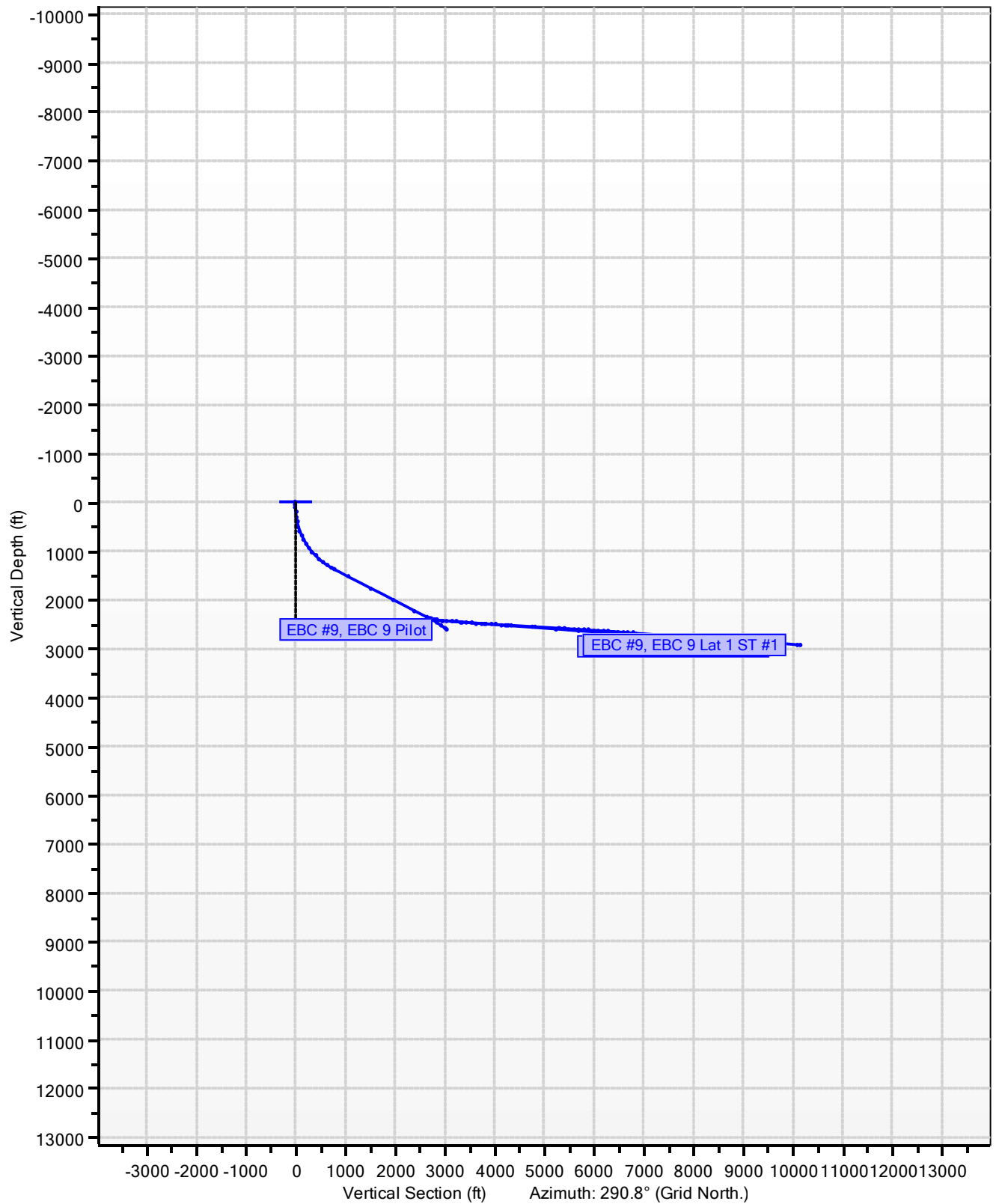


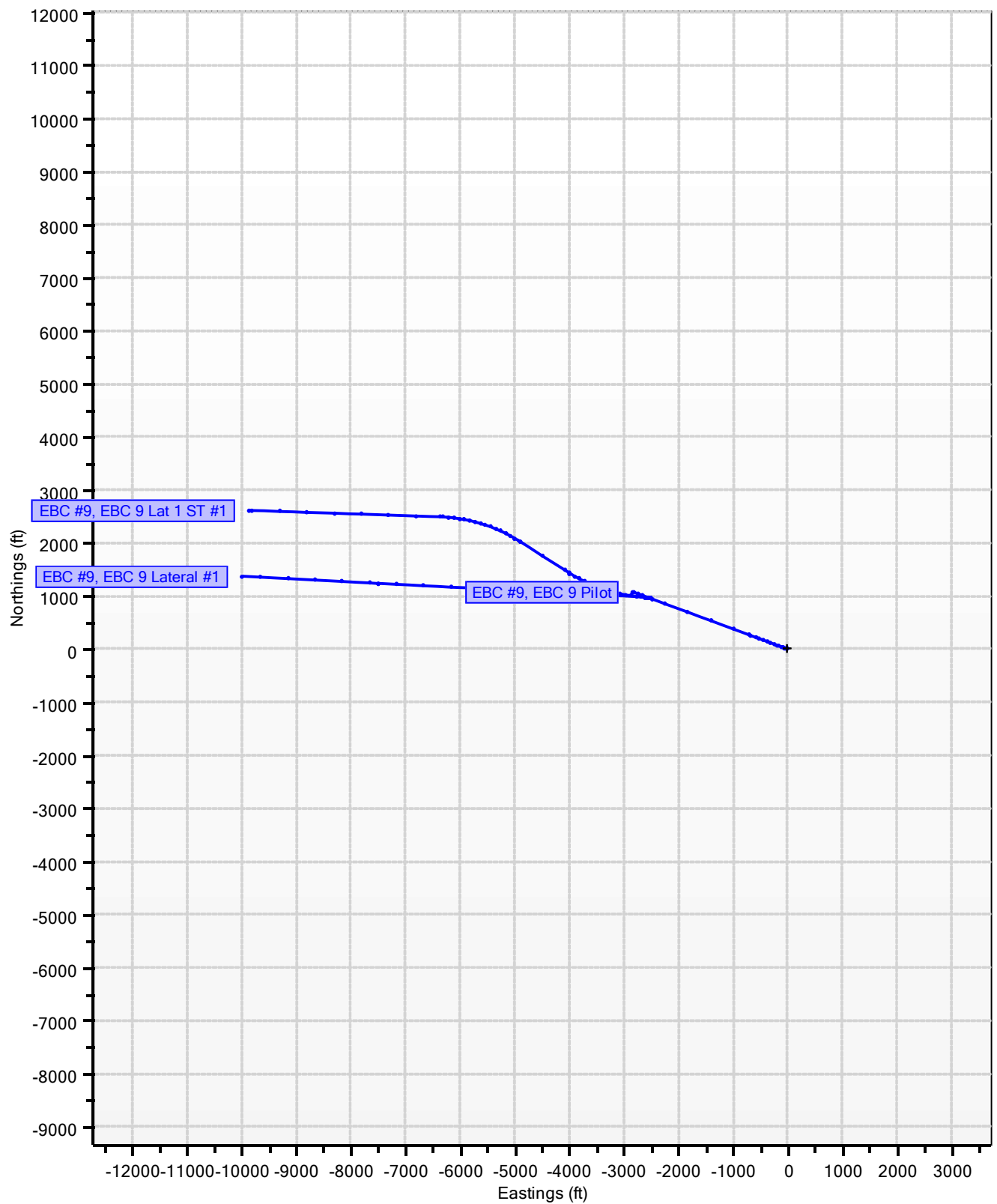
**East Bull Creek Well
EBC Pad 5
EBC #9
EBC 9 Lateral #1**

**Catamount Energy Partners
Proposal Report**

EBC Pad 5, EBC #9



EBC Pad 5, EBC #9



Catamount Energy Partners

Proposal Report



Database:	San Juan Basin	Local Coordinate Reference:	EBC #9
Company:		TVD Reference:	EBC #9
Project:	East Bull Creek Well	MD Reference:	EBC #9
Site:	EBC Pad 5	North reference:	Grid North
Well:	EBC #9	Survey Calculation Method:	Minimum Curvature
Wellbore:			
Proposal:	EBC 9 Lateral #1		

