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 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-025-51880
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Sun State Com
8. Well Number 502H
9. OGRID Number 331595
10. Pool name or Wildcat [49685] PEARL; BONE SPRING, SOUTH

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Franklin Mountain Energy 3, LLC	
3. Address of Operator 44 Cook Street, Suite 1000, Denver, CO 80206	
4. Well Location Unit Letter <u>K</u> : <u>2215</u> feet from the <u>South</u> line and <u>2595</u> feet from the <u>West</u> line Section <u>24</u> Township <u>19S</u> Range <u>35E</u> NMPM Lea County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3708	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

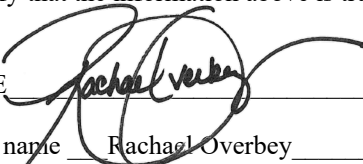
13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Franklin Mountain Energy, LLC (FME), Operator, respectfully requests approval to make the following changes to the proposed drilling plan for the above referenced well: Hole Size: FME requests approval to change the lateral hole size from 8.75" to 8.5". Please see attached Plan 2 and revised 14-point plan.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Dir. Ops Planning & Regulatory DATE 9/21/2023

Type or print name Rachael Overbey E-mail address: roverbey@fmellc.com PHONE: 303-570-4057

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):



Sun State Com 502H

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)	3,708'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	1951	1,787'			Carbonates
Salado	1690	2,048'			Salt, Anhydrite & Clastics
Base Salt	632	3,106'			Anhydrite & Clastics
Yates	380	3,358'			Carbonate & Clastics
Seven Rivers	-74	3,812'			Interbedded shale/carbonate
Queen	-785	4,524'			Sandstone & dolomite & anhydrite
Delaware Mtn Group	-2302	6,041'			Sandstone/Carb/Shale - oil/gas/water
Bone Spring Lime	-3842	7,581'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-5395	9,133'			Sandstone - oil/gas/water
Second Bone Spring Carbonate	-5608	9,346'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-5788	9,526'			Sandstone - oil/gas/water
HZ Target at Landing	-5935	9,673'			Sandstone - oil/gas/water
Third Bone Spring Carbonate	-6418	10,156'			Shale/Carbonates - oil/gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	6,041'	Oil
1 st Bone Spring Sand	9,133'	Oil
2 nd Bone Spring Sand	9,526'	Oil
3 rd Bone Carbonate	10,156'	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 1,900' and circulating cement back to surface.

4. Casing Program:

All casing strings will be run new.

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
Surface 13 3/8" 0-1,900'	54.5	J-55	2730	1130	853	BTC 909	1900	1.02	1.14	4.19	4.47
Intermediate 9 5/8" 0-4,000'	40	HCL-80	7430	4230	916	BTC 1042	4000	2.08	2.26	3.52	4.01
Production 7" 0-9,100'	32	HCP-110	12460	10760	1025	CDC-HTQ 1053	9100	2.19	2.53	2.62	2.69
Production 5 1/2" 9,100'-22,551'	20	HCP-110	12640	12200	641	CDC-HTQ 667 TVD	13451 9673	1.15	1.94	1.74	1.81 2.27

Tapered production string will be ran with a X-over installed at the KOP of 9,100'.



Cementing Program:

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

To increase efficiency of drilling operations and minimize disturbance of the area the batch-drilling approach will be used.

Off-line cementing may be utilized for Surface and Intermediate strings to further optimization of drilling process and reduction of disturbance.

String Type	Hole Size	Casing Size	Setting Depth	Sacks	Type of cmt	Lead Yield ft ³ /sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Tail Yield ft ³ /sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1900	1016	85:15 Compass Poz, 12.8 ppg Class C, 5%Gel, 3#/sk Kol Seal, 4.64#/sk Salt	2.05	11.12	0	441	Tail, 14.8 ppg, 100% Class C, 1%CaCl ₂ , 0.1%	1.34	6.35	1500	100%
Int	12.25	9.625	4000	640	Lead, 11.3 ppg, HSLD 82 10% Gel, 4%STE, 2#/sk, Gyp Seal	2.74	16.31	0	201	Econolite Tail, 14.8 ppg, 100% Class C, 0.08% C-51	1.33	6.33	3600	100%
Prod	8.75	7	0-10,051	424	HSLD 9420, 10.5 ppg, Class C, 1#/sk Salt, 4% STE 1% C-45	3.99	25.51	3000						100%
Prod	8.50	5.5	10,051-22,559						3081	HSLD 80, 13.ppg , 32#/sk Salt, 4% STE, 1#/sk Gyp Seal	1.52	7.59	9100	50%

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 to 1500 psi for 30 minutes.

