Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
[332472]

2. Name of Operator
[373910]

9. API Well No. **30-025-49848**

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory **[98185]**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface
At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NGMP Rec 03/08/2022

APPROVED WITH CONDITIONS

KZ
03/14/2022

SL

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/04/2022

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 03/04/2022

Additional Operator Remarks

Location of Well

0. SHL: TR M / 345 FSL / 1294 FWL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.167668 / LONG: -103.325608 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 0 FSL / 384 FWL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.181268 / LONG: -103.328571 (TVD: 10073 feet, MD: 15000 feet)

PPP: NWNW / 0 FSL / 384 FWL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.177628 / LONG: -103.328568 (TVD: 10073 feet, MD: 13700 feet)

PPP: TR M / 724 FSL / 380 FWL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.168708 / LONG: -103.328562 (TVD: 10073 feet, MD: 10488 feet)

BHL: TR D / 150 FNL / 380 FWL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.195362 / LONG: -103.328581 (TVD: 10073 feet, MD: 20185 feet)

BLM Point of Contact

Name: TENILLE ORTIZ
Title: Legal Instruments Examiner
Phone: (575) 234-2224
Email: tortiz@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-49848	98185	WC-025 G-09 S253502B;LWR BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
332472	FMM FED COM	301H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373910	FRANKLIN MOUNTAIN ENERGY LLC	3288.6'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	36	24S	35E		345	SOUTH	1294	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	25	24S	35E		150	NORTH	380	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

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

[16]

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°10'03.61" (32.167668°)
LONGITUDE = 103°19'32.19" (103.325608°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°10'03.15" (32.167542°)
LONGITUDE = 103°19'30.51" (103.325142°)
STATE PLANE NAD 83 (N.M. EAST)
N: 426192.69' E: 853157.64'
STATE PLANE NAD 27 (N.M. EAST)
N: 426133.88' E: 811971.23'

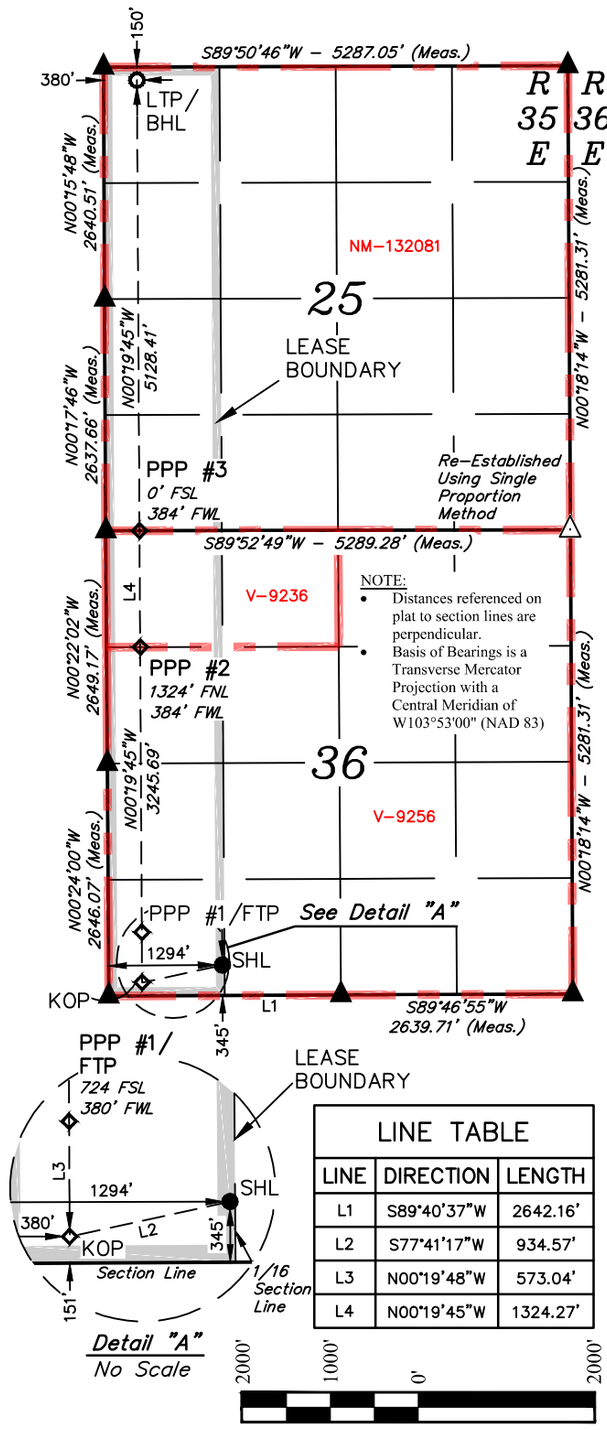
NAD 83 (KOP)
LATITUDE = 32°10'01.68" (32.167133°)
LONGITUDE = 103°19'42.82" (103.328561°)
NAD 27 (KOP)
LATITUDE = 32°10'01.23" (32.167007°)
LONGITUDE = 103°19'41.14" (103.328096°)
STATE PLANE NAD 83 (N.M. EAST)
N: 425989.62' E: 852245.54'
STATE PLANE NAD 27 (N.M. EAST)
N: 425930.83' E: 811059.14'

NAD 83 (PPP #1/FTP)
LATITUDE = 32°10'07.35" (32.168708°)
LONGITUDE = 103°19'42.82" (103.328562°)
NAD 27 (PPP #1/FTP)
LATITUDE = 32°10'06.89" (32.168582°)
LONGITUDE = 103°19'41.15" (103.328097°)
STATE PLANE NAD 83 (N.M. EAST)
N: 426562.55' E: 852239.85'
STATE PLANE NAD 27 (N.M. EAST)
N: 426503.75' E: 811053.47'

NAD 83 (PPP #2)
LATITUDE = 32°10'39.46" (32.177628°)
LONGITUDE = 103°19'42.85" (103.328568°)
NAD 27 (PPP #2)
LATITUDE = 32°10'39.01" (32.177502°)
LONGITUDE = 103°19'41.17" (103.328102°)
STATE PLANE NAD 83 (N.M. EAST)
N: 429807.61' E: 852207.63'
STATE PLANE NAD 27 (N.M. EAST)
N: 429748.71' E: 811021.38'

NAD 83 (PPP #3)
LATITUDE = 32°10'52.56" (32.181268°)
LONGITUDE = 103°19'42.85" (103.328571°)
NAD 27 (PPP #3)
LATITUDE = 32°10'52.11" (32.181141°)
LONGITUDE = 103°19'41.18" (103.328105°)
STATE PLANE NAD 83 (N.M. EAST)
N: 431131.62' E: 852194.51'
STATE PLANE NAD 27 (N.M. EAST)
N: 431072.69' E: 811008.32'

NAD 83 (LTP/BHL)
LATITUDE = 32°11'43.30" (32.195362°)
LONGITUDE = 103°19'42.89" (103.328581°)
NAD 27 (LTP/BHL)
LATITUDE = 32°11'42.85" (32.195235°)
LONGITUDE = 103°19'41.21" (103.328114°)
STATE PLANE NAD 83 (N.M. EAST)
N: 436259.03' E: 852143.56'
STATE PLANE NAD 27 (N.M. EAST)
N: 436199.96' E: 810957.57'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°40'37"W	2642.16'
L2	S77°41'17"W	934.57'
L3	N00°19'48"W	573.04'
L4	N00°19'45"W	1324.27'

● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/FTP/PPP
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED
△ = SECTION CORNER RE-ESTABLISHED. (Not Set on Ground.)

SCALE
DRAWN BY: T.L.L. 08-04-21
REV: 1 D.J.S. 09-22-21
(ADD TAKE POINTS & LEASE INFO.)

[17] OPERATOR CERTIFICATION

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

9/23/2021
Signature Date

Shelly Albrecht
Printed Name

salbrecht@fmellc.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

July 31, 2021
Date of Survey
Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 09-22-21

Certificate Number:

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: ___Franklin Mountain Energy, LLC_____ **OGRID:** ____373910_____ **Date:** __02/_24_/_2022

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

If Other, please describe: _____

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

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

IV. Central Delivery Point Name: ___FMM CTB: (f#) fAPP2203348319_____ [See 19.15.27.9(D)(1) NMAC]

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

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

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

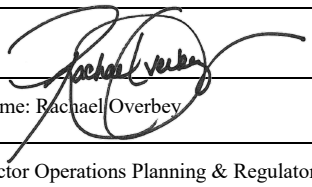
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Rachael Overbey
Title: Director Operations Planning & Regulatory
E-mail Address: roverbey@fmellc.com
Date: 2/24/2022
Phone: 720-414-7868

OIL CONSERVATION DIVISION **(Only applicable when submitted as a standalone form)**
Approved By:
Title:
Approval Date:
Conditions of Approval:

NATURAL GAS MANAGEMENT PLAN

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

Well Name	API 14 Digit	ULSTR	Surface Location FTG	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
FMM Fed Com 101H	TBD	M-36-24S-35E	345 FSL 1269 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 102H	TBD	M-36-24S-35E	345 FSL 1319 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 301H	TBD **30-025-49848**	M-36-24S-35E	345 FSL 1294 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 302H	TBD	N-36-24S-35E	345 FSL 1344 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 801H	TBD	M-36-24S-35E	270 FSL 1281 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 802H	TBD	M-36-24S-35E	270 FSL 1306 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 803H	TBD	N-36-24S-35E	270 FSL 1331 FWL	800 +/-	700 +/-	600 +/-
FMM Fed Com 103H	TBD	O-36-24S-35E	345 FSL 2027 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 104H	TBD	O-36-24S-35E	345 FSL 1977 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 303H	TBD	O-36-24S-35E	345 FSL 2002 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 304H	TBD	O-36-24S-35E	345 FSL 1952 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 804H	TBD	O-36-24S-35E	270 FSL 2015 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 805H	TBD	O-36-24S-35E	270 FSL 1990 FEL	800 +/-	700 +/-	600 +/-
FMM Fed Com 806H	TBD	O-36-24S-35E	270 FSL 1965 FEL	800 +/-	700 +/-	600 +/-

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

Well Name	API 14 Digit	Spud Date (Batch Drilling)	TD Reached Date	Completion Commencement Date	Initial Flowback Date	First Production Date
FMM Fed Com 101H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 102H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 301H	TBD **30-025-49848**	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 302H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 801H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 802H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 803H	TBD	6/27/2022	7/31/2022	11/14/2022	12/31/2022	1/2/2023
FMM Fed Com 103H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 104H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 303H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 304H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 804H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 805H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023
FMM Fed Com 806H	TBD	7/25/2022	8/27/2022	12/1/2022	1/4/2023	1/7/2023

FRANKLIN MOUNTAIN ENERGY

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 high pressure 2-phase separator to remove bulk gas, liquid from the 2-phase separator is sent to a 3-phase separator where additional gas is separated. Gas from the 2 Phase and 3 Phase separators are then sent through a gas scrubber before being route to treatment and/or sales. As production declines the 2-phase separator may be removed.
- Industry standard sizing calculations are used for gas-liquid separation and liquid-liquid separation.

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

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

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

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

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

FRANKLIN MOUNTAIN ENERGY

FMM Fed Com 301H

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)	3,288'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,436'	882'			Carbonates
Salado	1,898'	1,420'			Salt, Carbonate & Clastics
Base Salt	831'	2,487'			Shaley Carbonate & Shale
Capitan	-1,195'	4,513'			Carbonates
Lamar	-1,800'	5,118'			Carbonate & Clastics
Bell Canyon	-1,938'	5,256'			Sandstone - oil/gas/water
Cherry Canyon	-2,739'	6,057'			Sandstone - oil/gas/water
Brushy Canyon	-4,074'	7,392'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,418'	8,736'			Shale/Carbonates - oil/gas
Avalon	-5,494'	8,812'			Shale/Carbonates - oil/gas
Chert Zone	-5,725'	9,043'			Carbonate/Chert
First Bone Spring Sand	-6,699'	10,017'			Sandstone - oil/gas/water
HZ Target	-6,755'	10,073'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,823'	10,141'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,216'	10,534'			Sandstone - oil/gas/water

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

Upper Permian Sands	0- 400’	Fresh Water
Delaware Sands	5,256’	Oil
Bone Spring Sand	10,017’	Oil
Bone Spring Carbonate	11,141’	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 1,300’and circulating cement back to surface.

4. **Casing Program:**

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

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
						BTC					
Surface 13 3/8"	54.5	J-55	2730	1130	853	909	1300	1.18	1.67	4.99	5.32
						BTC					
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	1042	5200	1.77	1.74	2.97	3.38
						Stinger					
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	564	10488	1.27	1.46	2.01	1.37
						Eagle					
Long string 5 1/2"	23	P-110	14520	14520	729	606	20185	1.32	1.54	1.29	1.07
						TVD	10073				1.83

7 5/8”casing will be set at 10,488’MD/10,073’ TVD at 90°Inc. Stress calculations on 5 ½” casing performed assuming 20,185’ depth. Actual max vertical depth is 10,073’.

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

String Type	Hole Size	Casing Size	Casing Setting Depth	Sacks	Lead Type of cmt	Lead Yield ft3/sk	Lead Water gal/sk	Lead TOC ft	Tail Sacks	Tail Type of cmt	Tail Yield ft3/sk	Tail Water gal/sk	Tail TOC	Excess
Surf	17.5	13.375	1300	803	Extenda Cem, 12.8 ppg Class C, 3lb/sk Kol-Seal 0.125pps Poly-E-Flake	1.747	9.06	0	330	Tail, 14.8 ppg, Class C, 1% CaCl2, 0.125pps Celo-Flake	1.349	6.51	1000	100%
Int1	12.25	9.625	5200	1523	Lead, 12.8 ppg, Class C 5% Salt, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal	1.79	9.74	0	154	Tail, 14.8 ppg, Class C, 0.1% HR 800 .125 pps Poly-E-Flake	1.33	6.37	4900	100%
Int2	8.75	7.625	10488	283	Lite Fill, 9.5 ppg, Class C 3lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake	2.13	5.97	4200	94	NeoCem 14.8 ppg, Class C 0.25 pps Cello-Flake, 2% CalCl2	1.33	6.29	9488	50%
Prod	6.75	5.5	20185	798	Tail, 14.5 ppg, Gas Migration Control	1.34	6.22	9488						20%

5. Minimum Specifications for Pressure Control:

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5,000-psi WP). Both units will be hydraulically operated, and the ram-type will be equipped with blind rams on bottom and 4 ½" x 7" variable pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.
Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5,000/250 psig and the annular preventer to 5,000/250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the second intermediate casing, the ram-type BOP and accessory equipment will be tested to 10,000/250 psig and the annular preventer to 5,000/250 psig. The second intermediate casing will be tested to .22 psi/ft, but not to exceed 70 percent of the minimum internal yield, as per Onshore Order # 2 for 30 minutes prior to drillout.

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.

FRANKLIN MOUNTAIN ENERGY

6. Types and characteristics of the proposed mud system:

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 10,488'	Brine	8.8-10.2	28-34	N/c
10,488' – 20,185' Lateral	Oil Base	10.0-12.0	58-68	3 - 6

The highest mud weight needed to balance formation is expected to be 10-11 ppg. In order to maintain hole stability, mud weights up to 12 ppg may be utilized.
An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.
Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary well control and monitoring equipment:

(A) A kelly cock will be kept in the drill string at all times.
(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be 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 10,073' TVD (deepest point of the well) is 170F with an estimated maximum bottom-hole pressure (BHP) at the same point of 6,285 psig (based on 12 ppg MW). Hydrogen sulfate 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
i. The Mud program will be designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

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

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

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

11. Anticipated starting date and duration of operations:

The drilling operations on the well should be finished in approximately one month. However, in order to minimize disturbance in the area and to improve efficiency Franklin Mountain is planning to drill all the wells on the pad prior to commence completion operations. To even further reduce the time heavy machinery is used

the "batch drilling" method may be used. A batch drilling sequence sundry will be submitted for BLM approval prior to spud. A drilling rig with walking/skidding capabilities will be used.

12. Disposal/environmental concerns:

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

13. Wellhead:

A multi-bowl wellhead system will be utilized.
After running the 13 3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5,000 psi pressure test. This pressure test will be repeated at least every 21 days, as per Onshore Order No. 2

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

After running the 2nd intermediate casing, and before drilling out, the wellhead, BOP, and related equipment will be tested to 10,000/250 psig.

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

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

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

A solid steel body pack-off will be utilized after running and cementing the intermediate casing strings. After installation of the first intermediate string the pack-off and lower flanges will be pressure tested to 5000 psi. After installation of the second intermediate string, the pack-off and upper flange will be pressure tested to 10,000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

14. Additional variance requests

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

1. Variance is requested to wave the centralizer requirements for the 7 5/8" casing due to the tight clearance with 9 5/8" string.
2. Variance is requested to wave/reduce the centralizer requirements for the 5 ½" casing due to the tight clearance with 6 3/4" hole and 5 ½" casing due to tight clearances.

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 301H
Wellbore: OH
Design: Plan #1

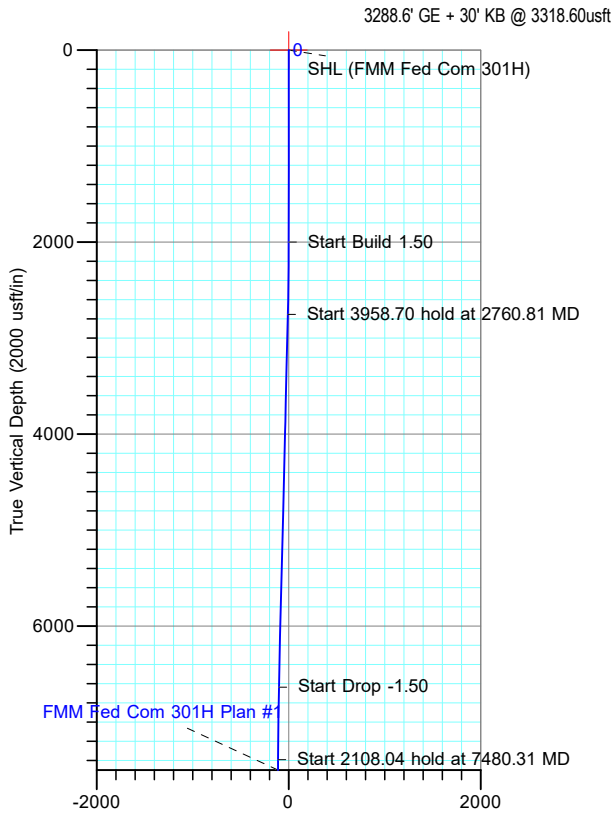
Azimuths to Grid North
True North: -0.54°
Magnetic North: 5.87°

Magnetic Field
Strength: 47465.2nT
Dip Angle: 59.88°
Date: 8/27/2021
Model: IGRF2020

PROJECT DETAILS: Lea County, NM (NAD83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

FRANKLIN MOUNTAIN ENERGY

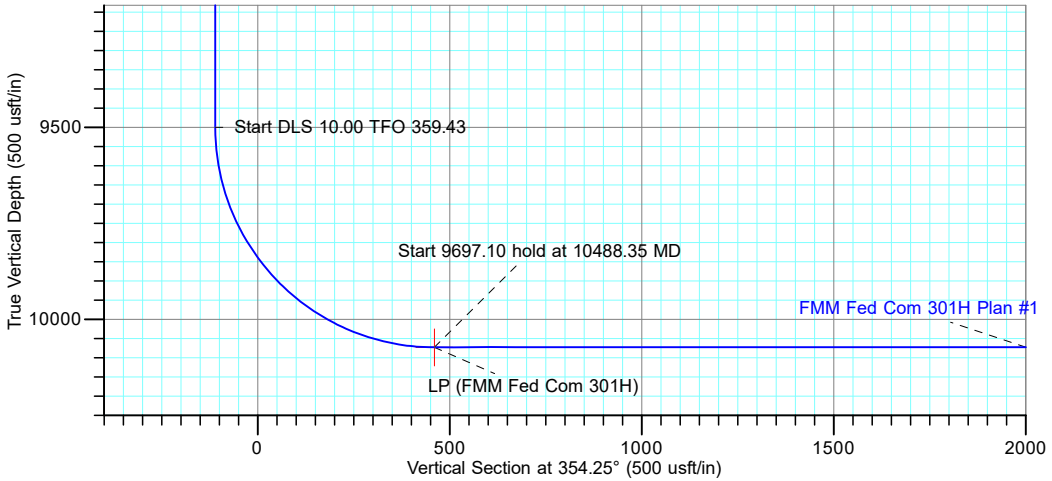


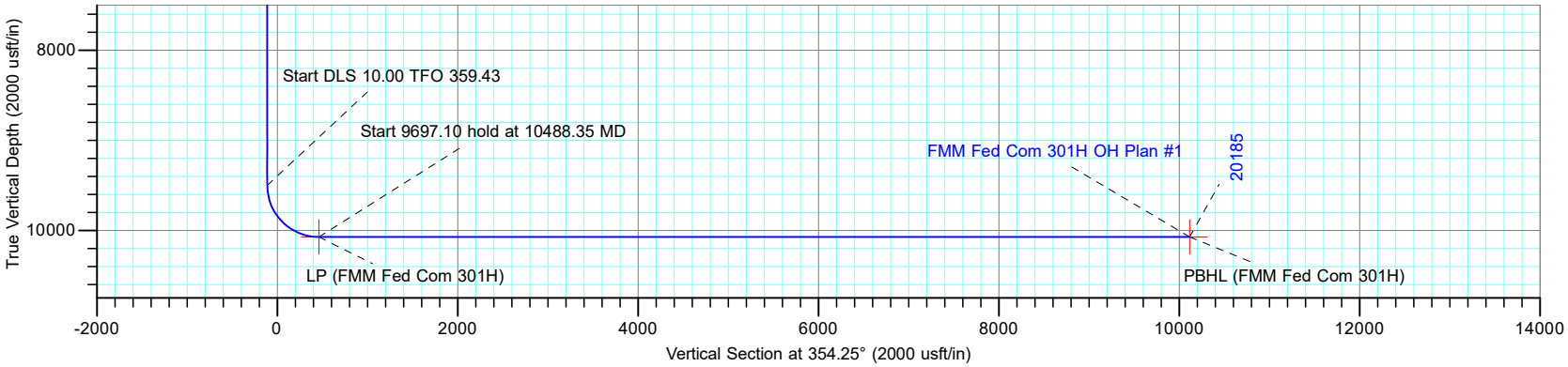
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2760.81	11.41	257.45	2755.79	-16.41	-73.71	1.50	257.45	-8.94	Start 3958.70 hold at 2760.81 MD
6719.50	11.41	257.45	6636.21	-186.59	-838.29	0.00	0.00	-101.63	Start Drop -1.50
7480.31	0.00	0.00	7392.00	-203.00	-912.00	1.50	180.00	-110.57	Start 2108.04 hold at 7480.31 MD
9588.35	0.00	0.00	9500.04	-203.00	-912.00	0.00	0.00	-110.57	Start DLS 10.00 TFO 359.43
10488.35	90.00	359.43	10073.00	369.93	-917.70	10.00	359.43	460.05	Start 9697.10 hold at 10488.35 MD
20185.45	90.00	359.43	10073.00	10066.55	-1014.09	0.00	0.00	10117.50	TD at 20185.45

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (FMM Fed Com 301H)	10073.00	369.93	-917.70	32.168708	-103.328562
PBHL (FMM Fed Com 301H)	10073.00	10066.55	-1014.09	32.195362	-103.328581
SHL (FMM Fed Com 301H)	0.00	0.00	0.00	32.167668	-103.325608





TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 301H/OH)
FMM Fed Com
Created By: Dustin Ault Date: 14:55, August 27 20
Date: _____
Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 301H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.54°
Magnetic North: 5.87°

Magnetic Field
Strength: 47465.2nT
Dip Angle: 59.88°
Date: 8/27/2021
Model: IGRF2020

PROJECT DETAILS: Lea County, NM (NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

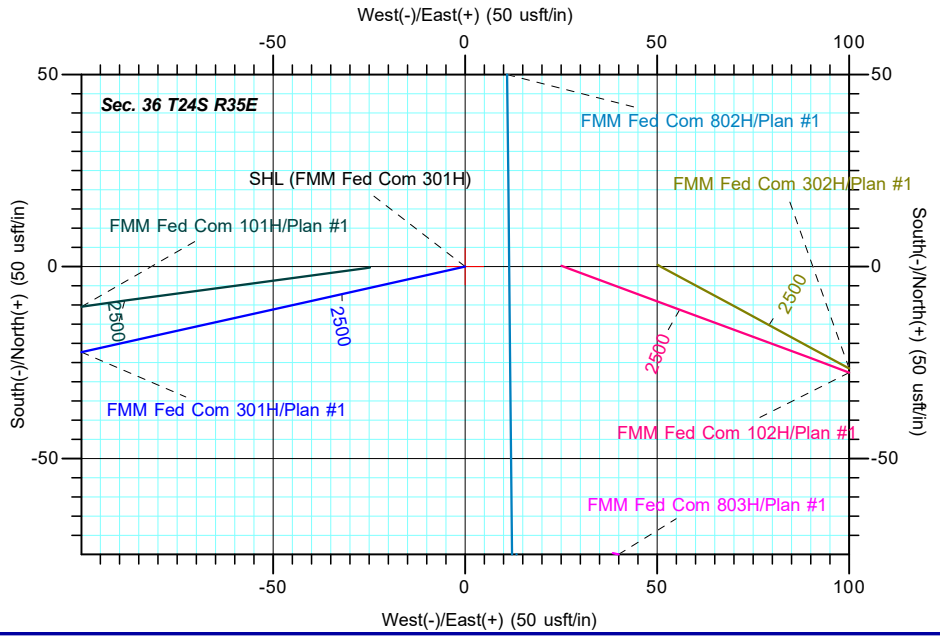
FRANKLIN MOUNTAIN ENERGY

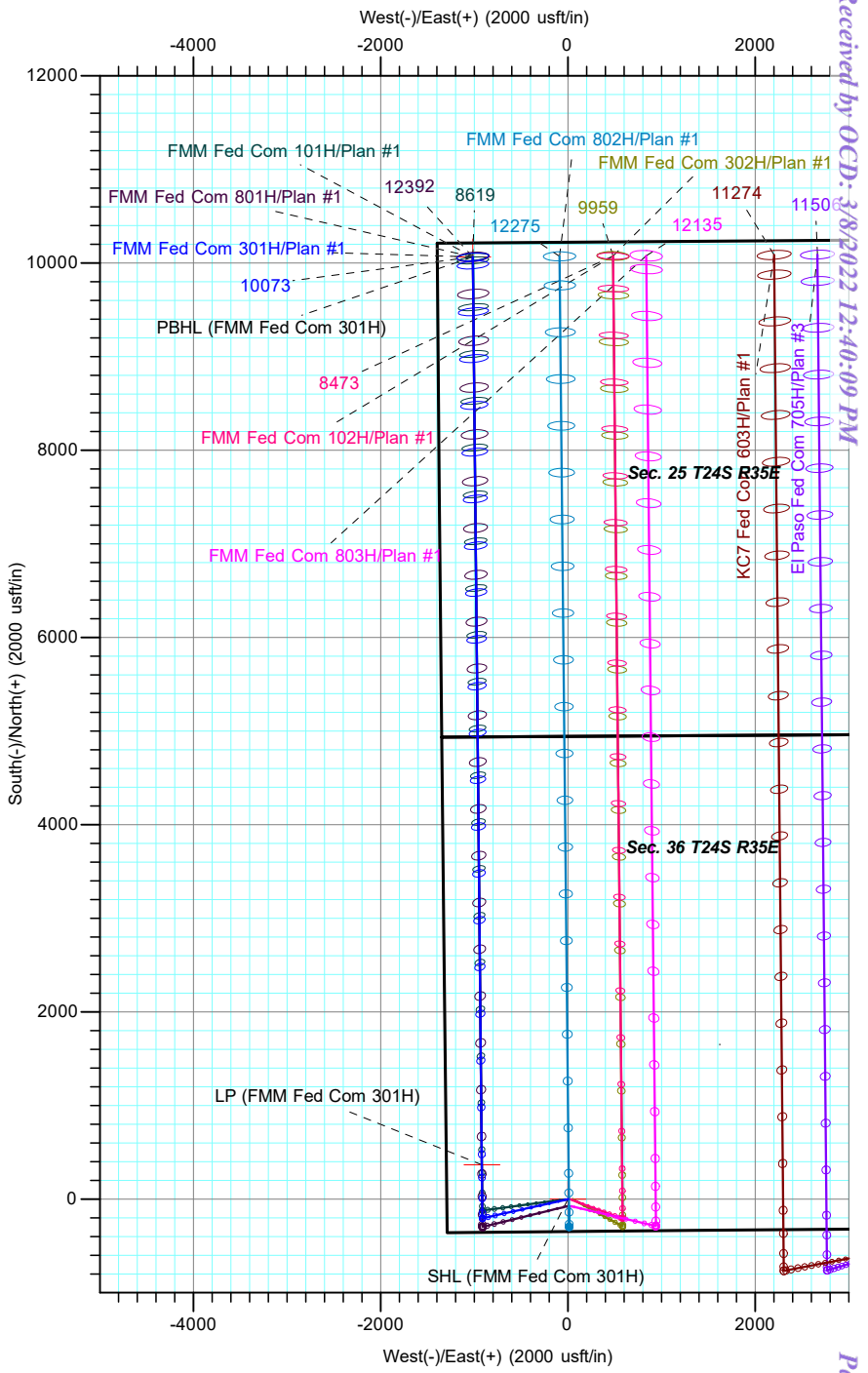
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (FMM Fed Com 301H)	10073.00	369.93	-917.70	426562.55	852239.84	32.168708	-103.328562
PBHL (FMM Fed Com 301H)	10073.00	10066.55	-1014.09	436259.18	852143.46	32.195362	-103.328581
SHL (FMM Fed Com 301H)	0.00	0.00	0.00	426192.62	853157.54	32.167668	-103.325608

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2760.81	11.41	257.45	2755.79	-16.41	-73.71	1.50	257.45	-8.94	Start 3958.70 hold at 2760.81 MD
6719.50	11.41	257.45	6636.21	-186.59	-838.29	0.00	0.00	-101.63	Start Drop -1.50
7480.31	0.00	0.00	7392.00	-203.00	-912.00	1.50	180.00	-110.57	Start 2108.04 hold at 7480.31 MD
9588.35	0.00	0.00	9500.04	-203.00	-912.00	0.00	0.00	-110.57	Start DLS 10.00 TFO 359.43
10488.35	90.00	359.43	10073.00	369.93	-917.70	10.00	359.43	460.05	Start 9697.10 hold at 10488.35 MD
20185.45	90.00	359.43	10073.00	10066.55	-1014.09	0.00	0.00	10117.50	TD at 20185.45





TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 301H/OH)
FMM Fed Com
Created By: Dustin Ault Date: 14:57, August 27 202
Date: _____
Approved: _____ Date: _____

Franklin Mountain Energy

Lea County, NM (NAD83)
FMM Fed Com
FMM Fed Com 301H

OH

Plan: Plan #1

Standard Planning Report

27 August, 2021

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Company:	Franklin Mountain Energy	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Lea County, NM (NAD83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site FMM Fed Com

Site Position:		**Northing:**	426,192.39 usft	**Latitude:**	32.167668
From:	Lat/Long	**Easting:**	853,132.79 usft	**Longitude:**	-103.325688
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.54 °

Well FMM Fed Com 301H

Well Position	**+N/-S**	0.23 usft	**Northing:**	426,192.62 usft	**Latitude:**	32.167668
	+E/-W	24.76 usft	**Easting:**	853,157.54 usft	**Longitude:**	-103.325608
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,288.60 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/27/2021	6.40	59.88	47,465.16024146

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	354.25

Plan Survey Tool Program **Date** 8/27/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,185.27	Plan #1 (OH)	OWSG (Rev2) MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,760.81	11.41	257.45	2,755.79	-16.41	-73.71	1.50	1.50	0.00	257.45	
6,719.50	11.41	257.45	6,636.21	-186.59	-838.29	0.00	0.00	0.00	0.00	
7,480.31	0.00	0.00	7,392.00	-203.00	-912.00	1.50	-1.50	0.00	180.00	
9,588.35	0.00	0.00	9,500.04	-203.00	-912.00	0.00	0.00	0.00	0.00	
10,488.35	90.00	359.43	10,073.00	369.93	-917.70	10.00	10.00	-0.06	359.43	
20,185.45	90.00	359.43	10,073.00	10,066.55	-1,014.09	0.00	0.00	0.00	0.00	PBHL (FMM Fed Com

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Company:	Franklin Mountain Energy	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (FMM Fed Com 301H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
2,100.00	1.50	257.45	2,099.99	-0.28	-1.28	-0.15	1.50	1.50	0.00
2,200.00	3.00	257.45	2,199.91	-1.14	-5.11	-0.62	1.50	1.50	0.00
2,300.00	4.50	257.45	2,299.69	-2.56	-11.49	-1.39	1.50	1.50	0.00
2,400.00	6.00	257.45	2,399.27	-4.55	-20.42	-2.48	1.50	1.50	0.00
2,500.00	7.50	257.45	2,498.57	-7.10	-31.90	-3.87	1.50	1.50	0.00
2,600.00	9.00	257.45	2,597.54	-10.22	-45.90	-5.57	1.50	1.50	0.00
2,700.00	10.50	257.45	2,696.09	-13.90	-62.43	-7.57	1.50	1.50	0.00
2,760.81	11.41	257.45	2,755.79	-16.41	-73.71	-8.94	1.50	1.50	0.00
Start 3958.70 hold at 2760.81 MD									
2,800.00	11.41	257.45	2,794.20	-18.09	-81.28	-9.85	0.00	0.00	0.00
2,900.00	11.41	257.45	2,892.23	-22.39	-100.60	-12.20	0.00	0.00	0.00
3,000.00	11.41	257.45	2,990.25	-26.69	-119.91	-14.54	0.00	0.00	0.00
3,100.00	11.41	257.45	3,088.27	-30.99	-139.23	-16.88	0.00	0.00	0.00
3,200.00	11.41	257.45	3,186.30	-35.29	-158.54	-19.22	0.00	0.00	0.00
3,300.00	11.41	257.45	3,284.32	-39.59	-177.85	-21.56	0.00	0.00	0.00
3,400.00	11.41	257.45	3,382.34	-43.89	-197.17	-23.90	0.00	0.00	0.00
3,500.00	11.41	257.45	3,480.37	-48.19	-216.48	-26.25	0.00	0.00	0.00
3,600.00	11.41	257.45	3,578.39	-52.48	-235.79	-28.59	0.00	0.00	0.00
3,700.00	11.41	257.45	3,676.41	-56.78	-255.11	-30.93	0.00	0.00	0.00
3,800.00	11.41	257.45	3,774.43	-61.08	-274.42	-33.27	0.00	0.00	0.00
3,900.00	11.41	257.45	3,872.46	-65.38	-293.73	-35.61	0.00	0.00	0.00
4,000.00	11.41	257.45	3,970.48	-69.68	-313.05	-37.95	0.00	0.00	0.00
4,100.00	11.41	257.45	4,068.50	-73.98	-332.36	-40.29	0.00	0.00	0.00
4,200.00	11.41	257.45	4,166.53	-78.28	-351.68	-42.64	0.00	0.00	0.00
4,300.00	11.41	257.45	4,264.55	-82.58	-370.99	-44.98	0.00	0.00	0.00
4,400.00	11.41	257.45	4,362.57	-86.88	-390.30	-47.32	0.00	0.00	0.00
4,500.00	11.41	257.45	4,460.59	-91.18	-409.62	-49.66	0.00	0.00	0.00
4,600.00	11.41	257.45	4,558.62	-95.47	-428.93	-52.00	0.00	0.00	0.00
4,700.00	11.41	257.45	4,656.64	-99.77	-448.24	-54.34	0.00	0.00	0.00
4,800.00	11.41	257.45	4,754.66	-104.07	-467.56	-56.68	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

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Project:	Lea County, NM (NAD83)	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	11.41	257.45	4,852.69	-108.37	-486.87	-59.03	0.00	0.00	0.00
5,000.00	11.41	257.45	4,950.71	-112.67	-506.19	-61.37	0.00	0.00	0.00
5,100.00	11.41	257.45	5,048.73	-116.97	-525.50	-63.71	0.00	0.00	0.00
5,200.00	11.41	257.45	5,146.76	-121.27	-544.81	-66.05	0.00	0.00	0.00
5,300.00	11.41	257.45	5,244.78	-125.57	-564.13	-68.39	0.00	0.00	0.00
5,400.00	11.41	257.45	5,342.80	-129.87	-583.44	-70.73	0.00	0.00	0.00
5,500.00	11.41	257.45	5,440.82	-134.17	-602.75	-73.08	0.00	0.00	0.00
5,600.00	11.41	257.45	5,538.85	-138.46	-622.07	-75.42	0.00	0.00	0.00
5,700.00	11.41	257.45	5,636.87	-142.76	-641.38	-77.76	0.00	0.00	0.00
5,800.00	11.41	257.45	5,734.89	-147.06	-660.70	-80.10	0.00	0.00	0.00
5,900.00	11.41	257.45	5,832.92	-151.36	-680.01	-82.44	0.00	0.00	0.00
6,000.00	11.41	257.45	5,930.94	-155.66	-699.32	-84.78	0.00	0.00	0.00
6,100.00	11.41	257.45	6,028.96	-159.96	-718.64	-87.12	0.00	0.00	0.00
6,200.00	11.41	257.45	6,126.98	-164.26	-737.95	-89.47	0.00	0.00	0.00
6,300.00	11.41	257.45	6,225.01	-168.56	-757.26	-91.81	0.00	0.00	0.00
6,400.00	11.41	257.45	6,323.03	-172.86	-776.58	-94.15	0.00	0.00	0.00
6,500.00	11.41	257.45	6,421.05	-177.16	-795.89	-96.49	0.00	0.00	0.00
6,600.00	11.41	257.45	6,519.08	-181.45	-815.21	-98.83	0.00	0.00	0.00
6,700.00	11.41	257.45	6,617.10	-185.75	-834.52	-101.17	0.00	0.00	0.00
6,719.50	11.41	257.45	6,636.21	-186.59	-838.29	-101.63	0.00	0.00	0.00
Start Drop -1.50									
6,800.00	10.20	257.45	6,715.28	-189.87	-853.02	-103.42	1.50	-1.50	0.00
6,900.00	8.70	257.45	6,813.92	-193.44	-869.05	-105.36	1.50	-1.50	0.00
7,000.00	7.20	257.45	6,912.96	-196.45	-882.56	-107.00	1.50	-1.50	0.00
7,100.00	5.70	257.45	7,012.32	-198.89	-893.54	-108.33	1.50	-1.50	0.00
7,200.00	4.20	257.45	7,111.95	-200.77	-901.97	-109.35	1.50	-1.50	0.00
7,300.00	2.70	257.45	7,211.76	-202.08	-907.85	-110.06	1.50	-1.50	0.00
7,400.00	1.20	257.45	7,311.70	-202.82	-911.18	-110.47	1.50	-1.50	0.00
7,480.31	0.00	0.00	7,392.00	-203.00	-912.00	-110.57	1.50	-1.50	0.00
Start 2108.04 hold at 7480.31 MD									
7,500.00	0.00	0.00	7,411.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
7,600.00	0.00	0.00	7,511.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
7,700.00	0.00	0.00	7,611.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
7,800.00	0.00	0.00	7,711.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
7,900.00	0.00	0.00	7,811.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,000.00	0.00	0.00	7,911.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,100.00	0.00	0.00	8,011.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,200.00	0.00	0.00	8,111.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,300.00	0.00	0.00	8,211.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,400.00	0.00	0.00	8,311.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,500.00	0.00	0.00	8,411.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,600.00	0.00	0.00	8,511.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,700.00	0.00	0.00	8,611.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,800.00	0.00	0.00	8,711.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
8,900.00	0.00	0.00	8,811.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,000.00	0.00	0.00	8,911.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,100.00	0.00	0.00	9,011.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,200.00	0.00	0.00	9,111.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,300.00	0.00	0.00	9,211.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,400.00	0.00	0.00	9,311.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,500.00	0.00	0.00	9,411.69	-203.00	-912.00	-110.57	0.00	0.00	0.00
9,588.35	0.00	0.00	9,500.04	-203.00	-912.00	-110.57	0.00	0.00	0.00
Start DLS 10.00 TFO 359.43									

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Design:	Plan #1		

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9,600.00	1.17	359.43	9,511.69	-202.88	-912.00	-110.45	10.00	10.00	0.00
9,650.00	6.17	359.43	9,561.57	-199.69	-912.03	-107.27	10.00	10.00	0.00
9,700.00	11.17	359.43	9,610.99	-192.16	-912.11	-99.77	10.00	10.00	0.00
9,750.00	16.17	359.43	9,659.56	-180.35	-912.23	-88.01	10.00	10.00	0.00
9,800.00	21.17	359.43	9,706.91	-164.35	-912.38	-72.07	10.00	10.00	0.00
9,850.00	26.17	359.43	9,752.69	-144.29	-912.58	-52.09	10.00	10.00	0.00
9,900.00	31.17	359.43	9,796.55	-120.31	-912.82	-28.21	10.00	10.00	0.00
9,950.00	36.17	359.43	9,838.15	-92.61	-913.10	-0.62	10.00	10.00	0.00
10,000.00	41.17	359.43	9,877.18	-61.38	-913.41	30.48	10.00	10.00	0.00
10,050.00	46.17	359.43	9,913.34	-26.87	-913.75	64.85	10.00	10.00	0.00
10,100.00	51.17	359.43	9,946.35	10.66	-914.12	102.23	10.00	10.00	0.00
10,150.00	56.17	359.43	9,975.97	50.92	-914.52	142.33	10.00	10.00	0.00
10,200.00	61.17	359.43	10,001.96	93.61	-914.95	184.85	10.00	10.00	0.00
10,250.00	66.17	359.43	10,024.13	138.41	-915.39	229.46	10.00	10.00	0.00
10,300.00	71.17	359.43	10,042.32	184.97	-915.86	275.83	10.00	10.00	0.00
10,350.00	76.17	359.43	10,056.38	232.93	-916.33	323.60	10.00	10.00	0.00
10,400.00	81.17	359.43	10,066.20	281.94	-916.82	372.41	10.00	10.00	0.00
10,450.00	86.17	359.43	10,071.72	331.61	-917.31	421.89	10.00	10.00	0.00
10,488.35	90.00	359.43	10,073.00	369.93	-917.70	460.05	10.00	10.00	0.00
Start 9697.10 hold at 10488.35 MD - LP (FMM Fed Com 301H)									
10,500.00	90.00	359.43	10,073.00	381.58	-917.81	471.65	0.00	0.00	0.00
10,600.00	90.00	359.43	10,073.00	481.58	-918.81	571.24	0.00	0.00	0.00
10,700.00	90.00	359.43	10,073.00	581.57	-919.80	670.84	0.00	0.00	0.00
10,800.00	90.00	359.43	10,073.00	681.57	-920.79	770.43	0.00	0.00	0.00
10,900.00	90.00	359.43	10,073.00	781.56	-921.79	870.02	0.00	0.00	0.00
11,000.00	90.00	359.43	10,073.00	881.56	-922.78	969.61	0.00	0.00	0.00
11,100.00	90.00	359.43	10,073.00	981.55	-923.78	1,069.20	0.00	0.00	0.00
11,200.00	90.00	359.43	10,073.00	1,081.55	-924.77	1,168.79	0.00	0.00	0.00
11,300.00	90.00	359.43	10,073.00	1,181.54	-925.76	1,268.38	0.00	0.00	0.00
11,400.00	90.00	359.43	10,073.00	1,281.54	-926.76	1,367.97	0.00	0.00	0.00
11,500.00	90.00	359.43	10,073.00	1,381.53	-927.75	1,467.57	0.00	0.00	0.00
11,600.00	90.00	359.43	10,073.00	1,481.53	-928.75	1,567.16	0.00	0.00	0.00
11,700.00	90.00	359.43	10,073.00	1,581.52	-929.74	1,666.75	0.00	0.00	0.00
11,800.00	90.00	359.43	10,073.00	1,681.52	-930.73	1,766.34	0.00	0.00	0.00
11,900.00	90.00	359.43	10,073.00	1,781.51	-931.73	1,865.93	0.00	0.00	0.00
12,000.00	90.00	359.43	10,073.00	1,881.51	-932.72	1,965.52	0.00	0.00	0.00
12,100.00	90.00	359.43	10,073.00	1,981.50	-933.72	2,065.11	0.00	0.00	0.00
12,200.00	90.00	359.43	10,073.00	2,081.50	-934.71	2,164.70	0.00	0.00	0.00
12,300.00	90.00	359.43	10,073.00	2,181.49	-935.70	2,264.29	0.00	0.00	0.00
12,400.00	90.00	359.43	10,073.00	2,281.49	-936.70	2,363.89	0.00	0.00	0.00
12,500.00	90.00	359.43	10,073.00	2,381.48	-937.69	2,463.48	0.00	0.00	0.00
12,600.00	90.00	359.43	10,073.00	2,481.48	-938.69	2,563.07	0.00	0.00	0.00
12,700.00	90.00	359.43	10,073.00	2,581.47	-939.68	2,662.66	0.00	0.00	0.00
12,800.00	90.00	359.43	10,073.00	2,681.47	-940.67	2,762.25	0.00	0.00	0.00
12,900.00	90.00	359.43	10,073.00	2,781.46	-941.67	2,861.84	0.00	0.00	0.00
13,000.00	90.00	359.43	10,073.00	2,881.46	-942.66	2,961.43	0.00	0.00	0.00
13,100.00	90.00	359.43	10,073.00	2,981.45	-943.66	3,061.02	0.00	0.00	0.00
13,200.00	90.00	359.43	10,073.00	3,081.45	-944.65	3,160.61	0.00	0.00	0.00
13,300.00	90.00	359.43	10,073.00	3,181.44	-945.64	3,260.21	0.00	0.00	0.00
13,400.00	90.00	359.43	10,073.00	3,281.44	-946.64	3,359.80	0.00	0.00	0.00
13,500.00	90.00	359.43	10,073.00	3,381.43	-947.63	3,459.39	0.00	0.00	0.00
13,600.00	90.00	359.43	10,073.00	3,481.43	-948.63	3,558.98	0.00	0.00	0.00
13,700.00	90.00	359.43	10,073.00	3,581.42	-949.62	3,658.57	0.00	0.00	0.00
13,800.00	90.00	359.43	10,073.00	3,681.42	-950.61	3,758.16	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Company:	Franklin Mountain Energy	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,900.00	90.00	359.43	10,073.00	3,781.41	-951.61	3,857.75	0.00	0.00	0.00
14,000.00	90.00	359.43	10,073.00	3,881.41	-952.60	3,957.34	0.00	0.00	0.00
14,100.00	90.00	359.43	10,073.00	3,981.40	-953.60	4,056.93	0.00	0.00	0.00
14,200.00	90.00	359.43	10,073.00	4,081.40	-954.59	4,156.53	0.00	0.00	0.00
14,300.00	90.00	359.43	10,073.00	4,181.39	-955.58	4,256.12	0.00	0.00	0.00
14,400.00	90.00	359.43	10,073.00	4,281.39	-956.58	4,355.71	0.00	0.00	0.00
14,500.00	90.00	359.43	10,073.00	4,381.38	-957.57	4,455.30	0.00	0.00	0.00
14,600.00	90.00	359.43	10,073.00	4,481.38	-958.57	4,554.89	0.00	0.00	0.00
14,700.00	90.00	359.43	10,073.00	4,581.37	-959.56	4,654.48	0.00	0.00	0.00
14,800.00	90.00	359.43	10,073.00	4,681.37	-960.55	4,754.07	0.00	0.00	0.00
14,900.00	90.00	359.43	10,073.00	4,781.37	-961.55	4,853.66	0.00	0.00	0.00
15,000.00	90.00	359.43	10,073.00	4,881.36	-962.54	4,953.25	0.00	0.00	0.00
15,100.00	90.00	359.43	10,073.00	4,981.36	-963.54	5,052.85	0.00	0.00	0.00
15,200.00	90.00	359.43	10,073.00	5,081.35	-964.53	5,152.44	0.00	0.00	0.00
15,300.00	90.00	359.43	10,073.00	5,181.35	-965.52	5,252.03	0.00	0.00	0.00
15,400.00	90.00	359.43	10,073.00	5,281.34	-966.52	5,351.62	0.00	0.00	0.00
15,500.00	90.00	359.43	10,073.00	5,381.34	-967.51	5,451.21	0.00	0.00	0.00
15,600.00	90.00	359.43	10,073.00	5,481.33	-968.51	5,550.80	0.00	0.00	0.00
15,700.00	90.00	359.43	10,073.00	5,581.33	-969.50	5,650.39	0.00	0.00	0.00
15,800.00	90.00	359.43	10,073.00	5,681.32	-970.49	5,749.98	0.00	0.00	0.00
15,900.00	90.00	359.43	10,073.00	5,781.32	-971.49	5,849.58	0.00	0.00	0.00
16,000.00	90.00	359.43	10,073.00	5,881.31	-972.48	5,949.17	0.00	0.00	0.00
16,100.00	90.00	359.43	10,073.00	5,981.31	-973.48	6,048.76	0.00	0.00	0.00
16,200.00	90.00	359.43	10,073.00	6,081.30	-974.47	6,148.35	0.00	0.00	0.00
16,300.00	90.00	359.43	10,073.00	6,181.30	-975.46	6,247.94	0.00	0.00	0.00
16,400.00	90.00	359.43	10,073.00	6,281.29	-976.46	6,347.53	0.00	0.00	0.00
16,500.00	90.00	359.43	10,073.00	6,381.29	-977.45	6,447.12	0.00	0.00	0.00
16,600.00	90.00	359.43	10,073.00	6,481.28	-978.45	6,546.71	0.00	0.00	0.00
16,700.00	90.00	359.43	10,073.00	6,581.28	-979.44	6,646.30	0.00	0.00	0.00
16,800.00	90.00	359.43	10,073.00	6,681.27	-980.43	6,745.90	0.00	0.00	0.00
16,900.00	90.00	359.43	10,073.00	6,781.27	-981.43	6,845.49	0.00	0.00	0.00
17,000.00	90.00	359.43	10,073.00	6,881.26	-982.42	6,945.08	0.00	0.00	0.00
17,100.00	90.00	359.43	10,073.00	6,981.26	-983.42	7,044.67	0.00	0.00	0.00
17,200.00	90.00	359.43	10,073.00	7,081.25	-984.41	7,144.26	0.00	0.00	0.00
17,300.00	90.00	359.43	10,073.00	7,181.25	-985.40	7,243.85	0.00	0.00	0.00
17,400.00	90.00	359.43	10,073.00	7,281.24	-986.40	7,343.44	0.00	0.00	0.00
17,500.00	90.00	359.43	10,073.00	7,381.24	-987.39	7,443.03	0.00	0.00	0.00
17,600.00	90.00	359.43	10,073.00	7,481.23	-988.39	7,542.62	0.00	0.00	0.00
17,700.00	90.00	359.43	10,073.00	7,581.23	-989.38	7,642.22	0.00	0.00	0.00
17,800.00	90.00	359.43	10,073.00	7,681.22	-990.37	7,741.81	0.00	0.00	0.00
17,900.00	90.00	359.43	10,073.00	7,781.22	-991.37	7,841.40	0.00	0.00	0.00
18,000.00	90.00	359.43	10,073.00	7,881.21	-992.36	7,940.99	0.00	0.00	0.00
18,100.00	90.00	359.43	10,073.00	7,981.21	-993.36	8,040.58	0.00	0.00	0.00
18,200.00	90.00	359.43	10,073.00	8,081.20	-994.35	8,140.17	0.00	0.00	0.00
18,300.00	90.00	359.43	10,073.00	8,181.20	-995.34	8,239.76	0.00	0.00	0.00
18,400.00	90.00	359.43	10,073.00	8,281.19	-996.34	8,339.35	0.00	0.00	0.00
18,500.00	90.00	359.43	10,073.00	8,381.19	-997.33	8,438.94	0.00	0.00	0.00
18,600.00	90.00	359.43	10,073.00	8,481.18	-998.33	8,538.54	0.00	0.00	0.00
18,700.00	90.00	359.43	10,073.00	8,581.18	-999.32	8,638.13	0.00	0.00	0.00
18,800.00	90.00	359.43	10,073.00	8,681.17	-1,000.31	8,737.72	0.00	0.00	0.00
18,900.00	90.00	359.43	10,073.00	8,781.17	-1,001.31	8,837.31	0.00	0.00	0.00
19,000.00	90.00	359.43	10,073.00	8,881.16	-1,002.30	8,936.90	0.00	0.00	0.00
19,100.00	90.00	359.43	10,073.00	8,981.16	-1,003.30	9,036.49	0.00	0.00	0.00
19,200.00	90.00	359.43	10,073.00	9,081.15	-1,004.29	9,136.08	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Company:	Franklin Mountain Energy	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,300.00	90.00	359.43	10,073.00	9,181.15	-1,005.28	9,235.67	0.00	0.00	0.00
19,400.00	90.00	359.43	10,073.00	9,281.14	-1,006.28	9,335.27	0.00	0.00	0.00
19,500.00	90.00	359.43	10,073.00	9,381.14	-1,007.27	9,434.86	0.00	0.00	0.00
19,600.00	90.00	359.43	10,073.00	9,481.13	-1,008.27	9,534.45	0.00	0.00	0.00
19,700.00	90.00	359.43	10,073.00	9,581.13	-1,009.26	9,634.04	0.00	0.00	0.00
19,800.00	90.00	359.43	10,073.00	9,681.12	-1,010.25	9,733.63	0.00	0.00	0.00
19,900.00	90.00	359.43	10,073.00	9,781.12	-1,011.25	9,833.22	0.00	0.00	0.00
20,000.00	90.00	359.43	10,073.00	9,881.11	-1,012.24	9,932.81	0.00	0.00	0.00
20,100.00	90.00	359.43	10,073.00	9,981.11	-1,013.24	10,032.40	0.00	0.00	0.00
20,185.45	90.00	359.43	10,073.00	10,066.55	-1,014.09	10,117.50	0.00	0.00	0.00
TD at 20185.45 - PBHL (FMM Fed Com 301H)									

