
ENTEK GRB LLC

Battle Mountain Fed. 14-10L

Moffat County, Colorado

Cement Surface Casing

Post Job Report

The Road to Excellence Starts with Safety

Sold To #: 361955	Ship To #: 2864848	Quote #:	Sales Order #: 8308680
Customer: ENTEK GRB LLC		Customer Rep: ZHS-18, Entek	
Well Name: Battle Mountain Fed.		Well #: 14-10L	API/UWI #: 05-081-07641
Field:	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 14 Township 21N Range 89W			
Contractor: Entek		Rig/Platform Name/Num: ZHS 18	
Job Purpose: Cement Surface Casing			
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: VOLNER, THOMAS		Srvc Supervisor: OLSEN, BARTLEY	MBU ID Emp #: 392185

Job Personnel

HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #	HES Emp Name	Exp Hrs	Emp #
LEATHAM, NOLAN Robert	30	482961	NESTOR, DUSTIN Howard	30	478743	OLSEN, BARTLEY Ned	30	392185
SPINDLER, DAVID Joseph	30	481522						

Equipment

HES Unit #	Distance-1 way						
10249494C	160 mile	10744715C	160 mile	10783485	160 mile	11071577	160 mile
11288838	160 mile	11337605	160 mile	11380725	160 mile		

Job Hours

Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours	Date	On Location Hours	Operating Hours
07/17/2011	18	0	07/18/2011	12	4			

TOTAL Total is the sum of each column separately

Job

Job Times

Formation Name	Top	Bottom	Called Out	Date	Time	Time Zone
Formation Depth (MD)			On Location	17 - Jul - 2011	01:00	MST
Form Type	BHST		Job Started	17 - Jul - 2011	06:00	MST
Job depth MD	810. ft	Job Depth TVD	Job Completed	18 - Jul - 2011	08:18	MST
Water Depth		Wk Ht Above Floor	Departed Loc			
Perforation Depth (MD)	From	To				

Well Data

Description	Max pressure psig	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
12-1/4" Surface Open Hole			12.25				.	810.		
9-5/8" Surface Casing		9.625	8.921	36.		J-55	.	810.		

Tools and Accessories

Type	Size	Qty	Make	Depth	Type	Size	Qty	Make	Depth	Type	Size	Qty	Make
Guide Shoe					Packer					Top Plug	9.625	1	HES
Float Shoe					Bridge Plug					Bottom Plug			
Float Collar					Retainer					SSR plug set			
Insert Float										Plug Container	9.625	1	HES
Stage Tool										Centralizers	9.625	4	HES

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		20.00	bbl	8.33	.0	.0	5	
2	Mountain G	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	450.0	sacks	15.8	1.16	4.98	5	4.98
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	1 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	0.125 lbm	POLY-E-FLAKE (101216940)							
	4.983 Gal	FRESH WATER							
3	Mountain G	CMT - PREMIUM - CLASS G, 94 LB SK (100003685)	35	sacks	15.8	1.16	4.99	2	4.99
	94 lbm	CMT - PREMIUM - CLASS G REG OR TYPE V, BULK (100003685)							
	2 %	CALCIUM CHLORIDE, PELLET, 50 LB (101509387)							
	5.019 Gal	FRESH WATER							
Calculated Values		Pressures		Volumes					
Displacement	59.3	Shut In: Instant		Lost Returns	59	Cement Slurry	93	Pad	
Top Of Cement		5 Min		Cement Returns	0	Actual Displacement	59	Treatment	
Frac Gradient		15 Min		Spacers	20	Load and Breakdown		Total Job	172
Rates									
Circulating	7	Mixing		5	Displacement	5	Avg. Job		5
Cement Left In Pipe	Amount	42 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					

