



# Wellbore Schematic Input Report

Well Name: MCKAY FEDERAL AB02-15

Original Hole [Land]			Well Header							
MD (ftKB)	Incl (°)	Vertical schematic (actual)	Surface UWI		Asset Team		Production Tree Location			
			0512334185				Land			
			Original RKB Elevation (ft)		Original KB to Ground (ft)		Original Spud Date		Abandon Date	
			4,896.00		14.00		3/3/2012			
			Range		Well Sub-Status		High Pressure			
		PR		N						
			Directions To Well		Latitude (°)		Longitude (°)			
			WCR 88 & 59, South 2.0 miles, West 0.3 miles, North into location.		40.5966346310001		-104.514224368			
			Comment							
			DV TOOL @ +/- 7902'							
			Congressional Location							
Quarter 3		Quarter 4	Section	Township	Township N/S Dir	Range	Range E/W Dir			
SW		SE	2	7	N	64	W			
			Rig Operator							
			Rig/Unit Supervisor							
			BRANDON							
			Daily Cost Summary							
			Sum of Field Est (Cost)							
			0							
			Wellbore Plug Back Total Depths							
Date		PBTD (ftKB)	Method		Com					
3/13/2012		9,024	CASING TALLY		FLOAT COLLAR					
			Wellbore Sections							
Section Des			Hole Size (in)		Top Depth (ftKB)		Btm Depth (ftKB)			
SURFACE			13 1/2		14.0		1,855.0			
PRODUCTION			8 3/4		1,855.0		9,129.0			
			Zone Statuses							
Zone Name			Status Date			Status				
LYONS			4/26/2012			PR				
NIOBRARA			4/26/2012			PR				
J SAND			4/26/2012			PR				
CODELL			4/26/2012			PR				
			Casing Strings							
			Surface, Actual, 1845ftKB							
Casing Description		Run Date	OD (in)	Wt/Len (lb/ft)	Grade	Top Depth (ftKB)	Set Depth (ftKB)			
Surface		3/4/2012	9 5/8	36.00	J-55	14	1845			
			Production Casing, Actual, 9106ftKB							
Casing Description		Run Date	OD (in)	Wt/Len (lb/ft)	Grade	Top Depth (ftKB)	Set Depth (ftKB)			
Production Casing		3/14/2012	7	26.00	L-80	14	9106			
			Cement							
Des			Start Date		Top (ftKB)		Btm (ftKB)			
TOP OUT JOB			3/4/2012		14.0		54.0			
Surface Casing Cement			3/4/2012		54.0		1,845.0			
Production Casing Cement			3/14/2012		1,906.0		7,918.0			
Production Casing Cement			3/14/2012		8,082.0		9,106.0			
			Proposed Cement							
Des					Top (ftKB)		Btm (ftKB)			
			Tubing Strings							
Tubing Description		Run Date	String Make	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Set Depth (ftKB)		
Tubing - Production		11/17/2023	2 7/8	2.441	6.50	L-80	8,727.49	8,726.7		
			Tubing Components							
Item Des		OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)		
Tubing		2 7/8	6.50	L-80	279	8,642.64	8,642.1	8,641.9		
Pump Seating Nipple		2 7/8	6.50	N-80	1	1.10	8,643.2	8,643.0		
Pup Joint		2 7/8	6.50	N-80	1	8.00	8,651.2	8,651.0		
ESP - Pump		4	0.00	X	1	23.73	8,674.9	8,674.7		
Seal Assembly		4	0.00	X	1	12.20	8,687.1	8,686.9		
ESP - Motor		4	0.00	X	1	27.20	8,714.3	8,714.1		
SENSOR		4	0.00	X	1	4.10	8,718.4	8,718.2		
Centralizer		2 3/8	0.00	X	1	0.52	8,718.9	8,718.7		
Shroud		5 1/2	0.00	N-80	1	8.00	8,726.9	8,726.7		
			Other In Hole							
Run Date		Des			Make	OD (in)	Top (ftKB)	Btm (ftKB)		
10/18/2013		Fish			Shroud	5 1/2	8,951.0	8,991.0		



