

WELL: FORGE 16A [78]-32

University of Utah

DAILY OPERATIONS

FIELD:

COUNTY/STATE: Beaver/Utah
 PTD: 10,938
 LOCATION: NW 1/4, SW 1/4, SEC 32, TS 26
 South, Range 9 West
 ELEVATION (RKB):
 API #:
 SERIAL NO:
 SPUD DATE: Oct 30 2020
 OBJECTIVE: Drill Horizontal in granite
 JOB NAME: Well 16A(78)-32

CONTRACTOR/RIG#: Frontier Drilling/Frontier Rig 16

Oct 20 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane C Winkler				PBTD:
	PRESENT OPERATIONS:	Move in Frontier Rig 16				
	No Activity;Frontier rig crew held safety meeting , Review planned daily activities;Lay 40 mill plastic over rig foot print and accessory equipment area Position matting for sub structure Prepare crew meeting house for operations;No Activity					
	ACTIVITY PLANNED:	Start rigging up Frontier Rig 16				
Oct 21 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane C Winkler , Leroy Swearingen				PBTD:
	PRESENT OPERATIONS:	Complete move in Frontier Rig 16				
	No Activity;Safety Meeting Clean matting boards, move man lift for 58-32 to 16A, work on BOPE and mud pits Total of twelve Frontier personnel on site;Frontier Rig 16 has delivered a total of 68 loads. There were thirteen trucks, one-man lift, forklift, and crane on location Set lower subbase, mud pits, and mud pump The rig is 95% on location and 5% rigged up;No Activity					
	ACTIVITY PLANNED:	Progress with rig up Frontier Rig 16				
Oct 22 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane C Winkler , Leroy Swearingen				PBTD:
	PRESENT OPERATIONS:	RIGGING UP WITH FRONTIER CREWS AND SUPERVISION AND JW JONES TRUCKING				
	No Activity.;Safety meeting with Forge Supt. Duane Winkler, Forge DSM Leroy Swearingen, Frontier Drilling and JW Jones Trucking.;Rigging up with Frontier personnel; 2 Superintendents, 2 Rig Managers, 12 crew members, 1 telehandler, 2 pole trucks, 2 bed trucks, 2 haul trucks and 2 cranes. Received 2 loads of drill pipe on location. Other equipment and personnel on location included fuel truck, 3 water trucks and a skid steer operator building containment. Stacked subs, assembled derrick, set fuel tanks, set doghouse on floor, rig up mud tanks, set walkways and begin stringing electrical lines. Rig is 100% on location. Approximately 40% rigged up.;Shut Down For Night, (SDFN)					
	ACTIVITY PLANNED:	CONTINUE RIGGING UP WITH FRONTIER CREWS AND SUPERVISION AND JW JONES TRUCKING				
Oct 23 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen / Duane C Winkler				PBTD:
	PRESENT OPERATIONS:	RIGGING UP WITH FRONTIER DRILLING SUPERVISION AND CREWS				
	No Activity. Wait on daylight.;Safety meeting with FORGE Supt. Duane Winkler, FORGE DSM Leroy Swearingen, Frontier Drilling and RW Jones Trucking.;Rigging up with Frontier Personnel; 2 Superintendents, 1 Rig Manager, 12 crew members, 2 cranes and 1 forklift. Other equipment and personnel on location included 1 fuel truck, 3 water trucks, 1 Frontier haul truck with collars and choke manifold, 2 haul trucks with solids control equipment and 2 solids control personnel. Also Stuart Coleman and Lauralee Simano with Chevron to tour the rig. Finish putting derrick together, string up blocks and set derrick on floor. Raise A-legs, hook up mud lines, complete running electrical lines and set stairs to floor. Begin rigging up gas buster and flare lines. Begin putting up wind walls. Work on rig generators. Rig floor is 50% rigged up, mud pits are 100% rigged up, back yard is 65% rigged up. Did a 30 minute walk around and tour with Chevron personnel.;SDFN (Shut Down For Night)					
	ACTIVITY PLANNED:	CONTINUE RIGGING UP WITH FRONTIER DRILLING SUPERVISION AND CREWS				

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Oct 24 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen				PBTD:
	PRESENT OPERATIONS:	RIGGING UP WITH FRONTIER DRILLING				
	<p>No Activity. Wait on daylight.;Safety meeting with FORGE DSM Leroy Swearingen, Frontier Drilling, RW Jones Trucking and DCT personnel.;Rigging up with Frontier Drilling personnel; 1 Superintendent, 1 Rig Manager, 12 crew members, 2 Rig Watch, 1 crane operator, 1 welder, 1 mud logger, 2 solids control and 2 cooler personnel. Set in solids control and bead recovery system. DCT personnel rigging up centrifuges, bead recovery and dewatering. Drill Cool mud coolers on location at 11:00 a.m. Pick and set with crane. Drill Cool personnel rigging up coolers. Set in mud logger trailer. Nabors personnel installing Rig Watch computers and monitors. Get generators running and power to rig, spool drilling line on drawworks, hook up mud lines, install hurricane bar in board, hook up steam lines to boiler, continue bolting up flare line, set pipe handler on floor. Prepare to raise derrick in a.m. Received 1 truck load of drill collars All trucks and cranes have been released. Rig 65% rigged up.;SDFN (Shut Down For Night).</p>					
	ACTIVITY PLANNED:	RAISE DERRICK. CONTINUE RIGGING UP				
Oct 25 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen				PBTD:
	PRESENT OPERATIONS:	RIGGING UP WITH FRONTIER DRILLING				
	<p>No Activity;Safety meeting with FORGE DSM Leroy Swearingen, Frontier Drilling and DCT.;Rigging up with Frontier Drilling; 1 Superintendent, 1 Rig Manager, 12 crew members, 2 Rig Watch, 2 solids control and 2 cooler personnel. Fire up generators and put online. Prepare derrick to be raised. Raise derrick at 9:00 a.m. and pin. Set catwalk. Install top drive in derrick. Rig up top drive. Nabors RigWatch finished installing workstations in shacks. Began rigging up panel on floor. Fill rig tank and boiler with water. Received 2 loads of 13 3/8" casing, float equipment and centralizers. Received 17 1/2" surface bits. Rig is 75% rigged up.;SDFN (Shut Down For Night)</p>					
	ACTIVITY PLANNED:	CONTINUE RIGGING UP WITH FRONTIER, NABORS AND DCT				
Oct 26 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:
	PRESENT OPERATIONS:	Rigging up with Frontier Drilling				
	<p>No activity;Safety meeting with FORGE DSM's Leroy Swearingen , Bob Frank, Frontier Drilling and DCT;Rigging up with Frontier Drilling: 2 Superintendents, 2 Rig Managers, 12 Crew members, 2 Rig Watch, 2 solids control Fire up generators, Fire up boiler, Install heaters on floor, hook up steam lines to all heaters. Bleed boiler lines to get out water pockets. Continue hooking up air , water, and electric lines. Put water in mud pits, repair leak in interior pit wall, run pumps, and top drive under light load function testing systems and electrical loading. Re-align cuttings trough, test rotation on solids control equipment. Solids control rigged up. Install flow sensor mounting bracket in flow line. Drain pumps of fresh water, blow out heater lines , and turn off boiler. Nabors Rig watch rigged up. Scout Directional employee arrived on location late evening. Scout equipment to be delivered Tuesday. Rig is 90 % rigged up.;SDFN (Shut down for night)</p>					
	ACTIVITY PLANNED:	Continue Rigging up with Frontier				
Oct 27 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:
	PRESENT OPERATIONS:	Rigging Up with Frontier Drilling				
	<p>No activity;Safety Meeting with FORGE DSM's Leroy Swearingen, Bob Frank, Frontier Drilling, and DCT;Rigging Up with Frontier Drilling: 1 Superintendent, 2 Rig managers, 12 crew members, 2 solids Control, 1 Scout, 1 Welder. Fire up generators, Fire up boiler. Clean fuel mister on boiler to allow better combustion. Flowline built, Conductor riser built, fill up and drain line access installed. on conductor. Rotating head assembly built. Hand turn buckles in substructure to secure conductor pipe riser. Check electrical, water, and air confections. Blow out pumps. Notified State Engineer of spud by submitting the Start Card . Nabors Rig watch installed and operational.;SDFN (shut down for night)</p>					
	ACTIVITY PLANNED:	Install conductor riser, Commissioning Test of all systems under continuous light load, Break Tour tonight start 24 hour operations				
Oct 28 2020	MD:	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:
	PRESENT OPERATIONS:	Setting surface casing on pipe racks, commission rig, rigging up floor				
	<p>No Activity;Safety Meeting with FORGE DSM, Frontier Drilling, and DCT;Rigging Up with Frontier Drilling: 1 Superintendent, 1 Rig Manager, and 6 man Crew. Fire up generators, and boiler. Place electric lines in suitcases, finish hanging conductor riser, weld riser to conductor casing already in ground, hang rotating head and secure to conductor riser, attach flexible flowline to rotating head assembly. Center riser and secure to substructure with turnbuckles. Fire up all available electric systems commissioning generators, mud pumps, solids control system , draw works, top drive, mud pit agitators. Start mud up by adding gel to mud system. Circulate mud system at 500 - 1200 gpm;Pre-tour safety meeting, Continue with conditioning as above, Count drill pipe , hang refurbished doors, Rig hands to start OSHA Inspection prior to Operations Supt. / DSM Inspect rig tomorrow. Set cat walk into place, lift V door into place, set pipe racks .</p>					
	ACTIVITY PLANNED:	Complete RU, Rig Inspection, Clean and drift surface casing.pre-spud meeting				

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Oct 29 2020	MD:	TVD:	FOOTAGE:	MW: 8.6	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:	
	PRESENT OPERATIONS:	Building mud volume, Prepare to spud					
	Continue Commissioning Operations by running Top Drive @110 RPM, Mud Pumps 1 & 3 @ 113 SPM, Draw works, Shakers, De-sander, DeSilter, Solids control. Install mousehole, build berms around flare stack to drain back to reserve pit.;Pre-spud rig inspection. The DSM and Superintendent inspected all the rig components, location and living quarters Held team meeting and resolve all components that required changes;Pre-spud meeting review drilling plan with service providers involved in present operations;Work on rig inspection list, RU mudlogger shack. Rigwatch not functioning in Mudlogger shack. Troubleshoot, Contact Rig watch support. The cat5 cable is bad. The new cable is schedule to arrive on location in the morning before spud, Mud products and Mud engineer arrived. Build drilling mud volume from 8.33 ppg, viscosity 29 to 8.6 ppg, 51 viscosity in mud pits per mud engineer.						
	ACTIVITY PLANNED:	Complete inspection, Rig Watch, Set up BHA, Spud Well					
Oct 30 2020	MD:	TVD:	FOOTAGE:	MW: 8.5	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank, Duane Winkler				PBTD:	
	PRESENT OPERATIONS:	Pressure mud lines and stand pipe, repair trough pump					
	Safety meeting with DSM, Rig Manager, Driller and six crew members Discussion on working at heights, trip hazards and electrical outlets;Build mud volume from 400 bbls to 800 bbls of 8.6 ppg with 51 viscosity Pick up 9 joints of heavy weight drill pipe Rig crew work on setting up rig floor;Nabors training Rig-Cloud;Complete Final Rig Inspection , Rig is 100% rigged up and ready to drill DSM and FORGE Operations Superintendent accept rig;Pre-spud meeting with Frontier Superintendent, Rig Manager, three driller , six rig crew members, mud engineer, mud logger and two solids control;Tally VRSS, pick up and make up BHA #1;Hydraulic line failed on grabber box. Replace line.;Make up BHA;Drill cement and 18 feet of formation to test surface, directional and third party equipment Frontier checking and pins and keepers in derrick Tighten turn buckles on conductor and flowline;Test Standpipe and mudlines to 4,000 psi;Rig is replacing water transfer pump for mud system.						
	ACTIVITY PLANNED:	Spud well and drill surface					
Oct 31 2020	MD: 1,629	TVD: 1,629	FOOTAGE: 1,629	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank, Duane Winkler				PBTD:	
	PRESENT OPERATIONS:	Short trip: Trip out of the hole					
	Safety meeting with Frontier Superintendent, Rig Manager, Driller , six rig crew members , Scout down hole and solids control Topic working around over head equipment, Proper Personal Protection working with chemicals and trip hazards;Crew change new crew prepare to start drilling;Establish circulation, Start Drilling Spud Well @ 7:15 am Drilling 17 1/2" hole from 103' to 182' Circulate, Install MWD;Drilling 17 1/2" hole from 182' to 455' , Mud Weight 8.6, Viscosity 52, Survey at 349', AZM 287.22, INC 0.22;Nabors service tech arrived on location and work on Rig Watch;Drilling 17 1/2" hole from 455' to 862' , Mud Weight 8.7, Viscosity 55, Survey at 665', AZM 197.92, INC 0.40;Replace grabber dies on top drive, Service Rig;Drilling 17 1/2" hole from 862' to 941' , Mud Weight 8.7, Viscosity 55, Survey at 851' , AZM 187.02, INC 0.88;Pre Tour Safety Meeting , Contact State Engineer giving notice of Surface casing run . Drill 17 1/2" hole 941' to 1,241' , Mud weight 8.7, VIS 60, Survey at 1137' , AMZ 177, Inc 1.80;When to unscrew the drill pipe to make a connection the top drive could not break out the connection used the break out tongs, to disconnect the top drive.;Drill 17 1/2" hole 1,241' to 1,629' Mud weight 8.7, VIS 70, Survey at 1,523' AMZ 124, Inc 0.66;Circulate two bottoms up hole clean, prepare to trip out of hole;Short trip: Start pulling out of the hole with drill pipe						
	ACTIVITY PLANNED:	Trip back to bottom, Circulate, Trip out of hole, RU Casers, Run 13 3/8" Casing , Cement,					
Nov 1 2020	MD: 1,629	TVD: 1,629	FOOTAGE:	MW: 8.8	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank, Duane Winkler				PBTD:	
	PRESENT OPERATIONS:	Remove Cement Head, Prepare cut off conductor					
	Trip in the hole with directional BHA and drill pipe tag bottom at 1.629' no fill, bottom hole clean circulate one bottoms up small amount of cutting recovered good clean well bore Trip out of the hole stand in derrick drill pipe and drill collars Lay down VRSS BHA NO WATER or WATER Flows Encountered While Drilling Surface;Held Safety Meeting with eight Wyoming Casing personnel, Nine Frontier personnel, DSM Rig up Wyoming Casing equipment;Surface Casing 13 3/8" X 68 ppg, L80, BTC threads, Run as follows Float Shoe, 1 joint of casing (shoe track), Float Collar 41 joints or 13 3/8" casing, (total of 42 joints of casing) bottom of float shoe 1,629', (bottom of well 1,629') 14 centralizer, 1 cement basket;Establish circulation, circulate well, while circulating rig down casing run equipment Rig up cement equipment to rig floor;Safety Meeting , Lay down CRT tool, Safety Meeting Rig up cement head, establish circulation,;RU Cementers, troubleshoot computer recording problems,;Safety Meeting, Test pump and lines to 3000 psi, cement with 30 bbls fresh water ahead, 50 bbls of 10.5 ppg sepiolite pacer, 13 bbls Sodium Silicate, 5 bbls fresh water, Drop bottom plug, follow with 410 bbls of 12.92 ppg, RC Thermalite-HT Cement at 5 BPM. Drop top plug, Displace with 237 bbls fresh water, Over displace 3 bbls. , floats held. 212 bbls cement to surface. Check annulus cement at surface , recheck 30 minutes later cement at surface and stagnant, Good returns through out job. No losses, Flush out conductor riser, RD Cementers;Wait on cement to cure, Center casing in bushing, Rig down flow line, Clean Cellar						
	ACTIVITY PLANNED:	Cut off conductor and surface casing, weld on surface casing head, NU BOP Test BOPE					

