

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

Form C-101
August 1, 2011

Permit 369702

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address Franklin Mountain Energy 3, LLC 44 Cook Street Denver, CO 80206		2. OGRID Number 331595
		3. API Number 30-025-53210
4. Property Code 334693	5. Property Name ALPHA STATE COM	6. Well No. 502H

7. Surface Location

UL - Lot C	Section 9	Township 19S	Range 35E	Lot Idn C	Feet From 320	N/S Line N	Feet From 2356	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot C	Section 33	Township 18S	Range 35E	Lot Idn C	Feet From 100	N/S Line N	Feet From 1600	E/W Line W	County Lea
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9. Pool Information

SCHARB;BONE SPRING	55610
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3851
16. Multiple N	17. Proposed Depth 20546	18. Formation Bone Spring	19. Contractor	20. Spud Date 8/15/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1906	1462	0
Int1	12.25	9.625	40	4084	860	0
Prod	8.75	7	32	9432	443	3084
Prod	8.75	5.5	20	20546	2774	9432

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	5000	CACTUS

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Rachael A Overbey

Title: Project Manager

Email Address: roverbey@fmellc.com

Date: 7/10/2024

Phone: 303-570-4057

OIL CONSERVATION DIVISION

Approved By: Paul F Kautz

Title: Geologist

Approved Date: 7/18/2024

Expiration Date: 7/18/2026

Conditions of Approval Attached

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Form APD Conditions
Permit 369702

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Franklin Mountain Energy 3, LLC [331595] 44 Cook Street Denver, CO 80206	API Number: 30-025-53210
	Well: ALPHA STATE COM #502H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud



Cable 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)	3,857'	30'	30'	0	Sand/Gravels/Unconsolidated
Rustler	2038	1,848'			Carbonates
Salado	1773	2,114'			Salt, Anhydrite & Clastics
Base Salt	656	3,231'			Shaley Carbonate & Shale
Yates	441	3,445'			Anhydrite/Shale
Seven Rivers	-26	3,913'			Interbedded Shale/Carbonate
Queen	-757	4,644'			Sandstone & Dolomite & Anhydrite
Delaware Mtn Group	-2316	6,202'			Sandstone/Carb/Shale - oil/gas/water
Bone Spring Lime	-3932	7,819'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-5489	9,375'			Sandstone - oil/gas/water
Second Bone Spring Carbonate	-5720	9,607'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-5981	9,867'			Sandstone - oil/gas/water
HZ Target	-6287	10,173'			Sandstone - oil/gas/water
Third Bone Spring Carbonate	-6384	10,270'			Shale/Carbonates - oil/gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	6,202'	Oil
1 st Bone Spring Sand	9,375'	Oil
2 nd Bone Spring Carb	9,607'	Oil
2 nd Bone Spring Sand	9,867'	Oil
3 rd Bone Spring Sand	N/A	Oil
Wolfcamp	N/A	Oil
Wolfcamp B	N/A	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 1,898' 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"	54.5	J-55	2730	1130	853	BTC 909	1,898	1.02	1.14	4.19	4.47
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	4,134	2.04	2.19	3.45	3.93
Production 7"	32	HCP-110	12460	10760	1025	CDC-HTQ 1053	9,621	1.92	2.39	2.51	2.58
Production 5 1/2"	20	HCP-110	12640	12200	641	CDC-HTQ 667	10,771 10,173	1.15	2.42	2.03	2.11 2.20

Tapered production string will be ran with a X-over installed at the KOP of 9,621'.



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, Intermediate, and Production strings to further optimization of drilling process and reduction of disturbance.

String Type	Hole Size	Casing		Sacks	Type of cmt	Lead			Sacks	Type of cmt	Tail			TOC	Excess
		Size	Setting Depth			Yield ft3/sk	Water gal/sk	TOC ft			Yield ft3/sk	Water gal/sk	TOC		
Surf	17.5	13.375	1,898	1015	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%CaCl2, 0.1%	1.34	6.35	1,498	100%	
Int1	12.25	9.625	4,134	671	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	3,734	100%	
Prod	8.75	7	9,621	453	HSLD 9420, 10.5 ppg, Class C, 1#/sk Salt, 4% STE 1% C-45	3.99	25.51	3,134						100%	
Prod	8.75	5.5	20,392						2688	HSLD 80, 13.ppg , 32#/sk Salt, 4% STE, 1#/sk Gyp Seal	1.52	7.59	9,621	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 3,500/250 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 3,500/250 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 – 1,898'	Fresh - Gel	8.6-8.8	28-34	N/c
1,898' – 4,134'	Brine	8.8-10.2	28-34	N/c
4,134' – 10,521'	Brine	8.8-10.2	28-34	N/c
10,521' – 20,392' Lateral	Oil Base	9.0-11	58-68	3 - 6

The

highest mud weight needed to balance formation is expected to be 9-11 ppg. In order to maintain hole stability, mud weights up to 11 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 10,173' TVD (deepest point of the well) is 170F with an estimated maximum bottom-hole pressure (BHP) at the same point of 5,819' psig (based on 11 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 30 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.

