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. **30-025-49810**

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory **[97779]**

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 03/03/2022

KZ
03/04/2022

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 02/11/2022

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: 02/11/2022

Additional Operator Remarks

Location of Well

0. SHL: TR M / 345 FSL / 1319 FWL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.167668 / LONG: -103.325527 (TVD: 0 feet, MD: 0 feet)

PPP: SESW / 0 FSL / 1882 FWL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.181255 / LONG: -103.323732 (TVD: 8474 feet, MD: 13400 feet)

PPP: NENW / 1323 FNL / 1881 FWL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.177619 / LONG: -103.323729 (TVD: 8474 feet, MD: 12100 feet)

PPP: TR M / 704 FSL / 1878 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.168657 / LONG: -103.323722 (TVD: 8474 feet, MD: 8836 feet)

BHL: TR C / 150 FNL / 1877 FWL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.195351 / LONG: -103.323742 (TVD: 8474 feet, MD: 18548 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
30-025-49809	97779	DOGIE DRAW;DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
332472	FMM FED COM	102H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373910	FRANKLIN MOUNTAIN ENERGY LLC	3289.7'

[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	1319	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
C	25	24S	35E		150	NORTH	1877	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°19'31.90" (103.325527°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°10'03.15" (32.167542°)
LONGITUDE = 103°19'30.22" (103.325062°)
STATE PLANE NAD 83 (N.M. EAST)
N: 426192.93' E: 853182.64'
STATE PLANE NAD 27 (N.M. EAST)
N: 426134.13' E: 811996.23'

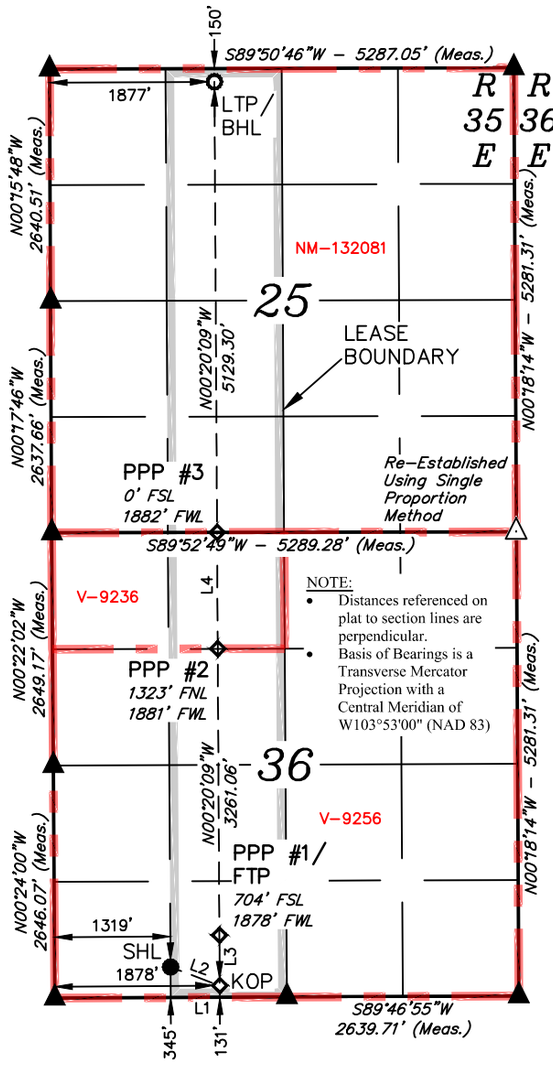
NAD 83 (KOP)
LATITUDE = 32°10'01.49" (32.167082°)
LONGITUDE = 103°19'25.39" (103.323721°)
NAD 27 (KOP)
LATITUDE = 32°10'01.04" (32.166955°)
LONGITUDE = 103°19'23.72" (103.323255°)
STATE PLANE NAD 83 (N.M. EAST)
N: 425984.86' E: 853743.61'
STATE PLANE NAD 27 (N.M. EAST)
N: 425926.05' E: 812557.18'

NAD 83 (PPP #1/FTP)
LATITUDE = 32°10'07.16" (32.168657°)
LONGITUDE = 103°19'25.40" (103.323722°)
NAD 27 (PPP #1/FTP)
LATITUDE = 32°10'06.71" (32.168530°)
LONGITUDE = 103°19'23.72" (103.323256°)
STATE PLANE NAD 83 (N.M. EAST)
N: 426557.79' E: 853737.86'
STATE PLANE NAD 27 (N.M. EAST)
N: 426498.97' E: 812551.46'

NAD 83 (PPP #2)
LATITUDE = 32°10'39.43" (32.177619°)
LONGITUDE = 103°19'25.42" (103.323729°)
NAD 27 (PPP #2)
LATITUDE = 32°10'38.97" (32.177492°)
LONGITUDE = 103°19'23.75" (103.323263°)
STATE PLANE NAD 83 (N.M. EAST)
N: 429818.21' E: 853705.11'
STATE PLANE NAD 27 (N.M. EAST)
N: 429759.30' E: 812518.84'

NAD 83 (PPP #3)
LATITUDE = 32°10'52.52" (32.181255°)
LONGITUDE = 103°19'25.43" (103.323732°)
NAD 27 (PPP #3)
LATITUDE = 32°10'52.06" (32.181128°)
LONGITUDE = 103°19'23.76" (103.323266°)
STATE PLANE NAD 83 (N.M. EAST)
N: 431141.02' E: 853691.83'
STATE PLANE NAD 27 (N.M. EAST)
N: 431082.07' E: 812505.60'

NAD 83 (LTP/BHL)
LATITUDE = 32°11'43.26" (32.195351°)
LONGITUDE = 103°19'25.47" (103.323742°)
NAD 27 (LTP/BHL)
LATITUDE = 32°11'42.81" (32.195225°)
LONGITUDE = 103°19'23.79" (103.323276°)
STATE PLANE NAD 83 (N.M. EAST)
N: 436269.31' E: 853640.31'
STATE PLANE NAD 27 (N.M. EAST)
N: 436210.23' E: 812454.29'



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S89°40'37"W	2642.16'
L2	S69°24'34"E	598.41'
L3	N00°20'06"W	573.04'
L4	N00°20'09"W	1323.07'

● = 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.)

2000' 1000' 0' 2000'

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

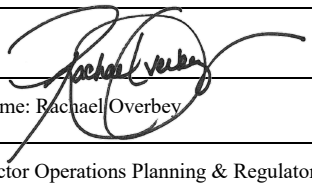
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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	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	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 102H

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	2,127'	1,191'			Carbonates
Salado	1,969'	1,349'			Salt, Carbonate & Clastics
Base Salt	111'	3,207'			Shaley Carbonate & Shale
Capitan	-1,210'	4,528'			Carbonates
Lamar	-1,830'	5,148'			Carbonate & Clastics
Bell Canyon	-1,977'	5,295'			Sandstone - oil/gas/water
Cherry Canyon	-2,705'	6,023'			Sandstone - oil/gas/water
Brushy Canyon	-4,026'	7,344'			Sand/carb/shales - oil/gas/water
Leonard	-5,014'	8,332'			Sand/carb/shales - oil/gas/water
HZ Target at Landing	-5,156'	8,474'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,269'	8,587'			Shale/Carbonates - oil/gas
Avalon	-5,341'	8,659'			Shale/Carbonates - oil/gas

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

Upper Permian Sands	0- 400’	Fresh Water
Delaware Sands	5,295’	Oil
Leonard	8,332’	Oil
Avalon	8,659’	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
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1300	1.18	1.67	4.99	5.32
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	5200	1.77	1.74	2.97	3.38
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	8836	1.50	1.73	2.28	1.56
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606	18548	1.32	1.67	1.38	1.15
						TVD	8474				2.05

7 5/8”casing will be set at 8,836’MD/8,474’ TVD at 90°Inc. Stress calculations on 5 ½” casing performed assuming 18,548’ depth. Actual max vertical depth is 8,474’.

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	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	1.747	9.06	0	330	Tail, 14.8 ppg, Class C,	1.349	6.51	1000	100%
Int1	12.25	9.625	5200	1523	0.125pps Poly-E-Flake Lead, 12.8 ppg, Class C 5% Salt, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal	1.79	9.74	0	154	1% CaCl2, 0.125pps Celo-Flake 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	8836	193	Lite Fill, 9.5 ppg, Class C 3lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake	2.13	5.97	4100	94	NeoCem 14.8 ppg, Class C 0.25 pps Cello-Flake, 2% CaICl2	1.33	6.29	7836	50%
Prod	6.75	5.5	18548	897	Tail, 14.5 ppg, Gas Migration Control	1.34	6.24	7836						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' – 8.836'	Brine	8.8-10.2	28-34	N/c
8,836' – 18,548' 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 8,474' TVD (deepest point of the well) is 160F with an estimated maximum bottom-hole pressure (BHP) at the same point of 5,287 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 102H
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)

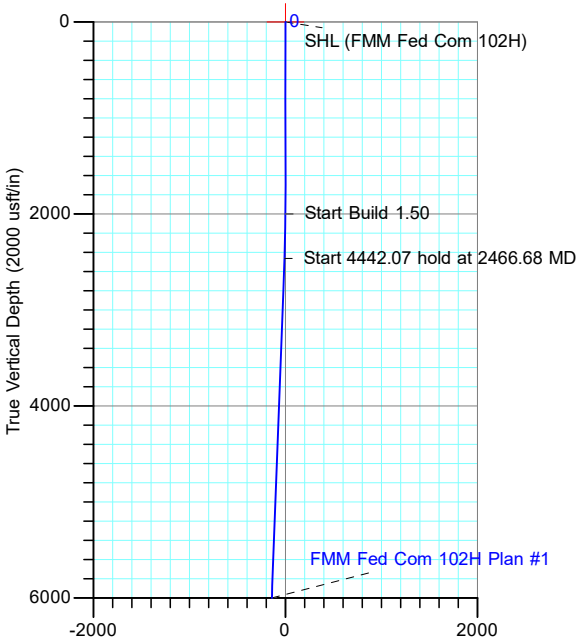
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

FRANKLIN MOUNTAIN ENERGY

3289.7' GE + 30' KB @ 3319.70usft

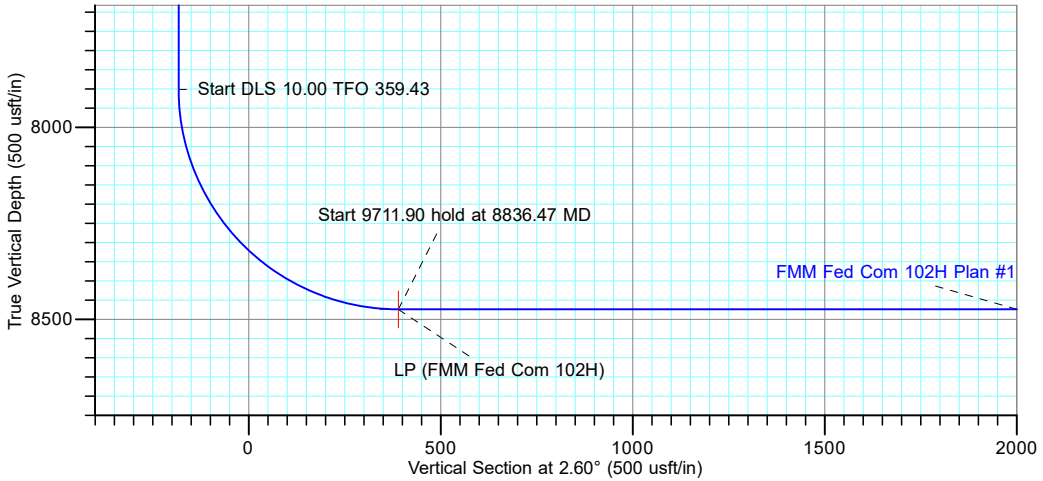
SECTION DETAILS

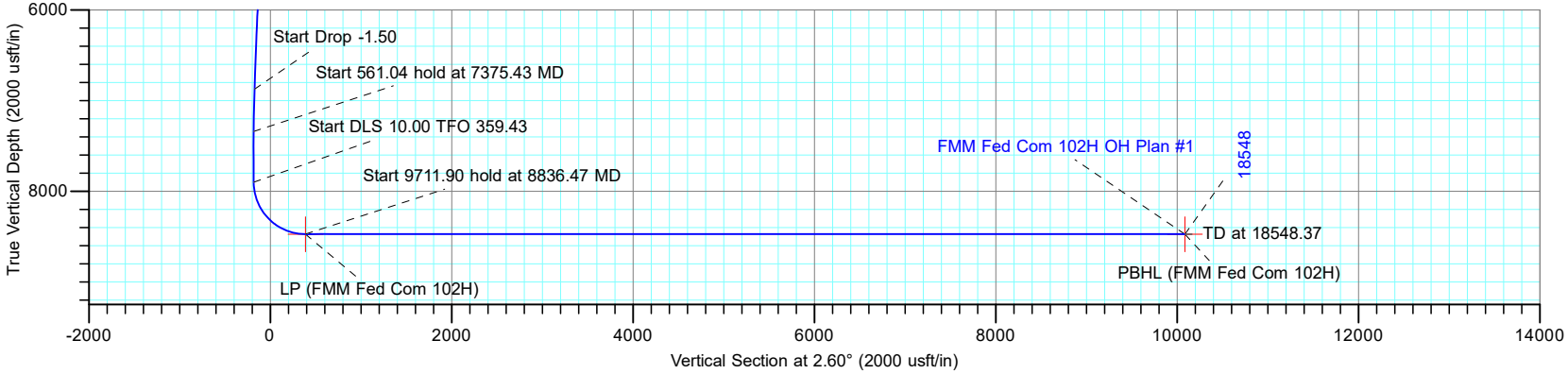
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2466.68	7.00	110.34	2465.52	-9.90	26.70	1.50	110.34	-8.68	Start 4442.07 hold at 2466.68 MD
6908.75	7.00	110.34	6874.48	-198.10	534.30	0.00	0.00	-173.65	Start Drop -1.50
7375.43	0.00	0.00	7340.00	-208.00	561.00	1.50	180.00	-182.32	Start 561.04 hold at 7375.43 MD
7936.47	0.00	0.00	7901.04	-208.00	561.00	0.00	0.00	-182.32	Start DLS 10.00 TFO 359.43
8836.47	90.00	359.43	8474.00	364.93	555.25	10.00	359.43	389.76	Start 9711.90 hold at 8836.47 MD
18548.37	90.00	359.43	8474.00	10076.34	457.83	0.00	0.00	10086.74	TD at 18548.37



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (FMM Fed Com 102H)	8474.00	364.93	555.25	32.168657	-103.323722
PBHL (FMM Fed Com 102H)	8474.00	10076.34	457.83	32.195351	-103.323742
SHL (FMM Fed Com 102H)	0.00	0.00	0.00	32.167668	-103.325527





TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 102H/OH)
FMM Fed Com
Created By: Dustin Ault Date: 14:51, August 27 20
Date: _____
Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 102H
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

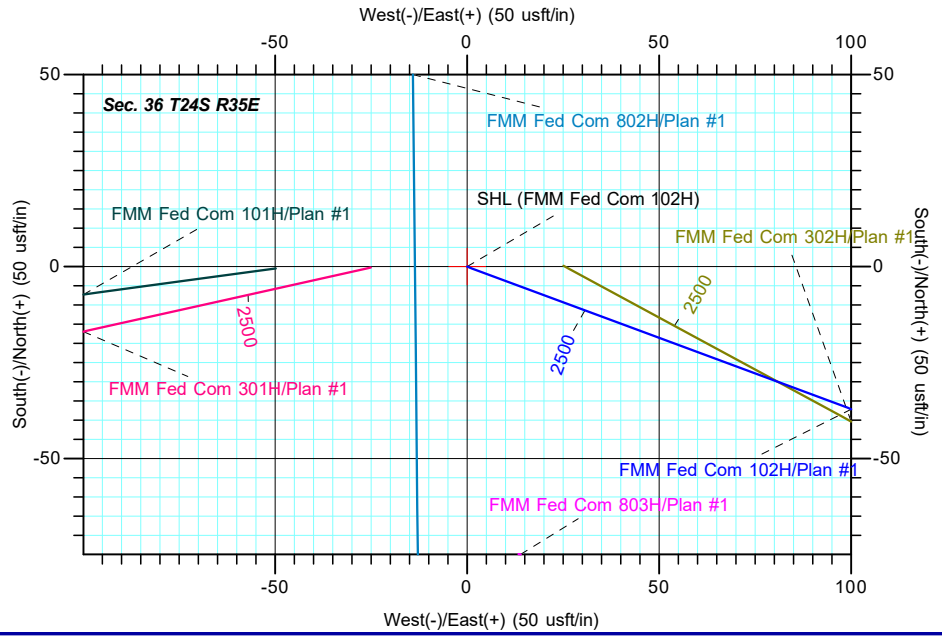
FRANKLIN MOUNTAIN ENERGY

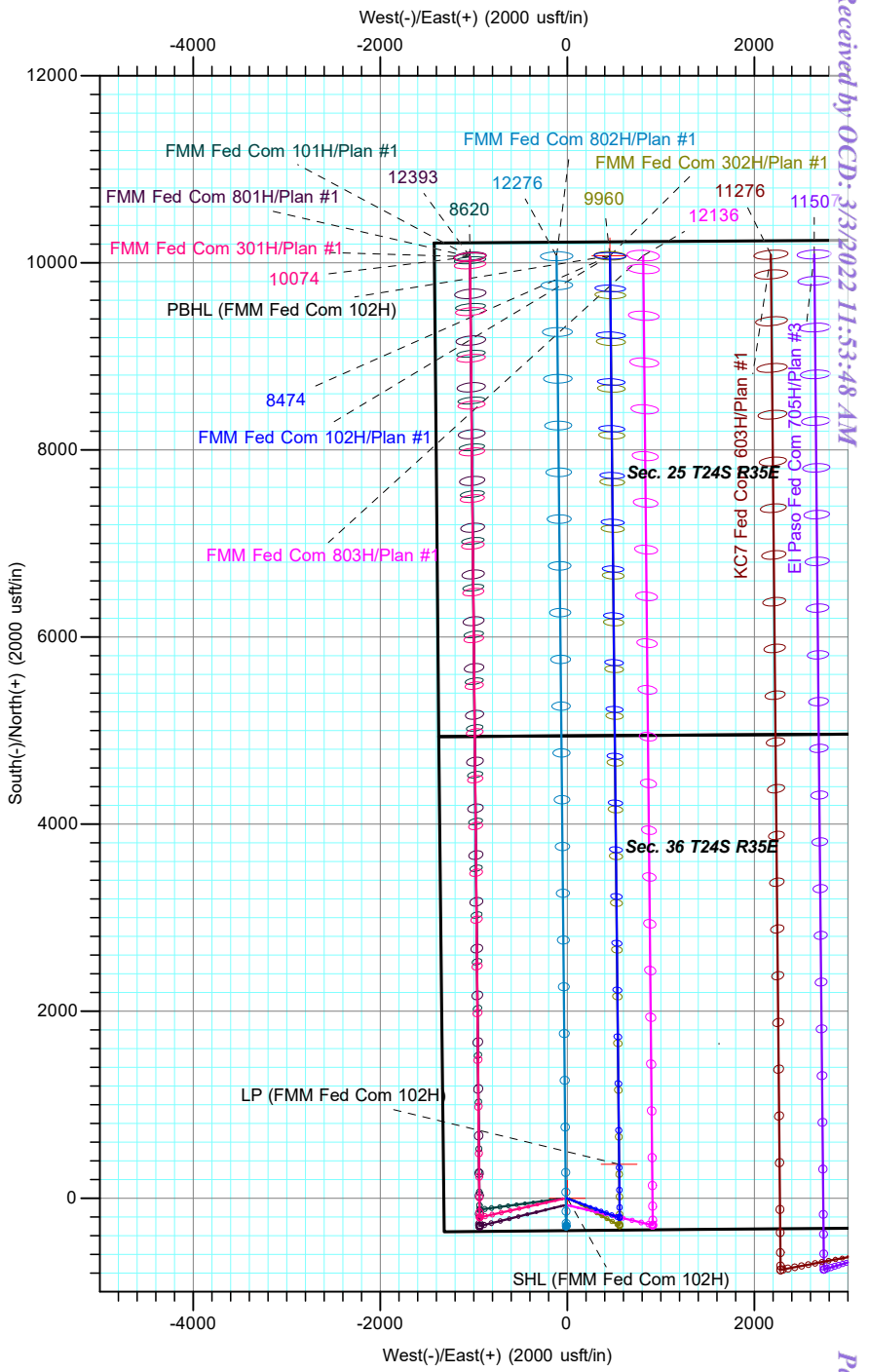
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (FMM Fed Com 102H)	8474.00	364.93	555.25	426557.79	853737.86	32.168657	-103.323722
PBHL (FMM Fed Com 102H)	8474.00	10076.34	457.83	436269.20	853640.44	32.195351	-103.323742
SHL (FMM Fed Com 102H)	0.00	0.00	0.00	426192.86	853182.61	32.167668	-103.325527

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
2466.68	7.00	110.34	2465.52	-9.90	26.70	1.50	110.34	-8.68	Start 4442.07 hold at 2466.68 MD
6908.75	7.00	110.34	6874.48	-198.10	534.30	0.00	0.00	-173.65	Start Drop -1.50
7375.43	0.00	0.00	7340.00	-208.00	561.00	1.50	180.00	-182.32	Start 561.04 hold at 7375.43 MD
7936.47	0.00	0.00	7901.04	-208.00	561.00	0.00	0.00	-182.32	Start DLS 10.00 TFO 359.43
8836.47	90.00	359.43	8474.00	364.93	555.25	10.00	359.43	389.76	Start 9711.90 hold at 8836.47 MD
18548.37	90.00	359.43	8474.00	10076.34	457.83	0.00	0.00	10086.74	TD at 18548.37





TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 102H/OH)
FMM Fed Com
Created By: Dustin Ault Date: 14:52, August 27 202
Date: _____
Approved: _____ Date: _____

Franklin Mountain Energy

Lea County, NM (NAD83)
FMM Fed Com
FMM Fed Com 102H

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 102H
Company:	Franklin Mountain Energy	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**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 102H

Well Position	**+N/-S**	0.47 usft	**Northing:**	426,192.86 usft	**Latitude:**	32.167668
	+E/-W	49.82 usft	**Easting:**	853,182.61 usft	**Longitude:**	-103.325527
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,289.70 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/27/2021	6.40	59.88	47,465.16035821

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	2.60

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

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,548.37	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	
2,466.68	7.00	110.34	2,465.52	-9.90	26.70	1.50	1.50	0.00	110.34	
6,908.75	7.00	110.34	6,874.48	-198.10	534.30	0.00	0.00	0.00	0.00	
7,375.43	0.00	0.00	7,340.00	-208.00	561.00	1.50	-1.50	0.00	180.00	
7,936.47	0.00	0.00	7,901.04	-208.00	561.00	0.00	0.00	0.00	0.00	
8,836.47	90.00	359.43	8,474.00	364.93	555.25	10.00	10.00	-0.06	359.43	
18,548.37	90.00	359.43	8,474.00	10,076.34	457.83	0.00	0.00	0.00	0.00	PBHL (FMM Fed Com

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Company:	Franklin Mountain Energy	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**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 102H)									
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	110.34	2,099.99	-0.46	1.23	-0.40	1.50	1.50	0.00
2,200.00	3.00	110.34	2,199.91	-1.82	4.91	-1.60	1.50	1.50	0.00
2,300.00	4.50	110.34	2,299.69	-4.09	11.04	-3.59	1.50	1.50	0.00
2,400.00	6.00	110.34	2,399.27	-7.27	19.62	-6.38	1.50	1.50	0.00
2,466.68	7.00	110.34	2,465.52	-9.90	26.70	-8.68	1.50	1.50	0.00
Start 4442.07 hold at 2466.68 MD									
2,500.00	7.00	110.34	2,498.59	-11.31	30.50	-9.91	0.00	0.00	0.00
2,600.00	7.00	110.34	2,597.85	-15.55	41.93	-13.63	0.00	0.00	0.00
2,700.00	7.00	110.34	2,697.10	-19.78	53.36	-17.34	0.00	0.00	0.00
2,800.00	7.00	110.34	2,796.36	-24.02	64.79	-21.06	0.00	0.00	0.00
2,900.00	7.00	110.34	2,895.61	-28.26	76.21	-24.77	0.00	0.00	0.00
3,000.00	7.00	110.34	2,994.86	-32.49	87.64	-28.48	0.00	0.00	0.00
3,100.00	7.00	110.34	3,094.12	-36.73	99.07	-32.20	0.00	0.00	0.00
3,200.00	7.00	110.34	3,193.37	-40.97	110.50	-35.91	0.00	0.00	0.00
3,300.00	7.00	110.34	3,292.63	-45.20	121.92	-39.62	0.00	0.00	0.00
3,400.00	7.00	110.34	3,391.88	-49.44	133.35	-43.34	0.00	0.00	0.00
3,500.00	7.00	110.34	3,491.14	-53.68	144.78	-47.05	0.00	0.00	0.00
3,600.00	7.00	110.34	3,590.39	-57.92	156.20	-50.77	0.00	0.00	0.00
3,700.00	7.00	110.34	3,689.65	-62.15	167.63	-54.48	0.00	0.00	0.00
3,800.00	7.00	110.34	3,788.90	-66.39	179.06	-58.19	0.00	0.00	0.00
3,900.00	7.00	110.34	3,888.16	-70.63	190.49	-61.91	0.00	0.00	0.00
4,000.00	7.00	110.34	3,987.41	-74.86	201.91	-65.62	0.00	0.00	0.00
4,100.00	7.00	110.34	4,086.66	-79.10	213.34	-69.33	0.00	0.00	0.00
4,200.00	7.00	110.34	4,185.92	-83.34	224.77	-73.05	0.00	0.00	0.00
4,300.00	7.00	110.34	4,285.17	-87.57	236.19	-76.76	0.00	0.00	0.00
4,400.00	7.00	110.34	4,384.43	-91.81	247.62	-80.48	0.00	0.00	0.00
4,500.00	7.00	110.34	4,483.68	-96.05	259.05	-84.19	0.00	0.00	0.00
4,600.00	7.00	110.34	4,582.94	-100.28	270.48	-87.90	0.00	0.00	0.00
4,700.00	7.00	110.34	4,682.19	-104.52	281.90	-91.62	0.00	0.00	0.00
4,800.00	7.00	110.34	4,781.45	-108.76	293.33	-95.33	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

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Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Company:	Franklin Mountain Energy	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**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	7.00	110.34	4,880.70	-112.99	304.76	-99.04	0.00	0.00	0.00
5,000.00	7.00	110.34	4,979.96	-117.23	316.19	-102.76	0.00	0.00	0.00
5,100.00	7.00	110.34	5,079.21	-121.47	327.61	-106.47	0.00	0.00	0.00
5,200.00	7.00	110.34	5,178.46	-125.70	339.04	-110.19	0.00	0.00	0.00
5,300.00	7.00	110.34	5,277.72	-129.94	350.47	-113.90	0.00	0.00	0.00
5,400.00	7.00	110.34	5,376.97	-134.18	361.89	-117.61	0.00	0.00	0.00
5,500.00	7.00	110.34	5,476.23	-138.42	373.32	-121.33	0.00	0.00	0.00
5,600.00	7.00	110.34	5,575.48	-142.65	384.75	-125.04	0.00	0.00	0.00
5,700.00	7.00	110.34	5,674.74	-146.89	396.18	-128.76	0.00	0.00	0.00
5,800.00	7.00	110.34	5,773.99	-151.13	407.60	-132.47	0.00	0.00	0.00
5,900.00	7.00	110.34	5,873.25	-155.36	419.03	-136.18	0.00	0.00	0.00
6,000.00	7.00	110.34	5,972.50	-159.60	430.46	-139.90	0.00	0.00	0.00
6,100.00	7.00	110.34	6,071.76	-163.84	441.88	-143.61	0.00	0.00	0.00
6,200.00	7.00	110.34	6,171.01	-168.07	453.31	-147.32	0.00	0.00	0.00
6,300.00	7.00	110.34	6,270.26	-172.31	464.74	-151.04	0.00	0.00	0.00
6,400.00	7.00	110.34	6,369.52	-176.55	476.17	-154.75	0.00	0.00	0.00
6,500.00	7.00	110.34	6,468.77	-180.78	487.59	-158.47	0.00	0.00	0.00
6,600.00	7.00	110.34	6,568.03	-185.02	499.02	-162.18	0.00	0.00	0.00
6,700.00	7.00	110.34	6,667.28	-189.26	510.45	-165.89	0.00	0.00	0.00
6,800.00	7.00	110.34	6,766.54	-193.49	521.88	-169.61	0.00	0.00	0.00
6,908.75	7.00	110.34	6,874.48	-198.10	534.30	-173.65	0.00	0.00	0.00
Start Drop -1.50									
7,000.00	5.63	110.34	6,965.17	-201.59	543.71	-176.70	1.50	-1.50	0.00
7,100.00	4.13	110.34	7,064.81	-204.55	551.69	-179.30	1.50	-1.50	0.00
7,200.00	2.63	110.34	7,164.63	-206.60	557.22	-181.09	1.50	-1.50	0.00
7,300.00	1.13	110.34	7,264.57	-207.74	560.30	-182.10	1.50	-1.50	0.00
7,375.43	0.00	0.00	7,340.00	-208.00	561.00	-182.32	1.50	-1.50	0.00
Start 561.04 hold at 7375.43 MD									
7,400.00	0.00	0.00	7,364.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,500.00	0.00	0.00	7,464.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,600.00	0.00	0.00	7,564.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,700.00	0.00	0.00	7,664.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,800.00	0.00	0.00	7,764.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,900.00	0.00	0.00	7,864.57	-208.00	561.00	-182.32	0.00	0.00	0.00
7,936.47	0.00	0.00	7,901.04	-208.00	561.00	-182.32	0.00	0.00	0.00
Start DLS 10.00 TFO 359.43									
7,950.00	1.35	359.43	7,914.57	-207.84	561.00	-182.16	10.00	10.00	0.00
8,000.00	6.35	359.43	7,964.44	-204.48	560.96	-178.81	10.00	10.00	0.00
8,050.00	11.35	359.43	8,013.83	-196.79	560.89	-171.13	10.00	10.00	0.00
8,100.00	16.35	359.43	8,062.36	-184.82	560.77	-159.18	10.00	10.00	0.00
8,150.00	21.35	359.43	8,109.66	-168.67	560.61	-143.05	10.00	10.00	0.00
8,200.00	26.35	359.43	8,155.37	-148.46	560.40	-122.87	10.00	10.00	0.00
8,250.00	31.35	359.43	8,199.15	-124.34	560.16	-98.79	10.00	10.00	0.00
8,300.00	36.35	359.43	8,240.66	-96.50	559.88	-70.99	10.00	10.00	0.00
8,350.00	41.35	359.43	8,279.59	-65.14	559.57	-39.68	10.00	10.00	0.00
8,400.00	46.35	359.43	8,315.63	-30.52	559.22	-5.10	10.00	10.00	0.00
8,450.00	51.35	359.43	8,348.52	7.12	558.84	32.48	10.00	10.00	0.00
8,500.00	56.35	359.43	8,378.01	47.48	558.44	72.78	10.00	10.00	0.00
8,550.00	61.35	359.43	8,403.86	90.26	558.01	115.49	10.00	10.00	0.00
8,600.00	66.35	359.43	8,425.89	135.12	557.56	160.29	10.00	10.00	0.00
8,650.00	71.35	359.43	8,443.92	181.74	557.09	206.84	10.00	10.00	0.00
8,700.00	76.35	359.43	8,457.82	229.75	556.61	254.78	10.00	10.00	0.00
8,750.00	81.35	359.43	8,467.48	278.79	556.12	303.74	10.00	10.00	0.00

FRANKLIN MOUNTAIN ENERGY

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Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**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)
8,800.00	86.35	359.43	8,472.84	328.48	555.62	353.36	10.00	10.00	0.00
8,836.47	90.00	359.43	8,474.00	364.93	555.25	389.76	10.00	10.00	0.00
Start 9711.90 hold at 8836.47 MD - LP (FMM Fed Com 102H)									
8,900.00	90.00	359.43	8,474.00	428.45	554.62	453.18	0.00	0.00	0.00
9,000.00	90.00	359.43	8,474.00	528.45	553.61	553.03	0.00	0.00	0.00
9,100.00	90.00	359.43	8,474.00	628.44	552.61	652.88	0.00	0.00	0.00
9,200.00	90.00	359.43	8,474.00	728.44	551.61	752.72	0.00	0.00	0.00
9,300.00	90.00	359.43	8,474.00	828.43	550.60	852.57	0.00	0.00	0.00
9,400.00	90.00	359.43	8,474.00	928.43	549.60	952.42	0.00	0.00	0.00
9,500.00	90.00	359.43	8,474.00	1,028.42	548.60	1,052.26	0.00	0.00	0.00
9,600.00	90.00	359.43	8,474.00	1,128.42	547.59	1,152.11	0.00	0.00	0.00
9,700.00	90.00	359.43	8,474.00	1,228.41	546.59	1,251.96	0.00	0.00	0.00
9,800.00	90.00	359.43	8,474.00	1,328.41	545.59	1,351.80	0.00	0.00	0.00
9,900.00	90.00	359.43	8,474.00	1,428.40	544.58	1,451.65	0.00	0.00	0.00
10,000.00	90.00	359.43	8,474.00	1,528.40	543.58	1,551.49	0.00	0.00	0.00
10,100.00	90.00	359.43	8,474.00	1,628.39	542.58	1,651.34	0.00	0.00	0.00
10,200.00	90.00	359.43	8,474.00	1,728.39	541.57	1,751.19	0.00	0.00	0.00
10,300.00	90.00	359.43	8,474.00	1,828.38	540.57	1,851.03	0.00	0.00	0.00
10,400.00	90.00	359.43	8,474.00	1,928.38	539.57	1,950.88	0.00	0.00	0.00
10,500.00	90.00	359.43	8,474.00	2,028.37	538.57	2,050.73	0.00	0.00	0.00
10,600.00	90.00	359.43	8,474.00	2,128.37	537.56	2,150.57	0.00	0.00	0.00
10,700.00	90.00	359.43	8,474.00	2,228.36	536.56	2,250.42	0.00	0.00	0.00
10,800.00	90.00	359.43	8,474.00	2,328.36	535.56	2,350.27	0.00	0.00	0.00
10,900.00	90.00	359.43	8,474.00	2,428.35	534.55	2,450.11	0.00	0.00	0.00
11,000.00	90.00	359.43	8,474.00	2,528.35	533.55	2,549.96	0.00	0.00	0.00
11,100.00	90.00	359.43	8,474.00	2,628.34	532.55	2,649.80	0.00	0.00	0.00
11,200.00	90.00	359.43	8,474.00	2,728.34	531.54	2,749.65	0.00	0.00	0.00
11,300.00	90.00	359.43	8,474.00	2,828.33	530.54	2,849.50	0.00	0.00	0.00
11,400.00	90.00	359.43	8,474.00	2,928.33	529.54	2,949.34	0.00	0.00	0.00
11,500.00	90.00	359.43	8,474.00	3,028.32	528.53	3,049.19	0.00	0.00	0.00
11,600.00	90.00	359.43	8,474.00	3,128.32	527.53	3,149.04	0.00	0.00	0.00
11,700.00	90.00	359.43	8,474.00	3,228.31	526.53	3,248.88	0.00	0.00	0.00
11,800.00	90.00	359.43	8,474.00	3,328.31	525.52	3,348.73	0.00	0.00	0.00
11,900.00	90.00	359.43	8,474.00	3,428.30	524.52	3,448.58	0.00	0.00	0.00
12,000.00	90.00	359.43	8,474.00	3,528.30	523.52	3,548.42	0.00	0.00	0.00
12,100.00	90.00	359.43	8,474.00	3,628.29	522.52	3,648.27	0.00	0.00	0.00
12,200.00	90.00	359.43	8,474.00	3,728.29	521.51	3,748.12	0.00	0.00	0.00
12,300.00	90.00	359.43	8,474.00	3,828.28	520.51	3,847.96	0.00	0.00	0.00
12,400.00	90.00	359.43	8,474.00	3,928.28	519.51	3,947.81	0.00	0.00	0.00
12,500.00	90.00	359.43	8,474.00	4,028.27	518.50	4,047.65	0.00	0.00	0.00
12,600.00	90.00	359.43	8,474.00	4,128.27	517.50	4,147.50	0.00	0.00	0.00
12,700.00	90.00	359.43	8,474.00	4,228.26	516.50	4,247.35	0.00	0.00	0.00
12,800.00	90.00	359.43	8,474.00	4,328.26	515.49	4,347.19	0.00	0.00	0.00
12,900.00	90.00	359.43	8,474.00	4,428.25	514.49	4,447.04	0.00	0.00	0.00
13,000.00	90.00	359.43	8,474.00	4,528.25	513.49	4,546.89	0.00	0.00	0.00
13,100.00	90.00	359.43	8,474.00	4,628.24	512.48	4,646.73	0.00	0.00	0.00
13,200.00	90.00	359.43	8,474.00	4,728.24	511.48	4,746.58	0.00	0.00	0.00
13,300.00	90.00	359.43	8,474.00	4,828.23	510.48	4,846.43	0.00	0.00	0.00
13,400.00	90.00	359.43	8,474.00	4,928.23	509.47	4,946.27	0.00	0.00	0.00
13,500.00	90.00	359.43	8,474.00	5,028.22	508.47	5,046.12	0.00	0.00	0.00
13,600.00	90.00	359.43	8,474.00	5,128.22	507.47	5,145.96	0.00	0.00	0.00
13,700.00	90.00	359.43	8,474.00	5,228.21	506.47	5,245.81	0.00	0.00	0.00
13,800.00	90.00	359.43	8,474.00	5,328.21	505.46	5,345.66	0.00	0.00	0.00
13,900.00	90.00	359.43	8,474.00	5,428.20	504.46	5,445.50	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

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Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**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)
14,000.00	90.00	359.43	8,474.00	5,528.20	503.46	5,545.35	0.00	0.00	0.00
14,100.00	90.00	359.43	8,474.00	5,628.19	502.45	5,645.20	0.00	0.00	0.00
14,200.00	90.00	359.43	8,474.00	5,728.19	501.45	5,745.04	0.00	0.00	0.00
14,300.00	90.00	359.43	8,474.00	5,828.18	500.45	5,844.89	0.00	0.00	0.00
14,400.00	90.00	359.43	8,474.00	5,928.18	499.44	5,944.74	0.00	0.00	0.00
14,500.00	90.00	359.43	8,474.00	6,028.17	498.44	6,044.58	0.00	0.00	0.00
14,600.00	90.00	359.43	8,474.00	6,128.17	497.44	6,144.43	0.00	0.00	0.00
14,700.00	90.00	359.43	8,474.00	6,228.16	496.43	6,244.27	0.00	0.00	0.00
14,800.00	90.00	359.43	8,474.00	6,328.16	495.43	6,344.12	0.00	0.00	0.00
14,900.00	90.00	359.43	8,474.00	6,428.15	494.43	6,443.97	0.00	0.00	0.00
15,000.00	90.00	359.43	8,474.00	6,528.15	493.43	6,543.81	0.00	0.00	0.00
15,100.00	90.00	359.43	8,474.00	6,628.14	492.42	6,643.66	0.00	0.00	0.00
15,200.00	90.00	359.43	8,474.00	6,728.14	491.42	6,743.51	0.00	0.00	0.00
15,300.00	90.00	359.43	8,474.00	6,828.13	490.42	6,843.35	0.00	0.00	0.00
15,400.00	90.00	359.43	8,474.00	6,928.13	489.41	6,943.20	0.00	0.00	0.00
15,500.00	90.00	359.43	8,474.00	7,028.12	488.41	7,043.05	0.00	0.00	0.00
15,600.00	90.00	359.43	8,474.00	7,128.12	487.41	7,142.89	0.00	0.00	0.00
15,700.00	90.00	359.43	8,474.00	7,228.11	486.40	7,242.74	0.00	0.00	0.00
15,800.00	90.00	359.43	8,474.00	7,328.11	485.40	7,342.58	0.00	0.00	0.00
15,900.00	90.00	359.43	8,474.00	7,428.10	484.40	7,442.43	0.00	0.00	0.00
16,000.00	90.00	359.43	8,474.00	7,528.10	483.39	7,542.28	0.00	0.00	0.00
16,100.00	90.00	359.43	8,474.00	7,628.09	482.39	7,642.12	0.00	0.00	0.00
16,200.00	90.00	359.43	8,474.00	7,728.09	481.39	7,741.97	0.00	0.00	0.00
16,300.00	90.00	359.43	8,474.00	7,828.08	480.38	7,841.82	0.00	0.00	0.00
16,400.00	90.00	359.43	8,474.00	7,928.08	479.38	7,941.66	0.00	0.00	0.00
16,500.00	90.00	359.43	8,474.00	8,028.07	478.38	8,041.51	0.00	0.00	0.00
16,600.00	90.00	359.43	8,474.00	8,128.07	477.38	8,141.36	0.00	0.00	0.00
16,700.00	90.00	359.43	8,474.00	8,228.06	476.37	8,241.20	0.00	0.00	0.00
16,800.00	90.00	359.43	8,474.00	8,328.06	475.37	8,341.05	0.00	0.00	0.00
16,900.00	90.00	359.43	8,474.00	8,428.05	474.37	8,440.90	0.00	0.00	0.00
17,000.00	90.00	359.43	8,474.00	8,528.05	473.36	8,540.74	0.00	0.00	0.00
17,100.00	90.00	359.43	8,474.00	8,628.04	472.36	8,640.59	0.00	0.00	0.00
17,200.00	90.00	359.43	8,474.00	8,728.04	471.36	8,740.43	0.00	0.00	0.00
17,300.00	90.00	359.43	8,474.00	8,828.03	470.35	8,840.28	0.00	0.00	0.00
17,400.00	90.00	359.43	8,474.00	8,928.03	469.35	8,940.13	0.00	0.00	0.00
17,500.00	90.00	359.43	8,474.00	9,028.02	468.35	9,039.97	0.00	0.00	0.00
17,600.00	90.00	359.43	8,474.00	9,128.01	467.34	9,139.82	0.00	0.00	0.00
17,700.00	90.00	359.43	8,474.00	9,228.01	466.34	9,239.67	0.00	0.00	0.00
17,800.00	90.00	359.43	8,474.00	9,328.00	465.34	9,339.51	0.00	0.00	0.00
17,900.00	90.00	359.43	8,474.00	9,428.00	464.33	9,439.36	0.00	0.00	0.00
18,000.00	90.00	359.43	8,474.00	9,527.99	463.33	9,539.21	0.00	0.00	0.00
18,100.00	90.00	359.43	8,474.00	9,627.99	462.33	9,639.05	0.00	0.00	0.00
18,200.00	90.00	359.43	8,474.00	9,727.98	461.33	9,738.90	0.00	0.00	0.00
18,300.00	90.00	359.43	8,474.00	9,827.98	460.32	9,838.74	0.00	0.00	0.00
18,400.00	90.00	359.43	8,474.00	9,927.97	459.32	9,938.59	0.00	0.00	0.00
18,500.00	90.00	359.43	8,474.00	10,027.97	458.32	10,038.44	0.00	0.00	0.00
18,548.37	90.00	359.43	8,474.00	10,076.34	457.83	10,086.74	0.00	0.00	0.00

TD at 18548.37 - PBHL (FMM Fed Com 102H)

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Company:	Franklin Mountain Energy	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site:	FMM Fed Com	**North Reference:**	Grid
Well:	FMM Fed Com 102H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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 10 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	426,192.86	853,182.61	32.167668	-103.325527
LP (FMM Fed Com 102H - plan hits target center - Point	0.00	0.00	8,474.00	364.93	555.25	426,557.79	853,737.86	32.168657	-103.323722
PBHL (FMM Fed Com 1 - plan hits target center - Point	0.00	0.00	8,474.00	10,076.34	457.83	436,269.20	853,640.44	32.195351	-103.323742

