

WELL DETAILS: Mansur 33-4-D

Ground Level: 6114.00							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot	
0.00	0.00	1423959.989	2222918.322	38.965331	-108.233459		

SECTION DETAILS SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1189.84	0.00	0.00	1189.84	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
3	1839.84	13.00	292.06	1834.27	27.58	-68.05	2.00	292.06	73.42	Start 1604.86 hold at 1839.84 MD
4	3444.70	13.00	292.06	3398.00	163.17	-402.63	0.00	0.00	434.44	TD at 3444.70

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Mansur 33-4-C	3398.00	163.17	-402.63	1424135.191	2222520.807	38.965779	-108.234875	Point
- plan hits target center								

PROJECT DETAILS: Whitewater Revival

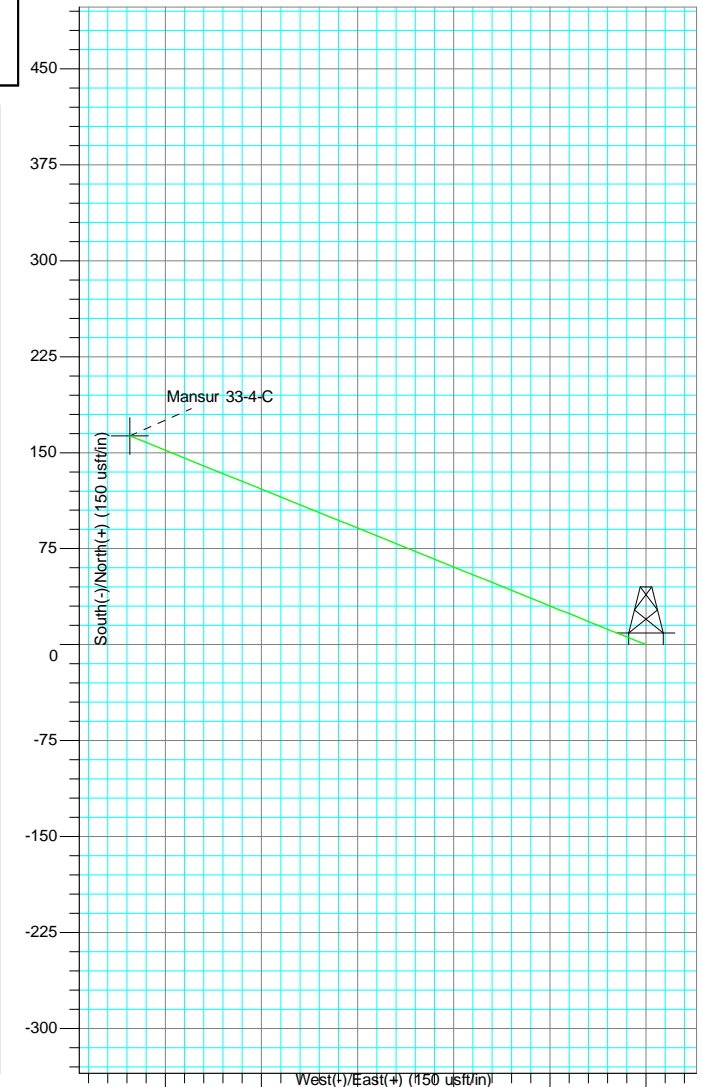
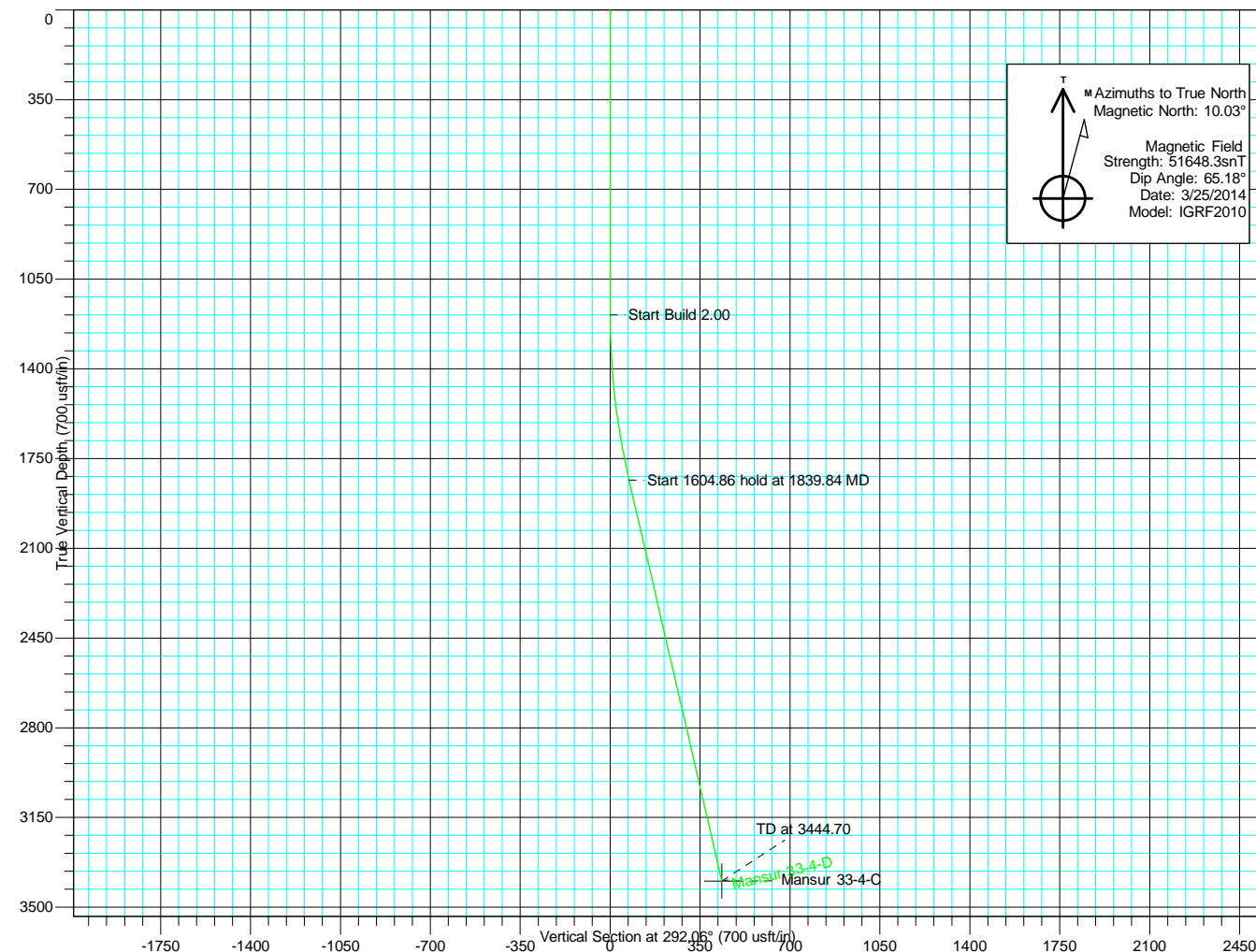
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Mansur 33-4-D, True North
Vertical (TVD) Reference: RKB @ 6126.00usft (Original Well Elev)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: RKB @ 6126.00usft (Original Well Elev)
Calculation Method: Minimum Curvature