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.

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 – 1,900'	Fresh - Gel	8.6-8.8	28-34	N/c
1,900' – 10,043'	Brine	8.8-10.2	28-34	N/c
10,043' – 22,551'	Oil Base	9.0-11.0	58-68	3 - 6
Lateral				

The highest mud weight needed to balance formation is expected to be 10-11 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 kept 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 9,673' TVD (deepest point of the well) is 155F with an estimated maximum bottom-hole pressure (BHP) at the same point of 6,035 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 150' 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/Escapes 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. 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.

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. A batch drilling sequence sundry will be submitted for State approval prior to spud. A 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 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 21 days.

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

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 string. After installation of the first intermediate string the pack-off and lower flanges will be pressure tested to 5000 psi.

Both the surface and intermediate casing strings will be tested as per NMOCD Rules to the one-third of manufacture's rated yield pressure, no less than 600 psi, but not greater than 1,500 psi.

14. Additional variance requests

A. Casing.

1. Variance is requested to wave/reduce the centralizer requirements for the 7" and 5 1/2" production casing due to the tight clearance with 8 3/4" hole.



Franklin Mountain Energy LLC

Lea County, NM(N83-NME3001)

Sun State

Sun State Com 502H

30-025-51880

502H

Plan: Plan 02

Standard Planning Report

19 September, 2023



Planning Report

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

Project	Lea County, NM(N83-NME3001)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sun State				
Site Position:		Northing:	599,528.98 usft	Latitude:	32.64476386
From:	Map	Easting:	825,267.52 usft	Longitude:	-103.41089803
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Sun State Com 502H					
Well Position	+N/-S	0.00 usft	Northing:	599,528.98 usft	Latitude:	32.64476386
	+E/-W	0.00 usft	Easting:	825,267.52 usft	Longitude:	-103.41089803
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,708.00 usft
Grid Convergence:		0.50 °				

Wellbore	502H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/26/2023	6.23	60.23	47,518.09525223

Design	Plan 02				
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	179.57	

Plan Survey Tool Program	Date	9/19/2023			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	22,559.15 Plan 02 (502H)	MWD+IFR1+MS		
			OWSG MWD + IFR1 + Multi-Si		

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	
2,150.00	0.00	0.00	2,150.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,851.48	10.52	310.39	2,847.54	41.62	-48.92	1.50	1.50	0.00	310.39	
5,450.09	10.52	310.39	5,402.46	349.12	-410.36	0.00	0.00	0.00	0.00	
6,151.57	0.00	0.00	6,100.00	390.74	-459.29	1.50	-1.50	0.00	180.00	
9,151.61	0.00	0.00	9,100.04	390.74	-459.29	0.00	0.00	0.00	0.00	
10,051.61	90.00	179.57	9,673.00	-182.20	-454.94	10.00	10.00	0.00	179.57	
22,559.15	90.00	179.57	9,673.00	-12,689.38	-360.10	0.00	0.00	0.00	0.00	02-PBHL(SS-502H)

Planning Report



Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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
30.00	0.00	0.00	30.00	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
200.00	0.00	0.00	200.00	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
400.00	0.00	0.00	400.00	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
600.00	0.00	0.00	600.00	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
800.00	0.00	0.00	800.00	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
1,000.00	0.00	0.00	1,000.00	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
1,200.00	0.00	0.00	1,200.00	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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,787.00	0.00	0.00	1,787.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	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
2,048.00	0.00	0.00	2,048.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,150.00	0.00	0.00	2,150.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.75	310.39	2,200.00	0.21	-0.25	-0.21	1.50	1.50	0.00
2,300.00	2.25	310.39	2,299.96	1.91	-2.24	-1.92	1.50	1.50	0.00
2,400.00	3.75	310.39	2,399.82	5.30	-6.23	-5.35	1.50	1.50	0.00
2,500.00	5.25	310.39	2,499.51	10.38	-12.20	-10.47	1.50	1.50	0.00
2,600.00	6.75	310.39	2,598.96	17.16	-20.17	-17.31	1.50	1.50	0.00
2,700.00	8.25	310.39	2,698.10	25.61	-30.11	-25.84	1.50	1.50	0.00
2,800.00	9.75	310.39	2,796.87	35.75	-42.02	-36.06	1.50	1.50	0.00
2,851.48	10.52	310.39	2,847.54	41.62	-48.92	-41.99	1.50	1.50	0.00
2,900.00	10.52	310.39	2,895.25	47.36	-55.67	-47.78	0.00	0.00	0.00
3,000.00	10.52	310.39	2,993.57	59.20	-69.58	-59.72	0.00	0.00	0.00
3,100.00	10.52	310.39	3,091.88	71.03	-83.49	-71.65	0.00	0.00	0.00
3,114.36	10.52	310.39	3,106.00	72.73	-85.49	-73.37	0.00	0.00	0.00
Base Salt									
3,200.00	10.52	310.39	3,190.20	82.86	-97.40	-83.59	0.00	0.00	0.00
3,300.00	10.52	310.39	3,288.52	94.69	-111.31	-95.53	0.00	0.00	0.00
3,370.67	10.52	310.39	3,358.00	103.06	-121.14	-103.96	0.00	0.00	0.00
Yates									
3,400.00	10.52	310.39	3,386.84	106.53	-125.22	-107.46	0.00	0.00	0.00
3,500.00	10.52	310.39	3,485.16	118.36	-139.13	-119.40	0.00	0.00	0.00
3,600.00	10.52	310.39	3,583.48	130.19	-153.03	-131.34	0.00	0.00	0.00
3,700.00	10.52	310.39	3,681.80	142.03	-166.94	-143.28	0.00	0.00	0.00
3,800.00	10.52	310.39	3,780.11	153.86	-180.85	-155.21	0.00	0.00	0.00
3,832.43	10.52	310.39	3,812.00	157.70	-185.36	-159.08	0.00	0.00	0.00
Seven Rivers									

