 42.06
	2400.00	6.97	348.90	2389.38	184.20	184.88	-36.26	0.00	14260347.42	782780.13	N 39 13 44.46	W 108 1 42.10
	2500.00	6.97	348.90	2488.64	196.07	196.80	-38.59	0.00	14260359.34	782777.79	N 39 13 44.58	W 108 1 42.13
	2600.00	6.97	348.90	2587.90	207.94	208.71	-40.93	0.00	14260371.26	782775.46	N 39 13 44.69	W 108 1 42.16
	2700.00	6.97	348.90	2687.16	219.81	220.63	-43.27	0.00	14260383.18	782773.12	N 39 13 44.81	W 108 1 42.20
	2800.00	6.97	348.90	2786.42	231.68	232.54	-45.60	0.00	14260395.10	782770.78	N 39 13 44.93	W 108 1 42.23
	2900.00	6.97	348.90	2885.68	243.55	244.46	-47.94	0.00	14260407.02	782768.44	N 39 13 45.05	W 108 1 42.27
	3000.00	6.97	348.90	2984.94	255.42	256.37	-50.28	0.00	14260418.94	782766.11	N 39 13 45.16	W 108 1 42.30
	3100.00	6.97	348.90	3084.20	267.29	268.28	-52.61	0.00	14260430.86	782763.77	N 39 13 45.28	W 108 1 42.34
	3200.00	6.97	348.90	3183.46	279.16	280.20	-54.95	0.00	14260442.78	782761.43	N 39 13 45.40	W 108 1 42.37
Top Gas	3219.68	6.97	348.90	3203.00	281.50	282.54	-55.41	0.00	14260445.12	782760.97	N 39 13 45.42	W 108 1 42.38
	3300.00	6.97	348.90	3292.72	291.03	292.11	-57.29	0.00	14260454.70	782759.09	N 39 13 45.51	W 108 1 42.41
	3400.00	6.97	348.90	3381.98	302.90	304.03	-59.62	0.00	14260466.62	782756.75	N 39 13 45.63	W 108 1 42.44
	3500.00	6.97	348.90	3481.24	314.77	315.94	-61.96	0.00	14260478.54	782754.42	N 39 13 45.75	W 108 1 42.48
	3600.00	6.97	348.90	3580.50	326.64	327.86	-64.30	0.00	14260490.46	782752.08	N 39 13 45.86	W 108 1 42.51
	3700.00	6.97	348.90	3679.76	338.51	339.77	-66.63	0.00	14260502.38	782749.74	N 39 13 45.98	W 108 1 42.55
	3800.00	6.97	348.90	3779.02	350.39	351.69	-68.97	0.00	14260514.30	782747.40	N 39 13 46.10	W 108 1 42.58
Coal Ridge (Paludal)	3838.26	6.97	348.90	3817.00	354.93	356.24	-69.86	0.00	14260518.86	782746.51	N 39 13 46.14	W 108 1 42.59
	3900.00	6.97	348.90	3878.28	362.26	363.60	-71.31	0.00	14260526.22	782745.07	N 39 13 46.21	W 108 1 42.62
	4000.00	6.97	348.90	3977.55	374.13	375.52	-73.64	0.00	14260538.13	782742.73	N 39 13 46.33	W 108 1 42.65
	4100.00	6.97	348.90	4076.81	386.00	387.43	-75.98	0.00	14260550.05	782740.39	N 39 13 46.45	W 108 1 42.69
Rollins Ss (lles Fm)	4119.34	6.97	348.90	4096.00	388.29	389.73	-76.43	0.00	14260552.36	782739.94	N 39 13 46.47	W 108 1 42.69
	4200.00	6.97	348.90	4176.07	397.87	399.34	-78.32	0.00	14260561.97	782738.05	N 39 13 46.57	W 108 1 42.72
	4300.00	6.97	348.90	4275.33	409.74	411.26	-80.65	0.00	14260573.89	782735.72	N 39 13 46.68	W 108 1 42.76