Fram Americas LLC

Whitewater Revival

Mansur 33-4-D-Redrill

Mansur 33-4-D

Mansur 33-4-D

Plan: Mansur 33-4-D

Standard Planning Report

27 March, 2014

Database:	Compass DB	Local Co-ordinate Reference:	Well Mansur 33-4-D
Company:	Fram Americas LLC	TVD Reference:	RKB @ 6126.00usft (Original Well Elev)
Project:	Whitewater Revival	MD Reference:	RKB @ 6126.00usft (Original Well Elev)
Site:	Mansur 33-4-D-Redrill	North Reference:	True
Well:	Mansur 33-4-D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Mansur 33-4-D		
Design:	Mansur 33-4-D		

Project	Whitewater Revival		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		Mansur 33-4-D-Redrill			
Site Position:		Northing:	1,423,959.989 usft	Latitude:	38.965331
From:	Lat/Long	Easting:	2,222,918.322 usft	Longitude:	-108.233459
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.72

Well	Mansur 33-4-D					
Well Position	+N/-S	0.00 usft	Northing:	1,423,959.989 usft	Latitude:	38.965331
	+E/-W	0.00 usft	Easting:	2,222,918.322 usft	Longitude:	-108.233459
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,114.00 usft

Wellbore	Mansur 33-4-D				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/25/2014	10.03	65.18	51,648

Design	Mansur 33-4-D				
Audit Notes:					
Version:	1	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)		+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00		0.00	0.00	292.06

