

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_WETHINGTON PAD

Wethington 41-7

Wethington 41-7

Plan: Wethington 41-7 (wp01)

Standard Planning Report

04 May, 2011



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_WETHINGTON PAD
 Well: Wethington 41-7
 Wellbore: Wethington 41-7
 Section:
 SHL:
 Design: Wethington 41-7 (wp01)
 Latitude: 40.068815
 Longitude: -104.820452
 GL: 4902.00
 KB: 15' RKB + 4902' GL @ 4917.00ft

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3297.00	3567.19	PRKM TOP
4627.00	5070.39	SX TOP
5142.00	5652.46	SHN TOP
7097.00	7715.68	NI A TOP
7437.00	8055.68	CDL TOP
7527.00	8145.68	GH TOP
7877.00	8495.68	J TOP



Azimuths to True North
 Magnetic North: 8.88°

Magnetic Field
 Strength: 52962.7snT
 Dip Angle: 66.78°
 Date: 5/3/2011
 Model: IGRF2010

WELL DETAILS: Wethington 41-7

+N/-S	+E/-W	Northing	Ground Level: Easting	4902.00 Latitude	Longitude	Slot
0.00	0.00	1268643.14	3190183.85	40.068815	-104.820452	

CASING DETAILS

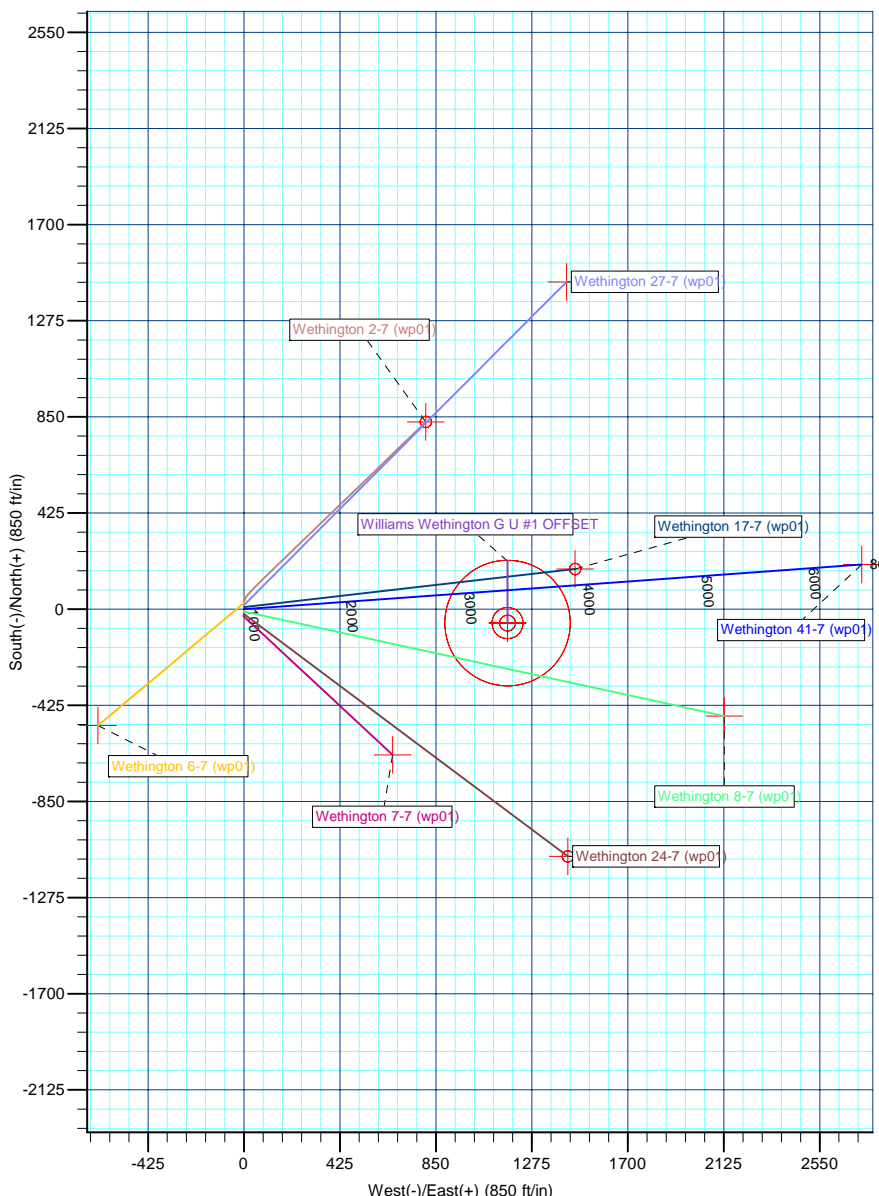
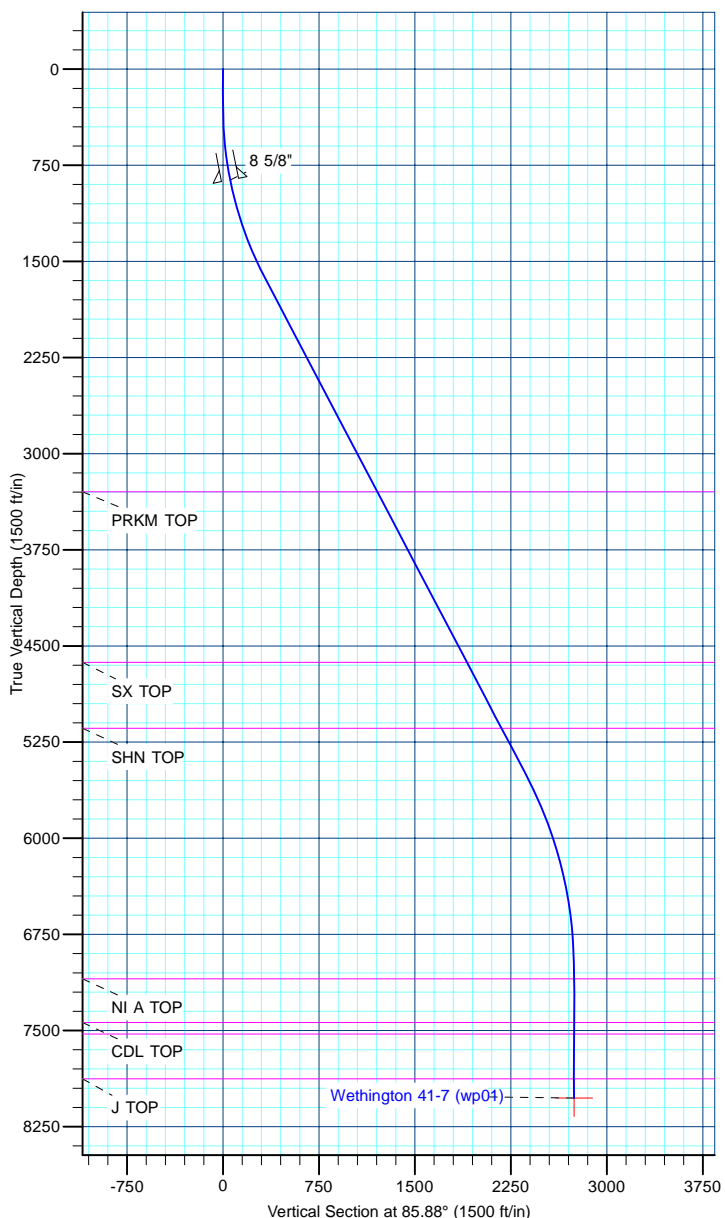
TVD	MD	Name	Size
865.00	868.73	8 5/8"	8-5/8

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Wethington 41-7 BHL	8027.00	197.24	2736.56	1268861.35	3192918.81	40.069356	-104.810674	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	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
1688.78	27.78	85.88	1635.02	23.73	329.23	2.00	85.88	330.08
6058.50	27.78	85.88	5501.26	170.12	2360.29	0.00	0.00	2366.42
7645.68	0.00	0.00	7027.00	197.24	2736.56	1.75	180.00	2743.65
8645.68	0.00	0.00	8027.00	197.24	2736.56	0.00	0.00	2743.65



Database:	edm5000p	Local Co-ordinate Reference:	Well Wethington 41-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site:	WELD_WETHINGTON PAD	North Reference:	True
Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wethington 41-7		
Design:	Wethington 41-7 (wp01)		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_WETHINGTON PAD			
Site Position:		Northing:	1,268,683.25 ft	Latitude:	40.068925
From:	Lat/Long	Easting:	3,190,186.90 ft	Longitude:	-104.820440
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.44 °

