

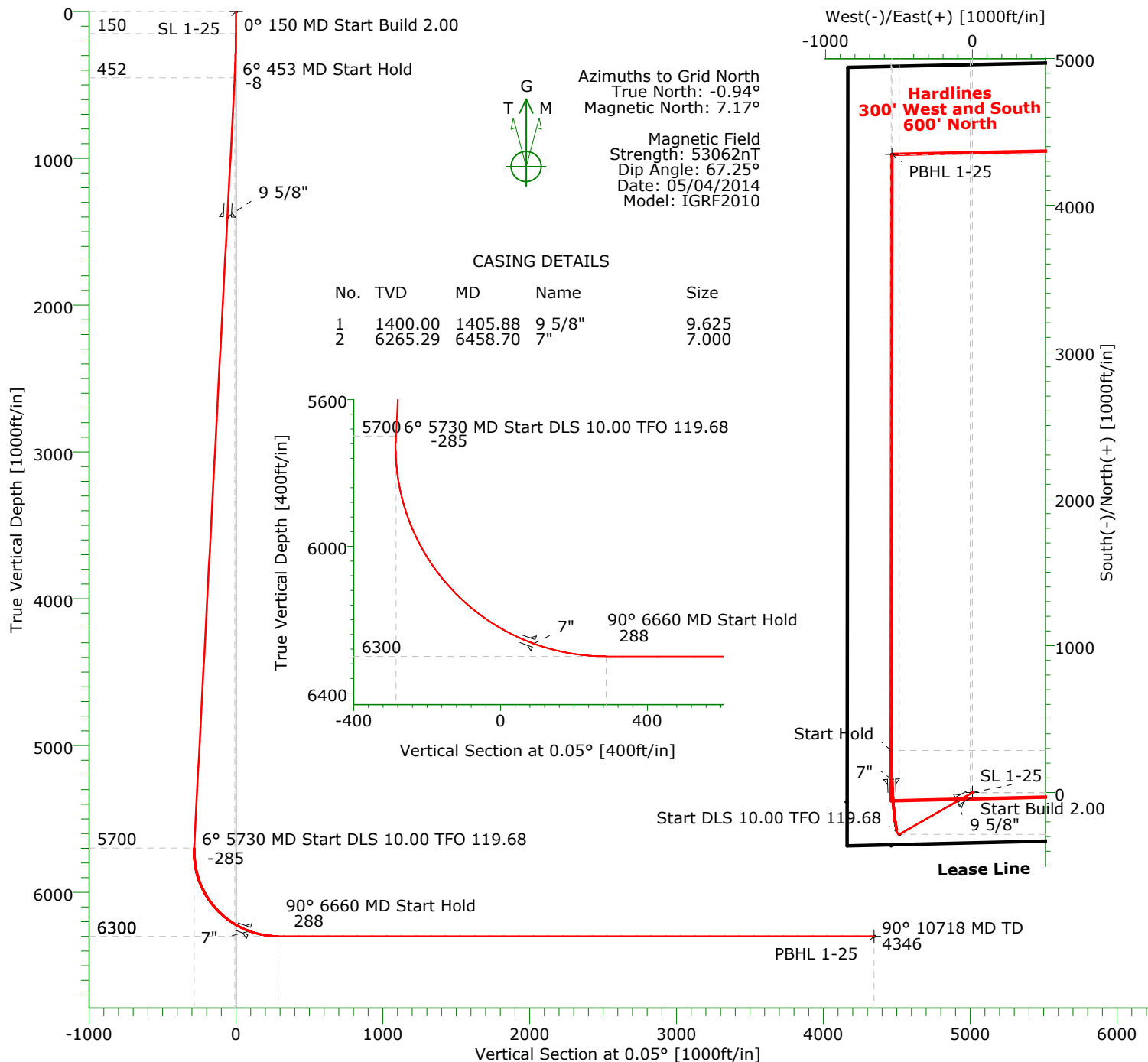


CARRIZO OIL & GAS, INC.