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: Franklin Mountain Energy 3, LLC **OGRID:** 331595 **Date:** 8/30/2023

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
See Attached Well List						

IV. Central Delivery Point Name: Alpha/Cable CTB [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
See Attached Well List						

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☒ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

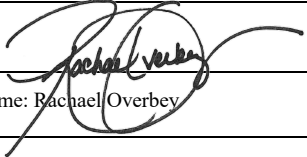
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature: 
Printed Name: Rachael Overbey
Title: Director Operations Planning & Regulatory
E-mail Address: roverbey@fmelle.com
Date: 1/2/2024
Phone: 720-414-7868
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

NATURAL GAS MANAGEMENT PLAN

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API 14 Digit	ULSTR	Surface Location FTG	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Alpha State Com 301H	TBD	C-09-19S-35E	310 FNL 1470 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 302H	TBD	C-09-19S-35E	50 FNL 2265 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 303H	30-025-52406	P-04-19S-35E	452 FSL 1395 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 304H	30-025-51990	P-04-19S-35E	452 FSL 1245 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 501H	TBD	C-09-19S-35E	310 FNL 1410 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 502H	TBD	C-09-19S-35E	50 FNL 2205 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 503H	30-025-52407	P-04-19S-35E	452 FSL 1365 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 504H	30-025-52408	P-04-19S-35E	452 FSL 1305 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 601H	TBD	C-09-19S-35E	310 FNL 1500 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 602H	TBD	C-09-19S-35E	50 FNL 2295 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 603H	30-025-52409	P-04-19S-35E	552 FSL 1365 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 604H	30-025-52410	P-04-19S-35E	552 FSL 1305 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 701H	TBD	C-09-19S-35E	310 FNL 1440 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 702H	TBD	C-09-19S-35E	50 FNL 2235 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 703H	30-025-52411	P-04-19S-35E	452 FSL 1335 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 704H	30-025-52412	P-04-19S-35E	452 FSL 1275 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 801H	TBD	C-09-19S-35E	310 FNL 1530 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 802H	TBD	C-09-19S-35E	50 FNL 2325 FWL	800 +/-	700 +/-	2500 +/-
Alpha State Com 803H	30-025-52413	P-04-19S-35E	552 FSL 1335 FEL	800 +/-	700 +/-	2500 +/-
Alpha State Com 804H	30-025-52414	P-04-19S-35E	552 FSL 1275 FEL	800 +/-	700 +/-	2500 +/-

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be

Well Name	API 14 Digit	Spud Date (Batch Drilling)	TD Reached Date	Completion Commencement Date	Initial Flowback Date	First Production Date
Alpha State Com 301H	TBD	6/21/2024	9/4/2024	9/29/2024	10/9/2024	10/11/2024
Alpha State Com 302H	TBD	6/1/2024	8/15/2024	9/9/2024	9/19/2024	9/21/2024
Alpha State Com 303H	30-025-52406	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 304H (Producing)	30-025-51990	N/A	N/A	N/A	N/A	N/A
Alpha State Com 501H	TBD	6/21/2024	9/4/2024	9/29/2024	10/9/2024	10/11/2024
Alpha State Com 502H	TBD	6/1/2024	8/15/2024	8/30/2024	9/9/2024	9/11/2024
Alpha State Com 503H	30-025-52407	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 504H	30-025-52408	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 601H	TBD	6/21/2024	9/4/2024	9/29/2024	10/9/2024	10/11/2024
Alpha State Com 602H	TBD	6/1/2024	8/15/2024	9/9/2024	9/19/2024	9/21/2024
Alpha State Com 603H	30-025-52409	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 604H	30-025-52410	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 701H	TBD	6/21/2024	9/4/2024	9/29/2024	10/9/2024	10/11/2024
Alpha State Com 702H	TBD	6/1/2024	8/15/2024	9/9/2024	9/19/2024	9/21/2024
Alpha State Com 703H	30-025-52411	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 704H	TBD	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 801H	TBD	6/21/2024	9/4/2024	9/29/2024	10/9/2024	10/11/2024
Alpha State Com 802H	TBD	6/1/2024	8/15/2024	9/9/2024	9/19/2024	9/21/2024
Alpha State Com 803H	30-025-52413	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025
Alpha State Com 804H	30-025-52414	8/15/2024	12/28/2024	1/22/2025	2/1/2025	2/3/2025



Natural Gas Management Plan

Items VI-VIII

VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.

- Data from surrounding wells is used to generate type curves which provides the basis for expected gas rates during initial production, peak production and then the natural decline.
- Separation equipment will be sized to provide adequate separation for peak production.
- Facility design includes multiple stages of separation to minimize gas waste. Wells flow through a 3-phase separator to remove gas. Gas from the 3 Phase separators are then sent through a gas scrubber before being route to treatment and/or sales.
- Industry standard sizing calculations are used for gas-liquid separation and liquid-liquid separation.

VII. Operational Practices: Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F 19.15.27.8 NMAC.

- Drilling, completion and production setup is designed to minimize the waste of natural gas and to flare instead of vent.
- *Drilling Operations:*
 - Natural gas encountered will be flared instead of vented unless there is an equipment malfunction and/or to avoid risking safety or the environment.
 - Flares will be properly sized and placed at least 100' from the nearest surface hole on the pad.
- *Completions/Recompletions Operations:*
 - Flowback operations will not commence until connected to a properly sized gas gathering system.
 - During initial flowback wells are routed to the separation equipment as soon as technically feasible to minimize gas waste.
 - During separation flowback wells are routed to the separation equipment to minimize gas waste.
 - Gas sales is maximized. Gas will be flared instead of vented during an emergency or malfunction to avoid posing a risk to operations or personnel safety.
 - Flares are properly sized with a continuous pilot.
- *Production Operations:*
 - Gas sales will be maximized. Gas will be flared instead of vented during an emergency or malfunction to avoid posing a risk to operations or personnel safety.
 - After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- *Performance Standards:*
 - The facility will be designed to handle peak production rates and pressures.
 - All tanks will have automatic gauging equipment.
 - Flares will be designed to ensure proper combustion and will have continuous pilots. Flares will be located 100' from nearest surface hole on the pad and storage tanks.
 - Weekly AVOs will be performed, and any leaking thief hatches will be cleaned and properly re-sealed.
- *Measurement and Calibration:*



