



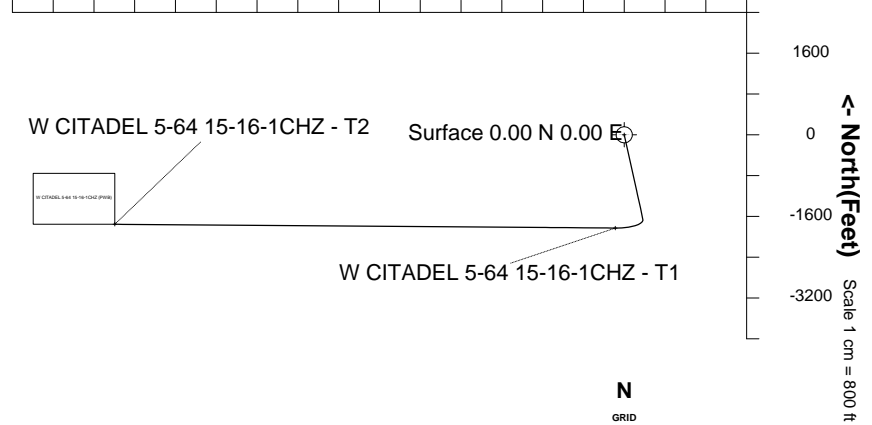
Highlands Natural Resources

Location DJ Basin Southern Extension **Slot** CITADEL 5-64 15-16-1CHZ
Field DJ Basin Southern Extension **Well** W CITADEL 5-64 15-16-1CHZ
Installation HNR Arapahoe County Pad **Wellbore** W CITADEL 5-64 15-16-1CHZ (PWB)

Scale 1 cm = 800 ft

East (Feet) ->

-11200 -9600 -8000 -6400 -4800 -3200 -1600 0 1600



Scale 1 cm = 400 ft

<- True Vertical Depth (Feet)

-800
0
800
1600
2400
3200
4000
4800
5600
6400
7200
8000
8800

Tie on - 0.00 Inc, 16.00 MD, 16.00 TVD, -0.00 VS

9 5/8in Surface Casing

3DS Kick off Point - 0.00 Inc, 1500.00 MD, 1500.00 TVD, -0.00 VS

End of Build - 18.00 Inc, 2399.75 MD, 2385.03 TVD, -6.09 VS

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	16.00	0.00	0.00	16.00	S 0.00	W 0.00		-0.00
KOP	1500.00	0.00	167.54	1500.00	S 0.00	W 0.00	0.00	-0.00
End of Build	2399.75	18.00	167.54	2385.03	S 136.84	E 30.23	2.00	-6.09
End of Hold	7440.90	18.00	167.54	7179.58	S 1657.57	E 366.14	0.00	-73.82
Target W CITA... Z - T1	8331.89	89.59	270.43	7736.00	S 1828.39	W 175.76	10.50	489.46
T.D. & Target W C... T2	18148.03	89.59	270.43	7807.00	S 1755.18	W 9991.37	0.00	10144.37

End of Hold - 18.00 Inc, 7440.90 MD, 7179.58 TVD, -73.82 VS

T.D. & End of Hold - 7807.00 TVD, 1755.18 S 9991.37 W

S/C Kick off Point - 89.59 Inc, 8331.89 MD, 7736.00 TVD, 489.46 VS

W CITADEL 5-64 15-16-1CHZ - T1

W CITADEL 5-64 15-16-1CHZ - T2
5 1/2in Production Casing

-800 -0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800
Scale 1 cm = 400 ft

Vertical Section (Feet) ->

Azimuth 260.04 with reference 0.00 N, 0.00 E from CITADEL 5-64 15-16-1CHZ

Jan-30-2017
EMM-2015 [2000.0-2020.0] Dip: 66.55 deg Field: 52134.2 nT
Lat: N39 36 54.0900 Long: W104 31 51.5568 Elev: 5936.00 ft
Magnetic North is 8.61 deg East of True North
GRID North is 0.61 deg East of True North
To correct azimuth from True to GRID subtract 0.61 deg
To correct azimuth from Magnetic to GRID add 8.00 deg

Created by admin
Date plotted 31-Jan-2017
Plot reference is W CITADEL 5-64 15-16-1CHZ (PWB).
Ref wellpath is W CITADEL 5-64 15-16-1CHZ (PWP#1).
Coordinates are in Feet reference CITADEL 5-64 15-16-1CHZ.
True Vertical Depths are reference Rig Datum.
Mean Depth reference 11200.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 5953.00 ft.
Plot North is aligned to GRID North.