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
2,466.68	2,465.52	-9.90	26.70	Start 4442.07 hold at 2466.68 MD
6,908.75	6,874.48	-198.10	534.30	Start Drop -1.50
7,375.43	7,340.00	-208.00	561.00	Start 561.04 hold at 7375.43 MD
7,936.47	7,901.04	-208.00	561.00	Start DLS 10.00 TFO 359.43
8,836.47	8,474.00	364.93	555.25	Start 9711.90 hold at 8836.47 MD
18,548.37	8,474.00	10,076.34	457.83	TD at 18548.37

Franklin Mountain Energy

Lea County, NM (NAD83)
FMM Fed Com
FMM Fed Com 102H

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	18,548.37	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	1,840.57	50.04	41.03	5.557	CC, ES
FMM Fed Com 101H - OH - Plan #1	1,900.00	1,896.83	51.06	41.77	5.499	SF
FMM Fed Com 301H - OH - Plan #1	2,000.00	1,998.90	25.07	15.26	2.556	CC, ES, SF
FMM Fed Com 302H - OH - Plan #1	2,655.28	2,653.08	23.32	10.49	1.818	CC
FMM Fed Com 302H - OH - Plan #1	3,100.00	3,097.74	24.59	9.57	1.637	ES
FMM Fed Com 302H - OH - Plan #1	3,400.00	3,397.69	26.72	10.16	1.614	SF
FMM Fed Com 801H - OH - Plan #1	2,000.00	1,999.20	83.78	73.97	8.542	CC, ES
FMM Fed Com 801H - OH - Plan #1	2,200.00	2,195.96	88.04	77.28	8.181	SF
FMM Fed Com 802H - OH - Plan #1	2,227.47	2,226.33	75.00	64.07	6.862	CC, ES
FMM Fed Com 802H - OH - Plan #1	2,300.00	2,297.36	75.72	64.44	6.717	SF
FMM Fed Com 803H - OH - Plan #1	2,585.08	2,580.54	71.92	59.28	5.693	CC
FMM Fed Com 803H - OH - Plan #1	2,600.00	2,595.32	71.93	59.23	5.662	ES
FMM Fed Com 803H - OH - Plan #1	2,700.00	2,694.30	72.88	59.70	5.528	SF
KC7 Fed Com/El Paso Fed Com						
El Paso Fed Com 604H - OH - Plan #1	7,310.44	7,278.28	2,806.92	2,770.62	77.337	CC, ES
El Paso Fed Com 604H - OH - Plan #1	18,548.37	22,160.64	3,891.06	3,698.66	20.224	SF
El Paso Fed Com 705H - OH - Plan #3	8,119.39	8,326.85	2,414.10	2,373.26	59.114	CC, ES
El Paso Fed Com 705H - OH - Plan #3	18,548.37	22,482.46	3,737.54	3,564.81	21.638	SF
El Paso Fed Com 706H - OH - Plan #1	7,064.95	6,845.33	2,931.98	2,897.29	84.515	CC
El Paso Fed Com 706H - OH - Plan #1	7,100.00	6,880.37	2,932.14	2,897.28	84.096	ES
El Paso Fed Com 706H - OH - Plan #1	18,548.37	22,304.88	4,211.07	4,015.94	21.580	SF
KC7 Fed Com 603H - OH - Plan #1	8,192.74	8,522.41	2,095.12	2,053.48	50.312	CC
KC7 Fed Com 603H - OH - Plan #1	8,200.00	8,528.78	2,095.14	2,053.46	50.271	ES
KC7 Fed Com 603H - OH - Plan #1	18,548.37	22,310.90	3,287.80	3,123.71	20.036	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	1,840.57	1,840.57	6.37	6.36	-90.57	-0.50	-50.03	50.04	41.03	9.00	5.557	CC, ES
1,900.00	1,900.00	1,896.83	1,896.82	6.58	6.56	-90.71	-0.63	-51.04	51.06	41.77	9.28	5.499	SF
2,000.00	2,000.00	1,995.40	1,995.31	6.94	6.89	-91.19	-1.14	-54.77	54.85	45.09	9.77	5.617	
2,100.00	2,099.99	2,093.61	2,093.32	7.28	7.23	158.21	-1.98	-61.00	62.43	52.19	10.23	6.101	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	2,191.08	2,190.40	7.62	7.57	158.50	-3.15	-69.64	74.95	64.27	10.69	7.015	
2,300.00	2,299.69	2,287.45	2,286.13	7.96	7.91	159.06	-4.63	-80.60	92.38	81.25	11.13	8.300	
2,400.00	2,399.27	2,382.38	2,380.13	8.31	8.26	159.68	-6.40	-93.73	114.66	103.09	11.57	9.913	
2,466.68	2,465.52	2,444.72	2,441.67	8.54	8.49	160.07	-7.74	-103.61	132.17	120.31	11.85	11.150	
2,500.00	2,498.59	2,475.59	2,472.07	8.66	8.60	160.28	-8.45	-108.87	141.56	129.57	11.99	11.802	
2,600.00	2,597.85	2,570.71	2,565.65	9.01	8.97	160.75	-10.74	-125.81	170.52	158.07	12.46	13.688	
2,700.00	2,697.10	2,666.41	2,659.78	9.37	9.34	161.08	-13.04	-142.88	199.52	186.59	12.93	15.427	
2,800.00	2,796.36	2,762.10	2,753.91	9.74	9.71	161.33	-15.35	-159.95	228.53	215.12	13.41	17.040	
2,900.00	2,895.61	2,857.80	2,848.05	10.10	10.10	161.53	-17.66	-177.02	257.54	243.65	13.89	18.539	
3,000.00	2,994.86	2,953.50	2,942.18	10.47	10.48	161.68	-19.96	-194.09	286.55	272.17	14.37	19.935	
3,100.00	3,094.12	3,049.20	3,036.31	10.85	10.88	161.81	-22.27	-211.16	315.56	300.70	14.86	21.237	
3,200.00	3,193.37	3,144.89	3,130.45	11.22	11.27	161.91	-24.58	-228.23	344.57	329.23	15.35	22.454	
3,300.00	3,292.63	3,240.59	3,224.58	11.60	11.67	162.00	-26.88	-245.30	373.59	357.75	15.83	23.594	
3,400.00	3,391.88	3,336.29	3,318.72	11.98	12.07	162.07	-29.19	-262.37	402.60	386.28	16.32	24.663	
3,500.00	3,491.14	3,431.98	3,412.85	12.36	12.48	162.14	-31.50	-279.45	431.61	414.80	16.82	25.667	
3,600.00	3,590.39	3,527.68	3,506.98	12.75	12.89	162.20	-33.80	-296.52	460.63	443.32	17.31	26.613	
3,700.00	3,689.65	3,623.38	3,601.12	13.13	13.29	162.25	-36.11	-313.59	489.65	471.84	17.80	27.504	
3,800.00	3,788.90	3,719.07	3,695.25	13.52	13.71	162.29	-38.42	-330.66	518.66	500.36	18.30	28.345	
3,900.00	3,888.16	3,814.77	3,789.39	13.91	14.12	162.33	-40.72	-347.73	547.68	528.88	18.79	29.140	
4,000.00	3,987.41	3,910.47	3,883.52	14.30	14.54	162.37	-43.03	-364.80	576.69	557.40	19.29	29.893	
4,100.00	4,086.66	4,006.17	3,977.65	14.69	14.95	162.40	-45.34	-381.87	605.71	585.92	19.79	30.606	
4,200.00	4,185.92	4,101.86	4,071.79	15.08	15.37	162.43	-47.64	-398.94	634.73	614.44	20.29	31.283	
4,300.00	4,285.17	4,197.56	4,165.92	15.47	15.79	162.46	-49.95	-416.01	663.75	642.95	20.79	31.926	
4,400.00	4,384.43	4,293.26	4,260.06	15.86	16.21	162.48	-52.26	-433.08	692.76	671.47	21.29	32.538	
4,500.00	4,483.68	4,388.95	4,354.19	16.26	16.63	162.50	-54.57	-450.15	721.78	699.99	21.79	33.120	
4,600.00	4,582.94	4,484.65	4,448.32	16.65	17.06	162.53	-56.87	-467.22	750.80	728.50	22.30	33.675	
4,700.00	4,682.19	4,580.35	4,542.46	17.05	17.48	162.54	-59.18	-484.29	779.81	757.02	22.80	34.205	
4,800.00	4,781.45	4,676.05	4,636.59	17.44	17.91	162.56	-61.49	-501.36	808.83	785.53	23.30	34.711	
4,900.00	4,880.70	4,771.74	4,730.73	17.84	18.33	162.58	-63.79	-518.43	837.85	814.04	23.81	35.195	
5,000.00	4,979.96	4,867.44	4,824.86	18.23	18.76	162.60	-66.10	-535.50	866.87	842.56	24.31	35.657	
5,100.00	5,079.21	4,963.14	4,918.99	18.63	19.19	162.61	-68.41	-552.57	895.88	871.07	24.82	36.101	
5,200.00	5,178.46	5,058.83	5,013.13	19.03	19.62	162.62	-70.71	-569.65	924.90	899.58	25.32	36.526	
5,300.00	5,277.72	5,154.53	5,107.26	19.43	20.05	162.64	-73.02	-586.72	953.92	928.09	25.83	36.933	
5,400.00	5,376.97	5,250.23	5,201.40	19.83	20.48	162.65	-75.33	-603.79	982.94	956.60	26.33	37.325	
5,500.00	5,476.23	5,345.92	5,295.53	20.23	20.91	162.66	-77.63	-620.86	1,011.96	985.11	26.84	37.700	
5,600.00	5,575.48	5,441.62	5,389.66	20.63	21.34	162.67	-79.94	-637.93	1,040.97	1,013.62	27.35	38.062	
5,700.00	5,674.74	5,537.32	5,483.80	21.03	21.77	162.68	-82.25	-655.00	1,069.99	1,042.13	27.86	38.410	
5,800.00	5,773.99	5,633.02	5,577.93	21.43	22.20	162.69	-84.55	-672.07	1,099.01	1,070.64	28.37	38.744	
5,900.00	5,873.25	5,728.71	5,672.07	21.83	22.63	162.70	-86.86	-689.14	1,128.03	1,099.15	28.87	39.067	
6,000.00	5,972.50	5,824.41	5,766.20	22.23	23.06	162.71	-89.17	-706.21	1,157.05	1,127.66	29.38	39.378	
6,100.00	6,071.76	5,920.11	5,860.33	22.63	23.50	162.72	-91.47	-723.28	1,186.06	1,156.17	29.89	39.678	
6,200.00	6,171.01	6,015.80	5,954.47	23.03	23.93	162.72	-93.78	-740.35	1,215.08	1,184.68	30.40	39.967	
6,300.00	6,270.26	6,111.50	6,048.60	23.43	24.36	162.73	-96.09	-757.42	1,244.10	1,213.19	30.91	40.247	
6,400.00	6,369.52	6,207.20	6,142.74	23.83	24.80	162.74	-98.40	-774.49	1,273.12	1,241.70	31.42	40.517	
6,500.00	6,468.77	6,302.90	6,236.87	24.24	25.23	162.75	-100.70	-791.56	1,302.14	1,270.20	31.93	40.778	
6,600.00	6,568.03	6,398.59	6,331.00	24.64	25.67	162.75	-103.01	-808.63	1,331.15	1,298.71	32.44	41.030	
6,700.00	6,667.28	6,494.29	6,425.14	25.04	26.10	162.76	-105.32	-825.70	1,360.17	1,327.22	32.95	41.274	
6,800.00	6,766.54	6,589.99	6,519.27	25.44	26.54	162.77	-107.62	-842.77	1,389.19	1,355.72	33.47	41.511	
6,908.75	6,874.48	6,694.06	6,621.64	25.88	27.01	162.77	-110.13	-861.34	1,420.75	1,386.73	34.02	41.760	
7,000.00	6,965.17	6,784.91	6,711.02	26.24	27.43	162.88	-112.32	-877.54	1,446.22	1,411.71	34.51	41.911	
7,100.00	7,064.81	6,940.34	6,864.48	26.63	28.10	162.95	-115.60	-901.82	1,469.69	1,434.37	35.33	41.602	
7,200.00	7,164.63	7,099.21	7,022.26	26.99	28.75	163.00	-118.09	-920.24	1,486.76	1,450.66	36.10	41.183	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
7,300.00	7,264.57	7,260.48	7,183.06	27.34	29.34	163.01	-119.72	-932.26	1,497.27	1,460.45	36.82	40.662	
7,375.43	7,340.00	7,383.04	7,305.52	27.60	29.76	-86.65	-120.34	-936.89	1,500.81	1,463.49	37.32	40.211	
7,400.00	7,364.57	7,423.03	7,345.50	27.68	29.88	-86.66	-120.43	-937.56	1,501.22	1,463.74	37.48	40.057	
7,500.00	7,464.57	7,540.19	7,462.67	28.00	30.24	-86.66	-120.47	-937.82	1,501.37	1,463.39	37.99	39.523	
7,600.00	7,564.57	7,640.19	7,562.67	28.33	30.55	-86.66	-120.47	-937.82	1,501.37	1,462.91	38.46	39.036	
7,700.00	7,664.57	7,740.19	7,662.67	28.65	30.85	-86.66	-120.47	-937.82	1,501.37	1,462.44	38.94	38.560	
7,800.00	7,764.57	7,840.19	7,762.67	28.98	31.16	-86.66	-120.47	-937.82	1,501.37	1,461.96	39.41	38.094	
7,900.00	7,864.57	7,940.19	7,862.67	29.31	31.47	-86.66	-120.47	-937.82	1,501.37	1,461.49	39.89	37.640	
7,936.47	7,901.04	7,976.67	7,899.14	29.42	31.58	-86.66	-120.47	-937.82	1,501.37	1,461.31	40.06	37.476	
7,950.00	7,914.57	7,990.19	7,912.67	29.47	31.62	-86.09	-120.47	-937.82	1,501.36	1,461.24	40.13	37.416	
8,000.00	7,964.44	8,040.06	7,962.54	29.63	31.78	-86.24	-120.47	-937.82	1,501.14	1,460.78	40.36	37.193	
8,050.00	8,013.83	8,089.45	8,011.93	29.78	31.93	-86.58	-120.47	-937.82	1,500.65	1,460.06	40.59	36.974	
8,100.00	8,062.36	8,136.11	8,058.58	29.92	32.07	-87.06	-120.31	-937.82	1,499.98	1,459.18	40.80	36.762	
8,150.00	8,109.66	8,178.88	8,101.26	30.05	32.20	-87.56	-117.70	-937.85	1,499.33	1,458.33	41.00	36.568	
8,200.00	8,155.37	8,222.42	8,144.39	30.17	32.33	-88.07	-111.79	-937.91	1,498.79	1,457.59	41.19	36.384	
8,250.00	8,199.15	8,266.82	8,187.78	30.28	32.46	-88.60	-102.40	-938.00	1,498.35	1,456.97	41.38	36.209	
8,300.00	8,240.66	8,312.17	8,231.20	30.37	32.58	-89.15	-89.38	-938.13	1,498.05	1,456.48	41.56	36.043	
8,350.00	8,279.59	8,358.56	8,274.42	30.45	32.70	-89.70	-72.55	-938.30	1,497.89	1,456.14	41.74	35.885	
8,377.64	8,299.89	8,384.69	8,298.11	30.49	32.77	-90.01	-61.55	-938.41	1,497.86	1,456.02	41.84	35.800	
8,400.00	8,315.63	8,406.10	8,317.14	30.52	32.82	-90.26	-51.73	-938.50	1,497.88	1,455.96	41.92	35.733	
8,450.00	8,348.52	8,454.91	8,359.06	30.58	32.93	-90.82	-26.76	-938.75	1,498.03	1,455.93	42.10	35.586	
8,500.00	8,378.01	8,505.10	8,399.78	30.62	33.03	-91.39	2.55	-939.04	1,498.34	1,456.07	42.27	35.444	
8,550.00	8,403.86	8,556.80	8,438.88	30.66	33.12	-91.95	36.35	-939.38	1,498.81	1,456.36	42.45	35.304	
8,600.00	8,425.89	8,610.13	8,475.85	30.69	33.21	-92.51	74.75	-939.76	1,499.43	1,456.79	42.64	35.164	
8,650.00	8,443.92	8,665.21	8,510.12	30.73	33.29	-93.06	117.84	-940.19	1,500.19	1,457.36	42.83	35.026	
8,700.00	8,457.82	8,722.15	8,541.03	30.78	33.37	-93.60	165.63	-940.67	1,501.06	1,458.03	43.03	34.883	
8,750.00	8,467.48	8,781.04	8,567.84	30.86	33.46	-94.12	218.04	-941.19	1,502.02	1,458.78	43.24	34.735	
8,800.00	8,472.84	8,841.95	8,589.77	30.99	33.55	-94.62	274.84	-941.75	1,503.04	1,459.57	43.46	34.581	
8,836.47	8,474.00	8,887.68	8,602.19	31.11	33.63	-94.96	318.83	-942.19	1,503.79	1,460.15	43.64	34.462	
8,900.00	8,474.00	8,970.50	8,615.63	31.35	33.80	-95.47	400.48	-943.00	1,504.74	1,460.76	43.98	34.216	
9,000.00	8,474.00	9,083.65	8,618.00	31.80	34.13	-95.56	513.55	-944.13	1,504.90	1,460.30	44.60	33.740	
9,100.00	8,474.00	9,183.65	8,618.00	32.34	34.52	-95.56	613.54	-945.12	1,504.89	1,459.58	45.32	33.210	
9,200.00	8,474.00	9,283.65	8,618.00	32.96	35.00	-95.56	713.54	-946.12	1,504.89	1,458.75	46.13	32.621	
9,300.00	8,474.00	9,383.65	8,618.00	33.64	35.57	-95.56	813.53	-947.11	1,504.88	1,457.83	47.05	31.984	
9,400.00	8,474.00	9,483.65	8,618.00	34.39	36.21	-95.56	913.53	-948.11	1,504.87	1,456.80	48.07	31.309	
9,500.00	8,474.00	9,583.65	8,618.00	35.20	36.93	-95.56	1,013.52	-949.10	1,504.86	1,455.69	49.17	30.606	
9,600.00	8,474.00	9,683.65	8,618.00	36.06	37.71	-95.56	1,113.52	-950.10	1,504.85	1,454.50	50.36	29.885	
9,700.00	8,474.00	9,783.65	8,618.00	36.97	38.55	-95.56	1,213.51	-951.09	1,504.84	1,453.22	51.62	29.152	
9,800.00	8,474.00	9,883.65	8,618.00	37.94	39.44	-95.56	1,313.51	-952.08	1,504.84	1,451.88	52.96	28.416	
9,900.00	8,474.00	9,983.65	8,618.00	38.95	40.38	-95.56	1,413.50	-953.08	1,504.83	1,450.47	54.36	27.682	
10,000.00	8,474.00	10,083.65	8,618.00	40.00	41.37	-95.56	1,513.50	-954.07	1,504.82	1,448.99	55.83	26.956	
10,100.00	8,474.00	10,183.65	8,618.00	41.09	42.40	-95.56	1,613.49	-955.07	1,504.81	1,447.46	57.35	26.240	
10,200.00	8,474.00	10,283.65	8,618.00	42.22	43.47	-95.56	1,713.49	-956.06	1,504.80	1,445.88	58.92	25.538	
10,300.00	8,474.00	10,383.65	8,618.00	43.38	44.57	-95.56	1,813.48	-957.06	1,504.79	1,444.25	60.55	24.853	
10,400.00	8,474.00	10,483.65	8,618.00	44.57	45.71	-95.56	1,913.48	-958.05	1,504.78	1,442.57	62.22	24.186	
10,500.00	8,474.00	10,583.65	8,618.00	45.78	46.88	-95.56	2,013.47	-959.05	1,504.78	1,440.85	63.93	23.539	
10,600.00	8,474.00	10,683.65	8,618.00	47.03	48.07	-95.56	2,113.47	-960.04	1,504.77	1,439.09	65.67	22.913	
10,700.00	8,474.00	10,783.65	8,618.00	48.30	49.30	-95.56	2,213.47	-961.04	1,504.76	1,437.30	67.46	22.307	
10,800.00	8,474.00	10,883.65	8,618.00	49.59	50.54	-95.56	2,313.46	-962.03	1,504.75	1,435.48	69.27	21.723	
10,900.00	8,474.00	10,983.65	8,618.00	50.90	51.81	-95.56	2,413.46	-963.03	1,504.74	1,433.63	71.12	21.159	
11,000.00	8,474.00	11,083.65	8,618.00	52.23	53.11	-95.56	2,513.45	-964.02	1,504.73	1,431.75	72.99	20.616	
11,100.00	8,474.00	11,183.65	8,618.00	53.58	54.42	-95.56	2,613.45	-965.02	1,504.73	1,429.84	74.89	20.093	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
11,200.00	8,474.00	11,283.65	8,618.00	54.95	55.75	-95.56	2,713.44	-966.01	1,504.72	1,427.91	76.81	19.590	
11,300.00	8,474.00	11,383.65	8,618.00	56.33	57.09	-95.56	2,813.44	-967.00	1,504.71	1,425.96	78.75	19.107	
11,400.00	8,474.00	11,483.65	8,618.00	57.72	58.45	-95.56	2,913.43	-968.00	1,504.70	1,423.98	80.72	18.642	
11,500.00	8,474.00	11,583.65	8,618.00	59.13	59.83	-95.56	3,013.43	-968.99	1,504.69	1,421.99	82.70	18.195	
11,600.00	8,474.00	11,683.65	8,618.00	60.55	61.22	-95.56	3,113.42	-969.99	1,504.68	1,419.98	84.70	17.765	
11,700.00	8,474.00	11,783.65	8,618.00	61.98	62.62	-95.56	3,213.42	-970.98	1,504.68	1,417.96	86.72	17.352	
11,800.00	8,474.00	11,883.65	8,618.00	63.43	64.03	-95.56	3,313.41	-971.98	1,504.67	1,415.92	88.75	16.954	
11,900.00	8,474.00	11,983.65	8,618.00	64.88	65.46	-95.56	3,413.41	-972.97	1,504.66	1,413.86	90.80	16.572	
12,000.00	8,474.00	12,083.65	8,618.00	66.34	66.90	-95.56	3,513.40	-973.97	1,504.65	1,411.80	92.85	16.204	
12,100.00	8,474.00	12,183.65	8,618.00	67.81	68.34	-95.56	3,613.40	-974.96	1,504.64	1,409.72	94.93	15.851	
12,200.00	8,474.00	12,283.65	8,618.00	69.29	69.80	-95.56	3,713.39	-975.96	1,504.63	1,407.62	97.01	15.510	
12,300.00	8,474.00	12,383.65	8,618.00	70.78	71.26	-95.56	3,813.39	-976.95	1,504.63	1,405.52	99.10	15.182	
12,400.00	8,474.00	12,483.65	8,618.00	72.27	72.73	-95.56	3,913.38	-977.95	1,504.62	1,403.41	101.21	14.867	
12,500.00	8,474.00	12,583.65	8,618.00	73.77	74.21	-95.56	4,013.38	-978.94	1,504.61	1,401.29	103.32	14.562	
12,600.00	8,474.00	12,683.65	8,618.00	75.28	75.70	-95.56	4,113.37	-979.94	1,504.60	1,399.16	105.44	14.269	
12,700.00	8,474.00	12,783.65	8,618.00	76.79	77.19	-95.56	4,213.37	-980.93	1,504.59	1,397.02	107.58	13.986	
12,800.00	8,474.00	12,883.65	8,618.00	78.31	78.69	-95.56	4,313.36	-981.92	1,504.58	1,394.87	109.71	13.714	
12,900.00	8,474.00	12,983.65	8,618.00	79.83	80.19	-95.56	4,413.36	-982.92	1,504.57	1,392.71	111.86	13.450	
13,000.00	8,474.00	13,083.65	8,618.00	81.36	81.70	-95.56	4,513.35	-983.91	1,504.57	1,390.55	114.01	13.196	
13,100.00	8,474.00	13,183.65	8,618.00	82.89	83.22	-95.56	4,613.35	-984.91	1,504.56	1,388.38	116.18	12.951	
13,200.00	8,474.00	13,283.65	8,618.00	84.43	84.74	-95.56	4,713.34	-985.90	1,504.55	1,386.21	118.34	12.714	
13,300.00	8,474.00	13,383.65	8,618.00	85.97	86.27	-95.56	4,813.34	-986.90	1,504.54	1,384.03	120.51	12.484	
13,400.00	8,474.00	13,483.65	8,618.00	87.52	87.80	-95.56	4,913.33	-987.89	1,504.53	1,381.84	122.69	12.263	
13,500.00	8,474.00	13,583.65	8,618.00	89.07	89.33	-95.56	5,013.33	-988.89	1,504.52	1,379.65	124.88	12.048	
13,600.00	8,474.00	13,683.65	8,618.00	90.62	90.87	-95.56	5,113.32	-989.88	1,504.52	1,377.45	127.07	11.840	
13,700.00	8,474.00	13,783.65	8,618.00	92.18	92.41	-95.57	5,213.32	-990.88	1,504.51	1,375.25	129.26	11.639	
13,800.00	8,474.00	13,883.65	8,618.00	93.74	93.96	-95.57	5,313.31	-991.87	1,504.50	1,373.04	131.46	11.445	
13,900.00	8,474.00	13,983.65	8,618.00	95.30	95.51	-95.57	5,413.31	-992.87	1,504.49	1,370.83	133.66	11.256	
14,000.00	8,474.00	14,083.65	8,618.00	96.87	97.06	-95.57	5,513.30	-993.86	1,504.48	1,368.61	135.87	11.073	
14,100.00	8,474.00	14,183.65	8,618.00	98.43	98.62	-95.57	5,613.30	-994.86	1,504.47	1,366.40	138.08	10.896	
14,200.00	8,474.00	14,283.65	8,618.00	100.01	100.18	-95.57	5,713.29	-995.85	1,504.47	1,364.17	140.29	10.724	
14,300.00	8,474.00	14,383.65	8,618.00	101.58	101.74	-95.57	5,813.29	-996.84	1,504.46	1,361.95	142.51	10.557	
14,400.00	8,474.00	14,483.65	8,618.00	103.16	103.31	-95.57	5,913.28	-997.84	1,504.45	1,359.72	144.73	10.395	
14,500.00	8,474.00	14,583.65	8,618.00	104.74	104.88	-95.57	6,013.28	-998.83	1,504.44	1,357.48	146.96	10.237	
14,600.00	8,474.00	14,683.65	8,618.00	106.32	106.45	-95.57	6,113.27	-999.83	1,504.43	1,355.25	149.18	10.084	
14,700.00	8,474.00	14,783.65	8,618.00	107.90	108.02	-95.57	6,213.27	-1,000.82	1,504.42	1,353.01	151.41	9.936	
14,800.00	8,474.00	14,883.65	8,618.00	109.49	109.60	-95.57	6,313.26	-1,001.82	1,504.42	1,350.77	153.65	9.791	
14,900.00	8,474.00	14,983.65	8,618.00	111.07	111.17	-95.57	6,413.26	-1,002.81	1,504.41	1,348.52	155.88	9.651	
15,000.00	8,474.00	15,083.65	8,618.00	112.66	112.75	-95.57	6,513.25	-1,003.81	1,504.40	1,346.28	158.12	9.514	
15,100.00	8,474.00	15,183.65	8,618.00	114.25	114.34	-95.57	6,613.25	-1,004.80	1,504.39	1,344.03	160.36	9.381	
15,200.00	8,474.00	15,283.65	8,618.00	115.85	115.92	-95.57	6,713.24	-1,005.80	1,504.38	1,341.77	162.61	9.252	
15,300.00	8,474.00	15,383.65	8,618.00	117.44	117.51	-95.57	6,813.24	-1,006.79	1,504.37	1,339.52	164.85	9.125	
15,400.00	8,474.00	15,483.65	8,618.00	119.04	119.09	-95.57	6,913.23	-1,007.79	1,504.36	1,337.26	167.10	9.003	
15,500.00	8,474.00	15,583.65	8,618.00	120.63	120.68	-95.57	7,013.23	-1,008.78	1,504.36	1,335.00	169.35	8.883	
15,600.00	8,474.00	15,683.65	8,618.00	122.23	122.27	-95.57	7,113.22	-1,009.78	1,504.35	1,332.74	171.60	8.766	
15,700.00	8,474.00	15,783.65	8,618.00	123.83	123.87	-95.57	7,213.22	-1,010.77	1,504.34	1,330.48	173.86	8.653	
15,800.00	8,474.00	15,883.65	8,618.00	125.43	125.46	-95.57	7,313.21	-1,011.76	1,504.33	1,328.22	176.11	8.542	
15,900.00	8,474.00	15,983.65	8,618.00	127.04	127.06	-95.57	7,413.21	-1,012.76	1,504.32	1,325.95	178.37	8.434	
16,000.00	8,474.00	16,083.65	8,618.00	128.64	128.65	-95.57	7,513.20	-1,013.75	1,504.31	1,323.68	180.63	8.328	
16,100.00	8,474.00	16,183.65	8,618.00	130.25	130.25	-95.57	7,613.20	-1,014.75	1,504.31	1,321.41	182.89	8.225	
16,200.00	8,474.00	16,283.65	8,618.00	131.85	131.85	-95.57	7,713.19	-1,015.74	1,504.30	1,319.14	185.16	8.125	
16,300.00	8,474.00	16,383.65	8,618.00	133.46	133.45	-95.57	7,813.19	-1,016.74	1,504.29	1,316.87	187.42	8.026	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
16,400.00	8,474.00	16,483.65	8,618.00	135.07	135.05	-95.57	7,913.18	-1,017.73	1,504.28	1,314.59	189.69	7.930	
16,500.00	8,474.00	16,583.65	8,618.00	136.68	136.66	-95.57	8,013.18	-1,018.73	1,504.27	1,312.32	191.95	7.837	
16,600.00	8,474.00	16,683.65	8,618.00	138.29	138.26	-95.57	8,113.17	-1,019.72	1,504.26	1,310.04	194.22	7.745	
16,700.00	8,474.00	16,783.65	8,618.00	139.90	139.87	-95.57	8,213.17	-1,020.72	1,504.26	1,307.76	196.49	7.656	
16,800.00	8,474.00	16,883.65	8,618.00	141.52	141.47	-95.57	8,313.16	-1,021.71	1,504.25	1,305.48	198.76	7.568	
16,900.00	8,474.00	16,983.65	8,618.00	143.13	143.08	-95.57	8,413.16	-1,022.71	1,504.24	1,303.20	201.04	7.482	
17,000.00	8,474.00	17,083.65	8,618.00	144.74	144.69	-95.57	8,513.15	-1,023.70	1,504.23	1,300.92	203.31	7.399	
17,100.00	8,474.00	17,183.65	8,618.00	146.36	146.30	-95.57	8,613.15	-1,024.70	1,504.22	1,298.64	205.58	7.317	
17,200.00	8,474.00	17,283.65	8,618.00	147.97	147.91	-95.57	8,713.14	-1,025.69	1,504.21	1,296.35	207.86	7.237	
17,300.00	8,474.00	17,383.65	8,618.00	149.59	149.52	-95.57	8,813.14	-1,026.68	1,504.20	1,294.07	210.14	7.158	
17,400.00	8,474.00	17,483.65	8,618.00	151.21	151.14	-95.57	8,913.13	-1,027.68	1,504.20	1,291.78	212.42	7.081	
17,500.00	8,474.00	17,583.65	8,618.00	152.83	152.75	-95.57	9,013.13	-1,028.67	1,504.19	1,289.49	214.69	7.006	
17,600.00	8,474.00	17,683.65	8,618.00	154.45	154.36	-95.57	9,113.12	-1,029.67	1,504.18	1,287.21	216.97	6.933	
17,700.00	8,474.00	17,783.65	8,618.00	156.07	155.98	-95.57	9,213.12	-1,030.66	1,504.17	1,284.92	219.25	6.860	
17,800.00	8,474.00	17,883.65	8,618.00	157.69	157.59	-95.57	9,313.11	-1,031.66	1,504.16	1,282.63	221.54	6.790	
17,900.00	8,474.00	17,983.65	8,618.00	159.31	159.21	-95.57	9,413.11	-1,032.65	1,504.15	1,280.34	223.82	6.720	
18,000.00	8,474.00	18,083.65	8,618.00	160.93	160.83	-95.57	9,513.10	-1,033.65	1,504.15	1,278.04	226.10	6.652	
18,100.00	8,474.00	18,183.65	8,618.00	162.55	162.45	-95.57	9,613.10	-1,034.64	1,504.14	1,275.75	228.39	6.586	
18,200.00	8,474.00	18,283.65	8,618.00	164.18	164.06	-95.57	9,713.09	-1,035.64	1,504.13	1,273.46	230.67	6.521	
18,300.00	8,474.00	18,383.65	8,618.00	165.80	165.68	-95.57	9,813.09	-1,036.63	1,504.12	1,271.16	232.96	6.457	
18,400.00	8,474.00	18,483.65	8,618.00	167.42	167.30	-95.57	9,913.08	-1,037.63	1,504.11	1,268.87	235.25	6.394	
18,500.00	8,474.00	18,583.65	8,618.00	169.05	168.92	-95.57	10,013.08	-1,038.62	1,504.10	1,266.57	237.53	6.332	
18,548.37	8,474.00	18,632.03	8,618.00	169.83	169.71	-95.57	10,061.45	-1,039.10	1,504.10	1,265.46	238.64	6.303	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 301H - 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	1,841.90	1,841.90	6.37	6.37	-90.54	-0.23	-25.06	25.07	16.06	9.01	2.782	
1,900.00	1,900.00	1,898.90	1,898.90	6.58	6.57	-90.54	-0.23	-25.06	25.07	15.77	9.30	2.695	
2,000.00	2,000.00	1,998.90	1,998.90	6.94	6.93	-90.54	-0.23	-25.06	25.07	15.26	9.81	2.556	CC, ES, SF
2,100.00	2,099.99	2,098.21	2,098.20	7.28	7.28	159.52	-0.51	-26.30	27.53	17.24	10.29	2.675	
2,200.00	2,199.91	2,197.14	2,197.05	7.62	7.61	160.37	-1.34	-30.03	34.99	24.23	10.76	3.253	
2,300.00	2,299.69	2,295.34	2,295.04	7.96	7.95	161.17	-2.71	-36.20	47.40	36.18	11.21	4.227	
2,400.00	2,399.27	2,392.44	2,391.75	8.31	8.29	161.75	-4.61	-44.73	64.72	53.06	11.66	5.549	
2,466.68	2,465.52	2,456.42	2,455.34	8.54	8.51	162.02	-6.15	-51.65	78.96	67.00	11.96	6.602	
2,500.00	2,498.59	2,488.16	2,486.83	8.66	8.62	162.13	-7.00	-55.47	86.74	74.63	12.11	7.164	
2,600.00	2,597.85	2,582.64	2,580.39	9.01	8.96	162.16	-9.87	-68.36	111.64	99.10	12.54	8.903	
2,700.00	2,697.10	2,675.93	2,672.40	9.37	9.31	161.92	-13.19	-83.29	138.83	125.86	12.96	10.710	
2,800.00	2,796.36	2,768.22	2,763.05	9.74	9.65	161.55	-16.96	-100.21	168.26	154.88	13.38	12.574	
2,900.00	2,895.61	2,863.49	2,856.44	10.10	10.03	161.20	-21.06	-118.61	198.64	184.78	13.86	14.336	
3,000.00	2,994.86	2,958.76	2,949.82	10.47	10.40	160.95	-25.15	-137.01	229.03	214.69	14.33	15.977	
3,100.00	3,094.12	3,054.02	3,043.21	10.85	10.79	160.76	-29.25	-155.41	259.42	244.60	14.81	17.511	
3,200.00	3,193.37	3,149.29	3,136.59	11.22	11.17	160.60	-33.34	-173.81	289.81	274.51	15.30	18.944	
3,300.00	3,292.63	3,244.56	3,229.97	11.60	11.57	160.48	-37.44	-192.21	320.20	304.42	15.78	20.288	
3,400.00	3,391.88	3,339.83	3,323.36	11.98	11.97	160.38	-41.53	-210.61	350.59	334.32	16.27	21.549	
3,500.00	3,491.14	3,435.09	3,416.74	12.36	12.37	160.29	-45.63	-229.01	380.99	364.23	16.76	22.734	
3,600.00	3,590.39	3,530.36	3,510.13	12.75	12.78	160.22	-49.73	-247.41	411.39	394.14	17.25	23.849	
3,700.00	3,689.65	3,625.63	3,603.51	13.13	13.19	160.16	-53.82	-265.81	441.78	424.04	17.74	24.900	
3,800.00	3,788.90	3,720.90	3,696.89	13.52	13.60	160.10	-57.92	-284.21	472.18	453.94	18.24	25.893	
3,900.00	3,888.16	3,816.16	3,790.28	13.91	14.02	160.05	-62.01	-302.61	502.57	483.84	18.73	26.832	
4,000.00	3,987.41	3,911.43	3,883.66	14.30	14.44	160.01	-66.11	-321.01	532.97	513.75	19.23	27.720	
4,100.00	4,086.66	4,006.70	3,977.05	14.69	14.86	159.97	-70.20	-339.41	563.37	543.65	19.72	28.562	
4,200.00	4,185.92	4,101.97	4,070.43	15.08	15.29	159.94	-74.30	-357.81	593.77	573.54	20.22	29.361	
4,300.00	4,285.17	4,197.23	4,163.81	15.47	15.71	159.91	-78.39	-376.21	624.17	603.44	20.72	30.120	
4,400.00	4,384.43	4,292.50	4,257.20	15.86	16.14	159.88	-82.49	-394.61	654.56	633.34	21.22	30.842	
4,500.00	4,483.68	4,387.77	4,350.58	16.26	16.57	159.85	-86.59	-413.01	684.96	663.24	21.72	31.529	
4,600.00	4,582.94	4,483.03	4,443.96	16.65	17.00	159.83	-90.68	-431.41	715.36	693.13	22.23	32.184	
4,700.00	4,682.19	4,578.30	4,537.35	17.05	17.44	159.81	-94.78	-449.81	745.76	723.03	22.73	32.808	
4,800.00	4,781.45	4,673.57	4,630.73	17.44	17.87	159.79	-98.87	-468.21	776.16	752.92	23.23	33.405	
4,900.00	4,880.70	4,768.84	4,724.12	17.84	18.31	159.77	-102.97	-486.60	806.56	782.82	23.74	33.975	
5,000.00	4,979.96	4,864.10	4,817.50	18.23	18.74	159.75	-107.06	-505.00	836.95	812.71	24.24	34.521	
5,100.00	5,079.21	4,959.37	4,910.88	18.63	19.18	159.74	-111.16	-523.40	867.35	842.60	24.75	35.043	
5,200.00	5,178.46	5,054.64	5,004.27	19.03	19.62	159.72	-115.25	-541.80	897.75	872.49	25.26	35.544	
5,300.00	5,277.72	5,149.91	5,097.65	19.43	20.06	159.71	-119.35	-560.20	928.15	902.39	25.76	36.024	
5,400.00	5,376.97	5,245.17	5,191.04	19.83	20.50	159.69	-123.45	-578.60	958.55	932.28	26.27	36.485	
5,500.00	5,476.23	5,340.44	5,284.42	20.23	20.94	159.68	-127.54	-597.00	988.95	962.17	26.78	36.927	
5,600.00	5,575.48	5,435.71	5,377.80	20.63	21.38	159.67	-131.64	-615.40	1,019.35	992.06	27.29	37.353	
5,700.00	5,674.74	5,530.98	5,471.19	21.03	21.83	159.66	-135.73	-633.80	1,049.75	1,021.95	27.80	37.762	
5,800.00	5,773.99	5,626.24	5,564.57	21.43	22.27	159.65	-139.83	-652.20	1,080.14	1,051.84	28.31	38.156	
5,900.00	5,873.25	5,721.51	5,657.96	21.83	22.71	159.64	-143.92	-670.60	1,110.54	1,081.72	28.82	38.535	
6,000.00	5,972.50	5,816.78	5,751.34	22.23	23.16	159.63	-148.02	-689.00	1,140.94	1,111.61	29.33	38.901	
6,100.00	6,071.76	5,912.04	5,844.72	22.63	23.61	159.62	-152.11	-707.40	1,171.34	1,141.50	29.84	39.254	
6,200.00	6,171.01	6,007.31	5,938.11	23.03	24.05	159.62	-156.21	-725.80	1,201.74	1,171.39	30.35	39.594	
6,300.00	6,270.26	6,102.58	6,031.49	23.43	24.50	159.61	-160.31	-744.20	1,232.14	1,201.28	30.86	39.922	
6,400.00	6,369.52	6,197.85	6,124.87	23.83	24.95	159.60	-164.40	-762.60	1,262.54	1,231.16	31.38	40.240	
6,500.00	6,468.77	6,293.11	6,218.26	24.24	25.39	159.59	-168.50	-781.00	1,292.94	1,261.05	31.89	40.546	
6,600.00	6,568.03	6,388.38	6,311.64	24.64	25.84	159.59	-172.59	-799.40	1,323.34	1,290.94	32.40	40.843	
6,700.00	6,667.28	6,483.65	6,405.03	25.04	26.29	159.58	-176.69	-817.80	1,353.74	1,320.82	32.91	41.130	
6,800.00	6,766.54	6,578.92	6,498.41	25.44	26.74	159.57	-180.78	-836.20	1,384.14	1,350.71	33.43	41.407	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 301H - 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
6,908.75	6,874.48	6,682.52	6,599.96	25.88	27.23	159.57	-185.24	-856.21	1,417.19	1,383.21	33.99	41.699	
7,000.00	6,965.17	6,799.08	6,714.38	26.24	27.77	159.69	-190.07	-877.93	1,443.45	1,408.82	34.63	41.687	
7,100.00	7,064.81	6,953.84	6,867.20	26.63	28.45	159.78	-195.36	-901.71	1,466.65	1,431.21	35.44	41.386	
7,200.00	7,164.63	7,111.96	7,024.22	26.99	29.08	159.83	-199.38	-919.74	1,483.54	1,447.33	36.21	40.976	
7,300.00	7,264.57	7,272.41	7,184.20	27.34	29.67	159.85	-202.01	-931.54	1,493.96	1,457.04	36.92	40.467	
7,375.43	7,340.00	7,394.32	7,306.02	27.60	30.08	-89.81	-203.02	-936.12	1,497.49	1,460.08	37.41	40.025	
7,400.00	7,364.57	7,434.10	7,345.79	27.68	30.21	-89.82	-203.17	-936.79	1,497.90	1,460.34	37.57	39.875	
7,500.00	7,464.57	7,551.77	7,463.47	28.00	30.57	-89.82	-203.23	-937.06	1,498.07	1,460.00	38.07	39.347	
7,600.00	7,564.57	7,651.77	7,563.47	28.33	30.87	-89.82	-203.23	-937.06	1,498.07	1,459.53	38.55	38.865	
7,700.00	7,664.57	7,751.77	7,663.47	28.65	31.17	-89.82	-203.23	-937.06	1,498.07	1,459.05	39.02	38.394	
7,800.00	7,764.57	7,851.77	7,763.47	28.98	31.47	-89.82	-203.23	-937.06	1,498.07	1,458.58	39.49	37.933	
7,900.00	7,864.57	7,951.77	7,863.47	29.31	31.78	-89.82	-203.23	-937.06	1,498.07	1,458.11	39.97	37.482	
7,936.47	7,901.04	7,988.25	7,899.94	29.42	31.89	-89.82	-203.23	-937.06	1,498.07	1,457.93	40.14	37.321	
7,950.00	7,914.57	8,001.77	7,913.47	29.47	31.93	-89.25	-203.23	-937.06	1,498.07	1,457.87	40.20	37.261	
8,000.00	7,964.44	8,051.64	7,963.34	29.63	32.08	-89.38	-203.23	-937.06	1,498.03	1,457.59	40.44	37.046	
8,050.00	8,013.83	8,101.03	8,012.73	29.78	32.23	-89.68	-203.23	-937.06	1,497.97	1,457.30	40.66	36.840	
8,087.50	8,050.32	8,137.53	8,049.22	29.89	32.34	-90.00	-203.23	-937.06	1,497.94	1,457.12	40.82	36.693	
8,100.00	8,062.36	8,149.56	8,061.26	29.92	32.38	-90.12	-203.23	-937.06	1,497.95	1,457.07	40.88	36.645	
8,150.00	8,109.66	8,196.87	8,108.56	30.05	32.53	-90.70	-203.23	-937.06	1,498.07	1,456.98	41.08	36.463	
8,200.00	8,155.37	8,242.58	8,154.27	30.17	32.67	-91.36	-203.23	-937.06	1,498.47	1,457.19	41.28	36.299	
8,250.00	8,199.15	8,286.36	8,198.05	30.28	32.80	-92.09	-203.23	-937.06	1,499.30	1,457.83	41.47	36.155	
8,300.00	8,240.66	8,327.87	8,239.56	30.37	32.93	-92.82	-203.23	-937.06	1,500.75	1,459.10	41.65	36.035	
8,350.00	8,279.59	8,366.80	8,278.49	30.45	33.05	-93.53	-203.23	-937.06	1,502.99	1,461.17	41.82	35.943	
8,400.00	8,315.63	8,402.84	8,314.53	30.52	33.16	-94.16	-203.23	-937.06	1,506.22	1,464.24	41.98	35.882	
8,450.00	8,348.52	8,435.73	8,347.42	30.58	33.26	-94.66	-203.23	-937.06	1,510.62	1,468.50	42.13	35.857	
8,500.00	8,378.01	8,465.21	8,376.91	30.62	33.35	-94.98	-203.23	-937.06	1,516.37	1,474.10	42.27	35.870	
8,550.00	8,403.86	8,491.07	8,402.76	30.66	33.43	-95.09	-203.23	-937.06	1,523.61	1,481.20	42.41	35.924	
8,600.00	8,425.89	8,513.09	8,424.79	30.69	33.50	-94.95	-203.23	-937.06	1,532.44	1,489.90	42.54	36.023	
8,650.00	8,443.92	8,531.13	8,442.82	30.73	33.56	-94.52	-203.23	-937.06	1,542.95	1,500.29	42.66	36.167	
8,700.00	8,457.82	8,545.03	8,456.72	30.78	33.60	-93.77	-203.23	-937.06	1,555.16	1,512.39	42.77	36.358	
8,750.00	8,467.48	8,554.69	8,466.38	30.86	33.63	-92.68	-203.23	-937.06	1,569.06	1,526.18	42.87	36.596	
8,800.00	8,472.84	8,560.04	8,471.74	30.99	33.65	-91.26	-203.23	-937.06	1,584.56	1,541.59	42.97	36.880	
8,836.47	8,474.00	8,561.20	8,472.90	31.11	33.65	-90.00	-203.23	-937.06	1,596.82	1,553.79	43.02	37.115	
8,900.00	8,474.00	8,561.20	8,472.90	31.35	33.65	-90.00	-203.23	-937.06	1,619.92	1,576.79	43.12	37.563	
9,000.00	8,474.00	8,561.20	8,472.90	31.80	33.65	-90.00	-203.23	-937.06	1,660.57	1,617.26	43.31	38.344	
9,100.00	8,474.00	8,561.20	8,472.90	32.34	33.65	-90.00	-203.23	-937.06	1,706.11	1,662.60	43.51	39.213	
9,200.00	8,474.00	8,561.20	8,472.90	32.96	33.65	-90.00	-203.23	-937.06	1,756.18	1,712.45	43.72	40.166	
9,300.00	8,474.00	8,561.20	8,472.90	33.64	33.65	-90.00	-203.23	-937.06	1,810.38	1,766.44	43.94	41.198	
9,400.00	8,474.00	8,561.20	8,472.90	34.39	33.65	-90.00	-203.23	-937.06	1,868.38	1,824.21	44.16	42.305	
9,500.00	8,474.00	8,561.20	8,472.90	35.20	33.65	-90.00	-203.23	-937.06	1,929.81	1,885.43	44.38	43.480	
9,600.00	8,474.00	8,561.20	8,472.90	36.06	33.65	-90.00	-203.23	-937.06	1,994.37	1,949.77	44.60	44.718	
9,700.00	8,474.00	8,561.20	8,472.90	36.97	33.65	-90.00	-203.23	-937.06	2,061.76	2,016.95	44.81	46.016	
9,800.00	8,474.00	8,561.20	8,472.90	37.94	33.65	-90.00	-203.23	-937.06	2,131.71	2,086.71	45.00	47.367	
9,900.00	8,474.00	11,532.22	10,073.00	38.95	44.42	-136.89	1,413.51	-953.14	2,191.74	2,147.57	44.17	49.621	
10,000.00	8,474.00	11,632.22	10,073.00	40.00	45.33	-136.89	1,513.51	-954.13	2,191.73	2,146.50	45.24	48.452	
10,100.00	8,474.00	11,732.22	10,073.00	41.09	46.27	-136.89	1,613.50	-955.12	2,191.72	2,145.38	46.34	47.293	
10,200.00	8,474.00	11,832.22	10,073.00	42.22	47.26	-136.89	1,713.50	-956.12	2,191.72	2,144.22	47.49	46.148	
10,300.00	8,474.00	11,932.22	10,073.00	43.38	48.29	-136.89	1,813.49	-957.11	2,191.71	2,143.03	48.68	45.022	
10,400.00	8,474.00	12,032.22	10,073.00	44.57	49.35	-136.89	1,913.49	-958.11	2,191.71	2,141.80	49.90	43.919	
10,500.00	8,474.00	12,132.22	10,073.00	45.78	50.44	-136.89	2,013.48	-959.10	2,191.70	2,140.54	51.16	42.841	
10,600.00	8,474.00	12,232.22	10,073.00	47.03	51.56	-136.89	2,113.48	-960.09	2,191.69	2,139.25	52.44	41.791	
10,700.00	8,474.00	12,332.22	10,073.00	48.30	52.71	-136.89	2,213.47	-961.09	2,191.69	2,137.93	53.76	40.771	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 301H - 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	8,474.00	12,432.22	10,073.00	49.59	53.88	-136.89	2,313.47	-962.08	2,191.68	2,136.59	55.09	39.782	
10,900.00	8,474.00	12,532.22	10,073.00	50.90	55.08	-136.89	2,413.46	-963.08	2,191.67	2,135.22	56.45	38.823	
11,000.00	8,474.00	12,632.22	10,073.00	52.23	56.30	-136.89	2,513.46	-964.07	2,191.67	2,133.83	57.83	37.896	
11,100.00	8,474.00	12,732.22	10,073.00	53.58	57.55	-136.89	2,613.45	-965.06	2,191.66	2,132.42	59.24	36.998	
11,200.00	8,474.00	12,832.22	10,073.00	54.95	58.81	-136.89	2,713.45	-966.06	2,191.66	2,131.00	60.66	36.131	
11,300.00	8,474.00	12,932.22	10,073.00	56.33	60.09	-136.89	2,813.44	-967.05	2,191.65	2,129.55	62.10	35.293	
11,400.00	8,474.00	13,032.22	10,073.00	57.72	61.39	-136.89	2,913.44	-968.05	2,191.64	2,128.09	63.56	34.484	
11,500.00	8,474.00	13,132.22	10,073.00	59.13	62.71	-136.89	3,013.43	-969.04	2,191.64	2,126.61	65.03	33.703	
11,600.00	8,474.00	13,232.22	10,073.00	60.55	64.04	-136.89	3,113.43	-970.03	2,191.63	2,125.12	66.52	32.949	
11,700.00	8,474.00	13,332.22	10,073.00	61.98	65.39	-136.89	3,213.42	-971.03	2,191.62	2,123.61	68.01	32.223	
11,800.00	8,474.00	13,432.22	10,073.00	63.43	66.75	-136.89	3,313.42	-972.02	2,191.62	2,122.09	69.53	31.523	
11,900.00	8,474.00	13,532.22	10,073.00	64.88	68.12	-136.89	3,413.41	-973.02	2,191.61	2,120.57	71.05	30.848	
12,000.00	8,474.00	13,632.22	10,073.00	66.34	69.51	-136.90	3,513.41	-974.01	2,191.61	2,119.03	72.58	30.197	
12,100.00	8,474.00	13,732.22	10,073.00	67.81	70.91	-136.90	3,613.40	-975.00	2,191.60	2,117.48	74.12	29.568	
12,200.00	8,474.00	13,832.22	10,073.00	69.29	72.31	-136.90	3,713.40	-976.00	2,191.59	2,115.92	75.67	28.962	
12,300.00	8,474.00	13,932.22	10,073.00	70.78	73.73	-136.90	3,813.40	-976.99	2,191.59	2,114.35	77.23	28.376	
12,400.00	8,474.00	14,032.22	10,073.00	72.27	75.16	-136.90	3,913.39	-977.99	2,191.58	2,112.78	78.80	27.810	
12,500.00	8,474.00	14,132.22	10,073.00	73.77	76.60	-136.90	4,013.39	-978.98	2,191.57	2,111.19	80.38	27.264	
12,600.00	8,474.00	14,232.22	10,073.00	75.28	78.04	-136.90	4,113.38	-979.97	2,191.57	2,109.60	81.97	26.737	
12,700.00	8,474.00	14,332.22	10,073.00	76.79	79.49	-136.90	4,213.38	-980.97	2,191.56	2,108.01	83.56	26.229	
12,800.00	8,474.00	14,432.22	10,073.00	78.31	80.95	-136.90	4,313.37	-981.96	2,191.56	2,106.40	85.15	25.737	
12,900.00	8,474.00	14,532.22	10,073.00	79.83	82.42	-136.90	4,413.37	-982.96	2,191.55	2,104.79	86.76	25.261	
13,000.00	8,474.00	14,632.22	10,073.00	81.36	83.90	-136.90	4,513.36	-983.95	2,191.54	2,103.18	88.37	24.801	
13,100.00	8,474.00	14,732.22	10,073.00	82.89	85.38	-136.90	4,613.36	-984.94	2,191.54	2,101.56	89.98	24.356	
13,200.00	8,474.00	14,832.22	10,073.00	84.43	86.86	-136.90	4,713.35	-985.94	2,191.53	2,099.94	91.60	23.926	
13,300.00	8,474.00	14,932.22	10,073.00	85.97	88.36	-136.90	4,813.35	-986.93	2,191.52	2,098.31	93.22	23.510	
13,400.00	8,474.00	15,032.22	10,073.00	87.52	89.86	-136.90	4,913.34	-987.93	2,191.52	2,096.67	94.85	23.106	
13,500.00	8,474.00	15,132.22	10,073.00	89.07	91.36	-136.90	5,013.34	-988.92	2,191.51	2,095.03	96.48	22.715	
13,600.00	8,474.00	15,232.22	10,073.00	90.62	92.87	-136.90	5,113.33	-989.91	2,191.51	2,093.39	98.11	22.337	
13,700.00	8,474.00	15,332.22	10,073.00	92.18	94.38	-136.90	5,213.33	-990.91	2,191.50	2,091.75	99.75	21.970	
13,800.00	8,474.00	15,432.22	10,073.00	93.74	95.90	-136.90	5,313.32	-991.90	2,191.49	2,090.10	101.39	21.614	
13,900.00	8,474.00	15,532.22	10,073.00	95.30	97.42	-136.90	5,413.32	-992.90	2,191.49	2,088.45	103.04	21.269	
14,000.00	8,474.00	15,632.22	10,073.00	96.87	98.95	-136.90	5,513.31	-993.89	2,191.48	2,086.80	104.68	20.934	
14,100.00	8,474.00	15,732.22	10,073.00	98.43	100.48	-136.90	5,613.31	-994.88	2,191.48	2,085.14	106.34	20.609	
