



Ursa Operating Company, LLC

Rockies Region

McLin C

McLin C8

Wellbore #1

Plan: Design #1

Standard Planning Report

25 June, 2013



Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well McLin C8
Company:	Ursa Operating Company, LLC	TVD Reference:	McLin C8 @ 5741.4ft (Original Well Elev)
Project:	Rockies Region	MD Reference:	McLin C8 @ 5741.4ft (Original Well Elev)
Site:	McLin C	North Reference:	True
Well:	McLin C8	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:	494,718.69 m	Latitude:	39° 31' 30.857 N
From:	Lat/Long	Easting:	733,248.01 m	Longitude:	107° 36' 25.703 W
Position Uncertainty:	0.0 ft	Slot Radius:	in	Grid Convergence:	-1.33 °

Well	McLin C8, SHL LAT: 39.525175680 LONG: -107.607176280					
Well Position	+N/-S	-22.8 ft	Northing:	494,711.83 m	Latitude:	39° 31' 30.632 N
	+E/-W	-10.3 ft	Easting:	733,244.70 m	Longitude:	107° 36' 25.835 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	52,152

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	254.89

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	
1,639.8	15.39	254.89	1,634.5	-15.3	-56.7	3.50	3.50	0.00	254.89	
4,317.8	15.39	254.89	4,216.5	-200.6	-742.9	0.00	0.00	0.00	0.00	
4,757.6	0.00	0.00	4,651.0	-215.9	-799.6	3.50	-3.50	0.00	180.00	C8 TGT
7,354.6	0.00	0.00	7,248.0	-215.9	-799.6	0.00	0.00	0.00	0.00	C8 BHL TGT

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Site:	McLin C	North Reference:	True
Well:	McLin C8	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	254.89	1,299.9	-0.8	-2.9	3.1	3.50	3.50	0.00
1,400.0	7.00	254.89	1,399.5	-3.2	-11.8	12.2	3.50	3.50	0.00
1,500.0	10.50	254.89	1,498.3	-7.1	-26.5	27.4	3.50	3.50	0.00
1,600.0	14.00	254.89	1,596.0	-12.7	-46.9	48.6	3.50	3.50	0.00
1,639.8	15.39	254.89	1,634.5	-15.3	-56.7	58.7	3.50	3.50	0.00
Start 2678.0 hold at 1639.8 MD									
1,700.0	15.39	254.89	1,692.6	-19.5	-72.1	74.7	0.00	0.00	0.00
1,800.0	15.39	254.89	1,789.0	-26.4	-97.7	101.2	0.00	0.00	0.00
1,900.0	15.39	254.89	1,885.4	-33.3	-123.4	127.8	0.00	0.00	0.00
2,000.0	15.39	254.89	1,981.8	-40.2	-149.0	154.3	0.00	0.00	0.00
2,100.0	15.39	254.89	2,078.2	-47.1	-174.6	180.9	0.00	0.00	0.00
2,200.0	15.39	254.89	2,174.6	-54.1	-200.2	207.4	0.00	0.00	0.00
2,300.0	15.39	254.89	2,271.0	-61.0	-225.9	234.0	0.00	0.00	0.00
2,400.0	15.39	254.89	2,367.5	-67.9	-251.5	260.5	0.00	0.00	0.00
2,500.0	15.39	254.89	2,463.9	-74.8	-277.1	287.0	0.00	0.00	0.00
2,600.0	15.39	254.89	2,560.3	-81.7	-302.7	313.6	0.00	0.00	0.00
2,700.0	15.39	254.89	2,656.7	-88.6	-328.4	340.1	0.00	0.00	0.00
2,800.0	15.39	254.89	2,753.1	-95.6	-354.0	366.7	0.00	0.00	0.00
2,900.0	15.39	254.89	2,849.5	-102.5	-379.6	393.2	0.00	0.00	0.00
3,000.0	15.39	254.89	2,945.9	-109.4	-405.3	419.8	0.00	0.00	0.00
3,100.0	15.39	254.89	3,042.4	-116.3	-430.9	446.3	0.00	0.00	0.00
3,200.0	15.39	254.89	3,138.8	-123.2	-456.5	472.8	0.00	0.00	0.00
3,300.0	15.39	254.89	3,235.2	-130.1	-482.1	499.4	0.00	0.00	0.00
3,392.1	15.39	254.89	3,324.0	-136.5	-505.7	523.8	0.00	0.00	0.00
WF									
3,400.0	15.39	254.89	3,331.6	-137.1	-507.8	525.9	0.00	0.00	0.00
3,500.0	15.39	254.89	3,428.0	-144.0	-533.4	552.5	0.00	0.00	0.00
3,600.0	15.39	254.89	3,524.4	-150.9	-559.0	579.0	0.00	0.00	0.00
3,700.0	15.39	254.89	3,620.8	-157.8	-584.6	605.6	0.00	0.00	0.00
3,800.0	15.39	254.89	3,717.2	-164.7	-610.3	632.1	0.00	0.00	0.00
3,900.0	15.39	254.89	3,813.7	-171.7	-635.9	658.6	0.00	0.00	0.00
4,000.0	15.39	254.89	3,910.1	-178.6	-661.5	685.2	0.00	0.00	0.00
4,100.0	15.39	254.89	4,006.5	-185.5	-687.1	711.7	0.00	0.00	0.00
4,200.0	15.39	254.89	4,102.9	-192.4	-712.8	738.3	0.00	0.00	0.00
4,300.0	15.39	254.89	4,199.3	-199.3	-738.4	764.8	0.00	0.00	0.00
4,317.8	15.39	254.89	4,216.5	-200.6	-742.9	769.5	0.00	0.00	0.00
Start Drop -3.50									
4,400.0	12.52	254.89	4,296.2	-205.7	-762.1	789.4	3.50	-3.50	0.00
4,500.0	9.02	254.89	4,394.5	-210.6	-780.1	808.0	3.50	-3.50	0.00
4,600.0	5.52	254.89	4,493.6	-213.9	-792.3	820.7	3.50	-3.50	0.00

