Form C-101 August 1, 2011

Permit 370887

<u>District I</u> 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 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**

	APPLICA	TION FOR PERMIT	TO DRILL, RE	E-ENTER, DEEPE	N, PLUGBAC	K, OR ADD A ZO	ONE			
	ergy 3, LLC					2. 00	GRID Number 331595			
Cook Street ver, CO 80206						3. AF		3		
Property Code         5. Property Name         6. Well No.           336097         ROPE STATE COM         602H										
			7. Su	rface Location						
Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County		
30	18	S 35E	M	330	S	1038	W	Lea		
			8. Proposed	Bottom Hole Locati	on					
Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County		
18	18	S 35E	С	100	N	1660	W	Lea		
			9. Pc	ool Information						
S183518A;BONE	SPRING						9793	)		
ONE SPRING							960			
1 1 1	Section  Section  Section  18	me and Address nklin Mountain Energy 3, LLC Cook Street ver, CO 80206 le 097  Section Township 18  Section 18  Section 18  Section 18  Section 18	Section	Name and Address   Name   Na	Section	Section   Township   Range   Lot Idn   Feet From   N/S Line	Section   Township   Range   Range   Section   18S   Range   Range   Range   Section   18S   Range   Range	Section   Township   Range   Section   18   18   18   35E   Co   Section   18   18   35E   Co   Section   18   18   35E   Co   Section   18   35E   Co   Section   18   35E   Co   Section   18   35E   Co   Section   18   35E   Co   100   N   1660   E/W Line   Section   18   18   35E   Co   100   N   1660   W   Section   Section   18   18   35E   Co   100   N   1660   W   Section   18   18   35E   Co   100   N   1660   Section   18   18   35E   Co   100   N   1660   Section   18   18   35E   Co   100   N   1600   W   Section   18   18   18   35E   Co   100   N   1600   Section   16   Section   18   18   18   35E   Co   100   N   16   16   Section   16   Sect		

**Additional Well Information** 

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3951	
16. Multiple Y	16. Multiple 17. Proposed Depth Y 25873		19. Contractor	20. Spud Date 5/15/2025	
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

	Ziii ropocca daoing ana domont riogram												
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC							
Surf	17.5	13.375	54.5	1942	1486	0							
Int1	12.25	9.625	40	4210	885	0							
Prod	8.75	7	32	9823	463	3210							
Prod	8.75	5.5	20	25873	4004	9823							

#### Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program										
Туре	Working Pressure	Test Pressure	Manufacturer							
Double Ram	10000	5000	CACTUS							

knowledge and b	elief.	true and complete to the best of my  NMAC ⊠ and/or 19.15.14.9 (B) NMAC		OIL CONSERVATION	ON DIVISION	
Printed Name:	Electronically filed by Rachael A	Overbey	Approved By:	Paul F Kautz		
Title:	Project Manager		Title:	Geologist		
Email Address:	roverbey@fmellc.com		Approved Date:	8/6/2024	Expiration Date: 8/6/2026	
Date:	7/31/2024	Phone: 303-570-4057	Conditions of Approval Attached			

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210

Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

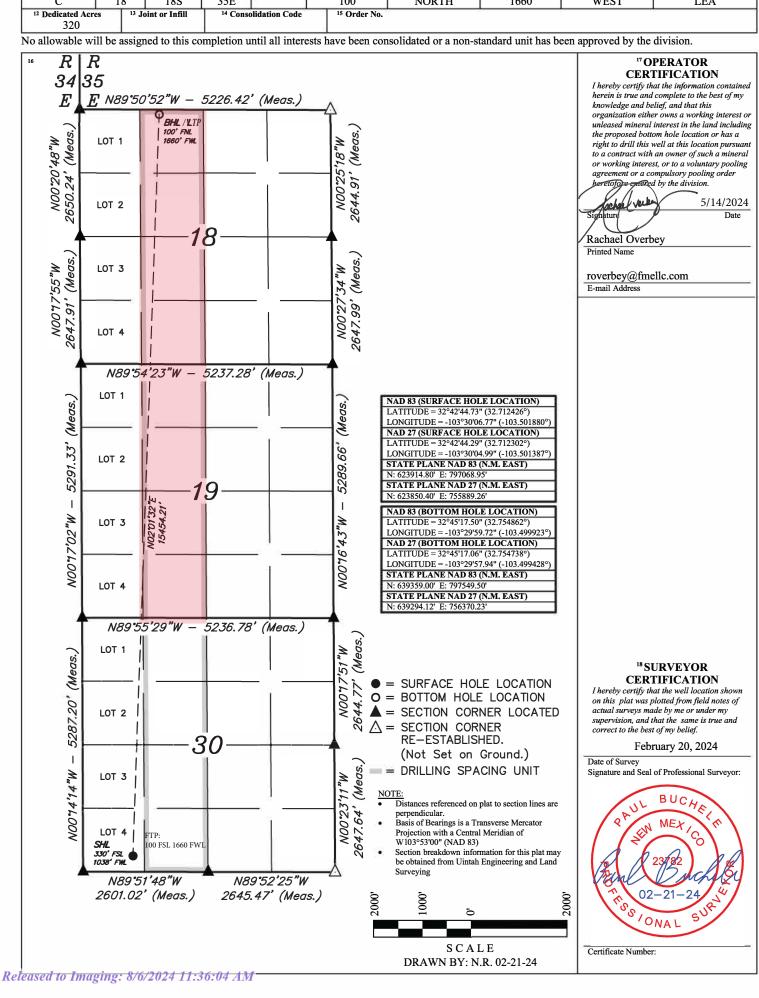
<sup>1</sup> API Number	r	<sup>2</sup> Pool Code 97930						
4 Property Code		5 Pr	operty Name	6 Well Number				
		ROPE STATE COM						
7 OGRID No.		8 OI	perator Name	9 Elevation				
331595		FRANKLIN MOU	JNTAIN ENERGY 3, LLC	3951.3				

#### Surface Location

UL or lot no.	Section 30	Township 18S	Range 35E	Lot Idn	Feet from the 330	North/South line SOUTH	Feet from the 1038	East/West line WEST	County LEA

#### <sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. C	Section 18		Township 18S	Range 35E	Lot Idn	F	Feet from the 100	North/South line NORTH	Feet from the 1660	East/West line WEST	County LEA
12 Dedicated Acres 320		13 Jo	int or Infill	14 Conso	lidation Code		15 Order No.	<del>0 </del>		,	



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1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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

☐ AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

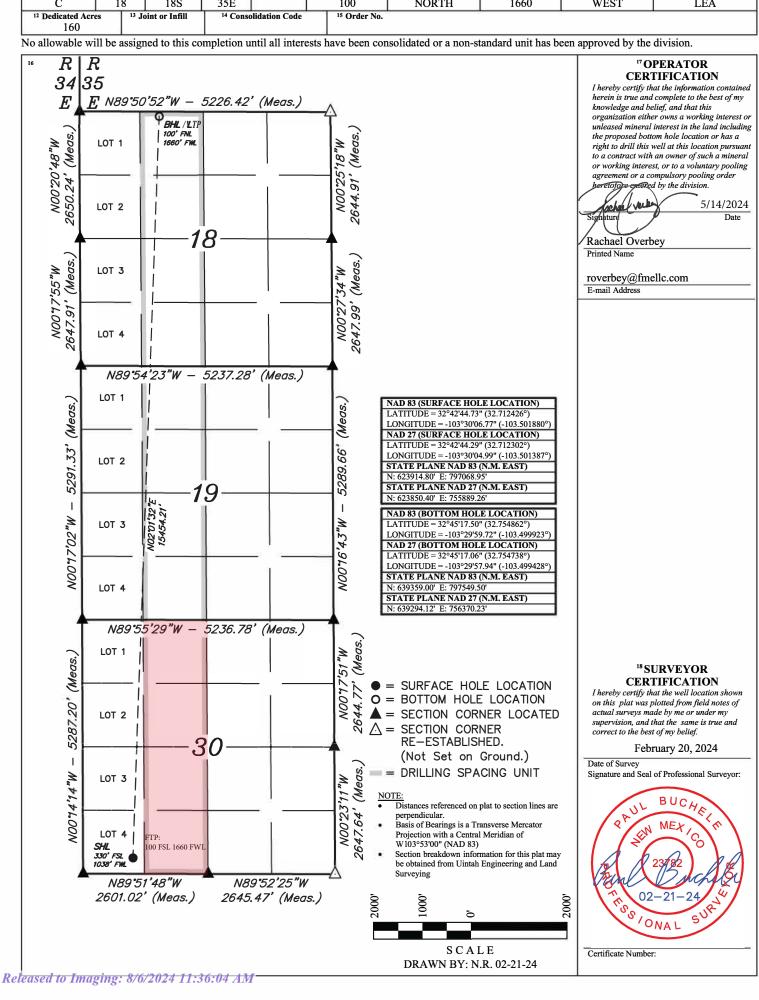
<sup>1</sup> API Number		<sup>2</sup> Pool Code 960					
4 Property Code		5 P1	operty Name	6 Well Number			
		ROPE STATE COM					
7 OGRID No.		8 O	perator Name	9 Elevation			
331595		FRANKLIN MOU	JNTAIN ENERGY 3, LLC	3951.3			

#### Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	30	18S	35E	2	330	SOUTH	1038	WEST	LEA

#### <sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no. C	Section 18		Township 18S	Range 35E	Lot Idn	Feet from the 100	North/South line NORTH	Feet from the 1660	East/West line WEST	County LEA
12 Dedicated Acres 160		13 Jo	int or Infill	14 Conso	lidation Code	15 Order No.	<del>0.</del>		,	



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

Form APD Conditions

Permit 370887

#### PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
Franklin Mountain Energy 3, LLC [331595]	30-025-53343
44 Cook Street	Well:
Denver, CO 80206	ROPE STATE COM #602H

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



# Franklin Mountain Energy LLC

PV\_Lea County, NM(N83-NME3001)
Rope West Pad
(06) Rope State Com 602H - Slot (06) RPSC 602H

602H

Plan: APD-Rev01

# **Standard Planning Report - Geographic**

12 March, 2024



TVD Reference:

MD Reference:

North Reference:

TZ USA 17.2 Database:

Franklin Mountain Energy LLC Company: PV\_Lea County, NM(N83-NME3001) Project:

Site: Rope West Pad

Well: (06) Rope State Com 602H

602H Wellbore: APD-Rev01 Design:

Local Co-ordinate Reference:

**Survey Calculation Method:** 

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

Minimum Curvature

**Project** PV\_Lea County, NM(N83-NME3001)

Map System: US State Plane 1983

North American Datum 1983 Geo Datum: New Mexico Eastern Zone Map Zone:

System Datum: Mean Sea Level

Site Rope West Pad

Site Position: Northing: 623,914.52 usft Latitude: 32.71242845 From: Easting: 796,918.98 usft Longitude: -103.50236793 Мар

**Position Uncertainty:** 0.00 usft Slot Radius: 13-3/16 "

Well (06) Rope State Com 602H - Slot (06) RPSC 602H

0.00 usft 32.71242598 **Well Position** +N/-S Northing: 623,914.80 usft Latitude: +E/-W 0.00 usft -103.50188038 Easting: 797,068.95 usft Longitude:

**Position Uncertainty** 0.00 usft Wellhead Elevation: Ground Level: 3,951.00 usft

Grid Convergence: 0.45°

602H Wellbore

Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (°) (°) (nT) IGRF2020 3/11/2024 6.23 60.26 47,499.37250048

Design **Audit Notes:** 0.00

Version: Phase: PLAN Tie On Depth: Vertical Section: Depth From (TVD) +N/-S +E/-W Direction

(usft) (usft) (usft) (°) 0.00 0.00 0.00 359.48

3/12/2024 **Plan Survey Tool Program** Date

APD-Rev01

**Depth From** Depth To

(usft) (usft) Survey (Wellbore) **Tool Name** Remarks

0.00 25,873.60 APD-Rev01 (602H) MWD+IFR1+MS 1

OWSG MWD + IFR1 + Multi-S



TZ USA 17.2 Database:

Franklin Mountain Energy LLC Company: Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

602H Wellbore: Design: APD-Rev01 Local Co-ordinate Reference:

**Survey Calculation Method:** 

RPSC 602H 3951+30 @ 3981.00usft

**TVD Reference:** 

MD Reference: Grid North Reference:

3951+30 @ 3981.00usft

Well (06) Rope State Com 602H - Slot (06)

an 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	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,002.08	7.53	114.52	2,000.64	-13.68	29.98	1.50	1.50	0.00	114.52	
6,489.19	7.53	114.52	6,449.04	-257.79	565.03	0.00	0.00	0.00	0.00	
7,242.32	0.00	0.00	7,200.00	-278.31	610.00	1.00	-1.00	0.00	180.00	
9,823.36	0.00	0.00	9,781.04	-278.31	610.00	0.00	0.00	0.00	0.00	
10,723.36	90.00	0.80	10,354.00	294.59	618.00	10.00	10.00	0.00	0.80	
10,789.50	90.00	359.48	10,354.00	360.73	618.16	2.00	0.00	-2.00	-90.00	
25,873.60	90.00	359.48	10,354.00	15,444.20	480.55	0.00	0.00	0.00	0.00	02-PBHL(RPSC-602



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC
Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

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	623,914.80	797,068.95	32.71242598	-103.50188038
30.00	0.00	0.00	30.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
Cenozoi	c Alluvium (sı	urface)							
100.00	0.00	0.00	100.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
200.00	0.00	0.00	200.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
300.00	0.00	0.00	300.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
400.00 500.00	0.00	0.00 0.00	400.00 500.00	0.00 0.00	0.00 0.00	623,914.80 623,914.80	797,068.95 797,068.95	32.71242598 32.71242598	-103.50188038 -103.50188038
600.00	0.00	0.00	600.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
700.00	0.00	0.00	700.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
800.00	0.00	0.00	800.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
900.00	0.00	0.00	900.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,000.00	0.00	0.00	1,000.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,100.00	0.00	0.00	1,100.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,200.00	0.00	0.00	1,200.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,300.00	0.00	0.00	1,300.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,400.00	0.00	0.00	1,400.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,500.00	0.00	0.00	1,500.00	0.00	0.00	623,914.80	797,068.95	32.71242598	-103.50188038
1,600.00	1.50	114.52	1,599.99	-0.54	1.19	623,914.26	797,070.14	32.71242447	-103.50187652
1,700.00 1,800.00	3.00 4.50	114.52 114.52	1,699.91 1,799.69	-2.17 -4.89	4.76 10.71	623,912.63 623,909.92	797,073.71 797,079.66	32.71241991 32.71241232	-103.50186495 -103.50184567
1,891.69	5.88	114.52	1,799.09	-8.33	18.25	623,906.48	797,079.00	32.71241232	-103.50182124
Rustler	5.00	114.02	1,031.00	-0.55	10.23	020,300.40	797,007.20	32.7 1240270	-100.50102124
1,900.00	6.00	114.52	1,899.27	-8.69	19.04	623,906.12	797,087.98	32.71240170	-103.50181871
2,002.08	7.53	114.52	2,000.64	-13.68	29.98	623,901.13	797,098.93	32.71238775	-103.50178327
2,100.00	7.53	114.52	2,097.71	-19.00	41.65	623,895.80	797,110.60	32.71237285	-103.50174544
2,200.00	7.53	114.52	2,196.85	-24.44	53.58	623,890.36	797,122.53	32.71235764	-103.50170682
2,241.51	7.53	114.52	2,238.00	-26.70	58.53	623,888.10	797,127.48	32.71235133	-103.50169078
Salado									
2,300.00	7.53	114.52	2,295.99	-29.89	65.50	623,884.92	797,134.45	32.71234244	-103.50166819
2,400.00	7.53	114.52	2,395.12	-35.33	77.43	623,879.48	797,146.37	32.71232723	-103.50162956
2,500.00	7.53	114.52	2,494.26	-40.77	89.35	623,874.04	797,158.30	32.71231202	-103.50159094
2,600.00	7.53	114.52	2,593.40	-46.21	101.28	623,868.60	797,170.22	32.71229681	-103.50155231
2,700.00 2,800.00	7.53 7.53	114.52 114.52	2,692.53 2,791.67	-51.65 -57.09	113.20 125.12	623,863.16 623,857.72	797,182.15 797,194.07	32.71228160 32.71226639	-103.50151368 -103.50147506
2,900.00	7.53	114.52	2,791.07	-62.53	137.05	623,852.28	797,194.07	32.71225118	-103.50147506
3,000.00	7.53	114.52	2,989.95	-67.97	148.97	623,846.84	797,217.92	32.71223597	-103.50139780
3,100.00	7.53	114.52	3,089.08	-73.41	160.90	623,841.40	797,229.84	32.71222076	-103.50135918
3,200.00	7.53	114.52	3,188.22	-78.85	172.82	623,835.96	797,241.77	32.71220555	-103.50132055
3,213.90	7.53	114.52	3,202.00	-79.60	174.48	623,835.20	797,243.43	32.71220344	-103.50131518
Base Sa	lt								
3,300.00	7.53	114.52	3,287.36	-84.29	184.75	623,830.51	797,253.69	32.71219034	-103.50128192
3,400.00	7.53	114.52	3,386.50	-89.73	196.67	623,825.07	797,265.62	32.71217513	-103.50124330
3,500.00	7.53	114.52	3,485.63	-95.17	208.59	623,819.63	797,277.54	32.71215992	-103.50120467
3,578.04	7.53	114.52	3,563.00	-99.42	217.90	623,815.39	797,286.85	32.71214805	-103.50117453
Yates		4=	0 = 2 + = =	4000	000	000 511 15	707.655.47	00 745 : : : - :	100
3,600.00	7.53	114.52	3,584.77	-100.61	220.52	623,814.19	797,289.47	32.71214471	-103.50116604
3,700.00 3,800.00	7.53 7.53	114.52 114.52	3,683.91	-106.05	232.44 244.37	623,808.75	797,301.39	32.71212950	-103.50112742
3,800.00	7.53	114.52	3,783.05 3,882.18	-111.49 -116.93	244.37 256.29	623,803.31 623,797.87	797,313.31 797,325.24	32.71211429 32.71209908	-103.50108879 -103.50105016
4,000.00	7.53	114.52	3,981.32	-110.93	268.21	623,792.43	797,325.24	32.71209908	-103.50103010
4,008.76	7.53	114.52	3,990.00	-122.85	269.26	623,791.96	797,338.21	32.71208254	-103.50100816
Seven R			,			,	,		



