

Burlington Resources

Location: COLORADO Slot: SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Field: ARAPAHOE COUNTY (NAD83/TN) Well: STATE LA PLATA 5-65 13-15 3DH
Facility: SEC.13-T05S-R65W Wellbore: STATE LA PLATA 5-65 13-15 3DH PWB

Plot reference wellpath is STATE LA PLATA 5-65 13-15 3DH (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Central Zone (502), US feet
True vertical depths are referenced to RIG (25KB) (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to RIG (25KB) (RKB)	North Reference: True north
RIG (25KB) (RKB) to Mean Sea Level: 5921.8 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adamkat on 2017-10-24
	Database: Denver

Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.13-T05S-R65W				3248820.058	1649331.661	39°36'46.390"N	104°39'02.500"W
Slot		Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)		0.00	40.70	3248860.750	1649332.057	39°36'46.390"N	104°39'02.500"W
RIG (25KB) (RKB) to Mud line (At Slot: SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13))				5921.8ft			
Mean Sea Level to Mud line (At Slot: SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13))				0ft			
RIG (25KB) (RKB) to Mean Sea Level				5921.8ft			

Survey Program

Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
25.00	17927.29	BHI NavTrak	BHI NavTrak (IFR1, Rotating)		STATE LA PLATA 5-65 13-15 3DH PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	25.00	0.000	58.747	25.00	0.00	0.00	0.00	0.00
End of Tangent	2385.00	0.000	58.747	2385.00	0.00	0.00	0.00	0.00
End of Build	2895.39	7.656	58.747	2893.87	17.66	29.11	1.50	-28.37
End of Tangent	7471.71	7.656	58.747	7429.40	333.97	550.31	0.00	-536.40
End of 3D Arc	8276.25	90.000	269.932	7960.00	370.33	75.91	12.00	-60.92
End of Tangent	12010.77	90.000	269.932	7960.00	365.88	-3658.60	0.00	3670.38
End of 3D Arc	17792.68	90.000	270.452	7960.00	385.23	-9440.47	0.01	9448.33
End of Tangent	17927.29	90.000	270.452	7960.00	386.29	-9575.08	0.00	9582.87

Wellpath Comments

MD (ft)	X (ft)	Y (ft)	TVD (ft)	Inclination (°)	Azimuth (°)	VS (ft)	Comment
1911.00	0.00	0.00	1911.00	0.000	58.747	0.00	Fox Hills Aquifer*
2135.00	0.00	0.00	2135.00	0.000	58.747	0.00	Pierre Shale*
2335.00	0.00	0.00	2335.00	0.000	58.747	0.00	SURFACE CASING
7751.33	501.32	352.75	7700.00	27.280	277.688	-486.69	Sharon Springs Shale
7887.98	422.80	360.38	7811.00	43.553	274.130	-407.93	Niobrara Fm.
7913.47	404.79	361.61	7829.00	46.598	273.706	-389.89	Niobrara A Marl
7959.54	369.91	363.65	7859.00	52.103	273.037	-354.95	Niobrara B Chalk, Niobrara B Marl
8057.77	286.85	367.18	7911.00	63.851	271.890	-271.81	Niobrara C Chalk, Niobrara C Marl Upper
8117.76	231.51	368.71	7934.00	71.029	271.303	-216.46	Niobrara C Marl Lower
8178.24	173.24	369.75	7950.00	78.268	270.760	-158.19	Niobrara D Chalk
8276.25	75.91	370.33	7960.00	90.000	269.932	-60.92	TARGET @ LP (10 ft under D Chalk top)

