

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 297-11B8

HORIZON 801

Post Job Summary

Cement Multiple Stages

Date Prepared: April 27, 2009
Version: 1

Service Supervisor: ESTEP, KENNETH

Submitted by: Nicholas Bullington

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Wellbore Geometry

Job Tubulars					MD		TVD		Excess	Shoe Joint Length
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	%	ft
Cement Stage Tool	Multiple Stage Cementer				0.00	1,315.00				
Casing	Surface Casing	10.75	9.950	45.50	0.00	3,710.00	0.00	3,672.00		80.00
Open Hole Section	Surface Open Hole		14.750		0.00	1,304.00	0.00	1,294.00	75.00	
Open Hole Section	Surface Open Hole		14.750		1,304.00	3,710.00	1,294.00	3,672.00	25.00	

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Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	FreshWater Ahead	8.33	6.00	50.0 bbl	50.0 bbl
1	2	Cement Slurry	First Stage Lead Cement	12.70	6.00	760.0 sacks	760.0 sacks
1	3	Cement Slurry	First Stage Tail Cement	15.80	6.00	350.0 sacks	350.0 sacks
1	4	Spacer	Drilling Fluid / Mud	8.80	6.00	336.0 bbl	336.0 bbl
2	1	Spacer	Freshwater Ahead	8.33	6.00	50.0 bbl	50.0 bbl
2	2	Cement Slurry	Second Stage Lead Cement	12.70	6.00	685.0 sacks	685.0 sacks
2	3	Spacer	Drilling Fluid / Mud	8.80	6.00	126.0 bbl	126.0 bbl
2	4	Cement Slurry	Top Out Cement	15.80		200.0 sacks	200.0 sacks

Fluids Pumped

Stage/Plug # 1 Fluid 1: FreshWater Ahead
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Fluid Volume: 50.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 2: First Stage Lead
Cement
ECONOCEM (TM) SYSTEM
0.5 % HR-7
0.25 lbm Poly-E-Flake

Fluid Weight: 12.70 lbm/gal
Slurry Yield: 1.88 ft³/sack
Total Mixing Fluid: 9.96 Gal
Surface Volume: 760.0 sacks
Sacks: 760.0 sacks
Calculated Fill: 2,048.00 ft
Calculated Top of Fluid: 1,315.00 ft
Estimated Top of Fluid:
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 3: First Stage Tail Cement
HALCEM (TM) SYSTEM
0.3 % HR-5
0.25 lbm Poly-E-Flake

Fluid Weight: 15.80 lbm/gal
Slurry Yield: 1.15 ft³/sack
Total Mixing Fluid: 4.94 Gal
Surface Volume: 350.0 sacks

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Sacks: 350.0 sacks
Calculated Fill: 516.00 ft
Calculated Top of Fluid: 3,363.00 ft

Estimated Top of Fluid:
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 4: Drilling Fluid / Mud
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.80 lbm/gal
Fluid Volume: 336.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 Fluid 1: Freshwater Ahead
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.33 lbm/gal
Fluid Volume: 50.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 Fluid 2: Second Stage Lead
Cement
ECONOCEM (TM) SYSTEM
0.25 lbm Poly-E-Flake

Fluid Weight: 12.70 lbm/gal
Slurry Yield: 1.87 ft³/sack
Total Mixing Fluid: 9.98 Gal
Surface Volume: 685.0 sacks
Sacks: 685.0 sacks
Calculated Fill: 1,315.00 ft
Calculated Top of Fluid: 0.00 ft
Estimated Top of Fluid:
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 Fluid 3: Drilling Fluid / Mud
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 8.80 lbm/gal
Fluid Volume: 126.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 2 Fluid 4: Top Out Cement
Top Out Cement

94 lbm Premium Cement
2 % Calcium Chloride

Fluid Weight: 15.80 lbm/gal
Slurry Yield: 1.17 ft³/sack
Total Mixing Fluid: 5.02 Gal
Surface Volume: 200.0 sacks
Sacks: 200.0 sacks
Estimated Top of Fluid:

Job Summary

Job Information

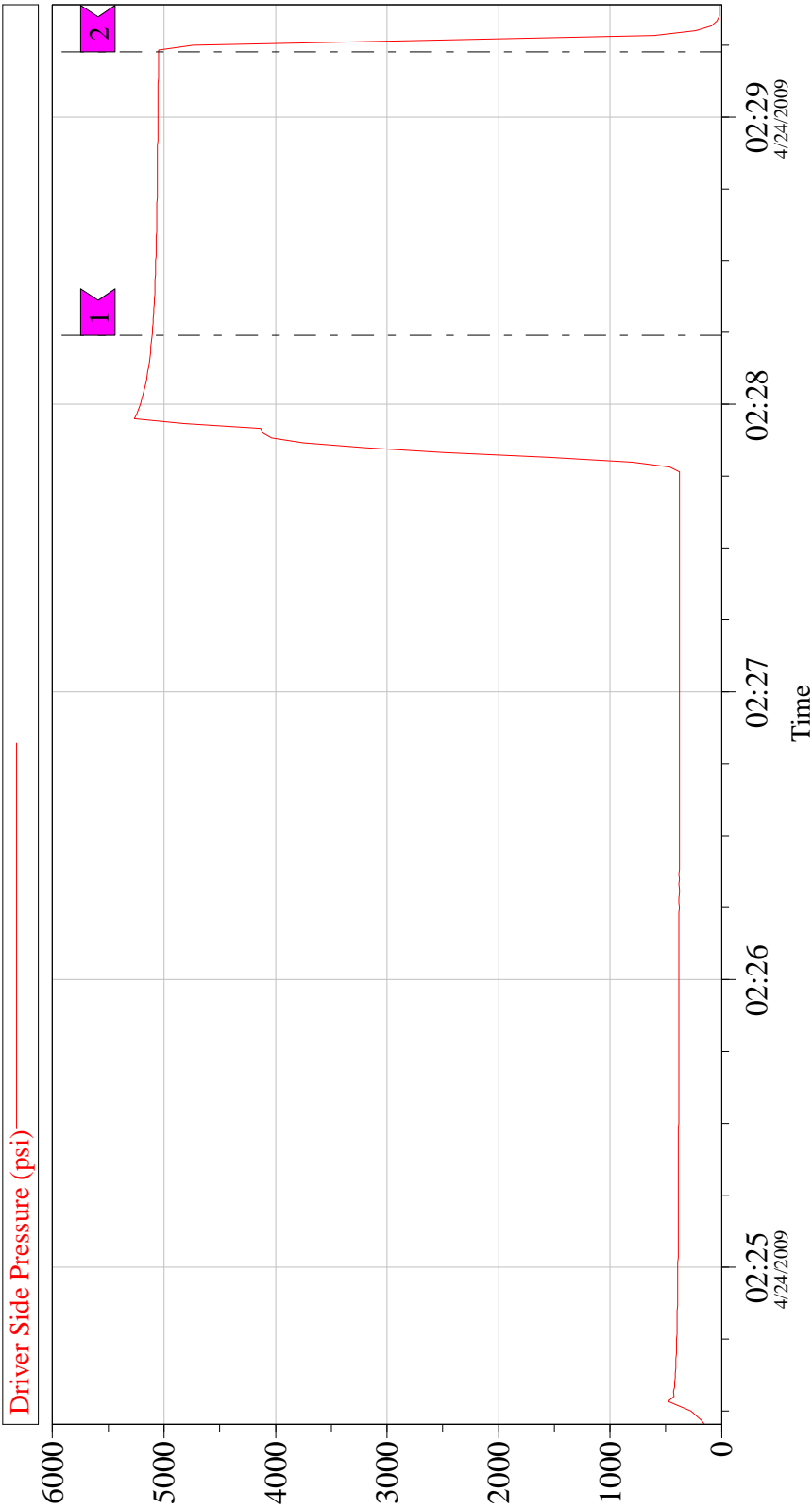
Job Start Date	4/24/2009 1:25:00 AM
Job MD	4,021.0 ft
Job TVD	3,706.0 ft
Height of Plug Container/Swage Above Rig Floor	3.0 ft
Mud Type	Water Based Mud
Actual Mud Density	8.6 lbm/gal
Pipe Movement During Cementing	Reciprocated
Calculated Displacement	126.47 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Annular flow Before Job? (Water/Gas)	No