Planning Report



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Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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)	
3,900.00	10.52	310.39	3,878.43	165.69	-194.76	-167.15	0.00	0.00	0.00	
4,000.00	10.52	310.39	3,976.75	177.53	-208.67	-179.09	0.00	0.00	0.00	
4,100.00	10.52	310.39	4,075.07	189.36	-222.58	-191.02	0.00	0.00	0.00	
4,200.00	10.52	310.39	4,173.39	201.19	-236.49	-202.96	0.00	0.00	0.00	
4,300.00	10.52	310.39	4,271.71	213.03	-250.40	-214.90	0.00	0.00	0.00	
4,400.00	10.52	310.39	4,370.02	224.86	-264.31	-226.84	0.00	0.00	0.00	
4,500.00	10.52	310.39	4,468.34	236.69	-278.22	-238.77	0.00	0.00	0.00	
4,555.59	10.52	310.39	4,523.00	243.27	-285.95	-245.41	0.00	0.00	0.00	
Queen										
4,600.00	10.52	310.39	4,566.66	248.53	-292.12	-250.71	0.00	0.00	0.00	
4,700.00	10.52	310.39	4,664.98	260.36	-306.03	-262.65	0.00	0.00	0.00	
4,800.00	10.52	310.39	4,763.30	272.19	-319.94	-274.58	0.00	0.00	0.00	
4,900.00	10.52	310.39	4,861.62	284.02	-333.85	-286.52	0.00	0.00	0.00	
5,000.00	10.52	310.39	4,959.94	295.86	-347.76	-298.46	0.00	0.00	0.00	
5,100.00	10.52	310.39	5,058.25	307.69	-361.67	-310.40	0.00	0.00	0.00	
5,200.00	10.52	310.39	5,156.57	319.52	-375.58	-322.33	0.00	0.00	0.00	
5,300.00	10.52	310.39	5,254.89	331.36	-389.49	-334.27	0.00	0.00	0.00	
5,400.00	10.52	310.39	5,353.21	343.19	-403.40	-346.21	0.00	0.00	0.00	
5,450.09	10.52	310.39	5,402.46	349.12	-410.36	-352.19	0.00	0.00	0.00	
5,500.00	9.77	310.39	5,451.59	354.82	-417.06	-357.94	1.50	-1.50	0.00	
5,600.00	8.27	310.39	5,550.35	364.98	-429.01	-368.19	1.50	-1.50	0.00	
5,700.00	6.77	310.39	5,649.48	373.46	-438.98	-376.75	1.50	-1.50	0.00	
5,800.00	5.27	310.39	5,748.93	380.26	-446.97	-383.61	1.50	-1.50	0.00	
5,900.00	3.77	310.39	5,848.61	385.37	-452.98	-388.76	1.50	-1.50	0.00	
6,000.00	2.27	310.39	5,948.47	388.79	-457.00	-392.21	1.50	-1.50	0.00	
6,091.57	0.90	310.39	6,040.00	390.43	-458.93	-393.87	1.50	-1.50	0.00	
Delaware Mtn Group										
6,100.00	0.77	310.39	6,048.43	390.51	-459.02	-393.95	1.50	-1.50	0.00	
6,151.57	0.00	0.00	6,100.00	390.74	-459.29	-394.17	1.50	-1.50	0.00	
6,200.00	0.00	0.00	6,148.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,248.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,348.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,448.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,548.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,648.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,748.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,848.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,948.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,100.00	0.00	0.00	7,048.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,200.00	0.00	0.00	7,148.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,300.00	0.00	0.00	7,248.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,400.00	0.00	0.00	7,348.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,500.00	0.00	0.00	7,448.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,600.00	0.00	0.00	7,548.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,631.57	0.00	0.00	7,580.00	390.74	-459.29	-394.17	0.00	0.00	0.00	
Bone Spring Lime										
7,700.00	0.00	0.00	7,648.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,748.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,848.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,948.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
8,100.00	0.00	0.00	8,048.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,148.43	390.74	-459.29	-394.17	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,248.43	390.74	-459.29	-394.17	0.00	0.00	0.00	