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC

Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

Planned Survey									
Measured			Vertical			Мар	Мар		
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude	Longitude
4,100.00	7.53	114.52	4,080.46	-127.81	280.14	623,786.99	797,349.09	32.71206866	-103.50097291
4,200.00	7.53	114.52	4,179.60	-133.25	292.06	623,781.55	797,361.01	32.71205345	-103.50093429
4,300.00	7.53	114.52	4,278.73	-138.69	303.99	623,776.11	797,372.94	32.71203824	-103.50089566
4,400.00	7.53	114.52	4,377.87	-144.13	315.91	623,770.67	797,384.86	32.71202303	-103.50085703
4,500.00	7.53	114.52	4,477.01	-149.57	327.84	623,765.23	797,396.78	32.71200782	-103.50081841
4,600.00	7.53	114.52	4,576.14	-155.01	339.76	623,759.79	797,408.71	32.71199261	-103.50077978
4,700.00	7.53	114.52	4,675.28	-160.45	351.68	623,754.35	797,420.63	32.71197740	-103.50074115
4,760.24	7.53	114.52	4,735.00	-163.73	358.87	623,751.07	797,427.82	32.71196824	-103.50071789
Queen									
4,800.00	7.53	114.52	4,774.42	-165.90	363.61	623,748.91	797,432.56	32.71196219	-103.50070253
4,900.00	7.53	114.52	4,873.56	-171.34	375.53	623,743.47	797,444.48	32.71194698	-103.50066390
5,000.00	7.53	114.52	4,972.69	-176.78	387.46	623,738.03	797,456.41	32.71193177	-103.50062527
5,100.00	7.53	114.52	5,071.83	-182.22	399.38	623,732.59	797,468.33	32.71191656	-103.50058665
5,200.00	7.53	114.52	5,170.97	-187.66	411.31	623,727.15	797,480.25	32.71190135	-103.50054802
5,300.00	7.53	114.52	5,270.11	-193.10	423.23	623,721.71	797,492.18	32.71188614	-103.50050939
5,400.00	7.53	114.52	5,369.24	-198.54	435.15	623,716.27	797,504.10	32.71187094	-103.50047077
5,500.00	7.53	114.52	5,468.38	-203.98	447.08	623,710.83	797,516.03	32.71185573	-103.50043214
5,600.00		114.52	5,567.52	-209.42	459.00	623,705.39	797,527.95	32.71184052	-103.50039352
5,700.00	7.53	114.52	5,666.66	-214.86	470.93	623,699.95	797,539.88	32.71182531	-103.50035489
5,800.00	7.53	114.52 114.52	5,765.79	-220.30 -225.74	482.85 494.78	623,694.50 623,689.06	797,551.80	32.71181010	-103.50031626
5,900.00 6,000.00	7.53 7.53	114.52	5,864.93 5,964.07	-225.74 -231.18	494.76 506.70	623,683.62	797,563.72 797,575.65	32.71179489 32.71177968	-103.50027764 -103.50023901
6,067.52		114.52	6,031.00	-231.16 -234.85	514.75	623,679.95	797,583.70	32.71176941	-103.50023901
· ·		114.52	0,031.00	-234.03	314.73	023,079.93	191,303.10	32.71170341	-105.50021295
6,100.00	e Mtn Group 7.53	114.52	6,063.20	-236.62	518.62	623,678.18	797,587.57	32.71176447	-103.50020038
6,200.00	7.53	114.52	6,162.34	-242.06	530.55	623,672.74	797,599.50	32.71174926	-103.50016176
6,300.00		114.52	6,261.48	-247.50	542.47	623,667.30	797,611.42	32.71173405	-103.50012313
6,400.00	7.53	114.52	6,360.62	-252.94	554.40	623,661.86	797,623.35	32.71171884	-103.50008451
6,489.19	7.53	114.52	6,449.04	-257.79	565.03	623,657.01	797,633.98	32.71170527	-103.50005005
6,500.00	7.42	114.52	6,459.76	-258.38	566.31	623,656.43	797,635.26	32.71170364	-103.50004591
6,600.00	6.42	114.52	6,559.03	-263.38	577.28	623,651.42	797,646.23	32.71168965	-103.50001039
6,700.00	5.42	114.52	6,658.49	-267.66	586.67	623,647.14	797,655.61	32.71167767	-103.49997997
6,800.00	4.42	114.52	6,758.12	-271.23	594.47	623,643.58	797,663.42	32.71166772	-103.49995468
6,900.00	3.42	114.52	6,857.88	-274.07	600.70	623,640.74	797,669.65	32.71165978	-103.49993452
7,000.00	2.42	114.52	6,957.75	-276.18	605.34	623,638.62	797,674.29	32.71165386	-103.49991949
7,100.00	1.42	114.52	7,057.70	-277.58	608.39	623,637.23	797,677.34	32.71164996	-103.49990960
7,200.00	0.42	114.52	7,157.68	-278.25	609.86	623,636.56	797,678.81	32.71164809	-103.49990485
7,242.32	0.00	0.00	7,200.00	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,300.00	0.00	0.00	7,257.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,400.00	0.00	0.00	7,357.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,500.00		0.00	7,457.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,600.00		0.00	7,557.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,693.32	0.00	0.00	7,651.00	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
	ring Lime								
7,700.00		0.00	7,657.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,800.00		0.00	7,757.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
7,900.00		0.00	7,857.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
8,000.00		0.00	7,957.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
8,100.00		0.00	8,057.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
8,200.00	0.00	0.00	8,157.68 8,257.68	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
8,300.00 8,400.00		0.00 0.00	8,257.68 8,357.68	-278.31 -278.31	610.00 610.00	623,636.49 623,636.49	797,678.95 797,678.95	32.71164791 32.71164791	-103.49990439 -103.49990439
8,500.00	0.00	0.00	8,457.68	-278.31 -278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
0,300.00	0.00	0.00	0,407.00	-210.31	010.00	023,030.49	00.010,161	32.11104191	-103.49990439