Project	East Bull Creek Well		
Map System:	HPGN Colorado State Planes	System Datum:	Mean Sea Level
Geo Datum:	High Precision GPS Network (aka HARN, NAD83/9)		
Map Zone:	Southern Zone		

Site	EBC Pad 5			
Site Position:		Northing:	+1180469	Latitude: 37.14711221° N
From:	Map	Easting:	+2451364	Longitude: 107.38240999° W
Position Uncertainty:	0ft	Slot Radius:	0in	Grid Convergence: -1.2°

Well	EBC #9					
Well Position:	+N/-S	14ft	Northing:	+1180483	Latitude:	37.14715037° N
	+E/-W	-5ft	Easting:	+2451359	Longitude:	107.38242810° W
Position Uncertainty:		1ft	Wellhead Elevation:	6530ft	Ground Level:	6514ft

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	User Defined	2/7/2018	0.0	0.0	0.0

Proposal	EBC 9 Lateral #1			
Audit Notes:				
Version:		Phase:		Tie On Depth: 3790ft

Vertical Section:	Depth from TVD (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0	0	0	277.8

Survey Program		3/7/2018			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	3710	EBC 9 Pilot	MWD	MWD	
3710	11333	EBC 9 Pilot	MWD	MWD	

Plan Sections											
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target	
3790	62.3	290.8	2360	944	-2481						
3983	85.0	275.0	2414	984	-2660	14.1	11.8	-8.2	-36.4		
4091	85.9	273.0	2423	991	-2768	2.0	0.8	-1.8	-66.5		
8828	85.9	273.0	2764	1239	-7485	0.0	0.0	0.0	0.0		
8833	85.9	273.1	2764	1239	-7490	2.0	-0.2	2.0	95.9		
11333	85.9	273.1	2945	1374	-9980	0.0	0.0	0.0	0.0	Lateral 1 BHL	

Planned Survey												
Measured Depth (ft)	Incl. (°)	Az. (°)	Vertical Depth (ft)	Sub Sea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Closure Distance (ft)	Closure Azimuth (°)	Dogleg Rate (°/100ft)	Comments/ Formations	
0	0.0	0.0	0	-6530	0	0	0	0	0.0	0.0	MWD	
50	0.0	0.0	50	-6480	0	0	0	0	0.0	0.0		
100	0.0	0.0	100	-6430	0	0	0	0	0.0	0.0		
120	0.8	290.8	120	-6410	0	0	0	0	290.8	4.0		
150	2.0	290.8	150	-6380	0	-1	1	1	290.8	4.0		

Catamount Energy Partners

Proposal Report



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Site:	EBC Pad 5	North reference:	Grid North
Well:	EBC #9	Survey Calculation Method:	Minimum Curvature
Wellbore:			
Proposal:	EBC 9 Lateral #1		

