

# HALLIBURTON

## Cementing Job Summary

The Road to Excellence Starts with Safety

Sold To #: 372073	Ship To #: 3617299	Quote #: 0021966946	Sales Order #: 0901910792
Customer: TAPSTONE ENERGY LLC		Customer Rep: SKIP	
Well Name: MANGEN 36-4-10	Well #: 1H	API/UWI #: 15-007-24248-01	
Field: UNDESIGNATED	City (SAP): HAZELTON	County/Parish: BARBER	State: KANSAS
Legal Description: N2 N2 NW NW-36-34S-10W-200FNL-660FWL			
Contractor: NOMAC		Rig/Platform Name/Num: NOMAC 07	
Job BOM: 7522			
Well Type: HORIZONTAL OIL		Srv Supervisor: Robert Husted	
Sales Person: HALAMERICA/HX25353		Job	

Formation Name		Bottom	
Formation Depth (MD)	Top	BHST	
Form Type		Job Depth TVD	
Job depth MD	5212ft	Wk Ht Above Floor	
Water Depth		To	
Perforation Depth (MD)	From		

### Well Data

Description	New / Used	Size in	ID in	Weight lbm/ft	Thread	Grade	Top MD ft	Bottom MD ft	Top TVD ft	Bottom TVD ft
Casing	3	9.625	8.921	36	LTC	J-55	0	800		
Casing	3	7	6.276	26	LTC	P-110	0	5212	0	4730
Open Hole Section			6.75				800	5212	800	4730

### Tools and Accessories

Type	Size in	Qty	Make	Depth ft	Type	Size in	Qty	Make
Guide Shoe	7			5159	Top Plug	7	1	HES
Float Shoe	7				Bottom Plug	7	1	HES
Float Collar	7			5074	SSR plug set	7		HES
Insert Float	7				Plug Container	7	1	HES
Stage Tool	7				Centralizers	7		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 <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/min	Total Mix Fluid Gal
1	Mud Flush III (Liquid)	Mud Flush III	10	bbl	8.4			4	
		FRESH WATER							
		41 gal/bbl							

Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
2	Lead Cement	ECONOCEM (TM) SYSTEM	140	sack	13.6	1.51		6	7.3
	0.40 %	HALAD(R)-9, 50 LB (100001617)							
	2 %	BENTONITE, BULK (100003682)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
3	Tail Cement	HALCEM (TM) SYSTEM	90	sack	15.6	1.18		5	5.2
	0.40 %	HALAD(R)-9, 50 LB (100001617)							
Fluid #	Stage Type	Fluid Name	Qty	Qty UoM	Mixing Density lbm/gal	Yield ft <sup>3</sup> /sack	Mix Fluid Gal	Rate bbl/mi n	Total Mix Fluid Gal
4	Displacement	Displacement	194	bbl	8.33			7	
<b>Cement Left In Pipe</b>	<b>Amount</b>	84.17ft			<b>Reason</b>			<b>Shoe Joint</b>	
<b>Mix Water:</b>	pH ##	<b>Mix Water Chloride:</b> ## ppm			<b>Mix Water Temperature:</b> ## °F °C				
<b>Cement Temperature:</b>	## °F °C	<b>Plug Displaced by:</b> ## lb/gal kg/m3 XXXX			<b>Disp. Temperature:</b> ## °F °C				
<b>Plug Bumped?</b>	Yes	<b>Bump Pressure:</b> 1100 psi			<b>Floats Held?</b> Yes				
<b>Returns:</b>	1 bbl	<b>Returns Density:</b> ## lb/gal kg/m3			<b>Returns Temperature:</b> ## °F °C				
<b>Comment</b>									

