UTAH FORGE U.S. Department of Energy

DAILY DRILLING REPORT

RPT DATE: 11/24/2020
RPT NUM.: 36
RIG: Frontier Rig 16

WELL/JOB INFORMATION

WELL NAME:	FORGE 16A [78]-32	JOB:	Drilling 65° Tangent	RIG SUPERV:	Duane Winkler, Leroy Swearingen, Paul
FIELD:		LEASE:		RIG PHONE:	281-854-6858
AFE #:		API #:		EMAIL:	
CONTRACTOR:	Frontier Drilling	ELEVATION:	5415.1	RKB:	
SPUD DATE:	10/30/2020	DFS:	25	DOL:	35
MD/TVD:	6016	24 HR FTG:	138	HRS DRLG:	3

PRESENT OPERATIONS: BUILDING CURVE SECTION AT 6,016' MD. LAST SURVEY AT 5,898' MD, 2.31° INC, 102.95° AZI

ACTIVITY PLANNED: CONTINUE BUILDING CURVE TO 65°

BOP

LAST BOP TEST:	12/14/20	LAST BOP DRILL:	11/6/20	NEXT BOP TEST:	11/14/20

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
Intermediate	9.63	40	HCL-80	5,113	5,112

MUD

TIME	MW	FV	WL	PH	CAKE	GELS (10s/10m/30m)			PV	YP	CL	K	Pf	Mf	Ca	OIL	LGS	HTHP
23:00	8.9	41.0	8.4	10.0	1	4	4	5	17	18	1,400		0.70	2.70	40		2.60	

DRILL BITS

NO.	SIZE	MANUFACTURER	TYPE	SER NO.	JETS	TFA	RE-RUN	IN	OUT	FEET	HRS	WOB	RPM	ROP
18	8.75	Reed Hycalog	PDC	A255857	3x14, 3x13	0.840	N	5,878	6,016	138	3.0	44,000	136	46.0
17	8.75	CCI	Core	77302	7x16	1.374	N	5,858			3.5	4		

BIT NO. 16 INNER: 2 OUTER: 1 DULL: CT LOC: N SEAL: GAUGE: I OTHER: RP: TD

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-8 3/4" PDC	8.75		1	7	Drill Collar-NMDC	6.75	3.25	60.66
2	Motor-6 1/2" 7/8 5.7 w/ 1.5° fixed bend	6.5		33.56	8	Drill Collar-Drill Collars	6.5	3	183
3	Sub-String sub w/ PUK sensor	6.5	1.25	2.34	9	Drill Pipe-HWDP	5	3.25	1380
4	Drill Collar-6 3/4" NM Pony Collar	6.75	3.25	9.22					
5	Sub-6 1/2" NM UBHO sub	6.5	2.75	3.11					
6	MWD Tool-NMDC w/ MWD	6.75	3.25	30.35					

DESCRIPTION: BHA #18, Curve BHA #1

LENGTH:	1,703.24	BHA WT. AIR:	72,000	BHA WT. MUD:	62,000	HRS. ON JARS:	
ROT. WT.:	225,000	P.U. WT.:	235,000	S.O. WT.:	222,000	TORQUE:	4,400

SURVEY DATA

MD	INCLINATION	AZIMUTH	TVD	N/S (COORDINATES)	E/W	V. SECTION	DLS
5,480	0.79	6.67	5,479	-4.2	11.1	11.8	0.8
5,574	0.69	145.55	5,573	-4.0	11.5	12.2	1.5
5,669	1.70	119.23	5,668	-5.2	13.1	14.0	1.2
5,764	1.88	110.44	5,763	-6.4	15.8	16.9	0.4

CONSUMABLES

CONSUMABLE	DAILY RECEIVED (gal)	DAILY USED (gal)	DAILY ON HAND (gal)
Fuel		1,883	13,639
Potable Water			1,000

TIME BREAKDOWN

FROM	TO	HRS	PHASE	CODE	NPT	OPERATIONS
06:00	09:00	3.0	Production Drilling	Drilling		Drilling core from 5,878' to 5,892'. 14' @ 4.67 fph. 6K wob, 40 rpm rotary, 347 gpm.
09:00	13:30	4.5	Production Drilling	Trips		Trip out of hole with BHA #17 core assembly. Lay down core barrels. Cored from 5,858' to 5,892' (34') and retrieved 31' of core.
13:30	14:30	1.0	Production Drilling	Trips		Lay down 18 - 6 1/2" drill collars.
14:30	15:30	1.0	Production Drilling	Rig Service		Service rig and top drive.
15:30	19:00	3.5	Production Drilling	Other		Rig up Extreme Wireline, notify University of Utah personnel when ready to run in hole. Run in hole to 5,750' with string shot, 10' long of primer cord, (800 grains) Shot tool at time of 16:42:30. Pull string shot to surface , no primer cord, shot went off, Rig down. Rig up wireline for second shot. Run in hole to 5,700' with 15" string shot and primer cord (1200 grains) Shot tool at time of 18:16:20. Pull string shot to surface, no primer cord, shot went off, Rig down.
19:00	03:00	8.0	Production Drilling	Trips		Pick up BHA #18 (Curve assembly) consisting of Reed TKC63 PDC bit, 6 1/2" Scout 7/8 5.7 stage 1.5° fixed motor, 6 1/2" Scout string sub with PUK sensor, 6 3/4" NM pony collar, 6 1/2" NM UBHO sub, 6 3/4" NMDC w/ MWD tool, 2 - 6 3/4" NMDC's, 6 - 6 1/2" drill collars, 45 joints 5" HWDP. Trip in hole, record six axis points for correlation
03:00	06:00	3.0	Production Drilling			Drill from 5,892' to 5,894', Orient tool face , start building curve SURVEY MD: 5898' INC: 2.31° AZM: 102.95° TVD: 5896.81' VS: 21.77' DLS: 0.38 Drill curve 5,894 to 6,016' MD
TOTAL HRS		24.0				