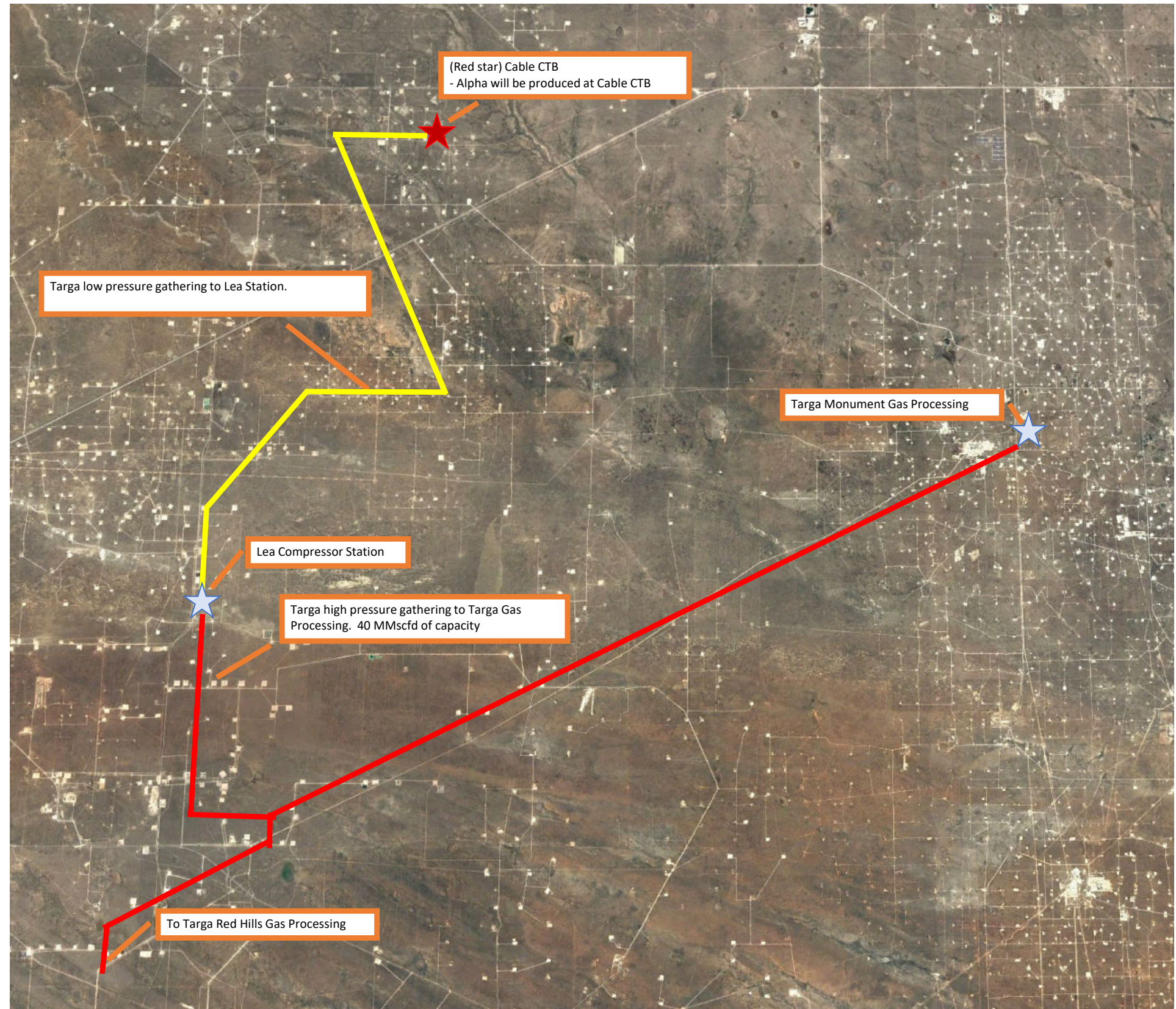
- All volume that is flared and vented that is not measured will be estimated.
- When metering is not practical due to low pressure/rate, all vented or flared volumes will be estimated.
- Measurement will conform to industry standards. Measurement will not be bypassed except for purposes of inspection or calibration.

VIII. Best Management Practices: Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

- Venting will be minimized during active and planned maintenance.
- Systems and equipment requiring maintenance will be isolated and blown down to sales and then flare before any remaining gas is vented in an effort to minimize waste and venting.
- Downhole maintenance will use best management practices to minimize vent.

Alpha NGMP Map
Sep 2023

- Capacities reflected are FME's understanding of 3rd party midstream system capacities





Franklin Mountain Energy LLC

PV_Lea County, NM(N83-NME3001)

Alpha_Cable West

(WC02) Cable State Com 502H - Slot (WC02)

502H

Plan: APD-Rev01

Standard Planning Report - Geographic

22 March, 2024



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Project	PV_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	Alpha_Cable West		
Site Position:		Northing:	612,756.93 usft
From:	Map	Easting:	808,179.69 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32.68151517
		Longitude:	-103.46605645

Well	(WC02) Cable State Com 502H - Slot (WC02)					
Well Position	+N/-S	0.00 usft	Northing:	612,856.80 usft	Latitude:	32.68179001
	+E/-W	0.00 usft	Easting:	808,163.95 usft	Longitude:	-103.46610494
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,857.00 usft
Grid Convergence:		0.47 °				

Wellbore	502H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/17/2024	6.21	60.24	47,483.82452300

Design	APD-Rev01			
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	179.31

Plan Survey Tool Program	Date	3/21/2024		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,392.53 APD-Rev01 (502H)	MWD+IFR1+MS	
			OWSG MWD + IFR1 + Multi-S	