Planning Report



Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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)
8,400.00	0.00	0.00	8,348.43	390.74	-459.29	-394.17	0.00	0.00	0.00
8,500.00	0.00	0.00	8,448.43	390.74	-459.29	-394.17	0.00	0.00	0.00
8,600.00	0.00	0.00	8,548.43	390.74	-459.29	-394.17	0.00	0.00	0.00
8,700.00	0.00	0.00	8,648.43	390.74	-459.29	-394.17	0.00	0.00	0.00
8,800.00	0.00	0.00	8,748.43	390.74	-459.29	-394.17	0.00	0.00	0.00
8,900.00	0.00	0.00	8,848.43	390.74	-459.29	-394.17	0.00	0.00	0.00
9,000.00	0.00	0.00	8,948.43	390.74	-459.29	-394.17	0.00	0.00	0.00
9,100.00	0.00	0.00	9,048.43	390.74	-459.29	-394.17	0.00	0.00	0.00
9,121.61	0.00	0.00	9,070.04	390.74	-459.29	-394.17	0.00	0.00	0.00
00-KOP(SS502H)									
9,151.61	0.00	0.00	9,100.04	390.74	-459.29	-394.17	0.00	0.00	0.00
KOP: 9151.61' MD/-394.17' VS/9100.04' TVD									
9,184.59	3.30	179.57	9,133.00	389.79	-459.28	-393.23	10.00	10.00	0.00
First Bone Spring Sand									
9,200.00	4.84	179.57	9,148.37	388.70	-459.27	-392.13	10.00	10.00	0.00
9,250.00	9.84	179.57	9,197.95	382.31	-459.22	-385.75	10.00	10.00	0.00
9,300.00	14.84	179.57	9,246.78	371.63	-459.14	-375.07	10.00	10.00	0.00
9,350.00	19.84	179.57	9,294.49	356.73	-459.03	-360.17	10.00	10.00	0.00
9,400.00	24.84	179.57	9,340.72	337.74	-458.88	-341.17	10.00	10.00	0.00
9,405.83	25.42	179.57	9,346.00	335.26	-458.87	-338.70	10.00	10.00	0.00
Second Bone Spring Carbonate									
9,450.00	29.84	179.57	9,385.12	314.78	-458.71	-318.22	10.00	10.00	0.00
9,500.00	34.84	179.57	9,427.36	288.05	-458.51	-291.48	10.00	10.00	0.00
9,550.00	39.84	179.57	9,467.10	257.73	-458.28	-261.16	10.00	10.00	0.00
9,600.00	44.84	179.57	9,504.04	224.07	-458.02	-227.50	10.00	10.00	0.00
9,631.86	48.02	179.57	9,526.00	200.98	-457.85	-204.41	10.00	10.00	0.00
Second Bone Spring Sand									
9,650.00	49.84	179.57	9,537.92	187.31	-457.74	-190.74	10.00	10.00	0.00
9,650.66	49.90	179.57	9,538.34	186.81	-457.74	-190.24	10.00	10.00	0.00
01-T98(SS-502H)									
9,700.00	54.84	179.57	9,568.46	147.74	-457.44	-151.17	10.00	10.00	0.00
9,750.00	59.84	179.57	9,595.43	105.66	-457.12	-109.09	10.00	10.00	0.00
9,800.00	64.84	179.57	9,618.64	61.39	-456.79	-64.82	10.00	10.00	0.00
9,850.00	69.84	179.57	9,637.89	15.27	-456.44	-18.69	10.00	10.00	0.00
9,900.00	74.84	179.57	9,653.06	-32.36	-456.08	28.93	10.00	10.00	0.00
9,950.00	79.84	179.57	9,664.01	-81.13	-455.71	77.70	10.00	10.00	0.00
10,000.00	84.84	179.57	9,670.68	-130.66	-455.33	127.24	10.00	10.00	0.00
10,051.61	90.00	179.57	9,673.00	-182.20	-454.94	178.78	10.00	10.00	0.00
EOC: 10051.61' MD/178.78' VS/9673.00' TVD - HZ Target at Landin									
10,100.00	90.00	179.57	9,673.00	-230.59	-454.57	227.17	0.00	0.00	0.00
10,200.00	90.00	179.57	9,673.00	-330.59	-453.82	327.17	0.00	0.00	0.00
10,300.00	90.00	179.57	9,673.00	-430.58	-453.06	427.17	0.00	0.00	0.00
10,400.00	90.00	179.57	9,673.00	-530.58	-452.30	527.17	0.00	0.00	0.00
10,500.00	90.00	179.57	9,673.00	-630.58	-451.54	627.17	0.00	0.00	0.00
10,600.00	90.00	179.57	9,673.00	-730.58	-450.78	727.17	0.00	0.00	0.00
10,700.00	90.00	179.57	9,673.00	-830.57	-450.02	827.17	0.00	0.00	0.00
10,800.00	90.00	179.57	9,673.00	-930.57	-449.27	927.17	0.00	0.00	0.00
10,900.00	90.00	179.57	9,673.00	-1,030.57	-448.51	1,027.17	0.00	0.00	0.00
11,000.00	90.00	179.57	9,673.00	-1,130.56	-447.75	1,127.17	0.00	0.00	0.00
11,100.00	90.00	179.57	9,673.00	-1,230.56	-446.99	1,227.17	0.00	0.00	0.00
11,200.00	90.00	179.57	9,673.00	-1,330.56	-446.23	1,327.17	0.00	0.00	0.00
11,300.00	90.00	179.57	9,673.00	-1,430.56	-445.48	1,427.17	0.00	0.00	0.00
11,400.00	90.00	179.57	9,673.00	-1,530.55	-444.72	1,527.17	0.00	0.00	0.00



