U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

11/30/2023

Well Name: FORGE FED COM	**Well Location:** T25S / R35E / SEC 35 / SWSW / 32.079718 / -103.342725	**County or Parish/State:** LEA / NM
Well Number: 601H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM045706	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number: 300255141100X1	**Well Status:** Drilling Well	**Operator:** FRANKLIN MOUNTAIN ENERGY LLC

Notice of Intent

Sundry ID: 2763748

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/30/2023

Time Sundry Submitted: 09:07

Date proposed operation will begin: 11/11/2023

Procedure Description: Franklin Mountain Energy, LLC (FME), Operator of the above captioned well, respectfully requests approval to utilize the attached 3-string casing design while drilling the Forge Fed Com 601H well.

NOI Attachments

Procedure Description

Forge_Fed_Com_601H_14PP_20231130090702.pdf

Conditions of Approval

Specialist Review

Forge_Fed_Com_601H_Sundry_ID_2763748_20231130104722.pdf

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Well Number: 601H

Type of Well: OIL WELL

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Unit or CA Number:

US Well Number: 300255141100X1

Well Status: Drilling Well

Operator: FRANKLIN MOUNTAIN ENERGY LLC

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: RACHAEL OVERBEY

Signed on: NOV 30, 2023 09:07 AM

Name: FRANKLIN MOUNTAIN ENERGY LLC

Title: Director – Operations Planning and Regulatory

Street Address: 44 COOK STREET, SUITE 1000

City: Denver **State:** CO

Phone: (720) 414-7868

Email address: roverbey@fmellc.com

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: LONG VO

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5759885402

BLM POC Email Address: LVO@BLM.GOV

Disposition: Approved

Disposition Date: 11/30/2023

Signature: Long Vo

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Forge Fed Com 601H

1. **Geologic name of surface location:** Permian

2. **Estimated tops of important geological markers:**

Formations	PROG SS	PROG TVD	Picked TVD	delta	Potential/Issues
Cenozoic Alluvium (surface)	3,120'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,281'	869'			Carbonates
Salado	1,413'	1,737'			Salt, Carbonate & Clastics
Base Salt	-368'	3,518'			Shaley Carbonate & Shale
Lamar	-1,760'	4,910'			Carbonate & Clastics
Bell Canyon	-2,052'	5,202'			Sandstone - oil/gas/water
Cherry Canyon	-2,990'	6,140'			Sandstone - oil/gas/water
Brushy Canyon	-4,436'	7,586'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,766'	8,916'			Shale/Carbonates - oil/gas
Avalon	-5,807'	8,957'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-7,061'	10,211'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-7,155'	10,305'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,501'	10,651'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-8,075'	11,225'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,738'	11,888'			Sandstone - oil/gas/water
HZ Target at Landing	-8,947'	12,097'			Overpressure shale/sand- Oil/Gas
Wolfcamp	-9,055'	12,205'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-9,115'	12,265'			Overpressure Shale - Oil/Gas
Wolfcamp B	-9,354'	12,504'			Overpressure Shale - Oil/Gas

3. **Estimated depth of anticipated fresh water, oil or gas:**

Upper Permian Sands	0-400’	Fresh Water
Delaware Sands	5,202’	Oil
Avalon	8,957’	Oil
Bone Spring	10,211’	Oil
Wolfcamp	12,205’	Oil

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface freshwater sands will be protected by setting 13-3/8" casing at 1,128’ and circulating cement back to surface.

4. **Casing Program:**

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1,128	1.24	1.93	5.28	5.63
Intermediate 7 5/8"	29.7	P-110	9470	5340	940	BTC 960	11,400	1.27	1.00	2.14	2.19
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606	22,031	1.32	1.41	1.20	1.00
							12,097				1.60

All casing strings will be run new. Safety factors calculated assuming the well is vertical.

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7-5/8" casing will be set at 11,400' MD / 11,390' TVD at 0° inclination. Stress calculations on 5-1/2" casing performed assuming 22,031' depth. Actual max vertical depth is 12,097'.

Cementing Program:

String Type	Hole Size	Casing Size	Casing Setting Depth	Lead Sacks	Lead Type of cmt	Lead Yield ft3/sk	Lead Water gal/sk	Lead TOC ft	Tail Sacks	Tail Type of cmt	Tail Yield ft3/sk	Tail Water gal/sk	Tail TOC	Excess
Surf	17.5	Shoe Track	1,128	658	Extenda Cem, 13.5 ppg Class C, 3lb/sk Kol-Seal 0.125pps Poly-E-Flake	1.747	9.06	0	335	Tail, 14.8 ppg, Class C, 1% CaCl2, 0.125pps Celo-Flake	1.349	6.51	828	100%
Int1	9.88	Shoe Track	11,400	606	Lead, Lite Fill, 9.5 ppg, Class C 3 lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25 Integraseal	5.1	6.9	0	71	Tail, IntegraCem 14.8 ppg, Class H .15% ASA 301; P50H; 0.5% FL-66; 0.25% R-21	1.33	6.3	9,972	30%
Prod	6.75	Shoe Track	22,031	44	Lead, 11.5 ppg, Class HSLD 82; .58#/sk Salt; .15% C-45 Econolite; 4% STE; .03% Citric Acid; .26% CSA-1000	2.4	13.98	10,400	739	Tail, 13.5 ppg, Class HSLD 82H; 0.4% CFL-2; 4% STE; 0.07% CSA-1000; .29#/sk Salt; .29#/sk Gypseal	1.43	6.87	11,534	20%

Cementing Stage tool can be placed in the 1st Intermediate string as a contingency to ensure required TOC to surface.