Hole and Casing Sections

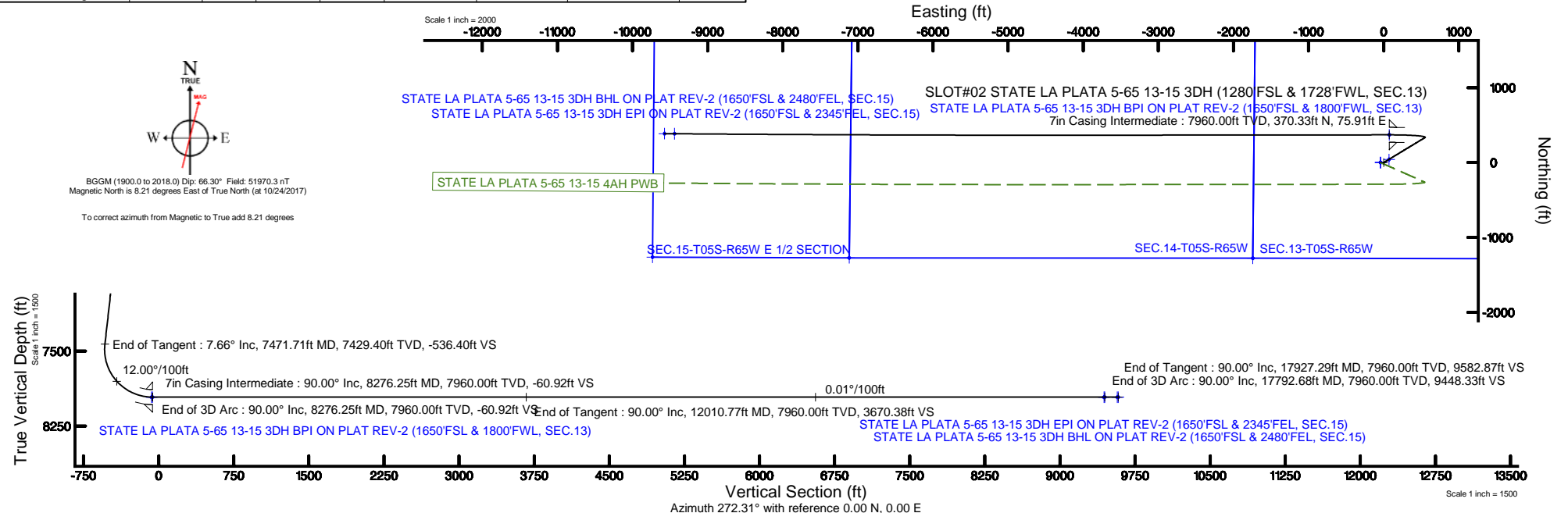
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9.625in Casing Surface	25.00	2335.00	2310.00	25.00	2335.00	0.00	0.00	0.00	0.00	STATE LA PLATA 5-65 13-15 3DH PWB
8.75in Open Hole	2335.00	8276.25	5941.25	2335.00	7960.00	0.00	0.00	370.33	75.91	STATE LA PLATA 5-65 13-15 3DH PWB
7in Casing Intermediate	25.00	8276.25	8251.25	25.00	7960.00	0.00	0.00	370.33	75.91	STATE LA PLATA 5-65 13-15 3DH PWB
6in Open Hole	8276.25	17927.29	9651.04	7960.00	7960.00	370.33	75.91	386.29	-9575.08	STATE LA PLATA 5-65 13-15 3DH PWB

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
17927.29	90.000	270.452	7960.00	386.29	-9575.08	3239282.62	1649625.22	39°36'50.190"N	104°39'02.330"W

BURLINGTON
RESOURCES

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Central Zone (502), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Adamkat
Scale	0.999976	Report Generated	10/24/2017 at 12:40:44 PM
Convergence at slot	0.56° East	Database/Source file	WA_DEN_Denver_Defn/STATE_LA_PLATA_5-65_13-15_3DH_REV-B.0_PWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	40.70	3248860.75	1649332.06	39°36'46.390"N	104°36'59.980"W
Facility Reference Pt			3248820.06	1649331.66	39°36'46.390"N	104°37'00.500"W
Field Reference Pt			3256721.09	1679994.75	39°41'48.650"N	104°35'15.610"W

WELLPATH DATUM			
Calculation method	Minimum curvature	RIG (25'KB) (RKB) to Facility Vertical Datum	5921.80ft
Horizontal Reference Pt	Slot	RIG (25'KB) (RKB) to Mean Sea Level	5921.80ft
Vertical Reference Pt	RIG (25'KB) (RKB)	RIG (25'KB) (RKB) to Mud Line at Slot (SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13))	5921.80ft
MD Reference Pt	RIG (25'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	272.31°

