# DAILY DRILLING REPORT

UTAH FORGE U.S. Department of Energy

RPT DATE: 12/09/2020
RPT NUM.: 51
RIG: Frontier Rig 16

## WELL/JOB INFORMATION

| | | | | | |
|---|---|---|---|---|---|
| WELL NAME: | FORGE 16A [78]-32 | JOB: | Drilling 65° Tangent | RIG SUPERV: | Bob F, Duane W, Leroy S |
| FIELD: | | LEASE: | | RIG PHONE: | 281-854-6858 |
| AFE #: | | API #: | | EMAIL: | |
| CONTRACTOR: | Frontier Drilling | ELEVATION: | 5415.1 | RKB: | |
| SPUD DATE: | 10/30/2020 | DFS: | 40 | DOL: | 50 |
| MD/TVD: | 8391 | 24 HR FTG: | 150 | HRS DRLG: | 3.5 |

PRESENT OPERATIONS: TRIPPING OUT OF HOLE FOR WASH OUT
ACTIVITY PLANNED: TRIP IN HOLE DRILL AHEAD.

## BOP

| LAST BOP TEST: | 11/14/20 | LAST BOP DRILL: | 11/29/20 | NEXT BOP TEST: | 12/14/20 |
|---|---|---|---|---|---|

## 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 | 5,110 | 5,109 |
| | | | | | |
| | | | | | |

## MUD

| TIME | MW | FV | WL | PH | CAKE | GELS (10s/10m/30m) | | | PV | YP | CL | K | Pf | Mf | Ca | OIL | LGS | HTHP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23:00 | 9.0 | 40.0 | 11.0 | 11.0 | 1 | 7 | 13 | 22 | 13 | 15 | 1,500 | | 1.80 | 3.80 | 40 | | 3.70 | |

## DRILL BITS

| NO. | SIZE | MANUFACTURER | TYPE | SER NO. | JETS | TFA | RE-RUN | IN | OUT | FEET | HRS | WOB | RPM | ROP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 8.75 | REED HYCALOG | PDC | A230682 | 3x14, 3x13 | 0.840 | N | 8,241 | 8,391 | 150 | 3.5 | 45 | 158 | 42.9 |
| 31 | 8.75 | Reed | PDC | A276122 | 3x13, 4x12 | 0.830 | N | 8,024 | 8,241 | 217 | 6.0 | 45 | 135 | 36.2 |

BIT NO. 23 INNER: 0 OUTER: 1 DULL: WC LOC: S SEAL: GAUGE: Y OTHER: DULL CUT 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 | 79 | 4000 | 325 | | 95 | 9.57 | 308 | 475 | 130.1 | |
| 3 | BOMCO | 1600 | 6.000 | 12.000 | 79 | 4000 | 325 | | 95 | 9.57 | 308 | 475 | 130.1 | |

## BHA

| # | COMPONENT | OD | ID | LENGTH | # | COMPONENT | OD | ID | LENGTH |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Drill Bit-Reed Hycalog | 8.75 | | 0.85 | 7 | Monel Collar-6 3/4 NMDC with crowfoot | 6.75 | 3.25 | 30.4 |
| 2 | Motor-6 1/2'' Motor 7/8 5.7, Fixed 1.25, 8 | 6.5 | 1.25 | 34.47 | 8 | Monel Collar-6 3/4 NMDC | 6.88 | 3.25 | 30.26 |
| 3 | MWD Tool-6 1/2 Scout Sub-PUK sensor | 6.5 | 3.25 | 2.34 | 9 | Drill Pipe-5'' HWDP (15 stands) | 5 | 3 | 1384.33 |
| 4 | Monel Collar-6 3/4 NM Pony Collar | 6.75 | 3.25 | 9.22 | | | | | |
| 5 | MWD Tool-6 1/2'' NM UBHO | 6.5 | 2.75 | 3.08 | | | | | |
| 6 | Monel Collar-6 3/4'' NMDC with MWD | 6.75 | 3.25 | 29.41 | | | | | |

DESCRIPTION: BHA 35 Tangent 3

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| LENGTH: | 1,524.36 | BHA WT. AIR: | 82,000 | BHA WT. MUD: | 65,600 | HRS. ON JARS: | |
| ROT. WT.: | 210,000 | P.U. WT.: | 330,000 | S.O. WT.: | 160,000 | TORQUE: | 9,500 |

## SURVEY DATA

| MD | INCLINATION | AZIMUTH | TVD | N/S (COORDINATES) | E/W | V. SECTION | DLS |
|---|---|---|---|---|---|---|---|
| 7,360 | 67.06 | 101.35 | 7,039 | -193.7 | 766.2 | 790.2 | 1.8 |
| 7,366 | 67.12 | 101.22 | 7,042 | -194.8 | 771.5 | 795.7 | 2.3 |
| 7,421 | 65.38 | 101.35 | 7,064 | -204.6 | 821.0 | 846.0 | 3.2 |
| 7,516 | 65.49 | 104.37 | 7,103 | -223.8 | 905.2 | 932.3 | 2.9 |

## CONSUMABLES

| CONSUMABLE | DAILY RECEIVED (gal) | DAILY USED (gal) | DAILY ON HAND (gal) |
|---|---|---|---|
| Fuel | 7,500 | 2,076 | 14,633 |
| Potable Water | | | 900 |

## TIME BREAKDOWN

| FROM | TO | HRS | PHASE | CODE | NPT | OPERATIONS |
|---|---|---|---|---|---|---|
| 06:00 | 07:00 | 1.0 | Production Drilling | Trips | | Trip in hole to 3,485'<br>determined possible wash out on drill string |
| 07:00 | 07:30 | 0.5 | Production Drilling | Trips | | Trip out of hole pulling wet pipe from 3,485' to 2,605' |
| 07:30 | 08:30 | 1.0 | Production Drilling | Cond Mud & Circ | | Pump soft-line to check for washout in pipe. Saw no pressure spike |
| 08:30 | 13:00 | 4.5 | Production Drilling | Trips | | Trip out of hole wet. Found washed tool joints at 627' MD<br>Trip out of hole from 627' breaking every connection checking for damage |
| 13:00 | 15:00 | 2.0 | Production Drilling | Trips | | Check BHA for wear. Check MWD tool for soft-line.<br>Lay Down 1 monel collar for wear<br>Make up bit and trip in hole with BHA #35 |
| 15:00 | 21:00 | 6.0 | Production Drilling | Trips | | Trip in hole with remaining weight pipe to check for washes.<br>Trip with BHA # 35 to 8,147'<br>Pre cautionary wash last stand to bottom for broke cutters |
| 21:00 | 00:30 | 3.5 | Production Drilling | Drilling | | Drill rotate and slide from 8,241' to 8,391', (150') 42.9 FPH, WOB 35 - 50, 70 RPM, 650 GPM<br>Rotate: 100' (1.75 hrs). AVG ROP 57.1' FPH.<br>Slide: 50', (1.75 hrs). AVG ROP 28.6 FPH.<br>SURVEY MD: 8276' INC: 66.06° AZM: 108.75° TVD: 7465.62' VS: 1597.64' DLS: 1.88<br>19' Low and 20' Right |
| 00:30 | 06:00 | 5.5 | Production Drilling | Trips | | Lost 380 stand pipe pressure, check surface equipment all good<br>Circulate carbide marker down drill pipe , determine wash depth<br>Trip out of wet from 8,391 to 1,429' located wash out at 1,429'<br>Continue trip out of hole for visual inspection |
| | TOTAL HRS | 24.0 | | | | |