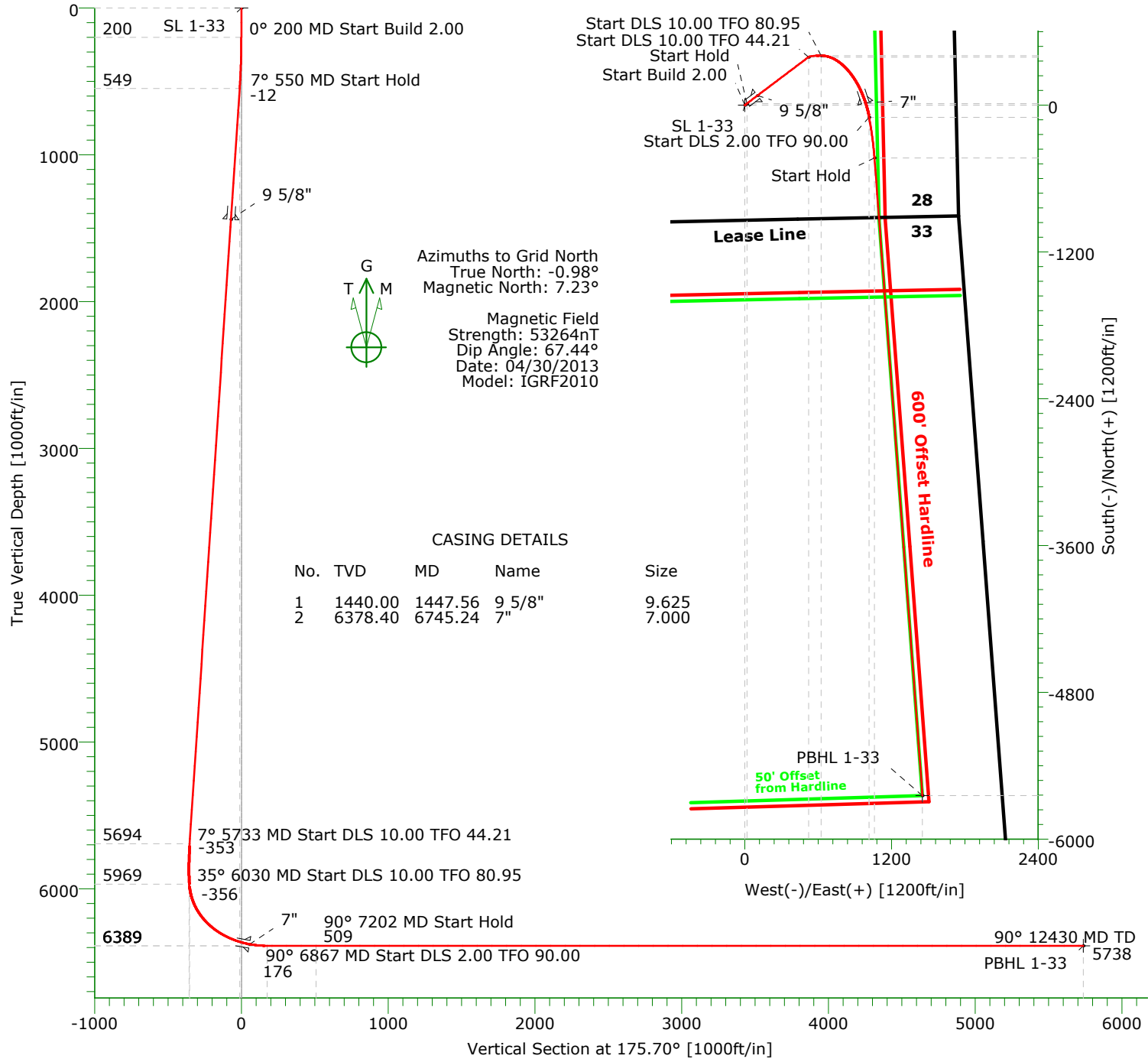




CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
Site: Nelson Ranches
Well: 1-33-10-59
Wellpath: Origina Hole
Plan: Plan #1



Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Nelson Ranches Well: 1-33-10-59 Wellpath: Origina Hole	Date: 04/12/2013 Co-ordinate(NE) Reference: Well: 1-33-10-59, Grid North Vertical (TVD) Reference: 5210'GL+17'KB 5227.0 Section (VS) Reference: Well (0.00N,0.00E,175.70Azi) Plan: Plan #1	Time: 10:21:51 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: Nelson Ranches			
Weld County, CO			
Site Position:	Northing: 1539460.70 ft	Latitude: 40 48 15.513 N	
From: Map	Easting: 3420471.06 ft	Longitude: 103 58 52.241 W	
Position Uncertainty: 0.00 ft		North Reference: Grid	
Ground Level: 5210.00 ft		Grid Convergence: 0.98 deg	

