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# **BLACK HILLS EXPLORATION & PROD-EBUS**

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**WINTER FLATS 1-10-100  
BRONCO FLATS  
Mesa County , Colorado**

**Plug to Abandon Service  
04-Oct-2010**

**Post Job Report**



## Cementing Job Summary

***The Road to Excellence Starts with Safety***

<b>Sold To #:</b> 359739		<b>Ship To #:</b> 359739		<b>Quote #:</b>		<b>Sales Order #:</b> 7679838	
<b>Customer:</b> BLACK HILLS EXPLORATION & PROD-EBUS				<b>Customer Rep:</b> DECKER, MIKE			
<b>Well Name:</b> WINTER FLATS			<b>Well #:</b> 1-10-100		<b>API/UWI #:</b> 05-077-08518		
<b>Field:</b>		<b>City (SAP):</b> GOLDEN		<b>County/Parish:</b> Mesa		<b>State:</b> Colorado	
<b>Lat:</b> N 39.286 deg. OR N 39 deg. 17 min. 8.124 secs.				<b>Long:</b> W 108.541 deg. OR W -109 deg. 27 min. 33.444 secs.			
<b>Contractor:</b> WORKOVER			<b>Rig/Platform Name/Num:</b> Workover				
<b>Job Purpose:</b> Plug to Abandon Service							
<b>Well Type:</b> Development Well			<b>Job Type:</b> Plug to Abandon Service				
<b>Sales Person:</b> DUNNING, DUSTIN			<b>Srvc Supervisor:</b> MUHLESTEIN, RYAN		<b>MBU ID Emp #:</b> 453609		

## Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
DYK, KORY Stephen	12	421946	HAMMOND, ANSON	12	421370	HUGENTOBLE, LOGAN Mark	12	447333
MAIN, CHAD R	12	335770	MUHLESTEIN, RYAN Herrick	12	453609	WYCKOFF, RYAN	12	476117

## Equipment

HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way	HES Unit #	Distance-1 way
10722398	110 mile	10867531	110 mile	10951244	110 mile	10951250	110 mile
10989685	110 mile	11360871	110 mile	11381461	110 mile	11542767	110 mile

**Job Hours**

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
10/04/2010	12	4						

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	04 - Oct - 2010		02:30	CST	
Form Type		BHST			On Location	04 - Oct - 2010		07:00	CST	
Job depth MD		3450. ft		Job Depth TVD	3450. ft		Job Started	04 - Oct - 2010 09:30 CST		
Water Depth		Wk Ht Above Floor			4. ft		Job Completed	04 - Oct - 2010 17:00 CST		
Perforation Depth (MD)		From	To		Departed Loc	04 - Oct - 2010		18:00	CST	

## Well Data

[illegible]

## 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

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 ft3/sk	Mix Fluid Gal/sk	Rate bbl/min	Total Mix Fluid Gal/sk
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Summit Version: 7.20.130