SYSDRILL
Well Design Combined Report
Wellbore: W CITADEL 5-64 15-16-1CHZ (PWB)



Wellhead Details							
Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
CITADEL 5-64 15-16-1CHZ	39.61420100	-104.53100800	1650056.9917	3272985.5939	300.20S	2.43W	0.00

Declination		
Date	Source	Time
Jan-30-2017	EMM-2015 [2000.0-2020.0]	15:10

Installation Details						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
HNR Arapahoe County Pad	39.61502500	-104.53098800	1650357.1793	3272988.0267	CO83-CF on NORTH AMERICAN DATUM 1983 datum	Grid

Summary Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	Vertical Depth SS	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]
16.00	0.00	0.000	16.00	-5937.00	0.00N	0.00E		0.00
1500.00	0.00	167.540	1500.00	-4453.00	0.00N	0.00E	==>	0.00
2399.75	18.00	167.540	2385.03	-3567.97	136.84S	30.23E	2.00	-6.09
7440.90	18.00	167.540	7179.58	1226.58	1657.57S	366.14E	==>	-73.82
8331.89	89.59	270.430	7736.00	1783.00	1828.39S	175.76W	10.50	489.46
18148.03	89.59	270.430	7807.00	1854.00	1755.18S	9991.37W	==>	10144.37

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	39.61420100	-104.53100800
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1500.00	0.00	167.540	1500.00	0.00N	0.00E	==>	0.00	39.61420100	-104.53100800
1600.00	2.00	167.540	1599.98	1.70S	0.38E	2.00	-0.08	39.61419631	-104.53100673
1700.00	4.00	167.540	1699.84	6.81S	1.51E	2.00	-0.30	39.61418225	-104.53100292
1800.00	6.00	167.540	1799.45	15.32S	3.38E	2.00	-0.68	39.61415883	-104.53099657
1900.00	8.00	167.540	1898.70	27.22S	6.01E	2.00	-1.21	39.61412609	-104.53098769
2000.00	10.00	167.540	1997.47	42.50S	9.39E	2.00	-1.89	39.61408406	-104.53097629
2100.00	12.00	167.540	2095.62	61.13S	13.50E	2.00	-2.72	39.61403280	-104.53096239
2200.00	14.00	167.540	2193.06	83.09S	18.35E	2.00	-3.70	39.61397236	-104.53094600
2300.00	16.00	167.540	2289.64	108.36S	23.94E	2.00	-4.83	39.61390282	-104.53092715
2400.00	18.00	167.540	2385.27	136.91S	30.24E	==>	-6.10	39.61382427	-104.53090585
2500.00	18.00	167.540	2480.38	167.08S	36.91E	==>	-7.44	39.61374127	-104.53088334
2600.00	18.00	167.540	2575.49	197.25S	43.57E	==>	-8.78	39.61365826	-104.53086083
2700.00	18.00	167.540	2670.59	227.41S	50.23E	==>	-10.13	39.61357526	-104.53083832

