UTAH FORGE — U.S. Department of Energy

DAILY DRILLING REPORT

RPT DATE: 11/11/2020
RPT NUM.: 23
RIG: Frontier Rig 16

WELL/JOB INFORMATION

WELL NAME:	FORGE 16A [78]-32	JOB:	Drilling 65° Tangent	RIG SUPERV:	Bob Frank, Duane Winkler, Virgil Welch
FIELD:		LEASE:		RIG PHONE:	281-854-6858
AFE #:		API #:		EMAIL:	
CONTRACTOR:	Frontier Drilling	ELEVATION:	5415.1	RKB:	
SPUD DATE:	10/30/2020	DFS:	12	DOL:	22
MD/TVD:		24 HR FTG:		HRS DRLG:	9

PRESENT OPERATIONS: Repair Pump 2

ACTIVITY PLANNED: Finish repairs to Pump 2 , TIH, Drop Gyro , TOOH with Survey Tool, RU Casers, Run Casing

BOP

LAST BOP TEST:	11/23/20	LAST BOP DRILL:	11/6/20	NEXT BOP TEST:	11/3/20

CASING

CASING TYPE	OD	WEIGHT	GRADE	MD	TVD
Conductor	20.00	54	A53B	130	130
Surface	13.38	68	L-80	1,629	1,629

MUD

TIME	MW	FV	WL	PH	CAKE	GELS (10s/10m/30m)			PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP
16:30	8.9	54.0	8.4	11.0	1	9	19	28	17	28	800		0.30	0.90	80		2.00	

DRILL BITS

NO.	SIZE	MANUFACTURER	TYPE	SER NO.	JETS	TFA	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP
7	12.25	SLB SMITH RR	Z713S	JD4755	4x20, 2x18, 1x16	1.940	Y	5,113	5,113				0	
6	12.25	SLB Smith	Z713S	JP4755	4x20, 2x18, 1x16	1.920	N	4,964	5,113	149	14.5	48	124	10.3

BIT NO.: INNER: OUTER: DULL: LOC: SEAL: GAUGE: OTHER: RP:

PUMPS

PUMP	MAKE	MODEL	LINER	STK	SPM	PSI	GPM	GPS	EFF %	ECD	AV DP	AV DC	BIT HHP	PUMP HHP
2	BOMCO	1600	6.000	12.000	95	2800	400		95	9.26	138.6	445	52.1	
3	BOMCO	1600	6.000	12.000	95	2800	400		95	9.26	138.6	445	52.1	

BHA

#	COMPONENT	OD	ID	LENGTH	#	COMPONENT	OD	ID	LENGTH
1	Drill Bit-RR Bit	12.25		2					
2	Sub-BIT SUB WITH FLOAT & CROWS FOOT	8	2.25	3.23					
3	Drill Collar-1 STD 8" DC	8	2.88	92					
4	X-Over-6 5/8 REG PIN X 4 1/2" IF BOX	8	2.75	2.8					
5	Drill Pipe-3 STD HVY WT DP	5	3	276.35					
6	Drill Pipe-5" DP 19.5#	5	4.28	1252.62					

DESCRIPTION: BHA 7 Gyro BHA

LENGTH:	1,629.00	BHA WT. AIR:		BHA WT. MUD:		HRS. ON JARS:	
ROT. WT.:		P.U. WT.:		S.O. WT.:		TORQUE:	

SURVEY DATA

MD	INCLINATION	AZIMUTH	TVD	N/S (COORDINATES)	E/W (COORDINATES)	V. SECTION	DLS
4,637	1.45	334.41	4,636	-2.3	10.4	10.7	1.2
4,732	1.23	267.79	4,731	-1.3	8.9	8.9	1.6
4,826	1.14	219.54	4,825	-2.0	7.3	7.6	1.0
4,920	1.27	159.42	4,919	-3.7	7.1	7.8	1.3

CONSUMABLES

CONSUMABLE	DAILY RECEIVED (gal)	DAILY USED (gal)	DAILY ON HAND (gal)
Fuel			37,382
Potable Water			13,200

TIME BREAKDOWN

FROM	TO	HRS	PHASE	CODE	NPT	OPERATIONS
06:00	15:00	9.0	Intermediate Drilling	Drilling		PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Drill ahead with BHA #6 from 5,042- 5,113', 71', at 7.8 FPH WOB: 50-60K, ROT 45 rpm, 800 gpm, TQ 3,350 - 3,500 ft lbs, SPP 2,400 - 2,800 psi, DIFF 125 -170 psi Last Survey at 4,920' Inc 1.27, AZM 159.42 Lithology: Rhyolite Light grey - white, crypto-crystalline, predominately quartz and feldspar, 5% black brown Biotite Frontier mud pump number 2 went down, pick up off bottom Investigate problem, the middle module wash out damages beyond repair
15:00	19:00	4.0	Intermediate Drilling	Trips		Prepare to trip out of the hole, pump 20bbls pill Trip out of hole
19:00	21:30	2.5	Intermediate Drilling	Trips		Lay down directional tools. Break out bit, Bit had minimal damage
21:30	04:00	6.5	Intermediate Drilling	Trips		Make up BHA 7, Gyro BHA, TIH with Re-run bit, bit sub with float and crows foot for Gyro dart, Trip in hole lay down nine 8" drill collars Trip in hole with BHA 7 to casing shoe, 1,629'. Make up stands of DP to replace BHA that was laid down. Shut down, Wait on pump repairs
04:00	06:00	2.0	Intermediate Drilling	Repair Rig	Equipment Failure	Frontier personnel working on replacing pump 2 module 2.
	TOTAL HRS	24.0				