Monday, October 04, 2010 19:36:00

Stage/Plug #: 1									
Fluid #	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
1	Spacer		10.00	bbl	8.4	.0	.0	.0	
2	Plug #1 Cement	PLUGCEM (TM) SYSTEM (452969)	100.0	sacks	15.8	1.15	5.0		5.0
	5 Gal	FRESH WATER							
3	Displacement		11.00	bbl	8.4	.0	.0	.0	
4	Spacer			bbl	8.4	.0	.0	.0	
5	Plug #2 Cement	PLUGCEM (TM) SYSTEM (452969)	450.0	sacks	15.8	1.15	5.0		5.0
	5 Gal	FRESH WATER							
6	Displacement			bbl	8.4	.0	.0	.0	
7	Spacer			bbl	8.4	.0	.0	.0	
8	Plug #3 Cement	PLUGCEM (TM) SYSTEM (452969)	40.0	sacks	15.8	1.15	5.0		5.0
	5 Gal	FRESH WATER							
9	Displacement			bbl	8.4	.0	.0	.0	
Calculated Values		Pressures		Volumes					
Displacement	11.2	Shut In: Instant		Lost Returns		Cement Slurry		Pad	
Top Of Cement	SURF	5 Min		Cement Returns	7	Actual Displacement		Treatment	
Frac Gradient		15 Min		Spacers	40	Load and Breakdown		Total Job	
Rates									
Circulating		Mixing		Displacement		Avg. Job			
Cement Left In Pipe	Amount	0 ft	Reason	PTA					
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 #: 359739	Ship To #: 359739	Quote #:	Sales Order #: 7679838
Customer: BLACK HILLS EXPLORATION & PROD-EBUS		Customer Rep: DECKER, MIKE	
Well Name: WINTER FLATS		Well #: 1-10-100	API/UWI #: 05-077-08518
Field:	City (SAP): GOLDEN	County/Parish: Mesa	State: Colorado
Legal Description:			