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC

Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

Map	Design.		IXEVUI							
Depth   Inclination   Azimuth   Depth   4N.S   4E.JW   (ustf)	Planned Survey									
8,800.00 0.00 0.00 8,857.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 8,900.00 0.00 0.00 0.00 8,857.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 9,857.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 9,057.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 9,167.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 9,163.00 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 9,163.00 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,163.00 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,357.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,357.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,357.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,457.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,457.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,457.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 9,557.68 .278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 6,000.00 0.00 0.00 0.00	Depth			Depth			Northing	Easting	Latitude	Longitude
8,800.00 0.00 0.00 8,857.88 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 8,900.00 0.00 0.00 8,857.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 8,857.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,000.00 0.00 0.00 0.00 9,057.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,205.32 0.00 0.00 0.00 9,167.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,205.32 0.00 0.00 9,163.00 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,205.32 0.00 0.00 9,163.00 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,306.32 0.00 0.00 0.00 9,357.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,306.32 0.00 0.00 0.00 9,357.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,306.32 0.00 0.00 0.00 9,357.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,306.32 0.00 0.00 0.00 9,457.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,457.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,457.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,836.49 797.678.95 32.71164791 -103.49990439 9,500.00 0.00 0.00 9,557.68 278	8.600.00	0.00	0.00	8.557.68	-278.31	610.00	623.636.49	797.678.95	32.71164791	-103.49990439
8,900.00 0.00 0.00 8,757.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49990439 9,000.00 0.00 0.00 8,857.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49990439 9,000.00 0.00 0.00 0.00 9,576.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49990439 9,200.00 0.00 0.00 0.00 9,157.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49990439 9,205.52 0.00 0.00 9,157.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49990439 9,205.52 0.00 0.00 9,157.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,305.20 0.00 0.00 0.00 9,354.00 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,305.20 0.00 0.00 0.00 9,354.00 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,305.20 0.00 0.00 0.00 9,357.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,306.20 0.00 0.00 0.00 9,357.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,306.20 0.00 0.00 0.00 9,357.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,500.00 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,557.68 278.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,757.68 2.728.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,757.68 2.728.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,757.68 2.728.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,757.68 2.728.31 610.00 623,636.49 797.678.95 32.71164791 1.03.49900439 9,600.20 0.00 0.00 9,55	1				-278.31	610.00				
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9,400,00 0,00 0,00 9,357,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,600,00 0,00 0,00 9,557,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,602.32 0,00 0,00 9,557,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,602.32 0,00 0,00 9,560,00 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,602.32 0,00 0,00 9,560,00 2,66 6 0,80 9,67,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,802.32 0,00 0,00 0,00 9,767,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,802.33 6 0,00 0,00 9,787,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 9,823.36 0,00 0,00 9,787,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 6,823.36 0,00 0,00 9,787,68 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 6,823.36 0,00 0,00 9,781.04 -278.31 610,00 623,636.49 797,678.95 32,71164791 -103.49990439 6,823.36 0,00 0,00 9,767.68 -277.76 9 610,01 623,637.11 797,678.95 32,71164991 -103.49990439 6,950.00 2,66 0.80 9,807.67 -277.69 610,01 623,637.11 797,678.96 32,71164991 -103.49990439 9,950.00 2,66 0.80 9,954.50 -273.19 610,07 623,641.61 797,679.02 32,71164961 -103.49990439 6,950.00 12,66 0.80 9,966.65 -264.37 610,19 623,650.43 797,679.14 32,71164961 -103.49990439 10,000.00 17,66 0.80 9,964.90 -251.30 610,38 623,663.43 797,679.57 32,71176949 -103.49990248 10,000.00 27.66 0.80 10,001.82 -234.07 610,62 623,680.73 797,679.57 32,71176949 -103.49990248 10,000.00 27.66 0.80 10,001.82 -234.07 610,62 623,680.73 797,679.57 32,71176949 -103.49990248 10,000.00 27.66 0.80 10,047.06 -212.82 610.91 623,707.19 79,680.61 32,71176949 -103.49990124 10,100.00 37.66 0.80 10,047.06 -212.82 610.91 623,707.19 79,680.61 32,71176694 -103.49990358 10,256.38 43.30 0.80 10,174.00 -122.34 611.67 623,707.19 79,680.61 32,71176694 -103.49990358 10,256.38 43.30 0.80 10,174.00 -122.34 611.67 623,707.19 79,680.61 32,71176694 -103.4998912 10,150.00 32.66 0.80 10,265.59 -52.87 613.15 623,881.94 797,681.07 32,7116699 -103.4998913	9,396.32	0.00	0.00	9,354.00	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
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9,600.00 0.00 0.00 9,557,68 -278.31 610.00 623,636.49 797,678.95 32.71164791 -103.49990439  9,602.32 0.00 0.00 0.00 9,560.00 -278.31 610.00 623,636.49 797,678.95 32.71164791 -103.49990439  9,700.00 0.00 0.00 0.00 9,657.68 -278.31 610.00 623,636.49 797,678.95 32.71164791 -103.49990439  9,800.00 0.00 0.00 0.00 9,757.68 -278.31 610.00 623,636.49 797,678.95 32.71164791 -103.49990439  9,823.36 0.00 0.00 0.00 9,781.04 -278.31 610.00 623,636.49 797,678.95 32.71164791 -103.49990439  KOP: 9823.36' MD/ -283.83' VS/9781.04' TVD  9,850.00 2.66 0.80 9,807.67 -277.69 610.01 623,637.11 797,678.96 32.71164791 -103.49990439  9,950.00 12.66 0.80 9,857.45 -273.19 610.07 623,641.61 797,678.96 32.71164961 -103.49990439  9,950.00 12.66 0.80 9,966.65 -264.37 610.19 623,650.43 797,679.14 32.71166198 -103.49990439  10,050.00 12.66 0.80 9,966.65 -264.37 610.19 623,650.43 797,679.14 32.71166198 -103.49990439  10,050.00 12.66 0.80 19,964.90 -251.30 610.38 623,663.51 797,679.14 32.71176861 -103.49990451  10,050.00 22.66 0.80 10,001.82 -234.07 610.62 623,680.73 797,679.70 32.71176949 -103.49990451  10,074.60 25.12 0.80 10,001.82 -234.07 610.62 623,680.73 797,679.70 32.71176966 -103.49990125  100FLL: 1007.60' MD/ -229.64' VS/10024.31' TVD  10,100.00 27.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,679.86 32.71182789 -103.4999055  100FLL: 1007.60' MD/ -229.64' VS/10024.31' TVD  10,100.00 37.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,679.86 32.71182789 -103.49989756  10,250.00 42.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,678.86 32.71182789 -103.49989583  10,250.00 42.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,678.86 32.71182789 -103.49989583  10,250.00 42.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,689.61 32.71189690 -103.499895912  10,250.00 47.66 0.80 10,470.60 -212.82 610.91 623,751.89 797,681.56 32.71126769 -103.499895912  10,250.00 47.66 0.80 10,470.60 -212.82 610.91 623,752.89 797,681.56 32.7126765 -103.49986938  10,250.00 52.66 0.80 10,340.77 71.40 612.72 623,958.89 797,681.56 32.7126765 -103.49986938  10,250.00 67										
Second Bone Spring Sand   9,700.00   0.00   9,560.00   -278.31   610.00   623,636.49   797,678.95   32.71164791   -103.49990439   9,700.00   0.00   0.00   0.00   9,757.68   -278.31   610.00   623,636.49   797,678.95   32.71164791   -103.49990439   9,802.36   0.00   0.00   9,767.68   -278.31   610.00   623,636.49   797,678.95   32.71164791   -103.49990439   9,823.36   0.00   0.00   9,781.04   -278.31   610.00   623,636.49   797,678.95   32.71164791   -103.49990439   797,678.95   32.71164791   -103.49990439   797,678.95   32.71164791   -103.49990439   797,678.95   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.96   32.71164791   -103.49990439   797,678.97   32.71176491   -103.49990439   797,678.97   32.71176491   -103.49990439   797,678.97   32.71176491   -103.49990439   797,678.97   32.71176491   -103.49990439   797,678.97   32.71164791   -103.49990439   797,678.97   32.71164791   -103.49990439   797,678.97   32.71164791   -103.49990439   797,678.97   32.71164791   -103.49990439   797,678.97   32.71164791   -103.49990439   797,678.97   32.71164791   -103.49990439   32.71266439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439   -103.49990439	1						,			
Second Bone Spring Sand	1									
9,700.00 0.00 0.00 9,657.68 -276.31 610.00 623,636.49 797,678.95 32,71164791 -103,49990439 9,800.00 0.00 0.00 9,757.68 -278.31 610.00 623,636.49 797,678.95 32,71164791 -103,49990439 8,823.36 0.00 0.00 9,757.68 -278.31 610.00 623,636.49 797,678.95 32,71164791 -103,49990439 8,823.36 0.00 0.00 9,761.04 -278.31 610.00 623,636.49 797,678.95 32,71164791 -103,49990439 8,823.36 0.00 0.00 9,807.67 -277.69 610.01 623,637.11 797,678.96 32,71164961 -103,49990435 9,900.00 7.66 0.80 9,807.67 -277.69 610.01 623,637.11 797,679.02 32,71166198 -103,49990430 9,900.00 7.66 0.80 9,906.65 -264.37 610.19 623,650.43 797,679.14 32,7116629 -103,49990340 10,000.00 17,66 0.80 9,954.90 -261.30 610.38 623,663.51 797,679.14 32,7116629 -103,49990340 10,000.00 17,66 0.80 10,001.82 -234.07 610.62 623,680.73 797,679.57 32,71176449 -103,49990265 10,074.60 25.12 0.80 10,024.31 *TVD 10,000.00 27.66 0.80 10,004.31 *224.11 610.76 623,690.70 797,679.57 32,71176649 -103,49990055 100FLL: 10074.60* MD' -229.64* W3/10024.31 *TVD 10,100.00 27.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,679.86 32,71182789 -103,49989075 10,150.00 32.66 0.80 10,902.77 -187.71 611.27 623,727.10 797,680.21 32,7118969 -103,4998976 10,200.00 37.66 0.80 10,190.31 -128.34 612.18 623,755.88 797,680.61 32,71197600 -103,49989530 10,256.38 43.30 0.80 10,174.00 -122.34 612.18 623,755.88 797,680.61 32,71197600 -103,49989533 Third Bone Spring Carbonate 10,300.00 47.66 0.80 10,265.59 -52.87 613.15 623,861.94 797,681.56 32,71207654 -103,49989310 10,550.00 52.66 0.80 10,265.59 -52.87 613.15 623,861.94 797,682.10 32,7126649 -103,49988940 10,450.00 62.66 0.80 10,250.59 -52.87 613.15 623,861.94 797,682.10 32,7126649 -103,49988930 10,256.38 43.30 0.80 10,174.00 -122.34 612.18 623,923.69 797,682.10 32,7126649 -103,49988940 10,450.00 62.66 0.80 10,250.59 -52.87 613.15 623,861.94 797,682.10 32,7126649 -103,49988940 10,450.00 62.66 0.80 10,250.59 -52.87 613.15 623,861.94 797,683.37 32,7126649 -103,49988940 10,450.00 62.66 0.80 10,250.59 -52.87 613.15 623,861.94 797,683.37 32,7126649 -103,4998894				9,560.00	-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
9,800.00 0.00 0.00 9,781.04 -278.31 610.00 623,636.49 797,678.95 32,71164791 -103.49990439 9,823.36 0.00 0.00 9,781.04 -278.31 610.00 623,636.49 797,678.95 32,71164791 -103.49990439 10.00										