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Nov 2 2020	MD: 1,629	TVD: 1,629	FOOTAGE:	MW: 8.7	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank, Duane C Winkler				PBTD:	
	PRESENT OPERATIONS:	Nipple UP BOPE					
	<p>PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Prepare cellar to install wellhead.;Cut conductor and initial cut on 13 3/8" casing and remove from sub base.;Make final cut on 13 3/8" casing and set on wellhead. Weld on wellhead performing preheat and post heat requirements as procedure. Test to 1,500 psi for 10 minutes and 30 minutes. Tests were good.;Clean all BOP components and begin stacking up BOP.;PTSM (pre tour safety meeting) with Frontier Drilling, Crew, and DSM. Stack up BOP, hammer up bolts and nuts, install fill and choke lines.</p>						
	ACTIVITY PLANNED:	Complete Nipple UP BOPE, Install Rotating Head,					
Nov 3 2020	MD: 1,629	TVD: 1,629	FOOTAGE:	MW: 8.7	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:	
	PRESENT OPERATIONS:	NUBOPE, Get ready for tester, arrange directional tools					
	<p>PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Build new choke line and nipple up to choke manifold and BOP stack. Set catwalk in place and set up pipe racks. Hang light, general housekeeping. Rig up trip tank. Unload 3 loads (80 joints) of 9 5/8" 40# HCL80 casing onto racks. Preparing rig to drill intermediate section of hole.;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Repair clamp on grabber box from quill to mud-saver on top-drive. Service and change out filters and fluids as needed on top drive and HPU. Stage directional tools on rack, Pick up jt. of drill pipe put in mouse hole for testing, Move drill pipe to finger racks to free up pipe racks for additional casing in route. Fixed bolt on annular. Housekeeping</p>						
	ACTIVITY PLANNED:	Test BOPE, MU directional BHA, TIH Drill Out, FIT test					
Nov 4 2020	MD: 1,629	TVD: 1,629	FOOTAGE:	MW: 8.7	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy Swearingen , Bob Frank				PBTD:	
	PRESENT OPERATIONS:	Change BHA to drill float equipment					
	<p>PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Move and sort drill pipe for drilling operations General housekeeping pick up tools and empty trash containers;Rig up A-1 Testing and begin BOPE testing at 09:00. Test blinds to 250 psi low, 5,000 psi high. Test pipe rams to 250 psi low, 5,000 psi high. Test choke manifold, choke lines and all valves to 250 psi low, 5,000 psi high. Test mud lines back to pumps to 80% of liner rating of 3,600 psi. Test casing to 1,500 psi. All tests were good. Meet with Jim Goddard, Division of Water Rights, State of Utah at 10:00. Tour rig and pad, Witness BOPE testing in progress Review required information by state including casing report, cement report and BOPE charts and reports.;Nabors installing a K Box Light (Control Center for Nabors Rig Watch), Install wear bushing. Perform function test on accumulator as per procedures.;Safety Meeting Slip and Cut Drill Line Set top drive in shipping position, chain off blocks to derrick. Prepare to slip and cut drilling line. Nabors continue to work on K Box Light.;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling. Pick up Intermediate Directional Tools BHA # 2, with 12 1/4" PDC bit;Trip in Hole with VRRS , tag cement;Drill cement and Float Collar, stop drilling , prepare to pull out of hole;Trip out of hole ,(TOOH) VRSS, bit no issues Conclusion probable rubber inference Plan Forward trip in hole with mill tooth bit drill up float equipment</p>						
	ACTIVITY PLANNED:	Drill shoe track , Trip out of hole, Pick up Rotary Steerable BHA					

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Nov 5 2020 MD: 2,630 TVD: FOOTAGE: 1,001 MW: 8.8 LB PTD: 10,938

RIG SUPERVISOR: Leroy Swearingen , Bob Frank, Duane Winkler PBTB:

PRESENT OPERATIONS: Drilling ahead at 2,630'

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 TOO (trip out of hole) with BHA #2. Break off bit, lay down Scout RSS (rotary steerable);Pick up Conventional BHA #3 consisting of Smith RK6139 tricone bit, 9 5/8" Scout 7/8 5.9 stage fixed motor stabilized to 12 1/8", 8" shock sub, 4 stands of 8" drill collars, 6 5/8" X 4 1/2" IF x-over, 3 stands HW drill pipe.
 TIH (trip in hole). Tag up on shoe track at 1,605';Drill cement in shoe track from 1,605' to 1,627'. Drill shoe from 1,627' to 1,629'.
 Drill 15' of new formation to depth of 1,644'.;Perform FIT at 1,644' MD to emw of 9.5 ppg.;TOOH with BHA #3, break off bit and lay down.;Make up BHA #4 consisting of NOV 12 1/4" TKC 66 PDC bit, 9 5/8" Vertical Scout RSS, 6 5/8" X 6 5/8" double pin x-over, 9 5/8" Scout 7/8 5.9 stage fixed motor stabilized to 12 1/8", 8" shock sub, 12 1/8" steel stabilizer, 8" NMDC, 8" hang off sub, 4 stands 8" drill collars, 6 5/8" X 4 1/2" IF x-over, 3 stands HW drill pipe.
 Trip in hole to 1,644' MD.;Nabors loading MSE programs onto RigWatch.;Perform 5 minute Step Test for WOB:
 3K WOB, 66 fph, 40 psi diff, 660 gpm, 46 rpm
 6K WOB, 69.6 fph, 80 psi diff, 660 gpm, 46 rpm
 9K WOB, 103.2 fph, 130 psi diff, 660 gpm, 46 rpm
 12K WOB, 157.8 fph, 205 psi diff, 660 gpm, 46 rpm
 15K WOB. Bit balled. Stop step test.;Cleaning bit, continue drilling from 2,030' to 2,100', 70fph.;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill from 2,100' - 2,575 Avg. 59.4 FPH
 WOB: 8-14 K, ROT 40, TQ 1,700 - 2,200 ft lbs, SPP 1700 psi, DIFF 80 - 200 psi
 Bit balling, pump sweeps as needed;Drill from 2,575' - 2,630' Avg. 27.5 FPH
 WOB: 8-14 K, ROT 40 - 50, TQ 1,900 - 2,600 ft lbs, Occasional spikes - 4,000 ft-lbs, SPP 1700 - 1800 psi, DIFF 100 - 300 psi
 Last Survey at 2,466', Inc 0.92, AZM 74.99
 Adjusting drilling parameters to increase ROP yet maintain inclination <2*
 Slight lithologic change at 2,575' less interstitial clays and occasional rock fragments coming to surface.

ACTIVITY PLANNED: Drill Intermediate 12 1/4" hole

Nov 6 2020 MD: 3,984 TVD: 3,983 FOOTAGE: 1,354 MW: 8.9 LB PTD: 10,938

RIG SUPERVISOR: Leroy Swearingen , Bob Frank, Duane Winkler PBTB:

PRESENT OPERATIONS: Drilling 12.25" Intermediate Hole. at 3,984

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA #4 from 2,630' - 3,260', 630' at 52.5 FPH
 WOB: 30-35 K, ROT 77 rpm, TQ 4,400 ft lbs, SPP 2,000 - 2,200 psi, DIFF 160 psi
 Last Survey at 3,125, Inc 1.54, AZM 64.06
 Control drilling to drop angle.
 Increased WOB from 35K to 40K at 2,905'. Saw our p-rate drop to lower lows and more uneven.
 Function Test Pipe Rams;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA #4 from 3,260' - 3,323' 42' -at 42.0 FPH
 WOB: 35 K, ROT 75 rpm, 795 gpm, TQ 4,400 ft lbs, SPP 2,000 - 2,200 psi, DIFF 170 psi
 Last Survey at 3,323', Inc 1.58, AZM 19.15
 Control drilling to drop angle.
 Decrease WOB from 40K to 35K at 3,323 . P rate approximately the same;Drill ahead with BHA #4 from 3,323' - 3,418' 95' -at 38' FPH
 WOB: 33- 35 K, ROT 75 rpm, 725 gpm, TQ 4,200 ft lbs, SPP 2,000 - 2,200 psi, DIFF 170 psi
 Last Survey at 3,418', Inc 1.05, AZM 332.83
 Control drilling to drop angle.
 Decrease GPM 795 - 725 gpm P rate dropped to 38 FPH , Inc. dropped and AZM turned
 Install camera on derrick to monitor Top Drive Connections;Drill ahead with BHA #4 from 3,418' - 3513' -at 45 FPH
 WOB: 38 K, ROT 75 rpm, 725 gpm, TQ 4,200 ft lbs, SPP 2,000 - 2,200 psi, DIFF 170 - 250psi
 Last Survey at 3513', Inc 0.7, AZM 278.25
 Control drilling to drop angle.
 Increase WOB - 40 P rate increased to 45 FPH , Inc. dropped and AZM turned;Drill ahead with BHA #4 from 3,518' - 3,795' 377' at 107.7 FPH
 WOB: 40 K, ROT 75 rpm, 725 gpm, TQ 4,200 ft lbs, SPP 2,000 - 2,200 psi, DIFF 250psi
 Last Survey at 3,795, Inc 1.14 , AZM 83.31
 Drilling off MSE
 Leaving WOB - 40 , 725 GPM stable, will turn rotary down to 40.;Drill ahead with BHA #4 from 3,795' - 3,889' 94 at 94 FPH
 WOB: 40 K, ROT 40 rpm, 725 gpm, TQ 4,000 ft lbs, SPP 2,000 - 2,200 psi, DIFF 350psi
 Last Survey at 3,889', Inc 1.674 , AZM 50.26
 Drilling off MSE
 Decrease WOB - 35 , Maintain 725 GPM and 40 ROT stable.;BOP drill
 Drill ahead with BHA #4 from 3,889' - 3,984' 95' at 63.3'FPH
 WOB: 35 K, ROT 40 rpm, 725 gpm, TQ 4,000 ft lbs, SPP 2,000 - 2,200 psi, DIFF 250psi
 Last Survey at 3,889' Inc. 1.67, AZM50.26
 Control drilling to drop angle., Take check shot half way down stand

ACTIVITY PLANNED: Drill 12.25" hole, Fuel, Casing, and Beads to be delivered today.

