



Well History

Well Name: Baker #31-5

API/UWI 05123212970000	Surface Legal Location NWNE 5-4N-63W	Field Name Wattenberg	State/Prov CO	Well Configuration Type
Ground Elevation (ft) 4,610.00	Original KB Elevation (ft) 4,622.00	KB-Ground Distance (ft) 12.00	Spud Date 1/29/2003 00:00	Rig Release Date 2/12/2003 00:00
			On Production Date 3/13/2003 00:00	

Daily Operations		
Start Date	Summary	End Date
10/18/2012	STP 700 psi, SCP 600 psi, on blow down through production equipment, SSCP 0 psi, MIRU Bayou 008, blew well down to rig tank, control well w/40 bbls Claytreat/Biocide water, ND WH, NU BOP, PU tag jts, TIH w/ 2 jts, tagged @ 7,040.40' w/2, LD tag jts, RU Pick Testers, POOH w/production tbg to derrick testing to 6000 psi, all jts tested good, RD tester, (POOH w/ 225 jts 2 3/8" J-55 EUE 8rd tbg, sn/nc, tbg was landed at 6,995.40' KB), tag depth of 7,040.40' KB, PU RMOR's 3 7/8" blade git - 4 1/2" csg scraper, TIH w/production tbg, circulated down to 7,040.40' KB (11' below J-Sand) and tools w/227 jts, rolled hole clean, POOH LD w/ 134 jts, leaving 91 jts @ 2,829.19', isolated well, drained lines, prepare for next days operations, SDFN.	10/18/2012
10/19/2012	SCP 0, SSCP 0 psi, finished TOOH w/ tubing, ND BOP, remove tbg head, install PDC's 4 1/2" 5K frac valve, MIRU Nabors Wireline, TIH w/ wireline set cast iron plug, correlated with logs, set cast iron plug @ 6,935', TOOH LD setting tool, TIH w/ dump bailer and two sacks of cement, spotted cement on top of plug abandoning J-Sand formation, TOOH w/wireline, RD moved wireline off of location, MIRU Pick Testers, pressured tested csg/RBP to 5000 psi using Pick Testers, held 20 minutes, test good, released tester, removed frac valve, un-pack csg head, un-land csg (90 K), NU annular flanges, TIH picking up tallying WS #311 1.660" 3.02# N-80 CSHD workstring to 3,127.75' w/ 100 jts, RU circulation equipment on jt 100, break circulation and conditioned hole for 5 hours @ 3,127.75' w/100 jts, LD 10 jts, isolate well, prepare for next days operations, SDFWE.	10/19/2012
10/22/2012	STP 0 psi, SCP 0 psi, SSCP 0 psi, TIH picking up tallying WS #311 1.660" 3.02# N-80 CSHD workstring, broke circulations every 50 jts tripped in, rolling hole 45min. to 1 hour each circulation, tagged original cmt top at 5,880.21' KB half way in on jt 189, LD jt 189, RU circulation equipment on jt 188, break circulation and conditioned hole all night utilizing night crew, total circulation time of 18 hours @ 5,877.09' w/188 jts.	10/22/2012
10/23/2012	0 psi @ WH, Circulate and condition hole @ 1,500 psi @ 1 .25 BPM throughout the night. Shut rig pump down, MI&RU Halliburton Cement Services to 1 1/4" 3.02# CSHD, hold JSA and procedure meeting. Pressure test lines to 3,500 psi Preflush: Pumped 10 bbl clay treat, 12 bbl Mud flush III and 10 bbl clay treat spacer 1st stage:EOT set @ 5,877.09' w/188 jts, mix, batch, and pump 213 sks (reciproc44e pipe) Extendacem 11.5 ppg 2.29 yield (88 bbls) Displace 1.5 Bbls Est. TOC @ 4,402.87', lay down 50 jts. 2nd stage:EOT set @ 4,502.43' w/144 jts, mix, batch and pump 212 sks (reciprocate pipe) of Extendacem 11.5 ppg 2.29 yield (87 bbls) displace 1.0 bbls, Est. TOC @ 2,945.60', lay down 47 jts. 3rd stage:EOT set @ 3,033.97' w/97 jts, mix, batch and pump 180 sks (reciprocate pipe) of Varicem (70 bbls), bringing cement top to surface, returned 18 bbls cement to tank, Displace 1.0 Bbls, RD and release Halliburton, TOOH laying down remaining 97 jts 1 1/4" work string. Change equipment over to 4 1/2", unland annular flanges and re-land casing in slips @ 60 K lbs, ND flanges and pack off casing head. NU tubing head and BOP, load casing with clay treat for logging, SI well and secure, SDFN.	10/23/2012
10/24/2012	0 psi at WH, open well, RU Superior Wireline, ran GR/CCL/CBL/VDL log from 5950' to surface, had acceptable bonding on 11.5.0 ppg Extendacem cmt from original cmt top to 3000' and acceptable bonding on 12.0 ppg Varicem cmt from 3000' to surface, RIH w/3 1/8" slickgun, correlated cased/open logs getting on correct depth, re-perforated Codell 6600'-6608', 3 spf (24 new holes), 120 degree phasing, 19 gram charges, .41" entry holes w/21.28" penetration, all shots fired, RD e-line, SI and isolate well, drained lines, RDMOL	10/24/2012