	4400.00	6.97	348.90	4374.59	421.61	423.17	-82.99	0.00	14260585.81	782733.38	N 39 13 46.80	W 108 1 42.79
Cozzette Ss	4407.47	6.97	348.90	4382.00	422.49	424.06	-83.16	0.00	14260586.70	782733.20	N 39 13 46.81	W 108 1 42.79
	4500.00	6.97	348.90	4473.85	433.48	435.09	-85.33	0.00	14260597.73	782731.04	N 39 13 46.92	W 108 1 42.82
Corcoran Ss	4589.82	6.97	348.90	4563.00	444.14	445.79	-87.42	0.00	14260608.44	782728.94	N 39 13 47.02	W 108 1 42.86
	4600.00	6.97	348.90	4573.11	445.35	447.00	-87.66	0.00	14260609.65	782728.70	N 39 13 47.03	W 108 1 42.86
	4700.00	6.97	348.90	4672.37	457.22	458.92	-90.00	0.00	14260621.57	782726.37	N 39 13 47.15	W 108 1 42.89
	4800.00	6.97	348.90	4771.63	469.09	470.83	-92.34	0.00	14260633.49	782724.03	N 39 13 47.27	W 108 1 42.93
	4900.00	6.97	348.90	4870.89	480.96	482.75	-94.67	0.00	14260645.41	782721.69	N 39 13 47.38	W 108 1 42.96
	5000.00	6.97	348.90	4970.15	492.83	494.66	-97.01	0.00	14260657.33	782719.35	N 39 13 47.50	W 108 1 43.00
	5100.00	6.97	348.90	5069.41	504.70	506.58	-99.35	0.00	14260669.25	782717.02	N 39 13 47.62	W 108 1 43.03
	5200.00	6.97	348.90	5168.67	516.57	518.49	-101.68	0.00	14260681.17	782714.68	N 39 13 47.73	W 108 1 43.07
	5300.00	6.97	348.90	5267.93	528.44	530.40	-104.02	0.00	14260693.09	782712.34	N 39 13 47.85	W 108 1 43.10
Buck Tongue	5301.08	6.97	348.90	5269.00	528.57	530.53	-104.04	0.00	14260693.22	782712.31	N 39 13 47.85	W 108 1 43.10
	5400.00	6.97	348.90	5367.19	540.31	542.32	-106.36	0.00	14260705.01	782710.00	N 39 13 47.97	W 108 1 43.14
	5500.00	6.97	348.90	5466.45	552.18	554.23	-108.69	0.00	14260716.93	782707.66	N 39 13 48.09	W 108 1 43.17
	5600.00	6.97	348.90	5565.71	564.05	566.15	-111.03	0.00	14260728.85	782705.33	N 39 13 48.20	W 108 1 43.21
	5700.00	6.97	348.90	5664.97	575.92	578.06	-113.37	0.00	14260740.77	782702.99	N 39 13 48.32	W 108 1 43.24
	5800.00	6.97	348.90	5764.23	587.79	589.98	-115.70	0.00	14260752.69	782700.65	N 39 13 48.44	W 108 1 43.28
Castlegate	5834.02	6.97	348.90	5798.00	591.83	594.03	-116.50	0.00	14260756.75	782699.86	N 39 13 48.48	W 108 1 43.29
	5900.00	6.97	348.90	5893.49	599.66	601.89	-118.04	0.00	14260764.61	782698.31	N 39 13 48.55	W 108 1 43.31
	6000.00	6.97	348.90	5962.75	611.54	613.81	-120.37					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	6500.00	6.97	348.90	6459.05	670.89	673.38	-132.06	0.00	14260836.13	782684.29	N 39 13 49.25 W 108 1 43.52	
	6600.00	6.97	348.90	6558.31	682.76	685.29	-134.39	0.00	14260848.05	782681.95	N 39 13 49.37 W 108 1 43.55	
	6700.00	6.97	348.90	6657.57	694.63	697.21	-136.73	0.00	14260859.97	782679.61	N 39 13 49.49 W 108 1 43.59	