14,200.00	8,474.00	15,832.22	10,073.00	100.01	102.01	-136.90	5,713.30	-995.88	2,191.47	2,083.48	107.99	20.293	
14,300.00	8,474.00	15,932.22	10,073.00	101.58	103.55	-136.90	5,813.30	-996.87	2,191.46	2,081.81	109.65	19.986	
14,400.00	8,474.00	16,032.22	10,073.00	103.16	105.09	-136.90	5,913.29	-997.87	2,191.46	2,080.15	111.31	19.689	
14,500.00	8,474.00	16,132.22	10,073.00	104.74	106.64	-136.90	6,013.29	-998.86	2,191.45	2,078.48	112.97	19.399	
14,600.00	8,474.00	16,232.22	10,073.00	106.32	108.19	-136.90	6,113.28	-999.85	2,191.44	2,076.81	114.63	19.118	
14,700.00	8,474.00	16,332.22	10,073.00	107.90	109.74	-136.90	6,213.28	-1,000.85	2,191.44	2,075.14	116.30	18.844	
14,800.00	8,474.00	16,432.22	10,073.00	109.49	111.29	-136.90	6,313.27	-1,001.84	2,191.43	2,073.47	117.96	18.577	
14,900.00	8,474.00	16,532.22	10,073.00	111.07	112.85	-136.90	6,413.27	-1,002.84	2,191.43	2,071.80	119.63	18.318	
15,000.00	8,474.00	16,632.22	10,073.00	112.66	114.41	-136.90	6,513.26	-1,003.83	2,191.42	2,070.12	121.30	18.066	
15,100.00	8,474.00	16,732.22	10,073.00	114.25	115.97	-136.90	6,613.26	-1,004.83	2,191.41	2,068.44	122.97	17.820	
15,200.00	8,474.00	16,832.22	10,073.00	115.85	117.54	-136.90	6,713.25	-1,005.82	2,191.41	2,066.76	124.65	17.581	
15,300.00	8,474.00	16,932.22	10,073.00	117.44	119.10	-136.90	6,813.25	-1,006.81	2,191.40	2,065.08	126.32	17.348	
15,400.00	8,474.00	17,032.22	10,073.00	119.04	120.67	-136.90	6,913.24	-1,007.81	2,191.39	2,063.40	127.99	17.121	
15,500.00	8,474.00	17,132.22	10,073.00	120.63	122.24	-136.90	7,013.24	-1,008.80	2,191.39	2,061.72	129.67	16.900	
15,600.00	8,474.00	17,232.22	10,073.00	122.23	123.82	-136.90	7,113.23	-1,009.80	2,191.38	2,060.03	131.35	16.684	
15,700.00	8,474.00	17,332.22	10,073.00	123.83	125.39	-136.90	7,213.23	-1,010.79	2,191.38	2,058.35	133.03	16.473	
15,800.00	8,474.00	17,432.22	10,073.00	125.43	126.97	-136.90	7,313.22	-1,011.78	2,191.37	2,056.66	134.71	16.267	
15,900.00	8,474.00	17,532.22	10,073.00	127.04	128.55	-136.90	7,413.22	-1,012.78	2,191.36	2,054.97	136.39	16.066	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 301H - 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	8,474.00	17,632.22	10,073.00	128.64	130.13	-136.90	7,513.21	-1,013.77	2,191.36	2,053.28	138.08	15.871	
16,100.00	8,474.00	17,732.22	10,073.00	130.25	131.71	-136.90	7,613.21	-1,014.77	2,191.35	2,051.59	139.76	15.680	
16,200.00	8,474.00	17,832.22	10,073.00	131.85	133.30	-136.90	7,713.20	-1,015.76	2,191.34	2,049.90	141.44	15.493	
16,300.00	8,474.00	17,932.22	10,073.00	133.46	134.88	-136.90	7,813.20	-1,016.75	2,191.34	2,048.21	143.13	15.310	
16,400.00	8,474.00	18,032.22	10,073.00	135.07	136.47	-136.90	7,913.19	-1,017.75	2,191.33	2,046.52	144.81	15.132	
16,500.00	8,474.00	18,132.22	10,073.00	136.68	138.06	-136.90	8,013.19	-1,018.74	2,191.33	2,044.83	146.50	14.958	
16,600.00	8,474.00	18,232.22	10,073.00	138.29	139.65	-136.90	8,113.18	-1,019.74	2,191.32	2,043.14	148.18	14.788	
16,700.00	8,474.00	18,332.22	10,073.00	139.90	141.24	-136.90	8,213.18	-1,020.73	2,191.31	2,041.44	149.87	14.621	
16,800.00	8,474.00	18,432.22	10,073.00	141.52	142.84	-136.90	8,313.17	-1,021.72	2,191.31	2,039.75	151.56	14.458	
16,900.00	8,474.00	18,532.22	10,073.00	143.13	144.43	-136.90	8,413.17	-1,022.72	2,191.30	2,038.05	153.25	14.299	
17,000.00	8,474.00	18,632.22	10,073.00	144.74	146.03	-136.90	8,513.16	-1,023.71	2,191.29	2,036.36	154.93	14.143	
17,100.00	8,474.00	18,732.22	10,073.00	146.36	147.62	-136.90	8,613.16	-1,024.71	2,191.29	2,034.67	156.62	13.991	
17,200.00	8,474.00	18,832.22	10,073.00	147.97	149.22	-136.90	8,713.15	-1,025.70	2,191.28	2,032.97	158.31	13.842	
17,300.00	8,474.00	18,932.22	10,073.00	149.59	150.82	-136.90	8,813.15	-1,026.69	2,191.28	2,031.27	160.00	13.695	
17,400.00	8,474.00	19,032.22	10,073.00	151.21	152.42	-136.90	8,913.14	-1,027.69	2,191.27	2,029.58	161.69	13.552	
17,500.00	8,474.00	19,132.22	10,073.00	152.83	154.03	-136.90	9,013.14	-1,028.68	2,191.26	2,027.88	163.38	13.412	
17,600.00	8,474.00	19,232.22	10,073.00	154.45	155.63	-136.90	9,113.13	-1,029.68	2,191.26	2,026.18	165.07	13.274	
17,700.00	8,474.00	19,332.22	10,073.00	156.07	157.23	-136.91	9,213.13	-1,030.67	2,191.25	2,024.49	166.76	13.140	
17,800.00	8,474.00	19,432.22	10,073.00	157.69	158.84	-136.91	9,313.12	-1,031.66	2,191.24	2,022.79	168.45	13.008	
17,900.00	8,474.00	19,532.22	10,073.00	159.31	160.44	-136.91	9,413.12	-1,032.66	2,191.24	2,021.10	170.14	12.879	
18,000.00	8,474.00	19,632.22	10,073.00	160.93	162.05	-136.91	9,513.11	-1,033.65	2,191.23	2,019.40	171.83	12.752	
18,100.00	8,474.00	19,732.22	10,073.00	162.55	163.66	-136.91	9,613.11	-1,034.65	2,191.23	2,017.70	173.52	12.628	
18,200.00	8,474.00	19,832.22	10,073.00	164.18	165.27	-136.91	9,713.10	-1,035.64	2,191.22	2,016.00	175.22	12.506	
18,300.00	8,474.00	19,932.22	10,073.00	165.80	166.88	-136.91	9,813.10	-1,036.63	2,191.21	2,014.30	176.91	12.386	
18,400.00	8,474.00	20,032.22	10,073.00	167.42	168.49	-136.91	9,913.09	-1,037.63	2,191.21	2,012.61	178.60	12.269	
18,500.00	8,474.00	20,132.22	10,073.00	169.05	170.10	-136.91	10,013.09	-1,038.62	2,191.20	2,010.91	180.29	12.154	
18,548.37	8,474.00	20,180.59	10,073.00	169.83	170.88	-136.91	10,061.46	-1,039.10	2,191.20	2,010.09	181.11	12.099	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,843.60	1,843.60	6.37	6.38	89.46	0.23	25.06	25.07	16.05	9.02	2.780	
1,900.00	1,900.00	1,900.60	1,900.60	6.58	6.58	89.46	0.23	25.06	25.07	15.76	9.30	2.694	
1,916.47	1,916.47	1,917.07	1,917.07	6.64	6.64	89.46	0.23	25.06	25.07	15.68	9.39	2.670	
2,000.00	2,000.00	2,000.60	2,000.60	6.94	6.94	89.46	0.23	25.06	25.07	15.26	9.81	2.555	
2,100.00	2,099.99	2,100.00	2,099.99	7.28	7.28	-20.49	-0.39	26.22	25.00	14.70	10.29	2.428	
2,200.00	2,199.91	2,199.45	2,199.36	7.62	7.61	-19.34	-2.24	29.64	24.77	14.01	10.76	2.303	
2,300.00	2,299.69	2,298.87	2,298.57	7.96	7.95	-17.39	-5.33	35.34	24.40	13.19	11.21	2.176	
2,400.00	2,399.27	2,398.29	2,397.57	8.31	8.29	-14.58	-9.64	43.31	23.92	12.27	11.65	2.053	
2,466.68	2,465.52	2,464.58	2,463.44	8.54	8.52	-12.17	-13.19	49.88	23.57	11.63	11.94	1.974	
2,500.00	2,498.59	2,497.83	2,496.43	8.66	8.64	-10.78	-15.15	53.50	23.48	11.39	12.09	1.942	
2,600.00	2,597.85	2,597.81	2,595.64	9.01	8.99	-6.51	-21.07	64.44	23.34	10.78	12.57	1.858	
2,655.28	2,652.71	2,653.08	2,650.48	9.21	9.19	-4.14	-24.34	70.48	23.32	10.49	12.83	1.818	CC
2,700.00	2,697.10	2,697.80	2,694.85	9.37	9.35	-2.21	-26.98	75.37	23.34	10.29	13.05	1.789	
2,800.00	2,796.36	2,797.78	2,794.05	9.74	9.71	2.06	-32.90	86.31	23.46	9.93	13.53	1.734	
2,900.00	2,895.61	2,897.77	2,893.26	10.10	10.08	6.27	-38.82	97.24	23.71	9.69	14.02	1.691	
3,000.00	2,994.86	2,997.75	2,992.47	10.47	10.45	10.37	-44.73	108.18	24.09	9.57	14.52	1.660	
3,100.00	3,094.12	3,097.74	3,091.68	10.85	10.82	14.32	-50.65	119.11	24.59	9.57	15.02	1.637	ES
3,200.00	3,193.37	3,197.72	3,190.89	11.22	11.20	18.10	-56.56	130.04	25.20	9.67	15.52	1.623	
3,300.00	3,292.63	3,297.71	3,290.10	11.60	11.58	21.68	-62.48	140.98	25.91	9.87	16.04	1.616	
3,400.00	3,391.88	3,397.69	3,389.31	11.98	11.96	25.06	-68.40	151.91	26.72	10.16	16.56	1.614	SF
3,500.00	3,491.14	3,497.67	3,488.52	12.36	12.34	28.24	-74.31	162.85	27.62	10.54	17.08	1.617	
3,600.00	3,590.39	3,597.66	3,587.72	12.75	12.72	31.20	-80.23	173.78	28.59	10.98	17.61	1.624	
3,700.00	3,689.65	3,697.64	3,686.93	13.13	13.11	33.96	-86.14	184.72	29.64	11.50	18.14	1.634	
3,800.00	3,788.90	3,797.63	3,786.14	13.52	13.50	36.53	-92.06	195.65	30.75	12.07	18.68	1.646	
3,900.00	3,888.16	3,897.61	3,885.35	13.91	13.89	38.91	-97.98	206.58	31.92	12.70	19.22	1.661	
4,000.00	3,987.41	3,997.60	3,984.56	14.30	14.28	41.12	-103.89	217.52	33.14	13.37	19.76	1.677	
4,100.00	4,086.66	4,097.58	4,083.77	14.69	14.67	43.18	-109.81	228.45	34.40	14.09	20.31	1.694	
4,200.00	4,185.92	4,197.57	4,182.98	15.08	15.06	45.08	-115.72	239.39	35.71	14.85	20.86	1.712	
4,300.00	4,285.17	4,297.55	4,282.19	15.47	15.45	46.85	-121.64	250.32	37.05	15.64	21.41	1.731	
4,400.00	4,384.43	4,397.54	4,381.39	15.86	15.85	48.49	-127.56	261.26	38.43	16.46	21.97	1.750	
4,500.00	4,483.68	4,497.52	4,480.60	16.26	16.24	50.02	-133.47	272.19	39.83	17.31	22.52	1.769	
4,600.00	4,582.94	4,597.51	4,579.81	16.65	16.64	51.44	-139.39	283.12	41.27	18.19	23.08	1.788	
4,700.00	4,682.19	4,697.49	4,679.02	17.05	17.03	52.77	-145.30	294.06	42.72	19.09	23.64	1.808	
4,800.00	4,781.45	4,797.48	4,778.23	17.44	17.43	54.01	-151.22	304.99	44.20	20.00	24.20	1.827	
4,900.00	4,880.70	4,897.46	4,877.44	17.84	17.83	55.17	-157.14	315.93	45.70	20.94	24.76	1.846	
5,000.00	4,979.96	4,997.44	4,976.65	18.23	18.23	56.25	-163.05	326.86	47.21	21.89	25.32	1.865	
5,100.00	5,079.21	5,097.43	5,075.86	18.63	18.63	57.27	-168.97	337.80	48.74	22.86	25.88	1.883	
5,200.00	5,178.46	5,197.41	5,175.06	19.03	19.02	58.22	-174.88	348.73	50.28	23.84	26.44	1.902	
5,300.00	5,277.72	5,297.40	5,274.27	19.43	19.42	59.12	-180.80	359.67	51.84	24.83	27.01	1.919	
5,400.00	5,376.97	5,397.38	5,373.48	19.83	19.82	59.97	-186.71	370.60	53.41	25.84	27.57	1.937	
5,500.00	5,476.23	5,497.37	5,472.69	20.23	20.23	60.76	-192.63	381.53	54.99	26.85	28.14	1.954	
5,600.00	5,575.48	5,597.35	5,571.90	20.63	20.63	61.52	-198.55	392.47	56.58	27.88	28.70	1.971	
5,700.00	5,674.74	5,697.34	5,671.11	21.03	21.03	62.23	-204.46	403.40	58.18	28.91	29.27	1.988	
5,800.00	5,773.99	5,797.32	5,770.32	21.43	21.43	62.90	-210.38	414.34	59.79	29.95	29.84	2.004	
5,900.00	5,873.25	5,897.31	5,869.53	21.83	21.83	63.54	-216.29	425.27	61.40	31.00	30.41	2.019	
6,000.00	5,972.50	5,997.29	5,968.73	22.23	22.24	64.14	-222.21	436.21	63.03	32.05	30.97	2.035	
6,100.00	6,071.76	6,097.28	6,067.94	22.63	22.64	64.72	-228.13	447.14	64.66	33.11	31.54	2.050	
6,200.00	6,171.01	6,197.26	6,167.15	23.03	23.04	65.26	-234.04	458.07	66.29	34.18	32.11	2.064	
6,300.00	6,270.26	6,297.25	6,266.36	23.43	23.45	65.78	-239.96	469.01	67.93	35.25	32.68	2.079	
6,400.00	6,369.52	6,397.23	6,365.57	23.83	23.85	66.28	-245.87	479.94	69.58	36.33	33.25	2.093	
6,500.00	6,468.77	6,497.22	6,464.78	24.24	24.25	66.75	-251.79	490.88	71.23	37.41	33.82	2.106	
6,600.00	6,568.03	6,597.20	6,563.99	24.64	24.66	67.20	-257.71	501.81	72.89	38.50	34.39	2.119	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,700.00	6,667.28	6,697.18	6,663.20	25.04	25.06	67.63	-263.62	512.75	74.55	39.59	34.96	2.132	
6,800.00	6,766.54	6,797.17	6,762.40	25.44	25.47	68.04	-269.54	523.68	76.21	40.68	35.53	2.145	
6,908.75	6,874.48	6,905.96	6,870.35	25.88	25.91	68.47	-275.97	535.57	78.03	41.87	36.15	2.158	
7,000.00	6,965.17	6,998.13	6,961.95	26.24	26.27	68.88	-280.84	544.57	79.35	42.67	36.68	2.163	
7,100.00	7,064.81	7,099.14	7,062.59	26.63	26.66	69.21	-284.97	552.19	80.47	43.24	37.23	2.161	
7,200.00	7,164.63	7,200.17	7,163.43	26.99	27.03	69.45	-287.82	557.47	81.24	43.49	37.75	2.152	
7,300.00	7,264.57	7,301.20	7,264.40	27.34	27.39	69.58	-289.41	560.41	81.67	43.43	38.25	2.135	
7,375.43	7,340.00	7,377.40	7,340.60	27.60	27.64	179.95	-289.77	561.06	81.77	43.17	38.59	2.119	
7,400.00	7,364.57	7,401.97	7,365.17	27.68	27.72	179.95	-289.77	561.06	81.77	43.06	38.71	2.112	
7,500.00	7,464.57	7,501.97	7,465.17	28.00	28.04	179.95	-289.77	561.06	81.77	42.59	39.17	2.087	
7,600.00	7,564.57	7,601.97	7,565.17	28.33	28.36	179.95	-289.77	561.06	81.77	42.13	39.63	2.063	
7,700.00	7,664.57	7,701.97	7,665.17	28.65	28.69	179.95	-289.77	561.06	81.77	41.67	40.10	2.039	
7,800.00	7,764.57	7,801.97	7,765.17	28.98	29.01	179.95	-289.77	561.06	81.77	41.20	40.56	2.016	
7,900.00	7,864.57	7,901.97	7,865.17	29.31	29.34	179.95	-289.77	561.06	81.77	40.73	41.03	1.993	
7,936.47	7,901.04	7,938.44	7,901.64	29.42	29.45	179.95	-289.77	561.06	81.77	40.56	41.20	1.985	
7,950.00	7,914.57	7,951.97	7,915.17	29.47	29.50	-179.47	-289.77	561.06	81.92	40.66	41.26	1.985	
8,000.00	7,964.44	8,001.84	7,965.04	29.63	29.66	-179.49	-289.77	561.06	85.28	43.79	41.50	2.055	
8,050.00	8,013.83	8,051.23	8,014.43	29.78	29.82	-179.53	-289.77	561.06	92.98	51.25	41.73	2.228	
8,100.00	8,062.36	8,099.76	8,062.96	29.92	29.98	-179.57	-289.77	561.06	104.94	62.99	41.95	2.501	
8,150.00	8,109.66	8,147.06	8,110.26	30.05	30.14	-179.62	-289.77	561.06	121.09	78.92	42.17	2.872	
8,200.00	8,155.37	8,192.77	8,155.97	30.17	30.28	-179.66	-289.77	561.06	141.31	98.93	42.37	3.335	
8,250.00	8,199.15	8,236.55	8,199.75	30.28	30.43	-179.69	-289.77	561.06	165.43	122.86	42.57	3.886	
8,300.00	8,240.66	8,278.06	8,241.26	30.37	30.56	-179.72	-289.77	561.06	193.27	150.52	42.75	4.521	
8,350.00	8,279.59	8,316.99	8,280.19	30.45	30.69	-179.74	-289.77	561.06	224.63	181.71	42.91	5.234	
8,400.00	8,315.63	8,353.03	8,316.23	30.52	30.81	-179.76	-289.77	561.06	259.26	216.19	43.06	6.020	
8,450.00	8,348.52	8,385.92	8,349.12	30.58	30.92	-179.77	-289.77	561.06	296.89	253.70	43.20	6.873	
8,500.00	8,378.01	8,415.41	8,378.61	30.62	31.02	-179.77	-289.77	561.06	337.26	293.94	43.31	7.787	
8,550.00	8,403.86	8,441.26	8,404.46	30.66	31.10	-179.76	-289.77	561.06	380.03	336.62	43.41	8.754	
8,600.00	8,425.89	8,463.29	8,426.49	30.69	31.17	-179.75	-289.77	561.06	424.90	381.41	43.49	9.770	
8,650.00	8,443.92	8,481.32	8,444.52	30.73	31.23	-179.71	-289.77	561.06	471.52	427.97	43.56	10.826	
8,700.00	8,457.82	8,495.22	8,458.42	30.78	31.28	-179.65	-289.77	561.06	519.53	475.93	43.60	11.915	
8,750.00	8,467.48	8,504.89	8,468.08	30.86	31.31	-179.49	-289.77	561.06	568.57	524.94	43.64	13.030	
8,800.00	8,472.84	8,510.24	8,473.44	30.99	31.33	-178.90	-289.77	561.06	618.27	574.62	43.65	14.163	
8,836.47	8,474.00	8,511.40	8,474.60	31.11	31.33	-90.01	-289.77	561.06	654.72	611.06	43.66	14.997	
8,900.00	8,474.00	8,511.40	8,474.60	31.35	31.33	-90.01	-289.77	561.06	718.25	674.59	43.66	16.451	
9,000.00	8,474.00	8,511.40	8,474.60	31.80	31.33	-90.01	-289.77	561.06	818.25	774.58	43.66	18.740	
9,100.00	8,474.00	8,511.40	8,474.60	32.34	31.33	-90.02	-289.77	561.06	918.25	874.58	43.67	21.028	
9,200.00	8,474.00	8,511.40	8,474.60	32.96	31.33	-90.02	-289.77	561.06	1,018.25	974.57	43.67	23.315	
9,300.00	8,474.00	8,511.40	8,474.60	33.64	31.33	-90.02	-289.77	561.06	1,118.25	1,074.57	43.68	25.601	
9,400.00	8,474.00	8,511.40	8,474.60	34.39	31.33	-90.02	-289.77	561.06	1,218.25	1,174.56	43.69	27.886	
9,500.00	8,474.00	8,511.40	8,474.60	35.20	31.33	-90.02	-289.77	561.06	1,318.25	1,274.55	43.69	30.170	
9,600.00	8,474.00	8,511.40	8,474.60	36.06	31.33	-90.02	-289.77	561.06	1,418.25	1,374.54	43.70	32.453	
9,700.00	8,474.00	11,270.13	9,961.00	36.97	41.33	-179.98	1,228.41	545.95	1,486.40	1,457.88	28.52	52.116	
9,800.00	8,474.00	11,370.13	9,961.00	37.94	42.21	-179.98	1,328.40	544.95	1,486.40	1,457.25	29.15	50.990	
9,900.00	8,474.00	11,470.13	9,961.00	38.95	43.13	-179.98	1,428.40	543.95	1,486.40	1,456.59	29.81	49.865	
10,000.00	8,474.00	11,570.13	9,961.00	40.00	44.09	-179.98	1,528.39	542.96	1,486.40	1,455.91	30.49	48.746	
10,100.00	8,474.00	11,670.13	9,961.00	41.09	45.10	-179.98	1,628.39	541.96	1,486.40	1,455.20	31.20	47.639	
10,200.00	8,474.00	11,770.13	9,961.00	42.22	46.14	-179.98	1,728.38	540.97	1,486.40	1,454.47	31.93	46.548	
10,300.00	8,474.00	11,870.13	9,961.00	43.38	47.22	-179.98	1,828.38	539.97	1,486.40	1,453.72	32.69	45.476	
10,400.00	8,474.00	11,970.13	9,961.00	44.57	48.32	-179.98	1,928.37	538.97	1,486.40	1,452.94	33.46	44.426	
10,500.00	8,474.00	12,070.13	9,961.00	45.78	49.46	-179.98	2,028.37	537.98	1,486.40	1,452.15	34.25	43.400	
10,600.00	8,474.00	12,170.13	9,961.00	47.03	50.63	-179.98	2,128.36	536.98	1,486.40	1,451.34	35.06	42.399	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
10,700.00	8,474.00	12,270.13	9,961.00	48.30	51.82	-179.98	2,228.36	535.99	1,486.40	1,450.52	35.88	41.425	
10,800.00	8,474.00	12,370.13	9,961.00	49.59	53.04	-179.98	2,328.35	534.99	1,486.40	1,449.68	36.72	40.478	
10,900.00	8,474.00	12,470.13	9,961.00	50.90	54.28	-179.98	2,428.35	534.00	1,486.40	1,448.82	37.58	39.558	
11,000.00	8,474.00	12,570.13	9,961.00	52.23	55.54	-179.98	2,528.34	533.00	1,486.40	1,447.96	38.44	38.666	
11,100.00	8,474.00	12,670.13	9,961.00	53.58	56.82	-179.98	2,628.34	532.00	1,486.40	1,447.08	39.32	37.802	
11,200.00	8,474.00	12,770.13	9,961.00	54.95	58.12	-179.98	2,728.33	531.01	1,486.40	1,446.19	40.21	36.965	
11,300.00	8,474.00	12,870.13	9,961.00	56.33	59.43	-179.98	2,828.33	530.01	1,486.40	1,445.29	41.11	36.154	
11,400.00	8,474.00	12,970.13	9,961.00	57.72	60.77	-179.98	2,928.32	529.02	1,486.40	1,444.38	42.02	35.371	
11,500.00	8,474.00	13,070.13	9,961.00	59.13	62.11	-179.98	3,028.32	528.02	1,486.40	1,443.46	42.94	34.613	
11,600.00	8,474.00	13,170.13	9,961.00	60.55	63.48	-179.98	3,128.31	527.02	1,486.40	1,442.53	43.87	33.879	
11,700.00	8,474.00	13,270.13	9,961.00	61.98	64.85	-179.98	3,228.31	526.03	1,486.40	1,441.59	44.81	33.171	
11,800.00	8,474.00	13,370.13	9,961.00	63.43	66.24	-179.98	3,328.30	525.03	1,486.40	1,440.64	45.76	32.486	
11,900.00	8,474.00	13,470.13	9,961.00	64.88	67.64	-179.98	3,428.30	524.04	1,486.40	1,439.69	46.71	31.823	
12,000.00	8,474.00	13,570.13	9,961.00	66.34	69.05	-179.98	3,528.29	523.04	1,486.40	1,438.73	47.67	31.183	
12,100.00	8,474.00	13,670.13	9,961.00	67.81	70.47	-179.98	3,628.29	522.05	1,486.40	1,437.77	48.63	30.564	
12,200.00	8,474.00	13,770.13	9,961.00	69.29	71.91	-179.98	3,728.28	521.05	1,486.40	1,436.80	49.60	29.965	
12,300.00	8,474.00	13,870.13	9,961.00	70.78	73.35	-179.98	3,828.28	520.05	1,486.40	1,435.82	50.58	29.386	
12,400.00	8,474.00	13,970.13	9,961.00	72.27	74.80	-179.98	3,928.27	519.06	1,486.40	1,434.84	51.56	28.826	
12,500.00	8,474.00	14,070.13	9,961.00	73.77	76.25	-179.98	4,028.27	518.06	1,486.40	1,433.85	52.55	28.284	
12,600.00	8,474.00	14,170.13	9,961.00	75.28	77.72	-179.98	4,128.26	517.07	1,486.40	1,432.86	53.55	27.760	
12,700.00	8,474.00	14,270.13	9,961.00	76.79	79.19	-179.98	4,228.26	516.07	1,486.40	1,431.86	54.54	27.252	
12,800.00	8,474.00	14,370.13	9,961.00	78.31	80.67	-179.98	4,328.25	515.07	1,486.40	1,430.86	55.54	26.761	
12,900.00	8,474.00	14,470.13	9,961.00	79.83	82.16	-179.98	4,428.25	514.08	1,486.40	1,429.85	56.55	26.285	
13,000.00	8,474.00	14,570.13	9,961.00	81.36	83.65	-179.98	4,528.24	513.08	1,486.40	1,428.84	57.56	25.824	
13,100.00	8,474.00	14,670.13	9,961.00	82.89	85.15	-179.98	4,628.24	512.09	1,486.40	1,427.83	58.57	25.378	
13,200.00	8,474.00	14,770.13	9,961.00	84.43	86.65	-179.98	4,728.23	511.09	1,486.40	1,426.81	59.59	24.945	
13,300.00	8,474.00	14,870.13	9,961.00	85.97	88.16	-179.99	4,828.23	510.10	1,486.40	1,425.79	60.61	24.525	
13,400.00	8,474.00	14,970.13	9,961.00	87.52	89.68	-179.99	4,928.22	509.10	1,486.40	1,424.77	61.63	24.118	
13,500.00	8,474.00	15,070.13	9,961.00	89.07	91.20	-179.99	5,028.22	508.10	1,486.40	1,423.74	62.66	23.723	
13,600.00	8,474.00	15,170.13	9,961.00	90.62	92.72	-179.99	5,128.21	507.11	1,486.40	1,422.72	63.68	23.340	
13,700.00	8,474.00	15,270.13	9,961.00	92.18	94.25	-179.99	5,228.21	506.11	1,486.40	1,421.68	64.72	22.968	
13,800.00	8,474.00	15,370.13	9,961.00	93.74	95.78	-179.99	5,328.20	505.12	1,486.40	1,420.65	65.75	22.607	
13,900.00	8,474.00	15,470.13	9,961.00	95.30	97.32	-179.99	5,428.20	504.12	1,486.40	1,419.61	66.79	22.256	
14,000.00	8,474.00	15,570.13	9,961.00	96.87	98.86	-179.99	5,528.19	503.12	1,486.40	1,418.58	67.82	21.916	
14,100.00	8,474.00	15,670.13	9,961.00	98.43	100.40	-179.99	5,628.19	502.13	1,486.40	1,417.54	68.86	21.584	
14,200.00	8,474.00	15,770.13	9,961.00	100.01	101.95	-179.99	5,728.18	501.13	1,486.40	1,416.49	69.91	21.262	
14,300.00	8,474.00	15,870.13	9,961.00	101.58	103.50	-179.99	5,828.18	500.14	1,486.40	1,415.45	70.95	20.949	
14,400.00	8,474.00	15,970.13	9,961.00	103.16	105.05	-179.99	5,928.17	499.14	1,486.40	1,414.40	72.00	20.645	
14,500.00	8,474.00	16,070.13	9,961.00	104.74	106.61	-179.99	6,028.17	498.15	1,486.40	1,413.35	73.05	20.348	
14,600.00	8,474.00	16,170.13	9,961.00	106.32	108.17	-179.99	6,128.16	497.15	1,486.40	1,412.30	74.10	20.060	
14,700.00	8,474.00	16,270.13	9,961.00	107.90	109.73	-179.99	6,228.16	496.15	1,486.40	1,411.25	75.15	19.779	
14,800.00	8,474.00	16,370.13	9,961.00	109.49	111.29	-179.99	6,328.15	495.16	1,486.40	1,410.20	76.20	19.505	
14,900.00	8,474.00	16,470.13	9,961.00	111.07	112.86	-179.99	6,428.15	494.16	1,486.40	1,409.14	77.26	19.239	
15,000.00	8,474.00	16,570.13	9,961.00	112.66	114.43	-179.99	6,528.14	493.17	1,486.40	1,408.08	78.32	18.979	
15,100.00	8,474.00	16,670.13	9,961.00	114.25	116.00	-179.99	6,628.14	492.17	1,486.40	1,407.02	79.38	18.726	
15,200.00	8,474.00	16,770.13	9,961.00	115.85	117.57	-179.99	6,728.13	491.17	1,486.40	1,405.96	80.44	18.479	
15,300.00	8,474.00	16,870.13	9,961.00	117.44	119.15	-179.99	6,828.13	490.18	1,486.40	1,404.90	81.50	18.239	
15,400.00	8,474.00	16,970.13	9,961.00	119.04	120.73	-179.99	6,928.12	489.18	1,486.40	1,403.84	82.56	18.004	
15,500.00	8,474.00	17,070.13	9,961.00	120.63	122.31	-179.99	7,028.12	488.19	1,486.40	1,402.78	83.62	17.775	
15,600.00	8,474.00	17,170.13	9,961.00	122.23	123.89	-179.99	7,128.11	487.19	1,486.40	1,401.71	84.69	17.552	
15,700.00	8,474.00	17,270.13	9,961.00	123.83	125.47	-179.99	7,228.11	486.20	1,486.40	1,400.65	85.75	17.333	
15,800.00	8,474.00	17,370.13	9,961.00	125.43	127.06	-179.99	7,328.10	485.20	1,486.40	1,399.58	86.82	17.120	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
15,900.00	8,474.00	17,470.13	9,961.00	127.04	128.64	-179.99	7,428.10	484.20	1,486.40	1,398.51	87.89	16.912	
16,000.00	8,474.00	17,570.13	9,961.00	128.64	130.23	-179.99	7,528.09	483.21	1,486.40	1,397.44	88.96	16.709	
16,100.00	8,474.00	17,670.13	9,961.00	130.25	131.82	-179.99	7,628.09	482.21	1,486.40	1,396.37	90.03	16.511	
16,200.00	8,474.00	17,770.13	9,961.00	131.85	133.42	-179.99	7,728.08	481.22	1,486.40	1,395.30	91.10	16.316	
16,300.00	8,474.00	17,870.13	9,961.00	133.46	135.01	-179.99	7,828.08	480.22	1,486.40	1,394.23	92.17	16.127	
16,400.00	8,474.00	17,970.13	9,961.00	135.07	136.60	-179.99	7,928.07	479.22	1,486.40	1,393.16	93.24	15.941	
16,500.00	8,474.00	18,070.13	9,961.00	136.68	138.20	-179.99	8,028.07	478.23	1,486.40	1,392.08	94.32	15.760	
16,600.00	8,474.00	18,170.13	9,961.00	138.29	139.80	-179.99	8,128.06	477.23	1,486.40	1,391.01	95.39	15.582	
16,700.00	8,474.00	18,270.13	9,961.00	139.90	141.40	-179.99	8,228.06	476.24	1,486.40	1,389.93	96.47	15.408	
16,800.00	8,474.00	18,370.13	9,961.00	141.52	142.99	-180.00	8,328.05	475.24	1,486.40	1,388.86	97.54	15.238	
16,900.00	8,474.00	18,470.13	9,961.00	143.13	144.60	-180.00	8,428.05	474.25	1,486.40	1,387.78	98.62	15.072	
17,000.00	8,474.00	18,570.13	9,961.00	144.74	146.20	-180.00	8,528.04	473.25	1,486.40	1,386.70	99.70	14.909	
17,100.00	8,474.00	18,670.13	9,961.00	146.36	147.80	-180.00	8,628.04	472.25	1,486.40	1,385.62	100.78	14.750	
17,200.00	8,474.00	18,770.13	9,961.00	147.97	149.41	-180.00	8,728.03	471.26	1,486.40	1,384.55	101.85	14.593	
17,300.00	8,474.00	18,870.13	9,961.00	149.59	151.01	-180.00	8,828.03	470.26	1,486.40	1,383.47	102.93	14.440	
17,400.00	8,474.00	18,970.13	9,961.00	151.21	152.62	-180.00	8,928.02	469.27	1,486.40	1,382.39	104.01	14.290	
17,500.00	8,474.00	19,070.13	9,961.00	152.83	154.22	-180.00	9,028.02	468.27	1,486.40	1,381.30	105.10	14.143	
17,600.00	8,474.00	19,170.13	9,961.00	154.45	155.83	-180.00	9,128.01	467.27	1,486.40	1,380.22	106.18	13.999	
17,700.00	8,474.00	19,270.13	9,961.00	156.07	157.44	-180.00	9,228.01	466.28	1,486.40	1,379.14	107.26	13.858	
17,800.00	8,474.00	19,370.13	9,961.00	157.69	159.05	-180.00	9,328.00	465.28	1,486.40	1,378.06	108.34	13.720	
17,900.00	8,474.00	19,470.13	9,961.00	159.31	160.66	-180.00	9,428.00	464.29	1,486.40	1,376.98	109.42	13.584	
18,000.00	8,474.00	19,570.13	9,961.00	160.93	162.27	-180.00	9,527.99	463.29	1,486.40	1,375.89	110.51	13.451	
18,100.00	8,474.00	19,670.13	9,961.00	162.55	163.89	-180.00	9,627.99	462.30	1,486.40	1,374.81	111.59	13.320	
18,200.00	8,474.00	19,770.13	9,961.00	164.18	165.50	-180.00	9,727.98	461.30	1,486.40	1,373.72	112.68	13.192	
18,300.00	8,474.00	19,870.13	9,961.00	165.80	167.11	-180.00	9,827.98	460.30	1,486.40	1,372.64	113.76	13.066	
18,400.00	8,474.00	19,970.13	9,961.00	167.42	168.73	-180.00	9,927.97	459.31	1,486.40	1,371.55	114.85	12.942	
18,500.00	8,474.00	20,070.13	9,961.00	169.05	170.34	-180.00	10,027.97	458.31	1,486.40	1,370.47	115.93	12.821	
18,548.37	8,474.00	20,118.50	9,961.00	169.83	171.13	180.00	10,076.34	457.83	1,486.40	1,369.94	116.46	12.763	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,842.20	1,842.20	6.37	6.37	-153.99	-75.29	-36.74	83.78	74.77	9.01	9.297	
1,900.00	1,900.00	1,899.20	1,899.20	6.58	6.58	-153.99	-75.29	-36.74	83.78	74.48	9.30	9.008	
2,000.00	2,000.00	1,999.20	1,999.20	6.94	6.93	-153.99	-75.29	-36.74	83.78	73.97	9.81	8.542	CC, ES
2,100.00	2,099.99	2,097.77	2,097.76	7.28	7.28	97.17	-75.59	-37.96	84.75	74.46	10.29	8.233	
2,200.00	2,199.91	2,195.96	2,195.88	7.62	7.61	101.46	-76.49	-41.62	88.04	77.28	10.76	8.181	SF
2,300.00	2,299.69	2,293.44	2,293.15	7.96	7.94	107.83	-77.97	-47.68	94.55	83.32	11.22	8.423	
2,400.00	2,399.27	2,389.85	2,389.17	8.31	8.28	115.18	-80.01	-56.05	105.37	93.69	11.68	9.023	
2,466.68	2,465.52	2,453.38	2,452.32	8.54	8.50	120.10	-81.68	-62.85	115.43	103.46	11.97	9.640	
2,500.00	2,498.59	2,484.89	2,483.59	8.66	8.61	122.48	-82.59	-66.60	121.29	109.17	12.12	10.008	
2,600.00	2,597.85	2,578.74	2,576.53	9.01	8.95	128.58	-85.68	-79.25	141.51	128.96	12.55	11.277	
2,700.00	2,697.10	2,671.41	2,667.96	9.37	9.29	133.30	-89.27	-93.91	165.29	152.32	12.97	12.747	
2,800.00	2,796.36	2,762.83	2,757.77	9.74	9.63	136.91	-93.32	-110.49	192.23	178.85	13.38	14.371	
2,900.00	2,895.61	2,858.12	2,851.16	10.10	10.00	139.80	-97.81	-128.85	220.89	207.04	13.85	15.951	
3,000.00	2,994.86	2,953.40	2,944.55	10.47	10.38	142.03	-102.30	-147.20	249.95	235.63	14.32	17.450	
3,100.00	3,094.12	3,048.68	3,037.94	10.85	10.76	143.79	-106.78	-165.56	279.29	264.48	14.80	18.866	
3,200.00	3,193.37	3,143.96	3,131.33	11.22	11.15	145.22	-111.27	-183.91	308.82	293.54	15.29	20.204	
3,300.00	3,292.63	3,239.24	3,224.72	11.60	11.54	146.40	-115.76	-202.27	338.50	322.73	15.77	21.466	
3,400.00	3,391.88	3,334.52	3,318.11	11.98	11.94	147.39	-120.24	-220.63	368.29	352.03	16.26	22.657	
3,500.00	3,491.14	3,429.80	3,411.49	12.36	12.35	148.23	-124.73	-238.98	398.16	381.42	16.74	23.780	
3,600.00	3,590.39	3,525.08	3,504.88	12.75	12.75	148.96	-129.22	-257.34	428.11	410.87	17.23	24.841	
3,700.00	3,689.65	3,620.36	3,598.27	13.13	13.17	149.59	-133.70	-275.69	458.11	440.38	17.73	25.844	
3,800.00	3,788.90	3,715.65	3,691.66	13.52	13.58	150.14	-138.19	-294.05	488.15	469.93	18.22	26.793	
3,900.00	3,888.16	3,810.93	3,785.05	13.91	14.00	150.63	-142.68	-312.41	518.23	499.51	18.71	27.692	
4,000.00	3,987.41	3,906.21	3,878.44	14.30	14.42	151.06	-147.17	-330.76	548.34	529.13	19.21	28.545	
4,100.00	4,086.66	4,001.49	3,971.82	14.69	14.84	151.46	-151.65	-349.12	578.47	558.76	19.71	29.354	
4,200.00	4,185.92	4,096.77	4,065.21	15.08	15.26	151.81	-156.14	-367.47	608.63	588.42	20.21	30.122	
4,300.00	4,285.17	4,192.05	4,158.60	15.47	15.69	152.12	-160.63	-385.83	638.80	618.10	20.70	30.853	
4,400.00	4,384.43	4,287.33	4,251.99	15.86	16.12	152.41	-165.11	-404.19	669.00	647.79	21.21	31.549	
4,500.00	4,483.68	4,382.61	4,345.38	16.26	16.55	152.68	-169.60	-422.54	699.20	677.50	21.71	32.211	
4,600.00	4,582.94	4,477.89	4,438.77	16.65	16.98	152.92	-174.09	-440.90	729.42	707.21	22.21	32.844	
4,700.00	4,682.19	4,573.18	4,532.16	17.05	17.41	153.15	-178.57	-459.25	759.65	736.94	22.71	33.447	
4,800.00	4,781.45	4,668.46	4,625.54	17.44	17.85	153.35	-183.06	-477.61	789.89	766.67	23.22	34.023	
4,900.00	4,880.70	4,763.74	4,718.93	17.84	18.28	153.54	-187.55	-495.97	820.14	796.42	23.72	34.575	
5,000.00	4,979.96	4,859.02	4,812.32	18.23	18.72	153.72	-192.04	-514.32	850.39	826.17	24.23	35.102	
5,100.00	5,079.21	4,954.30	4,905.71	18.63	19.16	153.89	-196.52	-532.68	880.66	855.93	24.73	35.608	
5,200.00	5,178.46	5,049.58	4,999.10	19.03	19.60	154.04	-201.01	-551.03	910.93	885.69	25.24	36.092	
5,300.00	5,277.72	5,144.86	5,092.49	19.43	20.04	154.19	-205.50	-569.39	941.20	915.46	25.75	36.557	
5,400.00	5,376.97	5,240.14	5,185.87	19.83	20.48	154.32	-209.98	-587.75	971.48	945.23	26.25	37.003	
5,500.00	5,476.23	5,335.42	5,279.26	20.23	20.92	154.45	-214.47	-606.10	1,001.77	975.00	26.76	37.431	
5,600.00	5,575.48	5,430.71	5,372.65	20.63	21.36	154.57	-218.96	-624.46	1,032.05	1,004.78	27.27	37.844	
5,700.00	5,674.74	5,525.99	5,466.04	21.03	21.81	154.68	-223.45	-642.81	1,062.35	1,034.57	27.78	38.240	
5,800.00	5,773.99	5,621.27	5,559.43	21.43	22.25	154.79	-227.93	-661.17	1,092.64	1,064.35	28.29	38.622	
5,900.00	5,873.25	5,716.55	5,652.82	21.83	22.70	154.89	-232.42	-679.53	1,122.94	1,094.14	28.80	38.989	
6,000.00	5,972.50	5,811.83	5,746.21	22.23	23.14	154.98	-236.91	-697.88	1,153.25	1,123.93	29.31	39.344	
6,100.00	6,071.76	5,907.11	5,839.59	22.63	23.59	155.07	-241.39	-716.24	1,183.55	1,153.73	29.82	39.685	
6,200.00	6,171.01	6,002.39	5,932.98	23.03	24.04	155.16	-245.88	-734.59	1,213.86	1,183.52	30.33	40.015	
6,300.00	6,270.26	6,097.67	6,026.37	23.43	24.48	155.24	-250.37	-752.95	1,244.17	1,213.32	30.85	40.334	
6,400.00	6,369.52	6,192.95	6,119.76	23.83	24.93	155.32	-254.85	-771.31	1,274.48	1,243.12	31.36	40.641	
6,500.00	6,468.77	6,288.24	6,213.15	24.24	25.38	155.40	-259.34	-789.66	1,304.79	1,272.92	31.87	40.938	
6,600.00	6,568.03	6,383.52	6,306.54	24.64	25.83	155.47	-263.83	-808.02	1,335.11	1,302.73	32.39	41.226	
6,700.00	6,667.28	6,478.80	6,399.93	25.04	26.28	155.53	-268.32	-826.37	1,365.43	1,332.53	32.90	41.504	
6,800.00	6,766.54	6,574.08	6,493.31	25.44	26.73	155.60	-272.80	-844.73	1,395.75	1,362.34	33.41	41.773	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,908.75	6,874.48	6,682.69	6,599.78	25.88	27.24	155.67	-277.91	-865.63	1,428.71	1,394.71	34.00	42.019	
7,000.00	6,965.17	6,822.32	6,737.20	26.24	27.87	155.91	-283.78	-889.62	1,453.55	1,418.79	34.76	41.814	
7,100.00	7,064.81	6,979.18	6,892.53	26.63	28.53	156.10	-288.94	-910.73	1,474.86	1,439.30	35.56	41.479	
7,200.00	7,164.63	7,139.11	7,051.69	26.99	29.15	156.23	-292.63	-925.86	1,489.80	1,453.50	36.30	41.040	
7,300.00	7,264.57	7,301.06	7,213.38	27.34	29.72	156.31	-294.76	-934.57	1,498.25	1,461.26	36.99	40.504	
7,375.43	7,340.00	7,423.89	7,336.18	27.60	30.11	-93.34	-295.29	-936.73	1,500.28	1,462.81	37.46	40.046	
7,400.00	7,364.57	7,451.48	7,363.77	27.68	30.20	-93.34	-295.29	-936.74	1,500.28	1,462.70	37.59	39.917	
7,500.00	7,464.57	7,551.48	7,463.77	28.00	30.49	-93.34	-295.29	-936.74	1,500.28	1,462.23	38.06	39.422	
7,600.00	7,564.57	7,651.48	7,563.77	28.33	30.80	-93.34	-295.29	-936.74	1,500.28	1,461.75	38.53	38.939	
7,700.00	7,664.57	7,751.48	7,663.77	28.65	31.10	-93.34	-295.29	-936.74	1,500.28	1,461.28	39.00	38.467	
7,800.00	7,764.57	7,851.48	7,763.77	28.98	31.40	-93.34	-295.29	-936.74	1,500.28	1,460.81	39.48	38.005	
7,900.00	7,864.57	7,951.48	7,863.77	29.31	31.71	-93.34	-295.29	-936.74	1,500.28	1,460.33	39.95	37.553	
7,936.47	7,901.04	7,987.95	7,900.24	29.42	31.82	-93.34	-295.29	-936.74	1,500.28	1,460.16	40.12	37.391	
7,950.00	7,914.57	8,001.47	7,913.77	29.47	31.86	-92.77	-295.29	-936.74	1,500.29	1,460.10	40.19	37.331	
8,000.00	7,964.44	8,051.35	7,963.64	29.63	32.01	-92.88	-295.29	-936.74	1,500.46	1,460.03	40.42	37.120	
8,050.00	8,013.83	8,100.73	8,013.03	29.78	32.16	-93.13	-295.29	-936.74	1,500.86	1,460.22	40.65	36.925	
8,100.00	8,062.36	8,149.26	8,061.56	29.92	32.31	-93.50	-295.29	-936.74	1,501.58	1,460.71	40.86	36.746	
8,150.00	8,109.66	8,196.57	8,108.86	30.05	32.46	-93.97	-295.29	-936.74	1,502.69	1,461.62	41.07	36.587	
8,200.00	8,155.37	8,242.28	8,154.57	30.17	32.60	-94.51	-295.29	-936.74	1,504.33	1,463.06	41.27	36.450	
8,250.00	8,199.15	8,286.06	8,198.35	30.28	32.73	-95.08	-295.29	-936.74	1,506.63	1,465.17	41.46	36.340	
8,300.00	8,240.66	8,327.57	8,239.86	30.37	32.86	-95.64	-295.29	-936.74	1,509.77	1,468.13	41.64	36.258	
8,350.00	8,279.59	8,366.50	8,278.79	30.45	32.98	-96.15	-295.29	-936.74	1,513.90	1,472.09	41.81	36.208	
8,400.00	8,315.63	8,402.54	8,314.83	30.52	33.09	-96.56	-295.29	-936.74	1,519.21	1,477.24	41.97	36.194	
8,450.00	8,348.52	8,435.43	8,347.72	30.58	33.19	-96.83	-295.29	-936.74	1,525.85	1,483.72	42.13	36.219	
8,500.00	8,378.01	8,464.92	8,377.21	30.62	33.29	-96.91	-295.29	-936.74	1,533.97	1,491.69	42.27	36.285	
8,550.00	8,403.86	8,490.77	8,403.06	30.66	33.37	-96.76	-295.29	-936.74	1,543.67	1,501.26	42.41	36.396	
8,600.00	8,425.89	8,512.80	8,425.09	30.69	33.43	-96.34	-295.29	-936.74	1,555.05	1,512.51	42.54	36.553	
8,650.00	8,443.92	8,530.83	8,443.12	30.73	33.49	-95.63	-295.29	-936.74	1,568.15	1,525.49	42.66	36.758	
8,700.00	8,457.82	8,544.73	8,457.02	30.78	33.53	-94.59	-295.29	-936.74	1,582.96	1,540.19	42.77	37.010	
8,750.00	8,467.48	8,554.39	8,466.68	30.86	33.56	-93.21	-295.29	-936.74	1,599.44	1,556.57	42.87	37.309	
8,800.00	8,472.84	8,559.75	8,472.04	30.99	33.58	-91.48	-295.29	-936.74	1,617.48	1,574.52	42.96	37.654	
8,836.47	8,474.00	8,560.91	8,473.20	31.11	33.58	-90.00	-295.29	-936.74	1,631.54	1,588.53	43.01	37.933	
8,900.00	8,474.00	8,560.91	8,473.20	31.35	33.58	-90.00	-295.29	-936.74	1,657.69	1,614.59	43.11	38.455	
9,000.00	8,474.00	8,560.91	8,473.20	31.80	33.58	-90.00	-295.29	-936.74	1,702.85	1,659.57	43.28	39.347	
9,100.00	8,474.00	8,560.91	8,473.20	32.34	33.58	-90.00	-295.29	-936.74	1,752.56	1,709.09	43.47	40.321	
9,200.00	8,474.00	8,560.91	8,473.20	32.96	33.58	-90.00	-295.29	-936.74	1,806.43	1,762.77	43.66	41.371	
9,300.00	8,474.00	8,560.91	8,473.20	33.64	33.58	-90.00	-295.29	-936.74	1,864.12	1,820.25	43.87	42.494	
9,400.00	8,474.00	8,560.91	8,473.20	34.39	33.58	-90.00	-295.29	-936.74	1,925.28	1,881.21	44.07	43.683	
9,500.00	8,474.00	8,560.91	8,473.20	35.20	33.58	-90.00	-295.29	-936.74	1,989.59	1,945.31	44.28	44.935	
9,600.00	8,474.00	8,560.91	8,473.20	36.06	33.58	-90.00	-295.29	-936.74	2,056.75	2,012.27	44.48	46.243	
9,700.00	8,474.00	8,560.91	8,473.20	36.97	33.58	-90.00	-295.29	-936.74	2,126.49	2,081.82	44.67	47.605	
9,800.00	8,474.00	8,560.91	8,473.20	37.94	33.58	-90.00	-295.29	-936.74	2,198.57	2,153.71	44.86	49.014	
9,900.00	8,474.00	8,560.91	8,473.20	38.95	33.58	-90.00	-295.29	-936.74	2,272.76	2,227.73	45.03	50.468	
10,000.00	8,474.00	8,560.91	8,473.20	40.00	33.58	-90.00	-295.29	-936.74	2,348.87	2,303.67	45.20	51.962	
10,100.00	8,474.00	8,560.91	8,473.20	41.09	33.58	-90.00	-295.29	-936.74	2,426.72	2,381.35	45.37	53.493	
10,200.00	8,474.00	8,560.91	8,473.20	42.22	33.58	-90.00	-295.29	-936.74	2,506.13	2,460.62	45.52	55.058	
10,300.00	8,474.00	8,560.91	8,473.20	43.38	33.58	-90.00	-295.29	-936.74	2,586.98	2,541.32	45.66	56.655	
10,400.00	8,474.00	8,560.91	8,473.20	44.57	33.58	-90.00	-295.29	-936.74	2,669.12	2,623.32	45.80	58.281	
10,500.00	8,474.00	8,560.91	8,473.20	45.78	33.58	-90.00	-295.29	-936.74	2,752.44	2,706.52	45.93	59.931	
10,600.00	8,474.00	8,560.91	8,473.20	47.03	33.58	-90.00	-295.29	-936.74	2,836.85	2,790.80	46.05	61.604	
10,700.00	8,474.00	8,560.91	8,473.20	48.30	33.58	-90.00	-295.29	-936.74	2,922.23	2,876.07	46.17	63.298	
10,800.00	8,474.00	8,560.91	8,473.20	49.59	33.58	-90.00	-295.29	-936.74	3,008.52	2,962.24	46.28	65.011	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
10,900.00	8,474.00	8,560.91	8,473.20	50.90	33.58	-90.00	-295.29	-936.74	3,095.63	3,049.25	46.38	66.741	
11,000.00	8,474.00	8,560.91	8,473.20	52.23	33.58	-90.00	-295.29	-936.74	3,183.50	3,137.02	46.48	68.487	
11,100.00	8,474.00	8,560.91	8,473.20	53.58	33.58	-90.00	-295.29	-936.74	3,272.07	3,225.49	46.58	70.248	
11,200.00	8,474.00	8,560.91	8,473.20	54.95	33.58	-90.00	-295.29	-936.74	3,361.28	3,314.61	46.67	72.021	
11,300.00	8,474.00	8,560.91	8,473.20	56.33	33.58	-90.00	-295.29	-936.74	3,451.08	3,404.32	46.76	73.807	
11,400.00	8,474.00	8,560.91	8,473.20	57.72	33.58	-90.00	-295.29	-936.74	3,541.43	3,494.58	46.84	75.604	
11,500.00	8,474.00	8,560.91	8,473.20	59.13	33.58	-90.00	-295.29	-936.74	3,632.28	3,585.36	46.92	77.411	
11,600.00	8,474.00	8,560.91	8,473.20	60.55	33.58	-90.00	-295.29	-936.74	3,723.60	3,676.60	47.00	79.227	
11,700.00	8,474.00	8,560.91	8,473.20	61.98	33.58	-90.00	-295.29	-936.74	3,815.36	3,768.28	47.07	81.051	
11,800.00	8,474.00	8,560.91	8,473.20	63.43	33.58	-90.00	-295.29	-936.74	3,907.52	3,860.37	47.15	82.882	
11,900.00	8,474.00	8,560.91	8,473.20	64.88	33.58	-90.00	-295.29	-936.74	4,000.06	3,952.84	47.22	84.720	
12,000.00	8,474.00	8,560.91	8,473.20	66.34	33.58	-90.00	-295.29	-936.74	4,092.95	4,045.66	47.28	86.563	
12,100.00	8,474.00	8,560.91	8,473.20	67.81	33.58	-90.00	-295.29	-936.74	4,186.16	4,138.81	47.35	88.412	
12,200.00	8,474.00	16,242.76	12,392.00	69.29	77.50	-159.08	3,713.48	-976.36	4,195.34	4,133.90	61.43	68.291	
12,300.00	8,474.00	16,342.76	12,392.00	70.78	78.85	-159.08	3,813.48	-977.35	4,195.33	4,132.79	62.54	67.085	