The Road to Excellence Starts with Safety

Sold To #: 304535	Ship To #: 2262544	Quote #:	Sales Order #: 9910020
Customer: PDC ENERGY EBUS	Customer Rep: SAILORS, CHAD		
Well Name: Baker	Well #: 31-5	API/UWI #: 05-123-21297	
Field: Wattenberg	City (SAP): PLATTEVILLE	County/Parish: Weld	State: Colorado
Contractor: Basic	Rig/Platform Name/Num: 1548		
Job Purpose: Recement Service			
Well Type: Development Well		Job Type: Recement Service	
Sales Person: AARON, WESLEY		Srvc Supervisor: PICKELL, CHRISTOPHER	MBU ID Emp #: 396838

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BAMMER, JORDAN Blaine	6	526575	BURGESS, CODY Alan	6	511446	CARPENTER, JACOB P	6	499500
OTERI, VAUGHN Steeves	6	443828	PICKELL, CHRISTOPHER Lee	6	396838			

Equipment

HES Unit #	Distance-1 way						
10857080C	40 mile	10866497C	40 mile	11605597	40 mile	11667703C	40 mile
11764052	40 mile	11764739	40 mile	11808819C	40 mile	11923776C	40 mile

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
10/23/12	6	6						
TOTAL								

Total is the sum of each column separately

Job

Formation Name	Formation Depth (MD)	Top	Bottom	Job Times	Date	Time	Time Zone
Form Type			BHST	Called Out	23 - Oct - 2012	02:00	MST
Job depth MD	5877. ft		Job Depth TVD	On Location	23 - Oct - 2012	05:30	MST
Water Depth			Wk Ht Above Floor	Job Started	23 - Oct - 2012	06:47	MST
Perforation Depth (MD)	From		To	Job Completed	23 - Oct - 2012	10:34	MST
				Departed Loc	23 - Oct - 2012	11:30	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
Production Casing	Unknown		4.5	4.	11.6				6250.		6250.
Tubing	Unknown		1.25	.824	2.4			5877.			

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	Stage Type	Fluid Name	Qty	Qty uom	Mixing Density lbm/gal	Yield ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
Fluid #									

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	ClayWeb Water Spacer		10.00	bbl	8.33	.0	.0	2.0	
2	MUD FLUSH III	MUD FLUSH III - SBM (528788)	12.00	bbl	8.4	.0	.0	2.0	
3	ClayWeb Water Spacer		10.00	bbl	8.33	.0	.0	2.0	
59.525 gal/Mgal		CLA-WEB - TOTE (101985045)							
4	EXTENDACEM B1	EXTENDACEM (TM) SYSTEM (452981)	425.0	sacks	11.5	2.32	13.02		13.02
13.022 Gal		FRESH WATER							
5	Surface Varicem 12#	VARICEM (TM) CEMENT (452009)	180.0	sacks	12.	2.18	12.3		12.3
12.3 Gal		FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement		Shut In: Instant		Lost Returns	0 BBL	Cement Slurry	245 BBL	Pad	
Top Of Cement	0 FT	5 Min		Cement Returns	18 BBL	Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers	32 BBL	Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		1.8	Displacement		1.8	Avg. Job	1.8
Cement Left In Pipe		Amount	0 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					

