

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

Well Name: MASTER FED COM	Well Location: T24S / R35E / SEC 14 / NENW / 32.224066 / -103.33874	County or Parish/State: LEA / NM
Well Number: 704H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM138888	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002548591	Well Status: Drilling Well	Operator: FRANKLIN MOUNTAIN ENERGY LLC

Notice of Intent

Sundry ID: 2745884

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 08/12/2023

Time Sundry Submitted: 10:15

Date proposed operation will begin: 08/01/2023

Procedure Description: Franklin Mountain Energy, LLC (FME), Operator, respectfully requests approval to make the following changes to the proposed drilling plan for the above referenced well. BHL Change: FME requests approval to change the BHL for this well to 150' FSL 2152' FEL Sec 23 24S 35E. SHL remains the same. Please see attached Directional Plan, revised 14-point plan, geo prog and C-102.

NOI Attachments

Procedure Description

- Master_Fed_Com_704H_Plan_2_20230812101453.pdf
- Master_Fed_Com_704H_Updated_14PP_13_20230812101453.pdf
- C_102_Master_Fed_Com_704H_2023_Extend_20230812101433.pdf
- Master_Fed_Com_704H_GEOPROG_prelim_V2_20230812101433.pdf

Well Name: MASTER FED COM

Well Location: T24S / R35E / SEC 14 / NENW / 32.224066 / -103.33874

County or Parish/State: LEA / NM

Well Number: 704H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM138888

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002548591

Well Status: Drilling Well

Operator: FRANKLIN MOUNTAIN ENERGY LLC

Conditions of Approval

Additional

Master_Fed_Com_704H_Dr_COA_Sundry_ID_2677743_20230823064457.pdf

14_24_35_C_Sundry_ID_2745884_Master_Fed_Com_704H_Lea_NM138888_Franklin_Mountain_Energy_LLC_13_22_b_9_03_2020_LV_20230823064457.pdf

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: AUG 12, 2023 10:15 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: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 08/25/2023

Signature: Chris Walls

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 Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

Table with 3 columns: 1 API Number (30-025-48591), 2 Pool Code (98187), 3 Pool Name (WC-025 G-09 S253502D; UPR WOLFCAMP), 4 Property Code (330334), 5 Property Name (MASTER FED COM), 6 Well Number (704H), 7 OGRID No. (373910), 8 Operator Name (FRANKLIN MOUNTAIN ENERGY LLC), 9 Elevation (3411.3')

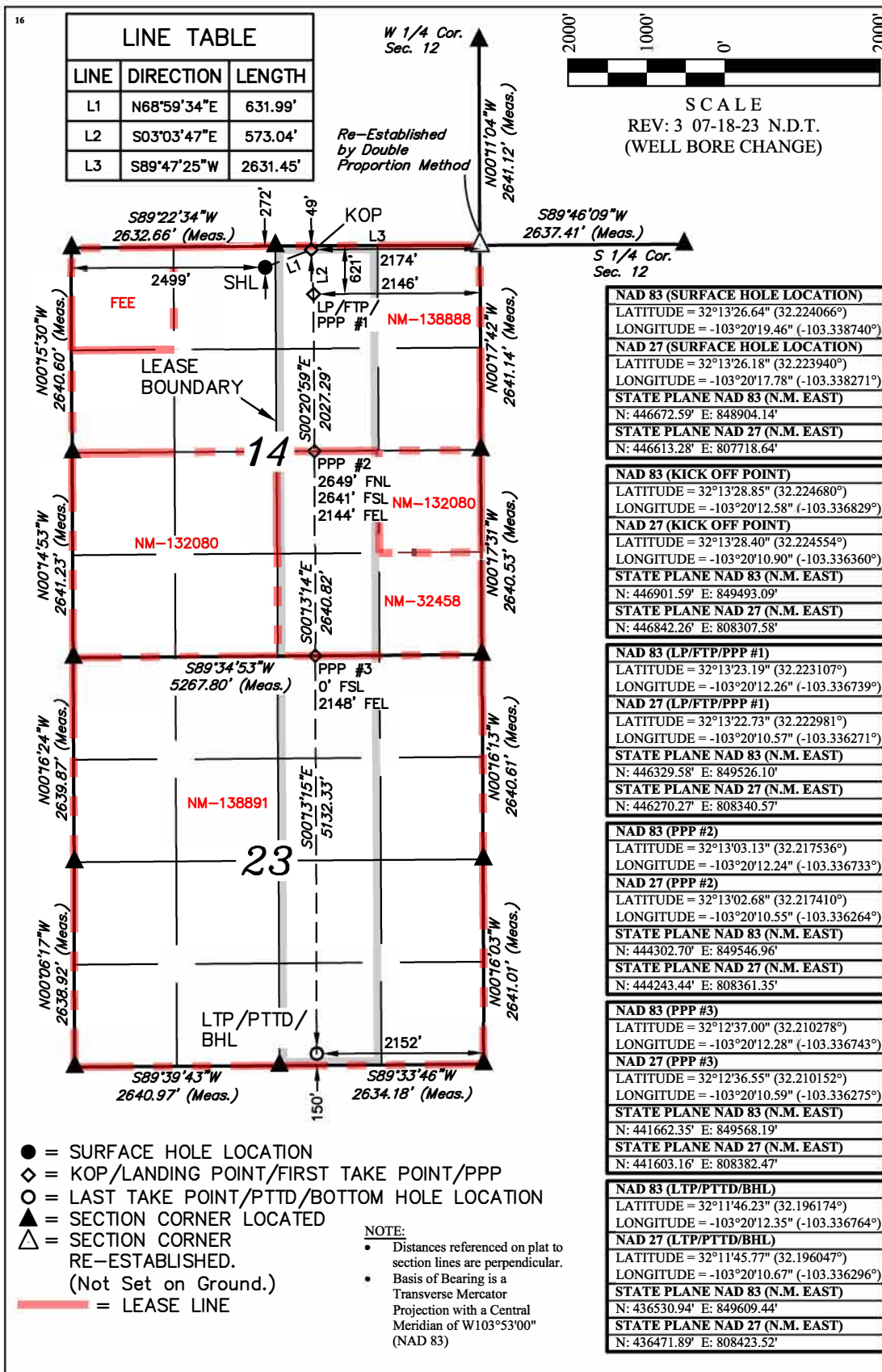
10 Surface Location

Table with 10 columns: UL or lot no. (C), Section (14), Township (24S), Range (35E), Lot Idn, Feet from the (272), North/South line (NORTH), Feet from the (2499), East/West line (WEST), County (LEA)

