

Windy Hill Water Operations, LLC
P.O. Box 18283
Denver, Colorado 80218

Re: Windy Hill #3-17D
SENE Sec 17-T3N-R55W
Morgan County
API: 05-087-08145

Summary of Casing and Cementing Operations

Open Hole Logging: August 12, 2007
Run Long String: August 14, 2007
Cement Long String: August 14, 2007

3-17D Cementing Description (excerpt from Aquifer Exemption Report)

The injection well construction is shown in Figure 2. Surface casing of 13-3/8-inch diameter J-55 steel pipe was installed to a depth of 483 feet in a borehole 17.5 inches in diameter. According to the cementing report by Halliburton (2007), the annulus was cemented from the surface to 483 feet with 350 sacks of cement yielding 529.5 cubic feet, completely filling the annular space of 335.5 cubic feet.

The well was drilled with a bit 12.5 inches in diameter and cased with 8-5/8-inch J-55 steel casing to a total depth of 5,431 feet, plugged back with cement to a depth of 5,385 feet, and perforated with 680 holes in the J Sandstone between the depths of 5,130 feet and 5,300 feet.

The 8-5/8-inch casing was cemented from the total depth to the surface with 3,130 sacks of cement/pozzolon mixture that yielded 7,259 cubic feet of grout to fill the annular space of 2,278 cubic feet; cement returns at the surface were reported. Based on the annular volume of 2,278 ft³ and the 7,259 FT³ of cement pumped, a total of 320% of the annular space was filled.

Tubing of 5-1/2-inch diameter J-55 steel is installed from the surface into a packer set at 5,050 feet. Down-hole pressure measurements in the well indicate that the static water level in the well is approximately 2,600 feet bgs. Injection tests indicate that the well is capable of accepting injectate at a rate of approximately 30,500 bpd without the application of additional pressure at the land surface.

A mechanical integrity test (MIT) performed in April 2015 indicated that the well casing maintained the 350 pounds per square inch (psi) test pressure for the test duration.

Attachments:

Figure 1 - Daily Drilling Report
Figure 2 - Halliburton - Cementing Job Summary (08-15-07)
Figure 3 - Cement Volume Calculations

NGS

Windy Hill

NGS

SWD 3-17 D

Drilling Activity Report

Version 1

Figure 1

Measured Depth: #####		TVD: #####		PBD: #####		Proposed MD: 5,500'		Proposed TVD: # #####					
DOL: 25	DFS: 17	Spud Date: 28-Jul-07		Daily Footage: 0'	Daily Rot Hrs: 0	Total Rot Hrs 135.5							
Torque:	Drag:	Rot Wt:	P/U Weight:	S/O Wt:	Wind:	Seas:	Bar:	POB: 16					
Last Casing Size: 8 5/8		Set At: 5,431'		TVD: #####	Shoe Test: <input checked="" type="checkbox"/>		Leakoff? Y N <input checked="" type="checkbox"/>						
Cum Rot Hrs on Casing: 0.0		Cum Rot Hrs on Casing Since Last Caliper: 0.0		Depth Worst Wear:		% Remaining:							
Liner Size:		Set At:		TVD	Liner Top At:		MD	TVD					
Mud Co: WESTERN	Type: FRESH WATER			Sample From: Pits	Wt: 10.0	FV: 51	PV: 12	YP:	Get:				
WL API: HTHP:	FC(1/32) API/HTHP:			Solids	% Oil:	% Water	% Sand:	MBT:	pH:				
Pm:	Pf/Mf:	Carb:	Cl:	Ca/Ma	Bent:	Solids % HGLG:		% DS/Benl					
Engr Service	Materials added last 24 hrs:												
YES													
Drig Gas:		Max Gas:		Conn. Gas:		Trip Gas:		Trip Cl:		Remarks:			
Bit No.	IADC	Size	Manufacturer	Serial Number	Type	Jets				TFA	MD In	MD Out	TVD Out
3		12 1/4	Smith	Unknown	Mill tooth	20	20	20	20	1.227	5,433'	5,433'	
Feet	Hours	WOB	RPM	I-Row	O-Row	DC	Loc	B	G	Char	?Pull	Cost/Ft	
0'	20.50	2-10	40									#DIV/0!	
Total Length of BHA:		BHA Description: 362' 12 1/4" Bit, Bit Sub, 3 x 8" D.C., X-Over, 9 x 6 1/4" D.C., X-Over											
Bit Cost	Row 1	Row 2	Rig \$/hr	Trip Time h	DC Size:	DP Size	Hours On	Hrs Since Last					
	6,500		\$688	688	8	5	lars:	Inspection:					
Bit	Liner	Stroke	BBL/STK	SPM	Pressure	GPM	Jet Vel	DP AV	DC AV	Bit HHP	BHHP/SO.IN.	Pump HHP	
3	6"	12"	0.100	180	2,300	756	197	148	215	154	1.31	1014	
	6"	12"	0.100										
Survey MD		Angle	Direction		N/S Coordinate		Survey MD		Angle	DLS			
Hrs.	(From-To) hh:mm	Operations Covering 24 Hours Ending at 06:00											
10:00	6:00 16:00	RUN 8 5/8, 32#, BTC CASING, TESTING EACH CONNECTION 1500PSI FOR 1 MINUTE											
2:00	16:00 18:00	WAIT ON CEMENTERS											
9:30	18:00 3:30	PUMP CEMENT WITH HALLIBURTON. LOST RETURNS FOR 35 BBL WHILE PUMPING PLUG, REGAINED											
		CIRCULATION AT A REDUCED PUMP RATE AND BUMPED PLUG. 1000PSI OVER.											
1:00	3:30 4:30	RIG DOWN HALLIBURTON, CLEAN OUT STACK AND FLOWLINE											
1:30	4:30 6:00	PICK UP STACK, SET CASING SLIPS, AND CUT OFF CONDUCTOR.											
24 hr Summary:													
RUN CASING TO 5421', WAIT ON CEMENTERS, PUMP CEMENT W/HALLIBURTON, CLEAN OUT STACK, PICK UP STACK, SET CASING SLIPES, AND CUT OFF CONDUCTOR													
Remarks:													