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Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH DATA (199 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
0.00†	0.000	58.747	0.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
25.00	0.000	58.747	25.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	Free On
125.00†	0.000	58.747	125.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
225.00†	0.000	58.747	225.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
325.00†	0.000	58.747	325.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
425.00†	0.000	58.747	425.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
525.00†	0.000	58.747	525.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
625.00†	0.000	58.747	625.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
725.00†	0.000	58.747	725.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
825.00†	0.000	58.747	825.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
925.00†	0.000	58.747	925.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1025.00†	0.000	58.747	1025.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1125.00†	0.000	58.747	1125.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1225.00†	0.000	58.747	1225.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1325.00†	0.000	58.747	1325.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1425.00†	0.000	58.747	1425.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1525.00†	0.000	58.747	1525.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1625.00†	0.000	58.747	1625.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1725.00†	0.000	58.747	1725.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1825.00†	0.000	58.747	1825.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
1911.00†	0.000	58.747	1911.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	Fox Hills Aquifer*
1925.00†	0.000	58.747	1925.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
2025.00†	0.000	58.747	2025.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
2125.00†	0.000	58.747	2125.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
2135.00†	0.000	58.747	2135.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	Pierre Shale*
2225.00†	0.000	58.747	2225.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
2325.00†	0.000	58.747	2325.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	
2335.00†	0.000	58.747	2335.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	SURFACE CASING
2385.00	0.000	58.747	2385.00	0.00	0.00	0.00	3248860.75	1649332.06	0.00	End of Tangent
2425.00†	0.600	58.747	2425.00	-0.17	0.11	0.18	3248860.93	1649332.17	1.50	
2525.00†	2.100	58.747	2524.97	-2.14	1.33	2.19	3248862.93	1649333.41	1.50	
2625.00†	3.600	58.747	2624.84	-6.28	3.91	6.44	3248867.16	1649336.03	1.50	
2725.00†	5.100	58.747	2724.55	-12.60	7.85	12.93	3248873.60	1649340.03	1.50	
2825.00†	6.600	58.747	2824.03	-21.09	13.13	21.64	3248882.26	1649345.40	1.50	
2895.39	7.656	58.747	2893.87	-28.37	17.66	29.11	3248889.68	1649350.00	1.50	End of Build
2925.00†	7.656	58.747	2923.22	-31.66	19.71	32.48	3248893.04	1649352.08	0.00	
3025.00†	7.656	58.747	3022.33	-42.76	26.62	43.87	3248904.36	1649359.10	0.00	
3125.00†	7.656	58.747	3121.44	-53.86	33.53	55.26	3248915.68	1649366.13	0.00	
3225.00†	7.656	58.747	3220.54	-64.96	40.45	66.65	3248927.00	1649373.15	0.00	
3325.00†	7.656	58.747	3319.65	-76.06	47.36	78.04	3248938.32	1649380.17	0.00	
3425.00†	7.656	58.747	3418.76	-87.17	54.27	89.43	3248949.64	1649387.19	0.00	
3525.00†	7.656	58.747	3517.87	-98.27	61.18	100.81	3248960.96	1649394.21	0.00	
3625.00†	7.656	58.747	3616.98	-109.37	68.09	112.20	3248972.28	1649401.24	0.00	
3725.00†	7.656	58.747	3716.09	-120.47	75.01	123.59	3248983.60	1649408.26	0.00	
3825.00†	7.656	58.747	3815.20	-131.57	81.92	134.98	3248994.93	1649415.28	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH DATA (199 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
3925.00†	7.656	58.747	3914.30	-142.67	88.83	146.37	3249006.25	1649422.30	0.00	
4025.00†	7.656	58.747	4013.41	-153.77	95.74	157.76	3249017.57	1649429.32	0.00	
4125.00†	7.656	58.747	4112.52	-164.87	102.65	169.15	3249028.89	1649436.35	0.00	
4225.00†	7.656	58.747	4211.63	-175.97	109.56	180.54	3249040.21	1649443.37	0.00	
4325.00†	7.656	58.747	4310.74	-187.08	116.48	191.93	3249051.53	1649450.39	0.00	
4425.00†	7.656	58.747	4409.85	-198.18	123.39	203.32	3249062.85	1649457.41	0.00	
4525.00†	7.656	58.747	4508.96	-209.28	130.30	214.71	3249074.17	1649464.43	0.00	
4625.00†	7.656	58.747	4608.06	-220.38	137.21	226.09	3249085.49	1649471.46	0.00	
4725.00†	7.656	58.747	4707.17	-231.48	144.12	237.48	3249096.82	1649478.48	0.00	
4825.00†	7.656	58.747	4806.28	-242.58	151.03	248.87	3249108.14	1649485.50	0.00	
4925.00†	7.656	58.747	4905.39	-253.68	157.95	260.26	3249119.46	1649492.52	0.00	
5025.00†	7.656	58.747	5004.50	-264.78	164.86	271.65	3249130.78	1649499.54	0.00	
5125.00†	7.656	58.747	5103.61	-275.89	171.77	283.04	3249142.10	1649506.57	0.00	
5225.00†	7.656	58.747	5202.72	-286.99	178.68	294.43	3249153.42	1649513.59	0.00	
5325.00†	7.656	58.747	5301.83	-298.09	185.59	305.82	3249164.74	1649520.61	0.00	
5425.00†	7.656	58.747	5400.93	-309.19	192.51	317.21	3249176.06	1649527.63	0.00	
