

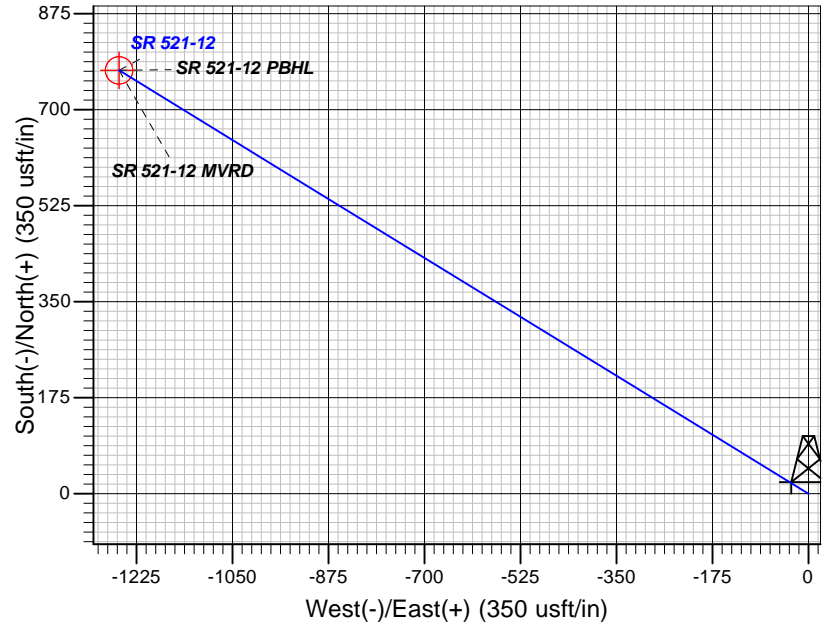
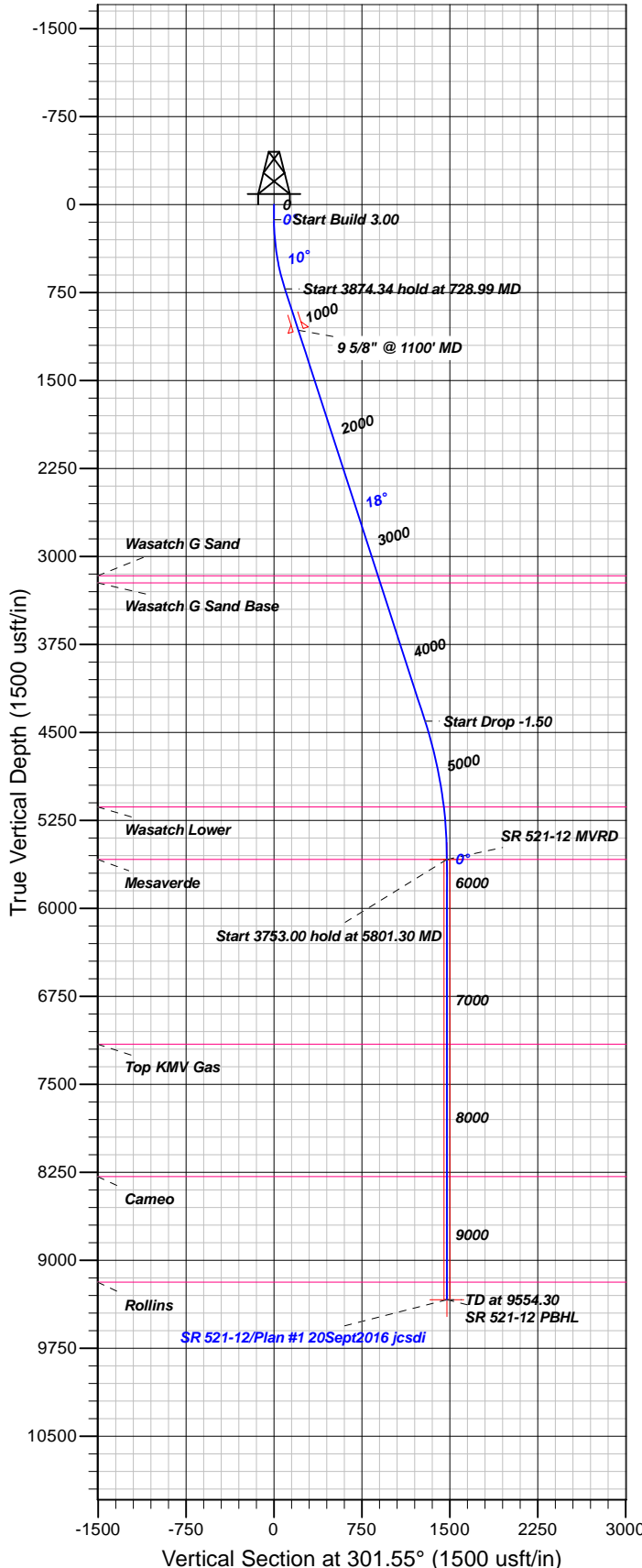
Well Details: SR 521-12