Lat: N 39.286 deg. OR N 39 deg. 17 min. 8.124 secs.		Long: W 108.541 deg. OR W -109 deg. 27 min. 33.444 secs.	
Contractor: WORKOVER		Rig/Platform Name/Num: Workover	
Job Purpose: Plug to Abandon Service			Ticket Amount:
Well Type: Development Well		Job Type: Plug to Abandon Service	
Sales Person: DUNNING, DUSTIN		Srvc Supervisor: MUHLESTEIN, RYAN	MBU ID Emp #: 453609

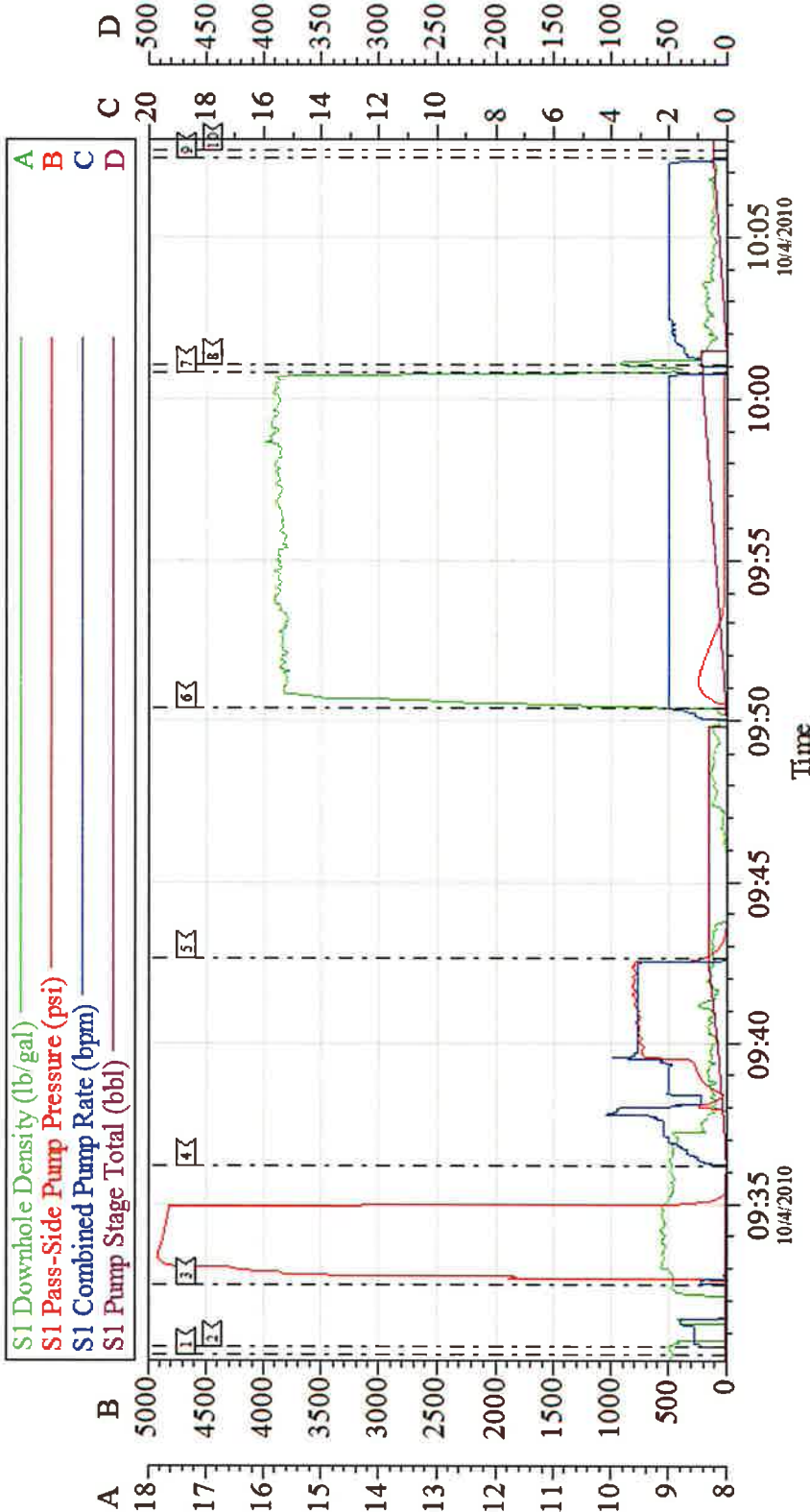
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	10/04/2010 02:30							HES WAS ON LOC 10 HRS CHARGED 2 ADD HRS
Pre-Convoy Safety Meeting	10/04/2010 04:00							ALL HES EMPLOYEES
Arrive At Loc	10/04/2010 07:00							RIG RUNNING TUBING WHEN HES ARRIVED
Assessment Of Location Safety Meeting	10/04/2010 07:10							ALL HES EMPLOYEES
Rig-Up Equipment	10/04/2010 07:20							1 HT-400 PUMP TRUCK, 2 660 BULK TRUCK, 1 F-450 P/U, 1 SQUEEZE MANAFOLD
Pre-Job Safety Meeting	10/04/2010 09:10							ALL HES EMPLOYEES, RIG CREW, CO REP AND ANY 3RD PARTY VENDORS
Start Job	10/04/2010 09:30							RETAINER SET AT 3450', HOLES IN CASING BELOW RETAINER 3555', 2.375" TUBING, 4.5" 10.5# CASING
Pump Water	10/04/2010 09:30			1				FILL LINES FRESH H2O PRIOR TO PRESSURE TESTING LINES
Pressure Test	10/04/2010 09:32					4930.0		NO LEAKS, KICK OUTS SET TO 5000 PSI FOR TEST, PER CUSTOMER MAX PSI 1000 WHILE PUMPING JOB.
Injection Test	10/04/2010 09:36		3.5	15.5		823.0		FRESH WATER
ISIP	10/04/2010 09:42					210.0		

