

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

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		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 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. 30-025-49819
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [98187]
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

SL

(Continued on page 2)



Approval Date: 02/11/2022

KZ
03/04/2022

*(Instructions on page 2)

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 well, 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 directionally 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 well 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 will 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 connects this information to an 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: TR O / 270 FSL / 1990 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.167461 / LONG: -103.319149 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 0 FSL / 1340 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.181237 / LONG: -103.317052 (TVD: 12092 feet, MD: 17100 feet)

PPP: TR O / 623 FSL / 1341 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.168428 / LONG: -103.317052 (TVD: 12092 feet, MD: 12466 feet)

BHL: TR B / 150 FNL / 1340 FEL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.195337 / LONG: -103.317052 (TVD: 12092 feet, MD: 22255 feet)

BLM Point of Contact

Name: TENILLE ORTIZ

Title: Legal Instruments Examiner

Phone: (575) 234-2224

Email: tortiz@blm.gov

CONFIDENTIAL

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.

CONFIDENTIAL

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 30-025-49819		² Pool Code 98187		³ Pool Name WC-025 G-09 S253502D;UPR WOLFCAMP	
⁴ Property Code		⁵ Property Name FMM FED COM			⁶ Well Number 805H
⁷ OGRID No. 373910		⁸ Operator Name FRANKLIN MOUNTAIN ENERGY LLC			⁹ Elevation 3332.9'

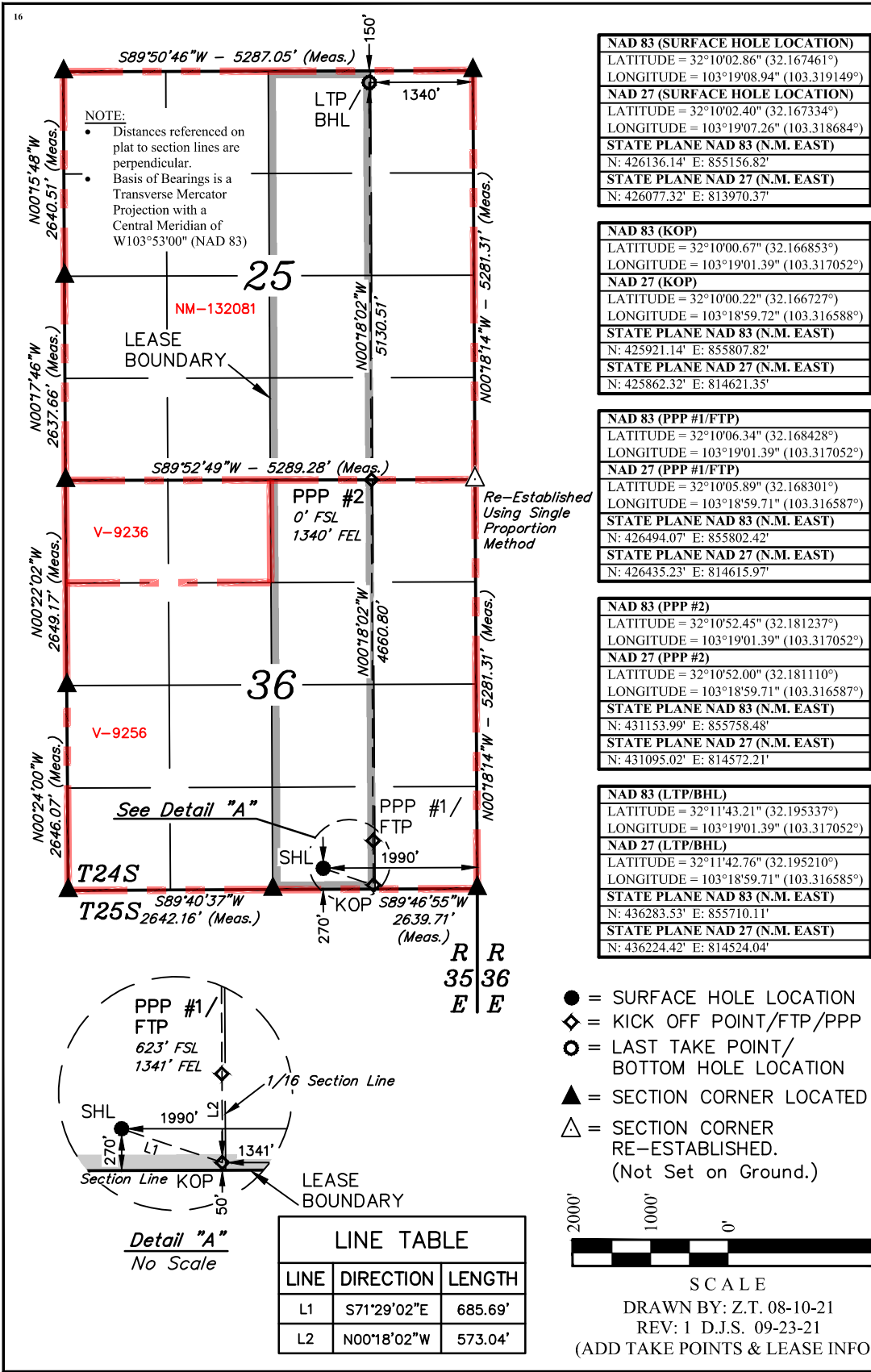
¹⁰ Surface Location

UL or lot no. O	Section 36	Township 24S	Range 35E	Lot Idn	Feet from the 270	North/South line SOUTH	Feet from the 1990	East/West line EAST	County LEA
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. B	Section 25	Township 24S	Range 35E	Lot Idn	Feet from the 150	North/South line NORTH	Feet from the 1340	East/West line EAST	County LEA
¹² Dedicated Acres 640		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

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.



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.

Signature: *Shelly Albrecht* Date: 9/24/2021

Printed Name: Shelly Albrecht

salbrecht@fmlc.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
09-23-21
PROFESSIONAL SURVEYOR

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: (##) 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

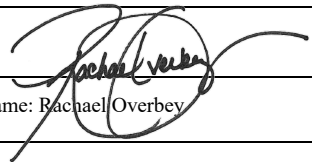
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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@fmelle.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



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.



FMM Fed Com 805H

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)	3,333'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,089'	1,274'			Carbonates
Salado	1,855'	1,508'			Salt, Carbonate & Clastics
Base Salt	71'	3,292'			Shaley Carbonate & Shale
Capitan	-793'	4,156'			Carbonates
Lamar	-1,895'	5,258'			Carbonate & Clastics
Bell Canyon	-2,011'	5,374'			Sandstone - oil/gas/water
Cherry Canyon	-2,665'	6,028'			Sandstone - oil/gas/water
Brushy Canyon	-3,971'	7,334'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,104'	8,467'			Shale/Carbonates - oil/gas
Avalon	-5,169'	8,532'			Shale/Carbonates - oil/gas
Chert Zone	-5,434'	8,797'			Carbonate/Chert
First Bone Spring Sand	-6,449'	9,812'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,586'	9,949'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,010'	10,373'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,585'	10,948'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,058'	11,421'			Sandstone - oil/gas/water
Wolfcamp	-8,264'	11,627'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,389'	11,752'			Overpressure Shale - Oil/Gas
Wolfcamp B	-8,567'	11,930'			Overpressure Shale - Oil/Gas
HZ Target	-8,729'	12,092'			Overpressure Shale - Oil/Gas
Wolfcamp C	-8,851'	12,214'			Overpressure Shale - Oil/Gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	5,374'	Oil
Bone Spring	9,812'	Oil
Wolfcamp	11,627'	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	5300	1.75	1.71	2.94	3.34
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	11500	1.15	1.33	1.87	1.28
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606 TVD	22255 12092	1.32	1.39	1.19	0.99 1.60



7 5/8" casing will be set at 11,500' MD/11,453' TVD at 0° Inc. Stress calculations on 5 1/2" casing performed assuming 22,255' depth. Actual max vertical depth is 12,092'.

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	Type of cmt	Lead Yield ft ³ /sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Tail Yield ft ³ /sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	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	5300	1558	0.125pps Poly-E-Flake Lead, 12.8 ppg, Class C 5% Salt,	1.79	9.74	0	154	1% CaCl ₂ , 0.125pps Celo-Flake Tail, 14.8 ppg, Class C,	1.33	6.37	5000	100%
Int2	8.75	7.625	11500	333	0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal Lite Fill, 9.5 ppg, Class C 3lb/sk	2.13	5.97	4300	94	NeoCem 14.8 ppg, Class C	1.33	6.29	10500	50%
Prod	6.75	5.5	22255	877	Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake Tail, 14.5 ppg, Gas Migration Control	1.34	6.22	10500		0.25 pps Cello-Flake, 2% CaCl ₂				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 1/2" x 7" variable pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5,000/250 psig and the annular preventer to 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 2000 psi 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.



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' – 11,500'	Brine	8.8-10.2	28-34	N/c
11,500' – 22,255' Lateral	Oil Base	11.0-12.5	58-68	3 - 6

The highest mud weight needed to balance formation is expected to be 11-12.5 ppg. In order to maintain hole stability, mud weights up to 13 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 12,092' TVD (deepest point of the well) is 195F with an estimated maximum bottom-hole pressure (BHP) at the same point of 8,174 psig (based on 13 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/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity



3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.
- ii. Auxiliary Rescue Equipment
 1. Stretcher
 2. Two OSHA full body harnesses
 3. 100 feet of 5/8 inches OSHA approved rope
 4. 1-20# class ABC fire extinguisher
- c. H2S Detection and Monitoring Equipment
 - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
 1. Rig Floor
 2. Below Rig Floor / Near BOPs
 3. End of flow line or where well bore fluid is being discharged (near shakers)
 - ii. If H2S is encountered, measured values and formations will be provided to the BLM.
- d. Visual Warning Systems
 - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - iii. Two windsocks will be placed in strategic locations, visible from all angles.
- e. Mud Program
 - i. The Mud program will be designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.
- f. Metallurgy
 - i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service at the anticipated operating pressures to prevent sour sulfide stress cracking.
- g. Communication
 - i. Communication will be via cell phones and walkie talkies on location.

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 1/2" casing due to the tight clearance with 6 3/4" hole and 5 1/2" casing due to tight clearances.

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Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 805H
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.54°
Magnetic North: 5.86°

Magnetic Field
Strength: 47462.2nT
Dip Angle: 59.88°
Date: 9/7/2021
Model: IGRF2020

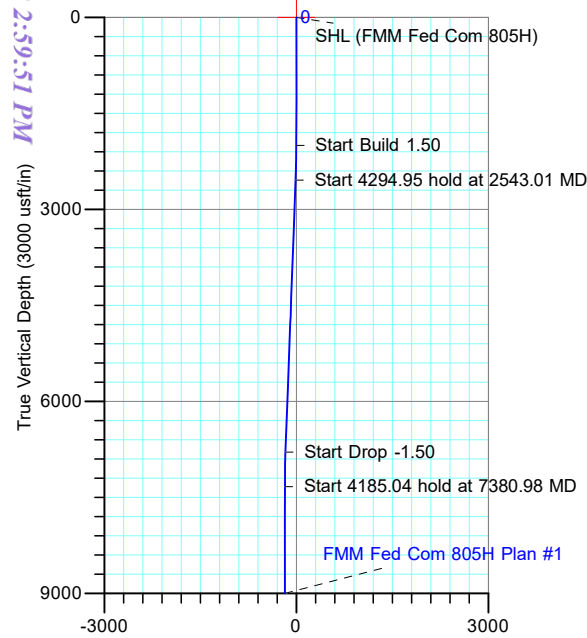
PROJECT DETAILS: Lea County, NM (NAD83)

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



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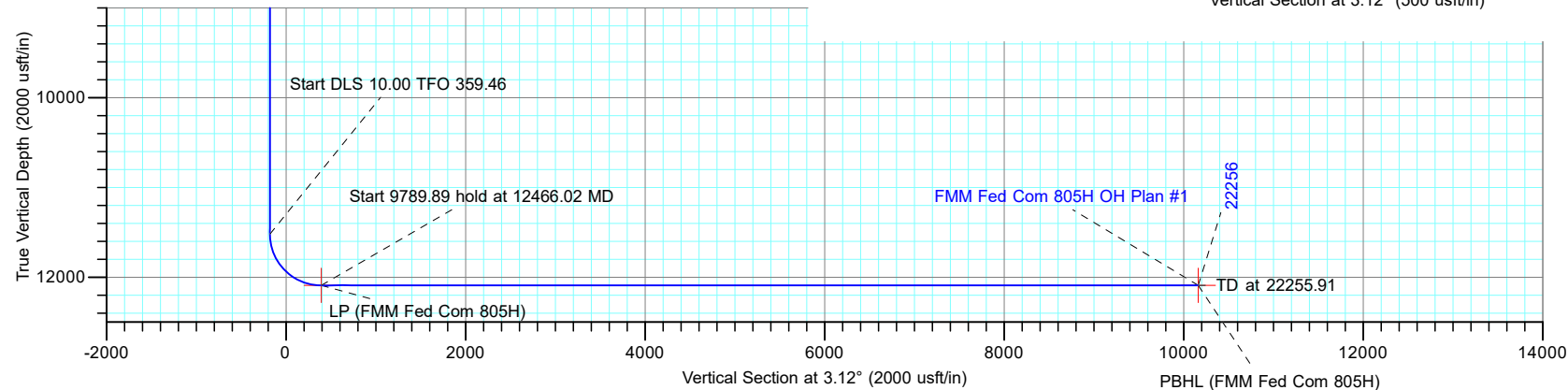
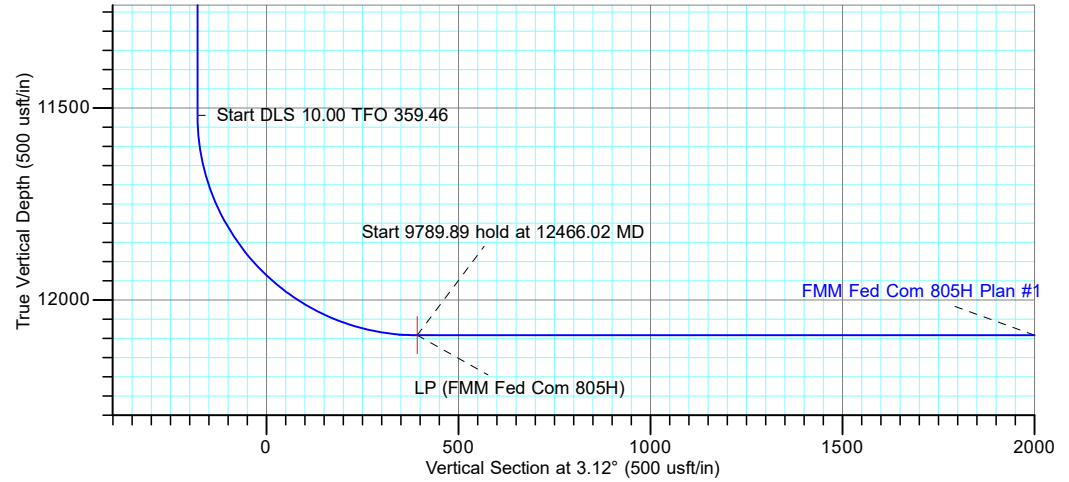
3332.9' GE + 30' KB @ 3362.90usft



SECTION DETAILS										Annotation
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		Start Build 1.50
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00		Start 4294.95 hold at 2543.01 MD
2543.01	8.15	108.28	2541.19	-12.08	36.59	1.50	108.28	-10.07		Start Drop -1.50
6837.97	8.15	108.28	6792.81	-202.92	614.41	0.00	0.00	-169.16		Start 4185.04 hold at 7380.98 MD
7380.98	0.00	0.00	7334.00	-215.00	651.00	1.50	180.00	-179.24		Start DLS 10.00 TFO 359.46
11566.02	0.00	0.00	11519.04	-215.00	651.00	0.00	0.00	-179.24		Start 9789.89 hold at 12466.02 MD
12466.02	90.00	359.46	12092.00	357.93	645.60	10.00	359.46	392.55		TD at 22255.91
22255.91	90.00	359.46	12092.00	10147.39	553.29	0.00	0.00	10162.46		

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (FMM Fed Com 805H)	12092.00	357.93	645.60	32.168428	-103.317052
PBHL (FMM Fed Com 805H)	12092.00	10147.39	553.29	32.195337	-103.317052
SHL (FMM Fed Com 805H)	0.00	0.00	0.00	32.167461	-103.319149



TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 805H/OH)
Created By: Dustin Ault
Date: 20:24, September 07 2021
Approved: _____
Date: _____

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Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 805H
Wellbore: OH
Design: Plan #1

T

G

M

Azimuths to Grid North

True North: -0.54°

Magnetic North: 5.86°

Magnetic Field

Strength: 47462.2nT

Dip Angle: 59.88°

Date: 9/7/2021

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

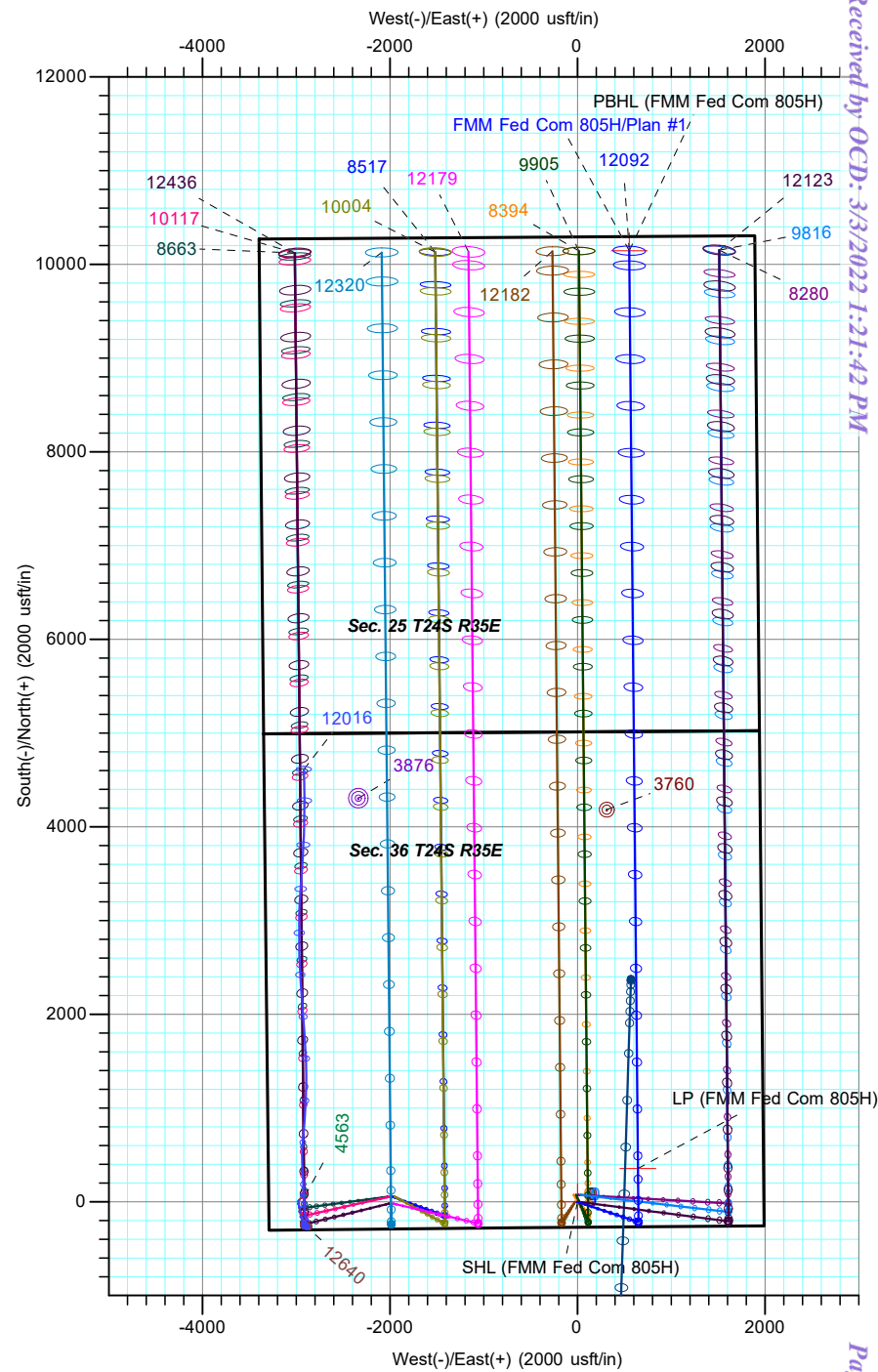
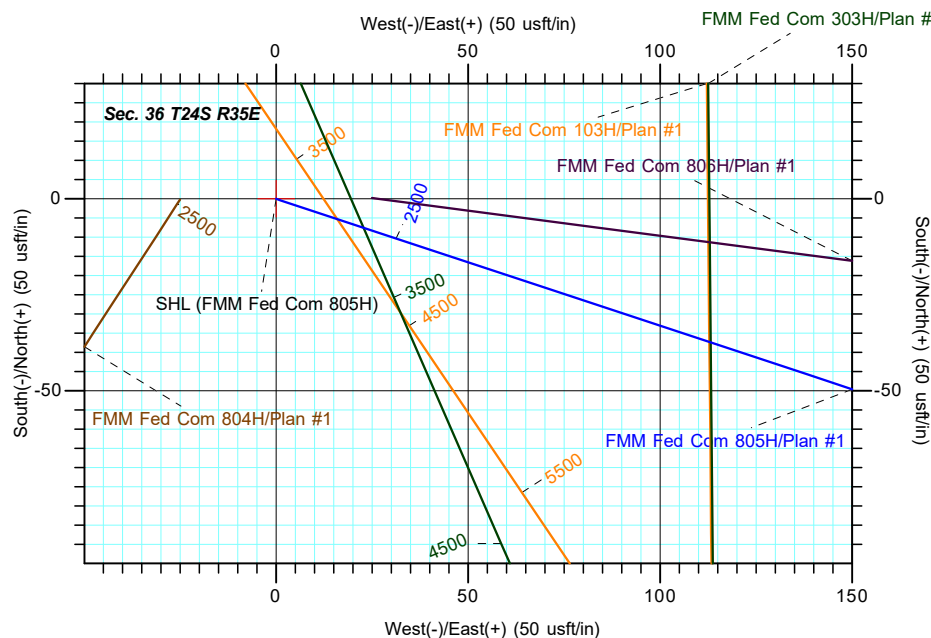


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northings	Easting	Latitude	Longitude
LP (FMM Fed Com 805H)	12092.00	357.93	645.60	426494.07	855802.42	32.168428	-103.317052
PBHL (FMM Fed Com 805H)	12092.00	10147.39	553.29	436283.53	855710.11	32.195337	-103.317052
SHL (FMM Fed Com 805H)	0.00	0.00	0.00	426136.14	855156.82	32.167461	-103.319149

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
2543.01	8.15	108.28	2541.19	-12.08	36.59	1.50	108.28	-10.07	Start 4294.95 hold at 2543.01 MD
6837.97	8.15	108.28	6792.81	-202.92	614.41	0.00	0.00	-169.16	Start Drop -1.50
7380.98	0.00	0.00	7334.00	-215.00	651.00	1.50	180.00	-179.24	Start 4185.04 hold at 7380.98 MD
11566.02	0.00	0.00	11519.04	-215.00	651.00	0.00	0.00	-179.24	Start DLS 10.00 TFO 359.46
12466.02	90.00	359.46	12092.00	357.93	645.60	10.00	359.46	392.55	Start 9789.89 hold at 12466.02 MD
22255.91	90.00	359.46	12092.00	10147.39	553.29	0.00	0.00	10162.46	TD at 22255.91



TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #1 (FMM Fed Com 805H/OH)
Created By: Dustin Ault
Date: 20:25, September 07 2021
Approved: _____ Date: _____

Received by OCD: 3/3/2022 1:21:42 PM

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Franklin Mountain Energy

Lea County, NM (NAD83)

FMM Fed Com

FMM Fed Com 805H

OH

Plan: Plan #1

Standard Planning Report

07 September, 2021





Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	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 805H					
Well Position	+N/-S	-56.25 usft	Northing:	426,136.14 usft	Latitude:	32.167461
	+E/-W	2,024.03 usft	Easting:	855,156.82 usft	Longitude:	-103.319150
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,332.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/7/2021	6.40	59.88	47,462.20502602