GL 7254' & RKB 24' @ 7278.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599231.40	2341055.10	39.4554210	-107.8339354	A4

T M Azimuths to True North
Magnetic North: 9.60°

Magnetic Field
Strength: 51598.4snT
Dip Angle: 65.62°
Date: 9/19/2016
Model: BGGM2016



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3166.00	3301.25	Wasatch G Sand
3226.00	3364.32	Wasatch G Sand Base
5135.00	5352.27	Wasatch Lower
5583.00	5801.30	Mesaverde
7158.00	7376.30	Top KMV Gas
8286.00	8504.30	Cameo
9186.00	9404.30	Rollins

Plan: Plan #1 20Sept2016 jcsdi

11:30, September 30 2016
Created By: Janie Collins

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
1072.13	1100.00	9 5/8" @ 1100' 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	130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	
3	728.99	17.97	301.55	719.22	48.74	-79.40	3.00	301.55	93.16	
4	4603.33	17.97	301.55	4404.57	674.09	-1098.04	0.00	0.001288.45		
5	5801.30	0.00	0.00	5583.00	771.57	-1256.83	1.50	180.001474.77		SR 521-12 MVRD
6	9554.30	0.00	0.00	9336.00	771.57	-1256.83	0.00	0.001474.77		SR 521-12 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 521-12 MVRD	5583.00	771.57	-1256.83	1600035.00	2339818.50	39.4575392	-107.8383867	Circle (Radius: 25.00)
- plan hits target center								
SR 521-12 PBHL	9336.00	771.57	-1256.83	1600035.00	2339818.50	39.4575392	-107.8383867	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 32-12 Pad

SR 521-12 - Slot A4

OH

Plan: Plan #1 20Sept2016 jcsdi

Standard Planning Report

30 September, 2016



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 521-12 - Slot A4
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 521-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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	RU 32-12 Pad			
Site Position:		Northing:	1,599,253.30 usft	Latitude: 39.4554808
From:	Map	Easting:	2,341,050.00 usft	Longitude: -107.8339555
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.47 °

Well	SR 521-12 - Slot A4			
Well Position	+N/-S	-21.76 usft	Northing:	1,599,231.40 usft
	+E/-W	5.66 usft	Easting:	2,341,055.10 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	7,254.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/19/2016	9.60	65.62	51,598

Design	Plan #1 20Sept2016 jcsdi			
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	301.55