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5953.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 260.040 degrees
Bottom hole distance is 10144.37 Feet on azimuth 260.04 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W CITADEL 5-64 15-16-1CHZ (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
2800.00	18.00	167.540	2765.70	257.58S	56.90E	==>	-11.47	39.61349225	-104.53081581
2900.00	18.00	167.540	2860.81	287.74S	63.56E	==>	-12.82	39.61340925	-104.53079331
3000.00	18.00	167.540	2955.92	317.91S	70.22E	==>	-14.16	39.61332624	-104.53077080
3100.00	18.00	167.540	3051.03	348.08S	76.89E	==>	-15.50	39.61324324	-104.53074829
3200.00	18.00	167.540	3146.13	378.24S	83.55E	==>	-16.85	39.61316023	-104.53072578
3300.00	18.00	167.540	3241.24	408.41S	90.21E	==>	-18.19	39.61307723	-104.53070328
3400.00	18.00	167.540	3336.35	438.58S	96.88E	==>	-19.53	39.61299422	-104.53068077
3500.00	18.00	167.540	3431.46	468.74S	103.54E	==>	-20.88	39.61291122	-104.53065826
3600.00	18.00	167.540	3526.57	498.91S	110.20E	==>	-22.22	39.61282821	-104.53063576
3700.00	18.00	167.540	3621.68	529.07S	116.87E	==>	-23.56	39.61274521	-104.53061325
3800.00	18.00	167.540	3716.78	559.24S	123.53E	==>	-24.91	39.61266220	-104.53059074
3900.00	18.00	167.540	3811.89	589.41S	130.19E	==>	-26.25	39.61257919	-104.53056823
4000.00	18.00	167.540	3907.00	619.57S	136.86E	==>	-27.59	39.61249619	-104.53054573
4100.00	18.00	167.540	4002.11	649.74S	143.52E	==>	-28.94	39.61241318	-104.53052322
4200.00	18.00	167.540	4097.22	679.91S	150.18E	==>	-30.28	39.61233018	-104.53050071
4300.00	18.00	167.540	4192.33	710.07S	156.85E	==>	-31.62	39.61224717	-104.53047821
4400.00	18.00	167.540	4287.43	740.24S	163.51E	==>	-32.97	39.61216417	-104.53045570
4500.00	18.00	167.540	4382.54	770.41S	170.17E	==>	-34.31	39.61208116	-104.53043319
4600.00	18.00	167.540	4477.65	800.57S	176.84E	==>	-35.66	39.61199816	-104.53041069
4700.00	18.00	167.540	4572.76	830.74S	183.50E	==>	-37.00	39.61191515	-104.53038818
4800.00	18.00	167.540	4667.87	860.90S	190.16E	==>	-38.34	39.61183215	-104.53036567
4900.00	18.00	167.540	4762.98	891.07S	196.83E	==>	-39.69	39.61174914	-104.53034317
5000.00	18.00	167.540	4858.08	921.24S	203.49E	==>	-41.03	39.61166614	-104.53032066
5100.00	18.00	167.540	4953.19	951.40S	210.16E	==>	-42.37	39.61158313	-104.53029815
5200.00	18.00	167.540	5048.30	981.57S	216.82E	==>	-43.72	39.61150012	-104.53027565
5300.00	18.00	167.540	5143.41	1011.74S	223.48E	==>	-45.06	39.61141712	-104.53025314
