



CARRIZO

CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83

Site: Bringelson Ranch 33-21-9-58 Pad

Well: 3-33-9-58

Wellpath: Original Hole

Plan: Plan #1

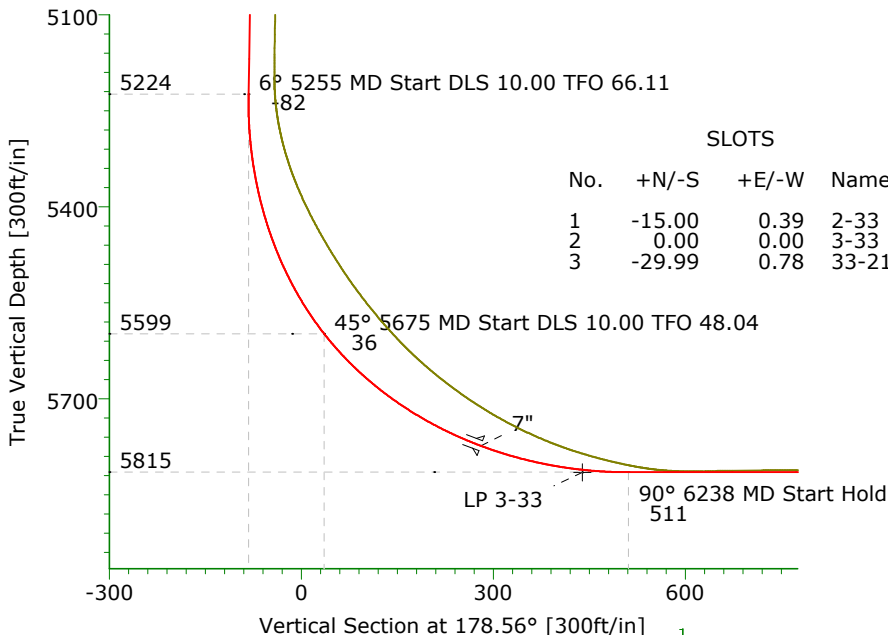


Precision

Directional Services

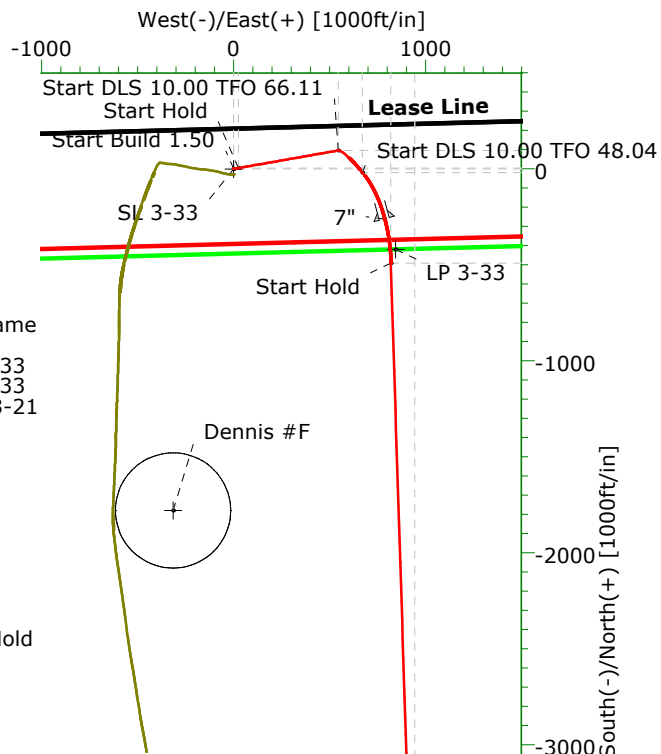
CASING DETAILS

No.	TVD	MD	Name	Size
1	5773.86	6000.68	7"	7.000



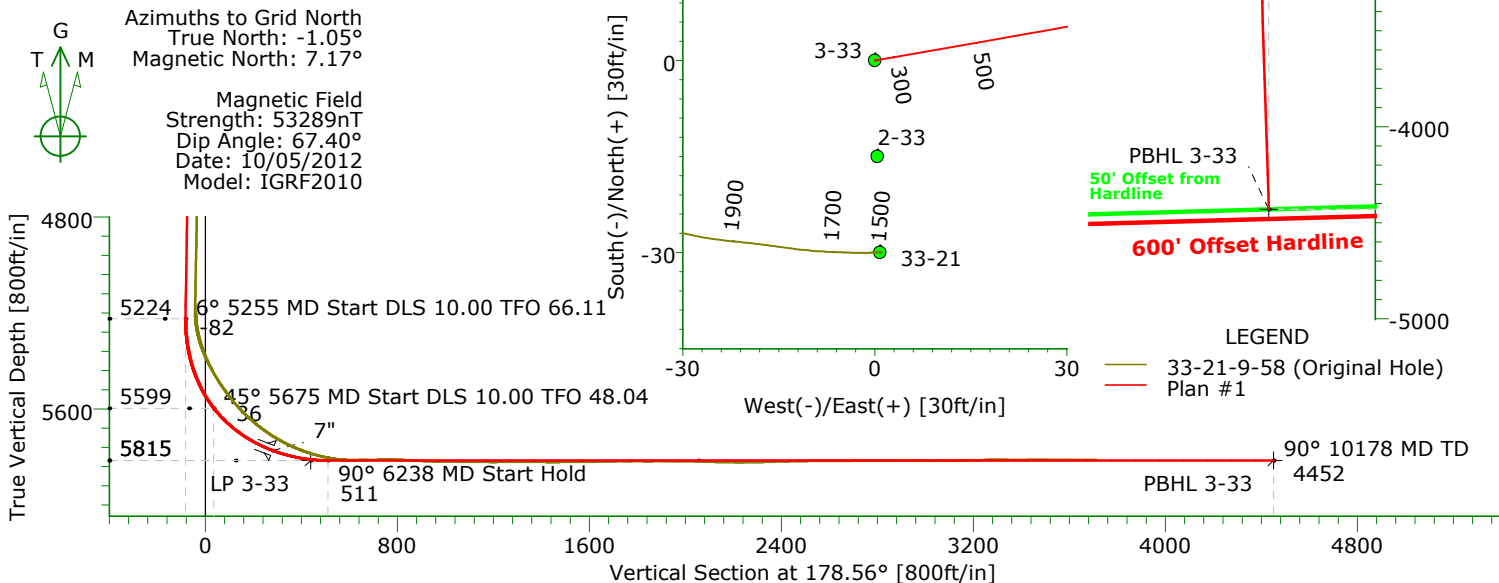
SLOTS

No.	+N/-S	+E/-W	Name
1	-15.00	0.39	2-33
2	0.00	0.00	3-33
3	-29.99	0.78	33-21



Azimuths to Grid North
True North: -1.05°
Magnetic North: 7.17°

Magnetic Field
Strength: 53289nT
Dip Angle: 67.40°
Date: 10/05/2012
Model: IGRF2010



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SL 3-33	0.00	0.00	0.00	1507195.74	3451857.29	40°42'51.245N	103°52'11.892W	Point
Dennis #F	0.00	-1778.90	-315.39	1505416.84	3451541.90	40°42'33.727N	103°52'16.412W	Circle (Radius: 300)
LP 3-33	5815.00	-418.36	842.64	1506777.38	3452699.93	40°42'46.959N	103°52'01.052W	Point
PBHL 3-33	5815.00	-4429.41	943.45	1502766.33	3452800.74	40°42'07.313N	103°52'00.702W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	583.33	6.50	80.00	582.40	4.26	24.18	1.50	80.00	-3.65	
4	5254.97	6.50	80.00	5224.01	96.10	544.99	0.00	0.00	-82.37	
5	5675.45	45.00	140.00	5598.52	-18.86	669.63	10.00	66.11	35.68	
6	6237.78	90.00	178.18	5815.00	-490.68	818.49	10.00	48.04	511.09	
7	10178.49	90.00	178.18	5815.00	-4429.41	943.45	0.00	0.00	4451.72	PBHL 3-33

Wellpath: (3-33-9-58/Original Hole)