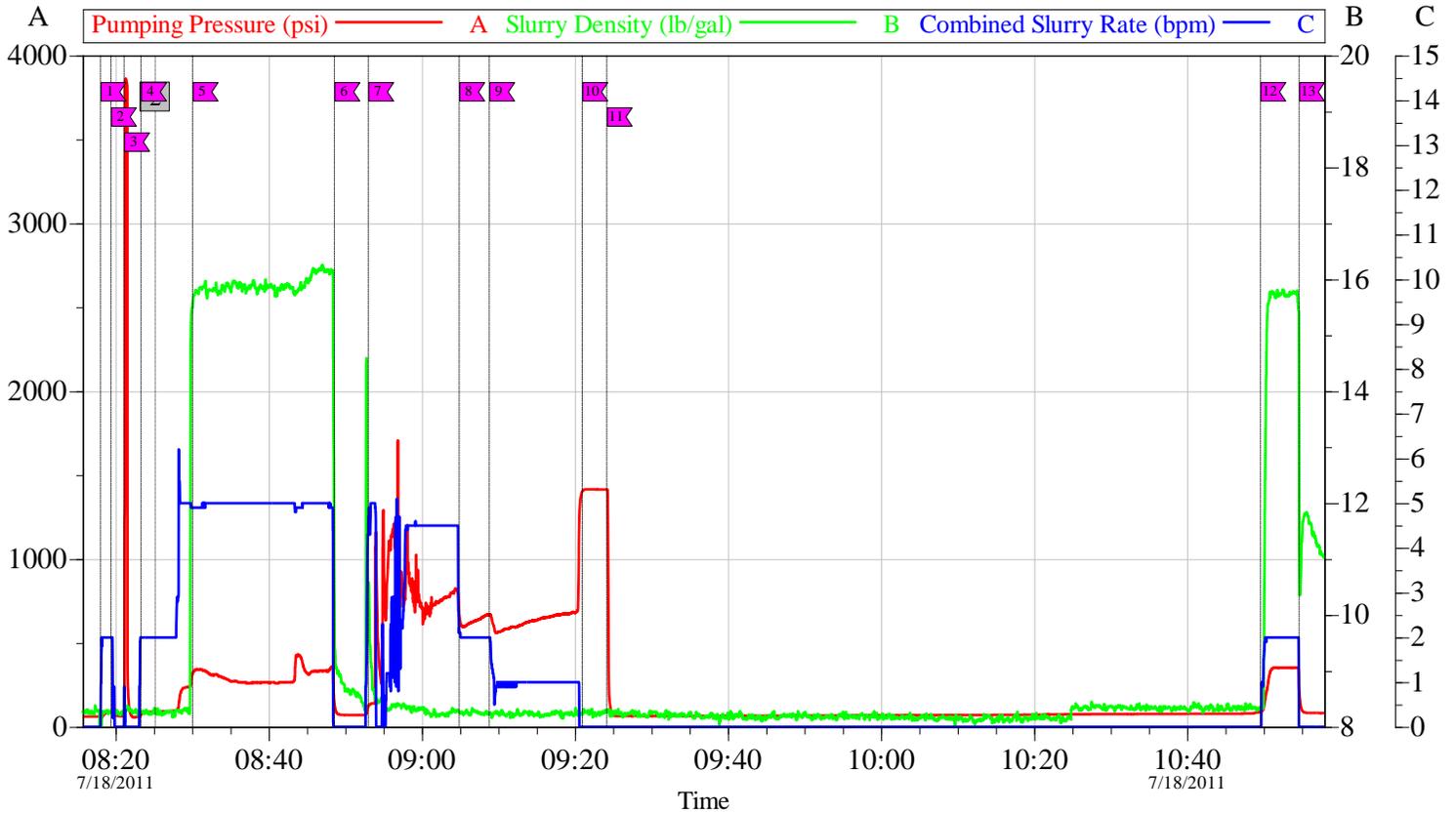
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Well Name: Battle Mountain Fed.		Well #: 14-10L	API/UWI #: 05-081-07641
Field:	City (SAP): CRAIG	County/Parish: Moffat	State: Colorado
Legal Description: Section 14 Township 21N Range 89W			
Lat: N 0 deg. OR N 0 deg. 0 min. 0 secs.		Long: E 0 deg. OR E 0 deg. 0 min. 0 secs.	
Contractor: Entek		Rig/Platform Name/Num: ZHS 18	
Job Purpose: Cement Surface Casing			Ticket Amount:
Well Type: Development Well		Job Type: Cement Surface Casing	
Sales Person: VOLNER, THOMAS		Srvc Supervisor: OLSEN, BARTLEY	MBU ID Emp #: 392185