Figure 2

TO:	<u>BAGNER, AUGUST</u>
FROM:	<u>HUFF, KATRINA</u>
REQUESTED ON LOCATION:	<u>14-Aug-2007 12:00 MST</u>
CUSTOMER:	<u>WINDY HILL GAS STORAGE LLC</u>
WELL NAME/NBR/LEASE:	<u>Disposal Well , 3-17d /</u>

TABLE OF CONTENTS:

Job Summary
Job Log
EJCS Survey Cementing

MBU LEADER: BE SURE THAT YOU HAVE RECEIVED EACH OF THE DOCUMENTS LISTED ABOVE. IF NOT, CONTACT CENTRAL DISPATCH IMMEDIATELY.

The Road to Excellence Starts with Safety

Sold To #: 352578	Ship To #: 352578	Quote #:	Sales Order #: 5297505
Customer: WINDY HILL GAS STORAGE LLC		Customer Rep:	
Well Name: Disposal Well	Well #: 3-17d	API/UWI #:	
Field:	City (SAP): WESTPORT	County/Parish: Morgan	State: Colorado
Contractor: Unit Driling	Rig/Platform Name/Num: 134		
Job Purpose: Cement Intermediate Casing			
Well Type: Unknown Well Type		Job Type: Cement Intermediate Casing	
Sales Person: STATEN, LARRY		Srvc Supervisor: BAGNER, AUGUST	MBU ID Emp #: 242142

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
BAGNER, AUGUST D	18.0	242142	GAINES, ALBERT D	12.0	376241	HOLLINS, HENRY H	12.0	410067
ZACH, JOSHUA James	12.0	311112						

Equipment

HES Unit #	Distance-1 way						
10025065	70 mile	10547374	70 mile	10592962	70 mile	10623573C	70 mile
10624130	70 mile	10822009	70 mile				

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

Job

Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Form Type	Job depth MD	Water Depth	Perforation Depth (MD)	From	To	Called Out	Date	Time	Time Zone
				BHST	5461. ft					13 - Aug - 2007	18:00	MST	
				150 degF						14 - Aug - 2007	12:00	MST	
				Job Depth TVD	5461. ft					14 - Aug - 2007	21:00	MST	
				Wk Ht Above Floor	3. ft					15 - Aug - 2007	03:47	MST	
										15 - Aug - 2007	06:00	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
13 3/8" Surface Casing	Used		13.375	12.615	54.5				473.		
8 5/8" Intermediate Casing	Used		8.625	7.921	32.				5461.		
12 1/4" Open Hole Section				12.25				473.	5461.		