5400.00	18.00	167.540	5238.52	1041.90S	230.15E	==>	-46.40	39.61133411	-104.53023063
5500.00	18.00	167.540	5333.63	1072.07S	236.81E	==>	-47.75	39.61125111	-104.53020813
5600.00	18.00	167.540	5428.73	1102.24S	243.47E	==>	-49.09	39.61116810	-104.53018562
5700.00	18.00	167.540	5523.84	1132.40S	250.14E	==>	-50.43	39.61108510	-104.53016312
5800.00	18.00	167.540	5618.95	1162.57S	256.80E	==>	-51.78	39.61100209	-104.53014061
5900.00	18.00	167.540	5714.06	1192.73S	263.46E	==>	-53.12	39.61091909	-104.53011810
6000.00	18.00	167.540	5809.17	1222.90S	270.13E	==>	-54.47	39.61083608	-104.53009560
6100.00	18.00	167.540	5904.28	1253.07S	276.79E	==>	-55.81	39.61075307	-104.53007309
6200.00	18.00	167.540	5999.38	1283.23S	283.45E	==>	-57.15	39.61067007	-104.53005059
6300.00	18.00	167.540	6094.49	1313.40S	290.12E	==>	-58.50	39.61058706	-104.53002808
6400.00	18.00	167.540	6189.60	1343.57S	296.78E	==>	-59.84	39.61050406	-104.53000557
6500.00	18.00	167.540	6284.71	1373.73S	303.44E	==>	-61.18	39.61042105	-104.52998307
6600.00	18.00	167.540	6379.82	1403.90S	310.11E	==>	-62.53	39.61033805	-104.52996056
6700.00	18.00	167.540	6474.93	1434.07S	316.77E	==>	-63.87	39.61025504	-104.52993806
6800.00	18.00	167.540	6570.03	1464.23S	323.43E	==>	-65.21	39.61017204	-104.52991555
6900.00	18.00	167.540	6665.14	1494.40S	330.10E	==>	-66.56	39.61008903	-104.52989305
7000.00	18.00	167.540	6760.25	1524.56S	336.76E	==>	-67.90	39.61000603	-104.52987054
7100.00	18.00	167.540	6855.36	1554.73S	343.42E	==>	-69.24	39.60992302	-104.52984804
7200.00	18.00	167.540	6950.47	1584.90S	350.09E	==>	-70.59	39.60984001	-104.52982553
7300.00	18.00	167.540	7045.58	1615.06S	356.75E	==>	-71.93	39.60975701	-104.52980302
7400.00	18.00	167.540	7140.68	1645.23S	363.41E	==>	-73.27	39.60967400	-104.52978052
7500.00	17.70	187.870	7235.89	1675.40S	366.88E	10.50	-71.47	39.60959109	-104.52976936
7600.00	21.56	217.350	7330.29	1705.14S	353.61E	10.50	-53.25	39.60950982	-104.52981758
7700.00	28.81	235.430	7420.86	1733.50S	322.53E	10.50	-17.73	39.60943288	-104.52992896
7800.00	37.53	246.230	7504.55	1759.53S	274.68E	10.50	33.90	39.60936284	-104.53009978
7900.00	46.90	253.330	7578.58	1782.34S	211.65E	10.50	99.92	39.60930206	-104.53032432
8000.00	56.58	258.510	7640.45	1801.18S	135.57E	10.50	178.12	39.60925257	-104.53059505
8100.00	66.44	262.630	7688.10	1815.42S	48.97E	10.50	265.87	39.60921602	-104.53090292
8200.00	76.40	266.170	7719.93	1824.58S	45.23W	10.50	360.24	39.60919365	-104.53123760
8300.00	86.39	269.420	7734.88	1828.35S	143.90W	10.50	458.07	39.60918619	-104.53158790

