

**Daily Drilling Report**

Well ID: FORGE 16B(78)-32

Field: FORGE

University of Utah

Well Name: FORGE 16B(78)-32

Sect: 32 Town: 26S Rng: 9W County: BEAVER State: UT

Report No: 25

Report For 06:00 AM 11-May-23

Operator:	UNIVERSITY OF UTAH	Rig:	Frontier 16	Spud Date:	26-Apr-23	Daily Cost / Mud (\$):	---
Measured Depth (ft):	4910	Last Casing:	11.750 at 4,837	Wellbore:	Original Wellbore	AFE No.	AFE (\$) Actual (\$)
Vertical Depth (ft):	4909	Next Casing:		RKB Elevation (ft):	31	---	---
Proposed TD (ft):		Last BOP Test:	29-Apr-23	Job Reference RKB (ft):		---	---
Hole Made (ft) / Hrs:	32 / 0.0	Next BOP Test:	20-May-23	Working Interest:		Totals:	---
Average ROP (ft/hr):						Well Cost (\$):	---
Days (actual / plan):	Drilling 1.8 / 0, Flat 0 / 0, Complete 0 / 0, Total 1.8 / 0						DOL: 25
Pers/Hrs:	Operator: 3 / 36	Contractor:	14 / 168	Service:	12 / 144	Other:	5 / 60 Total: 34 / 408
Safety Summary: No incidents or events reported. 25 days since LTI. Conducted Safety Meeting.							
Current Operations: Circulating hole clean for trip out to look at bit and possible wash out.							
Planned Operations: Trip out of the hole. Change out bit. Trip in hole and particle drill ahead.							
Toolpusher: Shawn Seddell, Jason Postma							
Wellsite Supervisors: Leroy Swearingen, Randy Baldwin						Tel No.:	

**Operations Summary**

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
6:00	8:00	2.00	4,878	CIRC	Displace top of hole at 2,486' with mud.	
8:00	9:00	1.00	4,878	TRPI	Trip in hole on elevators to 4,764'.	
9:00	9:30	0.50	4,878	CIRC	Displace bottom of hole at 4,774' with mud.	
9:30	10:30	1.00	4,878	REAM	Ream cored section of hole with particle drilling bit, from 4,855' to 4,878'.	
10:30	10:40	0.17	4,878	SAFETY	PJSM with Particle Drilling Technologies, NOV, FORGE DSM, and Frontier Drilling personnel.	
10:40	11:00	0.33	4,878	SERV	Service top drive and check out electrical issue.	
11:00	11:15	0.25	4,878	DRILPA	Pump shot down to begin particle drilling. Top drive rotary stopped.	
11:15	22:30	11.25	4,878	REPR	Work on top drive. Pull back into casing and continue to work on top drive. Remove blower motor on top drive. Waited on new blower motor.	X
22:30	2:30	4.00	4,878	REPR	Blower motor arrive at 22:30. Install blower motor.	X
2:30	2:45	0.25	4,878	SAFETY	PJSM with Particle Drilling Technologies, NOV, FORGE DSM, and Frontier Drilling night personnel.	
2:45	3:30	0.75	4,878	TRPI	Trip in the hole from 4,773' to 4,878'.	
3:30	5:30	2.00	4,910	DRILPA	Particle drill 9-1/2" hole from 4,878' to 4,910'. Increase WOB in steps from 15k to 30 k. Increase RPM from 80 to 100. Only slight changes in ROP. 30 to 40 ROP. ROP started to slow at around 4900' to 5 ft/hr.	
5:30	6:00	0.50	4,910	CIRC	Circulate hole clean.	

**Management Summary**

Displaced top of hole at 2,486' with mud. Tripped in hole to 4,764'. Displaced bottom of hole with mud. Reamed cored section of hole with particle drilling bit from 4,855' to 4,878'. Trouble shoot top drive blower motor. Pulled up to the shoe. Waited on new blower motor. Installed same. Tripped back to bottom. Particle drilled 9-1/2" hole from 4,878' to 4,910'. Increased WOB in steps from 15k to 30 k. Increased RPM from 80 to 100 with 30-40 ROP. ROP started to slow to 5 ft/hr and some pump pressure loss. Circulated hole clean for trip out.