	6800.00	6.97	348.90	6756.83	706.50	709.12	-139.07	0.00	14260871.89	782677.28	N 39 13 49.61 W 108 1 43.62	
	6900.00	6.97	348.90	6856.09	718.37	721.04	-141.40	0.00	14260883.81	782674.94	N 39 13 49.72 W 108 1 43.66	
	7000.00	6.97	348.90	6955.35	730.24	732.95	-143.74	0.00	14260895.73	782672.60	N 39 13 49.84 W 108 1 43.69	
	7100.00	6.97	348.90	7054.61	742.11	744.87	-146.08	0.00	14260907.65	782670.26	N 39 13 49.96 W 108 1 43.73	
	7200.00	6.97	348.90	7153.87	753.98	756.78	-148.41	0.00	14260919.57	782667.93	N 39 13 50.07 W 108 1 43.76	
KOP, Build 7 DLS	7219.32	6.97	348.90	7173.05	756.27	759.08	-148.87	0.00	14260921.87	782667.47	N 39 13 50.10 W 108 1 43.77	
	7300.00	12.54	354.87	7252.53	769.78	772.62	-150.59	7.00	14260935.42	782665.75	N 39 13 50.23 W 108 1 43.80	
	7400.00	19.50	357.55	7348.59	797.27	800.14	-152.28	7.00	14260962.95	782664.06	N 39 13 50.50 W 108 1 43.83	
	7450.88	23.05	358.31	7396.00	815.70	818.59	-152.94	7.00	14260981.41	782663.40	N 39 13 50.68 W 108 1 43.85	
Niobrara Fm	7500.00	28.48	358.85	7440.59	836.25	839.16	-153.44	7.00	14261001.98	782662.90	N 39 13 50.89 W 108 1 43.86	
	7600.00	33.47	359.64	7527.16	866.16	869.09	-154.06	7.00	14261051.93	782662.28	N 39 13 51.38 W 108 1 43.89	
	7700.00	40.46	0.19	7607.01	946.25	949.19	-154.13	7.00	14261112.06	782662.21	N 39 13 51.87 W 108 1 43.92	
	7800.00	47.46	0.59	7678.95	1015.62	1018.56	-153.64	7.00	14261181.46	782662.70	N 39 13 52.66 W 108 1 43.94	
	7900.00	54.45	0.92	7741.90	1093.24	1096.17	-152.61	7.00	14261259.10	782663.73	N 39 13 53.42 W 108 1 43.96	
	8000.00	61.45	1.19	7794.93	1177.95	1180.86	-151.04	7.00	14261343.83	782665.29	N 39 13 54.26 W 108 1 43.98	
	8100.00	68.45	1.43	7837.25	1268.48	1271.37	-148.97	7.00	14261434.39	782667.36	N 39 13 55.16 W 108 1 43.99	
	8200.00	75.44	1.64	7888.22	1363.49	1366.36	-146.43	7.00	14261529.41	782669.91	N 39 13 56.10 W 108 1 44.00	
Horizontal Target	8224.40	77.15	1.69	7874.00	1387.20	1390.05	-145.74	7.00	14261553.12	782670.60	N 39 13 56.33 W 108 1 44.00	
	8300.00	82.44	1.84	7887.39	1461.57	1464.39	-143.44	7.00	14261627.49	782672.90	N 39 13 57.06 W 108 1 44.00	
Landing Point	8379.45	88.00	2.00	7894.01	1540.70	1543.49	-140.79	7.00	14261706.62	782675.56	N 39 13 57.85 W 108 1 44.00	
	8400.00	88.00	2.00	7894.72	1561.24	1564.02	-140.07	0.00	14261727.16	782676.27	N 39 13 58.05 W 108 1 44.00	
	8500.00	88.00	2.00	7898.21	1661.16	1663.89	-136.58	0.00	14261827.08	782679.76	N 39 13 59.04 W 108 1 44.00	
	8600.00	88.00	2.00	7901.70	1761.09	1763.77	-133.09	0.00	14261927.00	782683.25	N 39 14 0.03 W 108 1 44.00	