The Road to Excellence Starts with Safety

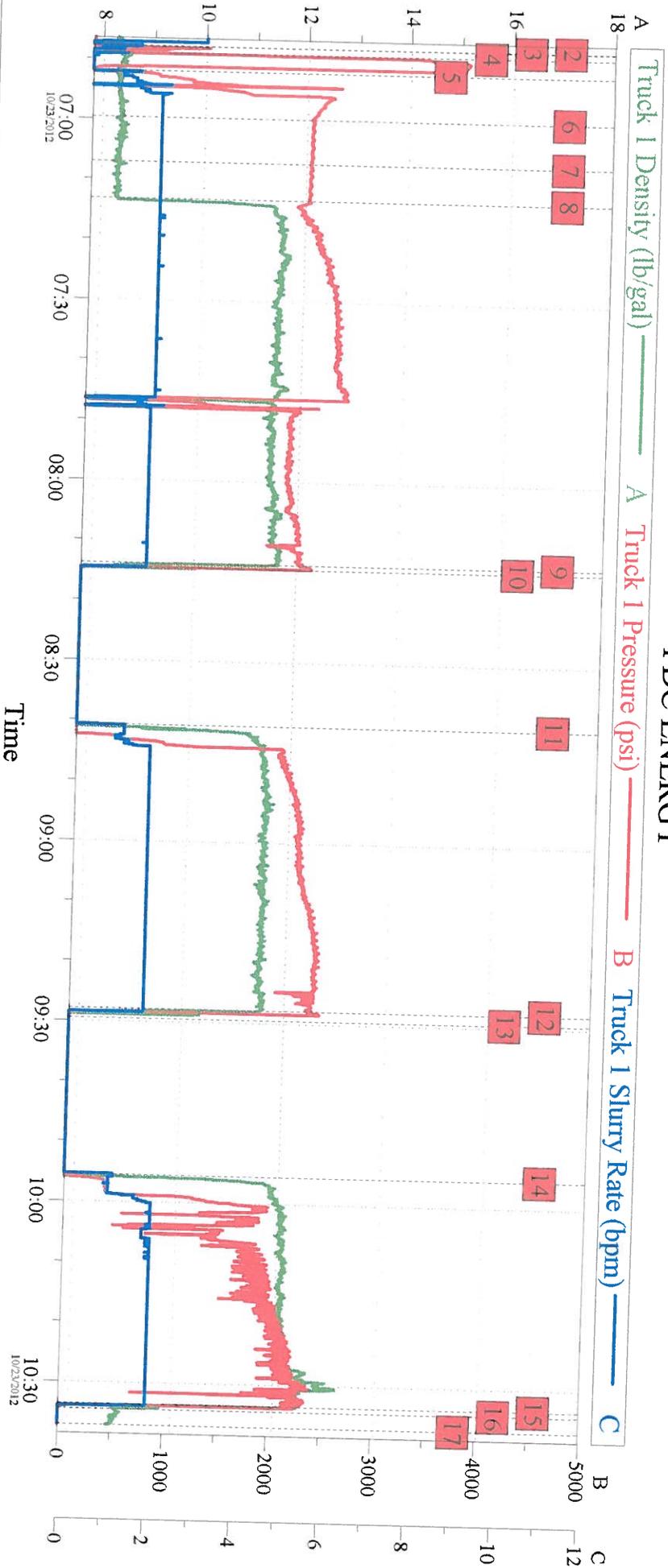
Sold To #: 304535	Ship To #: 2262544	Quote #:	Sales Order #: 9910020
Customer: PDC ENERGY EBUS		Customer Rep: SAILORS, CHAD	
Well Name: Baker	Well #: 31-5	API/UWI #: 05-123-21297	
Field: Wattenberg	City (SAP): PLATTEVILLE	County/Parish: Weld	State: Colorado
Legal Description:			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Basic		Rig/Platform Name/Num: 1548	
Job Purpose: Recement Service			Ticket Amount:
Well Type: Development Well		Job Type: Recement Service	
Sales Person: AARON, WESLEY		Srvc Supervisor: PICKELL, CHRISTOPHER	MBU ID Emp #: 396838