Well: 1-33-10-59 941'FSL 1727'FEL Well Position: +N/-S 0.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft	Slot Name: Latitude: 40 48 15.513 N Longitude: 103 58 52.241 W
---------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------

Wellpath: Origina Hole Current Datum: 5210'GL+17'KB Magnetic Data: 04/30/2013 Field Strength: 53264 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.22 deg Mag Dip Angle: 67.44 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00

Plan: Plan #1 Principal: No	Date Composed: 04/12/2013 Version: 1 Tied-to: From Surface
----------------------------------------------	---------------------------------------------------------------------------------------

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	53.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	53.00	200.00	0.00	0.00	0.00	0.00	0.00	53.00	
550.00	7.00	53.00	549.13	12.85	17.05	2.00	2.00	0.00	53.00	
5733.10	7.00	53.00	5693.60	392.99	521.52	0.00	0.00	0.00	0.00	
6029.83	35.00	90.00	5968.56	404.13	623.34	10.00	9.44	12.47	44.21	
6866.88	90.00	169.00	6389.00	-99.71	1015.68	10.00	6.57	9.44	80.95	
7201.50	90.00	175.69	6389.00	-431.16	1060.22	2.00	0.00	2.00	90.00	
12429.80	90.00	175.69	6389.00	-5644.69	1452.91	0.00	0.00	0.00	0.00	PBHL 1-33

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
0.00	0.00	53.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	53.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	53.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	2.00	53.00	299.98	1.05	1.39	-0.94	2.00	2.00	0.00	
400.00	4.00	53.00	399.84	4.20	5.57	-3.77	2.00	2.00	0.00	
500.00	6.00	53.00	499.45	9.44	12.53	-8.48	2.00	2.00	0.00	
550.00	7.00	53.00	549.13	12.85	17.05	-11.54	2.00	2.00	0.00	
600.00	7.00	53.00	598.76	16.52	21.92	-14.83	0.00	0.00	0.00	
700.00	7.00	53.00	698.01	23.85	31.65	-21.41	0.00	0.00	0.00	
800.00	7.00	53.00	797.27	31.19	41.39	-28.00	0.00	0.00	0.00	
900.00	7.00	53.00	896.52	38.52	51.12	-34.58	0.00	0.00	0.00	
1000.00	7.00	53.00	995.78	45.86	60.85	-41.16	0.00	0.00	0.00	
1100.00	7.00	53.00	1095.03	53.19	70.58	-47.75	0.00	0.00	0.00	
1200.00	7.00	53.00	1194.28	60.52	80.32	-54.33	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Nelson Ranches
Well: 1-33-10-59
Wellpath: Origina Hole

Date: 04/12/2013
Co-ordinate(NE) Reference: Well: 1-33-10-59, Grid North
Vertical (TVD) Reference: 5210'GL+17'KB 5227.0
Section (VS) Reference: Well (0.00N,0.00E,175.70Azi)
Plan: Plan #1