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	FRESH WATER SPACER		30.00	bbbl	8.33	.0	.0	.0	
2	MUD FLUSH	MUD FLUSH - ZI - SBM (13383)	60.00	bbbl	8.4	.0	.0	3.0	
	990 gal/Mgal	FRESH WATER							
	0.5 gal/bbl	MO-67, 55 GAL DRUM (100003693)							
3	FRESH WATER SPACER		30.00	bbbl	8.33	.0	.0	.0	
4	50/50 Poz Premium	POZ PREMIUM 50/50 - SBM (12302)	2295.0	sacks	11.1	2.73	16.26	3.0	16.26
	3 lbm	SILICALITE - COMPACTED, 50 LB SK (100012223)							
	3 %	MICROBOND HT, 50 LB SK (100003723)							
	1 lbm	ECONOLITE (100001580)							
	0.5 lbm	KWIK SEAL, SK (100064010)							
	16.814 Gal	FRESH WATER							
5	Premium Cement	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	835.0	sacks	15.8	1.19	4.79	3.0	4.79
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	0.2 %	HR-5, 50 LB SK (100005050)							
	0.2 %	HALAD(R)-344, 50 LB (100003670)							
	0.5 lbm	KWIK SEAL, SK (100064010)							
	3 %	MICROBOND HT, 50 LB SK (100003723)							
	0.1 %	CFR-3, W/O DEFOAMER, 50 LB SK (100003653)							
	5.113 Gal	FRESH WATER							
6	Water Displacement		10.00	bbbl	8.33	.0	.0	3.0	
7	WBM		300.00	bbbl	10.1	.0	.0	6.0	
8	Water Displacement		19.00	bbbl	8.33	.0	.0	4.0	
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	48.5 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 #: 352578	Ship To #: 352578	Quote #:	Sales Order #: 5297505
Customer: WINDY HILL GAS STORAGE LLC		Customer Rep:	
Well Name: Disposal Well	Well #: 3-17d	API/UWI #:	
Field:	City (SAP): WESTPORT	County/Parish: Morgan	State: Colorado
Legal Description:			
Lat:		Long:	
Contractor: Unit Drilling		Rig/Platform Name/Num: 134	
Job Purpose: Cement Intermediate Casing			Ticket Amount:
Well Type: Unknown Well Type		Job Type: Cement Intermediate Casing	
Sales Person: STATEN, LARRY		Srvc Supervisor: BAGNER, AUGUST	MBU ID Emp #: 242142

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Depart Yard Safety Meeting	08/14/2007 04:30							
Crew Leave Yard	08/14/2007 04:45							
Arrive At Loc	08/14/2007 12:00							
Assessment Of Location Safety Meeting	08/14/2007 12:15							
Pre-Rig Up Safety Meeting	08/14/2007 14:00							
Rig-Up Equipment	08/14/2007 14:30							
Other	08/14/2007 15:00							Off load Cement to Field Bins from Cobra Trucks
Casing on Bottom	08/14/2007 18:00							
Safety Meeting	08/14/2007 20:00							
Start Job	08/14/2007 20:27							
Test Lines	08/14/2007 20:44						3000.0	
Pump Water	08/14/2007 20:47		3	30				
Pump Spacer	08/14/2007 20:57		3	60				Mud Flush
Pump Water	08/14/2007 21:17		3	30				
Pump Lead Cement	08/14/2007 21:27		5	1116				11.6 ppg
Spacer Returns to Surface	08/15/2007 00:50			1020				
Cement Returns to Surface	08/15/2007 01:13			1150				

Sold To #: 352578

Ship To #: 352578

Quote #:

Sales Order #:

5297505

SUMMIT Version: 7.20.130

Wednesday, August 15, 2007 06:00:00

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pump Tail Cement	08/15/2007 01:41		5	174				15.8 ppg
Drop Top Plug	08/15/2007 02:15							
Pump Displacement - Start	08/15/2007 02:17							
Pump Water	08/15/2007 02:17		5	10				
Pump Displacement	08/15/2007 02:19		6	300				10.1 ppg mud
Displ Reached Cmnt	08/15/2007 02:43							
Other	08/15/2007 02:58		6	235			1400. 0	Lost Returns
Other	08/15/2007 03:00		1					Slowed rate to 1 BPM
Other	08/15/2007 03:20		2.5	272			1200. 0	Regained Returns
Pump Water	08/15/2007 03:31		2.5	19			1200. 0	
Bump Plug	08/15/2007 03:39						1180. 0	
Pressure Up	08/15/2007 03:39						1700. 0	
Check Floats	08/15/2007 03:41							
End Job	08/15/2007 03:47							
Safety Meeting - Pre Rig-Down	08/15/2007 03:52							
Rig-Down Equipment	08/15/2007 04:02							
Safety Meeting - Departing Location	08/15/2007 05:30							
Depart Location for Service Center or Other Site	08/15/2007 06:00							