11 Bottom Hole Location If Different From Surface

Table with 10 columns: UL or lot no. (O), Section (23), Township (24S), Range (35E), Lot Idn, Feet from the (150), North/South line (SOUTH), Feet from the (2152), East/West line (EAST), County (LEA). Includes 12 Dedicated Acres (320), 13 Joint or Infill, 14 Consolidation Code, 15 Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: Rachael Overbey
Date: 7/20/2023

Printed Name: Rachael Overbey
E-mail Address: roverbey@fmc.com

Table of coordinates for various points: NAD 83 (SURFACE HOLE LOCATION), NAD 27 (SURFACE HOLE LOCATION), NAD 83 (KICK OFF POINT), NAD 27 (KICK OFF POINT), NAD 83 (LP/FTP/PPP #1), NAD 27 (LP/FTP/PPP #1), NAD 83 (PPP #2), NAD 27 (PPP #2), NAD 83 (PPP #3), NAD 27 (PPP #3), NAD 83 (LTP/PTTD/BHL), NAD 27 (LTP/PTTD/BHL).

18 SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

February 07, 2020
Date of Survey
Signature and Seal of Professional Surveyor:



Certificate Number:

Geologic Prognosis



Well Name	Master Fed Com 704H
Operator	Franklin Mountain Energy, LLC
Project Area	Mirror Unit
Well Type	10,000' Upper Wolfcamp Lateral
API	30025485910000
Permit Number	
Rig	

State	NM	County	Lea						
SHL	Township	24S/35E	Section	14	2,499'	FWL	272'	FNL	
BHL	Township	24S/35E	Section	23	2,152'	FEL	150'	FSL	
Surface Latitude	NAD 83		32.224066						
Surface Longitude	NAD 83		103.33874						
Bottom Hole Latitude	NAD 83		32.196174						
Bottom Hole Longitude	NAD 83		103.336764						
Ground Level	3,410'	Rig KB	30'	KB	3,440'				

Formations	PROG SS	PROG TVD	Picked TVD	delta	Potential/Issues
Cenozoic Alluvium (surface)	3,410'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,035'	1,405'			Carbonates
Salado	1,597'	1,843'			Salt, Carbonate & Clastics
Base Salt	-262'	3,702'			Shaley Carbonate & Shale
Lamar	-1,942'	5,382'			Carbonate & Clastics
Bell Canyon	-2,058'	5,498'			Sandstone - oil/gas/water
Cherry Canyon	-2,707'	6,147'			Sandstone - oil/gas/water
Brushy Canyon	-4,038'	7,478'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,383'	8,823'			Shale/Carbonates - oil/gas
Avalon	-5,428'	8,868'			Shale/Carbonates - oil/gas
Chert Zone	-5,586'	9,026'			Carbonate/chert
First Bone Spring Sand	-6,475'	9,915'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,563'	10,003'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,085'	10,525'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,655'	11,095'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,146'	11,586'			Sandstone - oil/gas/water
Wolfcamp	-8,480'	11,920'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,514'	11,954'			Overpressure Shale - Oil/Gas
HZ Target	-8,611'	12,051'			Overpressure shale/sand- Oil/Gas
Wolfcamp B	-8,651'	12,091'			Overpressure Shale - Oil/Gas

Target interval is expected to have an average apparent dip of 0.0 degrees down along the lateral based on the Wolfcamp B structure

Target window tolerance is set at +/- 10'

Target Line: 12,051' KBTVD @ 0' VS w/ 90.0° inc.
Offset Log: Elevate 702H_PH (3002548590000)
Updated: 6/26/2023

FME Geologist		Ellen Wilcox		ewilcox@fmellc.com	
		Office		Cell	585.880.1737
FME Engineer					
Electric Logs		From		To	
Open-Hole					
MWD/LWD	MWD GR		Int. 1 Csg. Point	TD	
Mud Log:					
Start logging at drill out of surface casing					
Sampling:	10' samples in vertical and through curve, 30' samples in lateral				
Samples:	1 set dry samples at footage frequency noted above				
Mud Gas:	Continuous				
Daily Contact:	Email distribution of mud log/daily report at 7:30am and 4:30 pm CST				
Daily Mud Log Email Distribution List					
Final Mud Log Distribution					
	Ben Kessel (bkessel@fmellc.com)			email	
	Jenna Tavares (jtavares@fmellc.com)			email	
Cuttings/Samples Shipment Information					

Franklin Mountain Energy

Lea Co., NM (NAD-83)
Mirror MH Pad 1 & 2
Master Fed Com 704H
API 30025485910000
OH

Plan 2

Standard Planning Report

03 July, 2023





Project: Lea Co., NM (NAD-83)
 Site: Mirror MH Pad 1 & 2
 Well: Master Fed Com 704H
 Wellbore: OH
 Design: Plan 2
 Lat: 32.224066
 Long: -103.338740
 GL: 3411.30
 KB: 30' KB @ 3441.30usft