Page: 2

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
1300.00	7.00	53.00	1293.54	67.86	90.05	-60.92	0.00	0.00	0.00	
1400.00	7.00	53.00	1392.79	75.19	99.78	-67.50	0.00	0.00	0.00	9 5/8"
1447.56	7.00	53.00	1440.00	78.68	104.41	-70.63	0.00	0.00	0.00	
1500.00	7.00	53.00	1492.05	82.53	109.52	-74.08	0.00	0.00	0.00	
1600.00	7.00	53.00	1591.30	89.86	119.25	-80.67	0.00	0.00	0.00	
1700.00	7.00	53.00	1690.56	97.20	128.98	-87.25	0.00	0.00	0.00	
1800.00	7.00	53.00	1789.81	104.53	138.72	-93.83	0.00	0.00	0.00	
1900.00	7.00	53.00	1889.07	111.86	148.45	-100.42	0.00	0.00	0.00	
2000.00	7.00	53.00	1988.32	119.20	158.18	-107.00	0.00	0.00	0.00	
2100.00	7.00	53.00	2087.58	126.53	167.91	-113.59	0.00	0.00	0.00	
2200.00	7.00	53.00	2186.83	133.87	177.65	-120.17	0.00	0.00	0.00	
2300.00	7.00	53.00	2286.09	141.20	187.38	-126.75	0.00	0.00	0.00	
2400.00	7.00	53.00	2385.34	148.54	197.11	-133.34	0.00	0.00	0.00	
2500.00	7.00	53.00	2484.59	155.87	206.85	-139.92	0.00	0.00	0.00	
2600.00	7.00	53.00	2583.85	163.20	216.58	-146.51	0.00	0.00	0.00	
2700.00	7.00	53.00	2683.10	170.54	226.31	-153.09	0.00	0.00	0.00	
2800.00	7.00	53.00	2782.36	177.87	236.04	-159.67	0.00	0.00	0.00	
2900.00	7.00	53.00	2881.61	185.21	245.78	-166.26	0.00	0.00	0.00	
3000.00	7.00	53.00	2980.87	192.54	255.51	-172.84	0.00	0.00	0.00	
3100.00	7.00	53.00	3080.12	199.88	265.24	-179.42	0.00	0.00	0.00	
3200.00	7.00	53.00	3179.38	207.21	274.98	-186.01	0.00	0.00	0.00	
3300.00	7.00	53.00	3278.63	214.54	284.71	-192.59	0.00	0.00	0.00	
3400.00	7.00	53.00	3377.89	221.88	294.44	-199.18	0.00	0.00	0.00	
3500.00	7.00	53.00	3477.14	229.21	304.17	-205.76	0.00	0.00	0.00	
3600.00	7.00	53.00	3576.40	236.55	313.91	-212.34	0.00	0.00	0.00	
3700.00	7.00	53.00	3675.65	243.88	323.64	-218.93	0.00	0.00	0.00	
3800.00	7.00	53.00	3774.90	251.22	333.37	-225.51	0.00	0.00	0.00	
3900.00	7.00	53.00	3874.16	258.55	343.11	-232.10	0.00	0.00	0.00	
4000.00	7.00	53.00	3973.41	265.88	352.84	-238.68	0.00	0.00	0.00	
4100.00	7.00	53.00	4072.67	273.22	362.57	-245.26	0.00	0.00	0.00	
4200.00	7.00	53.00	4171.92	280.55	372.31	-251.85	0.00	0.00	0.00	
4300.00	7.00	53.00	4271.18	287.89	382.04	-258.43	0.00	0.00	0.00	
4400.00	7.00	53.00	4370.43	295.22	391.77	-265.02	0.00	0.00	0.00	
4500.00	7.00	53.00	4469.69	302.56	401.50	-271.60	0.00	0.00	0.00	
4600.00	7.00	53.00	4568.94	309.89	411.24	-278.18	0.00	0.00	0.00	
4700.00	7.00	53.00	4668.20	317.22	420.97	-284.77	0.00	0.00	0.00	
4800.00	7.00	53.00	4767.45	324.56	430.70	-291.35	0.00	0.00	0.00	
4900.00	7.00	53.00	4866.71	331.89	440.44	-297.93	0.00	0.00	0.00	
5000.00	7.00	53.00	4965.96	339.23	450.17	-304.52	0.00	0.00	0.00	
5100.00	7.00	53.00	5065.21	346.56	459.90	-311.10	0.00	0.00	0.00	
5200.00	7.00	53.00	5164.47	353.90	469.63	-317.69	0.00	0.00	0.00	
5300.00	7.00	53.00	5263.72	361.23	479.37	-324.27	0.00	0.00	0.00	
5400.00	7.00	53.00	5362.98	368.56	489.10	-330.85	0.00	0.00	0.00	
5500.00	7.00	53.00	5462.23	375.90	498.83	-337.44	0.00	0.00	0.00	
5600.00	7.00	53.00	5561.49	383.23	508.57	-344.02	0.00	0.00	0.00	
5700.00	7.00	53.00	5660.74	390.57	518.30	-350.61	0.00	0.00	0.00	
5733.10	7.00	53.00	5693.60	392.99	521.52	-352.79	0.00	0.00	0.00	
5800.00	12.68	74.72	5759.51	397.39	531.87	-356.39	10.00	8.49	32.47	
5900.00	22.23	84.95	5854.81	401.96	561.38	-358.73	10.00	9.55	10.23	
6000.00	32.05	89.17	5943.70	404.01	606.87	-357.37	10.00	9.82	4.21	
6029.83	35.00	90.00	5968.56	404.13	623.34	-356.25	10.00	9.88	2.79	
6100.00	36.68	101.65	6025.51	399.89	664.05	-348.97	10.00	2.39	16.61	
6200.00	40.81	116.25	6103.65	379.35	722.75	-324.09	10.00	4.13	14.60	

Precision Directional Services, Inc.