	8700.00	88.00	2.00	7905.19	1861.01	1863.65	-129.61	0.00	14262026.92	782686.74	N 39 14 1.01 W 108 1 43.99	
	8800.00	88.00	2.00	7908.68	1960.94	1963.53	-126.12	0.00	14262126.85	782690.23	N 39 14 2.00 W 108 1 43.99	
	8900.00	88.00	2.00	7912.17	2060.86	2063.41	-122.63	0.00	14262226.77	782693.72	N 39 14 2.99 W 108 1 43.99	
	9000.00	88.00	2.00	7915.66	2160.79	2163.29	-119.14	0.00	14262326.69	782697.21	N 39 14 3.98 W 108 1 43.99	
	9100.00	88.00	2.00	7919.15	2260.71	2263.16	-115.66	0.00	14262426.61	782700.70	N 39 14 4.96 W 108 1 43.99	
	9200.00	88.00	2.00	7922.64	2360.64	2363.04	-112.17	0.00	14262526.54	782704.19	N 39 14 5.95 W 108 1 43.99	
	9300.00	88.00	2.00	7926.13	2460.56	2462.92	-108.68	0.00	14262626.46	782707.68	N 39 14 6.94 W 108 1 43.98	
	9400.00	88.00	2.00	7929.62	2560.48	2562.80	-105.19	0.00	14262726.38	782711.17	N 39 14 7.93 W 108 1 43.98	
	9500.00	88.00	2.00	7933.11	2660.41	2662.68	-101.70	0.00	14262826.30	782714.66	N 39 14 8.92 W 108 1 43.98	
Nio. Laminated Stst	9525.45	88.00	2.00	7934.00	2685.84	2688.10	-100.82	0.00	14262851.73	782715.54	N 39 14 9.17 W 108 1 43.98	
	9600.00	88.00	2.00	7936.60	2760.33	2762.56	-98.22	0.00	14262926.22	782718.14	N 39 14 9.90 W 108 1 43.98	
	9700.00	88.00	2.00	7940.09	2860.26	2862.43	-94.73	0.00	14263026.15	782721.63	N 39 14 10.89 W 108 1 43.98	
	9800.00	88.00	2.00	7943.58	2960.18	2962.31	-91.24	0.00	14263126.07	782725.12	N 39 14 11.88 W 108 1 43.97	
	9900.00	88.00	2.00	7947.07	3060.11	3062.19	-87.75	0.00	14263225.99	782728.61	N 39 14 12.87 W 108 1 43.97	
	10000.00	88.00	2.00	7950.56	3160.03	3162.07	-84.27	0.00	14263325.91	782732.10	N 39 14 13.85 W 108 1 43.97	
	10100.00	88.00	2.00	7954.05	3259.96	3261.95	-80.78	0.00	14263425.83	782735.59	N 39 14 14.84 W 108 1 43.97	
	10200.00	88.00	2.00	7957.54	3359.88	3361.82	-77.29	0.00	14263525.76	782739.08	N 39 14 15.83 W 108 1 43.97	
	10300.00	88.00	2.00	7961.03	3459.81	3461.70	-73.80	0.00	14263625.68	782742.57	N 39 14 16.82 W 108 1 43.96	
	10400.00	88.00	2.00	7964.52	3559.73	3561.58	-70.31	0.00	14263725.60	782746.06	N 39 14 17.81 W 108 1 43.96	
	10500.00	88.00	2.00	7968.01	3659.66	3661.46	-66.83	0.00	14263825.52	782749.55	N 39 14 18.79 W 108 1 43.96	
	10600.00	88.00	2.00	7971.50	3759.58	3761.34	-63.34	0.00	14263925.44	782753.04	N 39 14 19.78 W 108 1 43.96	
	10700.00	88.00	2.00	7974.99	3859.51	3861.22	-59.85	0.00	14264025.37	782756.53	N 39 14 20.77 W 108 1 43.96	
	10800.00	88.00	2.00	7978.48	3959.43	3961.09	-56.36	0.00	14264125.29	782760.02	N 39 14 21.76 W 108 1 43.96	