12,400.00	8,474.00	16,442.76	12,392.00	72.27	80.21	-159.08	3,913.47	-978.34	4,195.33	4,131.68	63.65	65.913	
12,500.00	8,474.00	16,542.76	12,392.00	73.77	81.58	-159.08	4,013.47	-979.33	4,195.32	4,130.55	64.77	64.773	
12,600.00	8,474.00	16,642.76	12,392.00	75.28	82.96	-159.08	4,113.46	-980.32	4,195.31	4,129.42	65.90	63.664	
12,700.00	8,474.00	16,742.76	12,392.00	76.79	84.35	-159.08	4,213.46	-981.30	4,195.31	4,128.28	67.03	62.586	
12,800.00	8,474.00	16,842.76	12,392.00	78.31	85.75	-159.08	4,313.45	-982.29	4,195.30	4,127.13	68.17	61.537	
12,900.00	8,474.00	16,942.76	12,392.00	79.83	87.16	-159.08	4,413.45	-983.28	4,195.30	4,125.98	69.32	60.518	
13,000.00	8,474.00	17,042.76	12,392.00	81.36	88.58	-159.08	4,513.44	-984.27	4,195.29	4,124.82	70.48	59.527	
13,100.00	8,474.00	17,142.76	12,392.00	82.89	90.00	-159.08	4,613.44	-985.26	4,195.29	4,123.65	71.64	58.562	
13,200.00	8,474.00	17,242.76	12,392.00	84.43	91.43	-159.08	4,713.43	-986.24	4,195.28	4,122.48	72.80	57.626	
13,300.00	8,474.00	17,342.76	12,392.00	85.97	92.87	-159.08	4,813.43	-987.23	4,195.28	4,121.31	73.97	56.716	
13,400.00	8,474.00	17,442.76	12,392.00	87.52	94.32	-159.08	4,913.42	-988.22	4,195.27	4,120.13	75.14	55.831	
13,500.00	8,474.00	17,542.76	12,392.00	89.07	95.77	-159.08	5,013.42	-989.21	4,195.27	4,118.95	76.32	54.969	
13,600.00	8,474.00	17,642.76	12,392.00	90.62	97.23	-159.08	5,113.41	-990.20	4,195.26	4,117.76	77.50	54.131	
13,700.00	8,474.00	17,742.76	12,392.00	92.18	98.70	-159.08	5,213.41	-991.19	4,195.26	4,116.57	78.69	53.315	
13,800.00	8,474.00	17,842.76	12,392.00	93.74	100.17	-159.08	5,313.40	-992.17	4,195.25	4,115.37	79.88	52.520	
13,900.00	8,474.00	17,942.76	12,392.00	95.30	101.65	-159.08	5,413.40	-993.16	4,195.25	4,114.17	81.07	51.747	
14,000.00	8,474.00	18,042.76	12,392.00	96.87	103.13	-159.08	5,513.39	-994.15	4,195.24	4,112.97	82.27	50.993	
14,100.00	8,474.00	18,142.76	12,392.00	98.43	104.62	-159.08	5,613.39	-995.14	4,195.24	4,111.76	83.47	50.259	
14,200.00	8,474.00	18,242.76	12,392.00	100.01	106.11	-159.08	5,713.38	-996.13	4,195.23	4,110.55	84.68	49.544	
14,300.00	8,474.00	18,342.76	12,392.00	101.58	107.61	-159.08	5,813.38	-997.12	4,195.22	4,109.34	85.89	48.847	
14,400.00	8,474.00	18,442.76	12,392.00	103.16	109.11	-159.08	5,913.37	-998.10	4,195.22	4,108.12	87.10	48.167	
14,500.00	8,474.00	18,542.76	12,392.00	104.74	110.62	-159.09	6,013.37	-999.09	4,195.21	4,106.90	88.31	47.505	
14,600.00	8,474.00	18,642.76	12,392.00	106.32	112.13	-159.09	6,113.36	-1,000.08	4,195.21	4,105.68	89.53	46.859	
14,700.00	8,474.00	18,742.76	12,392.00	107.90	113.64	-159.09	6,213.36	-1,001.07	4,195.20	4,104.45	90.75	46.228	
14,800.00	8,474.00	18,842.76	12,392.00	109.49	115.16	-159.09	6,313.35	-1,002.06	4,195.20	4,103.23	91.97	45.615	
14,900.00	8,474.00	18,942.76	12,392.00	111.07	116.68	-159.09	6,413.35	-1,003.05	4,195.19	4,102.00	93.19	45.017	
15,000.00	8,474.00	19,042.76	12,392.00	112.66	118.20	-159.09	6,513.34	-1,004.03	4,195.19	4,100.77	94.42	44.432	
15,100.00	8,474.00	19,142.76	12,392.00	114.25	119.73	-159.09	6,613.34	-1,005.02	4,195.18	4,099.54	95.65	43.861	
15,200.00	8,474.00	19,242.76	12,392.00	115.85	121.26	-159.09	6,713.33	-1,006.01	4,195.18	4,098.30	96.88	43.305	
15,300.00	8,474.00	19,342.76	12,392.00	117.44	122.80	-159.09	6,813.33	-1,007.00	4,195.17	4,097.07	98.11	42.762	
15,400.00	8,474.00	19,442.76	12,392.00	119.04	124.34	-159.09	6,913.33	-1,007.99	4,195.17	4,095.83	99.34	42.231	
15,500.00	8,474.00	19,542.76	12,392.00	120.63	125.88	-159.09	7,013.32	-1,008.98	4,195.16	4,094.59	100.57	41.713	
15,600.00	8,474.00	19,642.76	12,392.00	122.23	127.42	-159.09	7,113.32	-1,009.96	4,195.16	4,093.35	101.81	41.206	
15,700.00	8,474.00	19,742.76	12,392.00	123.83	128.97	-159.09	7,213.31	-1,010.95	4,195.15	4,092.10	103.05	40.711	
15,800.00	8,474.00	19,842.76	12,392.00	125.43	130.52	-159.09	7,313.31	-1,011.94	4,195.15	4,090.86	104.29	40.227	
15,900.00	8,474.00	19,942.76	12,392.00	127.04	132.07	-159.09	7,413.30	-1,012.93	4,195.14	4,089.61	105.53	39.753	
16,000.00	8,474.00	20,042.76	12,392.00	128.64	133.62	-159.09	7,513.30	-1,013.92	4,195.13	4,088.36	106.77	39.290	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
16,100.00	8,474.00	20,142.76	12,392.00	130.25	135.18	-159.09	7,613.29	-1,014.91	4,195.13	4,087.11	108.02	38.837	
16,200.00	8,474.00	20,242.76	12,392.00	131.85	136.73	-159.09	7,713.29	-1,015.89	4,195.12	4,085.86	109.26	38.394	
16,300.00	8,474.00	20,342.76	12,392.00	133.46	138.30	-159.09	7,813.28	-1,016.88	4,195.12	4,084.61	110.51	37.960	
16,400.00	8,474.00	20,442.76	12,392.00	135.07	139.86	-159.09	7,913.28	-1,017.87	4,195.11	4,083.35	111.76	37.536	
16,500.00	8,474.00	20,542.76	12,392.00	136.68	141.42	-159.09	8,013.27	-1,018.86	4,195.11	4,082.09	113.01	37.120	
16,600.00	8,474.00	20,642.76	12,392.00	138.29	142.99	-159.09	8,113.27	-1,019.85	4,195.10	4,080.84	114.27	36.713	
16,700.00	8,474.00	20,742.76	12,392.00	139.90	144.56	-159.09	8,213.26	-1,020.84	4,195.10	4,079.58	115.52	36.316	
16,800.00	8,474.00	20,842.76	12,392.00	141.52	146.13	-159.09	8,313.26	-1,021.82	4,195.09	4,078.32	116.77	35.926	
16,900.00	8,474.00	20,942.76	12,392.00	143.13	147.70	-159.09	8,413.25	-1,022.81	4,195.09	4,077.06	118.02	35.544	
17,000.00	8,474.00	21,042.76	12,392.00	144.74	149.27	-159.09	8,513.25	-1,023.80	4,195.08	4,075.80	119.28	35.170	
17,100.00	8,474.00	21,142.76	12,392.00	146.36	150.85	-159.09	8,613.24	-1,024.79	4,195.08	4,074.54	120.53	34.804	
17,200.00	8,474.00	21,242.76	12,392.00	147.97	152.43	-159.09	8,713.24	-1,025.78	4,195.07	4,073.28	121.79	34.445	
17,300.00	8,474.00	21,342.76	12,392.00	149.59	154.00	-159.09	8,813.23	-1,026.77	4,195.07	4,072.02	123.05	34.093	
17,400.00	8,474.00	21,442.76	12,392.00	151.21	155.59	-159.09	8,913.23	-1,027.75	4,195.06	4,070.76	124.30	33.748	
17,500.00	8,474.00	21,542.76	12,392.00	152.83	157.17	-159.09	9,013.22	-1,028.74	4,195.06	4,069.49	125.56	33.410	
17,600.00	8,474.00	21,642.76	12,392.00	154.45	158.75	-159.09	9,113.22	-1,029.73	4,195.05	4,068.23	126.82	33.078	
17,700.00	8,474.00	21,742.76	12,392.00	156.07	160.33	-159.09	9,213.21	-1,030.72	4,195.04	4,066.96	128.08	32.753	
17,800.00	8,474.00	21,842.76	12,392.00	157.69	161.92	-159.09	9,313.21	-1,031.71	4,195.04	4,065.69	129.34	32.433	
17,900.00	8,474.00	21,942.76	12,392.00	159.31	163.51	-159.09	9,413.20	-1,032.70	4,195.03	4,064.43	130.61	32.119	
18,000.00	8,474.00	22,042.76	12,392.00	160.93	165.10	-159.09	9,513.20	-1,033.68	4,195.03	4,063.16	131.87	31.812	
18,100.00	8,474.00	22,142.76	12,392.00	162.55	166.69	-159.09	9,613.19	-1,034.67	4,195.02	4,061.89	133.13	31.510	
18,200.00	8,474.00	22,242.76	12,392.00	164.18	168.28	-159.09	9,713.19	-1,035.66	4,195.02	4,060.62	134.40	31.213	
18,300.00	8,474.00	22,342.76	12,392.00	165.80	169.87	-159.09	9,813.18	-1,036.65	4,195.01	4,059.35	135.67	30.922	
18,400.00	8,474.00	22,442.76	12,392.00	167.42	171.46	-159.09	9,913.18	-1,037.64	4,195.01	4,058.08	136.93	30.636	
18,500.00	8,474.00	22,542.76	12,392.00	169.05	173.06	-159.09	10,013.17	-1,038.63	4,195.00	4,056.80	138.20	30.355	
18,548.37	8,474.00	22,591.13	12,392.00	169.83	173.83	-159.09	10,061.54	-1,039.10	4,195.00	4,056.19	138.81	30.221	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,842.50	1,842.50	6.37	6.37	-171.16	-75.06	-11.68	75.96	66.95	9.01	8.429	
1,900.00	1,900.00	1,899.50	1,899.50	6.58	6.58	-171.16	-75.06	-11.68	75.96	66.66	9.30	8.167	
2,000.00	2,000.00	1,999.50	1,999.50	6.94	6.93	-171.16	-75.06	-11.68	75.96	66.15	9.81	7.745	
2,100.00	2,099.99	2,099.49	2,099.49	7.28	7.29	79.47	-75.06	-11.68	75.71	65.40	10.31	7.346	
2,200.00	2,199.91	2,199.41	2,199.41	7.62	7.65	82.43	-75.06	-11.68	75.09	64.30	10.80	6.954	
2,227.47	2,227.34	2,226.33	2,226.33	7.71	7.74	83.55	-75.15	-11.68	75.00	64.07	10.93	6.862	CC, ES
2,300.00	2,299.69	2,297.36	2,297.35	7.96	7.98	87.02	-76.30	-11.67	75.72	64.44	11.27	6.717	SF
2,400.00	2,399.27	2,395.14	2,395.06	8.31	8.30	92.62	-80.04	-11.65	79.29	67.56	11.73	6.759	
2,466.68	2,465.52	2,460.19	2,459.99	8.54	8.52	96.56	-83.92	-11.64	83.51	71.47	12.04	6.937	
2,500.00	2,498.59	2,492.64	2,492.35	8.66	8.62	98.47	-86.26	-11.62	86.17	73.98	12.19	7.069	
2,600.00	2,597.85	2,589.91	2,589.24	9.01	8.94	102.96	-94.94	-11.59	96.09	83.44	12.65	7.596	
2,700.00	2,697.10	2,687.67	2,686.36	9.37	9.27	105.87	-105.99	-11.54	108.39	95.27	13.12	8.261	
2,800.00	2,796.36	2,786.73	2,784.73	9.74	9.61	108.06	-117.71	-11.48	121.32	107.71	13.61	8.912	
2,900.00	2,895.61	2,885.80	2,883.10	10.10	9.95	109.83	-129.43	-11.43	134.39	120.28	14.11	9.525	
3,000.00	2,994.86	2,984.86	2,981.47	10.47	10.30	111.28	-141.15	-11.38	147.57	132.96	14.61	10.101	
3,100.00	3,094.12	3,083.93	3,079.84	10.85	10.65	112.49	-152.87	-11.32	160.82	145.71	15.11	10.641	
3,200.00	3,193.37	3,182.99	3,178.21	11.22	11.00	113.52	-164.59	-11.27	174.14	158.52	15.62	11.148	
3,300.00	3,292.63	3,282.06	3,276.58	11.60	11.36	114.40	-176.31	-11.22	187.50	171.37	16.13	11.624	
3,400.00	3,391.88	3,381.12	3,374.95	11.98	11.72	115.17	-188.03	-11.16	200.90	184.26	16.64	12.071	
3,500.00	3,491.14	3,480.19	3,473.32	12.36	12.08	115.84	-199.75	-11.11	214.33	197.17	17.16	12.491	
3,600.00	3,590.39	3,579.25	3,571.69	12.75	12.45	116.43	-211.47	-11.06	227.79	210.11	17.68	12.886	
3,700.00	3,689.65	3,678.32	3,670.06	13.13	12.82	116.95	-223.19	-11.00	241.26	223.07	18.20	13.258	
3,800.00	3,788.90	3,777.38	3,768.43	13.52	13.19	117.42	-234.91	-10.95	254.76	236.04	18.72	13.609	
3,900.00	3,888.16	3,876.45	3,866.79	13.91	13.56	117.84	-246.63	-10.90	268.27	249.03	19.24	13.941	
4,000.00	3,987.41	3,975.51	3,965.16	14.30	13.94	118.22	-258.35	-10.84	281.79	262.02	19.77	14.254	
4,100.00	4,086.66	4,075.40	4,064.35	14.69	14.32	118.58	-270.13	-10.79	295.30	275.00	20.30	14.545	
4,200.00	4,185.92	4,179.89	4,168.32	15.08	14.71	119.18	-280.63	-10.74	307.70	286.84	20.86	14.749	
4,300.00	4,285.17	4,284.64	4,272.78	15.47	15.09	120.13	-288.30	-10.71	318.42	297.00	21.42	14.868	
4,400.00	4,384.43	4,389.48	4,377.51	15.86	15.47	121.42	-293.09	-10.68	327.53	305.58	21.96	14.916	
4,500.00	4,483.68	4,494.26	4,482.26	16.26	15.83	123.03	-295.02	-10.68	335.17	312.69	22.49	14.904	
4,600.00	4,582.94	4,594.43	4,582.44	16.65	16.17	124.74	-295.06	-10.68	342.03	319.03	23.00	14.872	
4,700.00	4,682.19	4,693.69	4,681.69	17.05	16.51	126.38	-295.06	-10.68	349.15	325.65	23.50	14.855	
4,800.00	4,781.45	4,792.94	4,780.95	17.44	16.85	127.95	-295.06	-10.68	356.55	332.54	24.01	14.850	
4,900.00	4,880.70	4,892.20	4,880.20	17.84	17.18	129.45	-295.06	-10.68	364.21	339.69	24.51	14.857	
5,000.00	4,979.96	4,991.45	4,979.46	18.23	17.52	130.90	-295.06	-10.68	372.10	347.09	25.02	14.874	
5,100.00	5,079.21	5,090.71	5,078.71	18.63	17.86	132.28	-295.06	-10.68	380.23	354.71	25.52	14.899	
5,200.00	5,178.46	5,189.96	5,177.96	19.03	18.20	133.60	-295.06	-10.68	388.56	362.54	26.02	14.932	
5,300.00	5,277.72	5,289.22	5,277.22	19.43	18.54	134.87	-295.06	-10.68	397.10	370.57	26.52	14.971	
5,400.00	5,376.97	5,388.47	5,376.47	19.83	18.89	136.09	-295.06	-10.68	405.82	378.80	27.03	15.016	
5,500.00	5,476.23	5,487.73	5,475.73	20.23	19.23	137.25	-295.06	-10.68	414.72	387.19	27.53	15.066	
5,600.00	5,575.48	5,586.98	5,574.98	20.63	19.57	138.37	-295.06	-10.68	423.78	395.75	28.03	15.120	
5,700.00	5,674.74	5,686.23	5,674.24	21.03	19.91	139.43	-295.06	-10.68	432.99	404.46	28.53	15.177	
5,800.00	5,773.99	5,785.49	5,773.49	21.43	20.26	140.46	-295.06	-10.68	442.35	413.32	29.03	15.238	
5,900.00	5,873.25	5,884.74	5,872.75	21.83	20.60	141.44	-295.06	-10.68	451.84	422.31	29.53	15.301	
6,000.00	5,972.50	5,984.00	5,972.00	22.23	20.94	142.38	-295.06	-10.68	461.46	431.43	30.03	15.367	
6,100.00	6,071.76	6,083.25	6,071.26	22.63	21.29	143.28	-295.06	-10.68	471.20	440.67	30.53	15.434	
6,200.00	6,171.01	6,182.51	6,170.51	23.03	21.63	144.15	-295.06	-10.68	481.05	450.02	31.03	15.503	
6,300.00	6,270.26	6,281.76	6,269.76	23.43	21.98	144.98	-295.06	-10.68	491.01	459.48	31.53	15.573	
6,400.00	6,369.52	6,381.02	6,369.02	23.83	22.32	145.78	-295.06	-10.68	501.06	469.03	32.03	15.643	
6,500.00	6,468.77	6,480.27	6,468.27	24.24	22.67	146.54	-295.06	-10.68	511.21	478.68	32.53	15.715	
6,600.00	6,568.03	6,579.53	6,567.53	24.64	23.02	147.28	-295.06	-10.68	521.44	488.41	33.03	15.786	
6,700.00	6,667.28	6,678.78	6,666.78	25.04	23.36	147.99	-295.06	-10.68	531.76	498.22	33.53	15.858	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,800.00	6,766.54	6,778.03	6,766.04	25.44	23.71	148.67	-295.06	-10.68	542.15	508.12	34.03	15.930	
6,908.75	6,874.48	6,885.97	6,873.98	25.88	24.09	149.38	-295.06	-10.68	553.54	518.96	34.58	16.009	
7,000.00	6,965.17	6,976.67	6,964.67	26.24	24.40	149.97	-295.06	-10.68	562.21	527.18	35.03	16.048	
7,100.00	7,064.81	7,076.30	7,064.31	26.63	24.75	150.45	-295.06	-10.68	569.61	534.07	35.53	16.031	
7,200.00	7,164.63	7,176.13	7,164.13	26.99	25.10	150.78	-295.06	-10.68	574.75	538.72	36.03	15.952	
7,300.00	7,264.57	7,276.07	7,264.07	27.34	25.45	150.96	-295.06	-10.68	577.62	541.09	36.53	15.814	
7,375.43	7,340.00	7,351.50	7,339.50	27.60	25.72	-98.66	-295.06	-10.68	578.27	541.37	36.89	15.673	
7,400.00	7,364.57	7,376.06	7,364.07	27.68	25.80	-98.66	-295.06	-10.68	578.27	541.25	37.01	15.623	
7,500.00	7,464.57	7,476.06	7,464.07	28.00	26.16	-98.66	-295.06	-10.68	578.27	540.77	37.50	15.421	
7,600.00	7,564.57	7,576.06	7,564.07	28.33	26.51	-98.66	-295.06	-10.68	578.27	540.28	37.98	15.224	
7,700.00	7,664.57	7,676.06	7,664.07	28.65	26.86	-98.66	-295.06	-10.68	578.27	539.80	38.47	15.032	
7,800.00	7,764.57	7,776.06	7,764.07	28.98	27.21	-98.66	-295.06	-10.68	578.27	539.31	38.96	14.844	
7,900.00	7,864.57	7,876.06	7,864.07	29.31	27.56	-98.66	-295.06	-10.68	578.27	538.82	39.44	14.661	
7,936.47	7,901.04	7,912.54	7,900.54	29.42	27.69	-98.66	-295.06	-10.68	578.27	538.65	39.62	14.595	
7,950.00	7,914.57	7,926.06	7,914.07	29.47	27.74	-98.10	-295.06	-10.68	578.29	538.60	39.69	14.571	
8,000.00	7,964.44	7,975.93	7,963.94	29.63	27.91	-98.38	-295.06	-10.68	578.77	538.84	39.93	14.495	
8,050.00	8,013.83	8,025.32	8,013.33	29.78	28.09	-99.00	-295.06	-10.68	579.95	539.78	40.17	14.437	
8,100.00	8,062.36	8,073.85	8,061.86	29.92	28.26	-99.93	-295.06	-10.68	581.98	541.57	40.41	14.401	
8,150.00	8,109.66	8,121.16	8,109.16	30.05	28.42	-101.10	-295.06	-10.68	585.09	544.45	40.65	14.395	
8,200.00	8,155.37	8,166.87	8,154.87	30.17	28.59	-102.43	-295.06	-10.68	589.59	548.72	40.87	14.424	
8,250.00	8,199.15	8,210.65	8,198.65	30.28	28.74	-103.83	-295.06	-10.68	595.82	554.72	41.09	14.499	
8,300.00	8,240.66	8,252.16	8,240.16	30.37	28.89	-105.18	-295.06	-10.68	604.12	562.82	41.31	14.626	
8,350.00	8,279.59	8,291.09	8,279.09	30.45	29.02	-106.38	-295.06	-10.68	614.85	573.34	41.50	14.814	
8,400.00	8,315.63	8,327.13	8,315.13	30.52	29.15	-107.33	-295.06	-10.68	628.30	586.62	41.69	15.072	
8,450.00	8,348.52	8,360.02	8,348.02	30.58	29.27	-107.92	-295.06	-10.68	644.72	602.87	41.85	15.405	
8,500.00	8,378.01	8,389.50	8,377.51	30.62	29.37	-108.05	-295.06	-10.68	664.25	622.25	42.00	15.816	
8,550.00	8,403.86	8,415.36	8,403.36	30.66	29.46	-107.63	-295.06	-10.68	686.93	644.80	42.13	16.307	
8,600.00	8,425.89	8,437.38	8,425.39	30.69	29.54	-106.56	-295.06	-10.68	712.70	670.48	42.23	16.877	
8,650.00	8,443.92	8,455.42	8,443.42	30.73	29.60	-104.74	-295.06	-10.68	741.41	699.11	42.31	17.524	
8,700.00	8,457.82	8,469.32	8,457.32	30.78	29.65	-102.08	-295.06	-10.68	772.81	730.44	42.37	18.241	
8,750.00	8,467.48	8,478.98	8,466.98	30.86	29.69	-98.49	-295.06	-10.68	806.57	764.17	42.40	19.022	
8,800.00	8,472.84	8,484.33	8,472.34	30.99	29.70	-93.93	-295.06	-10.68	842.31	799.90	42.42	19.858	
8,836.47	8,474.00	8,485.49	8,473.50	31.11	29.71	-90.00	-295.06	-10.68	869.40	826.99	42.41	20.498	
8,900.00	8,474.00	8,485.49	8,473.50	31.35	29.71	-90.00	-295.06	-10.68	918.16	875.76	42.40	21.653	
9,000.00	8,474.00	8,485.49	8,473.50	31.80	29.71	-90.00	-295.06	-10.68	998.29	955.90	42.39	23.551	
9,100.00	8,474.00	8,485.49	8,473.50	32.34	29.71	-90.00	-295.06	-10.68	1,081.73	1,039.36	42.38	25.527	
9,200.00	8,474.00	8,485.49	8,473.50	32.96	29.71	-90.00	-295.06	-10.68	1,167.78	1,125.41	42.37	27.564	
9,300.00	8,474.00	8,485.49	8,473.50	33.64	29.71	-90.00	-295.06	-10.68	1,255.89	1,213.53	42.36	29.648	
9,400.00	8,474.00	8,485.49	8,473.50	34.39	29.71	-90.00	-295.06	-10.68	1,345.67	1,303.31	42.36	31.771	
9,500.00	8,474.00	8,485.49	8,473.50	35.20	29.71	-90.00	-295.06	-10.68	1,436.80	1,394.45	42.35	33.924	
9,600.00	8,474.00	8,485.50	8,473.50	36.06	29.71	-90.00	-295.06	-10.68	1,529.04	1,486.68	42.35	36.103	
9,700.00	8,474.00	8,485.50	8,473.50	36.97	29.71	-90.00	-295.06	-10.68	1,622.19	1,579.84	42.35	38.301	
9,800.00	8,474.00	8,485.50	8,473.50	37.94	29.71	-90.00	-295.06	-10.68	1,716.12	1,673.76	42.36	40.516	
9,900.00	8,474.00	8,485.50	8,473.50	38.95	29.71	-90.00	-295.06	-10.68	1,810.70	1,768.34	42.36	42.745	
10,000.00	8,474.00	8,485.50	8,473.50	40.00	29.71	-90.00	-295.06	-10.68	1,905.83	1,863.47	42.37	44.985	
10,100.00	8,474.00	8,485.50	8,473.50	41.09	29.71	-90.00	-295.06	-10.68	2,001.44	1,959.07	42.37	47.234	
10,200.00	8,474.00	8,485.50	8,473.50	42.22	29.71	-90.00	-295.06	-10.68	2,097.45	2,055.07	42.38	49.491	
10,300.00	8,474.00	8,485.50	8,473.50	43.38	29.71	-90.00	-295.06	-10.68	2,193.83	2,151.44	42.39	51.754	
10,400.00	8,474.00	8,485.50	8,473.50	44.57	29.71	-90.00	-295.06	-10.68	2,290.51	2,248.11	42.40	54.021	
10,500.00	8,474.00	8,485.50	8,473.50	45.78	29.71	-90.00	-295.06	-10.68	2,387.47	2,345.06	42.41	56.293	
10,600.00	8,474.00	8,485.50	8,473.50	47.03	29.71	-90.00	-295.06	-10.68	2,484.66	2,442.24	42.42	58.568	
10,700.00	8,474.00	8,485.50	8,473.50	48.30	29.71	-90.00	-295.06	-10.68	2,582.08	2,539.64	42.44	60.846	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
10,800.00	8,474.00	8,485.50	8,473.50	49.59	29.71	-90.00	-295.06	-10.68	2,679.68	2,637.23	42.45	63.125	
10,900.00	8,474.00	8,485.50	8,473.50	50.90	29.71	-90.00	-295.06	-10.68	2,777.45	2,734.99	42.47	65.405	
11,000.00	8,474.00	8,485.50	8,473.50	52.23	29.71	-90.00	-295.06	-10.68	2,875.38	2,832.90	42.48	67.686	
11,100.00	8,474.00	8,485.50	8,473.50	53.58	29.71	-90.00	-295.06	-10.68	2,973.44	2,930.95	42.50	69.967	
11,200.00	8,474.00	8,485.50	8,473.50	54.95	29.71	-90.00	-295.06	-10.68	3,071.63	3,029.12	42.52	72.248	
11,300.00	8,474.00	8,485.50	8,473.50	56.33	29.71	-90.00	-295.06	-10.68	3,169.93	3,127.40	42.53	74.528	
11,400.00	8,474.00	8,485.50	8,473.50	57.72	29.71	-90.00	-295.06	-10.68	3,268.34	3,225.79	42.55	76.807	
11,500.00	8,474.00	8,485.50	8,473.50	59.13	29.71	-90.00	-295.06	-10.68	3,366.84	3,324.27	42.57	79.085	
11,600.00	8,474.00	8,485.50	8,473.50	60.55	29.71	-90.00	-295.06	-10.68	3,465.42	3,422.83	42.59	81.362	
11,700.00	8,474.00	8,485.50	8,473.50	61.98	29.71	-90.00	-295.06	-10.68	3,564.09	3,521.47	42.61	83.636	
11,800.00	8,474.00	8,485.50	8,473.50	63.43	29.71	-90.00	-295.06	-10.68	3,662.83	3,620.19	42.64	85.909	
11,900.00	8,474.00	8,485.50	8,473.50	64.88	29.71	-90.00	-295.06	-10.68	3,761.63	3,718.97	42.66	88.179	
12,000.00	8,474.00	15,859.96	12,276.00	66.34	73.90	-171.45	3,522.64	-48.44	3,845.28	3,792.27	53.01	72.537	
12,100.00	8,474.00	15,959.96	12,276.00	67.81	75.25	-171.45	3,622.63	-49.43	3,845.28	3,791.33	53.95	71.281	
12,200.00	8,474.00	16,059.96	12,276.00	69.29	76.61	-171.45	3,722.63	-50.42	3,845.28	3,790.39	54.89	70.058	
12,300.00	8,474.00	16,159.96	12,276.00	70.78	77.98	-171.45	3,822.62	-51.41	3,845.27	3,789.44	55.84	68.867	
12,400.00	8,474.00	16,259.96	12,276.00	72.27	79.37	-171.45	3,922.62	-52.40	3,845.27	3,788.48	56.79	67.707	
12,500.00	8,474.00	16,359.96	12,276.00	73.77	80.76	-171.45	4,022.61	-53.39	3,845.27	3,787.52	57.75	66.580	
12,600.00	8,474.00	16,459.96	12,276.00	75.28	82.16	-171.45	4,122.61	-54.38	3,845.27	3,786.54	58.72	65.481	
12,700.00	8,474.00	16,559.96	12,276.00	76.79	83.57	-171.45	4,222.60	-55.37	3,845.27	3,785.57	59.70	64.411	
12,800.00	8,474.00	16,659.96	12,276.00	78.31	84.99	-171.45	4,322.60	-56.36	3,845.26	3,784.58	60.68	63.368	
12,900.00	8,474.00	16,759.96	12,276.00	79.83	86.42	-171.45	4,422.59	-57.35	3,845.26	3,783.59	61.67	62.354	
13,000.00	8,474.00	16,859.96	12,276.00	81.36	87.86	-171.45	4,522.59	-58.34	3,845.26	3,782.60	62.66	61.365	
13,100.00	8,474.00	16,959.96	12,276.00	82.89	89.30	-171.45	4,622.58	-59.33	3,845.26	3,781.60	63.66	60.403	
13,200.00	8,474.00	17,059.96	12,276.00	84.43	90.75	-171.45	4,722.58	-60.32	3,845.26	3,780.59	64.66	59.466	
13,300.00	8,474.00	17,159.96	12,276.00	85.97	92.21	-171.45	4,822.57	-61.31	3,845.25	3,779.58	65.67	58.553	
13,400.00	8,474.00	17,259.96	12,276.00	87.52	93.67	-171.45	4,922.57	-62.29	3,845.25	3,778.57	66.68	57.664	
13,500.00	8,474.00	17,359.96	12,276.00	89.07	95.15	-171.45	5,022.56	-63.28	3,845.25	3,777.55	67.70	56.798	
13,600.00	8,474.00	17,459.96	12,276.00	90.62	96.62	-171.45	5,122.56	-64.27	3,845.25	3,776.53	68.72	55.954	
13,700.00	8,474.00	17,559.96	12,276.00	92.18	98.10	-171.45	5,222.55	-65.26	3,845.25	3,775.50	69.75	55.132	
13,800.00	8,474.00	17,659.96	12,276.00	93.74	99.59	-171.45	5,322.55	-66.25	3,845.24	3,774.47	70.77	54.331	
13,900.00	8,474.00	17,759.96	12,276.00	95.30	101.08	-171.45	5,422.54	-67.24	3,845.24	3,773.43	71.81	53.550	
14,000.00	8,474.00	17,859.96	12,276.00	96.87	102.58	-171.45	5,522.54	-68.23	3,845.24	3,772.40	72.84	52.788	
14,100.00	8,474.00	17,959.96	12,276.00	98.43	104.08	-171.45	5,622.53	-69.22	3,845.24	3,771.36	73.88	52.046	
14,200.00	8,474.00	18,059.96	12,276.00	100.01	105.59	-171.45	5,722.53	-70.21	3,845.24	3,770.31	74.92	51.323	
14,300.00	8,474.00	18,159.96	12,276.00	101.58	107.10	-171.45	5,822.52	-71.20	3,845.23	3,769.27	75.97	50.618	
14,400.00	8,474.00	18,259.96	12,276.00	103.16	108.61	-171.45	5,922.52	-72.19	3,845.23	3,768.22	77.01	49.930	
14,500.00	8,474.00	18,359.96	12,276.00	104.74	110.13	-171.45	6,022.51	-73.18	3,845.23	3,767.17	78.06	49.259	
14,600.00	8,474.00	18,459.96	12,276.00	106.32	111.66	-171.45	6,122.51	-74.17	3,845.23	3,766.11	79.11	48.604	
14,700.00	8,474.00	18,559.96	12,276.00	107.90	113.18	-171.45	6,222.51	-75.16	3,845.22	3,765.06	80.17	47.965	
14,800.00	8,474.00	18,659.96	12,276.00	109.49	114.71	-171.45	6,322.50	-76.14	3,845.22	3,764.00	81.22	47.341	
14,900.00	8,474.00	18,759.96	12,276.00	111.07	116.25	-171.45	6,422.50	-77.13	3,845.22	3,762.94	82.28	46.731	
15,000.00	8,474.00	18,859.96	12,276.00	112.66	117.78	-171.45	6,522.49	-78.12	3,845.22	3,761.87	83.35	46.135	
15,100.00	8,474.00	18,959.96	12,276.00	114.25	119.32	-171.45	6,622.49	-79.11	3,845.22	3,760.81	84.41	45.553	
15,200.00	8,474.00	19,059.96	12,276.00	115.85	120.86	-171.45	6,722.48	-80.10	3,845.21	3,759.74	85.48	44.985	
15,300.00	8,474.00	19,159.96	12,276.00	117.44	122.41	-171.45	6,822.48	-81.09	3,845.21	3,758.67	86.55	44.429	
15,400.00	8,474.00	19,259.96	12,276.00	119.04	123.96	-171.45	6,922.47	-82.08	3,845.21	3,757.59	87.62	43.886	
15,500.00	8,474.00	19,359.96	12,276.00	120.63	125.51	-171.45	7,022.47	-83.07	3,845.21	3,756.52	88.69	43.355	
15,600.00	8,474.00	19,459.96	12,276.00	122.23	127.06	-171.45	7,122.46	-84.06	3,845.21	3,755.44	89.77	42.836	
15,700.00	8,474.00	19,559.96	12,276.00	123.83	128.62	-171.45	7,222.46	-85.05	3,845.20	3,754.36	90.84	42.328	
15,800.00	8,474.00	19,659.96	12,276.00	125.43	130.18	-171.45	7,322.45	-86.04	3,845.20	3,753.28	91.92	41.832	
15,900.00	8,474.00	19,759.96	12,276.00	127.04	131.74	-171.45	7,422.45	-87.03	3,845.20	3,752.20	93.00	41.347	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
16,000.00	8,474.00	19,859.96	12,276.00	128.64	133.30	-171.45	7,522.44	-88.02	3,845.20	3,751.12	94.08	40.873	
16,100.00	8,474.00	19,959.96	12,276.00	130.25	134.86	-171.45	7,622.44	-89.00	3,845.20	3,750.04	95.16	40.408	
16,200.00	8,474.00	20,059.96	12,276.00	131.85	136.43	-171.45	7,722.43	-89.99	3,845.19	3,748.95	96.24	39.953	
16,300.00	8,474.00	20,159.96	12,276.00	133.46	138.00	-171.45	7,822.43	-90.98	3,845.19	3,747.87	97.33	39.508	
16,400.00	8,474.00	20,259.96	12,276.00	135.07	139.57	-171.45	7,922.42	-91.97	3,845.19	3,746.78	98.41	39.072	
16,500.00	8,474.00	20,359.96	12,276.00	136.68	141.14	-171.45	8,022.42	-92.96	3,845.19	3,745.69	99.50	38.646	
16,600.00	8,474.00	20,459.96	12,276.00	138.29	142.72	-171.45	8,122.41	-93.95	3,845.19	3,744.60	100.59	38.227	
16,700.00	8,474.00	20,559.96	12,276.00	139.90	144.29	-171.46	8,222.41	-94.94	3,845.18	3,743.51	101.68	37.818	
16,800.00	8,474.00	20,659.96	12,276.00	141.52	145.87	-171.46	8,322.40	-95.93	3,845.18	3,742.41	102.77	37.416	
16,900.00	8,474.00	20,759.96	12,276.00	143.13	147.45	-171.46	8,422.40	-96.92	3,845.18	3,741.32	103.86	37.023	
17,000.00	8,474.00	20,859.96	12,276.00	144.74	149.03	-171.46	8,522.39	-97.91	3,845.18	3,740.23	104.95	36.637	
17,100.00	8,474.00	20,959.96	12,276.00	146.36	150.62	-171.46	8,622.39	-98.90	3,845.18	3,739.13	106.05	36.259	
17,200.00	8,474.00	21,059.96	12,276.00	147.97	152.20	-171.46	8,722.38	-99.89	3,845.17	3,738.03	107.14	35.889	
17,300.00	8,474.00	21,159.96	12,276.00	149.59	153.79	-171.46	8,822.38	-100.88	3,845.17	3,736.93	108.24	35.525	
17,400.00	8,474.00	21,259.96	12,276.00	151.21	155.37	-171.46	8,922.37	-101.87	3,845.17	3,735.83	109.33	35.169	
17,500.00	8,474.00	21,359.96	12,276.00	152.83	156.96	-171.46	9,022.37	-102.85	3,845.17	3,734.73	110.43	34.819	
17,600.00	8,474.00	21,459.96	12,276.00	154.45	158.55	-171.46	9,122.36	-103.84	3,845.17	3,733.63	111.53	34.476	
17,700.00	8,474.00	21,559.96	12,276.00	156.07	160.14	-171.46	9,222.36	-104.83	3,845.16	3,732.53	112.63	34.139	
17,800.00	8,474.00	21,659.96	12,276.00	157.69	161.73	-171.46	9,322.35	-105.82	3,845.16	3,731.43	113.73	33.809	
17,900.00	8,474.00	21,759.96	12,276.00	159.31	163.33	-171.46	9,422.35	-106.81	3,845.16	3,730.32	114.84	33.484	
18,000.00	8,474.00	21,859.96	12,276.00	160.93	164.92	-171.46	9,522.34	-107.80	3,845.16	3,729.22	115.93	33.167	
18,100.00	8,474.00	21,959.96	12,276.00	162.55	166.52	-171.46	9,622.34	-108.79	3,845.15	3,728.12	117.04	32.854	
18,200.00	8,474.00	22,059.96	12,276.00	164.18	168.11	-171.46	9,722.33	-109.78	3,845.15	3,727.01	118.14	32.547	
18,300.00	8,474.00	22,159.96	12,276.00	165.80	169.71	-171.46	9,822.33	-110.77	3,845.15	3,725.91	119.24	32.246	
18,400.00	8,474.00	22,259.96	12,276.00	167.42	171.31	-171.46	9,922.32	-111.76	3,845.15	3,724.80	120.35	31.950	
18,500.00	8,474.00	22,359.96	12,276.00	169.05	172.91	-171.46	10,022.32	-112.75	3,845.15	3,723.69	121.45	31.659	
18,548.37	8,474.00	22,408.34	12,276.00	169.83	173.68	-171.46	10,070.69	-113.23	3,845.15	3,723.16	121.99	31.520	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,843.10	1,843.10	6.37	6.37	169.85	-74.82	13.39	76.01	67.00	9.01	8.433	
1,900.00	1,900.00	1,900.10	1,900.10	6.58	6.58	169.85	-74.82	13.39	76.01	66.71	9.30	8.171	
2,000.00	2,000.00	2,000.00	2,000.00	6.94	6.94	169.85	-74.82	13.39	76.01	66.20	9.81	7.749	
2,017.03	2,017.03	2,017.00	2,017.00	7.00	7.00	59.51	-74.83	13.43	76.01	66.12	9.89	7.683	
2,100.00	2,099.99	2,099.32	2,099.31	7.28	7.28	59.46	-75.12	14.65	75.86	65.57	10.30	7.367	
2,200.00	2,199.91	2,198.54	2,198.45	7.62	7.62	59.32	-76.00	18.41	75.41	64.64	10.77	7.001	
2,300.00	2,299.69	2,297.75	2,297.45	7.96	7.96	59.08	-77.47	24.68	74.67	63.42	11.25	6.637	
2,400.00	2,399.27	2,396.96	2,396.25	8.31	8.30	58.74	-79.52	33.46	73.62	61.89	11.73	6.276	
2,466.68	2,465.52	2,463.12	2,461.98	8.54	8.53	58.45	-81.21	40.69	72.76	60.71	12.06	6.036	
2,500.00	2,498.59	2,496.17	2,494.77	8.66	8.65	58.18	-82.15	44.72	72.36	60.15	12.22	5.923	
2,585.08	2,583.04	2,580.54	2,578.31	8.96	8.96	56.55	-84.85	56.26	71.92	59.28	12.63	5.693	CC
2,600.00	2,597.85	2,595.32	2,592.92	9.01	9.01	56.12	-85.37	58.47	71.93	59.23	12.70	5.662	ES
2,700.00	2,697.10	2,694.30	2,690.48	9.37	9.37	52.28	-89.16	74.66	72.88	59.70	13.18	5.528	SF
2,800.00	2,796.36	2,793.30	2,787.63	9.74	9.75	47.02	-93.50	93.21	75.58	61.92	13.66	5.534	
2,900.00	2,895.61	2,892.98	2,885.32	10.10	10.14	41.77	-98.01	112.50	79.31	65.16	14.14	5.608	
3,000.00	2,994.86	2,992.66	2,983.01	10.47	10.54	37.03	-102.52	131.79	83.64	69.01	14.63	5.718	
3,100.00	3,094.12	3,092.34	3,080.70	10.85	10.94	32.77	-107.03	151.08	88.49	73.37	15.11	5.855	
3,200.00	3,193.37	3,192.01	3,178.39	11.22	11.35	28.98	-111.54	170.36	93.77	78.17	15.60	6.011	
3,300.00	3,292.63	3,291.69	3,276.08	11.60	11.77	25.60	-116.06	189.65	99.42	83.33	16.09	6.180	
3,400.00	3,391.88	3,391.37	3,373.77	11.98	12.19	22.59	-120.57	208.94	105.38	88.80	16.58	6.356	
3,500.00	3,491.14	3,491.05	3,471.46	12.36	12.61	19.92	-125.08	228.23	111.60	94.52	17.07	6.537	
3,600.00	3,590.39	3,590.73	3,569.15	12.75	13.04	17.52	-129.59	247.52	118.03	100.46	17.57	6.719	
3,700.00	3,689.65	3,690.40	3,666.84	13.13	13.47	15.38	-134.11	266.81	124.65	106.59	18.07	6.900	
3,800.00	3,788.90	3,790.08	3,764.53	13.52	13.91	13.46	-138.62	286.10	131.43	112.86	18.56	7.079	
3,900.00	3,888.16	3,889.76	3,862.22	13.91	14.35	11.72	-143.13	305.39	138.34	119.27	19.07	7.256	
4,000.00	3,987.41	3,989.44	3,959.91	14.30	14.79	10.15	-147.64	324.68	145.36	125.79	19.57	7.428	
4,100.00	4,086.66	4,089.11	4,057.60	14.69	15.23	8.73	-152.15	343.96	152.48	132.41	20.07	7.596	
4,200.00	4,185.92	4,188.79	4,155.29	15.08	15.68	7.44	-156.67	363.25	159.69	139.10	20.58	7.759	
4,300.00	4,285.17	4,288.47	4,252.98	15.47	16.13	6.25	-161.18	382.54	166.97	145.88	21.09	7.917	
4,400.00	4,384.43	4,388.15	4,350.67	15.86	16.58	5.17	-165.69	401.83	174.31	152.71	21.60	8.070	
4,500.00	4,483.68	4,487.83	4,448.36	16.26	17.03	4.17	-170.20	421.12	181.72	159.60	22.11	8.218	
4,600.00	4,582.94	4,587.50	4,546.05	16.65	17.48	3.26	-174.71	440.41	189.17	166.54	22.62	8.361	
4,700.00	4,682.19	4,687.18	4,643.74	17.05	17.94	2.41	-179.23	459.70	196.67	173.53	23.14	8.500	
4,800.00	4,781.45	4,786.86	4,741.43	17.44	18.39	1.62	-183.74	478.99	204.20	180.55	23.65	8.633	
4,900.00	4,880.70	4,886.54	4,839.12	17.84	18.85	0.89	-188.25	498.27	211.78	187.61	24.17	8.762	
5,000.00	4,979.96	4,986.21	4,936.80	18.23	19.31	0.21	-192.76	517.56	219.38	194.70	24.69	8.886	
5,100.00	5,079.21	5,085.89	5,034.49	18.63	19.77	-0.42	-197.28	536.85	227.02	201.81	25.21	9.007	
5,200.00	5,178.46	5,185.57	5,132.18	19.03	20.23	-1.01	-201.79	556.14	234.68	208.95	25.72	9.123	
5,300.00	5,277.72	5,285.25	5,229.87	19.43	20.69	-1.57	-206.30	575.43	242.36	216.11	26.24	9.235	
5,400.00	5,376.97	5,384.93	5,327.56	19.83	21.16	-2.09	-210.81	594.72	250.06	223.30	26.77	9.343	
5,500.00	5,476.23	5,484.60	5,425.25	20.23	21.62	-2.58	-215.32	614.01	257.79	230.50	27.29	9.447	
5,600.00	5,575.48	5,584.28	5,522.94	20.63	22.08	-3.04	-219.84	633.30	265.53	237.72	27.81	9.548	
5,700.00	5,674.74	5,683.96	5,620.63	21.03	22.55	-3.47	-224.35	652.59	273.28	244.95	28.33	9.646	
5,800.00	5,773.99	5,783.64	5,718.32	21.43	23.02	-3.89	-228.86	671.87	281.06	252.20	28.86	9.740	
5,900.00	5,873.25	5,883.32	5,816.01	21.83	23.48	-4.27	-233.37	691.16	288.84	259.46	29.38	9.831	
6,000.00	5,972.50	5,982.99	5,913.70	22.23	23.95	-4.64	-237.88	710.45	296.64	266.73	29.90	9.920	
6,100.00	6,071.76	6,082.67	6,011.39	22.63	24.42	-4.99	-242.40	729.74	304.45	274.02	30.43	10.005	
6,200.00	6,171.01	6,182.35	6,109.08	23.03	24.89	-5.32	-246.91	749.03	312.27	281.31	30.95	10.088	
6,300.00	6,270.26	6,282.03	6,206.77	23.43	25.35	-5.64	-251.42	768.32	320.10	288.62	31.48	10.168	
6,400.00	6,369.52	6,381.70	6,304.46	23.83	25.82	-5.94	-255.93	787.61	327.94	295.93	32.01	10.246	
6,500.00	6,468.77	6,481.38	6,402.15	24.24	26.29	-6.23	-260.45	806.90	335.79	303.25	32.53	10.321	
6,600.00	6,568.03	6,581.06	6,499.84	24.64	26.76	-6.50	-264.96	826.18	343.64	310.58	33.06	10.394	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,700.00	6,667.28	6,682.98	6,599.74	25.04	27.24	-6.77	-269.55	845.83	351.44	317.82	33.61	10.456	
6,800.00	6,766.54	6,793.01	6,708.00	25.44	27.74	-7.04	-274.02	864.94	357.23	323.01	34.23	10.437	
6,908.75	6,874.48	6,912.97	6,826.63	25.88	28.26	-7.33	-278.08	882.30	360.28	325.41	34.87	10.333	
7,000.00	6,965.17	7,013.73	6,926.65	26.24	28.67	-7.55	-280.84	894.07	361.28	325.91	35.38	10.213	
7,100.00	7,064.81	7,124.18	7,036.62	26.63	29.09	-7.74	-283.17	904.02	362.10	326.20	35.90	10.086	
7,200.00	7,164.63	7,234.65	7,146.87	26.99	29.48	-7.87	-284.77	910.88	362.63	326.23	36.39	9.964	
7,300.00	7,264.57	7,345.14	7,257.29	27.34	29.85	-7.94	-285.64	914.62	362.86	326.00	36.85	9.847	
7,375.43	7,340.00	7,427.96	7,340.10	27.60	30.11	102.39	-285.82	915.39	362.83	325.66	37.17	9.761	
7,400.00	7,364.57	7,452.53	7,364.67	27.68	30.18	102.39	-285.82	915.39	362.83	325.54	37.29	9.730	
7,500.00	7,464.57	7,552.53	7,464.67	28.00	30.48	102.39	-285.82	915.39	362.83	325.07	37.77	9.608	
7,600.00	7,564.57	7,652.53	7,564.67	28.33	30.78	102.39	-285.82	915.39	362.83	324.59	38.24	9.488	
7,700.00	7,664.57	7,752.53	7,664.67	28.65	31.09	102.39	-285.82	915.39	362.83	324.12	38.72	9.371	
7,800.00	7,764.57	7,852.53	7,764.67	28.98	31.39	102.39	-285.82	915.39	362.83	323.64	39.20	9.257	
7,900.00	7,864.57	7,952.53	7,864.67	29.31	31.70	102.39	-285.82	915.39	362.83	323.16	39.67	9.145	
7,936.47	7,901.04	7,989.00	7,901.14	29.42	31.81	102.39	-285.82	915.39	362.83	322.99	39.85	9.105	
7,950.00	7,914.57	8,002.52	7,914.67	29.47	31.85	102.98	-285.82	915.39	362.87	322.96	39.91	9.092	
8,000.00	7,964.44	8,052.40	7,964.54	29.63	32.00	103.42	-285.82	915.39	363.64	323.49	40.15	9.058	
8,050.00	8,013.83	8,101.78	8,013.93	29.78	32.15	104.40	-285.82	915.39	365.51	325.14	40.37	9.054	
8,100.00	8,062.36	8,150.31	8,062.46	29.92	32.30	105.84	-285.82	915.39	368.72	328.13	40.59	9.084	
8,150.00	8,109.66	8,197.62	8,109.76	30.05	32.45	107.64	-285.82	915.39	373.63	332.81	40.82	9.153	
8,200.00	8,155.37	8,243.33	8,155.47	30.17	32.59	109.65	-285.82	915.39	380.64	339.58	41.06	9.271	
8,250.00	8,199.15	8,287.11	8,199.25	30.28	32.73	111.73	-285.82	915.39	390.21	348.89	41.32	9.444	
8,300.00	8,240.66	8,328.62	8,240.76	30.37	32.85	113.72	-285.82	915.39	402.78	361.17	41.61	9.680	
8,350.00	8,279.59	8,367.55	8,279.69	30.45	32.97	115.46	-285.82	915.39	418.70	376.78	41.92	9.988	
8,400.00	8,315.63	8,403.59	8,315.73	30.52	33.09	116.81	-285.82	915.39	438.22	395.97	42.25	10.371	
8,450.00	8,348.52	8,436.48	8,348.62	30.58	33.19	117.64	-285.82	915.39	461.46	418.86	42.60	10.833	
8,500.00	8,378.01	8,465.97	8,378.11	30.62	33.28	117.83	-285.82	915.39	488.37	445.43	42.94	11.372	
8,550.00	8,403.86	8,491.82	8,403.96	30.66	33.36	117.24	-285.82	915.39	518.80	475.53	43.28	11.988	
8,600.00	8,425.89	8,513.85	8,425.99	30.69	33.43	115.71	-285.82	915.39	552.49	508.90	43.59	12.675	
8,650.00	8,443.92	8,531.88	8,444.02	30.73	33.48	113.08	-285.82	915.39	589.06	545.19	43.87	13.427	
8,700.00	8,457.82	8,545.78	8,457.92	30.78	33.53	109.11	-285.82	915.39	628.12	584.00	44.12	14.236	
8,750.00	8,467.48	8,555.44	8,467.58	30.86	33.56	103.58	-285.82	915.39	669.23	624.88	44.34	15.092	
8,800.00	8,472.84	8,560.80	8,472.94	30.99	33.57	96.34	-285.82	915.39	711.90	667.37	44.53	15.987	
8,836.47	8,474.00	8,561.96	8,474.10	31.11	33.58	90.00	-285.82	915.39	743.76	699.11	44.65	16.659	
8,900.00	8,474.00	8,561.96	8,474.10	31.35	33.58	90.00	-285.82	915.39	800.22	755.40	44.82	17.853	
9,000.00	8,474.00	8,561.96	8,474.10	31.80	33.58	90.00	-285.82	915.39	891.02	845.97	45.05	19.776	
9,100.00	8,474.00	8,561.96	8,474.10	32.34	33.58	90.00	-285.82	915.39	983.61	938.37	45.24	21.741	
9,200.00	8,474.00	8,561.96	8,474.10	32.96	33.58	90.00	-285.82	915.39	1,077.53	1,032.13	45.40	23.736	
9,300.00	8,474.00	8,561.96	8,474.10	33.64	33.58	90.00	-285.82	915.39	1,172.45	1,126.93	45.52	25.755	
9,400.00	8,474.00	8,561.96	8,474.10	34.39	33.58	90.00	-285.82	915.39	1,268.15	1,222.52	45.63	27.791	
9,500.00	8,474.00	8,561.96	8,474.10	35.20	33.58	90.00	-285.82	915.39	1,364.47	1,318.75	45.73	29.841	
9,600.00	8,474.00	8,561.96	8,474.10	36.06	33.58	90.00	-285.82	915.39	1,461.28	1,415.48	45.81	31.901	
9,700.00	8,474.00	8,561.96	8,474.10	36.97	33.58	90.00	-285.82	915.39	1,558.50	1,512.62	45.88	33.971	
9,800.00	8,474.00	8,561.96	8,474.10	37.94	33.58	90.00	-285.82	915.39	1,656.05	1,610.11	45.94	36.047	
9,900.00	8,474.00	8,561.96	8,474.10	38.95	33.58	90.00	-285.82	915.39	1,753.87	1,707.87	46.00	38.128	
10,000.00	8,474.00	8,561.96	8,474.10	40.00	33.58	90.00	-285.82	915.39	1,851.93	1,805.88	46.05	40.215	
10,100.00	8,474.00	8,561.96	8,474.10	41.09	33.58	90.00	-285.82	915.39	1,950.18	1,904.08	46.10	42.304	
10,200.00	8,474.00	8,561.96	8,474.10	42.22	33.58	90.00	-285.82	915.39	2,048.61	2,002.46	46.14	44.396	
10,300.00	8,474.00	8,561.96	8,474.10	43.38	33.58	90.00	-285.82	915.39	2,147.17	2,100.99	46.19	46.490	
10,400.00	8,474.00	8,561.96	8,474.10	44.57	33.58	90.00	-285.82	915.39	2,245.87	2,199.65	46.22	48.586	
10,500.00	8,474.00	8,561.96	8,474.10	45.78	33.58	90.00	-285.82	915.39	2,344.68	2,298.41	46.26	50.683	
10,600.00	8,474.00	8,561.96	8,474.10	47.03	33.58	90.00	-285.82	915.39	2,443.58	2,397.28	46.30	52.780	