Planning Report - Geographic

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Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	3.00	0.00	2,199.91	5.23	0.00	1.50	1.50	0.00	0.00	
2,350.00	3.00	0.00	2,349.70	13.09	0.00	0.00	0.00	0.00	0.00	
3,058.03	12.02	55.81	3,051.50	73.21	61.14	1.50	1.27	7.88	69.13	
3,319.36	12.02	55.81	3,307.11	103.78	106.15	0.00	0.00	0.00	0.00	
4,521.05	0.00	0.00	4,500.00	174.34	210.00	1.00	-1.00	0.00	180.00	
9,621.09	0.00	0.00	9,600.04	174.34	210.00	0.00	0.00	0.00	0.00	
10,521.09	90.00	184.00	10,173.00	-397.22	170.03	10.00	10.00	0.00	184.00	
10,755.73	90.00	179.31	10,173.00	-631.70	163.26	2.00	0.00	-2.00	-90.00	
20,392.53	90.00	179.31	10,173.00	-10,267.80	279.80	0.00	0.00	0.00	0.00	02-PBHL(CBSC-502H



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.00	0.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
30.00	0.00	0.00	30.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
Cenozoic Alluvium (surface)										
100.00	0.00	0.00	100.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
200.00	0.00	0.00	200.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
300.00	0.00	0.00	300.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
400.00	0.00	0.00	400.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
500.00	0.00	0.00	500.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
600.00	0.00	0.00	600.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
700.00	0.00	0.00	700.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
800.00	0.00	0.00	800.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
900.00	0.00	0.00	900.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,700.00	0.00	0.00	1,700.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
1,848.00	0.00	0.00	1,848.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
Rustler										
1,900.00	0.00	0.00	1,900.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	612,856.80	808,163.95	32.68179001	-103.46610494	
2,100.00	1.50	0.00	2,099.99	1.31	0.00	612,858.11	808,163.95	32.68179360	-103.46610491	
2,114.02	1.71	0.00	2,114.00	1.70	0.00	612,858.51	808,163.95	32.68179468	-103.46610490	
Salado										
2,200.00	3.00	0.00	2,199.91	5.23	0.00	612,862.04	808,163.95	32.68180439	-103.46610481	
2,300.00	3.00	0.00	2,299.77	10.47	0.00	612,867.27	808,163.95	32.68181878	-103.46610467	
2,350.00	3.00	0.00	2,349.70	13.09	0.00	612,869.89	808,163.95	32.68182597	-103.46610460	
2,400.00	3.34	12.11	2,399.63	15.82	0.31	612,872.62	808,164.25	32.68183347	-103.46610353	
2,500.00	4.34	28.97	2,499.40	21.98	2.75	612,878.78	808,166.70	32.68185036	-103.46609542	
2,600.00	5.57	38.99	2,599.03	29.07	7.64	612,885.87	808,171.59	32.68186973	-103.46607934	
2,700.00	6.91	45.28	2,698.44	37.08	14.97	612,893.88	808,178.92	32.68189157	-103.46605530	
2,800.00	8.30	49.51	2,797.55	46.00	24.74	612,902.80	808,188.69	32.68191588	-103.46602332	
2,900.00	9.73	52.51	2,896.32	55.83	36.94	612,912.64	808,200.88	32.68194262	-103.46598343	
3,000.00	11.17	54.75	2,994.66	66.57	51.55	612,923.37	808,215.50	32.68197180	-103.46593564	
3,058.03	12.02	55.81	3,051.50	73.21	61.14	612,930.01	808,225.09	32.68198983	-103.46590430	
3,100.00	12.02	55.81	3,092.55	78.12	68.37	612,934.92	808,232.32	32.68200316	-103.46588068	
3,200.00	12.02	55.81	3,190.36	89.82	85.59	612,946.62	808,249.54	32.68203493	-103.46582440	
3,241.55	12.02	55.81	3,231.00	94.68	92.75	612,951.48	808,256.69	32.68204813	-103.46580102	
Base Salt										
3,300.00	12.02	55.81	3,288.17	101.52	102.81	612,958.32	808,266.76	32.68206670	-103.46576813	
3,319.36	12.02	55.81	3,307.11	103.78	106.15	612,960.59	808,270.09	32.68207285	-103.46575723	
3,400.00	11.21	55.81	3,386.09	112.90	119.57	612,969.71	808,283.52	32.68209762	-103.46571335	
3,459.99	10.61	55.81	3,445.00	119.29	128.97	612,976.09	808,292.91	32.68211495	-103.46568266	
Yates										
3,500.00	10.21	55.81	3,484.35	123.35	134.95	612,980.15	808,298.89	32.68212598	-103.46566312	
3,600.00	9.21	55.81	3,582.92	132.83	148.90	612,989.63	808,312.84	32.68215172	-103.46561752	
3,700.00	8.21	55.81	3,681.76	141.34	161.42	612,998.14	808,325.37	32.68217483	-103.46557659	
3,800.00	7.21	55.81	3,780.86	148.88	172.52	613,005.68	808,336.47	32.68219530	-103.46554032	
3,900.00	6.21	55.81	3,880.17	155.44	182.19	613,012.25	808,346.13	32.68221313	-103.46550874	