Created By: Michael Cabrera

Date: 10/05/2012

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Bringelson Ranch 33-21-9-58 Pad Well: 3-33-9-58 Wellpath: Original Hole	Date: 10/05/2012 Co-ordinate(NE) Reference: Well: 3-33-9-58, Grid North Vertical (TVD) Reference: 4842'GL+17"KB 4859.0 Section (VS) Reference: Well (0.00N,0.00E,178.56Azi) Plan: Plan #1	Time: 13:00:44 Page: 1
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Field: Niobrara CONZ'83	
Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level	Map Zone: Colorado, Northern Zone Coordinate System: Well Centre Geomagnetic Model: IGRF2010

Site: Bringelson Ranch 33-21-9-58 Pad Weld County, CO	
Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 4842.00 ft	Northing: 1507165.75 ft Easting: 3451858.07 ft Latitude: 40 42 50.948 N Longitude: 103 52 11.889 W North Reference: Grid Grid Convergence: 1.05 deg

Well: 3-33-9-58 centered on 33-21	Slot Name: 3-33
Well Position: +N/-S 29.99 ft +E/-W -0.78 ft Position Uncertainty: 0.00 ft	Northing: 1507195.74 ft Easting : 3451857.29 ft Latitude: 40 42 51.245 N Longitude: 103 52 11.892 W

Wellpath: Original Hole Current Datum: 4842'GL+17"KB Magnetic Data: 10/05/2012 Field Strength: 53289 nT Vertical Section: Depth From (TVD) ft	Height 4859.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.22 deg Mag Dip Angle: 67.40 deg +E/-W ft Direction deg
0.00	0.00	0.00 178.56

Plan: Plan #1 Principal: No	Date Composed: 10/05/2012 Version: 1 Tied-to: From Surface
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Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
583.33	6.50	80.00	582.40	4.26	24.18	1.50	1.50	0.00	80.00	
5254.97	6.50	80.00	5224.01	96.10	544.99	0.00	0.00	0.00	0.00	
5675.45	45.00	140.00	5598.52	-18.86	669.63	10.00	9.16	14.27	66.11	
6237.78	90.00	178.18	5815.00	-490.68	818.49	10.00	8.00	6.79	48.04	
10178.49	90.00	178.18	5815.00	-4429.41	943.45	0.00	0.00	0.00	0.00	PBHL 3-33

Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.75	80.00	200.00	0.06	0.32	-0.05	1.50	1.50	0.00	
300.00	2.25	80.00	299.96	0.51	2.90	-0.44	1.50	1.50	0.00	
400.00	3.75	80.00	399.82	1.42	8.05	-1.22	1.50	1.50	0.00	
500.00	5.25	80.00	499.51	2.78	15.78	-2.39	1.50	1.50	0.00	
583.33	6.50	80.00	582.40	4.26	24.18	-3.65	1.50	1.50	0.00	
600.00	6.50	80.00	598.96	4.59	26.04	-3.94	0.00	0.00	0.00	
700.00	6.50	80.00	698.32	6.56	37.19	-5.62	0.00	0.00	0.00	
800.00	6.50	80.00	797.68	8.52	48.34	-7.31	0.00	0.00	0.00	
900.00	6.50	80.00	897.04	10.49	59.48	-8.99	0.00	0.00	0.00	
1000.00	6.50	80.00	996.39	12.45	70.63	-10.68	0.00	0.00	0.00	
1100.00	6.50	80.00	1095.75	14.42	81.78	-12.36	0.00	0.00	0.00	
1200.00	6.50	80.00	1195.11	16.39	92.93	-14.05	0.00	0.00	0.00	
1300.00	6.50	80.00	1294.46	18.35	104.08	-15.73	0.00	0.00	0.00	
1400.00	6.50	80.00	1393.82	20.32	115.23	-17.42	0.00	0.00	0.00	

Precision Directional Services, Inc.