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

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Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	8,474.00	8,561.96	8,474.10	48.30	33.58	90.00	-285.82	915.39	2,542.57	2,496.24	46.33	54.878	
10,800.00	8,474.00	8,561.96	8,474.10	49.59	33.58	90.00	-285.82	915.39	2,641.63	2,595.27	46.36	56.975	
10,900.00	8,474.00	8,561.96	8,474.10	50.90	33.58	90.00	-285.82	915.39	2,740.76	2,694.37	46.40	59.072	
11,000.00	8,474.00	8,561.96	8,474.10	52.23	33.58	90.00	-285.82	915.39	2,839.96	2,793.53	46.43	61.168	
11,100.00	8,474.00	8,561.96	8,474.10	53.58	33.58	90.00	-285.82	915.39	2,939.21	2,892.75	46.46	63.264	
11,200.00	8,474.00	8,561.96	8,474.10	54.95	33.58	90.00	-285.82	915.39	3,038.50	2,992.01	46.49	65.358	
11,300.00	8,474.00	8,561.96	8,474.10	56.33	33.58	90.00	-285.82	915.39	3,137.85	3,091.33	46.52	67.451	
11,400.00	8,474.00	8,561.96	8,474.10	57.72	33.58	90.00	-285.82	915.39	3,237.23	3,190.68	46.55	69.542	
11,500.00	8,474.00	8,561.96	8,474.10	59.13	33.58	90.00	-285.82	915.39	3,336.65	3,290.07	46.58	71.632	
11,600.00	8,474.00	8,561.96	8,474.10	60.55	33.58	90.00	-285.82	915.39	3,436.10	3,389.49	46.61	73.720	
11,700.00	8,474.00	8,561.96	8,474.10	61.98	33.58	90.00	-285.82	915.39	3,535.59	3,488.95	46.64	75.806	
11,800.00	8,474.00	8,561.96	8,474.10	63.43	33.58	90.00	-285.82	915.39	3,635.10	3,588.43	46.67	77.890	
11,900.00	8,474.00	15,695.76	12,136.00	64.88	73.07	174.48	3,431.81	878.54	3,678.97	3,628.56	50.42	72.973	
12,000.00	8,474.00	15,795.76	12,136.00	66.34	74.39	174.48	3,531.80	877.55	3,678.98	3,627.65	51.33	71.677	
12,100.00	8,474.00	15,895.76	12,136.00	67.81	75.73	174.48	3,631.80	876.56	3,678.98	3,626.73	52.25	70.415	
12,200.00	8,474.00	15,995.76	12,136.00	69.29	77.08	174.48	3,731.79	875.57	3,678.98	3,625.80	53.17	69.187	
12,300.00	8,474.00	16,095.76	12,136.00	70.78	78.43	174.48	3,831.79	874.58	3,678.98	3,624.87	54.11	67.991	
12,400.00	8,474.00	16,195.76	12,136.00	72.27	79.81	174.48	3,931.79	873.59	3,678.98	3,623.93	55.05	66.826	
12,500.00	8,474.00	16,295.76	12,136.00	73.77	81.19	174.48	4,031.78	872.60	3,678.98	3,622.98	56.00	65.694	
12,600.00	8,474.00	16,395.76	12,136.00	75.28	82.58	174.48	4,131.78	871.61	3,678.98	3,622.02	56.96	64.591	
12,700.00	8,474.00	16,495.76	12,136.00	76.79	83.98	174.48	4,231.77	870.61	3,678.98	3,621.06	57.92	63.518	
12,800.00	8,474.00	16,595.76	12,136.00	78.31	85.39	174.48	4,331.77	869.62	3,678.99	3,620.10	58.89	62.475	
12,900.00	8,474.00	16,695.76	12,136.00	79.83	86.80	174.48	4,431.76	868.63	3,678.99	3,619.13	59.86	61.459	
13,000.00	8,474.00	16,795.76	12,136.00	81.36	88.23	174.48	4,531.76	867.64	3,678.99	3,618.15	60.84	60.470	
13,100.00	8,474.00	16,895.76	12,136.00	82.89	89.66	174.48	4,631.75	866.65	3,678.99	3,617.17	61.82	59.508	
13,200.00	8,474.00	16,995.76	12,136.00	84.43	91.10	174.48	4,731.75	865.66	3,678.99	3,616.18	62.81	58.571	
13,300.00	8,474.00	17,095.76	12,136.00	85.97	92.55	174.48	4,831.74	864.67	3,678.99	3,615.19	63.81	57.660	
13,400.00	8,474.00	17,195.76	12,136.00	87.52	94.01	174.47	4,931.74	863.68	3,678.99	3,614.19	64.80	56.772	
13,500.00	8,474.00	17,295.76	12,136.00	89.07	95.47	174.47	5,031.73	862.69	3,678.99	3,613.19	65.80	55.908	
13,600.00	8,474.00	17,395.76	12,136.00	90.62	96.94	174.47	5,131.73	861.69	3,678.99	3,612.18	66.81	55.067	
13,700.00	8,474.00	17,495.76	12,136.00	92.18	98.41	174.47	5,231.72	860.70	3,679.00	3,611.18	67.82	54.247	
13,800.00	8,474.00	17,595.76	12,136.00	93.74	99.89	174.47	5,331.72	859.71	3,679.00	3,610.16	68.83	53.449	
13,900.00	8,474.00	17,695.76	12,136.00	95.30	101.37	174.47	5,431.71	858.72	3,679.00	3,609.15	69.85	52.671	
14,000.00	8,474.00	17,795.76	12,136.00	96.87	102.86	174.47	5,531.71	857.73	3,679.00	3,608.13	70.87	51.913	
14,100.00	8,474.00	17,895.76	12,136.00	98.43	104.36	174.47	5,631.70	856.74	3,679.00	3,607.11	71.89	51.174	
14,200.00	8,474.00	17,995.76	12,136.00	100.01	105.85	174.47	5,731.70	855.75	3,679.00	3,606.08	72.92	50.454	
14,300.00	8,474.00	18,095.76	12,136.00	101.58	107.36	174.47	5,831.69	854.76	3,679.00	3,605.06	73.95	49.752	
14,400.00	8,474.00	18,195.76	12,136.00	103.16	108.87	174.47	5,931.69	853.77	3,679.00	3,604.03	74.98	49.068	
14,500.00	8,474.00	18,295.76	12,136.00	104.74	110.38	174.47	6,031.68	852.78	3,679.00	3,602.99	76.01	48.400	
14,600.00	8,474.00	18,395.76	12,136.00	106.32	111.89	174.47	6,131.68	851.78	3,679.01	3,601.96	77.05	47.748	
14,700.00	8,474.00	18,495.76	12,136.00	107.90	113.41	174.47	6,231.67	850.79	3,679.01	3,600.92	78.09	47.113	
14,800.00	8,474.00	18,595.76	12,136.00	109.49	114.94	174.47	6,331.67	849.80	3,679.01	3,599.88	79.13	46.492	
14,900.00	8,474.00	18,695.76	12,136.00	111.07	116.46	174.47	6,431.66	848.81	3,679.01	3,598.83	80.18	45.887	
15,000.00	8,474.00	18,795.76	12,136.00	112.66	117.99	174.47	6,531.66	847.82	3,679.01	3,597.79	81.22	45.297	
15,100.00	8,474.00	18,895.76	12,136.00	114.25	119.53	174.47	6,631.65	846.83	3,679.01	3,596.75	82.27	44.721	
15,200.00	8,474.00	18,995.76	12,136.00	115.85	121.06	174.47	6,731.65	845.84	3,679.01	3,595.70	83.32	44.157	
15,300.00	8,474.00	19,095.76	12,136.00	117.44	122.60	174.47	6,831.64	844.85	3,679.01	3,594.65	84.37	43.607	
15,400.00	8,474.00	19,195.76	12,136.00	119.04	124.14	174.47	6,931.64	843.86	3,679.02	3,593.59	85.42	43.069	
15,500.00	8,474.00	19,295.76	12,136.00	120.63	125.69	174.47	7,031.63	842.86	3,679.02	3,592.54	86.48	42.543	
15,600.00	8,474.00	19,395.76	12,136.00	122.23	127.24	174.47	7,131.63	841.87	3,679.02	3,591.48	87.54	42.029	
15,700.00	8,474.00	19,495.76	12,136.00	123.83	128.79	174.47	7,231.62	840.88	3,679.02	3,590.42	88.59	41.527	
15,800.00	8,474.00	19,595.76	12,136.00	125.43	130.34	174.47	7,331.62	839.89	3,679.02	3,589.37	89.66	41.035	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
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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	8,474.00	19,695.76	12,136.00	127.04	131.90	174.47	7,431.61	838.90	3,679.02	3,588.30	90.72	40.555	
16,000.00	8,474.00	19,795.76	12,136.00	128.64	133.45	174.47	7,531.61	837.91	3,679.02	3,587.24	91.78	40.085	
16,100.00	8,474.00	19,895.76	12,136.00	130.25	135.01	174.47	7,631.60	836.92	3,679.02	3,586.18	92.85	39.625	
16,200.00	8,474.00	19,995.76	12,136.00	131.85	136.57	174.47	7,731.60	835.93	3,679.02	3,585.11	93.91	39.175	
16,300.00	8,474.00	20,095.76	12,136.00	133.46	138.14	174.47	7,831.59	834.94	3,679.03	3,584.04	94.98	38.734	
16,400.00	8,474.00	20,195.76	12,136.00	135.07	139.71	174.47	7,931.59	833.94	3,679.03	3,582.98	96.05	38.303	
16,500.00	8,474.00	20,295.76	12,136.00	136.68	141.27	174.47	8,031.58	832.95	3,679.03	3,581.91	97.12	37.881	
16,600.00	8,474.00	20,395.76	12,136.00	138.29	142.84	174.47	8,131.58	831.96	3,679.03	3,580.84	98.19	37.467	
16,700.00	8,474.00	20,495.76	12,136.00	139.90	144.42	174.47	8,231.57	830.97	3,679.03	3,579.76	99.27	37.062	
16,800.00	8,474.00	20,595.76	12,136.00	141.52	145.99	174.47	8,331.57	829.98	3,679.03	3,578.69	100.34	36.665	
16,900.00	8,474.00	20,695.76	12,136.00	143.13	147.56	174.47	8,431.56	828.99	3,679.03	3,577.62	101.42	36.277	
17,000.00	8,474.00	20,795.76	12,136.00	144.74	149.14	174.47	8,531.56	828.00	3,679.03	3,576.54	102.49	35.896	
17,100.00	8,474.00	20,895.76	12,136.00	146.36	150.72	174.47	8,631.55	827.01	3,679.04	3,575.47	103.57	35.523	
17,200.00	8,474.00	20,995.76	12,136.00	147.97	152.30	174.47	8,731.55	826.02	3,679.04	3,574.39	104.64	35.157	
17,300.00	8,474.00	21,095.76	12,136.00	149.59	153.88	174.47	8,831.54	825.03	3,679.04	3,573.31	105.72	34.799	
17,400.00	8,474.00	21,195.76	12,136.00	151.21	155.47	174.47	8,931.54	824.03	3,679.04	3,572.24	106.80	34.447	
17,500.00	8,474.00	21,295.76	12,136.00	152.83	157.05	174.47	9,031.53	823.04	3,679.04	3,571.16	107.88	34.102	
17,600.00	8,474.00	21,395.76	12,136.00	154.45	158.64	174.47	9,131.53	822.05	3,679.04	3,570.08	108.96	33.764	
17,700.00	8,474.00	21,495.76	12,136.00	156.07	160.22	174.47	9,231.52	821.06	3,679.04	3,569.00	110.05	33.432	
17,800.00	8,474.00	21,595.76	12,136.00	157.69	161.81	174.47	9,331.52	820.07	3,679.04	3,567.91	111.13	33.106	
17,900.00	8,474.00	21,695.76	12,136.00	159.31	163.40	174.47	9,431.51	819.08	3,679.04	3,566.83	112.21	32.786	
18,000.00	8,474.00	21,795.76	12,136.00	160.93	164.99	174.47	9,531.51	818.09	3,679.05	3,565.75	113.30	32.472	
18,100.00	8,474.00	21,895.76	12,136.00	162.55	166.59	174.47	9,631.51	817.10	3,679.05	3,564.66	114.38	32.164	
18,200.00	8,474.00	21,995.76	12,136.00	164.18	168.18	174.47	9,731.50	816.11	3,679.05	3,563.58	115.47	31.862	
18,300.00	8,474.00	22,095.76	12,136.00	165.80	169.77	174.47	9,831.50	815.11	3,679.05	3,562.49	116.56	31.565	
18,400.00	8,474.00	22,195.76	12,136.00	167.42	171.37	174.47	9,931.49	814.12	3,679.05	3,561.41	117.64	31.273	
18,500.00	8,474.00	22,295.76	12,136.00	169.05	172.97	174.47	10,031.49	813.13	3,679.05	3,560.32	118.73	30.986	
18,502.53	8,474.00	22,298.29	12,136.00	169.09	173.01	174.47	10,034.02	813.11	3,679.05	3,560.29	118.76	30.979	
18,548.37	8,474.00	22,343.71	12,136.00	169.83	173.75	174.47	10,079.44	812.66	3,679.05	3,559.79	119.26	30.849	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,887.40	1,887.40	6.37	6.53	99.90	-579.40	3,318.58	3,368.78	3,359.66	9.13	369.105	
1,900.00	1,900.00	1,944.40	1,944.40	6.58	6.74	99.90	-579.40	3,318.58	3,368.78	3,359.37	9.42	357.778	
2,000.00	2,000.00	2,044.40	2,044.40	6.94	7.10	99.90	-579.40	3,318.58	3,368.78	3,358.86	9.92	339.500	
2,100.00	2,099.99	2,144.39	2,144.39	7.28	7.45	-10.45	-579.40	3,318.58	3,367.49	3,357.07	10.42	323.141	
2,200.00	2,199.91	2,244.31	2,244.31	7.62	7.81	-10.47	-579.40	3,318.58	3,363.63	3,352.72	10.91	308.250	
2,300.00	2,299.69	2,344.09	2,344.09	7.96	8.17	-10.51	-579.40	3,318.58	3,357.20	3,345.80	11.40	294.391	
2,400.00	2,399.27	2,443.67	2,443.67	8.31	8.53	-10.56	-579.40	3,318.58	3,348.21	3,336.31	11.90	281.451	
2,466.68	2,465.52	2,509.92	2,509.92	8.54	8.76	-10.61	-579.40	3,318.58	3,340.78	3,328.56	12.22	273.277	
2,500.00	2,498.59	2,542.99	2,542.99	8.66	8.88	-10.62	-579.40	3,318.58	3,336.79	3,324.40	12.39	269.333	
2,600.00	2,597.85	2,642.25	2,642.25	9.01	9.24	-10.66	-579.40	3,318.58	3,324.81	3,311.93	12.88	258.104	
2,700.00	2,697.10	2,741.50	2,741.50	9.37	9.59	-10.70	-579.40	3,318.58	3,312.83	3,299.46	13.38	247.674	
2,800.00	2,796.36	2,840.76	2,840.76	9.74	9.95	-10.74	-579.40	3,318.58	3,300.85	3,286.98	13.87	237.965	
2,900.00	2,895.61	2,940.01	2,940.01	10.10	10.31	-10.77	-579.40	3,318.58	3,288.88	3,274.51	14.37	228.907	
3,000.00	2,994.86	3,039.26	3,039.26	10.47	10.66	-10.81	-579.40	3,318.58	3,276.90	3,262.04	14.87	220.437	
3,100.00	3,094.12	3,138.52	3,138.52	10.85	11.02	-10.85	-579.40	3,318.58	3,264.93	3,249.56	15.36	212.503	
3,200.00	3,193.37	3,237.77	3,237.77	11.22	11.37	-10.89	-579.40	3,318.58	3,252.96	3,237.09	15.86	205.057	
3,300.00	3,292.63	3,337.03	3,337.03	11.60	11.73	-10.94	-579.40	3,318.58	3,240.99	3,224.62	16.36	198.055	
3,400.00	3,391.88	3,436.28	3,436.28	11.98	12.09	-10.98	-579.40	3,318.58	3,229.02	3,212.15	16.87	191.461	
3,500.00	3,491.14	3,535.54	3,535.54	12.36	12.44	-11.02	-579.40	3,318.58	3,217.05	3,199.69	17.37	185.240	
3,600.00	3,590.39	3,634.79	3,634.79	12.75	12.80	-11.06	-579.40	3,318.58	3,205.09	3,187.22	17.87	179.362	
3,700.00	3,689.65	3,734.05	3,734.05	13.13	13.15	-11.10	-579.40	3,318.58	3,193.12	3,174.75	18.37	173.801	
3,800.00	3,788.90	3,833.30	3,833.30	13.52	13.51	-11.14	-579.40	3,318.58	3,181.16	3,162.29	18.88	168.531	
3,900.00	3,888.16	3,932.56	3,932.56	13.91	13.86	-11.19	-579.40	3,318.58	3,169.20	3,149.82	19.38	163.531	
4,000.00	3,987.41	4,031.81	4,031.81	14.30	14.22	-11.23	-579.40	3,318.58	3,157.24	3,137.36	19.88	158.780	
4,100.00	4,086.66	4,131.06	4,131.06	14.69	14.58	-11.27	-579.40	3,318.58	3,145.29	3,124.90	20.39	154.262	
4,200.00	4,185.92	4,230.32	4,230.32	15.08	14.93	-11.32	-579.40	3,318.58	3,133.33	3,112.44	20.89	149.959	
4,300.00	4,285.17	4,329.57	4,329.57	15.47	15.29	-11.36	-579.40	3,318.58	3,121.38	3,099.98	21.40	145.857	
4,400.00	4,384.43	4,428.83	4,428.83	15.86	15.64	-11.40	-579.40	3,318.58	3,109.43	3,087.52	21.91	141.942	
4,500.00	4,483.68	4,528.08	4,528.08	16.26	16.00	-11.45	-579.40	3,318.58	3,097.48	3,075.07	22.41	138.202	
4,600.00	4,582.94	4,627.34	4,627.34	16.65	16.35	-11.49	-579.40	3,318.58	3,085.53	3,062.61	22.92	134.626	
4,700.00	4,682.19	4,726.59	4,726.59	17.05	16.71	-11.54	-579.40	3,318.58	3,073.59	3,050.16	23.43	131.203	
4,800.00	4,781.45	4,825.85	4,825.85	17.44	17.07	-11.58	-579.40	3,318.58	3,061.64	3,037.71	23.93	127.923	
4,900.00	4,880.70	4,925.10	4,925.10	17.84	17.42	-11.63	-579.40	3,318.58	3,049.70	3,025.26	24.44	124.778	
5,000.00	4,979.96	5,024.36	5,024.36	18.23	17.78	-11.68	-579.40	3,318.58	3,037.76	3,012.81	24.95	121.760	
5,100.00	5,079.21	5,123.61	5,123.61	18.63	18.13	-11.72	-579.40	3,318.58	3,025.82	3,000.37	25.46	118.861	
5,200.00	5,178.46	5,222.86	5,222.86	19.03	18.49	-11.77	-579.40	3,318.58	3,013.89	2,987.92	25.96	116.075	
5,300.00	5,277.72	5,322.12	5,322.12	19.43	18.85	-11.82	-579.40	3,318.58	3,001.95	2,975.48	26.47	113.395	
5,400.00	5,376.97	5,421.37	5,421.37	19.83	19.20	-11.87	-579.40	3,318.58	2,990.02	2,963.04	26.98	110.815	
5,500.00	5,476.23	5,518.38	5,518.38	20.23	19.55	-11.91	-579.44	3,318.58	2,978.10	2,950.62	27.48	108.361	
5,600.00	5,575.48	5,606.87	5,606.86	20.63	19.85	-11.93	-580.89	3,318.60	2,966.43	2,938.47	27.95	106.115	
5,700.00	5,674.74	5,700.00	5,699.91	21.03	20.15	-11.90	-584.63	3,318.63	2,955.12	2,926.70	28.43	103.962	
5,800.00	5,773.99	5,783.96	5,783.70	21.43	20.42	-11.84	-589.95	3,318.68	2,944.17	2,915.29	28.88	101.956	
5,900.00	5,873.25	5,877.16	5,876.57	21.83	20.72	-11.73	-597.75	3,318.75	2,933.56	2,904.21	29.35	99.957	
6,000.00	5,972.50	5,976.42	5,975.45	22.23	21.04	-11.61	-606.40	3,318.83	2,923.02	2,893.19	29.83	97.977	
6,100.00	6,071.76	6,075.67	6,074.33	22.63	21.36	-11.49	-615.06	3,318.91	2,912.50	2,882.18	30.32	96.056	
6,200.00	6,171.01	6,174.93	6,173.21	23.03	21.69	-11.37	-623.71	3,319.00	2,901.99	2,871.18	30.81	94.193	
6,300.00	6,270.26	6,274.19	6,272.08	23.43	22.02	-11.25	-632.36	3,319.08	2,891.49	2,860.19	31.30	92.383	
6,400.00	6,369.52	6,373.44	6,370.96	23.83	22.35	-11.13	-641.01	3,319.16	2,881.00	2,849.21	31.79	90.626	
6,500.00	6,468.77	6,472.70	6,469.84	24.24	22.68	-11.00	-649.67	3,319.24	2,870.53	2,838.25	32.28	88.920	
6,600.00	6,568.03	6,571.95	6,568.72	24.64	23.01	-10.88	-658.32	3,319.32	2,860.07	2,827.29	32.78	87.262	
6,700.00	6,667.28	6,671.21	6,667.59	25.04	23.35	-10.75	-666.97	3,319.40	2,849.62	2,816.35	33.27	85.651	
6,800.00	6,766.54	6,770.46	6,766.47	25.44	23.68	-10.62	-675.63	3,319.48	2,839.19	2,805.43	33.77	84.085	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,908.75	6,874.48	6,878.40	6,874.00	25.88	24.05	-10.48	-685.03	3,319.57	2,827.86	2,793.56	34.31	82.430	
7,000.00	6,965.17	6,969.06	6,964.32	26.24	24.36	-10.34	-692.94	3,319.64	2,819.44	2,784.68	34.76	81.113	
7,100.00	7,064.81	7,068.58	7,063.46	26.63	24.70	-10.18	-701.61	3,319.72	2,812.67	2,777.42	35.26	79.779	
7,200.00	7,164.63	7,168.21	7,162.70	26.99	25.04	-10.01	-710.30	3,319.80	2,808.50	2,772.75	35.75	78.558	
7,300.00	7,264.57	7,267.87	7,261.99	27.34	25.39	-9.85	-718.99	3,319.88	2,806.93	2,770.69	36.24	77.446	
7,310.44	7,275.01	7,278.28	7,272.35	27.38	25.42	-9.83	-719.89	3,319.89	2,806.92	2,770.62	36.29	77.337	CC, ES
7,375.43	7,340.00	7,343.04	7,336.87	27.60	25.65	100.62	-725.54	3,319.94	2,807.47	2,770.86	36.61	76.683	
7,400.00	7,364.57	7,367.51	7,361.25	27.68	25.73	100.67	-727.67	3,319.96	2,807.88	2,771.15	36.73	76.448	
7,500.00	7,464.57	7,467.13	7,460.49	28.00	26.08	100.84	-736.36	3,320.04	2,809.60	2,772.38	37.21	75.501	
7,600.00	7,564.57	7,576.47	7,569.46	28.33	26.46	101.02	-745.33	3,320.13	2,811.24	2,773.52	37.72	74.535	
7,700.00	7,664.57	7,693.74	7,686.54	28.65	26.87	101.15	-751.74	3,320.19	2,812.34	2,774.10	38.24	73.551	
7,800.00	7,764.57	7,811.28	7,804.05	28.98	27.27	101.20	-754.55	3,320.21	2,812.83	2,774.07	38.75	72.581	
7,900.00	7,864.57	7,916.20	7,908.97	29.31	27.64	101.21	-754.70	3,320.21	2,812.85	2,773.60	39.25	71.658	
7,936.47	7,901.04	7,952.67	7,945.44	29.42	27.77	101.21	-754.70	3,320.21	2,812.85	2,773.42	39.43	71.333	
7,950.00	7,914.57	7,966.20	7,958.97	29.47	27.81	101.78	-754.70	3,320.21	2,812.88	2,773.39	39.50	71.214	
8,000.00	7,964.44	8,016.07	8,008.84	29.63	27.99	101.78	-754.70	3,320.21	2,813.57	2,773.83	39.74	70.798	
8,050.00	8,013.83	8,065.46	8,058.23	29.78	28.16	101.78	-754.70	3,320.21	2,815.16	2,775.18	39.98	70.419	
8,100.00	8,062.36	8,113.99	8,106.76	29.92	28.34	101.76	-754.70	3,320.21	2,817.68	2,777.47	40.21	70.079	
8,150.00	8,109.66	8,161.29	8,154.06	30.05	28.50	101.73	-754.70	3,320.21	2,821.14	2,780.72	40.43	69.779	
8,200.00	8,155.37	8,207.01	8,199.77	30.17	28.66	101.66	-754.70	3,320.21	2,825.61	2,784.97	40.65	69.519	
8,250.00	8,199.15	8,250.79	8,243.55	30.28	28.82	101.53	-754.70	3,320.21	2,831.12	2,790.27	40.85	69.299	
8,300.00	8,240.66	8,292.30	8,285.06	30.37	28.97	101.34	-754.70	3,320.21	2,837.72	2,796.66	41.06	69.119	
8,350.00	8,279.59	8,331.22	8,323.99	30.45	29.10	101.06	-754.70	3,320.21	2,845.46	2,804.21	41.25	68.978	
8,400.00	8,315.63	8,367.27	8,360.03	30.52	29.23	100.67	-754.70	3,320.21	2,854.39	2,812.94	41.44	68.876	
8,450.00	8,348.52	8,400.16	8,392.92	30.58	29.35	100.15	-754.70	3,320.21	2,864.53	2,822.90	41.63	68.811	
8,500.00	8,378.01	8,429.64	8,422.41	30.62	29.45	99.48	-754.70	3,320.21	2,875.92	2,834.10	41.81	68.782	
8,550.00	8,403.86	8,455.49	8,448.26	30.66	29.54	98.64	-754.70	3,320.21	2,888.55	2,846.56	41.99	68.789	
8,600.00	8,425.89	8,477.52	8,470.29	30.69	29.62	97.61	-754.70	3,320.21	2,902.42	2,860.25	42.17	68.829	
8,650.00	8,443.92	8,495.55	8,488.32	30.73	29.69	96.39	-754.70	3,320.21	2,917.49	2,875.15	42.34	68.901	
8,700.00	8,457.82	8,509.45	8,502.22	30.78	29.73	94.96	-754.70	3,320.21	2,933.71	2,891.19	42.51	69.004	
8,750.00	8,467.48	8,519.12	8,511.88	30.86	29.77	93.32	-754.70	3,320.21	2,950.99	2,908.30	42.68	69.137	
8,800.00	8,472.84	8,524.47	8,517.24	30.99	29.79	91.47	-754.70	3,320.21	2,969.22	2,926.37	42.85	69.297	
8,836.47	8,474.00	8,525.63	8,518.40	31.11	29.79	90.00	-754.70	3,320.21	2,983.05	2,940.08	42.96	69.430	
8,900.00	8,474.00	8,525.63	8,518.40	31.35	29.79	90.00	-754.70	3,320.21	3,008.05	2,964.87	43.18	69.669	
9,000.00	8,474.00	8,525.63	8,518.40	31.80	29.79	90.00	-754.70	3,320.21	3,049.68	3,006.13	43.55	70.030	
9,100.00	8,474.00	8,525.63	8,518.40	32.34	29.79	90.00	-754.70	3,320.21	3,093.98	3,050.02	43.96	70.383	
9,200.00	8,474.00	8,525.63	8,518.40	32.96	29.79	90.00	-754.70	3,320.21	3,140.84	3,096.44	44.40	70.736	
9,300.00	8,474.00	8,525.63	8,518.40	33.64	29.79	90.00	-754.70	3,320.21	3,190.15	3,145.28	44.87	71.095	
9,400.00	8,474.00	8,525.63	8,518.40	34.39	29.79	90.00	-754.70	3,320.21	3,241.79	3,196.43	45.36	71.467	
9,500.00	8,474.00	8,525.63	8,518.40	35.20	29.79	90.00	-754.70	3,320.21	3,295.66	3,249.79	45.86	71.857	
9,600.00	8,474.00	8,525.63	8,518.40	36.06	29.79	90.00	-754.70	3,320.21	3,351.65	3,305.27	46.38	72.269	
9,700.00	8,474.00	8,525.63	8,518.40	36.97	29.79	90.00	-754.70	3,320.21	3,409.65	3,362.75	46.90	72.707	
9,800.00	8,474.00	8,525.63	8,518.40	37.94	29.79	90.00	-754.70	3,320.21	3,469.56	3,422.15	47.42	73.173	
9,900.00	8,474.00	8,525.63	8,518.40	38.95	29.79	90.00	-754.70	3,320.21	3,531.29	3,483.36	47.93	73.669	
10,000.00	8,474.00	8,525.63	8,518.40	40.00	29.79	90.00	-754.70	3,320.21	3,594.75	3,546.30	48.45	74.197	
10,100.00	8,474.00	8,525.63	8,518.40	41.09	29.79	90.00	-754.70	3,320.21	3,659.83	3,610.87	48.96	74.756	
10,200.00	8,474.00	8,525.63	8,518.40	42.22	29.79	90.00	-754.70	3,320.21	3,726.46	3,677.01	49.45	75.351	
10,300.00	8,474.00	8,525.63	8,518.40	43.38	29.79	90.00	-754.70	3,320.21	3,794.56	3,744.62	49.94	75.978	
10,400.00	8,474.00	8,525.63	8,518.40	44.57	29.79	90.00	-754.70	3,320.21	3,864.05	3,813.63	50.42	76.635	
10,500.00	8,474.00	8,525.63	8,518.40	45.78	29.79	90.00	-754.70	3,320.21	3,934.85	3,883.96	50.89	77.324	
10,600.00	8,474.00	8,525.63	8,518.40	47.03	29.79	90.00	-754.70	3,320.21	4,006.89	3,955.55	51.34	78.045	
10,700.00	8,474.00	14,397.96	11,475.58	48.30	63.37	137.02	2,336.04	3,290.92	4,042.65	3,982.02	60.64	66.671	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	8,474.00	14,497.92	11,472.83	49.59	64.65	137.00	2,435.96	3,289.97	4,040.67	3,978.67	62.00	65.171	
10,900.00	8,474.00	14,597.89	11,470.07	50.90	65.95	136.97	2,535.88	3,289.03	4,038.69	3,975.31	63.39	63.712	
11,000.00	8,474.00	14,697.85	11,467.31	52.23	67.27	136.94	2,635.80	3,288.08	4,036.72	3,971.92	64.80	62.296	
11,100.00	8,474.00	14,797.81	11,464.56	53.58	68.59	136.91	2,735.72	3,287.13	4,034.74	3,968.51	66.23	60.922	
11,200.00	8,474.00	14,897.77	11,461.80	54.95	69.93	136.89	2,835.64	3,286.19	4,032.76	3,965.09	67.67	59.590	
11,300.00	8,474.00	14,997.73	11,459.05	56.33	71.29	136.86	2,935.56	3,285.24	4,030.79	3,961.65	69.14	58.299	
11,400.00	8,474.00	15,097.70	11,456.29	57.72	72.66	136.83	3,035.48	3,284.29	4,028.82	3,958.20	70.62	57.049	
11,500.00	8,474.00	15,197.66	11,453.53	59.13	74.03	136.81	3,135.40	3,283.35	4,026.84	3,954.73	72.12	55.838	
11,600.00	8,474.00	15,297.62	11,450.78	60.55	75.42	136.78	3,235.31	3,282.40	4,024.87	3,951.25	73.62	54.668	
11,700.00	8,474.00	15,397.58	11,448.02	61.98	76.82	136.75	3,335.23	3,281.45	4,022.90	3,947.75	75.15	53.535	
11,800.00	8,474.00	15,497.54	11,445.26	63.43	78.23	136.72	3,435.15	3,280.50	4,020.93	3,944.25	76.68	52.438	
11,900.00	8,474.00	15,597.51	11,442.51	64.88	79.65	136.70	3,535.07	3,279.56	4,018.96	3,940.73	78.23	51.377	
12,000.00	8,474.00	15,697.47	11,439.75	66.34	81.08	136.67	3,634.99	3,278.61	4,016.99	3,937.21	79.78	50.349	
12,100.00	8,474.00	15,797.43	11,437.00	67.81	82.52	136.64	3,734.91	3,277.66	4,015.02	3,933.67	81.35	49.354	
12,200.00	8,474.00	15,897.39	11,434.24	69.29	83.96	136.61	3,834.83	3,276.72	4,013.06	3,930.13	82.93	48.390	
12,300.00	8,474.00	15,997.35	11,431.48	70.78	85.41	136.59	3,934.75	3,275.77	4,011.09	3,926.57	84.52	47.457	
12,400.00	8,474.00	16,097.32	11,428.73	72.27	86.87	136.56	4,034.67	3,274.82	4,009.13	3,923.01	86.12	46.553	
12,500.00	8,474.00	16,197.28	11,425.97	73.77	88.34	136.53	4,134.59	3,273.88	4,007.16	3,919.43	87.73	45.677	
12,600.00	8,474.00	16,297.24	11,423.21	75.28	89.81	136.50	4,234.51	3,272.93	4,005.20	3,915.86	89.34	44.829	
12,700.00	8,474.00	16,397.20	11,420.46	76.79	91.29	136.47	4,334.43	3,271.98	4,003.24	3,912.27	90.97	44.006	
12,800.00	8,474.00	16,497.16	11,417.70	78.31	92.77	136.45	4,434.35	3,271.03	4,001.28	3,908.67	92.60	43.209	
12,900.00	8,474.00	16,597.13	11,414.95	79.83	94.26	136.42	4,534.27	3,270.09	3,999.32	3,905.08	94.24	42.438	
13,000.00	8,474.00	16,697.09	11,412.19	81.36	95.76	136.39	4,634.19	3,269.14	3,997.36	3,901.48	95.88	41.690	
13,100.00	8,474.00	16,797.05	11,409.43	82.89	97.26	136.36	4,734.11	3,268.19	3,995.40	3,897.86	97.54	40.964	
13,200.00	8,474.00	16,897.01	11,406.68	84.43	98.76	136.34	4,834.03	3,267.25	3,993.44	3,894.25	99.19	40.259	
13,300.00	8,474.00	16,996.97	11,403.92	85.97	100.27	136.31	4,933.95	3,266.30	3,991.49	3,890.63	100.86	39.576	
13,400.00	8,474.00	17,096.94	11,401.16	87.52	101.78	136.28	5,033.87	3,265.35	3,989.53	3,887.01	102.53	38.913	
13,500.00	8,474.00	17,196.90	11,398.41	89.07	103.30	136.25	5,133.78	3,264.41	3,987.58	3,883.38	104.20	38.269	
13,600.00	8,474.00	17,296.86	11,395.65	90.62	104.82	136.22	5,233.70	3,263.46	3,985.62	3,879.74	105.88	37.643	
13,700.00	8,474.00	17,396.82	11,392.89	92.18	106.35	136.20	5,333.62	3,262.51	3,983.67	3,876.11	107.57	37.035	
13,800.00	8,474.00	17,496.78	11,390.14	93.74	107.88	136.17	5,433.54	3,261.57	3,981.72	3,872.46	109.26	36.444	
13,900.00	8,474.00	17,596.75	11,387.38	95.30	109.41	136.14	5,533.46	3,260.62	3,979.77	3,868.82	110.95	35.869	
14,000.00	8,474.00	17,696.71	11,384.63	96.87	110.95	136.11	5,633.38	3,259.67	3,977.82	3,865.17	112.65	35.311	
14,100.00	8,474.00	17,796.67	11,381.87	98.43	112.49	136.08	5,733.30	3,258.72	3,975.87	3,861.51	114.36	34.767	
14,200.00	8,474.00	17,896.63	11,379.11	100.01	114.03	136.06	5,833.22	3,257.78	3,973.92	3,857.85	116.07	34.238	
14,300.00	8,474.00	17,996.59	11,376.36	101.58	115.58	136.03	5,933.14	3,256.83	3,971.98	3,854.19	117.78	33.723	
14,400.00	8,474.00	18,096.56	11,373.60	103.16	117.13	136.00	6,033.06	3,255.88	3,970.03	3,850.53	119.50	33.223	
14,500.00	8,474.00	18,196.52	11,370.84	104.74	118.68	135.97	6,132.98	3,254.94	3,968.09	3,846.87	121.22	32.736	
14,600.00	8,474.00	18,296.48	11,368.09	106.32	120.24	135.94	6,232.90	3,253.99	3,966.14	3,843.20	122.94	32.260	
14,700.00	8,474.00	18,396.44	11,365.33	107.90	121.79	135.91	6,332.82	3,253.04	3,964.20	3,839.53	124.67	31.797	
14,800.00	8,474.00	18,496.40	11,362.58	109.49	123.35	135.89	6,432.74	3,252.10	3,962.26	3,835.85	126.40	31.346	
14,900.00	8,474.00	18,596.37	11,359.82	111.07	124.91	135.86	6,532.66	3,251.15	3,960.32	3,832.18	128.14	30.907	
15,000.00	8,474.00	18,696.33	11,357.06	112.66	126.48	135.83	6,632.58	3,250.20	3,958.38	3,828.50	129.87	30.479	
15,100.00	8,474.00	18,796.29	11,354.31	114.25	128.04	135.80	6,732.50	3,249.25	3,956.44	3,824.82	131.61	30.061	
15,200.00	8,474.00	18,896.25	11,351.55	115.85	129.61	135.77	6,832.42	3,248.31	3,954.50	3,821.14	133.36	29.653	
15,300.00	8,474.00	18,996.21	11,348.79	117.44	131.18	135.74	6,932.34	3,247.36	3,952.56	3,817.46	135.10	29.255	
15,400.00	8,474.00	19,096.17	11,346.04	119.04	132.76	135.72	7,032.25	3,246.41	3,950.63	3,813.77	136.86	28.867	
15,500.00	8,474.00	19,196.14	11,343.28	120.63	134.33	135.69	7,132.17	3,245.47	3,948.69	3,810.08	138.61	28.488	
15,600.00	8,474.00	19,296.10	11,340.53	122.23	135.91	135.66	7,232.09	3,244.52	3,946.76	3,806.39	140.37	28.117	
15,700.00	8,474.00	19,396.06	11,337.77	123.83	137.48	135.63	7,332.01	3,243.57	3,944.82	3,802.70	142.13	27.756	
15,800.00	8,474.00	19,496.02	11,335.01	125.43	139.06	135.60	7,431.93	3,242.63	3,942.89	3,799.00	143.89	27.403	
15,900.00	8,474.00	19,595.98	11,332.26	127.04	140.65	135.57	7,531.85	3,241.68	3,940.96	3,795.31	145.65	27.058	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	8,474.00	19,695.95	11,329.50	128.64	142.23	135.54	7,631.77	3,240.73	3,939.03	3,791.61	147.42	26.721	
16,100.00	8,474.00	19,795.91	11,326.74	130.25	143.81	135.52	7,731.69	3,239.78	3,937.10	3,787.92	149.18	26.391	
16,200.00	8,474.00	19,895.87	11,323.99	131.85	145.40	135.49	7,831.61	3,238.84	3,935.17	3,784.22	150.96	26.068	
16,300.00	8,474.00	19,995.83	11,321.23	133.46	146.99	135.46	7,931.53	3,237.89	3,933.24	3,780.51	152.73	25.753	
16,400.00	8,474.00	20,095.79	11,318.48	135.07	148.58	135.43	8,031.45	3,236.94	3,931.32	3,776.81	154.51	25.444	
16,500.00	8,474.00	20,195.76	11,315.72	136.68	150.17	135.40	8,131.37	3,236.00	3,929.39	3,773.11	156.28	25.142	
16,600.00	8,474.00	20,295.72	11,312.96	138.29	151.76	135.37	8,231.29	3,235.05	3,927.47	3,769.41	158.06	24.847	
16,700.00	8,474.00	20,395.68	11,310.21	139.90	153.35	135.34	8,331.21	3,234.10	3,925.55	3,765.70	159.84	24.559	
16,800.00	8,474.00	20,495.64	11,307.45	141.52	154.94	135.31	8,431.13	3,233.16	3,923.62	3,761.99	161.63	24.275	
16,900.00	8,474.00	20,595.60	11,304.69	143.13	156.54	135.28	8,531.05	3,232.21	3,921.70	3,758.28	163.42	23.998	
17,000.00	8,474.00	20,695.57	11,301.94	144.74	158.14	135.26	8,630.97	3,231.26	3,919.78	3,754.57	165.21	23.726	
17,100.00	8,474.00	20,795.53	11,299.18	146.36	159.73	135.23	8,730.89	3,230.32	3,917.86	3,750.86	167.00	23.460	
17,200.00	8,474.00	20,895.49	11,296.43	147.97	161.33	135.20	8,830.81	3,229.37	3,915.94	3,747.15	168.79	23.200	
17,300.00	8,474.00	20,995.45	11,293.67	149.59	162.93	135.17	8,930.72	3,228.42	3,914.03	3,743.44	170.59	22.945	
17,400.00	8,474.00	21,095.41	11,290.91	151.21	164.53	135.14	9,030.64	3,227.47	3,912.11	3,739.73	172.38	22.694	
17,500.00	8,474.00	21,195.38	11,288.16	152.83	166.13	135.11	9,130.56	3,226.53	3,910.20	3,736.01	174.18	22.449	
17,600.00	8,474.00	21,295.34	11,285.40	154.45	167.74	135.08	9,230.48	3,225.58	3,908.28	3,732.30	175.98	22.208	
17,700.00	8,474.00	21,395.30	11,282.64	156.07	169.34	135.05	9,330.40	3,224.63	3,906.37	3,728.58	177.79	21.972	
17,800.00	8,474.00	21,495.26	11,279.89	157.69	170.95	135.02	9,430.32	3,223.69	3,904.46	3,724.86	179.59	21.741	
17,900.00	8,474.00	21,595.22	11,277.13	159.31	172.55	134.99	9,530.24	3,222.74	3,902.54	3,721.15	181.40	21.514	
18,000.00	8,474.00	21,695.19	11,274.38	160.93	174.16	134.96	9,630.16	3,221.79	3,900.63	3,717.43	183.20	21.291	
18,100.00	8,474.00	21,795.15	11,271.62	162.55	175.76	134.94	9,730.08	3,220.85	3,898.72	3,713.71	185.01	21.073	
18,200.00	8,474.00	21,895.11	11,268.86	164.18	177.37	134.91	9,830.00	3,219.90	3,896.82	3,709.99	186.82	20.858	
18,300.00	8,474.00	21,995.07	11,266.11	165.80	178.98	134.88	9,929.92	3,218.95	3,894.91	3,706.27	188.64	20.648	