WELL DETAILS: Master Fed Com 704H

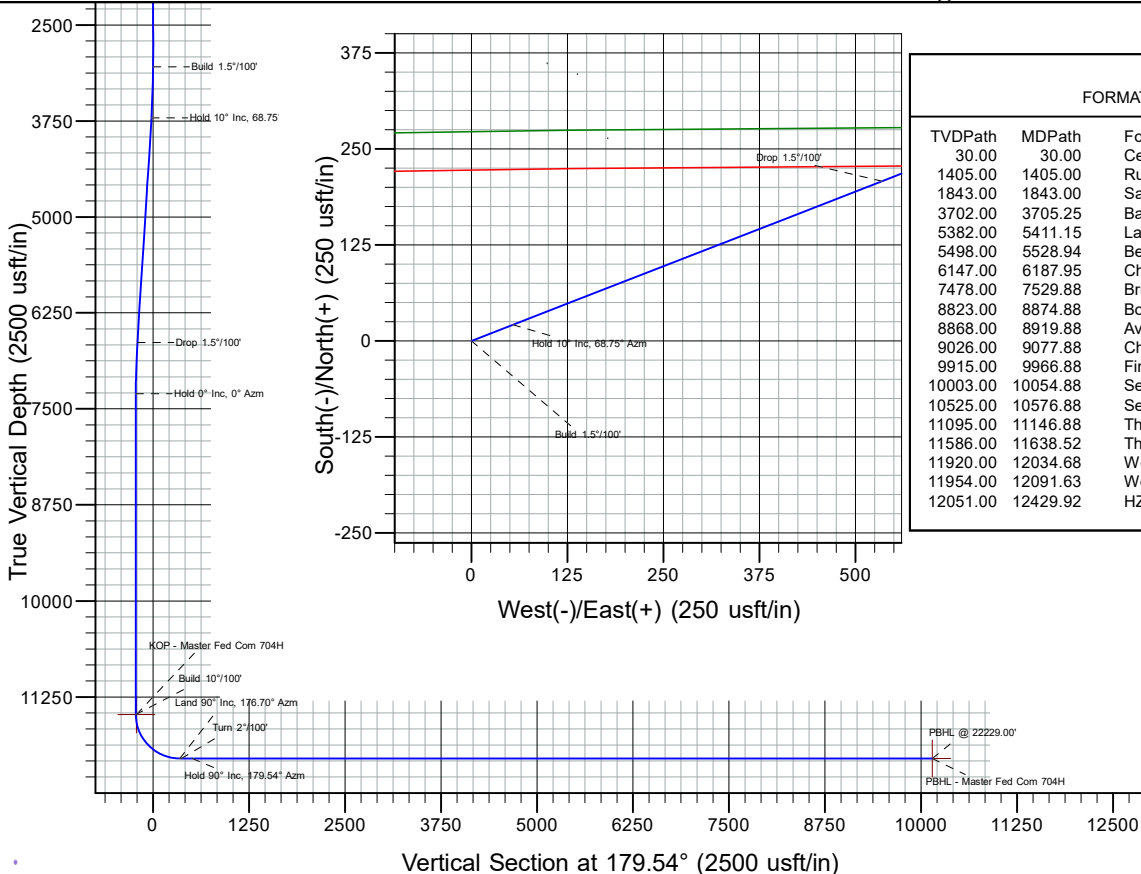
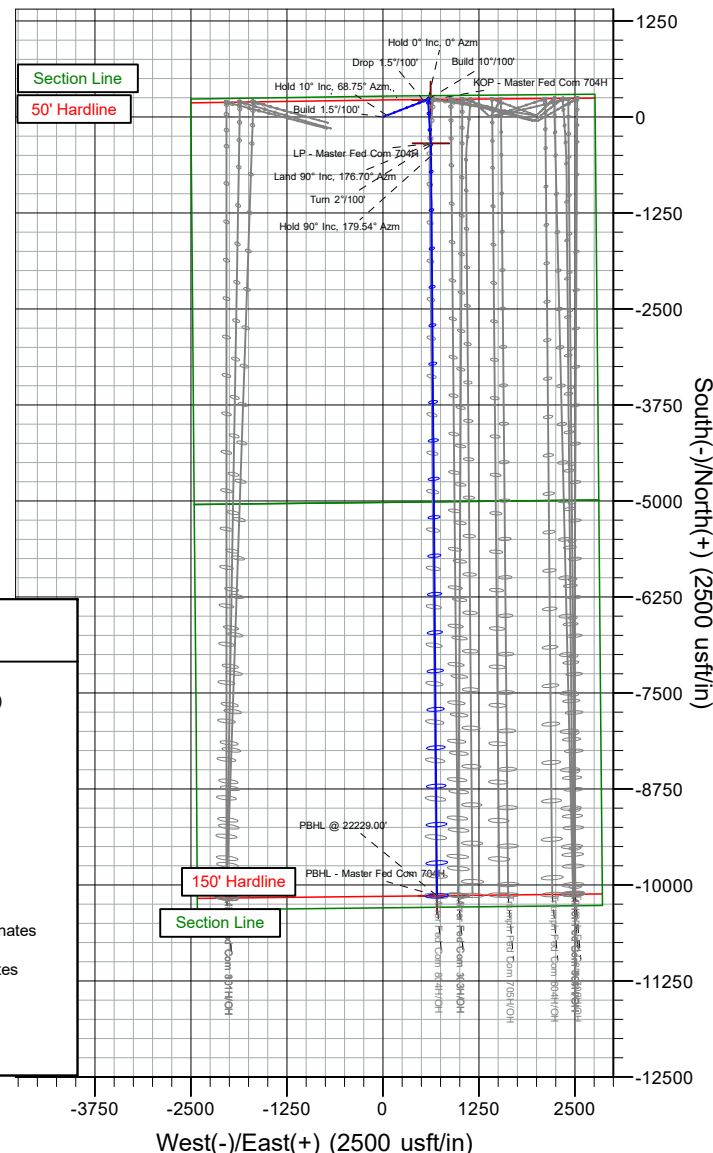
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	446672.59	848904.14	32.224066	-103.338740

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
KOP - Master Fed Com 704H	11478.00	222.00	622.00	446894.59	849526.14	Point
PBHL - Master Fed Com 704H	12051.00	-10141.65	705.30	436530.94	849609.44	Point
LP - Master Fed Com 704H	112051.00	-343.59	626.55	446329.00	849530.69	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3047.00	0.00	0.00	3047.00	0.00	0.00	0.00	0.00	0.00	Build 1.5°/100'
3713.46	10.00	68.75	3710.08	21.02	54.05	1.50	68.75	-20.58	Hold 10° Inc, 68.75° Azm
6685.42	10.00	68.75	6636.92	207.98	534.90	0.00	0.00	-203.68	Drop 1.5°/100'
7351.88	0.00	0.00	7300.00	229.00	588.95	1.50	180.00	-224.26	Hold 0° Inc, 0° Azm
11529.92	0.00	0.00	11478.04	229.00	588.95	0.00	0.00	-224.26	Build 10°/100'
12429.92	90.00	176.70	12051.00	-343.01	621.96	10.00	176.70	347.99	Land 90° Inc, 176.70° Azm
12450.89	90.00	176.70	12051.00	-363.94	623.17	0.00	0.00	368.93	Turn 2°/100'
12593.01	90.00	179.54	12051.00	-505.97	627.84	2.00	90.00	510.99	Hold 90° Inc, 179.54° Azm
22229.00	90.00	179.54	12051.00	-10141.65	705.30	0.00	0.00	10146.99	PBHL @ 22229.00'