Planning Report - Geographic

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Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,933.01	5.88	55.81	3,913.00	157.40	185.06	613,014.20	808,349.01	32.68221844	-103.46549934
Seven Rivers									
4,000.00	5.21	55.81	3,979.67	161.04	190.42	613,017.84	808,354.36	32.68222831	-103.46548184
4,100.00	4.21	55.81	4,079.33	165.65	197.21	613,022.45	808,361.16	32.68224084	-103.46545964
4,200.00	3.21	55.81	4,179.12	169.29	202.56	613,026.09	808,366.51	32.68225072	-103.46544215
4,300.00	2.21	55.81	4,279.01	171.94	206.47	613,028.75	808,370.42	32.68225794	-103.46542937
4,400.00	1.21	55.81	4,378.96	173.62	208.94	613,030.43	808,372.89	32.68226249	-103.46542130
4,500.00	0.21	55.81	4,478.95	174.32	209.97	613,031.12	808,373.92	32.68226438	-103.46541795
4,521.05	0.00	0.00	4,500.00	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
4,600.00	0.00	0.00	4,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
4,665.05	0.00	0.00	4,644.00	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
Queen									
4,700.00	0.00	0.00	4,678.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
4,800.00	0.00	0.00	4,778.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
4,900.00	0.00	0.00	4,878.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,000.00	0.00	0.00	4,978.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,100.00	0.00	0.00	5,078.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,200.00	0.00	0.00	5,178.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,300.00	0.00	0.00	5,278.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,400.00	0.00	0.00	5,378.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,500.00	0.00	0.00	5,478.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,600.00	0.00	0.00	5,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,700.00	0.00	0.00	5,678.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,800.00	0.00	0.00	5,778.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
5,900.00	0.00	0.00	5,878.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,000.00	0.00	0.00	5,978.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,100.00	0.00	0.00	6,078.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,200.00	0.00	0.00	6,178.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,223.05	0.00	0.00	6,202.00	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
Delaware Mtn Group									
6,300.00	0.00	0.00	6,278.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,400.00	0.00	0.00	6,378.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,500.00	0.00	0.00	6,478.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,600.00	0.00	0.00	6,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,700.00	0.00	0.00	6,678.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,800.00	0.00	0.00	6,778.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
6,900.00	0.00	0.00	6,878.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,000.00	0.00	0.00	6,978.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,100.00	0.00	0.00	7,078.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,200.00	0.00	0.00	7,178.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,300.00	0.00	0.00	7,278.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,400.00	0.00	0.00	7,378.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,500.00	0.00	0.00	7,478.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,600.00	0.00	0.00	7,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,700.00	0.00	0.00	7,678.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,800.00	0.00	0.00	7,778.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
7,840.05	0.00	0.00	7,819.00	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
Bone Spring Lime									
7,900.00	0.00	0.00	7,878.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,000.00	0.00	0.00	7,978.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,100.00	0.00	0.00	8,078.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,200.00	0.00	0.00	8,178.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,300.00	0.00	0.00	8,278.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,400.00	0.00	0.00	8,378.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,500.00	0.00	0.00	8,478.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,600.00	0.00	0.00	8,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,700.00	0.00	0.00	8,678.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,800.00	0.00	0.00	8,778.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
8,900.00	0.00	0.00	8,878.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,000.00	0.00	0.00	8,978.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,100.00	0.00	0.00	9,078.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,200.00	0.00	0.00	9,178.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,300.00	0.00	0.00	9,278.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,396.05	0.00	0.00	9,375.00	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
First Bone Spring Sand									
9,400.00	0.00	0.00	9,378.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,500.00	0.00	0.00	9,478.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,600.00	0.00	0.00	9,578.95	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
9,621.09	0.00	0.00	9,600.04	174.34	210.00	613,031.14	808,373.95	32.68226444	-103.46541784
KOP: 9621.09' MD/ -171.80' VS/9600.04' TVD									
9,628.05	0.70	184.00	9,607.00	174.30	210.00	613,031.10	808,373.95	32.68226433	-103.46541786
Second Bone Spring Carbonate									
9,650.00	2.89	184.00	9,628.94	173.61	209.95	613,030.42	808,373.90	32.68226244	-103.46541803
9,700.00	7.89	184.00	9,678.70	168.93	209.62	613,025.73	808,373.57	32.68224957	-103.46541922
9,750.00	12.89	184.00	9,727.87	159.93	208.99	613,016.74	808,372.94	32.68222487	-103.46542150
9,800.00	17.89	184.00	9,776.06	146.70	208.07	613,003.50	808,372.02	32.68218852	-103.46542486
9,850.00	22.89	184.00	9,822.91	129.33	206.85	612,986.13	808,370.80	32.68214080	-103.46542927
9,855.87	23.48	184.00	9,828.31	127.02	206.69	612,983.82	808,370.64	32.68213446	-103.46542986
100FLL: 9855.87' MD/ -124.52' VS/9828.31' TVD									
9,898.79	27.77	184.00	9,867.00	108.51	205.40	612,965.31	808,369.34	32.68208361	-103.46543456
Second Bone Spring Sand									
9,900.00	27.89	184.00	9,868.07	107.95	205.36	612,964.75	808,369.31	32.68208207	-103.46543470
9,950.00	32.89	184.00	9,911.18	82.72	203.59	612,939.52	808,367.54	32.68201278	-103.46544110
10,000.00	37.89	184.00	9,951.93	53.84	201.57	612,910.65	808,365.52	32.68193345	-103.46544843
10,050.00	42.89	184.00	9,990.00	21.53	199.31	612,878.33	808,363.26	32.68184470	-103.46545663
10,100.00	47.89	184.00	10,025.10	-13.97	196.83	612,842.84	808,360.78	32.68174719	-103.46546564
01-T98(CBSC-502H)									
10,150.00	52.89	184.00	10,056.97	-52.38	194.15	612,804.42	808,358.09	32.68164168	-103.46547539
10,200.00	57.89	184.00	10,085.36	-93.42	191.28	612,763.38	808,355.22	32.68152895	-103.46548581
10,250.00	62.89	184.00	10,110.06	-136.77	188.24	612,720.03	808,352.19	32.68140987	-103.46549682
10,300.00	67.89	184.00	10,130.87	-182.11	185.07	612,674.70	808,349.02	32.68128535	-103.46550832
10,350.00	72.89	184.00	10,147.64	-229.08	181.79	612,627.73	808,345.74	32.68115633	-103.46552024
10,400.00	77.89	184.00	10,160.25	-277.33	178.42	612,579.48	808,342.36	32.68102379	-103.46553249
10,450.00	82.89	184.00	10,168.59	-326.49	174.98	612,530.31	808,338.93	32.68088875	-103.46554497
10,500.00	87.89	184.00	10,172.61	-376.19	171.50	612,480.61	808,335.45	32.68075223	-103.46555759
10,521.09	90.00	184.00	10,173.00	-397.22	170.03	612,459.58	808,333.98	32.68069446	-103.46556292
EOC: 10521.09' MD/ 399.24' VS/10173.00' TVD - HZ Target									
10,600.00	90.00	182.42	10,173.00	-476.01	165.61	612,380.79	808,329.56	32.68047803	-103.46557938
10,700.00	90.00	180.42	10,173.00	-575.97	163.13	612,280.83	808,327.08	32.68020334	-103.46559010
10,755.73	90.00	179.31	10,173.00	-631.70	163.26	612,225.10	808,327.21	32.68005017	-103.46559115
10,800.00	90.00	179.31	10,173.00	-675.97	163.80	612,180.83	808,327.75	32.67992850	-103.46559059
10,900.00	90.00	179.31	10,173.00	-775.96	165.01	612,080.84	808,328.96	32.67965365	-103.46558932
11,000.00	90.00	179.31	10,173.00	-875.95	166.22	611,980.85	808,330.17	32.67937881	-103.46558805
11,100.00	90.00	179.31	10,173.00	-975.95	167.43	611,880.86	808,331.37	32.67910396	-103.46558677
11,200.00	90.00	179.31	10,173.00	-1,075.94	168.64	611,780.86	808,332.58	32.67882911	-103.46558550
11,300.00	90.00	179.31	10,173.00	-1,175.93	169.85	611,680.87	808,333.79	32.67855427	-103.46558423