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Nov 7 2020 MD: 4,552 TVD: 4,451 FOOTAGE: 568 MW: 9.1 LB PTD: 10,938
 RIG SUPERVISOR: Leroy Swearingen , Bob Frank, Duane Winkler PBSD:
 PRESENT OPERATIONS: Drilling Ahead 4552

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA #4 from 3,984' - 4,187', 203' at 40.6 FPH
 WOB: 30-35 K, ROT 40 rpm, 660 gpm, TQ 4,459 ft lbs, SPP 2,100 - 2,250 psi, DIFF 285 psi
 Last Survey at 4,069 Inc 1.23, AZM 315.63
 Control drilling to drop angle.;Drill ahead with BHA #4 from 4,187' - 4,258' 71' -at 17.75' FPH
 WOB: 35- 40 K, ROT 40 rpm, 730 gpm, TQ 4,287 ft lbs, SPP 2,150 - 2,250 psi, DIFF 225 - 260 psi
 Last Survey at 4,258 Inc 0.0.92, AZM 210.05
 Lithology at 4,250': 65%, clay and clay stone, 35% fine sand from granite
 Clay redish brown soft mod soluble, kaolinitic very sandy
 Sand fine to medium gran, angular to subangular from granite;15:00 Rig lost power, 15:10 Power back on
 Drill ahead with BHA #4 from 4,258' - 4,327' 69' -at 23' FPH
 WOB: 35- 40 K, ROT 40 rpm, 730 gpm, TQ 4,420 ft lbs, SPP 2,150 - 2,250 psi, DIFF 223 psi
 Last Survey at 4,164 Inc 0.92, AZM 263.33
 Lithology at 4,300, 65% Sand, Sand fine to medium grain, angular to subangular from granite
 clay and clay stone, 35% Clay White to light redish brown, soft mod soluble, kaolinitic very sandy;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA #4 from 4,327' - 4,460' 133' -at 22.2 FPH
 WOB: 40 - 48 K, ROT 55- 65 rpm, 730 - 850 gpm, TQ 4,6000 ft lbs, SPP 2,700 - 2,800 psi, DIFF 223 psi
 Last Survey at 4,457 'Inc 1.14, AZM 155.47
 Lithology at 4,300, 65% Sand, Sand fine to medium grain, angular to subangular from granite
 clay and clay stone, 35% Clay White to light redish brown, soft mod soluble, kaolinitic very sandy
 Drilling break at 4,441' 11' total, Peak ROP 112 fph Weathered granite.
 Inc walked out to 1.14 and AZM swung to 155.47 approaching AZM where inclination rate accelerates, Adjust ROT down to 40.;Drill ahead with BHA #4 from 4,460' - 4,552' 92' -at 15.3 FPH ;
 Mud Weight 9.0+, viscosity 55, drilling break 4,460 to 4,471
 Lithology changed from red, white clay and sand to Granodiorite: Med Dark Grey,
 Mud fluids seepage losses in six hours 9 bbls
 Speed up centrifuge to lower mud weight to 9.0, viscosity 55
 WOB: 45 - 48 K, ROT 40 - 55 rpm, 730 - 850 gpm, TQ 3,200 - 4,200 ft lbs, SPP 2,700 - 2,800 psi, DIFF 150 -223 psi
 Last Survey at 4,457 'Inc 1.14, AZM 155.47
 Lithology at 4,460: Granite / Granodiorite: Med Dark Grey, Soft to Mod Firm, 50% Feldspar, 20 - 30 % Cloudy Quartz, 10 - 20 % Black - green Mafic, Typically Biotite Hornblende, Green Epidote, Pyrite .
 At 06:00 seepage to small to measure
 Prepare to trip out of hole

ACTIVITY PLANNED: Trip out of hole, Trip back in hole start drilling

Nov 8 2020 MD: 4,811 TVD: 4,810 FOOTAGE: 259 MW: 9.0 LB PTD: 10,938
 RIG SUPERVISOR: Leroy Swearingen , Bob Frank, Duane Winkler PBSD:
 PRESENT OPERATIONS: Drilling 12.25" hole @ 4,811'

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drilled 12 1/4" hole with BHA #4 to 4,552'
 Mud Weight 9.0, viscosity 55
 Last Survey at 4,457 'Inc 1.14, AZM 155.47
 Trip out of the hole at 1,785' and 1,751' pulled 10,000 over string weight work back through twice no more over pull, wiped clean
 Lithology @ 1,780': Clay pale yellowish brown, soft, thin consistency, non swelling associated with granule sized rock fragments up to 5mm in size
 Pull BHA to surface , lay down BHA, two of the bit junk throat was packed off with red clay, stabilizer 1/8" under gauge, bit was 1/16" under gauge
 tested motor and VRSS good test no issues;Pick up BHA # 5, Schlumberger / Smith 12 1/4" 616 PDC with 13mm cutter and replace stabilizer, mud motor
 Trip in the hole with BHA # 5, set on bottom , clean bottom, establish circulation;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA # 5 from 4,552' - 4,595' at 21.5 FPH
 WOB: 30-35 K, ROT 40 rpm, 725 gpm, TQ 4,856 ft lbs, SPP 2,600 - 2,750 psi, DIFF 280 psi
 Last Survey at 4,543' Inc 1.54, AZM 20.20
 Lithology: Granite Med-Dark Grey, 50 - 60% Lt Gray Feldspar,20 -30 % Cloudy Quartz, 10-30% Black-green mafic, Blocky Biotite with Magnetite, Anhed Epidote
 Hornblende, Epidote , Pyrite;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA # 5 from 4,595' - 4,743' 148', at 24.7 FPH
 WOB: 35 - 44 K, ROT 40 rpm, 725 - 800 gpm, TQ 3,600 - 4,200 ft lbs, SPP 2,400 - 2,700 psi, DIFF 280 psi
 Last Survey at 4,740' Inc 1.45, AZM 334.41
 Lithology: Granite Med-Dark Grey, 50 - 60% Lt Gray Feldspar,20 -30 % Cloudy Quartz, 10-30% Black-green mafic, Blocky Biotite with Magnetite, Anhed Epidote
 Hornblende, Epidote , Pyrite
 250 psi pressure loss at 4,746', Check pumps, check MWD signal both OK, Set back down and diff came back to where it was
 Strokes remained steady, diff good. Drill ahead and monitor. Possible nozzle un-plugged.
 Temporary power loss for EDR station 01:15 - 01:45;Service rig;Drill ahead with BHA # 5 from 4,743' - 4,811, 68', at 12.3 FPH
 WOB: 25 - 44 K, ROT 40 rpm, 725 gpm, TQ 3,600 - 4,200 ft lbs, SPP 2,400 - 2,700 psi, DIFF 280 psi
 Last Survey at 4,740' Inc 1.45, AZM 334.41
 Lithology: Granite Med-Dark Grey, 50 - 60% Lt Gray Feldspar,20 -30 % Cloudy Quartz, 10-30% Black-green mafic, Blocky Biotite with Magnetite, Anhed Epidote
 Hornblende, Epidote , Pyrite
 250 psi pressure loss at 4,746', Check pumps, check MWD signal both OK, Set back down and diff came back to where it was
 Strokes remained steady, diff good. Drill ahead and monitor. Possible nozzle un-plugged.
 Temporary power loss for EDR station 01:15 - 01:45
 Boiler ran 24 hrs

ACTIVITY PLANNED: Continue Drilling

WELL: FORGE 16A [78]-32

Nov 9 2020 MD: 4,964 TVD: 4,963 FOOTAGE: 153 MW: 8.9 LB PTD: 10,938

RIG SUPERVISOR: Bob Frank, Duane Winkler, Virgil Welch PBDT:

PRESENT OPERATIONS: Picking up BHA # 6 and prepare to trip in hole

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Drill ahead with BHA # 5 from 4,811' - 4,924, 113', at 14. FPH
 WOB: 44-45 K, ROT 40 rpm, 800 gpm, TQ 3,850 - 4,200 ft lbs, SPP 2,375 - 2,600 psi, DIFF 150 psi
 Last Survey at 4,826' Inc 1.14, AZM 219.24
 Lithology: Weathered Granite consisting of in-situ weathered Feldspar represented as 25% Kaolin clay altered from plagioclase, 50% - 60% Quartz grains, Biotite, Occasional Epidote;Rig Service;Drill ahead with BHA # 5 from 4,924' - 4,932, 8', at 8. FPH
 WOB: 50 K, ROT 40 rpm, 800 gpm, TQ 3,850 - 4,200 ft lbs, SPP 2,375 - 2,600 psi, DIFF 150 psi
 Last Survey at 4,826' Inc 1.14, AZM 219.24
 Lithology: Weathered Granite consisting of in-situ weathered Feldspar represented as 25% Kaolin clay altered from plagioclase, 50% - 60% Quartz grains, Biotite, Occasional Epidote;Step Rate Test: 5K increments, 5 mins each set
 800 gpm, 40 rotary

WOB	Depth	Differential
20K	4,946	110
25K	4,946	130
30K	4,947	150
35K	4,947	150
40K	4,947	150

 150;Drill ahead with BHA # 5 from 4,932' - 4,947, 15', at 7.5 FPH
 WOB: 50 K, ROT 40 rpm, 800 gpm, TQ 3,850 - 4,200 ft lbs, SPP 2,375 - 2,600 psi, DIFF 150 psi
 Last Survey at 4,826' Inc 1.14, AZM 219.24
 Lithology: Weathered Granite consisting of in-situ weathered Feldspar represented as 25% Kaolin clay altered from plagioclase, 50% - 60% Quartz grains, Biotite, Occasional Epidote;Drill ahead with BHA # 5 from 4,947' - 4,964', 17', at 3.4 FPH
 WOB: 50 K, ROT 40 rpm, 800 gpm, TQ 3,850 - 4,200 ft lbs, SPP 2,375 - 2,600 psi, DIFF 150 psi
 Last Survey at 4,826' Inc 1.14, AZM 219.24
 Lithology: Weathered Granite consisting of in-situ weathered Feldspar represented as 25% Kaolin clay altered from plagioclase, 50% - 60% Quartz grains, Biotite, Occasional Epidote
 Performed Step Rate test based on Holding GPM constant at 740 GPM

Time	WOB(K)	Rotary	Differential	ROP
19:40	30	40	95	2.8
19:45	35	40	105	4.3
19:50	40	40	115	3.4
19:55	45	40	135	4.2
20:00	45	50	130	3.3
20:05	45	60	130	3.0
20:08	45	65	130	2.9
20:10	25	80	230	3.1

 ;Rig up air system to kelly hose and blow out water;Trip out of hole to BHA #5, lay down MWD;Lay down motor, Inspect VRRS Scout tool. stabilizers in gauge
 Mud Motor bear seal leaking
 The cutters on the matrix of the bit damaged
 Replace mud motor and pick up new Schlumberger Smith bit

ACTIVITY PLANNED: Pick up directional tools, TIH, Drill ahead to Casing point

Nov 10 2020 MD: 5,042 TVD: FOOTAGE: 78 MW: 9.0 LB PTD: 10,938

RIG SUPERVISOR: Bob Frank, Duane Winkler, Virgil Welch PBDT:

PRESENT OPERATIONS: Drilling 12.25" Intermediate Section @ 5,042'

PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling.
 Complete pickup BHA #6
 Trip in hole to bottom 4,964' no issues, no fill
 Start circulation the mud pump number one went down
 Pick up off bottom, investigate the problem, the bolt for main bearing broke
 The number 3 pump the only pump operating
 The repair time for the pump number 2 and number 1 estimated 12 hrs.
 Pull bit back into the surface casing shoe at 1,629'
 Frontier Rig on NPT;Replace module on Pump 2.
 Work on pump 1 repairing bolt for main bearing;PJSM (pre job safety meeting) with FORGE DSM's and Frontier Drilling
 Pump 2 ready for duty;Trip in hole to 4,885'
 Establish circulation
 Perform precautionary wash to bottom to flush possible cutter off bottom
 No indication of any cutters on bottom;Drill ahead with BHA #6 from 4,964- 5,042', 78', at 10.4 FPH
 WOB: 45 to 50K, ROT 40 rpm, 800 gpm, TQ 3,850 - 4,200 ft lbs, SPP 3,200 - 3,400 psi, DIFF 90 -150 psi
 Last Survey at 5024' Inc 1.27, AZM 159.42
 Lithology: Granodiorite Light Grey, Decreasing amount of in-situ weathered Feldspar. 50 - 60% Fresh to slightly altered Feldspar
 20 - 30% Quartz grains, 10% Biotite, Occasional Epidote