FORMATION TOPS

TVDPath	MDPath	Formation
30.00	30.00	Cenozoic Alluvium (surface)
1405.00	1405.00	Rustler
1843.00	1843.00	Salado
3702.00	3705.25	Base Salt
5382.00	5411.15	Lamar
5498.00	5528.94	Bell Canyon
6147.00	6187.95	Cherry Canyon
7478.00	7529.88	Brushy Canyon
8823.00	8874.88	Bone Spring Lime
8868.00	8919.88	Avalon
9026.00	9077.88	Chert Zone
9915.00	9966.88	First Bone Spring Sand
10003.00	10054.88	Second Bone Spring Carbonates
10525.00	10576.88	Second Bone Spring Sand
11095.00	11146.88	Third Bone Spring Carbonates
11586.00	11638.52	Third Bone Spring Sand
11920.00	12034.68	Wolfcamp
11954.00	12091.63	Wolfcamp A
12051.00	12429.92	HZ Target

Azimuths to Grid North
 True North: -0.53°
 Magnetic North: 5.76°

Magnetic Field
 Strength: 47451.2nT
 Dip Angle: 59.72°
 Date: 7/2/2023
 Model: HRGM

Released to Imaging: 9/8/2023 7:35:38 AM

Received by OCD: 8/29/2023 7:58:03 AM

Page 7 of 22

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Project	Lea Co., NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Mirror MH Pad 1 & 2				
Site Position:		Northing:	446,622.75 usft	Latitude:	32.223879
From:	Map	Easting:	850,849.76 usft	Longitude:	-103.332451
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Master Fed Com 704H					
Well Position	+N/-S	0.00 usft	Northing:	446,672.59 usft	Latitude:	32.224066
	+E/-W	0.00 usft	Easting:	848,904.14 usft	Longitude:	-103.338740
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,411.30 usft
Grid Convergence:	0.53 °					

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HRGM	7/2/2023	6.29	59.72	47,451.22429799

Design	Plan 2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.54

Plan Survey Tool Program	Date	7/3/2023		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,228.91 Plan 2 (OH)	MWD+HDGM	
			OWSG MWD + HRGM	

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,047.00	0.00	0.00	3,047.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,713.46	10.00	68.75	3,710.08	21.02	54.05	1.50	1.50	0.00	68.75	
6,685.42	10.00	68.75	6,636.92	207.98	534.90	0.00	0.00	0.00	0.00	
7,351.88	0.00	0.00	7,300.00	229.00	588.95	1.50	-1.50	0.00	180.00	
11,529.92	0.00	0.00	11,478.04	229.00	588.95	0.00	0.00	0.00	0.00	
12,429.92	90.00	176.70	12,051.00	-343.01	621.96	10.00	10.00	0.00	176.70	
12,450.89	90.00	176.70	12,051.00	-363.94	623.17	0.00	0.00	0.00	0.00	
12,593.01	90.00	179.54	12,051.00	-505.97	627.84	2.00	0.00	2.00	90.00	
22,229.00	90.00	179.54	12,051.00	-10,141.65	705.30	0.00	0.00	0.00	0.00	

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cenozoic Alluvium (surface)										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,405.00	0.00	0.00	1,405.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,843.00	0.00	0.00	1,843.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado										
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,047.00	0.00	0.00	3,047.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Build 1.5°/100'										
3,100.00	0.80	68.75	3,100.00	0.13	0.34	-0.13	1.50	1.50	0.00	0.00
3,200.00	2.30	68.75	3,199.96	1.11	2.86	-1.09	1.50	1.50	0.00	0.00
3,300.00	3.80	68.75	3,299.82	3.04	7.81	-2.97	1.50	1.50	0.00	0.00
3,400.00	5.30	68.75	3,399.50	5.91	15.19	-5.78	1.50	1.50	0.00	0.00
3,500.00	6.80	68.75	3,498.94	9.72	25.01	-9.52	1.50	1.50	0.00	0.00
3,600.00	8.30	68.75	3,598.07	14.48	37.24	-14.18	1.50	1.50	0.00	0.00
3,700.00	9.80	68.75	3,696.82	20.18	51.90	-19.76	1.50	1.50	0.00	0.00
3,705.25	9.87	68.75	3,702.00	20.50	52.73	-20.08	1.50	1.50	0.00	0.00
Base Salt										
3,713.46	10.00	68.75	3,710.08	21.02	54.05	-20.58	1.50	1.50	0.00	0.00
Hold 10° Inc, 68.75° Azm										
3,800.00	10.00	68.75	3,795.31	26.46	68.05	-25.91	0.00	0.00	0.00	0.00
3,900.00	10.00	68.75	3,893.79	32.75	84.23	-32.07	0.00	0.00	0.00	0.00
4,000.00	10.00	68.75	3,992.27	39.04	100.41	-38.24	0.00	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,100.00	10.00	68.75	4,090.75	45.33	116.59	-44.40	0.00	0.00	0.00	
4,200.00	10.00	68.75	4,189.24	51.63	132.77	-50.56	0.00	0.00	0.00	
4,300.00	10.00	68.75	4,287.72	57.92	148.95	-56.72	0.00	0.00	0.00	
4,400.00	10.00	68.75	4,386.20	64.21	165.13	-62.88	0.00	0.00	0.00	
4,500.00	10.00	68.75	4,484.68	70.50	181.31	-69.04	0.00	0.00	0.00	
4,600.00	10.00	68.75	4,583.16	76.79	197.49	-75.20	0.00	0.00	0.00	
4,700.00	10.00	68.75	4,681.65	83.08	213.67	-81.36	0.00	0.00	0.00	
4,800.00	10.00	68.75	4,780.13	89.37	229.85	-87.52	0.00	0.00	0.00	
4,900.00	10.00	68.75	4,878.61	95.66	246.03	-93.68	0.00	0.00	0.00	
5,000.00	10.00	68.75	4,977.09	101.95	262.21	-99.84	0.00	0.00	0.00	
5,100.00	10.00	68.75	5,075.57	108.24	278.39	-106.01	0.00	0.00	0.00	
5,200.00	10.00	68.75	5,174.05	114.54	294.57	-112.17	0.00	0.00	0.00	
5,300.00	10.00	68.75	5,272.54	120.83	310.75	-118.33	0.00	0.00	0.00	
5,400.00	10.00	68.75	5,371.02	127.12	326.92	-124.49	0.00	0.00	0.00	
5,411.15	10.00	68.75	5,382.00	127.82	328.73	-125.18	0.00	0.00	0.00	
Lamar										
5,500.00	10.00	68.75	5,469.50	133.41	343.10	-130.65	0.00	0.00	0.00	
5,528.94	10.00	68.75	5,498.00	135.23	347.79	-132.43	0.00	0.00	0.00	
Bell Canyon										
5,600.00	10.00	68.75	5,567.98	139.70	359.28	-136.81	0.00	0.00	0.00	
5,700.00	10.00	68.75	5,666.46	145.99	375.46	-142.97	0.00	0.00	0.00	
5,800.00	10.00	68.75	5,764.94	152.28	391.64	-149.13	0.00	0.00	0.00	
5,900.00	10.00	68.75	5,863.43	158.57	407.82	-155.29	0.00	0.00	0.00	
6,000.00	10.00	68.75	5,961.91	164.86	424.00	-161.45	0.00	0.00	0.00	
6,100.00	10.00	68.75	6,060.39	171.15	440.18	-167.62	0.00	0.00	0.00	
6,187.95	10.00	68.75	6,147.00	176.69	454.41	-173.03	0.00	0.00	0.00	
Cherry Canyon										
6,200.00	10.00	68.75	6,158.87	177.45	456.36	-173.78	0.00	0.00	0.00	
6,300.00	10.00	68.75	6,257.35	183.74	472.54	-179.94	0.00	0.00	0.00	
6,400.00	10.00	68.75	6,355.83	190.03	488.72	-186.10	0.00	0.00	0.00	
6,500.00	10.00	68.75	6,454.32	196.32	504.90	-192.26	0.00	0.00	0.00	
6,600.00	10.00	68.75	6,552.80	202.61	521.08	-198.42	0.00	0.00	0.00	
6,685.42	10.00	68.75	6,636.92	207.98	534.90	-203.68	0.00	0.00	0.00	
Drop 1.5°/100'										
6,700.00	9.78	68.75	6,651.28	208.89	537.23	-204.57	1.50	-1.50	0.00	
6,800.00	8.28	68.75	6,750.04	214.58	551.86	-210.14	1.50	-1.50	0.00	
6,900.00	6.78	68.75	6,849.18	219.32	564.07	-214.79	1.50	-1.50	0.00	
7,000.00	5.28	68.75	6,948.62	223.13	573.85	-218.52	1.50	-1.50	0.00	
7,100.00	3.78	68.75	7,048.31	225.99	581.21	-221.32	1.50	-1.50	0.00	
7,200.00	2.28	68.75	7,148.16	227.91	586.14	-223.19	1.50	-1.50	0.00	
7,300.00	0.78	68.75	7,248.13	228.87	588.62	-224.14	1.50	-1.50	0.00	
7,351.88	0.00	0.00	7,300.00	229.00	588.95	-224.26	1.50	-1.50	0.00	
Hold 0° Inc, 0° Azm										
7,400.00	0.00	0.00	7,348.12	229.00	588.95	-224.26	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,448.12	229.00	588.95	-224.26	0.00	0.00	0.00	
7,529.88	0.00	0.00	7,478.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Brushy Canyon										
7,600.00	0.00	0.00	7,548.12	229.00	588.95	-224.26	0.00	0.00	0.00	
7,700.00	0.00	0.00	7,648.12	229.00	588.95	-224.26	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,748.12	229.00	588.95	-224.26	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,848.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,948.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,048.12	229.00	588.95	-224.26	0.00	0.00	0.00	