No.	1									
KOP: 9823.36" MD/ -283.83" VS/9781.04" TVD   9,850.00   2.66   0.80   9,857.45   -273.19   610.07   623,637.11   797,676.96   32.71164961   -103.49990435   9,950.00   7.66   0.80   9,857.45   -273.19   610.07   623,631.61   797,679.02   32.71166918   -103.49990430   9,950.00   12.66   0.80   9,956.95   -264.37   610.19   623,650.43   797,679.14   32.71168621   -103.49990430   10,000.00   17.66   0.80   9,954.90   -251.30   610.38   623,660.43   797,679.14   32.71176862   -103.49990248   10,0550.00   22.66   0.80   10,001.82   -234.07   610.62   623,680.73   797,679.57   32.71177649   -103.49990125   10,074.60   25.12   0.80   10,024.31   -224.11   610.76   623,690.70   797,679.70   32.71179866   -103.4999055   100FLL: 10074.60' MD/ -229.64' VS/10024.31' VD   10,100.00   27.66   0.80   10,047.06   -212.82   610.91   623,701.99   797,679.86   32.71182789   -103.49989755   10,250.00   32.66   0.80   10,090.27   -187.71   611.27   623,727.10   797,680.21   32.71189690   -103.49989756   10,250.00   32.66   0.80   10,169.33   -126.69   612.12   623,788.12   797,681.07   32.71107660   -103.49989333   10,256.38   43.30   0.80   10,174.00   -122.34   612.18   623,792.47   797,681.13   32.71207654   -103.49989333   10,256.38   43.30   0.80   10,174.00   -122.34   612.18   623,792.47   797,681.13   32.71207654   -103.49989333   10,256.38   43.30   0.80   10,265.15   -11.84   613.72   623,823.56   797,681.66   32.7126765   -103.49988933   10,350.00   52.66   0.80   10,265.15   -11.84   613.72   623,902.96   797,682.67   32.7126745   -103.49988941   10,450.00   62.66   0.80   10,265.15   -11.84   613.72   623,902.96   797,682.67   32.7126745   -103.49988949   10,450.00   62.66   0.80   10,290.02   31.51   614.33   623,946.32   797,683.27   32.7126745   -103.49988549   10,450.00   62.66   0.80   10,327.97   123.88   615.62   624,038.69   797,683.91   32.7126639   -103.49988549   10,450.00   62.66   0.80   10,340.77   72.20   616.29   624,087.00   797,685.24   32.71288594   -103.49988549   10,550.00   72.66   0.80   10,340.										
9,850.00	·				-278.31	610.00	623,636.49	797,678.95	32.71164791	-103.49990439
9,900.00 7,66 0.80 9,857.45 -273.19 610.07 623,641.61 797,679.02 32.71166198 -103.49990403 9,950.00 12.66 0.80 9,906.65 -264.37 610.19 623,650.43 797,679.14 32.71168621 -103.49990340 10,000.00 17.66 0.80 9,964.90 -251.30 610.38 623,663.51 797,679.13 32.71176949 -103.49990340 10,050.00 22.66 0.80 10,001.82 -234.07 610.62 623,680.73 797,679.57 32.71176949 -103.49990055 10,074.60 25.12 0.80 10,024.31 -224.11 610.76 623,690.70 797,679.70 32.71176949 -103.49990055 10,074.60 25.12 0.80 10,004.31 -224.11 610.76 623,690.70 797,679.70 32.71179686 -103.49990055 10,000 27.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,679.86 32.71182789 -103.49980975 10,150.00 32.66 0.80 10,047.06 -212.82 610.91 623,701.99 797,679.86 32.71182789 -103.49989975 10,250.00 32.66 0.80 10,131.13 -158.92 611.67 623,755.88 797,680.61 32.71197600 -103.49989562 10,250.00 42.66 0.80 10,169.33 -126.69 612.12 623,755.88 797,680.61 32.71197600 -103.49989562 10,256.38 43.30 0.80 10,174.00 -122.34 612.18 623,792.47 797,681.13 32.71207654 -103.49989333 17.167 680 680 10,169.33 -126.69 612.12 623,755.88 797,681.07 32.71206459 -103.49989333 10,256.38 43.30 0.80 10,174.00 -122.34 612.18 623,792.47 797,681.13 32.71207654 -103.49989333 10,256.38 43.30 0.80 10,174.00 -122.34 612.18 623,792.47 797,681.13 32.71207654 -103.499889333 10,256.38 43.30 0.80 10,204.58 -91.24 612.61 623,823.56 797,681.56 32.71216199 -103.499889112 01-798(RPSC-602H) 10,350.00 52.66 0.80 10,236.59 -52.87 613.15 623,861.94 797,682.10 32.71226745 -103.49988404 10,450.00 62.66 0.80 10,265.15 -11.84 613.72 623,902.96 797,682.67 32.71238019 -103.49988940 10,450.00 62.66 0.80 10,290.02 31.51 614.33 623,948.23 797,683.37 32.7126745 -103.49988404 10,450.00 62.66 0.80 10,290.02 31.51 614.33 623,948.23 797,683.37 32.71267499 -103.49988941 10,450.00 62.66 0.80 10,290.02 31.51 614.33 623,948.23 797,683.27 32.7126939 -103.49988941 10,450.00 62.66 0.80 10,390.07 70.68 61.60 624,090.00 77,66 0.80 10,340.77 172.20 616.29 624,090.00 797,685.24 32.7125318 -103.49987586 10,550.00 77.66 0.80 10,340.77 172.2					077.00	040.04	000 007 44	707 670 00	20.74404004	402 40000425
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Third Bone Spring Carbonate 10,300.00	10,250.00	42.66	0.80	10,169.33	-126.69	612.12	623,788.12	797,681.07	32.71206459	-103.49989363
10,300.00 47.66 0.80 10,204.58 -91.24 612.61 623,823.56 797,681.56 32.71216199 -103.49989112  01-T98(RPSC-602H)  10,350.00 52.66 0.80 10,236.59 -52.87 613.15 623,861.94 797,682.10 32.71226745 -103.49988840 10,400.00 57.66 0.80 10,265.15 -11.84 613.72 623,902.96 797,682.67 32.71238019 -103.49988549 10,450.00 62.66 0.80 10,290.02 31.51 614.33 623,946.32 797,683.27 32.71249933 -103.49988241 10,452.15 62.88 0.80 10,291.00 33.43 614.35 623,948.23 797,683.30 32.71250459 -103.49988227  Third Bone Spring Sand  10,500.00 67.66 0.80 10,311.01 76.87 614.96 623,991.67 797,683.91 32.71262398 -103.49987919 10,550.00 72.66 0.80 10,327.97 123.88 615.62 624,038.69 797,684.56 32.71275318 -103.49987586 10,600.00 77.66 0.80 10,340.77 172.20 616.29 624,087.00 797,685.24 32.71288594 -103.49987243 10,650.00 82.66 0.80 10,349.31 221.44 616.98 624,136.24 797,685.93 32.71302127 -103.49986933 10,700.00 87.66 0.80 10,345.00 294.59 618.00 624,209.40 797,686.62 32.71315813 -103.49986374 EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153	10,256.38	43.30	0.80	10,174.00	-122.34	612.18	623,792.47	797,681.13	32.71207654	-103.49989333
01-T98(RPSC-602H)           10,350.00         52.66         0.80         10,236.59         -52.87         613.15         623,861.94         797,682.10         32.71226745         -103.49988840           10,400.00         57.66         0.80         10,265.15         -11.84         613.72         623,902.96         797,682.67         32.71238019         -103.49988549           10,450.00         62.66         0.80         10,290.02         31.51         614.33         623,946.32         797,683.27         32.71249933         -103.49988241           10,452.15         62.88         0.80         10,291.00         33.43         614.35         623,948.23         797,683.30         32.71250459         -103.49988227           Third Bone Spring Sand           10,500.00         67.66         0.80         10,311.01         76.87         614.96         623,991.67         797,683.91         32.71262398         -103.49987919           10,550.00         72.66         0.80         10,327.97         123.88         615.62         624,038.69         797,684.56         32.71275318         -103.49987586           10,600.00         77.66         0.80         10,349.31         221.44         616.98         624,087.00         797,685.24	Third Bo	ne Spring Ca	rbonate							
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10,400.00 57.66 0.80 10,265.15 -11.84 613.72 623,902.96 797,682.67 32.71238019 -103.49988549 10,450.00 62.66 0.80 10,290.02 31.51 614.33 623,946.32 797,683.27 32.71249933 -103.49988241 10,452.15 62.88 0.80 10,291.00 33.43 614.35 623,948.23 797,683.30 32.71250459 -103.49988227 Third Bone Spring Sand 10,500.00 67.66 0.80 10,311.01 76.87 614.96 623,991.67 797,683.91 32.71262398 -103.49987919 10,550.00 72.66 0.80 10,327.97 123.88 615.62 624,038.69 797,684.56 32.71275318 -103.49987586 10,600.00 77.66 0.80 10,340.77 172.20 616.29 624,087.00 797,685.24 32.71288594 -103.49987243 10,650.00 82.66 0.80 10,349.31 221.44 616.98 624,136.24 797,685.93 32.71302127 -103.4998693 10,700.00 87.66 0.80 10,353.52 271.24 617.67 624,186.05 797,686.62 32.71315813 -103.49986540 10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374 EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153	•	•								
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10,500.00       67.66       0.80       10,311.01       76.87       614.96       623,991.67       797,683.91       32.71262398       -103.49987919         10,550.00       72.66       0.80       10,327.97       123.88       615.62       624,038.69       797,684.56       32.71275318       -103.49987586         10,600.00       77.66       0.80       10,340.77       172.20       616.29       624,087.00       797,685.24       32.71288594       -103.49987243         10,650.00       82.66       0.80       10,349.31       221.44       616.98       624,136.24       797,685.93       32.71302127       -103.4998693         10,700.00       87.66       0.80       10,353.52       271.24       617.67       624,186.05       797,686.62       32.71315813       -103.49986540         10,723.36       90.00       0.80       10,354.00       294.59       618.00       624,209.40       797,686.95       32.71322230       -103.49986374         EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target         10,789.50       90.00       359.48       10,354.00       360.73       618.16       624,275.53       797,687.11       32.71340406       -103.49986153	,			10,291.00	33.43	614.35	623,948.23	797,683.30	32.71250459	-103.49988227
10,550.00 72.66 0.80 10,327.97 123.88 615.62 624,038.69 797,684.56 32.71275318 -103.49987586 10,600.00 77.66 0.80 10,340.77 172.20 616.29 624,087.00 797,685.24 32.71288594 -103.49987243 10,650.00 82.66 0.80 10,349.31 221.44 616.98 624,136.24 797,685.93 32.71302127 -103.49986893 10,700.00 87.66 0.80 10,353.52 271.24 617.67 624,186.05 797,686.62 32.71315813 -103.49986540 10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374 EOC: 10723.36 MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153				40 244 04	70.07	044.00	000 004 07	707 000 04	20.74002200	402 40007040
10,600.00 77.66 0.80 10,340.77 172.20 616.29 624,087.00 797,685.24 32.71288594 -103.49987243 10,650.00 82.66 0.80 10,349.31 221.44 616.98 624,136.24 797,685.93 32.71302127 -103.49986893 10,700.00 87.66 0.80 10,353.52 271.24 617.67 624,186.05 797,686.62 32.71315813 -103.49986540 10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374 EOC: 10723.36 MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153	· · · · · · · · · · · · · · · · · · ·						,			
10,650.00 82.66 0.80 10,349.31 221.44 616.98 624,136.24 797,685.93 32.71302127 -103.49986893 10,700.00 87.66 0.80 10,353.52 271.24 617.67 624,186.05 797,686.62 32.71315813 -103.49986540 10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374 EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153										
10,700.00 87.66 0.80 10,353.52 271.24 617.67 624,186.05 797,686.62 32.71315813 -103.49986540 10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374 EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153										
10,723.36 90.00 0.80 10,354.00 294.59 618.00 624,209.40 797,686.95 32.71322230 -103.49986374  EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target  10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153							,			
EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD - HZ Target 10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153										
10,789.50 90.00 359.48 10,354.00 360.73 618.16 624,275.53 797,687.11 32.71340406 -103.49986153						0.00	02 1,200.40	101,000.00	OZ., 1022200	100.4000074
						618.16	624,275.53	797,687.11	32.71340406	-103.49986153
, , , , , , , , , , , , , , , , , , ,	1									-103.49986158
10,900.00 90.00 359.48 10,354.00 471.23 617.15 624,386.03 797,686.10 32.71370778 -103.49986199								,		-103.49986199
	11,000.00	90.00	359.48	10,354.00		616.24	624,486.03	797,685.19		-103.49986240