Sales Order #: 5297505	Line Item: 10	Date: 8/14/2007
Customer: WINDY HILL GAS STORAGE LLC		Job Type (BOM): Cement Intermediate Casing
Customer Rep. / Phone :		API (If no API; leave blank):
H2S Present: Unknown	Well Type: Unknown Well Type	Well Name: Disposal Well 3-17d

Dear Customer,

We hope that you were satisfied with the service quality of this job performed by Halliburton. It is the aim of our management and service personnel to deliver equipment and service of a standard unmatched in the service sector of the energy industry.

Please take the time to let us know if our performance met with your satisfaction. Please be as critical as possible to ensure we constantly improve our service. Your comments are of great value to us and are intended for the exclusive use of Halliburton.

RATING	DESCRIPTION	OPPORTUNITY
5	Superior Performance (Establish new quality/performance standards)	Best Practice
4	Exceeded Expectations (Provided more than what was required/expected)	Potential Best Practice
3	Met Expectations (Did what was expected)	Prevention/Improvement
2	Below Expectations (Did not do what was expected - *Recovery made)	CPI Required
1	Poor Performance (Job problems/failures occurred - Some *recovery made)	CPI Required
* Recovery : resolved issue(s) on jobsite in a timely and professional manner		

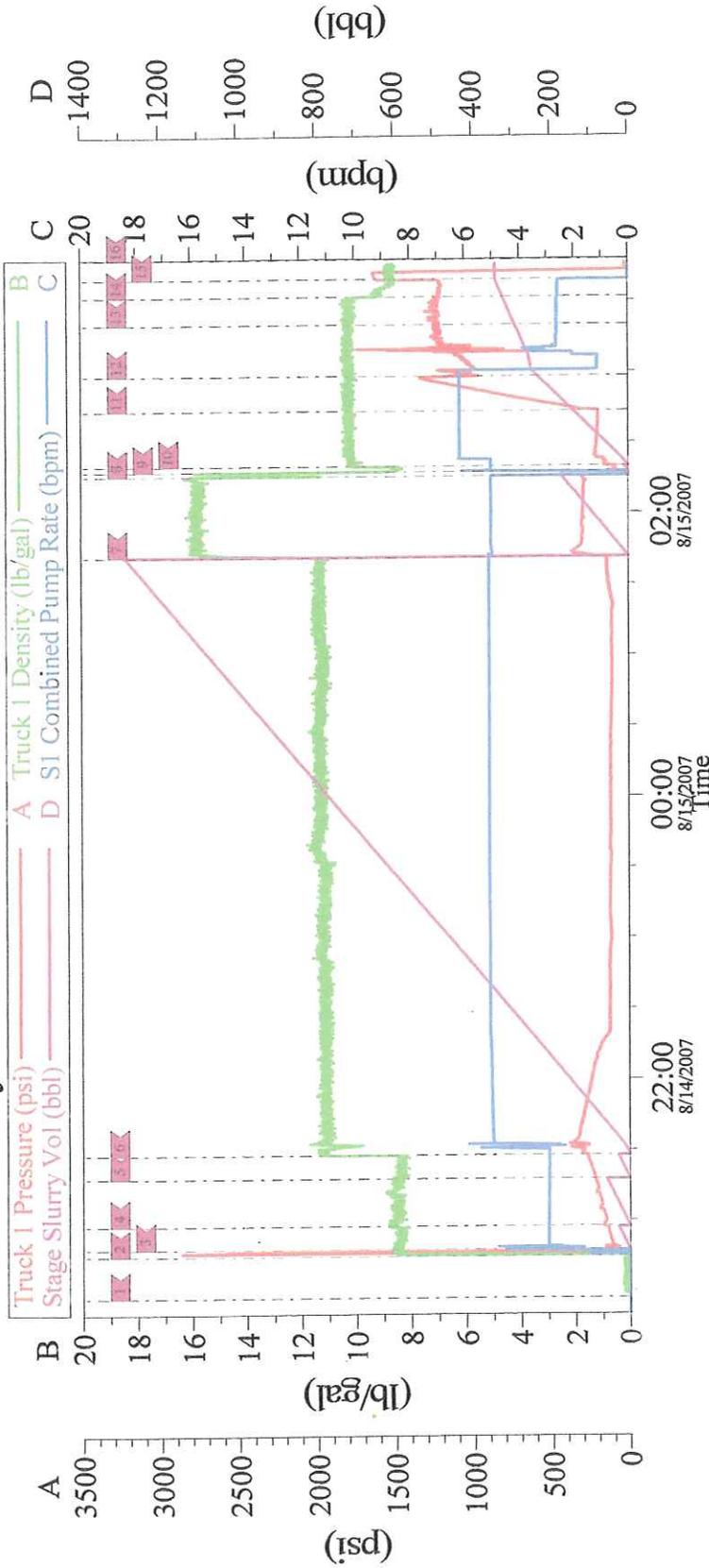
END OF JOB CUSTOMER SURVEY

CATEGORY	CUSTOMER SATISFACTION RATING (1-5)
PERSONNEL	Did our personnel perform to your satisfaction?
EQUIPMENT	Did our equipment perform to your satisfaction?
JOB DESIGN	Did we Perform the job to the agreed upon design?
PRODUCT / MATERIAL	Did our products and materials perform as you expected?
HEALTH & SAFETY	Did we perform in a safe and careful manner (Pre/post mtgs., PPE, JSA, etc.)?
ENVIRONMENTAL	Did we perform in an environmentally sound manner (Spills, leaks, cleanup, etc.)?
TIMELINESS	Was job performed as scheduled (On time to site, accessible to customer, completed on time)?
CONDITION/ APPEARANCE	Did the equipment condition and appearance meet your expectations?
COMMUNICATION	How well did our personnel communicate during mobilization, rig-up and job execution?
IMPROVEMENT	What can we do to improve our service? _____ _____ _____
COMMENT	_____ _____ _____ _____

Overall, I was satisfied with your job performance	<input type="radio"/> Yes	<input type="radio"/> No