Field: Niobrara CONZ'83
 Site: Hemberger 1-25-8-60 Pad
 Well: 1-25-8-60
 Wellpath: Original Hole
 Plan: Plan #2



Precision
 Directional Services



Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Hemberger 1-25-8-60 Pad Well: 1-25-8-60 Wellpath: Original Hole	Date: 04/04/2014 Co-ordinate(NE) Reference: Well: 1-25-8-60, Grid North Vertical (TVD) Reference: 4908'GL+17'KB 4925.0 Section (VS) Reference: Well (0.00N,0.00E,0.05Azi) Plan: Plan #2	Time: 11:43:59 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
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Site: Hemberger 1-25-8-60 Pad			
Site Position: From: Map Position Uncertainty: 0.00 ft Ground Level: 4908.00 ft	Northing: 1474603.96 ft Easting: 3403479.97 ft	Latitude: 40 37 37.555 N Longitude: 104 2 46.978 W North Reference: Grid Grid Convergence: 0.94 deg	

Well: 1-25-8-60 Well Position: +N/-S 0.00 ft +E/-W 0.00 ft Position Uncertainty: 0.00 ft	Slot Name: Northing: 1474603.96 ft Easting : 3403479.97 ft Latitude: 40 37 37.555 N Longitude: 104 2 46.978 W
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Wellpath: Original Hole Current Datum: 4908'GL+17'KB Magnetic Data: 05/04/2014 Field Strength: 53062 nT Vertical Section: Depth From (TVD) ft	Height 4925.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.11 deg Mag Dip Angle: 67.25 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00	0.00 0.05

Plan: Plan #2 PBHL 600' off HL Principal: No	Date Composed: 04/04/2014 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	
452.69	6.05	240.23	452.13	-7.93	-13.87	2.00	2.00	0.00	0.00	
5729.52	6.05	240.23	5699.53	-284.22	-496.96	0.00	0.00	0.00	0.00	
6659.58	90.00	0.05	6300.00	288.00	-551.70	10.00	9.03	12.88	119.68	
10718.46	90.00	0.05	6300.00	4346.87	-548.08	0.00	0.00	0.00	0.00	PBHL 1-25

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	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	
200.00	1.00	240.23	200.00	-0.22	-0.38	-0.22	2.00	2.00	0.00	
300.00	3.00	240.23	299.93	-1.95	-3.41	-1.95	2.00	2.00	0.00	
400.00	5.00	240.23	399.68	-5.41	-9.46	-5.42	2.00	2.00	0.00	
452.69	6.05	240.23	452.13	-7.93	-13.87	-7.94	2.00	2.00	0.00	
500.00	6.05	240.23	499.17	-10.41	-18.20	-10.42	0.00	0.00	0.00	
600.00	6.05	240.23	598.62	-15.64	-27.35	-15.67	0.00	0.00	0.00	
700.00	6.05	240.23	698.06	-20.88	-36.51	-20.91	0.00	0.00	0.00	
800.00	6.05	240.23	797.50	-26.12	-45.66	-26.16	0.00	0.00	0.00	
900.00	6.05	240.23	896.94	-31.35	-54.82	-31.40	0.00	0.00	0.00	
1000.00	6.05	240.23	996.38	-36.59	-63.97	-36.64	0.00	0.00	0.00	
1100.00	6.05	240.23	1095.83	-41.82	-73.13	-41.89	0.00	0.00	0.00	
1200.00	6.05	240.23	1195.27	-47.06	-82.28	-47.13	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Hemberger 1-25-8-60 Pad
Well: 1-25-8-60
Wellpath: Original Hole

Date: 04/04/2014
Co-ordinate(NE) Reference: Well: 1-25-8-60, Grid North
Vertical (TVD) Reference: 4908'GL+17'KB 4925.0
Section (VS) Reference: Well (0.00N,0.00E,0.05Azi)
Plan: Plan #2