Cementing Equipment

Brand of Float Equipment Used	Weatherford
Did Float Equipment Hold?	Yes
Plug set used?	Yes
Brand of Plug set used?	Weatherford
Did Plugs Bump?	Yes
Brand of Stage Cementing Tools Used	Weatherford
Did Stage Cementing Tool Open Properly?	Yes

Data Acquisition

XOM PCU 297-11B8 Surface - 1st Stage
Pressure Test



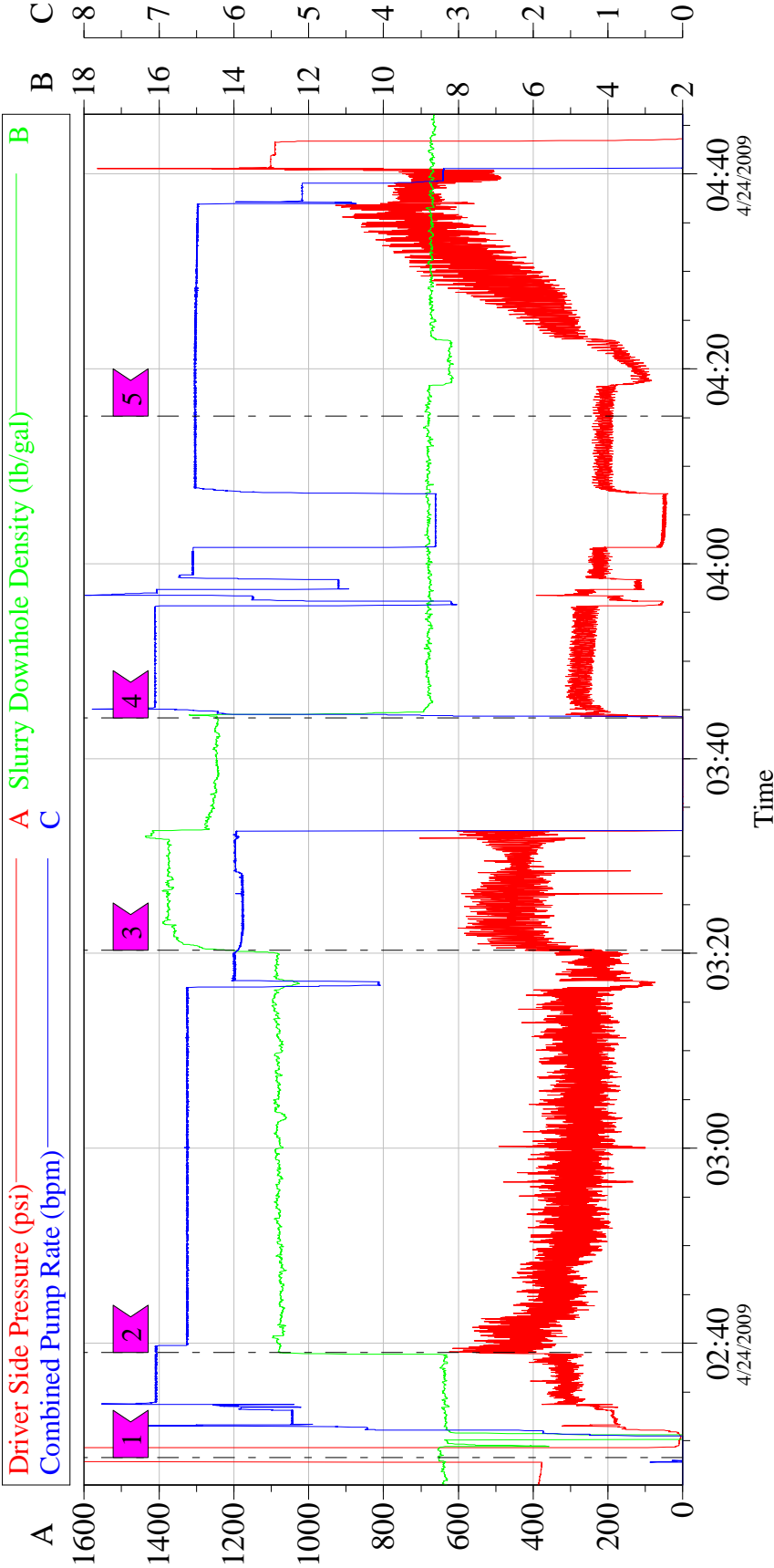
Local Event Log			
Intersection	DSP	Intersection	DSP
1	02:28:14 5105	2	02:29:14 5048