5525.00†	7.656	58.747	5500.04	-320.29	199.42	328.60	3249187.38	1649534.65	0.00	
5625.00†	7.656	58.747	5599.15	-331.39	206.33	339.99	3249198.70	1649541.68	0.00	
5725.00†	7.656	58.747	5698.26	-342.49	213.24	351.37	3249210.03	1649548.70	0.00	
5825.00†	7.656	58.747	5797.37	-353.59	220.15	362.76	3249221.35	1649555.72	0.00	
5925.00†	7.656	58.747	5896.48	-364.70	227.06	374.15	3249232.67	1649562.74	0.00	
6025.00†	7.656	58.747	5995.59	-375.80	233.98	385.54	3249243.99	1649569.76	0.00	
6125.00†	7.656	58.747	6094.69	-386.90	240.89	396.93	3249255.31	1649576.79	0.00	
6225.00†	7.656	58.747	6193.80	-398.00	247.80	408.32	3249266.63	1649583.81	0.00	
6325.00†	7.656	58.747	6292.91	-409.10	254.71	419.71	3249277.95	1649590.83	0.00	
6425.00†	7.656	58.747	6392.02	-420.20	261.62	431.10	3249289.27	1649597.85	0.00	
6525.00†	7.656	58.747	6491.13	-431.30	268.53	442.49	3249300.59	1649604.87	0.00	
6625.00†	7.656	58.747	6590.24	-442.40	275.45	453.88	3249311.92	1649611.90	0.00	
6725.00†	7.656	58.747	6689.35	-453.51	282.36	465.27	3249323.24	1649618.92	0.00	
6825.00†	7.656	58.747	6788.45	-464.61	289.27	476.65	3249334.56	1649625.94	0.00	
6925.00†	7.656	58.747	6887.56	-475.71	296.18	488.04	3249345.88	1649632.96	0.00	
7025.00†	7.656	58.747	6986.67	-486.81	303.09	499.43	3249357.20	1649639.98	0.00	
7125.00†	7.656	58.747	7085.78	-497.91	310.01	510.82	3249368.52	1649647.01	0.00	
7225.00†	7.656	58.747	7184.89	-509.01	316.92	522.21	3249379.84	1649654.03	0.00	
7325.00†	7.656	58.747	7284.00	-520.11	323.83	533.60	3249391.16	1649661.05	0.00	
7425.00†	7.656	58.747	7383.11	-531.21	330.74	544.99	3249402.48	1649668.07	0.00	
7471.71	7.656	58.747	7429.40	-536.40	333.97	550.31	3249407.77	1649671.35	0.00	End of Tangent
7525.00†	3.984	2.087	7482.44	-539.35	337.66	553.41	3249410.84	1649675.08	12.00	
7625.00†	12.492	288.242	7581.50	-528.90	344.55	543.23	3249400.59	1649681.86	12.00	
7725.00†	24.161	278.857	7676.28	-498.06	351.11	512.63	3249369.93	1649688.12	12.00	
7751.33†	27.280	277.688	7700.00	-486.69	352.75	501.32	3249358.60	1649689.65	12.00	Sharon Springs Shale
7825.00†	36.041	275.421	7762.65	-448.17	357.06	462.94	3249320.18	1649693.59	12.00	
7887.98†	43.553	274.130	7811.00	-407.93	360.38	422.80	3249280.01	1649696.52	12.00	Niobrara Fm.
7913.47†	46.598	273.706	7829.00	-389.89	361.61	404.79	3249262.00	1649697.57	12.00	Niobrara A Marl
7925.00†	47.975	273.528	7836.82	-381.41	362.14	396.33	3249253.53	1649698.03	12.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH DATA (199 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
7959.54†	52.103	273.037	7859.00	-354.95	363.65	369.91	3249227.10	1649699.28	12.00	Niobrara B Chalk, Niobrara B Marl
8025.00†	59.931	272.241	7895.56	-300.71	366.14	315.73	3249172.90	1649701.23	12.00	
8057.77†	63.851	271.890	7911.00	-271.81	367.18	286.85	3249144.01	1649701.99	12.00	Niobrara C Chalk, Niobrara C Marl Upper
8117.76†	71.029	271.303	7934.00	-216.46	368.71	231.51	3249088.65	1649702.99	12.00	Niobrara C Marl Lower
8125.00†	71.896	271.235	7936.30	-209.59	368.86	224.64	3249081.79	1649703.08	12.00	
8178.24†	78.268	270.760	7950.00	-158.19	369.75	173.24	3249030.38	1649703.47	12.00	Niobrara D Chalk
8225.00†	83.865	270.360	7957.26	-112.04	370.20	127.06	3248984.20	1649703.47	12.00	
8276.25	90.000	269.932	7960.00	-60.92	370.33	75.91	3248933.06	1649703.10	12.00	End of 3D Arc
8276.25†	90.000	269.932	7960.00	-60.92	370.33	75.91	3248933.05	1649703.10	0.00	TARGET @ LP (10 ft under D Chalk top)
8325.00†	90.000	269.932	7960.00	-12.21	370.28	27.16	3248884.31	1649702.57	0.00	
8425.00†	90.000	269.932	7960.00	87.70	370.16	-72.84	3248784.32	1649701.48	0.00	
8525.00†	90.000	269.932	7960.00	187.62	370.04	-172.84	3248684.33	1649700.39	0.00	
8625.00†	90.000	269.932	7960.00	287.53	369.92	-272.84	3248584.33	1649699.29	0.00	
8725.00†	90.000	269.932	7960.00	387.44	369.80	-372.84	3248484.34	1649698.20	0.00	
8825.00†	90.000	269.932	7960.00	487.36	369.68	-472.84	3248384.35	1649697.11	0.00	
8925.00†	90.000	269.932	7960.00	587.27	369.56	-572.84	3248284.36	1649696.02	0.00	
9025.00†	90.000	269.932	7960.00	687.19	369.44	-672.84	3248184.37	1649694.93	0.00	
9125.00†	90.000	269.932	7960.00	787.10	369.32	-772.84	3248084.38	1649693.84	0.00	
9225.00†	90.000	269.932	7960.00	887.01	369.20	-872.84	3247984.39	1649692.74	0.00	
9325.00†	90.000	269.932	7960.00	986.93	369.08	-972.84	3247884.39	1649691.65	0.00	
9425.00†	90.000	269.932	7960.00	1086.84	368.96	-1072.84	3247784.40	1649690.56	0.00	
9525.00†	90.000	269.932	7960.00	1186.75	368.84	-1172.84	3247684.41	1649689.47	0.00	
9625.00†	90.000	269.932	7960.00	1286.67	368.72	-1272.84	3247584.42	1649688.38	0.00	
9725.00†	90.000	269.932	7960.00	1386.58	368.60	-1372.84	3247484.43	1649687.29	0.00	
9825.00†	90.000	269.932	7960.00	1486.50	368.48	-1472.84	3247384.44	1649686.19	0.00	
9925.00†	90.000	269.932	7960.00	1586.41	368.37	-1572.84	3247284.45	1649685.10	0.00	
10025.00†	90.000	269.932	7960.00	1686.32	368.25	-1672.84	3247184.45	1649684.01	0.00	
10125.00†	90.000	269.932	7960.00	1786.24	368.13	-1772.84	3247084.46	1649682.92	0.00	
10225.00†	90.000	269.932	7960.00	1886.15	368.01	-1872.84	3246984.47	1649681.83	0.00	
10325.00†	90.000	269.932	7960.00	1986.07	367.89	-1972.84	3246884.48	1649680.74	0.00	
10425.00†	90.000	269.932	7960.00	2085.98	367.77	-2072.84	3246784.49	1649679.64	0.00	