Planning Report

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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)	
11,500.00	90.00	179.57	9,673.00	-1,630.55	-443.96	1,627.17	0.00	0.00	0.00	
11,600.00	90.00	179.57	9,673.00	-1,730.55	-443.20	1,727.17	0.00	0.00	0.00	
11,700.00	90.00	179.57	9,673.00	-1,830.54	-442.44	1,827.17	0.00	0.00	0.00	
11,800.00	90.00	179.57	9,673.00	-1,930.54	-441.68	1,927.17	0.00	0.00	0.00	
11,900.00	90.00	179.57	9,673.00	-2,030.54	-440.93	2,027.17	0.00	0.00	0.00	
12,000.00	90.00	179.57	9,673.00	-2,130.54	-440.17	2,127.17	0.00	0.00	0.00	
12,100.00	90.00	179.57	9,673.00	-2,230.53	-439.41	2,227.17	0.00	0.00	0.00	
12,200.00	90.00	179.57	9,673.00	-2,330.53	-438.65	2,327.17	0.00	0.00	0.00	
12,300.00	90.00	179.57	9,673.00	-2,430.53	-437.89	2,427.17	0.00	0.00	0.00	
12,400.00	90.00	179.57	9,673.00	-2,530.52	-437.13	2,527.17	0.00	0.00	0.00	
12,500.00	90.00	179.57	9,673.00	-2,630.52	-436.38	2,627.17	0.00	0.00	0.00	
12,600.00	90.00	179.57	9,673.00	-2,730.52	-435.62	2,727.17	0.00	0.00	0.00	
12,700.00	90.00	179.57	9,673.00	-2,830.52	-434.86	2,827.17	0.00	0.00	0.00	
12,800.00	90.00	179.57	9,673.00	-2,930.51	-434.10	2,927.17	0.00	0.00	0.00	
12,900.00	90.00	179.57	9,673.00	-3,030.51	-433.34	3,027.17	0.00	0.00	0.00	
13,000.00	90.00	179.57	9,673.00	-3,130.51	-432.58	3,127.17	0.00	0.00	0.00	
13,100.00	90.00	179.57	9,673.00	-3,230.50	-431.83	3,227.17	0.00	0.00	0.00	
13,200.00	90.00	179.57	9,673.00	-3,330.50	-431.07	3,327.17	0.00	0.00	0.00	
13,300.00	90.00	179.57	9,673.00	-3,430.50	-430.31	3,427.17	0.00	0.00	0.00	
13,400.00	90.00	179.57	9,673.00	-3,530.50	-429.55	3,527.17	0.00	0.00	0.00	
13,500.00	90.00	179.57	9,673.00	-3,630.49	-428.79	3,627.17	0.00	0.00	0.00	
13,600.00	90.00	179.57	9,673.00	-3,730.49	-428.03	3,727.17	0.00	0.00	0.00	
13,700.00	90.00	179.57	9,673.00	-3,830.49	-427.28	3,827.17	0.00	0.00	0.00	
13,800.00	90.00	179.57	9,673.00	-3,930.48	-426.52	3,927.17	0.00	0.00	0.00	
13,900.00	90.00	179.57	9,673.00	-4,030.48	-425.76	4,027.17	0.00	0.00	0.00	
14,000.00	90.00	179.57	9,673.00	-4,130.48	-425.00	4,127.17	0.00	0.00	0.00	