5. Minimum Specifications for Pressure Control:

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated, and the ram-type will be equipped with blind rams on bottom and 4 ½" x 7" variable pipe rams on top.

All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5,000/250 psig and the annular preventer to 5,000/250 psig. The surface casing will be tested for 30 minutes to 0.22 psi/ft or 1500 psi, whichever is greater, but not to exceed 70% of Internal yield.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 10,000/250 psig and the annular preventer to 5,000/250 psig. The intermediate casing will be for 30 minutes to 0.22 psi/ft or 1500 psi, whichever is greater, but not to exceed 70% of Internal yield prior to drill-out.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

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6. Types and characteristics of the proposed mud system:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.
The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,128'	Fresh - Gel	8.6-8.8	28-34	N/c
1,128' –11,400'	Brine	8.8-10.2	28-34	N/c
11,400' –22,031' Lateral	Oil Base	10.0-12.0	58-68	3 – 6

The highest mud weight needed to balance formation is expected to be 10-12 ppg. In order to maintain hole stability, mud weights up to 12 ppg may be utilized.
An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.
Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary well control and monitoring equipment:

(A) A kelly cock will be kept in the drill string at all times.
(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
(C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.
(D) A wear bushing will be installed in the wellhead prior to drilling out of the surface casing.

8. Logging, testing and coring program:

GR–CCL-CNL will be run in cased hole during completions phase of operations.
Open-hole logs are not planned for this well.

9. Abnormal conditions, pressures, temperatures and potential hazards:

The estimated bottom-hole temperature at 12,097' TVD (deepest point of the well) is 175°F with an estimated maximum bottom-hole pressure (BHP) at the same point of 7,548 psig (based on 12 ppg MW).
Hydrogen sulfide may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

A. All personnel shall receive proper awareness H2S training.
B. Briefing Area: Two perpendicular areas will be designated by signs and readily accessible.
C. Required Emergency Equipment
    a. Well Control Equipment
        i. Flare line 100' from wellhead to be ignited by auto ignition sparking system.
        ii. Choke manifold with a remotely operated hydraulic choke.
        iii. Mud/gas separator.
    b. Protective equipment for essential personnel
        i. Breathing Apparatus
            1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.
            2. Work / Escape packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.

3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

ii. Auxiliary Rescue Equipment
1. Stretcher
2. Two OSHA full body harnesses
3. 100 feet of 5/8 inches OSHA approved rope
4. 1-20# class ABC fire extinguisher

c. H2S Detection and Monitoring Equipment
i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
1. Rig Floor
2. Below Rig Floor / Near BOPs
3. End of flow line or where well bore fluid is being discharged (near shakers)
ii. If H2S is encountered, measured values and formations will be provided to the BLM.

d. Visual Warning Systems
i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
iii. Two windsocks will be placed in strategic locations, visible from all angles.

e. Mud Program
i. The Mud program will be designed to minimize the volume of H2S circulated to surface.
ii. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

f. Metallurgy
i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service at the anticipated operating pressures to prevent sour sulfide stress cracking.

g. Communication
i. Communication will be via cell phones and walkie talkies on location.

Franklin Mountain Energy has conducted a review of offset operated wells to determine if an H2S contingency plan is required for the proposed well. Based on concentrations of offset wells, proximity to main roads, and distance to populated areas, the radius of exposure created by a potential release was determined to be minimal and low enough to not necessitate an H2S contingency plan. This will be reevaluated during wellbore construction if H2S is observed and after the well is on production.

11. Anticipated starting date and duration of operations:

The drilling operations on the well should be finished in approximately one month. However, in order to minimize disturbance in the area and to improve efficiency Franklin Mountain is planning to drill all the wells on the pad prior to commence completion operations. To even further reduce the time heavy machinery is used the “batch drilling” method may be used. The drilling rig with walking/skidding capabilities will be used.

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12. Disposal/environmental concerns:

(A) Drilled cuttings will be hauled to and disposed of in a state-certified disposal site.
(B) Non-hazardous waste mud/cement from the drilling process will be also be hauled to and disposed of in a state-certified disposal site.
(C) Garbage will be hauled to the Pecos City Landfill.
(D) Sewage (grey water) will be hauled to the Carlsbad City Landfill.

13. Wellhead:

A multi-bowl wellhead system will be utilized.
After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5,000 psi.

After running the 1st intermediate casing, and before drilling out, the wellhead, BOP, and related equipment will be tested to 10,000/250 psig.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Cactus Multi-Bowl WH system has been sent to the BLM office in Carlsbad.

The wellhead will be installed by a third-party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing strings. After installation of the first intermediate string the pack-off and lower flanges will be pressure tested to 5,000 psi. After installation of the second intermediate string, the pack-off and upper flange will be pressure tested to 10,000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1,500 psi, whichever is greater.

14. Additional variance requests

A. Casing.
1. Variance is requested to waive/reduce the centralizer requirements for the 5-1/2" casing due to the tight clearance with 6-3/4" hole and 5-1/2" casing due to tight clearances.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 297108

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street, Suite 1000 Denver, CO 80206	OGRID: 373910
	Action Number: 297108
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	2/1/2024