10525.00†	90.000	269.932	7960.00	2185.89	367.65	-2172.84	3246684.50	1649678.55	0.00	
10625.00†	90.000	269.932	7960.00	2285.81	367.53	-2272.84	3246584.51	1649677.46	0.00	
10725.00†	90.000	269.932	7960.00	2385.72	367.41	-2372.84	3246484.51	1649676.37	0.00	
10825.00†	90.000	269.932	7960.00	2485.63	367.29	-2472.84	3246384.52	1649675.28	0.00	
10925.00†	90.000	269.932	7960.00	2585.55	367.17	-2572.84	3246284.53	1649674.19	0.00	
11025.00†	90.000	269.932	7960.00	2685.46	367.05	-2672.84	3246184.54	1649673.09	0.00	
11125.00†	90.000	269.932	7960.00	2785.38	366.93	-2772.84	3246084.55	1649672.00	0.00	
11225.00†	90.000	269.932	7960.00	2885.29	366.81	-2872.84	3245984.56	1649670.91	0.00	
11325.00†	90.000	269.932	7960.00	2985.20	366.69	-2972.84	3245884.57	1649669.82	0.00	
11425.00†	90.000	269.932	7960.00	3085.12	366.57	-3072.84	3245784.57	1649668.73	0.00	
11525.00†	90.000	269.932	7960.00	3185.03	366.46	-3172.84	3245684.58	1649667.64	0.00	
11625.00†	90.000	269.932	7960.00	3284.94	366.34	-3272.84	3245584.59	1649666.54	0.00	
11725.00†	90.000	269.932	7960.00	3384.86	366.22	-3372.84	3245484.60	1649665.45	0.00	
11825.00†	90.000	269.932	7960.00	3484.77	366.10	-3472.84	3245384.61	1649664.36	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH DATA (199 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments	
11925.00†	90.000	269.932	7960.00	3584.69	365.98	-3572.84	3245284.62	1649663.27	0.00		
12010.77	90.000	269.932	7960.00	3670.38	365.88	-3658.60	3245198.86	1649662.33	0.00	End of Tangent	
12025.00†	90.000	269.933	7960.00	3684.60	365.86	-3672.84	3245184.63	1649662.18	0.01		
12125.00†	90.000	269.942	7960.00	3784.51	365.75	-3772.84	3245084.63	1649661.10	0.01		
12225.00†	90.000	269.951	7960.00	3884.43	365.66	-3872.84	3244984.64	1649660.03	0.01		
12325.00†	90.000	269.960	7960.00	3984.34	365.58	-3972.84	3244884.65	1649658.98	0.01		
12425.00†	90.000	269.969	7960.00	4084.26	365.52	-4072.84	3244784.66	1649657.94	0.01		
12525.00†	90.000	269.978	7960.00	4184.18	365.47	-4172.84	3244684.67	1649656.93	0.01		
12625.00†	90.000	269.987	7960.00	4284.10	365.44	-4272.84	3244584.67	1649655.92	0.01		
12725.00†	90.000	269.996	7960.00	4384.01	365.42	-4372.84	3244484.68	1649654.94	0.01		
12825.00†	90.000	270.005	7960.00	4483.93	365.42	-4472.84	3244384.69	1649653.96	0.01		
12925.00†	90.000	270.014	7960.00	4583.85	365.44	-4572.84	3244284.70	1649653.01	0.01		
13025.00†	90.000	270.023	7960.00	4683.77	365.47	-4672.84	3244184.70	1649652.07	0.01		
13125.00†	90.000	270.032	7960.00	4783.69	365.52	-4772.84	3244084.71	1649651.14	0.01		
13225.00†	90.000	270.041	7960.00	4883.61	365.58	-4872.84	3243984.72	1649650.23	0.01		
13325.00†	90.000	270.050	7960.00	4983.54	365.66	-4972.84	3243884.72	1649649.34	0.01		
13425.00†	90.000	270.059	7960.00	5083.46	365.76	-5072.84	3243784.73	1649648.46	0.01		
13525.00†	90.000	270.068	7960.00	5183.38	365.87	-5172.84	3243684.74	1649647.60	0.01		
13625.00†	90.000	270.077	7960.00	5283.30	365.99	-5272.84	3243584.74	1649646.76	0.01		
13725.00†	90.000	270.086	7960.00	5383.23	366.14	-5372.84	3243484.75	1649645.93	0.01		
13825.00†	90.000	270.095	7960.00	5483.15	366.29	-5472.84	3243384.75	1649645.11	0.01		
13925.00†	90.000	270.104	7960.00	5583.08	366.47	-5572.84	3243284.76	1649644.31	0.01		
14025.00†	90.000	270.113	7960.00	5683.01	366.66	-5672.84	3243184.77	1649643.53	0.01		
14125.00†	90.000	270.122	7960.00	5782.93	366.86	-5772.84	3243084.77	1649642.76	0.01		
14225.00†	90.000	270.131	7960.00	5882.86	367.08	-5872.84	3242984.78	1649642.01	0.01		
14325.00†	90.000	270.140	7960.00	5982.79	367.32	-5972.84	3242884.78	1649641.27	0.01		
14425.00†	90.000	270.149	7960.00	6082.72	367.57	-6072.84	3242784.79	1649640.55	0.01		
14525.00†	90.000	270.158	7960.00	6182.65	367.84	-6172.84	3242684.79	1649639.85	0.01		
14625.00†	90.000	270.167	7960.00	6282.58	368.12	-6272.83	3242584.80	1649639.16	0.01		
14725.00†	90.000	270.176	7960.00	6382.51	368.42	-6372.83	3242484.80	1649638.49	0.01		
14825.00†	90.000	270.185	7960.00	6482.44	368.74	-6472.83	3242384.81	1649637.83	0.01		
14925.00†	90.000	270.194	7960.00	6582.37	369.07	-6572.83	3242284.81	1649637.19	0.01		
15025.00†	90.000	270.203	7960.00	6682.30	369.41	-6672.83	3242184.82	1649636.56	0.01		
15125.00†	90.000	270.212	7960.00	6782.23	369.77	-6772.83	3242084.82	1649635.95	0.01		
15225.00†	90.000	270.221	7960.00	6882.17	370.15	-6872.83	3241984.83	1649635.36	0.01		
15325.00†	90.000	270.230	7960.00	6982.10	370.55	-6972.83	3241884.83	1649634.78	0.01		
15425.00†	90.000	270.239	7960.00	7082.03	370.95	-7072.83	3241784.83	1649634.21	0.01		
15525.00†	90.000	270.248	7960.00	7181.97	371.38	-7172.83	3241684.84	1649633.67	0.01		
15625.00†	90.000	270.257	7960.00	7281.90	371.82	-7272.83	3241584.84	1649633.13	0.01		
15725.00†	90.000	270.266	7960.00	7381.84	372.28	-7372.83	3241484.85	1649632.62	0.01		
15825.00†	90.000	270.275	7960.00	7481.78	372.75	-7472.83	3241384.85	1649632.12	0.01		
15925.00†	90.000	270.284	7960.00	7581.71	373.24	-7572.82	3241284.85	1649631.63	0.01		
16025.00†	90.000	270.293	7960.00	7681.65	373.74	-7672.82	3241184.86	1649631.16	0.01		
16125.00†	90.000	270.302	7960.00	7781.59	374.26	-7772.82	3241084.86	1649630.71	0.01		
16225.00†	90.000	270.311	7960.00	7881.53	374.79	-7872.82	3240984.86	1649630.27	0.01		