Customer: EXXONMOBIL CORPORATION	Job Date: 24-Apr-2009	Sales Order #: 6627029
Well Description: PCU 297-11B8 Surface Casing	UWI:	

OptiCem v6.4.0
28-Apr-09 07:06

XOM PCU 297-11B8 Surface - 1st Stage

Job Plot

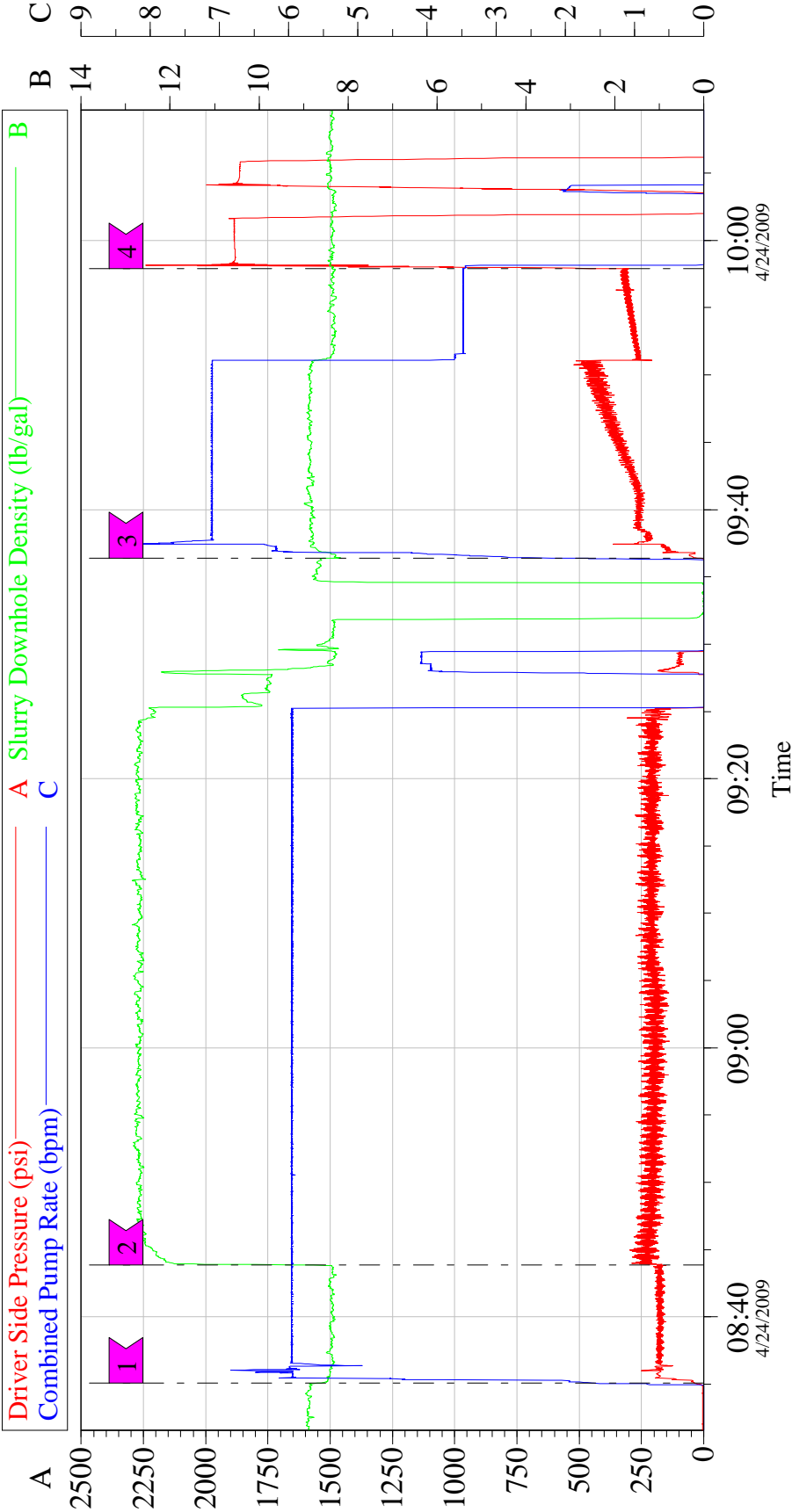


Local Event Log			
1	25 BBL Water	2	760 Sacks 12.7 PPG CMT 02:39:02
3	350 Sacks 15.8 PPG CMT	4	336.0 BBL Mud Displacement 03:44:10
5	Bump Plug @ 750 PSI		04:15:08

Customer: EXXONMOBIL CORPORATION	Job Date: 24-Apr-2009	Sales Order #: 6627029
Well Description: PCU 297-11B8 Surface Casing	UWI:	

XOM PCU 297-11B8 Surface - 2nd Stage

Job Plot



Customer:	EXXONMOBIL CORPORATION	Job Date: 24-Apr-2009	Sales Order #: 6627029
Well Description:	PCU 297-11B8 Surface Casing	UWI:	

OptiCem v6.4.0
28-Apr-09 07:28

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump	Pressure (psig)	Comments
04/23/2009 16:00		Call Out					
04/23/2009 18:15		Safety Huddle					
04/23/2009 18:30		Depart from Service Center or Other Site					
04/23/2009 21:30		Arrive at Location from Service Center					
04/23/2009 21:35		Safety Huddle					
04/23/2009 21:50		Rig-Up Equipment					
04/24/2009 01:00		Safety Huddle					
04/24/2009 01:25		Pressure Test				380.0	
04/24/2009 01:30		Pressure Test				5070.0	
04/24/2009 01:33		Pump Water	7	50		303.0	
04/24/2009 01:41		Pump Lead Cement	6.6	254.5		430.0	
04/24/2009 02:22		Pump Tail Cement	6	72		451.0	
04/24/2009 02:47		Pump Displacement	7	347		280.0	