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	3.12

Plan Survey Tool Program	Date	9/7/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,255.91 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	
2,543.01	8.15	108.28	2,541.19	-12.08	36.59	1.50	1.50	0.00	108.28	
6,837.97	8.15	108.28	6,792.81	-202.92	614.41	0.00	0.00	0.00	0.00	
7,380.98	0.00	0.00	7,334.00	-215.00	651.00	1.50	-1.50	0.00	180.00	
11,566.02	0.00	0.00	11,519.04	-215.00	651.00	0.00	0.00	0.00	0.00	
12,466.02	90.00	359.46	12,092.00	357.93	645.60	10.00	10.00	-0.06	359.46	
22,255.91	90.00	359.46	12,092.00	10,147.39	553.29	0.00	0.00	0.00	0.00	PBHL (FMM Fed Corr)



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	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 805H)									
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	108.28	2,099.99	-0.41	1.24	-0.34	1.50	1.50	0.00
2,200.00	3.00	108.28	2,199.91	-1.64	4.97	-1.37	1.50	1.50	0.00
2,300.00	4.50	108.28	2,299.69	-3.69	11.18	-3.08	1.50	1.50	0.00
2,400.00	6.00	108.28	2,399.27	-6.56	19.87	-5.47	1.50	1.50	0.00
2,500.00	7.50	108.28	2,498.57	-10.25	31.03	-8.54	1.50	1.50	0.00
2,543.01	8.15	108.28	2,541.19	-12.08	36.59	-10.07	1.50	1.50	0.00
Start 4294.95 hold at 2543.01 MD									
2,600.00	8.15	108.28	2,597.60	-14.62	44.26	-12.18	0.00	0.00	0.00
2,700.00	8.15	108.28	2,696.59	-19.06	57.71	-15.89	0.00	0.00	0.00
2,800.00	8.15	108.28	2,795.58	-23.50	71.16	-19.59	0.00	0.00	0.00
2,900.00	8.15	108.28	2,894.57	-27.95	84.62	-23.30	0.00	0.00	0.00
3,000.00	8.15	108.28	2,993.56	-32.39	98.07	-27.00	0.00	0.00	0.00
3,100.00	8.15	108.28	3,092.55	-36.83	111.52	-30.71	0.00	0.00	0.00
3,200.00	8.15	108.28	3,191.55	-41.27	124.98	-34.41	0.00	0.00	0.00
3,300.00	8.15	108.28	3,290.54	-45.72	138.43	-38.11	0.00	0.00	0.00
3,400.00	8.15	108.28	3,389.53	-50.16	151.88	-41.82	0.00	0.00	0.00
3,500.00	8.15	108.28	3,488.52	-54.60	165.34	-45.52	0.00	0.00	0.00
3,600.00	8.15	108.28	3,587.51	-59.05	178.79	-49.23	0.00	0.00	0.00
3,700.00	8.15	108.28	3,686.50	-63.49	192.24	-52.93	0.00	0.00	0.00
3,800.00	8.15	108.28	3,785.49	-67.93	205.70	-56.63	0.00	0.00	0.00
3,900.00	8.15	108.28	3,884.48	-72.38	219.15	-60.34	0.00	0.00	0.00
4,000.00	8.15	108.28	3,983.48	-76.82	232.60	-64.04	0.00	0.00	0.00
4,100.00	8.15	108.28	4,082.47	-81.26	246.06	-67.75	0.00	0.00	0.00
4,200.00	8.15	108.28	4,181.46	-85.71	259.51	-71.45	0.00	0.00	0.00
4,300.00	8.15	108.28	4,280.45	-90.15	272.97	-75.15	0.00	0.00	0.00
4,400.00	8.15	108.28	4,379.44	-94.59	286.42	-78.86	0.00	0.00	0.00
4,500.00	8.15	108.28	4,478.43	-99.04	299.87	-82.56	0.00	0.00	0.00
4,600.00	8.15	108.28	4,577.42	-103.48	313.33	-86.27	0.00	0.00	0.00
4,700.00	8.15	108.28	4,676.41	-107.92	326.78	-89.97	0.00	0.00	0.00
4,800.00	8.15	108.28	4,775.40	-112.37	340.23	-93.68	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	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	8.15	108.28	4,874.40	-116.81	353.69	-97.38	0.00	0.00	0.00
5,000.00	8.15	108.28	4,973.39	-121.25	367.14	-101.08	0.00	0.00	0.00
5,100.00	8.15	108.28	5,072.38	-125.70	380.59	-104.79	0.00	0.00	0.00
5,200.00	8.15	108.28	5,171.37	-130.14	394.05	-108.49	0.00	0.00	0.00
5,300.00	8.15	108.28	5,270.36	-134.58	407.50	-112.20	0.00	0.00	0.00
5,400.00	8.15	108.28	5,369.35	-139.02	420.95	-115.90	0.00	0.00	0.00
5,500.00	8.15	108.28	5,468.34	-143.47	434.41	-119.60	0.00	0.00	0.00
5,600.00	8.15	108.28	5,567.33	-147.91	447.86	-123.31	0.00	0.00	0.00
5,700.00	8.15	108.28	5,666.33	-152.35	461.31	-127.01	0.00	0.00	0.00
5,800.00	8.15	108.28	5,765.32	-156.80	474.77	-130.72	0.00	0.00	0.00
5,900.00	8.15	108.28	5,864.31	-161.24	488.22	-134.42	0.00	0.00	0.00
6,000.00	8.15	108.28	5,963.30	-165.68	501.68	-138.12	0.00	0.00	0.00
6,100.00	8.15	108.28	6,062.29	-170.13	515.13	-141.83	0.00	0.00	0.00
6,200.00	8.15	108.28	6,161.28	-174.57	528.58	-145.53	0.00	0.00	0.00
6,300.00	8.15	108.28	6,260.27	-179.01	542.04	-149.24	0.00	0.00	0.00
6,400.00	8.15	108.28	6,359.26	-183.46	555.49	-152.94	0.00	0.00	0.00
6,500.00	8.15	108.28	6,458.26	-187.90	568.94	-156.65	0.00	0.00	0.00
6,600.00	8.15	108.28	6,557.25	-192.34	582.40	-160.35	0.00	0.00	0.00
6,700.00	8.15	108.28	6,656.24	-196.79	595.85	-164.05	0.00	0.00	0.00
6,800.00	8.15	108.28	6,755.23	-201.23	609.30	-167.76	0.00	0.00	0.00
6,837.97	8.15	108.28	6,792.81	-202.92	614.41	-169.16	0.00	0.00	0.00
Start Drop -1.50									
6,900.00	7.21	108.28	6,854.29	-205.52	622.28	-171.33	1.50	-1.50	0.00
7,000.00	5.71	108.28	6,953.65	-209.05	632.97	-174.27	1.50	-1.50	0.00
7,100.00	4.21	108.28	7,053.27	-211.76	641.19	-176.54	1.50	-1.50	0.00
7,200.00	2.71	108.28	7,153.09	-213.66	646.93	-178.12	1.50	-1.50	0.00
7,300.00	1.21	108.28	7,253.03	-214.73	650.18	-179.01	1.50	-1.50	0.00
7,380.98	0.00	0.00	7,334.00	-215.00	651.00	-179.24	1.50	-1.50	0.00
Start 4185.04 hold at 7380.98 MD									
7,400.00	0.00	0.00	7,353.02	-215.00	651.00	-179.24	0.00	0.00	0.00
7,500.00	0.00	0.00	7,453.02	-215.00	651.00	-179.24	0.00	0.00	0.00
7,600.00	0.00	0.00	7,553.02	-215.00	651.00	-179.24	0.00	0.00	0.00
7,700.00	0.00	0.00	7,653.02	-215.00	651.00	-179.24	0.00	0.00	0.00
7,800.00	0.00	0.00	7,753.02	-215.00	651.00	-179.24	0.00	0.00	0.00
7,900.00	0.00	0.00	7,853.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,000.00	0.00	0.00	7,953.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,100.00	0.00	0.00	8,053.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,200.00	0.00	0.00	8,153.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,300.00	0.00	0.00	8,253.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,400.00	0.00	0.00	8,353.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,500.00	0.00	0.00	8,453.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,600.00	0.00	0.00	8,553.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,700.00	0.00	0.00	8,653.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,800.00	0.00	0.00	8,753.02	-215.00	651.00	-179.24	0.00	0.00	0.00
8,900.00	0.00	0.00	8,853.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,000.00	0.00	0.00	8,953.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,100.00	0.00	0.00	9,053.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,200.00	0.00	0.00	9,153.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,300.00	0.00	0.00	9,253.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,400.00	0.00	0.00	9,353.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,500.00	0.00	0.00	9,453.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,600.00	0.00	0.00	9,553.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,700.00	0.00	0.00	9,653.02	-215.00	651.00	-179.24	0.00	0.00	0.00
9,800.00	0.00	0.00	9,753.02	-215.00	651.00	-179.24	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	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)
9,900.00	0.00	0.00	9,853.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,000.00	0.00	0.00	9,953.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,100.00	0.00	0.00	10,053.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,200.00	0.00	0.00	10,153.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,300.00	0.00	0.00	10,253.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,400.00	0.00	0.00	10,353.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,500.00	0.00	0.00	10,453.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,600.00	0.00	0.00	10,553.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,700.00	0.00	0.00	10,653.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,800.00	0.00	0.00	10,753.02	-215.00	651.00	-179.24	0.00	0.00	0.00
10,900.00	0.00	0.00	10,853.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,000.00	0.00	0.00	10,953.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,100.00	0.00	0.00	11,053.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,200.00	0.00	0.00	11,153.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,300.00	0.00	0.00	11,253.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,400.00	0.00	0.00	11,353.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,500.00	0.00	0.00	11,453.02	-215.00	651.00	-179.24	0.00	0.00	0.00
11,566.02	0.00	0.00	11,519.04	-215.00	651.00	-179.24	0.00	0.00	0.00
Start DLS 10.00 TFO 359.46									
11,600.00	3.40	359.46	11,553.00	-213.99	650.99	-178.23	10.00	10.00	0.00
11,650.00	8.40	359.46	11,602.72	-208.86	650.94	-173.11	10.00	10.00	0.00
11,700.00	13.40	359.46	11,651.80	-199.41	650.85	-163.68	10.00	10.00	0.00
11,750.00	18.40	359.46	11,699.87	-185.72	650.72	-150.01	10.00	10.00	0.00
11,800.00	23.40	359.46	11,746.57	-167.89	650.56	-132.22	10.00	10.00	0.00
11,850.00	28.40	359.46	11,791.53	-146.06	650.35	-110.43	10.00	10.00	0.00
11,900.00	33.40	359.46	11,834.42	-120.39	650.11	-84.82	10.00	10.00	0.00
11,950.00	38.40	359.46	11,874.92	-91.08	649.83	-55.57	10.00	10.00	0.00
12,000.00	43.40	359.46	11,912.70	-58.36	649.52	-22.91	10.00	10.00	0.00
12,050.00	48.40	359.46	11,947.48	-22.47	649.18	12.91	10.00	10.00	0.00
12,100.00	53.40	359.46	11,979.01	16.32	648.82	51.62	10.00	10.00	0.00
12,150.00	58.40	359.46	12,007.03	57.71	648.43	92.92	10.00	10.00	0.00
12,200.00	63.40	359.46	12,031.34	101.38	648.02	136.51	10.00	10.00	0.00
12,250.00	68.40	359.46	12,051.76	147.00	647.59	182.04	10.00	10.00	0.00
12,300.00	73.40	359.46	12,068.11	194.23	647.14	229.18	10.00	10.00	0.00
12,350.00	78.40	359.46	12,080.29	242.71	646.68	277.56	10.00	10.00	0.00
12,400.00	83.40	359.46	12,088.20	292.06	646.22	326.81	10.00	10.00	0.00
12,450.00	88.40	359.46	12,091.77	341.91	645.75	376.56	10.00	10.00	0.00
12,466.02	90.00	359.46	12,092.00	357.93	645.60	392.55	10.00	10.00	0.00
Start 9789.89 hold at 12466.02 MD - LP (FMM Fed Com 805H)									
12,500.00	90.00	359.46	12,092.00	391.91	645.28	426.46	0.00	0.00	0.00
12,600.00	90.00	359.46	12,092.00	491.91	644.33	526.26	0.00	0.00	0.00
12,700.00	90.00	359.46	12,092.00	591.90	643.39	626.05	0.00	0.00	0.00
12,800.00	90.00	359.46	12,092.00	691.90	642.45	725.85	0.00	0.00	0.00
12,900.00	90.00	359.46	12,092.00	791.89	641.51	825.64	0.00	0.00	0.00
13,000.00	90.00	359.46	12,092.00	891.89	640.56	925.44	0.00	0.00	0.00
13,100.00	90.00	359.46	12,092.00	991.88	639.62	1,025.24	0.00	0.00	0.00
13,200.00	90.00	359.46	12,092.00	1,091.88	638.68	1,125.03	0.00	0.00	0.00
13,300.00	90.00	359.46	12,092.00	1,191.87	637.73	1,224.83	0.00	0.00	0.00
13,400.00	90.00	359.46	12,092.00	1,291.87	636.79	1,324.62	0.00	0.00	0.00
13,500.00	90.00	359.46	12,092.00	1,391.87	635.85	1,424.42	0.00	0.00	0.00
13,600.00	90.00	359.46	12,092.00	1,491.86	634.91	1,524.22	0.00	0.00	0.00
13,700.00	90.00	359.46	12,092.00	1,591.86	633.96	1,624.01	0.00	0.00	0.00
13,800.00	90.00	359.46	12,092.00	1,691.85	633.02	1,723.81	0.00	0.00	0.00
13,900.00	90.00	359.46	12,092.00	1,791.85	632.08	1,823.60	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	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	359.46	12,092.00	1,891.84	631.13	1,923.40	0.00	0.00	0.00
14,100.00	90.00	359.46	12,092.00	1,991.84	630.19	2,023.19	0.00	0.00	0.00
14,200.00	90.00	359.46	12,092.00	2,091.83	629.25	2,122.99	0.00	0.00	0.00
14,300.00	90.00	359.46	12,092.00	2,191.83	628.31	2,222.79	0.00	0.00	0.00
14,400.00	90.00	359.46	12,092.00	2,291.83	627.36	2,322.58	0.00	0.00	0.00
14,500.00	90.00	359.46	12,092.00	2,391.82	626.42	2,422.38	0.00	0.00	0.00
14,600.00	90.00	359.46	12,092.00	2,491.82	625.48	2,522.17	0.00	0.00	0.00
14,700.00	90.00	359.46	12,092.00	2,591.81	624.53	2,621.97	0.00	0.00	0.00
14,800.00	90.00	359.46	12,092.00	2,691.81	623.59	2,721.77	0.00	0.00	0.00
14,900.00	90.00	359.46	12,092.00	2,791.80	622.65	2,821.56	0.00	0.00	0.00
15,000.00	90.00	359.46	12,092.00	2,891.80	621.71	2,921.36	0.00	0.00	0.00
15,100.00	90.00	359.46	12,092.00	2,991.79	620.76	3,021.15	0.00	0.00	0.00
15,200.00	90.00	359.46	12,092.00	3,091.79	619.82	3,120.95	0.00	0.00	0.00
15,300.00	90.00	359.46	12,092.00	3,191.79	618.88	3,220.75	0.00	0.00	0.00
15,400.00	90.00	359.46	12,092.00	3,291.78	617.93	3,320.54	0.00	0.00	0.00
15,500.00	90.00	359.46	12,092.00	3,391.78	616.99	3,420.34	0.00	0.00	0.00
15,600.00	90.00	359.46	12,092.00	3,491.77	616.05	3,520.13	0.00	0.00	0.00
15,700.00	90.00	359.46	12,092.00	3,591.77	615.10	3,619.93	0.00	0.00	0.00
15,800.00	90.00	359.46	12,092.00	3,691.76	614.16	3,719.73	0.00	0.00	0.00
15,900.00	90.00	359.46	12,092.00	3,791.76	613.22	3,819.52	0.00	0.00	0.00
16,000.00	90.00	359.46	12,092.00	3,891.75	612.28	3,919.32	0.00	0.00	0.00
16,100.00	90.00	359.46	12,092.00	3,991.75	611.33	4,019.11	0.00	0.00	0.00
16,200.00	90.00	359.46	12,092.00	4,091.75	610.39	4,118.91	0.00	0.00	0.00
16,300.00	90.00	359.46	12,092.00	4,191.74	609.45	4,218.70	0.00	0.00	0.00
16,400.00	90.00	359.46	12,092.00	4,291.74	608.50	4,318.50	0.00	0.00	0.00
16,500.00	90.00	359.46	12,092.00	4,391.73	607.56	4,418.30	0.00	0.00	0.00
16,600.00	90.00	359.46	12,092.00	4,491.73	606.62	4,518.09	0.00	0.00	0.00
16,700.00	90.00	359.46	12,092.00	4,591.72	605.68	4,617.89	0.00	0.00	0.00
16,800.00	90.00	359.46	12,092.00	4,691.72	604.73	4,717.68	0.00	0.00	0.00
16,900.00	90.00	359.46	12,092.00	4,791.71	603.79	4,817.48	0.00	0.00	0.00
17,000.00	90.00	359.46	12,092.00	4,891.71	602.85	4,917.28	0.00	0.00	0.00
17,100.00	90.00	359.46	12,092.00	4,991.71	601.90	5,017.07	0.00	0.00	0.00
17,200.00	90.00	359.46	12,092.00	5,091.70	600.96	5,116.87	0.00	0.00	0.00
17,300.00	90.00	359.46	12,092.00	5,191.70	600.02	5,216.66	0.00	0.00	0.00
17,400.00	90.00	359.46	12,092.00	5,291.69	599.08	5,316.46	0.00	0.00	0.00
17,500.00	90.00	359.46	12,092.00	5,391.69	598.13	5,416.26	0.00	0.00	0.00
17,600.00	90.00	359.46	12,092.00	5,491.68	597.19	5,516.05	0.00	0.00	0.00
17,700.00	90.00	359.46	12,092.00	5,591.68	596.25	5,615.85	0.00	0.00	0.00
17,800.00	90.00	359.46	12,092.00	5,691.67	595.30	5,715.64	0.00	0.00	0.00
17,900.00	90.00	359.46	12,092.00	5,791.67	594.36	5,815.44	0.00	0.00	0.00
18,000.00	90.00	359.46	12,092.00	5,891.67	593.42	5,915.24	0.00	0.00	0.00
18,100.00	90.00	359.46	12,092.00	5,991.66	592.48	6,015.03	0.00	0.00	0.00
18,200.00	90.00	359.46	12,092.00	6,091.66	591.53	6,114.83	0.00	0.00	0.00
18,300.00	90.00	359.46	12,092.00	6,191.65	590.59	6,214.62	0.00	0.00	0.00
18,400.00	90.00	359.46	12,092.00	6,291.65	589.65	6,314.42	0.00	0.00	0.00
18,500.00	90.00	359.46	12,092.00	6,391.64	588.70	6,414.21	0.00	0.00	0.00
18,600.00	90.00	359.46	12,092.00	6,491.64	587.76	6,514.01	0.00	0.00	0.00
18,700.00	90.00	359.46	12,092.00	6,591.63	586.82	6,613.81	0.00	0.00	0.00
18,800.00	90.00	359.46	12,092.00	6,691.63	585.88	6,713.60	0.00	0.00	0.00
18,900.00	90.00	359.46	12,092.00	6,791.63	584.93	6,813.40	0.00	0.00	0.00
19,000.00	90.00	359.46	12,092.00	6,891.62	583.99	6,913.19	0.00	0.00	0.00
19,100.00	90.00	359.46	12,092.00	6,991.62	583.05	7,012.99	0.00	0.00	0.00
19,200.00	90.00	359.46	12,092.00	7,091.61	582.10	7,112.79	0.00	0.00	0.00
19,300.00	90.00	359.46	12,092.00	7,191.61	581.16	7,212.58	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,400.00	90.00	359.46	12,092.00	7,291.60	580.22	7,312.38	0.00	0.00	0.00	
19,500.00	90.00	359.46	12,092.00	7,391.60	579.28	7,412.17	0.00	0.00	0.00	
19,600.00	90.00	359.46	12,092.00	7,491.59	578.33	7,511.97	0.00	0.00	0.00	
19,700.00	90.00	359.46	12,092.00	7,591.59	577.39	7,611.77	0.00	0.00	0.00	
19,800.00	90.00	359.46	12,092.00	7,691.59	576.45	7,711.56	0.00	0.00	0.00	
19,900.00	90.00	359.46	12,092.00	7,791.58	575.50	7,811.36	0.00	0.00	0.00	
20,000.00	90.00	359.46	12,092.00	7,891.58	574.56	7,911.15	0.00	0.00	0.00	
20,100.00	90.00	359.46	12,092.00	7,991.57	573.62	8,010.95	0.00	0.00	0.00	
20,200.00	90.00	359.46	12,092.00	8,091.57	572.67	8,110.75	0.00	0.00	0.00	
20,300.00	90.00	359.46	12,092.00	8,191.56	571.73	8,210.54	0.00	0.00	0.00	
20,400.00	90.00	359.46	12,092.00	8,291.56	570.79	8,310.34	0.00	0.00	0.00	
20,500.00	90.00	359.46	12,092.00	8,391.55	569.85	8,410.13	0.00	0.00	0.00	
20,600.00	90.00	359.46	12,092.00	8,491.55	568.90	8,509.93	0.00	0.00	0.00	
20,700.00	90.00	359.46	12,092.00	8,591.55	567.96	8,609.72	0.00	0.00	0.00	
20,800.00	90.00	359.46	12,092.00	8,691.54	567.02	8,709.52	0.00	0.00	0.00	
20,900.00	90.00	359.46	12,092.00	8,791.54	566.07	8,809.32	0.00	0.00	0.00	
21,000.00	90.00	359.46	12,092.00	8,891.53	565.13	8,909.11	0.00	0.00	0.00	
21,100.00	90.00	359.46	12,092.00	8,991.53	564.19	9,008.91	0.00	0.00	0.00	
21,200.00	90.00	359.46	12,092.00	9,091.52	563.25	9,108.70	0.00	0.00	0.00	
21,300.00	90.00	359.46	12,092.00	9,191.52	562.30	9,208.50	0.00	0.00	0.00	
21,400.00	90.00	359.46	12,092.00	9,291.51	561.36	9,308.30	0.00	0.00	0.00	
21,500.00	90.00	359.46	12,092.00	9,391.51	560.42	9,408.09	0.00	0.00	0.00	
21,600.00	90.00	359.46	12,092.00	9,491.51	559.47	9,507.89	0.00	0.00	0.00	
21,700.00	90.00	359.46	12,092.00	9,591.50	558.53	9,607.68	0.00	0.00	0.00	
21,800.00	90.00	359.46	12,092.00	9,691.50	557.59	9,707.48	0.00	0.00	0.00	
21,900.00	90.00	359.46	12,092.00	9,791.49	556.65	9,807.28	0.00	0.00	0.00	
22,000.00	90.00	359.46	12,092.00	9,891.49	555.70	9,907.07	0.00	0.00	0.00	
22,100.00	90.00	359.46	12,092.00	9,991.48	554.76	10,006.87	0.00	0.00	0.00	
22,200.00	90.00	359.46	12,092.00	10,091.48	553.82	10,106.66	0.00	0.00	0.00	
22,255.91	90.00	359.46	12,092.00	10,147.39	553.29	10,162.46	0.00	0.00	0.00	
TD at 22255.91 - PBHL (FMM Fed Com 805H)										

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 805H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	426,136.14	855,156.82	32.167461	-103.319150	
PBHL (FMM Fed Com 805H) - plan hits target center - Point	0.00	0.00	12,092.00	10,147.39	553.29	436,283.53	855,710.11	32.195337	-103.317052	
LP (FMM Fed Com 805H) - plan hits target center - Point	0.00	0.00	12,092.00	357.93	645.60	426,494.07	855,802.42	32.168428	-103.317053	