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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
728.99	17.97	301.55	719.22	48.74	-79.40	3.00	3.00	0.00	301.55	
4,603.33	17.97	301.55	4,404.57	674.09	-1,098.04	0.00	0.00	0.00	0.00	
5,801.30	0.00	0.00	5,583.00	771.57	-1,256.84	1.50	-1.50	0.00	180.00	SR 521-12 MVRD
9,554.30	0.00	0.00	9,336.00	771.57	-1,256.84	0.00	0.00	0.00	0.00	SR 521-12 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 521-12 - Slot A4
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 521-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.10	301.55	199.98	0.67	-1.09	1.28	3.00	3.00	0.00	
300.00	5.10	301.55	299.78	3.96	-6.44	7.56	3.00	3.00	0.00	
400.00	8.10	301.55	399.10	9.97	-16.24	19.05	3.00	3.00	0.00	
500.00	11.10	301.55	497.69	18.69	-30.45	35.73	3.00	3.00	0.00	
600.00	14.10	301.55	595.27	30.10	-49.04	57.54	3.00	3.00	0.00	
700.00	17.10	301.55	691.58	44.17	-71.95	84.43	3.00	3.00	0.00	
728.99	17.97	301.55	719.22	48.74	-79.40	93.16	3.00	3.00	0.00	
800.00	17.97	301.55	786.76	60.20	-98.07	115.07	0.00	0.00	0.00	
900.00	17.97	301.55	881.89	76.34	-124.36	145.92	0.00	0.00	0.00	
1,000.00	17.97	301.55	977.01	92.48	-150.65	176.77	0.00	0.00	0.00	
1,100.00	17.97	301.55	1,072.13	108.62	-176.94	207.62	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	17.97	301.55	1,167.25	124.77	-203.23	238.48	0.00	0.00	0.00	
1,300.00	17.97	301.55	1,262.37	140.91	-229.53	269.33	0.00	0.00	0.00	
1,400.00	17.97	301.55	1,357.50	157.05	-255.82	300.18	0.00	0.00	0.00	
1,500.00	17.97	301.55	1,452.62	173.19	-282.11	331.03	0.00	0.00	0.00	
1,600.00	17.97	301.55	1,547.74	189.33	-308.40	361.88	0.00	0.00	0.00	
1,700.00	17.97	301.55	1,642.86	205.47	-334.70	392.73	0.00	0.00	0.00	
1,800.00	17.97	301.55	1,737.98	221.61	-360.99	423.58	0.00	0.00	0.00	
1,900.00	17.97	301.55	1,833.11	237.75	-387.28	454.43	0.00	0.00	0.00	
2,000.00	17.97	301.55	1,928.23	253.89	-413.57	485.29	0.00	0.00	0.00	
2,100.00	17.97	301.55	2,023.35	270.03	-439.86	516.14	0.00	0.00	0.00	
2,200.00	17.97	301.55	2,118.47	286.17	-466.16	546.99	0.00	0.00	0.00	
2,300.00	17.97	301.55	2,213.59	302.31	-492.45	577.84	0.00	0.00	0.00	
2,400.00	17.97	301.55	2,308.72	318.45	-518.74	608.69	0.00	0.00	0.00	
2,500.00	17.97	301.55	2,403.84	334.59	-545.03	639.54	0.00	0.00	0.00	
2,600.00	17.97	301.55	2,498.96	350.74	-571.33	670.39	0.00	0.00	0.00	
2,700.00	17.97	301.55	2,594.08	366.88	-597.62	701.25	0.00	0.00	0.00	
2,800.00	17.97	301.55	2,689.20	383.02	-623.91	732.10	0.00	0.00	0.00	
2,900.00	17.97	301.55	2,784.33	399.16	-650.20	762.95	0.00	0.00	0.00	
3,000.00	17.97	301.55	2,879.45	415.30	-676.49	793.80	0.00	0.00	0.00	
3,100.00	17.97	301.55	2,974.57	431.44	-702.79	824.65	0.00	0.00	0.00	
3,200.00	17.97	301.55	3,069.69	447.58	-729.08	855.50	0.00	0.00	0.00	
3,300.00	17.97	301.55	3,164.81	463.72	-755.37	886.35	0.00	0.00	0.00	
3,301.25	17.97	301.55	3,166.00	463.92	-755.70	886.74	0.00	0.00	0.00	
Wasatch G Sand										
3,364.32	17.97	301.55	3,226.00	474.10	-772.28	906.20	0.00	0.00	0.00	
Wasatch G Sand Base										
3,400.00	17.97	301.55	3,259.94	479.86	-781.66	917.20	0.00	0.00	0.00	
3,500.00	17.97	301.55	3,355.06	496.00	-807.96	948.06	0.00	0.00	0.00	
3,600.00	17.97	301.55	3,450.18	512.14	-834.25	978.91	0.00	0.00	0.00	
3,700.00	17.97	301.55	3,545.30	528.28	-860.54	1,009.76	0.00	0.00	0.00	
3,800.00	17.97	301.55	3,640.43	544.42	-886.83	1,040.61	0.00	0.00	0.00	
3,900.00	17.97	301.55	3,735.55	560.57	-913.12	1,071.46	0.00	0.00	0.00	
4,000.00	17.97	301.55	3,830.67	576.71	-939.42	1,102.31	0.00	0.00	0.00	
4,100.00	17.97	301.55	3,925.79	592.85	-965.71	1,133.16	0.00	0.00	0.00	
4,200.00	17.97	301.55	4,020.91	608.99	-992.00	1,164.01	0.00	0.00	0.00	
4,300.00	17.97	301.55	4,116.04	625.13	-1,018.29	1,194.87	0.00	0.00	0.00	
4,400.00	17.97	301.55	4,211.16	641.27	-1,044.58	1,225.72	0.00	0.00	0.00	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 521-12 - Slot A4
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 521-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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)
4,500.00	17.97	301.55	4,306.28	657.41	-1,070.88	1,256.57	0.00	0.00	0.00
4,600.00	17.97	301.55	4,401.40	673.55	-1,097.17	1,287.42	0.00	0.00	0.00
4,603.33	17.97	301.55	4,404.57	674.09	-1,098.04	1,288.45	0.00	0.00	0.00
4,700.00	16.52	301.55	4,496.89	689.08	-1,122.47	1,317.10	1.50	-1.50	0.00
4,800.00	15.02	301.55	4,593.12	703.30	-1,145.63	1,344.28	1.50	-1.50	0.00
4,900.00	13.52	301.55	4,690.04	716.19	-1,166.63	1,368.93	1.50	-1.50	0.00
5,000.00	12.02	301.55	4,787.56	727.76	-1,185.47	1,391.03	1.50	-1.50	0.00
5,100.00	10.52	301.55	4,885.63	737.98	-1,202.12	1,410.57	1.50	-1.50	0.00
5,200.00	9.02	301.55	4,984.18	746.86	-1,216.58	1,427.54	1.50	-1.50	0.00