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
SHL (FMM Fed Com 30 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	426,192.62	853,157.54	32.167668	-103.325608
PBHL (FMM Fed Com 3 - plan hits target center - Point	0.00	0.00	10,073.00	10,066.55	-1,014.09	436,259.18	852,143.46	32.195362	-103.328581
LP (FMM Fed Com 301H - plan misses target center by 0.01usft at 10488.35usft MD (10073.00 TVD, 369.93 N, -917.70 E) - Point	0.00	0.01	10,073.00	369.93	-917.70	426,562.55	852,239.84	32.168708	-103.328562

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Build 1.50
2,760.81	2,755.79	-16.41	-73.71	Start 3958.70 hold at 2760.81 MD
6,719.50	6,636.21	-186.59	-838.29	Start Drop -1.50
7,480.31	7,392.00	-203.00	-912.00	Start 2108.04 hold at 7480.31 MD
9,588.35	9,500.04	-203.00	-912.00	Start DLS 10.00 TFO 359.43
10,488.35	10,073.00	369.93	-917.70	Start 9697.10 hold at 10488.35 MD
20,185.45	10,073.00	10,066.55	-1,014.09	TD at 20185.45

Franklin Mountain Energy

Lea County, NM (NAD83)
FMM Fed Com
FMM Fed Com 301H

OH
Plan #1

Anticollision Report

27 August, 2021

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	1,843.00 to 28,999.00usft	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.00 usft	**Error Surface:**	Combined Separation
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 8/27/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,185.27	Plan #1 (OH)	OWSG (Rev2) MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
FMM Fed Com						
FMM Fed Com 101H - OH - Plan #1	1,843.00	1,841.93	24.99	15.98	2.774	CC, ES
FMM Fed Com 101H - OH - Plan #1	8,102.22	8,090.64	82.77	37.59	1.832	SF
FMM Fed Com 102H - OH - Plan #1	1,916.30	1,917.40	25.07	15.68	2.670	CC
FMM Fed Com 102H - OH - Plan #1	2,000.00	2,001.09	25.07	15.25	2.555	ES, SF
FMM Fed Com 302H - OH - Plan #1	1,916.09	1,917.79	50.13	40.74	5.340	CC
FMM Fed Com 302H - OH - Plan #1	2,000.00	2,001.68	50.13	40.32	5.108	ES
FMM Fed Com 302H - OH - Plan #1	2,100.00	2,100.00	52.59	42.29	5.108	SF
FMM Fed Com 801H - OH - Plan #1	1,916.57	1,916.87	75.96	66.57	8.092	CC
FMM Fed Com 801H - OH - Plan #1	9,588.35	9,588.05	92.06	40.19	1.775	ES, SF
FMM Fed Com 802H - OH - Plan #1	2,156.07	2,156.63	75.95	65.36	7.174	CC
FMM Fed Com 802H - OH - Plan #1	2,200.00	2,200.00	75.98	65.17	7.033	ES
FMM Fed Com 802H - OH - Plan #1	2,300.00	2,298.40	77.65	66.38	6.886	SF
FMM Fed Com 803H - OH - Plan #1	1,916.26	1,917.46	83.92	74.53	8.939	CC
FMM Fed Com 803H - OH - Plan #1	2,000.00	2,001.18	83.92	74.11	8.552	ES
FMM Fed Com 803H - OH - Plan #1	2,100.00	2,100.00	85.14	74.84	8.266	SF
KC7 Fed Com/El Paso Fed Com						
El Paso Fed Com 604H - OH - Plan #1	2,000.00	2,045.50	3,393.44	3,383.51	341.888	CC, ES
El Paso Fed Com 604H - OH - Plan #1	20,185.45	22,160.64	4,407.43	4,164.41	18.136	SF
El Paso Fed Com 705H - OH - Plan #3	2,000.00	2,045.90	3,359.01	3,349.08	338.384	CC, ES
El Paso Fed Com 705H - OH - Plan #3	20,185.45	22,482.46	3,949.89	3,712.51	16.639	SF
El Paso Fed Com 706H - OH - Plan #1	2,000.00	2,045.30	3,427.87	3,417.94	345.374	CC, ES
El Paso Fed Com 706H - OH - Plan #1	20,185.45	22,304.88	4,736.59	4,494.51	19.566	SF
KC7 Fed Com 603H - OH - Plan #1	2,000.00	2,045.60	3,324.60	3,314.67	334.944	CC
KC7 Fed Com 603H - OH - Plan #1	20,185.45	22,310.90	3,434.76	3,196.20	14.398	ES, SF