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	6.05	240.23	1294.71	-52.30	-91.44	-52.38	0.00	0.00	0.00	
1400.00	6.05	240.23	1394.15	-57.53	-100.59	-57.62	0.00	0.00	0.00	
1405.88	6.05	240.23	1400.00	-57.84	-101.13	-57.93	0.00	0.00	0.00	9 5/8"
1500.00	6.05	240.23	1493.60	-62.77	-109.75	-62.86	0.00	0.00	0.00	
1600.00	6.05	240.23	1593.04	-68.00	-118.90	-68.11	0.00	0.00	0.00	
1700.00	6.05	240.23	1692.48	-73.24	-128.06	-73.35	0.00	0.00	0.00	
1800.00	6.05	240.23	1791.92	-78.47	-137.21	-78.59	0.00	0.00	0.00	
1900.00	6.05	240.23	1891.37	-83.71	-146.37	-83.84	0.00	0.00	0.00	
2000.00	6.05	240.23	1990.81	-88.95	-155.52	-89.08	0.00	0.00	0.00	
2100.00	6.05	240.23	2090.25	-94.18	-164.68	-94.33	0.00	0.00	0.00	
2200.00	6.05	240.23	2189.69	-99.42	-173.83	-99.57	0.00	0.00	0.00	
2300.00	6.05	240.23	2289.13	-104.65	-182.99	-104.81	0.00	0.00	0.00	
2400.00	6.05	240.23	2388.58	-109.89	-192.14	-110.06	0.00	0.00	0.00	
2500.00	6.05	240.23	2488.02	-115.13	-201.30	-115.30	0.00	0.00	0.00	
2600.00	6.05	240.23	2587.46	-120.36	-210.45	-120.54	0.00	0.00	0.00	
2700.00	6.05	240.23	2686.90	-125.60	-219.61	-125.79	0.00	0.00	0.00	
2800.00	6.05	240.23	2786.35	-130.83	-228.76	-131.03	0.00	0.00	0.00	
2900.00	6.05	240.23	2885.79	-136.07	-237.92	-136.28	0.00	0.00	0.00	
3000.00	6.05	240.23	2985.23	-141.30	-247.07	-141.52	0.00	0.00	0.00	
3100.00	6.05	240.23	3084.67	-146.54	-256.23	-146.76	0.00	0.00	0.00	
3200.00	6.05	240.23	3184.12	-151.78	-265.38	-152.01	0.00	0.00	0.00	
3300.00	6.05	240.23	3283.56	-157.01	-274.54	-157.25	0.00	0.00	0.00	
3400.00	6.05	240.23	3383.00	-162.25	-283.69	-162.50	0.00	0.00	0.00	
3500.00	6.05	240.23	3482.44	-167.48	-292.85	-167.74	0.00	0.00	0.00	
3600.00	6.05	240.23	3581.88	-172.72	-302.00	-172.98	0.00	0.00	0.00	
3700.00	6.05	240.23	3681.33	-177.96	-311.16	-178.23	0.00	0.00	0.00	
3800.00	6.05	240.23	3780.77	-183.19	-320.31	-183.47	0.00	0.00	0.00	
3900.00	6.05	240.23	3880.21	-188.43	-329.47	-188.71	0.00	0.00	0.00	
4000.00	6.05	240.23	3979.65	-193.66	-338.62	-193.96	0.00	0.00	0.00	
4100.00	6.05	240.23	4079.10	-198.90	-347.78	-199.20	0.00	0.00	0.00	
4200.00	6.05	240.23	4178.54	-204.13	-356.93	-204.45	0.00	0.00	0.00	
4300.00	6.05	240.23	4277.98	-209.37	-366.09	-209.69	0.00	0.00	0.00	
4400.00	6.05	240.23	4377.42	-214.61	-375.24	-214.93	0.00	0.00	0.00	
4500.00	6.05	240.23	4476.87	-219.84	-384.40	-220.18	0.00	0.00	0.00	
4600.00	6.05	240.23	4576.31	-225.08	-393.55	-225.42	0.00	0.00	0.00	
4700.00	6.05	240.23	4675.75	-230.31	-402.71	-230.67	0.00	0.00	0.00	
4800.00	6.05	240.23	4775.19	-235.55	-411.86	-235.91	0.00	0.00	0.00	
4900.00	6.05	240.23	4874.64	-240.79	-421.02	-241.15	0.00	0.00	0.00	
5000.00	6.05	240.23	4974.08	-246.02	-430.17	-246.40	0.00	0.00	0.00	
5100.00	6.05	240.23	5073.52	-251.26	-439.33	-251.64	0.00	0.00	0.00	
5200.00	6.05	240.23	5172.96	-256.49	-448.48	-256.88	0.00	0.00	0.00	
5300.00	6.05	240.23	5272.40	-261.73	-457.64	-262.13	0.00	0.00	0.00	
5400.00	6.05	240.23	5371.85	-266.97	-466.79	-267.37	0.00	0.00	0.00	
5500.00	6.05	240.23	5471.29	-272.20	-475.94	-272.62	0.00	0.00	0.00	
5600.00	6.05	240.23	5570.73	-277.44	-485.10	-277.86	0.00	0.00	0.00	
5700.00	6.05	240.23	5670.17	-282.67	-494.25	-283.10	0.00	0.00	0.00	
5729.52	6.05	240.23	5699.53	-284.22	-496.96	-284.65	0.00	0.00	0.00	
5750.00	5.34	259.70	5719.91	-284.92	-498.83	-285.36	10.00	-3.47	95.09	
5800.00	6.63	307.69	5769.67	-283.58	-503.41	-284.02	10.00	2.57	95.97	
5850.00	10.45	330.12	5819.12	-277.88	-507.96	-278.32	10.00	7.64	44.86	
5900.00	14.97	339.93	5867.88	-267.87	-512.43	-268.32	10.00	9.05	19.63	
5950.00	19.73	345.18	5915.60	-253.64	-516.81	-254.09	10.00	9.51	10.51	
6000.00	24.58	348.44	5961.89	-235.28	-521.06	-235.74	10.00	9.70	6.52	
6050.00	29.47	350.68	6006.42	-212.94	-525.13	-213.40	10.00	9.79	4.47	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Hemberger 1-25-8-60 Pad
Well: 1-25-8-60
Wellpath: Original Hole