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,200.00	0.00	0.00	8,148.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,248.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,348.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,448.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,548.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,648.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,748.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,874.88	0.00	0.00	8,823.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Bone Spring Lime										
8,900.00	0.00	0.00	8,848.12	229.00	588.95	-224.26	0.00	0.00	0.00	
8,919.88	0.00	0.00	8,868.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Avalon										
9,000.00	0.00	0.00	8,948.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,077.88	0.00	0.00	9,026.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Chert Zone										
9,100.00	0.00	0.00	9,048.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,148.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,248.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,348.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,448.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,548.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,648.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,748.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,848.12	229.00	588.95	-224.26	0.00	0.00	0.00	
9,966.88	0.00	0.00	9,915.00	229.00	588.95	-224.26	0.00	0.00	0.00	
First Bone Spring Sand										
10,000.00	0.00	0.00	9,948.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,054.88	0.00	0.00	10,003.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Second Bone Spring Carbonates										
10,100.00	0.00	0.00	10,048.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,148.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,248.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,348.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,448.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,576.88	0.00	0.00	10,525.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Second Bone Spring Sand										
10,600.00	0.00	0.00	10,548.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,648.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,748.12	229.00	588.95	-224.26	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,848.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,948.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,100.00	0.00	0.00	11,048.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,146.88	0.00	0.00	11,095.00	229.00	588.95	-224.26	0.00	0.00	0.00	
Third Bone Spring Carbonates										
11,200.00	0.00	0.00	11,148.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,248.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,348.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,448.12	229.00	588.95	-224.26	0.00	0.00	0.00	
11,529.92	0.00	0.00	11,478.04	229.00	588.95	-224.26	0.00	0.00	0.00	
Build 10°/100'										
11,600.00	7.01	176.70	11,547.95	224.73	589.20	-219.99	10.00	10.00	0.00	
11,638.52	10.86	176.70	11,586.00	218.75	589.54	-214.01	10.00	10.00	0.00	
Third Bone Spring Sand										