	10900.00	88.00	2.00	7981.97	4059.36	4060.97	-52.87	0.00	14264225.21	782763.51	N 39 14 22.74 W 108 1 43.95	
	11000.00	88.00	2.00	7985.46	4159.28	4160.85	-49.39	0.00	14264325.13	782767.00	N 39 14 23.73 W 108 1 43.95	
	11100.00	88.00	2.00	7988.95	4259.21	4260.73	-45.90	0.00	14264425.05	782770.48	N 39 14 24.72 W 108 1 43.95	
	11200.00	88.00	2.00	7992.44	4359.13	4360.61	-42.41	0.00	14264524.98	782773.97	N 39 14 25.71 W 108 1 43.95	
	11300.00	88.00	2.00	7995.93	4459.06	4460.48	-38.92	0.00	14264624.90	782777.46	N 39 14 26.70 W 108 1 43.95	
	11400.00	88.00	2.00	7999.42	4558.98	4560.36	-35.44	0.00	14264724.82	782780.95	N 39 14 27.68 W 108 1 43.94	
	11500.00	88.00	2.00	8002.91	4658.91	4660.24	-31.95	0.00	14264824.74	782784.44	N 39 14 28.67 W 108 1 43.94	
	11600.00	88.00	2.00	8006.40	4758.83	4760.12	-28.46	0.00	14264924.67	782787.93	N 39 14 29.66 W 108 1 43.94	
	11700.00	88.00	2.00	8009.89	4858.76	4860.00	-24.97	0.00	14265024.59	782791.42	N 39 14 30.65 W 108 1 43.94	
	11800.00	88.00	2.00	8013.38	4958.68	4959.88	-21.48	0.00	14265124.51	782794.91	N 39 14 31.63 W 108 1 43.94	
	11900.00	88.00	2.00	8016.87	5058.61	5059.75	-18.00	0.00	14265224.43	782798.40	N 39 14 32.62 W 108 1 43.94	
	12000.00	88.00	2.00	8020.36	5158.53	5159.63	-14.51	0.00	14265324.35	782801.89	N 39 14 33.61 W 108 1 43.93	
	12100.00	88.00	2.00	8023.85	5258.46	5259.51	-11.02	0.00	14265424.28	782805.38	N 39 14 34.60 W 108 1 43.93	
	12200.00	88.00	2.00	8027.34	5358.38	5359.39	-7.53	0.00	14265524.20	782808.87	N 39 14 35.58 W 108 1 43.93	
	12300.00	88.00	2.00	8030.83	5458.31	5459.27	-4.05	0.00	14265624.12	782812.36	N 39 14 36.57 W 108 1 43.93	
	12400.00	88.00	2.00	8034.32	5558.23	5559.14	-0.56	0.00	14265724.04	782815.85	N 39 14 37.56 W 108 1 43.93	
	12500.00	88.00	2.00	8037.81	5658.16	5659.02	2.93	0.00	14265823.96	782819.34	N 39 14 38.55 W 108 1 43.92	
	12600.00	88.00	2.00	8041.30	5758.08	5758.90	6.42	0.00	14265923.89	782822.83	N 39 14 39.54 W 108 1 43.92	
	12700.00	88.00	2.00	8044.79	5858.01	5858.78	9.91	0.00	14266023.81	782826.31	N 39 14 40.52 W 108 1 43.92	
	12800.00	88.00	2.00	8048.28	5957.93	5958.66	13.39	0.00	14266123.73	782829.80	N 39 14 41.51 W 108 1 43.92	
	12900.00	88.00	2.00	8051.77	6057.85	6058.54	16.88	0.00	14266223.65	782833.29	N 39 14 42.50 W 108 1 43.92	
	13000.00	88.00	2.00	8055.26	6157.78	6158.41	20.37	0.00	14266323.57	782836.78	N 39 14 43.49 W 108 1 43.92	
	13100.00	88.00	2.00	8058.75	6257.70	6258.29	23.86	0.00	14266423.50	782840.27	N 39 14 44.47 W 108 1 43.91	
