



Ursa Operating Company, LLC

Rockies Region

McLin C

McLin C5

Wellbore #1

Plan: Design #1

Standard Planning Report

25 June, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well McLin C5
Company:	Ursa Operating Company, LLC	TVD Reference:	McLin C5 @ 5741.4ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	McLin C5 @ 5741.4ft (Original Well Elev)
Site:	McLin C	North Reference:	True
Well:	McLin C5	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: From:		Northing:	494,718.69 m	Latitude:	39° 31' 30.857 N
	Lat/Long	Easting:	733,248.01 m	Longitude:	107° 36' 25.703 W
	Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:

Well	McLin C5, SHL LAT: 39.525269419 LONG: -107.607121389					
Well Position	+N/-S	11.4 ft	Northing:	494,722.12 m	Latitude:	39° 31' 30.970 N
	+E/-W	5.2 ft	Easting:	733,249.66 m	Longitude:	107° 36' 25.637 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	299.70

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	
1,712.6	17.94	299.70	1,704.3	39.4	-69.1	3.50	3.50	0.00	299.70	
4,262.0	17.94	299.70	4,129.7	428.5	-751.3	0.00	0.00	0.00	0.00	
4,774.6	0.00	0.00	4,634.0	467.9	-820.5	3.50	-3.50	0.00	180.00	C5 TGT
7,371.6	0.00	0.00	7,231.0	467.9	-820.5	0.00	0.00	0.00	0.00	C5 BHL TGT

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Site:	McLin C	North Reference:	True
Well:	McLin C5	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	299.70	1,299.9	1.5	-2.7	3.1	3.50	3.50	0.00
1,400.0	7.00	299.70	1,399.5	6.0	-10.6	12.2	3.50	3.50	0.00
1,500.0	10.50	299.70	1,498.3	13.6	-23.8	27.4	3.50	3.50	0.00
1,600.0	14.00	299.70	1,596.0	24.1	-42.2	48.6	3.50	3.50	0.00
1,700.0	17.50	299.70	1,692.3	37.5	-65.8	75.8	3.50	3.50	0.00
1,712.6	17.94	299.70	1,704.3	39.4	-69.1	79.6	3.50	3.50	0.00
Start 2549.5 hold at 1712.6 MD									
1,800.0	17.94	299.70	1,787.4	52.8	-92.5	106.5	0.00	0.00	0.00
1,900.0	17.94	299.70	1,882.6	68.0	-119.3	137.3	0.00	0.00	0.00
2,000.0	17.94	299.70	1,977.7	83.3	-146.0	168.1	0.00	0.00	0.00
2,100.0	17.94	299.70	2,072.8	98.6	-172.8	198.9	0.00	0.00	0.00
2,200.0	17.94	299.70	2,168.0	113.8	-199.6	229.7	0.00	0.00	0.00
2,300.0	17.94	299.70	2,263.1	129.1	-226.3	260.5	0.00	0.00	0.00
2,400.0	17.94	299.70	2,358.2	144.3	-253.1	291.3	0.00	0.00	0.00
2,500.0	17.94	299.70	2,453.4	159.6	-279.8	322.1	0.00	0.00	0.00
2,600.0	17.94	299.70	2,548.5	174.9	-306.6	352.9	0.00	0.00	0.00
2,700.0	17.94	299.70	2,643.7	190.1	-333.3	383.8	0.00	0.00	0.00
2,800.0	17.94	299.70	2,738.8	205.4	-360.1	414.6	0.00	0.00	0.00
2,900.0	17.94	299.70	2,833.9	220.6	-386.9	445.4	0.00	0.00	0.00
3,000.0	17.94	299.70	2,929.1	235.9	-413.6	476.2	0.00	0.00	0.00
3,100.0	17.94	299.70	3,024.2	251.2	-440.4	507.0	0.00	0.00	0.00
3,200.0	17.94	299.70	3,119.3	266.4	-467.1	537.8	0.00	0.00	0.00
3,300.0	17.94	299.70	3,214.5	281.7	-493.9	568.6	0.00	0.00	0.00
3,397.3	17.94	299.70	3,307.0	296.5	-519.9	598.5	0.00	0.00	0.00
WF									
3,400.0	17.94	299.70	3,309.6	296.9	-520.7	599.4	0.00	0.00	0.00
3,500.0	17.94	299.70	3,404.8	312.2	-547.4	630.2	0.00	0.00	0.00
3,600.0	17.94	299.70	3,499.9	327.5	-574.2	661.0	0.00	0.00	0.00
3,700.0	17.94	299.70	3,595.0	342.7	-600.9	691.8	0.00	0.00	0.00
3,800.0	17.94	299.70	3,690.2	358.0	-627.7	722.6	0.00	0.00	0.00
3,900.0	17.94	299.70	3,785.3	373.2	-654.4	753.4	0.00	0.00	0.00
4,000.0	17.94	299.70	3,880.4	388.5	-681.2	784.2	0.00	0.00	0.00
4,100.0	17.94	299.70	3,975.6	403.8	-708.0	815.0	0.00	0.00	0.00
4,200.0	17.94	299.70	4,070.7	419.0	-734.7	845.8	0.00	0.00	0.00
4,262.0	17.94	299.70	4,129.7	428.5	-751.3	864.9	0.00	0.00	0.00
Start Drop -3.50									
4,300.0	16.61	299.70	4,166.0	434.1	-761.1	876.2	3.50	-3.50	0.00
4,400.0	13.11	299.70	4,262.6	446.8	-783.4	901.8	3.50	-3.50	0.00
4,500.0	9.61	299.70	4,360.7	456.5	-800.5	921.5	3.50	-3.50	0.00
4,600.0	6.11	299.70	4,459.7	463.3	-812.4	935.2	3.50	-3.50	0.00