Offset Design FMM Fed Com - FMM Fed Com 101H - OH - Plan #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,841.93	1,841.93	6.37	6.37	-90.60	-0.26	-24.98	24.99	15.98	9.01	2.774	CC, ES
1,900.00	1,900.00	1,898.54	1,898.53	6.58	6.56	-90.89	-0.40	-26.02	26.03	16.74	9.29	2.802	
2,000.00	2,000.00	1,997.75	1,997.66	6.94	6.90	-91.76	-0.92	-29.83	29.88	20.11	9.77	3.059	
2,100.00	2,099.99	2,096.78	2,096.48	7.28	7.24	10.09	-1.78	-36.18	35.03	24.80	10.24	3.423	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 101H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,200.00	2,199.91	2,195.68	2,194.97	7.62	7.59	9.88	-2.97	-45.05	40.19	29.50	10.69	3.760	
2,300.00	2,299.69	2,294.44	2,293.06	7.97	7.94	9.99	-4.51	-56.42	45.35	34.21	11.14	4.072	
2,400.00	2,399.27	2,393.08	2,390.70	8.31	8.30	10.32	-6.39	-70.29	50.50	38.92	11.58	4.362	
2,500.00	2,498.57	2,491.58	2,487.81	8.67	8.66	10.82	-8.59	-86.63	55.65	43.64	12.02	4.631	
2,600.00	2,597.54	2,591.50	2,586.10	9.03	9.04	11.59	-11.00	-104.45	59.51	47.00	12.51	4.758	
2,700.00	2,696.09	2,691.48	2,684.45	9.40	9.43	12.80	-13.41	-122.29	60.83	47.83	13.01	4.677	
2,760.81	2,755.79	2,752.28	2,744.25	9.63	9.67	13.80	-14.88	-133.13	60.40	47.09	13.31	4.538	
2,800.00	2,794.20	2,791.46	2,782.79	9.78	9.83	14.52	-15.82	-140.12	59.83	46.32	13.51	4.430	
2,900.00	2,892.23	2,891.43	2,881.13	10.17	10.23	16.43	-18.23	-157.96	58.42	44.41	14.01	4.169	
3,000.00	2,990.25	2,991.40	2,979.47	10.57	10.64	18.43	-20.64	-175.79	57.08	42.55	14.53	3.929	
3,100.00	3,088.27	3,091.37	3,077.80	10.97	11.05	20.52	-23.05	-193.62	55.82	40.77	15.05	3.708	
3,200.00	3,186.30	3,191.34	3,176.14	11.38	11.46	22.71	-25.46	-211.45	54.63	39.05	15.58	3.506	
3,300.00	3,284.32	3,291.31	3,274.48	11.80	11.88	24.99	-27.87	-229.29	53.52	37.40	16.12	3.320	
3,400.00	3,382.34	3,391.28	3,372.82	12.22	12.30	27.37	-30.28	-247.12	52.50	35.83	16.67	3.149	
3,500.00	3,480.37	3,491.26	3,471.15	12.65	12.73	29.83	-32.69	-264.95	51.58	34.35	17.23	2.993	
3,600.00	3,578.39	3,591.23	3,569.49	13.08	13.16	32.38	-35.10	-282.79	50.75	32.95	17.80	2.851	
3,700.00	3,676.41	3,691.20	3,667.83	13.51	13.59	35.01	-37.51	-300.62	50.03	31.64	18.39	2.721	
3,800.00	3,774.43	3,791.17	3,766.17	13.95	14.02	37.70	-39.92	-318.45	49.42	30.43	18.99	2.603	
3,900.00	3,872.46	3,891.14	3,864.51	14.39	14.45	40.46	-42.33	-336.28	48.92	29.32	19.60	2.496	
4,000.00	3,970.48	3,991.11	3,962.84	14.83	14.89	43.27	-44.74	-354.12	48.53	28.30	20.23	2.399	
4,100.00	4,068.50	4,091.08	4,061.18	15.28	15.32	46.12	-47.15	-371.95	48.27	27.40	20.87	2.313	
4,200.00	4,166.53	4,191.05	4,159.52	15.73	15.76	48.99	-49.56	-389.78	48.12	26.60	21.52	2.236	
4,270.46	4,235.59	4,261.49	4,228.81	16.04	16.07	51.02	-51.26	-402.35	48.09	26.10	21.99	2.187	
4,300.00	4,264.55	4,291.02	4,257.86	16.17	16.20	51.88	-51.97	-407.62	48.09	25.91	22.19	2.168	
4,400.00	4,362.57	4,390.99	4,356.19	16.63	16.64	54.75	-54.38	-425.45	48.19	25.33	22.86	2.108	
4,500.00	4,460.59	4,490.96	4,454.53	17.08	17.09	57.61	-56.79	-443.28	48.41	24.86	23.55	2.056	
4,600.00	4,558.62	4,590.93	4,552.87	17.53	17.53	60.44	-59.20	-461.12	48.75	24.51	24.24	2.011	
4,700.00	4,656.64	4,690.90	4,651.21	17.99	17.97	63.22	-61.61	-478.95	49.20	24.26	24.94	1.973	
4,800.00	4,754.66	4,790.87	4,749.55	18.45	18.42	65.95	-64.02	-496.78	49.77	24.13	25.64	1.941	
4,900.00	4,852.69	4,890.85	4,847.88	18.91	18.87	68.60	-66.43	-514.61	50.45	24.11	26.34	1.915	
5,000.00	4,950.71	4,990.82	4,946.22	19.37	19.31	71.19	-68.84	-532.45	51.23	24.19	27.04	1.894	
5,100.00	5,048.73	5,090.79	5,044.56	19.83	19.76	73.68	-71.25	-550.28	52.11	24.37	27.74	1.878	
5,200.00	5,146.76	5,190.76	5,142.90	20.29	20.21	76.09	-73.66	-568.11	53.09	24.65	28.44	1.867	
5,300.00	5,244.78	5,290.73	5,241.23	20.75	20.66	78.41	-76.07	-585.95	54.16	25.03	29.13	1.859	
5,400.00	5,342.80	5,390.70	5,339.57	21.22	21.11	80.64	-78.48	-603.78	55.32	25.50	29.82	1.855	
5,500.00	5,440.82	5,490.67	5,437.91	21.68	21.56	82.77	-80.89	-621.61	56.56	26.05	30.50	1.854	
5,600.00	5,538.85	5,590.64	5,536.25	22.15	22.01	84.81	-83.30	-639.44	57.87	26.69	31.18	1.856	
5,700.00	5,636.87	5,690.61	5,634.59	22.61	22.46	86.76	-85.71	-657.28	59.25	27.40	31.85	1.860	
5,800.00	5,734.89	5,790.58	5,732.92	23.08	22.91	88.61	-88.12	-675.11	60.69	28.18	32.51	1.867	
5,900.00	5,832.92	5,890.55	5,831.26	23.55	23.36	90.38	-90.53	-692.94	62.20	29.03	33.17	1.875	
6,000.00	5,930.94	5,990.52	5,929.60	24.02	23.82	92.06	-92.94	-710.78	63.76	29.95	33.82	1.886	
6,100.00	6,028.96	6,090.49	6,027.94	24.49	24.27	93.66	-95.35	-728.61	65.38	30.92	34.46	1.897	
6,200.00	6,126.98	6,190.46	6,126.27	24.96	24.72	95.18	-97.76	-746.44	67.04	31.94	35.10	1.910	
6,300.00	6,225.01	6,290.44	6,224.61	25.43	25.18	96.63	-100.17	-764.28	68.75	33.02	35.73	1.924	
6,400.00	6,323.03	6,390.41	6,322.95	25.90	25.63	98.01	-102.58	-782.11	70.50	34.14	36.36	1.939	
6,500.00	6,421.05	6,490.38	6,421.29	26.37	26.09	99.32	-104.99	-799.94	72.29	35.30	36.99	1.954	
6,600.00	6,519.08	6,590.35	6,519.63	26.84	26.54	100.56	-107.40	-817.77	74.12	36.50	37.61	1.971	
6,700.00	6,617.10	6,690.32	6,617.96	27.31	27.00	101.75	-109.81	-835.61	75.97	37.75	38.23	1.987	
6,719.50	6,636.21	6,709.81	6,637.14	27.40	27.08	101.97	-110.28	-839.08	76.34	37.99	38.35	1.991	
6,800.00	6,715.28	6,790.26	6,716.28	27.78	27.45	102.30	-112.21	-853.41	77.68	38.83	38.86	1.999	
6,900.00	6,813.92	6,889.99	6,814.66	28.22	27.89	102.20	-114.40	-869.57	79.06	39.58	39.48	2.003	
7,000.00	6,912.96	6,989.71	6,913.43	28.64	28.31	102.13	-116.23	-883.18	80.23	40.15	40.07	2.002	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 101H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,100.00	7,012.32	7,089.44	7,012.53	29.04	28.71	102.07	-117.73	-894.23	81.17	40.54	40.64	1.998	
7,200.00	7,111.95	7,189.17	7,111.89	29.42	29.08	102.03	-118.87	-902.71	81.90	40.73	41.17	1.989	
7,300.00	7,211.76	7,288.90	7,211.44	29.77	29.44	102.02	-119.67	-908.62	82.41	40.74	41.67	1.978	
7,400.00	7,311.70	7,388.63	7,311.11	30.10	29.77	102.01	-120.12	-911.95	82.70	40.56	42.14	1.963	
7,480.31	7,392.00	7,468.73	7,391.20	30.35	30.03	-0.52	-120.23	-912.76	82.77	40.28	42.49	1.948	
7,500.00	7,411.69	7,488.42	7,410.89	30.41	30.09	-0.52	-120.23	-912.76	82.77	40.20	42.58	1.944	
7,600.00	7,511.69	7,588.42	7,510.89	30.71	30.39	-0.52	-120.23	-912.76	82.77	39.77	43.00	1.925	
7,700.00	7,611.69	7,688.42	7,610.89	31.01	30.70	-0.52	-120.23	-912.76	82.77	39.34	43.44	1.906	
7,800.00	7,711.69	7,788.42	7,710.89	31.31	31.00	-0.52	-120.23	-912.76	82.77	38.90	43.87	1.887	
7,900.00	7,811.69	7,888.42	7,810.89	31.62	31.31	-0.52	-120.23	-912.76	82.77	38.47	44.30	1.868	
8,000.00	7,911.69	7,988.42	7,910.89	31.92	31.62	-0.52	-120.23	-912.76	82.77	38.03	44.74	1.850	
8,100.00	8,011.69	8,088.42	8,010.89	32.23	31.93	-0.52	-120.23	-912.76	82.77	37.60	45.17	1.832	
8,102.22	8,013.92	8,090.64	8,013.12	32.24	31.93	-0.52	-120.23	-912.76	82.77	37.59	45.18	1.832	SF
8,200.00	8,111.69	8,179.91	8,102.29	32.54	32.21	-0.52	-117.36	-912.78	86.07	40.89	45.18	1.905	
8,300.00	8,211.69	8,264.51	8,185.53	32.84	32.45	-0.53	-102.74	-912.93	103.42	59.33	44.09	2.346	
8,400.00	8,311.69	8,343.26	8,260.32	33.15	32.67	-0.54	-78.25	-913.17	134.61	92.10	42.52	3.166	
8,500.00	8,411.69	8,414.15	8,324.20	33.46	32.84	-0.54	-47.63	-913.48	177.93	137.15	40.78	4.364	
8,600.00	8,511.69	8,476.48	8,376.87	33.77	32.97	-0.55	-14.36	-913.81	231.41	192.40	39.01	5.933	
8,700.00	8,611.69	8,530.49	8,419.36	34.08	33.07	-0.55	18.94	-914.14	293.17	255.85	37.31	7.857	
8,800.00	8,711.69	8,576.95	8,453.27	34.40	33.16	-0.55	50.69	-914.46	361.57	325.81	35.76	10.110	
8,900.00	8,811.69	8,616.86	8,480.26	34.71	33.22	-0.56	80.07	-914.75	435.26	400.87	34.40	12.655	
9,000.00	8,911.69	8,650.00	8,501.08	35.03	33.27	-0.56	105.85	-915.00	513.18	480.03	33.15	15.480	
9,100.00	9,011.69	8,680.83	8,519.07	35.34	33.31	-0.56	130.89	-915.25	594.46	562.25	32.20	18.459	
9,200.00	9,111.69	8,700.00	8,529.57	35.66	33.34	-0.56	146.92	-915.41	678.52	647.42	31.10	21.816	
9,300.00	9,211.69	8,729.01	8,544.43	35.97	33.38	-0.56	171.83	-915.66	764.65	734.00	30.65	24.945	
9,400.00	9,311.69	8,750.00	8,554.38	36.29	33.41	-0.56	190.31	-915.84	852.66	822.54	30.11	28.315	
9,500.00	9,411.69	8,766.11	8,561.56	36.61	33.44	-0.56	204.74	-915.99	942.15	912.54	29.60	31.827	
9,588.35	9,500.04	8,779.85	8,567.35	36.89	33.46	-0.56	217.19	-916.11	1,022.25	992.98	29.26	34.934	
9,600.00	9,511.69	8,781.60	8,568.07	36.93	33.46	0.01	218.78	-916.13	1,032.83	1,003.61	29.22	35.346	
9,650.00	9,561.57	8,800.00	8,575.31	37.08	33.49	0.01	235.70	-916.30	1,077.37	1,048.11	29.26	36.825	
9,700.00	9,610.99	8,800.00	8,575.31	37.23	33.49	0.01	235.70	-916.30	1,119.84	1,091.02	28.82	38.856	
9,750.00	9,659.56	8,800.00	8,575.31	37.38	33.49	0.01	235.70	-916.30	1,160.59	1,132.22	28.37	40.908	
9,800.00	9,706.91	8,818.77	8,582.13	37.51	33.51	0.00	253.18	-916.47	1,199.03	1,170.76	28.27	42.410	
9,850.00	9,752.69	8,829.78	8,585.87	37.63	33.53	0.00	263.54	-916.57	1,235.29	1,207.30	27.99	44.129	
9,900.00	9,796.55	8,850.00	8,592.21	37.74	33.56	0.00	282.74	-916.76	1,269.25	1,241.39	27.85	45.567	
9,950.00	9,838.15	8,850.00	8,592.21	37.83	33.56	0.00	282.74	-916.76	1,300.49	1,273.13	27.36	47.528	
10,000.00	9,877.18	8,850.00	8,592.21	37.92	33.56	0.00	282.74	-916.76	1,329.48	1,302.59	26.90	49.427	
10,050.00	9,913.34	8,878.54	8,599.99	37.99	33.61	0.00	310.19	-917.04	1,355.14	1,328.29	26.85	50.468	
10,100.00	9,946.35	8,900.00	8,604.94	38.05	33.65	0.00	331.07	-917.24	1,378.37	1,351.68	26.69	51.640	
10,150.00	9,975.97	8,900.00	8,604.94	38.11	33.65	0.00	331.07	-917.24	1,398.58	1,372.30	26.28	53.223	
10,200.00	10,001.96	8,918.54	8,608.58	38.15	33.69	0.00	349.25	-917.43	1,415.85	1,389.74	26.11	54.226	
10,250.00	10,024.13	8,950.00	8,613.41	38.19	33.76	0.00	380.33	-917.73	1,430.53	1,404.45	26.08	54.843	
10,300.00	10,042.32	8,950.00	8,613.41	38.23	33.76	0.00	380.33	-917.73	1,441.41	1,415.64	25.78	55.922	
10,350.00	10,056.38	8,950.00	8,613.41	38.28	33.76	0.00	380.33	-917.73	1,449.68	1,424.14	25.54	56.757	
10,400.00	10,066.20	8,974.25	8,615.96	38.33	33.81	0.00	404.44	-917.97	1,454.61	1,429.08	25.52	56.993	
10,450.00	10,071.72	9,000.00	8,617.55	38.40	33.88	0.00	430.14	-918.23	1,456.70	1,431.17	25.53	57.054	
10,488.35	10,073.00	9,000.00	8,617.55	38.46	33.88	0.00	430.14	-918.23	1,455.89	1,430.42	25.47	57.156	
10,500.00	10,073.00	9,000.00	8,617.55	38.48	33.88	0.00	430.14	-918.23	1,455.45	1,429.99	25.47	57.155	
10,600.00	10,073.00	9,051.45	8,618.00	38.70	34.03	0.00	481.58	-918.74	1,454.20	1,428.55	25.65	56.693	
10,700.00	10,073.00	9,151.45	8,618.00	39.01	34.39	0.00	581.57	-919.74	1,454.20	1,428.20	26.00	55.931	
10,800.00	10,073.00	9,251.45	8,618.00	39.41	34.84	0.00	681.57	-920.73	1,454.20	1,427.81	26.39	55.103	
10,900.00	10,073.00	9,351.45	8,618.00	39.89	35.38	0.00	781.56	-921.73	1,454.20	1,427.38	26.82	54.218	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 101H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,000.00	10,073.00	9,451.45	8,618.00	40.44	36.00	0.00	881.56	-922.72	1,454.20	1,426.91	27.29	53.285	
11,100.00	10,073.00	9,551.45	8,618.00	41.06	36.69	0.00	981.55	-923.72	1,454.20	1,426.40	27.80	52.316	
11,200.00	10,073.00	9,651.45	8,618.00	41.75	37.45	0.00	1,081.55	-924.71	1,454.20	1,425.86	28.34	51.318	
11,300.00	10,073.00	9,751.45	8,618.00	42.49	38.27	0.00	1,181.54	-925.70	1,454.20	1,425.29	28.91	50.302	
11,400.00	10,073.00	9,851.45	8,618.00	43.29	39.15	0.00	1,281.54	-926.70	1,454.20	1,424.69	29.51	49.275	
11,500.00	10,073.00	9,951.45	8,618.00	44.13	40.07	0.00	1,381.53	-927.69	1,454.20	1,424.06	30.14	48.242	
11,600.00	10,073.00	10,051.45	8,618.00	45.03	41.05	0.00	1,481.53	-928.69	1,454.20	1,423.40	30.80	47.210	
11,700.00	10,073.00	10,151.45	8,618.00	45.96	42.06	0.00	1,581.52	-929.68	1,454.20	1,422.71	31.49	46.185	
11,800.00	10,073.00	10,251.45	8,618.00	46.94	43.12	0.00	1,681.52	-930.68	1,454.20	1,422.01	32.19	45.169	
11,900.00	10,073.00	10,351.45	8,618.00	47.95	44.21	0.00	1,781.51	-931.67	1,454.20	1,421.28	32.92	44.167	
12,000.00	10,073.00	10,451.45	8,618.00	49.00	45.34	0.00	1,881.51	-932.67	1,454.20	1,420.52	33.68	43.182	
12,100.00	10,073.00	10,551.45	8,618.00	50.08	46.50	0.00	1,981.50	-933.66	1,454.20	1,419.75	34.45	42.216	
12,200.00	10,073.00	10,651.45	8,618.00	51.19	47.69	0.00	2,081.50	-934.66	1,454.20	1,418.96	35.24	41.271	
12,300.00	10,073.00	10,751.45	8,618.00	52.33	48.90	0.00	2,181.49	-935.65	1,454.20	1,418.16	36.04	40.348	
12,400.00	10,073.00	10,851.45	8,618.00	53.50	50.14	0.00	2,281.49	-936.65	1,454.20	1,417.34	36.86	39.449	
12,500.00	10,073.00	10,951.45	8,618.00	54.69	51.40	0.00	2,381.48	-937.64	1,454.20	1,416.50	37.70	38.574	
12,600.00	10,073.00	11,051.45	8,618.00	55.91	52.69	0.00	2,481.48	-938.64	1,454.20	1,415.65	38.55	37.723	
12,700.00	10,073.00	11,151.45	8,618.00	57.14	53.99	0.00	2,581.47	-939.63	1,454.20	1,414.79	39.41	36.897	
12,800.00	10,073.00	11,251.45	8,618.00	58.40	55.32	0.00	2,681.47	-940.62	1,454.20	1,413.91	40.29	36.095	
12,900.00	10,073.00	11,351.45	8,618.00	59.68	56.66	0.00	2,781.46	-941.62	1,454.20	1,413.03	41.17	35.318	
13,000.00	10,073.00	11,451.45	8,618.00	60.97	58.01	0.00	2,881.46	-942.61	1,454.20	1,412.13	42.07	34.565	
13,100.00	10,073.00	11,551.45	8,618.00	62.28	59.38	0.00	2,981.45	-943.61	1,454.20	1,411.22	42.98	33.836	
13,200.00	10,073.00	11,651.45	8,618.00	63.61	60.77	0.00	3,081.45	-944.60	1,454.20	1,410.31	43.89	33.129	
13,300.00	10,073.00	11,751.45	8,618.00	64.95	62.17	0.00	3,181.44	-945.60	1,454.20	1,409.38	44.82	32.445	
13,400.00	10,073.00	11,851.45	8,618.00	66.31	63.58	0.00	3,281.44	-946.59	1,454.20	1,408.45	45.75	31.783	
13,500.00	10,073.00	11,951.45	8,618.00	67.68	65.00	0.00	3,381.43	-947.59	1,454.20	1,407.51	46.69	31.143	
13,600.00	10,073.00	12,051.45	8,618.00	69.06	66.43	0.00	3,481.43	-948.58	1,454.20	1,406.56	47.64	30.523	
13,700.00	10,073.00	12,151.45	8,618.00	70.45	67.88	0.00	3,581.43	-949.58	1,454.20	1,405.60	48.60	29.923	
13,800.00	10,073.00	12,251.45	8,618.00	71.86	69.33	0.00	3,681.42	-950.57	1,454.20	1,404.64	49.56	29.342	
13,900.00	10,073.00	12,351.45	8,618.00	73.27	70.79	0.00	3,781.42	-951.57	1,454.20	1,403.67	50.53	28.780	
14,000.00	10,073.00	12,451.45	8,618.00	74.70	72.26	0.00	3,881.41	-952.56	1,454.20	1,402.70	51.50	28.236	
14,100.00	10,073.00	12,551.45	8,618.00	76.13	73.73	0.00	3,981.41	-953.56	1,454.20	1,401.72	52.48	27.710	
14,200.00	10,073.00	12,651.45	8,618.00	77.57	75.22	0.00	4,081.40	-954.55	1,454.20	1,400.74	53.46	27.200	
14,300.00	10,073.00	12,751.45	8,618.00	79.02	76.71	0.00	4,181.40	-955.54	1,454.20	1,399.75	54.45	26.706	
14,400.00	10,073.00	12,851.45	8,618.00	80.48	78.20	0.00	4,281.39	-956.54	1,454.20	1,398.75	55.45	26.227	
14,500.00	10,073.00	12,951.45	8,618.00	81.95	79.71	0.00	4,381.39	-957.53	1,454.20	1,397.76	56.44	25.763	
14,600.00	10,073.00	13,051.45	8,618.00	83.42	81.22	0.00	4,481.38	-958.53	1,454.20	1,396.75	57.45	25.314	
14,700.00	10,073.00	13,151.45	8,618.00	84.90	82.73	0.00	4,581.38	-959.52	1,454.20	1,395.75	58.45	24.878	
14,800.00	10,073.00	13,251.45	8,618.00	86.38	84.25	0.00	4,681.37	-960.52	1,454.20	1,394.74	59.46	24.456	
14,900.00	10,073.00	13,351.45	8,618.00	87.87	85.78	0.00	4,781.37	-961.51	1,454.20	1,393.73	60.47	24.046	
15,000.00	10,073.00	13,451.45	8,618.00	89.37	87.30	0.00	4,881.36	-962.51	1,454.20	1,392.71	61.49	23.649	
15,100.00	10,073.00	13,551.45	8,618.00	90.87	88.84	0.00	4,981.36	-963.50	1,454.20	1,391.69	62.51	23.263	
15,200.00	10,073.00	13,651.45	8,618.00	92.38	90.38	0.00	5,081.35	-964.50	1,454.20	1,390.67	63.53	22.889	
15,300.00	10,073.00	13,751.45	8,618.00	93.89	91.92	0.00	5,181.35	-965.49	1,454.20	1,389.64	64.56	22.525	
15,400.00	10,073.00	13,851.45	8,618.00	95.41	93.46	0.00	5,281.34	-966.49	1,454.20	1,388.61	65.59	22.172	
15,500.00	10,073.00	13,951.45	8,618.00	96.93	95.01	0.00	5,381.34	-967.48	1,454.20	1,387.58	66.62	21.829	
15,600.00	10,073.00	14,051.45	8,618.00	98.46	96.56	0.00	5,481.33	-968.48	1,454.20	1,386.55	67.65	21.495	
15,700.00	10,073.00	14,151.45	8,618.00	99.99	98.12	0.00	5,581.33	-969.47	1,454.20	1,385.51	68.69	21.171	
15,800.00	10,073.00	14,251.45	8,618.00	101.52	99.68	0.00	5,681.32	-970.46	1,454.20	1,384.47	69.73	20.856	
15,900.00	10,073.00	14,351.45	8,618.00	103.06	101.24	0.00	5,781.32	-971.46	1,454.20	1,383.43	70.77	20.550	
16,000.00	10,073.00	14,451.45	8,618.00	104.60	102.81	0.00	5,881.31	-972.45	1,454.20	1,382.39	71.81	20.251	
16,100.00	10,073.00	14,551.45	8,618.00	106.14	104.37	0.00	5,981.31	-973.45	1,454.20	1,381.35	72.85	19.961	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 101H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,200.00	10,073.00	14,651.45	8,618.00	107.69	105.94	0.00	6,081.30	-974.44	1,454.20	1,380.30	73.90	19.678	
16,300.00	10,073.00	14,751.45	8,618.00	109.24	107.51	0.00	6,181.30	-975.44	1,454.20	1,379.25	74.95	19.403	
16,400.00	10,073.00	14,851.45	8,618.00	110.79	109.09	0.00	6,281.29	-976.43	1,454.20	1,378.20	76.00	19.135	
16,500.00	10,073.00	14,951.45	8,618.00	112.35	110.67	0.00	6,381.29	-977.43	1,454.20	1,377.15	77.05	18.874	
16,600.00	10,073.00	15,051.45	8,618.00	113.91	112.25	0.00	6,481.28	-978.42	1,454.20	1,376.10	78.10	18.619	
16,700.00	10,073.00	15,151.45	8,618.00	115.47	113.83	0.00	6,581.28	-979.42	1,454.20	1,375.04	79.16	18.371	
16,800.00	10,073.00	15,251.45	8,618.00	117.03	115.41	0.00	6,681.27	-980.41	1,454.20	1,373.99	80.21	18.129	
16,900.00	10,073.00	15,351.45	8,618.00	118.60	117.00	0.00	6,781.27	-981.41	1,454.20	1,372.93	81.27	17.893	
17,000.00	10,073.00	15,451.45	8,618.00	120.17	118.58	0.00	6,881.26	-982.40	1,454.20	1,371.87	82.33	17.663	
17,100.00	10,073.00	15,551.45	8,618.00	121.74	120.17	0.00	6,981.26	-983.40	1,454.20	1,370.81	83.39	17.439	
17,200.00	10,073.00	15,651.45	8,618.00	123.31	121.76	0.00	7,081.25	-984.39	1,454.20	1,369.75	84.45	17.220	
17,300.00	10,073.00	15,751.45	8,618.00	124.88	123.35	0.00	7,181.25	-985.38	1,454.20	1,368.69	85.51	17.005	
17,400.00	10,073.00	15,851.45	8,618.00	126.46	124.95	0.00	7,281.24	-986.38	1,454.20	1,367.62	86.58	16.796	
17,500.00	10,073.00	15,951.45	8,618.00	128.04	126.54	0.00	7,381.24	-987.37	1,454.20	1,366.56	87.64	16.592	
17,600.00	10,073.00	16,051.45	8,618.00	129.62	128.14	0.00	7,481.23	-988.37	1,454.20	1,365.49	88.71	16.393	
17,700.00	10,073.00	16,151.45	8,618.00	131.20	129.74	0.00	7,581.23	-989.36	1,454.20	1,364.42	89.78	16.198	
17,800.00	10,073.00	16,251.45	8,618.00	132.79	131.34	0.00	7,681.22	-990.36	1,454.20	1,363.35	90.85	16.007	
17,900.00	10,073.00	16,351.45	8,618.00	134.37	132.94	0.00	7,781.22	-991.35	1,454.20	1,362.28	91.92	15.821	
18,000.00	10,073.00	16,451.45	8,618.00	135.96	134.54	0.00	7,881.21	-992.35	1,454.20	1,361.21	92.99	15.639	
18,100.00	10,073.00	16,551.45	8,618.00	137.55	136.14	0.00	7,981.21	-993.34	1,454.20	1,360.14	94.06	15.461	
18,200.00	10,073.00	16,651.45	8,618.00	139.14	137.75	0.00	8,081.20	-994.34	1,454.20	1,359.07	95.13	15.287	
18,300.00	10,073.00	16,751.45	8,618.00	140.73	139.35	0.00	8,181.20	-995.33	1,454.20	1,358.00	96.20	15.116	
18,400.00	10,073.00	16,851.45	8,618.00	142.32	140.96	0.00	8,281.19	-996.33	1,454.20	1,356.92	97.28	14.949	
18,500.00	10,073.00	16,951.45	8,618.00	143.92	142.56	0.00	8,381.19	-997.32	1,454.20	1,355.85	98.35	14.786	
18,600.00	10,073.00	17,051.45	8,618.00	145.51	144.17	0.00	8,481.18	-998.32	1,454.20	1,354.77	99.43	14.626	
18,700.00	10,073.00	17,151.45	8,618.00	147.11	145.78	0.00	8,581.18	-999.31	1,454.20	1,353.70	100.50	14.469	
18,800.00	10,073.00	17,251.45	8,618.00	148.71	147.39	0.00	8,681.17	-1,000.31	1,454.20	1,352.62	101.58	14.316	
18,900.00	10,073.00	17,351.45	8,618.00	150.31	149.00	0.00	8,781.17	-1,001.30	1,454.20	1,351.54	102.66	14.166	
19,000.00	10,073.00	17,451.45	8,618.00	151.91	150.62	0.00	8,881.16	-1,002.29	1,454.20	1,350.47	103.73	14.018	
19,100.00	10,073.00	17,551.45	8,618.00	153.51	152.23	0.00	8,981.16	-1,003.29	1,454.20	1,349.39	104.81	13.874	
19,200.00	10,073.00	17,651.45	8,618.00	155.11	153.84	0.00	9,081.15	-1,004.28	1,454.20	1,348.31	105.89	13.733	
19,300.00	10,073.00	17,751.45	8,618.00	156.72	155.46	0.00	9,181.15	-1,005.28	1,454.20	1,347.23	106.97	13.594	
19,400.00	10,073.00	17,851.45	8,618.00	158.32	157.07	0.00	9,281.14	-1,006.27	1,454.20	1,346.15	108.05	13.458	
19,500.00	10,073.00	17,951.45	8,618.00	159.93	158.69	0.00	9,381.14	-1,007.27	1,454.20	1,345.07	109.13	13.325	
19,600.00	10,073.00	18,051.45	8,618.00	161.53	160.31	0.00	9,481.13	-1,008.26	1,454.20	1,343.98	110.22	13.194	
19,700.00	10,073.00	18,151.45	8,618.00	163.14	161.92	0.00	9,581.13	-1,009.26	1,454.20	1,342.90	111.30	13.066	
19,800.00	10,073.00	18,251.45	8,618.00	164.75	163.54	0.00	9,681.12	-1,010.25	1,454.20	1,341.82	112.38	12.940	
19,900.00	10,073.00	18,351.45	8,618.00	166.36	165.16	0.00	9,781.12	-1,011.25	1,454.20	1,340.73	113.47	12.816	
20,000.00	10,073.00	18,451.45	8,618.00	167.97	166.78	0.00	9,881.11	-1,012.24	1,454.20	1,339.65	114.55	12.695	
20,100.00	10,073.00	18,551.45	8,618.00	169.58	168.40	0.00	9,981.11	-1,013.24	1,454.20	1,338.57	115.63	12.576	
20,157.33	10,073.00	18,608.78	8,618.00	170.50	169.33	0.00	10,038.44	-1,013.81	1,454.20	1,337.94	116.26	12.509	
20,185.45	10,073.00	18,636.90	8,618.00	170.96	169.79	0.00	10,066.55	-1,014.09	1,454.20	1,337.64	116.56	12.476	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 102H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,844.10	1,844.10	6.37	6.38	89.46	0.23	25.06	25.07	16.05	9.02	2.780	
1,900.00	1,900.00	1,901.10	1,901.10	6.58	6.58	89.46	0.23	25.06	25.07	15.76	9.31	2.694	
1,916.30	1,916.30	1,917.40	1,917.40	6.64	6.64	89.46	0.23	25.06	25.07	15.68	9.39	2.670	CC
2,000.00	2,000.00	2,001.09	2,001.09	6.94	6.94	89.46	0.23	25.07	25.07	15.25	9.81	2.555	ES, SF
2,100.00	2,099.99	2,100.42	2,100.41	7.28	7.28	-167.56	-0.22	26.30	27.59	17.29	10.30	2.679	
2,200.00	2,199.91	2,199.37	2,199.28	7.62	7.62	-166.69	-1.57	29.94	35.10	24.34	10.76	3.261	
2,300.00	2,299.69	2,297.59	2,297.29	7.97	7.95	-165.84	-3.79	35.93	47.57	36.35	11.22	4.240	
2,400.00	2,399.27	2,394.71	2,394.01	8.31	8.29	-165.18	-6.85	44.17	64.95	53.28	11.67	5.565	
2,500.00	2,498.57	2,490.91	2,489.57	8.67	8.62	-164.72	-10.69	54.53	87.09	74.97	12.12	7.184	
2,600.00	2,597.54	2,587.67	2,585.60	9.03	8.97	-164.65	-14.79	65.59	112.34	99.75	12.60	8.917	
2,700.00	2,696.09	2,683.75	2,680.97	9.40	9.31	-164.85	-18.86	76.57	140.03	126.96	13.07	10.711	
2,760.81	2,755.79	2,741.82	2,738.61	9.63	9.52	-165.03	-21.32	83.20	158.05	144.69	13.36	11.827	
2,800.00	2,794.20	2,779.16	2,775.67	9.78	9.66	-165.20	-22.90	87.47	169.96	156.41	13.55	12.544	
2,900.00	2,892.23	2,874.43	2,870.23	10.17	10.01	-165.54	-26.94	98.36	200.34	186.32	14.02	14.285	
3,000.00	2,990.25	2,969.69	2,964.79	10.57	10.36	-165.79	-30.98	109.24	230.73	216.23	14.50	15.910	
3,100.00	3,088.27	3,064.96	3,059.34	10.97	10.72	-165.98	-35.01	120.13	261.12	246.14	14.98	17.429	
3,200.00	3,186.30	3,160.23	3,153.90	11.38	11.07	-166.13	-39.05	131.02	291.51	276.05	15.46	18.850	
3,300.00	3,284.32	3,255.50	3,248.46	11.80	11.43	-166.25	-43.08	141.90	321.90	305.95	15.95	20.183	
3,400.00	3,382.34	3,350.76	3,343.01	12.22	11.79	-166.35	-47.12	152.79	352.30	335.86	16.44	21.434	
3,500.00	3,480.37	3,446.03	3,437.57	12.65	12.16	-166.44	-51.16	163.67	382.69	365.77	16.92	22.611	
3,600.00	3,578.39	3,541.30	3,532.13	13.08	12.52	-166.51	-55.19	174.56	413.09	395.67	17.42	23.720	
3,700.00	3,676.41	3,636.57	3,626.69	13.51	12.89	-166.57	-59.23	185.45	443.48	425.58	17.91	24.765	
3,800.00	3,774.43	3,731.83	3,721.24	13.95	13.26	-166.63	-63.27	196.33	473.88	455.48	18.40	25.753	
3,900.00	3,872.46	3,827.10	3,815.80	14.39	13.62	-166.68	-67.30	207.22	504.28	485.38	18.90	26.687	
4,000.00	3,970.48	3,922.37	3,910.36	14.83	13.99	-166.72	-71.34	218.11	534.67	515.28	19.39	27.571	
4,100.00	4,068.50	4,017.64	4,004.91	15.28	14.36	-166.76	-75.38	228.99	565.07	545.18	19.89	28.410	
4,200.00	4,166.53	4,112.90	4,099.47	15.73	14.74	-166.79	-79.41	239.88	595.47	575.08	20.39	29.206	
4,300.00	4,264.55	4,208.17	4,194.03	16.17	15.11	-166.82	-83.45	250.77	625.87	604.98	20.89	29.963	
4,400.00	4,362.57	4,303.44	4,288.59	16.63	15.48	-166.85	-87.48	261.65	656.27	634.88	21.39	30.683	
4,500.00	4,460.59	4,398.71	4,383.14	17.08	15.86	-166.87	-91.52	272.54	686.66	664.77	21.89	31.369	
4,600.00	4,558.62	4,493.97	4,477.70	17.53	16.23	-166.90	-95.56	283.43	717.06	694.67	22.39	32.023	
4,700.00	4,656.64	4,589.24	4,572.26	17.99	16.61	-166.92	-99.59	294.31	747.46	724.57	22.90	32.647	
4,800.00	4,754.66	4,684.51	4,666.81	18.45	16.98	-166.94	-103.63	305.20	777.86	754.46	23.40	33.243	
4,900.00	4,852.69	4,779.77	4,761.37	18.91	17.36	-166.96	-107.67	316.08	808.26	784.35	23.90	33.813	
5,000.00	4,950.71	4,875.04	4,855.93	19.37	17.74	-166.97	-111.70	326.97	838.66	814.25	24.41	34.358	
5,100.00	5,048.73	4,970.31	4,950.49	19.83	18.12	-166.99	-115.74	337.86	869.06	844.14	24.91	34.881	
5,200.00	5,146.76	5,065.58	5,045.04	20.29	18.49	-167.01	-119.77	348.74	899.45	874.03	25.42	35.382	
5,300.00	5,244.78	5,160.84	5,139.60	20.75	18.87	-167.02	-123.81	359.63	929.85	903.92	25.93	35.862	
5,400.00	5,342.80	5,256.11	5,234.16	21.22	19.25	-167.03	-127.85	370.52	960.25	933.82	26.44	36.324	
5,500.00	5,440.82	5,351.38	5,328.72	21.68	19.63	-167.04	-131.88	381.40	990.65	963.71	26.94	36.767	
5,600.00	5,538.85	5,446.65	5,423.27	22.15	20.01	-167.06	-135.92	392.29	1,021.05	993.60	27.45	37.193	
5,700.00	5,636.87	5,541.91	5,517.83	22.61	20.39	-167.07	-139.96	403.18	1,051.45	1,023.49	27.96	37.603	
5,800.00	5,734.89	5,637.18	5,612.39	23.08	20.77	-167.08	-143.99	414.06	1,081.85	1,053.38	28.47	37.998	
5,900.00	5,832.92	5,732.45	5,706.94	23.55	21.16	-167.09	-148.03	424.95	1,112.25	1,083.27	28.98	38.378	
6,000.00	5,930.94	5,827.72	5,801.50	24.02	21.54	-167.09	-152.07	435.84	1,142.65	1,113.15	29.49	38.745	
6,100.00	6,028.96	5,922.98	5,896.06	24.49	21.92	-167.10	-156.10	446.72	1,173.04	1,143.04	30.00	39.098	
6,200.00	6,126.98	6,018.25	5,990.62	24.96	22.30	-167.11	-160.14	457.61	1,203.44	1,172.93	30.51	39.440	
6,300.00	6,225.01	6,113.52	6,085.17	25.43	22.68	-167.12	-164.17	468.49	1,233.84	1,202.82	31.03	39.769	
6,400.00	6,323.03	6,208.79	6,179.73	25.90	23.07	-167.13	-168.21	479.38	1,264.24	1,232.70	31.54	40.088	
6,500.00	6,421.05	6,304.05	6,274.29	26.37	23.45	-167.13	-172.25	490.27	1,294.64	1,262.59	32.05	40.395	
6,600.00	6,519.08	6,399.32	6,368.84	26.84	23.83	-167.14	-176.28	501.15	1,325.04	1,292.48	32.56	40.693	
6,700.00	6,617.10	6,494.59	6,463.40	27.31	24.21	-167.15	-180.32	512.04	1,355.44	1,322.36	33.07	40.981	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 102H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,719.50	6,636.21	6,513.17	6,481.84	27.40	24.29	-167.15	-181.11	514.16	1,361.37	1,328.19	33.17	41.036	
6,800.00	6,715.28	6,590.10	6,558.20	27.78	24.60	-167.23	-184.37	522.95	1,385.05	1,351.46	33.59	41.237	
6,900.00	6,813.92	6,686.32	6,653.71	28.22	24.99	-167.29	-188.44	533.95	1,412.26	1,378.16	34.10	41.415	
7,000.00	6,912.96	6,783.20	6,749.87	28.64	25.38	-167.33	-192.55	545.02	1,437.00	1,402.39	34.61	41.517	
7,100.00	7,012.32	6,880.68	6,846.61	29.04	25.77	-167.33	-196.68	556.16	1,459.26	1,424.14	35.12	41.546	
7,200.00	7,111.95	7,018.56	6,983.64	29.42	26.32	-167.29	-201.97	570.44	1,478.09	1,442.25	35.84	41.242	
7,300.00	7,211.76	7,174.69	7,139.35	29.77	26.90	-167.26	-205.93	581.12	1,490.79	1,454.19	36.60	40.734	
7,400.00	7,311.70	7,332.40	7,296.97	30.10	27.45	-167.26	-207.68	585.84	1,497.11	1,459.80	37.30	40.133	
7,480.31	7,392.00	7,428.53	7,393.10	30.35	27.77	90.18	-207.77	586.06	1,498.07	1,460.34	37.74	39.698	
7,500.00	7,411.69	7,448.23	7,412.79	30.41	27.83	90.18	-207.77	586.06	1,498.07	1,460.24	37.83	39.601	
7,600.00	7,511.69	7,548.23	7,512.79	30.71	28.16	90.18	-207.77	586.06	1,498.07	1,459.77	38.30	39.113	
7,700.00	7,611.69	7,648.23	7,612.79	31.01	28.48	90.18	-207.77	586.06	1,498.07	1,459.30	38.77	38.636	
7,800.00	7,711.69	7,748.23	7,712.79	31.31	28.81	90.18	-207.77	586.06	1,498.07	1,458.83	39.25	38.170	
7,900.00	7,811.69	7,848.23	7,812.79	31.62	29.14	90.18	-207.77	586.06	1,498.07	1,458.35	39.72	37.714	
8,000.00	7,911.69	7,948.65	7,913.21	31.92	29.46	90.18	-207.64	586.06	1,498.07	1,457.87	40.20	37.268	
8,100.00	8,011.69	8,050.69	8,014.50	32.23	29.78	89.75	-196.42	585.95	1,497.97	1,457.30	40.66	36.840	
8,137.55	8,049.24	8,087.51	8,050.34	32.34	29.89	89.43	-187.97	585.87	1,497.94	1,457.12	40.82	36.692	
8,200.00	8,111.69	8,145.94	8,105.88	32.54	30.04	88.73	-169.90	585.69	1,498.07	1,456.99	41.08	36.467	
8,300.00	8,211.69	8,230.52	8,182.35	32.84	30.24	87.36	-133.96	585.32	1,499.22	1,457.78	41.45	36.173	
8,400.00	8,311.69	8,300.00	8,240.66	33.15	30.37	85.92	-96.26	584.95	1,502.48	1,460.73	41.74	35.992	
8,500.00	8,411.69	8,364.20	8,290.13	33.46	30.47	84.37	-55.39	584.54	1,508.79	1,466.81	41.99	35.935	
8,600.00	8,511.69	8,415.27	8,326.02	33.77	30.54	82.99	-19.10	584.17	1,518.96	1,476.83	42.13	36.055	
8,700.00	8,611.69	8,450.00	8,348.52	34.08	30.58	82.00	7.36	583.91	1,533.57	1,491.43	42.14	36.391	
8,800.00	8,711.69	8,500.00	8,378.01	34.40	30.62	80.48	47.72	583.50	1,552.89	1,510.74	42.14	36.846	
8,900.00	8,811.69	8,524.02	8,390.89	34.71	30.64	79.73	67.98	583.30	1,577.13	1,535.17	41.96	37.586	
9,000.00	8,911.69	8,550.00	8,403.86	35.03	30.66	78.89	90.49	583.07	1,606.36	1,564.65	41.71	38.511	
9,100.00	9,011.69	8,571.94	8,414.01	35.34	30.67	78.18	109.94	582.88	1,640.47	1,599.09	41.38	39.647	
9,200.00	9,111.69	8,600.00	8,425.89	35.66	30.69	77.24	135.36	582.62	1,679.35	1,638.32	41.03	40.930	
9,300.00	9,211.69	8,600.00	8,425.89	35.97	30.69	77.24	135.36	582.62	1,722.67	1,682.19	40.49	42.547	
9,400.00	9,311.69	8,622.51	8,434.51	36.29	30.71	76.49	156.15	582.41	1,770.21	1,730.16	40.05	44.196	
9,500.00	9,411.69	8,650.00	8,443.92	36.61	30.73	75.55	181.97	582.16	1,821.93	1,782.30	39.62	45.980	
9,588.35	9,500.04	8,650.00	8,443.92	36.89	30.73	75.55	181.97	582.16	1,870.41	1,831.29	39.11	47.822	
9,600.00	9,511.69	8,650.00	8,443.92	36.93	30.73	75.35	181.97	582.16	1,876.99	1,837.95	39.04	48.073	
9,650.00	9,561.57	8,650.00	8,443.92	37.08	30.73	72.07	181.97	582.16	1,905.22	1,866.47	38.75	49.164	
9,700.00	9,610.99	8,650.00	8,443.92	37.23	30.73	68.88	181.97	582.16	1,933.24	1,894.78	38.46	50.269	
9,750.00	9,659.56	8,668.70	8,449.61	37.38	30.74	65.33	199.78	581.98	1,960.56	1,922.29	38.27	51.230	
9,800.00	9,706.91	8,677.54	8,452.09	37.51	30.75	62.28	208.27	581.89	1,987.22	1,949.19	38.03	52.258	
9,850.00	9,752.69	8,700.00	8,457.82	37.63	30.78	59.17	229.98	581.67	2,013.06	1,975.21	37.86	53.173	
9,900.00	9,796.55	8,700.00	8,457.82	37.74	30.78	56.79	229.98	581.67	2,037.49	1,999.91	37.58	54.214	
9,950.00	9,838.15	8,700.00	8,457.82	37.83	30.78	54.62	229.98	581.67	2,060.77	2,023.45	37.32	55.223	
10,000.00	9,877.18	8,718.90	8,461.98	37.92	30.80	52.38	248.42	581.49	2,082.45	2,045.29	37.16	56.040	
10,050.00	9,913.34	8,730.41	8,464.21	37.99	30.82	50.51	259.71	581.38	2,102.55	2,065.57	36.98	56.856	
10,100.00	9,946.35	8,750.00	8,467.48	38.05	30.86	48.79	279.02	581.18	2,120.91	2,084.06	36.85	57.552	
10,150.00	9,975.97	8,750.00	8,467.48	38.11	30.86	47.50	279.02	581.18	2,137.29	2,100.63	36.66	58.297	
10,200.00	10,001.96	8,750.00	8,467.48	38.15	30.86	46.38	279.02	581.18	2,151.92	2,115.42	36.50	58.958	
10,250.00	10,024.13	8,779.55	8,471.17	38.19	30.93	45.26	308.34	580.89	2,163.99	2,127.51	36.48	59.322	
10,300.00	10,042.32	8,800.00	8,472.84	38.23	30.99	44.43	328.72	580.68	2,174.17	2,137.73	36.44	59.657	
10,350.00	10,056.38	8,800.00	8,472.84	38.28	30.99	43.87	328.72	580.68	2,182.04	2,145.67	36.37	59.988	
10,400.00	10,066.20	8,818.44	8,473.71	38.33	31.05	43.43	347.13	580.50	2,187.63	2,151.24	36.40	60.106	
10,450.00	10,071.72	8,836.47	8,474.00	38.40	31.11	43.18	365.16	580.32	2,190.95	2,154.50	36.45	60.113	
10,488.35	10,073.00	8,856.27	8,474.00	38.46	31.18	43.11	384.96	580.12	2,191.80	2,155.27	36.53	60.006	
10,500.00	10,073.00	8,867.92	8,474.00	38.48	31.22	43.11	396.61	580.00	2,191.80	2,155.23	36.57	59.937	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 102H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,600.00	10,073.00	8,967.92	8,474.00	38.70	31.65	43.11	496.60	579.00	2,191.79	2,154.82	36.98	59.274	
10,700.00	10,073.00	9,067.92	8,474.00	39.01	32.17	43.11	596.60	578.00	2,191.79	2,154.32	37.46	58.503	
10,800.00	10,073.00	9,167.92	8,474.00	39.41	32.76	43.11	696.59	576.99	2,191.78	2,153.75	38.03	57.634	
10,900.00	10,073.00	9,267.92	8,474.00	39.89	33.42	43.11	796.59	575.99	2,191.78	2,153.11	38.67	56.682	
11,000.00	10,073.00	9,367.92	8,474.00	40.44	34.15	43.11	896.58	574.99	2,191.77	2,152.39	39.38	55.661	
11,100.00	10,073.00	9,467.92	8,474.00	41.06	34.94	43.11	996.58	573.98	2,191.76	2,151.61	40.15	54.588	
11,200.00	10,073.00	9,567.92	8,474.00	41.75	35.78	43.11	1,096.57	572.98	2,191.76	2,150.77	40.99	53.473	
11,300.00	10,073.00	9,667.92	8,474.00	42.49	36.68	43.11	1,196.57	571.98	2,191.75	2,149.87	41.88	52.330	
11,400.00	10,073.00	9,767.92	8,474.00	43.29	37.63	43.11	1,296.56	570.97	2,191.74	2,148.91	42.83	51.168	
11,500.00	10,073.00	9,867.92	8,474.00	44.13	38.62	43.11	1,396.56	569.97	2,191.74	2,147.90	43.84	49.998	
11,600.00	10,073.00	9,967.92	8,474.00	45.03	39.66	43.11	1,496.55	568.97	2,191.73	2,146.85	44.89	48.828	
11,700.00	10,073.00	10,067.92	8,474.00	45.96	40.74	43.11	1,596.55	567.96	2,191.73	2,145.74	45.98	47.664	
11,800.00	10,073.00	10,167.92	8,474.00	46.94	41.85	43.11	1,696.54	566.96	2,191.72	2,144.60	47.12	46.514	
11,900.00	10,073.00	10,267.92	8,474.00	47.95	43.00	43.11	1,796.54	565.96	2,191.71	2,143.42	48.30	45.382	
12,000.00	10,073.00	10,367.92	8,474.00	49.00	44.18	43.11	1,896.53	564.96	2,191.71	2,142.20	49.51	44.271	
12,100.00	10,073.00	10,467.92	8,474.00	50.08	45.39	43.11	1,996.53	563.95	2,191.70	2,140.95	50.75	43.185	
12,200.00	10,073.00	10,567.92	8,474.00	51.19	46.63	43.11	2,096.52	562.95	2,191.69	2,139.67	52.03	42.126	
12,300.00	10,073.00	10,667.92	8,474.00	52.33	47.89	43.11	2,196.52	561.95	2,191.69	2,138.36	53.33	41.096	
12,400.00	10,073.00	10,767.92	8,474.00	53.50	49.18	43.11	2,296.51	560.94	2,191.68	2,137.02	54.66	40.097	
12,500.00	10,073.00	10,867.92	8,474.00	54.69	50.48	43.11	2,396.51	559.94	2,191.68	2,135.66	56.01	39.129	
12,600.00	10,073.00	10,967.92	8,474.00	55.91	51.81	43.11	2,496.50	558.94	2,191.67	2,134.28	57.39	38.190	
12,700.00	10,073.00	11,067.92	8,474.00	57.14	53.15	43.11	2,596.50	557.93	2,191.66	2,132.88	58.79	37.282	
12,800.00	10,073.00	11,167.92	8,474.00	58.40	54.51	43.11	2,696.49	556.93	2,191.66	2,131.45	60.20	36.404	
12,900.00	10,073.00	11,267.92	8,474.00	59.68	55.89	43.11	2,796.49	555.93	2,191.65	2,130.01	61.64	35.557	
13,000.00	10,073.00	11,367.92	8,474.00	60.97	57.28	43.11	2,896.48	554.92	2,191.65	2,128.56	63.09	34.740	
13,100.00	10,073.00	11,467.92	8,474.00	62.28	58.68	43.11	2,996.48	553.92	2,191.64	2,127.09	64.55	33.951	
13,200.00	10,073.00	11,567.92	8,474.00	63.61	60.10	43.11	3,096.47	552.92	2,191.63	2,125.60	66.04	33.189	
13,300.00	10,073.00	11,667.92	8,474.00	64.95	61.52	43.11	3,196.47	551.91	2,191.63	2,124.10	67.53	32.454	
13,400.00	10,073.00	11,767.92	8,474.00	66.31	62.96	43.11	3,296.46	550.91	2,191.62	2,122.58	69.04	31.745	
13,500.00	10,073.00	11,867.92	8,474.00	67.68	64.41	43.11	3,396.46	549.91	2,191.61	2,121.06	70.55	31.062	
13,600.00	10,073.00	11,967.92	8,474.00	69.06	65.87	43.10	3,496.45	548.91	2,191.61	2,119.52	72.08	30.404	
13,700.00	10,073.00	12,067.92	8,474.00	70.45	67.34	43.10	3,596.45	547.90	2,191.60	2,117.98	73.62	29.768	
13,800.00	10,073.00	12,167.92	8,474.00	71.86	68.81	43.10	3,696.44	546.90	2,191.60	2,116.42	75.17	29.154	
13,900.00	10,073.00	12,267.92	8,474.00	73.27	70.30	43.10	3,796.44	545.90	2,191.59	2,114.86	76.73	28.562	
14,000.00	10,073.00	12,367.92	8,474.00	74.70	71.79	43.10	3,896.43	544.89	2,191.58	2,113.28	78.30	27.990	
14,100.00	10,073.00	12,467.92	8,474.00	76.13	73.29	43.10	3,996.43	543.89	2,191.58	2,111.70	79.87	27.438	
14,200.00	10,073.00	12,567.92	8,474.00	77.57	74.79	43.10	4,096.42	542.89	2,191.57	2,110.11	81.46	26.905	
14,300.00	10,073.00	12,667.92	8,474.00	79.02	76.30	43.10	4,196.42	541.88	2,191.56	2,108.52	83.04	26.390	
14,400.00	10,073.00	12,767.92	8,474.00	80.48	77.82	43.10	4,296.41	540.88	2,191.56	2,106.92	84.64	25.893	
14,500.00	10,073.00	12,867.92	8,474.00	81.95	79.34	43.10	4,396.41	539.88	2,191.55	2,105.31	86.24	25.412	
14,600.00	10,073.00	12,967.92	8,474.00	83.42	80.87	43.10	4,496.40	538.87	2,191.55	2,103.70	87.85	24.947	
14,700.00	10,073.00	13,067.92	8,474.00	84.90	82.40	43.10	4,596.40	537.87	2,191.54	2,102.08	89.46	24.498	
14,800.00	10,073.00	13,167.92	8,474.00	86.38	83.94	43.10	4,696.39	536.87	2,191.53	2,100.46	91.07	24.063	
14,900.00	10,073.00	13,267.92	8,474.00	87.87	85.48	43.10	4,796.39	535.86	2,191.53	2,098.83	92.70	23.642	
15,000.00	10,073.00	13,367.92	8,474.00	89.37	87.02	43.10	4,896.38	534.86	2,191.52	2,097.20	94.32	23.234	
15,100.00	10,073.00	13,467.92	8,474.00	90.87	88.57	43.10	4,996.38	533.86	2,191.51	2,095.56	95.95	22.839	
15,200.00	10,073.00	13,567.92	8,474.00	92.38	90.12	43.10	5,096.37	532.86	2,191.51	2,093.92	97.59	22.457	
15,300.00	10,073.00	13,667.92	8,474.00	93.89	91.68	43.10	5,196.37	531.85	2,191.50	2,092.28	99.22	22.087	
15,400.00	10,073.00	13,767.92	8,474.00	95.41	93.24	43.10	5,296.36	530.85	2,191.50	2,090.63	100.86	21.728	
15,500.00	10,073.00	13,867.92	8,474.00	96.93	94.80	43.10	5,396.36	529.85	2,191.49	2,088.98	102.51	21.379	
15,600.00	10,073.00	13,967.92	8,474.00	98.46	96.36	43.10	5,496.35	528.84	2,191.48	2,087.33	104.15	21.041	
15,700.00	10,073.00	14,067.92	8,474.00	99.99	97.93	43.10	5,596.35	527.84	2,191.48	2,085.67	105.81	20.712	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 102H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,800.00	10,073.00	14,167.92	8,474.00	101.52	99.50	43.10	5,696.34	526.84	2,191.47	2,084.01	107.46	20.393	
15,900.00	10,073.00	14,267.92	8,474.00	103.06	101.08	43.10	5,796.34	525.83	2,191.46	2,082.35	109.12	20.084	
16,000.00	10,073.00	14,367.92	8,474.00	104.60	102.65	43.10	5,896.33	524.83	2,191.46	2,080.69	110.77	19.783	
16,100.00	10,073.00	14,467.92	8,474.00	106.14	104.23	43.10	5,996.33	523.83	2,191.45	2,079.02	112.43	19.491	
16,200.00	10,073.00	14,567.92	8,474.00	107.69	105.81	43.10	6,096.32	522.82	2,191.45	2,077.35	114.09	19.208	
16,300.00	10,073.00	14,667.92	8,474.00	109.24	107.39	43.10	6,196.32	521.82	2,191.44	2,075.68	115.76	18.931	
16,400.00	10,073.00	14,767.92	8,474.00	110.79	108.98	43.10	6,296.31	520.82	2,191.43	2,074.01	117.42	18.663	
16,500.00	10,073.00	14,867.92	8,474.00	112.35	110.56	43.10	6,396.31	519.81	2,191.43	2,072.33	119.09	18.401	
16,600.00	10,073.00	14,967.92	8,474.00	113.91	112.15	43.10	6,496.30	518.81	2,191.42	2,070.66	120.76	18.146	
16,700.00	10,073.00	15,067.92	8,474.00	115.47	113.74	43.10	6,596.30	517.81	2,191.41	2,068.98	122.44	17.899	
16,800.00	10,073.00	15,167.92	8,474.00	117.03	115.34	43.10	6,696.29	516.81	2,191.41	2,067.30	124.11	17.657	
16,900.00	10,073.00	15,267.92	8,474.00	118.60	116.93	43.10	6,796.29	515.80	2,191.40	2,065.62	125.78	17.422	
17,000.00	10,073.00	15,367.92	8,474.00	120.17	118.52	43.10	6,896.28	514.80	2,191.40	2,063.94	127.46	17.193	
17,100.00	10,073.00	15,467.92	8,474.00	121.74	120.12	43.10	6,996.28	513.80	2,191.39	2,062.26	129.13	16.970	
17,200.00	10,073.00	15,567.92	8,474.00	123.31	121.72	43.10	7,096.27	512.79	2,191.38	2,060.57	130.81	16.752	
17,300.00	10,073.00	15,667.92	8,474.00	124.88	123.32	43.10	7,196.27	511.79	2,191.38	2,058.89	132.49	16.540	
17,400.00	10,073.00	15,767.92	8,474.00	126.46	124.92	43.10	7,296.26	510.79	2,191.37	2,057.20	134.17	16.333	
17,500.00	10,073.00	15,867.92	8,474.00	128.04	126.52	43.10	7,396.26	509.78	2,191.37	2,055.51	135.85	16.130	
17,600.00	10,073.00	15,967.92	8,474.00	129.62	128.13	43.10	7,496.25	508.78	2,191.36	2,053.82	137.53	15.933	
17,700.00	10,073.00	16,067.92	8,474.00	131.20	129.73	43.10	7,596.25	507.78	2,191.35	2,052.14	139.22	15.741	
17,800.00	10,073.00	16,167.92	8,474.00	132.79	131.34	43.10	7,696.24	506.77	2,191.35	2,050.45	140.90	15.552	
17,900.00	10,073.00	16,267.92	8,474.00	134.37	132.95	43.10	7,796.24	505.77	2,191.34	2,048.75	142.59	15.369	
18,000.00	10,073.00	16,367.92	8,474.00	135.96	134.55	43.10	7,896.23	504.77	2,191.33	2,047.06	144.27	15.189	
18,100.00	10,073.00	16,467.92	8,474.00	137.55	136.16	43.10	7,996.23	503.77	2,191.33	2,045.37	145.96	15.014	
18,200.00	10,073.00	16,567.92	8,474.00	139.14	137.77	43.10	8,096.22	502.76	2,191.32	2,043.68	147.64	14.842	
18,300.00	10,073.00	16,667.92	8,474.00	140.73	139.39	43.10	8,196.22	501.76	2,191.32	2,041.99	149.33	14.674	
18,400.00	10,073.00	16,767.92	8,474.00	142.32	141.00	43.10	8,296.21	500.76	2,191.31	2,040.29	151.02	14.510	
18,500.00	10,073.00	16,867.92	8,474.00	143.92	142.61	43.10	8,396.21	499.75	2,191.30	2,038.60	152.70	14.350	
18,600.00	10,073.00	16,967.92	8,474.00	145.51	144.23	43.10	8,496.20	498.75	2,191.30	2,036.91	154.39	14.193	
18,700.00	10,073.00	17,067.92	8,474.00	147.11	145.84	43.10	8,596.20	497.75	2,191.29	2,035.21	156.08	14.040	
18,800.00	10,073.00	17,167.92	8,474.00	148.71	147.46	43.10	8,696.19	496.74	2,191.28	2,033.52	157.77	13.889	
18,900.00	10,073.00	17,267.92	8,474.00	150.31	149.07	43.10	8,796.19	495.74	2,191.28	2,031.82	159.46	13.742	
19,000.00	10,073.00	17,367.92	8,474.00	151.91	150.69	43.10	8,896.18	494.74	2,191.27	2,030.12	161.15	13.598	
19,100.00	10,073.00	17,467.92	8,474.00	153.51	152.31	43.10	8,996.18	493.73	2,191.27	2,028.42	162.84	13.457	
19,200.00	10,073.00	17,567.92	8,474.00	155.11	153.93	43.10	9,096.17	492.73	2,191.26	2,026.73	164.53	13.318	
19,300.00	10,073.00	17,667.92	8,474.00	156.72	155.55	43.10	9,196.17	491.73	2,191.25	2,025.03	166.22	13.183	
19,400.00	10,073.00	17,767.92	8,474.00	158.32	157.17	43.09	9,296.16	490.72	2,191.25	2,023.34	167.91	13.050	
19,500.00	10,073.00	17,867.92	8,474.00	159.93	158.79	43.09	9,396.16	489.72	2,191.24	2,021.64	169.60	12.920	
19,600.00	10,073.00	17,967.92	8,474.00	161.53	160.41	43.09	9,496.15	488.72	2,191.23	2,019.94	171.29	12.793	
19,700.00	10,073.00	18,067.92	8,474.00	163.14	162.03	43.09	9,596.15	487.72	2,191.23	2,018.25	172.98	12.667	
19,800.00	10,073.00	18,167.92	8,474.00	164.75	163.66	43.09	9,696.14	486.71	2,191.22	2,016.55	174.67	12.545	
19,900.00	10,073.00	18,267.92	8,474.00	166.36	165.28	43.09	9,796.14	485.71	2,191.22	2,014.85	176.37	12.424	
20,000.00	10,073.00	18,367.92	8,474.00	167.97	166.90	43.09	9,896.13	484.71	2,191.21	2,013.15	178.06	12.306	
20,100.00	10,073.00	18,467.92	8,474.00	169.58	168.53	43.09	9,996.13	483.70	2,191.20	2,011.46	179.75	12.191	
20,176.96	10,073.00	18,544.88	8,474.00	170.82	169.78	43.09	10,073.08	482.93	2,191.20	2,010.15	181.05	12.103	
20,185.45	10,073.00	18,548.37	8,474.00	170.96	169.83	43.09	10,076.57	482.90	2,191.20	2,010.06	181.14	12.096	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 302H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,844.70	1,844.70	6.37	6.38	89.46	0.47	50.13	50.13	41.11	9.02	5.559	
1,900.00	1,900.00	1,901.70	1,901.70	6.58	6.58	89.46	0.47	50.13	50.13	40.83	9.31	5.387	
1,916.09	1,916.09	1,917.79	1,917.79	6.64	6.64	89.46	0.47	50.13	50.13	40.74	9.39	5.340	CC
2,000.00	2,000.00	2,001.68	2,001.68	6.94	6.94	89.46	0.47	50.13	50.13	40.32	9.81	5.108	ES
2,100.00	2,099.99	2,100.00	2,099.99	7.28	7.28	-167.58	-0.15	51.28	52.59	42.29	10.29	5.108	SF
2,200.00	2,199.91	2,198.94	2,198.85	7.62	7.61	-166.58	-2.00	54.69	59.86	49.10	10.76	5.563	
2,300.00	2,299.69	2,296.69	2,296.39	7.97	7.94	-165.37	-5.01	60.26	71.97	60.75	11.22	6.415	
2,400.00	2,399.27	2,393.41	2,392.71	8.31	8.27	-164.23	-9.16	67.93	88.86	77.19	11.67	7.614	
2,500.00	2,498.57	2,489.10	2,487.77	8.67	8.61	-163.26	-14.40	77.61	110.47	98.35	12.12	9.116	
2,600.00	2,597.54	2,585.95	2,583.86	9.03	8.95	-162.72	-20.13	88.21	135.35	122.76	12.59	10.749	
2,700.00	2,696.09	2,682.15	2,679.32	9.40	9.30	-162.59	-25.82	98.73	162.65	149.58	13.07	12.447	
2,760.81	2,755.79	2,740.29	2,737.01	9.63	9.51	-162.63	-29.26	105.08	180.43	167.07	13.36	13.507	
2,800.00	2,794.20	2,777.69	2,774.12	9.78	9.64	-162.73	-31.48	109.17	192.17	178.62	13.54	14.188	
2,900.00	2,892.23	2,873.09	2,868.78	10.17	9.99	-162.93	-37.12	119.61	222.13	208.11	14.02	15.844	
3,000.00	2,990.25	2,968.50	2,963.44	10.57	10.34	-163.08	-42.77	130.04	252.09	237.59	14.50	17.387	
3,100.00	3,088.27	3,063.90	3,058.11	10.97	10.70	-163.20	-48.41	140.47	282.05	267.07	14.98	18.828	
3,200.00	3,186.30	3,159.31	3,152.77	11.38	11.06	-163.30	-54.06	150.91	312.01	296.55	15.46	20.175	
3,300.00	3,284.32	3,254.71	3,247.44	11.80	11.41	-163.38	-59.70	161.34	341.97	326.02	15.95	21.438	
3,400.00	3,382.34	3,350.11	3,342.10	12.22	11.78	-163.45	-65.35	171.77	371.94	355.50	16.44	22.622	
3,500.00	3,480.37	3,445.52	3,436.76	12.65	12.14	-163.50	-70.99	182.21	401.90	384.97	16.93	23.735	
3,600.00	3,578.39	3,540.92	3,531.43	13.08	12.51	-163.55	-76.64	192.64	431.87	414.44	17.43	24.783	
3,700.00	3,676.41	3,636.33	3,626.09	13.51	12.87	-163.60	-82.28	203.08	461.83	443.91	17.92	25.770	
3,800.00	3,774.43	3,731.73	3,720.76	13.95	13.24	-163.63	-87.93	213.51	491.80	473.38	18.42	26.702	
3,900.00	3,872.46	3,827.14	3,815.42	14.39	13.61	-163.67	-93.57	223.94	521.76	502.84	18.92	27.583	
4,000.00	3,970.48	3,922.54	3,910.08	14.83	13.98	-163.70	-99.22	234.38	551.73	532.31	19.42	28.417	
4,100.00	4,068.50	4,017.95	4,004.75	15.28	14.36	-163.72	-104.86	244.81	581.69	561.77	19.92	29.207	
4,200.00	4,166.53	4,113.35	4,099.41	15.73	14.73	-163.75	-110.51	255.24	611.66	591.24	20.42	29.956	
4,300.00	4,264.55	4,208.75	4,194.08	16.17	15.10	-163.77	-116.15	265.68	641.62	620.70	20.92	30.668	
4,400.00	4,362.57	4,304.16	4,288.74	16.63	15.48	-163.79	-121.80	276.11	671.59	650.16	21.43	31.345	
4,500.00	4,460.59	4,399.56	4,383.40	17.08	15.85	-163.81	-127.44	286.54	701.55	679.62	21.93	31.989	
4,600.00	4,558.62	4,494.97	4,478.07	17.53	16.23	-163.82	-133.09	296.98	731.52	709.08	22.44	32.603	
4,700.00	4,656.64	4,590.37	4,572.73	17.99	16.61	-163.84	-138.73	307.41	761.49	738.54	22.94	33.188	
4,800.00	4,754.66	4,685.78	4,667.40	18.45	16.99	-163.85	-144.38	317.84	791.45	768.00	23.45	33.747	
4,900.00	4,852.69	4,781.18	4,762.06	18.91	17.37	-163.87	-150.02	328.28	821.42	797.46	23.96	34.282	
5,000.00	4,950.71	4,876.59	4,856.73	19.37	17.74	-163.88	-155.67	338.71	851.38	826.91	24.47	34.793	
5,100.00	5,048.73	4,971.99	4,951.39	19.83	18.12	-163.89	-161.31	349.14	881.35	856.37	24.98	35.282	
5,200.00	5,146.76	5,067.39	5,046.05	20.29	18.51	-163.90	-166.96	359.58	911.32	885.82	25.49	35.751	
5,300.00	5,244.78	5,162.80	5,140.72	20.75	18.89	-163.91	-172.60	370.01	941.28	915.28	26.00	36.200	
5,400.00	5,342.80	5,258.20	5,235.38	21.22	19.27	-163.92	-178.25	380.44	971.25	944.73	26.51	36.632	
5,500.00	5,440.82	5,353.61	5,330.05	21.68	19.65	-163.93	-183.89	390.88	1,001.21	974.19	27.03	37.046	
5,600.00	5,538.85	5,449.01	5,424.71	22.15	20.03	-163.94	-189.53	401.31	1,031.18	1,003.64	27.54	37.444	
5,700.00	5,636.87	5,544.42	5,519.37	22.61	20.41	-163.95	-195.18	411.74	1,061.15	1,033.09	28.05	37.827	
5,800.00	5,734.89	5,639.82	5,614.04	23.08	20.80	-163.95	-200.82	422.18	1,091.11	1,062.55	28.57	38.195	
5,900.00	5,832.92	5,735.23	5,708.70	23.55	21.18	-163.96	-206.47	432.61	1,121.08	1,092.00	29.08	38.550	
6,000.00	5,930.94	5,830.63	5,803.37	24.02	21.56	-163.97	-212.11	443.04	1,151.04	1,121.45	29.60	38.892	
6,100.00	6,028.96	5,926.03	5,898.03	24.49	21.95	-163.97	-217.76	453.48	1,181.01	1,150.90	30.11	39.222	
6,200.00	6,126.98	6,021.44	5,992.69	24.96	22.33	-163.98	-223.40	463.91	1,210.98	1,180.35	30.63	39.540	
6,300.00	6,225.01	6,116.84	6,087.36	25.43	22.72	-163.98	-229.05	474.34	1,240.94	1,209.80	31.14	39.847	
6,400.00	6,323.03	6,212.25	6,182.02	25.90	23.10	-163.99	-234.69	484.78	1,270.91	1,239.25	31.66	40.144	
6,500.00	6,421.05	6,307.65	6,276.69	26.37	23.49	-164.00	-240.34	495.21	1,300.88	1,268.70	32.18	40.430	
6,600.00	6,519.08	6,403.06	6,371.35	26.84	23.87	-164.00	-245.98	505.64	1,330.84	1,298.15	32.69	40.707	
6,700.00	6,617.10	6,498.46	6,466.01	27.31	24.26	-164.00	-251.63	516.08	1,360.81	1,327.60	33.21	40.975	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 302H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,719.50	6,636.21	6,517.07	6,484.47	27.40	24.33	-164.01	-252.73	518.11	1,366.65	1,333.34	33.31	41.026	
6,800.00	6,715.28	6,594.10	6,560.92	27.78	24.65	-164.10	-257.29	526.54	1,389.99	1,356.27	33.73	41.212	
6,900.00	6,813.92	6,690.44	6,656.50	28.22	25.03	-164.18	-262.99	537.07	1,416.81	1,382.57	34.24	41.373	
7,000.00	6,912.96	6,787.40	6,752.71	28.64	25.43	-164.22	-268.73	547.68	1,441.19	1,406.43	34.76	41.460	
7,100.00	7,012.32	6,884.94	6,849.49	29.04	25.82	-164.22	-274.50	558.34	1,463.13	1,427.85	35.28	41.477	
7,200.00	7,111.95	7,027.54	6,991.23	29.42	26.39	-164.16	-281.94	572.10	1,481.36	1,445.35	36.01	41.132	
7,300.00	7,211.76	7,180.82	7,144.10	29.77	26.96	-164.13	-287.14	581.71	1,493.59	1,456.84	36.76	40.634	
7,400.00	7,311.70	7,335.52	7,298.72	30.10	27.50	-164.13	-289.42	585.93	1,499.68	1,462.24	37.45	40.047	
7,480.31	7,392.00	7,430.50	7,393.70	30.35	27.81	93.31	-289.53	586.13	1,500.63	1,462.75	37.88	39.620	
7,500.00	7,411.69	7,450.19	7,413.39	30.41	27.87	93.31	-289.53	586.13	1,500.63	1,462.66	37.97	39.524	
7,600.00	7,511.69	7,550.19	7,513.39	30.71	28.20	93.31	-289.53	586.13	1,500.63	1,462.19	38.44	39.042	
7,700.00	7,611.69	7,650.19	7,613.39	31.01	28.52	93.31	-289.53	586.13	1,500.63	1,461.72	38.91	38.571	
7,800.00	7,711.69	7,750.19	7,713.39	31.31	28.84	93.31	-289.53	586.13	1,500.63	1,461.25	39.38	38.109	
7,900.00	7,811.69	7,850.19	7,813.39	31.62	29.17	93.31	-289.53	586.13	1,500.63	1,460.78	39.85	37.658	
8,000.00	7,911.69	7,950.19	7,913.39	31.92	29.49	93.31	-289.53	586.13	1,500.63	1,460.31	40.32	37.217	
8,100.00	8,011.69	8,050.19	8,013.39	32.23	29.82	93.31	-289.53	586.13	1,500.63	1,459.83	40.79	36.785	
8,200.00	8,111.69	8,150.19	8,113.39	32.54	30.15	93.31	-289.53	586.13	1,500.63	1,459.36	41.27	36.363	
8,300.00	8,211.69	8,250.19	8,213.39	32.84	30.47	93.31	-289.53	586.13	1,500.63	1,458.88	41.74	35.949	
8,400.00	8,311.69	8,350.19	8,313.39	33.15	30.80	93.31	-289.53	586.13	1,500.63	1,458.41	42.22	35.544	
8,500.00	8,411.69	8,450.19	8,413.39	33.46	31.13	93.31	-289.53	586.13	1,500.63	1,457.93	42.70	35.147	
8,600.00	8,511.69	8,550.19	8,513.39	33.77	31.46	93.31	-289.53	586.13	1,500.63	1,457.45	43.17	34.759	
8,700.00	8,611.69	8,650.19	8,613.39	34.08	31.79	93.31	-289.53	586.13	1,500.63	1,456.98	43.65	34.379	
8,800.00	8,711.69	8,750.19	8,713.39	34.40	32.12	93.31	-289.53	586.13	1,500.63	1,456.50	44.13	34.006	
8,900.00	8,811.69	8,850.19	8,813.39	34.71	32.45	93.31	-289.53	586.13	1,500.63	1,456.02	44.61	33.641	
9,000.00	8,911.69	8,950.19	8,913.39	35.03	32.79	93.31	-289.53	586.13	1,500.63	1,455.54	45.09	33.283	
9,100.00	9,011.69	9,050.19	9,013.39	35.34	33.12	93.31	-289.53	586.13	1,500.63	1,455.06	45.57	32.932	
9,200.00	9,111.69	9,150.19	9,113.39	35.66	33.45	93.31	-289.53	586.13	1,500.63	1,454.58	46.05	32.588	
9,300.00	9,211.69	9,250.19	9,213.39	35.97	33.78	93.31	-289.53	586.13	1,500.63	1,454.10	46.53	32.251	
9,400.00	9,311.69	9,350.19	9,313.39	36.29	34.12	93.31	-289.53	586.13	1,500.63	1,453.62	47.01	31.921	
9,500.00	9,411.69	9,455.62	9,418.80	36.61	34.47	93.27	-288.70	586.12	1,500.58	1,453.07	47.51	31.586	
9,588.35	9,500.04	9,560.41	9,522.35	36.89	34.79	92.70	-273.57	585.97	1,499.77	1,451.82	47.95	31.276	
9,600.00	9,511.69	9,573.75	9,535.28	36.93	34.83	93.16	-270.29	585.94	1,499.62	1,451.61	48.01	31.237	
9,650.00	9,561.57	9,630.04	9,588.88	37.08	34.98	92.70	-253.18	585.77	1,498.97	1,450.74	48.23	31.078	
9,700.00	9,610.99	9,684.81	9,639.18	37.23	35.11	92.23	-231.56	585.55	1,498.41	1,449.97	48.44	30.933	
9,750.00	9,659.56	9,738.13	9,685.95	37.38	35.22	91.75	-206.00	585.30	1,497.95	1,449.31	48.64	30.799	
9,800.00	9,706.91	9,790.07	9,729.03	37.51	35.31	91.27	-177.02	585.01	1,497.59	1,448.77	48.82	30.677	
9,850.00	9,752.69	9,840.73	9,768.36	37.63	35.39	90.78	-145.11	584.69	1,497.34	1,448.35	48.99	30.565	
9,900.00	9,796.55	9,890.17	9,803.88	37.74	35.45	90.29	-110.74	584.35	1,497.21	1,448.06	49.15	30.462	
9,929.56	9,821.44	9,918.87	9,823.09	37.79	35.48	90.00	-89.43	584.14	1,497.19	1,447.95	49.24	30.406	
9,950.00	9,838.15	9,938.50	9,835.61	37.83	35.50	89.80	-74.30	583.99	1,497.20	1,447.90	49.30	30.368	
10,000.00	9,877.18	9,985.80	9,863.58	37.92	35.53	89.32	-36.19	583.61	1,497.30	1,447.86	49.45	30.280	
10,050.00	9,913.34	10,032.14	9,887.85	37.99	35.55	88.84	3.28	583.21	1,497.52	1,447.93	49.59	30.198	
10,100.00	9,946.35	10,077.62	9,908.48	38.05	35.56	88.38	43.79	582.81	1,497.82	1,448.10	49.73	30.120	
10,150.00	9,975.97	10,122.30	9,925.57	38.11	35.57	87.93	85.06	582.40	1,498.22	1,448.35	49.86	30.046	
10,200.00	10,001.96	10,166.25	9,939.19	38.15	35.57	87.50	126.84	581.98	1,498.69	1,448.69	50.00	29.974	
10,250.00	10,024.13	10,209.56	9,949.44	38.19	35.57	87.09	168.90	581.56	1,499.22	1,449.08	50.14	29.902	
10,300.00	10,042.32	10,250.00	9,956.12	38.23	35.58	86.71	208.77	581.17	1,499.79	1,449.52	50.27	29.834	
10,350.00	10,056.38	10,294.46	9,960.19	38.28	35.63	86.32	253.03	580.73	1,500.39	1,449.97	50.42	29.758	
10,400.00	10,066.20	10,338.29	9,961.00	38.33	35.74	85.96	296.85	580.29	1,501.00	1,450.42	50.57	29.679	
10,450.00	10,071.72	10,387.97	9,961.00	38.40	35.90	85.72	346.52	579.80	1,501.40	1,450.64	50.76	29.579	
10,488.35	10,073.00	10,426.29	9,961.00	38.46	36.04	85.66	384.84	579.41	1,501.49	1,450.57	50.92	29.487	
10,500.00	10,073.00	10,437.94	9,961.00	38.48	36.08	85.66	396.49	579.30	1,501.49	1,450.52	50.97	29.456	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 302H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,600.00	10,073.00	10,537.94	9,961.00	38.70	36.49	85.66	496.49	578.30	1,501.49	1,450.02	51.48	29.168	
10,700.00	10,073.00	10,637.94	9,961.00	39.01	36.97	85.66	596.48	577.31	1,501.49	1,449.41	52.08	28.831	
10,800.00	10,073.00	10,737.94	9,961.00	39.41	37.51	85.66	696.48	576.31	1,501.49	1,448.71	52.78	28.449	
10,900.00	10,073.00	10,837.94	9,961.00	39.89	38.10	85.66	796.47	575.31	1,501.49	1,447.92	53.57	28.029	
11,000.00	10,073.00	10,937.94	9,961.00	40.44	38.76	85.66	896.47	574.32	1,501.49	1,447.04	54.45	27.576	
11,100.00	10,073.00	11,037.94	9,961.00	41.06	39.47	85.66	996.46	573.32	1,501.48	1,446.07	55.41	27.097	
11,200.00	10,073.00	11,137.94	9,961.00	41.75	40.24	85.66	1,096.46	572.33	1,501.48	1,445.03	56.46	26.596	
11,300.00	10,073.00	11,237.94	9,961.00	42.49	41.05	85.66	1,196.45	571.33	1,501.48	1,443.91	57.57	26.079	
11,400.00	10,073.00	11,337.94	9,961.00	43.29	41.92	85.66	1,296.45	570.34	1,501.48	1,442.71	58.76	25.551	
11,500.00	10,073.00	11,437.94	9,961.00	44.13	42.83	85.66	1,396.44	569.34	1,501.48	1,441.45	60.02	25.016	
11,600.00	10,073.00	11,537.94	9,961.00	45.03	43.78	85.66	1,496.44	568.34	1,501.47	1,440.13	61.34	24.477	
11,700.00	10,073.00	11,637.94	9,961.00	45.96	44.77	85.66	1,596.43	567.35	1,501.47	1,438.75	62.72	23.939	
11,800.00	10,073.00	11,737.94	9,961.00	46.94	45.80	85.66	1,696.43	566.35	1,501.47	1,437.32	64.16	23.404	
11,900.00	10,073.00	11,837.94	9,961.00	47.95	46.87	85.66	1,796.42	565.36	1,501.47	1,435.83	65.64	22.874	
12,000.00	10,073.00	11,937.94	9,961.00	49.00	47.96	85.66	1,896.42	564.36	1,501.47	1,434.29	67.17	22.352	
12,100.00	10,073.00	12,037.94	9,961.00	50.08	49.09	85.66	1,996.41	563.36	1,501.47	1,432.71	68.75	21.839	
12,200.00	10,073.00	12,137.94	9,961.00	51.19	50.25	85.66	2,096.41	562.37	1,501.46	1,431.09	70.37	21.336	
12,300.00	10,073.00	12,237.94	9,961.00	52.33	51.43	85.66	2,196.40	561.37	1,501.46	1,429.43	72.03	20.844	
12,400.00	10,073.00	12,337.94	9,961.00	53.50	52.64	85.66	2,296.40	560.38	1,501.46	1,427.73	73.73	20.365	
12,500.00	10,073.00	12,437.94	9,961.00	54.69	53.87	85.66	2,396.39	559.38	1,501.46	1,426.00	75.46	19.898	
12,600.00	10,073.00	12,537.94	9,961.00	55.91	55.13	85.66	2,496.39	558.39	1,501.46	1,424.24	77.22	19.444	
12,700.00	10,073.00	12,637.94	9,961.00	57.14	56.40	85.66	2,596.38	557.39	1,501.45	1,422.44	79.01	19.003	
12,800.00	10,073.00	12,737.94	9,961.00	58.40	57.70	85.66	2,696.38	556.39	1,501.45	1,420.62	80.83	18.576	
12,900.00	10,073.00	12,837.94	9,961.00	59.68	59.01	85.66	2,796.37	555.40	1,501.45	1,418.78	82.67	18.161	
13,000.00	10,073.00	12,937.94	9,961.00	60.97	60.33	85.66	2,896.37	554.40	1,501.45	1,416.91	84.54	17.760	
13,100.00	10,073.00	13,037.94	9,961.00	62.28	61.68	85.66	2,996.36	553.41	1,501.45	1,415.02	86.43	17.371	
13,200.00	10,073.00	13,137.94	9,961.00	63.61	63.04	85.66	3,096.36	552.41	1,501.45	1,413.10	88.34	16.995	
13,300.00	10,073.00	13,237.94	9,961.00	64.95	64.41	85.66	3,196.35	551.41	1,501.44	1,411.17	90.28	16.632	
13,400.00	10,073.00	13,337.94	9,961.00	66.31	65.79	85.66	3,296.35	550.42	1,501.44	1,409.22	92.23	16.280	
13,500.00	10,073.00	13,437.94	9,961.00	67.68	67.19	85.66	3,396.34	549.42	1,501.44	1,407.25	94.19	15.940	
13,600.00	10,073.00	13,537.94	9,961.00	69.06	68.60	85.66	3,496.34	548.43	1,501.44	1,405.26	96.18	15.611	
13,700.00	10,073.00	13,637.94	9,961.00	70.45	70.02	85.66	3,596.33	547.43	1,501.44	1,403.26	98.17	15.293	
13,800.00	10,073.00	13,737.94	9,961.00	71.86	71.44	85.66	3,696.33	546.44	1,501.43	1,401.25	100.19	14.986	
13,900.00	10,073.00	13,837.94	9,961.00	73.27	72.88	85.66	3,796.32	545.44	1,501.43	1,399.22	102.21	14.689	
14,000.00	10,073.00	13,937.94	9,961.00	74.70	74.33	85.66	3,896.32	544.44	1,501.43	1,397.18	104.25	14.402	
14,100.00	10,073.00	14,037.94	9,961.00	76.13	75.78	85.66	3,996.31	543.45	1,501.43	1,395.12	106.31	14.124	
14,200.00	10,073.00	14,137.94	9,961.00	77.57	77.25	85.66	4,096.31	542.45	1,501.43	1,393.06	108.37	13.855	
14,300.00	10,073.00	14,237.94	9,961.00	79.02	78.72	85.66	4,196.30	541.46	1,501.43	1,390.98	110.44	13.595	
14,400.00	10,073.00	14,337.94	9,961.00	80.48	80.20	85.66	4,296.30	540.46	1,501.42	1,388.90	112.53	13.343	
14,500.00	10,073.00	14,437.94	9,961.00	81.95	81.68	85.66	4,396.29	539.46	1,501.42	1,386.80	114.62	13.099	
14,600.00	10,073.00	14,537.94	9,961.00	83.42	83.17	85.66	4,496.29	538.47	1,501.42	1,384.70	116.72	12.863	
14,700.00	10,073.00	14,637.94	9,961.00	84.90	84.67	85.66	4,596.28	537.47	1,501.42	1,382.59	118.83	12.635	
14,800.00	10,073.00	14,737.94	9,961.00	86.38	86.17	85.66	4,696.28	536.48	1,501.42	1,380.47	120.95	12.414	
14,900.00	10,073.00	14,837.94	9,961.00	87.87	87.68	85.66	4,796.27	535.48	1,501.41	1,378.34	123.08	12.199	
15,000.00	10,073.00	14,937.94	9,961.00	89.37	89.19	85.66	4,896.27	534.49	1,501.41	1,376.20	125.21	11.991	
15,100.00	10,073.00	15,037.94	9,961.00	90.87	90.71	85.66	4,996.26	533.49	1,501.41	1,374.06	127.35	11.790	
15,200.00	10,073.00	15,137.94	9,961.00	92.38	92.23	85.66	5,096.26	532.49	1,501.41	1,371.91	129.50	11.594	
15,300.00	10,073.00	15,237.94	9,961.00	93.89	93.76	85.66	5,196.25	531.50	1,501.41	1,369.76	131.65	11.405	
15,400.00	10,073.00	15,337.94	9,961.00	95.41	95.29	85.66	5,296.25	530.50	1,501.41	1,367.60	133.81	11.221	
15,500.00	10,073.00	15,437.94	9,961.00	96.93	96.82	85.66	5,396.24	529.51	1,501.40	1,365.43	135.97	11.042	
15,600.00	10,073.00	15,537.94	9,961.00	98.46	98.36	85.66	5,496.24	528.51	1,501.40	1,363.26	138.14	10.868	
15,700.00	10,073.00	15,637.94	9,961.00	99.99	99.90	85.66	5,596.23	527.51	1,501.40	1,361.08	140.32	10.700	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 302H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,800.00	10,073.00	15,737.94	9,961.00	101.52	101.45	85.66	5,696.23	526.52	1,501.40	1,358.90	142.50	10.536	
15,900.00	10,073.00	15,837.94	9,961.00	103.06	103.00	85.66	5,796.22	525.52	1,501.40	1,356.71	144.68	10.377	
16,000.00	10,073.00	15,937.94	9,961.00	104.60	104.55	85.66	5,896.22	524.53	1,501.39	1,354.52	146.87	10.222	
16,100.00	10,073.00	16,037.94	9,961.00	106.14	106.11	85.66	5,996.21	523.53	1,501.39	1,352.32	149.07	10.072	
16,200.00	10,073.00	16,137.94	9,961.00	107.69	107.66	85.66	6,096.21	522.54	1,501.39	1,350.13	151.27	9.926	
16,300.00	10,073.00	16,237.94	9,961.00	109.24	109.22	85.66	6,196.20	521.54	1,501.39	1,347.92	153.47	9.783	
16,400.00	10,073.00	16,337.94	9,961.00	110.79	110.79	85.66	6,296.20	520.54	1,501.39	1,345.71	155.67	9.644	
16,500.00	10,073.00	16,437.94	9,961.00	112.35	112.35	85.66	6,396.19	519.55	1,501.39	1,343.50	157.88	9.510	
16,600.00	10,073.00	16,537.94	9,961.00	113.91	113.92	85.66	6,496.19	518.55	1,501.38	1,341.29	160.09	9.378	
16,700.00	10,073.00	16,637.94	9,961.00	115.47	115.49	85.66	6,596.18	517.56	1,501.38	1,339.07	162.31	9.250	
16,800.00	10,073.00	16,737.94	9,961.00	117.03	117.07	85.66	6,696.18	516.56	1,501.38	1,336.85	164.53	9.125	
16,900.00	10,073.00	16,837.94	9,961.00	118.60	118.64	85.66	6,796.17	515.56	1,501.38	1,334.63	166.75	9.004	
17,000.00	10,073.00	16,937.94	9,961.00	120.17	120.22	85.66	6,896.17	514.57	1,501.38	1,332.40	168.98	8.885	
17,100.00	10,073.00	17,037.94	9,961.00	121.74	121.80	85.66	6,996.16	513.57	1,501.37	1,330.17	171.21	8.769	
17,200.00	10,073.00	17,137.94	9,961.00	123.31	123.38	85.66	7,096.16	512.58	1,501.37	1,327.94	173.44	8.657	
17,300.00	10,073.00	17,237.94	9,961.00	124.88	124.96	85.66	7,196.15	511.58	1,501.37	1,325.70	175.67	8.547	
17,400.00	10,073.00	17,337.94	9,961.00	126.46	126.55	85.66	7,296.15	510.59	1,501.37	1,323.47	177.90	8.439	
17,500.00	10,073.00	17,437.94	9,961.00	128.04	128.13	85.66	7,396.14	509.59	1,501.37	1,321.23	180.14	8.334	
17,600.00	10,073.00	17,537.94	9,961.00	129.62	129.72	85.66	7,496.14	508.59	1,501.37	1,318.98	182.38	8.232	
17,700.00	10,073.00	17,637.94	9,961.00	131.20	131.31	85.66	7,596.13	507.60	1,501.36	1,316.74	184.62	8.132	
17,800.00	10,073.00	17,737.94	9,961.00	132.79	132.90	85.66	7,696.13	506.60	1,501.36	1,314.49	186.87	8.034	
17,900.00	10,073.00	17,837.94	9,961.00	134.37	134.50	85.66	7,796.13	505.61	1,501.36	1,312.25	189.11	7.939	
18,000.00	10,073.00	17,937.94	9,961.00	135.96	136.09	85.66	7,896.12	504.61	1,501.36	1,309.99	191.36	7.846	
18,100.00	10,073.00	18,037.94	9,961.00	137.55	137.69	85.66	7,996.12	503.61	1,501.36	1,307.74	193.61	7.754	
18,200.00	10,073.00	18,137.94	9,961.00	139.14	139.28	85.66	8,096.11	502.62	1,501.35	1,305.49	195.87	7.665	
18,300.00	10,073.00	18,237.94	9,961.00	140.73	140.88	85.66	8,196.11	501.62	1,501.35	1,303.23	198.12	7.578	
18,400.00	10,073.00	18,337.94	9,961.00	142.32	142.48	85.66	8,296.10	500.63	1,501.35	1,300.97	200.38	7.493	
18,500.00	10,073.00	18,437.94	9,961.00	143.92	144.08	85.66	8,396.10	499.63	1,501.35	1,298.71	202.64	7.409	
18,600.00	10,073.00	18,537.94	9,961.00	145.51	145.68	85.66	8,496.09	498.64	1,501.35	1,296.45	204.89	7.327	
18,700.00	10,073.00	18,637.94	9,961.00	147.11	147.29	85.66	8,596.09	497.64	1,501.35	1,294.19	207.15	7.247	
18,800.00	10,073.00	18,737.94	9,961.00	148.71	148.89	85.66	8,696.08	496.64	1,501.34	1,291.93	209.42	7.169	
18,900.00	10,073.00	18,837.94	9,961.00	150.31	150.49	85.66	8,796.08	495.65	1,501.34	1,289.66	211.68	7.092	
19,000.00	10,073.00	18,937.94	9,961.00	151.91	152.10	85.66	8,896.07	494.65	1,501.34	1,287.39	213.95	7.017	
19,100.00	10,073.00	19,037.94	9,961.00	153.51	153.71	85.66	8,996.07	493.66	1,501.34	1,285.13	216.21	6.944	
19,200.00	10,073.00	19,137.94	9,961.00	155.11	155.31	85.66	9,096.06	492.66	1,501.34	1,282.86	218.48	6.872	
19,300.00	10,073.00	19,237.94	9,961.00	156.72	156.92	85.66	9,196.06	491.66	1,501.33	1,280.59	220.75	6.801	
19,400.00	10,073.00	19,337.94	9,961.00	158.32	158.53	85.66	9,296.05	490.67	1,501.33	1,278.31	223.02	6.732	
19,500.00	10,073.00	19,437.94	9,961.00	159.93	160.14	85.66	9,396.05	489.67	1,501.33	1,276.04	225.29	6.664	
19,600.00	10,073.00	19,537.94	9,961.00	161.53	161.76	85.66	9,496.04	488.68	1,501.33	1,273.77	227.56	6.597	
19,700.00	10,073.00	19,637.94	9,961.00	163.14	163.37	85.66	9,596.04	487.68	1,501.33	1,271.49	229.84	6.532	
19,800.00	10,073.00	19,737.94	9,961.00	164.75	164.98	85.66	9,696.03	486.69	1,501.33	1,269.21	232.11	6.468	
19,900.00	10,073.00	19,837.94	9,961.00	166.36	166.59	85.66	9,796.03	485.69	1,501.32	1,266.94	234.39	6.405	
20,000.00	10,073.00	19,937.94	9,961.00	167.97	168.21	85.66	9,896.02	484.69	1,501.32	1,264.66	236.67	6.344	
20,100.00	10,073.00	20,037.94	9,961.00	169.58	169.82	85.66	9,996.02	483.70	1,501.32	1,262.38	238.94	6.283	
20,180.93	10,073.00	20,118.82	9,961.00	170.88	171.14	85.66	10,076.89	482.89	1,501.32	1,260.53	240.79	6.235	
20,185.45	10,073.00	20,118.82	9,961.00	170.96	171.14	85.66	10,076.89	482.89	1,501.33	1,260.50	240.82	6.234	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 801H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,843.30	1,843.30	6.37	6.37	-171.16	-75.06	-11.68	75.96	66.95	9.01	8.427	
1,900.00	1,900.00	1,900.30	1,900.30	6.58	6.58	-171.16	-75.06	-11.68	75.96	66.66	9.30	8.165	
1,916.57	1,916.57	1,916.87	1,916.87	6.64	6.64	-171.16	-75.06	-11.68	75.96	66.57	9.39	8.092	CC
2,000.00	2,000.00	2,000.00	2,000.00	6.94	6.94	-171.16	-75.06	-11.68	75.96	66.15	9.81	7.744	
2,100.00	2,099.99	2,099.54	2,099.53	7.28	7.28	-68.62	-75.37	-12.94	75.99	65.69	10.30	7.377	
2,200.00	2,199.91	2,198.78	2,198.69	7.62	7.62	-68.66	-76.29	-16.70	76.05	65.28	10.78	7.058	
2,300.00	2,299.69	2,298.03	2,297.72	7.97	7.96	-68.72	-77.82	-22.96	76.16	64.91	11.26	6.767	
2,400.00	2,399.27	2,397.27	2,396.55	8.31	8.30	-68.81	-79.96	-31.73	76.32	64.58	11.74	6.501	
2,500.00	2,498.57	2,496.52	2,495.12	8.67	8.65	-68.93	-82.71	-42.98	76.51	64.28	12.23	6.256	
2,600.00	2,597.54	2,595.76	2,593.35	9.03	9.01	-69.08	-86.07	-56.72	76.75	64.02	12.73	6.030	
2,700.00	2,696.09	2,695.02	2,691.19	9.40	9.38	-69.25	-90.03	-72.93	77.03	63.79	13.24	5.819	
2,760.81	2,755.79	2,755.37	2,750.45	9.63	9.60	-69.37	-92.74	-83.99	77.22	63.67	13.55	5.698	
2,800.00	2,794.20	2,794.51	2,788.82	9.78	9.75	-69.41	-94.58	-91.53	77.38	63.61	13.76	5.622	
2,900.00	2,892.23	2,894.51	2,886.83	10.17	10.14	-69.48	-99.29	-110.79	77.78	63.47	14.31	5.436	
3,000.00	2,990.25	2,994.50	2,984.84	10.57	10.54	-69.56	-104.00	-130.06	78.18	63.31	14.86	5.260	
3,100.00	3,088.27	3,094.50	3,082.86	10.97	10.95	-69.64	-108.71	-149.32	78.58	63.15	15.43	5.094	
3,200.00	3,186.30	3,194.50	3,180.87	11.38	11.36	-69.71	-113.41	-168.59	78.98	62.98	16.00	4.937	
3,300.00	3,284.32	3,294.50	3,278.88	11.80	11.78	-69.79	-118.12	-187.85	79.38	62.80	16.58	4.788	
3,400.00	3,382.34	3,394.50	3,376.89	12.22	12.20	-69.86	-122.83	-207.12	79.78	62.62	17.16	4.649	
3,500.00	3,480.37	3,494.50	3,474.91	12.65	12.62	-69.93	-127.54	-226.38	80.18	62.43	17.75	4.516	
3,600.00	3,578.39	3,594.50	3,572.92	13.08	13.05	-70.00	-132.25	-245.65	80.58	62.23	18.35	4.391	
3,700.00	3,676.41	3,694.50	3,670.93	13.51	13.49	-70.07	-136.96	-264.91	80.98	62.03	18.95	4.273	
3,800.00	3,774.43	3,794.50	3,768.94	13.95	13.92	-70.14	-141.67	-284.18	81.38	61.83	19.56	4.162	
3,900.00	3,872.46	3,894.50	3,866.96	14.39	14.36	-70.21	-146.38	-303.44	81.78	61.62	20.16	4.056	
4,000.00	3,970.48	3,994.50	3,964.97	14.83	14.81	-70.28	-151.09	-322.71	82.18	61.41	20.78	3.956	
4,100.00	4,068.50	4,094.50	4,062.98	15.28	15.25	-70.35	-155.80	-341.97	82.59	61.19	21.39	3.860	
4,200.00	4,166.53	4,194.49	4,161.00	15.73	15.70	-70.42	-160.51	-361.24	82.99	60.97	22.01	3.770	
4,300.00	4,264.55	4,294.49	4,259.01	16.17	16.15	-70.49	-165.22	-380.50	83.39	60.75	22.63	3.684	
4,400.00	4,362.57	4,394.49	4,357.02	16.63	16.60	-70.55	-169.93	-399.77	83.79	60.53	23.26	3.603	
4,500.00	4,460.59	4,494.49	4,455.03	17.08	17.05	-70.62	-174.63	-419.03	84.19	60.31	23.89	3.525	
4,600.00	4,558.62	4,594.49	4,553.05	17.53	17.51	-70.68	-179.34	-438.30	84.59	60.08	24.51	3.451	
4,700.00	4,656.64	4,694.49	4,651.06	17.99	17.97	-70.75	-184.05	-457.56	85.00	59.85	25.15	3.380	
4,800.00	4,754.66	4,794.49	4,749.07	18.45	18.42	-70.81	-188.76	-476.83	85.40	59.62	25.78	3.313	
4,900.00	4,852.69	4,894.49	4,847.09	18.91	18.88	-70.87	-193.47	-496.09	85.80	59.39	26.41	3.248	
5,000.00	4,950.71	4,994.49	4,945.10	19.37	19.34	-70.94	-198.18	-515.35	86.20	59.15	27.05	3.187	
5,100.00	5,048.73	5,094.49	5,043.11	19.83	19.81	-71.00	-202.89	-534.62	86.61	58.92	27.69	3.128	
5,200.00	5,146.76	5,194.49	5,141.12	20.29	20.27	-71.06	-207.60	-553.88	87.01	58.68	28.33	3.072	
5,300.00	5,244.78	5,294.49	5,239.14	20.75	20.73	-71.12	-212.31	-573.15	87.41	58.44	28.97	3.018	
5,400.00	5,342.80	5,394.48	5,337.15	21.22	21.20	-71.18	-217.02	-592.41	87.81	58.20	29.61	2.966	
5,500.00	5,440.82	5,494.48	5,435.16	21.68	21.66	-71.24	-221.73	-611.68	88.22	57.96	30.25	2.916	
5,600.00	5,538.85	5,594.48	5,533.18	22.15	22.13	-71.30	-226.44	-630.94	88.62	57.72	30.90	2.868	
5,700.00	5,636.87	5,694.48	5,631.19	22.61	22.59	-71.36	-231.15	-650.21	89.02	57.48	31.54	2.822	
5,800.00	5,734.89	5,794.48	5,729.20	23.08	23.06	-71.42	-235.85	-669.47	89.43	57.24	32.19	2.778	
5,900.00	5,832.92	5,894.48	5,827.21	23.55	23.53	-71.48	-240.56	-688.74	89.83	56.99	32.84	2.736	
6,000.00	5,930.94	5,994.48	5,925.23	24.02	24.00	-71.53	-245.27	-708.00	90.23	56.75	33.49	2.695	
6,100.00	6,028.96	6,094.48	6,023.24	24.49	24.47	-71.59	-249.98	-727.27	90.64	56.50	34.13	2.655	
6,200.00	6,126.98	6,194.48	6,121.25	24.96	24.94	-71.65	-254.69	-746.53	91.04	56.25	34.78	2.617	
6,300.00	6,225.01	6,294.48	6,219.27	25.43	25.41	-71.70	-259.40	-765.80	91.44	56.01	35.44	2.581	
6,400.00	6,323.03	6,394.48	6,317.28	25.90	25.88	-71.76	-264.11	-785.06	91.85	55.76	36.09	2.545	
6,500.00	6,421.05	6,494.47	6,415.29	26.37	26.35	-71.81	-268.82	-804.33	92.25	55.51	36.74	2.511	
6,600.00	6,519.08	6,594.47	6,513.30	26.84	26.82	-71.87	-273.53	-823.59	92.65	55.26	37.39	2.478	
6,700.00	6,617.10	6,694.68	6,611.53	27.31	27.30	-71.97	-278.23	-842.82	93.03	54.98	38.05	2.445	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 801H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,719.50	6,636.21	6,714.34	6,630.84	27.40	27.39	-72.09	-279.11	-846.43	93.05	54.87	38.18	2.437	
6,800.00	6,715.28	6,795.46	6,710.69	27.78	27.75	-72.69	-282.51	-860.32	93.05	54.32	38.73	2.402	
6,900.00	6,813.92	6,896.22	6,810.26	28.22	28.19	-73.44	-286.16	-875.27	93.01	53.62	39.39	2.361	
7,000.00	6,912.96	6,996.94	6,910.17	28.64	28.61	-74.19	-289.19	-887.67	92.93	52.92	40.01	2.323	
7,100.00	7,012.32	7,097.64	7,010.35	29.04	29.00	-74.94	-291.59	-897.49	92.81	52.22	40.60	2.286	
7,200.00	7,111.95	7,198.30	7,110.73	29.42	29.37	-75.70	-293.37	-904.75	92.65	51.50	41.16	2.251	
7,300.00	7,211.76	7,298.93	7,211.24	29.77	29.71	-76.46	-294.51	-909.43	92.45	50.77	41.68	2.218	
7,400.00	7,311.70	7,399.52	7,311.81	30.10	30.04	-77.22	-295.03	-911.54	92.21	50.03	42.18	2.186	
7,480.31	7,392.00	7,480.01	7,392.30	30.35	30.28	179.80	-295.06	-911.68	92.06	49.51	42.55	2.164	
7,500.00	7,411.69	7,499.70	7,411.99	30.41	30.34	179.80	-295.06	-911.68	92.06	49.43	42.63	2.160	
7,600.00	7,511.69	7,599.70	7,511.99	30.71	30.64	179.80	-295.06	-911.68	92.06	49.00	43.06	2.138	
7,700.00	7,611.69	7,699.70	7,611.99	31.01	30.94	179.80	-295.06	-911.68	92.06	48.57	43.49	2.117	
7,800.00	7,711.69	7,799.70	7,711.99	31.31	31.24	179.80	-295.06	-911.68	92.06	48.14	43.92	2.096	
7,900.00	7,811.69	7,899.70	7,811.99	31.62	31.55	179.80	-295.06	-911.68	92.06	47.71	44.35	2.076	
8,000.00	7,911.69	7,999.70	7,911.99	31.92	31.85	179.80	-295.06	-911.68	92.06	47.27	44.79	2.056	
8,100.00	8,011.69	8,099.70	8,011.99	32.23	32.16	179.80	-295.06	-911.68	92.06	46.84	45.22	2.036	
8,200.00	8,111.69	8,199.70	8,111.99	32.54	32.47	179.80	-295.06	-911.68	92.06	46.40	45.66	2.016	
8,300.00	8,211.69	8,299.70	8,211.99	32.84	32.77	179.80	-295.06	-911.68	92.06	45.96	46.10	1.997	
8,400.00	8,311.69	8,399.70	8,311.99	33.15	33.08	179.80	-295.06	-911.68	92.06	45.52	46.54	1.978	
8,500.00	8,411.69	8,499.70	8,411.99	33.46	33.39	179.80	-295.06	-911.68	92.06	45.08	46.98	1.959	
8,600.00	8,511.69	8,599.70	8,511.99	33.77	33.71	179.80	-295.06	-911.68	92.06	44.64	47.42	1.941	
8,700.00	8,611.69	8,699.70	8,611.99	34.08	34.02	179.80	-295.06	-911.68	92.06	44.19	47.87	1.923	
8,800.00	8,711.69	8,799.70	8,711.99	34.40	34.33	179.80	-295.06	-911.68	92.06	43.75	48.31	1.905	
8,900.00	8,811.69	8,899.70	8,811.99	34.71	34.64	179.80	-295.06	-911.68	92.06	43.30	48.76	1.888	
9,000.00	8,911.69	8,999.70	8,911.99	35.03	34.96	179.80	-295.06	-911.68	92.06	42.85	49.21	1.871	
9,100.00	9,011.69	9,099.70	9,011.99	35.34	35.27	179.80	-295.06	-911.68	92.06	42.40	49.66	1.854	
9,200.00	9,111.69	9,199.70	9,111.99	35.66	35.59	179.80	-295.06	-911.68	92.06	41.95	50.11	1.837	
9,300.00	9,211.69	9,299.70	9,211.99	35.97	35.91	179.80	-295.06	-911.68	92.06	41.50	50.56	1.821	
9,400.00	9,311.69	9,399.70	9,311.99	36.29	36.23	179.80	-295.06	-911.68	92.06	41.05	51.01	1.805	
9,500.00	9,411.69	9,499.70	9,411.99	36.61	36.55	179.80	-295.06	-911.68	92.06	40.60	51.46	1.789	
9,588.35	9,500.04	9,588.05	9,500.34	36.89	36.83	179.80	-295.06	-911.68	92.06	40.19	51.87	1.775	ES, SF
9,600.00	9,511.69	9,599.70	9,511.99	36.93	36.86	-179.63	-295.06	-911.68	92.18	40.26	51.92	1.775	
9,650.00	9,561.57	9,649.58	9,561.87	37.08	37.02	-179.64	-295.06	-911.68	95.37	43.23	52.15	1.829	
9,700.00	9,610.99	9,699.00	9,611.29	37.23	37.18	-179.66	-295.06	-911.68	102.90	50.53	52.37	1.965	
9,750.00	9,659.56	9,747.57	9,659.86	37.38	37.34	-179.69	-295.06	-911.68	114.71	62.12	52.60	2.181	
9,800.00	9,706.91	9,794.92	9,707.21	37.51	37.49	-179.72	-295.06	-911.68	130.71	77.90	52.81	2.475	
9,850.00	9,752.69	9,840.70	9,752.99	37.63	37.64	-179.75	-295.06	-911.68	150.77	97.76	53.01	2.844	
9,900.00	9,796.55	9,884.56	9,796.85	37.74	37.78	-179.77	-295.06	-911.68	174.75	121.54	53.21	3.284	
9,950.00	9,838.15	9,926.16	9,838.45	37.83	37.91	-179.79	-295.06	-911.68	202.46	149.07	53.39	3.792	
10,000.00	9,877.18	9,965.19	9,877.48	37.92	38.04	-179.81	-295.06	-911.68	233.69	180.14	53.55	4.364	
10,050.00	9,913.34	10,001.35	9,913.64	37.99	38.15	-179.82	-295.06	-911.68	268.20	214.50	53.70	4.995	
10,100.00	9,946.35	10,034.36	9,946.65	38.05	38.26	-179.82	-295.06	-911.68	305.73	251.90	53.83	5.680	
10,150.00	9,975.97	10,063.97	9,976.27	38.11	38.36	-179.82	-295.06	-911.68	345.99	292.05	53.94	6.414	
10,200.00	10,001.96	10,089.97	10,002.26	38.15	38.44	-179.82	-295.06	-911.68	388.69	334.65	54.04	7.192	
10,250.00	10,024.13	10,112.14	10,024.43	38.19	38.51	-179.81	-295.06	-911.68	433.48	379.36	54.12	8.009	
10,300.00	10,042.32	10,130.33	10,042.62	38.23	38.57	-179.78	-295.06	-911.68	480.04	425.86	54.19	8.859	
10,350.00	10,056.38	10,144.38	10,056.68	38.28	38.62	-179.73	-295.06	-911.68	528.01	473.78	54.23	9.736	
10,400.00	10,066.20	10,154.21	10,066.50	38.33	38.65	-179.62	-295.06	-911.68	577.02	522.75	54.27	10.633	
10,450.00	10,071.72	10,159.72	10,072.02	38.40	38.67	-179.19	-295.06	-911.68	626.70	572.41	54.28	11.545	
10,488.35	10,073.00	10,161.01	10,073.30	38.46	38.67	-90.01	-295.06	-911.68	665.02	610.73	54.29	12.250	
10,500.00	10,073.00	10,161.01	10,073.30	38.48	38.67	-90.01	-295.06	-911.68	676.67	622.38	54.29	12.464	
10,600.00	10,073.00	10,161.01	10,073.30	38.70	38.67	-90.02	-295.06	-911.68	776.67	722.38	54.29	14.305	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 801H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,073.00	10,161.01	10,073.30	39.01	38.67	-90.02	-295.06	-911.68	876.67	822.37	54.30	16.145	
10,800.00	10,073.00	10,161.01	10,073.30	39.41	38.67	-90.02	-295.06	-911.68	976.67	922.36	54.30	17.985	
10,900.00	10,073.00	10,161.01	10,073.30	39.89	38.67	-90.02	-295.06	-911.68	1,076.67	1,022.36	54.31	19.824	
11,000.00	10,073.00	10,161.01	10,073.30	40.44	38.67	-90.03	-295.06	-911.68	1,176.67	1,122.35	54.32	21.663	
11,100.00	10,073.00	10,161.01	10,073.30	41.06	38.67	-90.03	-295.06	-911.68	1,276.67	1,222.34	54.33	23.500	
11,200.00	10,073.00	10,161.01	10,073.30	41.75	38.67	-90.03	-295.06	-911.68	1,376.67	1,322.34	54.33	25.337	
11,300.00	10,073.00	10,161.01	10,073.30	42.49	38.67	-90.03	-295.06	-911.68	1,476.67	1,422.33	54.34	27.173	
11,400.00	10,073.00	10,161.01	10,073.30	43.29	38.67	-90.03	-295.06	-911.68	1,576.67	1,522.32	54.35	29.009	
11,500.00	10,073.00	10,161.01	10,073.30	44.13	38.67	-90.04	-295.06	-911.68	1,676.67	1,622.31	54.36	30.843	
11,600.00	10,073.00	10,161.01	10,073.30	45.03	38.67	-90.04	-295.06	-911.68	1,776.67	1,722.30	54.37	32.677	
11,700.00	10,073.00	10,161.01	10,073.30	45.96	38.67	-90.04	-295.06	-911.68	1,876.67	1,822.29	54.38	34.509	
11,800.00	10,073.00	10,161.01	10,073.30	46.94	38.67	-90.04	-295.06	-911.68	1,976.67	1,922.28	54.39	36.340	
11,900.00	10,073.00	10,161.01	10,073.30	47.95	38.67	-90.05	-295.06	-911.68	2,076.67	2,022.26	54.41	38.169	
12,000.00	10,073.00	10,161.01	10,073.30	49.00	38.67	-90.05	-295.06	-911.68	2,176.67	2,122.25	54.42	39.998	
12,100.00	10,073.00	10,161.01	10,073.30	50.08	38.67	-90.05	-295.06	-911.68	2,276.67	2,222.24	54.43	41.825	
12,200.00	10,073.00	14,610.46	12,392.00	51.19	57.76	-179.99	2,081.49	-935.16	2,318.70	2,276.13	42.57	54.469	
12,300.00	10,073.00	14,710.46	12,392.00	52.33	58.80	-179.99	2,181.49	-936.15	2,318.70	2,275.43	43.27	53.591	
12,400.00	10,073.00	14,810.46	12,392.00	53.50	59.88	-179.99	2,281.48	-937.14	2,318.70	2,274.72	43.98	52.721	
12,500.00	10,073.00	14,910.46	12,392.00	54.69	60.97	-179.99	2,381.48	-938.13	2,318.70	2,273.99	44.71	51.860	
12,600.00	10,073.00	15,010.46	12,392.00	55.91	62.10	-179.99	2,481.47	-939.12	2,318.70	2,273.24	45.46	51.009	
12,700.00	10,073.00	15,110.46	12,392.00	57.14	63.24	-179.99	2,581.47	-940.11	2,318.70	2,272.48	46.22	50.170	
12,800.00	10,073.00	15,210.46	12,392.00	58.40	64.41	-179.99	2,681.46	-941.09	2,318.70	2,271.71	46.99	49.344	
12,900.00	10,073.00	15,310.46	12,392.00	59.68	65.60	-179.99	2,781.46	-942.08	2,318.70	2,270.92	47.78	48.531	
13,000.00	10,073.00	15,410.46	12,392.00	60.97	66.81	-179.99	2,881.45	-943.07	2,318.70	2,270.12	48.58	47.731	
13,100.00	10,073.00	15,510.46	12,392.00	62.28	68.03	-179.99	2,981.45	-944.06	2,318.70	2,269.31	49.39	46.947	
13,200.00	10,073.00	15,610.46	12,392.00	63.61	69.28	-179.99	3,081.44	-945.05	2,318.70	2,268.49	50.21	46.177	
13,300.00	10,073.00	15,710.46	12,392.00	64.95	70.54	-179.99	3,181.44	-946.04	2,318.70	2,267.65	51.05	45.422	
13,400.00	10,073.00	15,810.46	12,392.00	66.31	71.82	-179.99	3,281.43	-947.02	2,318.70	2,266.81	51.89	44.683	
13,500.00	10,073.00	15,910.46	12,392.00	67.68	73.11	-179.99	3,381.43	-948.01	2,318.70	2,265.95	52.75	43.959	
13,600.00	10,073.00	16,010.46	12,392.00	69.06	74.42	-179.99	3,481.43	-949.00	2,318.70	2,265.09	53.61	43.251	
13,700.00	10,073.00	16,110.46	12,392.00	70.45	75.74	-179.99	3,581.42	-949.99	2,318.70	2,264.22	54.48	42.558	
13,800.00	10,073.00	16,210.46	12,392.00	71.86	77.07	-179.99	3,681.42	-950.98	2,318.70	2,263.34	55.36	41.881	
13,900.00	10,073.00	16,310.46	12,392.00	73.27	78.41	-179.99	3,781.41	-951.97	2,318.70	2,262.45	56.25	41.219	
14,000.00	10,073.00	16,410.46	12,392.00	74.70	79.77	-179.99	3,881.41	-952.95	2,318.70	2,261.55	57.15	40.572	
14,100.00	10,073.00	16,510.46	12,392.00	76.13	81.14	-179.99	3,981.40	-953.94	2,318.70	2,260.65	58.06	39.940	
14,200.00	10,073.00	16,610.46	12,392.00	77.57	82.51	-179.99	4,081.40	-954.93	2,318.70	2,259.73	58.97	39.322	
14,300.00	10,073.00	16,710.46	12,392.00	79.02	83.90	-179.99	4,181.39	-955.92	2,318.70	2,258.82	59.88	38.719	
14,400.00	10,073.00	16,810.46	12,392.00	80.48	85.30	-179.99	4,281.39	-956.91	2,318.70	2,257.89	60.81	38.131	
14,500.00	10,073.00	16,910.46	12,392.00	81.95	86.70	-179.99	4,381.38	-957.90	2,318.70	2,256.96	61.74	37.556	
14,600.00	10,073.00	17,010.46	12,392.00	83.42	88.12	-179.99	4,481.38	-958.88	2,318.70	2,256.02	62.68	36.995	
14,700.00	10,073.00	17,110.46	12,392.00	84.90	89.54	-179.99	4,581.37	-959.87	2,318.70	2,255.08	63.62	36.447	
14,800.00	10,073.00	17,210.46	12,392.00	86.38	90.97	-179.99	4,681.37	-960.86	2,318.70	2,254.13	64.57	35.912	
14,900.00	10,073.00	17,310.46	12,392.00	87.87	92.41	-179.99	4,781.36	-961.85	2,318.70	2,253.18	65.52	35.390	
15,000.00	10,073.00	17,410.46	12,392.00	89.37	93.85	-179.99	4,881.36	-962.84	2,318.70	2,252.22	66.48	34.881	
15,100.00	10,073.00	17,510.46	12,392.00	90.87	95.30	-179.99	4,981.35	-963.83	2,318.70	2,251.26	67.44	34.383	
15,200.00	10,073.00	17,610.46	12,392.00	92.38	96.76	-179.99	5,081.35	-964.81	2,318.70	2,250.30	68.40	33.897	
15,300.00	10,073.00	17,710.46	12,392.00	93.89	98.23	-179.99	5,181.34	-965.80	2,318.70	2,249.33	69.37	33.423	
15,400.00	10,073.00	17,810.46	12,392.00	95.41	99.70	-179.99	5,281.34	-966.79	2,318.70	2,248.35	70.35	32.960	
15,500.00	10,073.00	17,910.46	12,392.00	96.93	101.17	-179.99	5,381.33	-967.78	2,318.70	2,247.37	71.33	32.507	
15,600.00	10,073.00	18,010.46	12,392.00	98.46	102.65	-179.99	5,481.33	-968.77	2,318.70	2,246.39	72.31	32.066	
15,700.00	10,073.00	18,110.46	12,392.00	99.99	104.14	-179.99	5,581.32	-969.76	2,318.70	2,245.40	73.30	31.634	
15,800.00	10,073.00	18,210.46	12,392.00	101.52	105.63	-179.99	5,681.32	-970.74	2,318.70	2,244.41	74.29	31.213	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 801H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,900.00	10,073.00	18,310.46	12,392.00	103.06	107.12	-179.99	5,781.31	-971.73	2,318.70	2,243.42	75.28	30.801	
16,000.00	10,073.00	18,410.46	12,392.00	104.60	108.63	-179.99	5,881.31	-972.72	2,318.70	2,242.42	76.28	30.399	
16,100.00	10,073.00	18,510.46	12,392.00	106.14	110.13	-179.99	5,981.30	-973.71	2,318.70	2,241.42	77.28	30.005	
16,200.00	10,073.00	18,610.46	12,392.00	107.69	111.64	-179.99	6,081.30	-974.70	2,318.70	2,240.42	78.28	29.621	
16,300.00	10,073.00	18,710.46	12,392.00	109.24	113.15	-179.99	6,181.29	-975.69	2,318.70	2,239.42	79.28	29.246	
16,400.00	10,073.00	18,810.46	12,392.00	110.79	114.67	-179.99	6,281.29	-976.67	2,318.70	2,238.41	80.29	28.878	
16,500.00	10,073.00	18,910.46	12,392.00	112.35	116.19	-179.99	6,381.28	-977.66	2,318.70	2,237.40	81.30	28.519	
16,600.00	10,073.00	19,010.46	12,392.00	113.91	117.71	-179.99	6,481.28	-978.65	2,318.70	2,236.38	82.32	28.168	
16,700.00	10,073.00	19,110.46	12,392.00	115.47	119.24	-180.00	6,581.27	-979.64	2,318.70	2,235.37	83.33	27.825	
16,800.00	10,073.00	19,210.46	12,392.00	117.03	120.77	-180.00	6,681.27	-980.63	2,318.70	2,234.35	84.35	27.489	
16,900.00	10,073.00	19,310.46	12,392.00	118.60	122.30	-180.00	6,781.26	-981.62	2,318.70	2,233.33	85.37	27.161	
17,000.00	10,073.00	19,410.46	12,392.00	120.17	123.84	-180.00	6,881.26	-982.60	2,318.70	2,232.31	86.39	26.839	
17,100.00	10,073.00	19,510.46	12,392.00	121.74	125.38	-180.00	6,981.25	-983.59	2,318.70	2,231.28	87.42	26.524	
17,200.00	10,073.00	19,610.46	12,392.00	123.31	126.92	-180.00	7,081.25	-984.58	2,318.70	2,230.26	88.44	26.217	
17,300.00	10,073.00	19,710.46	12,392.00	124.88	128.47	-180.00	7,181.24	-985.57	2,318.70	2,229.23	89.47	25.915	
17,400.00	10,073.00	19,810.46	12,392.00	126.46	130.02	-180.00	7,281.24	-986.56	2,318.70	2,228.20	90.50	25.620	
17,500.00	10,073.00	19,910.46	12,392.00	128.04	131.57	-180.00	7,381.23	-987.55	2,318.70	2,227.16	91.54	25.331	
17,600.00	10,073.00	20,010.46	12,392.00	129.62	133.12	-180.00	7,481.23	-988.53	2,318.70	2,226.13	92.57	25.048	
17,700.00	10,073.00	20,110.46	12,392.00	131.20	134.67	-180.00	7,581.22	-989.52	2,318.70	2,225.09	93.61	24.771	
17,800.00	10,073.00	20,210.46	12,392.00	132.79	136.23	-180.00	7,681.22	-990.51	2,318.70	2,224.06	94.64	24.499	
17,900.00	10,073.00	20,310.46	12,392.00	134.37	137.79	-180.00	7,781.22	-991.50	2,318.70	2,223.02	95.68	24.233	
18,000.00	10,073.00	20,410.46	12,392.00	135.96	139.35	-180.00	7,881.21	-992.49	2,318.70	2,221.98	96.72	23.972	
18,100.00	10,073.00	20,510.46	12,392.00	137.55	140.92	-180.00	7,981.21	-993.48	2,318.70	2,220.93	97.77	23.717	
18,200.00	10,073.00	20,610.46	12,392.00	139.14	142.48	-180.00	8,081.20	-994.46	2,318.70	2,219.89	98.81	23.466	
18,300.00	10,073.00	20,710.46	12,392.00	140.73	144.05	-180.00	8,181.20	-995.45	2,318.70	2,218.84	99.86	23.220	
18,400.00	10,073.00	20,810.46	12,392.00	142.32	145.62	-180.00	8,281.19	-996.44	2,318.70	2,217.80	100.90	22.980	
18,500.00	10,073.00	20,910.46	12,392.00	143.92	147.19	-180.00	8,381.19	-997.43	2,318.70	2,216.75	101.95	22.743	
18,600.00	10,073.00	21,010.46	12,392.00	145.51	148.76	-180.00	8,481.18	-998.42	2,318.70	2,215.70	103.00	22.512	
18,700.00	10,073.00	21,110.46	12,392.00	147.11	150.34	-180.00	8,581.18	-999.40	2,318.70	2,214.65	104.05	22.284	
18,800.00	10,073.00	21,210.46	12,392.00	148.71	151.92	-180.00	8,681.17	-1,000.39	2,318.70	2,213.60	105.10	22.061	
18,900.00	10,073.00	21,310.46	12,392.00	150.31	153.49	-180.00	8,781.17	-1,001.38	2,318.70	2,212.54	106.16	21.842	
19,000.00	10,073.00	21,410.46	12,392.00	151.91	155.07	-180.00	8,881.16	-1,002.37	2,318.70	2,211.49	107.21	21.628	
19,100.00	10,073.00	21,510.46	12,392.00	153.51	156.66	-180.00	8,981.16	-1,003.36	2,318.70	2,210.43	108.27	21.417	
19,200.00	10,073.00	21,610.46	12,392.00	155.11	158.24	-180.00	9,081.15	-1,004.35	2,318.70	2,209.38	109.32	21.210	
19,300.00	10,073.00	21,710.46	12,392.00	156.72	159.82	-180.00	9,181.15	-1,005.33	2,318.70	2,208.32	110.38	21.007	
19,400.00	10,073.00	21,810.46	12,392.00	158.32	161.41	-180.00	9,281.14	-1,006.32	2,318.70	2,207.26	111.44	20.807	
19,500.00	10,073.00	21,910.46	12,392.00	159.93	162.99	-180.00	9,381.14	-1,007.31	2,318.70	2,206.20	112.50	20.611	
19,600.00	10,073.00	22,010.46	12,392.00	161.53	164.58	-180.00	9,481.13	-1,008.30	2,318.70	2,205.14	113.56	20.419	
19,700.00	10,073.00	22,110.46	12,392.00	163.14	166.17	-180.00	9,581.13	-1,009.29	2,318.70	2,204.08	114.62	20.230	
19,800.00	10,073.00	22,210.46	12,392.00	164.75	167.76	-180.00	9,681.12	-1,010.28	2,318.70	2,203.02	115.68	20.044	
19,900.00	10,073.00	22,310.46	12,392.00	166.36	169.35	-180.00	9,781.12	-1,011.26	2,318.70	2,201.96	116.74	19.861	
20,000.00	10,073.00	22,410.46	12,392.00	167.97	170.95	-180.00	9,881.11	-1,012.25	2,318.70	2,200.89	117.81	19.682	
20,100.00	10,073.00	22,510.46	12,392.00	169.58	172.54	-180.00	9,981.11	-1,013.24	2,318.70	2,199.83	118.87	19.506	
20,185.45	10,073.00	22,595.91	12,392.00	170.96	173.90	180.00	10,066.55	-1,014.09	2,318.70	2,198.92	119.78	19.357	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 802H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,843.60	1,843.60	6.37	6.38	169.85	-74.82	13.39	76.01	67.00	9.02	8.432	
1,900.00	1,900.00	1,900.60	1,900.60	6.58	6.58	169.85	-74.82	13.39	76.01	66.71	9.30	8.170	
2,000.00	2,000.00	2,000.60	2,000.60	6.94	6.94	169.85	-74.82	13.39	76.01	66.20	9.81	7.748	
2,100.00	2,099.99	2,100.59	2,100.59	7.28	7.30	-88.58	-74.82	13.39	75.97	65.66	10.31	7.368	
2,156.07	2,156.03	2,156.63	2,156.63	7.47	7.50	-90.00	-74.82	13.39	75.95	65.36	10.59	7.174	CC
2,200.00	2,199.91	2,200.00	2,200.00	7.62	7.65	-91.52	-74.82	13.39	75.98	65.17	10.80	7.033	ES
2,300.00	2,299.69	2,298.40	2,298.39	7.97	7.99	-96.02	-76.09	13.39	77.65	66.38	11.28	6.886	SF
2,400.00	2,399.27	2,396.08	2,395.99	8.31	8.31	-101.31	-79.86	13.41	82.65	70.92	11.74	7.042	
2,500.00	2,498.57	2,493.37	2,493.08	8.67	8.62	-106.69	-86.08	13.44	91.28	79.08	12.20	7.483	
2,600.00	2,597.54	2,590.12	2,589.45	9.03	8.94	-111.59	-94.73	13.48	103.65	91.00	12.66	8.189	
2,700.00	2,696.09	2,687.01	2,685.71	9.40	9.27	-115.80	-105.68	13.53	119.64	106.51	13.13	9.112	
2,760.81	2,755.79	2,746.58	2,744.86	9.63	9.47	-118.25	-112.73	13.56	130.49	117.05	13.43	9.714	
2,800.00	2,794.20	2,784.93	2,782.94	9.78	9.60	-119.82	-117.26	13.58	137.75	124.12	13.63	10.108	
2,900.00	2,892.23	2,882.76	2,880.08	10.17	9.94	-123.16	-128.84	13.63	156.66	142.53	14.13	11.088	
3,000.00	2,990.25	2,980.59	2,977.23	10.57	10.28	-125.78	-140.41	13.69	175.97	161.34	14.63	12.026	
3,100.00	3,088.27	3,078.42	3,074.37	10.97	10.63	-127.88	-151.99	13.74	195.57	180.43	15.14	12.916	
3,200.00	3,186.30	3,176.26	3,171.52	11.38	10.98	-129.59	-163.56	13.79	215.38	199.72	15.65	13.759	
3,300.00	3,284.32	3,274.09	3,268.67	11.80	11.33	-131.02	-175.13	13.84	235.34	219.17	16.17	14.554	
3,400.00	3,382.34	3,371.92	3,365.81	12.22	11.69	-132.23	-186.71	13.90	255.42	238.73	16.69	15.304	
3,500.00	3,480.37	3,469.75	3,462.96	12.65	12.05	-133.25	-198.28	13.95	275.59	258.38	17.21	16.012	
3,600.00	3,578.39	3,567.59	3,560.10	13.08	12.41	-134.14	-209.86	14.00	295.84	278.10	17.74	16.679	
3,700.00	3,676.41	3,665.42	3,657.25	13.51	12.77	-134.92	-221.43	14.06	316.15	297.88	18.27	17.309	
3,800.00	3,774.43	3,763.25	3,754.39	13.95	13.14	-135.60	-233.01	14.11	336.50	317.71	18.80	17.903	
3,900.00	3,872.46	3,861.09	3,851.54	14.39	13.50	-136.20	-244.58	14.16	356.90	337.57	19.33	18.465	
4,000.00	3,970.48	3,958.92	3,948.69	14.83	13.87	-136.74	-256.15	14.21	377.33	357.46	19.86	18.997	
4,100.00	4,068.50	4,056.75	4,045.83	15.28	14.25	-137.22	-267.73	14.27	397.78	377.38	20.40	19.500	
4,200.00	4,166.53	4,159.95	4,148.46	15.73	14.63	-137.84	-278.61	14.32	417.65	396.69	20.97	19.921	
4,300.00	4,264.55	4,263.56	4,251.74	16.17	15.01	-138.74	-286.75	14.35	436.30	414.77	21.52	20.271	
4,400.00	4,362.57	4,367.29	4,355.32	16.63	15.39	-139.87	-292.08	14.38	453.80	431.73	22.07	20.562	
4,500.00	4,460.59	4,470.99	4,458.99	17.08	15.75	-141.23	-294.60	14.39	470.29	447.68	22.60	20.805	
4,600.00	4,558.62	4,571.21	4,559.22	17.53	16.09	-142.69	-294.82	14.39	486.08	462.96	23.12	21.028	
4,700.00	4,656.64	4,669.24	4,657.24	17.99	16.42	-144.05	-294.82	14.39	502.07	478.46	23.62	21.260	
4,800.00	4,754.66	4,767.26	4,755.26	18.45	16.76	-145.32	-294.82	14.39	518.32	494.21	24.11	21.494	
4,900.00	4,852.69	4,865.28	4,853.29	18.91	17.09	-146.52	-294.82	14.39	534.82	510.20	24.61	21.728	
5,000.00	4,950.71	4,963.31	4,951.31	19.37	17.43	-147.65	-294.82	14.39	551.52	526.41	25.11	21.962	
5,100.00	5,048.73	5,061.33	5,049.33	19.83	17.76	-148.71	-294.82	14.39	568.43	542.82	25.61	22.194	
5,200.00	5,146.76	5,159.35	5,147.36	20.29	18.10	-149.71	-294.82	14.39	585.52	559.41	26.11	22.424	
5,300.00	5,244.78	5,257.38	5,245.38	20.75	18.43	-150.66	-294.82	14.39	602.77	576.16	26.61	22.652	
5,400.00	5,342.80	5,355.40	5,343.40	21.22	18.77	-151.55	-294.82	14.39	620.17	593.06	27.11	22.877	
5,500.00	5,440.82	5,453.42	5,441.42	21.68	19.11	-152.39	-294.82	14.39	637.71	610.10	27.61	23.099	
5,600.00	5,538.85	5,551.44	5,539.45	22.15	19.45	-153.19	-294.82	14.39	655.38	627.28	28.11	23.317	
5,700.00	5,636.87	5,649.47	5,637.47	22.61	19.79	-153.95	-294.82	14.39	673.17	644.56	28.61	23.531	
5,800.00	5,734.89	5,747.49	5,735.49	23.08	20.12	-154.67	-294.82	14.39	691.07	661.96	29.11	23.742	
5,900.00	5,832.92	5,845.51	5,833.52	23.55	20.46	-155.35	-294.82	14.39	709.06	679.46	29.61	23.948	
6,000.00	5,930.94	5,943.54	5,931.54	24.02	20.80	-156.00	-294.82	14.39	727.15	697.04	30.11	24.151	
6,100.00	6,028.96	6,041.56	6,029.56	24.49	21.14	-156.61	-294.82	14.39	745.33	714.72	30.61	24.349	
6,200.00	6,126.98	6,139.58	6,127.58	24.96	21.48	-157.20	-294.82	14.39	763.59	732.47	31.11	24.543	
6,300.00	6,225.01	6,237.60	6,225.61	25.43	21.82	-157.76	-294.82	14.39	781.92	750.30	31.61	24.734	
6,400.00	6,323.03	6,335.63	6,323.63	25.90	22.17	-158.29	-294.82	14.39	800.32	768.20	32.12	24.920	
6,500.00	6,421.05	6,433.65	6,421.65	26.37	22.51	-158.81	-294.82	14.39	818.78	786.16	32.62	25.102	
6,600.00	6,519.08	6,531.67	6,519.68	26.84	22.85	-159.29	-294.82	14.39	837.31	804.18	33.12	25.280	
6,700.00	6,617.10	6,629.70	6,617.70	27.31	23.19	-159.76	-294.82	14.39	855.89	822.26	33.62	25.454	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 802H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,719.50	6,636.21	6,648.81	6,636.81	27.40	23.26	-159.85	-294.82	14.39	859.52	825.79	33.72	25.487	
6,800.00	6,715.28	6,727.88	6,715.88	27.78	23.53	-160.26	-294.82	14.39	873.74	839.61	34.13	25.602	
6,900.00	6,813.92	6,826.52	6,814.52	28.22	23.88	-160.70	-294.82	14.39	889.24	854.61	34.63	25.678	
7,000.00	6,912.96	6,925.56	6,913.56	28.64	24.23	-161.05	-294.82	14.39	902.33	867.20	35.13	25.684	
7,100.00	7,012.32	7,024.92	7,012.92	29.04	24.57	-161.33	-294.82	14.39	912.98	877.35	35.63	25.623	
7,200.00	7,111.95	7,124.54	7,112.55	29.42	24.92	-161.54	-294.82	14.39	921.17	885.04	36.13	25.497	
7,300.00	7,211.76	7,224.36	7,212.36	29.77	25.27	-161.69	-294.82	14.39	926.89	890.27	36.62	25.309	
7,400.00	7,311.70	7,324.30	7,312.30	30.10	25.62	-161.77	-294.82	14.39	930.13	893.01	37.11	25.061	
7,480.31	7,392.00	7,404.60	7,392.60	30.35	25.90	95.66	-294.82	14.39	930.93	893.43	37.50	24.822	
7,500.00	7,411.69	7,424.29	7,412.29	30.41	25.97	95.66	-294.82	14.39	930.93	893.33	37.60	24.760	
7,600.00	7,511.69	7,524.29	7,512.29	30.71	26.32	95.66	-294.82	14.39	930.93	892.85	38.08	24.448	
7,700.00	7,611.69	7,624.29	7,612.29	31.01	26.68	95.66	-294.82	14.39	930.93	892.37	38.56	24.143	
7,800.00	7,711.69	7,724.29	7,712.29	31.31	27.03	95.66	-294.82	14.39	930.93	891.89	39.04	23.846	
7,900.00	7,811.69	7,824.29	7,812.29	31.62	27.38	95.66	-294.82	14.39	930.93	891.41	39.52	23.555	
8,000.00	7,911.69	7,924.29	7,912.29	31.92	27.73	95.66	-294.82	14.39	930.93	890.93	40.00	23.271	
8,100.00	8,011.69	8,024.29	8,012.29	32.23	28.08	95.66	-294.82	14.39	930.93	890.44	40.49	22.993	
8,200.00	8,111.69	8,124.29	8,112.29	32.54	28.44	95.66	-294.82	14.39	930.93	889.96	40.97	22.722	
8,300.00	8,211.69	8,224.29	8,212.29	32.84	28.79	95.66	-294.82	14.39	930.93	889.47	41.45	22.457	
8,400.00	8,311.69	8,324.29	8,312.29	33.15	29.14	95.66	-294.82	14.39	930.93	888.99	41.94	22.197	
8,500.00	8,411.69	8,424.29	8,412.29	33.46	29.49	95.66	-294.82	14.39	930.93	888.50	42.42	21.943	
8,600.00	8,511.69	8,524.29	8,512.29	33.77	29.85	95.66	-294.82	14.39	930.93	888.02	42.91	21.695	
8,700.00	8,611.69	8,624.29	8,612.29	34.08	30.20	95.66	-294.82	14.39	930.93	887.53	43.40	21.452	
8,800.00	8,711.69	8,724.29	8,712.29	34.40	30.55	95.66	-294.82	14.39	930.93	887.05	43.88	21.214	
8,900.00	8,811.69	8,824.29	8,812.29	34.71	30.90	95.66	-294.82	14.39	930.93	886.56	44.37	20.981	
9,000.00	8,911.69	8,924.29	8,912.29	35.03	31.26	95.66	-294.82	14.39	930.93	886.07	44.86	20.753	
9,100.00	9,011.69	9,024.29	9,012.29	35.34	31.61	95.66	-294.82	14.39	930.93	885.58	45.35	20.530	
9,200.00	9,111.69	9,124.29	9,112.29	35.66	31.97	95.66	-294.82	14.39	930.93	885.10	45.83	20.311	
9,300.00	9,211.69	9,224.29	9,212.29	35.97	32.32	95.66	-294.82	14.39	930.93	884.61	46.32	20.097	
9,400.00	9,311.69	9,324.29	9,312.29	36.29	32.67	95.66	-294.82	14.39	930.93	884.12	46.81	19.887	
9,500.00	9,411.69	9,424.29	9,412.29	36.61	33.03	95.66	-294.82	14.39	930.93	883.63	47.30	19.681	
9,588.35	9,500.04	9,512.64	9,500.64	36.89	33.34	95.66	-294.82	14.39	930.93	883.19	47.73	19.502	
9,600.00	9,511.69	9,524.29	9,512.29	36.93	33.38	96.24	-294.82	14.39	930.94	883.15	47.79	19.479	
9,650.00	9,561.57	9,574.17	9,562.17	37.08	33.56	96.40	-294.82	14.39	931.29	883.26	48.04	19.387	
9,700.00	9,610.99	9,623.59	9,611.59	37.23	33.73	96.76	-294.82	14.39	932.17	883.89	48.28	19.307	
9,750.00	9,659.56	9,672.15	9,660.16	37.38	33.90	97.31	-294.82	14.39	933.66	885.14	48.52	19.242	
9,800.00	9,706.91	9,719.51	9,707.51	37.51	34.07	98.01	-294.82	14.39	935.91	887.15	48.76	19.195	
9,850.00	9,752.69	9,765.29	9,753.29	37.63	34.23	98.81	-294.82	14.39	939.12	890.13	48.99	19.169	
9,900.00	9,796.55	9,809.15	9,797.15	37.74	34.39	99.64	-294.82	14.39	943.49	894.28	49.21	19.171	
9,950.00	9,838.15	9,850.75	9,838.75	37.83	34.54	100.45	-294.82	14.39	949.28	899.85	49.43	19.204	
10,000.00	9,877.18	9,889.78	9,877.78	37.92	34.67	101.17	-294.82	14.39	956.72	907.08	49.64	19.275	
10,050.00	9,913.34	9,925.94	9,913.94	37.99	34.80	101.72	-294.82	14.39	966.05	916.22	49.83	19.387	
10,100.00	9,946.35	9,958.95	9,946.95	38.05	34.92	102.04	-294.82	14.39	977.47	927.47	50.01	19.546	
10,150.00	9,975.97	9,988.56	9,976.57	38.11	35.02	102.06	-294.82	14.39	991.17	941.00	50.17	19.756	
10,200.00	10,001.96	10,014.56	10,002.56	38.15	35.12	101.71	-294.82	14.39	1,007.25	956.93	50.32	20.018	
10,250.00	10,024.13	10,036.73	10,024.73	38.19	35.20	100.93	-294.82	14.39	1,025.76	975.32	50.44	20.335	
10,300.00	10,042.32	10,054.92	10,042.92	38.23	35.26	99.68	-294.82	14.39	1,046.69	996.14	50.55	20.706	
10,350.00	10,056.38	10,068.97	10,056.98	38.28	35.31	97.90	-294.82	14.39	1,069.94	1,019.31	50.63	21.131	
10,400.00	10,066.20	10,078.80	10,066.80	38.33	35.34	95.55	-294.82	14.39	1,095.36	1,044.66	50.69	21.607	
10,450.00	10,071.72	10,084.31	10,072.32	38.40	35.36	92.63	-294.82	14.39	1,122.72	1,071.99	50.73	22.130	
10,488.35	10,073.00	10,085.59	10,073.60	38.46	35.37	90.00	-294.82	14.39	1,144.85	1,094.10	50.75	22.560	
10,500.00	10,073.00	10,085.59	10,073.60	38.48	35.37	90.00	-294.82	14.39	1,151.75	1,101.00	50.75	22.695	
10,600.00	10,073.00	10,085.59	10,073.60	38.70	35.37	90.00	-294.82	14.39	1,213.94	1,163.17	50.77	23.910	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 802H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,073.00	10,085.59	10,073.60	39.01	35.37	90.00	-294.82	14.39	1,280.93	1,230.14	50.79	25.220	
10,800.00	10,073.00	10,085.59	10,073.60	39.41	35.37	90.00	-294.82	14.39	1,352.00	1,301.20	50.81	26.611	
10,900.00	10,073.00	10,085.59	10,073.60	39.89	35.37	90.00	-294.82	14.39	1,426.55	1,375.73	50.82	28.070	
11,000.00	10,073.00	10,085.59	10,073.60	40.44	35.37	90.00	-294.82	14.39	1,504.05	1,453.21	50.83	29.587	
11,100.00	10,073.00	10,085.60	10,073.60	41.06	35.37	90.00	-294.82	14.39	1,584.07	1,533.23	50.85	31.154	
11,200.00	10,073.00	10,085.60	10,073.60	41.75	35.37	90.00	-294.82	14.39	1,666.26	1,615.40	50.86	32.762	
11,300.00	10,073.00	10,085.60	10,073.60	42.49	35.37	90.00	-294.82	14.39	1,750.30	1,699.43	50.87	34.406	
11,400.00	10,073.00	10,085.60	10,073.60	43.29	35.37	90.00	-294.82	14.39	1,835.94	1,785.06	50.88	36.082	
11,500.00	10,073.00	10,085.60	10,073.60	44.13	35.37	90.00	-294.82	14.39	1,922.97	1,872.07	50.90	37.783	
11,600.00	10,073.00	10,085.60	10,073.60	45.03	35.37	90.00	-294.82	14.39	2,011.20	1,960.29	50.91	39.507	
11,700.00	10,073.00	10,085.60	10,073.60	45.96	35.37	90.00	-294.82	14.39	2,100.49	2,049.57	50.92	41.251	
11,800.00	10,073.00	10,085.60	10,073.60	46.94	35.37	90.00	-294.82	14.39	2,190.70	2,139.77	50.93	43.012	
11,900.00	10,073.00	10,085.60	10,073.60	47.95	35.37	90.00	-294.82	14.39	2,281.73	2,230.79	50.95	44.787	
12,000.00	10,073.00	10,085.60	10,073.60	49.00	35.37	90.00	-294.82	14.39	2,373.49	2,322.53	50.96	46.576	
12,100.00	10,073.00	14,327.67	12,276.00	50.08	55.33	157.21	1,990.66	-8.22	2,388.97	2,340.25	48.72	49.032	
12,200.00	10,073.00	14,427.67	12,276.00	51.19	56.38	157.21	2,090.65	-9.21	2,388.97	2,339.39	49.58	48.184	
12,300.00	10,073.00	14,527.67	12,276.00	52.33	57.46	157.21	2,190.65	-10.20	2,388.98	2,338.52	50.46	47.345	
12,400.00	10,073.00	14,627.67	12,276.00	53.50	58.57	157.21	2,290.64	-11.19	2,388.98	2,337.62	51.36	46.516	
12,500.00	10,073.00	14,727.67	12,276.00	54.69	59.70	157.21	2,390.64	-12.18	2,388.98	2,336.70	52.28	45.697	
12,600.00	10,073.00	14,827.67	12,276.00	55.91	60.86	157.21	2,490.63	-13.17	2,388.98	2,335.77	53.21	44.893	
12,700.00	10,073.00	14,927.67	12,276.00	57.14	62.04	157.21	2,590.63	-14.16	2,388.98	2,334.82	54.17	44.103	
12,800.00	10,073.00	15,027.67	12,276.00	58.40	63.24	157.21	2,690.62	-15.15	2,388.99	2,333.85	55.14	43.328	
12,900.00	10,073.00	15,127.67	12,276.00	59.68	64.46	157.21	2,790.62	-16.14	2,388.99	2,332.86	56.12	42.567	
13,000.00	10,073.00	15,227.67	12,276.00	60.97	65.69	157.20	2,890.61	-17.12	2,388.99	2,331.87	57.12	41.821	
13,100.00	10,073.00	15,327.67	12,276.00	62.28	66.95	157.20	2,990.61	-18.11	2,388.99	2,330.85	58.14	41.092	
13,200.00	10,073.00	15,427.67	12,276.00	63.61	68.22	157.20	3,090.61	-19.10	2,388.99	2,329.83	59.17	40.378	
13,300.00	10,073.00	15,527.67	12,276.00	64.95	69.51	157.20	3,190.60	-20.09	2,388.99	2,328.79	60.21	39.680	
13,400.00	10,073.00	15,627.67	12,276.00	66.31	70.82	157.20	3,290.60	-21.08	2,389.00	2,327.74	61.26	38.998	
13,500.00	10,073.00	15,727.67	12,276.00	67.68	72.14	157.20	3,390.59	-22.07	2,389.00	2,326.67	62.32	38.332	
13,600.00	10,073.00	15,827.67	12,276.00	69.06	73.47	157.20	3,490.59	-23.06	2,389.00	2,325.60	63.40	37.683	
13,700.00	10,073.00	15,927.67	12,276.00	70.45	74.81	157.20	3,590.58	-24.05	2,389.00	2,324.52	64.48	37.051	
13,800.00	10,073.00	16,027.67	12,276.00	71.86	76.17	157.20	3,690.58	-25.04	2,389.00	2,323.43	65.57	36.435	
13,900.00	10,073.00	16,127.67	12,276.00	73.27	77.54	157.20	3,790.57	-26.03	2,389.01	2,322.34	66.67	35.834	
14,000.00	10,073.00	16,227.67	12,276.00	74.70	78.92	157.20	3,890.57	-27.02	2,389.01	2,321.23	67.78	35.247	
14,100.00	10,073.00	16,327.67	12,276.00	76.13	80.31	157.20	3,990.56	-28.01	2,389.01	2,320.11	68.90	34.675	
14,200.00	10,073.00	16,427.67	12,276.00	77.57	81.71	157.20	4,090.56	-29.00	2,389.01	2,318.99	70.02	34.118	
14,300.00	10,073.00	16,527.67	12,276.00	79.02	83.12	157.20	4,190.55	-29.99	2,389.01	2,317.86	71.16	33.575	
14,400.00	10,073.00	16,627.67	12,276.00	80.48	84.53	157.20	4,290.55	-30.97	2,389.01	2,316.72	72.30	33.045	
14,500.00	10,073.00	16,727.67	12,276.00	81.95	85.96	157.20	4,390.54	-31.96	2,389.02	2,315.57	73.44	32.529	
14,600.00	10,073.00	16,827.67	12,276.00	83.42	87.39	157.20	4,490.54	-32.95	2,389.02	2,314.42	74.60	32.026	
14,700.00	10,073.00	16,927.67	12,276.00	84.90	88.83	157.20	4,590.53	-33.94	2,389.02	2,313.26	75.76	31.536	
14,800.00	10,073.00	17,027.67	12,276.00	86.38	90.28	157.20	4,690.53	-34.93	2,389.02	2,312.10	76.92	31.059	
14,900.00	10,073.00	17,127.67	12,276.00	87.87	91.74	157.20	4,790.52	-35.92	2,389.02	2,310.94	78.09	30.595	
15,000.00	10,073.00	17,227.67	12,276.00	89.37	93.20	157.20	4,890.52	-36.91	2,389.03	2,309.77	79.26	30.142	
15,100.00	10,073.00	17,327.67	12,276.00	90.87	94.67	157.20	4,990.51	-37.90	2,389.03	2,308.59	80.44	29.701	
15,200.00	10,073.00	17,427.67	12,276.00	92.38	96.14	157.20	5,090.51	-38.89	2,389.03	2,307.41	81.62	29.270	
15,300.00	10,073.00	17,527.67	12,276.00	93.89	97.62	157.20	5,190.50	-39.88	2,389.03	2,306.22	82.81	28.850	
15,400.00	10,073.00	17,627.67	12,276.00	95.41	99.11	157.20	5,290.50	-40.87	2,389.03	2,305.03	84.00	28.440	
15,500.00	10,073.00	17,727.67	12,276.00	96.93	100.60	157.20	5,390.49	-41.86	2,389.03	2,303.84	85.20	28.041	
15,600.00	10,073.00	17,827.67	12,276.00	98.46	102.10	157.20	5,490.49	-42.85	2,389.04	2,302.64	86.40	27.651	
15,700.00	10,073.00	17,927.67	12,276.00	99.99	103.60	157.20	5,590.48	-43.84	2,389.04	2,301.43	87.60	27.271	
15,800.00	10,073.00	18,027.67	12,276.00	101.52	105.10	157.20	5,690.48	-44.82	2,389.04	2,300.23	88.81	26.900	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 802H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,900.00	10,073.00	18,127.67	12,276.00	103.06	106.61	157.20	5,790.47	-45.81	2,389.04	2,299.02	90.02	26.539	
16,000.00	10,073.00	18,227.67	12,276.00	104.60	108.13	157.20	5,890.47	-46.80	2,389.04	2,297.81	91.23	26.186	
16,100.00	10,073.00	18,327.67	12,276.00	106.14	109.64	157.20	5,990.46	-47.79	2,389.05	2,296.60	92.45	25.842	
16,200.00	10,073.00	18,427.67	12,276.00	107.69	111.16	157.20	6,090.46	-48.78	2,389.05	2,295.38	93.67	25.506	
16,300.00	10,073.00	18,527.67	12,276.00	109.24	112.69	157.20	6,190.45	-49.77	2,389.05	2,294.16	94.89	25.177	
16,400.00	10,073.00	18,627.67	12,276.00	110.79	114.22	157.20	6,290.45	-50.76	2,389.05	2,292.94	96.11	24.856	
16,500.00	10,073.00	18,727.67	12,276.00	112.35	115.75	157.20	6,390.44	-51.75	2,389.05	2,291.71	97.34	24.543	
16,600.00	10,073.00	18,827.67	12,276.00	113.91	117.29	157.20	6,490.44	-52.74	2,389.06	2,290.48	98.57	24.237	
16,700.00	10,073.00	18,927.67	12,276.00	115.47	118.82	157.20	6,590.43	-53.73	2,389.06	2,289.25	99.81	23.937	
16,800.00	10,073.00	19,027.67	12,276.00	117.03	120.37	157.20	6,690.43	-54.72	2,389.06	2,288.02	101.04	23.645	
16,900.00	10,073.00	19,127.67	12,276.00	118.60	121.91	157.20	6,790.42	-55.71	2,389.06	2,286.78	102.28	23.359	
17,000.00	10,073.00	19,227.67	12,276.00	120.17	123.46	157.20	6,890.42	-56.70	2,389.06	2,285.55	103.51	23.080	
17,100.00	10,073.00	19,327.67	12,276.00	121.74	125.01	157.20	6,990.41	-57.68	2,389.06	2,284.31	104.75	22.807	
17,200.00	10,073.00	19,427.67	12,276.00	123.31	126.56	157.20	7,090.41	-58.67	2,389.07	2,283.07	105.99	22.540	
17,300.00	10,073.00	19,527.67	12,276.00	124.88	128.11	157.20	7,190.40	-59.66	2,389.07	2,281.83	107.23	22.279	
17,400.00	10,073.00	19,627.67	12,276.00	126.46	129.67	157.20	7,290.40	-60.65	2,389.07	2,280.59	108.48	22.023	
17,500.00	10,073.00	19,727.67	12,276.00	128.04	131.23	157.20	7,390.39	-61.64	2,389.07	2,279.34	109.73	21.773	
17,600.00	10,073.00	19,827.67	12,276.00	129.62	132.79	157.20	7,490.39	-62.63	2,389.07	2,278.10	110.98	21.528	
17,700.00	10,073.00	19,927.67	12,276.00	131.20	134.36	157.20	7,590.38	-63.62	2,389.08	2,276.85	112.23	21.288	
17,800.00	10,073.00	20,027.67	12,276.00	132.79	135.92	157.20	7,690.38	-64.61	2,389.08	2,275.60	113.48	21.053	
17,900.00	10,073.00	20,127.67	12,276.00	134.37	137.49	157.20	7,790.38	-65.60	2,389.08	2,274.35	114.73	20.823	
18,000.00	10,073.00	20,227.67	12,276.00	135.96	139.06	157.20	7,890.37	-66.59	2,389.08	2,273.10	115.99	20.598	
18,100.00	10,073.00	20,327.67	12,276.00	137.55	140.64	157.20	7,990.37	-67.58	2,389.08	2,271.84	117.24	20.378	
18,200.00	10,073.00	20,427.67	12,276.00	139.14	142.21	157.20	8,090.36	-68.57	2,389.08	2,270.59	118.49	20.162	
18,300.00	10,073.00	20,527.67	12,276.00	140.73	143.78	157.20	8,190.36	-69.56	2,389.09	2,269.34	119.75	19.951	
18,400.00	10,073.00	20,627.67	12,276.00	142.32	145.36	157.20	8,290.35	-70.55	2,389.09	2,268.08	121.01	19.743	
18,500.00	10,073.00	20,727.67	12,276.00	143.92	146.94	157.20	8,390.35	-71.53	2,389.09	2,266.82	122.27	19.540	
18,600.00	10,073.00	20,827.67	12,276.00	145.51	148.52	157.20	8,490.34	-72.52	2,389.09	2,265.56	123.53	19.340	
18,700.00	10,073.00	20,927.67	12,276.00	147.11	150.10	157.20	8,590.34	-73.51	2,389.09	2,264.30	124.79	19.145	
18,800.00	10,073.00	21,027.67	12,276.00	148.71	151.69	157.20	8,690.33	-74.50	2,389.10	2,263.04	126.05	18.953	
18,900.00	10,073.00	21,127.67	12,276.00	150.31	153.27	157.20	8,790.33	-75.49	2,389.10	2,261.78	127.32	18.765	
19,000.00	10,073.00	21,227.67	12,276.00	151.91	154.86	157.20	8,890.32	-76.48	2,389.10	2,260.52	128.58	18.581	
19,100.00	10,073.00	21,327.67	12,276.00	153.51	156.45	157.20	8,990.32	-77.47	2,389.10	2,259.26	129.85	18.400	
19,200.00	10,073.00	21,427.67	12,276.00	155.11	158.04	157.20	9,090.31	-78.46	2,389.10	2,257.99	131.11	18.222	
19,300.00	10,073.00	21,527.67	12,276.00	156.72	159.63	157.20	9,190.31	-79.45	2,389.10	2,256.73	132.37	18.048	
19,400.00	10,073.00	21,627.67	12,276.00	158.32	161.22	157.20	9,290.30	-80.44	2,389.11	2,255.47	133.64	17.877	
19,500.00	10,073.00	21,727.67	12,276.00	159.93	162.81	157.20	9,390.30	-81.43	2,389.11	2,254.20	134.91	17.709	
19,600.00	10,073.00	21,827.67	12,276.00	161.53	164.41	157.20	9,490.29	-82.42	2,389.11	2,252.93	136.18	17.544	
19,700.00	10,073.00	21,927.67	12,276.00	163.14	166.00	157.20	9,590.29	-83.41	2,389.11	2,251.67	137.45	17.382	
19,800.00	10,073.00	22,027.67	12,276.00	164.75	167.60	157.20	9,690.28	-84.39	2,389.11	2,250.40	138.72	17.223	
19,900.00	10,073.00	22,127.67	12,276.00	166.36	169.20	157.20	9,790.28	-85.38	2,389.12	2,249.13	139.99	17.067	
20,000.00	10,073.00	22,227.67	12,276.00	167.97	170.79	157.20	9,890.27	-86.37	2,389.12	2,247.86	141.26	16.913	
20,100.00	10,073.00	22,327.67	12,276.00	169.58	172.39	157.20	9,990.27	-87.36	2,389.12	2,246.59	142.53	16.763	
20,107.83	10,073.00	22,335.51	12,276.00	169.70	172.52	157.20	9,998.10	-87.44	2,389.12	2,246.49	142.63	16.751	
20,185.45	10,073.00	22,410.08	12,276.00	170.96	173.71	157.20	10,072.67	-88.18	2,389.12	2,245.54	143.58	16.640	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 803H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,844.20	1,844.20	6.37	6.38	152.73	-74.59	38.45	83.92	74.90	9.02	9.307	
1,900.00	1,900.00	1,901.20	1,901.20	6.58	6.58	152.73	-74.59	38.45	83.92	74.61	9.31	9.018	
1,916.26	1,916.26	1,917.46	1,917.46	6.64	6.64	152.73	-74.59	38.45	83.92	74.53	9.39	8.939	CC
2,000.00	2,000.00	2,001.18	2,001.18	6.94	6.94	152.73	-74.59	38.45	83.92	74.11	9.81	8.552	ES
2,100.00	2,099.99	2,100.00	2,099.99	7.28	7.28	-106.22	-74.89	39.73	85.14	74.84	10.30	8.266	SF
2,200.00	2,199.91	2,197.86	2,197.78	7.62	7.62	-110.37	-75.76	43.44	89.09	78.32	10.77	8.273	
2,300.00	2,299.69	2,295.26	2,294.97	7.97	7.95	-116.42	-77.19	49.56	96.60	85.37	11.23	8.600	
2,400.00	2,399.27	2,391.55	2,390.87	8.31	8.28	-123.28	-79.16	57.98	108.66	96.97	11.69	9.297	
2,500.00	2,498.57	2,486.39	2,485.08	8.67	8.62	-129.96	-81.63	68.57	125.95	113.83	12.13	10.385	
2,600.00	2,597.54	2,579.45	2,577.23	9.03	8.95	-135.84	-84.58	81.17	148.79	136.24	12.56	11.850	
2,700.00	2,696.09	2,670.44	2,667.01	9.40	9.29	-140.71	-87.96	95.60	177.13	164.16	12.97	13.655	
2,760.81	2,755.79	2,724.65	2,720.31	9.63	9.49	-143.19	-90.20	105.18	196.96	183.74	13.22	14.900	
2,800.00	2,794.20	2,759.17	2,754.19	9.78	9.62	-144.71	-91.72	111.67	210.60	197.22	13.38	15.745	
2,900.00	2,892.23	2,851.42	2,844.60	10.17	9.98	-148.00	-95.89	129.52	246.46	232.62	13.83	17.816	
3,000.00	2,990.25	2,943.95	2,935.28	10.57	10.34	-150.47	-100.08	147.43	282.86	268.56	14.30	19.782	
3,100.00	3,088.27	3,036.47	3,025.95	10.97	10.71	-152.39	-104.27	165.33	319.62	304.85	14.77	21.642	
3,200.00	3,186.30	3,129.00	3,116.63	11.38	11.09	-153.90	-108.46	183.23	356.63	341.39	15.24	23.400	
3,300.00	3,284.32	3,221.52	3,207.31	11.80	11.47	-155.14	-112.65	201.14	393.81	378.10	15.72	25.058	
3,400.00	3,382.34	3,314.05	3,297.99	12.22	11.86	-156.16	-116.83	219.04	431.13	414.93	16.19	26.623	
3,500.00	3,480.37	3,406.57	3,388.67	12.65	12.25	-157.02	-121.02	236.95	468.54	451.87	16.67	28.101	
3,600.00	3,578.39	3,499.10	3,479.35	13.08	12.65	-157.75	-125.21	254.85	506.03	488.88	17.16	29.497	
3,700.00	3,676.41	3,591.62	3,570.03	13.51	13.04	-158.38	-129.40	272.76	543.59	525.95	17.64	30.817	
3,800.00	3,774.43	3,684.15	3,660.71	13.95	13.45	-158.93	-133.59	290.66	581.19	563.07	18.13	32.065	
3,900.00	3,872.46	3,776.67	3,751.39	14.39	13.85	-159.42	-137.78	308.57	618.84	600.22	18.61	33.248	
4,000.00	3,970.48	3,869.20	3,842.07	14.83	14.26	-159.85	-141.96	326.47	656.51	637.41	19.10	34.370	
4,100.00	4,068.50	3,961.72	3,932.75	15.28	14.67	-160.23	-146.15	344.38	694.22	674.63	19.59	35.434	
4,200.00	4,166.53	4,054.25	4,023.43	15.73	15.08	-160.57	-150.34	362.28	731.95	711.87	20.08	36.445	
4,300.00	4,264.55	4,146.77	4,114.11	16.17	15.49	-160.88	-154.53	380.19	769.70	749.12	20.58	37.406	
4,400.00	4,362.57	4,239.30	4,204.78	16.63	15.90	-161.16	-158.72	398.09	807.47	786.40	21.07	38.321	
4,500.00	4,460.59	4,331.82	4,295.46	17.08	16.32	-161.42	-162.91	416.00	845.25	823.68	21.57	39.192	
4,600.00	4,558.62	4,424.35	4,386.14	17.53	16.74	-161.65	-167.09	433.90	883.05	860.98	22.06	40.023	
4,700.00	4,656.64	4,516.87	4,476.82	17.99	17.16	-161.86	-171.28	451.80	920.85	898.29	22.56	40.817	
4,800.00	4,754.66	4,609.40	4,567.50	18.45	17.58	-162.06	-175.47	469.71	958.67	935.61	23.06	41.574	
4,900.00	4,852.69	4,701.92	4,658.18	18.91	18.00	-162.24	-179.66	487.61	996.50	972.94	23.56	42.299	
5,000.00	4,950.71	4,794.45	4,748.86	19.37	18.43	-162.41	-183.85	505.52	1,034.33	1,010.27	24.06	42.992	
5,100.00	5,048.73	4,886.97	4,839.54	19.83	18.85	-162.57	-188.04	523.42	1,072.17	1,047.61	24.56	43.656	
5,200.00	5,146.76	4,979.50	4,930.22	20.29	19.28	-162.72	-192.22	541.33	1,110.02	1,084.96	25.06	44.292	
5,300.00	5,244.78	5,072.02	5,020.90	20.75	19.71	-162.85	-196.41	559.23	1,147.88	1,122.31	25.56	44.903	
5,400.00	5,342.80	5,164.54	5,111.58	21.22	20.13	-162.98	-200.60	577.14	1,185.73	1,159.67	26.07	45.488	
5,500.00	5,440.82	5,257.07	5,202.26	21.68	20.56	-163.10	-204.79	595.04	1,223.60	1,197.03	26.57	46.051	
5,600.00	5,538.85	5,349.59	5,292.94	22.15	20.99	-163.21	-208.98	612.95	1,261.47	1,234.39	27.08	46.591	
5,700.00	5,636.87	5,442.12	5,383.62	22.61	21.42	-163.32	-213.17	630.85	1,299.34	1,271.76	27.58	47.112	
5,800.00	5,734.89	5,534.64	5,474.29	23.08	21.85	-163.42	-217.35	648.76	1,337.21	1,309.13	28.09	47.612	
5,900.00	5,832.92	5,627.17	5,564.97	23.55	22.28	-163.52	-221.54	666.66	1,375.09	1,346.50	28.59	48.094	
6,000.00	5,930.94	5,719.69	5,655.65	24.02	22.72	-163.61	-225.73	684.57	1,412.98	1,383.88	29.10	48.558	
6,100.00	6,028.96	5,812.22	5,746.33	24.49	23.15	-163.69	-229.92	702.47	1,450.86	1,421.26	29.61	49.006	
6,200.00	6,126.98	5,904.74	5,837.01	24.96	23.58	-163.77	-234.11	720.37	1,488.75	1,458.64	30.11	49.438	
6,300.00	6,225.01	5,997.27	5,927.69	25.43	24.02	-163.85	-238.30	738.28	1,526.64	1,496.02	30.62	49.855	
6,400.00	6,323.03	6,089.79	6,018.37	25.90	24.45	-163.92	-242.48	756.18	1,564.53	1,533.40	31.13	50.258	
6,500.00	6,421.05	6,182.32	6,109.05	26.37	24.89	-163.99	-246.67	774.09	1,602.43	1,570.79	31.64	50.647	
6,600.00	6,519.08	6,274.84	6,199.73	26.84	25.32	-164.06	-250.86	791.99	1,640.32	1,608.17	32.15	51.023	
6,700.00	6,617.10	6,367.37	6,290.41	27.31	25.76	-164.12	-255.05	809.90	1,678.22	1,645.56	32.66	51.386	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 803H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,719.50	6,636.21	6,385.41	6,308.09	27.40	25.84	-164.13	-255.87	813.39	1,685.61	1,652.85	32.76	51.456	
6,800.00	6,715.28	6,460.20	6,381.39	27.78	26.19	-164.30	-259.25	827.86	1,715.36	1,682.19	33.17	51.716	
6,900.00	6,813.92	6,553.93	6,473.25	28.22	26.64	-164.48	-263.49	846.00	1,750.20	1,716.52	33.68	51.966	
7,000.00	6,912.96	6,648.51	6,565.94	28.64	27.08	-164.62	-267.78	864.30	1,782.66	1,748.47	34.19	52.139	
7,100.00	7,012.32	6,818.30	6,732.97	29.04	27.85	-164.71	-274.72	893.97	1,810.97	1,775.86	35.11	51.578	
7,200.00	7,111.95	7,002.21	6,915.20	29.42	28.62	-164.79	-280.32	917.92	1,832.35	1,796.32	36.03	50.858	
7,300.00	7,211.76	7,190.18	7,102.47	29.77	29.33	-164.85	-283.98	933.56	1,846.53	1,809.66	36.88	50.074	
7,400.00	7,311.70	7,380.61	7,292.75	30.10	29.96	-164.89	-285.54	940.23	1,853.36	1,815.72	37.64	49.235	
7,480.31	7,392.00	7,481.06	7,393.20	30.35	30.27	92.55	-285.59	940.45	1,854.29	1,816.22	38.07	48.703	
7,500.00	7,411.69	7,500.75	7,412.89	30.41	30.33	92.55	-285.59	940.45	1,854.29	1,816.13	38.17	48.586	
7,600.00	7,511.69	7,600.75	7,512.89	30.71	30.63	92.55	-285.59	940.45	1,854.29	1,815.66	38.63	47.998	
7,700.00	7,611.69	7,700.75	7,612.89	31.01	30.93	92.55	-285.59	940.45	1,854.29	1,815.19	39.10	47.423	
7,800.00	7,711.69	7,800.75	7,712.89	31.31	31.23	92.55	-285.59	940.45	1,854.29	1,814.72	39.57	46.861	
7,900.00	7,811.69	7,900.75	7,812.89	31.62	31.54	92.55	-285.59	940.45	1,854.29	1,814.25	40.04	46.311	
8,000.00	7,911.69	8,000.75	7,912.89	31.92	31.84	92.55	-285.59	940.45	1,854.29	1,813.78	40.51	45.773	
8,100.00	8,011.69	8,100.75	8,012.89	32.23	32.15	92.55	-285.59	940.45	1,854.29	1,813.31	40.98	45.246	
8,200.00	8,111.69	8,200.75	8,112.89	32.54	32.46	92.55	-285.59	940.45	1,854.29	1,812.84	41.46	44.730	
8,300.00	8,211.69	8,300.75	8,212.89	32.84	32.77	92.55	-285.59	940.45	1,854.29	1,812.37	41.93	44.225	
8,400.00	8,311.69	8,400.75	8,312.89	33.15	33.08	92.55	-285.59	940.45	1,854.29	1,811.89	42.40	43.730	
8,500.00	8,411.69	8,500.75	8,412.89	33.46	33.39	92.55	-285.59	940.45	1,854.29	1,811.42	42.88	43.246	
8,600.00	8,511.69	8,600.75	8,512.89	33.77	33.70	92.55	-285.59	940.45	1,854.29	1,810.94	43.35	42.771	
8,700.00	8,611.69	8,700.75	8,612.89	34.08	34.01	92.55	-285.59	940.45	1,854.29	1,810.46	43.83	42.306	
8,800.00	8,711.69	8,800.75	8,712.89	34.40	34.33	92.55	-285.59	940.45	1,854.29	1,809.99	44.31	41.851	
8,900.00	8,811.69	8,900.75	8,812.89	34.71	34.64	92.55	-285.59	940.45	1,854.29	1,809.51	44.78	41.404	
9,000.00	8,911.69	9,000.75	8,912.89	35.03	34.96	92.55	-285.59	940.45	1,854.29	1,809.03	45.26	40.967	
9,100.00	9,011.69	9,100.75	9,012.89	35.34	35.27	92.55	-285.59	940.45	1,854.29	1,808.55	45.74	40.538	
9,200.00	9,111.69	9,200.75	9,112.89	35.66	35.59	92.55	-285.59	940.45	1,854.29	1,808.07	46.22	40.117	
9,300.00	9,211.69	9,300.75	9,212.89	35.97	35.91	92.55	-285.59	940.45	1,854.29	1,807.59	46.70	39.705	
9,400.00	9,311.69	9,400.75	9,312.89	36.29	36.22	92.55	-285.59	940.45	1,854.29	1,807.11	47.18	39.300	
9,500.00	9,411.69	9,500.75	9,412.89	36.61	36.54	92.55	-285.59	940.45	1,854.29	1,806.63	47.66	38.903	
9,588.35	9,500.04	9,589.10	9,501.24	36.89	36.83	92.55	-285.59	940.45	1,854.29	1,806.20	48.09	38.559	
9,600.00	9,511.69	9,600.75	9,512.89	36.93	36.86	93.13	-285.59	940.45	1,854.30	1,806.16	48.15	38.514	
9,650.00	9,561.57	9,650.63	9,562.77	37.08	37.02	93.21	-285.59	940.45	1,854.48	1,806.09	48.38	38.329	
9,700.00	9,610.99	9,700.05	9,612.19	37.23	37.18	93.39	-285.59	940.45	1,854.92	1,806.30	48.61	38.155	
9,750.00	9,659.56	9,748.62	9,660.76	37.38	37.34	93.67	-285.59	940.45	1,855.67	1,806.83	48.84	37.995	
9,800.00	9,706.91	9,795.97	9,708.11	37.51	37.49	94.02	-285.59	940.45	1,856.80	1,807.75	49.06	37.851	
9,850.00	9,752.69	9,841.75	9,753.89	37.63	37.64	94.43	-285.59	940.45	1,858.42	1,809.15	49.26	37.725	
9,900.00	9,796.55	9,885.61	9,797.75	37.74	37.78	94.85	-285.59	940.45	1,860.63	1,811.17	49.46	37.619	
9,950.00	9,838.15	9,927.21	9,839.35	37.83	37.91	95.27	-285.59	940.45	1,863.57	1,813.92	49.65	37.536	
10,000.00	9,877.18	9,966.24	9,878.38	37.92	38.04	95.63	-285.59	940.45	1,867.37	1,817.55	49.82	37.480	
10,050.00	9,913.34	10,002.40	9,914.54	37.99	38.16	95.92	-285.59	940.45	1,872.17	1,822.18	49.99	37.451	
10,100.00	9,946.35	10,035.41	9,947.55	38.05	38.26	96.08	-285.59	940.45	1,878.09	1,827.95	50.14	37.454	
10,150.00	9,975.97	10,065.02	9,977.17	38.11	38.36	96.09	-285.59	940.45	1,885.25	1,834.97	50.29	37.490	
10,200.00	10,001.96	10,091.02	10,003.16	38.15	38.44	95.91	-285.59	940.45	1,893.76	1,843.34	50.42	37.561	
10,250.00	10,024.13	10,113.19	10,025.33	38.19	38.51	95.52	-285.59	940.45	1,903.67	1,853.13	50.54	37.668	
10,300.00	10,042.32	10,131.38	10,043.52	38.23	38.57	94.87	-285.59	940.45	1,915.02	1,864.38	50.64	37.813	
10,350.00	10,056.38	10,145.43	10,057.58	38.28	38.62	93.97	-285.59	940.45	1,927.83	1,877.09	50.74	37.997	
10,400.00	10,066.20	10,155.26	10,067.40	38.33	38.65	92.78	-285.59	940.45	1,942.05	1,891.23	50.82	38.218	
10,450.00	10,071.72	10,160.77	10,072.92	38.40	38.67	91.32	-285.59	940.45	1,957.61	1,906.73	50.88	38.476	
10,488.35	10,073.00	10,162.06	10,074.20	38.46	38.67	90.00	-285.59	940.45	1,970.39	1,919.47	50.92	38.698	
10,500.00	10,073.00	10,162.06	10,074.20	38.48	38.67	90.00	-285.59	940.45	1,974.40	1,923.48	50.93	38.769	
10,600.00	10,073.00	10,162.06	10,074.20	38.70	38.67	90.00	-285.59	940.45	2,011.32	1,960.28	51.03	39.413	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 803H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,073.00	10,162.06	10,074.20	39.01	38.67	90.00	-285.59	940.45	2,052.44	2,001.29	51.15	40.123	
10,800.00	10,073.00	10,162.06	10,074.20	39.41	38.67	90.00	-285.59	940.45	2,097.53	2,046.24	51.29	40.896	
10,900.00	10,073.00	10,162.06	10,074.20	39.89	38.67	90.00	-285.59	940.45	2,146.34	2,094.90	51.44	41.727	
11,000.00	10,073.00	10,162.06	10,074.20	40.44	38.67	90.00	-285.59	940.45	2,198.61	2,147.02	51.59	42.614	
11,100.00	10,073.00	10,162.06	10,074.20	41.06	38.67	90.00	-285.59	940.45	2,254.11	2,202.35	51.75	43.554	
11,200.00	10,073.00	10,162.06	10,074.20	41.75	38.67	90.00	-285.59	940.45	2,312.60	2,260.68	51.92	44.544	
11,300.00	10,073.00	10,162.06	10,074.20	42.49	38.67	90.00	-285.59	940.45	2,373.87	2,321.79	52.08	45.580	
11,400.00	10,073.00	10,162.06	10,074.20	43.29	38.67	90.00	-285.59	940.45	2,437.70	2,385.45	52.24	46.659	
11,500.00	10,073.00	10,162.06	10,074.20	44.13	38.67	90.00	-285.59	940.45	2,503.89	2,451.49	52.41	47.779	
11,600.00	10,073.00	10,162.06	10,074.20	45.03	38.67	90.00	-285.59	940.45	2,572.28	2,519.71	52.56	48.937	
11,700.00	10,073.00	10,162.06	10,074.20	45.96	38.67	90.00	-285.59	940.45	2,642.68	2,589.96	52.72	50.130	
11,800.00	10,073.00	10,162.06	10,074.20	46.94	38.67	90.00	-285.59	940.45	2,714.93	2,662.07	52.87	51.355	
11,900.00	10,073.00	14,063.50	12,136.00	47.95	54.10	138.07	1,799.86	919.78	2,771.18	2,715.68	55.51	49.926	
12,000.00	10,073.00	14,163.50	12,136.00	49.00	55.07	138.07	1,899.86	918.79	2,771.18	2,714.61	56.58	48.979	
12,100.00	10,073.00	14,263.50	12,136.00	50.08	56.07	138.07	1,999.85	917.80	2,771.19	2,713.50	57.69	48.040	
12,200.00	10,073.00	14,363.50	12,136.00	51.19	57.10	138.07	2,099.85	916.81	2,771.19	2,712.37	58.82	47.112	
12,300.00	10,073.00	14,463.50	12,136.00	52.33	58.17	138.07	2,199.84	915.82	2,771.19	2,711.20	59.99	46.197	
12,400.00	10,073.00	14,563.50	12,136.00	53.50	59.26	138.07	2,299.84	914.83	2,771.19	2,710.01	61.18	45.296	
12,500.00	10,073.00	14,663.50	12,136.00	54.69	60.37	138.07	2,399.83	913.84	2,771.19	2,708.80	62.40	44.411	
12,600.00	10,073.00	14,763.50	12,136.00	55.91	61.51	138.07	2,499.83	912.85	2,771.20	2,707.55	63.64	43.543	
12,700.00	10,073.00	14,863.50	12,136.00	57.14	62.67	138.07	2,599.82	911.86	2,771.20	2,706.29	64.91	42.692	
12,800.00	10,073.00	14,963.50	12,136.00	58.40	63.85	138.07	2,699.82	910.87	2,771.20	2,705.00	66.20	41.860	
12,900.00	10,073.00	15,063.50	12,136.00	59.68	65.06	138.07	2,799.81	909.87	2,771.20	2,703.69	67.51	41.048	
13,000.00	10,073.00	15,163.50	12,136.00	60.97	66.28	138.07	2,899.81	908.88	2,771.20	2,702.36	68.84	40.254	
13,100.00	10,073.00	15,263.50	12,136.00	62.28	67.52	138.07	2,999.80	907.89	2,771.21	2,701.02	70.19	39.481	
13,200.00	10,073.00	15,363.50	12,136.00	63.61	68.78	138.07	3,099.80	906.90	2,771.21	2,699.65	71.55	38.729	
13,300.00	10,073.00	15,463.50	12,136.00	64.95	70.05	138.07	3,199.79	905.91	2,771.21	2,698.28	72.93	37.996	
13,400.00	10,073.00	15,563.50	12,136.00	66.31	71.34	138.07	3,299.79	904.92	2,771.21	2,696.88	74.33	37.282	
13,500.00	10,073.00	15,663.50	12,136.00	67.68	72.65	138.07	3,399.78	903.93	2,771.21	2,695.47	75.74	36.588	
13,600.00	10,073.00	15,763.50	12,136.00	69.06	73.97	138.07	3,499.78	902.94	2,771.22	2,694.05	77.16	35.914	
13,700.00	10,073.00	15,863.50	12,136.00	70.45	75.30	138.07	3,599.78	901.95	2,771.22	2,692.62	78.60	35.258	
13,800.00	10,073.00	15,963.50	12,136.00	71.86	76.64	138.07	3,699.77	900.95	2,771.22	2,691.17	80.05	34.620	
13,900.00	10,073.00	16,063.50	12,136.00	73.27	78.00	138.07	3,799.77	899.96	2,771.22	2,689.72	81.51	34.001	
14,000.00	10,073.00	16,163.50	12,136.00	74.70	79.36	138.07	3,899.76	898.97	2,771.22	2,688.25	82.98	33.398	
14,100.00	10,073.00	16,263.50	12,136.00	76.13	80.74	138.07	3,999.76	897.98	2,771.23	2,686.77	84.46	32.813	
14,200.00	10,073.00	16,363.50	12,136.00	77.57	82.13	138.07	4,099.75	896.99	2,771.23	2,685.28	85.95	32.243	
14,300.00	10,073.00	16,463.50	12,136.00	79.02	83.53	138.07	4,199.75	896.00	2,771.23	2,683.78	87.45	31.691	
14,400.00	10,073.00	16,563.50	12,136.00	80.48	84.93	138.07	4,299.74	895.01	2,771.23	2,682.28	88.95	31.155	
14,500.00	10,073.00	16,663.50	12,136.00	81.95	86.35	138.07	4,399.74	894.02	2,771.23	2,680.77	90.47	30.632	
14,600.00	10,073.00	16,763.50	12,136.00	83.42	87.77	138.07	4,499.73	893.03	2,771.24	2,679.24	91.99	30.125	
14,700.00	10,073.00	16,863.50	12,136.00	84.90	89.20	138.07	4,599.73	892.03	2,771.24	2,677.72	93.52	29.632	
14,800.00	10,073.00	16,963.50	12,136.00	86.38	90.64	138.07	4,699.72	891.04	2,771.24	2,676.18	95.06	29.154	
14,900.00	10,073.00	17,063.50	12,136.00	87.87	92.09	138.07	4,799.72	890.05	2,771.24	2,674.64	96.60	28.688	
15,000.00	10,073.00	17,163.50	12,136.00	89.37	93.54	138.07	4,899.71	889.06	2,771.24	2,673.09	98.15	28.235	
15,100.00	10,073.00	17,263.50	12,136.00	90.87	95.00	138.07	4,999.71	888.07	2,771.25	2,671.54	99.70	27.795	
15,200.00	10,073.00	17,363.50	12,136.00	92.38	96.46	138.07	5,099.70	887.08	2,771.25	2,669.98	101.27	27.366	
15,300.00	10,073.00	17,463.50	12,136.00	93.89	97.93	138.07	5,199.70	886.09	2,771.25	2,668.42	102.83	26.949	
15,400.00	10,073.00	17,563.50	12,136.00	95.41	99.41	138.07	5,299.69	885.10	2,771.25	2,666.85	104.40	26.543	
15,500.00	10,073.00	17,663.50	12,136.00	96.93	100.89	138.07	5,399.69	884.11	2,771.25	2,665.27	105.98	26.149	
15,600.00	10,073.00	17,763.50	12,136.00	98.46	102.38	138.07	5,499.68	883.12	2,771.26	2,663.70	107.56	25.765	
15,700.00	10,073.00	17,863.50	12,136.00	99.99	103.87	138.07	5,599.68	882.12	2,771.26	2,662.11	109.15	25.390	
15,800.00	10,073.00	17,963.50	12,136.00	101.52	105.37	138.07	5,699.67	881.13	2,771.26	2,660.52	110.74	25.026	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 803H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,900.00	10,073.00	18,063.50	12,136.00	103.06	106.87	138.07	5,799.67	880.14	2,771.26	2,658.93	112.33	24.671	
16,000.00	10,073.00	18,163.50	12,136.00	104.60	108.38	138.07	5,899.66	879.15	2,771.26	2,657.34	113.92	24.326	
16,100.00	10,073.00	18,263.50	12,136.00	106.14	109.89	138.07	5,999.66	878.16	2,771.27	2,655.74	115.52	23.989	
16,200.00	10,073.00	18,363.50	12,136.00	107.69	111.40	138.07	6,099.65	877.17	2,771.27	2,654.14	117.13	23.660	
16,300.00	10,073.00	18,463.50	12,136.00	109.24	112.92	138.07	6,199.65	876.18	2,771.27	2,652.53	118.74	23.340	
16,400.00	10,073.00	18,563.50	12,136.00	110.79	114.44	138.07	6,299.64	875.19	2,771.27	2,650.93	120.34	23.028	
16,500.00	10,073.00	18,663.50	12,136.00	112.35	115.97	138.07	6,399.64	874.20	2,771.27	2,649.32	121.96	22.723	
16,600.00	10,073.00	18,763.50	12,136.00	113.91	117.50	138.07	6,499.63	873.20	2,771.28	2,647.70	123.57	22.426	
16,700.00	10,073.00	18,863.50	12,136.00	115.47	119.03	138.07	6,599.63	872.21	2,771.28	2,646.08	125.19	22.136	
16,800.00	10,073.00	18,963.50	12,136.00	117.03	120.57	138.07	6,699.62	871.22	2,771.28	2,644.47	126.81	21.853	
16,900.00	10,073.00	19,063.50	12,136.00	118.60	122.10	138.07	6,799.62	870.23	2,771.28	2,642.85	128.43	21.577	
17,000.00	10,073.00	19,163.50	12,136.00	120.17	123.65	138.07	6,899.61	869.24	2,771.28	2,641.22	130.06	21.308	
17,100.00	10,073.00	19,263.50	12,136.00	121.74	125.19	138.07	6,999.61	868.25	2,771.28	2,639.60	131.69	21.045	
17,200.00	10,073.00	19,363.50	12,136.00	123.31	126.74	138.07	7,099.60	867.26	2,771.29	2,637.97	133.32	20.787	
17,300.00	10,073.00	19,463.50	12,136.00	124.88	128.29	138.07	7,199.60	866.27	2,771.29	2,636.34	134.95	20.536	
17,400.00	10,073.00	19,563.50	12,136.00	126.46	129.84	138.07	7,299.59	865.28	2,771.29	2,634.71	136.58	20.290	
17,500.00	10,073.00	19,663.50	12,136.00	128.04	131.39	138.07	7,399.59	864.28	2,771.29	2,633.07	138.22	20.050	
17,600.00	10,073.00	19,763.50	12,136.00	129.62	132.95	138.07	7,499.58	863.29	2,771.29	2,631.44	139.85	19.816	
17,700.00	10,073.00	19,863.50	12,136.00	131.20	134.51	138.07	7,599.58	862.30	2,771.30	2,629.80	141.49	19.586	
17,800.00	10,073.00	19,963.50	12,136.00	132.79	136.07	138.07	7,699.57	861.31	2,771.30	2,628.16	143.13	19.362	
17,900.00	10,073.00	20,063.50	12,136.00	134.37	137.63	138.07	7,799.57	860.32	2,771.30	2,626.52	144.78	19.142	
18,000.00	10,073.00	20,163.50	12,136.00	135.96	139.20	138.07	7,899.56	859.33	2,771.30	2,624.88	146.42	18.927	
18,100.00	10,073.00	20,263.50	12,136.00	137.55	140.77	138.07	7,999.56	858.34	2,771.30	2,623.24	148.06	18.717	
18,200.00	10,073.00	20,363.50	12,136.00	139.14	142.34	138.07	8,099.55	857.35	2,771.31	2,621.60	149.71	18.511	
18,300.00	10,073.00	20,463.50	12,136.00	140.73	143.91	138.07	8,199.55	856.36	2,771.31	2,619.95	151.36	18.310	
18,400.00	10,073.00	20,563.50	12,136.00	142.32	145.48	138.07	8,299.54	855.37	2,771.31	2,618.30	153.01	18.112	
18,500.00	10,073.00	20,663.50	12,136.00	143.92	147.06	138.07	8,399.54	854.37	2,771.31	2,616.66	154.65	17.919	
18,600.00	10,073.00	20,763.50	12,136.00	145.51	148.63	138.07	8,499.53	853.38	2,771.31	2,615.01	156.30	17.730	
18,700.00	10,073.00	20,863.50	12,136.00	147.11	150.21	138.07	8,599.53	852.39	2,771.32	2,613.36	157.96	17.545	
18,800.00	10,073.00	20,963.50	12,136.00	148.71	151.79	138.07	8,699.52	851.40	2,771.32	2,611.71	159.61	17.363	
18,900.00	10,073.00	21,063.50	12,136.00	150.31	153.37	138.07	8,799.52	850.41	2,771.32	2,610.06	161.26	17.185	
19,000.00	10,073.00	21,163.50	12,136.00	151.91	154.95	138.07	8,899.51	849.42	2,771.32	2,608.41	162.92	17.011	
19,100.00	10,073.00	21,263.50	12,136.00	153.51	156.54	138.07	8,999.51	848.43	2,771.32	2,606.75	164.57	16.840	
19,200.00	10,073.00	21,363.50	12,136.00	155.11	158.12	138.07	9,099.51	847.44	2,771.33	2,605.10	166.23	16.672	
19,300.00	10,073.00	21,463.50	12,136.00	156.72	159.71	138.07	9,199.50	846.45	2,771.33	2,603.44	167.89	16.507	
19,400.00	10,073.00	21,563.50	12,136.00	158.32	161.30	138.07	9,299.50	845.45	2,771.33	2,601.79	169.54	16.346	
19,500.00	10,073.00	21,663.50	12,136.00	159.93	162.89	138.07	9,399.49	844.46	2,771.33	2,600.13	171.20	16.188	
19,600.00	10,073.00	21,763.50	12,136.00	161.53	164.48	138.07	9,499.49	843.47	2,771.33	2,598.48	172.86	16.032	
19,700.00	10,073.00	21,863.50	12,136.00	163.14	166.07	138.07	9,599.48	842.48	2,771.34	2,596.82	174.52	15.880	
19,800.00	10,073.00	21,963.50	12,136.00	164.75	167.66	138.07	9,699.48	841.49	2,771.34	2,595.16	176.18	15.730	
19,900.00	10,073.00	22,063.50	12,136.00	166.36	169.26	138.07	9,799.47	840.50	2,771.34	2,593.50	177.84	15.583	
20,000.00	10,073.00	22,163.50	12,136.00	167.97	170.85	138.07	9,899.47	839.51	2,771.34	2,591.84	179.50	15.439	
20,100.00	10,073.00	22,263.50	12,136.00	169.58	172.45	138.07	9,999.46	838.52	2,771.34	2,590.18	181.16	15.298	
20,107.19	10,073.00	22,270.68	12,136.00	169.69	172.57	138.07	10,006.65	838.45	2,771.34	2,590.06	181.28	15.288	
20,185.45	10,073.00	22,343.71	12,136.00	170.96	173.75	138.07	10,079.67	837.72	2,771.35	2,588.82	182.53	15.183	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 604H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,888.50	1,888.50	6.37	6.54	99.83	-579.16	3,343.65	3,393.44	3,384.31	9.13	371.691	
1,900.00	1,900.00	1,945.50	1,945.50	6.58	6.74	99.83	-579.16	3,343.65	3,393.44	3,384.02	9.42	360.288	
2,000.00	2,000.00	2,045.50	2,045.50	6.94	7.10	99.83	-579.16	3,343.65	3,393.44	3,383.51	9.93	341.888	CC, ES
2,100.00	2,099.99	2,145.49	2,145.49	7.28	7.46	-157.63	-579.16	3,343.65	3,394.65	3,384.22	10.42	325.633	
2,200.00	2,199.91	2,245.41	2,245.41	7.62	7.82	-157.63	-579.16	3,343.65	3,398.28	3,387.36	10.92	311.276	
2,300.00	2,299.69	2,345.19	2,345.19	7.97	8.17	-157.64	-579.16	3,343.65	3,404.33	3,392.92	11.41	298.346	
2,400.00	2,399.27	2,444.77	2,444.77	8.31	8.53	-157.65	-579.16	3,343.65	3,412.79	3,400.89	11.90	286.677	
2,500.00	2,498.57	2,544.07	2,544.07	8.67	8.89	-157.66	-579.16	3,343.65	3,423.68	3,411.28	12.40	276.122	
2,600.00	2,597.54	2,643.04	2,643.04	9.03	9.24	-157.67	-579.16	3,343.65	3,436.97	3,424.08	12.89	266.557	
2,700.00	2,696.09	2,741.59	2,741.59	9.40	9.59	-157.69	-579.16	3,343.65	3,452.67	3,439.28	13.39	257.871	
2,760.81	2,755.79	2,801.29	2,801.29	9.63	9.81	-157.70	-579.16	3,343.65	3,463.39	3,449.70	13.69	252.974	
2,800.00	2,794.20	2,839.70	2,839.70	9.78	9.95	-157.75	-579.16	3,343.65	3,470.58	3,456.70	13.88	249.953	
2,900.00	2,892.23	2,937.73	2,937.73	10.17	10.30	-157.87	-579.16	3,343.65	3,488.96	3,474.58	14.38	242.608	
3,000.00	2,990.25	3,035.75	3,035.75	10.57	10.65	-157.99	-579.16	3,343.65	3,507.34	3,492.47	14.88	235.719	
3,100.00	3,088.27	3,133.77	3,133.77	10.97	11.00	-158.11	-579.16	3,343.65	3,525.75	3,510.37	15.38	229.248	
3,200.00	3,186.30	3,231.80	3,231.80	11.38	11.35	-158.23	-579.16	3,343.65	3,544.17	3,528.28	15.88	223.161	
3,300.00	3,284.32	3,329.82	3,329.82	11.80	11.70	-158.35	-579.16	3,343.65	3,562.60	3,546.21	16.39	217.426	
3,400.00	3,382.34	3,427.84	3,427.84	12.22	12.05	-158.47	-579.16	3,343.65	3,581.05	3,564.15	16.89	212.017	
3,500.00	3,480.37	3,525.87	3,525.87	12.65	12.41	-158.58	-579.16	3,343.65	3,599.51	3,582.11	17.40	206.907	
3,600.00	3,578.39	3,623.89	3,623.89	13.08	12.76	-158.70	-579.16	3,343.65	3,617.98	3,600.08	17.90	202.074	
3,700.00	3,676.41	3,721.91	3,721.91	13.51	13.11	-158.81	-579.16	3,343.65	3,636.47	3,618.06	18.41	197.497	
3,800.00	3,774.43	3,819.93	3,819.93	13.95	13.46	-158.92	-579.16	3,343.65	3,654.97	3,636.05	18.92	193.156	
3,900.00	3,872.46	3,917.96	3,917.96	14.39	13.81	-159.03	-579.16	3,343.65	3,673.49	3,654.06	19.43	189.036	
4,000.00	3,970.48	4,015.98	4,015.98	14.83	14.16	-159.14	-579.16	3,343.65	3,692.02	3,672.07	19.94	185.120	
4,100.00	4,068.50	4,114.00	4,114.00	15.28	14.51	-159.25	-579.16	3,343.65	3,710.56	3,690.10	20.46	181.394	
4,200.00	4,166.53	4,212.03	4,212.03	15.73	14.87	-159.36	-579.16	3,343.65	3,729.12	3,708.15	20.97	177.845	
4,300.00	4,264.55	4,310.05	4,310.05	16.17	15.22	-159.46	-579.16	3,343.65	3,747.68	3,726.20	21.48	174.461	
4,400.00	4,362.57	4,408.07	4,408.07	16.63	15.57	-159.57	-579.16	3,343.65	3,766.26	3,744.27	22.00	171.231	
4,500.00	4,460.59	4,506.09	4,506.09	17.08	15.92	-159.67	-579.16	3,343.65	3,784.86	3,762.35	22.51	168.146	
4,600.00	4,558.62	4,604.12	4,604.12	17.53	16.27	-159.78	-579.16	3,343.65	3,803.46	3,780.44	23.02	165.195	
4,700.00	4,656.64	4,702.14	4,702.14	17.99	16.62	-159.88	-579.16	3,343.65	3,822.08	3,798.54	23.54	162.372	
4,800.00	4,754.66	4,800.16	4,800.16	18.45	16.97	-159.98	-579.16	3,343.65	3,840.70	3,816.65	24.05	159.667	
4,900.00	4,852.69	4,898.19	4,898.19	18.91	17.33	-160.08	-579.16	3,343.65	3,859.34	3,834.77	24.57	157.074	
5,000.00	4,950.71	4,996.21	4,996.21	19.37	17.68	-160.18	-579.16	3,343.65	3,877.99	3,852.91	25.09	154.586	
5,100.00	5,048.73	5,094.23	5,094.23	19.83	18.03	-160.28	-579.16	3,343.65	3,896.66	3,871.05	25.60	152.196	
5,200.00	5,146.76	5,192.26	5,192.26	20.29	18.38	-160.38	-579.16	3,343.65	3,915.33	3,889.21	26.12	149.901	
5,300.00	5,244.78	5,290.28	5,290.28	20.75	18.73	-160.47	-579.16	3,343.65	3,934.01	3,907.38	26.64	147.693	
5,400.00	5,342.80	5,388.30	5,388.30	21.22	19.08	-160.57	-579.16	3,343.65	3,952.71	3,925.55	27.15	145.568	
5,500.00	5,440.82	5,486.32	5,486.32	21.68	19.43	-160.66	-579.16	3,343.65	3,971.41	3,943.74	27.67	143.523	
5,600.00	5,538.85	5,574.96	5,574.96	22.15	19.74	-160.74	-579.90	3,343.65	3,990.23	3,962.07	28.15	141.738	
5,700.00	5,636.87	5,662.16	5,662.11	22.61	20.02	-160.78	-582.60	3,343.68	4,009.31	3,980.69	28.62	140.087	
5,800.00	5,734.89	5,749.36	5,749.18	23.08	20.30	-160.80	-587.30	3,343.72	4,028.67	3,999.58	29.09	138.510	
5,900.00	5,832.92	5,836.84	5,836.41	23.55	20.59	-160.78	-594.00	3,343.79	4,048.29	4,018.73	29.55	136.984	
6,000.00	5,930.94	5,934.85	5,934.04	24.02	20.90	-160.75	-602.55	3,343.87	4,068.03	4,037.98	30.05	135.375	
6,100.00	6,028.96	6,032.86	6,031.68	24.49	21.22	-160.72	-611.09	3,343.94	4,087.78	4,057.23	30.55	133.810	
6,200.00	6,126.98	6,130.87	6,129.31	24.96	21.54	-160.69	-619.63	3,344.02	4,107.52	4,076.47	31.05	132.289	
6,300.00	6,225.01	6,228.88	6,226.95	25.43	21.87	-160.66	-628.18	3,344.10	4,127.27	4,095.72	31.55	130.810	
6,400.00	6,323.03	6,326.89	6,324.59	25.90	22.19	-160.63	-636.72	3,344.18	4,147.02	4,114.97	32.06	129.371	
6,500.00	6,421.05	6,424.90	6,422.22	26.37	22.52	-160.60	-645.27	3,344.26	4,166.77	4,134.21	32.56	127.971	
6,600.00	6,519.08	6,522.91	6,519.86	26.84	22.85	-160.58	-653.81	3,344.34	4,186.52	4,153.45	33.07	126.608	
6,700.00	6,617.10	6,620.91	6,617.49	27.31	23.18	-160.55	-662.35	3,344.42	4,206.27	4,172.70	33.57	125.281	
6,719.50	6,636.21	6,640.03	6,636.53	27.40	23.24	-160.54	-664.02	3,344.44	4,210.12	4,176.45	33.67	125.027	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 604H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,715.28	6,719.07	6,715.27	27.78	23.51	-160.59	-670.91	3,344.50	4,225.24	4,191.16	34.08	123.970	
6,900.00	6,813.92	6,817.63	6,813.46	28.22	23.84	-160.63	-679.50	3,344.58	4,241.83	4,207.24	34.59	122.634	
7,000.00	6,912.96	6,916.54	6,911.99	28.64	24.18	-160.65	-688.12	3,344.66	4,255.98	4,220.88	35.09	121.274	
7,100.00	7,012.32	7,015.73	7,010.80	29.04	24.52	-160.64	-696.77	3,344.74	4,267.68	4,232.08	35.60	119.891	
7,200.00	7,111.95	7,115.13	7,109.83	29.42	24.86	-160.61	-705.44	3,344.82	4,276.93	4,240.84	36.10	118.489	
7,300.00	7,211.76	7,214.67	7,208.99	29.77	25.20	-160.56	-714.12	3,344.90	4,283.74	4,247.14	36.59	117.068	
7,400.00	7,311.70	7,314.29	7,308.23	30.10	25.55	-160.48	-722.80	3,344.98	4,288.09	4,251.00	37.08	115.632	
7,480.31	7,392.00	7,394.30	7,387.94	30.35	25.83	97.05	-729.77	3,345.05	4,289.80	4,252.33	37.47	114.477	
7,500.00	7,411.69	7,413.92	7,407.48	30.41	25.90	97.08	-731.48	3,345.06	4,290.03	4,252.46	37.57	114.196	
7,600.00	7,511.69	7,514.06	7,507.23	30.71	26.24	97.19	-740.21	3,345.15	4,291.20	4,253.15	38.05	112.783	
7,700.00	7,611.69	7,631.76	7,624.63	31.01	26.65	97.30	-748.56	3,345.22	4,292.16	4,253.58	38.58	111.255	
7,800.00	7,711.69	7,749.86	7,742.64	31.31	27.06	97.37	-753.30	3,345.27	4,292.71	4,253.60	39.11	109.765	
7,900.00	7,811.69	7,864.43	7,857.19	31.62	27.45	97.38	-754.46	3,345.28	4,292.85	4,253.22	39.63	108.331	
8,000.00	7,911.69	7,964.43	7,957.19	31.92	27.81	97.38	-754.46	3,345.28	4,292.85	4,252.74	40.11	107.028	
8,100.00	8,011.69	8,064.43	8,057.19	32.23	28.16	97.38	-754.46	3,345.28	4,292.85	4,252.25	40.59	105.753	
8,200.00	8,111.69	8,164.43	8,157.19	32.54	28.51	97.38	-754.46	3,345.28	4,292.85	4,251.77	41.08	104.508	
8,300.00	8,211.69	8,264.43	8,257.19	32.84	28.87	97.38	-754.46	3,345.28	4,292.85	4,251.28	41.56	103.290	
8,400.00	8,311.69	8,364.43	8,357.19	33.15	29.22	97.38	-754.46	3,345.28	4,292.85	4,250.80	42.05	102.098	
8,500.00	8,411.69	8,464.43	8,457.19	33.46	29.58	97.38	-754.46	3,345.28	4,292.85	4,250.31	42.53	100.933	
8,600.00	8,511.69	8,564.43	8,557.19	33.77	29.93	97.38	-754.46	3,345.28	4,292.85	4,249.83	43.02	99.793	
8,700.00	8,611.69	8,664.43	8,657.19	34.08	30.28	97.38	-754.46	3,345.28	4,292.85	4,249.34	43.50	98.677	
8,800.00	8,711.69	8,764.43	8,757.19	34.40	30.64	97.38	-754.46	3,345.28	4,292.85	4,248.85	43.99	97.585	
8,900.00	8,811.69	8,864.43	8,857.19	34.71	30.99	97.38	-754.46	3,345.28	4,292.85	4,248.37	44.48	96.516	
9,000.00	8,911.69	8,964.43	8,957.19	35.03	31.35	97.38	-754.46	3,345.28	4,292.85	4,247.88	44.97	95.469	
9,100.00	9,011.69	9,064.43	9,057.19	35.34	31.70	97.38	-754.46	3,345.28	4,292.85	4,247.39	45.45	94.443	
9,200.00	9,111.69	9,164.43	9,157.19	35.66	32.05	97.38	-754.46	3,345.28	4,292.85	4,246.90	45.94	93.439	
9,300.00	9,211.69	9,264.43	9,257.19	35.97	32.41	97.38	-754.46	3,345.28	4,292.85	4,246.41	46.43	92.455	
9,400.00	9,311.69	9,364.43	9,357.19	36.29	32.76	97.38	-754.46	3,345.28	4,292.85	4,245.92	46.92	91.491	
9,500.00	9,411.69	9,464.43	9,457.19	36.61	33.12	97.38	-754.46	3,345.28	4,292.85	4,245.43	47.41	90.546	
9,588.35	9,500.04	9,552.77	9,545.54	36.89	33.43	97.38	-754.46	3,345.28	4,292.85	4,245.00	47.84	89.726	
9,600.00	9,511.69	9,564.43	9,557.19	36.93	33.47	97.95	-754.46	3,345.28	4,292.86	4,244.96	47.90	89.620	
9,650.00	9,561.57	9,614.31	9,607.07	37.08	33.65	97.95	-754.46	3,345.28	4,293.31	4,245.16	48.14	89.179	
9,700.00	9,610.99	9,663.72	9,656.49	37.23	33.82	97.94	-754.46	3,345.28	4,294.36	4,245.98	48.38	88.768	
9,750.00	9,659.56	9,712.29	9,705.06	37.38	34.00	97.93	-754.46	3,345.28	4,296.04	4,247.43	48.61	88.386	
9,800.00	9,706.91	9,759.65	9,752.41	37.51	34.17	97.90	-754.46	3,345.28	4,298.36	4,249.54	48.82	88.038	
9,850.00	9,752.69	9,805.43	9,798.19	37.63	34.33	97.84	-754.46	3,345.28	4,301.36	4,252.33	49.03	87.724	
9,900.00	9,796.55	9,849.28	9,842.05	37.74	34.48	97.75	-754.46	3,345.28	4,305.06	4,255.83	49.23	87.445	
9,950.00	9,838.15	9,890.89	9,883.65	37.83	34.63	97.62	-754.46	3,345.28	4,309.50	4,260.08	49.42	87.203	
10,000.00	9,877.18	9,929.91	9,922.68	37.92	34.77	97.42	-754.46	3,345.28	4,314.72	4,265.12	49.60	86.998	
10,050.00	9,913.34	9,966.07	9,958.84	37.99	34.90	97.15	-754.46	3,345.28	4,320.73	4,270.97	49.76	86.832	
10,100.00	9,946.35	9,999.08	9,991.85	38.05	35.02	96.79	-754.46	3,345.28	4,327.58	4,277.66	49.91	86.704	
10,150.00	9,975.97	10,028.70	10,021.47	38.11	35.12	96.33	-754.46	3,345.28	4,335.27	4,285.22	50.05	86.615	
10,200.00	10,001.96	10,054.69	10,047.46	38.15	35.21	95.77	-754.46	3,345.28	4,343.82	4,293.64	50.18	86.564	
10,250.00	10,024.13	10,076.87	10,069.63	38.19	35.29	95.08	-754.46	3,345.28	4,353.22	4,302.93	50.30	86.552	
10,300.00	10,042.32	10,095.05	10,087.82	38.23	35.36	94.26	-754.46	3,345.28	4,363.46	4,313.06	50.40	86.578	
10,350.00	10,056.38	10,109.11	10,101.88	38.28	35.41	93.31	-754.46	3,345.28	4,374.50	4,324.01	50.49	86.642	
10,400.00	10,066.20	10,118.93	10,111.70	38.33	35.44	92.23	-754.46	3,345.28	4,386.30	4,335.73	50.57	86.742	
10,450.00	10,071.72	10,124.45	10,117.22	38.40	35.46	91.02	-754.46	3,345.28	4,398.78	4,348.15	50.63	86.878	
10,488.35	10,073.00	10,125.73	10,118.50	38.46	35.47	90.00	-754.46	3,345.28	4,408.76	4,358.09	50.67	87.005	
10,500.00	10,073.00	10,125.73	10,118.50	38.48	35.47	90.00	-754.46	3,345.28	4,411.86	4,361.18	50.68	87.047	
10,600.00	10,073.00	10,125.73	10,118.50	38.70	35.47	90.00	-754.46	3,345.28	4,439.62	4,388.82	50.80	87.394	
10,700.00	10,073.00	10,125.73	10,118.50	39.01	35.47	90.00	-754.46	3,345.28	4,469.44	4,418.49	50.95	87.727	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 604H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,800.00	10,073.00	12,821.51	11,519.05	39.41	46.39	108.23	760.50	3,330.92	4,477.15	4,418.74	58.40	76.660	
10,900.00	10,073.00	12,921.48	11,516.29	39.89	47.22	108.20	860.42	3,329.97	4,476.33	4,416.95	59.38	75.389	
11,000.00	10,073.00	13,021.44	11,513.54	40.44	48.09	108.16	960.34	3,329.03	4,475.51	4,415.09	60.42	74.076	
11,100.00	10,073.00	13,121.40	11,510.78	41.06	49.01	108.13	1,060.25	3,328.08	4,474.70	4,413.17	61.53	72.730	
11,200.00	10,073.00	13,221.36	11,508.03	41.75	49.96	108.10	1,160.17	3,327.13	4,473.88	4,411.19	62.69	71.361	
11,300.00	10,073.00	13,321.32	11,505.27	42.49	50.95	108.06	1,260.09	3,326.19	4,473.07	4,409.15	63.92	69.979	
11,400.00	10,073.00	13,421.29	11,502.51	43.29	51.97	108.03	1,360.01	3,325.24	4,472.26	4,407.06	65.20	68.592	
11,500.00	10,073.00	13,521.25	11,499.76	44.13	53.03	107.99	1,459.93	3,324.29	4,471.45	4,404.92	66.53	67.206	
11,600.00	10,073.00	13,621.21	11,497.00	45.03	54.11	107.96	1,559.85	3,323.34	4,470.65	4,402.73	67.92	65.827	
11,700.00	10,073.00	13,721.17	11,494.24	45.96	55.22	107.93	1,659.77	3,322.40	4,469.84	4,400.50	69.34	64.460	
11,800.00	10,073.00	13,821.13	11,491.49	46.94	56.36	107.89	1,759.69	3,321.45	4,469.04	4,398.22	70.81	63.110	
11,900.00	10,073.00	13,921.10	11,488.73	47.95	57.53	107.86	1,859.61	3,320.50	4,468.23	4,395.91	72.33	61.780	
12,000.00	10,073.00	14,021.06	11,485.98	49.00	58.71	107.82	1,959.53	3,319.56	4,467.43	4,393.56	73.87	60.473	
12,100.00	10,073.00	14,121.02	11,483.22	50.08	59.92	107.79	2,059.45	3,318.61	4,466.63	4,391.17	75.46	59.192	
12,200.00	10,073.00	14,220.98	11,480.46	51.19	61.15	107.76	2,159.37	3,317.66	4,465.83	4,388.75	77.08	57.938	
12,300.00	10,073.00	14,320.94	11,477.71	52.33	62.40	107.72	2,259.29	3,316.72	4,465.04	4,386.31	78.73	56.713	
12,400.00	10,073.00	14,420.91	11,474.95	53.50	63.67	107.69	2,359.21	3,315.77	4,464.24	4,383.83	80.41	55.517	
12,500.00	10,073.00	14,520.87	11,472.19	54.69	64.95	107.66	2,459.13	3,314.82	4,463.45	4,381.33	82.12	54.352	
12,600.00	10,073.00	14,620.83	11,469.44	55.91	66.25	107.62	2,559.05	3,313.87	4,462.66	4,378.80	83.86	53.218	
12,700.00	10,073.00	14,720.79	11,466.68	57.14	67.57	107.59	2,658.97	3,312.93	4,461.87	4,376.25	85.62	52.115	
12,800.00	10,073.00	14,820.75	11,463.93	58.40	68.90	107.55	2,758.89	3,311.98	4,461.08	4,373.68	87.40	51.043	
12,900.00	10,073.00	14,920.72	11,461.17	59.68	70.25	107.52	2,858.81	3,311.03	4,460.29	4,371.09	89.20	50.001	
13,000.00	10,073.00	15,020.68	11,458.41	60.97	71.60	107.49	2,958.72	3,310.09	4,459.51	4,368.48	91.03	48.989	
13,100.00	10,073.00	15,120.64	11,455.66	62.28	72.97	107.45	3,058.64	3,309.14	4,458.72	4,365.85	92.88	48.007	
13,200.00	10,073.00	15,220.60	11,452.90	63.61	74.35	107.42	3,158.56	3,308.19	4,457.94	4,363.20	94.74	47.054	
13,300.00	10,073.00	15,320.56	11,450.14	64.95	75.74	107.38	3,258.48	3,307.25	4,457.16	4,360.54	96.62	46.130	
13,400.00	10,073.00	15,420.53	11,447.39	66.31	77.15	107.35	3,358.40	3,306.30	4,456.38	4,357.86	98.52	45.233	
13,500.00	10,073.00	15,520.49	11,444.63	67.68	78.56	107.32	3,458.32	3,305.35	4,455.60	4,355.17	100.43	44.363	
13,600.00	10,073.00	15,620.45	11,441.88	69.06	79.98	107.28	3,558.24	3,304.41	4,454.83	4,352.47	102.36	43.520	
13,700.00	10,073.00	15,720.41	11,439.12	70.45	81.41	107.25	3,658.16	3,303.46	4,454.05	4,349.75	104.31	42.702	
13,800.00	10,073.00	15,820.37	11,436.36	71.86	82.85	107.21	3,758.08	3,302.51	4,453.28	4,347.02	106.26	41.909	
13,900.00	10,073.00	15,920.34	11,433.61	73.27	84.29	107.18	3,858.00	3,301.56	4,452.51	4,344.28	108.23	41.140	
14,000.00	10,073.00	16,020.30	11,430.85	74.70	85.75	107.15	3,957.92	3,300.62	4,451.74	4,341.53	110.21	40.394	
14,100.00	10,073.00	16,120.26	11,428.09	76.13	87.21	107.11	4,057.84	3,299.67	4,450.97	4,338.77	112.20	39.670	
14,200.00	10,073.00	16,220.22	11,425.34	77.57	88.67	107.08	4,157.76	3,298.72	4,450.21	4,336.00	114.20	38.967	
14,300.00	10,073.00	16,320.18	11,422.58	79.02	90.15	107.04	4,257.68	3,297.78	4,449.44	4,333.22	116.22	38.286	
14,400.00	10,073.00	16,420.15	11,419.82	80.48	91.63	107.01	4,357.60	3,296.83	4,448.68	4,330.44	118.24	37.625	
14,500.00	10,073.00	16,520.11	11,417.07	81.95	93.11	106.98	4,457.52	3,295.88	4,447.92	4,327.65	120.27	36.983	
14,600.00	10,073.00	16,620.07	11,414.31	83.42	94.60	106.94	4,557.44	3,294.94	4,447.16	4,324.85	122.31	36.360	
14,700.00	10,073.00	16,720.03	11,411.56	84.90	96.10	106.91	4,657.36	3,293.99	4,446.40	4,322.04	124.36	35.755	
14,800.00	10,073.00	16,819.99	11,408.80	86.38	97.60	106.87	4,757.28	3,293.04	4,445.64	4,319.23	126.41	35.167	
14,900.00	10,073.00	16,919.96	11,406.04	87.87	99.11	106.84	4,857.19	3,292.09	4,444.88	4,316.41	128.48	34.597	
15,000.00	10,073.00	17,019.92	11,403.29	89.37	100.62	106.80	4,957.11	3,291.15	4,444.13	4,313.58	130.55	34.042	
15,100.00	10,073.00	17,119.88	11,400.53	90.87	102.13	106.77	5,057.03	3,290.20	4,443.38	4,310.75	132.63	33.503	
15,200.00	10,073.00	17,219.84	11,397.77	92.38	103.65	106.74	5,156.95	3,289.25	4,442.63	4,307.92	134.71	32.979	
15,300.00	10,073.00	17,319.80	11,395.02	93.89	105.17	106.70	5,256.87	3,288.31	4,441.88	4,305.08	136.80	32.469	
15,400.00	10,073.00	17,419.77	11,392.26	95.41	106.70	106.67	5,356.79	3,287.36	4,441.13	4,302.23	138.90	31.974	
15,500.00	10,073.00	17,519.73	11,389.51	96.93	108.23	106.63	5,456.71	3,286.41	4,440.38	4,299.38	141.00	31.491	
15,600.00	10,073.00	17,619.69	11,386.75	98.46	109.77	106.60	5,556.63	3,285.47	4,439.64	4,296.53	143.11	31.022	
15,700.00	10,073.00	17,719.65	11,383.99	99.99	111.30	106.56	5,656.55	3,284.52	4,438.90	4,293.67	145.23	30.565	
15,800.00	10,073.00	17,819.61	11,381.24	101.52	112.84	106.53	5,756.47	3,283.57	4,438.16	4,290.81	147.35	30.120	
15,900.00	10,073.00	17,919.58	11,378.48	103.06	114.39	106.50	5,856.39	3,282.62	4,437.42	4,287.94	149.47	29.687	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 604H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,000.00	10,073.00	18,019.54	11,375.72	104.60	115.94	106.46	5,956.31	3,281.68	4,436.68	4,285.07	151.60	29.265	
16,100.00	10,073.00	18,119.50	11,372.97	106.14	117.48	106.43	6,056.23	3,280.73	4,435.94	4,282.20	153.74	28.854	
16,200.00	10,073.00	18,219.46	11,370.21	107.69	119.04	106.39	6,156.15	3,279.78	4,435.21	4,279.33	155.88	28.453	
16,300.00	10,073.00	18,319.42	11,367.46	109.24	120.59	106.36	6,256.07	3,278.84	4,434.47	4,276.45	158.02	28.062	
16,400.00	10,073.00	18,419.39	11,364.70	110.79	122.15	106.32	6,355.99	3,277.89	4,433.74	4,273.57	160.17	27.681	
16,500.00	10,073.00	18,519.35	11,361.94	112.35	123.71	106.29	6,455.91	3,276.94	4,433.01	4,270.69	162.32	27.310	
16,600.00	10,073.00	18,619.31	11,359.19	113.91	125.27	106.26	6,555.83	3,276.00	4,432.28	4,267.80	164.48	26.947	
16,700.00	10,073.00	18,719.27	11,356.43	115.47	126.84	106.22	6,655.75	3,275.05	4,431.56	4,264.92	166.64	26.593	
16,800.00	10,073.00	18,819.23	11,353.67	117.03	128.40	106.19	6,755.66	3,274.10	4,430.83	4,262.03	168.80	26.248	
16,900.00	10,073.00	18,919.19	11,350.92	118.60	129.97	106.15	6,855.58	3,273.16	4,430.11	4,259.14	170.97	25.911	
17,000.00	10,073.00	19,019.16	11,348.16	120.17	131.54	106.12	6,955.50	3,272.21	4,429.39	4,256.25	173.14	25.583	
17,100.00	10,073.00	19,119.12	11,345.41	121.74	133.12	106.08	7,055.42	3,271.26	4,428.67	4,253.35	175.31	25.261	
17,200.00	10,073.00	19,219.08	11,342.65	123.31	134.69	106.05	7,155.34	3,270.31	4,427.95	4,250.46	177.49	24.948	
17,300.00	10,073.00	19,319.04	11,339.89	124.88	136.27	106.02	7,255.26	3,269.37	4,427.23	4,247.56	179.67	24.641	
17,400.00	10,073.00	19,419.00	11,337.14	126.46	137.85	105.98	7,355.18	3,268.42	4,426.51	4,244.66	181.85	24.341	
17,500.00	10,073.00	19,518.97	11,334.38	128.04	139.43	105.95	7,455.10	3,267.47	4,425.80	4,241.76	184.04	24.048	
17,600.00	10,073.00	19,618.93	11,331.62	129.62	141.01	105.91	7,555.02	3,266.53	4,425.09	4,238.86	186.23	23.762	
17,700.00	10,073.00	19,718.89	11,328.87	131.20	142.59	105.88	7,654.94	3,265.58	4,424.38	4,235.96	188.42	23.482	
17,800.00	10,073.00	19,818.85	11,326.11	132.79	144.18	105.84	7,754.86	3,264.63	4,423.67	4,233.06	190.61	23.208	
17,900.00	10,073.00	19,918.81	11,323.36	134.37	145.76	105.81	7,854.78	3,263.69	4,422.96	4,230.15	192.81	22.940	
18,000.00	10,073.00	20,018.78	11,320.60	135.96	147.35	105.77	7,954.70	3,262.74	4,422.25	4,227.24	195.01	22.677	
18,100.00	10,073.00	20,118.74	11,317.84	137.55	148.94	105.74	8,054.62	3,261.79	4,421.55	4,224.34	197.21	22.420	
18,200.00	10,073.00	20,218.70	11,315.09	139.14	150.53	105.70	8,154.54	3,260.84	4,420.85	4,221.43	199.42	22.169	
18,300.00	10,073.00	20,318.66	11,312.33	140.73	152.12	105.67	8,254.46	3,259.90	4,420.14	4,218.52	201.62	21.923	
18,400.00	10,073.00	20,418.62	11,309.57	142.32	153.72	105.64	8,354.38	3,258.95	4,419.45	4,215.61	203.83	21.682	
18,500.00	10,073.00	20,518.59	11,306.82	143.92	155.31	105.60	8,454.30	3,258.00	4,418.75	4,212.70	206.05	21.445	
18,600.00	10,073.00	20,618.55	11,304.06	145.51	156.91	105.57	8,554.22	3,257.06	4,418.05	4,209.79	208.26	21.214	
18,700.00	10,073.00	20,718.51	11,301.31	147.11	158.50	105.53	8,654.14	3,256.11	4,417.36	4,206.88	210.48	20.987	
18,800.00	10,073.00	20,818.47	11,298.55	148.71	160.10	105.50	8,754.05	3,255.16	4,416.66	4,203.97	212.70	20.765	
18,900.00	10,073.00	20,918.43	11,295.79	150.31	161.70	105.46	8,853.97	3,254.22	4,415.97	4,201.06	214.91	20.548	
19,000.00	10,073.00	21,018.40	11,293.04	151.91	163.30	105.43	8,953.89	3,253.27	4,415.28	4,198.15	217.14	20.334	
19,100.00	10,073.00	21,118.36	11,290.28	153.51	164.90	105.39	9,053.81	3,252.32	4,414.59	4,195.23	219.36	20.125	
19,200.00	10,073.00	21,218.32	11,287.52	155.11	166.50	105.36	9,153.73	3,251.37	4,413.91	4,192.32	221.59	19.920	
19,300.00	10,073.00	21,318.28	11,284.77	156.72	168.11	105.32	9,253.65	3,250.43	4,413.22	4,189.41	223.81	19.718	
19,400.00	10,073.00	21,418.24	11,282.01	158.32	169.71	105.29	9,353.57	3,249.48	4,412.54	4,186.50	226.04	19.521	
19,500.00	10,073.00	21,518.21	11,279.26	159.93	171.31	105.25	9,453.49	3,248.53	4,411.86	4,183.58	228.27	19.327	
19,600.00	10,073.00	21,618.17	11,276.50	161.53	172.92	105.22	9,553.41	3,247.59	4,411.18	4,180.67	230.51	19.137	
19,700.00	10,073.00	21,718.13	11,273.74	163.14	174.53	105.18	9,653.33	3,246.64	4,410.50	4,177.76	232.74	18.950	
19,800.00	10,073.00	21,818.09	11,270.99	164.75	176.13	105.15	9,753.25	3,245.69	4,409.82	4,174.84	234.98	18.767	
19,900.00	10,073.00	21,918.05	11,268.23	166.36	177.74	105.12	9,853.17	3,244.75	4,409.14	4,171.93	237.21	18.587	
20,000.00	10,073.00	22,018.02	11,265.47	167.97	179.35	105.08	9,953.09	3,243.80	4,408.47	4,169.02	239.45	18.411	
20,100.00	10,073.00	22,117.98	11,262.72	169.58	180.96	105.05	10,053.01	3,242.85	4,407.80	4,166.10	241.69	18.237	
20,172.24	10,073.00	22,160.64	11,261.54	170.74	181.65	105.03	10,095.65	3,242.45	4,407.41	4,164.50	242.91	18.144	
20,185.45	10,073.00	22,160.64	11,261.54	170.96	181.65	105.03	10,095.65	3,242.45	4,407.43	4,164.41	243.03	18.136	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 705H - OH - Plan #3