	13200.00	88.00	2.00	8062.24	6357.63	6358.17	27.34	0.00	14266523.42	782843.76	N 39 14 45.46 W 108 1 43.91	
	13300.00	88.00	2.00	8065.73	6457.55	6458.05	30.83	0.00	14266623.34	782847.25	N 39 14 46.45 W 108 1 43.91	
	13400.00	88.00	2.00	8069.22	6557.48	6557.93	34.32	0.00	14266723.26	782850.74	N 39 14 47.44 W 108 1 43.91	
	13500.00	88.00	2.00	8072.71	6657.40	6657.81	37.81	0.00	14266823.19	782854.23		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	16800.00	88.00	2.00	8187.88	9954.92	9953.79	152.91	0.00	14270120.61	782969.38	N 39 15 21.02	W 108 1 43.85
	16900.00	88.00	2.00	8191.37	10054.85	10053.66	156.39	0.00	14270220.54	782972.87	N 39 15 22.01	W 108 1 43.84
	17000.00	88.00	2.00	8194.86	10154.77	10153.54	159.88	0.00	14270320.46	782976.36	N 39 15 23.00	W 108 1 43.84
	17100.00	88.00	2.00	8198.35	10254.70	10253.42	163.37	0.00	14270420.38	782979.85	N 39 15 23.98	W 108 1 43.84
	17200.00	88.00	2.00	8201.84	10354.62	10353.30	166.86	0.00	14270520.30	782983.34	N 39 15 24.97	W 108 1 43.84
	17300.00	88.00	2.00	8205.33	10454.55	10453.18	170.35	0.00	14270620.22	782986.82	N 39 15 25.96	W 108 1 43.84
	17400.00	88.00	2.00	8208.82	10554.47	10553.05	173.83	0.00	14270720.15	782990.31	N 39 15 26.95	W 108 1 43.83
	17500.00	88.00	2.00	8212.31	10654.40	10652.93	177.32	0.00	14270820.07	782993.80	N 39 15 27.94	W 108 1 43.83
	17600.00	88.00	2.00	8215.80	10754.32	10752.81	180.81	0.00	14270919.99	782997.29	N 39 15 28.92	W 108 1 43.83
	17700.00	88.00	2.00	8219.29	10854.25	10852.69	184.30	0.00	14271019.91	783000.78	N 39 15 29.91	W 108 1 43.83
	17800.00	88.00	2.00	8222.78	10954.17	10952.57	187.78	0.00	14271119.83	783004.27	N 39 15 30.90	W 108 1 43.83
	17900.00	88.00	2.00	8226.27	11054.10	11052.45	191.27	0.00	14271219.76	783007.76	N 39 15 31.89	W 108 1 43.83
	18000.00	88.00	2.00	8229.76	11154.02	11152.32	194.76	0.00	14271319.68	783011.25	N 39 15 32.87	W 108 1 43.82
	18100.00	88.00	2.00	8233.25	11253.95	11252.20	198.25	0.00	14271419.60	783014.74	N 39 15 33.86	W 108 1 43.82
	18200.00	88.00	2.00	8236.74	11353.87	11352.08	201.74	0.00	14271519.52	783018.23	N 39 15 34.85	W 108 1 43.82
	18300.00	88.00	2.00	8240.23	11453.80	11451.96	205.22	0.00	14271619.45	783021.72	N 39 15 35.84	W 108 1 43.82
Nichols 19-9H TD	18379.45	88.00	2.00	8243.00	11533.19	11531.31	207.99	0.00	14271698.83	783024.49	N 39 15 36.62	W 108 1 43.82

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
	0.000	22.000	1/100.000	SLB_MWD-STD-Depth Only	Original Hole / Nichols 19-9H R2 ors 01-Dec-11
	22.000	18379.449	1/100.000	SLB_MWD-STD	Original Hole / Nichols 19-9H R2 ors 01-Dec-11