

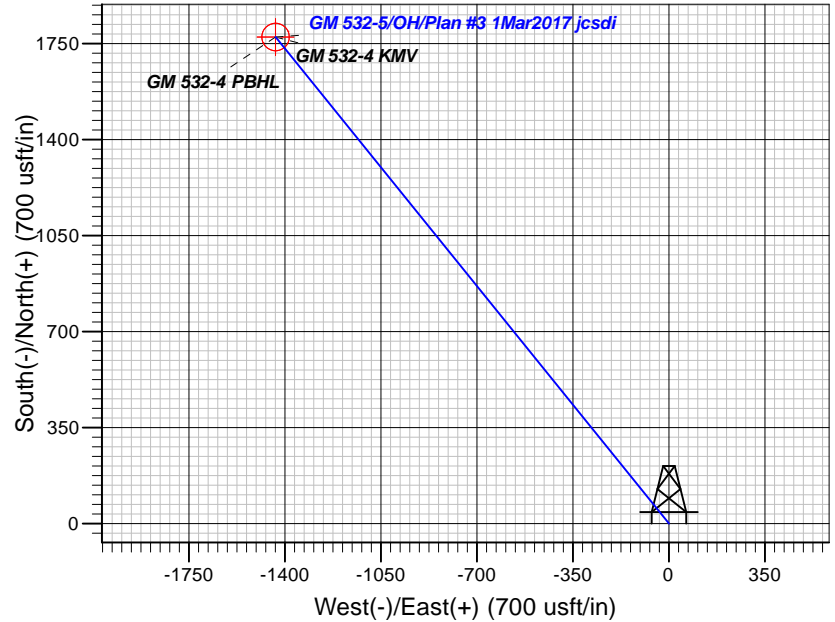
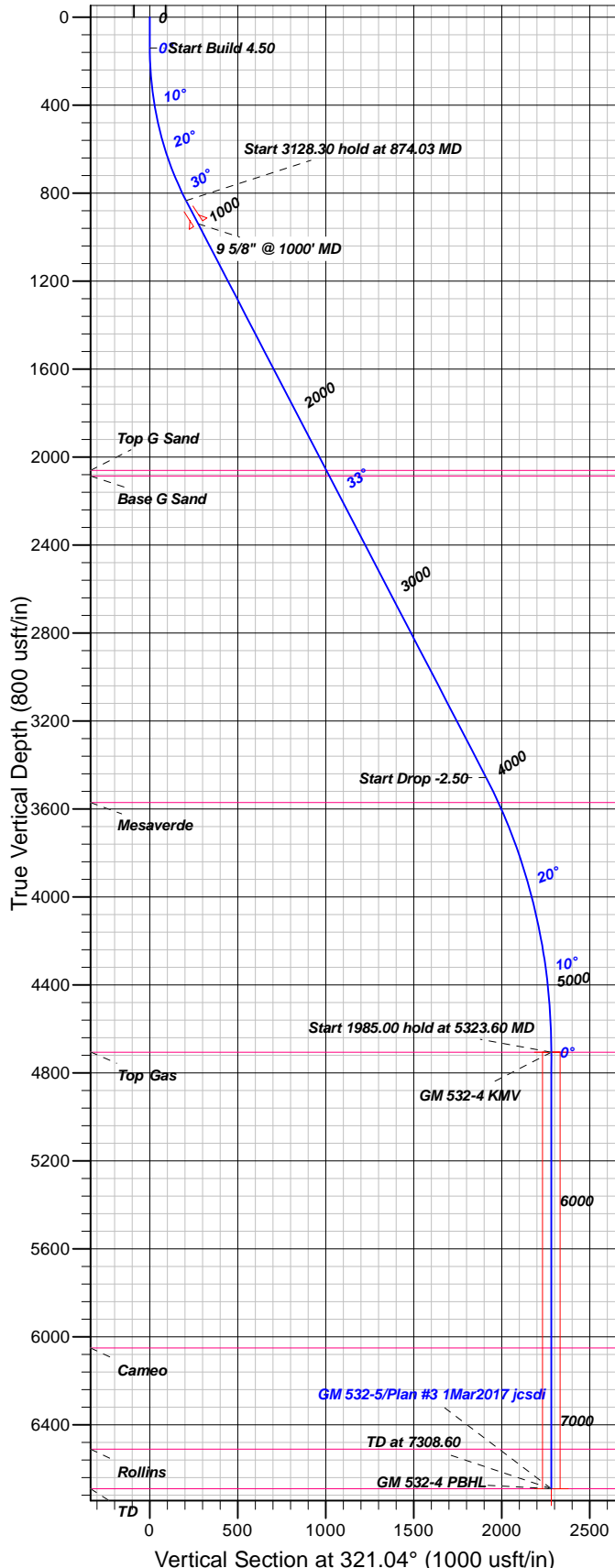
Well Details: GM 532-5