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Call Out	07/17/2011 01:00							
Pre-Convoy Safety Meeting	07/17/2011 02:15							WITH HES CREW, TALKED ABOUT THE HAZARDS OF DRIVING TO LOCATION
Crew Leave Yard	07/17/2011 02:30							
Arrive At Loc	07/17/2011 06:00							DELIVERED FLOAT EQUIPMENT AND CIRCULATING IRON TO LOCATION, CREW WAITED ON CASING CREW TO RUN 810' OF 9 5/8" , 36#, J-55 CASING
Assessment Of Location Safety Meeting	07/18/2011 05:00							ASSESSMENT OF LOCATION , TALKED ABOUT SPOTTING EQUIPMENT AND RIGGING UP EQUIPMENT
Other	07/18/2011 05:15							SPOT EQUIPMENT
Pre-Job Safety Meeting	07/18/2011 05:30							WITH HES CREW TALKED , ABOUT THE HAZARDS OF RIGGING UP BULK, WATER, IRON
Rig-Up Equipment	07/18/2011 05:40							RIG UP BULK , WATER, IRON
Rig-Up Completed	07/18/2011 07:45							FINISHED RIGGING UP GROUND

Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Pre-Job Safety Meeting	07/18/2011 08:00							WITH HES CREW, RIG CREW ,TALKED ABOUT THE HAZARDS OF DONING THE JOB, ON BOTTOM WITH CASING @ 02:25 CIRCULATED 7bbls/min, WAITED ON HES HAD TO PULL PUMP INTO LOCATION WITH A CAT
Start Job	07/18/2011 08:18	1						
Pump Water	07/18/2011 08:18	1	2	3	3		56.0	PUMP 3BBLs OF FRESH WATER AHEAD TO FILL LINES
Shutdown	07/18/2011 08:19	2						
Pressure Test	07/18/2011 08:21	3						PRESSURE TEST HES IRON TO 3000 PSI
Pump Spacer	07/18/2011 08:23	4	2	17	20		73.0	H2O SPACER
Pump Cement	07/18/2011 08:30	5	5	93	93		321.0	450sks MOUNTAIN-G @ 15.8 ppg, 1.16 cf/sk, 4.98 gps
Shutdown	07/18/2011 08:48	6						
Drop Top Plug	07/18/2011 08:48	6						DROP HES TOP PLUG WITNESSED BY COMPANY MAN
Pump Displacement	07/18/2011 08:52	7	5	40	40		120.0	PUMP FRESH WATER DISPLACEMENT, LOST RETURNS WHILE SHUTDOWN TO DROP PLUG, HAD TO SURGE PUMPS WELL TRYING TO PACK OFF TRIED TO REGAIN CIRCULATION
Slow Rate	07/18/2011 09:04	8	2	9	49		665.0	SLOW RATE
Slow Rate	07/18/2011 09:08	9	1	10	59		668.0	
Bump Plug	07/18/2011 09:20	10					1404.0	FINAL CIRCULATING PRESSURE 680psi BROUGHT UP TO 1404psi