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Company:	Franklin Mountain Energy	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Project:	Lea County, NM (NAD83)	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 805H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,000.00	2,000.00	0.00	0.00	Start Build 1.50
2,543.01	2,541.19	-12.08	36.59	Start 4294.95 hold at 2543.01 MD
6,837.97	6,792.81	-202.92	614.41	Start Drop -1.50
7,380.98	7,334.00	-215.00	651.00	Start 4185.04 hold at 7380.98 MD
11,566.02	11,519.04	-215.00	651.00	Start DLS 10.00 TFO 359.46
12,466.02	12,092.00	357.93	645.60	Start 9789.89 hold at 12466.02 MD
22,255.91	12,092.00	10,147.39	553.29	TD at 22255.91



Franklin Mountain Energy

Lea County, NM (NAD83)

FMM Fed Com

FMM Fed Com 805H

OH

Plan #1

Anticollision Report

07 September, 2021





Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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
Depth Range:	Unlimited
Results Limited by:	Maximum ellipse separation of 1,000.00 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Combined Separation
Casing Method:	Not applied

Survey Tool Program	Date	9/7/2021
From (usft)	To (usft)	Survey (Wellbore)
0.00	22,255.91	Plan #1 (OH)
		Tool Name
		OWSG (Rev2) MWD
		Description
		OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
FMM Fed Com						
Amoco State #001 (Offset) - OH - OH	1,157.17	1,287.84	4,195.59	4,161.47	122.958	CC
Amoco State #001 (Offset) - OH - OH	2,200.00	2,214.77	4,197.87	4,152.65	92.837	ES
Amoco State #001 (Offset) - OH - OH	3,800.00	3,775.00	4,254.25	4,173.56	52.721	SF
Blue Bay WCA State Com #001C (Offset Plan) - OH - PI	11,997.28	14,141.35	153.80	82.51	2.157	CC, ES, SF
FMM Fed Com 101H - OH - Plan #1	1,806.09	1,760.99	2,024.81	2,016.10	232.391	CC
FMM Fed Com 101H - OH - Plan #1	1,900.00	1,836.04	2,025.07	2,015.93	221.584	ES
FMM Fed Com 101H - OH - Plan #1	22,255.91	18,625.78	4,947.61	4,755.91	25.809	SF
FMM Fed Com 102H - OH - Plan #1	2,461.33	2,646.45	1,967.12	1,954.69	158.314	CC
FMM Fed Com 102H - OH - Plan #1	2,500.00	2,685.12	1,967.30	1,954.69	155.966	ES
FMM Fed Com 102H - OH - Plan #1	22,255.91	18,541.95	4,130.73	3,976.31	26.750	SF
FMM Fed Com 103H - OH - Plan #1	2,264.83	2,269.37	77.67	66.62	7.026	CC
FMM Fed Com 103H - OH - Plan #1	2,300.00	2,304.51	77.81	66.59	6.934	ES
FMM Fed Com 103H - OH - Plan #1	2,400.00	2,404.33	79.81	68.11	6.822	SF
FMM Fed Com 104H - OH - Plan #1	1,516.63	1,516.73	76.03	68.67	10.331	CC
FMM Fed Com 104H - OH - Plan #1	1,700.00	1,699.79	76.22	67.94	9.204	ES
FMM Fed Com 104H - OH - Plan #1	1,900.00	1,898.22	79.15	69.88	8.538	SF
FMM Fed Com 301H - OH - Plan #1	2,000.00	1,955.70	2,000.08	1,990.38	206.237	CC, ES
FMM Fed Com 301H - OH - Plan #1	22,255.91	20,174.35	4,076.88	3,857.26	18.563	SF
FMM Fed Com 302H - OH - Plan #1	2,443.40	2,617.61	1,944.46	1,932.15	157.969	CC, ES
FMM Fed Com 302H - OH - Plan #1	22,255.91	20,112.23	2,940.26	2,754.05	15.790	SF
FMM Fed Com 303H - OH - Plan #1	2,411.09	2,415.81	55.10	43.38	4.700	CC, ES
FMM Fed Com 303H - OH - Plan #1	2,500.00	2,504.36	56.33	44.18	4.635	SF
FMM Fed Com 304H - OH - Plan #1	1,316.47	1,317.07	83.84	77.50	13.212	CC
FMM Fed Com 304H - OH - Plan #1	1,400.00	1,400.59	83.84	77.07	12.386	ES
FMM Fed Com 304H - OH - Plan #1	1,700.00	1,696.63	90.24	82.00	10.944	SF
FMM Fed Com 801H - OH - Plan #1	2,000.00	1,956.00	2,011.04	2,001.34	207.352	CC, ES
FMM Fed Com 801H - OH - Plan #1	22,255.91	22,585.01	3,583.27	3,339.14	14.678	SF
FMM Fed Com 802H - OH - Plan #1	2,000.00	1,956.30	1,985.97	1,976.27	204.751	CC, ES
FMM Fed Com 802H - OH - Plan #1	22,255.91	22,402.20	2,650.60	2,405.89	10.832	SF
FMM Fed Com 803H - OH - Plan #1	6,672.39	6,900.00	1,701.28	1,666.67	49.154	CC
FMM Fed Com 803H - OH - Plan #1	22,255.91	22,337.95	1,717.08	1,472.10	7.009	ES, SF
FMM Fed Com 804H - OH - Plan #1	2,000.00	1,999.20	25.00	15.19	2.549	CC, ES
FMM Fed Com 804H - OH - Plan #1	2,100.00	2,099.19	26.24	15.94	2.546	SF
FMM Fed Com 806H - OH - Plan #1	1,600.00	1,599.90	24.99	17.21	3.212	CC, ES, SF
Pre-Ongard Well #001 (Offset) - OH - OH	1,141.53	1,195.88	4,899.65	4,874.00	191.088	CC
Pre-Ongard Well #001 (Offset) - OH - OH	2,100.00	2,098.10	4,900.87	4,847.01	90.986	ES
Pre-Ongard Well #001 (Offset) - OH - OH	3,200.00	3,190.08	4,996.60	4,912.85	59.658	SF

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
FMM Fed Com						
Proxy WCA State Com #001H (Offset) - OH - OH	100.00	33.84	2,914.59	2,914.45	10,000.000	CC
Proxy WCA State Com #001H (Offset) - OH - OH	200.00	125.03	2,914.85	2,914.33	5,563.593	ES
Proxy WCA State Com #001H (Offset) - OH - OH	5,000.00	4,501.00	3,302.82	3,279.78	143.362	SF
Proxy WCA State Com #001H (Offset) - ST01 - ST01	100.00	33.84	2,914.59	2,914.45	10,000.000	CC
Proxy WCA State Com #001H (Offset) - ST01 - ST01	200.00	125.03	2,914.85	2,914.33	5,563.593	ES
Proxy WCA State Com #001H (Offset) - ST01 - ST01	12,300.00	11,794.70	3,589.66	3,535.63	66.435	SF
Proxy WCA State Com #001H (Offset) - ST02 - ST02	100.00	33.84	2,914.59	2,914.45	10,000.000	CC
Proxy WCA State Com #001H (Offset) - ST02 - ST02	200.00	125.03	2,914.85	2,914.33	5,563.593	ES
Proxy WCA State Com #001H (Offset) - ST02 - ST02	17,300.00	16,762.00	3,565.55	3,441.87	28.828	SF

Offset Design

FMM Fed Com - Amoco State #001 (Offset) - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 635-INC-ONLY												Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	14.10	14.10	0.00	0.23	4.29	4,184.87	313.62	4,196.60				
100.00	100.00	114.10	114.10	0.13	1.82	4.29	4,184.87	313.62	4,196.60	4,194.77	1.83	2,294.980	
200.00	200.00	214.10	214.10	0.48	3.42	4.29	4,184.87	313.62	4,196.60	4,193.15	3.46	1,213.879	
300.00	300.00	314.10	314.10	0.84	5.02	4.29	4,184.87	313.62	4,196.60	4,191.51	5.09	824.130	
400.00	400.00	414.10	414.10	1.20	6.62	4.29	4,184.87	313.62	4,196.60	4,189.87	6.73	623.671	
500.00	500.00	514.10	514.10	1.56	8.22	4.29	4,184.87	313.62	4,196.60	4,188.24	8.37	501.607	
600.00	600.00	614.10	614.10	1.92	9.82	4.29	4,184.87	313.62	4,196.60	4,186.60	10.00	419.488	
700.00	700.00	714.26	714.10	2.28	13.04	4.29	4,184.87	313.62	4,196.60	4,183.37	13.23	317.101	
800.00	800.00	814.26	814.10	2.63	16.68	4.29	4,184.87	313.62	4,196.60	4,179.72	16.88	248.572	
900.00	900.00	918.00	917.78	2.99	20.45	4.28	4,187.52	313.62	4,199.25	4,178.58	20.67	203.169	
1,000.00	1,000.00	1,061.76	1,061.51	3.35	25.68	4.28	4,186.64	313.62	4,198.64	4,172.74	25.90	162.117	
1,100.00	1,100.00	1,205.59	1,205.27	3.71	30.92	4.29	4,184.27	313.62	4,196.99	4,165.86	31.13	134.816	
1,157.17	1,157.17	1,287.84	1,287.47	3.92	33.91	4.29	4,182.24	313.62	4,195.59	4,161.47	34.12	122.958	CC
1,200.00	1,200.00	1,214.85	1,214.10	4.07	30.81	4.29	4,184.87	313.62	4,196.60	4,165.53	31.07	135.056	
1,300.00	1,300.00	1,314.86	1,314.10	4.43	32.12	4.29	4,184.87	313.62	4,196.60	4,164.18	32.42	129.437	
1,400.00	1,400.00	1,414.86	1,414.10	4.79	33.07	4.29	4,184.87	313.62	4,196.60	4,163.19	33.41	125.604	
1,500.00	1,500.00	1,514.86	1,514.10	5.14	34.50	4.29	4,184.87	313.62	4,196.60	4,161.72	34.89	120.296	
1,600.00	1,600.00	1,614.86	1,614.10	5.50	35.94	4.29	4,184.87	313.62	4,196.60	4,160.24	36.36	115.414	
1,700.00	1,700.00	1,714.86	1,714.10	5.86	37.38	4.29	4,184.87	313.62	4,196.60	4,158.76	37.84	110.911	
1,800.00	1,800.00	1,814.86	1,814.10	6.22	38.82	4.29	4,184.87	313.62	4,196.60	4,157.29	39.31	106.745	
1,900.00	1,900.00	1,914.86	1,914.10	6.58	40.26	4.29	4,184.87	313.62	4,196.60	4,155.81	40.79	102.880	
2,000.00	2,000.00	2,014.86	2,014.10	6.94	41.70	4.29	4,184.87	313.62	4,196.60	4,154.33	42.27	99.284	
2,100.00	2,099.99	2,114.85	2,114.09	7.28	43.13	-104.00	4,184.87	313.62	4,196.92	4,153.17	43.74	95.942	
2,200.00	2,199.91	2,214.77	2,214.01	7.62	44.57	-104.04	4,184.87	313.62	4,197.87	4,152.65	45.22	92.837	ES
2,300.00	2,299.69	2,314.56	2,313.79	7.96	46.01	-104.10	4,184.87	313.62	4,199.46	4,152.78	46.69	89.944	
2,400.00	2,399.27	2,414.13	2,413.37	8.31	47.44	-104.19	4,184.87	313.62	4,201.71	4,153.55	48.16	87.245	
2,500.00	2,498.57	2,513.44	2,512.67	8.66	48.87	-104.30	4,184.87	313.62	4,204.62	4,155.00	49.63	84.724	
2,543.01	2,541.19	2,556.07	2,555.29	8.81	49.51	-104.36	4,184.87	313.62	4,206.08	4,155.80	50.29	83.640	
2,600.00	2,597.60	2,612.48	2,611.70	9.02	50.61	-104.47	4,184.87	313.62	4,208.11	4,156.71	51.40	81.866	
2,700.00	2,696.59	2,711.47	2,710.69	9.38	52.53	-104.65	4,184.87	313.62	4,211.71	4,158.35	53.36	78.930	
2,800.00	2,795.58	2,810.46	2,809.68	9.75	54.45	-104.83	4,184.87	313.62	4,215.35	4,160.03	55.32	76.202	
2,900.00	2,894.57	2,915.51	2,914.72	10.12	56.49	-105.03	4,185.40	313.62	4,219.57	4,162.18	57.39	73.521	
3,000.00	2,993.56	3,021.61	3,020.83	10.50	58.56	-105.23	4,185.16	313.62	4,223.07	4,163.59	59.49	70.991	
3,100.00	3,092.55	3,107.48	3,106.65	10.88	60.29	-105.39	4,184.87	313.62	4,226.53	4,165.27	61.27	68.986	

