

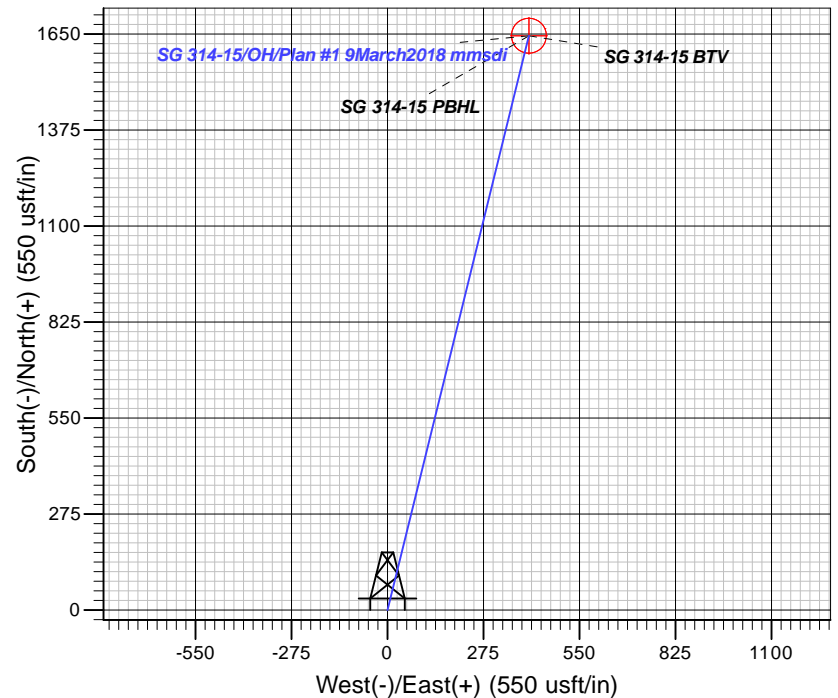
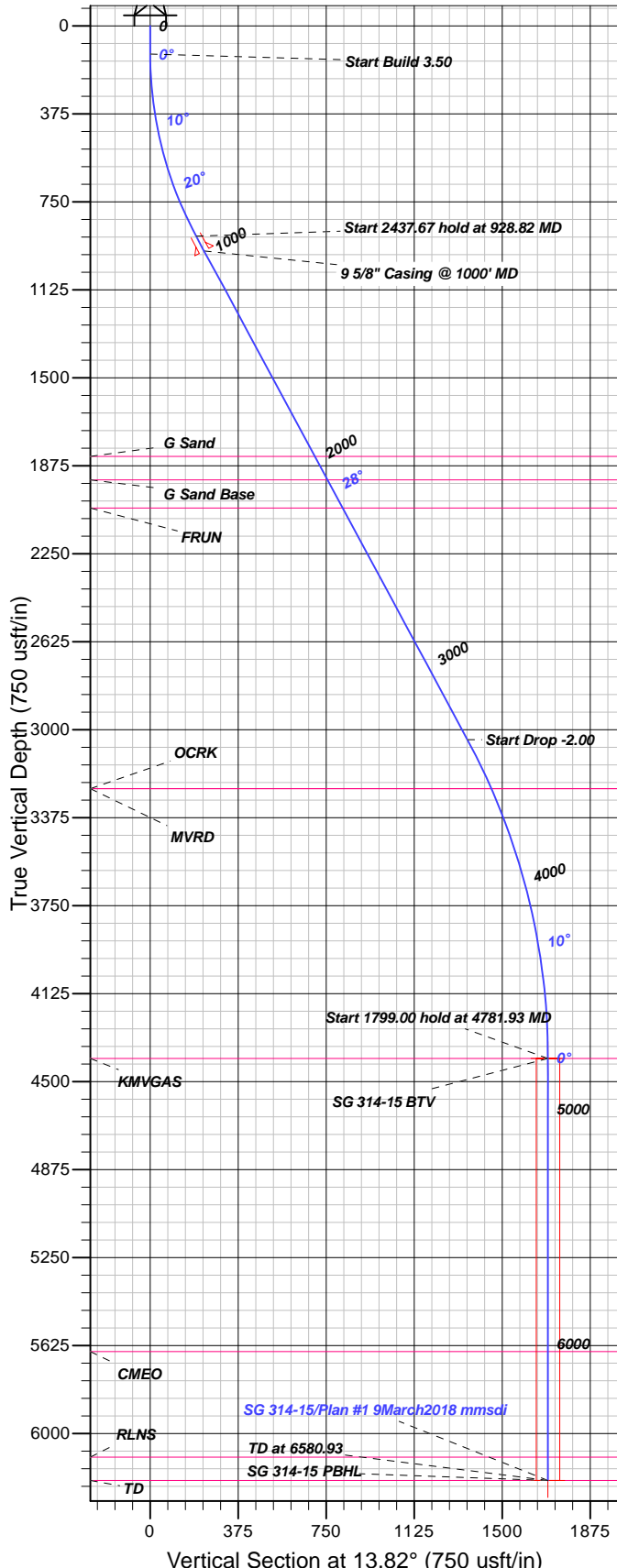