--	---------------------------	--------------------------

CUSTOMER SIGNATURE	_____
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Windy Hills 8-5/8" Intermediate 3-17D
Henry Hollins 8-15-2007 SO# 5297505



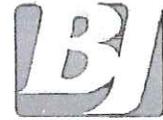
FIELD RECEIPT NO. 225134184

BJ Services Company



CUSTOMER (COMPANY NAME) Windy Hill Gas Storage LLC		CREDIT APPROVAL NO. A22511002338		PURCHASE ORDER NO.		CUSTOMER NUMBER 20095921 - 20095921		INVOICE NUMBER 1298575				
MAIL INVOICE TO STREET OR BOX NUMBER 61 Wilton Road				CITY Westport		STATE Connecticut		ZIP CODE 6880				
DATE COMPLETED	MO.	DAY	YEAR	WELL API NO.		WELL TYPE: New Well						
07	30	2007		BJ SERVICES SUPERVISOR JOSHUA K GOFF								
BJ SERVICES DISTRICT Brighton				JOB DEPTH(ft) 485		WELL CLASS: Other						
WELL NAME AND NUMBER SWD 3-17				TD WELL DEPTH(ft) 480		GAS USED ON JOB: No Gas						
WELL LOCATION: Morgan				COUNTY/PARISH Morgan		STATE Colorado		JOB TYPE CODE: Surface				
PRODUCT CODE	LEGAL DESCRIPTION			DESCRIPTION		UNIT OF MEASURE	QUANTITY	LIST PRICE UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT	
100021	Class G Cement					sacks	150					
100112	Calcium Chloride					lbs	804					
100120	Bentonite					lbs	1044					
100295	Cello Flake					lbs	88					
398224	Premium Lite Cement					sacks	200					
A152	Personnel Surcharge - Cement Svc					ea	1					
M100	Bulk Materials Service Charge					cu ft	589					
F003A	Cement Pump Casing, 0 - 1000 ft					4hrs	1					
J225	Data Acquisition, Cement, Standard					job	1					
J390	Mileage, Heavy Vehicle					miles	152					
J391N	Mileage, Auto, Pick-Up or Treating Van					miles	152					
J401	Bulk Delivery, Dry Products					ton-mi	1985				14,000.00	
				FIELD ESTIMATE								
ARRIVE LOCATION:				MO.	DAY	YEAR	TIME	SERVICE ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH THE TERMS AND CONDITIONS PRINTED ON THE LAST PAGE OF THIS FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.				
CUSTOMER REP. DAVID ST. ROMAIN				07	29	2007	21:40	SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.				
SEE LAST PAGE FOR GENERAL TERMS AND CONDITIONS				CUSTOMER AUTHORIZED AGENT				CUSTOMER AUTHORIZED AGENT <input checked="" type="checkbox"/>				
				CUSTOMER AUTHORIZED AGENT				BJ SERVICES APPROVED <input checked="" type="checkbox"/>				