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Original Hole [Land]			Proposed Other In Hole				
MD (ftKB)	Incl (°)	Vertical schematic (actual)	Des	Make	OD (in)	Top (ftKB)	Btm (ftKB)
Logs							
			Date	Type	Depth Top (MD) (ftKB)		Btm (ftKB)
-0.7	0.0		3/7/2012	MUD LOG - VERTICAL	6,000	9,128.0	
14.1			3/10/2012	COMPENSATED SPECTRAL NATURAL GAMMA RAY	184	9,053.0	
54.1	0.3			3/13/2012	TRIPLE COMBO	184	9,127.0
622.7			FOXHILLS-BASE PROD	3/28/2012	ISOLATION SCANNER CEMENT EVAL CAMMA RAY-CCL	14	9,000.0
678.1	0.6		FOX HILLS BASE EST (FOX	3/29/2012	CBL V.D.L./CCL/GR	14	9,007.0
690.0			Casing Joints, 9 5/8in; 1757.4; 14 TVD; 1,743.37; 14-1757.2 TVD; 14-1757.4				
780.5	0.7		Float Collar, 9 5/8in; 1758.3; 1757.2 TVD; 1.00; 1757.2-1758.2 TVD; 1757.3-1758.3				
1,749.3			Float Shoe, 9 5/8in; 1845; 1843.9 TVD; 1.00; 1843.9-1844.9 TVD; 1844-1845				
1,757.2	1.2						
1,758.2			Casing Joints, 9 5/8in; 1844; 1758.2 TVD; 85.65; 1758.2-1843.9 TVD; 1758.3-1844				
1,844.2	1.2						
1,845.1							
1,905.8	0.5						
2,662.1			PIERRE (PIERRE (final))				
2,669.6	0.1		A SAND TOP PROD (A				
3,192.3			Casing Joints, 7in; 6636.8; 14 TVD; 6,622.79; 14-6636.6 TVD; 14-6636.8				
3,714.2	0.1						
3,733.9			PARKMAN-TOP PROD				
4,178.8	0.0		PARKMAN-BASE PROD				
4,312.3		SUSSEX-TOP PROD					
4,320.9	0.1	SUSSEX (SUSSEX (final))					
4,686.7		SUSSEX-BASE PROD					
5,169.9	0.0	SHANNON (SHANNON (final))					
5,175.2		SHANNON-TOP PROD					
5,228.3	0.1	SHANNON-BASE PROD					
5,939.0		TEEPER BUTTES (TEEPER					
6,143.7	0.1	TEEPER BUTTES (TEEPER BUTTES					
6,636.8							
6,650.9	0.1	Marker Joint, 7in; 6651.1; 6636.6 TVD; 14.28; 6636.6-6650.9 TVD; 6636.8-6651.1					
6,762.1		INTRA SHARON SPGS MK					
6,763.5	0.0	SHARON SPRING MKR					
6,770.0		NIOBRARA-TOP PROD					
6,774.9	0.0	NIO A CHALK (NIO A CHALK					
6,785.1		Casing Joints, 7in; 6938.6; 6650.9 TVD; 287.53; 6650.9-6938.5 TVD; 6651.1-6938.6					
6,794.0	0.1						
6,891.4		NIOBRARA A (NIOBRARA A					
6,900.9	0.1	NIO B MARL (NIO B MARL					
6,928.5							
6,938.6	0.1	Marker Joint, 7in; 6958.5; 6938.5 TVD; 19.88; 6938.5-6958.3 TVD; 6938.6-6958.5					
6,958.3		NIO C CHALK (NIO C CHALK					
6,965.6	0.2	NIOBRARA B (NIOBRARA B					
6,965.9		NIO C MARL (NIO C MARL					
7,010.2	0.4	NIO D CHALK (NIO D CHALK					
7,029.9		NIOBRARA C (NIOBRARA C					
7,068.9	0.4	NIO FT HAYS (NIO FT HAYS					
7,069.2		FORT HAYS (FORT HAYS					
7,091.9	0.4	CODFII (CODFII (final))					
7,092.5		Casing Joints, 7in; 7413.8; 6958.3 TVD; 455.35; 6958.3-7413.7 TVD; 6958.5-7413.8					
7,107.9	0.5						
7,413.7		Marker Joint, 7in; 7428.5; 7413.7 TVD; 14.64; 7413.7-7428.3 TVD; 7413.8-7428.5					
7,428.5	0.1						
7,431.1		GREENHORN (GREENHORN					
7,482.9	0.1	D SAND (D SAND (final))					
7,495.1		Casing Joints, 7in; 7679.7; 7428.3 TVD; 251.26; 7428.3-7679.6 TVD; 7428.5-7679.7					
7,679.8	0.0	Marker Joint, 7in; 7700.4; 7679.6 TVD; 20.63; 7679.6-7700.2 TVD; 7679.7-7700.4					
7,700.5		Stage Collar, 7in; 7923.8; 7901.7 TVD; 22.00; 7901.7-7923.7 TVD; 7901.8-7923.8					
7,744.1	0.1						
7,901.9							
7,918.0	0.0						
7,923.9							
8,082.0	0.1	Casing Joints, 7in; 8763.7; 7923.7 TVD; 839.89; 7923.7-8763.6 TVD; 7923.8-8763.7					
8,642.1							
8,643.0	0.0						
8,651.2							
8,674.9	0.0						
8,687.0							
8,714.2	0.0						
8,718.5							
8,718.8	0.0						
8,727.0							
8,763.8	0.1						
8,777.6		Casing Joints, 7in; 9024; 8777.3 TVD; 246.54; 8777.3-9023.8 TVD; 8777.4-9024					
8,951.1	0.0						
8,991.1							
9,024.0	0.1	Shoe Joint, 7in; 9065.8; 9025.3 TVD; 40.35; 9025.3-9065.7 TVD; 9025.5-9065.8					
9,025.6							
9,065.9	0.0	Float Shoe, 7in; 9106; 9104.1 TVD; 1.75; 9104.1-9105.8 TVD; 9104.2-9106					
9,104.3							
9,106.0	0.0						

Perforation Data				
Linked Zone	Sum of Entered Shot Total	Top (ftKB)	Btm (ftKB)	Date
LYONS, Original Hole	88	8,828.0	8,850.0	4/3/2012
Total	88			

Job Supply Amounts						
Supply Item Des	Job Supply Type	Unit L	Job Category	Total Re	Total Co	Total Re

Daily Cost Breakdown by Category		
Field Est (Cost)	Description	Note

Date	Type	Depth Top (MD) (ftKB)	Btm (ftKB)
3/7/2012	MUD LOG - VERTICAL	6,000	9,128.0
3/10/2012	COMPENSATED SPECTRAL NATURAL GAMMA RAY	184	9,053.0
3/13/2012	TRIPLE COMBO	184	9,127.0
3/28/2012	ISOLATION SCANNER CEMENT EVAL CAMMA RAY-CCL	14	9,000.0
3/29/2012	CBL V.D.L./CCL/GR	14	9,007.0

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LYONS, Original Hole	88	8,828.0	8,850.0	4/3/2012
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