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Field: Niobrara CONZ'83
Site: Bringelson Ranch 33-21-9-58 Pad
Well: 3-33-9-58
Wellpath: Original Hole

Date: 10/05/2012
Co-ordinate(NE) Reference: Well: 3-33-9-58, Grid North
Vertical (TVD) Reference: 4842'GL+17'KB 4859.0
Section (VS) Reference: Well (0.00N,0.00E,178.56Azi)
Plan: Plan #1

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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1500.00	6.50	80.00	1493.18	22.28	126.37	-19.10	0.00	0.00	0.00	
1600.00	6.50	80.00	1592.54	24.25	137.52	-20.79	0.00	0.00	0.00	
1700.00	6.50	80.00	1691.89	26.21	148.67	-22.47	0.00	0.00	0.00	
1800.00	6.50	80.00	1791.25	28.18	159.82	-24.16	0.00	0.00	0.00	
1900.00	6.50	80.00	1890.61	30.15	170.97	-25.84	0.00	0.00	0.00	
2000.00	6.50	80.00	1989.96	32.11	182.12	-27.53	0.00	0.00	0.00	
2100.00	6.50	80.00	2089.32	34.08	193.26	-29.21	0.00	0.00	0.00	
2200.00	6.50	80.00	2188.68	36.04	204.41	-30.90	0.00	0.00	0.00	
2300.00	6.50	80.00	2288.04	38.01	215.56	-32.58	0.00	0.00	0.00	
2400.00	6.50	80.00	2387.39	39.97	226.71	-34.27	0.00	0.00	0.00	
2500.00	6.50	80.00	2486.75	41.94	237.86	-35.95	0.00	0.00	0.00	
2600.00	6.50	80.00	2586.11	43.91	249.01	-37.63	0.00	0.00	0.00	
2700.00	6.50	80.00	2685.46	45.87	260.15	-39.32	0.00	0.00	0.00	
2800.00	6.50	80.00	2784.82	47.84	271.30	-41.00	0.00	0.00	0.00	
2900.00	6.50	80.00	2884.18	49.80	282.45	-42.69	0.00	0.00	0.00	
3000.00	6.50	80.00	2983.54	51.77	293.60	-44.37	0.00	0.00	0.00	
3100.00	6.50	80.00	3082.89	53.74	304.75	-46.06	0.00	0.00	0.00	
3200.00	6.50	80.00	3182.25	55.70	315.90	-47.74	0.00	0.00	0.00	
3300.00	6.50	80.00	3281.61	57.67	327.04	-49.43	0.00	0.00	0.00	
3400.00	6.50	80.00	3380.97	59.63	338.19	-51.11	0.00	0.00	0.00	
3500.00	6.50	80.00	3480.32	61.60	349.34	-52.80	0.00	0.00	0.00	
3600.00	6.50	80.00	3579.68	63.56	360.49	-54.48	0.00	0.00	0.00	
3700.00	6.50	80.00	3679.04	65.53	371.64	-56.17	0.00	0.00	0.00	
3800.00	6.50	80.00	3778.39	67.50	382.79	-57.85	0.00	0.00	0.00	
3900.00	6.50	80.00	3877.75	69.46	393.93	-59.54	0.00	0.00	0.00	
4000.00	6.50	80.00	3977.11	71.43	405.08	-61.22	0.00	0.00	0.00	
4100.00	6.50	80.00	4076.47	73.39	416.23	-62.91	0.00	0.00	0.00	
4200.00	6.50	80.00	4175.82	75.36	427.38	-64.59	0.00	0.00	0.00	
4300.00	6.50	80.00	4275.18	77.32	438.53	-66.28	0.00	0.00	0.00	
4400.00	6.50	80.00	4374.54	79.29	449.68	-67.96	0.00	0.00	0.00	
4500.00	6.50	80.00	4473.89	81.26	460.82	-69.65	0.00	0.00	0.00	
4600.00	6.50	80.00	4573.25	83.22	471.97	-71.33	0.00	0.00	0.00	
4700.00	6.50	80.00	4672.61	85.19	483.12	-73.02	0.00	0.00	0.00	
4800.00	6.50	80.00	4771.97	87.15	494.27	-74.70	0.00	0.00	0.00	
4900.00	6.50	80.00	4871.32	89.12	505.42	-76.39	0.00	0.00	0.00	
5000.00	6.50	80.00	4970.68	91.08	516.57	-78.07	0.00	0.00	0.00	
5100.00	6.50	80.00	5070.04	93.05	527.71	-79.76	0.00	0.00	0.00	
5200.00	6.50	80.00	5169.39	95.02	538.86	-81.44	0.00	0.00	0.00	
5254.97	6.50	80.00	5224.01	96.10	544.99	-82.37	0.00	0.00	0.00	
5300.00	9.28	106.43	5268.62	95.51	550.99	-81.64	10.00	6.18	58.69	
5350.00	13.50	120.29	5317.64	91.43	559.90	-77.33	10.00	8.44	27.72	
5400.00	18.12	127.43	5365.74	83.75	571.12	-69.37	10.00	9.23	14.28	
5450.00	22.89	131.70	5412.56	72.55	584.56	-57.84	10.00	9.55	8.56	
5500.00	27.74	134.56	5457.75	57.91	600.12	-42.81	10.00	9.70	5.71	
5550.00	32.63	136.62	5500.96	39.94	617.68	-24.40	10.00	9.78	4.12	
5600.00	37.55	138.19	5541.86	18.77	637.11	-2.75	10.00	9.84	3.15	
5650.00	42.48	139.45	5580.14	-5.43	658.26	21.97	10.00	9.87	2.51	
5675.45	45.00	140.00	5598.52	-18.86	669.63	35.68	10.00	9.89	2.17	
5700.00	46.67	142.51	5615.63	-32.60	680.65	49.69	10.00	6.80	10.22	
5750.00	50.22	147.21	5648.80	-63.20	702.13	80.82	10.00	7.11	9.40	
5800.00	53.95	151.44	5679.53	-97.12	722.21	115.24	10.00	7.45	8.46	
5850.00	57.81	155.28	5707.57	-134.12	740.74	152.69	10.00	7.72	7.68	
5900.00	61.78	158.81	5732.73	-173.90	757.56	192.88	10.00	7.93	7.05	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringelson Ranch 33-21-9-58 Pad
Well: 3-33-9-58
Wellpath: Original Hole