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH DATA (199 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments	
16325.00†	90.000	270.320	7960.00	7981.47	375.34	-7972.82	3240884.87	1649629.85	0.01		
16425.00†	90.000	270.329	7960.00	8081.41	375.91	-8072.82	3240784.87	1649629.45	0.01		
16525.00†	90.000	270.338	7960.00	8181.35	376.49	-8172.82	3240684.87	1649629.06	0.01		
16625.00†	90.000	270.347	7960.00	8281.29	377.09	-8272.81	3240584.88	1649628.68	0.01		
16725.00†	90.000	270.356	7960.00	8381.23	377.70	-8372.81	3240484.88	1649628.32	0.01		
16825.00†	90.000	270.365	7960.00	8481.17	378.33	-8472.81	3240384.88	1649627.98	0.01		
16925.00†	90.000	270.374	7960.00	8581.12	378.98	-8572.81	3240284.89	1649627.65	0.01		
17025.00†	90.000	270.383	7960.00	8681.06	379.64	-8672.81	3240184.89	1649627.34	0.01		
17125.00†	90.000	270.392	7960.00	8781.00	380.31	-8772.80	3240084.89	1649627.04	0.01		
17225.00†	90.000	270.401	7960.00	8880.95	381.00	-8872.80	3239984.90	1649626.76	0.01		
17325.00†	90.000	270.410	7960.00	8980.89	381.71	-8972.80	3239884.90	1649626.50	0.01		
17425.00†	90.000	270.419	7960.00	9080.84	382.43	-9072.80	3239784.90	1649626.25	0.01		
17525.00†	90.000	270.428	7960.00	9180.78	383.17	-9172.79	3239684.91	1649626.01	0.01		
17625.00†	90.000	270.437	7960.00	9280.73	383.93	-9272.79	3239584.91	1649625.80	0.01		
17725.00†	90.000	270.446	7960.00	9380.68	384.70	-9372.79	3239484.91	1649625.59	0.01		
17792.68	90.000	270.452	7960.00 ²	9448.33	385.23	-9440.47	3239417.23	1649625.47	0.01	End of 3D Arc	
17825.00†	90.000	270.452	7960.00	9480.62	385.48	-9472.78	3239384.91	1649625.41	0.00		
17925.00†	90.000	270.452	7960.00	9580.57	386.27	-9572.78	3239284.92	1649625.22	0.00		
17927.29	90.000	270.452	7960.00 ³	9582.87	386.29	-9575.08	3239282.62	1649625.22	0.00	End of Tangent	