ACTIVITY PLANNED: Drill ahead

WELL: FORGE 16A [78]-32

Nov 11 2020	MD: 5,113	TVD: 5,112	FOOTAGE: 71	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob Frank, Duane Winkler, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	Repair Pump 2					
	<p>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;Prepare to trip out of the hole, pump 20bbls pill Trip out of hole;Lay down directional tools. Break out bit, Bit had minimal damage;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;Frontier personnel working on replacing pump 2 module 2.</p>						
	ACTIVITY PLANNED:	Finish repairs to Pump 2 , TIH, Drop Gyro , TOOH with Survey Tool, RU Casers, Run Casing					
Nov 12 2020	MD: 5,113	TVD: 5,112	FOOTAGE:	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob Frank, Duane Winkler, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	Circulating, rig down casing running equipment					
	<p>Frontier complete the installation of pump #2 module;Trip in hole to bottom 5,113', no issue or fill Circulate two bottom up Mud Weight 8.9, viscosity 55;Pick up off bottom, unscrew top drive Pick up gyro tool, set clocks, drop Gyro;While trip out of hole measure angle and azimuth Lay out survey tools, break out bit, lay Down Collars;Clean floor prior to running casing;PJSM, pre job safety meeting, Wyoming Casing , DSM and Frontier Driller, Welder. Pick up casing running tools to rig floor RU Casing Running tools: Bale extensions, elevators, spider, tongs bring up casing centralizer's, and float equipment;Weld float shoe to casing , baker lock and tack weld each shoe track joint and float collar. Run 4 joints of 9 5/8" 40#, HCL-80, BTC casing. pump through floats Run total of 118 jts 9 5/8", 40#, HCL-80, BTC casing to 5,110.' fill casing while running in hole Two joints of casing off bottom establish circulation Precautionary wash the last 2 jts of casing to bottom. Tag bottom at 5,113' Circulate at 5 bpm, SPP 310 psi, no issues</p>						
	ACTIVITY PLANNED:	Circulate, RU cementers, Cement well, Drain stack, wash out BOP. Rig down flow line in preparation of installing well head.					
Nov 13 2020	MD: 5,113	TVD: 5,112	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob Frank, Duane Winkler, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	Nipling down well head to weld on head					
	<p>Circulate and condition mud;PJSM, pre job safety meeting: Resources cement crew, Frontier rig crew, DSM Rig up cement equipment Test lines to 3,000 psi, Pump 30 bbls Fresh water, 20 bbls RC Mud Cleaner, 50 bbls 10.5# Sepiolite, 13 bbls Sodium Silicate, 5 bbls Fresh water spacers. Pumped 428 bbls 12.92# RC Thermalite-HT cement, Drop Top plug displace with 381 bbls Fresh water, Pump 2.5 bbls over. Bumped plug at 2295 psi, 500psi over lift pressure. Bleed off pressure. Floats did not hold. Pressure back to 2300 psi on plug, Shut in a well holding 2300 psi;Wash down stack, wash well head out. Set casing on bottom, land casing in set slips. The BOPE and wellhead were washed. When picked up the stack to set the slips, there was water from washing the BOPE and wellhead.;Rough cut on casing, lay down cut off piece of casing Nipple down BOP , lay down spacer spool Welder preparing to weld on 9 5/8" well head.</p>						
	ACTIVITY PLANNED:	Install well head, nipple up BOP					
Nov 14 2020	MD: 5,113	TVD: 5,112	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	TEST BOPE AND CASING.					
	<p>Pre-tour safety meeting with FORGE representatives and Frontier Drilling personnel. Weld on 11" X 5K wellhead as per recommended procedure. Pressure test wellhead.;Nipple up BOP stack. Make up choke and kill lines to choke manifold. Change out blind rams.;Install turnbuckles on BOP stack. Rig down casing bails and elevators. Remove from floor. Rig up drill pipe elevators. Clean floor.;Pre-tour safety meeting with FORGE representatives and Frontier Drilling personnel. Remove flare line and flare stack. Set pipe racks for catwalk. Lay out 21 - 6 1/2" drill collars, OD, ID and strap.;Pick up 6 stands (18) 6 1/2" drill collars and stand in derrick.;Repair cable on catwalk. Tie up service loop on top drive due to high winds. Bring wear bushing, test plug and joint of drill pipe to floor for BOPE testing. Clean up rig floor and substructure.;A-1 Testers on location. Rig up and begin testing BOPE and casing.</p>						
	<p>Currently at 5,113' MD (intermediate casing shoe depth). Last survey at 4,920' MD, 4,919' TVD, 1.27° inc., 159.42° azi., 7.77' VS.</p>						
	ACTIVITY PLANNED:	TEST BOPE. PICK UP BHA, DRILL SHOE TRACK AND 10' OF NEW FORMATION. PERFORM FIT. TOOH FOR LOGS.					

WELL: FORGE 16A [78]-32

Nov 15 2020	MD: 5,200	TVD: 5,199	FOOTAGE: 87	MW: 8.9	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch			PBSD:	
	PRESENT OPERATIONS:	DRILLING AHEAD WITH BHA #9 AT 5200' MD, 5199' TVD. LAST SURVEY AT 5092', 1.56° INC, 108.18° AZI				
	<p>PJSM, pre job safety meeting Test BOPE 250 psi low 5000 psi high, test casing 1500 psi, test choke manifold 5000 psi;INSTALL WEAR BUSHING;PJSM, pre job safety meeting Pick up BHA # 8, 8 3/4" mill tooth bit Trip in hole to 3,000', circulate two bottom up to cool off hole Trip in hole to 4,800' start circulation Precautionary trip in hole making connections for temperature control at the motor. Tag float collar Drill out float collar, cement, float shoe Circulate two bottoms up;PJSM, pre job safety meeting Trip out of the hole to change out BHA.;PJSM, pre job safety meeting, Trip out of hole. Lay down BHA #8;Break off saver sub on top drive and install corrosion ring.;Pick up BHA #9 consisting of Smith XS616, Vertical Scout RSS, 6 1/2" Scout 7/8 3.0 fixed motor 6 1/2" NOV shock sub, 6 3/4" Stabil Drill NM Stabilizer, 6 1/2" Scout UBHO 6 3/4" NMDC, 7 stands of 6 1/2" DC's and 3 stands of weight pipe.;Trip in hole with drill pipe to 3,000'. Circulate bottoms up to cool the hole. Trip in hole with drill pipe to 4,930'. Start circulation.;Ream float collar and shoe track. Drill out of shoe. Drill 12' of new formation and perform FIT to 9.6 ppg EMW.;Drill ahead from 5.113' to 5200' with BHA #9 38K WOB, 31 rpm rotary, 275 psi differential, 485 gpm. Last survey at 5,092', 1.56° Inc., 108.18° AZI Step test 5 minute increments WOB FPH 35K 54.5 40K 55.2 45K 69.6 Present drilling WOB 40K , AVG ROP 33'</p>					
	ACTIVITY PLANNED:	CONTINUE DRILLING PRODUCTION HOLE WITH BHA #9				
Nov 16 2020	MD: 5,390	TVD: 5,389	FOOTAGE: 190	MW: 8.8	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch			PBSD:	
	PRESENT OPERATIONS:	DRILLING AHEAD WITH BHA #10 AT 5,390' MD, 5,389' TVD. LAST SURVEY AT 5,294', 1.67° INC, 51.93° AZI				
	<p>PJSM, pre job safety meeting Drill ahead from 5.200' to 5300' with BHA #9 , (100') @ 10.5 45K WOB, 60 rotary, 125 psi differential, 575 gpm. SSP 2300 Last survey at 5,199', 1.63° Inc., 88.50° AZI PU with pumps 210K, SO 160K PU with out pumps, 230, SO 175 Mw 8.8, viscosity 40;Drill ahead from 5,300' to 5,324'. 24' @ 9.6 fph. 45K WOB, 60 rpm rotary, 155 psi differential, 575 gpm. SSP 2320;PJSM, pre job safety meeting. Drill ahead with BHA #9 from 5,324' to 5,345'. 21 ft @ 6 fph. 50K WOB 56 rotary, 250 psi differential , 580 gpm.;Build slug and prepare to trip out of hole at 5,345' MD. Trip out of hole and break off bit. The bit was in gauge and good shape;Make up Ulterra U616M 6 PDC bit Stop and circulate at 3,000 ft to cool tools. Trip in the hole with BHA #10 to 5,300'. At 5300' Establish circulation to cool off directional tools Wash to bottom at 5,345'.;Drill ahead from 5.345' to 5,390' with BHA #10. 45' @ 30 fph. 30K WOB, 32 rpm rotary, 250 psi differential, 550 gpm. Last survey at 5,294', 1.67° Inc., 51.93° AZI</p>					
	ACTIVITY PLANNED:	CONTINUE DRILLING PRODUCTION HOLE WITH BHA #10				
Nov 17 2020	MD: 5,473	TVD: 5,471	FOOTAGE: 83	MW: 8.8	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch			PBSD:	
	PRESENT OPERATIONS:	LOGGING WITH SCHLUMBERGER. RUN #1 ISOLATION SCANNER LOG, RUN #2 TEMPERATURE LOG				
	<p>PJSM, pre job safety meeting Drill ahead from 5.390' to 5,473' with BHA #10 , (83') @ 11 FPH 50K WOB, 40 rotary, 325 psi differential, 575 gpm. SSP 2300 Last survey at 5,389', 1.32° Inc., 36.29° AZI Mw 8.8, viscosity 40;Circulate, pump dry pill 1ppg over mud weight Trip out of hole to 1610' shut down;Re-spool drilling line on drum. Cut and slip drill line;Trip out of hole from 1,610' to top of directional tools. Lay down Scout directional tools. Bit was in gauge and good shape.;PJSM with Schlumberger and Frontier Drilling. Rig up wireline tools. Log intermediate casing with Schlumberger. Run #1 Isolation Scanner Log, (IBC , CBL) Run #2 Temperature Log.</p>					
	ACTIVITY PLANNED:	RIG DOWN SCHLUMBERGER. PICK UP CORE TOOLS AND TRIP IN HOLE TO CORE AT 5,473'				

WELL: FORGE 16A [78]-32

Nov 18 2020	MD: 5,495	TVD: 5,493	FOOTAGE: 22	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	TRIPPING IN HOLE WITH BHA #12 CORE ASSEMBLY					
	<p>PJSM, pre job safety meeting Prepare rig floor for core tools Stage core tools to rig floor;Pick up make up 7" core barrel to cut 4" core;Trip in hole BHA # 11;Fill pipe and circulate one bottom up;Rig Service;Trip in hole with BHA # 11 to 5,473';Circulate bottoms drop ball;Coring from 5,473' to 5,495'. 22' of core at 2.75 fph.;Mix and pump dry job. Trip out of hole for slow ROP. Lay down core barrels. Actual core recovered approximately 16'. Core barrel was jammed.;Make up BHA #12 core assembly and core bit. Trip in the hole.</p>						
	ACTIVITY PLANNED:	CUT CORE FROM 5,495'					
Nov 19 2020	MD: 5,505	TVD: 5,503	FOOTAGE: 10	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	12 HOUR TEMPERATURE BUILD UP SURVEY TOOLS AT 5,501' MD. TOOL DEPTH AT 5,499'.					
	<p>PJSM, pre job safety meeting Establish circulation;Trip in hole from 3,000' to 5,495';Establish circulation, drop ball;Cut cores 5,495' to 5,504' (9) 2.75 FPH;Circulate, pump dry pill 1 ppg over mud weight;Trip out of the hole to 5,504' shut down high winds;Shut down high winds;Trip out of hole with core assembly. Lay down assembly recovered 2 1/2' of core;Pick up bit, bit sub and temperature tool. Trip in hole for 12 hour shut in to record temperatures. Tag up at 5,504'. No fill on bottom.;12 hour temperature build up test at 5,501' bit depth, 5,499' tool depth beginning at 23:36.</p>						
	ACTIVITY PLANNED:	COMPLETE TEMPERATURE SURVEY. TRIP OUT OF HOLE					
Nov 20 2020	MD: 5,641	TVD: 5,640	FOOTAGE: 136	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Virgil Welch				PBTD:	
	PRESENT OPERATIONS:	DRILLING 8 3/4" PRODUCTION HOLE WITH BHA #14					
	<p>Temperature build up survey for log;Trip out of hole with Di Drill temperature tool and BHA #13.;Make up BHA #14 consisting of Reed TKC 66 bit, 712 Vertical Scout RSS, 6 1/2" Scout 7/8 3.0 Fixed motor, 6 3/4" shock sub, 6 3/4" NM stabilizer, 6 1/2" UBHO sub, 6 3/4" NM drill collar, 24 - 6 1/2" drill collars and 9 HWDP. Sensors located at top of bit (2.5'), top of Scout RSS (21.5'), top of motor (48.6') and at MWD (80'). Trip in hole to 3,027' circulated for temperature Trip to 5,465' establish circulation , pre cautionary wash last stand to bottom.;Drill from 5,505' to 5,515' with 35K wob, 50 rpm, 618 gpm. 10' @ 100'/hr. Drill from 5,515' to 5,543' with 40K wob, 50 rpm, 618 gpm. 28' @ 105'/hr. Drill from 5,549' to 5,563' with 45K wob, 50 rpm, 618 gpm. 14' @ 76'/hr. Drill from 5,579' to 5,591' with 50K wob, 50 rpm, 598 gpm. 12' @ 37'/hr. Drill to 5,641' Total footage 136 ft @ 24.7 fph. 47K wob, 50 rpm, 598 gpm. Survey depth 5,480', 0.79° inc, 6.67° azi.</p>						
	ACTIVITY PLANNED:	DRILL AHEAD WITH BHA #14					
Nov 21 2020	MD: 5,793	TVD: 5,792	FOOTAGE: 152	MW: 9.3	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W., Leroy S., Virgil W., Paul S.				PBTD:	
	PRESENT OPERATIONS:	DRILLING 8 3/4" PRODUCTION HOLE WITH BHA #14					
	<p>PJSM, pre job safety meeting Drill ahead from 5,641' to 5,752' with BHA #14 , (111') @ 9.25 FPH 47K WOB, 60 rotary, 207 psi differential, 450 gpm. SPP 2500 psi Last survey at 5,669', 1.71° Inc. 119.26° AZI MW 9.0 , viscosity 45;PJSM, pre job safety meeting Drill ahead from 5,752' to 5,793' with BHA #14 , (41') @ 3.4 FPH At 5,758' reduce wob to 30K 30K WOB, 35 rpm rotary, 172 psi differential, SPP 2,800 psi, 590 gpm, 4250 torque Last survey at 5,669', 1.71° Inc. 119.26° Azi MW 9.3 , viscosity 42</p>						
	ACTIVITY PLANNED:	DRILL AHEAD WITH BHA #14					
Nov 22 2020	MD: 5,855	TVD: 5,853	FOOTAGE: 62	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Paul Stoud				PBTD:	
	PRESENT OPERATIONS:	CORING					
	<p>PJSM, pre job safety meeting Drill ahead from 5,793' to 5,846' with BHA #14 , (53') @ 5.3 FPH Take survey check shot at 5,800'. 1.89° Inc Made connection at 5,846'. After connection ROP dropped to 1.6 fph. Decided to trip out of hole to core. 30K WOB, 35 rpm rotary, 145 psi differential, SPP 2,770 psi, 602 gpm, 3,900 - 4,100 torque;Build dry job and TOO H for slow P-rate with BHA #14. Inspect hard banding, HWDP and drill collars while tripping out no issues Last survey at 5764', 1.89° Inc. 109.68° Azi MW 8.8, viscosity 42;Lay down BHA # 14, VRSS Mud motor bearing loose No other issues;Pick up BHA # 15, with nine blade core bit;Trip in hole with BHA # 15 (Core Assembly) tag bottom no fill;Circulate off bottom;Cut core from 5,846' to 5,855'</p>						
	ACTIVITY PLANNED:	CORING. TRIP OUT OF HOLE WITH CORE ASSEMBLY					