Well	Wethington 41-7					
Well Position	+N-S	-40.09 ft	Northing:	1,268,643.14 ft	Latitude:	40.068815
	+E-W	-3.36 ft	Easting:	3,190,183.85 ft	Longitude:	-104.820452
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,902.00 ft

Wellbore	Wethington 41-7				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/3/2011	8.88	66.78	52,963

Design	Wethington 41-7 (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	85.88

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	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	
1,688.78	27.78	85.88	1,635.02	23.73	329.23	2.00	2.00	0.00	85.88	
6,058.50	27.78	85.88	5,501.26	170.12	2,360.29	0.00	0.00	0.00	0.00	
7,645.68	0.00	0.00	7,027.00	197.24	2,736.56	1.75	-1.75	0.00	180.00	
8,645.68	0.00	0.00	8,027.00	197.24	2,736.56	0.00	0.00	0.00	0.00	Wethington 41-7 Bt

Database:	edm5000p	Local Co-ordinate Reference:	Well Wethington 41-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site:	WELD_WETHINGTON PAD	North Reference:	True
Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wethington 41-7		
Design:	Wethington 41-7 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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	2.00	85.88	399.98	0.13	1.74	1.75	2.00	2.00	0.00
500.00	4.00	85.88	499.84	0.50	6.96	6.98	2.00	2.00	0.00
600.00	6.00	85.88	599.45	1.13	15.65	15.69	2.00	2.00	0.00
700.00	8.00	85.88	698.70	2.00	27.81	27.88	2.00	2.00	0.00
800.00	10.00	85.88	797.47	3.13	43.41	43.52	2.00	2.00	0.00
868.73	11.37	85.88	865.00	4.05	56.12	56.27	2.00	2.00	0.00
8 5/8"									
900.00	12.00	85.88	895.62	4.50	62.44	62.60	2.00	2.00	0.00
1,000.00	14.00	85.88	993.06	6.12	84.88	85.10	2.00	2.00	0.00
1,100.00	16.00	85.88	1,089.64	7.98	110.69	110.98	2.00	2.00	0.00
1,200.00	18.00	85.88	1,185.27	10.08	139.85	140.21	2.00	2.00	0.00
1,300.00	20.00	85.88	1,279.82	12.42	172.32	172.77	2.00	2.00	0.00
1,400.00	22.00	85.88	1,373.17	15.00	208.06	208.60	2.00	2.00	0.00
1,500.00	24.00	85.88	1,465.21	17.81	247.03	247.67	2.00	2.00	0.00
1,600.00	26.00	85.88	1,555.84	20.84	289.18	289.93	2.00	2.00	0.00
1,688.78	27.78	85.88	1,635.02	23.73	329.23	330.08	2.00	2.00	0.00
1,700.00	27.78	85.88	1,644.95	24.11	334.44	335.31	0.00	0.00	0.00
1,800.00	27.78	85.88	1,733.43	27.46	380.92	381.91	0.00	0.00	0.00
1,900.00	27.78	85.88	1,821.90	30.81	427.40	428.51	0.00	0.00	0.00
2,000.00	27.78	85.88	1,910.38	34.16	473.88	475.11	0.00	0.00	0.00
2,100.00	27.78	85.88	1,998.86	37.51	520.37	521.72	0.00	0.00	0.00
2,200.00	27.78	85.88	2,087.34	40.86	566.85	568.32	0.00	0.00	0.00
2,300.00	27.78	85.88	2,175.81	44.21	613.33	614.92	0.00	0.00	0.00
2,400.00	27.78	85.88	2,264.29	47.56	659.81	661.52	0.00	0.00	0.00
2,500.00	27.78	85.88	2,352.77	50.91	706.29	708.12	0.00	0.00	0.00
2,600.00	27.78	85.88	2,441.25	54.26	752.77	754.72	0.00	0.00	0.00
2,700.00	27.78	85.88	2,529.73	57.61	799.25	801.32	0.00	0.00	0.00
2,800.00	27.78	85.88	2,618.20	60.96	845.73	847.92	0.00	0.00	0.00
2,900.00	27.78	85.88	2,706.68	64.31	892.21	894.52	0.00	0.00	0.00
3,000.00	27.78	85.88	2,795.16	67.66	938.69	941.12	0.00	0.00	0.00
3,100.00	27.78	85.88	2,883.64	71.01	985.17	987.73	0.00	0.00	0.00
3,200.00	27.78	85.88	2,972.12	74.36	1,031.65	1,034.33	0.00	0.00	0.00
3,300.00	27.78	85.88	3,060.59	77.71	1,078.13	1,080.93	0.00	0.00	0.00
3,400.00	27.78	85.88	3,149.07	81.06	1,124.61	1,127.53	0.00	0.00	0.00
3,500.00	27.78	85.88	3,237.55	84.41	1,171.09	1,174.13	0.00	0.00	0.00
3,567.19	27.78	85.88	3,297.00	86.66	1,202.32	1,205.44	0.00	0.00	0.00
PRKM TOP									
3,600.00	27.78	85.88	3,326.03	87.76	1,217.57	1,220.73	0.00	0.00	0.00
3,700.00	27.78	85.88	3,414.51	91.11	1,264.05	1,267.33	0.00	0.00	0.00
3,800.00	27.78	85.88	3,502.98	94.46	1,310.53	1,313.93	0.00	0.00	0.00
3,900.00	27.78	85.88	3,591.46	97.81	1,357.01	1,360.53	0.00	0.00	0.00
4,000.00	27.78	85.88	3,679.94	101.16	1,403.49	1,407.13	0.00	0.00	0.00
4,100.00	27.78	85.88	3,768.42	104.51	1,449.97	1,453.74	0.00	0.00	0.00
4,200.00	27.78	85.88	3,856.90	107.86	1,496.45	1,500.34	0.00	0.00	0.00
4,300.00	27.78	85.88	3,945.37	111.21	1,542.93	1,546.94	0.00	0.00	0.00
4,400.00	27.78	85.88	4,033.85	114.56	1,589.41	1,593.54	0.00	0.00	0.00
4,500.00	27.78	85.88	4,122.33	117.91	1,635.90	1,640.14	0.00	0.00	0.00
4,600.00	27.78	85.88	4,210.81	121.26	1,682.38	1,686.74	0.00	0.00	0.00
4,700.00	27.78	85.88	4,299.29	124.61	1,728.86	1,733.34	0.00	0.00	0.00
4,800.00	27.78	85.88	4,387.76	127.96	1,775.34	1,779.94	0.00	0.00	0.00