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC

Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

nned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,100.00	90.00	359.48	10,354.00	671.22	615.33	624,586.02	797,684.27	32.71425748	-103.4998628
11,200.00	90.00	359.48	10,354.00	771.21	614.41	624,686.02	797,683.36	32.71453233	-103.4998632
11,300.00	90.00	359.48	10,354.00	871.21	613.50	624,786.01	797,682.45	32.71480718	-103.4998636
11,400.00	90.00	359.48	10,354.00	971.21	612.59	624,886.01	797,681.54	32.71508203	-103.4998640
11,500.00	90.00	359.48	10,354.00	1,071.20	611.68	624,986.01	797,680.63	32.71535687	-103.4998644
11,600.00	90.00	359.48	10,354.00	1,171.20	610.77	625,086.00	797,679.71	32.71563172	-103.4998648
11,700.00	90.00	359.48	10,354.00	1,271.19	609.85	625,186.00	797,678.80	32.71590657	-103.4998652
11,800.00	90.00	359.48	10,354.00	1,371.19	608.94	625,285.99	797,677.89	32.71618142	-103.4998656
11,900.00	90.00	359.48	10,354.00	1,471.18	608.03	625,385.99	797,676.98	32.71645627	-103.4998660
12,000.00	90.00	359.48	10,354.00	1,571.18	607.12	625,485.98	797,676.06	32.71673111	-103.4998664
12,100.00	90.00	359.48	10,354.00	1,671.18	606.20	625,585.98	797,675.15	32.71700596	-103.4998669
12,200.00	90.00	359.48	10,354.00	1,771.17	605.29	625,685.98	797,674.24	32.71728081	-103.499867
12,300.00	90.00	359.48	10,354.00	1,871.17	604.38	625,785.97	797,673.33	32.71755566	-103.499867
12,400.00	90.00	359.48	10,354.00	1,971.16	603.47	625,885.97	797,672.42	32.71783051	-103.499868
12,500.00	90.00	359.48	10,354.00	2,071.16	602.56	625,985.96	797,671.50	32.71810536	-103.499868
12,600.00	90.00	359.48	10,354.00	2,171.16	601.64	626,085.96	797,670.59	32.71838020	-103.499868
12,700.00	90.00	359.48	10,354.00	2,271.15	600.73	626,185.96	797,669.68	32.71865505	-103.499869
12,800.00	90.00	359.48	10,354.00	2,371.15	599.82	626,285.95	797,668.77	32.71892990	-103.499869
12,900.00	90.00	359.48	10,354.00	2,471.14	598.91	626,385.95	797,667.85	32.71920475	-103.499870
13,000.00	90.00	359.48	10,354.00	2,571.14	597.99	626,485.94	797,666.94	32.71947960	-103.499870
13,100.00	90.00	359.48	10,354.00	2,671.13	597.08	626,585.94	797,666.03	32.71975444	-103.499871
13,200.00	90.00	359.48	10,354.00	2,771.13	596.17	626,685.93	797,665.12	32.72002929	-103.499871
13,300.00	90.00	359.48	10,354.00	2,871.13	595.26	626,785.93	797,664.20	32.72030414	-103.499871
13,400.00	90.00	359.48	10,354.00	2,971.12	594.34	626,885.93	797,663.29	32.72057899	-103.499872
13,500.00	90.00	359.48	10,354.00	3,071.12	593.43	626,985.92	797,662.38	32.72085384	-103.499872
13,600.00	90.00	359.48	10,354.00	3,171.11	592.52	627,085.92	797,661.47	32.72112869	-103.499873
13,700.00	90.00	359.48	10,354.00	3,271.11	591.61	627,185.91	797,660.56	32.72140353	-103.499873
13,800.00	90.00	359.48	10,354.00	3,371.11	590.70	627,285.91	797,659.64	32.72167838	-103.499873
13,900.00	90.00	359.48	10,354.00	3,471.10	589.78	627,385.91	797,658.73	32.72195323	-103.499874
14,000.00	90.00	359.48	10,354.00	3,571.10	588.87	627,485.90	797,657.82	32.72222808	-103.499874
14,100.00	90.00	359.48	10,354.00	3,671.09	587.96	627,585.90	797,656.91	32.72250293	-103.499875
14,200.00	90.00	359.48	10,354.00	3,771.09	587.05	627,685.89	797,655.99	32.72277777	-103.499875
14,300.00	90.00	359.48	10,354.00	3,871.08	586.13	627,785.89	797,655.08	32.72305262	-103.499875
14,400.00	90.00	359.48	10,354.00	3,971.08	585.22	627,885.88	797,654.17	32.72332747	-103.499876
14,500.00	90.00	359.48	10,354.00	4,071.08	584.31	627,985.88	797,653.26	32.72360232	-103.499876
14,600.00	90.00	359.48	10,354.00	4,171.07	583.40	628,085.88	797,652.34	32.72387717	-103.499877
14,700.00	90.00	359.48	10,354.00	4,271.07	582.48	628,185.87	797,651.43	32.72415201	-103.499877
14,800.00	90.00	359.48	10,354.00	4,371.06	581.57	628,285.87	797,650.52	32.72442686	-103.499877
14,900.00	90.00	359.48	10,354.00	4,471.06	580.66	628,385.86	797,649.61	32.72470171	-103.499878
15,000.00	90.00	359.48	10,354.00	4,571.06	579.75	628,485.86	797,648.70	32.72497656	-103.499878
15,100.00	90.00	359.48	10,354.00	4,671.05	578.84	628,585.86	797,647.78	32.72525141	-103.499879
15,200.00	90.00	359.48	10,354.00	4,771.05	577.92	628,685.85	797,646.87	32.72552625	-103.499879
15,300.00	90.00	359.48	10,354.00	4,871.04	577.01	628,785.85	797,645.96	32.72580110	-103.499880
15,400.00	90.00	359.48	10,354.00	4,971.04	576.10	628,885.84	797,645.05	32.72607595	-103.499880
15,500.00		359.48	10,354.00	5,071.03	575.19	628,985.84	797,644.13	32.72635080	-103.499880
15,600.00	90.00	359.48	10,354.00	5,171.03	574.27	629,085.83	797,643.22	32.72662564	-103.499881
15,700.00	90.00	359.48	10,354.00	5,271.03	573.36	629,185.83	797,642.31	32.72690049	-103.499881
15,800.00	90.00	359.48	10,354.00	5,371.02	572.45	629,285.83	797,641.40	32.72717534	-103.499882
15,900.00		359.48	10,354.00	5,471.02	571.54	629,385.82	797,640.49	32.72745019	-103.499882
16,000.00	90.00	359.48	10,354.00	5,571.01	570.63	629,485.82	797,639.57	32.72772504	-103.499882
16,100.00		359.48	10,354.00	5,671.01	569.71	629,585.81	797,638.66	32.72799988	-103.499883
16,200.00	90.00	359.48	10,354.00	5,771.01	568.80	629,685.81	797,637.75	32.72827473	-103.499883
16,300.00		359.48	10,354.00	5,871.00	567.89	629,785.81	797,636.84	32.72854958	-103.499884
16,400.00	90.00	359.48	10,354.00	5,971.00	566.98	629,885.80	797,635.92	32.72882443	-103.499884



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC
Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

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
16,500.00	90.00	359.48	10,354.00	6,070.99	566.06	629,985.80	797,635.01	32.72909927	-103.49988491
16,600.00	90.00	359.48	10,354.00	6,170.99	565.15	630,085.79	797,634.10	32.72937412	-103.49988532
16,700.00	90.00	359.48	10,354.00	6,270.98	564.24	630,185.79	797,633.19	32.72964897	-103.49988573
16,800.00	90.00	359.48	10,354.00	6,370.98	563.33	630,285.78	797,632.27	32.72992382	-103.49988614
16,900.00	90.00	359.48	10,354.00	6,470.98	562.41	630,385.78	797,631.36	32.73019867	-103.49988655
17,000.00	90.00	359.48	10,354.00	6,570.97	561.50	630,485.78	797,630.45	32.73047351	-103.49988696
17,100.00	90.00	359.48	10,354.00	6,670.97	560.59	630,585.77	797,629.54	32.73074836	-103.49988737
17,200.00	90.00	359.48	10,354.00	6,770.96	559.68	630,685.77	797,628.63	32.73102321	-103.49988778
17,300.00	90.00	359.48	10,354.00	6,870.96	558.77	630,785.76	797,627.71	32.73129806	-103.49988819
17,400.00	90.00	359.48	10,354.00	6,970.96	557.85	630,885.76	797,626.80	32.73157290	-103.49988860
17,500.00	90.00	359.48	10,354.00	7,070.95	556.94	630,985.76	797,625.89	32.73184775	-103.49988900
17,600.00	90.00	359.48	10,354.00	7,170.95	556.03	631,085.75	797,624.98	32.73212260	-103.49988941
17,700.00	90.00	359.48	10,354.00	7,270.94	555.12	631,185.75	797,624.06	32.73239745	-103.49988982
17,800.00	90.00	359.48	10,354.00	7,370.94	554.20	631,285.74	797,623.15	32.73267229	-103.49989023
17,900.00	90.00	359.48	10,354.00	7,470.94	553.29	631,385.74	797,622.24	32.73294714	-103.49989064
18,000.00	90.00	359.48	10,354.00	7,570.93	552.38	631,485.73	797,621.33	32.73322199	-103.49989105
18,100.00	90.00	359.48	10,354.00	7,670.93	551.47	631,585.73	797,620.42	32.73349684	-103.49989146
18,200.00	90.00	359.48	10,354.00	7,770.92	550.55	631,685.73	797,619.50	32.73377168	-103.49989187
18,300.00	90.00	359.48	10,354.00	7,870.92	549.64	631,785.72	797,618.59	32.73404653	-103.49989227
18,400.00	90.00	359.48	10,354.00	7,970.91	548.73	631,885.72	797,617.68	32.73432138	-103.49989268
18,500.00	90.00	359.48	10,354.00	8,070.91	547.82	631,985.71	797,616.77	32.73459623	-103.49989309
18,600.00	90.00	359.48	10,354.00	8,170.91	546.91	632,085.71	797,615.85	32.73487107	-103.49989350
18,700.00	90.00	359.48	10,354.00	8,270.90	545.99	632,185.71	797,614.94	32.73514592	-103.49989391
18,800.00	90.00	359.48	10,354.00	8,370.90	545.08	632,285.70	797,614.03	32.73542077	-103.49989432
18,900.00	90.00	359.48	10,354.00	8,470.89	544.17	632,385.70	797,613.12	32.73569562	-103.49989473
19,000.00	90.00	359.48	10,354.00	8,570.89	543.26 542.34	632,485.69	797,612.20	32.73597046	-103.49989513
19,100.00	90.00 90.00	359.48	10,354.00	8,670.89		632,585.69	797,611.29	32.73624531	-103.49989554 -103.49989595
19,200.00 19,300.00	90.00	359.48 359.48	10,354.00 10,354.00	8,770.88 8,870.88	541.43 540.52	632,685.68 632,785.68	797,610.38 797,609.47	32.73652016 32.73679501	-103.49989636
19,400.00	90.00	359.48	10,354.00	8,970.87	539.61	632,885.68	797,608.56	32.73706985	-103.49989677
19,500.00	90.00	359.48	10,354.00	9,070.87	538.70	632,985.67	797,607.64	32.73734470	-103.49989718
19,600.00	90.00	359.48	10,354.00	9,170.86	537.78	633,085.67	797,606.73	32.73761955	-103.49989759
19,700.00	90.00	359.48	10,354.00	9,270.86	536.87	633,185.66	797,605.82	32.73789440	-103.49989799
19,800.00	90.00	359.48	10,354.00	9,370.86	535.96	633,285.66	797,604.91	32.73816924	-103.49989840
19,900.00	90.00	359.48	10,354.00	9,470.85	535.05	633,385.66	797,603.99	32.73844409	-103.4998988
20,000.00	90.00	359.48	10,354.00	9,570.85	534.13	633,485.65	797,603.08	32.73871894	-103.49989922
20,100.00	90.00	359.48	10,354.00	9,670.84	533.22	633,585.65	797,602.17	32.73899378	-103.49989963
20,200.00	90.00	359.48	10,354.00	9,770.84	532.31	633,685.64	797,601.26	32.73926863	-103.49990004
20,300.00	90.00	359.48	10,354.00	9,870.84	531.40	633,785.64	797,600.34	32.73954348	-103.49990044
20,400.00	90.00	359.48	10,354.00	9,970.83	530.48	633,885.63	797,599.43	32.73981833	-103.49990085
20,500.00	90.00	359.48	10,354.00	10,070.83	529.57	633,985.63	797,598.52	32.74009317	-103.49990126
20,600.00	90.00	359.48	10,354.00	10,170.82	528.66	634,085.63	797,597.61	32.74036802	-103.49990167
20,700.00	90.00	359.48	10,354.00	10,270.82	527.75	634,185.62	797,596.70	32.74064287	-103.49990208
20,800.00	90.00	359.48	10,354.00	10,370.81	526.84	634,285.62	797,595.78	32.74091772	-103.49990249
20,900.00	90.00	359.48	10,354.00	10,470.81	525.92	634,385.61	797,594.87	32.74119256	-103.49990289
21,000.00	90.00	359.48	10,354.00	10,570.81	525.01	634,485.61	797,593.96	32.74146741	-103.49990330
21,100.00	90.00	359.48	10,354.00	10,670.80	524.10	634,585.61	797,593.05	32.74174226	-103.49990371
21,200.00	90.00	359.48	10,354.00	10,770.80	523.19	634,685.60	797,592.13	32.74201710	-103.49990412
21,300.00	90.00	359.48	10,354.00	10,870.79	522.27	634,785.60	797,591.22	32.74229195	-103.4999045
21,400.00	90.00	359.48	10,354.00	10,970.79	521.36	634,885.59	797,590.31	32.74256680	-103.49990494
21,500.00	90.00	359.48	10,354.00	11,070.79	520.45	634,985.59	797,589.40	32.74284165	-103.49990534
21,600.00	90.00	359.48	10,354.00	11,170.78	519.54	635,085.59	797,588.49	32.74311649	-103.4999057
21,700.00	90.00	359.48	10,354.00	11,270.78	518.63	635,185.58	797,587.57	32.74339134	-103.49990616
21,800.00	90.00	359.48	10,354.00	11,370.77	517.71	635,285.58	797,586.66	32.74366619	-103.49990657



