

EXXONMOBIL CORPORATION

HOUSTON, Texas

PCU 296-6B9

H&P 215

Post Job Summary

Cement Intermediate Casing

Prepared for: Haley Holub
Date Prepared: July 31, 2011
Version: 1

Service Supervisor: DAVIS, CODY

Submitted by: Joshua Anglin

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Wellbore Geometry

Job Tubulars					MD		TVD		Excess	Shoe Joint Length ft
Type	Description	Size in	ID in	Wt lbm/ft	Top ft	Bottom ft	Top ft	Bottom ft	%	
Casing	Surface Casing	10.75	9.950	45.50	0.00	4,398.00	0.00	4,356.00		80.00
Open Hole Section	Intermediate Open Hole		9.875		4,398.00	10,013.00	4,356.00	9,973.00		0.00
Casing	Intermediate Casing	7.00	6.276	26.00	0.00	9,998.00	0.00	9,956.00		80.00

Pumping Schedule

Stage /Plug #	Fluid #	Fluid Type	Fluid Name	Surface Density lbm/gal	Avg Rate bbl/min	Surface Volume	Downhole Volume
1	1	Spacer	TUNED SPACER III	10.00	6.00	80.0 bbl	80.0 bbl
1	2	Cement Slurry	New Vernal Tuned Light	11.00	6.00	1415.0 sacks	1415.0 sacks
1	3	Spacer	Drilling Mud	0.00	0.00	377.0 bbl	377.0 bbl

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Fluids Pumped

Stage/Plug # 1 Fluid 1: TUNED SPACER III
TUNED SPACER III - SBM (483826)
64.375 Barite
lbm/bbl

Fluid Density: 10.00 lbm/gal
Fluid Volume: 80.00 bbl
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 2: New Vernal Tuned
Light
TUNED LIGHT (TM) SYSTEM

Fluid Weight: 11.00 lbm/gal
Slurry Yield: 2.22 ft³/sack
Total Mixing Fluid: 9.67 Gal
Surface Volume: 1415.0 sacks
Sacks: 1415.0 sacks
Calculated Fill: 6,185.00 ft
Calculated Top of Fluid: 4,055.00 ft
Estimated Top of Fluid:
Pump Rate: 6.00 bbl/min

Stage/Plug # 1 Fluid 3: Drilling Mud
DUMMY MUD / FLUSH / SPACER SBC MATERIAL

Fluid Density: 0.00 lbm/gal
Fluid Volume: 377.00 bbl
Pump Rate: 0.00 bbl/min

Job Summary

Job Information

Job Start Date	7/15/2011 4:25:00 PM
Job MD	10,002.0 ft
Job TVD	9,988.0 ft
Height of Plug Container/Swage Above Rig Floor	3.0 ft
Surface Temperature at Time of Job	80 degF
Mud Type	Water Based Mud
Name of Mud Company	BAROID
Actual Mud Density	9 lbm/gal
Time Circulated before job	4.00 hour(s)
Pipe Movement During Hole Circulation	Rotated and Reciprocated
Time From End Mud Circ. to Job Start	10.00 minute
Pipe Movement During Cementing	None
Calculated Displacement	377.00 bbl
Job Displaced by (rig/halco)	Cement Unit HP Pumps
Length of Rat Hole	14.00 ft

Cementing Equipment

Number of Centralizers Used	3
Pipe Centralization	Bottom Joints (1 TO 10)
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
Calculated Pressure to Bump Plugs	1,000.0 psig