GL 5977' & RKB 24' @ 6001.00usft (H&P 271)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1603520.43	2258800.52	39.4610286	-108.1255609	A5

T M Azimuths to True North
Magnetic North: 9.65°

Magnetic Field
Strength: 51850.7snT
Dip Angle: 65.78°
Date: 12/21/2016
Model: HDGM



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2061.00	2337.54	Top G Sand
2086.00	2367.35	Base G Sand
3571.00	4136.18	Mesaverde
4706.00	5323.60	Top Gas
6051.00	6668.60	Cameo
6511.00	7128.60	Rollins
6691.00	7308.60	TD

Plan: Plan #3 1Mar2017 jcsdi

16:43, March 06 2017
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
939.65	1000.00	9 5/8" @ 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	140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	
3	874.03	33.03	321.04	834.04	160.02	-129.39	4.50	321.04	205.79	
4	4002.34	33.03	321.04	3456.72	1486.01	-1201.58	0.00	0.00	1911.03	
5	5323.60	0.00	0.00	4706.00	1774.06	-1434.49	2.50	180.00	2281.46	GM 532-4 KMV
6	7308.60	0.00	0.00	6691.00	1774.06	-1434.49	0.00	0.00	2281.46	GM 532-4 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 532-4 KMV	4706.00	1774.06	-1434.49	1605335.20	2257417.89	39.4658991	-108.1306420	Circle (Radius: 50.00)
- plan hits target center								
GM 532-4 PBHL	6691.00	1774.06	-1434.49	1605335.20	2257417.89	39.4658991	-108.1306420	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

MV 34-5 Pad

GM 532-5 - Slot A5

OH

Plan: Plan #3 1Mar2017 jcsdi

Standard Planning Report

06 March, 2017



Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 532-5 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 532-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 1Mar2017 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		MV 34-5 Pad			
Site Position:		Northing:	1,603,476.79 usft	Latitude:	39.4609066
From:	Map	Easting:	2,258,772.10 usft	Longitude:	-108.1256571
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	GM 532-5 - Slot A5					
Well Position	+N/-S	44.44 usft	Northing:	1,603,520.43 usft	Latitude:	39.4610286
	+E/-W	27.15 usft	Easting:	2,258,800.52 usft	Longitude:	-108.1255610
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,977.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	12/21/2016	9.65	65.78	51,851

Design	Plan #3 1Mar2017 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	321.04