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC
Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
21,900.00	90.00	359.48	10,354.00	11,470.77	516.80	635,385.57	797,585.75	32.74394103	-103.49990698
22,000.00	90.00	359.48	10,354.00	11,570.76	515.89	635,485.57	797,584.84	32.74421588	-103.49990738
22,100.00	90.00	359.48	10,354.00	11,670.76	514.98	635,585.56	797,583.92	32.74449073	-103.49990779
22,200.00	90.00	359.48	10,354.00	11,770.76	514.06	635,685.56	797,583.01	32.74476557	-103.49990820
22,300.00	90.00	359.48	10,354.00	11,870.75	513.15	635,785.56	797,582.10	32.74504042	-103.49990861
22,400.00	90.00	359.48	10,354.00	11,970.75	512.24	635,885.55	797,581.19	32.74531527	-103.49990902
22,500.00	90.00	359.48	10,354.00	12,070.74	511.33	635,985.55	797,580.27	32.74559012	-103.49990942
22,600.00	90.00	359.48	10,354.00	12,170.74	510.41	636,085.54	797,579.36	32.74586496	-103.49990983
22,700.00	90.00	359.48	10,354.00	12,270.74	509.50	636,185.54	797,578.45	32.74613981	-103.49991024
22,800.00	90.00	359.48	10,354.00	12,370.73	508.59	636,285.54	797,577.54	32.74641466	-103.49991065
22,900.00	90.00	359.48	10,354.00	12,470.73	507.68	636,385.53	797,576.63	32.74668950	-103.49991106
23,000.00	90.00	359.48	10,354.00	12,570.72	506.77	636,485.53	797,575.71	32.74696435	-103.49991146
23,100.00	90.00	359.48	10,354.00	12,670.72	505.85	636,585.52	797,574.80	32.74723920	-103.49991187
23,200.00	90.00	359.48	10,354.00	12,770.71	504.94	636,685.52	797,573.89	32.74751404	-103.49991228
23,300.00	90.00	359.48	10,354.00	12,870.71	504.03	636,785.51	797,572.98	32.74778889	-103.49991269
23,400.00	90.00	359.48	10,354.00	12,970.71	503.12	636,885.51	797,572.06	32.74806374	-103.49991310
23,500.00	90.00	359.48	10,354.00	13,070.70	502.20	636,985.51	797,571.15	32.74833859	-103.49991350
23,600.00	90.00	359.48	10,354.00	13,170.70	501.29	637,085.50	797,570.24	32.74861343	-103.49991391
23,700.00	90.00	359.48	10,354.00	13,270.69	500.38	637,185.50	797,569.33	32.74888828	-103.49991432
23,800.00	90.00	359.48	10,354.00	13,370.69	499.47	637,285.49	797,568.41	32.74916313	-103.49991473
23,900.00	90.00	359.48	10,354.00	13,470.69	498.55	637,385.49	797,567.50	32.74943797	-103.49991513
24,000.00	90.00	359.48	10,354.00	13,570.68	497.64	637,485.49	797,566.59	32.74971282	-103.49991554
24,100.00	90.00	359.48	10,354.00	13,670.68	496.73	637,585.48	797,565.68	32.74998767	-103.49991595
24,200.00	90.00	359.48	10,354.00	13,770.67	495.82	637,685.48	797,564.77	32.75026251	-103.49991636
24,300.00	90.00	359.48	10,354.00	13,870.67	494.91	637,785.47	797,563.85	32.75053736	-103.49991677
24,400.00	90.00	359.48	10,354.00	13,970.66	493.99	637,885.47	797,562.94	32.75081221	-103.49991717
24,500.00	90.00	359.48	10,354.00	14,070.66	493.08	637,985.46	797,562.03	32.75108705	-103.49991758
24,600.00	90.00	359.48	10,354.00	14,170.66	492.17	638,085.46	797,561.12	32.75136190	-103.49991799
24,700.00	90.00	359.48	10,354.00	14,270.65	491.26	638,185.46	797,560.20	32.75163675	-103.49991840
24,800.00	90.00	359.48	10,354.00	14,370.65	490.34	638,285.45	797,559.29	32.75191159	-103.49991880
24,900.00	90.00	359.48	10,354.00	14,470.64	489.43	638,385.45	797,558.38	32.75218644	-103.49991921
25,000.00	90.00	359.48	10,354.00	14,570.64	488.52	638,485.44	797,557.47	32.75246129	-103.49991962
25,100.00	90.00	359.48	10,354.00	14,670.64	487.61	638,585.44	797,556.56	32.75273613	-103.49992003
25,200.00	90.00	359.48	10,354.00	14,770.63	486.70	638,685.44	797,555.64	32.75301098	-103.49992043
25,300.00	90.00	359.48	10,354.00	14,870.63	485.78	638,785.43	797,554.73	32.75328583	-103.49992084
25,400.00	90.00	359.48	10,354.00	14,970.62	484.87	638,885.43	797,553.82	32.75356067	-103.49992125
25,500.00	90.00	359.48	10,354.00	15,070.62	483.96	638,985.42	797,552.91	32.75383552	-103.49992166
25,600.00	90.00	359.48	10,354.00	15,170.61	483.05	639,085.42	797,551.99	32.75411037	-103.49992206
25,700.00	90.00	359.48	10,354.00	15,270.61	482.13	639,185.41	797,551.08	32.75438521	-103.49992247
25,800.00	90.00	359.48	10,354.00	15,370.61	481.22	639,285.41	797,550.17	32.75466006	-103.49992288
25,873.60	90.00	359.48	10,354.00	15,444.20	480.55	639,359.00	797,549.50	32.75486234	-103.49992318
TD: 2587	3.60' MD/ 154	39.21' VS/103	354.00' TVD - 0	2-PBHL(RPS	C-602H)				



Database: TZ USA 17.2

Company: Franklin Mountain Energy LLC
Project: PV\_Lea County, NM(N83-NME3001)

Site: Rope West Pad

Well: (06) Rope State Com 602H

Wellbore: 602H
Design: APD-Rev01

Local Co-ordinate Reference:

/D Poforonco: 30

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well (06) Rope State Com 602H - Slot (06)

RPSC 602H

3951+30 @ 3981.00usft 3951+30 @ 3981.00usft

Grid

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
02-PBHL(RPSC-602H) - plan hits target center - Point	0.00 er	0.00	10,354.00	15,444.20	480.55	639,359.00	797,549.50	32.75486234	-103.49992318
01-T98(RPSC-602H) - plan misses target c - Point	0.00 enter by 201		10,354.00 )300.00usft M	-225.45 ID (10204.58	621.71 TVD, -91.24 N	623,689.35 I, 612.61 E)	797,690.66	32.71179294	-103.49986496

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	30.00	30.00	Cenozoic Alluvium (surface)			
	1,891.69	1,891.00	Rustler			
	2,241.51	2,238.00	Salado			
	3,213.90	3,202.00	Base Salt			
	3,578.04	3,563.00	Yates			
	4,008.76	3,990.00	Seven Rivers			
	4,760.24	4,735.00	Queen			
	6,067.52	6,031.00	Delaware Mtn Group			
	7,693.32	7,651.00	Bone Spring Lime			
	9,205.32	9,163.00	First Bone Spring Sand			
	9,396.32	9,354.00	Second Bone Spring Carbonate			
	9,602.32	9,560.00	Second Bone Spring Sand			
	10,256.38	10,174.00	Third Bone Spring Carbonate			
	10,452.15	10,291.00	Third Bone Spring Sand			
	10,723.36	10,354.00	HZ Target			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coord +N/-S (usft)	dinates +E/-W (usft)	Comment
9.823.36	9.781.04	-278.31	610.00	KOP: 9823.36' MD/ -283.83' VS/9781.04' TVD
10,074.60	10,024.31	-224.11	610.76	100FLL: 10074.60' MD/ -229.64' VS/10024.31' TVD
10,723.36	10,354.00	294.59	618.00	EOC: 10723.36' MD/ 288.97' VS/10354.00' TVD
25,873.60	10,354.00	15,444.20	480.55	TD: 25873.60' MD/ 15439.21' VS/10354.00' TVD