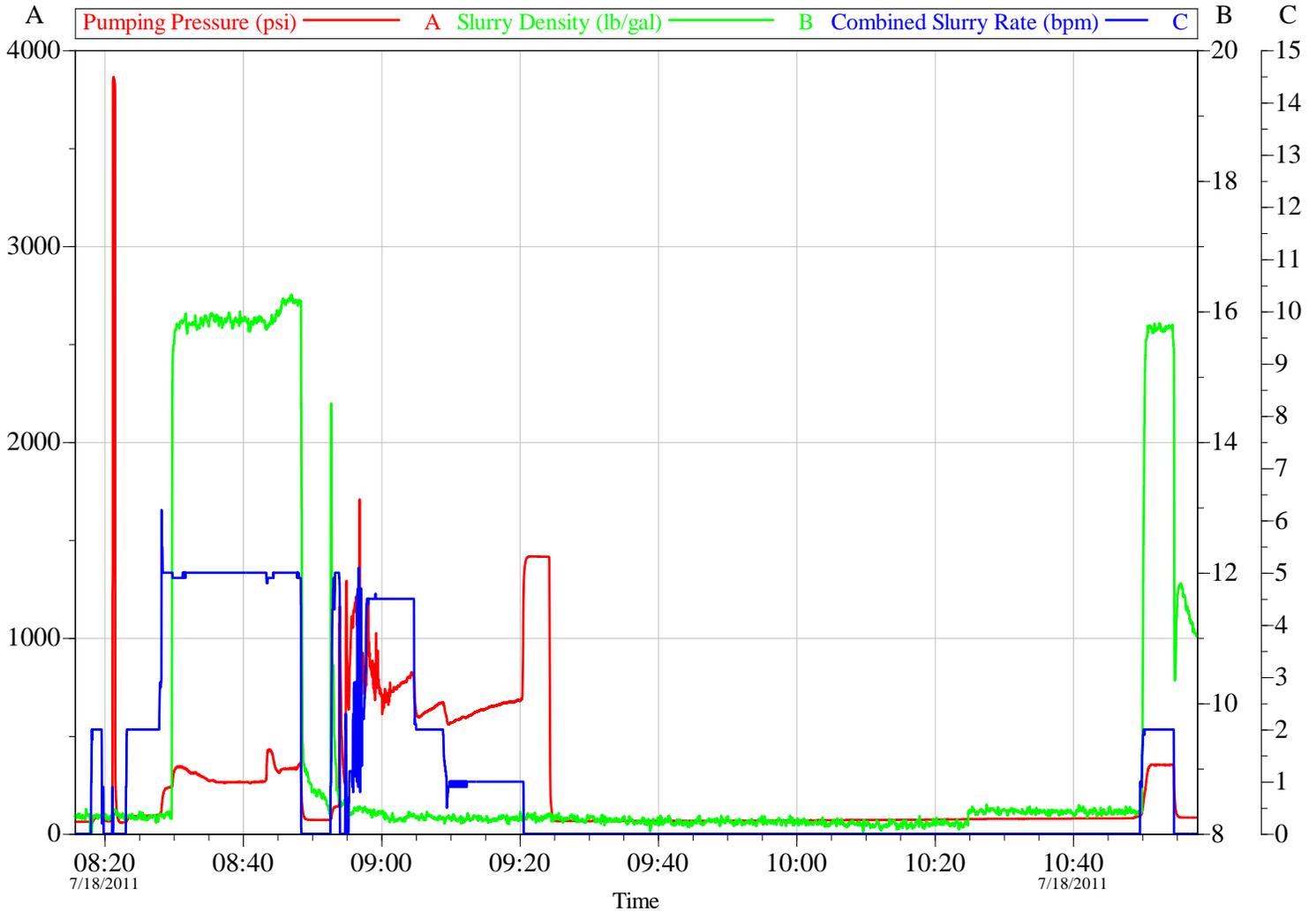
Activity Description	Date/Time	Cht #	Rate bbl/min	Volume bbl		Pressure psig		Comments
				Stage	Total	Tubing	Casing	
Check Floats	07/18/2011 09:24	11						FLOATS HELD RETURNED .5 BBLS BACK TO PUMP TRUCK
Other	07/18/2011 10:49	12		7	100			PUMP TOPOUT CEMENT @ 15.8 ppg, 1.16 cf/sk, 4.99 gps USED 80' OF 1" TUBING, USED 35sks
End Job	07/18/2011 10:54	13						LOST RETURNS WHEN DROPPING TOP PLUG NEVER GAINED THEM BACK
Post-Job Safety Meeting (Pre Rig-Down)	07/18/2011 11:00							WITH HES,RIG CREW TALKED ABOUT THE HAZARDS OF RIGGING DOWN EQUIPMENT
Rig-Down Equipment	07/18/2011 11:10							RIG DOWN IRON, WATER, BULK
Rig-Down Completed	07/18/2011 11:40							RIG DOWN COMPLETE
Pre-Convoy Safety Meeting	07/18/2011 11:50							WITH HES CREW TALKED ABOUT THE HAZARDS OF DRIVING BACK TO YARD
Crew Leave Location	07/18/2011 12:00							