Service Supervisor Reports

Job Log

Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
07/13/2011 16:00		Call Out						
07/13/2011 17:45		Depart Yard Safety Meeting						JOURNEY MANAGMENT
07/13/2011 18:00		Crew Leave Yard						
07/13/2011 21:30		Arrive at Location from Service Center						RIG RUNNING CASING
07/13/2011 21:45		Safety Meeting - Assessment of Location						OVER HEAD LINES RED ZONES
07/13/2011 21:50		Other						MEET W/ CO MAN AND GO OVER NUMBERS
07/13/2011 22:00		Other						SOPT TRUCKS USING TWO SPOTTERS
07/13/2011 22:05		Safety Meeting - Pre Rig-Up						PINCH POINTS RED ZONE LINE OF FIRE
07/13/2011 22:10		Rig-Up Equipment						
07/14/2011 00:30		Rig-Up Completed						
07/14/2011 00:35		Other						WAIT ON RIG TO RUN CASING
07/15/2011 14:49		Pre-Rig Up Safety Meeting						Discussed, rig up procedure, safety precautions and other safety topics
07/15/2011 16:02		Pressure Test						Start Low Pressure Test 400psi lost 4psi 1 % lost during test, High pressure test @ 5074psi lost 30psi >1% lost
07/15/2011 16:02		Slow Rate						Belly Magmeter plugged off, slowed rate to rectify the problem
07/15/2011 16:02		Pump Displacement - End	8	377				Pump displacement
07/15/2011 16:12		Pump Spacer	5	80			493.0	Pump spacer, Design 80bbl Pumped 74 bbl TSIII

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Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)	Comments
07/15/2011 16:31		Drop Bottom Plug						Dropped top plug witnessed by co-man
07/15/2011 16:32	1211	Pump Cement	6	559.5			591.0	Intermediate Tuned Light 11ppg 9.67gal/sk 560
07/15/2011 16:39		Slow Rate	3	559.5			210.0	Swap from bulk truck to silo #1 dropped rate to maintain density, then picked back up to 6bpm
07/15/2011 17:06		Slow Rate	4	559.5			112.0	Slow rate to maintain density, picked back up to 6 bpm
07/15/2011 18:01	13	Other	7	559.5				Belly line blocked off tried to re-prime pumps with no success. Use metal rod to try and unblock bellymag meter down from 17:32 to 18:01. Lines finally cleared 18:01
07/15/2011 18:02	14	Pump Cement	7	559.5				Resume pumping cement
07/15/2011 18:24		Drop Plug						Drop top plug,
07/15/2011 18:41		Other	8	377			115.0	Catch Plug
07/15/2011 18:45		Slow Rate						Reduce Pump rate to 6 bbl/min, 130 bbls away, 340 psi
07/15/2011 19:12		Slow Rate	5	377			742.0	Slow rate to 5bpm
07/15/2011 19:27		Slow Rate	3	377			812.0	Slow rate to 3pm in anticipation to bump plug
07/15/2011 19:32		Bump Plug	3	378			1454.0	Bumped the plug @1454psi calculated 1004psi, 377.7bbls into displacement
07/15/2011 19:37		Check Floats						Check floats, floats held with 2.25bbls back,
07/15/2011 19:40		Post-Job Safety Meeting (Pre Rig-Down)						Pinch points red zones line of fire
07/15/2011 19:50		Rig-Down Equipment						
07/15/2011 21:00		Rig-Down Completed						
07/15/2011 21:15		Safety Meeting - Departing Location						Journey managment

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Date/Time	Chart #	Activity Code	Pump Rate	Cum Vol	Pump		Pressure (psig)		Comments
07/15/2011 21:30		Depart Location Safety Meeting							

The Road to Excellence Starts with Safety

Sold To #: 331699	Ship To #: 2862378	Quote #:	Sales Order #: 8307327
Customer: EXXONMOBIL CORPORATION	Customer Rep: McGourty, Alex		
Well Name: PCU	Well #: 296-6B9	API/UWI #:	
Field:	City (SAP): MEEKER	County/Parish: Rio Blanco	State: Colorado
Contractor: H&P	Rig/Platform Name/Num: H&P215		
Job Purpose: Cement Intermediate Casing			
Well Type: Development Well	Job Type: Cement Intermediate Casing		
Sales Person: MCNARY, GEORGE	Srvs Supervisor: DAVIS, CODY	MBU ID Emp #:	446891

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DAVIS, CODY R		446891	ESTEP, KENNETH		121420	GOODRICH, BENJAMIN Franklin		481342
PARTRIDGE, TRAVIS M		484614	WILLIAMS, CAMERON Kent		438405			

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

TOTAL	Total is the sum of each column separately							
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Job