WELL: FORGE 16A [78]-32

Nov 23 2020	MD: 5,878	TVD: 5,876	FOOTAGE: 23	MW: 8.9	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Paul Stoud				PBTD:
	PRESENT OPERATIONS:	CORING				
	<p>PJSM, pre job safety meeting Core from 5,855' to 5,856'. 8-9K wob, 40 rom, 350 gpm.; Trip out of hole with BHA #15, core BHA due to slow penetration. Lay down core barrels. Drilled 10' (5,846' to 5,856') and recovered 8' of core. Total core recovered is 26'; 1 hour rig service. Preparing BHA for clean out run.; Pick up BHA #16 consisting of Ultrerra SPL 616 bit, bit sub, rerun 6 1/2" Scout 7/8 3.0 motor, 6 3/4" NM Stabilizer, 8 stands drill collars, 3 stands HWDP. Trip in hole to 3,000'. Stop to cool hole for motor. Trip in hole from 3,000' to 5,856'; PJSM, pre job safety meeting. Drill from 5,856' to 5,858' to clean up for core run.; Pump 20 bbl sweep and circulate to clean hole.; Trip out of hole with BHA #16. Lay down BHA.; Make up coring BHA #17 with CCI 713 core bit and trip in hole. Wash last 2 stands to bottom. Circulate bottom of hole.; Core from 5,858' to 5,878'. 20' @ 5.7 fph. 6K wob, 40 rpm rotary, 347 gpm. Last survey @ 5,764', 1.88° Inc, 110.44° Azi.</p>					
	ACTIVITY PLANNED:	COMPLETE CORING, RUN WIRELINE SEISMIC SHOT, PICK UP CURVE ASSEMBLY				
Nov 24 2020	MD: 6,016	TVD: 6,014	FOOTAGE: 138	MW: 8.9	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane Winkler, Leroy Swearingen, Paul Stoud				PBTD:
	PRESENT OPERATIONS:	BUILDING CURVE SECTION AT 6,016' MD. LAST SURVEY AT 5,898' MD, 2.31° INC, 102.95° AZI				
	<p>Drilling core from 5,878' to 5,892'. 14' @ 4.67 fph. 6K wob, 40 rpm rotary, 347 gpm.; 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.; Lay down 18 - 6 1/2" drill collars.; Service rig and top drive.; 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.; 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; 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</p>					
	ACTIVITY PLANNED:	CONTINUE BUILDING CURVE TO 65°				
Nov 25 2020	MD: 6,360	TVD: 6,344	FOOTAGE: 344	MW: 8.9	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, Paul S, Bob F				PBTD:
	PRESENT OPERATIONS:	RIG UP SCHLUMBERGER PREPARE TO RUN LOGS				
	<p>PJSM, pre job safety meeting. Building curve from 6,016' to 6,360'. 45K wob, 51 rpm rotary, 558 gpm, 3,000 psi, 134 psi differential, (344'), 27.5 FHP Drilling MWD temperature 185° F, good temperature for motor fit Last survey at 6,276' MD, 6,264' TVD, 18.16° Inc., 106.22° Azi., 59.4' high, 6.9' left, 125.05' VS; Circulate to cool hole and tools, surface circulation temperature 164° F.; Trip out of hole with BHA #18. Stop at 5,800' and circulate to cool hole and tools.; Trip out of hole and Lay down directional tools.; Cool down BHA, rerun Reed Hycalog TKC 63 C7 8 3/4" bit, bit sub with float, drill pipe and trip in hole to 5200'; Cool hole in preparation to run logs, surface circulating temperature to 120° F.; Trip out of hole with cool down BHA</p>					
	ACTIVITY PLANNED:	RUN UBI LOG, PICK UP BHA # 2, DRILL 8 3/4" Curve				
Nov 26 2020	MD: 6,507	TVD: 6,490	FOOTAGE: 147	MW: 8.9	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, Paul S, Bob F				PBTD:
	PRESENT OPERATIONS:	PIPE FREE, TRIP OUT OF HOLE FOR BHA INSPECTION				
	<p>PJSM, pre job safety meeting. Rig up Schlumberger run the UBI log from 5.200 to surface. Rig down logging tools.; Tie up service loop on top drive for tripping in strong winds.; Trip in hole with slick assembly, BHA #20 to 5,200' to circulate for temperature. Temperatures on surface Max 118°; Cut and Slip drilling line; Mix and pump dry job. pump dry pill, Trip out of hole with BHA #20. Break off bit; Pick up Curve assembly 2, BHA 21, Reed Hycalog SKC613M-01C Trip in hole to 5,200'; At 5,200' circulate for temperature Circulate Bottoms up max recorded Surface Mud Temperature 122°; Trip in hole to 6,360', no issues; Drill From 6,360' to 6,507', (147') Total, 32.6' feet per hour. WOB 20 TO 35k, Rotary 50, Torque 6,500, SPP 3200 -3400 GPM 560, DIFF 200 - 300psi During the slide lost tool face and became assembly became stuck; Work pipe, circulate lube sweep, work tool back in position Pipe free</p>					
	ACTIVITY PLANNED:	INSPECT BHA, TRIP IN HOLE DRILL CURVE				

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Nov 27 2020	MD: 6,724	TVD: 6,676	FOOTAGE: 217	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, Paul S, Bob F			PBSD:	
	PRESENT OPERATIONS:	Drilling Curve				
	<p>PJSM, pre job safety meeting. Work tight hole at 6,526';Circulate for temperature and mix dry pill;Pump dry pill Trip out of hole to 5,500' Establish Pick Up, Slack Off, Torque parameters Trip back to bottom at 6.507';Drill rotate from 6,507' to 6,526'. 30K - 40K wob, 58 rpm, 558 gpm. (19') 19 FPH Due to high torque decision to pull out of hole Last survey @ 6,434' MD, 20.02° Inc, 113.34° Azi, 6,484' TVD, 179.4' VS, 4.64° DLS;Circulate for temperature and mix dry pill;Trip out of hole with BHA # 21, Hole drag from 6,050' to 5,901' no issues;Lay down BHA # 21 and bit;Pick up BHA # 22;Trip in hole to 5,119';Circulate hole to cool directional tools at 5,119';Trip in Hole from 5,119' to 6,526';Drill rotate and slide from 6,526' - 6,724'. 198 ft @ 28.23 FPH, 35K - 50K wob, 50 rpm, 558 gpm. Last Survey - MD: 6624' INC: 29.36° AZM: 116.09° TVD: 6587.19' VS: 229.31' DLS: 3.4 ACTIVITY PLANNED: Drill Curve.</p>					
Nov 28 2020	MD: 6,945	TVD: 6,835	FOOTAGE: 221	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, Paul S, Bob F, Duane W			PBSD:	
	PRESENT OPERATIONS:	TRIP OUT OF HOLE BHA 22				
	<p>PJSM, pre job safety meeting. Drill rotate, slide from 6,724' to 6,913'. (189') 16.4 FPH WOB 40K-60K, 50 rpm, 558 gpm.;Rig Service;Drill rotate, slide from 6,913' to 6,945'. (32') 16.0 FPH, WOB 40-60, 50 rpm, 558 gpm. Last Survey MD: 6877' INC: 44.76° AZM: 100.76° TVD: 6788.27' VS: 380.97' DLS: 8.2 20' High and 17' Right;Circulate for temperature while building dry pill, Pump dry pill;Trip out of hole to 5,235';Circulate for temperature while building dry pill, Pump dry pill;Trip out of hole to 2,957';Circulate for temperature while building dry pill, Pump dry pill;Trip out of hole ACTIVITY PLANNED: PICK BHA 23, TRIP IN HOLE DRILL CURE</p>					
Nov 29 2020	MD: 7,294	TVD: 7,023	FOOTAGE: 349	MW: 9.1	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, Paul S, Bob F, Duane W			PBSD:	
	PRESENT OPERATIONS:	DRILLING AT 7,294'				
	<p>Complete lay down BHA #22;Pick up BHA #23 to drill curve;Trip in hole with BHA # 23 to 3,000';Circulate for temperature at 3,000';Trip in hole with BHA # 23 to 5,206';Circulate for temperature at 5,206';Trip in hole to 6,720 hit ledge;Work ledges from 6,720' to 6,915', circulate and rotate Clean well bore, no issues;PJSM, pre job safety meeting Drill rotate, slide from 6,945' to 7294'. (349') 24.0 FPH, WOB 40-60, 50 rpm, 558 gpm. Last Survey MD: 7,193' INC: 61.28° AZM: 105.27° TVD: 6,974.58' VS: 634.32' DLS: 4.26° Curve projected landing @ 7,262' INC: 63.60° AZM: 103.00° TVD: 7,006.51' VS: 695.47' DLS: 4.45° 14' High and 8' Right Mud Weight 9.1, viscosity 44 ACTIVITY PLANNED: DRILL TANGENT, TOO, RUN REAMING ASSEMBLY</p>					
Nov 30 2020	MD: 7,390	TVD: 7,059	FOOTAGE: 96	MW: 9.1	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W			PBSD:	
	PRESENT OPERATIONS:	REAMING CURVE				
	<p>PJSM, pre job safety meeting Drill rotate, slide from 7,294' to 7,390'. (96') 27.42 FPH, WOB 40-60, 50 rpm, 558 gpm Last Survey MD: 7320' INC: 65.54° AZM: 102.49° TVD: 7030.84' VS: 748.12' DLS: 5.21 Curve EOB MD 7,262';Circulate for temperature while building dry pill, Pump dry pill;Trip out of hole to 5810';Circulate for temperature while building dry pill, Pump dry pill;Trip out of hole Lay down 4 joints of Drill Pipe to be hard banded. Lay down 5 drill collars;Lay down BHA # 23, Break out bit;Service Rig;Reamer Assembly Reed Hycalog 8 3/4" bit, near bit roller reamer, drill collar, roller reamer, heavy weight drill pipe, string mill, jars, heavy weight drill pipe. Trip in hole.;Circulate for temperature at 5,240';Trip in hole to 5,634';Ream from 5,634' to 6,263' Rotary 60 rpm to 80 rpm Weight on bit form 0 - 3,000 lbs Torque ranges from 3500 - 5400 FTLBS ACTIVITY PLANNED: REAM CURVE, TRIP OUT OF HOLE RUN GYRO SURVEY</p>					
Dec 1 2020	MD: 7,390	TVD: 7,059	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W			PBSD:	
	PRESENT OPERATIONS:	TRIP IN HOLE WITH GYRO BHA #25				
	<p>PJSM Ream from 6,263' to 7,148" Rotary 60 rpm to 80 rpm Weight on bit form 0 - 3,000 lbs Torque ranges from 3500 - 5400 FTLBS;Service Rig;Ream from 7,148' to 7,390' Rotary 60 rpm to 80 rpm Weight on bit form 0 - 3,000 lbs Torque ranges from 3500 - 5400 FTLBS;Circulate for temperature while building dry pill, Pump dry pill;Short trip out of hole to 5,655', Trip back to bottom;Circulate for temperature, while building dry pill, Pump dry pill;Trip out of hole. Lay down Reamer assembly BHA 24.;Pick up GYRO assembly and trip in hole with BHA 25 ACTIVITY PLANNED: FINISH TRIPPING IN HOLE WITH GYRO BHA, PULL OUT OF HOLE WITH GYRO SURVEY</p>					

