



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: 15 Report For 06:00 AM 01-May-23

Operator:	UNIVERSITY OF UTAH	Rig:	Frontier 16	Spud Date:	26-Apr-23	Daily Cost / Mud (\$):	---
Measured Depth (ft):	4353	Last Casing:	16.000 at 1,136	Wellbore:	Original Wellbore	AFE No.	AFE (\$) Actual (\$)
Vertical Depth (ft):	4352	Next Casing:		RKB Elevation (ft):	31	---	---
Proposed TD (ft):		Last BOP Test:	29-Apr-23	Job Reference RKB (ft):		---	---
Hole Made (ft) / Hrs:	1,703 / 14.42	Next BOP Test:	20-May-23	Working Interest:		Totals:	---
Average ROP (ft/hr):	118.12					Well Cost (\$):	---
Days (actual / plan):	Drilling 1.33 / 0, Flat 0 / 0, Complete 0 / 0, Total 1.33 / 0					DOL:	15
Pers/Hrs: Operator:	3 / 36	Contractor:	14 / 168	Service:	4 / 48	Other:	3 / 36
						Total:	24 / 288

Safety Summary: No incidents or events reported. 15 days since LTI. Conducted Safety Meeting.

Current Operations: Working tight hole at 2,132'.

Planned Operations: Finish pulling out of the hole. Change out 14-3/4" bit and MWD batteries. Run in hole and drill 14-3/4" to +/- 4,960'. TD for this section.

Toolpusher: Shawn Seddell, Clay

Wellsite Supervisors: Leroy Swearingen, Randy Baldwin **Tel No.:**

Operations Summary

From	To	Elapsed	End MD(ft)	Code	Operations Description	Non-Prod
6:00	8:15	2.25	2,932	DRIL	Drill 14 3/4-inch intermediate section f/2,650' t/2,932', 20-70K WOB, 100 rpm ROT, 18-27 K ft-lb TORQ, 1,200 gpm, 2,450 psi SPP, Diff 650-800.	
8:15	8:35	0.33	2,932	REPR	Lost air pressure to drawworks, clutch would not function.	X
8:35	10:00	1.42	3,075	DRIL	Drill 14 3/4-inch intermediate section f/2,932' t/3,075', 40-70K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,200 gpm, 3,300 psi SPP, Diff 650-800. ROP Limiter is available weight on bit.	
10:00	11:30	1.50	3,075	OTHER	No. 1 generator down on high temp, 2 of 4 generators operational.	X
11:30	12:00	0.50	3,122	DRIL	Drill 14 3/4-inch intermediate section f/3,075' t/3,122', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,200 gpm, 3,300 psi SPP, Diff 650-800. ROP Limiter is available weight on bit.	
12:00	13:30	1.50	3,122	OTHER	No. 2 and 4 generator down on high temp, 1 of 4 generators operational.	X
13:30	14:15	0.75	3,207	DRIL	Drill 14 3/4-inch intermediate section f/3,122' t/3,207', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,200 gpm, 3,300 psi SPP, Diff 650-800. ROP Limiter is available weight on bit, generators.	
14:15	15:00	0.75	3,207	OTHER	Cool down generators. 3 of 4 generators operational. Change swab on #2 mud pump.	X
15:00	20:00	5.00	3,960	DRIL	Drill 14 3/4-inch intermediate section f/3,207' t/3,960', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,200 gpm, 3,300 psi SPP, Diff 200-400. ROP Limiter is available weight on bit, generators.	
20:00	0:00	4.00	4,316	DRIL	Drill 14 3/4-inch intermediate section f/3,960' t/4,316', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,100-1200 gpm, 3,300 psi SPP, Diff 200-400. ROP Limiter is available weight on bit, generators. NOTE: Vibrations went to orange around 3,960'. At 20:00. Adjusted rotary to 110 rpm and 90 rpm. Vibrations stayed at orange. Continued at 100 rpm.	
0:00	0:30	0.50	4,316	DRIL	Drill 14 3/4-inch intermediate section f/4,316' t/4,353', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,150-1,200 gpm, 3,300 psi SPP, Diff 200-400. ROP Limiter is available weight on bit, generators. NOTE: MSE steadily climbed and ROP slowed after connection at 4,264'. Vibrations went from yellow orange to orange red. Adjusted rotary to 90 rpm and then 85 rpm. Vibrations stayed at orange with MSE still climbing.	
0:30	1:40	1.17	4,353	CIRC	Circulated hole clean with 1-1/2 hole volumes.	
1:40	4:15	2.58	4,353	TRPO	Tripped out of the hole from 4,353' to 2,241'. Hole giving proper displacement.	
4:15	6:00	1.75	4,353	STUCK	Worked tight hole from 2,241' to 2,132' with 70 - 100 K overpullwith pumps.	X