18,400.00	8,474.00	22,095.03	11,263.35	167.42	180.59	134.85	10,029.84	3,218.00	3,893.00	3,702.55	190.45	20.441	
18,500.00	8,474.00	22,160.64	11,261.54	169.05	181.65	134.83	10,095.41	3,217.38	3,891.25	3,699.29	191.96	20.271	
18,539.77	8,474.00	22,160.64	11,261.54	169.69	181.65	134.83	10,095.41	3,217.38	3,891.05	3,698.73	192.32	20.232	
18,548.37	8,474.00	22,160.64	11,261.54	169.83	181.65	134.83	10,095.41	3,217.38	3,891.06	3,698.66	192.40	20.224	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,887.80	1,887.80	6.37	6.53	100.01	-579.69	3,283.58	3,334.36	3,325.23	9.13	365.292	
1,900.00	1,900.00	1,944.80	1,944.80	6.58	6.74	100.01	-579.69	3,283.58	3,334.36	3,324.94	9.42	354.084	
2,000.00	2,000.00	2,044.80	2,044.80	6.94	7.10	100.01	-579.69	3,283.58	3,334.36	3,324.44	9.92	335.996	
2,100.00	2,099.99	2,144.79	2,144.79	7.28	7.46	-10.34	-579.69	3,283.58	3,333.07	3,322.65	10.42	319.807	
2,200.00	2,199.91	2,244.71	2,244.71	7.62	7.81	-10.36	-579.69	3,283.58	3,329.21	3,318.30	10.91	305.066	
2,300.00	2,299.69	2,344.49	2,344.49	7.96	8.17	-10.40	-579.69	3,283.58	3,322.78	3,311.37	11.40	291.346	
2,400.00	2,399.27	2,444.07	2,444.07	8.31	8.53	-10.45	-579.69	3,283.58	3,313.78	3,301.88	11.90	278.532	
2,466.68	2,465.52	2,510.32	2,510.32	8.54	8.77	-10.50	-579.69	3,283.58	3,306.35	3,294.13	12.23	270.438	
2,500.00	2,498.59	2,543.39	2,543.39	8.66	8.88	-10.51	-579.69	3,283.58	3,302.36	3,289.97	12.39	266.532	
2,600.00	2,597.85	2,642.65	2,642.65	9.01	9.24	-10.55	-579.69	3,283.58	3,290.37	3,277.49	12.88	255.410	
2,700.00	2,697.10	2,741.90	2,741.90	9.37	9.60	-10.59	-579.69	3,283.58	3,278.39	3,265.01	13.38	245.081	
2,800.00	2,796.36	2,841.16	2,841.16	9.74	9.95	-10.63	-579.69	3,283.58	3,266.41	3,252.53	13.87	235.465	
2,900.00	2,895.61	2,940.41	2,940.41	10.10	10.31	-10.67	-579.69	3,283.58	3,254.43	3,240.06	14.37	226.493	
3,000.00	2,994.86	3,039.66	3,039.66	10.47	10.66	-10.71	-579.69	3,283.58	3,242.45	3,227.58	14.87	218.105	
3,100.00	3,094.12	3,138.92	3,138.92	10.85	11.02	-10.75	-579.69	3,283.58	3,230.47	3,215.10	15.37	210.247	
3,200.00	3,193.37	3,238.17	3,238.17	11.22	11.37	-10.79	-579.69	3,283.58	3,218.49	3,202.63	15.86	202.872	
3,300.00	3,292.63	3,337.43	3,337.43	11.60	11.73	-10.83	-579.69	3,283.58	3,206.52	3,190.15	16.36	195.938	
3,400.00	3,391.88	3,436.68	3,436.68	11.98	12.09	-10.87	-579.69	3,283.58	3,194.55	3,177.68	16.87	189.407	
3,500.00	3,491.14	3,546.22	3,546.22	12.36	12.47	-10.91	-579.94	3,283.46	3,182.52	3,165.13	17.39	183.037	
3,600.00	3,590.39	3,673.70	3,673.64	12.75	12.89	-10.90	-583.26	3,281.91	3,169.78	3,151.85	17.93	176.755	
3,700.00	3,689.65	3,800.71	3,800.39	13.13	13.31	-10.81	-590.41	3,278.58	3,156.17	3,137.70	18.47	170.867	
3,800.00	3,788.90	4,034.10	4,033.01	13.52	14.09	-10.61	-604.73	3,266.60	3,140.45	3,121.21	19.23	163.269	
3,900.00	3,888.16	4,178.37	4,176.75	13.91	14.58	-10.56	-608.82	3,254.99	3,120.94	3,101.13	19.81	157.514	
4,000.00	3,987.41	4,276.40	4,274.41	14.30	14.93	-10.53	-611.25	3,246.79	3,101.23	3,080.93	20.30	152.760	
4,100.00	4,086.66	4,374.42	4,372.06	14.69	15.27	-10.50	-613.67	3,238.60	3,081.53	3,060.74	20.79	148.221	
4,200.00	4,185.92	4,472.45	4,469.71	15.08	15.61	-10.47	-616.10	3,230.40	3,061.83	3,040.55	21.28	143.882	
4,300.00	4,285.17	4,570.48	4,567.36	15.47	15.96	-10.44	-618.53	3,222.21	3,042.13	3,020.36	21.77	139.731	
4,400.00	4,384.43	4,668.50	4,665.02	15.86	16.31	-10.40	-620.95	3,214.01	3,022.43	3,000.16	22.26	135.757	
4,500.00	4,483.68	4,766.53	4,762.67	16.26	16.66	-10.37	-623.38	3,205.82	3,002.73	2,979.97	22.76	131.949	
4,600.00	4,582.94	4,864.56	4,860.32	16.65	17.01	-10.34	-625.80	3,197.62	2,983.03	2,959.78	23.25	128.298	
4,700.00	4,682.19	4,962.58	4,957.98	17.05	17.36	-10.31	-628.23	3,189.43	2,963.33	2,939.58	23.75	124.794	
4,800.00	4,781.45	5,060.61	5,055.63	17.44	17.71	-10.27	-630.65	3,181.23	2,943.63	2,919.39	24.24	121.429	
4,900.00	4,880.70	5,158.63	5,153.28	17.84	18.07	-10.24	-633.08	3,173.04	2,923.94	2,899.20	24.74	118.195	
5,000.00	4,979.96	5,256.66	5,250.93	18.23	18.42	-10.20	-635.50	3,164.84	2,904.24	2,879.01	25.24	115.086	
5,100.00	5,079.21	5,354.69	5,348.59	18.63	18.78	-10.17	-637.93	3,156.65	2,884.55	2,858.82	25.73	112.094	
5,200.00	5,178.46	5,452.71	5,446.24	19.03	19.13	-10.13	-640.35	3,148.46	2,864.86	2,838.62	26.23	109.212	
5,300.00	5,277.72	5,550.74	5,543.89	19.43	19.49	-10.10	-642.78	3,140.26	2,845.16	2,818.43	26.73	106.436	
5,400.00	5,376.97	5,648.76	5,641.55	19.83	19.85	-10.06	-645.20	3,132.07	2,825.47	2,798.24	27.23	103.760	
5,500.00	5,476.23	5,746.79	5,739.20	20.23	20.21	-10.02	-647.63	3,123.87	2,805.78	2,778.05	27.73	101.178	
5,600.00	5,575.48	5,844.82	5,836.85	20.63	20.56	-9.99	-650.05	3,115.68	2,786.10	2,757.86	28.23	98.685	
5,700.00	5,674.74	5,942.84	5,934.51	21.03	20.92	-9.95	-652.48	3,107.48	2,766.41	2,737.67	28.73	96.278	
5,800.00	5,773.99	6,040.87	6,032.16	21.43	21.29	-9.91	-654.90	3,099.29	2,746.72	2,717.49	29.24	93.952	
5,900.00	5,873.25	6,138.90	6,129.81	21.83	21.65	-9.87	-657.33	3,091.09	2,727.04	2,697.30	29.74	91.703	
6,000.00	5,972.50	6,236.92	6,227.46	22.23	22.01	-9.83	-659.76	3,082.90	2,707.35	2,677.11	30.24	89.528	
6,100.00	6,071.76	6,334.95	6,325.12	22.63	22.37	-9.79	-662.18	3,074.70	2,687.67	2,656.93	30.74	87.423	
6,200.00	6,171.01	6,432.97	6,422.77	23.03	22.73	-9.75	-664.61	3,066.51	2,667.99	2,636.74	31.25	85.384	
6,300.00	6,270.26	6,531.00	6,520.42	23.43	23.10	-9.71	-667.03	3,058.31	2,648.31	2,616.56	31.75	83.409	
6,400.00	6,369.52	6,629.03	6,618.08	23.83	23.46	-9.66	-669.46	3,050.12	2,628.63	2,596.38	32.26	81.495	
6,500.00	6,468.77	6,727.05	6,715.73	24.24	23.82	-9.62	-671.88	3,041.92	2,608.96	2,576.20	32.76	79.639	
6,600.00	6,568.03	6,825.08	6,813.38	24.64	24.19	-9.58	-674.31	3,033.73	2,589.28	2,556.02	33.26	77.839	
6,700.00	6,667.28	6,923.11	6,911.03	25.04	24.55	-9.53	-676.73	3,025.53	2,569.61	2,535.84	33.77	76.091	
6,800.00	6,766.54	7,021.13	7,008.69	25.44	24.92	-9.49	-679.16	3,017.34	2,549.93	2,515.66	34.28	74.395	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,908.75	6,874.48	7,127.73	7,114.88	25.88	25.32	-9.44	-681.80	3,008.43	2,528.54	2,493.72	34.83	72.605	
7,000.00	6,965.17	7,217.38	7,204.19	26.24	25.65	-9.35	-684.01	3,000.93	2,511.65	2,476.36	35.29	71.177	
7,100.00	7,064.81	7,316.04	7,302.48	26.63	26.02	-9.25	-686.45	2,992.69	2,495.57	2,459.78	35.79	69.723	
7,200.00	7,164.63	7,415.08	7,401.13	26.99	26.39	-9.15	-688.90	2,984.41	2,482.05	2,445.76	36.30	68.380	
7,300.00	7,264.57	7,514.41	7,500.09	27.34	26.76	-9.04	-691.36	2,976.10	2,471.10	2,434.30	36.80	67.146	
7,375.43	7,340.00	7,589.50	7,574.89	27.60	27.04	101.39	-693.22	2,969.83	2,464.55	2,427.37	37.18	66.291	
7,400.00	7,364.57	7,613.97	7,599.27	27.68	27.14	101.41	-693.83	2,967.78	2,462.66	2,425.36	37.30	66.024	
7,500.00	7,464.57	7,713.59	7,698.51	28.00	27.51	101.51	-696.29	2,959.45	2,454.95	2,417.15	37.79	64.956	
7,600.00	7,564.57	7,813.21	7,797.75	28.33	27.88	101.60	-698.75	2,951.12	2,447.25	2,408.96	38.29	63.915	
7,700.00	7,664.57	7,912.83	7,896.99	28.65	28.26	101.70	-701.22	2,942.80	2,439.55	2,400.77	38.79	62.899	
7,800.00	7,764.57	8,012.45	7,996.23	28.98	28.63	101.80	-703.68	2,934.47	2,431.87	2,392.58	39.28	61.908	
7,900.00	7,864.57	8,112.07	8,095.47	29.31	29.01	101.89	-706.15	2,926.14	2,424.19	2,384.41	39.78	60.942	
7,936.47	7,901.04	8,148.40	8,131.67	29.42	29.14	101.93	-707.05	2,923.10	2,421.39	2,381.43	39.96	60.595	
7,950.00	7,914.57	8,161.87	8,145.09	29.47	29.19	102.62	-707.38	2,921.98	2,420.38	2,380.36	40.03	60.468	
8,000.00	7,964.44	8,211.47	8,194.50	29.63	29.38	103.05	-708.61	2,917.83	2,417.29	2,377.01	40.27	60.023	
8,050.00	8,013.83	8,260.49	8,243.33	29.78	29.56	103.47	-709.82	2,913.73	2,415.20	2,374.69	40.51	59.614	
8,100.00	8,062.36	8,308.55	8,291.20	29.92	29.75	103.88	-711.01	2,909.71	2,414.19	2,373.44	40.75	59.245	
8,119.39	8,080.87	8,326.85	8,309.44	29.97	29.81	104.04	-711.46	2,908.18	2,414.10	2,373.26	40.84	59.114	CC, ES
8,150.00	8,109.66	8,355.29	8,337.76	30.05	29.92	104.26	-712.17	2,905.81	2,414.32	2,373.35	40.98	58.917	
8,200.00	8,155.37	8,400.34	8,382.65	30.17	30.09	104.59	-713.28	2,902.04	2,415.70	2,374.50	41.20	58.632	
8,250.00	8,199.15	8,443.38	8,425.52	30.28	30.25	104.85	-714.35	2,898.44	2,418.40	2,376.98	41.42	58.391	
8,300.00	8,240.66	8,484.07	8,466.05	30.37	30.41	105.01	-715.35	2,895.04	2,422.51	2,380.88	41.63	58.194	
8,350.00	8,279.59	8,522.09	8,503.94	30.45	30.55	105.04	-716.29	2,891.86	2,428.13	2,386.30	41.83	58.042	
8,400.00	8,315.63	8,557.17	8,538.88	30.52	30.68	104.93	-717.16	2,888.93	2,435.34	2,393.30	42.04	57.936	
8,450.00	8,348.52	8,589.04	8,570.63	30.58	30.80	104.64	-717.95	2,886.27	2,444.19	2,401.96	42.23	57.874	
8,500.00	8,378.01	8,617.45	8,598.92	30.62	30.91	104.14	-718.65	2,883.89	2,454.73	2,412.31	42.43	57.858	
8,550.00	8,403.86	8,642.18	8,623.56	30.66	31.00	103.43	-719.26	2,881.82	2,466.99	2,424.37	42.62	57.886	
8,600.00	8,425.89	8,663.05	8,644.35	30.69	31.08	102.46	-719.78	2,880.08	2,480.95	2,438.15	42.81	57.958	
8,650.00	8,443.92	8,679.90	8,661.14	30.73	31.15	101.23	-720.20	2,878.67	2,496.59	2,453.60	42.99	58.073	
8,700.00	8,457.82	8,692.60	8,673.79	30.78	31.19	99.72	-720.51	2,877.61	2,513.83	2,470.66	43.17	58.229	
8,750.00	8,467.48	8,701.05	8,682.21	30.86	31.23	97.93	-720.72	2,876.90	2,532.58	2,489.23	43.35	58.424	
8,800.00	8,472.84	8,705.20	8,686.34	30.99	31.24	95.85	-720.82	2,876.56	2,552.70	2,509.18	43.52	58.657	
8,836.47	8,474.00	8,705.48	8,686.63	31.11	31.24	94.15	-720.83	2,876.53	2,568.15	2,524.51	43.64	58.849	
8,900.00	8,474.00	8,703.97	8,685.11	31.35	31.24	94.12	-720.79	2,876.66	2,596.21	2,552.36	43.85	59.200	
9,000.00	8,474.00	8,701.58	8,682.73	31.80	31.23	94.06	-720.73	2,876.86	2,642.88	2,598.65	44.23	59.759	
9,100.00	8,474.00	8,699.19	8,680.35	32.34	31.22	94.00	-720.67	2,877.06	2,692.45	2,647.82	44.63	60.332	
9,200.00	8,474.00	8,696.80	8,677.97	32.96	31.21	93.94	-720.62	2,877.26	2,744.77	2,699.72	45.05	60.924	
9,300.00	8,474.00	8,694.40	8,675.59	33.64	31.20	93.88	-720.56	2,877.46	2,799.68	2,754.18	45.49	61.538	
9,400.00	8,474.00	8,692.01	8,673.21	34.39	31.19	93.82	-720.50	2,877.66	2,857.04	2,811.09	45.95	62.179	
9,500.00	8,474.00	8,689.62	8,670.83	35.20	31.18	93.76	-720.44	2,877.86	2,916.69	2,870.28	46.41	62.849	
9,600.00	8,474.00	8,687.23	8,668.45	36.06	31.17	93.70	-720.38	2,878.06	2,978.51	2,931.64	46.87	63.550	
9,700.00	8,474.00	8,684.84	8,666.07	36.97	31.16	93.64	-720.32	2,878.26	3,042.35	2,995.03	47.33	64.282	
9,800.00	8,474.00	8,682.45	8,663.68	37.94	31.16	93.59	-720.26	2,878.46	3,108.11	3,060.32	47.78	65.048	
9,900.00	8,474.00	8,680.06	8,661.30	38.95	31.15	93.53	-720.20	2,878.66	3,175.64	3,127.41	48.23	65.845	
10,000.00	8,474.00	8,677.67	8,658.92	40.00	31.14	93.47	-720.14	2,878.86	3,244.85	3,196.19	48.67	66.675	
10,100.00	8,474.00	8,675.28	8,656.54	41.09	31.13	93.41	-720.08	2,879.06	3,315.64	3,266.54	49.09	67.539	
10,200.00	8,474.00	8,672.89	8,654.16	42.22	31.12	93.35	-720.02	2,879.26	3,387.89	3,338.38	49.51	68.435	
10,300.00	8,474.00	8,670.50	8,651.78	43.38	31.11	93.29	-719.97	2,879.46	3,461.52	3,411.62	49.91	69.362	
10,400.00	8,474.00	8,668.11	8,649.40	44.57	31.10	93.23	-719.91	2,879.66	3,536.45	3,486.16	50.29	70.317	
10,500.00	8,474.00	8,665.72	8,647.02	45.78	31.09	93.17	-719.85	2,879.86	3,612.59	3,561.92	50.67	71.300	
10,600.00	8,474.00	8,663.33	8,644.64	47.03	31.08	93.11	-719.79	2,880.06	3,689.86	3,638.84	51.03	72.310	
10,700.00	8,474.00	8,660.94	8,642.26	48.30	31.07	93.05	-719.73	2,880.26	3,768.21	3,716.83	51.38	73.344	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
10,800.00	8,474.00	8,658.55	8,639.87	49.59	31.07	92.99	-719.67	2,880.46	3,847.55	3,795.84	51.71	74.403	
10,900.00	8,474.00	14,930.04	11,769.24	50.90	67.16	146.16	2,542.49	2,712.96	3,914.57	3,855.56	59.01	66.343	
11,000.00	8,474.00	15,029.99	11,766.36	52.23	68.45	146.13	2,642.41	2,712.02	3,912.21	3,851.97	60.24	64.943	
11,100.00	8,474.00	15,129.95	11,763.49	53.58	69.76	146.11	2,742.32	2,711.07	3,909.85	3,848.36	61.49	63.582	
11,200.00	8,474.00	15,229.91	11,760.61	54.95	71.09	146.09	2,842.23	2,710.12	3,907.50	3,844.74	62.76	62.259	
11,300.00	8,474.00	15,329.87	11,757.74	56.33	72.43	146.06	2,942.15	2,709.18	3,905.14	3,841.10	64.05	60.974	
11,400.00	8,474.00	15,429.83	11,754.86	57.72	73.78	146.04	3,042.06	2,708.23	3,902.79	3,837.45	65.34	59.729	
11,500.00	8,474.00	15,529.79	11,751.99	59.13	75.14	146.01	3,141.97	2,707.29	3,900.44	3,833.78	66.65	58.520	
11,600.00	8,474.00	15,629.75	11,749.11	60.55	76.51	145.99	3,241.88	2,706.34	3,898.08	3,830.11	67.97	57.346	
11,700.00	8,474.00	15,729.70	11,746.24	61.98	77.90	145.96	3,341.80	2,705.39	3,895.73	3,826.42	69.31	56.207	
11,800.00	8,474.00	15,829.66	11,743.37	63.43	79.29	145.94	3,441.71	2,704.45	3,893.38	3,822.72	70.66	55.102	
11,900.00	8,474.00	15,929.62	11,740.49	64.88	80.70	145.92	3,541.62	2,703.50	3,891.03	3,819.01	72.02	54.030	
12,000.00	8,474.00	16,029.58	11,737.62	66.34	82.11	145.89	3,641.53	2,702.56	3,888.68	3,815.29	73.39	52.990	
12,100.00	8,474.00	16,129.54	11,734.74	67.81	83.53	145.87	3,741.45	2,701.61	3,886.33	3,811.56	74.77	51.980	
12,200.00	8,474.00	16,229.50	11,731.87	69.29	84.97	145.84	3,841.36	2,700.66	3,883.98	3,807.82	76.15	51.001	
12,300.00	8,474.00	16,329.46	11,728.99	70.78	86.40	145.82	3,941.27	2,699.72	3,881.63	3,804.08	77.55	50.051	
12,400.00	8,474.00	16,429.42	11,726.12	72.27	87.85	145.79	4,041.19	2,698.77	3,879.28	3,800.32	78.96	49.129	
12,500.00	8,474.00	16,529.37	11,723.24	73.77	89.30	145.77	4,141.10	2,697.83	3,876.94	3,796.56	80.38	48.234	
12,600.00	8,474.00	16,629.33	11,720.37	75.28	90.76	145.74	4,241.01	2,696.88	3,874.59	3,792.79	81.80	47.366	
12,700.00	8,474.00	16,729.29	11,717.50	76.79	92.23	145.72	4,340.92	2,695.93	3,872.25	3,789.01	83.23	46.523	
12,800.00	8,474.00	16,829.25	11,714.62	78.31	93.70	145.69	4,440.84	2,694.99	3,869.90	3,785.23	84.67	45.707	
12,900.00	8,474.00	16,929.21	11,711.75	79.83	95.18	145.67	4,540.75	2,694.04	3,867.56	3,781.45	86.11	44.915	
13,000.00	8,474.00	17,029.17	11,708.87	81.36	96.67	145.64	4,640.66	2,693.10	3,865.22	3,777.66	87.56	44.145	
13,100.00	8,474.00	17,129.13	11,706.00	82.89	98.16	145.62	4,740.58	2,692.15	3,862.87	3,773.86	89.01	43.398	
13,200.00	8,474.00	17,229.08	11,703.12	84.43	99.65	145.60	4,840.49	2,691.20	3,860.53	3,770.06	90.47	42.671	
13,300.00	8,474.00	17,329.04	11,700.25	85.97	101.15	145.57	4,940.40	2,690.26	3,858.19	3,766.25	91.94	41.965	
13,400.00	8,474.00	17,429.00	11,697.37	87.52	102.65	145.55	5,040.31	2,689.31	3,855.85	3,762.44	93.41	41.278	
13,500.00	8,474.00	17,528.96	11,694.50	89.07	104.16	145.52	5,140.23	2,688.37	3,853.51	3,758.62	94.89	40.611	
13,600.00	8,474.00	17,628.92	11,691.62	90.62	105.67	145.50	5,240.14	2,687.42	3,851.17	3,754.80	96.37	39.961	
13,700.00	8,474.00	17,728.88	11,688.75	92.18	107.19	145.47	5,340.05	2,686.47	3,848.84	3,750.97	97.86	39.330	
13,800.00	8,474.00	17,828.84	11,685.88	93.74	108.71	145.45	5,439.97	2,685.53	3,846.50	3,747.14	99.35	38.715	
13,900.00	8,474.00	17,928.79	11,683.00	95.30	110.24	145.42	5,539.88	2,684.58	3,844.16	3,743.31	100.85	38.117	
14,000.00	8,474.00	18,028.75	11,680.13	96.87	111.77	145.40	5,639.79	2,683.63	3,841.83	3,739.47	102.36	37.534	
14,100.00	8,474.00	18,128.71	11,677.25	98.43	113.30	145.37	5,739.70	2,682.69	3,839.49	3,735.63	103.86	36.967	
14,200.00	8,474.00	18,228.67	11,674.38	100.01	114.83	145.35	5,839.62	2,681.74	3,837.16	3,731.79	105.37	36.416	
14,300.00	8,474.00	18,328.63	11,671.50	101.58	116.37	145.32	5,939.53	2,680.80	3,834.82	3,727.94	106.88	35.879	
14,400.00	8,474.00	18,428.59	11,668.63	103.16	117.91	145.30	6,039.44	2,679.85	3,832.49	3,724.09	108.40	35.356	
14,500.00	8,474.00	18,528.55	11,665.75	104.74	119.46	145.27	6,139.36	2,678.90	3,830.16	3,720.24	109.92	34.846	
14,600.00	8,474.00	18,628.51	11,662.88	106.32	121.00	145.25	6,239.27	2,677.96	3,827.83	3,716.39	111.44	34.349	
14,700.00	8,474.00	18,728.46	11,660.01	107.90	122.55	145.22	6,339.18	2,677.01	3,825.50	3,712.53	112.97	33.864	
14,800.00	8,474.00	18,828.42	11,657.13	109.49	124.11	145.19	6,439.09	2,676.07	3,823.17	3,708.67	114.50	33.391	
14,900.00	8,474.00	18,928.38	11,654.26	111.07	125.66	145.17	6,539.01	2,675.12	3,820.84	3,704.81	116.03	32.930	
15,000.00	8,474.00	19,028.34	11,651.38	112.66	127.22	145.14	6,638.92	2,674.17	3,818.51	3,700.94	117.57	32.479	
15,100.00	8,474.00	19,128.30	11,648.51	114.25	128.78	145.12	6,738.83	2,673.23	3,816.18	3,697.07	119.11	32.040	
15,200.00	8,474.00	19,228.26	11,645.63	115.85	130.34	145.09	6,838.74	2,672.28	3,813.85	3,693.20	120.65	31.610	
15,300.00	8,474.00	19,328.22	11,642.76	117.44	131.90	145.07	6,938.66	2,671.34	3,811.53	3,689.33	122.20	31.191	
15,400.00	8,474.00	19,428.17	11,639.88	119.04	133.47	145.04	7,038.57	2,670.39	3,809.20	3,685.45	123.75	30.782	
15,500.00	8,474.00	19,528.13	11,637.01	120.63	135.04	145.02	7,138.48	2,669.44	3,806.88	3,681.58	125.30	30.382	
15,600.00	8,474.00	19,628.09	11,634.14	122.23	136.61	144.99	7,238.40	2,668.50	3,804.55	3,677.70	126.85	29.992	
15,700.00	8,474.00	19,728.05	11,631.26	123.83	138.18	144.97	7,338.31	2,667.55	3,802.23	3,673.83	128.41	29.611	
15,800.00	8,474.00	19,828.01	11,628.39	125.43	139.76	144.94	7,438.22	2,666.61	3,799.91	3,669.95	129.96	29.238	
15,900.00	8,474.00	19,927.97	11,625.51	127.04	141.33	144.91	7,538.13	2,665.66	3,797.59	3,666.06	131.53	28.873	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
16,000.00	8,474.00	20,027.93	11,622.64	128.64	142.91	144.89	7,638.05	2,664.71	3,795.27	3,662.18	133.09	28.516	
16,100.00	8,474.00	20,127.88	11,619.76	130.25	144.49	144.86	7,737.96	2,663.77	3,792.95	3,658.29	134.66	28.167	
16,200.00	8,474.00	20,227.84	11,616.89	131.85	146.07	144.84	7,837.87	2,662.82	3,790.63	3,654.40	136.22	27.826	
16,300.00	8,474.00	20,327.80	11,614.01	133.46	147.65	144.81	7,937.79	2,661.88	3,788.31	3,650.51	137.79	27.492	
16,400.00	8,474.00	20,427.76	11,611.14	135.07	149.24	144.79	8,037.70	2,660.93	3,785.99	3,646.63	139.37	27.166	
16,500.00	8,474.00	20,527.72	11,608.26	136.68	150.82	144.76	8,137.61	2,659.98	3,783.67	3,642.74	140.94	26.846	
16,600.00	8,474.00	20,627.68	11,605.39	138.29	152.41	144.73	8,237.52	2,659.04	3,781.36	3,638.84	142.51	26.533	
16,700.00	8,474.00	20,727.64	11,602.52	139.90	154.00	144.71	8,337.44	2,658.09	3,779.04	3,634.95	144.09	26.226	
16,800.00	8,474.00	20,827.60	11,599.64	141.52	155.59	144.68	8,437.35	2,657.15	3,776.73	3,631.05	145.68	25.926	
16,900.00	8,474.00	20,927.55	11,596.77	143.13	157.18	144.66	8,537.26	2,656.20	3,774.41	3,627.16	147.26	25.631	
17,000.00	8,474.00	21,027.51	11,593.89	144.74	158.77	144.63	8,637.18	2,655.25	3,772.10	3,623.26	148.84	25.343	
17,100.00	8,474.00	21,127.47	11,591.02	146.36	160.36	144.60	8,737.09	2,654.31	3,769.79	3,619.36	150.43	25.061	
17,200.00	8,474.00	21,227.43	11,588.14	147.97	161.96	144.58	8,837.00	2,653.36	3,767.48	3,615.46	152.01	24.784	
17,300.00	8,474.00	21,327.39	11,585.27	149.59	163.55	144.55	8,936.91	2,652.42	3,765.17	3,611.56	153.60	24.512	
17,400.00	8,474.00	21,427.35	11,582.39	151.21	165.15	144.53	9,036.83	2,651.47	3,762.86	3,607.66	155.19	24.246	
17,500.00	8,474.00	21,527.31	11,579.52	152.83	166.75	144.50	9,136.74	2,650.52	3,760.55	3,603.76	156.79	23.985	
17,600.00	8,474.00	21,627.26	11,576.65	154.45	168.34	144.47	9,236.65	2,649.58	3,758.24	3,599.86	158.38	23.729	
17,700.00	8,474.00	21,727.22	11,573.77	156.07	169.94	144.45	9,336.57	2,648.63	3,755.93	3,595.95	159.98	23.478	
17,800.00	8,474.00	21,827.18	11,570.90	157.69	171.54	144.42	9,436.48	2,647.68	3,753.62	3,592.05	161.58	23.231	
17,900.00	8,474.00	21,927.14	11,568.02	159.31	173.15	144.40	9,536.39	2,646.74	3,751.32	3,588.14	163.18	22.989	
18,000.00	8,474.00	22,027.10	11,565.15	160.93	174.75	144.37	9,636.30	2,645.79	3,749.01	3,584.23	164.78	22.751	
18,100.00	8,474.00	22,127.06	11,562.27	162.55	176.35	144.34	9,736.22	2,644.85	3,746.71	3,580.32	166.38	22.518	
18,200.00	8,474.00	22,227.02	11,559.40	164.18	177.96	144.32	9,836.13	2,643.90	3,744.40	3,576.42	167.99	22.290	
18,300.00	8,474.00	22,326.97	11,556.52	165.80	179.56	144.29	9,936.04	2,642.95	3,742.10	3,572.51	169.59	22.065	
18,400.00	8,474.00	22,426.93	11,553.65	167.42	181.17	144.26	10,035.95	2,642.01	3,739.80	3,568.60	171.20	21.844	
18,500.00	8,474.00	22,482.46	11,552.05	169.05	182.06	144.25	10,091.45	2,641.48	3,737.76	3,565.35	172.41	21.679	
18,541.58	8,474.00	22,482.46	11,552.05	169.72	182.06	144.25	10,091.45	2,641.48	3,737.53	3,564.85	172.69	21.644	
18,548.37	8,474.00	22,482.46	11,552.05	169.83	182.06	144.25	10,091.45	2,641.48	3,737.54	3,564.81	172.73	21.638	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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,887.20	1,887.20	6.37	6.53	99.80	-579.10	3,353.57	3,403.20	3,394.08	9.13	372.897	
1,900.00	1,900.00	1,944.20	1,944.20	6.58	6.74	99.80	-579.10	3,353.57	3,403.20	3,393.79	9.42	361.453	
2,000.00	2,000.00	2,044.20	2,044.20	6.94	7.09	99.80	-579.10	3,353.57	3,403.20	3,393.28	9.92	342.987	
2,100.00	2,099.99	2,144.19	2,144.19	7.28	7.45	-10.55	-579.10	3,353.57	3,401.92	3,391.50	10.42	326.461	
2,200.00	2,199.91	2,244.11	2,244.11	7.62	7.81	-10.58	-579.10	3,353.57	3,398.06	3,387.15	10.91	311.419	
2,300.00	2,299.69	2,343.89	2,343.89	7.96	8.17	-10.61	-579.10	3,353.57	3,391.63	3,380.23	11.40	297.423	
2,400.00	2,399.27	2,443.47	2,443.47	8.31	8.53	-10.67	-579.10	3,353.57	3,382.64	3,370.74	11.90	284.357	
2,466.68	2,465.52	2,509.72	2,509.72	8.54	8.76	-10.71	-579.10	3,353.57	3,375.22	3,362.99	12.22	276.105	
2,500.00	2,498.59	2,542.79	2,542.79	8.66	8.88	-10.73	-579.10	3,353.57	3,371.23	3,358.84	12.39	272.124	
2,600.00	2,597.85	2,642.05	2,642.05	9.01	9.24	-10.76	-579.10	3,353.57	3,359.25	3,346.37	12.88	260.788	
2,700.00	2,697.10	2,741.30	2,741.30	9.37	9.59	-10.80	-579.10	3,353.57	3,347.27	3,333.90	13.38	250.259	
2,800.00	2,796.36	2,840.56	2,840.56	9.74	9.95	-10.84	-579.10	3,353.57	3,335.30	3,321.43	13.87	240.457	
2,900.00	2,895.61	2,939.81	2,939.81	10.10	10.31	-10.88	-579.10	3,353.57	3,323.33	3,308.96	14.37	231.312	
3,000.00	2,994.86	3,039.06	3,039.06	10.47	10.66	-10.92	-579.10	3,353.57	3,311.36	3,296.49	14.86	222.762	
3,100.00	3,094.12	3,138.32	3,138.32	10.85	11.02	-10.96	-579.10	3,353.57	3,299.39	3,284.02	15.36	214.753	
3,200.00	3,193.37	3,237.57	3,237.57	11.22	11.37	-11.00	-579.10	3,353.57	3,287.42	3,271.56	15.86	207.235	
3,300.00	3,292.63	3,336.83	3,336.83	11.60	11.73	-11.04	-579.10	3,353.57	3,275.45	3,259.09	16.36	200.167	
3,400.00	3,391.88	3,436.08	3,436.08	11.98	12.08	-11.08	-579.10	3,353.57	3,263.49	3,246.63	16.86	193.510	
3,500.00	3,491.14	3,535.34	3,535.34	12.36	12.44	-11.12	-579.10	3,353.57	3,251.53	3,234.16	17.37	187.229	
3,600.00	3,590.39	3,634.59	3,634.59	12.75	12.80	-11.17	-579.10	3,353.57	3,239.57	3,221.70	17.87	181.296	
3,700.00	3,689.65	3,733.85	3,733.85	13.13	13.15	-11.21	-579.10	3,353.57	3,227.61	3,209.24	18.37	175.681	
3,800.00	3,788.90	3,833.10	3,833.10	13.52	13.51	-11.25	-579.10	3,353.57	3,215.65	3,196.78	18.88	170.361	
3,900.00	3,888.16	3,932.36	3,932.36	13.91	13.86	-11.29	-579.10	3,353.57	3,203.70	3,184.32	19.38	165.313	
4,000.00	3,987.41	4,031.61	4,031.61	14.30	14.22	-11.34	-579.10	3,353.57	3,191.74	3,171.86	19.88	160.518	
4,100.00	4,086.66	4,130.86	4,130.86	14.69	14.57	-11.38	-579.10	3,353.57	3,179.79	3,159.40	20.39	155.956	
4,200.00	4,185.92	4,230.12	4,230.12	15.08	14.93	-11.42	-579.10	3,353.57	3,167.84	3,146.94	20.89	151.613	
4,300.00	4,285.17	4,329.37	4,329.37	15.47	15.29	-11.47	-579.10	3,353.57	3,155.89	3,134.49	21.40	147.471	
4,400.00	4,384.43	4,428.63	4,428.63	15.86	15.64	-11.51	-579.10	3,353.57	3,143.94	3,122.04	21.91	143.519	
4,500.00	4,483.68	4,527.88	4,527.88	16.26	16.00	-11.55	-579.10	3,353.57	3,132.00	3,109.59	22.41	139.744	
4,600.00	4,582.94	4,627.14	4,627.14	16.65	16.35	-11.60	-579.10	3,353.57	3,120.06	3,097.14	22.92	136.133	
4,700.00	4,682.19	4,726.39	4,726.39	17.05	16.71	-11.64	-579.10	3,353.57	3,108.11	3,084.69	23.43	132.677	
4,800.00	4,781.45	4,825.65	4,825.65	17.44	17.07	-11.69	-579.10	3,353.57	3,096.18	3,072.24	23.93	129.366	
4,900.00	4,880.70	4,924.90	4,924.90	17.84	17.42	-11.74	-579.10	3,353.57	3,084.24	3,059.80	24.44	126.192	
5,000.00	4,979.96	5,024.16	5,024.16	18.23	17.78	-11.78	-579.10	3,353.57	3,072.30	3,047.35	24.95	123.145	
5,100.00	5,079.21	5,123.41	5,123.41	18.63	18.13	-11.83	-579.10	3,353.57	3,060.37	3,034.91	25.46	120.219	
5,200.00	5,178.46	5,222.66	5,222.66	19.03	18.49	-11.88	-579.10	3,353.57	3,048.44	3,022.47	25.96	117.406	
5,300.00	5,277.72	5,321.92	5,321.92	19.43	18.84	-11.92	-579.10	3,353.57	3,036.51	3,010.04	26.47	114.700	
5,400.00	5,376.97	5,421.17	5,421.17	19.83	19.20	-11.97	-579.10	3,353.57	3,024.58	2,997.60	26.98	112.096	
5,500.00	5,476.23	5,500.00	5,500.00	20.23	19.48	-12.01	-579.10	3,353.57	3,012.73	2,985.28	27.44	109.778	
5,600.00	5,575.48	5,569.80	5,569.79	20.63	19.72	-12.04	-579.44	3,354.11	3,001.73	2,973.85	27.88	107.679	
5,700.00	5,674.74	5,627.88	5,627.85	21.03	19.92	-12.05	-580.26	3,355.37	2,992.15	2,963.87	28.28	105.814	
5,800.00	5,773.99	5,700.00	5,699.91	21.43	20.16	-12.06	-581.94	3,357.97	2,984.00	2,955.29	28.71	103.953	
5,900.00	5,873.25	5,744.47	5,744.31	21.83	20.31	-12.07	-583.35	3,360.14	2,977.12	2,948.06	29.06	102.431	
6,000.00	5,972.50	5,800.00	5,799.69	22.23	20.49	-12.06	-585.49	3,363.46	2,971.69	2,942.25	29.45	100.920	
6,100.00	6,071.76	5,881.13	5,880.53	22.63	20.76	-12.05	-589.26	3,369.28	2,967.49	2,937.60	29.89	99.278	
6,200.00	6,171.01	5,981.05	5,980.06	23.03	21.10	-12.02	-594.00	3,376.59	2,963.49	2,933.10	30.39	97.531	
6,300.00	6,270.26	6,080.96	6,079.59	23.43	21.44	-12.00	-598.73	3,383.91	2,959.48	2,928.60	30.88	95.837	
6,400.00	6,369.52	6,180.88	6,179.13	23.83	21.78	-11.98	-603.47	3,391.22	2,955.48	2,924.10	31.38	94.194	
6,500.00	6,468.77	6,280.79	6,278.66	24.24	22.12	-11.96	-608.21	3,398.54	2,951.47	2,919.60	31.87	92.600	
6,600.00	6,568.03	6,380.70	6,378.19	24.64	22.46	-11.94	-612.94	3,405.86	2,947.47	2,915.10	32.37	91.052	
6,700.00	6,667.28	6,480.62	6,477.73	25.04	22.80	-11.92	-617.68	3,413.17	2,943.47	2,910.60	32.87	89.549	
6,800.00	6,766.54	6,580.53	6,577.26	25.44	23.15	-11.90	-622.41	3,420.49	2,939.46	2,906.09	33.37	88.089	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,908.75	6,874.48	6,689.19	6,685.50	25.88	23.52	-11.87	-627.56	3,428.45	2,935.11	2,901.20	33.91	86.549	
7,000.00	6,965.17	6,780.39	6,776.36	26.24	23.84	-11.84	-631.89	3,435.12	2,932.53	2,898.16	34.37	85.325	
7,064.95	7,029.86	6,845.33	6,841.05	26.49	24.07	-11.82	-634.97	3,439.88	2,931.98	2,897.29	34.69	84.515 CC	
7,100.00	7,064.81	6,880.37	6,875.96	26.63	24.19	-11.80	-636.63	3,442.45	2,932.14	2,897.28	34.87	84.096 ES	
7,200.00	7,164.63	6,980.31	6,975.52	26.99	24.54	-11.76	-641.36	3,449.76	2,934.32	2,898.96	35.36	82.980	
7,300.00	7,264.57	7,080.16	7,074.98	27.34	24.89	-11.72	-646.10	3,457.08	2,939.07	2,903.21	35.85	81.973	
7,375.43	7,340.00	7,155.36	7,149.90	27.60	25.15	98.65	-649.66	3,462.58	2,944.34	2,908.12	36.22	81.289	
7,400.00	7,364.57	7,179.83	7,174.28	27.68	25.24	98.67	-650.82	3,464.37	2,946.30	2,909.96	36.34	81.079	
7,500.00	7,464.57	7,279.45	7,273.52	28.00	25.59	98.74	-655.54	3,471.67	2,954.26	2,917.44	36.82	80.238	
7,600.00	7,564.57	7,379.07	7,372.76	28.33	25.94	98.81	-660.27	3,478.96	2,962.22	2,924.92	37.30	79.417	
7,700.00	7,664.57	7,478.69	7,471.99	28.65	26.29	98.88	-664.99	3,486.26	2,970.19	2,932.41	37.78	78.615	
7,800.00	7,764.57	7,578.31	7,571.23	28.98	26.65	98.95	-669.71	3,493.55	2,978.17	2,939.90	38.26	77.832	
7,900.00	7,864.57	7,677.93	7,670.47	29.31	27.00	99.02	-674.43	3,500.85	2,986.14	2,947.40	38.75	77.067	
7,936.47	7,901.04	7,714.26	7,706.67	29.42	27.13	99.04	-676.16	3,503.51	2,989.05	2,950.13	38.92	76.792	
7,950.00	7,914.57	7,727.73	7,720.08	29.47	27.18	99.52	-676.79	3,504.50	2,990.16	2,951.17	38.99	76.692	
8,000.00	7,964.44	7,777.25	7,769.41	29.63	27.36	99.16	-679.14	3,508.12	2,994.71	2,955.48	39.23	76.343	
8,050.00	8,013.83	7,826.08	7,818.06	29.78	27.53	98.82	-681.46	3,511.70	2,999.96	2,960.50	39.46	76.028	
8,100.00	8,062.36	7,873.85	7,865.65	29.92	27.70	98.47	-683.72	3,515.19	3,005.92	2,966.24	39.68	75.749	
8,150.00	8,109.66	7,920.19	7,911.81	30.05	27.87	98.12	-685.92	3,518.59	3,012.61	2,972.71	39.90	75.506	
8,200.00	8,155.37	7,964.76	7,956.21	30.17	28.03	97.75	-688.03	3,521.85	3,020.02	2,979.92	40.11	75.299	
8,250.00	8,199.15	8,007.21	7,998.50	30.28	28.18	97.34	-690.04	3,524.96	3,028.20	2,987.89	40.31	75.126	
8,300.00	8,240.66	8,047.22	8,038.36	30.37	28.32	96.88	-691.94	3,527.89	3,037.17	2,996.67	40.50	74.987	
8,350.00	8,279.59	8,084.49	8,075.49	30.45	28.46	96.35	-693.70	3,530.62	3,046.95	3,006.26	40.69	74.881	
8,400.00	8,315.63	8,118.73	8,109.60	30.52	28.58	95.74	-695.33	3,533.13	3,057.57	3,016.69	40.87	74.807	
8,450.00	8,348.52	8,149.68	8,140.43	30.58	28.69	95.03	-696.80	3,535.39	3,069.04	3,027.99	41.05	74.761	