Job Times

Formation Name										Date	Time	Time Zone
Formation Depth (MD)		Top			Bottom				Called Out	13 - Jul - 2011	16:00	MST
Form Type					BHST				On Location	13 - Jul - 2011	21:30	MST
Job depth MD		10002. ft			Job Depth TVD		9988. ft		Job Started	15 - Jul - 2011	16:25	MST
Water Depth					Wk Ht Above Floor		3. ft		Job Completed	15 - Jul - 2011	00:00	MST
Perforation Depth (MD)		From			To				Departed Loc	15 - Jul - 2011	21:30	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
Intermediate Open Hole				9.875				4398.	10013.	4356.	9973.
Intermediate Casing	Unknown		7.	6.276	26.	HYDRIL - SERIES 500 TYPE 513	P-110	.	9998.	.	9956.
Surface Casing	Unknown		10.75	9.95	45.5	BTC	J-55	.	4398.	.	4356.

Tools and Accessories

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

Miscellaneous Materials

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

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	TUNED SPACER III	TUNED SPACER III - SBM (483826)	80.00	bbl	10.	6.42	43.97	6.0	
43.97 gal/bbl		FRESH WATER							
64.375 lbm/bbl		BARITE, 100 LB SK (100003680)							
2	New Vernal Tuned Light	TUNED LIGHT (TM) SYSTEM (452984)	1415.0	sacks	11.	2.22	9.67	6.0	9.67
9.67 Gal		FRESH WATER							
3	Drilling Mud		377.00	bbl	.	.0	.0	.0	
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 @	ID		
The Information Stated Herein Is Correct				Customer Representative Signature					

Lab Data

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Cementing Rockies, Vernal

LAB RESULTS - Primary

Job Information

Request/Slurry	161215/1	Rig Name	H&P 215	Date	12/JUL/2011
Submitted By	Joshua Anglin	Job Type	Intermediate Casing	Bulk Plant	Vernal
Customer	ExxonMobil	Location	Rio Blanco	Well	PCU 296-6B9

Well Information

Casing/Liner Size	7"	Depth MD	9998 ft	BHST	229 F
Hole Size	9 7/8"	Depth TVD	9956 ft	BHCT	173 F

Drilling Fluid Information

Mud Company	Type	Density	9.3 PPG	PV/YP
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Cement Information - Primary Design

Conc	UOM	Cement/Additive	Sample Type	Sample Date	Lot No.	Cement Properties		
		Tuned Light				Slurry Density	11.00	PPG
						Slurry Yield	2.22	ft3/sk
36.88	%	> Boral Craig Pozmix	Bulk	Jul 12, 2011		Water Requirement	9.67	GPS
11	%	> HGS 6000 (PB)	Bulk	Jul 12, 2011				
53.19	%	> Holcim Type V	Bulk	Jul 12, 2011				
13	%	> Silicalite - Compacted	Bulk	Jul 12, 2011				
100.00	% BWOC	Cement Blend						
0.200	lb/sk	Econolite (Powder - PB)	Bulk	Jul 12, 2011		Water Source	Field (Fresh) Water	
1.200	lb/sk	HR-601	Bulk	Jul 12, 2011		Water Chloride	N/A	ppm
0.500	lb/sk	D-Air 3000	Bulk	Jul 12, 2011				
9.67	gal/sack	Field (Fresh) Water	Lab	Apr 12, 2011	4/12/11			

Operation Test Results Request ID 161215/1

UCA Comp. Strength, Request Test ID:1615200, Historical Data

End Temp (°F)	Pressure (psi)	50 psi (hh:mm)	500 psi (hh:mm)	12 hr CS (psi)	24 hr CS (psi)	48 hr CS (psi)	End CS (psi)	End Time (hrs)
207	3,000	11:57	12:47	61	1,340	1,492	1,586	72

Thickening Time, Request Test ID:1615196, Historical Data

Temp (°F)	Pressure (psi)	Reached in (min)	Start BC	30 Bc (hh:mm)	50 Bc (hh:mm)	70 Bc (hh:mm)	100 Bc (hh:mm)
173	6,270	60	12	04:11	04:15	04:25	04:31