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,400.00	90.00	179.31	10,173.00	-1,275.93	171.05	611,580.88	808,335.00	32.67827942	-103.46558296
11,500.00	90.00	179.31	10,173.00	-1,375.92	172.26	611,480.89	808,336.21	32.67800457	-103.46558168
11,600.00	90.00	179.31	10,173.00	-1,475.91	173.47	611,380.89	808,337.42	32.67772973	-103.46558041
11,700.00	90.00	179.31	10,173.00	-1,575.90	174.68	611,280.90	808,338.63	32.67745488	-103.46557914
11,800.00	90.00	179.31	10,173.00	-1,675.90	175.89	611,180.91	808,339.84	32.67718004	-103.46557787
11,900.00	90.00	179.31	10,173.00	-1,775.89	177.10	611,080.92	808,341.05	32.67690519	-103.46557659
12,000.00	90.00	179.31	10,173.00	-1,875.88	178.31	610,980.92	808,342.26	32.67663034	-103.46557532
12,100.00	90.00	179.31	10,173.00	-1,975.87	179.52	610,880.93	808,343.47	32.67635550	-103.46557405
12,200.00	90.00	179.31	10,173.00	-2,075.87	180.73	610,780.94	808,344.68	32.67608065	-103.46557278
12,300.00	90.00	179.31	10,173.00	-2,175.86	181.94	610,680.94	808,345.89	32.67580580	-103.46557150
12,400.00	90.00	179.31	10,173.00	-2,275.85	183.15	610,580.95	808,347.10	32.67553096	-103.46557023
12,500.00	90.00	179.31	10,173.00	-2,375.84	184.36	610,480.96	808,348.30	32.67525611	-103.46556896
12,600.00	90.00	179.31	10,173.00	-2,475.84	185.57	610,380.97	808,349.51	32.67498126	-103.46556769
12,700.00	90.00	179.31	10,173.00	-2,575.83	186.78	610,280.97	808,350.72	32.67470642	-103.46556641
12,800.00	90.00	179.31	10,173.00	-2,675.82	187.98	610,180.98	808,351.93	32.67443157	-103.46556514
12,900.00	90.00	179.31	10,173.00	-2,775.82	189.19	610,080.99	808,353.14	32.67415672	-103.46556387
13,000.00	90.00	179.31	10,173.00	-2,875.81	190.40	609,981.00	808,354.35	32.67388188	-103.46556260
13,100.00	90.00	179.31	10,173.00	-2,975.80	191.61	609,881.00	808,355.56	32.67360703	-103.46556132
13,200.00	90.00	179.31	10,173.00	-3,075.79	192.82	609,781.01	808,356.77	32.67333219	-103.46556005
13,300.00	90.00	179.31	10,173.00	-3,175.79	194.03	609,681.02	808,357.98	32.67305734	-103.46555878
13,400.00	90.00	179.31	10,173.00	-3,275.78	195.24	609,581.02	808,359.19	32.67278249	-103.46555750
13,500.00	90.00	179.31	10,173.00	-3,375.77	196.45	609,481.03	808,360.40	32.67250765	-103.46555623
13,600.00	90.00	179.31	10,173.00	-3,475.76	197.66	609,381.04	808,361.61	32.67223280	-103.46555496
13,700.00	90.00	179.31	10,173.00	-3,575.76	198.87	609,281.05	808,362.82	32.67195795	-103.46555369
13,800.00	90.00	179.31	10,173.00	-3,675.75	200.08	609,181.05	808,364.03	32.67168311	-103.46555241
13,900.00	90.00	179.31	10,173.00	-3,775.74	201.29	609,081.06	808,365.23	32.67140826	-103.46555114
14,000.00	90.00	179.31	10,173.00	-3,875.74	202.50	608,981.07	808,366.44	32.67113341	-103.46554987
14,100.00	90.00	179.31	10,173.00	-3,975.73	203.71	608,881.08	808,367.65	32.67085857	-103.46554860
14,200.00	90.00	179.31	10,173.00	-4,075.72	204.91	608,781.08	808,368.86	32.67058372	-103.46554732
14,300.00	90.00	179.31	10,173.00	-4,175.71	206.12	608,681.09	808,370.07	32.67030887	-103.46554605
14,400.00	90.00	179.31	10,173.00	-4,275.71	207.33	608,581.10	808,371.28	32.67003403	-103.46554478
14,500.00	90.00	179.31	10,173.00	-4,375.70	208.54	608,481.11	808,372.49	32.66975918	-103.46554350
14,600.00	90.00	179.31	10,173.00	-4,475.69	209.75	608,381.11	808,373.70	32.66948433	-103.46554223
14,700.00	90.00	179.31	10,173.00	-4,575.68	210.96	608,281.12	808,374.91	32.66920949	-103.46554096
14,800.00	90.00	179.31	10,173.00	-4,675.68	212.17	608,181.13	808,376.12	32.66893464	-103.46553969
14,900.00	90.00	179.31	10,173.00	-4,775.67	213.38	608,081.13	808,377.33	32.66865979	-103.46553841
15,000.00	90.00	179.31	10,173.00	-4,875.66	214.59	607,981.14	808,378.54	32.66838495	-103.46553714
15,100.00	90.00	179.31	10,173.00	-4,975.65	215.80	607,881.15	808,379.75	32.66811010	-103.46553587
15,200.00	90.00	179.31	10,173.00	-5,075.65	217.01	607,781.16	808,380.96	32.66783525	-103.46553459
15,300.00	90.00	179.31	10,173.00	-5,175.64	218.22	607,681.16	808,382.16	32.66756041	-103.46553332
15,400.00	90.00	179.31	10,173.00	-5,275.63	219.43	607,581.17	808,383.37	32.66728556	-103.46553205
15,500.00	90.00	179.31	10,173.00	-5,375.63	220.64	607,481.18	808,384.58	32.66701071	-103.46553077
15,600.00	90.00	179.31	10,173.00	-5,475.62	221.84	607,381.19	808,385.79	32.66673587	-103.46552950
15,700.00	90.00	179.31	10,173.00	-5,575.61	223.05	607,281.19	808,387.00	32.66646102	-103.46552823
15,800.00	90.00	179.31	10,173.00	-5,675.60	224.26	607,181.20	808,388.21	32.66618617	-103.46552696
15,900.00	90.00	179.31	10,173.00	-5,775.60	225.47	607,081.21	808,389.42	32.66591133	-103.46552568
16,000.00	90.00	179.31	10,173.00	-5,875.59	226.68	606,981.21	808,390.63	32.66563648	-103.46552441
16,100.00	90.00	179.31	10,173.00	-5,975.58	227.89	606,881.22	808,391.84	32.66536163	-103.46552314
16,200.00	90.00	179.31	10,173.00	-6,075.57	229.10	606,781.23	808,393.05	32.66508678	-103.46552186
16,300.00	90.00	179.31	10,173.00	-6,175.57	230.31	606,681.24	808,394.26	32.66481194	-103.46552059
16,400.00	90.00	179.31	10,173.00	-6,275.56	231.52	606,581.24	808,395.47	32.66453709	-103.46551932
16,500.00	90.00	179.31	10,173.00	-6,375.55	232.73	606,481.25	808,396.68	32.66426224	-103.46551804
16,600.00	90.00	179.31	10,173.00	-6,475.55	233.94	606,381.26	808,397.89	32.66398740	-103.46551677
16,700.00	90.00	179.31	10,173.00	-6,575.54	235.15	606,281.27	808,399.09	32.66371255	-103.46551550