Database:	edm5000p	Local Co-ordinate Reference:	Well Wethington 41-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site:	WELD_WETHINGTON PAD	North Reference:	True
Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wethington 41-7		
Design:	Wethington 41-7 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,900.00	27.78	85.88	4,476.24	131.31	1,821.82	1,826.54	0.00	0.00	0.00
5,000.00	27.78	85.88	4,564.72	134.66	1,868.30	1,873.14	0.00	0.00	0.00
5,070.39	27.78	85.88	4,627.00	137.02	1,901.02	1,905.95	0.00	0.00	0.00
SX TOP									
5,100.00	27.78	85.88	4,653.20	138.01	1,914.78	1,919.75	0.00	0.00	0.00
5,200.00	27.78	85.88	4,741.68	141.36	1,961.26	1,966.35	0.00	0.00	0.00
5,300.00	27.78	85.88	4,830.15	144.71	2,007.74	2,012.95	0.00	0.00	0.00
5,400.00	27.78	85.88	4,918.63	148.06	2,054.22	2,059.55	0.00	0.00	0.00
5,500.00	27.78	85.88	5,007.11	151.41	2,100.70	2,106.15	0.00	0.00	0.00
5,600.00	27.78	85.88	5,095.59	154.76	2,147.18	2,152.75	0.00	0.00	0.00
5,652.46	27.78	85.88	5,142.00	156.52	2,171.56	2,177.20	0.00	0.00	0.00
SHN TOP									
5,700.00	27.78	85.88	5,184.07	158.11	2,193.66	2,199.35	0.00	0.00	0.00
5,800.00	27.78	85.88	5,272.54	161.46	2,240.14	2,245.95	0.00	0.00	0.00
5,900.00	27.78	85.88	5,361.02	164.81	2,286.62	2,292.55	0.00	0.00	0.00
6,000.00	27.78	85.88	5,449.50	168.16	2,333.10	2,339.15	0.00	0.00	0.00
6,058.50	27.78	85.88	5,501.26	170.12	2,360.29	2,366.42	0.00	0.00	0.00
6,100.00	27.05	85.88	5,538.10	171.50	2,379.35	2,385.52	1.75	-1.75	0.00
6,200.00	25.30	85.88	5,627.84	174.67	2,423.34	2,429.63	1.75	-1.75	0.00
6,300.00	23.55	85.88	5,718.89	177.64	2,464.58	2,470.98	1.75	-1.75	0.00
6,400.00	21.80	85.88	5,811.16	180.41	2,503.03	2,509.53	1.75	-1.75	0.00
6,500.00	20.05	85.88	5,904.56	182.98	2,538.65	2,545.24	1.75	-1.75	0.00
6,600.00	18.30	85.88	5,999.01	185.34	2,571.41	2,578.08	1.75	-1.75	0.00
6,700.00	16.55	85.88	6,094.41	187.49	2,601.28	2,608.03	1.75	-1.75	0.00
6,800.00	14.80	85.88	6,190.69	189.43	2,628.22	2,635.04	1.75	-1.75	0.00
6,900.00	13.05	85.88	6,287.75	191.16	2,652.22	2,659.10	1.75	-1.75	0.00
7,000.00	11.30	85.88	6,385.50	192.68	2,673.26	2,680.19	1.75	-1.75	0.00
7,100.00	9.55	85.88	6,483.84	193.98	2,691.30	2,698.29	1.75	-1.75	0.00
7,200.00	7.80	85.88	6,582.69	195.06	2,706.35	2,713.37	1.75	-1.75	0.00
7,300.00	6.05	85.88	6,681.96	195.93	2,718.37	2,725.42	1.75	-1.75	0.00
7,400.00	4.30	85.88	6,781.55	196.58	2,727.37	2,734.44	1.75	-1.75	0.00
7,500.00	2.55	85.88	6,881.37	197.01	2,733.32	2,740.41	1.75	-1.75	0.00
7,600.00	0.80	85.88	6,981.32	197.22	2,736.24	2,743.34	1.75	-1.75	0.00
7,645.68	0.00	0.00	7,027.00	197.24	2,736.56	2,743.65	1.75	-1.75	0.00
7,700.00	0.00	0.00	7,081.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
7,715.68	0.00	0.00	7,097.00	197.24	2,736.56	2,743.65	0.00	0.00	0.00
NI A TOP									
7,800.00	0.00	0.00	7,181.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
7,900.00	0.00	0.00	7,281.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,000.00	0.00	0.00	7,381.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,055.68	0.00	0.00	7,437.00	197.24	2,736.56	2,743.65	0.00	0.00	0.00
CDL TOP									
8,100.00	0.00	0.00	7,481.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,145.68	0.00	0.00	7,527.00	197.24	2,736.56	2,743.65	0.00	0.00	0.00
GH TOP									
8,200.00	0.00	0.00	7,581.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,300.00	0.00	0.00	7,681.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,400.00	0.00	0.00	7,781.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,495.68	0.00	0.00	7,877.00	197.24	2,736.56	2,743.65	0.00	0.00	0.00
J TOP									
8,500.00	0.00	0.00	7,881.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,600.00	0.00	0.00	7,981.32	197.24	2,736.56	2,743.65	0.00	0.00	0.00
8,645.68	0.00	0.00	8,027.00	197.24	2,736.56	2,743.65	0.00	0.00	0.00

