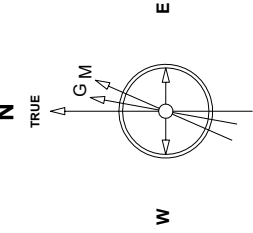


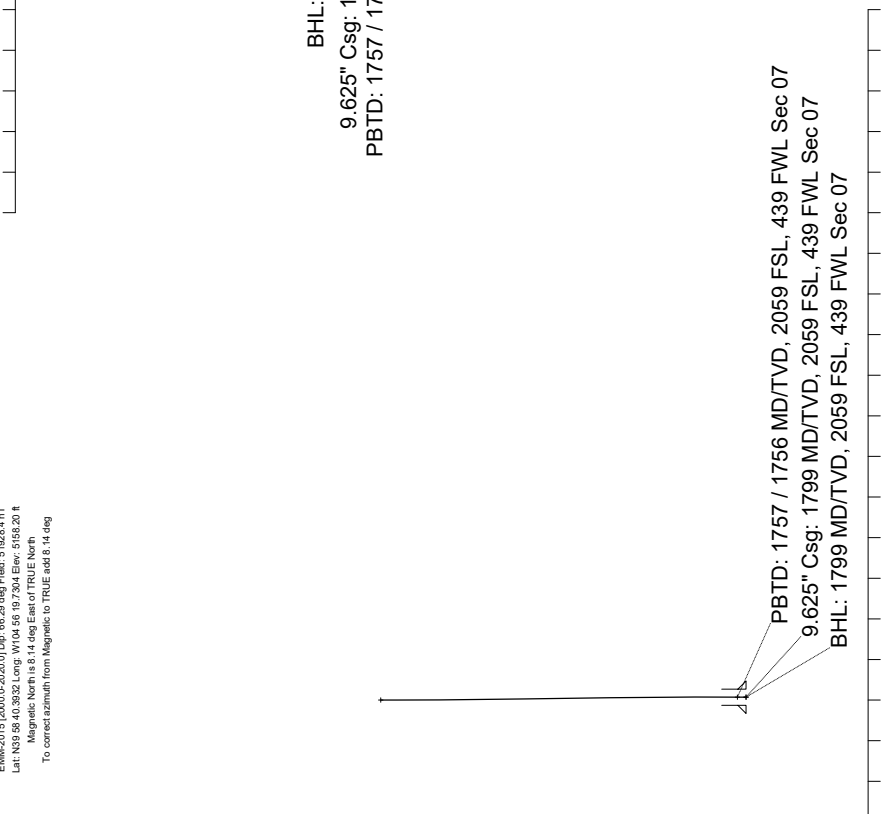
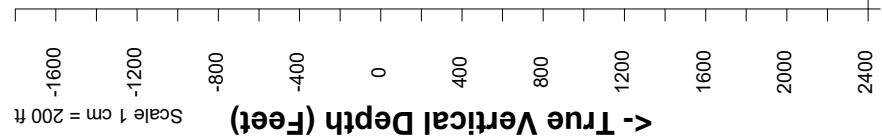
# Great Western Operating Company, LLC

Location	Colorado	Slot	S06 - Tollway LC 24-375HN
Field	Wattensburg	Well	Tollway LC 24-375HN
Installation	Tollway	Wellbore	Tollway LC 24-375HN (AWB)

Scale 1 cm = 1 ft      East (Feet) ->



May-5-2019  
 E:\M\2015\2000\0-2020\01.Dwg: 68.29 deg Field: 519264.nT  
 Lat: N39 58.40.3032 Long: W104 55.69.7304 Elev: 5152.20 ft  
 Magnetic North is 8.14 deg East of TRUE North  
 To correct azimuth from Magnetic to TRUE add 8.14 deg



Created by: nmount  
 Date plotted: 17-Sep-2019  
 Plot reference is Tollway LC 24-375HN (AWB).  
 Ref wellpath is Tollway LC 24-375HN (AWP#1).  
 Coordinates are in Feet reference S06 - Tollway LC 24-375HN.  
 True Vertical Depths are reference Rig Datum.  
 Measured Depths are reference Rig Datum.  
 Rig Datum: Actual Datum #1  
 Rig Datum to Mean Sea Level: 5164.20 ft.  
 Plot North is aligned to TRUE North.