Planned Survey											
Measured Depth (ft)	Incl. (°)	Az. (°)	Vertical Depth (ft)	Sub Sea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Closure Distance (ft)	Closure Azimuth (°)	Dogleg Rate (°/100ft)	Comments/ Formations
180	3.2	290.8	180	-6350	1	-2	2	2	290.8	4.0	
210	4.4	290.8	210	-6320	2	-4	4	4	290.8	4.0	
240	5.6	290.8	240	-6290	2	-6	7	7	290.8	4.0	
270	6.8	290.8	270	-6260	4	-9	10	10	290.8	4.0	
300	8.0	290.8	299	-6231	5	-13	14	14	290.8	4.0	
330	9.2	290.8	329	-6201	7	-17	18	18	290.8	4.0	
360	10.4	290.8	359	-6171	8	-22	23	24	290.8	4.0	
390	11.6	290.8	388	-6142	10	-27	29	29	290.8	4.0	
420	12.8	290.8	417	-6113	13	-33	35	36	290.8	4.0	
450	14.0	290.8	447	-6083	15	-40	41	43	290.8	4.0	
480	15.2	290.8	476	-6054	18	-47	49	50	290.8	4.0	
510	16.4	290.8	504	-6026	21	-54	57	58	290.8	4.0	
540	17.6	290.8	533	-5997	24	-63	65	67	290.8	4.0	
570	18.8	290.8	562	-5968	27	-71	74	76	290.8	4.0	
600	20.0	290.8	590	-5940	31	-81	84	86	290.8	4.0	
630	21.2	290.8	618	-5912	34	-91	94	97	290.8	4.0	
660	22.4	290.8	646	-5884	38	-101	105	108	290.8	4.0	
690	23.6	290.8	673	-5857	43	-112	117	120	290.8	4.0	
720	24.8	290.8	701	-5829	47	-123	129	132	290.8	4.0	
750	26.0	290.8	728	-5802	52	-135	141	145	290.8	4.0	
780	27.2	290.8	755	-5775	56	-148	154	158	290.8	4.0	
810	28.4	290.8	781	-5749	61	-161	168	172	290.8	4.0	
840	29.6	290.8	808	-5722	66	-175	182	187	290.8	4.0	
870	30.8	290.8	833	-5697	72	-189	197	202	290.8	4.0	
900	32.0	290.8	859	-5671	77	-203	212	218	290.8	4.0	
930	33.2	290.8	884	-5646	83	-219	228	234	290.8	4.0	
960	34.4	290.8	909	-5621	89	-234	244	251	290.8	4.0	
990	35.6	290.8	934	-5596	95	-250	261	268	290.8	4.0	
1020	36.8	290.8	958	-5572	102	-267	278	285	290.8	4.0	
1050	38.0	290.8	982	-5548	108	-284	296	304	290.8	4.0	
1080	39.2	290.8	1005	-5525	115	-301	314	322	290.8	4.0	
1110	40.4	290.8	1028	-5502	121	-319	333	342	290.8	4.0	
1140	41.6	290.8	1051	-5479	128	-338	352	361	290.8	4.0	
1170	42.8	290.8	1073	-5457	136	-356	372	381	290.8	4.0	
1200	44.0	290.8	1095	-5435	143	-376	392	402	290.8	4.0	
1230	45.2	290.8	1116	-5414	150	-395	412	423	290.8	4.0	
1260	46.4	290.8	1137	-5393	158	-416	433	445	290.8	4.0	
1290	47.6	290.8	1158	-5372	166	-436	455	467	290.8	4.0	
1320	48.8	290.8	1178	-5352	174	-457	476	489	290.8	4.0	
1350	50.0	290.8	1197	-5333	182	-478	499	512	290.8	4.0	
1380	51.2	290.8	1216	-5314	190	-500	521	535	290.8	4.0	
1410	52.4	290.8	1235	-5295	199	-522	544	558	290.8	4.0	
1440	53.6	290.8	1253	-5277	207	-544	567	582	290.8	4.0	
1470	54.8	290.8	1270	-5260	216	-567	591	607	290.8	4.0	
1500	56.0	290.8	1288	-5242	225	-590	615	631	290.8	4.0	
1530	57.2	290.8	1304	-5226	233	-614	640	656	290.8	4.0	
1560	58.4	290.8	1320	-5210	243	-637	664	682	290.8	4.0	
1590	59.6	290.8	1335	-5195	252	-661	689	708	290.8	4.0	
1620	60.8	290.8	1350	-5180	261	-686	715	734	290.8	4.0	
1650	62.0	290.8	1365	-5165	270	-710	740	760	290.8	4.0	

Catamount Energy Partners

Proposal Report



Database:	San Juan Basin	Local Coordinate Reference:	EBC #9
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Site:	EBC Pad 5	North reference:	Grid North
Well:	EBC #9	Survey Calculation Method:	Minimum Curvature
Wellbore:			
Proposal:	EBC 9 Lateral #1		