14,100.00	90.00	179.57	9,673.00	-4,230.47	-424.24	4,227.17	0.00	0.00	0.00	
14,200.00	90.00	179.57	9,673.00	-4,330.47	-423.49	4,327.17	0.00	0.00	0.00	
14,300.00	90.00	179.57	9,673.00	-4,430.47	-422.73	4,427.17	0.00	0.00	0.00	
14,400.00	90.00	179.57	9,673.00	-4,530.47	-421.97	4,527.17	0.00	0.00	0.00	
14,500.00	90.00	179.57	9,673.00	-4,630.46	-421.21	4,627.17	0.00	0.00	0.00	
14,600.00	90.00	179.57	9,673.00	-4,730.46	-420.45	4,727.17	0.00	0.00	0.00	
14,700.00	90.00	179.57	9,673.00	-4,830.46	-419.69	4,827.17	0.00	0.00	0.00	
14,800.00	90.00	179.57	9,673.00	-4,930.45	-418.94	4,927.17	0.00	0.00	0.00	
14,900.00	90.00	179.57	9,673.00	-5,030.45	-418.18	5,027.17	0.00	0.00	0.00	
15,000.00	90.00	179.57	9,673.00	-5,130.45	-417.42	5,127.17	0.00	0.00	0.00	
15,100.00	90.00	179.57	9,673.00	-5,230.45	-416.66	5,227.17	0.00	0.00	0.00	
15,200.00	90.00	179.57	9,673.00	-5,330.44	-415.90	5,327.17	0.00	0.00	0.00	
15,300.00	90.00	179.57	9,673.00	-5,430.44	-415.14	5,427.17	0.00	0.00	0.00	
15,400.00	90.00	179.57	9,673.00	-5,530.44	-414.39	5,527.17	0.00	0.00	0.00	
15,500.00	90.00	179.57	9,673.00	-5,630.43	-413.63	5,627.17	0.00	0.00	0.00	
15,600.00	90.00	179.57	9,673.00	-5,730.43	-412.87	5,727.17	0.00	0.00	0.00	
15,700.00	90.00	179.57	9,673.00	-5,830.43	-412.11	5,827.17	0.00	0.00	0.00	
15,800.00	90.00	179.57	9,673.00	-5,930.43	-411.35	5,927.17	0.00	0.00	0.00	
15,900.00	90.00	179.57	9,673.00	-6,030.42	-410.59	6,027.17	0.00	0.00	0.00	
16,000.00	90.00	179.57	9,673.00	-6,130.42	-409.84	6,127.17	0.00	0.00	0.00	
16,100.00	90.00	179.57	9,673.00	-6,230.42	-409.08	6,227.17	0.00	0.00	0.00	
16,200.00	90.00	179.57	9,673.00	-6,330.41	-408.32	6,327.17	0.00	0.00	0.00	
16,300.00	90.00	179.57	9,673.00	-6,430.41	-407.56	6,427.17	0.00	0.00	0.00	
16,400.00	90.00	179.57	9,673.00	-6,530.41	-406.80	6,527.17	0.00	0.00	0.00	
16,500.00	90.00	179.57	9,673.00	-6,630.41	-406.04	6,627.17	0.00	0.00	0.00	
16,600.00	90.00	179.57	9,673.00	-6,730.40	-405.29	6,727.17	0.00	0.00	0.00	
16,700.00	90.00	179.57	9,673.00	-6,830.40	-404.53	6,827.17	0.00	0.00	0.00	
16,800.00	90.00	179.57	9,673.00	-6,930.40	-403.77	6,927.17	0.00	0.00	0.00	