8,500.00	8,378.01	8,177.11	8,167.75	30.62	28.79	94.19	-698.10	3,537.40	3,081.37	3,040.15	41.23	74.743	
8,550.00	8,403.86	8,200.81	8,191.36	30.66	28.88	93.23	-699.22	3,539.14	3,094.56	3,053.16	41.40	74.752	
8,600.00	8,425.89	8,220.59	8,211.07	30.69	28.95	92.11	-700.16	3,540.59	3,108.58	3,067.01	41.57	74.784	
8,650.00	8,443.92	8,236.31	8,226.73	30.73	29.01	90.85	-700.90	3,541.74	3,123.38	3,081.64	41.74	74.838	
8,700.00	8,457.82	8,247.85	8,238.22	30.78	29.05	89.43	-701.45	3,542.58	3,138.91	3,097.01	41.90	74.912	
8,750.00	8,467.48	8,255.11	8,245.46	30.86	29.07	87.86	-701.79	3,543.11	3,155.09	3,113.02	42.06	75.005	
8,800.00	8,472.84	8,258.05	8,248.39	30.99	29.08	86.14	-701.93	3,543.33	3,171.80	3,129.58	42.23	75.115	
8,836.47	8,474.00	8,257.46	8,247.79	31.11	29.08	84.81	-701.90	3,543.29	3,184.27	3,141.93	42.34	75.206	
8,900.00	8,474.00	8,254.40	8,244.75	31.35	29.07	84.75	-701.76	3,543.06	3,206.71	3,164.15	42.55	75.361	
9,000.00	8,474.00	8,249.58	8,239.95	31.80	29.05	84.66	-701.53	3,542.71	3,244.22	3,201.30	42.93	75.578	
9,100.00	8,474.00	8,244.77	8,235.16	32.34	29.04	84.57	-701.30	3,542.36	3,284.35	3,241.00	43.34	75.774	
9,200.00	8,474.00	8,239.96	8,230.36	32.96	29.02	84.48	-701.07	3,542.00	3,326.99	3,283.19	43.80	75.959	
9,300.00	8,474.00	8,235.14	8,225.57	33.64	29.00	84.38	-700.85	3,541.65	3,372.05	3,327.76	44.29	76.140	
9,400.00	8,474.00	8,230.33	8,220.77	34.39	28.98	84.29	-700.62	3,541.30	3,419.43	3,374.63	44.80	76.327	
9,500.00	8,474.00	8,225.52	8,215.98	35.20	28.97	84.20	-700.39	3,540.95	3,469.05	3,423.72	45.33	76.527	
9,600.00	8,474.00	8,220.70	8,211.18	36.06	28.95	84.11	-700.16	3,540.59	3,520.80	3,474.92	45.88	76.745	
9,700.00	8,474.00	8,215.89	8,206.39	36.97	28.93	84.01	-699.93	3,540.24	3,574.59	3,528.16	46.43	76.987	
9,800.00	8,474.00	8,211.08	8,201.59	37.94	28.91	83.92	-699.71	3,539.89	3,630.33	3,583.34	46.99	77.256	
9,900.00	8,474.00	8,206.26	8,196.80	38.95	28.90	83.83	-699.48	3,539.54	3,687.94	3,640.39	47.55	77.555	
10,000.00	8,474.00	8,201.45	8,192.00	40.00	28.88	83.74	-699.25	3,539.18	3,747.33	3,699.21	48.11	77.886	
10,100.00	8,474.00	8,196.64	8,187.21	41.09	28.86	83.65	-699.02	3,538.83	3,808.40	3,759.74	48.67	78.252	
10,200.00	8,474.00	8,191.82	8,182.41	42.22	28.84	83.55	-698.79	3,538.48	3,871.10	3,821.88	49.22	78.652	
10,300.00	8,474.00	8,187.01	8,177.62	43.38	28.83	83.46	-698.56	3,538.13	3,935.33	3,885.57	49.76	79.091	
10,400.00	8,474.00	8,182.20	8,172.82	44.57	28.81	83.37	-698.34	3,537.77	4,001.02	3,950.73	50.28	79.567	
10,500.00	8,474.00	8,177.38	8,168.03	45.78	28.79	83.28	-698.11	3,537.42	4,068.10	4,017.30	50.80	80.076	
10,600.00	8,474.00	8,172.57	8,163.23	47.03	28.78	83.19	-697.88	3,537.07	4,136.51	4,085.20	51.31	80.617	
10,700.00	8,474.00	8,167.76	8,158.43	48.30	28.76	83.09	-697.65	3,536.72	4,206.18	4,154.37	51.81	81.192	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	8,474.00	8,162.94	8,153.64	49.59	28.74	83.00	-697.42	3,536.36	4,277.04	4,224.76	52.29	81.800	
10,900.00	8,474.00	8,158.13	8,148.84	50.90	28.72	82.91	-697.20	3,536.01	4,349.05	4,296.29	52.76	82.438	
11,000.00	8,474.00	14,843.76	11,609.51	52.23	67.50	135.33	2,639.32	3,588.05	4,347.24	4,281.69	65.55	66.315	
11,100.00	8,474.00	14,943.72	11,606.86	53.58	68.82	135.31	2,739.24	3,587.10	4,345.39	4,278.39	67.00	64.854	
11,200.00	8,474.00	15,043.69	11,604.21	54.95	70.16	135.28	2,839.17	3,586.16	4,343.55	4,275.08	68.47	63.437	
11,300.00	8,474.00	15,143.65	11,601.56	56.33	71.50	135.26	2,939.09	3,585.21	4,341.70	4,271.75	69.95	62.064	
11,400.00	8,474.00	15,243.62	11,598.91	57.72	72.86	135.23	3,039.02	3,584.26	4,339.86	4,268.40	71.46	60.734	
11,500.00	8,474.00	15,343.58	11,596.26	59.13	74.24	135.21	3,138.94	3,583.31	4,338.01	4,265.04	72.97	59.446	
11,600.00	8,474.00	15,443.55	11,593.61	60.55	75.62	135.18	3,238.87	3,582.37	4,336.17	4,261.66	74.51	58.198	
11,700.00	8,474.00	15,543.51	11,590.96	61.98	77.01	135.16	3,338.79	3,581.42	4,334.33	4,258.27	76.05	56.990	
11,800.00	8,474.00	15,643.48	11,588.31	63.43	78.41	135.13	3,438.72	3,580.47	4,332.49	4,254.87	77.61	55.821	
11,900.00	8,474.00	15,743.44	11,585.65	64.88	79.83	135.11	3,538.64	3,579.52	4,330.65	4,251.46	79.19	54.689	
12,000.00	8,474.00	15,843.41	11,583.00	66.34	81.25	135.08	3,638.57	3,578.58	4,328.81	4,248.03	80.77	53.593	
12,100.00	8,474.00	15,943.37	11,580.35	67.81	82.68	135.06	3,738.49	3,577.63	4,326.97	4,244.60	82.37	52.534	
12,200.00	8,474.00	16,043.34	11,577.70	69.29	84.12	135.03	3,838.42	3,576.68	4,325.13	4,241.16	83.97	51.509	
12,300.00	8,474.00	16,143.30	11,575.05	70.78	85.56	135.01	3,938.34	3,575.73	4,323.29	4,237.71	85.58	50.516	
12,400.00	8,474.00	16,243.27	11,572.40	72.27	87.02	134.98	4,038.27	3,574.79	4,321.46	4,234.25	87.21	49.555	
12,500.00	8,474.00	16,343.23	11,569.75	73.77	88.48	134.96	4,138.19	3,573.84	4,319.62	4,230.78	88.84	48.623	
12,600.00	8,474.00	16,443.20	11,567.10	75.28	89.94	134.93	4,238.12	3,572.89	4,317.79	4,227.30	90.48	47.721	
12,700.00	8,474.00	16,543.16	11,564.45	76.79	91.42	134.90	4,338.04	3,571.94	4,315.95	4,223.82	92.13	46.846	
12,800.00	8,474.00	16,643.13	11,561.80	78.31	92.90	134.88	4,437.97	3,571.00	4,314.12	4,220.33	93.79	45.999	
12,900.00	8,474.00	16,743.09	11,559.15	79.83	94.38	134.85	4,537.89	3,570.05	4,312.29	4,216.83	95.45	45.177	
13,000.00	8,474.00	16,843.06	11,556.50	81.36	95.87	134.83	4,637.82	3,569.10	4,310.46	4,213.33	97.13	44.380	
13,100.00	8,474.00	16,943.02	11,553.84	82.89	97.37	134.80	4,737.74	3,568.15	4,308.62	4,209.82	98.81	43.607	
13,200.00	8,474.00	17,042.99	11,551.19	84.43	98.87	134.78	4,837.67	3,567.21	4,306.80	4,206.30	100.49	42.858	
13,300.00	8,474.00	17,142.95	11,548.54	85.97	100.37	134.75	4,937.59	3,566.26	4,304.97	4,202.79	102.18	42.131	
13,400.00	8,474.00	17,242.91	11,545.89	87.52	101.88	134.73	5,037.52	3,565.31	4,303.14	4,199.26	103.87	41.426	
13,500.00	8,474.00	17,342.88	11,543.24	89.07	103.40	134.70	5,137.44	3,564.36	4,301.31	4,195.73	105.58	40.741	
13,600.00	8,474.00	17,442.84	11,540.59	90.62	104.92	134.67	5,237.37	3,563.42	4,299.49	4,192.20	107.29	40.075	
13,700.00	8,474.00	17,542.81	11,537.94	92.18	106.44	134.65	5,337.30	3,562.47	4,297.66	4,188.66	109.00	39.428	
13,800.00	8,474.00	17,642.77	11,535.29	93.74	107.97	134.62	5,437.22	3,561.52	4,295.84	4,185.12	110.72	38.799	
13,900.00	8,474.00	17,742.74	11,532.64	95.30	109.50	134.60	5,537.15	3,560.57	4,294.01	4,181.57	112.44	38.189	
14,000.00	8,474.00	17,842.70	11,529.99	96.87	111.03	134.57	5,637.07	3,559.63	4,292.19	4,178.02	114.17	37.596	
14,100.00	8,474.00	17,942.67	11,527.34	98.43	112.57	134.55	5,737.00	3,558.68	4,290.37	4,174.47	115.90	37.018	
14,200.00	8,474.00	18,042.63	11,524.69	100.01	114.11	134.52	5,836.92	3,557.73	4,288.55	4,170.91	117.63	36.457	
14,300.00	8,474.00	18,142.60	11,522.03	101.58	115.65	134.49	5,936.85	3,556.78	4,286.73	4,167.35	119.37	35.910	
14,400.00	8,474.00	18,242.56	11,519.38	103.16	117.19	134.47	6,036.77	3,555.84	4,284.91	4,163.79	121.12	35.378	
14,500.00	8,474.00	18,342.53	11,516.73	104.74	118.74	134.44	6,136.70	3,554.89	4,283.09	4,160.22	122.87	34.860	
14,600.00	8,474.00	18,442.49	11,514.08	106.32	120.30	134.42	6,236.62	3,553.94	4,281.27	4,156.65	124.62	34.355	
14,700.00	8,474.00	18,542.46	11,511.43	107.90	121.85	134.39	6,336.55	3,552.99	4,279.46	4,153.08	126.37	33.863	
14,800.00	8,474.00	18,642.42	11,508.78	109.49	123.41	134.37	6,436.47	3,552.05	4,277.64	4,149.50	128.13	33.384	
14,900.00	8,474.00	18,742.39	11,506.13	111.07	124.97	134.34	6,536.40	3,551.10	4,275.83	4,145.93	129.89	32.918	
15,000.00	8,474.00	18,842.35	11,503.48	112.66	126.53	134.31	6,636.32	3,550.15	4,274.01	4,142.35	131.66	32.463	
15,100.00	8,474.00	18,942.32	11,500.83	114.25	128.09	134.29	6,736.25	3,549.20	4,272.20	4,138.77	133.43	32.019	
15,200.00	8,474.00	19,042.28	11,498.18	115.85	129.66	134.26	6,836.17	3,548.26	4,270.39	4,135.19	135.20	31.586	
15,300.00	8,474.00	19,142.25	11,495.53	117.44	131.23	134.24	6,936.10	3,547.31	4,268.57	4,131.60	136.97	31.163	
15,400.00	8,474.00	19,242.21	11,492.88	119.04	132.80	134.21	7,036.02	3,546.36	4,266.76	4,128.01	138.75	30.751	
15,500.00	8,474.00	19,342.18	11,490.22	120.63	134.37	134.18	7,135.95	3,545.41	4,264.95	4,124.42	140.53	30.348	
15,600.00	8,474.00	19,442.14	11,487.57	122.23	135.94	134.16	7,235.87	3,544.47	4,263.15	4,120.83	142.32	29.955	
15,700.00	8,474.00	19,542.11	11,484.92	123.83	137.52	134.13	7,335.80	3,543.52	4,261.34	4,117.24	144.10	29.572	
15,800.00	8,474.00	19,642.07	11,482.27	125.43	139.10	134.11	7,435.72	3,542.57	4,259.53	4,113.64	145.89	29.197	
15,900.00	8,474.00	19,742.04	11,479.62	127.04	140.67	134.08	7,535.65	3,541.62	4,257.73	4,110.05	147.68	28.831	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	8,474.00	19,842.00	11,476.97	128.64	142.26	134.05	7,635.57	3,540.68	4,255.92	4,106.45	149.47	28.473	
16,100.00	8,474.00	19,941.96	11,474.32	130.25	143.84	134.03	7,735.50	3,539.73	4,254.12	4,102.85	151.27	28.123	
16,200.00	8,474.00	20,041.93	11,471.67	131.85	145.42	134.00	7,835.42	3,538.78	4,252.31	4,099.24	153.07	27.780	
16,300.00	8,474.00	20,141.89	11,469.02	133.46	147.01	133.97	7,935.35	3,537.83	4,250.51	4,095.64	154.87	27.446	
16,400.00	8,474.00	20,241.86	11,466.37	135.07	148.59	133.95	8,035.28	3,536.89	4,248.71	4,092.04	156.67	27.118	
16,500.00	8,474.00	20,341.82	11,463.72	136.68	150.18	133.92	8,135.20	3,535.94	4,246.91	4,088.43	158.48	26.798	
16,600.00	8,474.00	20,441.79	11,461.07	138.29	151.77	133.90	8,235.13	3,534.99	4,245.11	4,084.82	160.28	26.485	
16,700.00	8,474.00	20,541.75	11,458.42	139.90	153.36	133.87	8,335.05	3,534.04	4,243.31	4,081.22	162.09	26.178	
16,800.00	8,474.00	20,641.72	11,455.76	141.52	154.96	133.84	8,434.98	3,533.10	4,241.51	4,077.61	163.90	25.878	
16,900.00	8,474.00	20,741.68	11,453.11	143.13	156.55	133.82	8,534.90	3,532.15	4,239.71	4,074.00	165.72	25.584	
17,000.00	8,474.00	20,841.65	11,450.46	144.74	158.14	133.79	8,634.83	3,531.20	4,237.92	4,070.38	167.53	25.296	
17,100.00	8,474.00	20,941.61	11,447.81	146.36	159.74	133.76	8,734.75	3,530.25	4,236.12	4,066.77	169.35	25.014	
17,200.00	8,474.00	21,041.58	11,445.16	147.97	161.34	133.74	8,834.68	3,529.31	4,234.33	4,063.16	171.17	24.738	
17,300.00	8,474.00	21,141.54	11,442.51	149.59	162.94	133.71	8,934.60	3,528.36	4,232.53	4,059.55	172.99	24.467	
17,400.00	8,474.00	21,241.51	11,439.86	151.21	164.54	133.68	9,034.53	3,527.41	4,230.74	4,055.93	174.81	24.202	
17,500.00	8,474.00	21,341.47	11,437.21	152.83	166.14	133.66	9,134.45	3,526.46	4,228.95	4,052.32	176.63	23.942	
17,600.00	8,474.00	21,441.44	11,434.56	154.45	167.74	133.63	9,234.38	3,525.52	4,227.16	4,048.70	178.46	23.687	
17,700.00	8,474.00	21,541.40	11,431.91	156.07	169.34	133.61	9,334.30	3,524.57	4,225.37	4,045.08	180.29	23.437	
17,800.00	8,474.00	21,641.37	11,429.26	157.69	170.94	133.58	9,434.23	3,523.62	4,223.58	4,041.46	182.12	23.191	
17,900.00	8,474.00	21,741.33	11,426.61	159.31	172.55	133.55	9,534.15	3,522.67	4,221.79	4,037.84	183.96	22.950	
18,000.00	8,474.00	21,841.30	11,423.95	160.93	174.15	133.53	9,634.08	3,521.73	4,220.01	4,034.22	185.79	22.714	
18,100.00	8,474.00	21,941.26	11,421.30	162.55	175.76	133.50	9,734.00	3,520.78	4,218.22	4,030.60	187.62	22.483	
18,200.00	8,474.00	22,041.23	11,418.65	164.18	177.36	133.47	9,833.93	3,519.83	4,216.43	4,026.98	189.46	22.255	
18,300.00	8,474.00	22,141.19	11,416.00	165.80	178.97	133.45	9,933.85	3,518.88	4,214.65	4,023.35	191.30	22.032	
18,400.00	8,474.00	22,241.16	11,413.35	167.42	180.58	133.42	10,033.78	3,517.94	4,212.87	4,019.73	193.14	21.813	
18,500.00	8,474.00	22,304.88	11,411.66	169.05	181.61	133.40	10,097.47	3,517.33	4,211.24	4,016.57	194.67	21.633	
18,538.82	8,474.00	22,304.88	11,411.66	169.68	181.61	133.40	10,097.47	3,517.33	4,211.06	4,016.01	195.05	21.590	
18,548.37	8,474.00	22,304.88	11,411.66	169.83	181.61	133.40	10,097.47	3,517.33	4,211.07	4,015.94	195.14	21.580	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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	1,887.50	1,887.50	6.37	6.53	100.12	-579.99	3,248.59	3,299.96	3,290.83	9.13	361.554	
1,900.00	1,900.00	1,944.50	1,944.50	6.58	6.74	100.12	-579.99	3,248.59	3,299.96	3,290.54	9.42	350.459	
2,000.00	2,000.00	2,044.50	2,044.50	6.94	7.10	100.12	-579.99	3,248.59	3,299.96	3,290.04	9.92	332.556	
2,100.00	2,099.99	2,144.49	2,144.49	7.28	7.45	-10.23	-579.99	3,248.59	3,298.67	3,288.25	10.42	316.530	
2,200.00	2,199.91	2,244.41	2,244.41	7.62	7.81	-10.25	-579.99	3,248.59	3,294.81	3,283.90	10.91	301.935	
2,300.00	2,299.69	2,344.19	2,344.19	7.96	8.17	-10.29	-579.99	3,248.59	3,288.37	3,276.97	11.40	288.349	
2,400.00	2,399.27	2,443.77	2,443.77	8.31	8.53	-10.34	-579.99	3,248.59	3,279.37	3,267.47	11.90	275.658	
2,466.68	2,465.52	2,510.02	2,510.02	8.54	8.76	-10.38	-579.99	3,248.59	3,271.94	3,259.72	12.23	267.640	
2,500.00	2,498.59	2,543.09	2,543.09	8.66	8.88	-10.40	-579.99	3,248.59	3,267.95	3,255.56	12.39	263.771	
2,600.00	2,597.85	2,642.35	2,642.35	9.01	9.24	-10.44	-579.99	3,248.59	3,255.96	3,243.08	12.88	252.754	
2,700.00	2,697.10	2,741.60	2,741.60	9.37	9.59	-10.48	-579.99	3,248.59	3,243.97	3,230.59	13.38	242.522	
2,800.00	2,796.36	2,840.86	2,840.86	9.74	9.95	-10.51	-579.99	3,248.59	3,231.98	3,218.11	13.87	232.997	
2,900.00	2,895.61	2,940.11	2,940.11	10.10	10.31	-10.55	-579.99	3,248.59	3,220.00	3,205.63	14.37	224.110	
3,000.00	2,994.86	3,039.36	3,039.36	10.47	10.66	-10.59	-579.99	3,248.59	3,208.02	3,193.15	14.87	215.801	
3,100.00	3,094.12	3,138.62	3,138.62	10.85	11.02	-10.63	-579.99	3,248.59	3,196.03	3,180.67	15.36	208.018	
3,200.00	3,193.37	3,237.87	3,237.87	11.22	11.37	-10.67	-579.99	3,248.59	3,184.05	3,168.19	15.86	200.712	
3,300.00	3,292.63	3,337.13	3,337.13	11.60	11.73	-10.72	-579.99	3,248.59	3,172.07	3,155.71	16.36	193.843	
3,400.00	3,391.88	3,436.38	3,436.38	11.98	12.09	-10.76	-579.99	3,248.59	3,160.10	3,143.23	16.87	187.374	
3,500.00	3,491.14	3,656.50	3,656.45	12.36	12.85	-10.83	-580.59	3,245.44	3,147.44	3,129.80	17.64	178.412	
3,600.00	3,590.39	4,044.54	4,042.68	12.75	14.19	-10.76	-587.27	3,210.40	3,126.44	3,107.74	18.71	167.143	
3,700.00	3,689.65	4,166.80	4,163.62	13.13	14.62	-10.69	-590.61	3,192.84	3,100.90	3,081.67	19.23	161.259	
3,800.00	3,788.90	4,263.42	4,259.18	13.52	14.97	-10.64	-593.29	3,178.80	3,075.28	3,055.58	19.71	156.034	
3,900.00	3,888.16	4,360.04	4,354.74	13.91	15.32	-10.58	-595.96	3,164.77	3,049.67	3,029.48	20.19	151.044	
4,000.00	3,987.41	4,456.66	4,450.30	14.30	15.67	-10.53	-598.64	3,150.74	3,024.06	3,003.39	20.67	146.275	
4,100.00	4,086.66	4,553.28	4,545.86	14.69	16.03	-10.47	-601.31	3,136.70	2,998.45	2,977.29	21.16	141.713	
4,200.00	4,185.92	4,649.90	4,641.42	15.08	16.39	-10.41	-603.99	3,122.67	2,972.85	2,951.20	21.64	137.346	
4,300.00	4,285.17	4,746.52	4,736.98	15.47	16.75	-10.35	-606.66	3,108.64	2,947.25	2,925.11	22.13	133.162	
4,400.00	4,384.43	4,843.15	4,832.54	15.86	17.12	-10.29	-609.34	3,094.60	2,921.65	2,899.03	22.62	129.151	
4,500.00	4,483.68	4,939.77	4,928.09	16.26	17.48	-10.23	-612.01	3,080.57	2,896.05	2,872.94	23.11	125.304	
4,600.00	4,582.94	5,036.39	5,023.65	16.65	17.85	-10.16	-614.69	3,066.54	2,870.46	2,846.86	23.60	121.610	
4,700.00	4,682.19	5,133.01	5,119.21	17.05	18.22	-10.10	-617.36	3,052.50	2,844.87	2,820.78	24.10	118.062	
4,800.00	4,781.45	5,229.63	5,214.77	17.44	18.60	-10.04	-620.04	3,038.47	2,819.29	2,794.70	24.59	114.651	
4,900.00	4,880.70	5,326.25	5,310.33	17.84	18.97	-9.97	-622.71	3,024.44	2,793.70	2,768.62	25.08	111.370	
5,000.00	4,979.96	5,422.87	5,405.89	18.23	19.35	-9.90	-625.39	3,010.40	2,768.13	2,742.54	25.58	108.212	
5,100.00	5,079.21	5,519.49	5,501.45	18.63	19.73	-9.83	-628.06	2,996.37	2,742.55	2,716.47	26.08	105.170	
5,200.00	5,178.46	5,616.12	5,597.01	19.03	20.11	-9.76	-630.74	2,982.34	2,716.98	2,690.40	26.57	102.240	
5,300.00	5,277.72	5,712.74	5,692.57	19.43	20.49	-9.69	-633.41	2,968.30	2,691.41	2,664.34	27.07	99.413	
5,400.00	5,376.97	5,809.36	5,788.13	19.83	20.87	-9.62	-636.08	2,954.27	2,665.85	2,638.28	27.57	96.687	
5,500.00	5,476.23	5,905.98	5,883.69	20.23	21.25	-9.54	-638.76	2,940.24	2,640.29	2,612.22	28.07	94.055	
5,600.00	5,575.48	6,002.60	5,979.25	20.63	21.64	-9.47	-641.43	2,926.20	2,614.74	2,586.16	28.57	91.513	
5,700.00	5,674.74	6,099.22	6,074.81	21.03	22.02	-9.39	-644.11	2,912.17	2,589.18	2,560.11	29.07	89.056	
5,800.00	5,773.99	6,195.84	6,170.37	21.43	22.41	-9.31	-646.78	2,898.14	2,563.64	2,534.06	29.58	86.681	
5,900.00	5,873.25	6,292.46	6,265.92	21.83	22.80	-9.23	-649.46	2,884.10	2,538.10	2,508.02	30.08	84.384	
6,000.00	5,972.50	6,389.09	6,361.48	22.23	23.19	-9.15	-652.13	2,870.07	2,512.56	2,481.98	30.58	82.160	
6,100.00	6,071.76	6,485.71	6,457.04	22.63	23.58	-9.07	-654.81	2,856.04	2,487.03	2,455.94	31.08	80.007	
6,200.00	6,171.01	6,582.33	6,552.60	23.03	23.97	-8.98	-657.48	2,842.00	2,461.50	2,429.91	31.59	77.922	
6,300.00	6,270.26	6,678.95	6,648.16	23.43	24.36	-8.89	-660.16	2,827.97	2,435.98	2,403.89	32.09	75.901	
6,400.00	6,369.52	6,775.57	6,743.72	23.83	24.76	-8.80	-662.83	2,813.94	2,410.46	2,377.87	32.60	73.941	
6,500.00	6,468.77	6,872.19	6,839.28	24.24	25.15	-8.71	-665.51	2,799.90	2,384.95	2,351.85	33.11	72.041	
6,600.00	6,568.03	6,968.81	6,934.84	24.64	25.54	-8.62	-668.18	2,785.87	2,359.45	2,325.84	33.61	70.196	
6,700.00	6,667.28	7,065.43	7,030.40	25.04	25.94	-8.53	-670.86	2,771.84	2,333.95	2,299.83	34.12	68.406	
6,800.00	6,766.54	7,162.06	7,125.96	25.44	26.33	-8.43	-673.53	2,757.80	2,308.46	2,273.83	34.63	66.667	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
6,908.75	6,874.48	7,267.13	7,229.88	25.88	26.77	-8.32	-676.44	2,742.54	2,280.74	2,245.56	35.18	64.832	
7,000.00	6,965.17	7,355.56	7,317.33	26.24	27.13	-8.18	-678.89	2,729.70	2,258.54	2,222.89	35.64	63.365	
7,100.00	7,064.81	7,453.02	7,413.72	26.63	27.53	-8.01	-681.59	2,715.54	2,236.62	2,200.47	36.15	61.867	
7,200.00	7,164.63	7,551.00	7,510.63	26.99	27.93	-7.84	-684.30	2,701.31	2,217.25	2,180.59	36.66	60.478	
7,300.00	7,264.57	7,649.43	7,607.97	27.34	28.34	-7.67	-687.02	2,687.02	2,200.45	2,163.27	37.17	59.197	
7,375.43	7,340.00	7,723.93	7,681.66	27.60	28.65	102.81	-689.09	2,676.19	2,189.47	2,151.92	37.55	58.303	
7,400.00	7,364.57	7,748.23	7,705.69	27.68	28.75	102.85	-689.76	2,672.67	2,186.14	2,148.46	37.68	58.024	
7,500.00	7,464.57	7,847.13	7,803.50	28.00	29.16	103.01	-692.50	2,658.30	2,172.58	2,134.40	38.18	56.904	
7,600.00	7,564.57	7,946.03	7,901.32	28.33	29.57	103.17	-695.24	2,643.94	2,159.04	2,120.35	38.68	55.813	
7,700.00	7,664.57	8,044.93	7,999.13	28.65	29.98	103.33	-697.97	2,629.57	2,145.51	2,106.32	39.19	54.749	
7,800.00	7,764.57	8,143.83	8,096.95	28.98	30.39	103.49	-700.71	2,615.21	2,132.00	2,092.30	39.69	53.712	
7,900.00	7,864.57	8,242.74	8,194.76	29.31	30.80	103.65	-703.45	2,600.84	2,118.50	2,078.30	40.20	52.700	
7,936.47	7,901.04	8,278.81	8,230.44	29.42	30.95	103.71	-704.45	2,595.60	2,113.58	2,073.20	40.38	52.337	
7,950.00	7,914.57	8,292.18	8,243.66	29.47	31.00	104.49	-704.82	2,593.66	2,111.80	2,071.35	40.45	52.205	
8,000.00	7,964.44	8,341.42	8,292.36	29.63	31.21	105.23	-706.18	2,586.51	2,105.91	2,065.21	40.70	51.737	
8,050.00	8,013.83	8,390.06	8,340.46	29.78	31.41	105.97	-707.53	2,579.45	2,101.20	2,060.24	40.95	51.307	
8,100.00	8,062.36	8,437.74	8,387.62	29.92	31.61	106.68	-708.85	2,572.52	2,097.76	2,056.56	41.20	50.918	
8,150.00	8,109.66	8,484.10	8,433.47	30.05	31.80	107.35	-710.13	2,565.79	2,095.70	2,054.26	41.44	50.572	
8,192.74	8,148.84	8,522.41	8,471.36	30.15	31.96	107.87	-711.19	2,560.22	2,095.12	2,053.48	41.64	50.312 CC	
8,200.00	8,155.37	8,528.78	8,477.66	30.17	31.99	107.95	-711.37	2,559.30	2,095.14	2,053.46	41.68	50.271 ES	
8,250.00	8,199.15	8,571.45	8,519.86	30.28	32.17	108.45	-712.55	2,553.10	2,096.21	2,054.30	41.91	50.017	
8,300.00	8,240.66	8,611.77	8,559.74	30.37	32.33	108.84	-713.67	2,547.24	2,099.02	2,056.88	42.14	49.811	
8,350.00	8,279.59	8,649.45	8,597.00	30.45	32.49	109.07	-714.71	2,541.77	2,103.70	2,061.33	42.37	49.655	
8,400.00	8,315.63	8,684.19	8,631.36	30.52	32.64	109.11	-715.67	2,536.73	2,110.34	2,067.75	42.59	49.551	
8,450.00	8,348.52	8,715.73	8,662.56	30.58	32.77	108.94	-716.54	2,532.14	2,119.02	2,076.21	42.81	49.497	
8,500.00	8,378.01	8,743.83	8,690.35	30.62	32.89	108.53	-717.32	2,528.06	2,129.81	2,086.78	43.03	49.496	
8,550.00	8,403.86	8,768.28	8,714.53	30.66	32.99	107.85	-718.00	2,524.51	2,142.72	2,099.48	43.25	49.547	
8,600.00	8,425.89	8,788.89	8,734.91	30.69	33.07	106.86	-718.57	2,521.52	2,157.75	2,114.30	43.46	49.650	
8,650.00	8,443.92	8,805.50	8,751.34	30.73	33.14	105.55	-719.03	2,519.11	2,174.86	2,131.19	43.67	49.803	
8,700.00	8,457.82	8,817.99	8,763.69	30.78	33.20	103.89	-719.37	2,517.29	2,193.95	2,150.08	43.87	50.006	
8,750.00	8,467.48	8,826.26	8,771.87	30.86	33.23	101.87	-719.60	2,516.09	2,214.91	2,170.84	44.07	50.257	
8,800.00	8,472.84	8,830.25	8,775.82	30.99	33.25	99.49	-719.71	2,515.51	2,237.57	2,193.31	44.26	50.553	
8,836.47	8,474.00	8,830.44	8,776.01	31.11	33.25	97.53	-719.72	2,515.48	2,255.06	2,210.66	44.39	50.796	
8,900.00	8,474.00	8,828.78	8,774.36	31.35	33.24	97.48	-719.67	2,515.73	2,286.83	2,242.21	44.63	51.244	
9,000.00	8,474.00	8,826.15	8,771.77	31.80	33.23	97.40	-719.60	2,516.11	2,339.48	2,294.46	45.02	51.971	
9,100.00	8,474.00	8,823.53	8,769.17	32.34	33.22	97.32	-719.53	2,516.49	2,395.14	2,349.71	45.42	52.729	
9,200.00	8,474.00	8,820.91	8,766.58	32.96	33.21	97.25	-719.45	2,516.87	2,453.61	2,407.76	45.84	53.520	
9,300.00	8,474.00	8,818.29	8,763.98	33.64	33.20	97.17	-719.38	2,517.25	2,514.70	2,468.42	46.27	54.346	
9,400.00	8,474.00	8,815.66	8,761.39	34.39	33.19	97.10	-719.31	2,517.63	2,578.21	2,531.51	46.70	55.208	
9,500.00	8,474.00	8,813.04	8,758.80	35.20	33.17	97.02	-719.24	2,518.01	2,643.98	2,596.86	47.13	56.105	
9,600.00	8,474.00	8,810.42	8,756.20	36.06	33.16	96.94	-719.16	2,518.39	2,711.85	2,664.30	47.54	57.039	
9,700.00	8,474.00	8,807.80	8,753.61	36.97	33.15	96.87	-719.09	2,518.77	2,781.65	2,733.69	47.95	58.007	
9,800.00	8,474.00	8,805.17	8,751.02	37.94	33.14	96.79	-719.02	2,519.15	2,853.24	2,804.89	48.35	59.010	
9,900.00	8,474.00	8,802.55	8,748.42	38.95	33.13	96.71	-718.95	2,519.53	2,926.50	2,877.76	48.74	60.045	
10,000.00	8,474.00	8,799.93	8,745.83	40.00	33.12	96.64	-718.87	2,519.92	3,001.30	2,952.19	49.11	61.113	
10,100.00	8,474.00	8,797.31	8,743.24	41.09	33.11	96.56	-718.80	2,520.30	3,077.53	3,028.06	49.47	62.212	
10,200.00	8,474.00	8,794.68	8,740.64	42.22	33.10	96.48	-718.73	2,520.68	3,155.09	3,105.28	49.81	63.341	
10,300.00	8,474.00	8,792.06	8,738.05	43.38	33.09	96.41	-718.66	2,521.06	3,233.87	3,183.73	50.14	64.496	
10,400.00	8,474.00	8,789.44	8,735.45	44.57	33.08	96.33	-718.58	2,521.44	3,313.80	3,263.35	50.46	65.677	
10,500.00	8,474.00	8,786.82	8,732.86	45.78	33.07	96.26	-718.51	2,521.82	3,394.79	3,344.03	50.76	66.882	
10,600.00	8,474.00	8,784.19	8,730.27	47.03	33.05	96.18	-718.44	2,522.20	3,476.77	3,425.72	51.05	68.109	
10,700.00	8,474.00	14,554.34	11,552.46	48.30	65.08	150.50	2,335.55	2,251.91	3,486.95	3,432.29	54.66	63.793	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
10,800.00	8,474.00	14,654.30	11,549.46	49.59	66.34	150.48	2,435.45	2,250.97	3,484.37	3,428.58	55.79	62.451	
10,900.00	8,474.00	14,754.25	11,546.47	50.90	67.60	150.45	2,535.36	2,250.02	3,481.79	3,424.85	56.95	61.143	
11,000.00	8,474.00	14,854.21	11,543.47	52.23	68.89	150.43	2,635.27	2,249.07	3,479.21	3,421.10	58.11	59.869	
11,100.00	8,474.00	14,954.16	11,540.48	53.58	70.19	150.40	2,735.17	2,248.13	3,476.64	3,417.34	59.30	58.633	
11,200.00	8,474.00	15,054.12	11,537.48	54.95	71.50	150.38	2,835.08	2,247.18	3,474.06	3,413.57	60.49	57.431	
11,300.00	8,474.00	15,154.07	11,534.49	56.33	72.83	150.35	2,934.98	2,246.24	3,471.48	3,409.78	61.70	56.262	
11,400.00	8,474.00	15,254.03	11,531.49	57.72	74.17	150.33	3,034.89	2,245.29	3,468.91	3,405.98	62.93	55.127	
11,500.00	8,474.00	15,353.98	11,528.50	59.13	75.52	150.30	3,134.79	2,244.35	3,466.33	3,402.17	64.16	54.024	
11,600.00	8,474.00	15,453.94	11,525.50	60.55	76.88	150.28	3,234.70	2,243.40	3,463.76	3,398.34	65.41	52.953	
11,700.00	8,474.00	15,553.90	11,522.51	61.98	78.26	150.25	3,334.61	2,242.46	3,461.18	3,394.51	66.67	51.913	
11,800.00	8,474.00	15,653.85	11,519.51	63.43	79.64	150.22	3,434.51	2,241.51	3,458.61	3,390.66	67.94	50.904	
11,900.00	8,474.00	15,753.81	11,516.52	64.88	81.04	150.20	3,534.42	2,240.57	3,456.04	3,386.81	69.23	49.923	
12,000.00	8,474.00	15,853.76	11,513.52	66.34	82.44	150.17	3,634.32	2,239.62	3,453.46	3,382.95	70.52	48.972	
12,100.00	8,474.00	15,953.72	11,510.53	67.81	83.86	150.15	3,734.23	2,238.68	3,450.89	3,379.07	71.82	48.049	
12,200.00	8,474.00	16,053.67	11,507.53	69.29	85.28	150.12	3,834.13	2,237.73	3,448.32	3,375.20	73.13	47.155	
12,300.00	8,474.00	16,153.63	11,504.54	70.78	86.71	150.10	3,934.04	2,236.79	3,445.75	3,371.31	74.45	46.286	
12,400.00	8,474.00	16,253.58	11,501.54	72.27	88.15	150.07	4,033.95	2,235.84	3,443.18	3,367.41	75.77	45.442	
12,500.00	8,474.00	16,353.54	11,498.55	73.77	89.60	150.05	4,133.85	2,234.90	3,440.62	3,363.51	77.10	44.624	
12,600.00	8,474.00	16,453.49	11,495.55	75.28	91.05	150.02	4,233.76	2,233.95	3,438.05	3,359.61	78.44	43.830	
12,700.00	8,474.00	16,553.45	11,492.56	76.79	92.51	149.99	4,333.66	2,233.00	3,435.48	3,355.69	79.79	43.058	
12,800.00	8,474.00	16,653.40	11,489.56	78.31	93.97	149.97	4,433.57	2,232.06	3,432.91	3,351.78	81.14	42.309	
12,900.00	8,474.00	16,753.36	11,486.57	79.83	95.44	149.94	4,533.47	2,231.11	3,430.35	3,347.85	82.50	41.580	
13,000.00	8,474.00	16,853.31	11,483.57	81.36	96.92	149.92	4,633.38	2,230.17	3,427.78	3,343.92	83.86	40.873	
13,100.00	8,474.00	16,953.27	11,480.58	82.89	98.40	149.89	4,733.29	2,229.22	3,425.22	3,339.98	85.24	40.185	
13,200.00	8,474.00	17,053.22	11,477.58	84.43	99.89	149.86	4,833.19	2,228.28	3,422.66	3,336.04	86.61	39.516	
13,300.00	8,474.00	17,153.18	11,474.59	85.97	101.39	149.84	4,933.10	2,227.33	3,420.09	3,332.09	88.00	38.865	
13,400.00	8,474.00	17,253.13	11,471.59	87.52	102.88	149.81	5,033.00	2,226.39	3,417.53	3,328.14	89.39	38.233	
13,500.00	8,474.00	17,353.09	11,468.60	89.07	104.39	149.79	5,132.91	2,225.44	3,414.97	3,324.19	90.78	37.618	
13,600.00	8,474.00	17,453.04	11,465.60	90.62	105.89	149.76	5,232.81	2,224.50	3,412.41	3,320.23	92.18	37.020	
13,700.00	8,474.00	17,553.00	11,462.61	92.18	107.41	149.73	5,332.72	2,223.55	3,409.85	3,316.27	93.58	36.439	
13,800.00	8,474.00	17,652.95	11,459.61	93.74	108.92	149.71	5,432.63	2,222.61	3,407.29	3,312.31	94.98	35.873	
13,900.00	8,474.00	17,752.91	11,456.62	95.30	110.44	149.68	5,532.53	2,221.66	3,404.73	3,308.34	96.39	35.322	
14,000.00	8,474.00	17,852.86	11,453.62	96.87	111.96	149.66	5,632.44	2,220.72	3,402.17	3,304.37	97.80	34.786	
14,100.00	8,474.00	17,952.82	11,450.63	98.43	113.49	149.63	5,732.34	2,219.77	3,399.62	3,300.39	99.22	34.263	
14,200.00	8,474.00	18,052.77	11,447.63	100.01	115.02	149.60	5,832.25	2,218.82	3,397.06	3,296.42	100.64	33.753	
14,300.00	8,474.00	18,152.73	11,444.64	101.58	116.55	149.58	5,932.15	2,217.88	3,394.50	3,292.43	102.07	33.257	
14,400.00	8,474.00	18,252.68	11,441.64	103.16	118.09	149.55	6,032.06	2,216.93	3,391.95	3,288.45	103.50	32.773	
14,500.00	8,474.00	18,352.64	11,438.65	104.74	119.63	149.52	6,131.97	2,215.99	3,389.39	3,284.46	104.93	32.300	
14,600.00	8,474.00	18,452.59	11,435.65	106.32	121.17	149.50	6,231.87	2,215.04	3,386.84	3,280.47	106.37	31.840	
14,700.00	8,474.00	18,552.55	11,432.66	107.90	122.72	149.47	6,331.78	2,214.10	3,384.29	3,276.48	107.81	31.391	
14,800.00	8,474.00	18,652.50	11,429.66	109.49	124.27	149.44	6,431.68	2,213.15	3,381.74	3,272.48	109.25	30.953	
14,900.00	8,474.00	18,752.46	11,426.67	111.07	125.82	149.42	6,531.59	2,212.21	3,379.19	3,268.49	110.70	30.526	
15,000.00	8,474.00	18,852.41	11,423.67	112.66	127.37	149.39	6,631.49	2,211.26	3,376.63	3,264.49	112.15	30.109	
15,100.00	8,474.00	18,952.37	11,420.68	114.25	128.93	149.36	6,731.40	2,210.32	3,374.08	3,260.49	113.60	29.702	
15,200.00	8,474.00	19,052.32	11,417.68	115.85	130.48	149.34	6,831.31	2,209.37	3,371.54	3,256.48	115.05	29.305	
15,300.00	8,474.00	19,152.28	11,414.68	117.44	132.04	149.31	6,931.21	2,208.43	3,368.99	3,252.48	116.51	28.916	
15,400.00	8,474.00	19,252.23	11,411.69	119.04	133.61	149.28	7,031.12	2,207.48	3,366.44	3,248.47	117.97	28.537	
15,500.00	8,474.00	19,352.19	11,408.69	120.63	135.17	149.26	7,131.02	2,206.54	3,363.89	3,244.46	119.43	28.166	
15,600.00	8,474.00	19,452.14	11,405.70	122.23	136.74	149.23	7,230.93	2,205.59	3,361.35	3,240.45	120.89	27.804	
15,700.00	8,474.00	19,552.10	11,402.70	123.83	138.31	149.20	7,330.83	2,204.64	3,358.80	3,236.44	122.36	27.450	
15,800.00	8,474.00	19,652.05	11,399.71	125.43	139.88	149.18	7,430.74	2,203.70	3,356.26	3,232.43	123.83	27.104	
15,900.00	8,474.00	19,752.01	11,396.71	127.04	141.45	149.15	7,530.65	2,202.75	3,353.71	3,228.41	125.30	26.765	