Database:	edm5000p	Local Co-ordinate Reference:	Well Wethington 41-7
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site:	WELD_WETHINGTON PAD	North Reference:	True
Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wethington 41-7		
Design:	Wethington 41-7 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Wethington 41-7 BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Wethington 41-7 BHL	0.00	0.00	8,027.00	197.24	2,736.56	1,268,861.34	3,192,918.81	40.069356	-104.810674
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
868.73	865.00	8 5/8"	8-5/8	11	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,567.19	3,297.00	PRKM TOP				
5,070.39	4,627.00	SX TOP				
5,652.46	5,142.00	SHN TOP				
7,715.68	7,097.00	NI A TOP				
8,055.68	7,437.00	CDL TOP				
8,145.68	7,527.00	GH TOP				
8,495.68	7,877.00	J TOP				

US ROCKIES REGION PLANNING

**COLORADO NORTHERN ZONE - 83
WELD_WETHINGTON PAD
Wethington 41-7**

**Wethington 41-7
Wethington 41-7 (wp01)**

Anticollision Summary Report

04 May, 2011



APC
Anticollision Summary Report



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Wethington 41-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Reference Site:	WELD_WETHINGTON PAD	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wethington 41-7	Database:	edm5000p
Reference Design:	Wethington 41-7 (wp01)	Offset TVD Reference:	Offset Datum

Reference	Wethington 41-7 (wp01)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 25.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.00 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 5/4/2011			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	8,645.68	Wethington 41-7 (wp01) (Wethington 41-7	MWD	MWD - Standard