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Dec 2 2020	MD: 7,390	TVD: 7,065	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	LOGGING WELL				
	Trip in hole with slick BHA # 25 for gyro survey;Circulate for temperature and pump down Gyro tool;Trip out of hole with Gyro survey in place, Lay down Gyro tool;Trip in hole with BHA # 26 to 5,254';Slip and Cut drill line;Trip in hole with BHA #26 to bottom 7,390';Circulate for for temperature, Pump dry pill;Trip out of hole with BHA # 26;Rig up Schlumberger and run in hole with UBI log to 7,085'					
	ACTIVITY PLANNED:	COMPLETE LOGGING OPERATIONS. PICK UP PACKER TO EXTENDED LEAK OFF TESTS				
Dec 3 2020	MD: 7,390	TVD: 7,059	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	SETTING PACKER FOR EXTENDED LEAK OFF TEST				
	Complete UBI Logging run. Rig Down Schlumberger;Trip in hole with BHA 27 to 5,083';Circulate for Temperature;Trip in hole from 5,083' to 7,390';Circulate for temperature, Build dry pill, Pump dry pill;Trip out of hole with BHA 27;Pick up Test Packer and trip in hole;Circulating while rigging up pump truck					
	ACTIVITY PLANNED:	COMPLETE EXTENDED LEAK OFF TEST, TRIP OUT WITH PACKER BHA, TRIP IN HOLE DRILL TANGENT				
Dec 4 2020	MD: 7,390	TVD: 7,065	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	TRIPPING IN HOLE WITH DIRECTIONAL BHA # 30				
	Proceed with Extended Leak off Test Packer at 7,325' Reach maximum allowable surface pressure The decision was to trip out of hole;Trip out o hole to 5800';Connect pump line to drill pipe Pump truck pressured on and tool shifted Circulate for temperature while making dry pill, pump dry pill;Trip out of hole lay down packer BHA # 28;Lay down packer no indication of external failure Lost two packer elements Break down sections of packer Lower port did not open;Pick up BHA # 29, to drill out lost packer elements Trip in hole to 7,108 MD Establish circulation Rotate and circulate to bottom 7,389';Drill from 7,389' to 7,390' Drilling on packer element;Circulate all packer elements out of the hole Confirm well bore clean Make up dry pill, pump dry pill;Trip out of hole with Clean Out BHA 29.;Pick up directional tangent BHA # 30 Trip in hole					
	ACTIVITY PLANNED:	CONTINUE TRIPPING IN HOLE WITH BHA # 30 AND DRILL TANGENT				
Dec 5 2020	MD: 7,990	TVD: 7,335	FOOTAGE: 600	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Paul S, Bob F, Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	DRILLING TANGENT AT 7,990'				
	PJSM, pre job safety meeting with Frontier and DSM Trip in hole with Directional Tangent Assembly BHA # 30 to 7,390';Drill rotate and slide from 7,390' to 7,602', (212') 32.6 fph WOB 35 - 50, 50 - 70 RPM, 590 GPM Rotate: 142' (3.75 hrs). AVG ROP 37.8.' fph. Slide: 70', (2.33 hrs.) AVG ROP 30.0 fph.;Rig Service;Drill rotate and slide from 7,602' to 7,990', (388') 26.75 fph WOB 35 - 50, 50 - 70 RPM, 590 GPM Rotate: 261' (8.3 hrs). AVG ROP 31.44.' fph. Slide: 127', (6.2 hrs). AVG ROP 20.8 fph. Last Survey: MD: 7896' INC: 56.83° AZM: 108.77° TVD: 7288.99' VS: 1262.52' DLS: 0.79					
	ACTIVITY PLANNED:	DRILL AHEAD				
Dec 6 2020	MD: 8,024	TVD: 7,356	FOOTAGE: 34	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Bob F, Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	LAYING DOWN COOLING BHA 31				
	PJSM, pre job safety meeting with Frontier and DSM. Rotary drill from 7,990' to 8,024'. 34', (34" FPH) 30 - 68 rpm, 50K wob. Pick up off bottom due to sharp decrease in ROP.;Circulate temperature , build dry pill, pump dry pill;Trip out of hole with BHA # 30;Lay down BHA # 30;Service rig and top drive.;Trip in hole with BHA #31. Pick up bit, bit sub with float and crows foot.;Continue trip in hole with BHA #31;Slip and cut drilling line.;Finish trip in hole to 7,995'.;Circulate for temperature and prepare hole for Extended Leakoff Test. Build and pump dry pill to trip out of hole.;Trip out of hole with BHA #31 Lay down BHA					
	ACTIVITY PLANNED:	PICK UP PACKER, TRIP IN HOLE, SET PACKER, PERFORM XLOT,				
Dec 7 2020	MD: 8,024	TVD:	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Bob F, Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	CIRCULATE FOR TEMPERATURE				
	Prepare rig floor. Pick up BHA #32 Packer assembly.;Trip in hole to 5,089'.;Circulate to cool hole for packers.;Trip in hole from 5,089' to 7,972'. Center of bottom packer element at 7,958'.;Circulate hole to cool packers.;Attempted multiple times to set packers Pressures indicated that ball did not seat and packers did not set.;Circulate for temperature, build dry pill, pump dry pill;Trip out of hole with BHA #32 Packer assembly.;Pick up Fishing BHA # 33 and trip in hole to 7,996';Circulate condition hole to start fishing					
	ACTIVITY PLANNED:	FISHING OPERATIONS				

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Dec 8 2020	MD: 8,241	TVD: 7,452	FOOTAGE: 217	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob F, Duane W, Leroy S				PBTD:	
	PRESENT OPERATIONS:	TRIP IN HOLE WITH DIRECTIONAL BHA					
	<p>PJSM, pre job safety meeting with Frontier and DSM. Milled up lost pieces of bit; Trip out of the hole with Mill BHA #33.; Clean floor, lay down bale extensions and chiksans.; Make up BHA #34 Directional Drilling Assembly.; Trip in hole to 5,221'; Fill pipe. Install new corrosion ring in saver sub on top drive.; Trip in hole to 8,024'; Drill rotate and slide from 8,024' to 8,241', (217') 36.0 FPH, WOB 35 - 50, 50 RPM, 560 GPM Rotate: 163' (3.3 hrs). AVG ROP 49.4' FPH. Slide: 54', (2.0 hrs). AVG ROP 27.0 FPH. SURVEY MD: 8086' INC: 63.60° AZM: 108.28° TVD: 7385.09' VS: 1426.07' DLS: 5.12 19' Low and 7' Right; Circulate for temperature, Build and Pump Dry Pill; Trip out of hole with BHA # 34 Motor check good, Lay down bit; Trip in hole with Directional Drilling Assembly BHA # 35 ACTIVITY PLANNED: CONTINUE TRIP IN HOLE, DRILL AHEAD</p>						
Dec 9 2020	MD: 8,391	TVD: 7,512	FOOTAGE: 150	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob F, Duane W, Leroy S				PBTD:	
	PRESENT OPERATIONS:	TRIPPING OUT OF HOLE FOR WASH OUT					
	<p>Trip in hole to 3,485' determined possible wash out on drill string; Trip out of hole pulling wet pipe from 3,485' to 2,605'; Pump soft-line to check for washout in pipe. Saw no pressure spike; Trip out of hole wet. Found washed tool joints at 627' MD Trip out of hole from 627' breaking every connection checking for damage; Check BHA for wear. Check MWD tool for soft-line. Lay Down 1 monel collar for wear Make up bit and trip in hole with BHA #35; Trip in hole with remaining weight pipe to check for washes. Trip with BHA # 35 to 8,147' Pre cautionary wash last stand to bottom for broke cutters; Drill rotate and slide from 8,241' to 8,391', (150') 42.9 FPH, WOB 35 - 50, 70 RPM, 650 GPM Rotate: 100' (1.75 hrs). AVG ROP 57.1' FPH. Slide: 50', (1.75 hrs). AVG ROP 28.6 FPH. SURVEY MD: 8276' INC: 66.06° AZM: 108.75° TVD: 7465.62' VS: 1597.64' DLS: 1.88 19' Low and 20' Right; Lost 380 stand pipe pressure, check surface equipment all good Circulate carbide marker down drill pipe, determine wash depth Trip out of wet from 8,391 to 1,429' located wash out at 1,429' Continue trip out of hole for visual inspection ACTIVITY PLANNED: TRIP IN HOLE DRILL AHEAD.</p>						
Dec 10 2020	MD: 8,535	TVD: 7,571	FOOTAGE: 144	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Bob F, Duane W, Leroy S				PBTD:	
	PRESENT OPERATIONS:	TRIP IN HOLE WITH PACKER ASSEMBLY					
	<p>PJSM, pre job safety meeting with Frontier and DSM. Continue tripping out of hole looking for washed pipe.; Check BHA and bit.; Trip in hole with BHA #35 to 5,120'; Circulate to lower temperature.; Trip in hole. Check MWD temperature at 7,220'. Continue tripping in hole to 8,345'. Pre cautionary wash to bottom at 8,391'.; Drill rotate from 8,391' to 8,535', (144') 57.6 FPH, WOB 50K, 70 RPM, 620-645 GPM SURVEY MD: 8,466' INC: 65.6° AZM: 108.41° TVD: 7,571.44' VS: 1,771' DLS: 1.76 16' Low and 28' Right; Circulate for temperature; Drop gyro survey, pump dry job and trip out of hole.; Lay down gyro survey tool and BHA.; Trip in hole with heavy weight drill pipe.; Slip and cut drilling line.; Lay down heavy weight drill pipe; Strap and pick up 45 joints of new heavy weight drill pipe. Stand in derrick.; Make up packer assembly BHA # 36 and trip in hole. ACTIVITY PLANNED: CONTINUE TRIP IN HOLE. SET BOTTOM PACKER, PERFORM XLOT. TRIP OUT OF HOLE.</p>						
Dec 11 2020	MD: 8,535	TVD: 7,571	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S				PBTD:	
	PRESENT OPERATIONS:	CIRCULATING TO COOL HOLE FOR LOGS					
	<p>PJSM, pre job safety meeting with Frontier and DSM. Trip in hole with packer assembly to 2,010'.; Circulate for temperature to cool packers; Trip in hole to 5,241'.; Circulate for temperature cool packers; Trip in hole to 8,466'.; Establish circulation. Get pick up / slack off weights. Drop ball to set packers. Held safety meeting with FORGE DSM's, Resource Cementing, Peak Completions and Frontier Drilling personnel.; Test lines from pump truck to 5,000 psi. Pump down ball to ball seat and pressure up to 957 psi. Hold for 5 minutes. Pressure up to 2100 psi to shear pins and set packer. Pinned at 1,897 psi. Pressure up to 2,700 psi to open landing collar. Pinned at 2,705 psi. Saw a pressure drop to verify opening. Started the XLOT establish circulation to annulus, stop test; Circulate, build dry job. Pull 5 wet stands off bottom; Rig down bale extensions and Resource Cementing pump truck and iron. Pump dry job.; Trip out of hole with packer assembly #3 (BHA 36); Break apart and lay down packer assembly.; Make up BHA #37. Cool down assembly Trip in hole; Circulate for temperature to run open hole logs. ACTIVITY PLANNED: TRIP OUT OF HOLE, RUN LOGS</p>						