Planned Survey											
Measured Depth (ft)	Incl. (°)	Az. (°)	Vertical Depth (ft)	Sub Sea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Closure Distance (ft)	Closure Azimuth (°)	Dogleg Rate (°/100ft)	Comments/ Formations
1657	62.3	290.8	1368	-5162	273	-716	747	766	290.8	4.0	
1700	62.3	290.8	1388	-5142	286	-752	784	804	290.8	0.0	
1800	62.3	290.8	1434	-5096	318	-834	870	893	290.8	0.0	
1900	62.3	290.8	1481	-5049	349	-917	956	981	290.8	0.0	
2000	62.3	290.8	1527	-5003	381	-1000	1042	1070	290.8	0.0	
2100	62.3	290.8	1574	-4956	412	-1083	1129	1158	290.8	0.0	
2200	62.3	290.8	1620	-4910	443	-1165	1215	1247	290.8	0.0	
2300	62.3	290.8	1667	-4863	475	-1248	1301	1335	290.8	0.0	
2400	62.3	290.8	1713	-4817	506	-1331	1387	1424	290.8	0.0	
2500	62.3	290.8	1760	-4770	538	-1414	1474	1512	290.8	0.0	
2600	62.3	290.8	1806	-4724	569	-1496	1560	1601	290.8	0.0	
2700	62.3	290.8	1853	-4677	601	-1579	1646	1690	290.8	0.0	
2800	62.3	290.8	1899	-4631	632	-1662	1733	1778	290.8	0.0	
2900	62.3	290.8	1946	-4584	664	-1745	1819	1867	290.8	0.0	
3000	62.3	290.8	1992	-4538	695	-1827	1905	1955	290.8	0.0	
3100	62.3	290.8	2039	-4491	727	-1910	1991	2044	290.8	0.0	
3200	62.3	290.8	2085	-4445	758	-1993	2078	2132	290.8	0.0	
3300	62.3	290.8	2132	-4398	790	-2075	2164	2221	290.8	0.0	
3400	62.3	290.8	2178	-4352	821	-2158	2250	2309	290.8	0.0	
3500	62.3	290.8	2225	-4305	853	-2241	2336	2398	290.8	0.0	
3600	62.3	290.8	2271	-4259	884	-2324	2423	2486	290.8	0.0	
3700	62.3	290.8	2318	-4212	916	-2406	2509	2575	290.8	0.0	
3710	62.3	290.8	2323	-4207	919	-2415	2518	2584	290.8	0.0	MWD
3790	62.3	290.8	2360	-4170	944	-2481	2587	2655	290.8	0.0	
3810	64.6	289.0	2369	-4161	950	-2498	2604	2672	290.8	14.1	
3840	68.1	286.3	2381	-4149	959	-2524	2631	2700	290.8	14.1	
3870	71.6	283.8	2391	-4139	966	-2551	2659	2728	290.7	14.1	
3900	75.1	281.4	2400	-4130	972	-2579	2688	2756	290.7	14.1	
3918	77.2	279.9	2404	-4126	975	-2596	2705	2774	290.6	14.1	Target Coal
3930	78.7	279.0	2407	-4123	977	-2608	2717	2785	290.5	14.1	
3960	82.3	276.7	2411	-4119	981	-2637	2746	2814	290.4	14.1	
3983	85.0	275.0	2414	-4116	984	-2660	2769	2836	290.3	14.1	
3990	85.1	274.9	2415	-4115	984	-2667	2776	2843	290.3	2.0	
4020	85.3	274.3	2417	-4113	987	-2697	2806	2872	290.1	2.0	
4050	85.5	273.8	2420	-4110	989	-2727	2836	2900	289.9	2.0	
4080	85.8	273.2	2422	-4108	991	-2756	2866	2929	289.8	2.0	
4091	85.9	273.0	2423	-4107	991	-2768	2877	2940	289.7	2.0	
4100	85.9	273.0	2423	-4107	992	-2776	2886	2948	289.7	0.0	
4200	85.9	273.0	2430	-4100	997	-2876	2985	3044	289.1	0.0	
4300	85.9	273.0	2438	-4092	1002	-2976	3084	3140	288.6	0.0	
4400	85.9	273.0	2445	-4085	1007	-3075	3184	3236	288.1	0.0	
4500	85.9	273.0	2452	-4078	1013	-3175	3283	3332	287.7	0.0	
4600	85.9	273.0	2459	-4071	1018	-3274	3383	3429	287.3	0.0	
4700	85.9	273.0	2466	-4064	1023	-3374	3482	3526	286.9	0.0	
4800	85.9	273.0	2474	-4056	1028	-3474	3581	3623	286.5	0.0	
4900	85.9	273.0	2481	-4049	1034	-3573	3681	3720	286.1	0.0	
5000	85.9	273.0	2488	-4042	1039	-3673	3780	3817	285.8	0.0	
5100	85.9	273.0	2495	-4035	1044	-3772	3879	3914	285.5	0.0	
5200	85.9	273.0	2503	-4027	1049	-3872	3979	4012	285.2	0.0	
5300	85.9	273.0	2510	-4020	1054	-3972	4078	4109	284.9	0.0	