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Site:	McLin C	North Reference:	True
Well:	McLin C5	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	2.61	299.70	4,559.4	467.1	-819.0	942.8	3.50	-3.50	0.00
4,774.6	0.00	0.00	4,634.0	467.9	-820.5	944.5	3.50	-3.50	0.00
Start 2597.0 hold at 4774.6 MD - Top of Gas									
4,800.0	0.00	0.00	4,659.4	467.9	-820.5	944.5	0.00	0.00	0.00
4,900.0	0.00	0.00	4,759.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,859.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,100.0	0.00	0.00	4,959.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,059.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,300.0	0.00	0.00	5,159.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,259.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,500.0	0.00	0.00	5,359.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,459.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,700.0	0.00	0.00	5,559.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,659.4	467.9	-820.5	944.5	0.00	0.00	0.00
5,894.6	0.00	0.00	5,754.0	467.9	-820.5	944.5	0.00	0.00	0.00
Cameo									
5,900.0	0.00	0.00	5,759.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,859.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,100.0	0.00	0.00	5,959.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,059.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,159.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,259.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,359.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,459.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,559.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,659.4	467.9	-820.5	944.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,759.4	467.9	-820.5	944.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,859.4	467.9	-820.5	944.5	0.00	0.00	0.00
7,071.6	0.00	0.00	6,931.0	467.9	-820.5	944.5	0.00	0.00	0.00
Rollins									
7,100.0	0.00	0.00	6,959.4	467.9	-820.5	944.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,059.4	467.9	-820.5	944.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,159.4	467.9	-820.5	944.5	0.00	0.00	0.00
7,371.6	0.00	0.00	7,231.0	467.9	-820.5	944.5	0.00	0.00	0.00
TD at 7371.6									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,397.3	3,307.0	WF		0.00		
4,774.6	4,634.0	Top of Gas		0.00		
5,894.6	5,754.0	Cameo		0.00		
7,071.6	6,931.0	Rollins		0.00		

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Project:	Rockies Region	MD Reference:	McLin C5 @ 5741.4ft (Original Well Elev)
Site:	McLin C	North Reference:	True
Well:	McLin C5	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
1,712.6	1,704.3	39.4	-69.1	Start 2549.5 hold at 1712.6 MD
4,262.0	4,129.7	428.5	-751.3	Start Drop -3.50
4,774.6	4,634.0	467.9	-820.5	Start 2597.0 hold at 4774.6 MD
7,371.6	7,231.0	467.9	-820.5	TD at 7371.6



Well Name: McLin C5
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 494722.12 733249.66 39° 31' 30.970 N 107° 36' 25.637 W
Original Well Elev McLin C5 @ 5741.4ft (Original Well Elev)



Azimuths to True North
Magnetic North: 9.88°
Magnetic Field
Strength: 52152.5nT
Dip Angle: 65.79°
Date: 6/24/2013
Model: IGRF200510

McLin C
McLin C5
Design #1
9:13, June 25 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
C5 TGT	4634.0	467.9	-820.5	494870.50	733002.96	39° 31' 35.594 N	107° 36' 36.108 W	Point
C5 BHL TGT	7231.0	467.9	-820.5	494870.50	733002.96	39° 31' 35.594 N	107° 36' 36.108 W	Point

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	Start Build 3.50
1704.3	1712.6	Start 2549.5 hold at 1712.6 MD
4129.7	4262.0	Start Drop -3.50
4634.0	4774.6	Start 2597.0 hold at 4774.6 MD
7231.0	7371.6	TD at 7371.6

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	1712.6	17.94	299.70	1704.3	39.4	-69.1	3.50	299.70	79.6	
4	4262.0	17.94	299.70	4129.7	428.5	-751.3	0.00	0.00	864.9	
5	4774.6	0.00	0.00	4634.0	467.9	-820.5	3.50	180.00	944.5	C5 TGT
6	7371.6	0.00	0.00	7231.0	467.9	-820.5	0.00	0.00	944.5	C5 BHL TGT