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,700.00	17.01	176.70	11,645.64	203.98	590.39	-199.24	10.00	10.00	0.00
11,800.00	27.01	176.70	11,738.23	166.62	592.55	-161.86	10.00	10.00	0.00
11,900.00	37.01	176.70	11,822.92	113.77	595.60	-108.98	10.00	10.00	0.00
12,000.00	47.01	176.70	11,897.13	47.04	599.45	-42.23	10.00	10.00	0.00
12,034.68	50.48	176.70	11,920.00	21.02	600.95	-16.19	10.00	10.00	0.00
Wolfcamp									
12,091.63	56.17	176.70	11,954.00	-24.56	603.58	29.41	10.00	10.00	0.00
Wolfcamp A									
12,100.00	57.01	176.70	11,958.61	-31.54	603.99	36.39	10.00	10.00	0.00
12,200.00	67.01	176.70	12,005.49	-119.58	609.07	124.47	10.00	10.00	0.00
12,300.00	77.01	176.70	12,036.33	-214.41	614.54	219.34	10.00	10.00	0.00
12,400.00	87.01	176.70	12,050.22	-313.15	620.24	318.12	10.00	10.00	0.00
12,429.92	90.00	176.70	12,051.00	-343.01	621.96	347.99	10.00	10.00	0.00
Land 90° Inc, 176.70° Azm - HZ Target									
12,450.89	90.00	176.70	12,051.00	-363.94	623.17	368.93	0.00	0.00	0.00
Turn 2°/100'									
12,500.00	90.00	177.68	12,051.00	-412.99	625.58	418.00	2.00	0.00	2.00
12,593.01	90.00	179.54	12,051.00	-505.97	627.84	511.00	2.00	0.00	2.00
Hold 90° Inc, 179.54° Azm									
12,600.00	90.00	179.54	12,051.00	-512.96	627.89	517.99	0.00	0.00	0.00
12,700.00	90.00	179.54	12,051.00	-612.96	628.70	617.99	0.00	0.00	0.00
12,800.00	90.00	179.54	12,051.00	-712.96	629.50	717.99	0.00	0.00	0.00
12,900.00	90.00	179.54	12,051.00	-812.95	630.30	817.99	0.00	0.00	0.00
13,000.00	90.00	179.54	12,051.00	-912.95	631.11	917.99	0.00	0.00	0.00
13,100.00	90.00	179.54	12,051.00	-1,012.95	631.91	1,017.99	0.00	0.00	0.00
13,200.00	90.00	179.54	12,051.00	-1,112.94	632.72	1,117.99	0.00	0.00	0.00
13,300.00	90.00	179.54	12,051.00	-1,212.94	633.52	1,217.99	0.00	0.00	0.00
13,400.00	90.00	179.54	12,051.00	-1,312.94	634.32	1,317.99	0.00	0.00	0.00
13,500.00	90.00	179.54	12,051.00	-1,412.93	635.13	1,417.99	0.00	0.00	0.00
13,600.00	90.00	179.54	12,051.00	-1,512.93	635.93	1,517.99	0.00	0.00	0.00
13,700.00	90.00	179.54	12,051.00	-1,612.93	636.74	1,617.99	0.00	0.00	0.00
13,800.00	90.00	179.54	12,051.00	-1,712.92	637.54	1,717.99	0.00	0.00	0.00
13,900.00	90.00	179.54	12,051.00	-1,812.92	638.34	1,817.99	0.00	0.00	0.00
14,000.00	90.00	179.54	12,051.00	-1,912.92	639.15	1,917.99	0.00	0.00	0.00
14,100.00	90.00	179.54	12,051.00	-2,012.91	639.95	2,017.99	0.00	0.00	0.00
14,200.00	90.00	179.54	12,051.00	-2,112.91	640.76	2,117.99	0.00	0.00	0.00
14,300.00	90.00	179.54	12,051.00	-2,212.91	641.56	2,217.99	0.00	0.00	0.00
14,400.00	90.00	179.54	12,051.00	-2,312.90	642.36	2,317.99	0.00	0.00	0.00
14,500.00	90.00	179.54	12,051.00	-2,412.90	643.17	2,417.99	0.00	0.00	0.00
14,600.00	90.00	179.54	12,051.00	-2,512.90	643.97	2,517.99	0.00	0.00	0.00
14,700.00	90.00	179.54	12,051.00	-2,612.89	644.77	2,617.99	0.00	0.00	0.00
14,800.00	90.00	179.54	12,051.00	-2,712.89	645.58	2,717.99	0.00	0.00	0.00
14,900.00	90.00	179.54	12,051.00	-2,812.89	646.38	2,817.99	0.00	0.00	0.00
15,000.00	90.00	179.54	12,051.00	-2,912.88	647.19	2,917.99	0.00	0.00	0.00
15,100.00	90.00	179.54	12,051.00	-3,012.88	647.99	3,017.99	0.00	0.00	0.00
15,200.00	90.00	179.54	12,051.00	-3,112.88	648.79	3,117.99	0.00	0.00	0.00
15,300.00	90.00	179.54	12,051.00	-3,212.87	649.60	3,217.99	0.00	0.00	0.00
15,400.00	90.00	179.54	12,051.00	-3,312.87	650.40	3,317.99	0.00	0.00	0.00
15,500.00	90.00	179.54	12,051.00	-3,412.87	651.21	3,417.99	0.00	0.00	0.00
15,600.00	90.00	179.54	12,051.00	-3,512.87	652.01	3,517.99	0.00	0.00	0.00
15,700.00	90.00	179.54	12,051.00	-3,612.86	652.81	3,617.99	0.00	0.00	0.00
15,800.00	90.00	179.54	12,051.00	-3,712.86	653.62	3,717.99	0.00	0.00	0.00
15,900.00	90.00	179.54	12,051.00	-3,812.86	654.42	3,817.99	0.00	0.00	0.00