Management Summary

Drill 14 3/4-inch intermediate section f/2,650' t/4,353', 65K WOB, 100 rpm ROT, 18-33 K ft-lb TORQ, 1,150-1,200 gpm, 3,300 psi SPP, Diff 200-400. ROP Limiter is available weight on bit and generators overheating. NOTE: MSE steadily climbed and ROP slowed after connection at 4,264'. Vibrations increased from yellow orange to orange red. Formation changed to granite wash around 4,330'. Circulated hole cleaned and tripped out of the hole with proper hole fill. Pulled tight at 2,241'. Worked tight hole from 2,241' to 2,132' with pumps.

Comments

Fuel on hand 11,846 gals.
Fuel used 3,466 gals.
Total NPT to date 11.75 HR

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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	J-55	

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
30-Apr-23 17:00 at Depth 3,599 ft Mud Pits, Type: Low Solids Non-Dispersed																				
9.00	38	11	8	5	1	8.2	3.5	0	96.5	0.3		2900	72		2	2	6	129	140	0

Mud Consumables

Item Description	Qty.	Cost	Item Description	Qty.	Cost
API Gel - 100#SK	136	---	Desco - 25#SK	3	---
DMA/SPA - 50#SK	24	---	Micro C - 50#SK	14	---
PAC LV - 50#SK	19	---	PALlets/Wraps - OTHER	5	---
SAPP - 50#SK	4	---	Sawdust - 50#SK	17	---
Soda Ash - 50#SK	2	---			

Bit/BHA/Workstring Information

No Run		Make	Model	Diam	Depth In	This Run Dist	R.O.P. Hrs	Avg	Max	WOB	RPM	Torque	Wt	Mud Flow	Pump Press	J. Vel	P. Drp	HHP	JIF	
3	1	NOV	TKC66-A4	9.688	1181	3170	16	198.1	300.0	65	350	18000	9	1200	3300	258	537	376	1443	
Jets: 18 18 18 18 18 18					Out:	Grade:	Cutter: /	Dull: /	Wear:	Brgs:	Gge:	Pull:								
BHA - No. 3 - BIT, MMTR, STAB, DCM, PC, HSUB, OTHER, PC, XO, DC, XO, HWDP = 841.42																				

Drilling Parameters

Depth (ft)		ROP (ft/hr)		WOB (lbs)		RPM		Torque (ft lbs)		Flow (gals/min)		Pressure (psi)	
From	To	Avg	Max	Avg	Max	Avg	Max	Avg	Max	Avg	Max		
2,650	4,351	200.0	300.0	65	65	350	350	18,000	22,000	1,160	1,220	3,300	
Annular Velocity: Drill Collars: 1,021.2				Drill Pipe: 151.8									
Comments: No Losses.													

Miscellaneous Drilling Parameters

Hook Loads (lbs):	Off Bottom Rotate:	200	Pick Up:	204	Slack Off:	192	Drag Avg/Max:	4000 / 8000
Slow Circulation Data:								
Pump 1:	40 spm	150 psi	50 spm	200 psi	60 spm	250 psi		
Pump 2:	40 spm	150 psi	50 spm	200 psi	60 spm	250 psi		
Hours on BHA:	Since Inspection:	23.25	Total:	23.25	Jars:			
Hours on Casing/Liner:	Rotating:	23.25 / 16	Tripping:	6 /	<input type="checkbox"/> Wear Bushing Installed			

Rig Information

Equipment Problems:	Generators overheating. Gen #3 down for repairs.
Location Condition:	Good.
Transport:	

Solids Control Information

Screen Sizes:	Top	Middle 1	Middle 2	Bottom	Equipment Usage (Hrs):
Shaker No 1:	120	120	120	120	
Shaker No 2:	120	120	120	120	Centrifuge 1: 20 (Solids Removal) Centrifuge 2: 20 (Solids Removal)
Shaker No 3:	120	120	120	120	

Drill Pipe Inventory

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

Safety Information

Meetings/Drills	Time	Description
Safety	30	Two Pre-tour safety meetings held daily with crews. Review planned operations. Drilling ahead.
First Aid Treatments:	Medical Treatments:	Lost Time Incidents:
Days Since LTI:	15	
<input type="checkbox"/> BOP Test	<input type="checkbox"/> Crownamatic Check	



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Weather Information

Sky Condition: Clear	Visibility: 10
Air Temperature: 73 degF	Bar. Pressure:
Wind Speed/Dir: 11 / SSW	Wind Gusts: 14