Planning Report

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Field: Niobrara CONZ'83
Site: Nelson Ranches
Well: 1-33-10-59
Wellpath: Origina Hole

Date: 04/12/2013
Co-ordinate(NE) Reference: Well: 1-33-10-59, Grid North
Vertical (TVD) Reference: 5210'GL+17'KB 5227.0
Section (VS) Reference: Well (0.00N,0.00E,175.70Azi)
Plan: Plan #1

Page: 3

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
6300.00	46.47	128.23	6176.12	342.37	780.68	-282.87	10.00	5.66	11.98	
6400.00	53.15	138.00	6240.71	290.07	836.07	-226.57	10.00	6.68	9.76	
6500.00	60.50	146.12	6295.45	224.04	887.24	-156.89	10.00	7.35	8.12	
6600.00	68.27	153.10	6338.69	146.30	932.63	-75.96	10.00	7.77	6.99	
6700.00	76.31	159.36	6369.11	59.19	970.86	13.77	10.00	8.04	6.26	
6745.24	80.00	162.04	6378.40	17.41	985.49	56.53	10.00	8.16	5.92	7"
6800.00	84.49	165.20	6385.79	-34.63	1000.77	109.57	10.00	8.20	5.77	
6866.88	90.00	169.00	6389.00	-99.71	1015.68	175.58	10.00	8.24	5.68	
6900.00	90.00	169.66	6389.00	-132.26	1021.81	208.50	2.00	0.00	2.00	
7000.00	90.00	171.66	6389.00	-230.93	1038.03	308.11	2.00	0.00	2.00	
7100.00	90.00	173.66	6389.00	-330.10	1050.80	407.96	2.00	0.00	2.00	
7200.00	90.00	175.66	6389.00	-429.66	1060.10	507.94	2.00	0.00	2.00	
7201.50	90.00	175.69	6389.00	-431.16	1060.22	509.45	2.00	0.00	2.00	
7300.00	90.00	175.69	6389.00	-529.38	1067.62	607.94	0.00	0.00	0.00	
7400.00	90.00	175.69	6389.00	-629.10	1075.13	707.94	0.00	0.00	0.00	
7500.00	90.00	175.69	6389.00	-728.82	1082.64	807.94	0.00	0.00	0.00	
7600.00	90.00	175.69	6389.00	-828.53	1090.15	907.94	0.00	0.00	0.00	
7700.00	90.00	175.69	6389.00	-928.25	1097.66	1007.94	0.00	0.00	0.00	
7800.00	90.00	175.69	6389.00	-1027.97	1105.17	1107.94	0.00	0.00	0.00	
7900.00	90.00	175.69	6389.00	-1127.69	1112.68	1207.94	0.00	0.00	0.00	
8000.00	90.00	175.69	6389.00	-1227.40	1120.19	1307.94	0.00	0.00	0.00	
8100.00	90.00	175.69	6389.00	-1327.12	1127.70	1407.94	0.00	0.00	0.00	
8200.00	90.00	175.69	6389.00	-1426.84	1135.21	1507.94	0.00	0.00	0.00	
8300.00	90.00	175.69	6389.00	-1526.56	1142.72	1607.94	0.00	0.00	0.00	
8400.00	90.00	175.69	6389.00	-1626.27	1150.24	1707.94	0.00	0.00	0.00	
8500.00	90.00	175.69	6389.00	-1725.99	1157.75	1807.94	0.00	0.00	0.00	
8600.00	90.00	175.69	6389.00	-1825.71	1165.26	1907.94	0.00	0.00	0.00	
8700.00	90.00	175.69	6389.00	-1925.43	1172.77	2007.94	0.00	0.00	0.00	
8800.00	90.00	175.69	6389.00	-2025.15	1180.28	2107.94	0.00	0.00	0.00	
8900.00	90.00	175.69	6389.00	-2124.86	1187.79	2207.94	0.00	0.00	0.00	
9000.00	90.00	175.69	6389.00	-2224.58	1195.30	2307.94	0.00	0.00	0.00	
9100.00	90.00	175.69	6389.00	-2324.30	1202.81	2407.94	0.00	0.00	0.00	
9200.00	90.00	175.69	6389.00	-2424.02	1210.32	2507.94	0.00	0.00	0.00	
9300.00	90.00	175.69	6389.00	-2523.73	1217.83	2607.94	0.00	0.00	0.00	
9400.00	90.00	175.69	6389.00	-2623.45	1225.34	2707.94	0.00	0.00	0.00	
9500.00	90.00	175.69	6389.00	-2723.17	1232.86	2807.94	0.00	0.00	0.00	
9600.00	90.00	175.69	6389.00	-2822.89	1240.37	2907.94	0.00	0.00	0.00	
9700.00	90.00	175.69	6389.00	-2922.60	1247.88	3007.94	0.00	0.00	0.00	
9800.00	90.00	175.69	6389.00	-3022.32	1255.39	3107.94	0.00	0.00	0.00	
9900.00	90.00	175.69	6389.00	-3122.04	1262.90	3207.94	0.00	0.00	0.00	
10000.00	90.00	175.69	6389.00	-3221.76	1270.41	3307.94	0.00	0.00	0.00	
10100.00	90.00	175.69	6389.00	-3321.47	1277.92	3407.94	0.00	0.00	0.00	
10200.00	90.00	175.69	6389.00	-3421.19	1285.43	3507.94	0.00	0.00	0.00	
10300.00	90.00	175.69	6389.00	-3520.91	1292.94	3607.94	0.00	0.00	0.00	
10400.00	90.00	175.69	6389.00	-3620.63	1300.45	3707.94	0.00	0.00	0.00	
10500.00	90.00	175.69	6389.00	-3720.34	1307.96	3807.94	0.00	0.00	0.00	
10600.00	90.00	175.69	6389.00	-3820.06	1315.48	3907.94	0.00	0.00	0.00	
10700.00	90.00	175.69	6389.00	-3919.78	1322.99	4007.94	0.00	0.00	0.00	
10800.00	90.00	175.69	6389.00	-4019.50	1330.50	4107.94	0.00	0.00	0.00	
10900.00	90.00	175.69	6389.00	-4119.21	1338.01	4207.94	0.00	0.00	0.00	
11000.00	90.00	175.69	6389.00	-4218.93	1345.52	4307.94	0.00	0.00	0.00	
11100.00	90.00	175.69	6389.00	-4318.65	1353.03	4407.94	0.00	0.00	0.00	
11200.00	90.00	175.69	6389.00	-4418.37	1360.54	4507.94	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Nelson Ranches
Well: 1-33-10-59
Wellpath: Origina Hole