CEMENT JOB REPORT



CUSTOMER Windy Hill Gas Storage LLC		DATE 30-JUL-07	F.R. # 225134184	SERV. SUPV. JOSHUA K GOFF											
LEASE & WELL NAME SWD 3-17		LOCATION		COUNTY-PARISH-BLOCK Morgan Colorado											
DISTRICT Brighton		DRILLING CONTRACTOR RIG # UNIT 234		TYPE OF JOB Surface											
SIZE & TYPE OF PLUGS		LIST-CSG-HARDWARE		PHYSICAL SLURRY PROPERTIES											
Cement Plug, Rubber, Top 8-5/8 in		Float Shoe 13-3/8 - 8rd		SACKS OF CEMENT	SLURRY WGT PPG	SLURRY YLD FT ³	WATER GPS	PUMP TIME HR:MIN	Bbl SLURRY	Bbl MIX WATER					
		Float Collar, Auto Fill, 13-3/8 - 8rd													
MATERIALS FURNISHED BY BJ															
Fresh Water					8.4				60						
Class "G" + additives				150	15.8	1.17	5.00	02:30	31.14	17.84					
Fresh Water					8.4				68.6						
Premium Lite Cement				200	13	1.77	9.21	02:30	62.96	43.86					
Class "G" Neat				0	15.8	1.15	5.00		0	0					
Available Mix Water 500 Bbl.		Available Displ. Fluid 356 Bbl.		TOTAL				222.71	61.70						
HOLE			TBG-CSG-D.P.				COLLAR DEPTHS								
SIZE	% EXCESS	DEPTH	SIZE	WGT.	TYPE	DEPTH	GRADE	SHOE	FLOAT	STAGE					
17.5		480	13.375	54.5	CSG	485	J-55	485	443	0					
LAST CASING			PKR-CMT RET-BR PL-LINER			PERF. DEPTH		TOP CONN		WELL FLUID					
SIZE	WGT	TYPE	DEPTH	BRAND & TYPE		DEPTH	TOP	BTM	SIZE	THREAD	TYPE	WGT.			
				NO PACKER		0	0	0	13.375	8 RD	WATER BASED ML	9.7			
DISPL. VOLUME		DISPL. FLUID		CAL. PSI	CAL. MAX PSI	OP. MAX	MAX TBG PSI		MAX CSG PSI		MIX WATER				
VOLUME	UOM	TYPE		WGT.	BUMP PLUG	TO REV.	SQ. PSI	RATED	Operator	RATED	Operator				
68.6	BBLS	Fresh Water		8.4	123	0	0	0	0	2500	1000	FRAC TANK			
Circulation Prior to Job															
Circulated Well: Rig <input checked="" type="checkbox"/> BJ <input type="checkbox"/>				Circulation Time: .5				Circulation Rate: 4 BPM							
Mud Density In: 9.7 LBS/GAL				Mud Density Out: 9.7 LBS/GAL				PV & YP Mud In: 55		PV & YP Mud Out: 55					
Gas Present: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> Units:				Solids Present at End of Circulation: NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>											
Displacement And Mud Removal															
Displaced By: Rig <input type="checkbox"/> BJ <input checked="" type="checkbox"/>				Amount Bled Back After Job: .2 BBLS											
Returns During Job: <input type="checkbox"/> NONE <input type="checkbox"/> PARTIAL <input checked="" type="checkbox"/> FULL				Method Used to Verify Returns: EYE											
Cement Returns at Surface: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				Were Returns Planned at Surface: <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES											
Pipe Movement: <input type="checkbox"/> ROTATION <input type="checkbox"/> RECIPROCATION <input type="checkbox"/> NONE <input type="checkbox"/> UNABLE DUE TO STUCK PIPE															
Centralizers: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Quantity:				Type: <input type="checkbox"/> BOW <input type="checkbox"/> RIGID							
Job Pumped Through: <input type="checkbox"/> CHOKE MANIFOLD <input type="checkbox"/> SQUEEZE MANIFOLD <input checked="" type="checkbox"/> MANIFOLD <input type="checkbox"/> NO MANIFOLD															
Plugs															
Number of Attempts by BJ: 0				Competition: 0				Wiper Balls Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES Quantity:							
Plug Catcher Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Parabow Used: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES											
Was There a Bottom: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Top of Plug: 0 FT				Bottom of Plug: 0 FT							
Squeezes (Update Original Treatment Report for Primary Job)															
BLOCK SQUEEZE <input type="checkbox"/>				SHOE SQUEEZE <input type="checkbox"/>				TOP OF LINER SQUEEZE <input type="checkbox"/>				PLANNED <input type="checkbox"/> UNPLANNED <input type="checkbox"/>			
Liner Packer: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				Bond Log: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES				PSI Applied: 0				Fluid Weight: 0 LBS/GAL			
Casing Test (Update Original Treatment Report for Primary Job)															
Casing Test Pressure: 0 PSI				With 0 LBS/GAL Mud				Time Held: 00 Hours 00 Minutes							
Shoe Test (Update Original Treatment Report for Primary Job)															
Depth Drilled out of Shoe: 0 FT				Target EMW: 0 LBS/GAL				Actual EMW: 0 LBS/GAL							
Number of Times Tests Conducted: 0				Mud Weight When Test was Conducted: 0 LBS/GAL											