Planning Report

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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)
16,900.00	90.00	179.57	9,673.00	-7,030.39	-403.01	7,027.17	0.00	0.00	0.00
17,000.00	90.00	179.57	9,673.00	-7,130.39	-402.25	7,127.17	0.00	0.00	0.00
17,100.00	90.00	179.57	9,673.00	-7,230.39	-401.50	7,227.17	0.00	0.00	0.00
17,200.00	90.00	179.57	9,673.00	-7,330.39	-400.74	7,327.17	0.00	0.00	0.00
17,300.00	90.00	179.57	9,673.00	-7,430.38	-399.98	7,427.17	0.00	0.00	0.00
17,400.00	90.00	179.57	9,673.00	-7,530.38	-399.22	7,527.17	0.00	0.00	0.00
17,500.00	90.00	179.57	9,673.00	-7,630.38	-398.46	7,627.17	0.00	0.00	0.00
17,600.00	90.00	179.57	9,673.00	-7,730.37	-397.70	7,727.17	0.00	0.00	0.00
17,700.00	90.00	179.57	9,673.00	-7,830.37	-396.95	7,827.17	0.00	0.00	0.00
17,800.00	90.00	179.57	9,673.00	-7,930.37	-396.19	7,927.17	0.00	0.00	0.00
17,900.00	90.00	179.57	9,673.00	-8,030.37	-395.43	8,027.17	0.00	0.00	0.00
18,000.00	90.00	179.57	9,673.00	-8,130.36	-394.67	8,127.17	0.00	0.00	0.00
18,100.00	90.00	179.57	9,673.00	-8,230.36	-393.91	8,227.17	0.00	0.00	0.00
18,200.00	90.00	179.57	9,673.00	-8,330.36	-393.15	8,327.17	0.00	0.00	0.00
18,300.00	90.00	179.57	9,673.00	-8,430.35	-392.40	8,427.17	0.00	0.00	0.00
18,400.00	90.00	179.57	9,673.00	-8,530.35	-391.64	8,527.17	0.00	0.00	0.00
18,500.00	90.00	179.57	9,673.00	-8,630.35	-390.88	8,627.17	0.00	0.00	0.00
18,600.00	90.00	179.57	9,673.00	-8,730.35	-390.12	8,727.17	0.00	0.00	0.00
18,700.00	90.00	179.57	9,673.00	-8,830.34	-389.36	8,827.17	0.00	0.00	0.00
18,800.00	90.00	179.57	9,673.00	-8,930.34	-388.60	8,927.17	0.00	0.00	0.00
18,900.00	90.00	179.57	9,673.00	-9,030.34	-387.85	9,027.17	0.00	0.00	0.00
19,000.00	90.00	179.57	9,673.00	-9,130.33	-387.09	9,127.17	0.00	0.00	0.00
19,100.00	90.00	179.57	9,673.00	-9,230.33	-386.33	9,227.17	0.00	0.00	0.00
19,200.00	90.00	179.57	9,673.00	-9,330.33	-385.57	9,327.17	0.00	0.00	0.00
19,300.00	90.00	179.57	9,673.00	-9,430.33	-384.81	9,427.17	0.00	0.00	0.00
19,400.00	90.00	179.57	9,673.00	-9,530.32	-384.05	9,527.17	0.00	0.00	0.00
19,500.00	90.00	179.57	9,673.00	-9,630.32	-383.30	9,627.17	0.00	0.00	0.00
19,600.00	90.00	179.57	9,673.00	-9,730.32	-382.54	9,727.17	0.00	0.00	0.00
19,700.00	90.00	179.57	9,673.00	-9,830.31	-381.78	9,827.17	0.00	0.00	0.00
19,800.00	90.00	179.57	9,673.00	-9,930.31	-381.02	9,927.17	0.00	0.00	0.00
19,900.00	90.00	179.57	9,673.00	-10,030.31	-380.26	10,027.17	0.00	0.00	0.00
20,000.00	90.00	179.57	9,673.00	-10,130.31	-379.51	10,127.17	0.00	0.00	0.00
20,100.00	90.00	179.57	9,673.00	-10,230.30	-378.75	10,227.17	0.00	0.00	0.00
20,200.00	90.00	179.57	9,673.00	-10,330.30	-377.99	10,327.17	0.00	0.00	0.00
20,300.00	90.00	179.57	9,673.00	-10,430.30	-377.23	10,427.17	0.00	0.00	0.00
20,400.00	90.00	179.57	9,673.00	-10,530.29	-376.47	10,527.17	0.00	0.00	0.00
20,500.00	90.00	179.57	9,673.00	-10,630.29	-375.71	10,627.17	0.00	0.00	0.00
20,600.00	90.00	179.57	9,673.00	-10,730.29	-374.96	10,727.17	0.00	0.00	0.00
20,700.00	90.00	179.57	9,673.00	-10,830.29	-374.20	10,827.17	0.00	0.00	0.00
20,800.00	90.00	179.57	9,673.00	-10,930.28	-373.44	10,927.17	0.00	0.00	0.00
20,900.00	90.00	179.57	9,673.00	-11,030.28	-372.68	11,027.17	0.00	0.00	0.00
21,000.00	90.00	179.57	9,673.00	-11,130.28	-371.92	11,127.17	0.00	0.00	0.00
21,100.00	90.00	179.57	9,673.00	-11,230.27	-371.16	11,227.17	0.00	0.00	0.00
21,200.00	90.00	179.57	9,673.00	-11,330.27	-370.41	11,327.17	0.00	0.00	0.00
21,300.00	90.00	179.57	9,673.00	-11,430.27	-369.65	11,427.17	0.00	0.00	0.00
21,400.00	90.00	179.57	9,673.00	-11,530.27	-368.89	11,527.17	0.00	0.00	0.00
21,500.00	90.00	179.57	9,673.00	-11,630.26	-368.13	11,627.17	0.00	0.00	0.00
21,600.00	90.00	179.57	9,673.00	-11,730.26	-367.37	11,727.17	0.00	0.00	0.00
21,700.00	90.00	179.57	9,673.00	-11,830.26	-366.61	11,827.17	0.00	0.00	0.00
21,800.00	90.00	179.57	9,673.00	-11,930.25	-365.86	11,927.17	0.00	0.00	0.00
21,900.00	90.00	179.57	9,673.00	-12,030.25	-365.10	12,027.17	0.00	0.00	0.00
22,000.00	90.00	179.57	9,673.00	-12,130.25	-364.34	12,127.17	0.00	0.00	0.00
22,100.00	90.00	179.57	9,673.00	-12,230.25	-363.58	12,227.17	0.00	0.00	0.00
22,200.00	90.00	179.57	9,673.00	-12,330.24	-362.82	12,327.17	0.00	0.00	0.00