HOLE & CASING SECTIONS - Ref Wellbore: STATE LA PLATA 5-65 13-15 3DH PWB Ref Wellpath: STATE LA PLATA 5-65 13-15 3DH (REV-B.0) PWP										
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]	
9.625in Casing Surface	25.00	2335.00	2310.00	25.00	2335.00	0.00	0.00	0.00	0.00	
8.75in Open Hole	2335.00	8276.25	5941.25	2335.00	7960.00	0.00	0.00	370.33	75.91	
7in Casing Intermediate	25.00	8276.25	8251.25	25.00	7960.00	0.00	0.00	370.33	75.91	
6in Open Hole	8276.25	17927.29	9651.04	7960.00	7960.00	370.33	75.91	386.29	-9575.08	

REFERENCE WELLPATH IDENTIFICATION			
Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T05S-R65W		0.60	0.00	-40.70	3248820.06	1649331.66	39°36'46.390"N	104°37'00.500"W	polygon
SEC.13-T05S-R65W NE CORNER		0.60	3992.90	3578.41	3252400.07	1653359.45	39°37'25.849"N	104°36'14.249"W	point
SEC.13-T05S-R65W NW CORNER		0.60	4002.90	-1687.04	3247134.91	1653318.26	39°37'25.950"N	104°37'21.540"W	point
SEC.13-T05S-R65W SE CORNER		0.60	-1284.91	3528.15	3252401.13	1648081.54	39°36'33.689"N	104°36'14.900"W	point
SEC.13-T05S-R65W SW CORNER		0.60	-1276.72	-1741.49	3247131.81	1648038.50	39°36'33.772"N	104°37'22.231"W	point
SEC.14-T05S-R65W		0.60	0.00	-40.70	3248820.06	1649331.66	39°36'46.390"N	104°37'00.500"W	polygon
SEC.14-T05S-R65W NW CORNER		0.60	4006.00	-7052.49	3241769.83	1653269.19	39°37'25.972"N	104°38'30.109"W	point
SEC.14-T05S-R65W SW CORNER		0.60	-1271.06	-7115.93	3241757.70	1647991.91	39°36'33.818"N	104°38'30.901"W	point
SEC.15-T05S-R65W E 1/2 SECTION		0.60	0.00	-40.70	3248820.06	1649331.66	39°36'46.390"N	104°37'00.500"W	polygon
SEC.15-T05S-R65W N 1/2 CORNER		0.60	4014.88	-9688.87	3239133.56	1653252.44	39°37'26.051"N	104°39'03.802"W	point
SEC.15-T05S-R65W S 1/2 CORNER		0.60	-1262.91	-9734.54	3239139.21	1647974.59	39°36'33.890"N	104°39'04.360"W	point
3) STATE LA PLATA 5-65 13-15 3DH BHL ON PLAT REV-2 (1650'FSL & 2480'FEL, SEC.15)	17927.29	7960.00	386.29	-9575.08	3239282.62	1649625.22	39°36'50.190"N	104°39'02.330"W	point
1) STATE LA PLATA 5-65 13-15 3DH BPI ON PLAT REV-2 (1650'FSL & 1800'FWL, SEC.13)	8276.25	7960.00	370.33	75.91	3248933.06	1649703.10	39°36'50.050"N	104°36'59.010"W	point
2) STATE LA PLATA 5-65 13-15 3DH EPI ON PLAT REV-2 (1650'FSL & 2345'FEL, SEC.15)	17792.68	7960.00	385.23	-9440.47	3239417.23	1649625.47	39°36'50.180"N	104°39'00.610"W	point
STATE LA PLATA 5-65 13-15 3DH BHL ON PLAT REV-1 (1320'FSL & 2480'FEL, SEC.15)		7960.60	56.43	-9579.11	3239281.79	1649295.35	39°36'46.930"N	104°39'02.380"W	point
STATE LA PLATA 5-65 13-15 3DH BPI ON PLAT REV-1 (1320'FSL & 1800'FWL, SEC.13)		7960.60	40.47	72.00	3248932.35	1649373.23	39°36'46.790"N	104°36'59.060"W	point
STATE LA PLATA 5-65 13-15 3DH EPI ON PLAT REV-1 (1320'FSL & 2345'FEL, SEC.15)		7960.60	55.37	-9444.50	3239416.40	1649295.59	39°36'46.920"N	104°39'00.660"W	point