Date: 10/05/2012
Co-ordinate(NE) Reference: Well: 3-33-9-58, Grid North
Vertical (TVD) Reference: 4842'GL+17'KB 4859.0
Section (VS) Reference: Well (0.00N,0.00E,178.56Azi)
Plan: Plan #1

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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5950.00	65.83	162.07	5754.81	-216.17	772.55	235.51	10.00	8.10	6.54	
6000.00	69.94	165.14	5773.63	-260.59	785.60	280.25	10.00	8.23	6.13	
6000.68	70.00	165.18	5773.86	-261.21	785.77	280.87	10.00	8.29	5.96	7"
6050.00	74.11	168.05	5789.06	-306.84	796.61	326.77	10.00	8.33	5.81	
6100.00	78.31	170.84	5800.97	-354.57	805.50	374.70	10.00	8.41	5.58	
6150.00	82.54	173.54	5809.29	-403.40	812.19	423.68	10.00	8.46	5.41	
6200.00	86.79	176.19	5813.94	-452.97	816.64	473.35	10.00	8.49	5.31	
6237.78	90.00	178.18	5815.00	-490.68	818.49	511.09	10.00	8.50	5.26	
6300.00	90.00	178.18	5815.00	-552.87	820.46	573.31	0.00	0.00	0.00	
6400.00	90.00	178.18	5815.00	-652.82	823.63	673.31	0.00	0.00	0.00	
6500.00	90.00	178.18	5815.00	-752.77	826.80	773.31	0.00	0.00	0.00	
6600.00	90.00	178.18	5815.00	-852.72	829.97	873.31	0.00	0.00	0.00	
6700.00	90.00	178.18	5815.00	-952.67	833.15	973.30	0.00	0.00	0.00	
6800.00	90.00	178.18	5815.00	-1052.62	836.32	1073.30	0.00	0.00	0.00	
6900.00	90.00	178.18	5815.00	-1152.57	839.49	1173.30	0.00	0.00	0.00	
7000.00	90.00	178.18	5815.00	-1252.52	842.66	1273.30	0.00	0.00	0.00	
7100.00	90.00	178.18	5815.00	-1352.47	845.83	1373.29	0.00	0.00	0.00	
7200.00	90.00	178.18	5815.00	-1452.42	849.00	1473.29	0.00	0.00	0.00	
7300.00	90.00	178.18	5815.00	-1552.37	852.17	1573.29	0.00	0.00	0.00	
7400.00	90.00	178.18	5815.00	-1652.32	855.34	1673.29	0.00	0.00	0.00	
7500.00	90.00	178.18	5815.00	-1752.26	858.51	1773.29	0.00	0.00	0.00	
7600.00	90.00	178.18	5815.00	-1852.21	861.68	1873.28	0.00	0.00	0.00	
7700.00	90.00	178.18	5815.00	-1952.16	864.86	1973.28	0.00	0.00	0.00	
7800.00	90.00	178.18	5815.00	-2052.11	868.03	2073.28	0.00	0.00	0.00	
7900.00	90.00	178.18	5815.00	-2152.06	871.20	2173.28	0.00	0.00	0.00	
8000.00	90.00	178.18	5815.00	-2252.01	874.37	2273.28	0.00	0.00	0.00	
8100.00	90.00	178.18	5815.00	-2351.96	877.54	2373.27	0.00	0.00	0.00	
8200.00	90.00	178.18	5815.00	-2451.91	880.71	2473.27	0.00	0.00	0.00	