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 635-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
3,200.00	3,191.55	3,206.47	3,205.65	11.27	63.15	-105.57	4,184.87	313.62	4,230.35	4,166.21	64.14	65.951		
3,300.00	3,290.54	3,305.46	3,304.64	11.65	66.00	-105.75	4,184.87	313.62	4,234.21	4,167.19	67.02	63.177		
3,400.00	3,389.53	3,404.46	3,403.63	12.04	68.86	-105.94	4,184.87	313.62	4,238.12	4,168.22	69.90	60.631		
3,500.00	3,488.52	3,503.45	3,502.62	12.44	71.71	-106.12	4,184.87	313.62	4,242.06	4,169.29	72.78	58.287		
3,600.00	3,587.51	3,602.44	3,601.61	12.83	74.57	-106.30	4,184.87	313.62	4,246.06	4,170.40	75.66	56.122		
3,700.00	3,686.50	3,701.43	3,700.60	13.23	77.42	-106.48	4,184.87	313.62	4,250.09	4,171.55	78.54	54.115		
3,800.00	3,785.49	3,775.00	3,773.73	13.62	79.54	-106.62	4,184.87	313.62	4,254.25	4,173.56	80.69	52.721 SF		
3,900.00	3,884.48	3,775.00	3,773.73	14.02	79.54	-106.62	4,184.87	313.62	4,260.12	4,179.40	80.73	52.772		
4,000.00	3,983.48	3,775.00	3,773.73	14.43	79.54	-106.62	4,184.87	313.62	4,268.33	4,187.61	80.72	52.878		
4,100.00	4,082.47	3,775.00	3,773.73	14.83	79.54	-106.62	4,184.87	313.62	4,278.86	4,198.19	80.67	53.039		
4,200.00	4,181.46	3,775.00	3,773.73	15.23	79.54	-106.62	4,184.87	313.62	4,291.70	4,211.11	80.59	53.255		
4,300.00	4,280.45	3,775.00	3,773.73	15.64	79.54	-106.62	4,184.87	313.62	4,306.82	4,226.36	80.46	53.526		
4,400.00	4,379.44	3,775.00	3,773.73	16.04	79.54	-106.62	4,184.87	313.62	4,324.20	4,243.90	80.29	53.854		
4,500.00	4,478.43	3,775.00	3,773.73	16.45	79.54	-106.62	4,184.87	313.62	4,343.81	4,263.72	80.09	54.237		
4,600.00	4,577.42	3,775.00	3,773.73	16.86	79.54	-106.62	4,184.87	313.62	4,365.63	4,285.78	79.85	54.672		
4,700.00	4,676.41	3,775.00	3,773.73	17.27	79.54	-106.62	4,184.87	313.62	4,389.61	4,310.03	79.58	55.160		
4,800.00	4,775.40	3,775.00	3,773.73	17.68	79.54	-106.62	4,184.87	313.62	4,415.74	4,336.46	79.28	55.700		
4,900.00	4,874.40	3,775.00	3,773.73	18.09	79.54	-106.62	4,184.87	313.62	4,443.95	4,365.01	78.94	56.292		
5,000.00	4,973.39	3,775.00	3,773.73	18.50	79.54	-106.62	4,184.87	313.62	4,474.23	4,395.65	78.58	56.935		
5,100.00	5,072.38	3,775.00	3,773.73	18.91	79.54	-106.62	4,184.87	313.62	4,506.52	4,428.33	78.20	57.629		
5,200.00	5,171.37	3,775.00	3,773.73	19.32	79.54	-106.62	4,184.87	313.62	4,540.79	4,463.00	77.79	58.374		
5,300.00	5,270.36	3,775.00	3,773.73	19.73	79.54	-106.62	4,184.87	313.62	4,576.98	4,499.63	77.36	59.168		
5,400.00	5,369.35	3,775.00	3,773.73	20.15	79.54	-106.62	4,184.87	313.62	4,615.06	4,538.16	76.90	60.012		
5,500.00	5,468.34	3,775.00	3,773.73	20.56	79.54	-106.62	4,184.87	313.62	4,654.97	4,578.54	76.43	60.905		
5,600.00	5,567.33	3,775.00	3,773.73	20.97	79.54	-106.62	4,184.87	313.62	4,696.68	4,620.74	75.94	61.847		
5,700.00	5,666.33	3,775.00	3,773.73	21.39	79.54	-106.62	4,184.87	313.62	4,740.13	4,664.69	75.43	62.839		
5,800.00	5,765.32	3,775.00	3,773.73	21.80	79.54	-106.62	4,184.87	313.62	4,785.27	4,710.36	74.91	63.877		
5,900.00	5,864.31	3,775.00	3,773.73	22.22	79.54	-106.62	4,184.87	313.62	4,832.06	4,757.68	74.38	64.962		
6,000.00	5,963.30	3,775.00	3,773.73	22.64	79.54	-106.62	4,184.87	313.62	4,880.45	4,806.61	73.84	66.094		
6,100.00	6,062.29	3,775.00	3,773.73	23.05	79.54	-106.62	4,184.87	313.62	4,930.40	4,857.11	73.29	67.270		
6,200.00	6,161.28	3,775.00	3,773.73	23.47	79.54	-106.62	4,184.87	313.62	4,981.85	4,909.11	72.74	68.491		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	10.10	10.10	0.00	0.01	13.52	2,374.63	570.96	2,442.31					
100.00	100.00	110.10	110.10	0.13	0.17	13.52	2,374.63	570.96	2,442.31	2,442.10	0.21	N/A		
200.00	200.00	210.10	210.10	0.48	0.53	13.52	2,374.63	570.96	2,442.31	2,441.59	0.72	3,406.100		
300.00	300.00	310.10	310.10	0.84	0.89	13.52	2,374.63	570.96	2,442.31	2,441.09	1.22	1,995.839		
400.00	400.00	410.10	410.10	1.20	1.25	13.52	2,374.63	570.96	2,442.31	2,440.58	1.73	1,411.304		
500.00	500.00	510.10	510.10	1.56	1.60	13.52	2,374.63	570.96	2,442.31	2,440.07	2.24	1,091.573		
600.00	600.00	610.10	610.10	1.92	1.96	13.52	2,374.63	570.96	2,442.31	2,439.56	2.74	889.946		
700.00	700.00	710.10	710.10	2.28	2.32	13.52	2,374.63	570.96	2,442.31	2,439.06	3.25	751.188		
800.00	800.00	810.10	810.10	2.63	2.68	13.52	2,374.63	570.96	2,442.31	2,438.55	3.76	649.862		
900.00	900.00	910.10	910.10	2.99	3.04	13.52	2,374.63	570.96	2,442.31	2,438.04	4.27	572.622		
1,000.00	1,000.00	1,010.10	1,010.10	3.35	3.40	13.52	2,374.63	570.96	2,442.31	2,437.54	4.77	511.792		
1,100.00	1,100.00	1,110.10	1,110.10	3.71	3.76	13.52	2,374.63	570.96	2,442.31	2,437.03	5.28	462.644		
1,200.00	1,200.00	1,210.10	1,210.10	4.07	4.11	13.52	2,374.63	570.96	2,442.31	2,436.52	5.79	422.109		
1,300.00	1,300.00	1,310.10	1,310.10	4.43	4.47	13.52	2,374.63	570.96	2,442.31	2,436.02	6.29	388.104		
1,400.00	1,400.00	1,410.10	1,410.10	4.79	4.83	13.52	2,374.63	570.96	2,442.31	2,435.51	6.80	359.170		
1,500.00	1,500.00	1,510.10	1,510.10	5.14	5.19	13.52	2,374.63	570.96	2,442.31	2,435.00	7.31	334.251		
1,600.00	1,600.00	1,610.10	1,610.10	5.50	5.55	13.52	2,374.63	570.96	2,442.31	2,434.50	7.81	312.565		
1,700.00	1,700.00	1,710.10	1,710.10	5.86	5.91	13.52	2,374.63	570.96	2,442.31	2,433.99	8.32	293.521		
1,800.00	1,800.00	1,810.10	1,810.10	6.22	6.26	13.52	2,374.63	570.96	2,442.31	2,433.48	8.83	276.665		
1,900.00	1,900.00	1,910.10	1,910.10	6.58	6.62	13.52	2,374.63	570.96	2,442.31	2,432.97	9.33	261.640		
2,000.00	2,000.00	2,010.10	2,010.10	6.94	6.98	13.52	2,374.63	570.96	2,442.31	2,432.47	9.84	248.162		
2,100.00	2,099.99	2,110.09	2,110.09	7.28	7.34	-94.79	2,374.63	570.96	2,442.42	2,432.08	10.34	236.203		
2,200.00	2,199.91	2,210.01	2,210.01	7.62	7.70	-94.87	2,374.63	570.96	2,442.75	2,431.92	10.83	225.505		
2,300.00	2,299.69	2,309.79	2,309.79	7.96	8.06	-95.02	2,374.63	570.96	2,443.31	2,431.99	11.33	215.717		
2,400.00	2,399.27	2,409.37	2,409.37	8.31	8.41	-95.22	2,374.63	570.96	2,444.13	2,432.31	11.82	206.723		
2,500.00	2,498.57	2,508.67	2,508.67	8.66	8.77	-95.47	2,374.63	570.96	2,445.24	2,432.91	12.32	198.423		
2,543.01	2,541.19	2,551.29	2,551.29	8.81	8.92	-95.60	2,374.63	570.96	2,445.81	2,433.27	12.54	195.044		
2,600.00	2,597.60	2,607.70	2,607.70	9.02	9.12	-95.79	2,374.63	570.96	2,446.61	2,433.79	12.83	190.730		
2,700.00	2,696.59	2,706.69	2,706.69	9.38	9.48	-96.11	2,374.63	570.96	2,448.10	2,434.76	13.34	183.571		
2,800.00	2,795.58	2,805.68	2,805.68	9.75	9.83	-96.44	2,374.63	570.96	2,449.66	2,435.81	13.85	176.901		
2,900.00	2,894.57	2,904.67	2,904.67	10.12	10.19	-96.76	2,374.63	570.96	2,451.31	2,436.95	14.36	170.676		
3,000.00	2,993.56	3,003.66	3,003.66	10.50	10.54	-97.09	2,374.63	570.96	2,453.03	2,438.15	14.88	164.857		
3,100.00	3,092.55	3,102.65	3,102.65	10.88	10.90	-97.41	2,374.63	570.96	2,454.84	2,439.44	15.40	159.410		
3,200.00	3,191.55	3,201.65	3,201.65	11.27	11.25	-97.74	2,374.63	570.96	2,456.73	2,440.81	15.92	154.303		
3,300.00	3,290.54	3,300.64	3,300.64	11.65	11.61	-98.06	2,374.63	570.96	2,458.69	2,442.25	16.45	149.508		
3,400.00	3,389.53	3,399.63	3,399.63	12.04	11.96	-98.39	2,374.63	570.96	2,460.74	2,443.77	16.97	144.998		
3,500.00	3,488.52	3,498.62	3,498.62	12.44	12.32	-98.71	2,374.63	570.96	2,462.87	2,445.37	17.50	140.752		
3,600.00	3,587.51	3,597.61	3,597.61	12.83	12.67	-99.03	2,374.63	570.96	2,465.07	2,447.05	18.03	136.748		
3,700.00	3,686.50	3,696.60	3,696.60	13.23	13.03	-99.35	2,374.63	570.96	2,467.36	2,448.80	18.56	132.967		
3,800.00	3,785.49	3,795.59	3,795.59	13.62	13.38	-99.67	2,374.63	570.96	2,469.73	2,450.64	19.09	129.393		
3,900.00	3,884.48	3,894.58	3,894.58	14.02	13.74	-100.00	2,374.63	570.96	2,472.17	2,452.55	19.62	126.010		
4,000.00	3,983.48	3,993.58	3,993.58	14.43	14.09	-100.32	2,374.63	570.96	2,474.69	2,454.54	20.15	122.804		
4,100.00	4,082.47	4,092.57	4,092.57	14.83	14.45	-100.63	2,374.63	570.96	2,477.29	2,456.61	20.69	119.762		
4,200.00	4,181.46	4,191.56	4,191.56	15.23	14.80	-100.95	2,374.63	570.96	2,479.97	2,458.75	21.22	116.872		
4,300.00	4,280.45	4,290.55	4,290.55	15.64	15.16	-101.27	2,374.63	570.96	2,482.73	2,460.98	21.75	114.125		
4,400.00	4,379.44	4,389.54	4,389.54	16.04	15.51	-101.59	2,374.63	570.96	2,485.57	2,463.28	22.29	111.510		
4,500.00	4,478.43	4,488.53	4,488.53	16.45	15.87	-101.90	2,374.63	570.96	2,488.48	2,465.65	22.83	109.019		
4,600.00	4,577.42	4,587.52	4,587.52	16.86	16.22	-102.22	2,374.63	570.96	2,491.47	2,468.10	23.36	106.643		
4,700.00	4,676.41	4,686.51	4,686.51	17.27	16.58	-102.54	2,374.63	570.96	2,494.53	2,470.63	23.90	104.376		
4,800.00	4,775.40	4,785.50	4,785.50	17.68	16.93	-102.85	2,374.63	570.96	2,497.68	2,473.24	24.44	102.209		
4,900.00	4,874.40	4,884.50	4,884.50	18.09	17.29	-103.16	2,374.63	570.96	2,500.90	2,475.92	24.97	100.138		
5,000.00	4,973.39	4,983.49	4,983.49	18.50	17.64	-103.48	2,374.63	570.96	2,504.19	2,478.68	25.51	98.155		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	5,082.48	5,082.48	18.91	18.00	-103.79	2,374.63	570.96	2,507.56	2,481.51	26.05	96.257		
5,200.00	5,171.37	5,181.47	5,181.47	19.32	18.35	-104.10	2,374.63	570.96	2,511.01	2,484.42	26.59	94.437		
5,300.00	5,270.36	5,280.46	5,280.46	19.73	18.70	-104.41	2,374.63	570.96	2,514.53	2,487.40	27.13	92.692		
5,400.00	5,369.35	5,379.45	5,379.45	20.15	19.06	-104.72	2,374.63	570.96	2,518.13	2,490.46	27.67	91.017		
5,500.00	5,468.34	5,478.44	5,478.44	20.56	19.41	-105.03	2,374.63	570.96	2,521.80	2,493.59	28.21	89.409		
5,600.00	5,567.33	5,577.43	5,577.43	20.97	19.77	-105.33	2,374.63	570.96	2,525.54	2,496.80	28.74	87.863		
5,700.00	5,666.33	5,676.43	5,676.43	21.39	20.12	-105.64	2,374.63	570.96	2,529.36	2,500.08	29.28	86.376		
5,800.00	5,765.32	5,775.42	5,775.42	21.80	20.48	-105.95	2,374.63	570.96	2,533.26	2,503.43	29.82	84.945		
5,900.00	5,864.31	5,874.41	5,874.41	22.22	20.83	-106.25	2,374.63	570.96	2,537.22	2,506.86	30.36	83.567		
6,000.00	5,963.30	5,973.40	5,973.40	22.64	21.19	-106.55	2,374.63	570.96	2,541.26	2,510.36	30.90	82.240		
6,100.00	6,062.29	6,072.39	6,072.39	23.05	21.54	-106.86	2,374.63	570.96	2,545.37	2,513.93	31.44	80.961		
6,200.00	6,161.28	6,171.38	6,171.38	23.47	21.90	-107.16	2,374.63	570.96	2,549.55	2,517.58	31.98	79.727		
6,300.00	6,260.27	6,270.37	6,270.37	23.88	22.25	-107.46	2,374.63	570.96	2,553.81	2,521.29	32.52	78.536		
6,400.00	6,359.26	6,369.36	6,369.36	24.30	22.61	-107.76	2,374.63	570.96	2,558.14	2,525.08	33.06	77.387		
6,500.00	6,458.26	6,468.36	6,468.36	24.72	22.96	-108.06	2,374.63	570.96	2,562.53	2,528.94	33.60	76.277		
6,600.00	6,557.25	6,567.35	6,567.35	25.14	23.32	-108.36	2,374.63	570.96	2,567.00	2,532.87	34.13	75.204		
6,700.00	6,656.24	6,666.34	6,666.34	25.55	23.67	-108.65	2,374.63	570.96	2,571.54	2,536.87	34.67	74.166		
6,800.00	6,755.23	6,765.33	6,765.33	25.97	24.03	-108.95	2,374.63	570.96	2,576.15	2,540.94	35.21	73.163		
6,837.97	6,792.81	6,802.91	6,802.91	26.13	24.16	-109.06	2,374.63	570.96	2,577.91	2,542.50	35.42	72.790		
6,900.00	6,854.29	6,864.39	6,864.39	26.39	24.38	-109.27	2,374.63	570.96	2,580.66	2,544.91	35.75	72.191		
7,000.00	6,953.65	6,963.75	6,963.75	26.79	24.74	-109.56	2,374.63	570.96	2,584.42	2,548.15	36.28	71.245		
7,100.00	7,053.27	7,063.37	7,063.37	27.17	25.10	-109.78	2,374.63	570.96	2,587.35	2,550.55	36.79	70.322		
7,200.00	7,153.09	7,163.19	7,163.19	27.53	25.45	-109.94	2,374.63	570.96	2,589.40	2,552.10	37.30	69.420		
7,300.00	7,253.03	7,263.13	7,263.13	27.88	25.81	-110.02	2,374.63	570.96	2,590.57	2,552.78	37.80	68.538		
7,380.98	7,334.00	7,344.10	7,344.10	28.15	26.10	-1.77	2,374.63	570.96	2,590.87	2,552.68	38.19	67.839		
7,400.00	7,353.02	7,363.12	7,363.12	28.21	26.17	-1.77	2,374.63	570.96	2,590.87	2,552.59	38.28	67.678		
7,500.00	7,453.02	7,463.12	7,463.12	28.53	26.53	-1.77	2,374.63	570.96	2,590.87	2,552.11	38.76	66.840		
7,600.00	7,553.02	7,563.12	7,563.12	28.85	26.89	-1.77	2,374.63	570.96	2,590.87	2,551.63	39.24	66.021		
7,700.00	7,653.02	7,663.12	7,663.12	29.17	27.25	-1.77	2,374.63	570.96	2,590.87	2,551.14	39.72	65.222		
7,800.00	7,753.02	7,763.12	7,763.12	29.49	27.60	-1.77	2,374.63	570.96	2,590.87	2,550.66	40.21	64.440		
7,900.00	7,853.02	7,863.12	7,863.12	29.81	27.96	-1.77	2,374.63	570.96	2,590.87	2,550.18	40.69	63.676		
8,000.00	7,953.02	7,963.12	7,963.12	30.13	28.32	-1.77	2,374.63	570.96	2,590.87	2,549.70	41.17	62.929		
8,100.00	8,053.02	8,063.12	8,063.12	30.46	28.68	-1.77	2,374.63	570.96	2,590.87	2,549.21	41.65	62.199		
8,200.00	8,153.02	8,163.12	8,163.12	30.78	29.04	-1.77	2,374.63	570.96	2,590.87	2,548.73	42.14	61.484		
8,300.00	8,253.02	8,263.12	8,263.12	31.11	29.40	-1.77	2,374.63	570.96	2,590.87	2,548.25	42.62	60.785		
8,400.00	8,353.02	8,363.12	8,363.12	31.43	29.76	-1.77	2,374.63	570.96	2,590.87	2,547.76	43.11	60.101		
8,500.00	8,453.02	8,463.12	8,463.12	31.76	30.11	-1.77	2,374.63	570.96	2,590.87	2,547.27	43.59	59.432		
8,600.00	8,553.02	8,563.12	8,563.12	32.09	30.47	-1.77	2,374.63	570.96	2,590.87	2,546.79	44.08	58.776		
8,700.00	8,653.02	8,663.12	8,663.12	32.42	30.83	-1.77	2,374.63	570.96	2,590.87	2,546.30	44.57	58.134		
8,800.00	8,753.02	8,763.12	8,763.12	32.74	31.19	-1.77	2,374.63	570.96	2,590.87	2,545.81	45.05	57.506		
8,900.00	8,853.02	8,863.12	8,863.12	33.07	31.55	-1.77	2,374.63	570.96	2,590.87	2,545.33	45.54	56.890		
9,000.00	8,953.02	8,963.12	8,963.12	33.40	31.91	-1.77	2,374.63	570.96	2,590.87	2,544.84	46.03	56.287		
9,100.00	9,053.02	9,063.12	9,063.12	33.73	32.26	-1.77	2,374.63	570.96	2,590.87	2,544.35	46.52	55.697		
9,200.00	9,153.02	9,163.12	9,163.12	34.07	32.62	-1.77	2,374.63	570.96	2,590.87	2,543.86	47.01	55.118		
9,300.00	9,253.02	9,263.12	9,263.12	34.40	32.98	-1.77	2,374.63	570.96	2,590.87	2,543.37	47.50	54.550		
9,400.00	9,353.02	14,296.01	11,915.00	34.73	59.52	-88.23	-210.07	491.15	2,556.89	2,520.31	36.58	69.893		
9,500.00	9,453.02	14,296.00	11,915.00	35.06	59.52	-88.23	-210.07	491.15	2,457.09	2,420.36	36.74	66.880		
9,600.00	9,553.02	14,296.00	11,915.00	35.39	59.52	-88.23	-210.07	491.15	2,357.32	2,320.42	36.90	63.885		
9,700.00	9,653.02	14,296.00	11,915.00	35.73	59.52	-88.23	-210.07	491.15	2,257.56	2,220.49	37.07	60.900		
9,800.00	9,753.02	14,296.00	11,915.00	36.06	59.52	-88.23	-210.07	491.15	2,157.82	2,120.58	37.24	57.940		
9,900.00	9,853.02	14,296.00	11,915.00	36.40	59.52	-88.23	-210.07	491.15	2,058.11	2,020.68	37.42	54.994		
10,000.00	9,953.02	14,296.00	11,915.00	36.73	59.52	-88.23	-210.07	491.15	1,958.43	1,920.81	37.61	52.070		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,053.02	14,296.00	11,915.00	37.07	59.52	-88.23	-210.07	491.15	1,858.78	1,820.97	37.81	49.163		
10,200.00	10,153.02	14,296.00	11,915.00	37.40	59.52	-88.23	-210.07	491.15	1,759.17	1,721.15	38.02	46.275		
10,300.00	10,253.02	14,296.00	11,915.00	37.74	59.52	-88.23	-210.07	491.15	1,659.61	1,621.38	38.23	43.409		
10,400.00	10,353.02	14,296.00	11,915.00	38.08	59.52	-88.23	-210.07	491.15	1,560.10	1,521.64	38.46	40.565		
10,500.00	10,453.02	14,296.00	11,915.00	38.41	59.52	-88.23	-210.07	491.15	1,460.67	1,421.96	38.70	37.741		
10,600.00	10,553.02	14,296.00	11,915.00	38.75	59.52	-88.23	-210.07	491.15	1,361.31	1,322.35	38.96	34.937		
10,700.00	10,653.02	14,296.00	11,915.00	39.09	59.52	-88.23	-210.06	491.15	1,262.06	1,222.81	39.25	32.155		
10,800.00	10,753.02	14,296.00	11,915.00	39.43	59.52	-88.23	-210.06	491.15	1,162.93	1,123.37	39.56	29.396		
10,900.00	10,853.02	14,296.00	11,915.00	39.77	59.52	-88.23	-210.06	491.15	1,063.97	1,024.06	39.91	26.659		
11,000.00	10,953.02	14,296.00	11,915.00	40.10	59.52	-88.23	-210.06	491.15	965.23	924.91	40.31	23.944		
11,100.00	11,053.02	14,296.00	11,915.00	40.44	59.52	-88.23	-210.06	491.15	866.77	825.98	40.78	21.254		
11,200.00	11,153.02	14,296.00	11,915.00	40.78	59.52	-88.23	-210.06	491.15	768.70	727.35	41.35	18.588		
11,300.00	11,253.02	14,296.00	11,915.00	41.12	59.52	-88.23	-210.06	491.15	671.22	629.13	42.09	15.949		
11,400.00	11,353.02	14,296.00	11,915.00	41.46	59.52	-88.23	-210.06	491.15	574.59	531.52	43.07	13.341		
11,500.00	11,453.02	14,296.00	11,915.00	41.80	59.52	-88.23	-210.06	491.15	479.35	434.86	44.49	10.774		
11,566.02	11,519.04	14,296.00	11,915.00	42.03	59.52	-88.23	-210.06	491.15	417.69	371.85	45.84	9.112		
11,600.00	11,553.00	14,295.00	11,915.00	42.14	59.51	-95.16	-209.06	491.18	386.52	339.81	46.72	8.274		
11,650.00	11,602.72	14,289.87	11,915.00	42.31	59.45	-103.32	-203.93	491.34	341.78	293.46	48.32	7.074		
11,700.00	11,651.80	14,280.42	11,915.00	42.46	59.34	-108.22	-194.49	491.63	299.06	248.65	50.41	5.933		
11,750.00	11,699.87	14,266.74	11,915.00	42.61	59.18	-110.29	-180.82	492.05	259.30	206.13	53.18	4.876		
11,800.00	11,746.57	14,248.93	11,915.00	42.75	58.98	-109.86	-163.01	492.60	223.70	166.88	56.83	3.937		
11,850.00	11,791.53	14,227.11	11,915.00	42.87	58.73	-107.11	-141.21	493.28	193.77	132.33	61.45	3.154		
11,900.00	11,834.42	14,201.47	11,915.00	42.98	58.43	-102.14	-115.57	494.07	171.29	104.70	66.58	2.573		
11,950.00	11,874.92	14,172.18	11,915.00	43.08	58.10	-95.07	-86.30	494.97	157.81	87.20	70.61	2.235		
11,997.28	11,910.71	14,141.35	11,915.00	43.16	57.76	-86.84	-55.48	495.92	153.80	82.51	71.29	2.157 CC, ES, SF		
12,000.00	11,912.70	14,139.48	11,915.00	43.17	57.74	-86.33	-53.62	495.98	153.81	82.60	71.21	2.160		
12,050.00	11,947.48	14,103.62	11,915.00	43.24	57.34	-76.71	-17.77	497.09	158.01	89.77	68.24	2.315		
12,100.00	11,979.01	14,064.86	11,915.00	43.29	56.91	-67.25	20.97	498.28	167.85	103.99	63.86	2.628		
12,150.00	12,007.03	14,023.51	11,915.00	43.34	56.46	-58.80	62.30	499.56	180.59	120.85	59.75	3.023		
12,200.00	12,031.34	13,979.87	11,915.00	43.37	55.98	-51.80	105.92	500.91	194.03	137.59	56.44	3.438		
12,250.00	12,051.76	13,934.28	11,915.00	43.40	55.50	-46.32	151.49	502.31	206.61	152.69	53.92	3.832		
12,300.00	12,068.11	13,887.09	11,915.00	43.43	55.00	-42.20	198.66	503.77	217.28	165.23	52.05	4.174		
12,350.00	12,080.29	13,838.65	11,915.00	43.46	54.49	-39.26	247.07	505.27	225.34	174.65	50.69	4.446		
12,400.00	12,088.20	13,789.33	11,915.00	43.51	53.98	-37.34	296.37	506.79	230.34	180.62	49.72	4.633		
12,450.00	12,091.77	13,739.52	11,915.00	43.58	53.48	-36.31	346.16	508.33	232.00	182.92	49.08	4.727		
12,466.02	12,092.00	13,723.51	11,915.00	43.60	53.32	-36.16	362.16	508.82	231.80	182.86	48.94	4.736		
12,500.00	12,092.00	13,689.56	11,915.00	43.67	52.98	-35.89	396.09	509.87	230.99	182.32	48.67	4.746		
12,600.00	12,092.00	13,589.64	11,915.00	43.93	52.01	-35.07	495.96	512.95	228.65	180.72	47.93	4.771		
12,700.00	12,092.00	13,489.72	11,915.00	44.27	51.07	-34.23	595.83	516.03	226.36	179.13	47.23	4.792		
12,800.00	12,092.00	13,389.80	11,915.00	44.68	50.17	-33.38	695.70	519.12	224.12	177.52	46.59	4.810		
12,900.00	12,092.00	13,289.88	11,915.00	45.15	49.30	-32.52	795.58	522.20	221.93	175.92	46.01	4.824		
13,000.00	12,092.00	13,189.97	11,915.00	45.68	48.48	-31.63	895.45	525.29	219.79	174.32	45.47	4.834		
13,100.00	12,092.00	13,090.05	11,915.00	46.26	47.70	-30.73	995.32	528.37	217.70	172.72	44.98	4.840		
13,200.00	12,092.00	12,990.13	11,915.00	46.89	46.96	-29.81	1,095.19	531.45	215.67	171.12	44.55	4.841		
13,300.00	12,092.00	12,890.21	11,915.00	47.57	46.27	-28.87	1,195.06	534.54	213.69	169.53	44.16	4.839		
13,400.00	12,092.00	12,790.29	11,915.00	48.30	45.63	-27.92	1,294.93	537.62	211.77	167.95	43.83	4.832		
13,500.00	12,092.00	12,690.37	11,915.00	49.06	45.04	-26.95	1,394.80	540.71	209.92	166.38	43.54	4.822		
13,600.00	12,092.00	12,590.45	11,915.00	49.88	44.50	-25.96	1,494.67	543.79	208.12	164.83	43.29	4.807		
13,700.00	12,092.00	12,490.53	11,915.00	50.73	44.02	-24.95	1,594.55	546.87	206.39	163.29	43.10	4.789		
13,800.00	12,092.00	12,390.61	11,915.00	51.62	43.59	-23.93	1,694.42	549.96	204.72	161.77	42.95	4.767		
13,900.00	12,092.00	12,290.70	11,915.01	52.54	43.23	-22.89	1,794.29	553.04	203.12	160.28	42.84	4.742		
14,000.00	12,092.00	12,190.78	11,915.01	53.51	42.92	-21.84	1,894.16	556.12	201.58	158.81	42.77	4.713		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,013.91	12,092.00	12,179.88	11,914.94	53.64	42.89	-21.72	1,905.05	556.46	201.45	158.68	42.78	4.709		
14,100.00	12,092.00	12,118.56	11,910.03	54.50	42.72	-20.57	1,966.10	558.35	206.67	163.60	43.07	4.798		
14,200.00	12,092.00	12,050.00	11,895.33	55.52	42.53	-18.55	2,032.98	560.41	225.73	181.76	43.97	5.133		
14,300.00	12,092.00	11,987.16	11,873.57	56.58	42.36	-16.34	2,091.85	562.23	258.04	212.52	45.53	5.668		
14,400.00	12,092.00	11,930.72	11,847.59	57.66	42.21	-14.33	2,141.89	563.77	302.16	254.68	47.48	6.364		
14,500.00	12,092.00	11,881.24	11,820.08	58.77	42.07	-12.66	2,182.98	565.04	356.25	306.74	49.52	7.195		
14,600.00	12,092.00	11,838.37	11,792.92	59.90	41.96	-11.34	2,216.11	566.07	418.49	367.08	51.41	8.141		
14,700.00	12,092.00	11,800.00	11,766.18	61.06	41.85	-10.28	2,243.60	566.91	487.25	434.27	52.99	9.196		
14,800.00	12,092.00	11,775.00	11,747.60	62.24	41.79	-9.64	2,260.31	567.43	561.26	506.69	54.57	10.286		
14,900.00	12,092.00	11,742.23	11,721.97	63.44	41.69	-8.88	2,280.71	568.06	639.29	583.78	55.51	11.516		
15,000.00	12,092.00	11,725.00	11,707.95	64.66	41.65	-8.51	2,290.72	568.37	720.76	664.20	56.56	12.744		
15,100.00	12,092.00	11,700.00	11,686.98	65.90	41.58	-8.01	2,304.33	568.79	804.76	747.56	57.20	14.070		
15,200.00	12,092.00	11,675.00	11,665.33	67.16	41.51	-7.56	2,316.82	569.18	891.02	833.32	57.70	15.443		
15,300.00	12,092.00	11,663.81	11,655.44	68.43	41.47	-7.37	2,322.04	569.34	978.99	920.73	58.26	16.803		
15,400.00	12,092.00	11,650.00	11,643.06	69.72	41.43	-7.14	2,328.16	569.53	1,068.47	1,009.79	58.68	18.208		
15,500.00	12,092.00	11,637.19	11,631.43	71.02	41.40	-6.94	2,333.51	569.69	1,159.18	1,100.15	59.02	19.639		
15,600.00	12,092.00	11,625.00	11,620.22	72.34	41.36	-6.76	2,338.32	569.84	1,250.92	1,191.61	59.31	21.091		
15,700.00	12,092.00	11,625.00	11,620.22	73.67	41.36	-6.76	2,338.32	569.84	1,343.65	1,284.02	59.63	22.533		
15,800.00	12,092.00	11,600.00	11,596.88	75.02	41.29	-6.41	2,347.27	570.12	1,436.96	1,377.21	59.75	24.051		
15,900.00	12,092.00	11,600.00	11,596.88	76.37	41.29	-6.41	2,347.27	570.12	1,530.90	1,470.92	59.98	25.523		
16,000.00	12,092.00	11,600.00	11,596.88	77.74	41.29	-6.41	2,347.27	570.12	1,625.56	1,565.38	60.18	27.012		
16,100.00	12,092.00	11,575.00	11,573.11	79.12	41.21	-6.09	2,354.99	570.35	1,720.61	1,660.36	60.25	28.559		
16,200.00	12,092.00	11,575.00	11,573.11	80.51	41.21	-6.09	2,354.99	570.35	1,815.97	1,755.57	60.41	30.063		
16,300.00	12,092.00	11,575.00	11,573.11	81.91	41.21	-6.09	2,354.99	570.35	1,911.81	1,851.26	60.54	31.577		
16,400.00	12,092.00	11,575.00	11,573.11	83.31	41.21	-6.09	2,354.99	570.35	2,008.05	1,947.38	60.67	33.099		
16,500.00	12,092.00	11,561.84	11,560.44	84.73	41.17	-5.93	2,358.55	570.46	2,104.42	2,043.68	60.74	34.644		
16,600.00	12,092.00	11,550.00	11,548.96	86.16	41.14	-5.80	2,361.46	570.55	2,201.21	2,140.39	60.82	36.193		
16,700.00	12,092.00	11,550.00	11,548.96	87.59	41.14	-5.80	2,361.46	570.55	2,298.11	2,237.19	60.92	37.726		
16,800.00	12,092.00	11,550.00	11,548.96	89.03	41.14	-5.80	2,361.46	570.55	2,395.26	2,334.25	61.00	39.265		
16,900.00	12,092.00	11,550.00	11,548.96	90.48	41.14	-5.80	2,361.46	570.55	2,492.63	2,431.55	61.09	40.805		
17,000.00	12,092.00	11,550.00	11,548.96	91.93	41.14	-5.80	2,361.46	570.55	2,590.21	2,529.05	61.16	42.349		
17,100.00	12,092.00	11,538.55	11,537.80	93.39	41.10	-5.67	2,363.99	570.63	2,687.80	2,626.59	61.22	43.906		
17,200.00	12,092.00	11,525.00	11,524.51	94.86	41.06	-5.53	2,366.65	570.71	2,785.76	2,724.49	61.27	45.469		
17,300.00	12,092.00	11,525.00	11,524.51	96.33	41.06	-5.53	2,366.65	570.71	2,883.64	2,822.30	61.34	47.014		
17,400.00	12,092.00	11,525.00	11,524.51	97.81	41.06	-5.53	2,366.65	570.71	2,981.66	2,920.26	61.40	48.560		
17,500.00	12,092.00	11,525.00	11,524.51	99.30	41.06	-5.53	2,366.65	570.71	3,079.81	3,018.34	61.47	50.106		
17,600.00	12,092.00	11,525.00	11,524.51	100.79	41.06	-5.53	2,366.65	570.71	3,178.07	3,116.55	61.53	51.653		
17,700.00	12,092.00	11,525.00	11,524.51	102.28	41.06	-5.53	2,366.65	570.71	3,276.44	3,214.86	61.59	53.199		
17,800.00	12,092.00	11,525.00	11,524.51	103.78	41.06	-5.53	2,366.65	570.71	3,374.91	3,313.26	61.65	54.745		
17,900.00	12,092.00	11,525.00	11,524.51	105.29	41.06	-5.53	2,366.65	570.71	3,473.46	3,411.76	61.71	56.291		
18,000.00	12,092.00	11,525.00	11,524.51	106.80	41.06	-5.53	2,366.65	570.71	3,572.10	3,510.33	61.76	57.835		
18,100.00	12,092.00	11,525.00	11,524.51	108.31	41.06	-5.53	2,366.65	570.71	3,670.80	3,608.98	61.82	59.379		
18,200.00	12,092.00	11,512.58	11,512.28	109.83	41.02	-5.41	2,368.75	570.78	3,769.40	3,707.53	61.87	60.928		
18,300.00	12,092.00	11,500.00	11,499.82	111.35	40.98	-5.29	2,370.55	570.84	3,868.32	3,806.41	61.91	62.481		
18,400.00	12,092.00	11,500.00	11,499.82	112.87	40.98	-5.29	2,370.55	570.84	3,967.12	3,905.15	61.97	64.018		
18,500.00	12,092.00	11,500.00	11,499.82	114.40	40.98	-5.29	2,370.55	570.84	4,065.98	4,003.96	62.03	65.553		
18,600.00	12,092.00	11,500.00	11,499.82	115.93	40.98	-5.29	2,370.55	570.84	4,164.90	4,102.81	62.08	67.086		
18,700.00	12,092.00	11,500.00	11,499.82	117.46	40.98	-5.29	2,370.55	570.84	4,263.86	4,201.72	62.14	68.618		
18,800.00	12,092.00	11,500.00	11,499.82	119.00	40.98	-5.29	2,370.55	570.84	4,362.87	4,300.68	62.20	70.147		
18,900.00	12,092.00	11,500.00	11,499.82	120.54	40.98	-5.29	2,370.55	570.84	4,461.93	4,399.68	62.25	71.674		
19,000.00	12,092.00	11,500.00	11,499.82	122.09	40.98	-5.29	2,370.55	570.84	4,561.03	4,498.72	62.31	73.199		
19,100.00	12,092.00	11,500.00	11,499.82	123.63	40.98	-5.29	2,370.55	570.84	4,660.16	4,597.79	62.37	74.721		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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												Offset Site Error:	0.00 usft
FMM Fed Com - Blue Bay WCA State Com #001C (Offset Plan) - OH - Plan #1												Offset Well Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,200.00	12,092.00	11,500.00	11,499.82	125.18	40.98	-5.29	2,370.55	570.84	4,759.33	4,696.91	62.42	76.241	
19,300.00	12,092.00	11,500.00	11,499.82	126.73	40.98	-5.29	2,370.55	570.84	4,858.54	4,796.06	62.48	77.758	
19,400.00	12,092.00	11,500.00	11,499.82	128.29	40.98	-5.29	2,370.55	570.84	4,957.78	4,895.24	62.54	79.272	