← North(Feet)

Scale 1 cm = 1 ft



Great Western Operating Co, LLC  
Directional Survey Report  
Wellpath: Tollway LC 24-375HN  
MDs and TVDs are from Rig Floor 5164.2ft above Mean Sea Level

**Wellbore Information**

Date Created	Date Revised	API #	RKB above GL	Well Name
Sep-17-2019	Sep-17-2019	05-001-10439	6.00	Tollway LC 24-375HN

**Slot Coordinates**

Latitude	Longitude
39.97755100	-104.93872900

**Pad Information**

Pad Name	Ground Elev.
Tollway	5158.20

**Field**

Name
Wattenburg

**Wellpath Report**

MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	DLS [deg/100ft]	Vertical Section[ft]	Lat - NAD 83	Long - NAD 83
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	39.97755100	-104.93872900
81.00	0.09	278.04	81.00	0.01	-0.06	0.11	-0.01	39.97755102	-104.93872922
171.00	0.23	310.82	171.00	0.14	-0.27	0.18	0.06	39.97755138	-104.93872996
258.00	0.44	9.36	258.00	0.58	-0.35	0.43	0.47	39.97755259	-104.93873024
351.00	0.70	43.11	350.99	1.35	0.10	0.45	1.33	39.97755470	-104.93872865
441.00	0.66	46.45	440.99	2.11	0.85	0.06	2.25	39.97755678	-104.93872597
531.00	0.75	352.31	530.98	3.05	1.15	0.72	3.24	39.97755936	-104.93872491
621.00	0.70	0.13	620.97	4.18	1.07	0.12	4.32	39.97756248	-104.93872518
711.00	1.14	3.82	710.96	5.62	1.13	0.49	5.73	39.97756644	-104.93872497
801.00	1.10	8.66	800.95	7.37	1.32	0.11	7.47	39.97757123	-104.93872429
891.00	0.97	8.04	890.93	8.98	1.56	0.14	9.08	39.97757565	-104.93872345
980.00	0.75	24.56	979.92	10.26	1.90	0.37	10.40	39.97757915	-104.93872221
1070.00	0.66	37.92	1069.91	11.20	2.47	0.21	11.46	39.97758174	-104.93872020
1160.00	0.70	59.90	1159.91	11.88	3.26	0.29	12.32	39.97758362	-104.93871736
1250.00	0.40	10.06	1249.90	12.47	3.79	0.60	13.02	39.97758523	-104.93871547
1340.00	0.31	42.67	1339.90	12.96	4.01	0.24	13.55	39.97758657	-104.93871468
1430.00	0.13	247.89	1429.90	13.10	4.08	0.48	13.70	39.97758696	-104.93871443
1520.00	0.66	309.07	1519.90	13.39	3.59	0.68	13.86	39.97758775	-104.93871621
1610.00	0.09	358.28	1609.90	13.78	3.18	0.67	14.14	39.97758884	-104.93871765
1700.00	0.04	13.93	1699.90	13.89	3.19	0.06	14.24	39.97758912	-104.93871763
1749.00	0.31	108.41	1748.90	13.86	3.32	0.64	14.25	39.97758905	-104.93871717
1756.51	0.31	108.41	1756.41	13.85	3.35	0.00	14.25	39.97758901	-104.93871703
1799.00	0.31	108.41	1798.90	13.77	3.57	0.00	14.23	39.97758881	-104.93871625

**Comments**

MD[ft]	TVD[ft]	North[ft]	East[ft]	Lat - NAD 83	Long - NAD 83	Comment
0.00	0.00	0.00	0.00	39.97755100	-104.93872900	Surface Location
1756.51	1756.41	13.85	3.35	39.97758901	-104.93871703	PBTD: 1757 / 1756 MD/TVD, 2059 FSL, 439 FWL Sec 07
1799.00	1798.90	13.77	3.57	39.97758881	-104.93871625	9.625" Csg: 1799 MD/TVD, 2059 FSL, 439 FWL Sec 07
1799.00	1798.90	13.77	3.57	39.97758881	-104.93871625	BHL: 1799 MD/TVD, 2059 FSL, 439 FWL Sec 07

**Hole Sections**

Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End East[ft]
13.500	0.00	0.00	0.00	0.00	1799.00	1798.90	13.77	3.57

**Casings**

Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Casing	0.00	0.00	0.00	0.00	1799.00	1798.90	13.77	3.57

**Survey Tool Program**

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool
616761	Surface - 20190917	1799.00	1798.90	MWD

Coordinates are from Slot  
MD's and TVD's are from Rig Floor 5164.2ft above Mean Sea Level  
Vertical Section is from Wellhead on azimuth 14.54 degrees  
Bottom hole distance is 14.23 Feet on azimuth 14.54 degrees from Wellhead  
Survey calculation uses Minimum Curvature method