Date: 04/04/2014
Co-ordinate(NE) Reference: Well: 1-25-8-60, Grid North
Vertical (TVD) Reference: 4908'GL+17'KB 4925.0
Section (VS) Reference: Well (0.00N,0.00E,0.05Azi)
Plan: Plan #2

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
6100.00	34.40	352.33	6048.84	-186.79	-529.01	-187.25	10.00	9.85	3.29	
6150.00	39.34	353.60	6088.83	-157.03	-532.67	-157.49	10.00	9.88	2.56	
6200.00	44.29	354.64	6126.09	-123.88	-536.06	-124.34	10.00	9.90	2.07	
6250.00	49.25	355.50	6160.32	-87.59	-539.18	-88.06	10.00	9.92	1.73	
6300.00	54.22	356.25	6191.28	-48.45	-542.00	-48.92	10.00	9.93	1.49	
6350.00	59.19	356.90	6218.72	-6.74	-544.48	-7.22	10.00	9.94	1.31	
6400.00	64.16	357.50	6242.44	37.20	-546.63	36.72	10.00	9.95	1.18	
6450.00	69.13	358.04	6262.25	83.06	-548.41	82.58	10.00	9.95	1.09	
6458.70	70.00	358.13	6265.29	91.20	-548.68	90.72	10.00	9.95	1.04	7"
6500.00	74.11	358.55	6278.01	130.47	-549.82	129.99	10.00	9.95	1.01	
6550.00	79.09	359.03	6289.60	179.08	-550.84	178.60	10.00	9.96	0.97	
6600.00	84.07	359.50	6296.92	228.52	-551.47	228.04	10.00	9.96	0.94	
6650.00	89.05	359.96	6299.92	278.42	-551.70	277.94	10.00	9.96	0.92	
6659.58	90.00	0.05	6300.00	288.00	-551.70	287.52	10.00	9.96	0.92	
6700.00	90.00	0.05	6300.00	328.42	-551.66	327.93	0.00	0.00	0.00	
6800.00	90.00	0.05	6300.00	428.42	-551.57	427.93	0.00	0.00	0.00	
6900.00	90.00	0.05	6300.00	528.42	-551.49	527.93	0.00	0.00	0.00	
7000.00	90.00	0.05	6300.00	628.42	-551.40	627.93	0.00	0.00	0.00	
7100.00	90.00	0.05	6300.00	728.42	-551.31	727.93	0.00	0.00	0.00	
7200.00	90.00	0.05	6300.00	828.42	-551.22	827.93	0.00	0.00	0.00	
7300.00	90.00	0.05	6300.00	928.42	-551.13	927.93	0.00	0.00	0.00	
7400.00	90.00	0.05	6300.00	1028.42	-551.04	1027.93	0.00	0.00	0.00	
7500.00	90.00	0.05	6300.00	1128.42	-550.95	1127.93	0.00	0.00	0.00	
7600.00	90.00	0.05	6300.00	1228.42	-550.86	1227.93	0.00	0.00	0.00	
7700.00	90.00	0.05	6300.00	1328.42	-550.77	1327.93	0.00	0.00	0.00	
7800.00	90.00	0.05	6300.00	1428.42	-550.68	1427.93	0.00	0.00	0.00	
7900.00	90.00	0.05	6300.00	1528.42	-550.59	1527.93	0.00	0.00	0.00	
8000.00	90.00	0.05	6300.00	1628.42	-550.51	1627.93	0.00	0.00	0.00	
8100.00	90.00	0.05	6300.00	1728.42	-550.42	1727.93	0.00	0.00	0.00	
8200.00	90.00	0.05	6300.00	1828.42	-550.33	1827.93	0.00	0.00	0.00	
8300.00	90.00	0.05	6300.00	1928.42	-550.24	1927.93	0.00	0.00	0.00	
8400.00	90.00	0.05	6300.00	2028.42	-550.15	2027.93	0.00	0.00	0.00	