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.41	56.25	-2,024.03	2,025.32					
100.00	100.00	54.90	54.90	0.13	0.07	-88.41	56.25	-2,024.03	2,024.81	2,024.67	0.14	N/A		
200.00	200.00	154.90	154.90	0.48	0.32	-88.41	56.25	-2,024.03	2,024.81	2,024.23	0.58	3,482.529		
300.00	300.00	254.90	254.90	0.84	0.68	-88.41	56.25	-2,024.03	2,024.81	2,023.73	1.08	1,869.502		
400.00	400.00	354.90	354.90	1.20	1.04	-88.41	56.25	-2,024.03	2,024.81	2,023.23	1.59	1,274.990		
500.00	500.00	454.90	454.90	1.56	1.40	-88.41	56.25	-2,024.03	2,024.81	2,022.72	2.09	966.933		
600.00	600.00	554.90	554.90	1.92	1.76	-88.41	56.25	-2,024.03	2,024.81	2,022.21	2.60	778.653		
700.00	700.00	654.90	654.90	2.28	2.11	-88.41	56.25	-2,024.03	2,024.81	2,021.71	3.11	651.705		
800.00	800.00	754.90	754.90	2.63	2.47	-88.41	56.25	-2,024.03	2,024.81	2,021.20	3.61	560.330		
900.00	900.00	854.90	854.90	2.99	2.83	-88.41	56.25	-2,024.03	2,024.81	2,020.69	4.12	491.419		
1,000.00	1,000.00	954.90	954.90	3.35	3.19	-88.41	56.25	-2,024.03	2,024.81	2,020.19	4.63	437.597		
1,100.00	1,100.00	1,054.90	1,054.90	3.71	3.55	-88.41	56.25	-2,024.03	2,024.81	2,019.68	5.13	394.398		
1,200.00	1,200.00	1,154.90	1,154.90	4.07	3.91	-88.41	56.25	-2,024.03	2,024.81	2,019.17	5.64	358.960		
1,300.00	1,300.00	1,254.90	1,254.90	4.43	4.27	-88.41	56.25	-2,024.03	2,024.81	2,018.67	6.15	329.364		
1,400.00	1,400.00	1,354.90	1,354.90	4.79	4.62	-88.41	56.25	-2,024.03	2,024.81	2,018.16	6.65	304.277		
1,500.00	1,500.00	1,454.90	1,454.90	5.14	4.98	-88.41	56.25	-2,024.03	2,024.81	2,017.65	7.16	282.740		
1,600.00	1,600.00	1,554.90	1,554.90	5.50	5.34	-88.41	56.25	-2,024.03	2,024.81	2,017.15	7.67	264.050		
1,700.00	1,700.00	1,654.90	1,654.90	5.86	5.70	-88.41	56.25	-2,024.03	2,024.81	2,016.64	8.18	247.678		
1,800.00	1,800.00	1,754.90	1,754.90	6.22	6.06	-88.41	56.25	-2,024.03	2,024.81	2,016.13	8.68	233.217		
1,806.09	1,806.09	1,760.99	1,760.99	6.24	6.08	-88.41	56.25	-2,024.03	2,024.81	2,016.10	8.71	232.391 CC		
1,900.00	1,900.00	1,836.04	1,836.04	6.58	6.35	-88.41	56.23	-2,024.20	2,025.07	2,015.93	9.14	221.584 ES		
2,000.00	2,000.00	1,900.00	1,899.99	6.94	6.57	-88.41	56.07	-2,025.33	2,026.85	2,017.30	9.55	212.245		
2,100.00	2,099.99	1,967.20	1,967.15	7.28	6.80	163.29	55.76	-2,027.66	2,031.58	2,021.62	9.95	204.098		
2,200.00	2,199.91	2,032.47	2,032.33	7.62	7.02	163.25	55.30	-2,031.04	2,040.49	2,030.14	10.34	197.254		
2,300.00	2,299.69	2,100.00	2,099.69	7.96	7.25	163.21	54.67	-2,035.70	2,053.57	2,042.83	10.74	191.208		
2,400.00	2,399.27	2,161.58	2,161.04	8.31	7.47	163.16	53.96	-2,040.98	2,070.76	2,059.65	11.12	186.239		
2,500.00	2,498.57	2,225.11	2,224.23	8.66	7.69	163.09	53.08	-2,047.45	2,092.04	2,080.54	11.50	181.916		
2,543.01	2,541.19	2,252.18	2,251.12	8.81	7.79	163.06	52.67	-2,050.53	2,102.44	2,090.78	11.66	180.257		
2,600.00	2,597.60	2,300.00	2,298.57	9.02	7.96	163.09	51.87	-2,056.42	2,117.01	2,105.10	11.91	177.719		
2,700.00	2,696.59	2,350.00	2,348.10	9.38	8.14	163.12	50.96	-2,063.21	2,143.65	2,131.40	12.25	175.007		
2,800.00	2,795.58	2,400.00	2,397.54	9.75	8.32	163.14	49.95	-2,070.64	2,171.93	2,159.35	12.58	172.628		
2,900.00	2,894.57	2,472.62	2,469.15	10.12	8.59	163.17	48.34	-2,082.57	2,201.63	2,188.64	12.98	169.592		
3,000.00	2,993.56	2,557.06	2,552.22	10.50	8.91	163.19	46.31	-2,097.59	2,232.51	2,219.09	13.42	166.350		
3,100.00	3,092.55	2,652.15	2,645.75	10.88	9.28	163.22	44.02	-2,114.55	2,263.47	2,249.57	13.90	162.887		
3,200.00	3,191.55	2,747.23	2,739.28	11.27	9.65	163.25	41.73	-2,131.51	2,294.43	2,280.06	14.37	159.623		
3,300.00	3,290.54	2,842.31	2,832.81	11.65	10.03	163.28	39.43	-2,148.47	2,325.39	2,310.53	14.85	156.543		
3,400.00	3,389.53	2,937.39	2,926.34	12.04	10.42	163.30	37.14	-2,165.43	2,356.35	2,341.01	15.34	153.634		
3,500.00	3,488.52	3,032.47	3,019.87	12.44	10.81	163.33	34.85	-2,182.39	2,387.31	2,371.48	15.82	150.883		
3,600.00	3,587.51	3,127.55	3,113.39	12.83	11.20	163.35	32.56	-2,199.35	2,418.27	2,401.96	16.31	148.279		
3,700.00	3,686.50	3,222.64	3,206.92	13.23	11.60	163.38	30.27	-2,216.31	2,449.23	2,432.43	16.80	145.811		
3,800.00	3,785.49	3,317.72	3,300.45	13.62	11.99	163.40	27.97	-2,233.27	2,480.19	2,462.90	17.29	143.470		
3,900.00	3,884.48	3,412.80	3,393.98	14.02	12.40	163.42	25.68	-2,250.24	2,511.15	2,493.37	17.78	141.246		
4,000.00	3,983.48	3,507.88	3,487.51	14.43	12.80	163.44	23.39	-2,267.20	2,542.11	2,523.84	18.27	139.131		
4,100.00	4,082.47	3,602.96	3,581.04	14.83	13.21	163.47	21.10	-2,284.16	2,573.07	2,554.31	18.77	137.119		
4,200.00	4,181.46	3,698.04	3,674.56	15.23	13.62	163.49	18.81	-2,301.12	2,604.04	2,584.78	19.26	135.202		
4,300.00	4,280.45	3,793.12	3,768.09	15.64	14.03	163.51	16.51	-2,318.08	2,635.00	2,615.24	19.76	133.374		
4,400.00	4,379.44	3,888.21	3,861.62	16.04	14.44	163.53	14.22	-2,335.04	2,665.96	2,645.71	20.25	131.629		
4,500.00	4,478.43	3,983.29	3,955.15	16.45	14.85	163.55	11.93	-2,352.00	2,696.92	2,676.17	20.75	129.961		
4,600.00	4,577.42	4,078.37	4,048.68	16.86	15.27	163.57	9.64	-2,368.96	2,727.89	2,706.64	21.25	128.367		
4,700.00	4,676.41	4,173.45	4,142.21	17.27	15.69	163.59	7.35	-2,385.92	2,758.85	2,737.10	21.75	126.841		
4,800.00	4,775.40	4,268.53	4,235.74	17.68	16.10	163.60	5.05	-2,402.88	2,789.82	2,767.56	22.25	125.379		
4,900.00	4,874.40	4,363.61	4,329.26	18.09	16.52	163.62	2.76	-2,419.84	2,820.78	2,798.03	22.75	123.978		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	4,458.70	4,422.79	18.50	16.94	163.64	0.47	-2,436.80	2,851.74	2,828.49	23.25	122.634		
5,100.00	5,072.38	4,553.78	4,516.32	18.91	17.36	163.66	-1.82	-2,453.77	2,882.71	2,858.95	23.76	121.343		
5,200.00	5,171.37	4,648.86	4,609.85	19.32	17.79	163.68	-4.11	-2,470.73	2,913.67	2,889.41	24.26	120.103		
5,300.00	5,270.36	4,743.94	4,703.38	19.73	18.21	163.69	-6.41	-2,487.69	2,944.64	2,919.88	24.76	118.910		
5,400.00	5,369.35	4,839.02	4,796.91	20.15	18.63	163.71	-8.70	-2,504.65	2,975.60	2,950.34	25.27	117.763		
5,500.00	5,468.34	4,934.10	4,890.43	20.56	19.06	163.72	-10.99	-2,521.61	3,006.57	2,980.80	25.77	116.658		
5,600.00	5,567.33	5,029.18	4,983.96	20.97	19.48	163.74	-13.28	-2,538.57	3,037.54	3,011.26	26.28	115.593		
5,700.00	5,666.33	5,124.27	5,077.49	21.39	19.91	163.76	-15.57	-2,555.53	3,068.50	3,041.72	26.78	114.566		
5,800.00	5,765.32	5,219.35	5,171.02	21.80	20.34	163.77	-17.87	-2,572.49	3,099.47	3,072.18	27.29	113.576		
5,900.00	5,864.31	5,314.43	5,264.55	22.22	20.76	163.78	-20.16	-2,589.45	3,130.44	3,102.64	27.80	112.620		
6,000.00	5,963.30	5,409.51	5,358.08	22.64	21.19	163.80	-22.45	-2,606.41	3,161.40	3,133.10	28.30	111.696		
6,100.00	6,062.29	5,504.59	5,451.61	23.05	21.62	163.81	-24.74	-2,623.37	3,192.37	3,163.56	28.81	110.804		
6,200.00	6,161.28	5,599.67	5,545.13	23.47	22.05	163.83	-27.03	-2,640.33	3,223.34	3,194.02	29.32	109.941		
6,300.00	6,260.27	5,694.76	5,638.66	23.88	22.48	163.84	-29.33	-2,657.30	3,254.30	3,224.48	29.83	109.106		
6,400.00	6,359.26	5,789.84	5,732.19	24.30	22.91	163.85	-31.62	-2,674.26	3,285.27	3,254.93	30.34	108.298		
6,500.00	6,458.26	5,884.92	5,825.72	24.72	23.34	163.87	-33.91	-2,691.22	3,316.24	3,285.39	30.84	107.515		
6,600.00	6,557.25	5,980.00	5,919.25	25.14	23.77	163.88	-36.20	-2,708.18	3,347.21	3,315.85	31.35	106.756		
6,700.00	6,656.24	6,075.08	6,012.78	25.55	24.20	163.89	-38.49	-2,725.14	3,378.17	3,346.31	31.86	106.021		
6,800.00	6,755.23	6,170.16	6,106.31	25.97	24.63	163.91	-40.79	-2,742.10	3,409.14	3,376.77	32.37	105.308		
6,837.97	6,792.81	6,206.26	6,141.82	26.13	24.79	163.91	-41.66	-2,748.54	3,420.90	3,388.33	32.57	105.043		
6,900.00	6,854.29	6,265.39	6,199.98	26.39	25.06	164.00	-43.08	-2,759.09	3,439.65	3,406.77	32.88	104.603		
7,000.00	6,953.65	6,361.31	6,294.33	26.79	25.50	164.12	-45.39	-2,776.20	3,467.92	3,434.53	33.39	103.852		
7,100.00	7,053.27	6,457.90	6,389.35	27.17	25.94	164.21	-47.72	-2,793.43	3,493.77	3,459.87	33.90	103.053		
7,200.00	7,153.09	6,555.11	6,484.96	27.53	26.38	164.28	-50.07	-2,810.77	3,517.18	3,482.77	34.41	102.207		
7,300.00	7,253.03	6,652.86	6,581.12	27.88	26.82	164.33	-52.42	-2,828.20	3,538.14	3,503.22	34.92	101.319		
7,380.98	7,334.00	6,732.37	6,659.33	28.15	27.19	-87.37	-54.34	-2,842.39	3,553.30	3,517.97	35.33	100.580		
7,400.00	7,353.02	6,751.08	6,677.74	28.21	27.27	-87.38	-54.79	-2,845.72	3,556.67	3,521.24	35.42	100.406		
7,500.00	7,453.02	7,485.44	7,407.92	28.53	30.08	-87.57	-63.75	-2,912.03	3,566.24	3,528.34	37.90	94.085		
7,600.00	7,553.02	7,585.44	7,507.92	28.85	30.38	-87.57	-63.75	-2,912.03	3,566.24	3,527.87	38.38	92.926		
7,700.00	7,653.02	7,685.44	7,607.92	29.17	30.69	-87.57	-63.75	-2,912.03	3,566.24	3,527.39	38.85	91.793		
7,800.00	7,753.02	7,785.44	7,707.92	29.49	30.99	-87.57	-63.75	-2,912.03	3,566.24	3,526.92	39.33	90.686		
7,900.00	7,853.02	7,885.44	7,807.92	29.81	31.30	-87.57	-63.75	-2,912.03	3,566.24	3,526.44	39.80	89.603		
8,000.00	7,953.02	7,985.44	7,907.92	30.13	31.61	-87.57	-63.75	-2,912.03	3,566.24	3,525.97	40.28	88.544		
8,100.00	8,053.02	8,085.44	8,007.92	30.46	31.92	-87.57	-63.75	-2,912.03	3,566.24	3,525.49	40.75	87.508		
8,100.98	8,054.00	8,086.43	8,008.90	30.46	31.92	-87.57	-63.75	-2,912.03	3,566.24	3,525.48	40.76	87.498		
8,200.00	8,153.02	8,169.88	8,092.30	30.78	32.18	-87.54	-61.80	-2,912.05	3,566.38	3,525.19	41.19	86.576		
8,300.00	8,253.02	8,250.00	8,171.43	31.11	32.41	-87.34	-49.64	-2,912.17	3,567.20	3,525.58	41.62	85.719		
8,400.00	8,353.02	8,313.45	8,232.41	31.43	32.59	-87.06	-32.25	-2,912.35	3,568.83	3,526.84	41.99	84.994		
8,500.00	8,453.02	8,377.90	8,292.01	31.76	32.75	-86.67	-7.79	-2,912.59	3,571.49	3,529.14	42.35	84.323		
8,600.00	8,553.02	8,436.12	8,343.18	32.09	32.89	-86.23	19.92	-2,912.87	3,575.40	3,532.70	42.70	83.739		
8,700.00	8,653.02	8,487.94	8,386.15	32.42	32.99	-85.77	48.85	-2,913.15	3,580.78	3,537.77	43.01	83.247		
8,800.00	8,753.02	8,533.65	8,421.75	32.74	33.08	-85.31	77.50	-2,913.44	3,587.85	3,544.54	43.31	82.847		
8,900.00	8,853.02	8,573.78	8,451.04	33.07	33.15	-84.87	104.92	-2,913.71	3,596.79	3,553.21	43.57	82.545		
9,000.00	8,953.02	8,600.00	8,469.11	33.40	33.19	-84.57	123.91	-2,913.90	3,607.76	3,563.96	43.80	82.377		
9,100.00	9,053.02	8,650.00	8,501.08	33.73	33.27	-83.96	162.34	-2,914.28	3,620.84	3,576.79	44.06	82.184		
9,200.00	9,153.02	8,667.03	8,511.18	34.07	33.30	-83.74	176.04	-2,914.42	3,636.10	3,591.87	44.23	82.216		
9,300.00	9,253.02	8,700.00	8,529.57	34.40	33.34	-83.31	203.40	-2,914.69	3,653.68	3,609.26	44.41	82.262		
9,400.00	9,353.02	8,700.00	8,529.57	34.73	33.34	-83.31	203.40	-2,914.69	3,673.56	3,629.06	44.50	82.548		
9,500.00	9,453.02	8,731.22	8,545.51	35.06	33.39	-82.88	230.24	-2,914.96	3,695.68	3,651.02	44.66	82.760		
9,600.00	9,553.02	8,750.00	8,554.38	35.39	33.41	-82.62	246.79	-2,915.12	3,720.18	3,675.42	44.76	83.120		
9,700.00	9,653.02	8,750.00	8,554.38	35.73	33.41	-82.62	246.79	-2,915.12	3,747.06	3,702.27	44.79	83.663		
9,800.00	9,753.02	8,777.05	8,566.19	36.06	33.45	-82.24	271.12	-2,915.36	3,776.08	3,731.20	44.88	84.137		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,853.02	8,800.00	8,575.31	36.40	33.49	-81.91	292.18	-2,915.57	3,807.49	3,762.55	44.95	84.713		
10,000.00	9,953.02	8,800.00	8,575.31	36.73	33.49	-81.91	292.18	-2,915.57	3,841.03	3,796.10	44.93	85.486		
10,100.00	10,053.02	8,800.00	8,575.31	37.07	33.49	-81.91	292.18	-2,915.57	3,876.86	3,831.96	44.90	86.337		
10,200.00	10,153.02	8,820.41	8,582.70	37.40	33.52	-81.61	311.20	-2,915.76	3,914.71	3,869.78	44.93	87.134		
10,300.00	10,253.02	8,829.04	8,585.63	37.74	33.53	-81.48	319.33	-2,915.84	3,954.71	3,909.80	44.91	88.068		
10,400.00	10,353.02	8,850.00	8,592.21	38.08	33.56	-81.17	339.22	-2,916.04	3,996.83	3,951.91	44.91	88.994		
10,500.00	10,453.02	8,850.00	8,592.21	38.41	33.56	-81.17	339.22	-2,916.04	4,040.76	3,995.91	44.85	90.100		
10,600.00	10,553.02	8,850.00	8,592.21	38.75	33.56	-81.17	339.22	-2,916.04	4,086.67	4,041.90	44.78	91.267		
10,700.00	10,653.02	8,850.00	8,592.21	39.09	33.56	-81.17	339.22	-2,916.04	4,134.49	4,089.79	44.70	92.490		
10,800.00	10,753.02	8,850.00	8,592.21	39.43	33.56	-81.17	339.22	-2,916.04	4,184.16	4,139.54	44.62	93.766		
10,900.00	10,853.02	8,850.00	8,592.21	39.77	33.56	-81.17	339.22	-2,916.04	4,235.60	4,191.06	44.54	95.091		
11,000.00	10,953.02	8,873.96	8,598.83	40.10	33.60	-80.81	362.24	-2,916.27	4,288.41	4,243.88	44.54	96.289		
11,100.00	11,053.02	8,878.76	8,600.05	40.44	33.61	-80.74	366.89	-2,916.32	4,343.06	4,298.59	44.47	97.661		
11,200.00	11,153.02	8,900.00	8,604.94	40.78	33.65	-80.41	387.55	-2,916.52	4,399.45	4,355.00	44.45	98.965		
11,300.00	11,253.02	8,900.00	8,604.94	41.12	33.65	-80.41	387.55	-2,916.52	4,457.11	4,412.73	44.38	100.436		
11,400.00	11,353.02	8,900.00	8,604.94	41.46	33.65	-80.41	387.55	-2,916.52	4,516.24	4,471.93	44.30	101.940		
11,500.00	11,453.02	8,900.00	8,604.94	41.80	33.65	-80.41	387.55	-2,916.52	4,576.79	4,532.56	44.23	103.471		
11,566.02	11,519.04	8,900.00	8,604.94	42.03	33.65	-80.41	387.55	-2,916.52	4,617.52	4,573.33	44.19	104.496		
11,600.00	11,553.02	8,900.00	8,604.94	42.14	33.65	-77.25	387.55	-2,916.52	4,638.55	4,594.39	44.17	105.026		
11,650.00	11,602.72	8,900.00	8,604.94	42.31	33.65	-73.51	387.55	-2,916.52	4,669.14	4,625.01	44.13	105.805		
11,700.00	11,651.80	8,900.00	8,604.94	42.46	33.65	-69.96	387.55	-2,916.52	4,699.07	4,654.98	44.09	106.575		
11,750.00	11,699.87	8,900.00	8,604.94	42.61	33.65	-66.64	387.55	-2,916.52	4,728.15	4,684.10	44.05	107.331		
11,800.00	11,746.57	8,900.00	8,604.94	42.75	33.65	-63.57	387.55	-2,916.52	4,756.16	4,712.15	44.01	108.068		
11,850.00	11,791.53	8,900.00	8,604.94	42.87	33.65	-60.77	387.55	-2,916.52	4,782.92	4,738.95	43.97	108.780		
11,900.00	11,834.42	8,921.85	8,609.17	42.98	33.70	-58.06	408.99	-2,916.74	4,807.91	4,763.92	43.99	109.292		
11,950.00	11,874.92	8,927.22	8,610.08	43.08	33.71	-55.78	414.27	-2,916.79	4,831.44	4,787.48	43.97	109.890		
12,000.00	11,912.70	8,950.00	8,613.41	43.17	33.76	-53.66	436.81	-2,917.01	4,853.36	4,809.37	43.99	110.326		
12,050.00	11,947.48	8,950.00	8,613.41	43.24	33.76	-51.96	436.81	-2,917.01	4,872.99	4,829.04	43.96	110.861		
12,100.00	11,979.01	8,950.00	8,613.41	43.29	33.76	-50.50	436.81	-2,917.01	4,890.57	4,846.64	43.93	111.337		
12,150.00	12,007.03	8,950.00	8,613.41	43.34	33.76	-49.26	436.81	-2,917.01	4,905.99	4,862.08	43.90	111.748		
12,200.00	12,031.34	8,950.00	8,613.41	43.37	33.76	-48.23	436.81	-2,917.01	4,919.14	4,875.26	43.89	112.087		
12,250.00	12,051.76	8,950.00	8,613.41	43.40	33.76	-47.41	436.81	-2,917.01	4,929.96	4,886.08	43.88	112.349		
12,300.00	12,068.11	8,972.23	8,615.79	43.43	33.81	-46.75	458.91	-2,917.23	4,938.01	4,894.07	43.95	112.366		
12,350.00	12,080.29	9,000.00	8,617.55	43.46	33.88	-46.30	486.62	-2,917.51	4,944.01	4,899.97	44.03	112.276		
12,400.00	12,088.20	9,000.00	8,617.55	43.51	33.88	-46.09	486.62	-2,917.51	4,946.95	4,902.89	44.06	112.266		
12,450.00	12,091.77	9,000.00	8,617.55	43.58	33.88	-46.06	486.62	-2,917.51	4,947.38	4,903.28	44.11	112.164		
12,466.02	12,092.00	9,000.00	8,617.55	43.60	33.88	-46.08	486.62	-2,917.51	4,946.99	4,902.86	44.13	112.111		
12,500.00	12,092.00	9,000.00	8,617.55	43.67	33.88	-46.08	486.62	-2,917.51	4,945.99	4,901.82	44.17	111.986		
12,600.00	12,092.00	9,022.57	8,618.00	43.93	33.94	-46.09	509.18	-2,917.73	4,944.29	4,899.92	44.37	111.433		
12,650.85	12,092.00	9,022.57	8,618.00	44.10	33.94	-46.09	509.18	-2,917.73	4,944.03	4,899.56	44.47	111.186		