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	
140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	
874.03	33.03	321.04	834.04	160.02	-129.39	4.50	4.50	0.00	321.04	
4,002.34	33.03	321.04	3,456.72	1,486.01	-1,201.58	0.00	0.00	0.00	0.00	
5,323.60	0.00	0.00	4,706.00	1,774.06	-1,434.49	2.50	-2.50	0.00	180.00	GM 532-4 KMW
7,308.60	0.00	0.00	6,691.00	1,774.06	-1,434.49	0.00	0.00	0.00	0.00	GM 532-4 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 532-5 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 532-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 1Mar2017 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	
140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.70	321.04	199.98	1.10	-0.89	1.41	4.50	4.50	0.00	
300.00	7.20	321.04	299.58	7.81	-6.31	10.04	4.50	4.50	0.00	
400.00	11.70	321.04	398.20	20.57	-16.63	26.45	4.50	4.50	0.00	
500.00	16.20	321.04	495.22	39.31	-31.79	50.56	4.50	4.50	0.00	
600.00	20.70	321.04	590.06	63.91	-51.68	82.20	4.50	4.50	0.00	
700.00	25.20	321.04	682.12	94.23	-76.19	121.18	4.50	4.50	0.00	
800.00	29.70	321.04	770.84	130.06	-105.17	167.26	4.50	4.50	0.00	
874.03	33.03	321.04	834.04	160.02	-129.39	205.79	4.50	4.50	0.00	
900.00	33.03	321.04	855.81	171.03	-138.29	219.95	0.00	0.00	0.00	
1,000.00	33.03	321.04	939.65	213.42	-172.57	274.46	0.00	0.00	0.00	
9 5/8" @ 1000' MD										
1,100.00	33.03	321.04	1,023.49	255.80	-206.84	328.97	0.00	0.00	0.00	
1,200.00	33.03	321.04	1,107.32	298.19	-241.12	383.48	0.00	0.00	0.00	
1,300.00	33.03	321.04	1,191.16	340.58	-275.39	437.99	0.00	0.00	0.00	
1,400.00	33.03	321.04	1,275.00	382.96	-309.66	492.50	0.00	0.00	0.00	
1,500.00	33.03	321.04	1,358.84	425.35	-343.94	547.01	0.00	0.00	0.00	
1,600.00	33.03	321.04	1,442.67	467.74	-378.21	601.52	0.00	0.00	0.00	
1,700.00	33.03	321.04	1,526.51	510.13	-412.48	656.03	0.00	0.00	0.00	
1,800.00	33.03	321.04	1,610.35	552.51	-446.76	710.54	0.00	0.00	0.00	
1,900.00	33.03	321.04	1,694.18	594.90	-481.03	765.05	0.00	0.00	0.00	
2,000.00	33.03	321.04	1,778.02	637.29	-515.31	819.56	0.00	0.00	0.00	
2,100.00	33.03	321.04	1,861.86	679.67	-549.58	874.07	0.00	0.00	0.00	
2,200.00	33.03	321.04	1,945.69	722.06	-583.85	928.58	0.00	0.00	0.00	
2,300.00	33.03	321.04	2,029.53	764.45	-618.13	983.09	0.00	0.00	0.00	
2,337.54	33.03	321.04	2,061.00	780.36	-630.99	1,003.55	0.00	0.00	0.00	
Top G Sand										
2,367.35	33.03	321.04	2,086.00	793.00	-641.21	1,019.80	0.00	0.00	0.00	
Base G Sand										
2,400.00	33.03	321.04	2,113.37	806.83	-652.40	1,037.60	0.00	0.00	0.00	
2,500.00	33.03	321.04	2,197.21	849.22	-686.68	1,092.11	0.00	0.00	0.00	
2,600.00	33.03	321.04	2,281.04	891.61	-720.95	1,146.62	0.00	0.00	0.00	
2,700.00	33.03	321.04	2,364.88	933.99	-755.22	1,201.13	0.00	0.00	0.00	
2,800.00	33.03	321.04	2,448.72	976.38	-789.50	1,255.64	0.00	0.00	0.00	
2,900.00	33.03	321.04	2,532.55	1,018.77	-823.77	1,310.15	0.00	0.00	0.00	
3,000.00	33.03	321.04	2,616.39	1,061.16	-858.04	1,364.66	0.00	0.00	0.00	
3,100.00	33.03	321.04	2,700.23	1,103.54	-892.32	1,419.17	0.00	0.00	0.00	
3,200.00	33.03	321.04	2,784.07	1,145.93	-926.59	1,473.68	0.00	0.00	0.00	
3,300.00	33.03	321.04	2,867.90	1,188.32	-960.87	1,528.19	0.00	0.00	0.00	
3,400.00	33.03	321.04	2,951.74	1,230.70	-995.14	1,582.70	0.00	0.00	0.00	
3,500.00	33.03	321.04	3,035.58	1,273.09	-1,029.41	1,637.21	0.00	0.00	0.00	
3,600.00	33.03	321.04	3,119.41	1,315.48	-1,063.69	1,691.72	0.00	0.00	0.00	
3,700.00	33.03	321.04	3,203.25	1,357.86	-1,097.96	1,746.23	0.00	0.00	0.00	
3,800.00	33.03	321.04	3,287.09	1,400.25	-1,132.24	1,800.74	0.00	0.00	0.00	
3,900.00	33.03	321.04	3,370.93	1,442.64	-1,166.51	1,855.25	0.00	0.00	0.00	
4,000.00	33.03	321.04	3,454.76	1,485.02	-1,200.78	1,909.76	0.00	0.00	0.00	
4,002.34	33.03	321.04	3,456.72	1,486.01	-1,201.58	1,911.03	0.00	0.00	0.00	
4,100.00	30.59	321.04	3,539.71	1,526.04	-1,233.95	1,962.51	2.50	-2.50	0.00	
4,130.82	29.82	321.04	3,566.35	1,538.10	-1,243.70	1,978.01	2.50	-2.50	0.00	
GM 333-5 MVRD										