Date: 04/12/2013
Co-ordinate(NE) Reference: Well: 1-33-10-59, Grid North
Vertical (TVD) Reference: 5210'GL+17'KB 5227.0
Section (VS) Reference: Well (0.00N,0.00E,175.70Azi)
Plan: Plan #1

Page: 4

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
11300.00	90.00	175.69	6389.00	-4518.08	1368.05	4607.94	0.00	0.00	0.00	
11400.00	90.00	175.69	6389.00	-4617.80	1375.56	4707.94	0.00	0.00	0.00	
11500.00	90.00	175.69	6389.00	-4717.52	1383.07	4807.94	0.00	0.00	0.00	
11600.00	90.00	175.69	6389.00	-4817.24	1390.58	4907.94	0.00	0.00	0.00	
11700.00	90.00	175.69	6389.00	-4916.95	1398.10	5007.94	0.00	0.00	0.00	
11800.00	90.00	175.69	6389.00	-5016.67	1405.61	5107.94	0.00	0.00	0.00	
11900.00	90.00	175.69	6389.00	-5116.39	1413.12	5207.94	0.00	0.00	0.00	
12000.00	90.00	175.69	6389.00	-5216.11	1420.63	5307.94	0.00	0.00	0.00	
12100.00	90.00	175.69	6389.00	-5315.82	1428.14	5407.94	0.00	0.00	0.00	
12200.00	90.00	175.69	6389.00	-5415.54	1435.65	5507.94	0.00	0.00	0.00	
12300.00	90.00	175.69	6389.00	-5515.26	1443.16	5607.94	0.00	0.00	0.00	
12400.00	90.00	175.69	6389.00	-5614.98	1450.67	5707.94	0.00	0.00	0.00	
12429.80	90.00	175.69	6389.00	-5644.69	1452.91	5737.74	0.00	0.00	0.00	PBHL 1-33

Targets

Name	Description	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ---->			<--- Longitude --->				
								Deg	Min	Sec	Deg	Min	Sec		
SL 1-33			0.00	0.00	0.00	1539460.70	3420471.06	40	48	15.513	N	103	58	52.241	W
PBHL 1-33			6389.00	-5644.69	1452.91	1533816.01	3421923.97	40	47	19.500	N	103	58	34.612	W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1447.56	1440.00	9.625	12.250	9 5/8"
6745.24	6378.40	7.000	8.500	7"