12,700.00	12,092.00	9,069.86	8,618.00	44.27	34.09	-46.09	556.47	-2,918.20	4,944.04	4,899.36	44.68	110.657		
12,800.00	12,092.00	9,169.86	8,618.00	44.68	34.46	-46.09	656.47	-2,919.20	4,944.08	4,898.90	45.18	109.432		
12,900.00	12,092.00	9,269.86	8,618.00	45.15	34.93	-46.09	756.46	-2,920.19	4,944.12	4,898.37	45.75	108.072		
13,000.00	12,092.00	9,369.86	8,618.00	45.68	35.49	-46.09	856.46	-2,921.19	4,944.16	4,897.77	46.38	106.593		
13,100.00	12,092.00	9,469.86	8,618.00	46.26	36.12	-46.09	956.45	-2,922.18	4,944.19	4,897.11	47.08	105.011		
13,200.00	12,092.00	9,569.86	8,618.00	46.89	36.83	-46.09	1,056.45	-2,923.18	4,944.23	4,896.39	47.84	103.343		
13,300.00	12,092.00	9,669.86	8,618.00	47.57	37.60	-46.09	1,156.44	-2,924.17	4,944.27	4,895.61	48.66	101.606		
13,400.00	12,092.00	9,769.86	8,618.00	48.30	38.43	-46.09	1,256.44	-2,925.17	4,944.30	4,894.77	49.53	99.815		
13,500.00	12,092.00	9,869.86	8,618.00	49.06	39.31	-46.09	1,356.43	-2,926.16	4,944.34	4,893.88	50.46	97.983		
13,600.00	12,092.00	9,969.86	8,618.00	49.88	40.25	-46.09	1,456.43	-2,927.16	4,944.38	4,892.94	51.44	96.125		
13,700.00	12,092.00	10,069.86	8,618.00	50.73	41.23	-46.09	1,556.42	-2,928.15	4,944.42	4,891.96	52.46	94.252		
13,800.00	12,092.00	10,169.86	8,618.00	51.62	42.25	-46.09	1,656.42	-2,929.14	4,944.45	4,890.93	53.53	92.374		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	10,269.86	8,618.00	52.54	43.32	-46.09	1,756.41	-2,930.14	4,944.49	4,889.86	54.63	90.501		
14,000.00	12,092.00	10,369.86	8,618.00	53.51	44.42	-46.09	1,856.41	-2,931.13	4,944.53	4,888.75	55.78	88.640		
14,100.00	12,092.00	10,469.86	8,618.00	54.50	45.55	-46.09	1,956.40	-2,932.13	4,944.57	4,887.60	56.97	86.798		
14,200.00	12,092.00	10,569.86	8,618.00	55.52	46.71	-46.10	2,056.40	-2,933.12	4,944.60	4,886.42	58.19	84.980		
14,300.00	12,092.00	10,669.86	8,618.00	56.58	47.91	-46.10	2,156.39	-2,934.12	4,944.64	4,885.21	59.43	83.195		
14,400.00	12,092.00	10,769.86	8,618.00	57.66	49.13	-46.10	2,256.39	-2,935.11	4,944.68	4,883.96	60.71	81.444		
14,500.00	12,092.00	10,869.86	8,618.00	58.77	50.37	-46.10	2,356.38	-2,936.11	4,944.72	4,882.70	62.02	79.728		
14,600.00	12,092.00	10,969.86	8,618.00	59.90	51.64	-46.10	2,456.38	-2,937.10	4,944.75	4,881.40	63.35	78.050		
14,700.00	12,092.00	11,069.86	8,618.00	61.06	52.93	-46.10	2,556.37	-2,938.10	4,944.79	4,880.08	64.71	76.412		
14,800.00	12,092.00	11,169.86	8,618.00	62.24	54.24	-46.10	2,656.37	-2,939.09	4,944.83	4,878.73	66.09	74.814		
14,900.00	12,092.00	11,269.86	8,618.00	63.44	55.56	-46.10	2,756.36	-2,940.09	4,944.86	4,877.37	67.50	73.259		
15,000.00	12,092.00	11,369.86	8,618.00	64.66	56.91	-46.10	2,856.36	-2,941.08	4,944.90	4,875.98	68.92	71.744		
15,100.00	12,092.00	11,469.86	8,618.00	65.90	58.26	-46.10	2,956.35	-2,942.08	4,944.94	4,874.57	70.37	70.271		
15,200.00	12,092.00	11,569.86	8,618.00	67.16	59.64	-46.10	3,056.35	-2,943.07	4,944.98	4,873.14	71.83	68.840		
15,300.00	12,092.00	11,669.86	8,618.00	68.43	61.03	-46.10	3,156.34	-2,944.06	4,945.01	4,871.70	73.31	67.450		
15,400.00	12,092.00	11,769.86	8,618.00	69.72	62.43	-46.10	3,256.34	-2,945.06	4,945.05	4,870.24	74.81	66.102		
15,500.00	12,092.00	11,869.86	8,618.00	71.02	63.84	-46.10	3,356.33	-2,946.05	4,945.09	4,868.77	76.32	64.795		
15,600.00	12,092.00	11,969.86	8,618.00	72.34	65.26	-46.10	3,456.33	-2,947.05	4,945.13	4,867.28	77.84	63.527		
15,700.00	12,092.00	12,069.86	8,618.00	73.67	66.70	-46.10	3,556.32	-2,948.04	4,945.16	4,865.78	79.38	62.296		
15,800.00	12,092.00	12,169.86	8,618.00	75.02	68.14	-46.10	3,656.32	-2,949.04	4,945.20	4,864.27	80.93	61.103		
15,900.00	12,092.00	12,269.86	8,618.00	76.37	69.60	-46.10	3,756.31	-2,950.03	4,945.24	4,862.74	82.49	59.948		
16,000.00	12,092.00	12,369.86	8,618.00	77.74	71.06	-46.10	3,856.31	-2,951.03	4,945.27	4,861.21	84.06	58.827		
16,100.00	12,092.00	12,469.86	8,618.00	79.12	72.53	-46.10	3,956.30	-2,952.02	4,945.31	4,859.67	85.65	57.741		
16,200.00	12,092.00	12,569.86	8,618.00	80.51	74.01	-46.10	4,056.30	-2,953.02	4,945.35	4,858.11	87.24	56.687		
16,300.00	12,092.00	12,669.86	8,618.00	81.91	75.49	-46.10	4,156.30	-2,954.01	4,945.39	4,856.54	88.84	55.665		
16,400.00	12,092.00	12,769.86	8,618.00	83.31	76.98	-46.10	4,256.29	-2,955.01	4,945.42	4,854.97	90.45	54.673		
16,500.00	12,092.00	12,869.86	8,618.00	84.73	78.48	-46.10	4,356.29	-2,956.00	4,945.46	4,853.39	92.07	53.711		
16,600.00	12,092.00	12,969.86	8,618.00	86.16	79.99	-46.11	4,456.28	-2,957.00	4,945.50	4,851.80	93.70	52.778		
16,700.00	12,092.00	13,069.86	8,618.00	87.59	81.50	-46.11	4,556.28	-2,957.99	4,945.54	4,850.20	95.34	51.873		
16,800.00	12,092.00	13,169.86	8,618.00	89.03	83.01	-46.11	4,656.27	-2,958.98	4,945.57	4,848.59	96.98	50.994		
16,900.00	12,092.00	13,269.86	8,618.00	90.48	84.53	-46.11	4,756.27	-2,959.98	4,945.61	4,846.98	98.63	50.142		
17,000.00	12,092.00	13,369.86	8,618.00	91.93	86.06	-46.11	4,856.26	-2,960.97	4,945.65	4,845.36	100.29	49.316		
17,100.00	12,092.00	13,469.86	8,618.00	93.39	87.59	-46.11	4,956.26	-2,961.97	4,945.69	4,843.74	101.95	48.513		
17,200.00	12,092.00	13,569.86	8,618.00	94.86	89.12	-46.11	5,056.25	-2,962.96	4,945.72	4,842.11	103.61	47.733		
17,300.00	12,092.00	13,669.86	8,618.00	96.33	90.66	-46.11	5,156.25	-2,963.96	4,945.76	4,840.48	105.28	46.975		
17,400.00	12,092.00	13,769.86	8,618.00	97.81	92.20	-46.11	5,256.24	-2,964.95	4,945.80	4,838.84	106.96	46.239		
17,500.00	12,092.00	13,869.86	8,618.00	99.30	93.75	-46.11	5,356.24	-2,965.95	4,945.83	4,837.19	108.64	45.523		
17,600.00	12,092.00	13,969.86	8,618.00	100.79	95.30	-46.11	5,456.23	-2,966.94	4,945.87	4,835.54	110.33	44.827		
17,700.00	12,092.00	14,069.86	8,618.00	102.28	96.85	-46.11	5,556.23	-2,967.94	4,945.91	4,833.89	112.02	44.151		
17,800.00	12,092.00	14,169.86	8,618.00	103.78	98.41	-46.11	5,656.22	-2,968.93	4,945.95	4,832.23	113.72	43.492		
17,900.00	12,092.00	14,269.86	8,618.00	105.29	99.97	-46.11	5,756.22	-2,969.93	4,945.98	4,830.56	115.42	42.852		
18,000.00	12,092.00	14,369.86	8,618.00	106.80	101.53	-46.11	5,856.21	-2,970.92	4,946.02	4,828.89	117.13	42.228		
18,100.00	12,092.00	14,469.86	8,618.00	108.31	103.09	-46.11	5,956.21	-2,971.92	4,946.06	4,827.22	118.84	41.621		
18,200.00	12,092.00	14,569.86	8,618.00	109.83	104.66	-46.11	6,056.20	-2,972.91	4,946.10	4,825.55	120.55	41.030		
18,300.00	12,092.00	14,669.86	8,618.00	111.35	106.23	-46.11	6,156.20	-2,973.90	4,946.13	4,823.87	122.26	40.454		
18,400.00	12,092.00	14,769.86	8,618.00	112.87	107.80	-46.11	6,256.19	-2,974.90	4,946.17	4,822.19	123.98	39.894		
18,500.00	12,092.00	14,869.86	8,618.00	114.40	109.38	-46.11	6,356.19	-2,975.89	4,946.21	4,820.51	125.70	39.349		
18,600.00	12,092.00	14,969.86	8,618.00	115.93	110.96	-46.11	6,456.18	-2,976.88	4,946.25	4,818.82	127.42	38.817		
18,700.00	12,092.00	15,069.86	8,618.00	117.46	112.54	-46.11	6,556.18	-2,977.88	4,946.28	4,817.13	129.15	38.299		
18,800.00	12,092.00	15,169.86	8,618.00	119.00	114.12	-46.11	6,656.17	-2,978.88	4,946.32	4,815.44	130.88	37.793		
18,900.00	12,092.00	15,269.86	8,618.00	120.54	115.70	-46.11	6,756.17	-2,979.87	4,946.36	4,813.75	132.61	37.300		
19,000.00	12,092.00	15,369.86	8,618.00	122.09	117.29	-46.12	6,856.16	-2,980.87	4,946.39	4,812.05	134.35	36.818		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,100.00	12,092.00	15,469.86	8,618.00	123.63	118.87	-46.12	6,956.16	-2,981.86	4,946.43	4,810.35	136.09	36.348		
19,200.00	12,092.00	15,569.86	8,618.00	125.18	120.46	-46.12	7,056.15	-2,982.86	4,946.47	4,808.64	137.83	35.889		
19,300.00	12,092.00	15,669.86	8,618.00	126.73	122.05	-46.12	7,156.15	-2,983.85	4,946.51	4,806.94	139.57	35.441		
19,400.00	12,092.00	15,769.86	8,618.00	128.29	123.65	-46.12	7,256.14	-2,984.85	4,946.54	4,805.23	141.31	35.005		
19,500.00	12,092.00	15,869.86	8,618.00	129.84	125.24	-46.12	7,356.14	-2,985.84	4,946.58	4,803.53	143.05	34.578		
19,600.00	12,092.00	15,969.86	8,618.00	131.40	126.84	-46.12	7,456.13	-2,986.84	4,946.62	4,801.82	144.80	34.161		
19,700.00	12,092.00	16,069.86	8,618.00	132.96	128.43	-46.12	7,556.13	-2,987.83	4,946.66	4,800.10	146.55	33.753		
19,800.00	12,092.00	16,169.86	8,618.00	134.53	130.03	-46.12	7,656.12	-2,988.82	4,946.69	4,798.39	148.30	33.355		
19,900.00	12,092.00	16,269.86	8,618.00	136.09	131.63	-46.12	7,756.12	-2,989.82	4,946.73	4,796.68	150.06	32.966		
20,000.00	12,092.00	16,369.86	8,618.00	137.66	133.23	-46.12	7,856.11	-2,990.81	4,946.77	4,794.96	151.81	32.586		
20,100.00	12,092.00	16,469.86	8,618.00	139.23	134.83	-46.12	7,956.11	-2,991.81	4,946.81	4,793.24	153.56	32.214		
20,200.00	12,092.00	16,569.86	8,618.00	140.80	136.44	-46.12	8,056.10	-2,992.80	4,946.84	4,791.52	155.32	31.850		
20,300.00	12,092.00	16,669.86	8,618.00	142.37	138.04	-46.12	8,156.10	-2,993.80	4,946.88	4,789.80	157.08	31.493		
20,400.00	12,092.00	16,769.86	8,618.00	143.95	139.65	-46.12	8,256.09	-2,994.79	4,946.92	4,788.08	158.84	31.144		
20,500.00	12,092.00	16,869.86	8,618.00	145.53	141.25	-46.12	8,356.09	-2,995.79	4,946.95	4,786.35	160.60	30.803		
20,600.00	12,092.00	16,969.86	8,618.00	147.10	142.86	-46.12	8,456.08	-2,996.78	4,946.99	4,784.63	162.37	30.468		
20,700.00	12,092.00	17,069.86	8,618.00	148.68	144.47	-46.12	8,556.08	-2,997.78	4,947.03	4,782.90	164.13	30.141		
20,800.00	12,092.00	17,169.86	8,618.00	150.27	146.08	-46.12	8,656.07	-2,998.77	4,947.07	4,781.17	165.89	29.821		
20,900.00	12,092.00	17,269.86	8,618.00	151.85	147.69	-46.12	8,756.07	-2,999.77	4,947.10	4,779.44	167.66	29.507		
21,000.00	12,092.00	17,369.86	8,618.00	153.43	149.30	-46.12	8,856.06	-3,000.76	4,947.14	4,777.72	169.43	29.200		
21,100.00	12,092.00	17,469.86	8,618.00	155.02	150.91	-46.12	8,956.06	-3,001.76	4,947.18	4,775.99	171.19	28.898		
21,200.00	12,092.00	17,569.86	8,618.00	156.61	152.53	-46.12	9,056.05	-3,002.75	4,947.22	4,774.25	172.96	28.603		
21,300.00	12,092.00	17,669.86	8,618.00	158.19	154.14	-46.12	9,156.05	-3,003.74	4,947.25	4,772.52	174.73	28.314		
21,400.00	12,092.00	17,769.86	8,618.00	159.78	155.76	-46.13	9,256.04	-3,004.74	4,947.29	4,770.79	176.50	28.030		
21,500.00	12,092.00	17,869.86	8,618.00	161.38	157.37	-46.13	9,356.04	-3,005.73	4,947.33	4,769.05	178.27	27.751		
21,600.00	12,092.00	17,969.86	8,618.00	162.97	158.99	-46.13	9,456.03	-3,006.73	4,947.37	4,767.32	180.05	27.478		
21,700.00	12,092.00	18,069.86	8,618.00	164.56	160.60	-46.13	9,556.03	-3,007.72	4,947.40	4,765.58	181.82	27.210		
21,800.00	12,092.00	18,169.86	8,618.00	166.16	162.22	-46.13	9,656.02	-3,008.72	4,947.44	4,763.84	183.60	26.947		
21,900.00	12,092.00	18,269.86	8,618.00	167.75	163.84	-46.13	9,756.02	-3,009.71	4,947.48	4,762.10	185.37	26.689		
22,000.00	12,092.00	18,369.86	8,618.00	169.35	165.46	-46.13	9,856.01	-3,010.71	4,947.51	4,760.36	187.15	26.436		
22,100.00	12,092.00	18,469.86	8,618.00	170.95	167.08	-46.13	9,956.01	-3,011.70	4,947.55	4,758.62	188.93	26.187		
22,200.00	12,092.00	18,569.86	8,618.00	172.55	168.70	-46.13	10,056.00	-3,012.70	4,947.59	4,756.88	190.70	25.944		
22,255.91	12,092.00	18,625.78	8,618.00	173.44	169.61	-46.13	10,111.91	-3,013.25	4,947.61	4,755.91	191.70	25.809 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.35	56.72	-1,974.21	1,975.50					
100.00	100.00	56.80	56.80	0.13	0.07	-88.35	56.72	-1,974.21	1,975.03	1,974.88	0.14	N/A		
200.00	200.00	156.80	156.80	0.48	0.33	-88.35	56.72	-1,974.21	1,975.03	1,974.44	0.59	3,374.826		
300.00	300.00	256.80	256.80	0.84	0.69	-88.35	56.72	-1,974.21	1,975.03	1,973.94	1.09	1,816.333		
400.00	400.00	356.80	356.80	1.20	1.05	-88.35	56.72	-1,974.21	1,975.03	1,973.43	1.59	1,240.153		
500.00	500.00	456.80	456.80	1.56	1.40	-88.35	56.72	-1,974.21	1,975.03	1,972.93	2.10	941.111		
600.00	600.00	556.80	556.80	1.92	1.76	-88.35	56.72	-1,974.21	1,975.03	1,972.42	2.61	758.165		
700.00	700.00	656.80	656.80	2.28	2.12	-88.35	56.72	-1,974.21	1,975.03	1,971.92	3.11	634.732		
800.00	800.00	756.80	756.80	2.63	2.48	-88.35	56.72	-1,974.21	1,975.03	1,971.41	3.62	545.848		
900.00	900.00	856.80	856.80	2.99	2.84	-88.35	56.72	-1,974.21	1,975.03	1,970.90	4.13	478.791		
1,000.00	1,000.00	956.80	956.80	3.35	3.20	-88.35	56.72	-1,974.21	1,975.03	1,970.40	4.63	426.404		
1,100.00	1,100.00	1,056.80	1,056.80	3.71	3.56	-88.35	56.72	-1,974.21	1,975.03	1,969.89	5.14	384.347		
1,200.00	1,200.00	1,156.80	1,156.80	4.07	3.91	-88.35	56.72	-1,974.21	1,975.03	1,969.38	5.65	349.841		
1,300.00	1,300.00	1,256.80	1,256.80	4.43	4.27	-88.35	56.72	-1,974.21	1,975.03	1,968.88	6.15	321.019		
1,400.00	1,400.00	1,356.80	1,356.80	4.79	4.63	-88.35	56.72	-1,974.21	1,975.03	1,968.37	6.66	296.584		
1,500.00	1,500.00	1,456.80	1,456.80	5.14	4.99	-88.35	56.72	-1,974.21	1,975.03	1,967.86	7.17	275.605		
1,600.00	1,600.00	1,556.80	1,556.80	5.50	5.35	-88.35	56.72	-1,974.21	1,975.03	1,967.35	7.67	257.398		
1,700.00	1,700.00	1,656.80	1,656.80	5.86	5.71	-88.35	56.72	-1,974.21	1,975.03	1,966.85	8.18	241.447		
1,800.00	1,800.00	1,756.80	1,756.80	6.22	6.06	-88.35	56.72	-1,974.21	1,975.03	1,966.34	8.69	227.358		
1,900.00	1,900.00	1,856.80	1,856.80	6.58	6.42	-88.35	56.72	-1,974.21	1,975.03	1,965.83	9.19	214.822		
2,000.00	2,000.00	1,956.80	1,956.80	6.94	6.78	-88.35	56.72	-1,974.21	1,975.03	1,965.33	9.70	203.596		
2,100.00	2,099.99	2,111.34	2,111.33	7.28	7.32	163.37	56.15	-1,972.69	1,975.50	1,965.17	10.32	191.366		
2,200.00	2,199.91	2,307.30	2,306.97	7.62	7.99	163.34	52.42	-1,962.63	1,974.07	1,963.06	11.01	179.337		
2,300.00	2,299.69	2,485.17	2,483.88	7.96	8.60	163.28	46.03	-1,945.40	1,970.38	1,958.73	11.64	169.204		
2,400.00	2,399.27	2,585.12	2,583.08	8.31	8.96	163.26	41.80	-1,933.98	1,967.59	1,955.46	12.13	162.242		
2,461.33	2,460.21	2,646.45	2,643.95	8.52	9.18	163.25	39.20	-1,926.97	1,967.12	1,954.69	12.43	158.314 CC		
2,500.00	2,498.57	2,685.12	2,682.33	8.66	9.32	163.24	37.56	-1,922.55	1,967.30	1,954.69	12.61	155.966 ES		
2,543.01	2,541.19	2,728.13	2,725.02	8.81	9.47	163.24	35.74	-1,917.64	1,967.95	1,955.13	12.82	153.460		
2,600.00	2,597.60	2,785.10	2,781.57	9.02	9.68	163.24	33.33	-1,911.13	1,969.12	1,956.02	13.10	150.280		
2,700.00	2,696.59	2,885.08	2,880.80	9.38	10.05	163.25	29.09	-1,899.70	1,971.17	1,957.57	13.60	144.988		
2,800.00	2,795.58	2,985.06	2,980.04	9.75	10.42	163.25	24.85	-1,888.28	1,973.22	1,959.12	14.09	140.037		
2,900.00	2,894.57	3,085.04	3,079.27	10.12	10.79	163.25	20.62	-1,876.85	1,975.26	1,960.67	14.59	135.399		
3,000.00	2,993.56	3,185.02	3,178.50	10.50	11.17	163.26	16.38	-1,865.43	1,977.31	1,962.22	15.09	131.046		
3,100.00	3,092.55	3,285.00	3,277.74	10.88	11.54	163.26	12.15	-1,854.00	1,979.36	1,963.77	15.59	126.956		
3,200.00	3,191.55	3,384.98	3,376.97	11.27	11.92	163.27	7.91	-1,842.58	1,981.41	1,965.31	16.10	123.106		
3,300.00	3,290.54	3,484.95	3,476.20	11.65	12.31	163.27	3.67	-1,831.16	1,983.45	1,966.85	16.60	119.478		
3,400.00	3,389.53	3,584.93	3,575.44	12.04	12.69	163.28	-0.56	-1,819.73	1,985.50	1,968.39	17.11	116.053		
3,500.00	3,488.52	3,684.91	3,674.67	12.44	13.07	163.28	-4.80	-1,808.31	1,987.55	1,969.93	17.62	112.817		
3,600.00	3,587.51	3,784.89	3,773.91	12.83	13.46	163.29	-9.03	-1,796.88	1,989.60	1,971.47	18.13	109.755		
3,700.00	3,686.50	3,884.87	3,873.14	13.23	13.85	163.29	-13.27	-1,785.46	1,991.64	1,973.00	18.64	106.853		
3,800.00	3,785.49	3,984.85	3,972.37	13.62	14.24	163.29	-17.50	-1,774.03	1,993.69	1,974.54	19.15	104.100		