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Cement	10/04/2010 09:50		2	20.5		225.0		100 SKS OF PLUGCEM AT 15.8 PPG 1.15 FT3/SK 5.0 GAL/SK
Shutdown	10/04/2010 10:00							
Pump Displacement	10/04/2010 10:01		2	11.2		-5.0		FRESH WATER
Shutdown	10/04/2010 10:07							PER CUSTOMER HES DID NOT REVERSE OUT, ALL STANDS WERE PULLED FROM WELL
End Job	10/04/2010 10:07							
Other	10/04/2010 10:10							WAIT ON WIRELINE TO PERFORATE
Start Job	10/04/2010 13:43							RETAINER SET AT 1140', PERFORATIONS IN CASING BELOW RETAINER 1200', 2.375" TUBING, 4.5" 10.5# CASING
Pump Water	10/04/2010 13:44		1.5			10.0		FILL LINES FRESH H2O PRIOR TO PRESSURE TESTING LINES
Pressure Test	10/04/2010 13:46					5410.0		NO LEAKS, KICK OUTS SET TO 5000 PSI FOR TEST, PER CUSTOMER MAX PSI 1000 WHILE PUMPING JOB.
Injection Test	10/04/2010 13:52		4	25		750.0		BROKE CIRCULATION IN WELL, STUNG BACK INTO RETAINER FOR INJECTION TEST
ISIP	10/04/2010 14:06					400.0		
Pump Spacer 1	10/04/2010 14:26		2.5	5		250.0		
Pump Cement	10/04/2010 14:29		2.5	56.2		592.0		275 SKS OF PLUGCEM AT 15.8 PPG 1.15 FT3/SK 5.0 GAL/SK
Pump Displacement	10/04/2010 14:52		2.5	2.2		312.0		FRESH WATER
Shutdown	10/04/2010 15:05							
Other	10/04/2010 15:06							WAIT ON WIRELINE TO PERFORATE