Marsh Funnel, Request Test ID:1615201, Historical Data

Volume [ml]	Time [Sec]	Foam Quality
250	14	0

Free Water, Request Test ID:1615197, Historical Data

Test Temp (°F)	% FW 45 Inc
173	0.2

API Rheology, Request Test ID:1615202, Historical Data

Temp (°F)	600	300	200	100	60	30	6	3	PV/YP
80	30	15	10	6	6	4	4	3	11.2 / 3.4

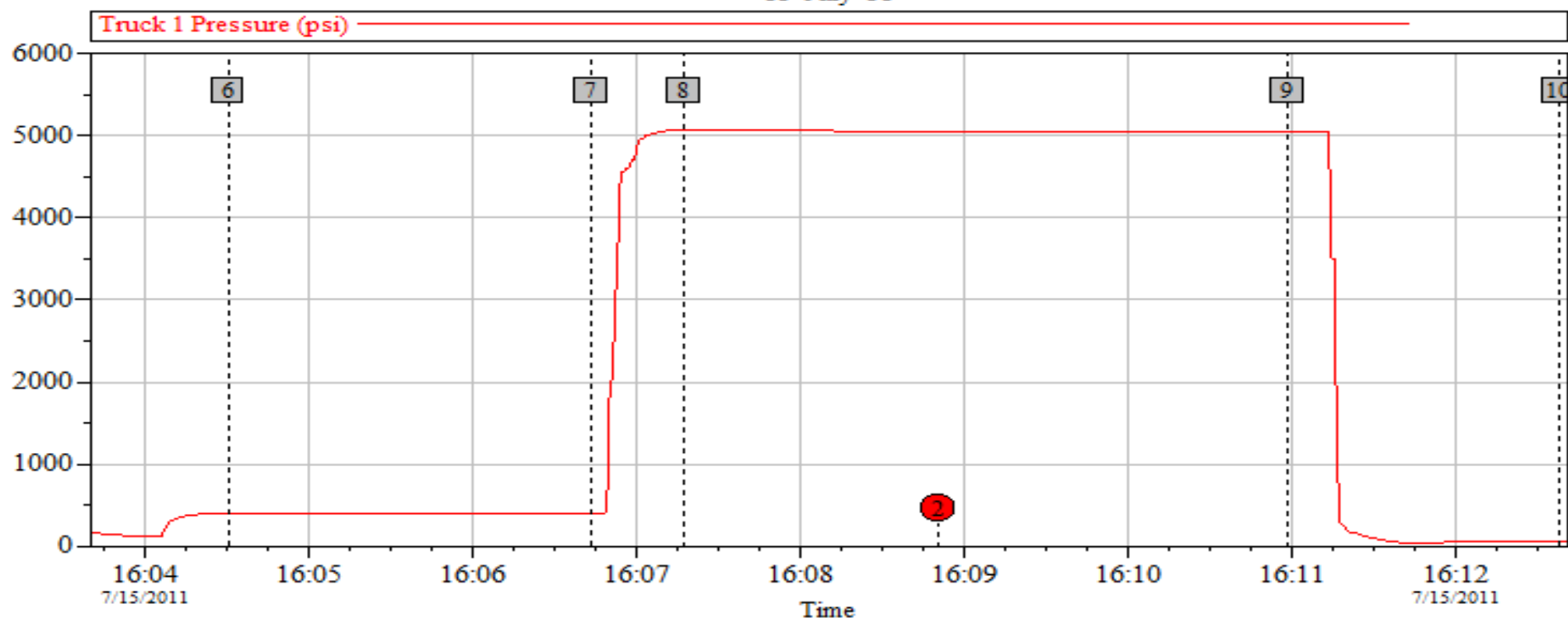
API Fluid Loss, Request Test ID:1615198, Historical Data

Test Temp (°F)	Test Pressure (psi)	Test Time (min)	Meas. Vol (< 30 min, cc)	Extr. ISO FL (cc/30 min)
173	1,000	0.75	40	506

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Data Acquisition

ExxonMobil PCU 296-6B9 7" Intermediate Cement Pressure Test 15-July-11



Global Event Log

Intersection	T1P	Intersection	T1P	Intersection	T1P
6 Start Low Pressure Test	16:04:30 400.0	7 End Low Pressure Test	16:06:44 396.0	8 Start High Pressure Test	16:07:17 5074
9 End High Pressure Test	16:10:58 5044	10 Pump Spacer	16:12:38 56.00		