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Start Job	10/23/2012 06:47							
Test Lines	10/23/2012 06:48		1	1		3500. 0		PRESSURE TEST LINES TO 3500 PSI. CHECK FOR VISIBLE LEAKS AND PRESSURE LOSS
Pump Spacer 1	10/23/2012 06:51		1.6	10	11	2100. 0		PUMP WATER WITH CLAYWEB
Pump Spacer 2	10/23/2012 06:59		1.6	12	23	2100. 0		PUMP MUDFLUSH
Pump Spacer 1	10/23/2012 07:07		1.6	10	33	2100. 0		PUMP WATE WITH CLAYWEB
Pump Lead Cement	10/23/2012 07:13		1.5	88	121	2400. 0		PUMP EXTENDACEM CEMENT 213 SKS 11.5 PPG 2.32 CUFT/SK 13.02 GAL/SK MIXED WITH RIG WATER
Pump Displacement	10/23/2012 08:13		1.6	1.5	122.5	2200. 0		PUMP DISPLACEMENT TO CLEAR OUR LINES
Shutdown	10/23/2012 08:14							SHUTDOWN FOR RIG TO PULL 44 JOINTS OF TUBING OUT OF THE HOLE
Pump Cement	10/23/2012 08:40		1.6	87	209.5	2300. 0		PUMP EXTENDACEM CEMENT 212 SKS 11.5 PPG 2.32 CUFT/SK 13.02 GAL/SK MIXED WITH RIG WATER
Pump Displacement	10/23/2012 09:27		1.6	1	210.5	2400. 0		PUMP DISPLACEMENT TO CLEAR OUR LINES
Shutdown	10/23/2012 09:29							SHUTDOWN FOR RIG TO PULL 47 JOINTS OF TUBING OUT OF THE HOLE

Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	10/23/2012 09:55		2	70	280.5	1900. 0		PUMP VARICEM CEMENT 180 SKS 12 PPG 2.18 CUFT/SK 12.3 GAL/SK MIXED WITH RIG WATER
Pump Displacement	10/23/2012 10:33		2	0.5	281	2100. 0		PUMP DISPLACEMENT TO CLEAR OUR LINES
Shutdown	10/23/2012 10:34							SHUTDOWN FOR RIG TO PULL OUT OF THE HOLE AFTER GETTING 18 BBL OF CEMENT BACK TO SURFACE
End Job	10/23/2012 10:34							

BAKER 31-5 PDC ENERGY



Global Event Log

Intersection	T1P	Intersection	T1P	Intersection	T1P
2 Start Job	06:47:48 2.527	3 Prime Pumps	06:47:53 6.790	4 Test Lines	06:48:56 89.35
5 Pump Water W/Clayweb	06:51:57 13.00	6 Pump Mudflush	06:59:40 2107	7 Pump Water W/Clayweb	07:07:07 2102
8 Pump Extendacem 11.5#	07:13:12 2096	9 Pump Displacement	08:13:46 2113	10 Shutdown	08:14:36 94.49
11 Pump Extendacem 11.5#	08:40:40 -7.000	12 Pump Displacement	09:27:52 2307	13 Shutdown	09:29:29 -9.000
14 Pump Varicem 12#	09:55:30 -7.000	15 Pump Displacement	10:33:32 2184	16 End Job	10:34:23 1.519
17 Ending Job	10:37:04 10.000				

Customer: PDC ENERGY
Well Description: BAKER 31-5
SER SUPERVISOR CHRISTOPHER PICKELL

Job Date: 23-Oct-2012
UWT: 05-123-21297
SERVICE OPERATOR VAUGHN OTERI

Sales Order #: 9910020

OptiCem v6.4.10
2012-10-12 10:41