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Start Job	10/04/2010 16:14							PERFORATIONS IN CASING AT 400', 4.5" 10.5# CASING, PUMPED DOWN BACKSIDE
Pump Water	10/04/2010 16:15		2	5			20.0	PUMP FRESH WATER, HES HAD FULL CIRCULATION
Pump Cement	10/04/2010 16:15		2.5	45			112.0	215 SKS OF PLUGCEM AT 15.8 PPG 1.15 FT3/SK 5.0 GAL/SK, CUSTOMER HAD HES PUMP THE 40 SACKS OF TOP OUT FOR THE TOTAL OF 215 SKS
Pump Displacement	10/04/2010 16:41		2	1			84.0	FRESH WATER HES RETURNED 7 BBLS OF CEMENT TO SURFACE
Shutdown	10/04/2010 16:41							
End Job	10/04/2010 16:42							
Pre-Rig Down Safety Meeting	10/04/2010 16:50							
Rig-Down Equipment	10/04/2010 17:00							THANK YOU FOR USING HES FROM RYAN MUHLESTEIN AND CREW
Pre-Convoy Safety Meeting	10/04/2010 18:00							ALL HES EMPLOYEES
Crew Leave Location	10/04/2010 18:05							LOCATION CLEAN



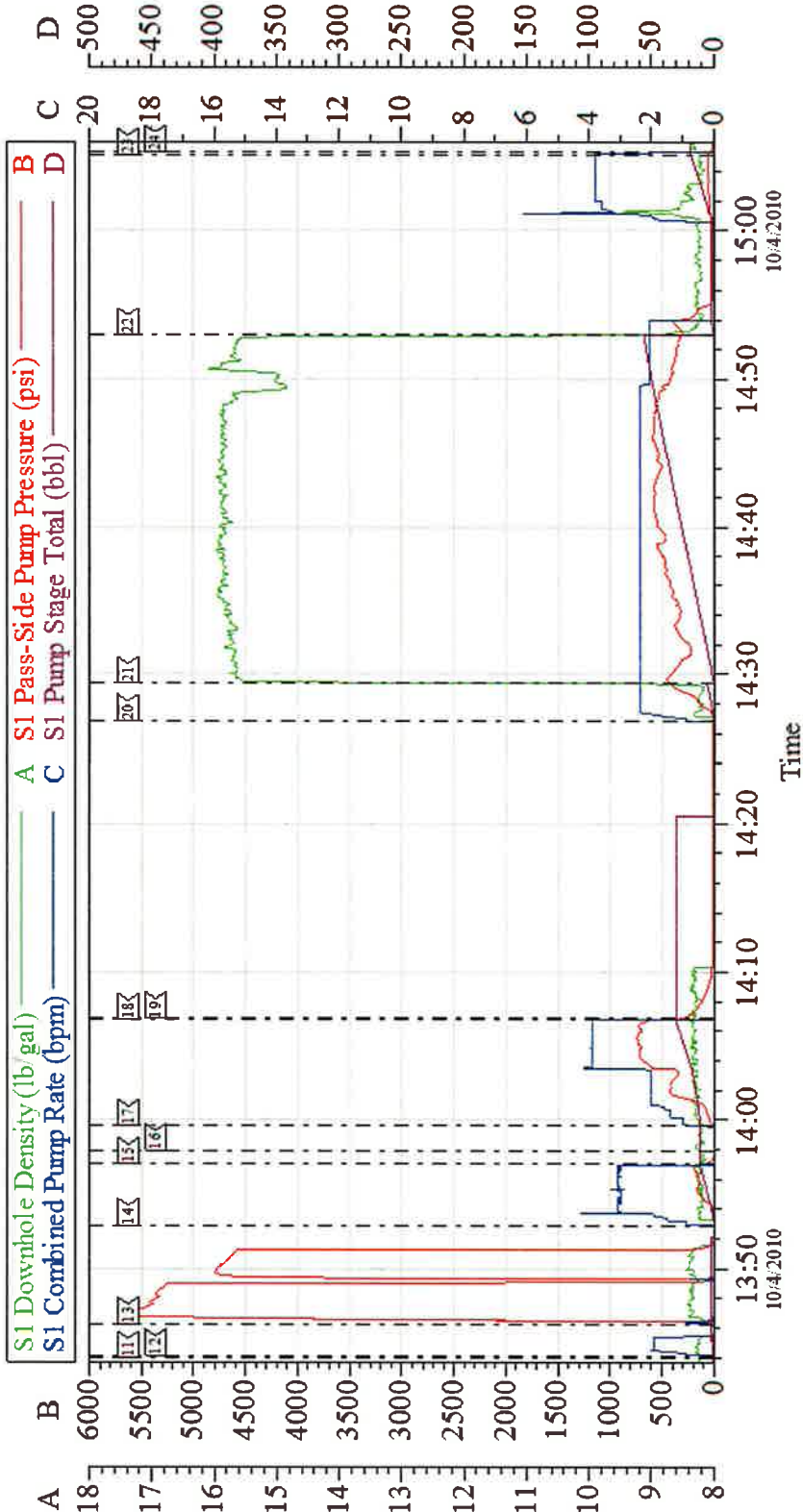
BLACK HILLS EXPLORATION  
PLUG # 1



Local Event Log			
1 START JOB	09:30:19	2 FILL LINES	09:30:32
4 INJECTION TEST	09:36:11	5 ISP	09:42:39
7 SHUT DOWN	10:00:47	8 PUMP DISPLACEMENT	10:01:02
10 END JOB	10:07:42	9 SHUT DOWN	10:07:26
3 TEST LINES	09:32:30	6 PUMP CEMENT	09:50:21

Customer:	BLACK HILLS EXPLORATION	Job Date:	04-Oct-2010	Sales Order #:	7679838
Well Description:	WINTER FLATS 1-10-100	Job Type:	PTA	ADC Used	YES
Company Rep:	MIKE DECKER	Cement Supervisor:	RYAN MUHLESTEIN	Elite #:	1
					LOGAN HUGENTOBLE

