



Ursa Operating Company, LLC

Rockies Region

McLin C

McLin C3

Wellbore #1

Plan: Design #1

Standard Planning Report

09 July, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well McLin C3
Company:	Ursa Operating Company, LLC	TVD Reference:	McLin C3 @ 5741.4ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	McLin C3 @ 5741.4ft (Original Well Elev)
Site:	McLin C	North Reference:	True
Well:	McLin C3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Rockies Region		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		McLin C			
Site Position:		Northing:	1,623,089.57 ft	Latitude:	39° 31' 30.857 N
From:	Lat/Long	Easting:	2,405,664.50 ft	Longitude:	107° 36' 25.703 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.33 °

Well	McLin C3, SHL LAT: 39.525300665 LONG: -107.607103093					
Well Position	+N/-S	22.8 ft	Northing:	1,623,112.08 ft	Latitude:	39° 31' 31.082 N
	+E/-W	10.3 ft	Easting:	2,405,675.35 ft	Longitude:	107° 36' 25.571 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,741.4 ft	Ground Level:	5,726.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/24/2013	9.88	65.79	52,153

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	312.28

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,667.0	16.35	312.28	1,660.7	44.5	-49.0	3.50	3.50	0.00	312.28	
4,278.1	16.35	312.28	4,166.3	538.9	-592.7	0.00	0.00	0.00	0.00	
4,745.2	0.00	0.00	4,627.0	583.4	-641.6	3.50	-3.50	0.00	180.00	C3 TGT
7,342.2	0.00	0.00	7,224.0	583.4	-641.6	0.00	0.00	0.00	0.00	C3 BHL TGT

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Site:	McLin C	North Reference:	True
Well:	McLin C3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.50									
1,300.0	3.50	312.28	1,299.9	2.1	-2.3	3.1	3.50	3.50	0.00
1,400.0	7.00	312.28	1,399.5	8.2	-9.0	12.2	3.50	3.50	0.00
1,500.0	10.50	312.28	1,498.3	18.4	-20.3	27.4	3.50	3.50	0.00
1,600.0	14.00	312.28	1,596.0	32.7	-36.0	48.6	3.50	3.50	0.00
1,667.0	16.35	312.28	1,660.7	44.5	-49.0	66.2	3.50	3.50	0.00
Start 2611.1 hold at 1667.0 MD									
1,700.0	16.35	312.28	1,692.4	50.8	-55.8	75.4	0.00	0.00	0.00
1,800.0	16.35	312.28	1,788.3	69.7	-76.6	103.6	0.00	0.00	0.00
1,900.0	16.35	312.28	1,884.3	88.6	-97.5	131.7	0.00	0.00	0.00
2,000.0	16.35	312.28	1,980.2	107.6	-118.3	159.9	0.00	0.00	0.00
2,100.0	16.35	312.28	2,076.2	126.5	-139.1	188.0	0.00	0.00	0.00
2,200.0	16.35	312.28	2,172.1	145.4	-159.9	216.2	0.00	0.00	0.00
2,300.0	16.35	312.28	2,268.1	164.3	-180.8	244.3	0.00	0.00	0.00
2,400.0	16.35	312.28	2,364.1	183.3	-201.6	272.5	0.00	0.00	0.00
2,500.0	16.35	312.28	2,460.0	202.2	-222.4	300.6	0.00	0.00	0.00
2,600.0	16.35	312.28	2,556.0	221.1	-243.2	328.7	0.00	0.00	0.00
2,700.0	16.35	312.28	2,651.9	240.1	-264.1	356.9	0.00	0.00	0.00
2,800.0	16.35	312.28	2,747.9	259.0	-284.9	385.0	0.00	0.00	0.00
2,900.0	16.35	312.28	2,843.9	277.9	-305.7	413.2	0.00	0.00	0.00
3,000.0	16.35	312.28	2,939.8	296.9	-326.5	441.3	0.00	0.00	0.00
3,100.0	16.35	312.28	3,035.8	315.8	-347.4	469.5	0.00	0.00	0.00
3,200.0	16.35	312.28	3,131.7	334.7	-368.2	497.6	0.00	0.00	0.00
3,300.0	16.35	312.28	3,227.7	353.7	-389.0	525.7	0.00	0.00	0.00
3,375.4	16.35	312.28	3,300.0	367.9	-404.7	547.0	0.00	0.00	0.00
WF									
3,400.0	16.35	312.28	3,323.6	372.6	-409.8	553.9	0.00	0.00	0.00
3,500.0	16.35	312.28	3,419.6	391.5	-430.6	582.0	0.00	0.00	0.00
3,600.0	16.35	312.28	3,515.6	410.5	-451.5	610.2	0.00	0.00	0.00
3,700.0	16.35	312.28	3,611.5	429.4	-472.3	638.3	0.00	0.00	0.00
3,800.0	16.35	312.28	3,707.5	448.3	-493.1	666.5	0.00	0.00	0.00
3,900.0	16.35	312.28	3,803.4	467.3	-513.9	694.6	0.00	0.00	0.00
4,000.0	16.35	312.28	3,899.4	486.2	-534.8	722.7	0.00	0.00	0.00
4,100.0	16.35	312.28	3,995.4	505.1	-555.6	750.9	0.00	0.00	0.00
4,200.0	16.35	312.28	4,091.3	524.1	-576.4	779.0	0.00	0.00	0.00
4,278.1	16.35	312.28	4,166.3	538.9	-592.7	801.0	0.00	0.00	0.00
Start Drop -3.50									
4,300.0	15.58	312.28	4,187.3	542.9	-597.1	807.0	3.50	-3.50	0.00
4,400.0	12.08	312.28	4,284.4	559.0	-614.8	830.9	3.50	-3.50	0.00
4,500.0	8.58	312.28	4,382.8	571.0	-628.1	848.9	3.50	-3.50	0.00
4,600.0	5.08	312.28	4,482.0	579.0	-636.9	860.8	3.50	-3.50	0.00