8500.00	90.00	0.05	6300.00	2128.42	-550.06	2127.93	0.00	0.00	0.00	
8600.00	90.00	0.05	6300.00	2228.42	-549.97	2227.93	0.00	0.00	0.00	
8700.00	90.00	0.05	6300.00	2328.42	-549.88	2327.93	0.00	0.00	0.00	
8800.00	90.00	0.05	6300.00	2428.42	-549.79	2427.93	0.00	0.00	0.00	
8900.00	90.00	0.05	6300.00	2528.42	-549.70	2527.93	0.00	0.00	0.00	
9000.00	90.00	0.05	6300.00	2628.42	-549.61	2627.93	0.00	0.00	0.00	
9100.00	90.00	0.05	6300.00	2728.42	-549.53	2727.93	0.00	0.00	0.00	
9200.00	90.00	0.05	6300.00	2828.42	-549.44	2827.93	0.00	0.00	0.00	
9300.00	90.00	0.05	6300.00	2928.42	-549.35	2927.93	0.00	0.00	0.00	
9400.00	90.00	0.05	6300.00	3028.42	-549.26	3027.93	0.00	0.00	0.00	
9500.00	90.00	0.05	6300.00	3128.41	-549.17	3127.93	0.00	0.00	0.00	
9600.00	90.00	0.05	6300.00	3228.41	-549.08	3227.93	0.00	0.00	0.00	
9700.00	90.00	0.05	6300.00	3328.41	-548.99	3327.93	0.00	0.00	0.00	
9800.00	90.00	0.05	6300.00	3428.41	-548.90	3427.93	0.00	0.00	0.00	
9900.00	90.00	0.05	6300.00	3528.41	-548.81	3527.93	0.00	0.00	0.00	
10000.00	90.00	0.05	6300.00	3628.41	-548.72	3627.93	0.00	0.00	0.00	
10100.00	90.00	0.05	6300.00	3728.41	-548.63	3727.93	0.00	0.00	0.00	
10200.00	90.00	0.05	6300.00	3828.41	-548.55	3827.93	0.00	0.00	0.00	
10300.00	90.00	0.05	6300.00	3928.41	-548.46	3927.93	0.00	0.00	0.00	
10400.00	90.00	0.05	6300.00	4028.41	-548.37	4027.93	0.00	0.00	0.00	
10500.00	90.00	0.05	6300.00	4128.41	-548.28	4127.93	0.00	0.00	0.00	

Precision Directional Services, Inc.

Planning Report

Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Hemberger 1-25-8-60 Pad Well: 1-25-8-60 Wellpath: Original Hole	Date: 04/04/2014 Co-ordinate(NE) Reference: Well: 1-25-8-60, Grid North Vertical (TVD) Reference: 4908'GL+17'KB 4925.0 Section (VS) Reference: Well (0.00N,0.00E,0.05Azi) Plan: Plan #2	Time: 11:43:59 Page: 4
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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
10600.00	90.00	0.05	6300.00	4228.41	-548.19	4227.93	0.00	0.00	0.00	
10700.00	90.00	0.05	6300.00	4328.41	-548.10	4327.93	0.00	0.00	0.00	
10718.46	90.00	0.05	6300.00	4346.87	-548.08	4346.39	0.00	0.00	0.00	PBHL 1-25

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 1-25			0.00	0.00	0.00	1474603.96	3403479.97	40	37	37.555 N	104	2	46.978 W
PBHL 1-25			6300.00	4346.87	-548.08	1478950.83	3402931.89	40	38	20.591 N	104	2	53.162 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
1405.88	1400.00	9.625	12.250	9 5/8"
6458.70	6265.29	7.000	8.500	7"