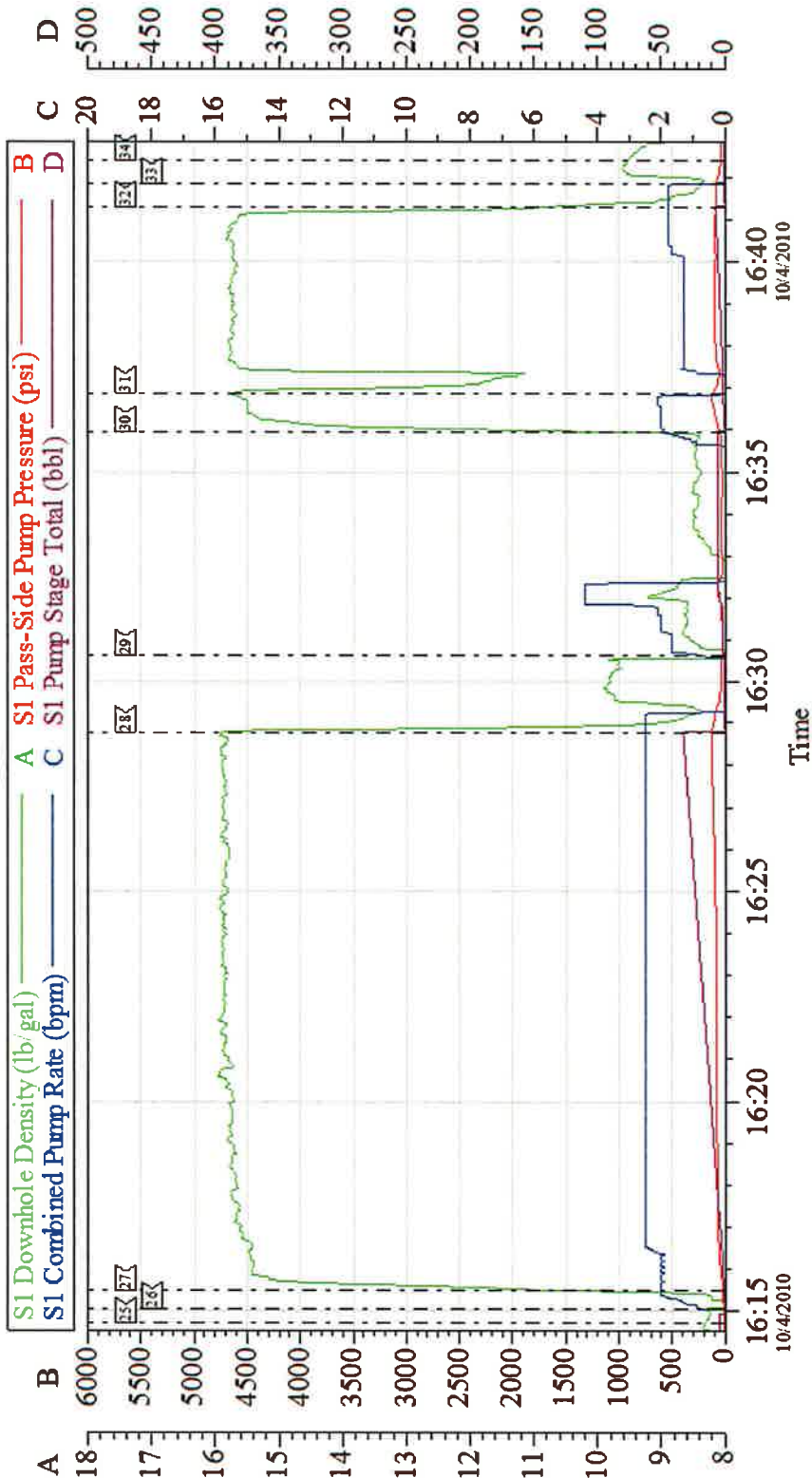
BLACK HILLS EXPLORATION  
PLUG # 2



Customer: BLACK HILLS EXPLORATION	Job Date: 04-Oct-2010	Sales Order #: 7679838
Well Description: WINTER FLATS 1-10-100	Job Type: PTA	ADC Used: YES
Company Rep: MIKE DECKER	Cement Supervisor: RYAN MUHLESTEIN	Elite #: 1
		LOGAN HUGENTOBLER