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,800.00	90.00	179.31	10,173.00	-6,675.53	236.36	606,181.27	808,400.30	32.66343770	-103.46551423
16,900.00	90.00	179.31	10,173.00	-6,775.52	237.57	606,081.28	808,401.51	32.66316286	-103.46551295
17,000.00	90.00	179.31	10,173.00	-6,875.52	238.77	605,981.29	808,402.72	32.66288801	-103.46551168
17,100.00	90.00	179.31	10,173.00	-6,975.51	239.98	605,881.30	808,403.93	32.66261316	-103.46551041
17,200.00	90.00	179.31	10,173.00	-7,075.50	241.19	605,781.30	808,405.14	32.66233832	-103.46550913
17,300.00	90.00	179.31	10,173.00	-7,175.49	242.40	605,681.31	808,406.35	32.66206347	-103.46550786
17,400.00	90.00	179.31	10,173.00	-7,275.49	243.61	605,581.32	808,407.56	32.66178862	-103.46550659
17,500.00	90.00	179.31	10,173.00	-7,375.48	244.82	605,481.32	808,408.77	32.66151377	-103.46550531
17,600.00	90.00	179.31	10,173.00	-7,475.47	246.03	605,381.33	808,409.98	32.66123893	-103.46550404
17,700.00	90.00	179.31	10,173.00	-7,575.46	247.24	605,281.34	808,411.19	32.66096408	-103.46550277
17,800.00	90.00	179.31	10,173.00	-7,675.46	248.45	605,181.35	808,412.40	32.66068923	-103.46550149
17,900.00	90.00	179.31	10,173.00	-7,775.45	249.66	605,081.35	808,413.61	32.66041439	-103.46550022
18,000.00	90.00	179.31	10,173.00	-7,875.44	250.87	604,981.36	808,414.82	32.66013954	-103.46549895
18,100.00	90.00	179.31	10,173.00	-7,975.44	252.08	604,881.37	808,416.02	32.65986469	-103.46549767
18,200.00	90.00	179.31	10,173.00	-8,075.43	253.29	604,781.38	808,417.23	32.65958984	-103.46549640
18,300.00	90.00	179.31	10,173.00	-8,175.42	254.50	604,681.38	808,418.44	32.65931500	-103.46549513
18,400.00	90.00	179.31	10,173.00	-8,275.41	255.70	604,581.39	808,419.65	32.65904015	-103.46549385
18,500.00	90.00	179.31	10,173.00	-8,375.41	256.91	604,481.40	808,420.86	32.65876530	-103.46549258
18,600.00	90.00	179.31	10,173.00	-8,475.40	258.12	604,381.40	808,422.07	32.65849046	-103.46549131
18,700.00	90.00	179.31	10,173.00	-8,575.39	259.33	604,281.41	808,423.28	32.65821561	-103.46549003
18,800.00	90.00	179.31	10,173.00	-8,675.38	260.54	604,181.42	808,424.49	32.65794076	-103.46548876
18,900.00	90.00	179.31	10,173.00	-8,775.38	261.75	604,081.43	808,425.70	32.65766591	-103.46548749
19,000.00	90.00	179.31	10,173.00	-8,875.37	262.96	603,981.43	808,426.91	32.65739107	-103.46548621
19,100.00	90.00	179.31	10,173.00	-8,975.36	264.17	603,881.44	808,428.12	32.65711622	-103.46548494
19,200.00	90.00	179.31	10,173.00	-9,075.35	265.38	603,781.45	808,429.33	32.65684137	-103.46548367
19,300.00	90.00	179.31	10,173.00	-9,175.35	266.59	603,681.46	808,430.54	32.65656653	-103.46548239
19,400.00	90.00	179.31	10,173.00	-9,275.34	267.80	603,581.46	808,431.75	32.65629168	-103.46548112
19,500.00	90.00	179.31	10,173.00	-9,375.33	269.01	603,481.47	808,432.95	32.65601683	-103.46547985
19,600.00	90.00	179.31	10,173.00	-9,475.33	270.22	603,381.48	808,434.16	32.65574198	-103.46547857
19,700.00	90.00	179.31	10,173.00	-9,575.32	271.43	603,281.49	808,435.37	32.65546714	-103.46547730
19,800.00	90.00	179.31	10,173.00	-9,675.31	272.63	603,181.49	808,436.58	32.65519229	-103.46547603
19,900.00	90.00	179.31	10,173.00	-9,775.30	273.84	603,081.50	808,437.79	32.65491744	-103.46547475
20,000.00	90.00	179.31	10,173.00	-9,875.30	275.05	602,981.51	808,439.00	32.65464260	-103.46547348
20,100.00	90.00	179.31	10,173.00	-9,975.29	276.26	602,881.51	808,440.21	32.65436775	-103.46547221
20,200.00	90.00	179.31	10,173.00	-10,075.28	277.47	602,781.52	808,441.42	32.65409290	-103.46547093
20,300.00	90.00	179.31	10,173.00	-10,175.27	278.68	602,681.53	808,442.63	32.65381805	-103.46546966
20,392.53	90.00	179.31	10,173.00	-10,267.80	279.80	602,589.01	808,443.75	32.65356374	-103.46546848
TD: 20392.53' MD/ 10270.42' VS/10173.00' TVD - 02-PBHL(CBSC-502H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
02-PBHL(CBSC-502H) - hit/miss target - Shape	0.00	0.00	10,173.00	-10,267.80	279.80	602,589.00	808,443.75	32.65356373	-103.46546848
- plan hits target center - Point									
01-T98(CBSC-502H) - plan misses target center by 206.80usft at 10100.00usft MD (10025.10 TVD, -13.97 N, 196.83 E) - Point	0.00	0.00	10,173.00	124.40	155.03	612,981.20	808,318.98	32.68212842	-103.46559782