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,888.90	1,888.90	6.37	6.54	99.93	-579.45	3,308.65	3,359.01	3,349.87	9.13	367.878	
1,900.00	1,900.00	1,945.90	1,945.90	6.58	6.74	99.93	-579.45	3,308.65	3,359.01	3,349.59	9.42	356.594	
2,000.00	2,000.00	2,045.90	2,045.90	6.94	7.10	99.93	-579.45	3,308.65	3,359.01	3,349.08	9.93	338.384	CC, ES
2,100.00	2,099.99	2,145.89	2,145.89	7.28	7.46	-157.52	-579.45	3,308.65	3,360.21	3,349.79	10.43	322.298	
2,200.00	2,199.91	2,245.81	2,245.81	7.62	7.82	-157.52	-579.45	3,308.65	3,363.84	3,352.92	10.92	308.092	
2,300.00	2,299.69	2,345.59	2,345.59	7.97	8.18	-157.53	-579.45	3,308.65	3,369.89	3,358.48	11.41	295.301	
2,400.00	2,399.27	2,445.17	2,445.17	8.31	8.53	-157.54	-579.45	3,308.65	3,378.35	3,366.44	11.91	283.759	
2,500.00	2,498.57	2,544.47	2,544.47	8.67	8.89	-157.56	-579.45	3,308.65	3,389.22	3,376.82	12.40	273.321	
2,600.00	2,597.54	2,643.44	2,643.44	9.03	9.24	-157.57	-579.45	3,308.65	3,402.51	3,389.61	12.90	263.862	
2,700.00	2,696.09	2,741.99	2,741.99	9.40	9.60	-157.59	-579.45	3,308.65	3,418.19	3,404.80	13.39	255.276	
2,760.81	2,755.79	2,801.69	2,801.69	9.63	9.81	-157.60	-579.45	3,308.65	3,428.91	3,415.21	13.69	250.435	
2,800.00	2,794.20	2,840.10	2,840.10	9.78	9.95	-157.65	-579.45	3,308.65	3,436.10	3,422.21	13.89	247.449	
2,900.00	2,892.23	2,938.13	2,938.13	10.17	10.30	-157.77	-579.45	3,308.65	3,454.46	3,440.07	14.38	240.190	
3,000.00	2,990.25	3,036.15	3,036.15	10.57	10.65	-157.90	-579.45	3,308.65	3,472.83	3,457.95	14.88	233.381	
3,100.00	3,088.27	3,134.17	3,134.17	10.97	11.00	-158.02	-579.45	3,308.65	3,491.22	3,475.84	15.38	226.985	
3,200.00	3,186.30	3,232.20	3,232.20	11.38	11.35	-158.14	-579.45	3,308.65	3,509.63	3,493.75	15.88	220.969	
3,300.00	3,284.32	3,330.22	3,330.22	11.80	11.70	-158.26	-579.45	3,308.65	3,528.05	3,511.66	16.39	215.301	
3,400.00	3,382.34	3,428.24	3,428.24	12.22	12.06	-158.38	-579.45	3,308.65	3,546.49	3,529.59	16.89	209.954	
3,500.00	3,480.37	3,535.68	3,535.68	12.65	12.44	-158.50	-579.60	3,308.58	3,564.90	3,547.48	17.42	204.659	
3,600.00	3,578.39	3,669.48	3,669.42	13.08	12.88	-158.60	-582.86	3,307.06	3,582.62	3,564.62	18.00	199.076	
3,700.00	3,676.41	3,804.01	3,803.69	13.51	13.32	-158.63	-590.41	3,303.54	3,599.35	3,580.78	18.57	193.828	
3,800.00	3,774.43	4,106.76	4,105.41	13.95	14.34	-158.68	-606.82	3,286.04	3,613.30	3,593.76	19.54	184.881	
3,900.00	3,872.46	4,206.28	4,204.55	14.39	14.68	-158.73	-609.28	3,277.72	3,623.95	3,603.90	20.05	180.750	
4,000.00	3,970.48	4,305.65	4,303.55	14.83	15.03	-158.79	-611.74	3,269.41	3,634.60	3,614.04	20.56	176.809	
4,100.00	4,068.50	4,405.02	4,402.54	15.28	15.38	-158.84	-614.20	3,261.10	3,645.25	3,624.19	21.07	173.045	
4,200.00	4,166.53	4,504.39	4,501.53	15.73	15.73	-158.90	-616.66	3,252.80	3,655.91	3,634.33	21.58	169.447	
4,300.00	4,264.55	4,603.76	4,600.52	16.17	16.08	-158.95	-619.11	3,244.49	3,666.57	3,644.48	22.09	166.004	
4,400.00	4,362.57	4,703.13	4,699.52	16.63	16.43	-159.01	-621.57	3,236.18	3,677.23	3,654.63	22.60	162.709	
4,500.00	4,460.59	4,802.50	4,798.51	17.08	16.79	-159.06	-624.03	3,227.88	3,687.89	3,664.78	23.11	159.551	
4,600.00	4,558.62	4,901.87	4,897.50	17.53	17.14	-159.11	-626.49	3,219.57	3,698.56	3,674.93	23.63	156.524	
4,700.00	4,656.64	5,001.25	4,996.49	17.99	17.50	-159.17	-628.95	3,211.26	3,709.23	3,685.09	24.15	153.619	
4,800.00	4,754.66	5,100.62	5,095.48	18.45	17.86	-159.22	-631.41	3,202.95	3,719.91	3,695.25	24.66	150.830	
4,900.00	4,852.69	5,199.99	5,194.48	18.91	18.21	-159.27	-633.87	3,194.65	3,730.59	3,705.41	25.18	148.150	
5,000.00	4,950.71	5,299.36	5,293.47	19.37	18.57	-159.32	-636.32	3,186.34	3,741.27	3,715.57	25.70	145.574	
5,100.00	5,048.73	5,398.73	5,392.46	19.83	18.94	-159.38	-638.78	3,178.03	3,751.95	3,725.73	26.22	143.095	
5,200.00	5,146.76	5,498.10	5,491.45	20.29	19.30	-159.43	-641.24	3,169.73	3,762.64	3,735.90	26.74	140.710	
5,300.00	5,244.78	5,597.47	5,590.45	20.75	19.66	-159.48	-643.70	3,161.42	3,773.33	3,746.07	27.26	138.412	
5,400.00	5,342.80	5,696.84	5,689.44	21.22	20.02	-159.53	-646.16	3,153.11	3,784.02	3,756.24	27.78	136.197	
5,500.00	5,440.82	5,796.21	5,788.43	21.68	20.39	-159.58	-648.62	3,144.80	3,794.72	3,766.41	28.31	134.061	
5,600.00	5,538.85	5,895.58	5,887.42	22.15	20.75	-159.63	-651.08	3,136.50	3,805.42	3,776.59	28.83	131.999	
5,700.00	5,636.87	5,994.95	5,986.42	22.61	21.12	-159.68	-653.53	3,128.19	3,816.12	3,786.77	29.35	130.010	
5,800.00	5,734.89	6,094.32	6,085.41	23.08	21.48	-159.73	-655.99	3,119.88	3,826.82	3,796.95	29.88	128.087	
5,900.00	5,832.92	6,193.69	6,184.40	23.55	21.85	-159.78	-658.45	3,111.58	3,837.53	3,807.13	30.40	126.230	
6,000.00	5,930.94	6,293.06	6,283.39	24.02	22.22	-159.83	-660.91	3,103.27	3,848.24	3,817.32	30.93	124.433	
6,100.00	6,028.96	6,392.43	6,382.38	24.49	22.58	-159.88	-663.37	3,094.96	3,858.95	3,827.50	31.45	122.695	
6,200.00	6,126.98	6,491.81	6,481.38	24.96	22.95	-159.93	-665.83	3,086.65	3,869.67	3,837.69	31.98	121.013	
6,300.00	6,225.01	6,591.18	6,580.37	25.43	23.32	-159.97	-668.29	3,078.35	3,880.39	3,847.89	32.50	119.384	
6,400.00	6,323.03	6,690.55	6,679.36	25.90	23.69	-160.02	-670.74	3,070.04	3,891.11	3,858.08	33.03	117.805	
6,500.00	6,421.05	6,789.92	6,778.35	26.37	24.06	-160.07	-673.20	3,061.73	3,901.83	3,868.28	33.56	116.275	
6,600.00	6,519.08	6,889.29	6,877.35	26.84	24.43	-160.12	-675.66	3,053.43	3,912.56	3,878.48	34.08	114.792	
6,700.00	6,617.10	6,988.66	6,976.34	27.31	24.80	-160.17	-678.12	3,045.12	3,923.29	3,888.68	34.61	113.353	
6,719.50	6,636.21	7,008.04	6,995.64	27.40	24.87	-160.17	-678.60	3,043.50	3,925.38	3,890.67	34.71	113.077	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 705H - OH - Plan #3