3,900.00	3,884.48	4,084.83	4,071.61	14.02	14.63	163.30	-21.74	-1,762.61	1,995.74	1,976.07	19.67	101.485		
4,000.00	3,983.48	4,184.81	4,170.84	14.43	15.02	163.30	-25.98	-1,751.18	1,997.79	1,977.61	20.18	98.999		
4,100.00	4,082.47	4,284.79	4,270.07	14.83	15.41	163.31	-30.21	-1,739.76	1,999.83	1,979.14	20.70	96.632		
4,200.00	4,181.46	4,384.77	4,369.31	15.23	15.80	163.31	-34.45	-1,728.33	2,001.88	1,980.67	21.21	94.377		
4,300.00	4,280.45	4,484.74	4,468.54	15.64	16.20	163.32	-38.68	-1,716.91	2,003.93	1,982.20	21.73	92.226		
4,400.00	4,379.44	4,584.72	4,567.77	16.04	16.59	163.32	-42.92	-1,705.48	2,005.98	1,983.73	22.25	90.172		
4,500.00	4,478.43	4,684.70	4,667.01	16.45	16.98	163.33	-47.16	-1,694.06	2,008.03	1,985.26	22.76	88.209		
4,600.00	4,577.42	4,784.68	4,766.24	16.86	17.38	163.33	-51.39	-1,682.63	2,010.07	1,986.79	23.28	86.331		
4,700.00	4,676.41	4,884.66	4,865.47	17.27	17.78	163.33	-55.63	-1,671.21	2,012.12	1,988.32	23.80	84.532		
4,800.00	4,775.40	4,984.64	4,964.71	17.68	18.17	163.34	-59.86	-1,659.78	2,014.17	1,989.85	24.32	82.809		
4,900.00	4,874.40	5,084.62	5,063.94	18.09	18.57	163.34	-64.10	-1,648.36	2,016.22	1,991.37	24.84	81.157		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	5,184.60	5,163.18	18.50	18.97	163.35	-68.34	-1,636.93	2,018.27	1,992.90	25.36	79.570		
5,100.00	5,072.38	5,284.58	5,262.41	18.91	19.37	163.35	-72.57	-1,625.51	2,020.31	1,994.43	25.89	78.046		
5,200.00	5,171.37	5,384.55	5,361.64	19.32	19.77	163.36	-76.81	-1,614.08	2,022.36	1,995.95	26.41	76.582		
5,300.00	5,270.36	5,484.53	5,460.88	19.73	20.16	163.36	-81.04	-1,602.66	2,024.41	1,997.48	26.93	75.173		
5,400.00	5,369.35	5,584.51	5,560.11	20.15	20.56	163.37	-85.28	-1,591.23	2,026.46	1,999.00	27.45	73.816		
5,500.00	5,468.34	5,684.49	5,659.34	20.56	20.96	163.37	-89.52	-1,579.81	2,028.50	2,000.53	27.98	72.510		
5,600.00	5,567.33	5,784.47	5,758.58	20.97	21.36	163.37	-93.75	-1,568.38	2,030.55	2,002.05	28.50	71.250		
5,700.00	5,666.33	5,884.45	5,857.81	21.39	21.76	163.38	-97.99	-1,556.96	2,032.60	2,003.58	29.02	70.035		
5,800.00	5,765.32	5,984.43	5,957.04	21.80	22.17	163.38	-102.22	-1,545.54	2,034.65	2,005.10	29.55	68.863		
5,900.00	5,864.31	6,084.41	6,056.28	22.22	22.57	163.39	-106.46	-1,534.11	2,036.70	2,006.63	30.07	67.731		
6,000.00	5,963.30	6,184.39	6,155.51	22.64	22.97	163.39	-110.70	-1,522.69	2,038.74	2,008.15	30.59	66.637		
6,100.00	6,062.29	6,284.36	6,254.75	23.05	23.37	163.40	-114.93	-1,511.26	2,040.79	2,009.67	31.12	65.579		
6,200.00	6,161.28	6,384.34	6,353.98	23.47	23.77	163.40	-119.17	-1,499.84	2,042.84	2,011.20	31.64	64.556		
6,300.00	6,260.27	6,484.32	6,453.21	23.88	24.17	163.40	-123.40	-1,488.41	2,044.89	2,012.72	32.17	63.566		
6,400.00	6,359.26	6,584.30	6,552.45	24.30	24.58	163.41	-127.64	-1,476.99	2,046.94	2,014.24	32.69	62.607		
6,500.00	6,458.26	6,684.28	6,651.68	24.72	24.98	163.41	-131.88	-1,465.56	2,048.98	2,015.76	33.22	61.678		
6,600.00	6,557.25	6,784.26	6,750.91	25.14	25.38	163.42	-136.11	-1,454.14	2,051.03	2,017.29	33.75	60.778		
6,700.00	6,656.24	6,884.24	6,850.15	25.55	25.78	163.42	-140.35	-1,442.71	2,053.08	2,018.81	34.27	59.905		
6,800.00	6,755.23	6,984.23	6,949.12	25.97	26.08	163.43	-144.59	-1,431.28	2,055.13	2,020.34	34.79	59.032		
6,837.97	6,792.81	6,983.85	6,949.11	26.13	26.18	163.43	-144.31	-1,432.02	2,056.96	2,022.06	34.91	58.929		
6,900.00	6,854.29	7,024.89	6,989.95	26.39	26.34	163.45	-145.70	-1,428.28	2,059.22	2,024.05	35.18	58.540		
7,000.00	6,953.65	7,100.00	7,064.81	26.79	26.63	163.47	-147.83	-1,422.52	2,062.19	2,026.56	35.63	57.881		
7,100.00	7,053.27	7,157.15	7,121.83	27.17	26.84	163.49	-149.12	-1,419.06	2,064.23	2,028.21	36.02	57.312		
7,200.00	7,153.09	7,223.26	7,187.87	27.53	27.07	163.50	-150.23	-1,416.05	2,065.43	2,029.01	36.42	56.712		
7,300.00	7,253.03	7,300.00	7,264.57	27.88	27.34	163.50	-151.03	-1,413.91	2,065.80	2,028.96	36.84	56.068		
7,380.98	7,334.00	7,342.91	7,307.47	28.15	27.49	-88.23	-151.24	-1,413.34	2,065.39	2,028.28	37.11	55.656		
7,400.00	7,353.02	7,355.48	7,320.05	28.21	27.53	-88.23	-151.27	-1,413.26	2,065.27	2,028.09	37.18	55.550		
7,447.74	7,400.76	7,392.99	7,357.56	28.36	27.65	-88.23	-151.28	-1,413.21	2,065.20	2,027.83	37.37	55.263		
7,500.00	7,453.02	7,445.25	7,409.82	28.53	27.82	-88.23	-151.28	-1,413.21	2,065.20	2,027.58	37.62	54.898		
7,600.00	7,553.02	7,545.25	7,509.82	28.85	28.15	-88.23	-151.28	-1,413.21	2,065.20	2,027.10	38.10	54.211		
7,700.00	7,653.02	7,645.25	7,609.82	29.17	28.47	-88.23	-151.28	-1,413.21	2,065.20	2,026.62	38.57	53.541		
7,800.00	7,753.02	7,745.25	7,709.82	29.49	28.80	-88.23	-151.28	-1,413.21	2,065.20	2,026.15	39.05	52.886		
7,900.00	7,853.02	7,845.25	7,809.82	29.81	29.13	-88.23	-151.28	-1,413.21	2,065.20	2,025.67	39.53	52.246		
7,913.46	7,866.48	7,858.71	7,823.28	29.85	29.17	-88.23	-151.28	-1,413.21	2,065.20	2,025.60	39.59	52.161		
8,000.00	7,953.02	7,944.12	7,908.69	30.13	29.45	-88.23	-151.23	-1,413.21	2,065.20	2,025.20	40.00	51.625		
8,100.00	8,053.02	8,030.43	7,994.58	30.46	29.72	-88.02	-143.60	-1,413.29	2,065.58	2,025.16	40.42	51.105		
8,200.00	8,153.02	8,112.67	8,074.47	30.78	29.95	-87.49	-124.41	-1,413.48	2,066.77	2,025.98	40.79	50.665		
8,300.00	8,253.02	8,188.07	8,144.63	31.11	30.14	-86.73	-96.93	-1,413.76	2,069.16	2,028.04	41.12	50.322		
8,400.00	8,353.02	8,250.00	8,199.15	31.43	30.28	-85.92	-67.63	-1,414.05	2,073.26	2,031.88	41.38	50.109		
8,500.00	8,453.02	8,313.86	8,251.72	31.76	30.39	-84.92	-31.44	-1,414.42	2,079.57	2,037.96	41.61	49.977		
8,600.00	8,553.02	8,364.49	8,290.35	32.09	30.47	-84.02	1.28	-1,414.74	2,088.60	2,046.83	41.77	50.002		
8,700.00	8,653.02	8,400.00	8,315.63	32.42	30.52	-83.34	26.20	-1,414.99	2,100.73	2,058.89	41.84	50.212		
8,800.00	8,753.02	8,450.00	8,348.52	32.74	30.58	-82.31	63.84	-1,415.37	2,116.17	2,074.25	41.92	50.477		
8,900.00	8,853.02	8,477.67	8,365.27	33.07	30.60	-81.72	85.85	-1,415.59	2,135.17	2,093.28	41.88	50.980		
9,000.00	8,953.02	8,500.00	8,378.01	33.40	30.62	-81.22	104.20	-1,415.78	2,157.84	2,116.06	41.78	51.653		
9,100.00	9,053.02	8,529.84	8,393.89	33.73	30.64	-80.54	129.46	-1,416.03	2,184.18	2,142.51	41.66	52.423		
9,200.00	9,153.02	8,550.00	8,403.86	34.07	30.66	-80.07	146.97	-1,416.21	2,214.21	2,172.74	41.47	53.388		
9,300.00	9,253.02	8,569.78	8,413.04	34.40	30.67	-79.60	164.49	-1,416.38	2,247.87	2,206.62	41.25	54.488		
9,400.00	9,353.02	8,600.00	8,425.89	34.73	30.69	-78.87	191.84	-1,416.66	2,285.18	2,244.13	41.05	55.664		
9,500.00	9,453.02	8,600.00	8,425.89	35.06	30.69	-78.87	191.84	-1,416.66	2,325.69	2,285.00	40.69	57.159		
9,600.00	9,553.02	8,600.00	8,425.89	35.39	30.69	-78.87	191.84	-1,416.66	2,369.73	2,329.42	40.31	58.791		
9,700.00	9,653.02	8,626.05	8,435.79	35.73	30.71	-78.23	215.93	-1,416.90	2,416.66	2,376.62	40.04	60.357		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,800.00	9,753.02	8,650.00	8,443.92	36.06	30.73	-77.63	238.46	-1,417.12	2,466.83	2,427.07	39.76	62.036		
9,900.00	9,853.02	8,650.00	8,443.92	36.40	30.73	-77.63	238.46	-1,417.12	2,519.61	2,480.24	39.37	63.993		
10,000.00	9,953.02	8,650.00	8,443.92	36.73	30.73	-77.63	238.46	-1,417.12	2,575.19	2,536.20	38.99	66.051		
10,100.00	10,053.02	8,650.00	8,443.92	37.07	30.73	-77.63	238.46	-1,417.12	2,633.40	2,594.79	38.61	68.201		
10,200.00	10,153.02	8,670.73	8,450.19	37.40	30.74	-77.11	258.21	-1,417.32	2,693.74	2,655.40	38.34	70.252		
10,300.00	10,253.02	8,677.54	8,452.10	37.74	30.75	-76.94	264.75	-1,417.39	2,756.44	2,718.42	38.03	72.486		
10,400.00	10,353.02	8,700.00	8,457.82	38.08	30.78	-76.37	286.47	-1,417.60	2,821.43	2,783.64	37.79	74.652		
10,500.00	10,453.02	8,700.00	8,457.82	38.41	30.78	-76.37	286.47	-1,417.60	2,888.06	2,850.57	37.48	77.047		
10,600.00	10,553.02	8,700.00	8,457.82	38.75	30.78	-76.37	286.47	-1,417.60	2,956.57	2,919.37	37.20	79.486		
10,700.00	10,653.02	8,700.00	8,457.82	39.09	30.78	-76.37	286.47	-1,417.60	3,026.83	2,989.90	36.93	81.961		
10,800.00	10,753.02	8,700.00	8,457.82	39.43	30.78	-76.37	286.47	-1,417.60	3,098.72	3,062.04	36.69	84.462		
10,900.00	10,853.02	8,700.00	8,457.82	39.77	30.78	-76.37	286.47	-1,417.60	3,172.14	3,135.67	36.47	86.982		
11,000.00	10,953.02	8,700.00	8,457.82	40.10	30.78	-76.37	286.47	-1,417.60	3,246.98	3,210.71	36.27	89.511		
11,100.00	11,053.02	8,700.00	8,457.82	40.44	30.78	-76.37	286.47	-1,417.60	3,323.14	3,287.04	36.10	92.044		
11,200.00	11,153.02	8,720.69	8,462.34	40.78	30.81	-75.85	306.66	-1,417.81	3,400.18	3,364.15	36.03	94.371		
11,300.00	11,253.02	8,724.10	8,463.01	41.12	30.81	-75.76	310.00	-1,417.84	3,478.60	3,442.69	35.91	96.857		
11,400.00	11,353.02	8,727.32	8,463.63	41.46	30.82	-75.68	313.16	-1,417.87	3,558.08	3,522.26	35.82	99.330		
11,500.00	11,453.02	8,750.00	8,467.48	41.80	30.86	-75.10	335.50	-1,418.10	3,638.89	3,603.08	35.81	101.614		
11,566.02	11,519.04	8,750.00	8,467.48	42.03	30.86	-75.10	335.50	-1,418.10	3,692.48	3,656.71	35.77	103.237		
11,600.00	11,553.02	8,750.00	8,467.48	42.14	30.86	-70.07	335.50	-1,418.10	3,720.05	3,684.30	35.75	104.070		
11,650.00	11,602.72	8,750.00	8,467.48	42.31	30.86	-63.94	335.50	-1,418.10	3,760.04	3,724.33	35.71	105.287		
11,700.00	11,651.80	8,750.00	8,467.48	42.46	30.86	-58.45	335.50	-1,418.10	3,799.12	3,763.44	35.68	106.489		
11,750.00	11,699.87	8,750.00	8,467.48	42.61	30.86	-53.64	335.50	-1,418.10	3,837.01	3,801.37	35.64	107.666		
11,800.00	11,746.57	8,750.00	8,467.48	42.75	30.86	-49.46	335.50	-1,418.10	3,873.46	3,837.86	35.60	108.812		
11,850.00	11,791.53	8,750.00	8,467.48	42.87	30.86	-45.88	335.50	-1,418.10	3,908.24	3,872.68	35.56	109.918		
11,900.00	11,834.42	8,750.00	8,467.48	42.98	30.86	-42.83	335.50	-1,418.10	3,941.14	3,905.62	35.51	110.977		
11,950.00	11,874.92	8,750.00	8,467.48	43.08	30.86	-40.23	335.50	-1,418.10	3,971.95	3,936.48	35.47	111.981		
12,000.00	11,912.70	8,750.00	8,467.48	43.17	30.86	-38.04	335.50	-1,418.10	4,000.48	3,965.06	35.43	112.921		
12,050.00	11,947.48	8,750.00	8,467.48	43.24	30.86	-36.19	335.50	-1,418.10	4,026.58	3,991.20	35.39	113.787		
12,100.00	11,979.01	8,776.20	8,470.83	43.29	30.92	-34.53	361.48	-1,418.36	4,049.50	4,014.09	35.41	114.364		
12,150.00	12,007.03	8,800.00	8,472.84	43.34	30.99	-33.19	385.20	-1,418.59	4,070.24	4,034.82	35.42	114.901		
12,200.00	12,031.34	8,800.00	8,472.84	43.37	30.99	-32.19	385.20	-1,418.59	4,087.64	4,052.25	35.39	115.495		
12,250.00	12,051.76	8,800.00	8,472.84	43.40	30.99	-31.39	385.20	-1,418.59	4,102.09	4,066.72	35.37	115.978		
12,300.00	12,068.11	8,800.00	8,472.84	43.43	30.99	-30.79	385.20	-1,418.59	4,113.51	4,078.15	35.36	116.344		
12,350.00	12,080.29	8,800.00	8,472.84	43.46	30.99	-30.36	385.20	-1,418.59	4,121.84	4,086.49	35.36	116.584		
12,400.00	12,088.20	8,800.00	8,472.84	43.51	30.99	-30.09	385.20	-1,418.59	4,127.04	4,091.67	35.37	116.691		
12,450.00	12,091.77	8,836.47	8,474.00	43.58	31.11	-29.99	421.64	-1,418.96	4,128.80	4,093.36	35.44	116.492		
12,466.02	12,092.00	8,836.47	8,474.00	43.60	31.11	-30.00	421.64	-1,418.96	4,128.64	4,093.19	35.45	116.455		
12,500.00	12,092.00	8,836.47	8,474.00	43.67	31.11	-30.00	421.64	-1,418.96	4,128.09	4,092.61	35.48	116.354		
12,549.19	12,092.00	8,836.47	8,474.00	43.79	31.11	-30.00	421.64	-1,418.96	4,127.80	4,092.27	35.53	116.170		
12,600.00	12,092.00	8,886.03	8,474.00	43.93	31.29	-30.00	471.20	-1,419.46	4,127.82	4,092.17	35.65	115.792		
12,700.00	12,092.00	8,986.03	8,474.00	44.27	31.74	-30.00	571.20	-1,420.46	4,127.85	4,091.91	35.93	114.876		
12,800.00	12,092.00	9,086.03	8,474.00	44.68	32.27	-30.00	671.19	-1,421.46	4,127.88	4,091.60	36.28	113.786		
12,900.00	12,092.00	9,186.03	8,474.00	45.15	32.87	-30.00	771.19	-1,422.47	4,127.91	4,091.23	36.68	112.536		
13,000.00	12,092.00	9,286.03	8,474.00	45.68	33.55	-30.00	871.18	-1,423.47	4,127.94	4,090.80	37.14	111.142		
13,100.00	12,092.00	9,386.03	8,474.00	46.26	34.28	-30.00	971.18	-1,424.47	4,127.97	4,090.31	37.66	109.624		
13,200.00	12,092.00	9,486.03	8,474.00	46.89	35.08	-30.00	1,071.17	-1,425.48	4,128.00	4,089.77	38.22	107.997		
13,300.00	12,092.00	9,586.03	8,474.00	47.57	35.94	-30.00	1,171.17	-1,426.48	4,128.03	4,089.19	38.84	106.280		
13,400.00	12,092.00	9,686.03	8,474.00	48.30	36.85	-30.01	1,271.16	-1,427.48	4,128.06	4,088.55	39.51	104.490		
13,500.00	12,092.00	9,786.03	8,474.00	49.06	37.80	-30.01	1,371.16	-1,428.49	4,128.09	4,087.87	40.22	102.643		
13,600.00	12,092.00	9,886.03	8,474.00	49.88	38.81	-30.01	1,471.15	-1,429.49	4,128.12	4,087.14	40.97	100.753		
13,700.00	12,092.00	9,986.03	8,474.00	50.73	39.85	-30.01	1,571.15	-1,430.49	4,128.15	4,086.38	41.77	98.836		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,800.00	12,092.00	10,086.03	8,474.00	51.62	40.94	-30.01	1,671.14	-1,431.50	4,128.18	4,085.58	42.60	96.906		
13,900.00	12,092.00	10,186.03	8,474.00	52.54	42.06	-30.01	1,771.14	-1,432.50	4,128.21	4,084.74	43.47	94.973		
14,000.00	12,092.00	10,286.03	8,474.00	53.51	43.21	-30.01	1,871.13	-1,433.50	4,128.24	4,083.87	44.37	93.044		
14,100.00	12,092.00	10,386.03	8,474.00	54.50	44.40	-30.01	1,971.13	-1,434.50	4,128.27	4,082.97	45.30	91.127		
14,200.00	12,092.00	10,486.03	8,474.00	55.52	45.61	-30.01	2,071.12	-1,435.51	4,128.30	4,082.03	46.27	89.229		
14,300.00	12,092.00	10,586.03	8,474.00	56.58	46.86	-30.01	2,171.12	-1,436.51	4,128.33	4,081.07	47.26	87.357		
14,400.00	12,092.00	10,686.03	8,474.00	57.66	48.12	-30.01	2,271.11	-1,437.51	4,128.36	4,080.08	48.28	85.515		
14,500.00	12,092.00	10,786.03	8,474.00	58.77	49.41	-30.01	2,371.11	-1,438.52	4,128.39	4,079.07	49.32	83.705		
14,600.00	12,092.00	10,886.03	8,474.00	59.90	50.72	-30.01	2,471.10	-1,439.52	4,128.42	4,078.03	50.39	81.932		
14,700.00	12,092.00	10,986.03	8,474.00	61.06	52.05	-30.02	2,571.10	-1,440.52	4,128.45	4,076.97	51.48	80.198		
14,800.00	12,092.00	11,086.03	8,474.00	62.24	53.39	-30.02	2,671.09	-1,441.53	4,128.48	4,075.89	52.59	78.509		
14,900.00	12,092.00	11,186.03	8,474.00	63.44	54.76	-30.02	2,771.09	-1,442.53	4,128.51	4,074.80	53.71	76.862		
15,000.00	12,092.00	11,286.03	8,474.00	64.66	56.14	-30.02	2,871.08	-1,443.53	4,128.54	4,073.68	54.86	75.256		
15,100.00	12,092.00	11,386.03	8,474.00	65.90	57.53	-30.02	2,971.08	-1,444.54	4,128.57	4,072.55	56.02	73.698		
15,200.00	12,092.00	11,486.03	8,474.00	67.16	58.93	-30.02	3,071.07	-1,445.54	4,128.60	4,071.40	57.20	72.183		
15,300.00	12,092.00	11,586.03	8,474.00	68.43	60.35	-30.02	3,171.07	-1,446.54	4,128.63	4,070.24	58.39	70.711		
15,400.00	12,092.00	11,686.03	8,474.00	69.72	61.78	-30.02	3,271.06	-1,447.54	4,128.66	4,069.07	59.59	69.280		
15,500.00	12,092.00	11,786.03	8,474.00	71.02	63.22	-30.02	3,371.06	-1,448.55	4,128.69	4,067.88	60.81	67.892		
15,600.00	12,092.00	11,886.03	8,474.00	72.34	64.68	-30.02	3,471.05	-1,449.55	4,128.72	4,066.67	62.04	66.544		
15,700.00	12,092.00	11,986.03	8,474.00	73.67	66.14	-30.02	3,571.05	-1,450.55	4,128.75	4,065.46	63.29	65.237		
15,800.00	12,092.00	12,086.03	8,474.00	75.02	67.60	-30.02	3,671.04	-1,451.56	4,128.78	4,064.24	64.54	63.970		
15,900.00	12,092.00	12,186.03	8,474.00	76.37	69.08	-30.02	3,771.04	-1,452.56	4,128.81	4,063.00	65.81	62.741		
16,000.00	12,092.00	12,286.03	8,474.00	77.74	70.57	-30.02	3,871.03	-1,453.56	4,128.84	4,061.76	67.08	61.553		
16,100.00	12,092.00	12,386.03	8,474.00	79.12	72.06	-30.03	3,971.03	-1,454.57	4,128.87	4,060.51	68.36	60.400		
16,200.00	12,092.00	12,486.03	8,474.00	80.51	73.56	-30.03	4,071.02	-1,455.57	4,128.90	4,059.25	69.65	59.282		