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Well:	McLin C8	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	2.02	254.89	4,593.4	-215.6	-798.7	827.2	3.50	-3.50	0.00
4,757.6	0.00	0.00	4,651.0	-215.9	-799.6	828.3	3.50	-3.50	182.48
Start 2597.0 hold at 4757.6 MD - Top of Gas									
4,800.0	0.00	0.00	4,693.4	-215.9	-799.6	828.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,793.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,893.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,100.0	0.00	0.00	4,993.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,093.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,193.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,293.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,393.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,493.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,593.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,693.4	-215.9	-799.6	828.3	0.00	0.00	0.00
5,877.6	0.00	0.00	5,771.0	-215.9	-799.6	828.3	0.00	0.00	0.00
Cameo									
5,900.0	0.00	0.00	5,793.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,893.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,100.0	0.00	0.00	5,993.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,093.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,193.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,400.0	0.00	0.00	6,293.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,500.0	0.00	0.00	6,393.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,600.0	0.00	0.00	6,493.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,700.0	0.00	0.00	6,593.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,693.4	-215.9	-799.6	828.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,793.4	-215.9	-799.6	828.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,893.4	-215.9	-799.6	828.3	0.00	0.00	0.00
7,054.6	0.00	0.00	6,948.0	-215.9	-799.6	828.3	0.00	0.00	0.00
Rollins									
7,100.0	0.00	0.00	6,993.4	-215.9	-799.6	828.3	0.00	0.00	0.00
7,200.0	0.00	0.00	7,093.4	-215.9	-799.6	828.3	0.00	0.00	0.00
7,300.0	0.00	0.00	7,193.4	-215.9	-799.6	828.3	0.00	0.00	0.00
7,354.6	0.00	0.00	7,248.0	-215.9	-799.6	828.3	0.00	0.00	0.00
TD at 7354.6									

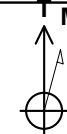
Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,392.1	3,324.0	WF		0.00		
4,757.6	4,651.0	Top of Gas		0.00		
5,877.6	5,771.0	Cameo		0.00		
7,054.6	6,948.0	Rollins		0.00		

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Site:	McLin C	North Reference:	True
Well:	McLin C8	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
1,639.8	1,634.5	-15.3	-56.7	Start 2678.0 hold at 1639.8 MD
4,317.8	4,216.5	-200.6	-742.9	Start Drop -3.50
4,757.6	4,651.0	-215.9	-799.6	Start 2597.0 hold at 4757.6 MD
7,354.6	7,248.0	-215.9	-799.6	TD at 7354.6



Well Name: McLin C8
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 494711.83 733244.70 39° 31' 30.632 N 107° 36' 25.835 W
Original Well Elev McLin C8 @ 5741.4ft (Original Well Elev)



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

McLin C
McLin C8
Design #1
9:27, June 25 2013

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
C8 TGT	4651.0	-215.9	-799.6	494651.70	732999.51	39° 31' 28.499 N	107° 36' 36.040 W	Point
C8 BHL TGT	7248.0	-215.9	-799.6	494651.70	732999.51	39° 31' 28.499 N	107° 36' 36.040 W	Point

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	Start Build 3.50
1634.5	1639.8	Start 2678.0 hold at 1639.8 MD
4216.5	4317.8	Start Drop -3.50
4651.0	4757.6	Start 2597.0 hold at 4757.6 MD
7248.0	7354.6	TD at 7354.6

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	1639.8	15.39	254.89	1634.5	-15.3	-56.7	3.50	254.89	58.7	
4	4317.8	15.39	254.89	4216.5	-200.6	-742.9	0.00	0.00	769.5	
5	4757.6	0.00	0.00	4651.0	-215.9	-799.6	3.50	180.00	828.3	C8 TGT
6	7354.6	0.00	0.00	7248.0	-215.9	-799.6	0.00	0.00	828.3	C8 BHL TGT

