

The Road to Excellence Starts with Safety

Sold To #: 300496	Ship To #: 2804150	Quote #:	Sales Order #: 7610511
Customer: APACHE CORP		Customer Rep: Hudson, Jim	
Well Name: Hager	Well #: 1-18	API/UWI #:	
Field:	City (SAP): MEADE	County/Parish: Meade	State: Kansas
Legal Description: Section 18 Township 34N Range 27W			
Contractor: KENAI	Rig/Platform Name/Num: 55		
Job Purpose: Cement Multiple Stages			
Well Type: Development Well	Job Type: Cement Multiple Stages		
Sales Person: MEREDITH, JERRY	Srvc Supervisor: WILTSHIRE, MERSHEK	MBU ID Emp #: 195811	

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
FARNUM, GORDON	12	0	LOPEZ, JUAN R	12	198514	MATA, ADOLFO V	12	419999
WILTSHIRE, MERSHEK Tonje	12	195811						

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

Job

Job Times

Formation Name	Formation Depth (MD)	Top	Bottom	Called Out	Date	Time	Time Zone
					04 - Sep - 2010	07:00	CST
Form Type			BHST	122 degF	On Location	04 - Sep - 2010	11:00
Job depth MD	6100. ft		Job Depth TVD	6100. ft	Job Started	04 - Sep - 2010	14:56
Water Depth			Wk Ht Above Floor		Job Completed	04 - Sep - 2010	21:35
Perforation Depth (MD)	From	To		Departed Loc	04 - Sep - 2010	23:00	CST

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
7-7/8" Production Open Hole Lower Section				7.875				3850.	6100.		
7-7/8" Production Open Hole Upper Section				7.875				1600.	3850.		
Multiple Stage Cementer	Unknown								4100.		
5-1/2" 17 ppf Production Casing	New		5.5	4.892	17.	8 RD (LT&C)	J-55		6100.		
8-5/8" Surface Casing	New		8.625	8.097	24.	8 RD (ST&C)	J-55		1596.		

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	Water Spacer		20.00	bbl	8.33	.0	.0	.0	
2	Superflush		20.00	bbl	9.3	.0	.0	.0	
		68 lbm/bbl	HALLIBURTON SUPER FLUSH (100003639)						
3	Water Spacer		20.00	bbl	8.33	.0	.0	.0	
4	Primary Cement	POZ PREMIUM 50/50 - SBM (12302)	355.0	sacks	14.2	1.43	5.79		5.79
		5.792 Gal	FRESH WATER						
		0.6 %	HALAD(R)-322, 50 LB (100003646)						
		3 lbm	KOL-SEAL, BULK (100064233)						
		5 %	CAL-SEAL 60, BULK (100064022)						
		10 %	SALT, 100 LB BAG (100003652)						
5	Mud Displacement		141.00	bbl	9.			.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	Water Spacer		20.00	bbl	8.33	.0	.0	.0	
2	Super Flush		20.00	bbl	9.3	.0	.0	.0	
		68 lbm/bbl	HALLIBURTON SUPER FLUSH (100003639)						
3	Water Spacer		20.00	bbl	8.33	.0	.0	.0	
4	Lead Cement	EXTENDACEM (TM) SYSTEM (452981)	250.0	sacks	11.2	3.07	18.29		18.29
		0.125 lbm	POLY-E-FLAKE (101216940)						
		18.294 Gal	FRESH WATER						
5	Tail Cement	CMT - PREMIUM CEMENT (100003687)	100.0	sacks	16.4	1.07	4.43		4.43
		94 lbm	CMT - PREMIUM - CLASS H REG OR TYPE V, BULK (100003687)						
		0.1 %	HR-800, 50 LB SACK (101619742)						
		0.125 lbm	POLY-E-FLAKE (101216940)						
		4.426 Gal	FRESH WATER						
6	Water Displacement		91.00	bbl	8.33	.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	40 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

HALLIBURTON

Cementing Job Log

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Field:	City (SAP): MEADE	County/Parish: Meade	State: Kansas
Legal Description: Section 18 Township 34N Range 27W			
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: KENAI	Rig/Platform Name/Num: 55		
Job Purpose: Cement Multiple Stages			Ticket Amount:
Well Type: Development Well		Job Type: Cement Multiple Stages	
Sales Person: MEREDITH, JERRY		Srvc Supervisor: WILTSHIRE, MERSHEK	MBU ID Emp #: 195811

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	09/04/2010 07:00							
Arrive At Loc	09/04/2010 11:00							
Pre-Job Safety Meeting	09/04/2010 11:15							
Start Job	09/04/2010 14:56							
Test Lines	09/04/2010 14:56						5000.0	
Pump Spacer 1	09/04/2010 14:58		6	20			520.0	WATER
Pump Spacer 2	09/04/2010 15:03		6	20			520.0	SUPERFLUSH
Pump Spacer 1	09/04/2010 15:08		6	20			520.0	WATER
Pump Cement	09/04/2010 15:11		6	96			520.0	355 SKS 50/50 POZ @ 14.2#
Drop Top Plug	09/04/2010 15:28		6		96		130.0	END CEMENT
Clean Lines	09/04/2010 15:29							
Pump Displacement	09/04/2010 15:37		5	141			60.0	50 BBLS WATER /// 91 BBLS MUD
Other	09/04/2010 16:00		2.5	121			750.0	SLOW RATE
Other	09/04/2010 16:04						950.0	PRESSURE BEFORE LANDING PLUG
Bump Plug	09/04/2010 16:04		2.5		141		1800.0	FLOAT HELD
Drop Opening Device For Multiple Stage Cementer	09/04/2010 16:06							
Open Multiple Stage Cementer	09/04/2010 16:33						850.0	

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Wednesday, September 15, 2010 03:33:00

HALLIBURTON

Cementing Job Log

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
End Job	09/04/2010 16:44							END FIRST STAGE /// CIRCULATE 4 HOURS
Start Job	09/04/2010 20:32							STAGE 2
Pump Spacer 1	09/04/2010 20:33		6.5	20			200.0	WATER
Pump Spacer 2	09/04/2010 20:37		6.5	20			200.0	SUPERFLUSH
Pump Spacer 1	09/04/2010 20:41		6.5	20			200.0	WATER
Pump Lead Cement	09/04/2010 20:44		6.5	137			230.0	250 SKS EXTENDACEM @ 11.2#
Pump Tail Cement	09/04/2010 21:04		5.5	19			180.0	100 SKS CLASS H @ 16.4#
Drop Top Plug	09/04/2010 21:08		5.5		156		170.0	END CEMENT
Clean Lines	09/04/2010 21:09							
Pump Displacement	09/04/2010 21:13		8	95			120.0	WATER
Other	09/04/2010 21:27		2.5	75			480.0	SLOW RATE
Other	09/04/2010 21:33							PRESSURE BEFORE LANDING PLUG
Bump Plug	09/04/2010 21:33		2.5		95		2650. 0	FLOAT HELD
Close Multiple Stage Cementer	09/04/2010 21:33						2650. 0	
End Job	09/04/2010 21:35							

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