04/24/2009 03:01		Slow Rate	6.5			260.0	
04/24/2009 03:04		Slow Rate	3.3	110		81.0	SLOW THROUGH TOOL
04/24/2009 03:09		Other	6.5	130		253.0	UP RATE
04/24/2009 03:20		Pump Water	6.5	210		160.0	
04/24/2009 03:26		Other	6.5	240		370.0	CAUGHT CEMENT
04/24/2009 03:39		Slow Rate	5	320		730.0	
04/24/2009 03:41		Slow Rate	3	330		643.0	
04/24/2009 03:43		Bump Plug	3	336		1140.0	
04/24/2009 03:45		Check Floats					
04/24/2009 03:50		Other					DROP DART
04/24/2009 04:07		Other				680.0	OPEN TOOL
04/24/2009 04:12		Other	4	20		160.0	CIRCULATE WELL
04/24/2009 04:15		Other					TURN OVER TO RIG- WASH PUMPS AND LINES
04/24/2009 04:30		Other					WAIT ON CEMENT SAMPLES
04/24/2009 07:15		Safety Huddle					
04/24/2009 07:37		Pump Water	6	50		181.0	
04/24/2009 07:45		Pump Lead Cement	6	228		243.0	
04/24/2009 08:28		Other					SHUT DOWN DROP PLUG
04/24/2009 08:53		Slow Rate	3.6			281.0	
04/24/2009 09:00		Bump Plug	3.6	126		1917.0	
04/24/2009 09:06		Other				1906.0	PRESSURE BACK UP AND SHUT IN HEAD
04/24/2009 10:34		Other	1.5	42		593.0	PUMP TOP OUT
04/24/2009 11:06		Other					SHUT DOWN- NO RETURNS
04/24/2009 11:10		Other					RELEASED BY COMPANY MAN
04/24/2009 11:15		Safety Huddle					
04/24/2009 11:30		Rig-Down Equipment					
04/24/2009 13:15		Safety Huddle					
04/24/2009 13:30		Depart Location for Service Center or Other Site					

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The Road to Excellence Starts with Safety