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	
1,189.84	0.00	0.00	1,189.84	0.00	0.00	0.00	0.00	0.00	0.00	
1,839.84	13.00	292.06	1,834.27	27.58	-68.05	2.00	2.00	0.00	292.06	
3,444.70	13.00	292.06	3,398.00	163.17	-402.63	0.00	0.00	0.00	0.00	Mansur 33-4-C

Database:	Compass DB	Local Co-ordinate Reference:	Well Mansur 33-4-D
Company:	Fram Americas LLC	TVD Reference:	RKB @ 6126.00usft (Original Well Elev)
Project:	Whitewater Revival	MD Reference:	RKB @ 6126.00usft (Original Well Elev)
Site:	Mansur 33-4-D-Redrill	North Reference:	True
Well:	Mansur 33-4-D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Mansur 33-4-D		
Design:	Mansur 33-4-D		

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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,189.84	0.00	0.00	1,189.84	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,200.00	0.20	292.06	1,200.00	0.01	-0.02	0.02	2.00	2.00	0.00
1,300.00	2.20	292.06	1,299.97	0.80	-1.96	2.12	2.00	2.00	0.00
1,400.00	4.20	292.06	1,399.81	2.89	-7.14	7.71	2.00	2.00	0.00
1,500.00	6.20	292.06	1,499.39	6.30	-15.55	16.77	2.00	2.00	0.00
1,600.00	8.20	292.06	1,598.60	11.01	-27.17	29.31	2.00	2.00	0.00
1,700.00	10.20	292.06	1,697.31	17.02	-41.99	45.31	2.00	2.00	0.00
1,800.00	12.20	292.06	1,795.40	24.31	-59.99	64.73	2.00	2.00	0.00
1,839.84	13.00	292.06	1,834.27	27.58	-68.05	73.42	2.00	2.00	0.00
Start 1604.86 hold at 1839.84 MD									
1,900.00	13.00	292.06	1,892.90	32.66	-80.59	86.96	0.00	0.00	0.00
2,000.00	13.00	292.06	1,990.33	41.11	-101.44	109.45	0.00	0.00	0.00
2,100.00	13.00	292.06	2,087.77	49.56	-122.29	131.95	0.00	0.00	0.00
2,200.00	13.00	292.06	2,185.21	58.01	-143.14	154.44	0.00	0.00	0.00
2,300.00	13.00	292.06	2,282.64	66.46	-163.98	176.94	0.00	0.00	0.00
2,400.00	13.00	292.06	2,380.08	74.91	-184.83	199.43	0.00	0.00	0.00
2,500.00	13.00	292.06	2,477.52	83.36	-205.68	221.93	0.00	0.00	0.00
2,600.00	13.00	292.06	2,574.95	91.81	-226.53	244.42	0.00	0.00	0.00
2,700.00	13.00	292.06	2,672.39	100.25	-247.38	266.92	0.00	0.00	0.00
2,800.00	13.00	292.06	2,769.83	108.70	-268.22	289.41	0.00	0.00	0.00
2,900.00	13.00	292.06	2,867.27	117.15	-289.07	311.91	0.00	0.00	0.00
3,000.00	13.00	292.06	2,964.70	125.60	-309.92	334.40	0.00	0.00	0.00
3,100.00	13.00	292.06	3,062.14	134.05	-330.77	356.90	0.00	0.00	0.00
3,200.00	13.00	292.06	3,159.58	142.50	-351.62	379.39	0.00	0.00	0.00
3,300.00	13.00	292.06	3,257.01	150.95	-372.46	401.89	0.00	0.00	0.00
3,400.00	13.00	292.06	3,354.45	159.40	-393.31	424.38	0.00	0.00	0.00
3,444.70	13.00	292.06	3,398.00	163.17	-402.63	434.44	0.00	0.00	0.00
TD at 3444.70 - Mansur 33-4-C									

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									
Mansur 33-4-C	0.00	0.00	3,398.00	163.17	-402.63	1,424,135.191	2,222,520.807	38.965779	-108.234875
- plan hits target center									
- Point									

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Site:	Mansur 33-4-D-Redrill	North Reference:	True
Well:	Mansur 33-4-D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Mansur 33-4-D		
Design:	Mansur 33-4-D		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,189.84	1,189.84	0.00	0.00	Start Build 2.00	
1,839.84	1,834.27	27.58	-68.05	Start 1604.86 hold at 1839.84 MD	
3,444.70	3,398.00	163.17	-402.63	TD at 3444.70	