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,715.28	7,088.12	7,075.42	27.78	25.17	-160.25	-680.58	3,036.80	3,933.23	3,898.09	35.14	111.937	
6,900.00	6,813.92	7,187.81	7,174.73	28.22	25.54	-160.32	-683.05	3,028.47	3,940.76	3,905.10	35.66	110.504	
7,000.00	6,912.96	7,287.67	7,274.21	28.64	25.91	-160.36	-685.52	3,020.12	3,945.83	3,909.65	36.18	109.056	
7,100.00	7,012.32	7,387.63	7,373.80	29.04	26.29	-160.38	-687.99	3,011.77	3,948.44	3,911.74	36.70	107.593	
7,200.00	7,111.95	7,487.63	7,473.41	29.42	26.66	-160.37	-690.46	3,003.41	3,948.58	3,911.37	37.21	106.117	
7,300.00	7,211.76	7,587.59	7,572.99	29.77	27.04	-160.34	-692.94	2,995.05	3,946.26	3,908.55	37.72	104.629	
7,400.00	7,311.70	7,687.44	7,672.46	30.10	27.41	-160.28	-695.41	2,986.70	3,941.48	3,903.26	38.22	103.130	
7,480.31	7,392.00	7,767.51	7,752.23	30.35	27.71	97.24	-697.39	2,980.01	3,935.86	3,897.24	38.61	101.927	
7,500.00	7,411.69	7,787.13	7,771.77	30.41	27.78	97.25	-697.87	2,978.37	3,934.28	3,895.57	38.71	101.634	
7,600.00	7,511.69	7,886.75	7,871.01	30.71	28.16	97.30	-700.34	2,970.04	3,926.30	3,887.10	39.20	100.167	
7,700.00	7,611.69	7,986.37	7,970.25	31.01	28.53	97.35	-702.80	2,961.71	3,918.32	3,878.63	39.69	98.735	
7,800.00	7,711.69	8,085.99	8,069.49	31.31	28.91	97.40	-705.27	2,953.39	3,910.34	3,870.17	40.17	97.337	
7,900.00	7,811.69	8,185.61	8,168.73	31.62	29.28	97.46	-707.73	2,945.06	3,902.37	3,861.70	40.66	95.970	
8,000.00	7,911.69	8,285.23	8,267.97	31.92	29.66	97.51	-710.20	2,936.73	3,894.39	3,853.24	41.15	94.634	
8,100.00	8,011.69	8,384.85	8,367.21	32.23	30.03	97.56	-712.66	2,928.40	3,886.43	3,844.78	41.64	93.329	
8,200.00	8,111.69	8,484.47	8,466.45	32.54	30.41	97.61	-715.13	2,920.07	3,878.46	3,836.33	42.13	92.053	
8,300.00	8,211.69	8,584.08	8,565.69	32.84	30.78	97.66	-717.59	2,911.75	3,870.50	3,827.87	42.62	90.805	
8,400.00	8,311.69	8,683.70	8,664.93	33.15	31.16	97.72	-720.06	2,903.42	3,862.54	3,819.42	43.12	89.585	
8,500.00	8,411.69	8,783.32	8,764.17	33.46	31.54	97.77	-722.52	2,895.09	3,854.59	3,810.98	43.61	88.391	
8,600.00	8,511.69	8,882.94	8,863.41	33.77	31.91	97.82	-724.99	2,886.76	3,846.63	3,802.53	44.10	87.222	
8,700.00	8,611.69	8,982.56	8,962.65	34.08	32.29	97.88	-727.45	2,878.43	3,838.68	3,794.09	44.59	86.079	
8,800.00	8,711.69	9,082.18	9,061.89	34.40	32.67	97.93	-729.92	2,870.11	3,830.74	3,785.65	45.09	84.960	
8,900.00	8,811.69	9,181.80	9,161.13	34.71	33.04	97.99	-732.38	2,861.78	3,822.80	3,777.21	45.58	83.865	
9,000.00	8,911.69	9,281.42	9,260.37	35.03	33.42	98.04	-734.85	2,853.45	3,814.86	3,768.78	46.08	82.792	
9,100.00	9,011.69	9,381.04	9,359.61	35.34	33.80	98.09	-737.31	2,845.12	3,806.92	3,760.35	46.57	81.741	
9,200.00	9,111.69	9,480.66	9,458.85	35.66	34.17	98.15	-739.77	2,836.79	3,798.99	3,751.92	47.07	80.712	
9,300.00	9,211.69	9,580.28	9,558.09	35.97	34.55	98.20	-742.24	2,828.47	3,791.06	3,743.50	47.56	79.704	
9,400.00	9,311.69	9,679.90	9,657.33	36.29	34.93	98.26	-744.70	2,820.14	3,783.14	3,735.08	48.06	78.715	
9,500.00	9,411.69	9,779.52	9,756.57	36.61	35.31	98.31	-747.17	2,811.81	3,775.22	3,726.66	48.56	77.747	
9,588.35	9,500.04	9,867.53	9,844.24	36.89	35.64	98.36	-749.35	2,804.45	3,768.22	3,719.23	49.00	76.907	
9,600.00	9,511.69	9,879.13	9,855.81	36.93	35.68	99.03	-749.63	2,803.48	3,767.32	3,718.26	49.05	76.798	
9,650.00	9,561.57	9,928.75	9,905.23	37.08	35.87	99.45	-750.86	2,799.34	3,763.87	3,714.57	49.30	76.346	
9,700.00	9,610.99	9,977.79	9,954.09	37.23	36.06	99.85	-752.07	2,795.24	3,761.15	3,711.61	49.54	75.921	
9,750.00	9,659.56	10,025.89	10,002.01	37.38	36.24	100.24	-753.26	2,791.21	3,759.21	3,709.43	49.77	75.526	
9,800.00	9,706.91	10,072.69	10,048.62	37.51	36.42	100.60	-754.42	2,787.30	3,758.11	3,708.11	50.00	75.165	
9,835.50	9,739.60	10,104.92	10,080.73	37.59	36.54	100.83	-755.22	2,784.61	3,757.87	3,707.72	50.15	74.930	
9,850.00	9,752.69	10,117.81	10,093.58	37.63	36.59	100.92	-755.54	2,783.53	3,757.91	3,707.70	50.21	74.838	
9,900.00	9,796.55	10,142.32	10,117.99	37.74	36.68	101.02	-756.13	2,781.54	3,758.79	3,708.41	50.37	74.620	
9,950.00	9,838.15	10,164.04	10,139.65	37.83	36.76	101.00	-756.61	2,779.90	3,760.91	3,710.39	50.52	74.448	
10,000.00	9,877.18	10,200.00	10,175.52	37.92	36.90	101.02	-757.34	2,777.44	3,764.36	3,713.67	50.69	74.256	
10,050.00	9,913.34	10,200.00	10,175.52	37.99	36.90	100.57	-757.34	2,777.44	3,768.98	3,718.21	50.77	74.235	
10,100.00	9,946.35	10,200.00	10,175.52	38.05	36.90	99.97	-757.34	2,777.44	3,775.05	3,724.21	50.84	74.252	
10,150.00	9,975.97	10,236.02	10,211.47	38.11	37.03	99.68	-757.98	2,775.30	3,782.20	3,731.19	51.01	74.150	
10,200.00	10,001.96	10,249.58	10,225.01	38.15	37.08	99.01	-758.19	2,774.58	3,790.72	3,739.61	51.11	74.169	
10,250.00	10,024.13	10,261.13	10,236.54	38.19	37.12	98.19	-758.36	2,774.00	3,800.47	3,749.26	51.20	74.225	
10,300.00	10,042.32	10,270.56	10,245.96	38.23	37.16	97.21	-758.49	2,773.55	3,811.39	3,760.11	51.29	74.316	
10,350.00	10,056.38	10,300.00	10,275.37	38.28	37.27	96.42	-758.86	2,772.30	3,823.56	3,772.14	51.43	74.348	
10,400.00	10,066.20	10,300.00	10,275.37	38.33	37.27	95.08	-758.86	2,772.30	3,836.60	3,785.12	51.48	74.523	
10,450.00	10,071.72	10,300.00	10,275.37	38.40	37.27	93.62	-758.86	2,772.30	3,850.62	3,799.09	51.53	74.719	
10,488.35	10,073.00	10,300.00	10,275.37	38.46	37.27	92.44	-758.86	2,772.30	3,861.96	3,810.39	51.57	74.883	
10,500.00	10,073.00	10,300.00	10,275.37	38.48	37.27	92.44	-758.86	2,772.30	3,865.49	3,813.91	51.59	74.934	
10,600.00	10,073.00	10,300.00	10,275.37	38.70	37.27	92.44	-758.86	2,772.30	3,897.11	3,845.40	51.70	75.374	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 705H - OH - Plan #3