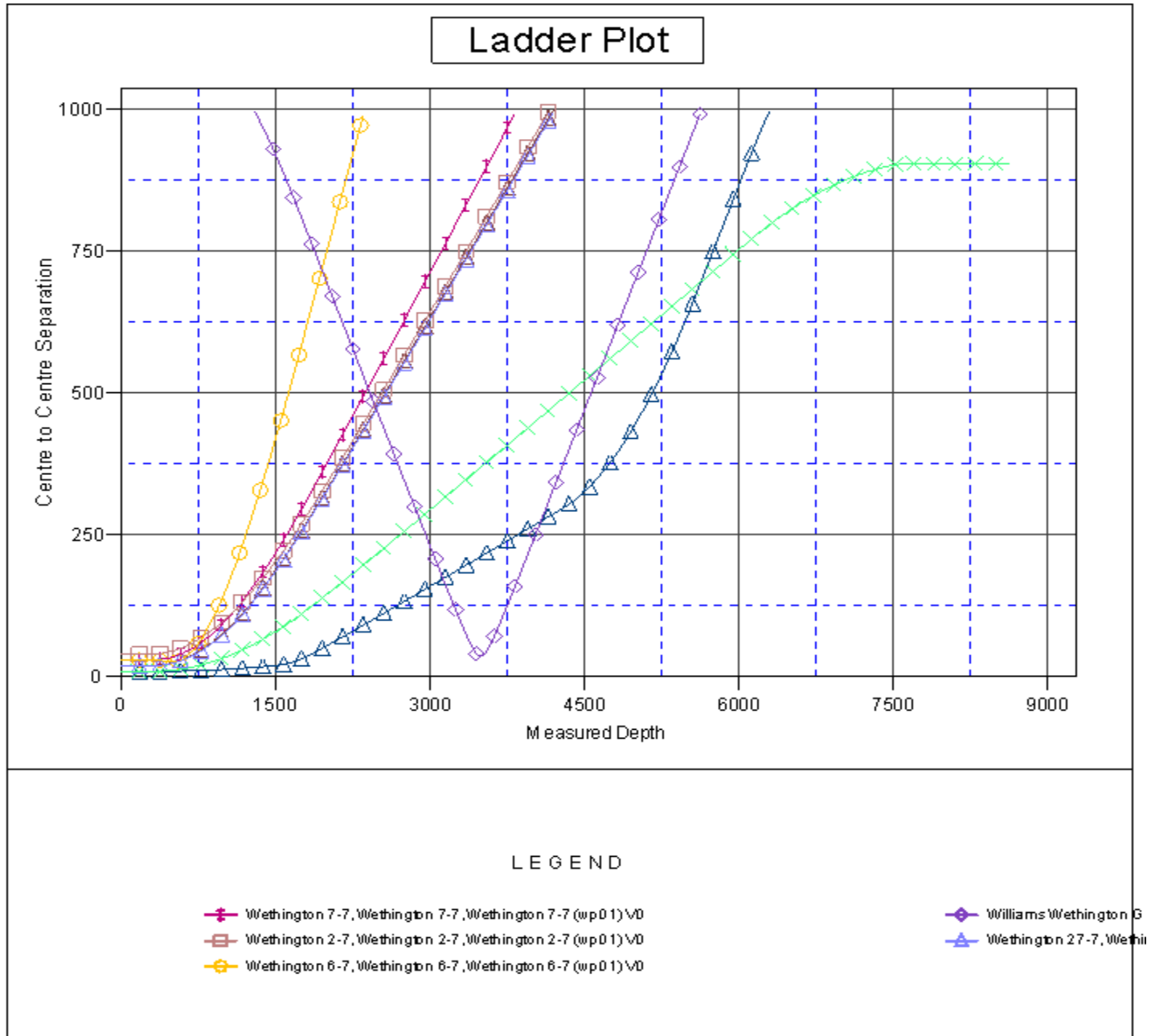
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
WELD_WETHINGTON PAD						
Wethington 17-7 - Wethington 17-7 - Wethington 17-7 (w	300.00	300.00	9.87	8.78	9.055	CC
Wethington 17-7 - Wethington 17-7 - Wethington 17-7 (w	750.00	749.69	11.33	8.01	3.415	ES
Wethington 17-7 - Wethington 17-7 - Wethington 17-7 (w	1,525.00	1,524.14	20.59	8.76	1.741	SF
Wethington 24-7 - Wethington 24-7 - Wethington 24-7 (w	300.00	300.00	20.10	19.01	18.440	CC
Wethington 24-7 - Wethington 24-7 - Wethington 24-7 (w	325.00	324.91	20.18	18.98	16.884	ES
Wethington 24-7 - Wethington 24-7 - Wethington 24-7 (w	550.00	548.85	27.58	25.41	12.720	SF
Wethington 2-7 - Wethington 2-7 - Wethington 2-7 (wp01	300.00	300.00	40.22	39.13	36.895	CC
Wethington 2-7 - Wethington 2-7 - Wethington 2-7 (wp01	325.00	324.65	40.31	39.11	33.615	ES
Wethington 2-7 - Wethington 2-7 - Wethington 2-7 (wp01	1,475.00	1,450.63	197.56	187.60	19.831	SF
Wethington 27-7 - Wethington 27-7 - Wethington 27-7 (w	300.00	300.00	20.11	19.02	18.443	CC
Wethington 27-7 - Wethington 27-7 - Wethington 27-7 (w	325.00	324.87	20.17	18.97	16.825	ES
Wethington 27-7 - Wethington 27-7 - Wethington 27-7 (w	550.00	548.44	26.96	24.75	12.212	SF
Wethington 6-7 - Wethington 6-7 - Wethington 6-7 (wp01	501.81	502.39	26.74	24.80	13.774	CC, ES
Wethington 6-7 - Wethington 6-7 - Wethington 6-7 (wp01	550.00	550.12	27.70	25.53	12.804	SF
Wethington 7-7 - Wethington 7-7 - Wethington 7-7 (wp01	300.00	300.00	29.98	28.89	27.499	CC
Wethington 7-7 - Wethington 7-7 - Wethington 7-7 (wp01	325.00	324.84	30.06	28.87	25.166	ES