Planning Report



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Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
16,000.00	90.00	179.54	12,051.00	-3,912.85	655.23	3,917.99	0.00	0.00	0.00	
16,100.00	90.00	179.54	12,051.00	-4,012.85	656.03	4,017.99	0.00	0.00	0.00	
16,200.00	90.00	179.54	12,051.00	-4,112.85	656.83	4,117.99	0.00	0.00	0.00	
16,300.00	90.00	179.54	12,051.00	-4,212.84	657.64	4,217.99	0.00	0.00	0.00	
16,400.00	90.00	179.54	12,051.00	-4,312.84	658.44	4,317.99	0.00	0.00	0.00	
16,500.00	90.00	179.54	12,051.00	-4,412.84	659.24	4,417.99	0.00	0.00	0.00	
16,600.00	90.00	179.54	12,051.00	-4,512.83	660.05	4,517.99	0.00	0.00	0.00	
16,700.00	90.00	179.54	12,051.00	-4,612.83	660.85	4,617.99	0.00	0.00	0.00	
16,800.00	90.00	179.54	12,051.00	-4,712.83	661.66	4,717.99	0.00	0.00	0.00	
16,900.00	90.00	179.54	12,051.00	-4,812.82	662.46	4,817.99	0.00	0.00	0.00	
17,000.00	90.00	179.54	12,051.00	-4,912.82	663.26	4,917.99	0.00	0.00	0.00	
17,100.00	90.00	179.54	12,051.00	-5,012.82	664.07	5,017.99	0.00	0.00	0.00	
17,200.00	90.00	179.54	12,051.00	-5,112.81	664.87	5,117.99	0.00	0.00	0.00	
17,300.00	90.00	179.54	12,051.00	-5,212.81	665.68	5,217.99	0.00	0.00	0.00	
17,400.00	90.00	179.54	12,051.00	-5,312.81	666.48	5,317.99	0.00	0.00	0.00	
17,500.00	90.00	179.54	12,051.00	-5,412.80	667.28	5,417.99	0.00	0.00	0.00	
17,600.00	90.00	179.54	12,051.00	-5,512.80	668.09	5,517.99	0.00	0.00	0.00	
17,700.00	90.00	179.54	12,051.00	-5,612.80	668.89	5,617.99	0.00	0.00	0.00	
17,800.00	90.00	179.54	12,051.00	-5,712.79	669.70	5,717.99	0.00	0.00	0.00	
17,900.00	90.00	179.54	12,051.00	-5,812.79	670.50	5,817.99	0.00	0.00	0.00	
18,000.00	90.00	179.54	12,051.00	-5,912.79	671.30	5,917.99	0.00	0.00	0.00	
18,100.00	90.00	179.54	12,051.00	-6,012.78	672.11	6,017.99	0.00	0.00	0.00	
18,200.00	90.00	179.54	12,051.00	-6,112.78	672.91	6,117.99	0.00	0.00	0.00	
18,300.00	90.00	179.54	12,051.00	-6,212.78	673.71	6,217.99	0.00	0.00	0.00	
18,400.00	90.00	179.54	12,051.00	-6,312.77	674.52	6,317.99	0.00	0.00	0.00	
18,500.00	90.00	179.54	12,051.00	-6,412.77	675.32	6,417.99	0.00	0.00	0.00	
18,600.00	90.00	179.54	12,051.00	-6,512.77	676.13	6,517.99	0.00	0.00	0.00	
18,700.00	90.00	179.54	12,051.00	-6,612.77	676.93	6,617.99	0.00	0.00	0.00	
18,800.00	90.00	179.54	12,051.00	-6,712.76	677.73	6,717.99	0.00	0.00	0.00	
18,900.00	90.00	179.54	12,051.00	-6,812.76	678.54	6,817.99	0.00	0.00	0.00	
19,000.00	90.00	179.54	12,051.00	-6,912.76	679.34	6,917.99	0.00	0.00	0.00	
19,100.00	90.00	179.54	12,051.00	-7,012.75	680.15	7,017.99	0.00	0.00	0.00	
19,200.00	90.00	179.54	12,051.00	-7,112.75	680.95	7,117.99	0.00	0.00	0.00	
19,300.00	90.00	179.54	12,051.00	-7,212.75	681.75	7,217.99	0.00	0.00	0.00	
19,400.00	90.00	179.54	12,051.00	-7,312.74	682.56	7,317.99	0.00	0.00	0.00	
19,500.00	90.00	179.54	12,051.00	-7,412.74	683.36	7,417.99	0.00	0.00	0.00	
19,600.00	90.00	179.54	12,051.00	-7,512.74	684.17	7,517.99	0.00	0.00	0.00	
19,700.00	90.00	179.54	12,051.00	-7,612.73	684.97	7,617.99	0.00	0.00	0.00	
19,800.00	90.00	179.54	12,051.00	-7,712.73	685.77	7,717.99	0.00	0.00	0.00	
19,900.00	90.00	179.54	12,051.00	-7,812.73	686.58	7,817.99	0.00	0.00	0.00	
20,000.00	90.00	179.54	12,051.00	-7,912.72	687.38	7,917.99	0.00	0.00	0.00	
20,100.00	90.00	179.54	12,051.00	-8,012.72	688.19	8,017.99	0.00	0.00	0.00	
20,200.00	90.00	179.54	12,051.00	-8,112.72	688.99	8,117.99	0.00	0.00	0.00	
20,300.00	90.00	179.54	12,051.00	-8,212.71	689.79	8,217.99	0.00	0.00	0.00	
20,400.00	90.00	179.54	12,051.00	-8,312.71	690.60	8,317.99	0.00	0.00	0.00	
20,500.00	90.00	179.54	12,051.00	-8,412.71	691.40	8,417.99	0.00	0.00	0.00	
20,600.00	90.00	179.54	12,051.00	-8,512.70	692.20	8,517.99	0.00	0.00	0.00	
20,700.00	90.00	179.54	12,051.00	-8,612.70	693.01	8,617.99	0.00	0.00	0.00	
20,800.00	90.00	179.54	12,051.00	-8,712.70	693.81	8,717.99	0.00	0.00	0.00	
20,900.00	90.00	179.54	12,051.00	-8,812.69	694.62	8,817.99	0.00	0.00	0.00	
21,000.00	90.00	179.54	12,051.00	-8,912.69	695.42	8,917.99	0.00	0.00	0.00	
21,100.00	90.00	179.54	12,051.00	-9,012.69	696.22	9,017.99	0.00	0.00	0.00	
21,200.00	90.00	179.54	12,051.00	-9,112.68	697.03	9,117.99	0.00	0.00	0.00	
21,300.00	90.00	179.54	12,051.00	-9,212.68	697.83	9,217.99	0.00	0.00	0.00	

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
21,400.00	90.00	179.54	12,051.00	-9,312.68	698.64	9,317.99	0.00	0.00	0.00	
21,500.00	90.00	179.54	12,051.00	-9,412.67	699.44	9,417.99	0.00	0.00	0.00	
21,600.00	90.00	179.54	12,051.00	-9,512.67	700.24	9,517.99	0.00	0.00	0.00	
21,700.00	90.00	179.54	12,051.00	-9,612.67	701.05	9,617.99	0.00	0.00	0.00	
21,800.00	90.00	179.54	12,051.00	-9,712.67	701.85	9,717.99	0.00	0.00	0.00	
21,900.00	90.00	179.54	12,051.00	-9,812.66	702.66	9,817.99	0.00	0.00	0.00	
22,000.00	90.00	179.54	12,051.00	-9,912.66	703.46	9,917.99	0.00	0.00	0.00	
22,100.00	90.00	179.54	12,051.00	-10,012.66	704.26	10,017.99	0.00	0.00	0.00	
22,200.00	90.00	179.54	12,051.00	-10,112.65	705.07	10,117.99	0.00	0.00	0.00	
22,229.00	90.00	179.54	12,051.00	-10,141.65	705.30	10,146.99	0.00	0.00	0.00	
PBHL @ 22229.00'										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
KOP - Master Fed Com - hit/miss target - Shape - Point	0.00	0.00	11,478.00	222.00	622.00	446,894.59	849,526.14	32.224660	-103.336722	- plan misses target center by 33.79usft at 11530.42usft MD (11478.54 TVD, 229.00 N, 588.95 E)
PBHL - Master Fed Com - plan hits target center - Point	0.00	0.00	12,051.00	-10,141.65	705.30	436,530.94	849,609.44	32.196174	-103.336764	
LP - Master Fed Com 7C - plan misses target center by 100000.00usft at 12430.76usft MD (12051.00 TVD, -343.85 N, 622.01 E) - Point	0.00	0.00	112,051.00	-343.59	626.55	446,329.00	849,530.69	32.223106	-103.336725	