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,073.00	10,300.00	10,275.37	39.01	37.27	92.44	-758.86	2,772.30	3,931.01	3,879.16	51.85	75.818	
10,800.00	10,073.00	10,300.00	10,275.37	39.41	37.27	92.44	-758.86	2,772.30	3,967.15	3,915.13	52.02	76.266	
10,900.00	10,073.00	10,300.00	10,275.37	39.89	37.27	92.44	-758.86	2,772.30	4,005.46	3,953.25	52.21	76.720	
11,000.00	10,073.00	10,300.00	10,275.37	40.44	37.27	92.44	-758.86	2,772.30	4,045.87	3,993.45	52.42	77.182	
11,100.00	10,073.00	13,451.69	11,811.75	41.06	50.47	114.72	1,065.06	2,752.02	4,047.74	3,986.23	61.51	65.806	
11,200.00	10,073.00	13,551.65	11,808.87	41.75	51.41	114.69	1,164.97	2,751.07	4,046.58	3,983.93	62.64	64.596	
11,300.00	10,073.00	13,651.61	11,806.00	42.49	52.38	114.65	1,264.89	2,750.13	4,045.42	3,981.59	63.83	63.376	
11,400.00	10,073.00	13,751.57	11,803.13	43.29	53.38	114.61	1,364.80	2,749.18	4,044.26	3,979.19	65.07	62.151	
11,500.00	10,073.00	13,851.53	11,800.25	44.13	54.42	114.57	1,464.71	2,748.23	4,043.11	3,976.75	66.36	60.927	
11,600.00	10,073.00	13,951.48	11,797.38	45.03	55.48	114.54	1,564.63	2,747.29	4,041.96	3,974.26	67.69	59.709	
11,700.00	10,073.00	14,051.44	11,794.50	45.96	56.57	114.50	1,664.54	2,746.34	4,040.81	3,971.73	69.07	58.502	
11,800.00	10,073.00	14,151.40	11,791.63	46.94	57.69	114.46	1,764.45	2,745.40	4,039.66	3,969.17	70.49	57.308	
11,900.00	10,073.00	14,251.36	11,788.75	47.95	58.84	114.43	1,864.36	2,744.45	4,038.51	3,966.56	71.95	56.131	
12,000.00	10,073.00	14,351.32	11,785.88	49.00	60.00	114.39	1,964.28	2,743.50	4,037.36	3,963.92	73.44	54.974	
12,100.00	10,073.00	14,451.28	11,783.00	50.08	61.19	114.35	2,064.19	2,742.56	4,036.22	3,961.25	74.97	53.839	
12,200.00	10,073.00	14,551.24	11,780.13	51.19	62.40	114.31	2,164.10	2,741.61	4,035.08	3,958.55	76.53	52.727	
12,300.00	10,073.00	14,651.19	11,777.25	52.33	63.63	114.28	2,264.02	2,740.67	4,033.94	3,955.82	78.12	51.639	
12,400.00	10,073.00	14,751.15	11,774.38	53.50	64.88	114.24	2,363.93	2,739.72	4,032.80	3,953.06	79.74	50.576	
12,500.00	10,073.00	14,851.11	11,771.51	54.69	66.15	114.20	2,463.84	2,738.77	4,031.66	3,950.28	81.39	49.538	
12,600.00	10,073.00	14,951.07	11,768.63	55.91	67.43	114.16	2,563.75	2,737.83	4,030.53	3,947.47	83.06	48.527	
12,700.00	10,073.00	15,051.03	11,765.76	57.14	68.73	114.13	2,663.67	2,736.88	4,029.39	3,944.64	84.75	47.543	
12,800.00	10,073.00	15,150.99	11,762.88	58.40	70.04	114.09	2,763.58	2,735.94	4,028.26	3,941.79	86.47	46.586	
12,900.00	10,073.00	15,250.95	11,760.01	59.68	71.37	114.05	2,863.49	2,734.99	4,027.13	3,938.92	88.21	45.654	
13,000.00	10,073.00	15,350.91	11,757.13	60.97	72.71	114.01	2,963.40	2,734.04	4,026.00	3,936.03	89.97	44.749	
13,100.00	10,073.00	15,450.86	11,754.26	62.28	74.06	113.98	3,063.32	2,733.10	4,024.88	3,933.13	91.75	43.869	
13,200.00	10,073.00	15,550.82	11,751.38	63.61	75.43	113.94	3,163.23	2,732.15	4,023.75	3,930.21	93.54	43.014	
13,300.00	10,073.00	15,650.78	11,748.51	64.95	76.80	113.90	3,263.14	2,731.21	4,022.63	3,927.27	95.36	42.184	
13,400.00	10,073.00	15,750.74	11,745.64	66.31	78.19	113.86	3,363.06	2,730.26	4,021.51	3,924.32	97.19	41.378	
13,500.00	10,073.00	15,850.70	11,742.76	67.68	79.59	113.82	3,462.97	2,729.31	4,020.39	3,921.35	99.04	40.595	
13,600.00	10,073.00	15,950.66	11,739.89	69.06	81.00	113.79	3,562.88	2,728.37	4,019.27	3,918.37	100.90	39.835	
13,700.00	10,073.00	16,050.62	11,737.01	70.45	82.41	113.75	3,662.79	2,727.42	4,018.15	3,915.38	102.77	39.098	
13,800.00	10,073.00	16,150.57	11,734.14	71.86	83.84	113.71	3,762.71	2,726.48	4,017.04	3,912.38	104.66	38.382	
13,900.00	10,073.00	16,250.53	11,731.26	73.27	85.27	113.67	3,862.62	2,725.53	4,015.92	3,909.36	106.56	37.687	
14,000.00	10,073.00	16,350.49	11,728.39	74.70	86.71	113.64	3,962.53	2,724.58	4,014.81	3,906.34	108.47	37.012	
14,100.00	10,073.00	16,450.45	11,725.51	76.13	88.16	113.60	4,062.45	2,723.64	4,013.70	3,903.31	110.40	36.357	
14,200.00	10,073.00	16,550.41	11,722.64	77.57	89.61	113.56	4,162.36	2,722.69	4,012.60	3,900.26	112.33	35.721	
14,300.00	10,073.00	16,650.37	11,719.76	79.02	91.07	113.52	4,262.27	2,721.75	4,011.49	3,897.21	114.28	35.103	
14,400.00	10,073.00	16,750.33	11,716.89	80.48	92.54	113.48	4,362.18	2,720.80	4,010.39	3,894.15	116.23	34.503	
14,500.00	10,073.00	16,850.28	11,714.02	81.95	94.01	113.45	4,462.10	2,719.85	4,009.29	3,891.09	118.20	33.920	
14,600.00	10,073.00	16,950.24	11,711.14	83.42	95.49	113.41	4,562.01	2,718.91	4,008.18	3,888.01	120.17	33.354	
14,700.00	10,073.00	17,050.20	11,708.27	84.90	96.98	113.37	4,661.92	2,717.96	4,007.09	3,884.93	122.15	32.804	
14,800.00	10,073.00	17,150.16	11,705.39	86.38	98.47	113.33	4,761.84	2,717.02	4,005.99	3,881.85	124.14	32.270	
14,900.00	10,073.00	17,250.12	11,702.52	87.87	99.96	113.29	4,861.75	2,716.07	4,004.89	3,878.76	126.14	31.750	
15,000.00	10,073.00	17,350.08	11,699.64	89.37	101.47	113.26	4,961.66	2,715.12	4,003.80	3,875.66	128.14	31.244	
15,100.00	10,073.00	17,450.04	11,696.77	90.87	102.97	113.22	5,061.57	2,714.18	4,002.71	3,872.55	130.16	30.753	
15,200.00	10,073.00	17,550.00	11,693.89	92.38	104.48	113.18	5,161.49	2,713.23	4,001.62	3,869.44	132.18	30.274	
15,300.00	10,073.00	17,649.95	11,691.02	93.89	105.99	113.14	5,261.40	2,712.28	4,000.53	3,866.33	134.20	29.809	
15,400.00	10,073.00	17,749.91	11,688.15	95.41	107.51	113.10	5,361.31	2,711.34	3,999.44	3,863.21	136.24	29.357	
15,500.00	10,073.00	17,849.87	11,685.27	96.93	109.03	113.07	5,461.23	2,710.39	3,998.36	3,860.09	138.27	28.916	
15,600.00	10,073.00	17,949.83	11,682.40	98.46	110.56	113.03	5,561.14	2,709.45	3,997.28	3,856.96	140.32	28.487	
15,700.00	10,073.00	18,049.79	11,679.52	99.99	112.09	112.99	5,661.05	2,708.50	3,996.20	3,853.83	142.37	28.070	
15,800.00	10,073.00	18,149.75	11,676.65	101.52	113.62	112.95	5,760.96	2,707.55	3,995.12	3,850.69	144.42	27.663	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 705H - OH - Plan #3