Catamount Energy Partners

Proposal Report



Database:	San Juan Basin	Local Coordinate Reference:	EBC #9
Company:		TVD Reference:	EBC #9
Project:	East Bull Creek Well	MD Reference:	EBC #9
Site:	EBC Pad 5	North reference:	Grid North
Well:	EBC #9	Survey Calculation Method:	Minimum Curvature
Wellbore:			
Proposal:	EBC 9 Lateral #1		

Planned Survey											
Measured Depth (ft)	Incl. (°)	Az. (°)	Vertical Depth (ft)	Sub Sea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Closure Distance (ft)	Closure Azimuth (°)	Dogleg Rate (°/100ft)	Comments/ Formations
5400	85.9	273.0	2517	-4013	1060	-4071	4178	4207	284.6	0.0	
5500	85.9	273.0	2524	-4006	1065	-4171	4277	4305	284.3	0.0	
5600	85.9	273.0	2531	-3999	1070	-4270	4376	4402	284.1	0.0	
5700	85.9	273.0	2539	-3991	1075	-4370	4476	4500	283.8	0.0	
5800	85.9	273.0	2546	-3984	1081	-4470	4575	4598	283.6	0.0	
5900	85.9	273.0	2553	-3977	1086	-4569	4675	4696	283.4	0.0	
6000	85.9	273.0	2560	-3970	1091	-4669	4774	4795	283.2	0.0	
6100	85.9	273.0	2567	-3963	1096	-4768	4873	4893	282.9	0.0	
6200	85.9	273.0	2575	-3955	1101	-4868	4973	4991	282.7	0.0	
6300	85.9	273.0	2582	-3948	1107	-4968	5072	5089	282.6	0.0	
6400	85.9	273.0	2589	-3941	1112	-5067	5171	5188	282.4	0.0	
6500	85.9	273.0	2596	-3934	1117	-5167	5271	5286	282.2	0.0	
6600	85.9	273.0	2603	-3927	1122	-5266	5370	5385	282.0	0.0	
6700	85.9	273.0	2611	-3919	1128	-5366	5470	5483	281.9	0.0	
6800	85.9	273.0	2618	-3912	1133	-5466	5569	5582	281.7	0.0	
6900	85.9	273.0	2625	-3905	1138	-5565	5668	5680	281.6	0.0	
7000	85.9	273.0	2632	-3898	1143	-5665	5768	5779	281.4	0.0	
7100	85.9	273.0	2639	-3891	1149	-5764	5867	5878	281.3	0.0	
7200	85.9	273.0	2647	-3883	1154	-5864	5967	5976	281.1	0.0	
7300	85.9	273.0	2654	-3876	1159	-5964	6066	6075	281.0	0.0	
7400	85.9	273.0	2661	-3869	1164	-6063	6165	6174	280.9	0.0	
7500	85.9	273.0	2668	-3862	1169	-6163	6265	6273	280.7	0.0	
7600	85.9	273.0	2675	-3855	1175	-6262	6364	6372	280.6	0.0	
7700	85.9	273.0	2683	-3847	1180	-6362	6463	6471	280.5	0.0	
7800	85.9	273.0	2690	-3840	1185	-6462	6563	6569	280.4	0.0	
7900	85.9	273.0	2697	-3833	1190	-6561	6662	6668	280.3	0.0	
8000	85.9	273.0	2704	-3826	1196	-6661	6762	6767	280.2	0.0	
8100	85.9	273.0	2711	-3819	1201	-6760	6861	6866	280.1	0.0	
8200	85.9	273.0	2719	-3811	1206	-6860	6960	6965	280.0	0.0	
8300	85.9	273.0	2726	-3804	1211	-6960	7060	7064	279.9	0.0	
8400	85.9	273.0	2733	-3797	1217	-7059	7159	7163	279.8	0.0	
8500	85.9	273.0	2740	-3790	1222	-7159	7259	7262	279.7	0.0	
8600	85.9	273.0	2747	-3783	1227	-7258	7358	7361	279.6	0.0	
8700	85.9	273.0	2755	-3775	1232	-7358	7457	7461	279.5	0.0	
8800	85.9	273.0	2762	-3768	1237	-7458	7557	7560	279.4	0.0	
8828	85.9	273.0	2764	-3766	1239	-7485	7584	7587	279.4	0.0	
8833	85.9	273.1	2764	-3766	1239	-7490	7589	7592	279.4	2.0	
8900	85.9	273.1	2769	-3761	1243	-7557	7656	7659	279.3	0.0	
9000	85.9	273.1	2776	-3754	1248	-7657	7756	7758	279.3	0.0	
9100	85.9	273.1	2784	-3746	1254	-7756	7855	7857	279.2	0.0	
9200	85.9	273.1	2791	-3739	1259	-7856	7954	7956	279.1	0.0	
9300	85.9	273.1	2798	-3732	1264	-7956	8054	8055	279.0	0.0	
9400	85.9	273.1	2805	-3725	1270	-8055	8153	8155	279.0	0.0	
9500	85.9	273.1	2812	-3718	1275	-8155	8253	8254	278.9	0.0	
9600	85.9	273.1	2820	-3710	1281	-8254	8352	8353	278.8	0.0	
9700	85.9	273.1	2827	-3703	1286	-8354	8451	8452	278.8	0.0	
9800	85.9	273.1	2834	-3696	1291	-8454	8551	8552	278.7	0.0	
9900	85.9	273.1	2841	-3689	1297	-8553	8650	8651	278.6	0.0	
10000	85.9	273.1	2849	-3681	1302	-8653	8750	8750	278.6	0.0	
10100	85.9	273.1	2856	-3674	1308	-8752	8849	8849	278.5	0.0	