Azimuths to True North
Magnetic North: 9.48°

Magnetic Field
Strength: 51724.5snT
Dip Angle: 65.63°
Date: 3/9/2018
Model: HDGM

Well Details: SG 314-15

GL 6092.4' & RKB 24' @ 6116.40usft
+N/-S 0.00 +E/-W 0.00 Northing 1591243.00 Easting 2264555.00 Latitude 39.4277897 Longitude -108.1039417 Slot SG 314-15 (A3)



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
1835.00	1995.02	G Sand
1935.00	2108.60	G Sand Base
2055.00	2244.91	FRUN
3251.00	3598.57	MVRD
3251.00	3598.57	OCRK
4401.00	4781.93	KMVGAS
5650.00	6030.93	CMEO
6100.00	6480.93	RLNS
6200.00	6580.93	TD

Plan: Plan #1 9March2018 mmsdi

13:46, March 13 2018
Created By: Mel Mireles

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
958.98	1000.00	5/8" Casing @ 1000' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	928.82	28.31	13.82	896.31	190.11	46.78	3.50	13.82	195.78	
4	3366.49	28.31	13.82	3042.45	1312.62	323.01	0.00	0.00	1351.78	
5	4781.93	0.00	0.00	4401.00	1645.31	404.88	2.00	180.00	1694.39	SG 314-15 BTV
6	6580.93	0.00	0.00	6200.00	1645.31	404.88	0.00	0.00	1694.39	SG 314-15 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SG 314-15 BTV	4401.00	1645.31	404.88	1592876.03	2265006.87	39.4323069	-108.1025083	Circle (Radius: 50.00)
- plan hits target center								
SG 314-15 PBHL	6200.00	1645.31	404.88	1592876.03	2265006.87	39.4323069	-108.1025083	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

SG 11-22 Pad

SG 314-15 - Slot SG 314-15 (A3)

OH

Plan: Plan #1 9March2018 mmsdi

Standard Planning Report

12 March, 2018



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SG 314-15 - Slot SG 314-15 (A3)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Site:	SG 11-22 Pad	North Reference:	True
Well:	SG 314-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 9March2018 mmsdi		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	SG 11-22 Pad			
Site Position:		Northing:	1,591,239.00 usft	Latitude: 39.4277783
From: Map		Easting:	2,264,548.70 usft	Longitude: -108.1039637
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.64 °

Well	SG 314-15 - Slot SG 314-15 (A3)			
Well Position	+N/-S	4.18 usft	Northing:	1,591,243.00 usft
	+E/-W	6.18 usft	Easting:	2,264,555.00 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	6,092.40 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/9/2018	9.48	65.63	51,725

Design	Plan #1 9March2018 mmsdi			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	13.82