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,900.00	10,073.00	18,249.71	11,673.77	103.06	115.16	112.91	5,860.88	2,706.61	3,994.04	3,847.56	146.48	27.266	
16,000.00	10,073.00	18,349.66	11,670.90	104.60	116.70	112.87	5,960.79	2,705.66	3,992.96	3,844.41	148.55	26.880	
16,100.00	10,073.00	18,449.62	11,668.02	106.14	118.24	112.84	6,060.70	2,704.72	3,991.89	3,841.27	150.62	26.503	
16,200.00	10,073.00	18,549.58	11,665.15	107.69	119.78	112.80	6,160.61	2,703.77	3,990.82	3,838.12	152.70	26.136	
16,300.00	10,073.00	18,649.54	11,662.28	109.24	121.33	112.76	6,260.53	2,702.82	3,989.75	3,834.97	154.78	25.777	
16,400.00	10,073.00	18,749.50	11,659.40	110.79	122.88	112.72	6,360.44	2,701.88	3,988.68	3,831.82	156.86	25.428	
16,500.00	10,073.00	18,849.46	11,656.53	112.35	124.43	112.68	6,460.35	2,700.93	3,987.61	3,828.66	158.95	25.087	
16,600.00	10,073.00	18,949.42	11,653.65	113.91	125.99	112.64	6,560.27	2,699.99	3,986.55	3,825.50	161.05	24.754	
16,700.00	10,073.00	19,049.37	11,650.78	115.47	127.55	112.61	6,660.18	2,699.04	3,985.48	3,822.34	163.14	24.429	
16,800.00	10,073.00	19,149.33	11,647.90	117.03	129.11	112.57	6,760.09	2,698.09	3,984.42	3,819.18	165.25	24.112	
16,900.00	10,073.00	19,249.29	11,645.03	118.60	130.67	112.53	6,860.00	2,697.15	3,983.36	3,816.01	167.35	23.802	
17,000.00	10,073.00	19,349.25	11,642.15	120.17	132.23	112.49	6,959.92	2,696.20	3,982.31	3,812.84	169.46	23.500	
17,100.00	10,073.00	19,449.21	11,639.28	121.74	133.80	112.45	7,059.83	2,695.26	3,981.25	3,809.67	171.58	23.204	
17,200.00	10,073.00	19,549.17	11,636.40	123.31	135.37	112.41	7,159.74	2,694.31	3,980.20	3,806.50	173.69	22.915	
17,300.00	10,073.00	19,649.13	11,633.53	124.88	136.94	112.37	7,259.66	2,693.36	3,979.14	3,803.33	175.81	22.633	
17,400.00	10,073.00	19,749.09	11,630.66	126.46	138.51	112.34	7,359.57	2,692.42	3,978.09	3,800.16	177.94	22.357	
17,500.00	10,073.00	19,849.04	11,627.78	128.04	140.09	112.30	7,459.48	2,691.47	3,977.04	3,796.98	180.06	22.087	
17,600.00	10,073.00	19,949.00	11,624.91	129.62	141.66	112.26	7,559.39	2,690.53	3,976.00	3,793.81	182.19	21.823	
17,700.00	10,073.00	20,048.96	11,622.03	131.20	143.24	112.22	7,659.31	2,689.58	3,974.95	3,790.63	184.32	21.565	
17,800.00	10,073.00	20,148.92	11,619.16	132.79	144.82	112.18	7,759.22	2,688.63	3,973.91	3,787.45	186.46	21.312	
17,900.00	10,073.00	20,248.88	11,616.28	134.37	146.40	112.14	7,859.13	2,687.69	3,972.87	3,784.27	188.60	21.065	
18,000.00	10,073.00	20,348.84	11,613.41	135.96	147.98	112.10	7,959.05	2,686.74	3,971.83	3,781.09	190.74	20.823	
18,100.00	10,073.00	20,448.80	11,610.53	137.55	149.57	112.07	8,058.96	2,685.80	3,970.79	3,777.91	192.88	20.586	
18,200.00	10,073.00	20,548.75	11,607.66	139.14	151.15	112.03	8,158.87	2,684.85	3,969.75	3,774.72	195.03	20.355	
18,300.00	10,073.00	20,648.71	11,604.79	140.73	152.74	111.99	8,258.78	2,683.90	3,968.72	3,771.54	197.18	20.127	
18,400.00	10,073.00	20,748.67	11,601.91	142.32	154.33	111.95	8,358.70	2,682.96	3,967.69	3,768.36	199.33	19.905	
18,500.00	10,073.00	20,848.63	11,599.04	143.92	155.92	111.91	8,458.61	2,682.01	3,966.66	3,765.17	201.48	19.687	
18,600.00	10,073.00	20,948.59	11,596.16	145.51	157.51	111.87	8,558.52	2,681.07	3,965.63	3,761.99	203.64	19.474	
18,700.00	10,073.00	21,048.55	11,593.29	147.11	159.10	111.83	8,658.44	2,680.12	3,964.60	3,758.80	205.80	19.264	
18,800.00	10,073.00	21,148.51	11,590.41	148.71	160.70	111.79	8,758.35	2,679.17	3,963.58	3,755.61	207.96	19.059	
18,900.00	10,073.00	21,248.46	11,587.54	150.31	162.29	111.76	8,858.26	2,678.23	3,962.55	3,752.43	210.13	18.858	
19,000.00	10,073.00	21,348.42	11,584.66	151.91	163.89	111.72	8,958.17	2,677.28	3,961.53	3,749.24	212.29	18.661	
19,100.00	10,073.00	21,448.38	11,581.79	153.51	165.48	111.68	9,058.09	2,676.33	3,960.51	3,746.05	214.46	18.467	
19,200.00	10,073.00	21,548.34	11,578.91	155.11	167.08	111.64	9,158.00	2,675.39	3,959.49	3,742.86	216.63	18.278	
19,300.00	10,073.00	21,648.30	11,576.04	156.72	168.68	111.60	9,257.91	2,674.44	3,958.48	3,739.67	218.81	18.091	
19,400.00	10,073.00	21,748.26	11,573.17	158.32	170.28	111.56	9,357.83	2,673.50	3,957.46	3,736.48	220.98	17.909	
19,500.00	10,073.00	21,848.22	11,570.29	159.93	171.88	111.52	9,457.74	2,672.55	3,956.45	3,733.29	223.16	17.729	
19,600.00	10,073.00	21,948.17	11,567.42	161.53	173.48	111.48	9,557.65	2,671.60	3,955.44	3,730.10	225.34	17.553	
19,700.00	10,073.00	22,048.13	11,564.54	163.14	175.09	111.44	9,657.56	2,670.66	3,954.43	3,726.91	227.52	17.381	
19,800.00	10,073.00	22,148.09	11,561.67	164.75	176.69	111.41	9,757.48	2,669.71	3,953.42	3,723.72	229.70	17.211	
19,900.00	10,073.00	22,248.05	11,558.79	166.36	178.29	111.37	9,857.39	2,668.77	3,952.42	3,720.53	231.89	17.044	
20,000.00	10,073.00	22,348.01	11,555.92	167.97	179.90	111.33	9,957.30	2,667.82	3,951.42	3,717.34	234.08	16.881	
20,100.00	10,073.00	22,447.97	11,553.04	169.58	181.51	111.29	10,057.21	2,666.87	3,950.41	3,714.15	236.27	16.720	
20,173.65	10,073.00	22,482.46	11,552.05	170.77	182.06	111.27	10,091.69	2,666.55	3,949.87	3,712.57	237.30	16.645	
20,185.45	10,073.00	22,482.46	11,552.05	170.96	182.06	111.27	10,091.69	2,666.55	3,949.89	3,712.51	237.38	16.639	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 706H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,888.30	1,888.30	6.37	6.54	99.72	-578.86	3,378.64	3,427.87	3,418.74	9.13	375.483	
1,900.00	1,900.00	1,945.30	1,945.30	6.58	6.74	99.72	-578.86	3,378.64	3,427.87	3,418.45	9.42	363.964	
2,000.00	2,000.00	2,045.30	2,045.30	6.94	7.10	99.72	-578.86	3,378.64	3,427.87	3,417.94	9.93	345.374	CC, ES
2,100.00	2,099.99	2,145.29	2,145.29	7.28	7.46	-157.73	-578.86	3,378.64	3,429.08	3,418.65	10.42	328.952	
2,200.00	2,199.91	2,245.21	2,245.21	7.62	7.82	-157.73	-578.86	3,378.64	3,432.71	3,421.80	10.92	314.445	
2,300.00	2,299.69	2,344.99	2,344.99	7.97	8.17	-157.74	-578.86	3,378.64	3,438.77	3,427.36	11.41	301.378	
2,400.00	2,399.27	2,444.57	2,444.57	8.31	8.53	-157.75	-578.86	3,378.64	3,447.24	3,435.34	11.90	289.583	
2,500.00	2,498.57	2,543.87	2,543.87	8.67	8.89	-157.76	-578.86	3,378.64	3,458.13	3,445.73	12.40	278.913	
2,600.00	2,597.54	2,642.84	2,642.84	9.03	9.24	-157.78	-578.86	3,378.64	3,471.43	3,458.54	12.89	269.241	
2,700.00	2,696.09	2,741.39	2,741.39	9.40	9.59	-157.79	-578.86	3,378.64	3,487.14	3,473.75	13.39	260.457	
2,760.81	2,755.79	2,801.09	2,801.09	9.63	9.81	-157.80	-578.86	3,378.64	3,497.87	3,484.18	13.69	255.504	
2,800.00	2,794.20	2,839.50	2,839.50	9.78	9.95	-157.85	-578.86	3,378.64	3,505.07	3,491.19	13.88	252.447	
2,900.00	2,892.23	2,937.53	2,937.53	10.17	10.30	-157.97	-578.86	3,378.64	3,523.46	3,509.07	14.38	245.018	
3,000.00	2,990.25	3,035.55	3,035.55	10.57	10.65	-158.09	-578.86	3,378.64	3,541.86	3,526.98	14.88	238.049	
3,100.00	3,088.27	3,133.57	3,133.57	10.97	11.00	-158.21	-578.86	3,378.64	3,560.27	3,544.89	15.38	231.504	
3,200.00	3,186.30	3,231.60	3,231.60	11.38	11.35	-158.32	-578.86	3,378.64	3,578.70	3,562.82	15.88	225.346	
3,300.00	3,284.32	3,329.62	3,329.62	11.80	11.70	-158.44	-578.86	3,378.64	3,597.14	3,580.76	16.38	219.545	
3,400.00	3,382.34	3,427.64	3,427.64	12.22	12.05	-158.56	-578.86	3,378.64	3,615.60	3,598.71	16.89	214.074	
3,500.00	3,480.37	3,525.67	3,525.67	12.65	12.41	-158.67	-578.86	3,378.64	3,634.07	3,616.68	17.40	208.905	
3,600.00	3,578.39	3,623.69	3,623.69	13.08	12.76	-158.78	-578.86	3,378.64	3,652.56	3,634.66	17.90	204.016	
3,700.00	3,676.41	3,721.71	3,721.71	13.51	13.11	-158.89	-578.86	3,378.64	3,671.06	3,652.65	18.41	199.386	
3,800.00	3,774.43	3,819.73	3,819.73	13.95	13.46	-159.00	-578.86	3,378.64	3,689.57	3,670.65	18.92	194.995	
3,900.00	3,872.46	3,917.76	3,917.76	14.39	13.81	-159.11	-578.86	3,378.64	3,708.10	3,688.67	19.43	190.827	
4,000.00	3,970.48	4,015.78	4,015.78	14.83	14.16	-159.22	-578.86	3,378.64	3,726.64	3,706.69	19.94	186.866	
4,100.00	4,068.50	4,113.80	4,113.80	15.28	14.51	-159.33	-578.86	3,378.64	3,745.19	3,724.73	20.45	183.097	
4,200.00	4,166.53	4,211.83	4,211.83	15.73	14.87	-159.43	-578.86	3,378.64	3,763.75	3,742.78	20.97	179.507	
4,300.00	4,264.55	4,309.85	4,309.85	16.17	15.22	-159.54	-578.86	3,378.64	3,782.33	3,760.85	21.48	176.084	
4,400.00	4,362.57	4,407.87	4,407.87	16.63	15.57	-159.64	-578.86	3,378.64	3,800.92	3,778.92	21.99	172.817	
4,500.00	4,460.59	4,505.89	4,505.89	17.08	15.92	-159.75	-578.86	3,378.64	3,819.52	3,797.01	22.51	169.696	
4,600.00	4,558.62	4,603.92	4,603.92	17.53	16.27	-159.85	-578.86	3,378.64	3,838.13	3,815.11	23.02	166.711	
4,700.00	4,656.64	4,701.94	4,701.94	17.99	16.62	-159.95	-578.86	3,378.64	3,856.75	3,833.22	23.54	163.855	
4,800.00	4,754.66	4,799.96	4,799.96	18.45	16.97	-160.05	-578.86	3,378.64	3,875.39	3,851.34	24.05	161.118	
4,900.00	4,852.69	4,897.99	4,897.99	18.91	17.32	-160.15	-578.86	3,378.64	3,894.04	3,869.47	24.57	158.495	
5,000.00	4,950.71	4,996.01	4,996.01	19.37	17.68	-160.25	-578.86	3,378.64	3,912.70	3,887.61	25.08	155.978	
5,100.00	5,048.73	5,094.03	5,094.03	19.83	18.03	-160.34	-578.86	3,378.64	3,931.37	3,905.76	25.60	153.561	
5,200.00	5,146.76	5,192.06	5,192.06	20.29	18.38	-160.44	-578.86	3,378.64	3,950.05	3,923.93	26.12	151.239	
5,300.00	5,244.78	5,290.08	5,290.08	20.75	18.73	-160.54	-578.86	3,378.64	3,968.74	3,942.10	26.63	149.006	
5,400.00	5,342.80	5,388.10	5,388.10	21.22	19.08	-160.63	-578.86	3,378.64	3,987.44	3,960.29	27.15	146.856	
5,500.00	5,440.82	5,486.12	5,486.12	21.68	19.43	-160.72	-578.86	3,378.64	4,006.15	3,978.48	27.67	144.787	
5,600.00	5,538.85	5,543.33	5,543.33	22.15	19.63	-160.78	-578.99	3,378.84	4,025.30	3,997.23	28.07	143.425	
5,700.00	5,636.87	5,600.00	5,599.99	22.61	19.83	-160.82	-579.57	3,379.74	4,045.61	4,017.15	28.46	142.168	
5,800.00	5,734.89	5,643.68	5,643.65	23.08	19.97	-160.86	-580.33	3,380.91	4,067.05	4,038.25	28.80	141.202	
5,900.00	5,832.92	5,700.00	5,699.91	23.55	20.16	-160.89	-581.71	3,383.03	4,089.66	4,060.48	29.18	140.143	
6,000.00	5,930.94	5,743.09	5,742.93	24.02	20.30	-160.92	-583.06	3,385.13	4,113.38	4,083.86	29.52	139.344	
6,100.00	6,028.96	5,800.00	5,799.69	24.49	20.49	-160.94	-585.26	3,388.52	4,138.24	4,108.35	29.90	138.426	
6,200.00	6,126.98	5,849.05	5,848.57	24.96	20.66	-160.96	-587.50	3,391.99	4,164.17	4,133.93	30.24	137.686	
6,300.00	6,225.01	5,945.49	5,944.64	25.43	20.98	-161.00	-592.08	3,399.05	4,190.51	4,159.77	30.74	136.323	
6,400.00	6,323.03	6,041.93	6,040.71	25.90	21.30	-161.03	-596.65	3,406.11	4,216.85	4,185.62	31.24	135.000	
6,500.00	6,421.05	6,138.37	6,136.78	26.37	21.63	-161.06	-601.22	3,413.18	4,243.20	4,211.46	31.73	133.714	
6,600.00	6,519.08	6,234.80	6,232.85	26.84	21.96	-161.10	-605.79	3,420.24	4,269.54	4,237.31	32.23	132.464	
6,700.00	6,617.10	6,331.24	6,328.92	27.31	22.29	-161.13	-610.36	3,427.30	4,295.88	4,263.15	32.73	131.249	
6,719.50	6,636.21	6,350.05	6,347.66	27.40	22.35	-161.13	-611.25	3,428.68	4,301.02	4,268.19	32.83	131.015	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 706H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,715.28	6,427.89	6,425.20	27.78	22.62	-161.26	-614.94	3,434.38	4,321.45	4,288.22	33.23	130.046	
6,900.00	6,813.92	6,525.15	6,522.09	28.22	22.96	-161.39	-619.55	3,441.50	4,344.66	4,310.94	33.73	128.814	
7,000.00	6,912.96	6,622.96	6,619.53	28.64	23.29	-161.50	-624.19	3,448.66	4,365.46	4,331.23	34.23	127.551	
7,100.00	7,012.32	6,721.26	6,717.45	29.04	23.63	-161.58	-628.85	3,455.86	4,383.81	4,349.09	34.72	126.262	
7,200.00	7,111.95	6,819.97	6,815.79	29.42	23.98	-161.64	-633.53	3,463.09	4,399.72	4,364.51	35.21	124.947	
7,300.00	7,211.76	6,919.04	6,914.48	29.77	24.32	-161.68	-638.22	3,470.34	4,413.18	4,377.47	35.70	123.609	
7,400.00	7,311.70	7,018.39	7,013.45	30.10	24.67	-161.69	-642.93	3,477.62	4,424.17	4,387.98	36.19	122.250	
7,480.31	7,392.00	7,098.33	7,093.09	30.35	24.95	95.76	-646.72	3,483.47	4,431.20	4,394.63	36.57	121.155	
7,500.00	7,411.69	7,117.95	7,112.63	30.41	25.02	95.77	-647.65	3,484.91	4,432.73	4,396.06	36.67	120.888	
7,600.00	7,511.69	7,217.57	7,211.87	30.71	25.37	95.83	-652.38	3,492.20	4,440.50	4,403.36	37.14	119.552	
7,700.00	7,611.69	7,317.19	7,311.11	31.01	25.72	95.88	-657.10	3,499.50	4,448.28	4,410.66	37.62	118.246	
7,800.00	7,711.69	7,416.81	7,410.35	31.31	26.07	95.93	-661.82	3,506.79	4,456.05	4,417.96	38.10	116.969	
7,900.00	7,811.69	7,516.43	7,509.59	31.62	26.43	95.98	-666.54	3,514.09	4,463.83	4,425.26	38.57	115.722	
8,000.00	7,911.69	7,616.05	7,608.83	31.92	26.78	96.03	-671.26	3,521.38	4,471.62	4,432.57	39.05	114.502	
8,100.00	8,011.69	7,715.66	7,708.07	32.23	27.14	96.08	-675.99	3,528.68	4,479.41	4,439.87	39.53	113.310	
8,200.00	8,111.69	7,815.28	7,807.31	32.54	27.49	96.13	-680.71	3,535.97	4,487.20	4,447.18	40.01	112.144	
8,300.00	8,211.69	7,914.90	7,906.54	32.84	27.85	96.18	-685.43	3,543.27	4,494.99	4,454.50	40.49	111.003	
8,400.00	8,311.69	8,014.52	8,005.78	33.15	28.21	96.23	-690.15	3,550.56	4,502.79	4,461.81	40.98	109.888	
8,500.00	8,411.69	8,114.14	8,105.02	33.46	28.57	96.28	-694.88	3,557.86	4,510.59	4,469.13	41.46	108.796	
8,600.00	8,511.69	8,213.76	8,204.26	33.77	28.92	96.33	-699.60	3,565.15	4,518.40	4,476.45	41.94	107.728	
8,700.00	8,611.69	8,313.38	8,303.50	34.08	29.28	96.38	-704.32	3,572.45	4,526.20	4,483.78	42.43	106.682	
8,800.00	8,711.69	8,413.00	8,402.74	34.40	29.64	96.43	-709.04	3,579.74	4,534.02	4,491.10	42.91	105.659	
8,900.00	8,811.69	8,512.62	8,501.98	34.71	30.00	96.48	-713.76	3,587.03	4,541.83	4,498.43	43.40	104.657	
9,000.00	8,911.69	8,612.23	8,601.22	35.03	30.36	96.53	-718.49	3,594.33	4,549.65	4,505.77	43.88	103.675	
9,100.00	9,011.69	8,711.85	8,700.46	35.34	30.73	96.57	-723.21	3,601.62	4,557.47	4,513.10	44.37	102.714	
9,200.00	9,111.69	8,811.47	8,799.70	35.66	31.09	96.62	-727.93	3,608.92	4,565.30	4,520.44	44.86	101.773	
9,300.00	9,211.69	8,911.09	8,898.94	35.97	31.45	96.67	-732.65	3,616.21	4,573.12	4,527.78	45.35	100.850	
9,400.00	9,311.69	9,010.71	8,998.17	36.29	31.81	96.72	-737.38	3,623.51	4,580.95	4,535.12	45.83	99.946	
9,500.00	9,411.69	9,110.33	9,097.41	36.61	32.18	96.77	-742.10	3,630.80	4,588.79	4,542.47	46.32	99.060	
9,588.35	9,500.04	9,558.80	9,545.34	36.89	33.77	96.86	-751.46	3,645.27	4,590.15	4,542.31	47.84	95.939	
9,600.00	9,511.69	9,570.45	9,556.99	36.93	33.81	97.43	-751.46	3,645.27	4,590.17	4,542.27	47.90	95.825	
9,650.00	9,561.57	9,620.33	9,606.87	37.08	33.99	97.43	-751.46	3,645.27	4,590.58	4,542.44	48.14	95.356	
9,700.00	9,610.99	9,669.74	9,656.29	37.23	34.16	97.42	-751.46	3,645.27	4,591.57	4,543.19	48.38	94.915	
9,750.00	9,659.56	9,718.31	9,704.86	37.38	34.33	97.41	-751.46	3,645.27	4,593.14	4,544.54	48.60	94.506	
9,800.00	9,706.91	9,765.67	9,752.21	37.51	34.49	97.38	-751.46	3,645.27	4,595.31	4,546.49	48.82	94.130	
9,850.00	9,752.69	9,811.45	9,797.99	37.63	34.66	97.33	-751.46	3,645.27	4,598.12	4,549.09	49.03	93.789	
9,900.00	9,796.55	9,855.31	9,841.85	37.74	34.81	97.25	-751.46	3,645.27	4,601.58	4,552.36	49.22	93.484	
9,950.00	9,838.15	9,896.91	9,883.45	37.83	34.95	97.12	-751.46	3,645.27	4,605.73	4,556.33	49.41	93.217	
10,000.00	9,877.18	9,935.94	9,922.48	37.92	35.09	96.93	-751.46	3,645.27	4,610.61	4,561.03	49.58	92.987	
10,050.00	9,913.34	9,972.09	9,958.64	37.99	35.22	96.68	-751.46	3,645.27	4,616.24	4,566.50	49.75	92.796	
10,100.00	9,946.35	10,005.11	9,991.65	38.05	35.33	96.35	-751.46	3,645.27	4,622.65	4,572.75	49.90	92.644	
10,150.00	9,975.97	10,034.72	10,021.27	38.11	35.44	95.92	-751.46	3,645.27	4,629.85	4,579.82	50.04	92.530	
10,200.00	10,001.96	10,060.71	10,047.26	38.15	35.53	95.39	-751.46	3,645.27	4,637.86	4,587.69	50.16	92.455	
10,250.00	10,024.13	10,082.89	10,069.43	38.19	35.61	94.75	-751.46	3,645.27	4,646.67	4,596.39	50.28	92.419	
10,300.00	10,042.32	10,101.07	10,087.62	38.23	35.67	93.98	-751.46	3,645.27	4,656.26	4,605.88	50.38	92.420	
10,350.00	10,056.38	10,115.13	10,101.68	38.28	35.72	93.10	-751.46	3,645.27	4,666.61	4,616.14	50.47	92.459	
10,400.00	10,066.20	10,124.96	10,111.50	38.33	35.75	92.08	-751.46	3,645.27	4,677.67	4,627.12	50.55	92.534	
10,450.00	10,071.72	10,130.47	10,117.02	38.40	35.77	90.95	-751.46	3,645.27	4,689.37	4,638.76	50.62	92.645	
10,488.35	10,073.00	10,131.75	10,118.30	38.46	35.78	90.00	-751.46	3,645.27	4,698.74	4,648.08	50.66	92.753	
10,500.00	10,073.00	10,131.75	10,118.30	38.48	35.78	90.00	-751.46	3,645.27	4,701.65	4,650.98	50.67	92.789	
10,600.00	10,073.00	10,131.75	10,118.30	38.70	35.78	90.00	-751.46	3,645.27	4,727.70	4,676.91	50.79	93.080	
10,700.00	10,073.00	10,131.75	10,118.30	39.01	35.78	90.00	-751.46	3,645.27	4,755.71	4,704.77	50.95	93.349	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 706H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,800.00	10,073.00	10,131.75	10,118.30	39.41	35.78	90.00	-751.46	3,645.27	4,785.65	4,734.52	51.13	93.599	
10,900.00	10,073.00	13,069.03	11,656.57	39.89	47.65	108.67	865.53	3,629.94	4,805.36	4,746.04	59.32	81.007	
11,000.00	10,073.00	13,169.00	11,653.92	40.44	48.52	108.64	965.45	3,628.99	4,804.56	4,744.21	60.35	79.615	
11,100.00	10,073.00	13,268.96	11,651.27	41.06	49.42	108.61	1,065.38	3,628.04	4,803.76	4,742.32	61.44	78.187	
11,200.00	10,073.00	13,368.93	11,648.62	41.75	50.36	108.58	1,165.30	3,627.09	4,802.95	4,740.36	62.59	76.732	
11,300.00	10,073.00	13,468.89	11,645.97	42.49	51.34	108.55	1,265.23	3,626.15	4,802.15	4,738.35	63.81	75.262	
11,400.00	10,073.00	13,568.86	11,643.32	43.29	52.35	108.52	1,365.15	3,625.20	4,801.35	4,736.28	65.07	73.784	
11,500.00	10,073.00	13,668.82	11,640.67	44.13	53.40	108.49	1,465.08	3,624.25	4,800.55	4,734.16	66.39	72.305	
11,600.00	10,073.00	13,768.79	11,638.02	45.03	54.47	108.46	1,565.00	3,623.30	4,799.76	4,732.00	67.76	70.833	
11,700.00	10,073.00	13,868.75	11,635.37	45.96	55.57	108.43	1,664.93	3,622.36	4,798.96	4,729.78	69.18	69.373	
11,800.00	10,073.00	13,968.72	11,632.72	46.94	56.70	108.40	1,764.86	3,621.41	4,798.17	4,727.53	70.63	67.930	
11,900.00	10,073.00	14,068.68	11,630.06	47.95	57.85	108.37	1,864.78	3,620.46	4,797.37	4,725.24	72.13	66.507	
12,000.00	10,073.00	14,168.65	11,627.41	49.00	59.03	108.34	1,964.71	3,619.51	4,796.58	4,722.91	73.67	65.108	
12,100.00	10,073.00	14,268.61	11,624.76	50.08	60.23	108.31	2,064.63	3,618.57	4,795.79	4,720.55	75.25	63.736	
12,200.00	10,073.00	14,368.58	11,622.11	51.19	61.45	108.28	2,164.56	3,617.62	4,795.00	4,718.15	76.85	62.392	
12,300.00	10,073.00	14,468.54	11,619.46	52.33	62.69	108.25	2,264.48	3,616.67	4,794.21	4,715.72	78.49	61.078	
12,400.00	10,073.00	14,568.51	11,616.81	53.50	63.95	108.22	2,364.41	3,615.72	4,793.43	4,713.27	80.16	59.796	
12,500.00	10,073.00	14,668.47	11,614.16	54.69	65.23	108.19	2,464.33	3,614.78	4,792.64	4,710.78	81.86	58.546	
12,600.00	10,073.00	14,768.44	11,611.51	55.91	66.52	108.16	2,564.26	3,613.83	4,791.86	4,708.27	83.59	57.329	
12,700.00	10,073.00	14,868.40	11,608.86	57.14	67.83	108.13	2,664.18	3,612.88	4,791.08	4,705.74	85.33	56.144	
12,800.00	10,073.00	14,968.37	11,606.21	58.40	69.15	108.10	2,764.11	3,611.93	4,790.30	4,703.19	87.11	54.993	
12,900.00	10,073.00	15,068.33	11,603.56	59.68	70.49	108.07	2,864.03	3,610.99	4,789.52	4,700.61	88.90	53.873	
13,000.00	10,073.00	15,168.29	11,600.91	60.97	71.84	108.04	2,963.96	3,610.04	4,788.74	4,698.02	90.72	52.786	
13,100.00	10,073.00	15,268.26	11,598.25	62.28	73.20	108.01	3,063.88	3,609.09	4,787.96	4,695.41	92.56	51.731	
13,200.00	10,073.00	15,368.22	11,595.60	63.61	74.58	107.98	3,163.81	3,608.14	4,787.19	4,692.78	94.41	50.706	
13,300.00	10,073.00	15,468.19	11,592.95	64.95	75.96	107.94	3,263.73	3,607.20	4,786.41	4,690.13	96.28	49.712	
13,400.00	10,073.00	15,568.15	11,590.30	66.31	77.36	107.91	3,363.66	3,606.25	4,785.64	4,687.47	98.17	48.748	
13,500.00	10,073.00	15,668.12	11,587.65	67.68	78.76	107.88	3,463.58	3,605.30	4,784.87	4,684.79	100.08	47.813	
13,600.00	10,073.00	15,768.08	11,585.00	69.06	80.18	107.85	3,563.51	3,604.35	4,784.10	4,682.10	101.99	46.905	
13,700.00	10,073.00	15,868.05	11,582.35	70.45	81.60	107.82	3,663.43	3,603.41	4,783.33	4,679.40	103.93	46.025	
13,800.00	10,073.00	15,968.01	11,579.70	71.86	83.03	107.79	3,763.36	3,602.46	4,782.56	4,676.68	105.87	45.172	
13,900.00	10,073.00	16,067.98	11,577.05	73.27	84.47	107.76	3,863.28	3,601.51	4,781.79	4,673.96	107.83	44.344	
14,000.00	10,073.00	16,167.94	11,574.40	74.70	85.92	107.73	3,963.21	3,600.56	4,781.03	4,671.22	109.81	43.541	
14,100.00	10,073.00	16,267.91	11,571.75	76.13	87.38	107.70	4,063.13	3,599.62	4,780.27	4,668.48	111.79	42.762	
14,200.00	10,073.00	16,367.87	11,569.10	77.57	88.84	107.67	4,163.06	3,598.67	4,779.50	4,665.72	113.78	42.006	
14,300.00	10,073.00	16,467.84	11,566.45	79.02	90.31	107.64	4,262.98	3,597.72	4,778.74	4,662.96	115.79	41.272	
14,400.00	10,073.00	16,567.80	11,563.79	80.48	91.78	107.61	4,362.91	3,596.77	4,777.98	4,660.18	117.80	40.560	
14,500.00	10,073.00	16,667.77	11,561.14	81.95	93.26	107.58	4,462.84	3,595.83	4,777.22	4,657.40	119.82	39.869	
14,600.00	10,073.00	16,767.73	11,558.49	83.42	94.75	107.55	4,562.76	3,594.88	4,776.47	4,654.61	121.85	39.198	
14,700.00	10,073.00	16,867.70	11,555.84	84.90	96.24	107.52	4,662.69	3,593.93	4,775.71	4,651.82	123.89	38.546	
14,800.00	10,073.00	16,967.66	11,553.19	86.38	97.74	107.49	4,762.61	3,592.98	4,774.96	4,649.01	125.94	37.913	
14,900.00	10,073.00	17,067.63	11,550.54	87.87	99.24	107.46	4,862.54	3,592.04	4,774.21	4,646.21	128.00	37.298	
15,000.00	10,073.00	17,167.59	11,547.89	89.37	100.75	107.43	4,962.46	3,591.09	4,773.45	4,643.39	130.06	36.701	
15,100.00	10,073.00	17,267.56	11,545.24	90.87	102.26	107.40	5,062.39	3,590.14	4,772.70	4,640.57	132.13	36.120	
15,200.00	10,073.00	17,367.52	11,542.59	92.38	103.77	107.37	5,162.31	3,589.19	4,771.96	4,637.75	134.21	35.556	
15,300.00	10,073.00	17,467.49	11,539.94	93.89	105.29	107.34	5,262.24	3,588.25	4,771.21	4,634.92	136.29	35.007	
15,400.00	10,073.00	17,567.45	11,537.29	95.41	106.82	107.31	5,362.16	3,587.30	4,770.46	4,632.08	138.38	34.473	
15,500.00	10,073.00	17,667.42	11,534.64	96.93	108.34	107.27	5,462.09	3,586.35	4,769.72	4,629.24	140.48	33.954	
15,600.00	10,073.00	17,767.38	11,531.98	98.46	109.87	107.24	5,562.01	3,585.40	4,768.97	4,626.40	142.58	33.449	
15,700.00	10,073.00	17,867.35	11,529.33	99.99	111.41	107.21	5,661.94	3,584.46	4,768.23	4,623.55	144.68	32.957	
15,800.00	10,073.00	17,967.31	11,526.68	101.52	112.95	107.18	5,761.86	3,583.51	4,767.49	4,620.70	146.79	32.477	
15,900.00	10,073.00	18,067.27	11,524.03	103.06	114.49	107.15	5,861.79	3,582.56	4,766.75	4,617.84	148.91	32.011	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - El Paso Fed Com 706H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,000.00	10,073.00	18,167.24	11,521.38	104.60	116.03	107.12	5,961.71	3,581.61	4,766.02	4,614.98	151.03	31.556	
16,100.00	10,073.00	18,267.20	11,518.73	106.14	117.58	107.09	6,061.64	3,580.67	4,765.28	4,612.12	153.16	31.113	
16,200.00	10,073.00	18,367.17	11,516.08	107.69	119.13	107.06	6,161.56	3,579.72	4,764.54	4,609.25	155.29	30.681	
16,300.00	10,073.00	18,467.13	11,513.43	109.24	120.68	107.03	6,261.49	3,578.77	4,763.81	4,606.38	157.43	30.261	
16,400.00	10,073.00	18,567.10	11,510.78	110.79	122.23	107.00	6,361.41	3,577.82	4,763.08	4,603.51	159.57	29.850	
16,500.00	10,073.00	18,667.06	11,508.13	112.35	123.79	106.97	6,461.34	3,576.88	4,762.35	4,600.64	161.71	29.450	
16,600.00	10,073.00	18,767.03	11,505.48	113.91	125.35	106.94	6,561.26	3,575.93	4,761.62	4,597.76	163.86	29.059	
16,700.00	10,073.00	18,866.99	11,502.83	115.47	126.91	106.91	6,661.19	3,574.98	4,760.89	4,594.88	166.01	28.678	
16,800.00	10,073.00	18,966.96	11,500.17	117.03	128.48	106.88	6,761.11	3,574.04	4,760.16	4,592.00	168.17	28.306	
16,900.00	10,073.00	19,066.92	11,497.52	118.60	130.04	106.85	6,861.04	3,573.09	4,759.44	4,589.11	170.33	27.943	
17,000.00	10,073.00	19,166.89	11,494.87	120.17	131.61	106.81	6,960.96	3,572.14	4,758.71	4,586.22	172.49	27.589	
17,100.00	10,073.00	19,266.85	11,492.22	121.74	133.18	106.78	7,060.89	3,571.19	4,757.99	4,583.33	174.65	27.242	
17,200.00	10,073.00	19,366.82	11,489.57	123.31	134.76	106.75	7,160.82	3,570.25	4,757.27	4,580.44	176.82	26.904	
17,300.00	10,073.00	19,466.78	11,486.92	124.88	136.33	106.72	7,260.74	3,569.30	4,756.55	4,577.55	178.99	26.574	
17,400.00	10,073.00	19,566.75	11,484.27	126.46	137.91	106.69	7,360.67	3,568.35	4,755.83	4,574.66	181.17	26.251	
17,500.00	10,073.00	19,666.71	11,481.62	128.04	139.48	106.66	7,460.59	3,567.40	4,755.11	4,571.77	183.35	25.935	
17,600.00	10,073.00	19,766.68	11,478.97	129.62	141.06	106.63	7,560.52	3,566.46	4,754.40	4,568.87	185.53	25.627	
17,700.00	10,073.00	19,866.64	11,476.32	131.20	142.65	106.60	7,660.44	3,565.51	4,753.68	4,565.97	187.71	25.325	
17,800.00	10,073.00	19,966.61	11,473.67	132.79	144.23	106.57	7,760.37	3,564.56	4,752.97	4,563.07	189.89	25.030	
17,900.00	10,073.00	20,066.57	11,471.02	134.37	145.81	106.54	7,860.29	3,563.61	4,752.26	4,560.17	192.08	24.741	
18,000.00	10,073.00	20,166.54	11,468.36	135.96	147.40	106.51	7,960.22	3,562.67	4,751.55	4,557.27	194.27	24.458	
18,100.00	10,073.00	20,266.50	11,465.71	137.55	148.99	106.48	8,060.14	3,561.72	4,750.84	4,554.37	196.47	24.181	
18,200.00	10,073.00	20,366.47	11,463.06	139.14	150.57	106.45	8,160.07	3,560.77	4,750.13	4,551.46	198.67	23.910	
18,300.00	10,073.00	20,466.43	11,460.41	140.73	152.17	106.41	8,259.99	3,559.82	4,749.42	4,548.56	200.86	23.645	
18,400.00	10,073.00	20,566.40	11,457.76	142.32	153.76	106.38	8,359.92	3,558.88	4,748.72	4,545.65	203.07	23.385	
18,500.00	10,073.00	20,666.36	11,455.11	143.92	155.35	106.35	8,459.84	3,557.93	4,748.01	4,542.75	205.27	23.131	
18,600.00	10,073.00	20,766.33	11,452.46	145.51	156.94	106.32	8,559.77	3,556.98	4,747.31	4,539.84	207.47	22.881	
18,700.00	10,073.00	20,866.29	11,449.81	147.11	158.54	106.29	8,659.69	3,556.03	4,746.61	4,536.93	209.68	22.637	
18,800.00	10,073.00	20,966.25	11,447.16	148.71	160.13	106.26	8,759.62	3,555.09	4,745.91	4,534.02	211.89	22.398	
18,900.00	10,073.00	21,066.22	11,444.51	150.31	161.73	106.23	8,859.54	3,554.14	4,745.21	4,531.11	214.10	22.164	
19,000.00	10,073.00	21,166.18	11,441.86	151.91	163.33	106.20	8,959.47	3,553.19	4,744.52	4,528.20	216.31	21.934	
19,100.00	10,073.00	21,266.15	11,439.21	153.51	164.93	106.17	9,059.39	3,552.24	4,743.82	4,525.29	218.53	21.708	
19,200.00	10,073.00	21,366.11	11,436.56	155.11	166.53	106.14	9,159.32	3,551.30	4,743.13	4,522.38	220.74	21.487	
19,300.00	10,073.00	21,466.08	11,433.90	156.72	168.13	106.11	9,259.24	3,550.35	4,742.44	4,519.47	222.96	21.270	
19,400.00	10,073.00	21,566.04	11,431.25	158.32	169.73	106.08	9,359.17	3,549.40	4,741.74	4,516.56	225.18	21.057	
19,500.00	10,073.00	21,666.01	11,428.60	159.93	171.34	106.04	9,459.09	3,548.45	4,741.06	4,513.65	227.41	20.848	
19,600.00	10,073.00	21,765.97	11,425.95	161.53	172.94	106.01	9,559.02	3,547.51	4,740.37	4,510.74	229.63	20.644	
19,700.00	10,073.00	21,865.94	11,423.30	163.14	174.55	105.98	9,658.94	3,546.56	4,739.68	4,507.82	231.85	20.442	
19,800.00	10,073.00	21,965.90	11,420.65	164.75	176.15	105.95	9,758.87	3,545.61	4,738.99	4,504.91	234.08	20.245	
19,900.00	10,073.00	22,065.87	11,418.00	166.36	177.76	105.92	9,858.79	3,544.66	4,738.31	4,502.00	236.31	20.051	
20,000.00	10,073.00	22,165.83	11,415.35	167.97	179.37	105.89	9,958.72	3,543.72	4,737.63	4,499.08	238.54	19.861	
20,100.00	10,073.00	22,265.80	11,412.70	169.58	180.98	105.86	10,058.65	3,542.77	4,736.95	4,496.17	240.78	19.674	
20,170.93	10,073.00	22,304.88	11,411.66	170.72	181.61	105.85	10,097.71	3,542.40	4,736.57	4,494.62	241.95	19.577	
20,185.45	10,073.00	22,304.88	11,411.66	170.96	181.61	105.85	10,097.71	3,542.40	4,736.59	4,494.51	242.09	19.566	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - KC7 Fed Com 603H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,843.00	1,843.00	1,888.60	1,888.60	6.37	6.54	100.04	-579.75	3,273.66	3,324.60	3,315.47	9.13	364.141	
1,900.00	1,900.00	1,945.60	1,945.60	6.58	6.74	100.04	-579.75	3,273.66	3,324.60	3,315.18	9.42	352.970	
2,000.00	2,000.00	2,045.60	2,045.60	6.94	7.10	100.04	-579.75	3,273.66	3,324.60	3,314.67	9.93	334.944	CC
2,100.00	2,099.99	2,145.59	2,145.59	7.28	7.46	-157.41	-579.75	3,273.66	3,325.81	3,315.38	10.43	319.021	
2,200.00	2,199.91	2,245.51	2,245.51	7.62	7.82	-157.42	-579.75	3,273.66	3,329.43	3,318.51	10.92	304.962	
2,300.00	2,299.69	2,345.29	2,345.29	7.97	8.17	-157.42	-579.75	3,273.66	3,335.47	3,324.06	11.41	292.305	
2,400.00	2,399.27	2,444.87	2,444.87	8.31	8.53	-157.43	-579.75	3,273.66	3,343.93	3,332.02	11.90	280.885	
2,500.00	2,498.57	2,544.17	2,544.17	8.67	8.89	-157.45	-579.75	3,273.66	3,354.79	3,342.39	12.40	270.560	
2,600.00	2,597.54	2,643.14	2,643.14	9.03	9.24	-157.47	-579.75	3,273.66	3,368.06	3,355.17	12.89	261.206	
2,700.00	2,696.09	2,741.69	2,741.69	9.40	9.60	-157.48	-579.75	3,273.66	3,383.74	3,370.35	13.39	252.717	
2,760.81	2,755.79	2,801.39	2,801.39	9.63	9.81	-157.50	-579.75	3,273.66	3,394.44	3,380.75	13.69	247.931	
2,800.00	2,794.20	2,839.80	2,839.80	9.78	9.95	-157.55	-579.75	3,273.66	3,401.63	3,387.75	13.89	244.979	
2,900.00	2,892.23	2,937.83	2,937.83	10.17	10.30	-157.67	-579.75	3,273.66	3,419.98	3,405.60	14.38	237.804	
3,000.00	2,990.25	3,035.85	3,035.85	10.57	10.65	-157.80	-579.75	3,273.66	3,438.34	3,423.46	14.88	231.073	
3,100.00	3,088.27	3,133.87	3,133.87	10.97	11.00	-157.92	-579.75	3,273.66	3,456.72	3,441.34	15.38	224.750	
3,200.00	3,186.30	3,231.90	3,231.90	11.38	11.35	-158.04	-579.75	3,273.66	3,475.11	3,459.23	15.88	218.803	
3,300.00	3,284.32	3,329.92	3,329.92	11.80	11.70	-158.16	-579.75	3,273.66	3,493.52	3,477.14	16.39	213.200	
3,400.00	3,382.34	3,427.94	3,427.94	12.22	12.06	-158.28	-579.75	3,273.66	3,511.95	3,495.06	16.89	207.914	
3,500.00	3,480.37	3,701.88	3,701.78	12.65	13.01	-158.58	-580.75	3,268.42	3,529.74	3,511.91	17.83	197.962	
3,600.00	3,578.39	4,119.82	4,117.16	13.08	14.45	-158.83	-589.08	3,224.72	3,536.43	3,517.39	19.04	185.759	
3,700.00	3,676.41	4,219.69	4,215.93	13.51	14.81	-158.87	-591.84	3,210.22	3,541.01	3,521.46	19.54	181.195	
3,800.00	3,774.43	4,319.56	4,314.71	13.95	15.17	-158.91	-594.61	3,195.71	3,545.59	3,525.54	20.05	176.840	
3,900.00	3,872.46	4,419.43	4,413.48	14.39	15.54	-158.94	-597.37	3,181.21	3,550.17	3,529.61	20.56	172.680	
4,000.00	3,970.48	4,519.30	4,512.25	14.83	15.90	-158.98	-600.14	3,166.70	3,554.75	3,533.68	21.07	168.705	
4,100.00	4,068.50	4,619.17	4,611.02	15.28	16.27	-159.01	-602.90	3,152.20	3,559.33	3,537.75	21.58	164.903	
4,200.00	4,166.53	4,719.04	4,709.79	15.73	16.65	-159.05	-605.67	3,137.69	3,563.92	3,541.82	22.10	161.264	
4,300.00	4,264.55	4,818.91	4,808.57	16.17	17.02	-159.09	-608.43	3,123.19	3,568.50	3,545.89	22.62	157.780	
4,400.00	4,362.57	4,918.78	4,907.34	16.63	17.40	-159.12	-611.20	3,108.68	3,573.09	3,549.96	23.14	154.441	
4,500.00	4,460.59	5,018.65	5,006.11	17.08	17.78	-159.16	-613.96	3,094.18	3,577.68	3,554.02	23.66	151.239	
4,600.00	4,558.62	5,118.52	5,104.88	17.53	18.17	-159.19	-616.73	3,079.67	3,582.27	3,558.09	24.18	148.167	
4,700.00	4,656.64	5,218.39	5,203.66	17.99	18.55	-159.23	-619.49	3,065.17	3,586.86	3,562.16	24.70	145.217	
4,800.00	4,754.66	5,318.26	5,302.43	18.45	18.94	-159.26	-622.25	3,050.66	3,591.46	3,566.23	25.22	142.383	
4,900.00	4,852.69	5,418.13	5,401.20	18.91	19.33	-159.30	-625.02	3,036.16	3,596.05	3,570.30	25.75	139.658	
5,000.00	4,950.71	5,518.00	5,499.97	19.37	19.72	-159.34	-627.78	3,021.65	3,600.65	3,574.37	26.28	137.037	
5,100.00	5,048.73	5,617.87	5,598.74	19.83	20.11	-159.37	-630.55	3,007.15	3,605.24	3,578.44	26.80	134.513	
5,200.00	5,146.76	5,717.74	5,697.52	20.29	20.51	-159.41	-633.31	2,992.64	3,609.84	3,582.51	27.33	132.083	
5,300.00	5,244.78	5,817.61	5,796.29	20.75	20.90	-159.44	-636.08	2,978.14	3,614.44	3,586.58	27.86	129.741	
5,400.00	5,342.80	5,917.48	5,895.06	21.22	21.30	-159.48	-638.84	2,963.63	3,619.04	3,590.65	28.39	127.483	
5,500.00	5,440.82	6,017.35	5,993.83	21.68	21.70	-159.51	-641.61	2,949.13	3,623.65	3,594.73	28.92	125.304	
5,600.00	5,538.85	6,117.22	6,092.60	22.15	22.10	-159.55	-644.37	2,934.62	3,628.25	3,598.80	29.45	123.201	
5,700.00	5,636.87	6,217.09	6,191.38	22.61	22.50	-159.58	-647.14	2,920.11	3,632.86	3,602.87	29.98	121.170	
5,800.00	5,734.89	6,316.96	6,290.15	23.08	22.90	-159.61	-649.90	2,905.61	3,637.46	3,606.95	30.51	119.207	
5,900.00	5,832.92	6,416.83	6,388.92	23.55	23.30	-159.65	-652.67	2,891.10	3,642.07	3,611.02	31.05	117.310	
6,000.00	5,930.94	6,516.70	6,487.69	24.02	23.70	-159.68	-655.43	2,876.60	3,646.68	3,615.10	31.58	115.474	
6,100.00	6,028.96	6,616.57	6,586.46	24.49	24.11	-159.72	-658.20	2,862.09	3,651.29	3,619.18	32.11	113.698	
6,200.00	6,126.98	6,716.44	6,685.24	24.96	24.52	-159.75	-660.96	2,847.59	3,655.90	3,623.25	32.65	111.978	
6,300.00	6,225.01	6,816.31	6,784.01	25.43	24.92	-159.79	-663.73	2,833.08	3,660.52	3,627.33	33.18	110.312	
6,400.00	6,323.03	6,916.18	6,882.78	25.90	25.33	-159.82	-666.49	2,818.58	3,665.13	3,631.41	33.72	108.697	
6,500.00	6,421.05	7,016.05	6,981.55	26.37	25.74	-159.85	-669.26	2,804.07	3,669.75	3,635.49	34.25	107.132	
6,600.00	6,519.08	7,115.91	7,080.32	26.84	26.15	-159.89	-672.02	2,789.57	3,674.36	3,639.57	34.79	105.614	
6,700.00	6,617.10	7,215.78	7,179.10	27.31	26.55	-159.92	-674.78	2,775.06	3,678.98	3,643.65	35.33	104.141	
6,719.50	6,636.21	7,235.26	7,198.36	27.40	26.63	-159.93	-675.32	2,772.23	3,679.88	3,644.45	35.43	103.858	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - KC7 Fed Com 603H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,800.00	6,715.28	7,315.69	7,277.91	27.78	26.96	-159.97	-677.55	2,760.55	3,682.81	3,646.94	35.86	102.692	
6,900.00	6,813.92	7,415.67	7,376.79	28.22	27.38	-159.99	-680.32	2,746.03	3,684.22	3,647.82	36.39	101.229	
7,000.00	6,912.96	7,515.67	7,475.68	28.64	27.79	-159.99	-683.09	2,731.51	3,683.17	3,646.25	36.92	99.752	
7,100.00	7,012.32	7,615.60	7,574.52	29.04	28.20	-159.96	-685.85	2,716.99	3,679.66	3,642.22	37.45	98.263	
7,200.00	7,111.95	7,715.40	7,673.22	29.42	28.61	-159.90	-688.62	2,702.50	3,673.70	3,635.73	37.97	96.763	
7,300.00	7,211.76	7,815.01	7,771.74	29.77	29.02	-159.81	-691.37	2,688.03	3,665.29	3,626.81	38.48	95.252	
7,400.00	7,311.70	7,914.36	7,869.99	30.10	29.43	-159.70	-694.12	2,673.60	3,654.43	3,615.44	38.99	93.732	
7,480.31	7,392.00	7,993.90	7,948.66	30.35	29.76	97.86	-696.33	2,662.05	3,643.95	3,604.56	39.39	92.512	
7,500.00	7,411.69	8,013.38	7,967.92	30.41	29.85	97.87	-696.86	2,659.22	3,641.19	3,601.70	39.49	92.214	
7,600.00	7,511.69	8,112.28	8,065.74	30.71	30.26	97.95	-699.60	2,644.86	3,627.17	3,587.19	39.98	90.727	
7,700.00	7,611.69	8,211.18	8,163.55	31.01	30.67	98.02	-702.34	2,630.49	3,613.15	3,572.68	40.47	89.274	
7,800.00	7,711.69	8,310.08	8,261.36	31.31	31.08	98.10	-705.08	2,616.13	3,599.15	3,558.18	40.97	87.854	
7,900.00	7,811.69	8,408.98	8,359.18	31.62	31.49	98.18	-707.82	2,601.76	3,585.14	3,543.68	41.46	86.467	
8,000.00	7,911.69	8,507.88	8,456.99	31.92	31.90	98.25	-710.55	2,587.40	3,571.15	3,529.19	41.96	85.112	
8,100.00	8,011.69	8,606.78	8,554.80	32.23	32.31	98.33	-713.29	2,573.03	3,557.16	3,514.70	42.45	83.787	
8,200.00	8,111.69	8,705.68	8,652.62	32.54	32.73	98.41	-716.03	2,558.67	3,543.18	3,500.22	42.95	82.491	
8,300.00	8,211.69	8,804.58	8,750.43	32.84	33.14	98.49	-718.77	2,544.30	3,529.20	3,485.75	43.45	81.224	
8,400.00	8,311.69	8,903.48	8,848.25	33.15	33.55	98.57	-721.51	2,529.94	3,515.23	3,471.28	43.95	79.985	
8,500.00	8,411.69	9,002.38	8,946.06	33.46	33.97	98.65	-724.24	2,515.58	3,501.27	3,456.82	44.45	78.772	
8,600.00	8,511.69	9,101.29	9,043.87	33.77	34.38	98.73	-726.98	2,501.21	3,487.31	3,442.36	44.95	77.586	
8,700.00	8,611.69	9,200.19	9,141.69	34.08	34.79	98.81	-729.72	2,486.85	3,473.36	3,427.91	45.45	76.425	
8,800.00	8,711.69	9,299.09	9,239.50	34.40	35.21	98.89	-732.46	2,472.48	3,459.42	3,413.47	45.95	75.288	
8,900.00	8,811.69	9,397.99	9,337.32	34.71	35.62	98.97	-735.20	2,458.12	3,445.48	3,399.03	46.45	74.175	
9,000.00	8,911.69	9,496.89	9,435.13	35.03	36.04	99.06	-737.93	2,443.75	3,431.55	3,384.60	46.95	73.085	
9,100.00	9,011.69	9,595.79	9,532.94	35.34	36.46	99.14	-740.67	2,429.39	3,417.63	3,370.18	47.46	72.017	
9,200.00	9,111.69	9,694.69	9,630.76	35.66	36.87	99.23	-743.41	2,415.02	3,403.72	3,355.76	47.96	70.971	
9,300.00	9,211.69	9,793.59	9,728.57	35.97	37.29	99.31	-746.15	2,400.66	3,389.81	3,341.35	48.46	69.947	
9,400.00	9,311.69	9,892.49	9,826.38	36.29	37.70	99.40	-748.89	2,386.30	3,375.91	3,326.95	48.97	68.942	
9,500.00	9,411.69	9,991.39	9,924.20	36.61	38.12	99.48	-751.62	2,371.93	3,362.02	3,312.55	49.47	67.958	
9,588.35	9,500.04	10,078.77	10,010.61	36.89	38.49	99.56	-754.04	2,359.24	3,349.76	3,299.84	49.92	67.105	
9,600.00	9,511.69	10,090.29	10,022.01	36.93	38.54	100.30	-754.36	2,357.57	3,348.16	3,298.18	49.98	66.994	
9,650.00	9,561.57	10,139.54	10,070.72	37.08	38.74	101.03	-755.72	2,350.41	3,341.80	3,291.57	50.23	66.533	
9,700.00	9,610.99	10,175.19	10,105.98	37.23	38.89	101.69	-756.70	2,345.27	3,336.34	3,285.90	50.45	66.138	
9,750.00	9,659.56	10,200.00	10,130.54	37.38	39.00	102.22	-757.36	2,341.84	3,332.10	3,281.46	50.63	65.808	
9,800.00	9,706.91	10,227.13	10,157.43	37.51	39.11	102.68	-758.04	2,338.28	3,329.15	3,278.33	50.82	65.507	
9,850.00	9,752.69	10,251.94	10,182.04	37.63	39.21	103.02	-758.63	2,335.18	3,327.56	3,276.56	51.00	65.249	
9,881.21	9,780.32	10,266.91	10,196.90	37.70	39.27	103.17	-758.97	2,333.39	3,327.28	3,276.18	51.10	65.109	
9,900.00	9,796.55	10,275.71	10,205.63	37.74	39.31	103.25	-759.16	2,332.36	3,327.38	3,276.22	51.17	65.030	
9,950.00	9,838.15	10,300.00	10,229.76	37.83	39.40	103.36	-759.69	2,329.63	3,328.67	3,277.33	51.33	64.846	
10,000.00	9,877.18	10,300.00	10,229.76	37.92	39.40	103.08	-759.69	2,329.63	3,331.54	3,280.11	51.43	64.780	
10,050.00	9,913.34	10,339.01	10,268.56	37.99	39.56	103.13	-760.46	2,325.56	3,335.74	3,284.12	51.62	64.618	
10,100.00	9,946.35	10,356.90	10,286.36	38.05	39.63	102.79	-760.79	2,323.82	3,341.57	3,289.82	51.76	64.563	
10,150.00	9,975.97	10,372.93	10,302.31	38.11	39.69	102.29	-761.08	2,322.34	3,348.94	3,297.06	51.88	64.548	
10,200.00	10,001.96	10,400.00	10,329.28	38.15	39.79	101.81	-761.53	2,319.98	3,357.88	3,305.84	52.04	64.529	
10,250.00	10,024.13	10,400.00	10,329.28	38.19	39.79	100.78	-761.53	2,319.98	3,368.21	3,316.10	52.11	64.634	
10,300.00	10,042.32	10,400.00	10,329.28	38.23	39.79	99.58	-761.53	2,319.98	3,380.05	3,327.86	52.18	64.772	
10,350.00	10,056.38	10,400.00	10,329.28	38.28	39.79	98.22	-761.53	2,319.98	3,393.27	3,341.02	52.25	64.940	
10,400.00	10,066.20	10,400.00	10,329.28	38.33	39.79	96.72	-761.53	2,319.98	3,407.78	3,355.46	52.32	65.136	
10,450.00	10,071.72	10,423.88	10,353.08	38.40	39.88	95.50	-761.89	2,318.05	3,423.29	3,370.84	52.45	65.266	
10,488.35	10,073.00	10,424.30	10,353.49	38.46	39.88	94.17	-761.90	2,318.02	3,435.99	3,383.49	52.50	65.448	
10,500.00	10,073.00	10,424.21	10,353.40	38.48	39.88	94.17	-761.90	2,318.02	3,439.96	3,387.44	52.51	65.506	
10,600.00	10,073.00	10,423.42	10,352.62	38.70	39.88	94.15	-761.89	2,318.08	3,475.40	3,422.75	52.65	66.013	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - KC7 Fed Com 603H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,700.00	10,073.00	10,422.62	10,351.82	39.01	39.88	94.14	-761.87	2,318.15	3,513.34	3,460.53	52.80	66.536	
10,800.00	10,073.00	12,974.15	11,599.81	39.41	48.60	114.75	756.37	2,291.92	3,538.52	3,479.76	58.76	60.224	
10,900.00	10,073.00	13,074.11	11,596.81	39.89	49.40	114.70	856.28	2,290.98	3,537.31	3,477.59	59.72	59.231	
11,000.00	10,073.00	13,174.06	11,593.82	40.44	50.24	114.66	956.18	2,290.03	3,536.10	3,475.35	60.75	58.210	
11,100.00	10,073.00	13,274.02	11,590.82	41.06	51.11	114.61	1,056.09	2,289.08	3,534.89	3,473.06	61.83	57.168	
11,200.00	10,073.00	13,373.97	11,587.83	41.75	52.03	114.57	1,156.00	2,288.14	3,533.69	3,470.71	62.98	56.112	
11,300.00	10,073.00	13,473.93	11,584.83	42.49	52.98	114.53	1,255.90	2,287.19	3,532.49	3,468.31	64.17	55.047	
11,400.00	10,073.00	13,573.88	11,581.84	43.29	53.97	114.48	1,355.81	2,286.25	3,531.29	3,465.87	65.42	53.978	
11,500.00	10,073.00	13,673.84	11,578.84	44.13	54.99	114.44	1,455.71	2,285.30	3,530.09	3,463.37	66.72	52.911	
11,600.00	10,073.00	13,773.79	11,575.85	45.03	56.03	114.39	1,555.62	2,284.36	3,528.89	3,460.84	68.06	51.850	
11,700.00	10,073.00	13,873.75	11,572.85	45.96	57.11	114.35	1,655.52	2,283.41	3,527.70	3,458.26	69.44	50.799	
11,800.00	10,073.00	13,973.70	11,569.86	46.94	58.21	114.30	1,755.43	2,282.47	3,526.51	3,455.64	70.87	49.759	
11,900.00	10,073.00	14,073.66	11,566.86	47.95	59.34	114.26	1,855.34	2,281.52	3,525.32	3,452.98	72.34	48.735	
12,000.00	10,073.00	14,173.61	11,563.87	49.00	60.50	114.21	1,955.24	2,280.58	3,524.13	3,450.30	73.84	47.728	
12,100.00	10,073.00	14,273.57	11,560.87	50.08	61.67	114.17	2,055.15	2,279.63	3,522.95	3,447.58	75.37	46.741	
12,200.00	10,073.00	14,373.52	11,557.88	51.19	62.87	114.12	2,155.05	2,278.69	3,521.77	3,444.83	76.94	45.774	
12,300.00	10,073.00	14,473.48	11,554.88	52.33	64.09	114.08	2,254.96	2,277.74	3,520.59	3,442.05	78.53	44.829	
12,400.00	10,073.00	14,573.43	11,551.89	53.50	65.32	114.03	2,354.86	2,276.80	3,519.41	3,439.25	80.16	43.905	
12,500.00	10,073.00	14,673.39	11,548.89	54.69	66.58	113.99	2,454.77	2,275.85	3,518.23	3,436.42	81.81	43.004	
12,600.00	10,073.00	14,773.34	11,545.90	55.91	67.85	113.94	2,554.68	2,274.90	3,517.06	3,433.57	83.49	42.126	
12,700.00	10,073.00	14,873.30	11,542.90	57.14	69.13	113.90	2,654.58	2,273.96	3,515.89	3,430.70	85.19	41.271	
12,800.00	10,073.00	14,973.25	11,539.91	58.40	70.44	113.85	2,754.49	2,273.01	3,514.72	3,427.80	86.91	40.439	
12,900.00	10,073.00	15,073.21	11,536.91	59.68	71.75	113.81	2,854.39	2,272.07	3,513.55	3,424.89	88.66	39.629	
13,000.00	10,073.00	15,173.16	11,533.92	60.97	73.08	113.76	2,954.30	2,271.12	3,512.38	3,421.96	90.43	38.843	
13,100.00	10,073.00	15,273.12	11,530.92	62.28	74.42	113.72	3,054.20	2,270.18	3,511.22	3,419.01	92.21	38.078	
13,200.00	10,073.00	15,373.08	11,527.93	63.61	75.78	113.67	3,154.11	2,269.23	3,510.06	3,416.04	94.02	37.335	
13,300.00	10,073.00	15,473.03	11,524.93	64.95	77.14	113.63	3,254.02	2,268.29	3,508.90	3,413.07	95.84	36.614	
13,400.00	10,073.00	15,572.99	11,521.94	66.31	78.52	113.58	3,353.92	2,267.34	3,507.74	3,410.07	97.67	35.913	
13,500.00	10,073.00	15,672.94	11,518.94	67.68	79.91	113.54	3,453.83	2,266.40	3,506.59	3,407.06	99.53	35.233	
13,600.00	10,073.00	15,772.90	11,515.95	69.06	81.31	113.49	3,553.73	2,265.45	3,505.44	3,404.04	101.39	34.573	
13,700.00	10,073.00	15,872.85	11,512.95	70.45	82.71	113.45	3,653.64	2,264.51	3,504.29	3,401.01	103.28	33.932	
13,800.00	10,073.00	15,972.81	11,509.96	71.86	84.13	113.40	3,753.54	2,263.56	3,503.14	3,397.97	105.17	33.309	
13,900.00	10,073.00	16,072.76	11,506.96	73.27	85.55	113.36	3,853.45	2,262.62	3,501.99	3,394.92	107.08	32.705	
14,000.00	10,073.00	16,172.72	11,503.97	74.70	86.99	113.31	3,953.36	2,261.67	3,500.85	3,391.85	109.00	32.119	
14,100.00	10,073.00	16,272.67	11,500.97	76.13	88.43	113.27	4,053.26	2,260.72	3,499.71	3,388.78	110.93	31.549	
14,200.00	10,073.00	16,372.63	11,497.98	77.57	89.87	113.22	4,153.17	2,259.78	3,498.57	3,385.70	112.87	30.996	
14,300.00	10,073.00	16,472.58	11,494.98	79.02	91.33	113.18	4,253.07	2,258.83	3,497.43	3,382.61	114.82	30.459	
14,400.00	10,073.00	16,572.54	11,491.99	80.48	92.79	113.13	4,352.98	2,257.89	3,496.30	3,379.51	116.79	29.938	
14,500.00	10,073.00	16,672.49	11,488.99	81.95	94.25	113.09	4,452.88	2,256.94	3,495.17	3,376.41	118.76	29.431	
14,600.00	10,073.00	16,772.45	11,485.99	83.42	95.73	113.04	4,552.79	2,256.00	3,494.04	3,373.30	120.74	28.939	
14,700.00	10,073.00	16,872.40	11,483.00	84.90	97.20	112.99	4,652.70	2,255.05	3,492.91	3,370.18	122.72	28.461	
14,800.00	10,073.00	16,972.36	11,480.00	86.38	98.69	112.95	4,752.60	2,254.11	3,491.78	3,367.06	124.72	27.997	
14,900.00	10,073.00	17,072.31	11,477.01	87.87	100.18	112.90	4,852.51	2,253.16	3,490.66	3,363.93	126.72	27.545	
15,000.00	10,073.00	17,172.27	11,474.01	89.37	101.67	112.86	4,952.41	2,252.22	3,489.54	3,360.80	128.74	27.106	
15,100.00	10,073.00	17,272.22	11,471.02	90.87	103.17	112.81	5,052.32	2,251.27	3,488.42	3,357.66	130.76	26.679	
15,200.00	10,073.00	17,372.18	11,468.02	92.38	104.67	112.77	5,152.22	2,250.33	3,487.30	3,354.52	132.78	26.263	
15,300.00	10,073.00	17,472.13	11,465.03	93.89	106.18	112.72	5,252.13	2,249.38	3,486.19	3,351.37	134.82	25.859	
15,400.00	10,073.00	17,572.09	11,462.03	95.41	107.69	112.68	5,352.04	2,248.44	3,485.07	3,348.22	136.86	25.465	
15,500.00	10,073.00	17,672.04	11,459.04	96.93	109.21	112.63	5,451.94	2,247.49	3,483.96	3,345.06	138.90	25.082	
15,600.00	10,073.00	17,772.00	11,456.04	98.46	110.73	112.58	5,551.85	2,246.54	3,482.86	3,341.90	140.96	24.709	
15,700.00	10,073.00	17,871.95	11,453.05	99.99	112.25	112.54	5,651.75	2,245.60	3,481.75	3,338.73	143.02	24.345	
15,800.00	10,073.00	17,971.91	11,450.05	101.52	113.78	112.49	5,751.66	2,244.65	3,480.65	3,335.57	145.08	23.991	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design KC7 Fed Com/El Paso Fed Com - KC7 Fed Com 603H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,900.00	10,073.00	18,071.86	11,447.06	103.06	115.31	112.45	5,851.56	2,243.71	3,479.54	3,332.39	147.15	23.646	
16,000.00	10,073.00	18,171.82	11,444.06	104.60	116.85	112.40	5,951.47	2,242.76	3,478.45	3,329.22	149.23	23.310	
16,100.00	10,073.00	18,271.77	11,441.07	106.14	118.38	112.35	6,051.38	2,241.82	3,477.35	3,326.04	151.31	22.982	
16,200.00	10,073.00	18,371.73	11,438.07	107.69	119.92	112.31	6,151.28	2,240.87	3,476.25	3,322.86	153.39	22.663	
16,300.00	10,073.00	18,471.68	11,435.08	109.24	121.47	112.26	6,251.19	2,239.93	3,475.16	3,319.68	155.48	22.351	
16,400.00	10,073.00	18,571.64	11,432.08	110.79	123.01	112.22	6,351.09	2,238.98	3,474.07	3,316.49	157.58	22.047	
16,500.00	10,073.00	18,671.59	11,429.09	112.35	124.56	112.17	6,451.00	2,238.04	3,472.98	3,313.31	159.68	21.750	
16,600.00	10,073.00	18,771.55	11,426.09	113.91	126.11	112.12	6,550.90	2,237.09	3,471.90	3,310.12	161.78	21.460	
16,700.00	10,073.00	18,871.50	11,423.10	115.47	127.67	112.08	6,650.81	2,236.15	3,470.81	3,306.92	163.89	21.178	
16,800.00	10,073.00	18,971.46	11,420.10	117.03	129.22	112.03	6,750.72	2,235.20	3,469.73	3,303.73	166.00	20.902	
16,900.00	10,073.00	19,071.41	11,417.11	118.60	130.78	111.99	6,850.62	2,234.26	3,468.65	3,300.54	168.12	20.633	
17,000.00	10,073.00	19,171.37	11,414.11	120.17	132.34	111.94	6,950.53	2,233.31	3,467.58	3,297.34	170.24	20.369	
17,100.00	10,073.00	19,271.32	11,411.12	121.74	133.90	111.89	7,050.43	2,232.36	3,466.50	3,294.14	172.36	20.112	
17,200.00	10,073.00	19,371.28	11,408.12	123.31	135.47	111.85	7,150.34	2,231.42	3,465.43	3,290.94	174.49	19.861	
17,300.00	10,073.00	19,471.23	11,405.13	124.88	137.04	111.80	7,250.24	2,230.47	3,464.36	3,287.74	176.62	19.615	
17,400.00	10,073.00	19,571.19	11,402.13	126.46	138.61	111.75	7,350.15	2,229.53	3,463.29	3,284.54	178.75	19.375	
17,500.00	10,073.00	19,671.14	11,399.14	128.04	140.18	111.71	7,450.06	2,228.58	3,462.23	3,281.34	180.88	19.140	
17,600.00	10,073.00	19,771.10	11,396.14	129.62	141.75	111.66	7,549.96	2,227.64	3,461.16	3,278.14	183.02	18.911	
17,700.00	10,073.00	19,871.05	11,393.15	131.20	143.32	111.62	7,649.87	2,226.69	3,460.10	3,274.93	185.17	18.686	
17,800.00	10,073.00	19,971.01	11,390.15	132.79	144.90	111.57	7,749.77	2,225.75	3,459.04	3,271.73	187.31	18.467	
17,900.00	10,073.00	20,070.96	11,387.16	134.37	146.48	111.52	7,849.68	2,224.80	3,457.99	3,268.52	189.46	18.251	
18,000.00	10,073.00	20,170.92	11,384.16	135.96	148.06	111.48	7,949.58	2,223.86	3,456.93	3,265.32	191.62	18.041	
18,100.00	10,073.00	20,270.87	11,381.17	137.55	149.64	111.43	8,049.49	2,222.91	3,455.88	3,262.11	193.77	17.835	
18,200.00	10,073.00	20,370.83	11,378.17	139.14	151.22	111.38	8,149.40	2,221.97	3,454.83	3,258.90	195.93	17.633	
18,300.00	10,073.00	20,470.78	11,375.18	140.73	152.81	111.34	8,249.30	2,221.02	3,453.78	3,255.69	198.09	17.435	
18,400.00	10,073.00	20,570.74	11,372.18	142.32	154.39	111.29	8,349.21	2,220.08	3,452.74	3,252.48	200.26	17.242	
18,500.00	10,073.00	20,670.69	11,369.19	143.92	155.98	111.24	8,449.11	2,219.13	3,451.70	3,249.27	202.42	17.052	
18,600.00	10,073.00	20,770.65	11,366.19	145.51	157.57	111.20	8,549.02	2,218.18	3,450.66	3,246.06	204.59	16.866	
18,700.00	10,073.00	20,870.60	11,363.20	147.11	159.16	111.15	8,648.93	2,217.24	3,449.62	3,242.85	206.77	16.684	
18,800.00	10,073.00	20,970.56	11,360.20	148.71	160.75	111.10	8,748.83	2,216.29	3,448.58	3,239.64	208.94	16.505	
18,900.00	10,073.00	21,070.52	11,357.21	150.31	162.34	111.06	8,848.74	2,215.35	3,447.55	3,236.43	211.12	16.330	
19,000.00	10,073.00	21,170.47	11,354.21	151.91	163.93	111.01	8,948.64	2,214.40	3,446.52	3,233.22	213.30	16.158	
19,100.00	10,073.00	21,270.43	11,351.22	153.51	165.53	110.96	9,048.55	2,213.46	3,445.49	3,230.01	215.48	15.990	
19,200.00	10,073.00	21,370.38	11,348.22	155.11	167.12	110.92	9,148.45	2,212.51	3,444.46	3,226.80	217.67	15.825	
19,300.00	10,073.00	21,470.34	11,345.23	156.72	168.72	110.87	9,248.36	2,211.57	3,443.44	3,223.59	219.85	15.663	
19,400.00	10,073.00	21,570.29	11,342.23	158.32	170.31	110.82	9,348.27	2,210.62	3,442.42	3,220.38	222.04	15.504	
19,500.00	10,073.00	21,670.25	11,339.24	159.93	171.91	110.78	9,448.17	2,209.68	3,441.40	3,217.17	224.23	15.348	
19,600.00	10,073.00	21,770.20	11,336.24	161.53	173.51	110.73	9,548.08	2,208.73	3,440.38	3,213.96	226.42	15.195	
19,700.00	10,073.00	21,870.16	11,333.25	163.14	175.11	110.68	9,647.98	2,207.79	3,439.36	3,210.75	228.62	15.044	
19,800.00	10,073.00	21,970.11	11,330.25	164.75	176.71	110.63	9,747.89	2,206.84	3,438.35	3,207.54	230.82	14.897	
19,900.00	10,073.00	22,070.07	11,327.26	166.36	178.32	110.59	9,847.79	2,205.90	3,437.34	3,204.33	233.01	14.752	
20,000.00	10,073.00	22,170.02	11,324.26	167.97	179.92	110.54	9,947.70	2,204.95	3,436.33	3,201.12	235.21	14.609	
20,100.00	10,073.00	22,269.98	11,321.27	169.58	181.52	110.49	10,047.61	2,204.00	3,435.33	3,197.91	237.42	14.470	
20,175.44	10,073.00	22,310.90	11,320.04	170.79	182.18	110.47	10,088.51	2,203.62	3,434.74	3,196.23	238.51	14.401	
20,185.45	10,073.00	22,310.90	11,320.04	170.96	182.18	110.47	10,088.51	2,203.62	3,434.76	3,196.20	238.56	14.398	ES, SF