CEMENT JOB REPORT



Problems Before Job (I.E. Running Casing, Circulating Well, ETC)

HAD TO WAIT ON CASERS AND CRANE TO RUN PIPE. CASING WAS ON BOTTOM AND PRESSURED UP HAD TO RETIGHTEN SWAGE AND LIFT CASING BEFORE CIRCULATION COULD BE ACHEIVED

Problems During Job (I.E. Lost Returns, Equipment Failure, Bulk Delivery, Foaming, ETC)

N/A

Problems After Job (I.E. Gas at Surface, Float Equipment Failed, ETC)

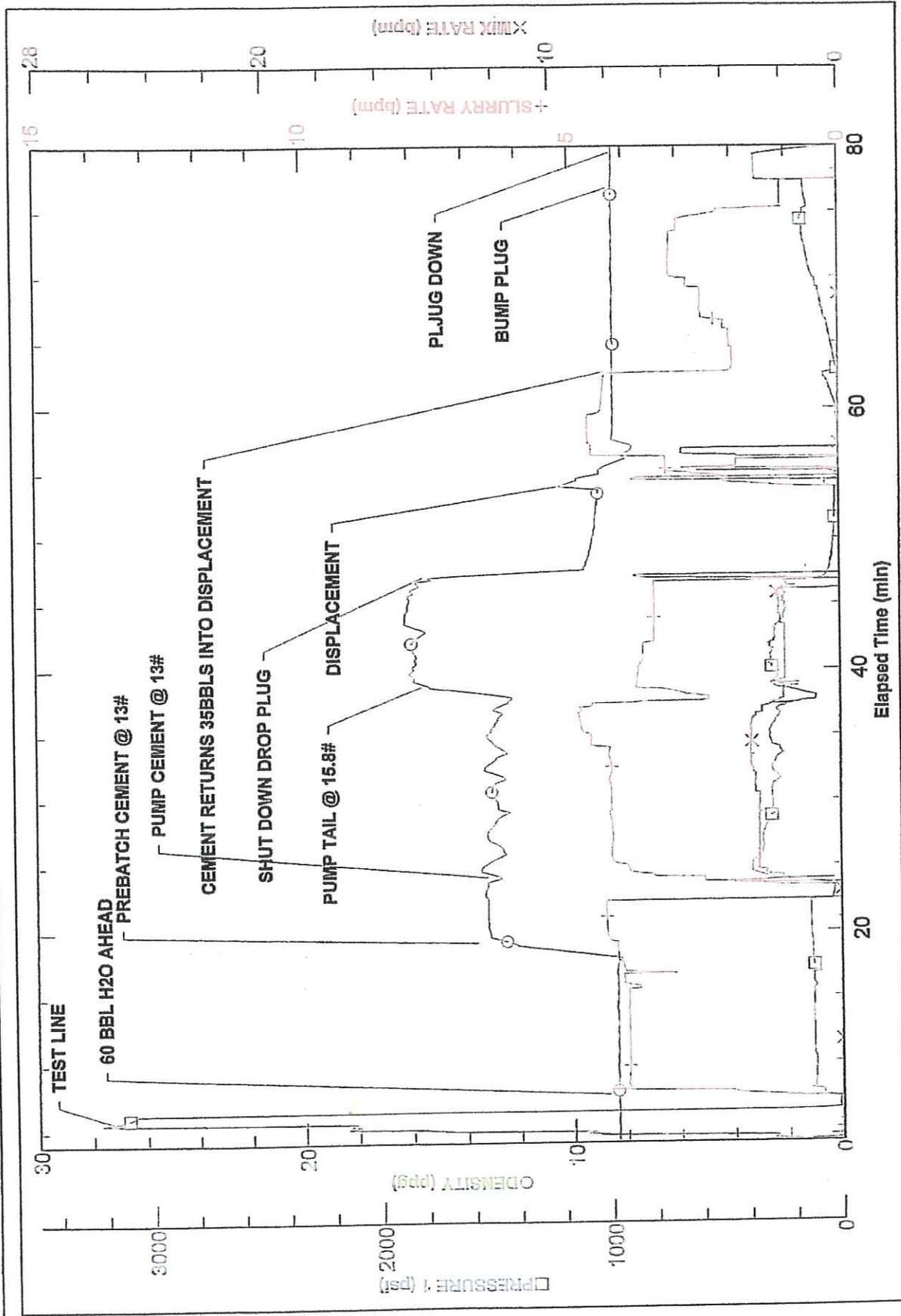
N/A

EXPLANATION: TROUBLE SETTING TOOL, RUNNING CSG, ETC. PRIOR TO CEMENTING:

PRESSURE/RATE DETAIL						EXPLANATION		
TIME HR:MIN.	PRESSURE - PSI		RATE BPM	Bbl. FLUID PUMPED	FLUID TYPE	SAFETY MEETING: BJ CREW <input checked="" type="checkbox"/> CO. REP. <input checked="" type="checkbox"/>		
	PIPE	ANNULUS				TEST LINES	3000 PSI	
						CIRCULATING WELL - RIG <input checked="" type="checkbox"/> BJ <input type="checkbox"/>		
03:50	0	0	0	0	N/A	SAFETY MEETING		
04:10	3000	0	0	0	H2O	TEST LINE		
04:13	120	0	4	60	H2O	WATER AHEAD		
04:29	300	0	4.3	62	CMT	BATCH AND PUMP LEAD @ 13#		
04:41	275	0	3.8	31.2	CMT	PUMP TAIL @ 15.8#		
04:54	0	0	0	0	N/A	DROP PLUG		
04:59	55	0	4	68.6	H2O	DISPLACEMENT CAUGHT CEMENT 35 BBLs INTO DISPLACEMENT		
05:23	360	0	0	0	H2O	BUMP PLUG		
05:29	0	0	0	0	H2O	PLUG DOWN		
BUMPED PLUG	PSI TO BUMP PLUG	TEST FLOAT EQUIP.	BBL.CMT RETURNS/ REVERSED	TOTAL BBL. PUMPED	PSI LEFT ON CSG	SPOT TOP OUT CEMENT	Service Supervisor Signature:	
<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	360	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	33.6	221.8	0	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		