Customer: EXXONMOBIL
Well Description: PCU 296-6B9

Job Date: 15-Jul-2011
UWI:

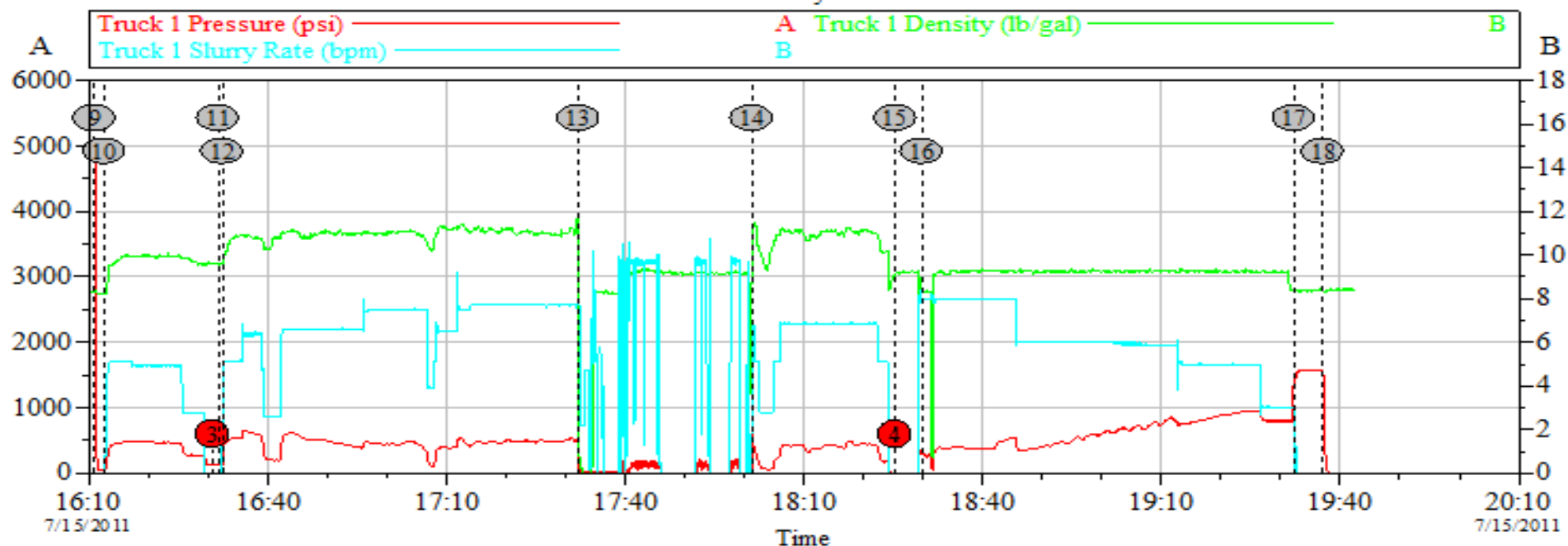
Sales Order #: 8308001

OptiCam v6.4.10
15-Jul-11 16:38

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ExxonMobil PCU 296-6B9 7" Intermediate Cement Job Summary

15-July-11



Intersection	TIP	Intersection	TIP	Intersection	TIP
9 End High Pressure Test	16:10:58 5044	10 Pump Spacer	16:12:38 56.00	11 Drop Bottom Plug	16:31:43 121.0
12 Pump Tuned Light	16:32:25 137.9	13 Other	17:32:11 109.8	14 Resume Pumping	18:01:17 379.1
15 Drop Top Plug	18:25:23 6.000	16 Pump Displacement	18:29:48 328.2	17 Bump Plug	19:32:18 1449
18 Check Floats	19:37:08 1520				

Customer: EXXONMOBIL
 Well Description: PCU 296-6B9
 SVC LDR: Ken Estep Sr

Job Date: 15-Jul-2011
 Rig: H&P 215
 SVC SUP: Cody Davis

Sales Order #: S308001

OptiCem v6.4.10
 15-Jul-11 19:42