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Vertical Section is from 0.00N 0.00E on azimuth 260.040 degrees
Bottom hole distance is 10144.37 Feet on azimuth 260.04 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W CITADEL 5-64 15-16-1CHZ (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
8400.00	89.59	270.430	7736.49	1827.88S	243.87W	==>	556.45	39.60919039	-104.53194268
8500.00	89.59	270.430	7737.22	1827.14S	343.86W	==>	654.81	39.60919536	-104.53229753
8600.00	89.59	270.430	7737.94	1826.39S	443.86W	==>	753.17	39.60920033	-104.53265238
8700.00	89.59	270.430	7738.66	1825.64S	543.85W	==>	851.52	39.60920530	-104.53300724
8800.00	89.59	270.430	7739.39	1824.90S	643.85W	==>	949.88	39.60921027	-104.53336209
8900.00	89.59	270.430	7740.11	1824.15S	743.84W	==>	1048.24	39.60921524	-104.53371694
9000.00	89.59	270.430	7740.83	1823.41S	843.84W	==>	1146.60	39.60922020	-104.53407179
9100.00	89.59	270.430	7741.56	1822.66S	943.83W	==>	1244.95	39.60922517	-104.53442665
9200.00	89.59	270.430	7742.28	1821.91S	1043.82W	==>	1343.31	39.60923013	-104.53478150
9300.00	89.59	270.430	7743.00	1821.17S	1143.82W	==>	1441.67	39.60923509	-104.53513635
9400.00	89.59	270.430	7743.73	1820.42S	1243.81W	==>	1540.03	39.60924006	-104.53549120
9500.00	89.59	270.430	7744.45	1819.68S	1343.81W	==>	1638.38	39.60924502	-104.53584606
9600.00	89.59	270.430	7745.17	1818.93S	1443.80W	==>	1736.74	39.60924998	-104.53620091
9700.00	89.59	270.430	7745.90	1818.19S	1543.80W	==>	1835.10	39.60925494	-104.53655576
9800.00	89.59	270.430	7746.62	1817.44S	1643.79W	==>	1933.46	39.60925989	-104.53691061
9900.00	89.59	270.430	7747.34	1816.69S	1743.79W	==>	2031.81	39.60926485	-104.53726547
10000.00	89.59	270.430	7748.07	1815.95S	1843.78W	==>	2130.17	39.60926981	-104.53762032
10100.00	89.59	270.430	7748.79	1815.20S	1943.78W	==>	2228.53	39.60927476	-104.53797517
10200.00	89.59	270.430	7749.51	1814.46S	2043.77W	==>	2326.89	39.60927972	-104.53833003
10300.00	89.59	270.430	7750.24	1813.71S	2143.76W	==>	2425.24	39.60928467	-104.53868488
10400.00	89.59	270.430	7750.96	1812.97S	2243.76W	==>	2523.60	39.60928962	-104.53903973
10500.00	89.59	270.430	7751.68	1812.22S	2343.75W	==>	2621.96	39.60929457	-104.53939458
10600.00	89.59	270.430	7752.41	1811.47S	2443.75W	==>	2720.31	39.60929952	-104.53974944
10700.00	89.59	270.430	7753.13	1810.73S	2543.74W	==>	2818.67	39.60930447	-104.54010429
10800.00	89.59	270.430	7753.85	1809.98S	2643.74W	==>	2917.03	39.60930941	-104.54045914
10900.00	89.59	270.430	7754.58	1809.24S	2743.73W	==>	3015.39	39.60931436	-104.54081400