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 532-5 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 532-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 1Mar2017 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)
4,136.18	29.69	321.04	3,571.00	1,540.17	-1,245.37	1,980.67	2.50	-2.50	0.00
Mesaverde									
4,200.00	28.09	321.04	3,626.87	1,564.14	-1,264.76	2,011.50	2.50	-2.50	0.00
4,300.00	25.59	321.04	3,716.09	1,599.25	-1,293.14	2,056.65	2.50	-2.50	0.00
4,400.00	23.09	321.04	3,807.20	1,631.29	-1,319.05	2,097.86	2.50	-2.50	0.00
4,500.00	20.59	321.04	3,900.01	1,660.22	-1,342.44	2,135.06	2.50	-2.50	0.00
4,600.00	18.09	321.04	3,994.36	1,685.97	-1,363.27	2,168.17	2.50	-2.50	0.00
4,700.00	15.59	321.04	4,090.07	1,708.49	-1,381.48	2,197.14	2.50	-2.50	0.00
4,800.00	13.09	321.04	4,186.94	1,727.75	-1,397.05	2,221.91	2.50	-2.50	0.00
4,900.00	10.59	321.04	4,284.81	1,743.70	-1,409.95	2,242.42	2.50	-2.50	0.00
5,000.00	8.09	321.04	4,383.48	1,756.32	-1,420.15	2,258.65	2.50	-2.50	0.00
5,100.00	5.59	321.04	4,482.76	1,765.58	-1,427.64	2,270.56	2.50	-2.50	0.00
5,200.00	3.09	321.04	4,582.46	1,771.47	-1,432.40	2,278.13	2.50	-2.50	0.00
5,300.00	0.59	321.04	4,682.40	1,773.96	-1,434.42	2,281.34	2.50	-2.50	0.00
5,323.60	0.00	0.00	4,706.00	1,774.06	-1,434.49	2,281.46	2.50	-2.50	165.09
Top Gas - GM 532-4 KMW									
5,400.00	0.00	0.00	4,782.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
5,500.00	0.00	0.00	4,882.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
5,600.00	0.00	0.00	4,982.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
5,700.00	0.00	0.00	5,082.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
5,800.00	0.00	0.00	5,182.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
5,900.00	0.00	0.00	5,282.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,000.00	0.00	0.00	5,382.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,100.00	0.00	0.00	5,482.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,200.00	0.00	0.00	5,582.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,300.00	0.00	0.00	5,682.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,400.00	0.00	0.00	5,782.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,500.00	0.00	0.00	5,882.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,600.00	0.00	0.00	5,982.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,668.60	0.00	0.00	6,051.00	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
Cameo									
6,700.00	0.00	0.00	6,082.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,800.00	0.00	0.00	6,182.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
6,900.00	0.00	0.00	6,282.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
7,000.00	0.00	0.00	6,382.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
7,100.00	0.00	0.00	6,482.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
7,128.60	0.00	0.00	6,511.00	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
Rollins									
7,200.00	0.00	0.00	6,582.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
7,283.60	0.00	0.00	6,666.00	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
GM 333-5 PBHL									
7,300.00	0.00	0.00	6,682.40	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
7,308.60	0.00	0.00	6,691.00	1,774.06	-1,434.49	2,281.46	0.00	0.00	0.00
TD - GM 532-4 PBHL									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 532-5 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5977' & RKB 24' @ 6001.00usft (H&P 271)
Site:	MV 34-5 Pad	North Reference:	True
Well:	GM 532-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3 1Mar2017 jcsdi		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GM 532-4 KMV - plan hits target center - Circle (radius 50.00)	0.00	0.00	4,706.00	1,774.06	-1,434.49	1,605,335.20	2,257,417.89	39.4658991	-108.1306420
GM 532-4 PBHL - plan hits target center - Point	0.00	0.00	6,691.00	1,774.06	-1,434.49	1,605,335.20	2,257,417.89	39.4658991	-108.1306420

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,000.00	939.65	9 5/8" @ 1000' MD	9.62	9.62	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,337.54	2,061.00	Top G Sand		0.00	0.00	
2,367.35	2,086.00	Base G Sand		0.00	0.00	
4,136.18	3,571.00	Mesaverde		0.00	0.00	
5,323.60	4,706.00	Top Gas		0.00	0.00	
6,668.60	6,051.00	Cameo		0.00	0.00	
7,128.60	6,511.00	Rollins		0.00	0.00	
7,308.60	6,691.00	TD		0.00	0.00	