# **Rope State Com 602H**

- 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)		3,981'	3,981'	0	Sand/Gravels/Unconsolidated
Rustler	2,090'	1,891'			Carbonates
Salado	1,744'	2,238'			Salt, Carbonate & Clastics
Base Salt	779'	3,202'			Shaley Carbonate & Shale
Yates	418'	3,563'			Anhydrite/Shale
Seven Rivers	-8'	3,990'			Interbedded Shale/Carbonate
Queen	-753'	4,735'			Sandstone & Dolomite & Anhydrite
Delaware Mtn Group	-2,050'	6,031'			Sandstone/Carb/Shale - oil/gas/water
Bone Spring Lime	-3,669'	7,651'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-5,182'	9,163'			Sandstone - oil/gas/water
Second Bone Spring Carbonate	-5,372'	9,354'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-5,579'	9,560'			Sandstone - oil/gas/water
Third Bone Spring Carbonate	-6,193'	10,174'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-6,310'	10,291'			Sandstone - oil/gas/water
HZ Target	-6,373'	10,354'			Overpressure Shale/Sand- oil/gas
Wolfcamp	-6,555'	10,536'			Overpressure Shale/Sand- oil/gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	6,031'	Oil
1 <sup>st</sup> Bone Spring Sand	9,163'	Oil
2 <sup>nd</sup> Bone Spring Carb	9,354'	Oil
2 <sup>nd</sup> Bone Spring Sand	9,560'	Oil
3 <sup>rd</sup> Bone Spring Sand	10,291'	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 1,942' and circulating cement back to surface.

## 4. Casing Program:

All casing strings will be run new.

Casing string	Weight	Grade	Burst	Collapse	Tonsion	Conn	Longth	API design factor			
Casing string	weight	Graue	Duist	Collapse	Telision	Collii	Length	Burst	Collapse	Tension	Coupling
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1,942	1.01	1.12	4.14	4.42
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	4,210	2.01	2.15	3.41	3.88
Production 7"	32	HCP-110	12460	10760	1025	CDC-HTQ 1053	9,823	1.89	2.34	2.47	2.54
Production 5 1/2"	20	HCP-110	12640	12200	641	CDC-HTQ 667	16,050 10,354	1.15	1.62	1.52	1.58 2.17



Tapered production string will be ran with a X-over installed at the KOP of 9,823'.

### **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	Hole	Cas	ing	Lead					Tail					
Type	Size	Size	Setting Depth	Sacks	Type of cmt	Yield ft3/sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Yield ft3/sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1,942	1045	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	0	100%
Int1	12.25	9.625	4,210	684	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	1,289	100%
Prod	8.75	7	9,823	463	HSLD 9420, 10.5 ppg, Class C, 1#/sk Salt, 4% STE 1% C-45	3.99	25.51	3,210						100%
Prod	8.75	5.5	25,873						4004	HSLD 80, 13.ppg, 32#/sk Salt, 4% STE, 1#/sk Gyp Seal	1.52	7.59	9,823	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  $4 \frac{1}{2}$ " 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	Туре	Weight (ppg)	Viscosity	Water Loss
0 – 1,942'	Fresh - Gel	8.6-8.8	28-34	N/c
1,942' – 4,210'	Brine	8.8- 10.2	28-34	N/c
4,210'' – 10,723'	Brine	8.8- 10.2	28-34	N/c
10,723' – 25,873' Lateral	Oil Base	9.0-11	58-68	3 - 6

⊺he

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 10,354' TVD (deepest point of the well) is 185F with an estimated maximum bottom-hole pressure (BHP) at the same point of 5,922' 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/Escape packs 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
    - 3. Emergency Escape Packs 4 packs shall be stored in the doghouse for emergency evacuation.
  - ii. Auxiliary Rescue Equipment
    - 1. Stretcher
    - 2. Two OSHA full body harnesses
    - 3. 100 feet of 5/8 inches OSHA approved rope
    - 4. 1-20# class ABC fire extinguisher
- c. H2S Detection and Monitoring Equipment
  - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
    - 1. Rig Floor
    - 2. Below Rig Floor / Near BOPs
    - 3. End of flow line or where well bore fluid is being discharged (near shakers)
  - ii. If H2S is encountered, measured values and formations will be provided to the BLM.
- d. Visual Warning Systems
  - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  - iii. Two windsocks will be placed in strategic locations, visible from all angles.
- e. Mud Program
  - 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  $\frac{1}{2}$ " 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 <u>Effective May 25, 2021</u>

I. Operator:Franklin	Mountain l	Energy 3, LLC	OG	RID:331595	5	Dat	e:7/3/2024
II. Type: ⊠ Original [	☐ Amendme	ent due to □ 19.15	.27.9.D(6)(a) NM	IAC □ 19.15.27.9	.D(6)(b) NMA	C □ Oth	er.
If Other, please describe: _							
<b>III.</b> Well(s): Provide the to be recompleted from a s					f wells propose	ed to be o	drilled or proposed
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D		Anticipated roduced Water BBL/D
See Attached Well List							
IV. Central Delivery Point V. Anticipated Schedule or proposed to be recomple	: Provide the	e following inform	ation for each ne	w or recompleted	well or set of w		9(D)(1) NMAC] posed to be drilled
Well Name	API	Spud Date	TD Reached Date	Completion Commencement		l Flow c Date	First Production Date
See Attached Well List							
VI. Separation Equipment VII. Operational Practice Subsection A through F of VIII. Best Management I during active and planned in	es: ⊠ Attac 19.15.27.8 I Practices: ☑	h a complete desc NMAC.	ription of the act	tions Operator wil	l take to comp	ly with t	the requirements of

## 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	Available Maximum Daily Capacity
	-		Start Date	of System Segment Tie-in

- **XI. Map.**  $\boxtimes$  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  $\square$  will  $\square$  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  $\Box$  does  $\Box$  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.

(i)

# Section 3 - Certifications <u>Effective May 25, 2021</u>

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: power generation on lease; (a) **(b)** power generation for grid; compression on lease; (c) (d) liquids removal on lease; reinjection for underground storage; (e) **(f)** reinjection for temporary storage; **(g)** reinjection for enhanced oil recovery; fuel cell production; and (h)

## Section 4 - Notices

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

other alternative beneficial uses approved by the division.

- (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: Sechal verbe
Printed Name: Rachael Overbey
Title: Director Operations Planning & Regulatory
E-mail Address: roverbey@fmellc.com
Date: 7/3/2024
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.

				Anticipated Oil	Anticipated	Anticipated Produced
Well Name	API 14 Digit	ULSTR	Surface Location FTG	BBL/D	Gas MCF/D	Water BBL/D
Rope State Com 301H	TBD	Lot 4-30-18S-35E	330 FSL 978 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 302H	TBD	O-30-18S-35E	335 FSL 2493 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 303H	TBD	P-30-18S-35E	338 FSL 1193 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 304H	TBD	P-30-18S-35E	338 FSL 1073 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 501H	TBD	Lot 4-30-18S-35E	330 FSL 948 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 502H	TBD	O-30-18S-35E	335 FSL 2523 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 601H	TBD	Lot 4-30-18S-35E	330 FSL 888 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 602H	TBD	Lot 4-30-18S-35E	330 FSL 1038 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 604H	TBD	P-30-18S-35E	338 FSL 1133 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 701H	TBD	Lot 4-30-18S-35E	330 FSL 1008 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 702H	TBD	O-30-18S-35E	335 FSL 2463 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 703H	TBD	P-30-18S-35E	338 FSL 1163 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 704H	TBD	P-30-18S-35E	338 FSL 1043 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 801H	TBD	Lot 4-30-18S-35E	330 FSL 918 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 802H	TBD	Lot 4-30-18S-35E	330 FSL 1068 FWL	800 +/-	700 +/-	2500 +/-
Rope State Com 803H	TBD	O-30-18S-35E	335 FSL 2433 FEL	800 +/-	700 +/-	2500 +/-
Rope State Com 804H	TBD	P-30-18S-35E	338 FSL 1103 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 recompleted from a single well pad or connected to a central delivery point.

recompleted from a single well p		,,,,,		Completion	Initial	
		Spud Date		Commencement	Flowback	
Well Name	API 14 Digit	(Batch Drilling)	TD Reached Date	Date	Date	First Production Date
Rope State Com 301H	TBD	5/15/2025	8/23/2025	9/17/2025	11/6/2025	11/8/2025
Rope State Com 302H	TBD	6/15/2025	9/3/2025	9/28/2025	11/7/2025	11/9/2025
Rope State Com 303H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 304H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 501H	TBD	5/15/2025	8/23/2025	9/17/2025	11/6/2025	11/8/2025
Rope State Com 502H	TBD	6/15/2025	9/3/2025	9/28/2025	11/7/2025	11/9/2025
Rope State Com 601H	TBD	5/15/2025	8/23/2025	9/17/2025	11/6/2025	11/8/2025
Rope State Com 602H	TBD	6/15/2025	9/3/2025	9/28/2025	11/7/2025	11/9/2025
Rope State Com 604H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 701H	TBD	5/15/2025	8/23/2025	9/17/2025	11/6/2025	11/8/2025
Rope State Com 702H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 703H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 704H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 801H	TBD	5/15/2025	8/23/2025	9/17/2025	11/6/2025	11/8/2025
Rope State Com 802H	TBD	6/15/2025	9/3/2025	9/28/2025	11/7/2025	11/9/2025
Rope State Com 803H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026
Rope State Com 804H	TBD	7/1/2025	12/8/2025	1/2/2026	3/23/2026	3/25/2026



# 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 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:



- o 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.

## Rope NGMP Map July 2024

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