BJ Services JobMaster Program Version 3.10
Job Number: 225134184
Customer: WINDY HILL GAS STORAGE LL
Well Name: SWD 3-17



Job Start: Monday, July 30, 2007

BJ Services

Windy Hill 3-17D Cementing Calculations

Figure 3

Data source for cement job is "3-17D Halliburton Cementing -8.625(08-14-07)

Surface Casing 0' - 483':

	OD (in)	ID (in)	Vol (cu ft/lf)	
Casing diameter	13.375	12.615	0.975697002	0.867964373
Hole diameter	--	17.5		1.670334636
Annular space volume			0.694637633	
Total annular space	335.51	cu ft		

Cement use:

Type	sacks	yield (cu ft/sx)	Cement volume (cu ft)
Class G cmt w/ additives	150	1.17	175.5
Prem Lite Cmt	200	1.77	354
Cement Total Volume			529.5

Production Casing 0' - 5,461':

1) Lower hole (483'-5461'): length (ft): 4978

	OD (in)	ID (in)	Vol (cu ft/lf)	
Casing diameter	8.625	7.921	0.405737918	0.342205839
Hole diameter	--	12.25		0.818463971
Annular space			0.412726053	
Annular space 1 volume	2054.55	cu ft		

2) Surface csg section (0'-483'): length (ft): 483

	OD (in)	ID (in)	Vol (cu ft/lf)	
Surf. csg diameter	13.375	12.615	0.975697002	0.867964373
Csg diameter	8.625	7.921	0.405737918	0.342205839
Annular space			0.462226454	
Annular space 2 volume	223.2554	cu ft		

Total annular space (1+2) 2277.806 cu ft

Cement use:

Type	sacks	yield (cu ft/sx)	Cement volume (cu ft)
50/50 Poz Premium	2295	2.73	6265.35
Premium Cement	835	1.19	993.65
Cement Total Volume			7259

Cement/ Annular 320%