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

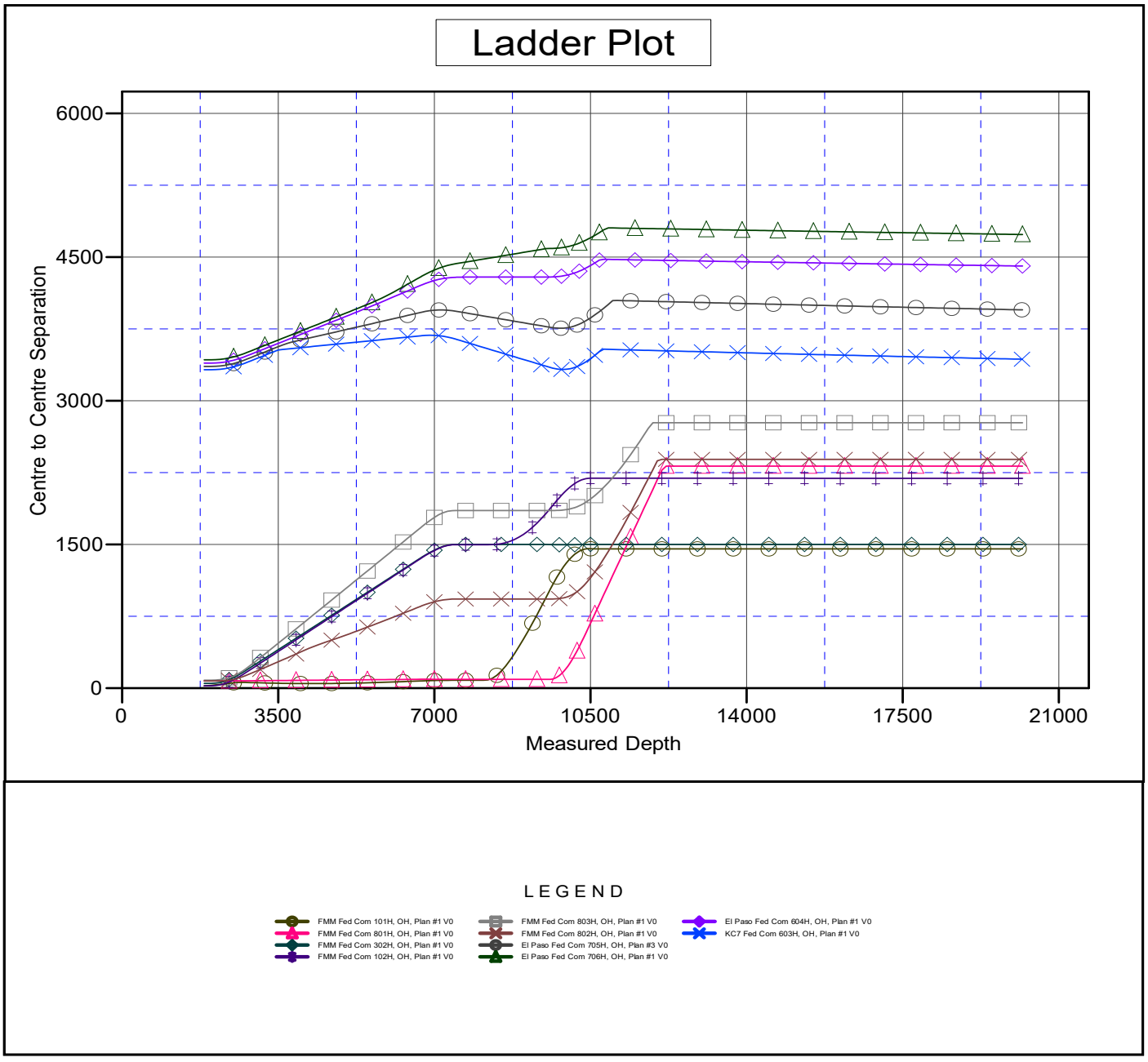
Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3288.6' GE + 30' KB @ 3318.60usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 301H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°



FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

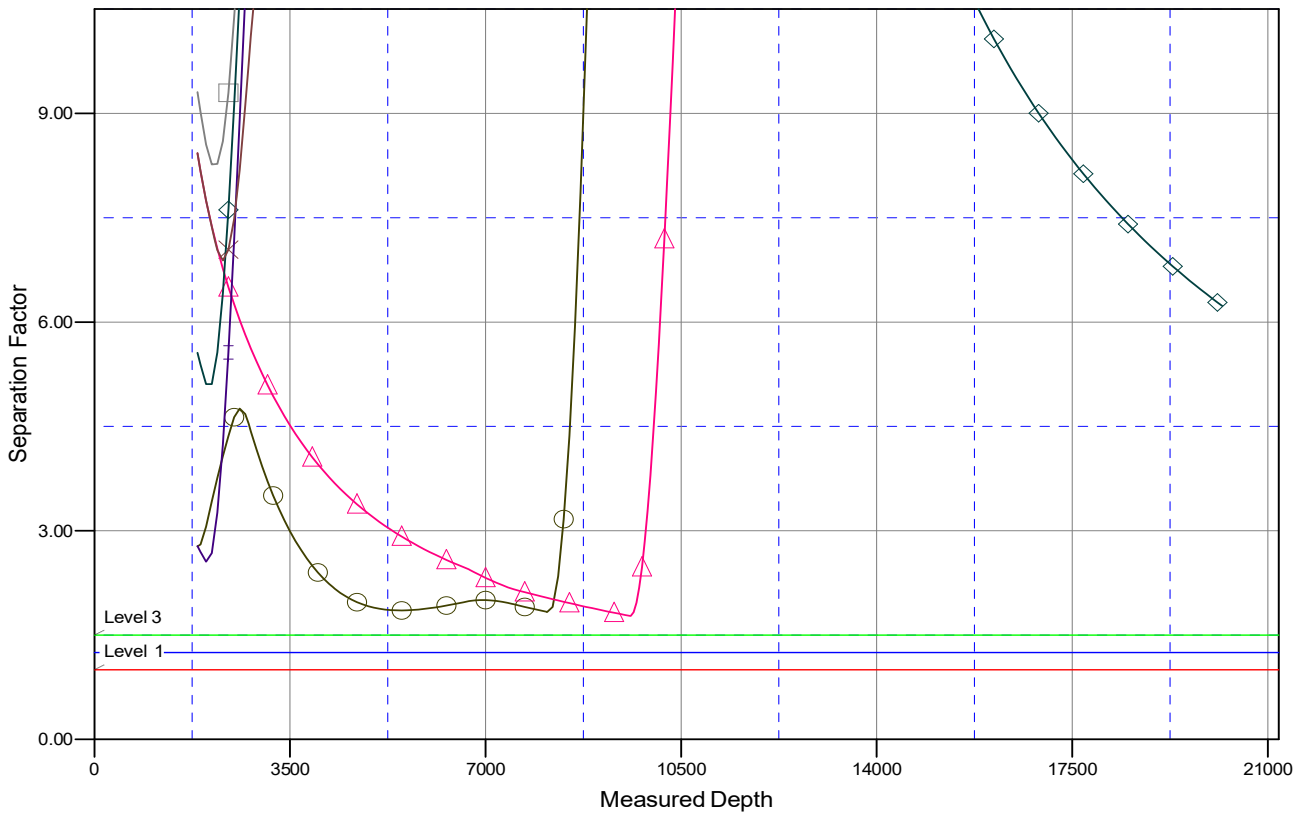
total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 301H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Reference Site:	FMM Fed Com	**MD Reference:**	3288.6' GE + 30' KB @ 3318.60usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 301H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3288.6' GE + 30' KB @ 3318.60usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 301H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°

Separation Factor Plot



LEGEND

FMM Fed Com 101H, OH, Plan #1 V0
FMM Fed Com 801H, OH, Plan #1 V0
FMM Fed Com 302H, OH, Plan #1 V0
FMM Fed Com 102H, OH, Plan #1 V0
FMM Fed Com 803H, OH, Plan #1 V0
FMM Fed Com 802H, OH, Plan #1 V0
El Paso Fed Com 705H, OH, Plan #3 V0
El Paso Fed Com 706H, OH, Plan #1 V0
El Paso Fed Com 604H, OH, Plan #1 V0
KC7 Fed Com 603H, OH, Plan #1 V0

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Franklin Mountain Energy LLC**
LEASE NO.:	**NMNM132081**
LOCATION:	Section 36, T.24 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico
Sundry ID:	**N/A**

WELL NAME & NO.:	**FMM Fed Com 101H**
SURFACE HOLE FOOTAGE:	345'/S & 1269'/W
BOTTOM HOLE FOOTAGE	150'/N & 380'/W

WELL NAME & NO.:	**FMM Fed Com 102H**
SURFACE HOLE FOOTAGE:	345'/S & 1319'/W
BOTTOM HOLE FOOTAGE	150'/N & 1877'/W

WELL NAME & NO.:	**FMM Fed Com 301H**
SURFACE HOLE FOOTAGE:	345'/S & 1294'/W
BOTTOM HOLE FOOTAGE	150'/N & 380'/W

WELL NAME & NO.:	**FMM Fed Com 801H**
SURFACE HOLE FOOTAGE:	270'/S & 1281'/W
BOTTOM HOLE FOOTAGE	150'/N & 380'/W

WELL NAME & NO.:	**FMM Fed Com 802H**
SURFACE HOLE FOOTAGE:	270'/S & 1306'/W
BOTTOM HOLE FOOTAGE	150'/N & 1306'/W

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	◉ None	○ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Wellhead Variance	○ Diverter		
Other	☑ 4 String Area	☑ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	☐ Cement Squeeze	☐ EchoMeter	
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit
Special Requirements Variance	☐ Break Testing	☐ Offline Cementing	

Approval Date: 03/04/2022

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1500 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **5280 feet** is:

    Option 1 (Single Stage):

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.**

    Option 2:

    Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

Approval Date: 03/04/2022

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.

❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

- Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. If cement does not circulate see B.1.a, c-d above.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst, potash or capitan reef.
  Cement excess is less than 25%, more cement might be required.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi.

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8** inch intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

Option 2:

a. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
ii. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
iii. Manufacturer representative shall install the test plug for the initial BOP test.
iv. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
v. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

Approval Date: 03/04/2022

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

Approval Date: 03/04/2022

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

 Approval Date: 03/04/2022

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

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hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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

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

CONDITIONS

Action 88160

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 88160
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	3/14/2022
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	3/14/2022
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	3/14/2022