Planning Report

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well Sun State Com 502H
Company:	Franklin Mountain Energy LLC	TVD Reference:	3708+30 @ 3738.00usft
Project:	Lea County, NM(N83-NME3001)	MD Reference:	3708+30 @ 3738.00usft
Site:	Sun State	North Reference:	Grid
Well:	Sun State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	Plan 02		

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)
22,300.00	90.00	179.57	9,673.00	-12,430.24	-362.07	12,427.17	0.00	0.00	0.00
22,400.00	90.00	179.57	9,673.00	-12,530.24	-361.31	12,527.17	0.00	0.00	0.00
22,500.00	90.00	179.57	9,673.00	-12,630.23	-360.55	12,627.17	0.00	0.00	0.00
22,559.15	90.00	179.57	9,673.00	-12,689.38	-360.10	12,686.32	0.00	0.00	0.00
TD: 22559.15' MD/12686.32' VS/9673.00' TVD - 02-PBHL(SS-502H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
00-KOP(SS502H) - hit/miss target - Shape - Point	0.00	0.00	9,070.04	390.74	-459.29	599,919.72	824,808.23	32.64584871	-103.41237899
01-T98(SS-502H) - plan misses target center by 170.11usft at 9650.66usft MD (9538.34 TVD, 186.81 N, -457.74 E) - Point	0.00	0.00	9,673.00	290.74	-457.95	599,819.72	824,809.57	32.64557385	-103.41237747
02-PBHL(SS-502H) - plan hits target center - Point	0.00	0.00	9,673.00	-12,689.38	-360.10	586,839.60	824,907.42	32.60989728	-103.41242505

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
30.00	30.00	Cenozoic Alluvium (surface)				
1,787.00	1,787.00	Rustler				
2,048.00	2,048.00	Salado				
3,114.36	3,106.00	Base Salt				
3,370.67	3,358.00	Yates				
3,832.43	3,812.00	Seven Rivers				
4,555.59	4,523.00	Queen				
6,091.57	6,040.00	Delaware Mtn Group				
7,631.57	7,580.00	Bone Spring Lime				
9,184.59	9,133.00	First Bone Spring Sand				
9,405.83	9,346.00	Second Bone Spring Carbonate				
9,631.86	9,526.00	Second Bone Spring Sand				
10,051.61	9,673.00	HZ Target at Landin				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,151.61	9,100.04	0.00	0.00	KOP: 9151.61' MD/-394.17' VS/9100.04' TVD
10,051.61	9,673.00	41.62	-48.92	EOC: 10051.61' MD/178.78' VS/9673.00' TVD
22,559.15	9,673.00	349.12	-410.36	TD: 22559.15' MD/12686.32' VS/9673.00' TVD

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 267919

CONDITIONS

Operator: Franklin Mountain Energy 3, LLC 44 Cook Street Denver, CO 80206	OGRID: 331595
	Action Number: 267919
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	10/30/2023