BLACK HILLS EXPLORATION  
PLUG #3

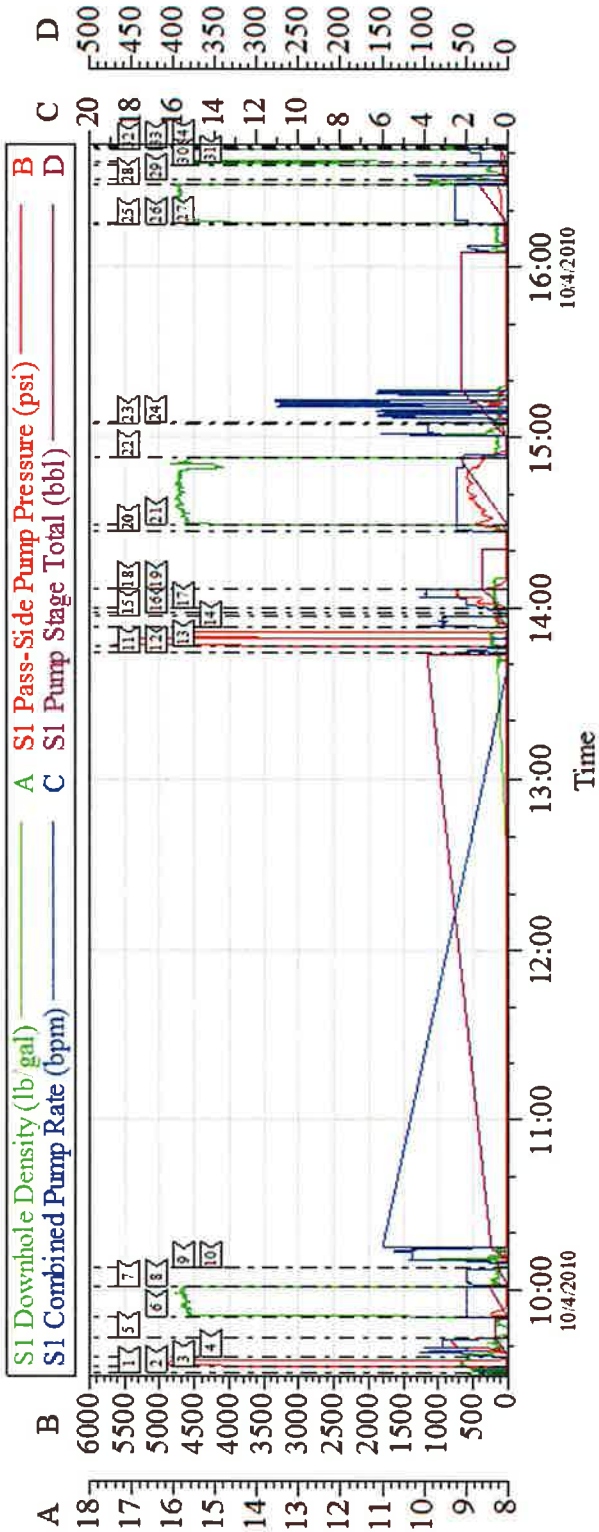


Local Event Log			
23< START JOB	16:14:42	26< PUMP H2O SPACER	16:35:04
27< PUMP TAIL CEMENT	16:15:29		
28< SHUT DOWN	16:28:46	29< PUMP H2O TO CLEAR LINES	16:30:37
30< PUMP TAIL CEMENT	16:35:56		
31< SHUT DOWN	16:36:53	32< PUMP H2O TO CLEARLINE	16:41:17
33< SHUT DOWN	16:42:23		
34< END JOB			

Customer: BLACK HILLS EXPLORATION	Job Date: 04-Oct-2010	Sales Order #: 7679838
Well Description: WINTER FLATS 1-10-100	Job Type: PTA	ADC Used: YES
Company Rep: MIKE DECKER	Cement Supervisor: RYAN MUHLES TEIN	Elite #: 1
		LOGAN HUGENTOBLER

BLACK HILLS EXPLORATION

PTA



Local Event Log								
1	START JOB	09:30:19	2	FILL LINES	09:30:32	3	TEST LINES	09:32:30
4	INJECTION TEST	09:36:11	5	ISP	09:42:39	6	PUMP CEMENT	09:50:21
7	SHUT DOWN	10:00:47	8	PUMP DISPLACEMENT	10:01:02	9	SHUT DOWN	10:07:24
10	END JOB	10:07:33	11	START JOB	13:43:56	12	FILL LINES	13:44:06
13	TEST LINES	13:46:15	14	CIRCULATE WELL	13:52:54	15	SHUT DOWN	13:57:00
16	STING INTO RETAINER	13:57:56	17	PUMP INJECTION TEST	13:59:34	18	SHUT DOWN	14:06:45
19	ISP	14:06:51	20	PUMP H2O SPACER	14:26:50	21	PUMP TAIL CEMENT	14:29:23
22	PUMP DISPLACEMENT	14:52:58	23	END JOB	15:05:04	24	SHUT DOWN	15:05:17
25	START JOB	16:14:42	26	PUMP H2O SPACER	16:15:04	27	PUMP TAIL CEMENT	16:15:29
28	SHUT DOWN	16:28:46	29	PUMP H2O TO CLEAR LINES	16:30:37	30	PUMP TAIL CEMENT	16:35:56
31	SHUT DOWN	16:36:53	32	PUMP H2O TO CLEAR LINE	16:41:17	33	SHUT DOWN	16:41:50
34	END JOB	16:42:23						

Customer:	BLACK HILLS EXPLORATION	Job Date:	04-Oct-2010	Sales Order #:	7679838
Well Description:	WINTER FLATS 1-10-100	Job Type:	PTA	ADC Used:	YES
Company Rep:	MIKE DECKER	Cement Supervisor:	RYAN MUELTEIN	Elite #:	1
					LOGAN HUGENTOBLER