Wethington 7-7 - Wethington 7-7 - Wethington 7-7 (wp01	650.00	646.94	46.57	43.90	17.500	SF
Wethington 8-7 - Wethington 8-7 - Wethington 8-7 (wp01	300.00	300.00	9.87	8.78	9.051	CC
Wethington 8-7 - Wethington 8-7 - Wethington 8-7 (wp01	350.00	349.98	9.99	8.69	7.669	ES
Wethington 8-7 - Wethington 8-7 - Wethington 8-7 (wp01	625.00	624.77	15.11	12.54	5.880	SF
Williams Wethington G U #1 - Williams Wethington G U #	3,491.50	3,218.18	36.49	8.67	1.312	Level 3, CC, ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Wethington 41-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Reference Site:	WELD_WETHINGTON PAD	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wethington 41-7	Database:	edm5000p
Reference Design:	Wethington 41-7 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 15' RKB + 4902' GL @ 4917.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wethington 41-7
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.44°



Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Wethington 41-7
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	15' RKB + 4902' GL @ 4917.00ft
Reference Site:	WELD_WETHINGTON PAD	MD Reference:	15' RKB + 4902' GL @ 4917.00ft
Site Error:	0.00 ft	North Reference:	True
Reference Well:	Wethington 41-7	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wethington 41-7	Database:	edm5000p
Reference Design:	Wethington 41-7 (wp01)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 15' RKB + 4902' GL @ 4917.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wethington 41-7
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.44°