1.5 Job Event Log

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	DH Density (ppg)	Recirc Density (ppg)	Comments
Event	1	Call Out	Call Out	12/8/2014	21:00:00	USER					CALLED OUT BY ARS, OKC
Event	2	Pre-Convoy Safety Meeting	Pre-Convoy Safety Meeting	12/8/2014	22:00:00	USER					DISCUSSED ROUTE TO LOCATION AND SAFE DRIVING
Event	3	Depart Home for Location	Depart Home for Location	12/8/2014	22:30:00	USER					DEPARTED BLACKWELL
Event	4	Arrive At Loc	Arrive At Loc	12/9/2014	01:00:00	USER					ARRIVE AT LOCATION REQUESTED BY 0300
Event	5	Pre-Rig Up Safety Meeting	Pre-Rig Up Safety Meeting	12/9/2014	06:00:00	USER					DISCUSSED RIG UP PROCEDURES AND SAFETY
Event	6	Rig-Up Equipment	Rig-Up Equipment	12/9/2014	06:15:00	USER					RIG UP EQUIPMENT
Event	7	Pre-Job Safety Meeting	Pre-Job Safety Meeting	12/9/2014	07:30:00	USER	0.00	3.00	-1.71	0.00	DISCUSSED SAFETY, NEAREST HOSPITAL AND JOB PROCEDURES
Event	8	Prime Pumps	Prime Pumps	12/9/2014	07:51:24	COM4	0.00	5.00	-1.70	0.00	PRIMED PUMPS
Event	9	Test Lines	Test Lines	12/9/2014	08:35:52	COM4	0.00	63.00	6.12	8.40	TESTED LINES TO 3000 PSI
Event	10	Drop Bottom Plug	Drop Bottom Plug	12/9/2014	08:35:53	USER	0.00	63.00	6.13	8.40	DROPPED BOTTOM PLUG
Event	11	Pump Spacer 1	Pump Spacer 1	12/9/2014	08:39:26	COM4	0.00	-13.00	8.27	8.34	PUMPED 10 BBLS MUD FLUSH III @ 3.5 BBLS/350 PSI
Event	12	Pump Lead Cement	Pump Lead Cement	12/9/2014	08:43:17	COM4	4.40	365.00	13.33	13.55	PUMPED 38 BBLS LEAD CEMENT @ 13.6 4.5 BBLS / 400 PSI
Event	13	Pump Tail Cement	Pump Tail Cement	12/9/2014	08:49:31	COM4	3.00	107.00	14.32	15.45	PUMPED TAIL CEMENT @ 15.6
Event	14	Shutdown	Shutdown	12/9/2014	08:49:32	USER	3.00	106.00	14.37	15.48	SHUTDOWN
Event	15	Drop Top Plug	Drop Top Plug	12/9/2014	08:49:33	USER	3.00	105.00	14.37	15.51	DROPPED TOP PLUG
Event	16	Pump Displacement	Pump Displacement	12/9/2014	08:56:52	COM4	1.30	-67.00	15.16	8.42	PUMPED 194 BBLS FRESH WATER DISPLACEMENT @ 7BBLS

# HALLIBURTON

HALLIBURTON ENERGY INSTITUTE  
 MANGEN 36-4-10 1H  
 Case 2

Type	Seq. No.	Activity	Graph Label	Date	Time	Source	Comb Pump Rate (bbl/min)	DS Pump Press (psi)	DH Density (ppg)	Recirc Density (ppg)	Comments
Event	17	Displ Reached Cmmt	Displ Reached Cmmt	12/9/2014	09:01:49	COM4	7.00	252.00	7.88	8.42	DISPLACEMENT REACHED CEMENT 350 PSI/ 7BBL
Event	18	Bump Plug	Bump Plug	12/9/2014	09:32:31	COM4	0.00	976.00	7.28	8.43	BUMPED PLUG @ 1100 PSI 500 OVER PSI
Event	19	Check Floats	Check Floats	12/9/2014	09:32:32	USER	0.00	975.00	7.27	8.43	1 BBL RETURN FLOATS HELD
Event	20	End Job	End Job	12/9/2014	09:33:49	COM4	0.00	-77.00	7.21	8.43	JOB ACTIVITIES COMPLETE
Event	21	Post-Job Safety Meeting (Pre Rig-Down)	Post-Job Safety Meeting (Pre Rig-Down)	12/9/2014	09:50:00	USER	0.00	-79.00	-1.35	8.42	DISCUSSED RIG DOWN PROCEDURES AND SAFETY
Event	22	Rig-Down Equipment	Rig-Down Equipment	12/9/2014	10:00:00	USER					RIG DOWN EQUIPMENT
Event	23	Pre-Convey Safety Meeting	Pre-Convey Safety Meeting	12/9/2014	11:00:00	USER					DISCUSSED ROUTE HOME AND SAFE DRIVING
Event	24	Depart Location	Depart Location	12/9/2014	11:30:00	USER					DEPARTED LOCATION
Event	25	Arrive at Home	Arrive at Home	12/9/2014	13:00:00	USER					ARRIVED IN BLACKWELL