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 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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
16,000.00	8,474.00	19,851.96	11,393.72	128.64	143.02	149.12	7,630.55	2,201.81	3,351.17	3,224.39	126.78	26.433	
16,100.00	8,474.00	19,951.92	11,390.72	130.25	144.60	149.09	7,730.46	2,200.86	3,348.63	3,220.38	128.25	26.110	
16,200.00	8,474.00	20,051.87	11,387.73	131.85	146.18	149.07	7,830.36	2,199.92	3,346.08	3,216.36	129.73	25.793	
16,300.00	8,474.00	20,151.83	11,384.73	133.46	147.76	149.04	7,930.27	2,198.97	3,343.54	3,212.34	131.21	25.483	
16,400.00	8,474.00	20,251.78	11,381.74	135.07	149.34	149.01	8,030.17	2,198.03	3,341.00	3,208.32	132.69	25.179	
16,500.00	8,474.00	20,351.74	11,378.74	136.68	150.92	148.98	8,130.08	2,197.08	3,338.46	3,204.29	134.17	24.882	
16,600.00	8,474.00	20,451.69	11,375.75	138.29	152.50	148.96	8,229.99	2,196.14	3,335.93	3,200.27	135.66	24.591	
16,700.00	8,474.00	20,551.65	11,372.75	139.90	154.09	148.93	8,329.89	2,195.19	3,333.39	3,196.24	137.15	24.305	
16,800.00	8,474.00	20,651.60	11,369.76	141.52	155.67	148.90	8,429.80	2,194.25	3,330.85	3,192.21	138.64	24.025	
16,900.00	8,474.00	20,751.56	11,366.76	143.13	157.26	148.88	8,529.70	2,193.30	3,328.31	3,188.18	140.13	23.751	
17,000.00	8,474.00	20,851.51	11,363.77	144.74	158.85	148.85	8,629.61	2,192.36	3,325.78	3,184.15	141.63	23.482	
17,100.00	8,474.00	20,951.47	11,360.77	146.36	160.44	148.82	8,729.51	2,191.41	3,323.24	3,180.12	143.13	23.219	
17,200.00	8,474.00	21,051.42	11,357.78	147.97	162.03	148.79	8,829.42	2,190.46	3,320.71	3,176.09	144.62	22.961	
17,300.00	8,474.00	21,151.38	11,354.78	149.59	163.63	148.76	8,929.33	2,189.52	3,318.18	3,172.05	146.12	22.708	
17,400.00	8,474.00	21,251.33	11,351.79	151.21	165.22	148.74	9,029.23	2,188.57	3,315.64	3,168.02	147.62	22.460	
17,500.00	8,474.00	21,351.29	11,348.79	152.83	166.82	148.71	9,129.14	2,187.63	3,313.11	3,163.99	149.13	22.217	
17,600.00	8,474.00	21,451.24	11,345.80	154.45	168.41	148.68	9,229.04	2,186.68	3,310.58	3,159.95	150.63	21.978	
17,700.00	8,474.00	21,551.20	11,342.80	156.07	170.01	148.65	9,328.95	2,185.74	3,308.05	3,155.91	152.14	21.744	
17,800.00	8,474.00	21,651.16	11,339.81	157.69	171.61	148.63	9,428.86	2,184.79	3,305.52	3,151.87	153.65	21.514	
17,900.00	8,474.00	21,751.11	11,336.81	159.31	173.21	148.60	9,528.76	2,183.85	3,302.99	3,147.84	155.16	21.288	
18,000.00	8,474.00	21,851.07	11,333.82	160.93	174.81	148.57	9,628.67	2,182.90	3,300.47	3,143.80	156.67	21.067	
18,100.00	8,474.00	21,951.02	11,330.82	162.55	176.41	148.54	9,728.57	2,181.96	3,297.94	3,139.76	158.18	20.849	
18,200.00	8,474.00	22,050.98	11,327.83	164.18	178.01	148.51	9,828.48	2,181.01	3,295.41	3,135.72	159.69	20.636	
18,300.00	8,474.00	22,150.93	11,324.83	165.80	179.61	148.49	9,928.38	2,180.07	3,292.89	3,131.68	161.21	20.426	
18,400.00	8,474.00	22,250.89	11,321.84	167.42	181.22	148.46	10,028.29	2,179.12	3,290.36	3,127.63	162.73	20.220	
18,500.00	8,474.00	22,310.90	11,320.04	169.05	182.18	148.44	10,088.27	2,178.55	3,288.08	3,124.22	163.86	20.067	
18,543.05	8,474.00	22,310.90	11,320.04	169.75	182.18	148.44	10,088.27	2,178.55	3,287.80	3,123.73	164.07	20.039	
18,548.37	8,474.00	22,310.90	11,320.04	169.83	182.18	148.44	10,088.27	2,178.55	3,287.80	3,123.71	164.09	20.036 SF	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

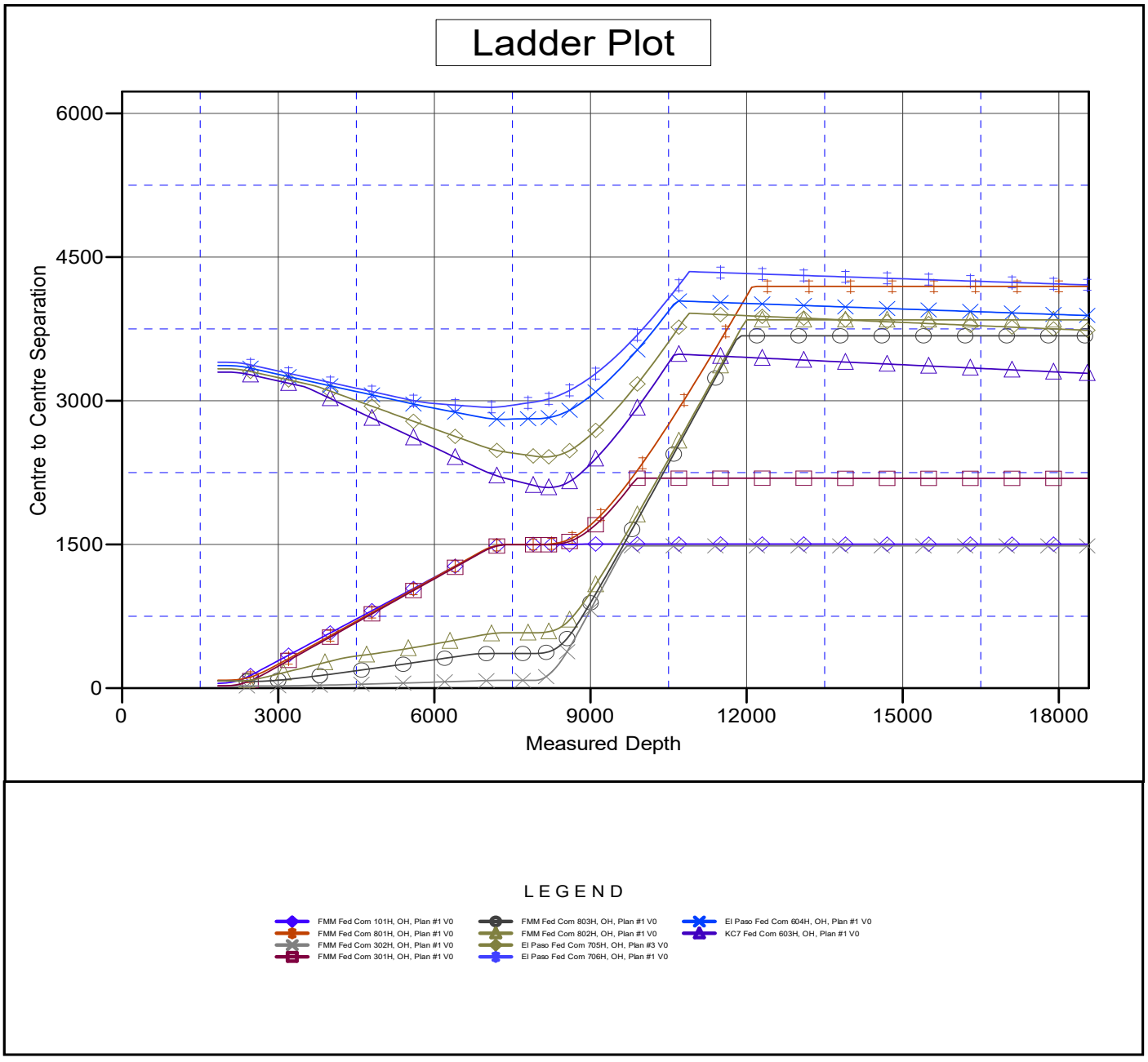
Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 3289.7' GE + 30' KB @ 3319.70usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 102H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°



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

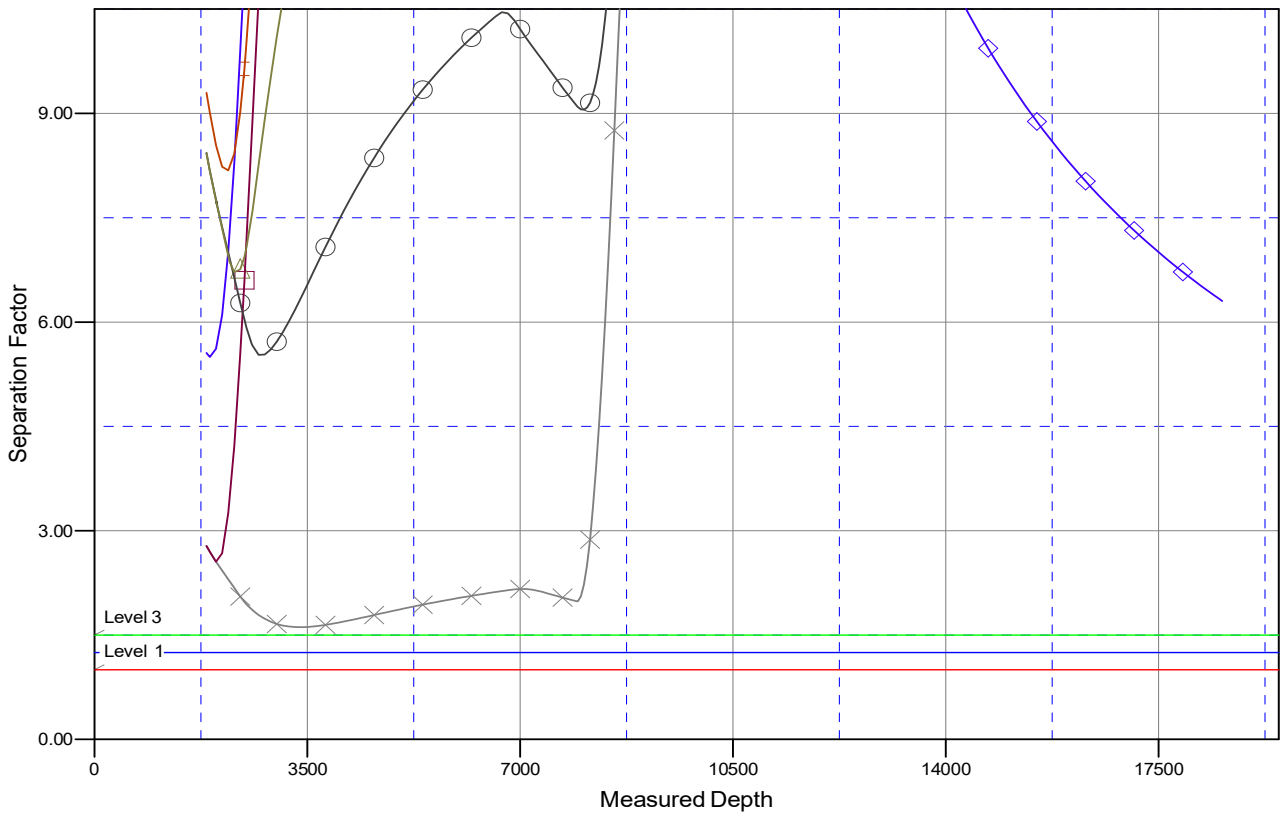
total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well FMM Fed Com 102H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Reference Site:	FMM Fed Com	**MD Reference:**	3289.7' GE + 30' KB @ 3319.70usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	FMM Fed Com 102H	**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 3289.7' GE + 30' KB @ 3319.70usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 102H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°

Separation Factor Plot



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: 02/11/2022

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: 02/11/2022

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.

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: 02/11/2022

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: 02/11/2022

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 85952

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 85952
	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	3/7/2022