To #: 331699		Ship To #: 2716562		Quote #:		Sales Order #: 6627029	
Customer: EXXONMOBIL CORPORATION				Customer Rep: Turner, Weston			
Well Name: PCU			Well #: 297-11B8		API/UWI #: 05-103-11371		
Field: PICEANCE CREEK		City (SAP): MEEKER		County/Parish: Rio Blanco		State: Colorado	
Contractor: HORIZON			Rig/Platform Name/Num: Horizon 801				
Job Purpose: Cement Multiple Stages							
Well Type: Development Well				Job Type: Cement Multiple Stages			
Sales Person: TURNER, JAMIE			Srvc Supervisor: ESTEP, KENNETH			MBU ID Emp #: 121420	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
ESTEP, KENNETH	16	121420	RUFF, RUSTY	16	0	WESTMORELAND, AUSTON	16	0

Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
4-23-09	2.5	0	4-24-09	13.5	6			
TOTAL	<i>Total is the sum of each column separately</i>							

Job

Job Times

Formation Name						Date	Time	Time Zone
Formation Depth (MD)	Top		Bottom		Called Out	23 - Apr - 2009	16:00	MST
Form Type			BHST	135 degF	On Location	23 - Apr - 2009	21:00	MST
Job depth MD	4021. ft		Job Depth TVD	3706. ft	Job Started	24 - Apr - 2009	01:25	MST
Water Depth			Wk Ht Above Floor	3. ft	Job Completed	24 - Apr - 2009	11:06	MST
Perforation Depth (MD)	From		To		Departed Loc	24 - Apr - 2009	13:30	MST

Well Data

Description	New / Used	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Multiple Stage Cementer								.	1319.		
Surface Open Hole				14.75				.	1304.	.	1294.
Surface Open Hole				14.75				1304.	3710.	1294.	3672.
Surface Casing	Unknown		10.75	9.95	45.5		J-55	.	3710.	.	3706.

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	10 3/4		
Float Shoe					Bridge Plug					Bottom Plug	10 3/4		
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	10 3/4		
Stage Tool										Centralizers			

Miscellaneous Materials

Gelling Agt	Conc	Surfactant	Conc	Acid Type	Qty	Conc	%
Treatment Fld	Conc	Inhibitor	Conc	Sand Type	Size		

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Fluid Data									
Stage/Plug #: 1									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft ³ /sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
1	FreshWater Ahead		50.00	bbl	8.33	.0	.0	6.0	
2	First Stage Lead Cement	ECONOCEM (TM) SYSTEM (452992)	760.0	sacks	12.7	1.88	9.96	6.0	9.96
	0.5 %	HR-7 (100005055)							
	0.25 lbm	POLY-E-FLAKE (101216940)							
	9.961 Gal	FRESH WATER							
3	First Stage Tail Cement	HALCEM (TM) SYSTEM (452986)	350.0	sacks	15.8	1.15	4.94	6.0	4.94
	0.3 %	HR-5, 50 LB SK (100005050)							
	0.25 lbm	POLY-E-FLAKE (101216940)							
	4.935 Gal	FRESH WATER							
4	Drilling Fluid / Mud		336.00	bbl	8.8	.0	.0	6.0	
Stage/Plug #: 2									
Fluid #	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density uom	Yield uom	Mix Fluid uom	Rate uom	Total Mix Fluid uom
1	Freshwater Ahead		50.00	bbl	8.33	.0	.0	6.0	
2	Second Stage Lead Cement	ECONOCEM (TM) SYSTEM (452992)	685.0	sacks	12.7	1.87	9.98	6.0	9.98
	0.25 lbm	POLY-E-FLAKE (101216940)							
	9.982 Gal	FRESH WATER							
3	Drilling Fluid / Mud		126.00	bbl	8.8	.0	.0	6.0	
4	Top Out Cement	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	200.0	sacks	15.8	1.17	5.02		5.02
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	2 %	CALCIUM CHLORIDE - HI TEST PELLET (100005053)							
	5.019 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement		5 Min		Cement Returns		Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers		Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	80 ft	Reason	Shoe Joint					
Frac Ring # 1 @	ID		Frac ring # 2 @	ID		Frac Ring # 3 @	ID		Frac Ring # 4 @
The Information Stated Herein Is Correct				Customer Representative Signature					