8300.00	90.00	178.18	5815.00	-2551.86	883.88	2573.27	0.00	0.00	0.00	
8400.00	90.00	178.18	5815.00	-2651.81	887.05	2673.27	0.00	0.00	0.00	
8500.00	90.00	178.18	5815.00	-2751.76	890.22	2773.26	0.00	0.00	0.00	
8600.00	90.00	178.18	5815.00	-2851.71	893.40	2873.26	0.00	0.00	0.00	
8700.00	90.00	178.18	5815.00	-2951.66	896.57	2973.26	0.00	0.00	0.00	
8800.00	90.00	178.18	5815.00	-3051.61	899.74	3073.26	0.00	0.00	0.00	
8900.00	90.00	178.18	5815.00	-3151.56	902.91	3173.26	0.00	0.00	0.00	
9000.00	90.00	178.18	5815.00	-3251.51	906.08	3273.25	0.00	0.00	0.00	
9100.00	90.00	178.18	5815.00	-3351.46	909.25	3373.25	0.00	0.00	0.00	
9200.00	90.00	178.18	5815.00	-3451.41	912.42	3473.25	0.00	0.00	0.00	
9300.00	90.00	178.18	5815.00	-3551.36	915.59	3573.25	0.00	0.00	0.00	
9400.00	90.00	178.18	5815.00	-3651.31	918.76	3673.24	0.00	0.00	0.00	
9500.00	90.00	178.18	5815.00	-3751.26	921.93	3773.24	0.00	0.00	0.00	
9600.00	90.00	178.18	5815.00	-3851.21	925.11	3873.24	0.00	0.00	0.00	
9700.00	90.00	178.18	5815.00	-3951.16	928.28	3973.24	0.00	0.00	0.00	
9800.00	90.00	178.18	5815.00	-4051.11	931.45	4073.24	0.00	0.00	0.00	
9900.00	90.00	178.18	5815.00	-4151.06	934.62	4173.23	0.00	0.00	0.00	
10000.00	90.00	178.18	5815.00	-4251.01	937.79	4273.23	0.00	0.00	0.00	
10100.00	90.00	178.18	5815.00	-4350.96	940.96	4373.23	0.00	0.00	0.00	
10178.49	90.00	178.18	5815.00	-4429.41	943.45	4451.72	0.00	0.00	0.00	PBHL 3-33

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Bringelson Ranch 33-21-9-58 Pad
Well: 3-33-9-58
Wellpath: Original Hole

Date: 10/05/2012
Co-ordinate(NE) Reference: Well: 3-33-9-58, Grid North
Vertical (TVD) Reference: 4842'GL+17"KB 4859.0
Section (VS) Reference: Well (0.00N,0.00E,178.56Azi)
Plan: Plan #1

Page: 4

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
SL 3-33			0.00	0.00	0.00	1507195.74	3451857.29	40	42	51.245 N	103	52	11.892 W
Dennis #F -Circle (Radius: 300)			0.00	-1778.90	-315.39	1505416.84	3451541.90	40	42	33.727 N	103	52	16.412 W
LP 3-33			5815.00	-418.36	842.64	1506777.38	3452699.93	40	42	46.959 N	103	52	1.052 W
PBHL 3-33			5815.00	-4429.41	943.45	1502766.33	3452800.74	40	42	7.313 N	103	52	0.702 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
6000.68	5773.86	7.000	8.750	7"