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Dec 12 2020	MD: 8,535	TVD: 7,571	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	TRIP OUT OF HOLE WITH WIRE				
	Trip out of the hole with cool down BHA # 37;Rig up Schlumberger wire line to run UBI log;Schlumberger run UBI log;Trip in hole with cool down BHA #37 to cool hole for acoustic shot;Circulate to cool hole for wireline acoustic shot;Pump dry job, blow down Kelly hose Trip out of hole with cool down BHA #37;Rig up Schlumberger to run acoustic shot Run in hole to MD 8,085', TVD 7,385.8, AZM 109.4, INC 63.7 12/12/2020, shot 1300 grains, time 5:36:25 Pull out of hole with guns					
	ACTIVITY PLANNED:	TRIP IN HOLE DIRECTIONAL ASSEMBLY DRILL TANGENT				
Dec 13 2020	MD: 9,064	TVD: 7,776	FOOTAGE: 529	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	TRIP OUT OF HOLE				
	Pick Up BHA # 38 directional drilling;Trip in hole with BHA # 38 to 5,800';Circulate for temperature;Trip in hole with BHA # 38 from 5,800' to 8535';Drill rotate and slide from 8,535' to 9,064', (529') 42.3 FPH, 45K WOB, 70 RPM, 640-650 GPM Rotate: 391' (6.7 hrs). AVG ROP 57.93 fph. Slide: 138', (4.3 hrs). AVG ROP 31.85 fph. Connections and position tool face (1.5hrs) SURVEY MD: 8,953' INC: 65.25° AZM: 98.06° TVD: 7,730.43' VS: 2,218' DLS: 4.54 0' Low and 14' Right;Circulate for temperature while building dry job;Trip out of hole with BHA #38 for penetration rate, elevated MSE and high lateral tool vibrations					
	ACTIVITY PLANNED:	LAY DOWN BHA #38, PICK UP BHA #39, TRIP IN HOLE. DRILL TANGENT				
Dec 14 2020	MD: 9,692	TVD: 8,046	FOOTAGE: 628	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S				PBTD:
	PRESENT OPERATIONS:	DRILLING AHEAD IN TANGENT AT 9,685' MD				
	Pick up directional drilling BHA # 39;Trip in hole with BHA # 39 to 5,800';Circulate for temperature;Trip in hole with BHA # 39 to 7,570';Circulate for temperature;Trip in hole with BHA # 39 to 9,064' btm;Drill rotate and slide from 9,064' to 9,324', (260') 43.3 FPH, 45K WOB, 70 RPM, 640-650 GPM;Assess torque issue on top drive. Brake is not releasing.;Trip out of hole 5 stands Work on top drive brake Trip in hole 5 stands;Drill rotate and slide from 9,324' to 9,595', (241') 34.4 FPH, 45K WOB, 70 RPM, 640-650 GPM;Fix and replace grabber box dies on top drive;Drill rotate and slide from 9,595' to 9,692', (97') 48.5 FPH, 47K WOB, 70 RPM, 640-650 GPM 24 hour footage: 628', 15 hrs, 41.8 fph. Rotate: 485' (9.5 hrs). AVG ROP 51 fph. Slide: 143', (5.5 hrs). AVG ROP 26.0 fph. Repairs, connections and position tool face (3.5 hrs) SURVEY MD: 9,524' INC: 62.73° AZM: 106.61° TVD: 7,969.67' VS: 2,735.17' DLS: 1.22 1' Above and 1' Left					
	ACTIVITY PLANNED:	DRILL AHEAD IN TANGENT WITH BHA #39				
Dec 15 2020	MD: 9,748	TVD: 8,073	FOOTAGE: 56	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F				PBTD:
	PRESENT OPERATIONS:	REAMING AT 8,083'				
	Drill rotate and slide from 9,692' to 9,748', (56') 22.4 FPH, 47K WOB, 70 RPM, 640-650 GPM Rotate: 36' (1 hrs). AVG ROP 36 fph. Slide: 20', (1 hrs). AVG ROP 20 fph. Repairs, connections and position tool face (0.5 hrs) SURVEY MD: 9,618' INC: 62.36° AZM: 105.28° TVD: 8,013.01' VS: 2,818.57' DLS: 1.32 3.4' Below and 1.7' Left;Circulate for temperature, Build dry pill, pump dry job jnm;Trip out of hole with BHA #39.;Lay down BHA # 39;PU Reamer BHA #40 with TKC713 PDC bit Trip in the hole to 1500';Cut and slip the drill line;Trip in hole to 5,250';Circulate and condition for temperature;Trip in hole to 7,225';Ream from 7,225' to 8.083' Ream at 60 - 70 RPM, 600 GPM, RATE 100 - 200 FPH.					
	ACTIVITY PLANNED:	REAM TO TD 9,748', TRIP OUT OF HOLE, LAY DOWN REAMING BHA, RIG UP BOP TESTERS, TEST BOP				
Dec 16 2020	MD: 9,748	TVD: 8,073	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F, Paul S				PBTD:
	PRESENT OPERATIONS:	TRIP OUT OF HOLE, LAY DOWN REAMER BHA 40				
	PJSM, pre job safety meeting with Frontier and DSM. Ream from 8,083' to 9,748" Ream at 55 - 70 RPM, 625 GPM, RATE 80-120 FPH. Pump TORKease sweeps as needed for lubricity. Pump 2 - 40bbl high viscosity TORKease sweeps at 9,600' and 9,690' while reaming. Mud weight 9.2 PPG, 70 VIS. Returned a high volume of cuttings over shakers. Build dry job and pump. Prepare to trip out of hole.;Trip out of hole with BHA #40. Lay down reamer assembly. SURVEY MD: 9,618' INC: 62.36° AZM: 105.28° TVD: 8,013.01' VS: 2,818.57' DLS: 1.32 3.4' Below and 1.7' Left					
	ACTIVITY PLANNED:	COMPLETE LAYING DOWN REAMER BHA, TEST BOP, RUN IN HOLE WITH DIRECTIONAL BHA 41				

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Dec 17 2020	MD: 9,961	TVD:	FOOTAGE: 213	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F,				PBSD:	
	PRESENT OPERATIONS:	DRILLING AHEAD @ 9,961					
	Lay Down reamer run # 2 BHA # 40;Remove wear bushing. Install test plug, fill BOP. Test BOP, top drive, choke manifold, and lines 250 psi low, 5000 psi high. Annular 250 psi low, 2500 psi high. Mud lines to pumps 3500 psi. Install wear bushing;Make up BHA # 41, directional BHA;Trip in Hole to 5,869';Circulate to cool directional tools;Trip in hole from 5,869' to 6,023' for survey;Replace Hydraulic hose on Top drive Circulate to cool directional tools;Trip in hole from 6,023' - 7,530';Circulate for temperature;Trip in hole from 7,350 - 8,385';Circulate for temperature;Trip in hole from 8,385' - 9,748';Drill rotate and slide from 9,748' to 9,961', (213') 42.6 FPH, 35- 40 K WOB, 60 RPM, 630-650 GPM Rotate: 177 (3.33 hrs). AVG ROP 53.2 FPH. Slide: 36', (1.67 hrs). AVG ROP 21.5 FPH. Repairs, connections and position tool face (0.33) hrs SURVEY MD: 9837' INC: 65.42° AZM: 105.64° TVD: 8110.93' VS: 3014.59' DLS: 2.67 6' Below and 1' Left						
	ACTIVITY PLANNED:	DRILL AHEAD					
Dec 18 2020	MD: 10,490	TVD:	FOOTAGE: 529	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F,				PBSD:	
	PRESENT OPERATIONS:	TRIP IN HOLE WITH DIRECTIONAL BHA #42					
	Drill rotate and slide from 9,961' to 10,097', (136') 45.3 FPH, 40K WOB, 55 RPM, 645 GPM;Service rig. Repair gasket in mud line to pumps;Drill rotate and slide from 10,097' to 10,490', (393') 43.7 FPH, 40K WOB, 55 RPM, 645 GPM Rotate: 316' (5.8hrs). AVG ROP 54.5 FPH. Slide: 77', (2.61 hrs). AVG ROP 29.6 FPH. Repairs, connections and position tool face (0.6 hrs) Pressured up, rubber coming across shaker SURVEY MD: 10411' INC: 64.68° AZM: 105.97° TVD: 8351.45' VS: 3535.30' DLS: 2.63 4' Below and 16.0' Right;Build Dry pill, Set up to Trip out of hole;Trip out of hole with BHA #41.;Lay down VibraScout (stator failure). Break out bit, lay down motor, BHA #41;Make up Directional BHA #42.;Trip in hole to 5,256' picking up VibraScout;Slip and cut drill line. Circulate for temperature while slip and cut.						
	ACTIVITY PLANNED:	FINISH TRIP IN HOLE, DRILL TO TD					
Dec 19 2020	MD: 10,955	TVD:	FOOTAGE: 465	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F,				PBSD:	
	PRESENT OPERATIONS:	TRIP OUT OF HOLE WITH BHA #42					
	Trip in hole with Directional BHA #42 to 5,256' to 7,625' Circulate for temperature;Trip in hole from 7,625' to 8,011' Circulate for temperature;Trip in hole from 8,011' to 9,047' Circulate for temperature;Trip in hole from 9,047' to 10,293';Pre cautionary wash to bottom from 10,293' to 10,490';Drill rotate and slide from 10,490' to 10,730', (240') 40 FPH, 40K WOB, 55 - 70 RPM, 645 GPM;Circulate and pump sweeps to clean and cool hole;Drill rotate and slide from 10,730' to 10,955', (225') 56.3 FPH, 40K WOB, 55 - 70 RPM, 645 GPM Rotate for day : 385' (6.2hrs). AVG ROP 62.1 FPH. Slide for day: 80', (2.7 hrs). AVG ROP 29.6 FPH. Repairs, connections and position tool face (1.1 hrs) Confirmed location to lease boundry SURVEY MD: 10886' INC: 68.60° AZM: 101.44° TVD: 8533.66' VS: 3973.25' DLS: 0.67 20' Above and 4' Left;Circulate and pump sweeps, Build dry pill, pump dry pill;Trip out of hole with BHA # 42						
	ACTIVITY PLANNED:	LAY DOWN DIRECTIONAL TOOLS , TIH GYRO BHA #43					
Dec 20 2020	MD: 10,955	TVD:	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S, Bob F, Paul S				PBSD:	
	PRESENT OPERATIONS:	TRIP OUT OF HOLE WITH CORING BHA #44					
	Lay down Directional BHA #42;Make up BHA #43 (Gyro BHA);Trip in hole to 10,955';Circulate for temperature;Drop gyro survey tool and pump down;Pump dry job and trip out of hole with survey tool. Lay down survey tool. Lay down BHA #43;Pick up Coring BHA #44;Trip in hole with coring BHA #44 to 5,071';Circulate for temperature at 5,071';Trip in hole from 5,071' to 8,005';Circulate for temperature at 8,005'.;Trip in hole from 8,005' to 10,109';Precautionary wash to bottom from 10,109' to 10,950' Torque began increasing at 10,700' to 10,950';Trip out of hole with coring BHA #44 due to torque and hole drag						
	ACTIVITY PLANNED:	LAY DOWN BHA #44, PICK UP REAMER ASSEMBLY, TRIP IN HOLE					
Dec 21 2020	MD: 10,955	TVD:	FOOTAGE:	MW: 0.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Duane W, Leroy S, , Paul S				PBSD:	
	PRESENT OPERATIONS:	CLEANING OUT WELL BORE					
	Trip out of hole with core BHA # 44, lay down BHA;Pick up clean out assembly BHA # 45;Trip in hole to 5,240';Circulate for temperature;Trip in hole with clean out BHA # 45 to 9,700';Circulate for temperature, working clean out BHA # 45, high torque;Trip out of hole with clean out assembly BHA # 45, lay down assembly;Pick up clean assembly BHA # 46;Trip in hole with clean assembly BHA # 46 to 5,200';Circulate for temperature and Cut and slip drilling line;Trip in hole with clean out BHA # 46 to 8,648';Start clean out well bore at 8,648' to 9,350' , rotary 40, gpm 660 Torque 8,100 to 10,000 two stall out 8,650' and 9,102' rework until clean Pump high viscosity sweeps every 200', recover fine granite						
	ACTIVITY PLANNED:	CLEAN OUT WELL BORE TO MDTD 10,955' , CUT CORES					