5,300.00	7.52	301.55	5,083.13	754.38	-1,228.84	1,441.92	1.50	-1.50	0.00
5,352.27	6.74	301.55	5,135.00	757.78	-1,234.37	1,448.41	1.50	-1.50	0.00
Wasatch Lower									
5,400.00	6.02	301.55	5,182.43	760.55	-1,238.89	1,453.71	1.50	-1.50	0.00
5,500.00	4.52	301.55	5,282.01	765.35	-1,246.71	1,462.89	1.50	-1.50	0.00
5,600.00	3.02	301.55	5,381.79	768.79	-1,252.32	1,469.47	1.50	-1.50	0.00
5,700.00	1.52	301.55	5,481.71	770.87	-1,255.69	1,473.43	1.50	-1.50	0.00
5,800.00	0.02	301.55	5,581.70	771.57	-1,256.83	1,474.77	1.50	-1.50	0.00
5,801.30	0.00	0.00	5,583.00	771.57	-1,256.84	1,474.77	1.50	-1.50	0.00
Mesaverde - SR 521-12 MVRD									
5,900.00	0.00	0.00	5,681.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,000.00	0.00	0.00	5,781.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,100.00	0.00	0.00	5,881.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,200.00	0.00	0.00	5,981.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,300.00	0.00	0.00	6,081.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,400.00	0.00	0.00	6,181.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,500.00	0.00	0.00	6,281.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,600.00	0.00	0.00	6,381.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,700.00	0.00	0.00	6,481.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,800.00	0.00	0.00	6,581.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
6,900.00	0.00	0.00	6,681.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,000.00	0.00	0.00	6,781.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,100.00	0.00	0.00	6,881.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,200.00	0.00	0.00	6,981.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,300.00	0.00	0.00	7,081.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,376.30	0.00	0.00	7,158.00	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
Top KMV Gas									
7,400.00	0.00	0.00	7,181.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,500.00	0.00	0.00	7,281.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,600.00	0.00	0.00	7,381.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,700.00	0.00	0.00	7,481.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,800.00	0.00	0.00	7,581.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
7,900.00	0.00	0.00	7,681.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,000.00	0.00	0.00	7,781.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,100.00	0.00	0.00	7,881.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,200.00	0.00	0.00	7,981.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,300.00	0.00	0.00	8,081.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,400.00	0.00	0.00	8,181.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,500.00	0.00	0.00	8,281.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
8,504.30	0.00	0.00	8,286.00	771.57	-1,256.84	1,474.77	0.00	0.00	0.00
Cameo									
8,600.00	0.00	0.00	8,381.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 521-12 - Slot A4
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 521-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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)	
8,700.00	0.00	0.00	8,481.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,581.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,681.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,781.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,881.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,981.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,081.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,181.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,404.30	0.00	0.00	9,186.00	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
Rollins										
9,500.00	0.00	0.00	9,281.70	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
9,554.30	0.00	0.00	9,336.00	771.57	-1,256.84	1,474.77	0.00	0.00	0.00	
SR 521-12 PBHL										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SR 521-12 MVRD	0.00	0.00	5,583.00	771.57	-1,256.84	1,600,035.00	2,339,818.50	39.4575393	-107.8383867
- plan hits target center									
- Circle (radius 25.00)									
SR 521-12 PBHL	0.00	0.00	9,336.00	771.57	-1,256.84	1,600,035.00	2,339,818.50	39.4575393	-107.8383867
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,072.13	9 5/8" @ 1100' MD	9.62	9.62	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,301.25	3,166.00	Wasatch G Sand		0.00	0.00	
3,364.32	3,226.00	Wasatch G Sand Base		0.00	0.00	
5,352.27	5,135.00	Wasatch Lower		0.00	0.00	
5,801.30	5,583.00	Mesaverde		0.00	0.00	
7,376.30	7,158.00	Top KMV Gas		0.00	0.00	
8,504.30	8,286.00	Cameo		0.00	0.00	
9,404.30	9,186.00	Rollins		0.00	0.00	