11000.00	89.59	270.430	7755.30	1808.49S	2843.73W	==>	3113.74	39.60931931	-104.54116885
11100.00	89.59	270.430	7756.02	1807.75S	2943.72W	==>	3212.10	39.60932425	-104.54152370
11200.00	89.59	270.430	7756.74	1807.00S	3043.72W	==>	3310.46	39.60932919	-104.54187856
11300.00	89.59	270.430	7757.47	1806.25S	3143.71W	==>	3408.82	39.60933413	-104.54223341
11400.00	89.59	270.430	7758.19	1805.51S	3243.71W	==>	3507.17	39.60933908	-104.54258827
11500.00	89.59	270.430	7758.91	1804.76S	3343.70W	==>	3605.53	39.60934401	-104.54294312
11600.00	89.59	270.430	7759.64	1804.02S	3443.69W	==>	3703.89	39.60934895	-104.54329797
11700.00	89.59	270.430	7760.36	1803.27S	3543.69W	==>	3802.25	39.60935389	-104.54365283
11800.00	89.59	270.430	7761.08	1802.53S	3643.68W	==>	3900.60	39.60935883	-104.54400768
11900.00	89.59	270.430	7761.81	1801.78S	3743.68W	==>	3998.96	39.60936376	-104.54436253
12000.00	89.59	270.430	7762.53	1801.03S	3843.67W	==>	4097.32	39.60936870	-104.54471739
12100.00	89.59	270.430	7763.25	1800.29S	3943.67W	==>	4195.68	39.60937363	-104.54507224
12200.00	89.59	270.430	7763.98	1799.54S	4043.66W	==>	4294.03	39.60937856	-104.54542710
12300.00	89.59	270.430	7764.70	1798.80S	4143.66W	==>	4392.39	39.60938349	-104.54578195
12400.00	89.59	270.430	7765.42	1798.05S	4243.65W	==>	4490.75	39.60938842	-104.54613680
12500.00	89.59	270.430	7766.15	1797.30S	4343.65W	==>	4589.11	39.60939335	-104.54649166
12600.00	89.59	270.430	7766.87	1796.56S	4443.64W	==>	4687.46	39.60939828	-104.54684651
12700.00	89.59	270.430	7767.59	1795.81S	4543.64W	==>	4785.82	39.60940321	-104.54720137
12800.00	89.59	270.430	7768.32	1795.07S	4643.63W	==>	4884.18	39.60940813	-104.54755622
12900.00	89.59	270.430	7769.04	1794.32S	4743.62W	==>	4982.54	39.60941306	-104.54791107
13000.00	89.59	270.430	7769.76	1793.58S	4843.62W	==>	5080.89	39.60941798	-104.54826593
13100.00	89.59	270.430	7770.49	1792.83S	4943.61W	==>	5179.25	39.60942290	-104.54862078
13200.00	89.59	270.430	7771.21	1792.08S	5043.61W	==>	5277.61	39.60942783	-104.54897564
13300.00	89.59	270.430	7771.93	1791.34S	5143.60W	==>	5375.97	39.60943275	-104.54933049
13400.00	89.59	270.430	7772.66	1790.59S	5243.60W	==>	5474.32	39.60943766	-104.54968535
13500.00	89.59	270.430	7773.38	1789.85S	5343.59W	==>	5572.68	39.60944258	-104.55004020
13600.00	89.59	270.430	7774.10	1789.10S	5443.59W	==>	5671.04	39.60944750	-104.55039506
13700.00	89.59	270.430	7774.83	1788.36S	5543.58W	==>	5769.40	39.60945242	-104.55074991
13800.00	89.59	270.430	7775.55	1787.61S	5643.58W	==>	5867.75	39.60945733	-104.55110476