Catamount Energy Partners

Proposal Report



Database:	San Juan Basin	Local Coordinate Reference:	EBC #9
Company:		TVD Reference:	EBC #9
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Site:	EBC Pad 5	North reference:	Grid North
Well:	EBC #9	Survey Calculation Method:	Minimum Curvature
Wellbore:			
Proposal:	EBC 9 Lateral #1		

Planned Survey											
Measured Depth (ft)	Incl. (°)	Az. (°)	Vertical Depth (ft)	Sub Sea Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Closure Distance (ft)	Closure Azimuth (°)	Dogleg Rate (°/100ft)	Comments/ Formations
10200	85.9	273.1	2863	-3667	1313	-8852	8948	8949	278.4	0.0	
10300	85.9	273.1	2870	-3660	1318	-8952	9048	9048	278.4	0.0	
10400	85.9	273.1	2877	-3653	1324	-9051	9147	9147	278.3	0.0	
10500	85.9	273.1	2885	-3645	1329	-9151	9246	9247	278.3	0.0	
10600	85.9	273.1	2892	-3638	1334	-9250	9346	9346	278.2	0.0	
10700	85.9	273.1	2899	-3631	1340	-9350	9445	9445	278.2	0.0	
10800	85.9	273.1	2906	-3624	1345	-9450	9545	9545	278.1	0.0	
10900	85.9	273.1	2914	-3616	1351	-9549	9644	9644	278.1	0.0	
11000	85.9	273.1	2921	-3609	1356	-9649	9743	9744	278.0	0.0	
11100	85.9	273.1	2928	-3602	1361	-9748	9843	9843	278.0	0.0	
11200	85.9	273.1	2935	-3595	1367	-9848	9942	9942	277.9	0.0	
11300	85.9	273.1	2942	-3588	1372	-9947	10042	10042	277.9	0.0	
11333	85.9	273.1	2945	-3585	1374	-9980	10074	10074	277.8	0.0	Lateral 1 BHL

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
-hit/miss target									
-Shape									
Lateral 1 BHL			2945	1374	-9980	+1181857	+2441379	37.15036578° N	107.41675742° W
- proposal hits the target center									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Subsea Depth (ft)	Name	Dip Angle (°)	Dip Direction (°)
3918	2404	-4126	Target Coal	0.0	0.0

Checked By:	Approved By:	Date:
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