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Site:	McLin C	North Reference:	True
Well:	McLin C3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

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)
4,700.0	1.58	312.28	4,581.8	582.9	-641.2	866.6	3.50	-3.50	0.00
4,745.2	0.00	0.00	4,627.0	583.4	-641.6	867.2	3.50	-3.50	0.00
Start 2597.0 hold at 4745.2 MD - Top of Gas									
4,800.0	0.00	0.00	4,681.8	583.4	-641.6	867.2	0.00	0.00	0.00
4,900.0	0.00	0.00	4,781.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,000.0	0.00	0.00	4,881.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,100.0	0.00	0.00	4,981.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,200.0	0.00	0.00	5,081.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,300.0	0.00	0.00	5,181.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,400.0	0.00	0.00	5,281.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,500.0	0.00	0.00	5,381.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,600.0	0.00	0.00	5,481.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,700.0	0.00	0.00	5,581.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,800.0	0.00	0.00	5,681.8	583.4	-641.6	867.2	0.00	0.00	0.00
5,865.2	0.00	0.00	5,747.0	583.4	-641.6	867.2	0.00	0.00	0.00
Cameo									
5,900.0	0.00	0.00	5,781.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,881.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,100.0	0.00	0.00	5,981.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,200.0	0.00	0.00	6,081.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,300.0	0.00	0.00	6,181.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,400.0	0.00	0.00	6,281.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,500.0	0.00	0.00	6,381.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,600.0	0.00	0.00	6,481.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,700.0	0.00	0.00	6,581.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,681.8	583.4	-641.6	867.2	0.00	0.00	0.00
6,900.0	0.00	0.00	6,781.8	583.4	-641.6	867.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,881.8	583.4	-641.6	867.2	0.00	0.00	0.00
7,042.2	0.00	0.00	6,924.0	583.4	-641.6	867.2	0.00	0.00	0.00
Rollins									
7,100.0	0.00	0.00	6,981.8	583.4	-641.6	867.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,081.8	583.4	-641.6	867.2	0.00	0.00	0.00
7,300.0	0.00	0.00	7,181.8	583.4	-641.6	867.2	0.00	0.00	0.00
7,342.2	0.00	0.00	7,224.0	583.4	-641.6	867.2	0.00	0.00	0.00
TD at 7342.2									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,375.4	3,300.0	WF		0.00	
4,745.2	4,627.0	Top of Gas		0.00	
5,865.2	5,747.0	Cameo		0.00	
7,042.2	6,924.0	Rollins		0.00	

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Project:	Rockies Region	MD Reference:	McLin C3 @ 5741.4ft (Original Well Elev)
Site:	McLin C	North Reference:	True
Well:	McLin C3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,200.0	1,200.0	0.0	0.0	Start Build 3.50
1,667.0	1,660.7	44.5	-49.0	Start 2611.1 hold at 1667.0 MD
4,278.1	4,166.3	538.9	-592.7	Start Drop -3.50
4,745.2	4,627.0	583.4	-641.6	Start 2597.0 hold at 4745.2 MD
7,342.2	7,224.0	583.4	-641.6	TD at 7342.2



Well Name: McLin C3
Surface Location: McLin C
North American Datum 1983 , US State Plane 1983, Colorado Central Zone
Ground Elevation: 5726.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1623112.08 2405675.35 39° 31' 31.082 N 107° 36' 25.571 W
Original Well Elev McLin C3 @ 5741.4ft (Original Well Elev)



Azimuths to True North
Magnetic North: 9.88°
Magnetic Field
Strength: 52152.6snT
Dip Angle: 65.79°
Date: 6/24/2013
Model: IGRF200510

McLin C
McLin C3
Design #1
10:06, July 09 2013

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
C3 TGT	4627.0	583.4	-641.6	1623710.17	2405047.41	39° 31' 36.848 N	107° 36' 33.760 W	Point
C3 BHL TGT	7224.0	583.4	-641.6	1623710.17	2405047.41	39° 31' 36.848 N	107° 36' 33.760 W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1667.0	16.35	312.28	1660.7	44.5	-49.0	3.50	312.28	66.2	
4	4278.1	16.35	312.28	4166.3	538.9	-592.7	0.00	0.00	801.0	
5	4745.2	0.00	0.00	4627.0	583.4	-641.6	3.50	180.00	867.2	C3 TGT
6	7342.2	0.00	0.00	7224.0	583.4	-641.6	0.00	0.00	867.2	C3 BHL TGT

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	Start Build 3.50
1660.7	1667.0	Start 2611.1 hold at 1667.0 MD
4166.3	4278.1	Start Drop -3.50
4627.0	4745.2	Start 2597.0 hold at 4745.2 MD
7224.0	7342.2	TD at 7342.2

FORMATION TOP DETAILS

TVDPathMDPath	Formation
3300.0 3375.4	WF
4627.0 4745.2	Top of Gas
5747.0 5865.2	Cameo
6924.0 7042.2	Rollins