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Dec 22 2020	MD: 10,955	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, , Paul S				PBTD:
	PRESENT OPERATIONS:	TRIP IN HOLE WITH CORE BHA # 47				
	Start clean out well bore at 9,350' to 10,955' , rotary 40 to 65, GPM 660 Torque 10,000 to 16,000' stalls out 9,505', 9,525,' and 9,590' rework until clearer Pump high viscosity sweeps every 200', recover fine granite;Circulate Pump high viscosity sweeps recover fine granite;Trip out of hole to 7,350';Circulate Pump high viscosity sweeps recover fine granite;Trip out of hole;Lay down clean out BHA # 46;Pick up Core BHA # 47;Trip in hole with core BHA # 47					
	ACTIVITY PLANNED:	COMPLETE TRIP IN HOLE, CORE , TRIP OUT OF HOLE				
Dec 23 2020	MD: 10,971	TVD: 8,559	FOOTAGE: 16	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, , Paul S				PBTD:
	PRESENT OPERATIONS:	TRIP IN HOLE WITH CLEAN OUT BHA #48				
	Trip in hole with coring BHA #47 to 5,139'. Fill pipe.;Trip in hole from 5,139' to 7,997'.;Circulate for temperature.;Trip in hole from 7,997' to 9,500'.;Circulate for temperature.;Trip in hole from 9,500' to 10,169'.;Obtain baseline string weights and rotary torque. Precautionary wash from 10169' to 10742';Obtain string weights and rotary torque. Precautionary wash from 10,742' to 10950'.;Obtain final string weights and rotary torque at 10,950'. Tag bottom at 10,955'. Circulate bottoms up at 450 gpm, 40-50 rpm.;Drop ball and pump down at 100 gpm. Land ball.;Coring from 10,955' to 10,971'. 8K WOB, 40 RPM, 350 - 375 GPM. Cored total of 16'. Average 3.5 fph. Stopped coring due to low penetration rate.;Circulate for temperature while building dry job.;Pull 5 stands off bottom and pump dry job. Trip out of hole with coring BHA #47.;Break down core barrel. Cored 16', retrieved 7.1' of core.;Pick up clean out BHA #48. Trip in hole to 5,222'.;Circulate for temperature.;Trip in hole from 5,222' to 8,001'.;Circulate for temperature.;Trip in hole from 8,001' to 9,492';Circulate for temperature.					
	ACTIVITY PLANNED:	CLEAN BOTTOM OF HOLE, TRIP OUT OF HOLE, PICK UP CORING ASSEMBLY, TRIP IN HOLE AND CUT CORE				
Dec 24 2020	MD: 10,987	TVD:	FOOTAGE: 16	MW: 9.2	LB	PTD: 10,938
	RIG SUPERVISOR:	Duane W, Leroy S, , Paul S, Bob F				PBTD:
	PRESENT OPERATIONS:	TRIP OUT OF HOLE WITH CORE BHA# 49				
	Trip in hole with core BHA # 48 from 10,728';Precautionary wash down from 10,728' to 10,971' Drill 2' of new hole to clean bottom from 10,971' to 10,973' for next core run;Pump high viscosity sweep and reciprocate pipe while circulating out;Trip out of hole with clean up BHA #48. Lay down bit and motor.;Pick up coring BHA #49;Service rig and top drive;Trip in hole to 5,198';Circulate for temperature;Trip in hole from 5,198' to 8,201';Circulate for temperature;Trip in hole from 8,201' to 9,553';Circulate for temperature;Precautionary wash to bottom from 10,742' to 10,973';Core from 10,973' to 10,987' (14') 3.1' FPH. WOB 6-10, ROT 40, GPM 360;Pump high viscosity sweeps build dry job and pump same;Trip out of hole with BHA #49. Trip from 10,987' to 4,500'					
	ACTIVITY PLANNED:	TRIP OUT OF HOLE WITH CORE BHA# 49, MAKE UP REAMER ASSEMBLY, TRIP IN HOLE				
Dec 25 2020	MD: 10,987	TVD:	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	REAMING AND PUMPING HIGH VIS SWEEPS				
	Trip out of hole with Core BHA #49;Lay down core assembly. Cored 14' from 10,973' to 10,987'. Recovered 10.1' of core.;Pick up Reamer BHA #50;Trip in hole to 5,178';Cut and slip drilling line;Trip in hole from 5,178' to 7,323';Mix and pump high viscosity sweep to clean hole. Circulated out with cuttings blinding off shakers on return to surface.;Trip in hole from 7,323' to 8,500';Ream to prepare for logs and liner, 8,500' to 10,987' ROT 40 -70, ROP 200' - 300' FPH, GPM 580 - 640, TORQ AVG 10,000 FT-LBS					
	ACTIVITY PLANNED:	RE-RUN GYRO , TRIP IN COOL DOWN FOR LOGS , RUN LOGS				
Dec 26 2020	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	LOGGING				
	Ream to prepare for logs and liner, 10,847' to 10,987' ROT 40 -70, ROP 200' - 300' FPH, GPM 580 - 640, TORQ AVG 10,000 FT-LBS;Pump high viscosity sweep at 10,987'. Circulate out.;Trip out of hole from 10,987' to 9,300'.;Drop gyro survey tool at 9,300', wait for tool to land.;Trip out of hole from 9,300' to 213' Survey from 9,300' to 6,000';Lay down reamer and gyro BHA #50 and survey tool;Make up cool down BHA #51 and trip in hole;Circulate and cool well for logs Pump dry pill;Before tripping out of hole drop 2.375" drift tool Trip out of Hole. with cooling BHA #51. Lay down bit and bit sub;Rig up Schlumberger and run UBI logs					
	ACTIVITY PLANNED:	LOGGING, SPOT SAND IN TOE OF WELL, REMOVE CASING SLIPS ON 9 5/8" CASING				
Dec 27 2020	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:
	PRESENT OPERATIONS:	DOWNLINK LOGS				
	PJSM, pre job safety meeting with Frontier and DSM. Logging with UBI log. Bottom hole temperature on tool 322° F. Operating temperature 330° F. Maximum tool temperature 350°F Pull out of hole with UBI logging tools due to temperature.;Pick up Schlumberger through bit logging tool consisting of Density Neutron, Induction Resistivity, Sonic, FMI, BHA # 52 Trip in hole to 5,200';Circulate and Condition for Temperature;Trip in Hole with BHA # 52 to 10,987';Circulate and Condition for Temperature;Trip out 2 stands to 10,787'. Assemble logging tools and pump logging tools down drill pipe out through bit;Begin logging well at 10,787' at 3 minutes per stand to intermediate casing shoe at 5,110', stopping multiple times to circulate and cool down tool. Trip out from 5,110' to surface;Lay down logging tool for evaluation. Clean floor and prepare to trip in hole;Trip in hole to 4,791' with BHA #52 to circulate for temperature;Lubricate Rig					
	ACTIVITY PLANNED:	TRIP IN HOLE TO PLACE SAND FROM 10,787' TO 10,987'				

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Dec 28 2020	MD: 10,987	TVD:	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:	
	PRESENT OPERATIONS:	CIRCULATE FOR TEMPERATURE					
	Service rig and top drive;Trip out of hole from 4,800' to 1,400' Lay down heavy weight drill pipe from 1,400' to surface;While waiting on Schlumberger to down load recovered data Pick up through bit BHA # 53, pick up 45 joints drill pipe and drifted The FMI data could not be down loaded;Trip out of hole with drill pipe. Break off Schlumberger tools.;Pull 9 5/8" casing slips, cut off 13 3/8" well head;Trip in hole with Logging BHA #53 to 5,134';Slip and Cut drill line;Lubricate Rig;Trip in hole to 10,987';Circulate for temperature prior to logging						
	ACTIVITY PLANNED:	LOG WELL. TRIP IN HOLE TO PLACE SAND FROM 10,787' TO 10,987'					
Dec 29 2020	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:	
	PRESENT OPERATIONS:	TRIP IN HOLE TO PLACE SAND FROM 10,787' TO 10,987',					
	Circulating for temperature at 10,977';Pull off bottom to 10, 923' Make up FMI tool with Schlumberger Wire line logging tools to 6,000' and then begin pulling tool down;Tool landed at 10,923'. Bottom hole temperature when released was 238° F Calibrate tool;Begin logging from 10,923' to 4,851' at 30'/minute Trip out of hole to surface Lay down logging tool;Tally rental 5" Drill pipe to use running liner Tally and Pick up 75 jts (25 stds) of Drill Pipe While down linking and processing FMI log.;Trip out of hole with made up stands of 5" drill pipe and rack separate from original work string;Pick up orange peel joint of 5" drill pipe and trip in Hole to 1,600'						
	ACTIVITY PLANNED:	PLACE SAND, TRIP IN HOLE DRESS UP SAND PLACEMENT, LAY DOWN 5" DRILL PIPE					
Dec 30 2020	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:	
	PRESENT OPERATIONS:	WASH TO CASING POINT FROM 10,633' TO 10,787'					
	Pick up 15 joints of rental drill pipe for running liner. Trip out of hole with 5 stands rental drill pipe, rack in derrick;Trip in hole with orange peel stinger pipe and regular drill pipe from 1,556' to 5,151' to spot sand;Service rig and top drive;Trip in hole from 5,151' to 8,000';Circulate for temperature;Trip in hole from 8,000' to 10,987'. Tag bottom and pull back 1 stand and a single to 10,864';Spot 50 bbl 60 viscosity slug of sand (1.9 lb/gal, 4,000 lb) at 10,864' Chase with 168 bbl of mud to balance;Pull out 8 stands to 10,128'. Rotate pipe with no pumps to let sand fall;Mix additional 50 bbl 80 viscosity slug of sand;Trip in hole 4 stands to 10,496';Spot 50 bbl, 80 viscosity slug of sand (1.9lb/gal, 4,000 lb) at 10,496' Chase with 160 bbl mud to balance;Trip out of hole from 10,496' to surface Lay down orange peel stinger pipe;Trip in hole to 10,000' with clean out BHA #54;Air out pumps, break down foam with de-foamer;Wash from 10,000' - 10,633' Pump 20 bbl 50 viscosity sweep at 10,633' , circulate out sweep , no sand						
	ACTIVITY PLANNED:	PUMP HIGH VISCOSITY SWEEP, SPOT 5% LUBE IN TANGENT, TRIP OUT TO RUN LINER					
Dec 31 2020	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 8.9	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:	
	PRESENT OPERATIONS:	RUNNING 7" LINER					
	Wash from 10,637' to 10,760' Tag top of sand at 10,760' Wash out sand to 10,787' (casing point);Pump 50 viscosity, 40 bbl sweep to clean excess sand out of hole. Circulate out.;Pump 250 bbl pill with 5% ProOne Lube. Spot in tangent with 190 bbl mud.;Trip out of hole laying down 5" drill pipe from 10,787' to 7,300';Circulate 60 viscosity, 40 bbl sweep to clean sand from curve. Circulate out of hole.;Trip out of hole laying down 5" drill pipe from 7,300' to Surface;Pull wear bushing, break off puller from drill pipe;Rig up casing equipment, change out bales and add bale extensions Install Casing Running, rig up power tongs;Make up shoe track, test floats by pumping through, run 96 jts of 7", 38#, T95, JFE Lion Threads to 4,400'						
	ACTIVITY PLANNED:	RUN LINER, PICK UP HANGER, TRIP IN HOLE , COOL WELL, SET HANGER, CEMENT WELL					
Jan 1 2021	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938	
	RIG SUPERVISOR:	Leroy S, , Paul S, Bob F, Duane W				PBTD:	
	PRESENT OPERATIONS:	RIGGING UP WYOMING CASING					
	Run 126 joints of 7' x 38 ppf, T95 JFELION casing To depth of 5,936'. Rotate casing 10 rpm, torque 6K;Rig down CRT and casing equipment Pick Up/Slack Off 220K;Pick up hanger and run in hole Remove casing tongs off rig floor Make up crossover on top drive;Trip in hole with liner on 5" drill pipe from 5,936' to 9,018' Down weight 220K. Pump through floats. Install rotating head Run liner on drill pipe, picking up and drifting pipe from 9,018' to 10, 770';Circulate to cool hole for cementing;Break connection and drop ball to set hanger slips Pump down, seat ball and pressure up. Slips did not set hydraulically. Worked pipe to set slips at various positions. Attempted to mechanically set slip. Would not set.;Trip out of hole with liner to hanger, laying down 5" drill pipe;Cut and slip drilling line;Rig up Wyoming Casing						
	ACTIVITY PLANNED:	BREAK OFF HANGER ASSEMBLY AND CHECK FOR SETTING BALL. CONTINUE RUNNING CASING TO 10,787'.					

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Jan 2 2021	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, , Paul S, Duane W, Virgil W.			PBTD:	
	PRESENT OPERATIONS:	CIRCULATING FOR TEMPERATURE				
	<p>Pre tour safety meeting Break off bottom sub an liner hanger. Located setting ball in ball catch.;Break off and lay down liner hanger assembly Attempted to drift liner hanger. Did not drift;Rig up and run 7" casing from 5,933' to 10,780' 229 total joints run in well Pick up landing collar and space out;Rig down casing tools Install cement head;Circulate for temperature</p>					
	ACTIVITY PLANNED:	CEMENT 7" CASING, NIPPLE DOWN BOPE, INSTALL WELLHEAD, NIPPLE UP BOPE ON 7" AND TEST				

Jan 3 2021	MD: 10,987	TVD: 8,559	FOOTAGE:	MW: 9.0	LB	PTD: 10,938
	RIG SUPERVISOR:	Leroy S, Duane W, Virgil W.			PBTD:	
	PRESENT OPERATIONS:	WAITING ON CEMENT. NIPPLE DOWN BOP STACK				
	<p>Circulate hole for temperature Hold safety meeting with Resource Cementing, Frontier Drilling and FORGE DSM's.;Cement 7" casing; Test lines to 5,000 psi Pump 100 bbl fresh water spacer at 5-7 bbl/min, 20 bbl RC Mud Clean, 30 bbl of 10.5 ppg Sepiolite spacer, 5 bbl fresh water spacer. Mix and pump 433 bbls of 12.97 ppg RC ThermoLite-HT cement at 7-8 bbl/min, shut down and drop top plug. Displace with 364 bbl of mud at 3 - 8 bbl/min. Slow rate to 1-2 bbl/min to bump plug. Hold pressure for 5 minutes. Bleed off pressure, floats held. Returned 15 bbl of cement to surface. Reciprocated pipe throughout job. Rig down Resource Cementing;Wait on cement. 4 bolt BOP stack</p>					
	ACTIVITY PLANNED:	WAIT ON CEMENT, NIPPLE DOWN BOPE, INSTALL WELLHEAD, NIPPLE UP 10K COMPLETION STACK				