Intersection	PP	Local Event Log	Intersection	PP	Intersection	PP
1 START JOB/FILL LINES	08:18:01 56.00	2 SHUTDOWN	08:19:22 86.00	3 PRESSURE TEST HES IRON	08:21:05 64.61	
4 PUMP H2O SPACER	08:23:18 73.18	5 PUMP PRIMARY CEMENT	08:30:03 321.5	6 SHUTDOWN/DROP TOP PLUG	08:48:34 144.6	
7 START DISPLACEMENT/SURGE PUMPS	08:52:59 120.6	8 SLOW RATE	09:04:53 665.3	9 SLOW RATE	09:08:48 668.0	
10 BUMP PLUG/SHUTDOWN	09:20:57 1404	11 CHECK FLOATS/WAIT TO TOPOUT	09:24:09 1415	12 PUMP TOPOUT CEMENT	10:49:33 89.00	
13 SHUTDOWN/END JOB	10:54:36 245.6					

Customer: ENTEK	Job Date: 17-Jul-2011	Sales Order #: 8308680
Well Description: SURFACE	Well #: 14-10L	Supervisor: BART OLSEN

OptiCem v6.4.10
18-Jul-11 11:43



Customer: ENTEK	Job Date: 17-Jul-2011	Sales Order #: 8308680
Well Description: SURFACE	Well #: 14-10L	Supervisor: BART OLSEN

OptiCem v6.4.10
18-Jul-11 11:45

HALLIBURTON

Water Analysis Report

COMPANY:	ENTEK	Date Recorded	7/17/2011
SUBMITTED BY:	BART OLSEN	SO#	8308680
LEASE:	BATTLE MOUNTAIN	Job Type	SURFACE
WELL #:	14-10L	Camp Location	10142 ROCK SPRINGS WY

CEMENT MIX WATER REQUIREMENTS

Item	Recorded Test Value	Max Acceptable Limit	Potential Problems in Exceeding Limit
pH	6	5 to 8.5	Chemicals in water can cause severe retardation
Chlorides ^{1,2}	0	3000 mg/L	Can accelerate the set time on cement 1% ~ 4800 mg/L
Total Alkalinity	240	1000 mg/L	Cement is greatly retarded to the point where it may not set up at all, decrease strength of cement and possibly thicken cement slurry. (Typically occurs @ pH ≥ 8.3)
Total Hardness	250	400 mg/L	Slightly shortens pump time on cement.
Sulfates	<200	1500 mg/L	Will greatly decrease the strength of cement
Iron	0	300 mg/L	Could cause gelation issues with cement
Water Temp	65F	50F to 80F	High temps will accelerate; Low temps may risk freezing in cold weather

NOTES:
 1. If the water's pH is greater than or equal to 8, avoid using it since Magnesium may be present (there are no field test strips for Magnesium).