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
928.82	28.31	13.82	896.31	190.11	46.78	3.50	3.50	0.00	13.82	
3,366.49	28.31	13.82	3,042.45	1,312.62	323.01	0.00	0.00	0.00	0.00	
4,781.93	0.00	0.00	4,401.00	1,645.31	404.88	2.00	-2.00	0.00	180.00	SG 314-15 BTV
6,580.93	0.00	0.00	6,200.00	1,645.31	404.88	0.00	0.00	0.00	0.00	SG 314-15 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SG 314-15 - Slot SG 314-15 (A3)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Site:	SG 11-22 Pad	North Reference:	True
Well:	SG 314-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 9March2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.50									
200.00	2.80	13.82	199.97	1.90	0.47	1.95	3.50	3.50	0.00
300.00	6.30	13.82	299.64	9.60	2.36	9.89	3.50	3.50	0.00
400.00	9.80	13.82	398.64	23.20	5.71	23.89	3.50	3.50	0.00
500.00	13.30	13.82	496.60	42.63	10.49	43.91	3.50	3.50	0.00
600.00	16.80	13.82	593.15	67.84	16.70	69.87	3.50	3.50	0.00
700.00	20.30	13.82	687.94	98.73	24.30	101.68	3.50	3.50	0.00
800.00	23.80	13.82	780.61	135.18	33.27	139.21	3.50	3.50	0.00
900.00	27.30	13.82	870.82	177.05	43.57	182.34	3.50	3.50	0.00
928.82	28.31	13.82	896.31	190.11	46.78	195.78	3.50	3.50	0.00
Start 2437.67 hold at 928.82 MD									
1,000.00	28.31	13.82	958.98	222.88	54.85	229.53	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	28.31	13.82	1,047.02	268.93	66.18	276.96	0.00	0.00	0.00
1,200.00	28.31	13.82	1,135.06	314.98	77.51	324.38	0.00	0.00	0.00
1,300.00	28.31	13.82	1,223.10	361.03	88.84	371.80	0.00	0.00	0.00
1,400.00	28.31	13.82	1,311.14	407.08	100.18	419.22	0.00	0.00	0.00
1,500.00	28.31	13.82	1,399.18	453.13	111.51	466.65	0.00	0.00	0.00
1,600.00	28.31	13.82	1,487.22	499.18	122.84	514.07	0.00	0.00	0.00
1,700.00	28.31	13.82	1,575.26	545.22	134.17	561.49	0.00	0.00	0.00
1,800.00	28.31	13.82	1,663.30	591.27	145.50	608.91	0.00	0.00	0.00
1,900.00	28.31	13.82	1,751.34	637.32	156.83	656.33	0.00	0.00	0.00
1,995.02	28.31	13.82	1,835.00	681.08	167.60	701.40	0.00	0.00	0.00
G Sand									
2,000.00	28.31	13.82	1,839.38	683.37	168.17	703.76	0.00	0.00	0.00
2,100.00	28.31	13.82	1,927.42	729.42	179.50	751.18	0.00	0.00	0.00
2,108.60	28.31	13.82	1,935.00	733.38	180.47	755.26	0.00	0.00	0.00
G Sand Base									
2,200.00	28.31	13.82	2,015.46	775.47	190.83	798.60	0.00	0.00	0.00
2,244.91	28.31	13.82	2,055.00	796.15	195.92	819.90	0.00	0.00	0.00
FRUN									
2,300.00	28.31	13.82	2,103.51	821.52	202.16	846.02	0.00	0.00	0.00
2,400.00	28.31	13.82	2,191.55	867.56	213.49	893.45	0.00	0.00	0.00
2,500.00	28.31	13.82	2,279.59	913.61	224.82	940.87	0.00	0.00	0.00
2,600.00	28.31	13.82	2,367.63	959.66	236.16	988.29	0.00	0.00	0.00
2,700.00	28.31	13.82	2,455.67	1,005.71	247.49	1,035.71	0.00	0.00	0.00
2,800.00	28.31	13.82	2,543.71	1,051.76	258.82	1,083.14	0.00	0.00	0.00
2,900.00	28.31	13.82	2,631.75	1,097.81	270.15	1,130.56	0.00	0.00	0.00
3,000.00	28.31	13.82	2,719.79	1,143.85	281.48	1,177.98	0.00	0.00	0.00
3,100.00	28.31	13.82	2,807.83	1,189.90	292.82	1,225.40	0.00	0.00	0.00
3,200.00	28.31	13.82	2,895.87	1,235.95	304.15	1,272.82	0.00	0.00	0.00
3,300.00	28.31	13.82	2,983.91	1,282.00	315.48	1,320.25	0.00	0.00	0.00
3,366.49	28.31	13.82	3,042.45	1,312.62	323.01	1,351.78	0.00	0.00	0.00
Start Drop -2.00									
3,400.00	27.64	13.82	3,072.04	1,327.88	326.77	1,367.50	2.00	-2.00	0.00
3,500.00	25.64	13.82	3,161.42	1,371.42	337.48	1,412.33	2.00	-2.00	0.00
3,598.57	23.67	13.82	3,251.00	1,411.34	347.31	1,453.44	2.00	-2.00	0.00
OCRK - MVRD									
3,600.00	23.64	13.82	3,252.31	1,411.90	347.44	1,454.02	2.00	-2.00	0.00
3,700.00	21.64	13.82	3,344.60	1,449.27	356.64	1,492.51	2.00	-2.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SG 314-15 - Slot SG 314-15 (A3)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Site:	SG 11-22 Pad	North Reference:	True