Planning Report



Database:	EDM 5000.17 Single User Db	Local Co-ordinate Reference:	Well Master Fed Com 704H
Company:	Franklin Mountain Energy	TVD Reference:	30' KB @ 3441.30usft
Project:	Lea Co., NM (NAD-83)	MD Reference:	30' KB @ 3441.30usft
Site:	Mirror MH Pad 1 & 2	North Reference:	Grid
Well:	Master Fed Com 704H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
30.00	30.00	Cenozoic Alluvium (surface)				
1,405.00	1,405.00	Rustler		0.00		
1,843.00	1,843.00	Salado		0.00		
3,705.25	3,702.00	Base Salt		0.00		
5,411.15	5,382.00	Lamar		0.00		
5,528.94	5,498.00	Bell Canyon		0.00		
6,187.95	6,147.00	Cherry Canyon		0.00		
7,529.88	7,478.00	Brushy Canyon		0.00		
8,874.88	8,823.00	Bone Spring Lime		0.00		
8,919.88	8,868.00	Avalon		0.00		
9,077.88	9,026.00	Chert Zone		0.00		
9,966.88	9,915.00	First Bone Spring Sand		0.00		
10,054.88	10,003.00	Second Bone Spring Carbonates		0.00		
10,576.88	10,525.00	Second Bone Spring Sand		0.00		
11,146.88	11,095.00	Third Bone Spring Carbonates		0.00		
11,638.52	11,586.00	Third Bone Spring Sand		0.00		
12,034.68	11,920.00	Wolfcamp		0.00		
12,091.63	11,954.00	Wolfcamp A		0.00		
12,429.92	12,051.00	HZ Target		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
3,047.00	3,047.00	0.00	0.00	Build 1.5°/100'	
3,713.46	3,710.08	21.02	54.05	Hold 10° Inc, 68.75° Azm	
6,685.42	6,636.92	207.98	534.90	Drop 1.5°/100'	
7,351.88	7,300.00	229.00	588.95	Hold 0° Inc, 0° Azm	
11,529.92	11,478.04	229.00	588.95	Build 10°/100'	
12,429.92	12,051.00	-343.01	621.96	Land 90° Inc, 176.70° Azm	
12,450.89	12,051.00	-363.94	623.17	Turn 2°/100'	
12,593.01	12,051.00	-505.97	627.84	Hold 90° Inc, 179.54° Azm	
22,229.00	12,051.00	-10,141.65	705.30	PBHL @ 22229.00'	



Master Fed Com 704H

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)	3,410'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,035'	1,405'			Carbonates
Salado	1,597'	1,843'			Salt, Carbonate & Clastics
Base Salt	-262'	3,702'			Shaley Carbonate & Shale
Lamar	-1,942'	5,382'			Carbonate & Clastics
Bell Canyon	-2,058'	5,498'			Sandstone - oil/gas/water
Cherry Canyon	-2,707'	6,147'			Sandstone - oil/gas/water
Brushy Canyon	-4,038'	7,478'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,383'	8,823'			Shale/Carbonates - oil/gas
Avalon	-5,428'	8,868'			Shale/Carbonates - oil/gas
Chert Zone	-5,586'	9,026'			Carbonate/chert
First Bone Spring Sand	-6,475'	9,915'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,563'	10,003'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,085'	10,525'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,655'	11,095'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,146'	11,586'			Sandstone - oil/gas/water
Wolfcamp	-8,480'	11,920'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,514'	11,954'			Overpressure Shale - Oil/Gas
HZ Target	-8,611'	12,051'			Overpressure shale/sand- Oil/Gas
Wolfcamp B	-8,651'	12,091'			Overpressure Shale - Oil/Gas

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

Upper Permian Sands	0-400'	Fresh Water
Delaware Sands	5,498'	Oil
Avalon	8,868'	Oil
Bone Spring	9,915'	Oil
Wolfcamp	11,920'	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 1,450' and circulating cement back to surface.

4. **Casing Program:**

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

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	1,450	1.14	1.50	4.76	5.08
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	5,450	1.71	1.66	2.88	3.28
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Liberty 558	11,400	1.16	1.34	1.89	1.27
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606	22,229 12,051	1.32	1.40	1.19	0.99 1.61



7-5/8" casing will be set at 11,400' MD / 11,348' TVD at 0° inclination. Stress calculations on 5-1/2" casing performed assuming 22,229' depth. Actual max vertical depth is 12,051'.

Cementing Program:

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

String Type	Hole Size	Casing		Sacks	Type of cmt	Lead			Tail					
		Size	Setting Depth			Yield ft ³ /sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Yield ft ³ /sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1,450	914	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% CaCl ₂ , 0.125pps Celo-Flake	1.349	6.51	1,150	100%
Int1	12.25	9.625	5,450	1961	Lead, 12.8 ppg, Class C, 5% Salt 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal	1.45	6.9	0	154	Tail, 14.8 ppg, Class C, 0.1% HR 800 .125 pps Poly-E-Flake	1.33	6.3	5,150	100%
Int2	8.75	7.625	11,400	74	Lite Fill, 9.5 ppg, Class C 3lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps IntegraSeal	5.1	27.2	4,450	391	IntegraCem 14.8 ppg, Class H, P50H; 0.15% ASA 301; 0.5% FL-66; 0.25% R-21	1.33	6.31	7,500	30%
Prod	6.75	5.5	22,229	827	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	10,400						20%

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.



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 – 1,450'	Fresh - Gel	8.6-8.8	28-34	N/c
1,450' –11,400'	Brine	8.8-10.2	28-34	N/c
11,400' –22,229' 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 12.5 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 12,051' TVD (deepest point of the well) is 190°F with an estimated maximum bottom-hole pressure (BHP) at the same point of 7,833 psig (based on 12.5 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.



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 2nd 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.

In order to minimize potential environmental and technical hazards, this well is planned with two intermediate strings of casing.

1. Variance is requested to waive the centralizer requirements for the 7-5/8" casing due to the tight clearance with 9-5/8" string.
2. 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.

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

CONDITIONS
 Action 258455

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street, Suite 1000 Denver, CO 80206	OGRID: 373910
	Action Number: 258455
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	9/8/2023