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Vertical Section is from 0.00N 0.00E on azimuth 260.040 degrees
Bottom hole distance is 10144.37 Feet on azimuth 260.04 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W CITADEL 5-64 15-16-1CHZ (PWB)



Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Station Position (Latitude)	Station Position (Longitude)
13900.00	89.59	270.430	7776.27	1786.86S	5743.57W	==>	5966.11	39.60946225	-104.55145962
14000.00	89.59	270.430	7777.00	1786.12S	5843.57W	==>	6064.47	39.60946716	-104.55181447
14100.00	89.59	270.430	7777.72	1785.37S	5943.56W	==>	6162.83	39.60947207	-104.55216933
14200.00	89.59	270.430	7778.44	1784.63S	6043.55W	==>	6261.18	39.60947698	-104.55252418
14300.00	89.59	270.430	7779.17	1783.88S	6143.55W	==>	6359.54	39.60948189	-104.55287904
14400.00	89.59	270.430	7779.89	1783.14S	6243.54W	==>	6457.90	39.60948680	-104.55323389
14500.00	89.59	270.430	7780.61	1782.39S	6343.54W	==>	6556.26	39.60949171	-104.55358875
14600.00	89.59	270.430	7781.34	1781.64S	6443.53W	==>	6654.61	39.60949661	-104.55394360
14700.00	89.59	270.430	7782.06	1780.90S	6543.53W	==>	6752.97	39.60950152	-104.55429846
14800.00	89.59	270.430	7782.78	1780.15S	6643.52W	==>	6851.33	39.60950642	-104.55465332
14900.00	89.59	270.430	7783.51	1779.41S	6743.52W	==>	6949.69	39.60951133	-104.55500817
15000.00	89.59	270.430	7784.23	1778.66S	6843.51W	==>	7048.04	39.60951623	-104.55536303
15100.00	89.59	270.430	7784.95	1777.91S	6943.51W	==>	7146.40	39.60952113	-104.55571788
15200.00	89.59	270.430	7785.68	1777.17S	7043.50W	==>	7244.76	39.60952603	-104.55607274
15300.00	89.59	270.430	7786.40	1776.42S	7143.50W	==>	7343.12	39.60953093	-104.55642759
15400.00	89.59	270.430	7787.12	1775.68S	7243.49W	==>	7441.47	39.60953583	-104.55678245
15500.00	89.59	270.430	7787.85	1774.93S	7343.48W	==>	7539.83	39.60954072	-104.55713730
15600.00	89.59	270.430	7788.57	1774.19S	7443.48W	==>	7638.19	39.60954562	-104.55749216
15700.00	89.59	270.430	7789.29	1773.44S	7543.47W	==>	7736.55	39.60955051	-104.55784701
15800.00	89.59	270.430	7790.02	1772.69S	7643.47W	==>	7834.90	39.60955541	-104.55820187
15900.00	89.59	270.430	7790.74	1771.95S	7743.46W	==>	7933.26	39.60956030	-104.55855673
16000.00	89.59	270.430	7791.46	1771.20S	7843.46W	==>	8031.62	39.60956519	-104.55891158
16100.00	89.59	270.430	7792.19	1770.46S	7943.45W	==>	8129.98	39.60957008	-104.55926644
16200.00	89.59	270.430	7792.91	1769.71S	8043.45W	==>	8228.33	39.60957497	-104.55962129
16300.00	89.59	270.430	7793.63	1768.97S	8143.44W	==>	8326.69	39.60957986	-104.55997615
16400.00	89.59	270.430	7794.36	1768.22S	8243.44W	==>	8425.05	39.60958474	-104.56033101
16500.00	89.59	270.430	7795.08	1767.47S	8343.43W	==>	8523.41	39.60958963	-104.56068586
16600.00	89.59	270.430	7795.80	1766.73S	8443.42W	==>	8621.76	39.60959452	-104.56104072
16700.00	89.59	270.430	7796.53	1765.98S	8543.42W	==>	8720.12	39.60959940	-104.56139557
16800.00	89.59	270.430	7797.25	1765.24S	8643.41W	==>	8818.48	39.60960428	-104.56175043
16900.00	89.59	270.430	7797.97	1764.49S	8743.41W	==>	8916.84	39.60960916	-104.56210529
17000.00	89.59	270.430	7798.70	1763.75S	8843.40W	==>	9015.19	39.60961405	-104.56246014
17100.00	89.59	270.430	7799.42	1763.00S	8943.40W	==>	9113.55	39.60961892	-104.56281500
17200.00	89.59	270.430	7800.14	1762.25S	9043.39W	==>	9211.91	39.60962380	-104.56316986
17300.00	89.59	270.430	7800.87	1761.51S	9143.39W	==>	9310.27	39.60962868	-104.56352471
17400.00	89.59	270.430	7801.59	1760.76S	9243.38W	==>	9408.62	39.60963356	-104.56387957
17500.00	89.59	270.430	7802.31	1760.02S	9343.38W	==>	9506.98	39.60963843	-104.56423442
17600.00	89.59	270.430	7803.04	1759.27S	9443.37W	==>	9605.34	39.60964331	-104.56458928
17700.00	89.59	270.430	7803.76	1758.53S	9543.37W	==>	9703.70	39.60964818	-104.56494414
17800.00	89.59	270.430	7804.48	1757.78S	9643.36W	==>	9802.05	39.60965305	-104.56529899
17900.00	89.59	270.430	7805.21	1757.03S	9743.35W	==>	9900.41	39.60965792	-104.56565385
18000.00	89.59	270.430	7805.93	1756.29S	9843.35W	==>	9998.77	39.60966279	-104.56600871
18100.00	89.59	270.430	7806.65	1755.54S	9943.34W	==>	10097.13	39.60966766	-104.56636357
18148.03	89.59	270.430	7807.00	1755.18S	9991.37W	==>	10144.37	39.60967000	-104.56653400

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