Planning Report - Geographic

Database:	TZ USA 17.2	Local Co-ordinate Reference:	Well (WC02) Cable State Com 502H - Slot (WC02)
Company:	Franklin Mountain Energy LLC	TVD Reference:	3857+30 @ 3887.00usft
Project:	PV_Lea County, NM(N83-NME3001)	MD Reference:	3857+30 @ 3887.00usft
Site:	Alpha_Cable West	North Reference:	Grid
Well:	(WC02) Cable State Com 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	502H		
Design:	APD-Rev01		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
30.00	30.00	Cenozoic Alluvium (surface)				
1,848.00	1,848.00	Rustler				
2,114.02	2,114.00	Salado				
3,241.55	3,231.00	Base Salt				
3,459.99	3,445.00	Yates				
3,933.01	3,913.00	Seven Rivers				
4,665.05	4,644.00	Queen				
6,223.05	6,202.00	Delaware Mtn Group				
7,840.05	7,819.00	Bone Spring Lime				
9,396.05	9,375.00	First Bone Spring Sand				
9,628.05	9,607.00	Second Bone Spring Carbonate				
9,898.79	9,867.00	Second Bone Spring Sand				
10,521.09	10,173.00	HZ Target				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
9,621.09	9,600.04	174.34	210.00	KOP: 9621.09' MD/ -171.80' VS/9600.04' TVD	
9,855.87	9,828.31	127.02	206.69	100FLL: 9855.87' MD/ -124.52' VS/9828.31' TVD	
10,521.09	10,173.00	-397.23	170.03	EOC: 10521.09' MD/ 399.24' VS/10173.00' TVD	
20,392.53	10,173.00	-10,267.80	279.80	TD: 20392.53' MD/ 10270.42' VS/10173.00' TVD	