Well:	SG 314-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 9March2018 mmsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,800.00	19.64	13.82	3,438.18	1,483.50	365.06	1,527.75	2.00	-2.00	0.00
3,900.00	17.64	13.82	3,532.93	1,514.53	372.70	1,559.71	2.00	-2.00	0.00
4,000.00	15.64	13.82	3,628.74	1,542.33	379.54	1,588.34	2.00	-2.00	0.00
4,100.00	13.64	13.82	3,725.49	1,566.87	385.58	1,613.61	2.00	-2.00	0.00
4,200.00	11.64	13.82	3,823.06	1,588.11	390.81	1,635.49	2.00	-2.00	0.00
4,300.00	9.64	13.82	3,921.34	1,606.04	395.22	1,653.95	2.00	-2.00	0.00
4,400.00	7.64	13.82	4,020.20	1,620.62	398.81	1,668.97	2.00	-2.00	0.00
4,500.00	5.64	13.82	4,119.52	1,631.85	401.57	1,680.53	2.00	-2.00	0.00
4,600.00	3.64	13.82	4,219.19	1,639.70	403.50	1,688.62	2.00	-2.00	0.00
4,700.00	1.64	13.82	4,319.08	1,644.17	404.60	1,693.22	2.00	-2.00	0.00
4,781.93	0.00	0.00	4,401.00	1,645.31	404.88	1,694.39	2.00	-2.00	0.00
Start 1799.00 hold at 4781.93 MD - KMGAS - SG 314-15 BTV									
4,800.00	0.00	0.00	4,419.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
4,900.00	0.00	0.00	4,519.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,000.00	0.00	0.00	4,619.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,100.00	0.00	0.00	4,719.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,200.00	0.00	0.00	4,819.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,300.00	0.00	0.00	4,919.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,400.00	0.00	0.00	5,019.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,500.00	0.00	0.00	5,119.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,600.00	0.00	0.00	5,219.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,700.00	0.00	0.00	5,319.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,800.00	0.00	0.00	5,419.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
5,900.00	0.00	0.00	5,519.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,000.00	0.00	0.00	5,619.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,030.93	0.00	0.00	5,650.00	1,645.31	404.88	1,694.39	0.00	0.00	0.00
CMEO									
6,100.00	0.00	0.00	5,719.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,200.00	0.00	0.00	5,819.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,300.00	0.00	0.00	5,919.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,400.00	0.00	0.00	6,019.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,480.93	0.00	0.00	6,100.00	1,645.31	404.88	1,694.39	0.00	0.00	0.00
RLNS									
6,500.00	0.00	0.00	6,119.07	1,645.31	404.88	1,694.39	0.00	0.00	0.00
6,580.93	0.00	0.00	6,200.00	1,645.31	404.88	1,694.39	0.00	0.00	0.00
TD at 6580.93 - TD - SG 314-15 PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SG 314-15 BTV	0.00	0.00	4,401.00	1,645.31	404.88	1,592,876.03	2,265,006.87	39.4323069	-108.1025083
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 50.00)									
SG 314-15 PBHL	0.00	0.00	6,200.00	1,645.31	404.88	1,592,876.03	2,265,006.87	39.4323069	-108.1025083
- plan hits target center									
- Point									

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 6092.4' & RKB 24' @ 6116.40usft
Site:	SG 11-22 Pad	North Reference:	True
Well:	SG 314-15	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 9March2018 mmsdi		

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	958.98	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,995.02	1,835.00	G Sand		0.00	0.00
2,108.60	1,935.00	G Sand Base		0.00	0.00
2,244.91	2,055.00	FRUN		0.00	0.00
3,598.57	3,251.00	OCRK		0.00	0.00
3,598.57	3,251.00	MVRD		0.00	0.00
4,781.93	4,401.00	KMVGAS		0.00	0.00
6,030.93	5,650.00	CMEO		0.00	0.00
6,480.93	6,100.00	RLNS		0.00	0.00
6,580.93	6,200.00	TD		0.00	0.00

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 3.50
928.82	896.31	190.11	46.78	Start 2437.67 hold at 928.82 MD
3,366.49	3,042.45	1,312.62	323.01	Start Drop -2.00
4,781.93	4,401.00	1,645.31	404.88	Start 1799.00 hold at 4781.93 MD
6,580.93	6,200.00	1,645.31	404.88	TD at 6580.93