**Comments**

Fuel on hand 14,783 gals.  
Fuel used 1,384 gals.  
Total NPT to date 63.75 HR  
No H2S today.

**Casing/Tubular Information**

Type	Size (ins)	Top MD (ft)	Top TVD (ft)	Bottom MD (ft)	Bottom TVD (ft)	Hole Section	OH Diam. (ins)	Nom. Wgt. (lbs)	Nominal Grade	LOT (lbs/gal)
FULL	16.000	4		1,136	1,135	SURF	22.000	84	OTHER	
FULL	11.750	-3	3	4,837	4,837	INT1	14.750	65	OTHER	

**Mud Information**

Mud Information																					
%																Gels			Temp		Mud
Dens.	Vis	PV	YP	Filt.	Cake	pH/ES	Solids	Oil	Water	Sand	LGS	Cl	Ca	CaCl	10s	10m	30m	In	Out	Loss	
10-May-23 12:00 at Depth 4,878 ft Mud Pits, Type: Low Solids Non-Dispersed																					
8.60	52	12	17	11	1	10.8			100	0.1		1300			8	24	38		127		

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**Mud Consumables**

Item Description	Qty.	Cost	Item Description	Qty.	Cost
API Gel - 100#SK	200	---	Bicarb - 50#SK	5	---
Caustic Soda - 50#SK	1	---	DC-310/CI-100 - SACK	10	---
Defoam 14 - GALS	1	---	Desco - 25#SK	3	---
Engineering - OTHER	1	---	MDC -	1	---
PALlets/Wraps - OTHER	4	---	TORKease - GALS	5	---
Trucking -	1	---	Xanthan Gum - 50#SK	8	---

**Bit/BHA/Workstring Information**

				Depth		This Run		R.O.P.				Mud				Pump						
No	Run	Make	Model	Diam	In	Dist	Hrs	Avg	Max	WOB	RPM	Torque	Wt	Flow	Press	J. Vel	P. Drp	HHP	JIF			
8	1	NOV	Partical Drilli	9.500	4878	32	2	16.0	40.0	30	80	9000	9	650	3000	513	2025	768	1484			
Jets: 11 11 12 12					Out:		Grade: Cutter:		/		Dull:		/		Wear:		Brgs:		Gge:		Pull:	
BHA - No. 8 - BIT, BS, RR, OTHER, RR, DC, RR, 12 DC, XO, 30 HWDP = 1348.68																						

**Drilling Parameters**

Depth (ft)		ROP (ft/hr)		WOB (lbs)		RPM		Torque (ft lbs)		Flow (gals/min)		Pressure
From	To	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max	(psi)
4,878	4,910	30.0	40.0	30	40	80	100	9,000	13,000	650	650	3,000
Annular Velocity: Drill Collars:				356.5	Drill Pipe:				265.5			
Comments: Partical drilling.												

**Miscellaneous Drilling Parameters**

Hook Loads (lbs):		Off Bottom Rotate:		Pick Up:		Slack Off:		Drag Avg/Max:		/	
Hours on BHA:		Since Inspection:		8.5	Total:		8.5	Jars:			
Hours on Casing/Liner:		Rotating:		8.5 / 0	Tripping:		/	<input type="checkbox"/> Wear Bushing Installed			

**Rig Information**

Equipment Problems:											
Location Condition:											
Transport:											

**Solids Control Information**

Screen Sizes:	Top	Middle 1	Middle 2	Bottom
Shaker No 1:	120	120	120	120
Shaker No 2:	120	120	120	120
Shaker No 3:	170	170	170	170

**Drill Pipe Inventory**

DP Size	Joints	Weight	Grade	Thread	DP Size	Joints	Weight	Grade	Thread
5.5	365	24.7	S-135	5.5FH					

**Safety Information**

Meetings/Drills	Time	Description
Safety	30	Two Pre-tour safety meetings held daily with crews. Last day of shift, particle drilling.
First Aid Treatments:		Medical Treatments:
Lost Time Incidents:		Days Since LTI: 25
<input type="checkbox"/> BOP Test		
<input type="checkbox"/> Crownamatic Check		

**Weather Information**

Sky Condition: Overcast		Visibility: 10	
Air Temperature: 75 degF		Bar. Pressure: 1011	
Wind Speed/Dir: 8 / NW		Wind Gusts:	