SURVEY PROGRAM - Ref Wellbore: STATE LA PLATA 5-65 13-15 3DH PWB Ref Wellpath: STATE LA PLATA 5-65 13-15 3DH (REV-B.0) PWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
25.00	17927.29	BHI NaviTrak (IFR1, Rotating)	STATE LA PLATA 5-65 13-15 3DH PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	Burlington Resources	Slot	SLOT#02 STATE LA PLATA 5-65 13-15 3DH (1280'FSL & 1728'FWL, SEC.13)
Area	COLORADO	Well	STATE LA PLATA 5-65 13-15 3DH
Field	ARAPAHOE COUNTY (NAD83/TN)	Wellbore	STATE LA PLATA 5-65 13-15 3DH PWB
Facility	SEC.13-T05S-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1911.00	0.000	58.747	1911.00	Fox Hills Aquifer*
2135.00	0.000	58.747	2135.00	Pierre Shale*
2335.00	0.000	58.747	2335.00	SURFACE CASING
7751.33	27.280	277.688	7700.00	Sharon Springs Shale
7887.98	43.553	274.130	7811.00	Niobrara Fm.
7913.47	46.598	273.706	7829.00	Niobrara A Marl
7959.54	52.103	273.037	7859.00	Niobrara B Chalk, Niobrara B Marl
8057.77	63.851	271.890	7911.00	Niobrara C Chalk, Niobrara C Marl Upper
8117.76	71.029	271.303	7934.00	Niobrara C Marl Lower
8178.24	78.268	270.760	7950.00	Niobrara D Chalk
8276.25	90.000	269.932	7960.00	TARGET @ LP (10 ft under D Chalk top)

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	58.747	25.00	Tie On
2385.00	0.000	58.747	2385.00	End of Tangent
2895.39	7.656	58.747	2893.87	End of Build
7471.71	7.656	58.747	7429.40	End of Tangent
8276.25	90.000	269.932	7960.00	End of 3D Arc
12010.77	90.000	269.932	7960.00	End of Tangent
17792.68	90.000	270.452	7960.00	End of 3D Arc
17927.29	90.000	270.452	7960.00	End of Tangent