16,300.00	12,092.00	12,586.03	8,474.00	81.91	75.06	-30.03	4,171.02	-1,456.57	4,128.93	4,057.98	70.95	58.199		
16,400.00	12,092.00	12,686.03	8,474.00	83.31	76.58	-30.03	4,271.01	-1,457.58	4,128.96	4,056.71	72.25	57.148		
16,500.00	12,092.00	12,786.03	8,474.00	84.73	78.09	-30.03	4,371.01	-1,458.58	4,128.99	4,055.43	73.56	56.128		
16,600.00	12,092.00	12,886.03	8,474.00	86.16	79.62	-30.03	4,471.00	-1,459.58	4,129.02	4,054.14	74.88	55.140		
16,700.00	12,092.00	12,986.03	8,474.00	87.59	81.14	-30.03	4,571.00	-1,460.59	4,129.05	4,052.84	76.21	54.180		
16,800.00	12,092.00	13,086.03	8,474.00	89.03	82.68	-30.03	4,670.99	-1,461.59	4,129.08	4,051.54	77.54	53.250		
16,900.00	12,092.00	13,186.03	8,474.00	90.48	84.21	-30.03	4,770.99	-1,462.59	4,129.11	4,050.23	78.88	52.346		
17,000.00	12,092.00	13,286.03	8,474.00	91.93	85.76	-30.03	4,870.98	-1,463.59	4,129.14	4,048.92	80.22	51.470		
17,100.00	12,092.00	13,386.03	8,474.00	93.39	87.30	-30.03	4,970.98	-1,464.60	4,129.17	4,047.60	81.57	50.618		
17,200.00	12,092.00	13,486.03	8,474.00	94.86	88.85	-30.03	5,070.97	-1,465.60	4,129.20	4,046.27	82.93	49.792		
17,300.00	12,092.00	13,586.03	8,474.00	96.33	90.40	-30.03	5,170.97	-1,466.60	4,129.23	4,044.95	84.28	48.992		
17,400.00	12,092.00	13,686.03	8,474.00	97.81	91.96	-30.03	5,270.96	-1,467.61	4,129.26	4,043.62	85.64	48.214		
17,500.00	12,092.00	13,786.03	8,474.00	99.30	93.52	-30.04	5,370.96	-1,468.61	4,129.29	4,042.28	87.01	47.458		
17,600.00	12,092.00	13,886.03	8,474.00	100.79	95.08	-30.04	5,470.95	-1,469.61	4,129.32	4,040.94	88.38	46.723		
17,700.00	12,092.00	13,986.03	8,474.00	102.28	96.65	-30.04	5,570.95	-1,470.62	4,129.35	4,039.60	89.75	46.008		
17,800.00	12,092.00	14,086.03	8,474.00	103.78	98.22	-30.04	5,670.94	-1,471.62	4,129.38	4,038.25	91.13	45.312		
17,900.00	12,092.00	14,186.03	8,474.00	105.29	99.79	-30.04	5,770.94	-1,472.62	4,129.41	4,036.90	92.51	44.636		
18,000.00	12,092.00	14,286.03	8,474.00	106.80	101.36	-30.04	5,870.93	-1,473.63	4,129.44	4,035.54	93.90	43.978		
18,100.00	12,092.00	14,386.03	8,474.00	108.31	102.94	-30.04	5,970.93	-1,474.63	4,129.47	4,034.19	95.28	43.339		
18,200.00	12,092.00	14,486.03	8,474.00	109.83	104.52	-30.04	6,070.92	-1,475.63	4,129.50	4,032.83	96.67	42.716		
18,300.00	12,092.00	14,586.03	8,474.00	111.35	106.10	-30.04	6,170.91	-1,476.64	4,129.53	4,031.47	98.07	42.109		
18,400.00	12,092.00	14,686.03	8,474.00	112.87	107.68	-30.04	6,270.91	-1,477.64	4,129.56	4,030.10	99.46	41.520		
18,500.00	12,092.00	14,786.03	8,474.00	114.40	109.26	-30.04	6,370.90	-1,478.64	4,129.59	4,028.74	100.86	40.945		
18,600.00	12,092.00	14,886.03	8,474.00	115.93	110.85	-30.04	6,470.90	-1,479.64	4,129.62	4,027.37	102.26	40.385		
18,700.00	12,092.00	14,986.03	8,474.00	117.46	112.44	-30.04	6,570.89	-1,480.65	4,129.65	4,026.00	103.66	39.839		
18,800.00	12,092.00	15,086.03	8,474.00	119.00	114.03	-30.04	6,670.89	-1,481.65	4,129.68	4,024.62	105.06	39.307		
18,900.00	12,092.00	15,186.03	8,474.00	120.54	115.62	-30.05	6,770.88	-1,482.65	4,129.71	4,023.24	106.47	38.788		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,000.00	12,092.00	15,286.03	8,474.00	122.09	117.22	-30.05	6,870.88	-1,483.66	4,129.74	4,021.86	107.88	38.281		
19,100.00	12,092.00	15,386.03	8,474.00	123.63	118.81	-30.05	6,970.87	-1,484.66	4,129.77	4,020.48	109.29	37.787		
19,200.00	12,092.00	15,486.03	8,474.00	125.18	120.41	-30.05	7,070.87	-1,485.66	4,129.80	4,019.10	110.70	37.306		
19,300.00	12,092.00	15,586.03	8,474.00	126.73	122.01	-30.05	7,170.86	-1,486.67	4,129.83	4,017.72	112.11	36.836		
19,400.00	12,092.00	15,686.03	8,474.00	128.29	123.61	-30.05	7,270.86	-1,487.67	4,129.87	4,016.34	113.53	36.377		
19,500.00	12,092.00	15,786.03	8,474.00	129.84	125.21	-30.05	7,370.85	-1,488.67	4,129.90	4,014.95	114.94	35.929		
19,600.00	12,092.00	15,886.03	8,474.00	131.40	126.81	-30.05	7,470.85	-1,489.68	4,129.93	4,013.56	116.36	35.492		
19,700.00	12,092.00	15,986.03	8,474.00	132.96	128.42	-30.05	7,570.84	-1,490.68	4,129.96	4,012.17	117.78	35.064		
19,800.00	12,092.00	16,086.03	8,474.00	134.53	130.02	-30.05	7,670.84	-1,491.68	4,129.99	4,010.78	119.20	34.646		
19,900.00	12,092.00	16,186.03	8,474.00	136.09	131.63	-30.05	7,770.83	-1,492.69	4,130.02	4,009.39	120.63	34.238		
20,000.00	12,092.00	16,286.03	8,474.00	137.66	133.24	-30.05	7,870.83	-1,493.69	4,130.05	4,007.99	122.05	33.838		
20,100.00	12,092.00	16,386.03	8,474.00	139.23	134.85	-30.05	7,970.82	-1,494.69	4,130.08	4,006.60	123.48	33.448		
20,200.00	12,092.00	16,486.03	8,474.00	140.80	136.45	-30.05	8,070.82	-1,495.69	4,130.11	4,005.20	124.91	33.065		
20,300.00	12,092.00	16,586.03	8,474.00	142.37	138.07	-30.06	8,170.81	-1,496.70	4,130.14	4,003.80	126.34	32.692		
20,400.00	12,092.00	16,686.03	8,474.00	143.95	139.68	-30.06	8,270.81	-1,497.70	4,130.17	4,002.40	127.76	32.327		
20,500.00	12,092.00	16,786.03	8,474.00	145.53	141.29	-30.06	8,370.80	-1,498.70	4,130.20	4,001.01	129.19	31.970		
20,600.00	12,092.00	16,886.03	8,474.00	147.10	142.90	-30.06	8,470.80	-1,499.71	4,130.23	3,999.61	130.62	31.620		
20,700.00	12,092.00	16,986.03	8,474.00	148.68	144.52	-30.06	8,570.79	-1,500.71	4,130.26	3,998.21	132.05	31.278		
20,800.00	12,092.00	17,086.03	8,474.00	150.27	146.13	-30.06	8,670.79	-1,501.71	4,130.29	3,996.80	133.48	30.942		
20,900.00	12,092.00	17,186.03	8,474.00	151.85	147.75	-30.06	8,770.78	-1,502.72	4,130.32	3,995.40	134.92	30.613		
21,000.00	12,092.00	17,286.03	8,474.00	153.43	149.37	-30.06	8,870.78	-1,503.72	4,130.35	3,993.99	136.35	30.291		
21,100.00	12,092.00	17,386.03	8,474.00	155.02	150.98	-30.06	8,970.77	-1,504.72	4,130.38	3,992.59	137.79	29.976		
21,200.00	12,092.00	17,486.03	8,474.00	156.61	152.60	-30.06	9,070.77	-1,505.73	4,130.41	3,991.18	139.22	29.668		
21,300.00	12,092.00	17,586.03	8,474.00	158.19	154.22	-30.06	9,170.76	-1,506.73	4,130.44	3,989.78	140.66	29.365		
21,400.00	12,092.00	17,686.03	8,474.00	159.78	155.84	-30.06	9,270.76	-1,507.73	4,130.47	3,988.37	142.10	29.068		
21,500.00	12,092.00	17,786.03	8,474.00	161.38	157.46	-30.06	9,370.75	-1,508.74	4,130.50	3,986.96	143.53	28.777		
21,600.00	12,092.00	17,886.03	8,474.00	162.97	159.08	-30.06	9,470.75	-1,509.74	4,130.53	3,985.56	144.97	28.492		
21,700.00	12,092.00	17,986.03	8,474.00	164.56	160.70	-30.07	9,570.74	-1,510.74	4,130.56	3,984.15	146.41	28.213		
21,800.00	12,092.00	18,086.03	8,474.00	166.16	162.33	-30.07	9,670.74	-1,511.74	4,130.59	3,982.74	147.85	27.938		
21,900.00	12,092.00	18,186.03	8,474.00	167.75	163.95	-30.07	9,770.73	-1,512.75	4,130.62	3,981.33	149.29	27.669		
22,000.00	12,092.00	18,286.03	8,474.00	169.35	165.57	-30.07	9,870.73	-1,513.75	4,130.65	3,979.92	150.73	27.404		
22,100.00	12,092.00	18,386.03	8,474.00	170.95	167.20	-30.07	9,970.72	-1,514.75	4,130.68	3,978.51	152.17	27.145		
22,200.00	12,092.00	18,486.03	8,474.00	172.55	168.82	-30.07	10,070.72	-1,515.76	4,130.71	3,977.10	153.61	26.890		
22,255.91	12,092.00	18,541.95	8,474.00	173.44	169.73	-30.07	10,126.63	-1,516.32	4,130.73	3,976.31	154.42	26.750 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.40	0.40	0.00	0.00	-27.03	74.69	-38.10	83.85					
100.00	100.00	100.40	100.40	0.13	0.13	-27.03	74.69	-38.10	83.85	83.67	0.18	469.855		
200.00	200.00	200.40	200.40	0.48	0.49	-27.03	74.69	-38.10	83.85	83.16	0.69	122.331		
300.00	300.00	300.40	300.40	0.84	0.84	-27.03	74.69	-38.10	83.85	82.65	1.19	70.320		
400.00	400.00	400.40	400.40	1.20	1.20	-27.03	74.69	-38.10	83.85	82.15	1.70	49.341		
500.00	500.00	500.40	500.40	1.56	1.56	-27.03	74.69	-38.10	83.85	81.64	2.21	38.004		
600.00	600.00	600.40	600.40	1.92	1.92	-27.03	74.69	-38.10	83.85	81.13	2.71	30.903		
700.00	700.00	700.40	700.40	2.28	2.28	-27.03	74.69	-38.10	83.85	80.63	3.22	26.038		
800.00	800.00	800.40	800.40	2.63	2.64	-27.03	74.69	-38.10	83.85	80.12	3.73	22.496		
900.00	900.00	900.40	900.40	2.99	2.99	-27.03	74.69	-38.10	83.85	79.61	4.23	19.803		
1,000.00	1,000.00	1,000.40	1,000.40	3.35	3.35	-27.03	74.69	-38.10	83.85	79.11	4.74	17.685		
1,100.00	1,100.00	1,100.40	1,100.40	3.71	3.71	-27.03	74.69	-38.10	83.85	78.60	5.25	15.977		
1,200.00	1,200.00	1,200.40	1,200.40	4.07	4.07	-27.03	74.69	-38.10	83.85	78.09	5.75	14.569		
1,300.00	1,300.00	1,300.40	1,300.40	4.43	4.43	-27.03	74.69	-38.10	83.85	77.58	6.26	13.390		
1,400.00	1,400.00	1,400.40	1,400.40	4.79	4.79	-27.03	74.69	-38.10	83.85	77.08	6.77	12.387		
1,500.00	1,500.00	1,500.40	1,500.40	5.14	5.15	-27.03	74.69	-38.10	83.85	76.57	7.28	11.524		
1,600.00	1,600.00	1,600.40	1,600.40	5.50	5.50	-27.03	74.69	-38.10	83.85	76.06	7.78	10.773		
1,700.00	1,700.00	1,700.40	1,700.40	5.86	5.86	-27.03	74.69	-38.10	83.85	75.56	8.29	10.114		
1,800.00	1,800.00	1,800.40	1,800.40	6.22	6.22	-27.03	74.69	-38.10	83.85	75.05	8.80	9.532		
1,900.00	1,900.00	1,900.40	1,900.40	6.58	6.58	-27.03	74.69	-38.10	83.85	74.54	9.30	9.012		
2,000.00	2,000.00	2,002.18	2,002.17	6.94	6.93	-26.95	73.96	-37.61	82.99	73.18	9.80	8.465		
2,100.00	2,099.99	2,104.31	2,104.24	7.28	7.27	-135.61	71.01	-35.61	80.46	70.18	10.28	7.829		
2,200.00	2,199.91	2,204.59	2,204.38	7.62	7.60	-137.21	66.68	-32.69	78.12	67.38	10.75	7.270		
2,264.83	2,264.61	2,269.37	2,269.07	7.84	7.81	-138.96	63.87	-30.79	77.67	66.62	11.05	7.026 CC		
2,300.00	2,299.69	2,304.51	2,304.16	7.96	7.93	-140.14	62.35	-29.76	77.81	66.59	11.22	6.934 ES		
2,400.00	2,399.27	2,404.33	2,403.85	8.31	8.27	-144.19	58.02	-26.84	79.81	68.11	11.70	6.822 SF		
2,500.00	2,498.57	2,503.98	2,503.36	8.66	8.61	-148.93	53.70	-23.92	84.42	72.24	12.18	6.932		
2,543.01	2,541.19	2,546.78	2,546.10	8.81	8.75	-151.06	51.84	-22.66	87.28	74.89	12.39	7.046		
2,600.00	2,597.60	2,603.45	2,602.69	9.02	8.95	-153.79	49.38	-21.00	91.52	78.86	12.66	7.228		
2,700.00	2,696.59	2,702.89	2,702.00	9.38	9.29	-158.00	45.07	-18.09	99.41	86.27	13.15	7.562		
2,800.00	2,795.58	2,802.33	2,801.31	9.75	9.63	-161.57	40.75	-15.17	107.76	94.12	13.63	7.905		
2,900.00	2,894.57	2,901.77	2,900.61	10.12	9.98	-164.62	36.44	-12.26	116.46	102.34	14.12	8.248		
3,000.00	2,993.56	3,001.22	2,999.92	10.50	10.33	-167.25	32.13	-9.35	125.44	110.83	14.61	8.587		
3,100.00	3,092.55	3,100.66	3,099.22	10.88	10.68	-169.52	27.81	-6.43	134.65	119.55	15.10	8.917		
3,200.00	3,191.55	3,200.10	3,198.53	11.27	11.02	-171.49	23.50	-3.52	144.05	128.46	15.59	9.238		
3,300.00	3,290.54	3,299.54	3,297.84	11.65	11.38	-173.23	19.19	-0.60	153.59	137.50	16.09	9.547		
3,400.00	3,389.53	3,398.99	3,397.14	12.04	11.73	-174.76	14.87	2.31	163.26	146.68	16.58	9.844		
3,500.00	3,488.52	3,498.43	3,496.45	12.44	12.08	-176.12	10.56	5.22	173.03	155.95	17.08	10.129		
3,600.00	3,587.51	3,597.87	3,595.75	12.83	12.43	-177.33	6.25	8.14	182.89	165.30	17.58	10.402		
3,700.00	3,686.50	3,697.31	3,695.06	13.23	12.79	-178.42	1.93	11.05	192.81	174.73	18.08	10.663		
3,800.00	3,785.49	3,796.76	3,794.37	13.62	13.14	-179.40	-2.38	13.97	202.81	184.22	18.58	10.913		
3,900.00	3,884.48	3,896.20	3,893.67	14.02	13.50	-179.71	-6.69	16.88	212.85	193.76	19.09	11.151		
4,000.00	3,983.48	3,995.64	3,992.98	14.43	13.86	-178.90	-11.01	19.79	222.94	203.35	19.59	11.379		
4,100.00	4,082.47	4,095.08	4,092.28	14.83	14.21	-178.16	-15.32	22.71	233.07	212.97	20.10	11.597		
4,200.00	4,181.46	4,194.53	4,191.59	15.23	14.57	-177.49	-19.64	25.62	243.24	222.63	20.60	11.806		
4,300.00	4,280.45	4,293.97	4,290.90	15.64	14.93	-176.86	-23.95	28.54	253.43	232.32	21.11	12.006		
4,400.00	4,379.44	4,393.41	4,390.20	16.04	15.29	-176.29	-28.26	31.45	263.66	242.04	21.62	12.196		
4,500.00	4,478.43	4,492.85	4,489.51	16.45	15.64	-175.76	-32.58	34.36	273.91	251.78	22.13	12.379		
4,600.00	4,577.42	4,592.30	4,588.82	16.86	16.00	-175.26	-36.89	37.28	284.18	261.54	22.64	12.555		
4,700.00	4,676.41	4,691.74	4,688.12	17.27	16.36	-174.81	-41.20	40.19	294.47	271.32	23.15	12.723		
4,800.00	4,775.40	4,791.18	4,787.43	17.68	16.72	-174.38	-45.52	43.11	304.78	281.12	23.66	12.884		
4,900.00	4,874.40	4,890.62	4,886.73	18.09	17.08	-173.98	-49.83	46.02	315.10	290.93	24.17	13.038		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	4,990.07	4,986.04	18.50	17.44	173.60	-54.14	48.93	325.44	300.76	24.68	13.187		
5,100.00	5,072.38	5,089.51	5,085.35	18.91	17.80	173.25	-58.46	51.85	335.79	310.59	25.19	13.329		
5,200.00	5,171.37	5,188.95	5,184.65	19.32	18.17	172.92	-62.77	54.76	346.15	320.44	25.70	13.467		
5,300.00	5,270.36	5,288.39	5,283.96	19.73	18.53	172.61	-67.08	57.68	356.52	330.30	26.22	13.599		
5,400.00	5,369.35	5,387.84	5,383.26	20.15	18.89	172.32	-71.40	60.59	366.90	340.17	26.73	13.726		
5,500.00	5,468.34	5,487.28	5,482.57	20.56	19.25	172.04	-75.71	63.50	377.29	350.05	27.25	13.848		
5,600.00	5,567.33	5,586.72	5,581.88	20.97	19.61	171.78	-80.03	66.42	387.69	359.93	27.76	13.966		
5,700.00	5,666.33	5,686.16	5,681.18	21.39	19.97	171.53	-84.34	69.33	398.10	369.83	28.27	14.080		
5,800.00	5,765.32	5,785.61	5,780.49	21.80	20.34	171.29	-88.65	72.25	408.52	379.73	28.79	14.190		
5,900.00	5,864.31	5,885.05	5,879.79	22.22	20.70	171.07	-92.97	75.16	418.94	389.63	29.31	14.296		
6,000.00	5,963.30	5,984.49	5,979.10	22.64	21.06	170.85	-97.28	78.08	429.36	399.54	29.82	14.398		
6,100.00	6,062.29	6,083.93	6,078.41	23.05	21.42	170.65	-101.59	80.99	439.80	409.46	30.34	14.497		
6,200.00	6,161.28	6,183.38	6,177.71	23.47	21.79	170.45	-105.91	83.90	450.23	419.38	30.85	14.592		
6,300.00	6,260.27	6,282.82	6,277.02	23.88	22.15	170.27	-110.22	86.82	460.68	429.31	31.37	14.685		
6,400.00	6,359.26	6,382.26	6,376.33	24.30	22.51	170.09	-114.53	89.73	471.12	439.24	31.89	14.774		
6,500.00	6,458.26	6,481.70	6,475.63	24.72	22.88	169.92	-118.85	92.65	481.58	449.17	32.41	14.861		
6,600.00	6,557.25	6,581.15	6,574.94	25.14	23.24	169.76	-123.16	95.56	492.03	459.11	32.92	14.945		
6,700.00	6,656.24	6,680.59	6,674.24	25.55	23.60	169.61	-127.47	98.47	502.49	469.05	33.44	15.026		
6,800.00	6,755.23	6,780.03	6,773.55	25.97	23.97	169.46	-131.79	101.39	512.95	479.00	33.96	15.105		
6,837.97	6,792.81	6,817.79	6,811.25	26.13	24.10	169.40	-133.43	102.49	516.93	482.77	34.16	15.135		
6,900.00	6,854.29	6,879.52	6,872.90	26.39	24.33	169.32	-136.10	104.30	522.93	488.45	34.48	15.168		
7,000.00	6,953.65	6,979.21	6,972.46	26.79	24.69	169.14	-140.43	107.22	530.53	495.53	34.99	15.161		
7,100.00	7,053.27	7,079.06	7,072.17	27.17	25.06	168.91	-144.76	110.15	535.57	500.06	35.51	15.082		
7,200.00	7,153.09	7,172.89	7,165.90	27.53	25.40	168.69	-148.36	112.58	538.47	502.47	36.00	14.959		
7,300.00	7,253.03	7,264.39	7,257.37	27.88	25.72	168.59	-150.11	113.77	540.31	503.86	36.45	14.822		
7,380.98	7,334.00	7,341.42	7,334.40	28.15	25.99	-83.13	-150.31	113.90	540.98	504.16	36.82	14.691		
7,400.00	7,353.02	7,360.44	7,353.42	28.21	26.05	-83.13	-150.31	113.90	540.98	504.07	36.91	14.655		
7,500.00	7,453.02	7,460.44	7,453.42	28.53	26.38	-83.13	-150.31	113.90	540.98	503.59	37.39	14.469		
7,600.00	7,553.02	7,560.44	7,553.42	28.85	26.72	-83.13	-150.31	113.90	540.98	503.12	37.87	14.287		
7,700.00	7,653.02	7,660.44	7,653.42	29.17	27.06	-83.13	-150.31	113.90	540.98	502.64	38.34	14.109		
7,800.00	7,753.02	7,760.44	7,753.42	29.49	27.39	-83.13	-150.31	113.90	540.98	502.16	38.82	13.935		
7,800.82	7,753.84	7,761.26	7,754.24	29.49	27.39	-83.13	-150.31	113.90	540.98	502.16	38.83	13.934		
7,900.00	7,853.02	7,856.90	7,849.87	29.81	27.72	-83.06	-149.58	113.89	541.09	501.81	39.28	13.776		
8,000.00	7,953.02	7,944.44	7,936.62	30.13	27.99	-81.90	-138.53	113.79	542.89	503.25	39.64	13.696		
8,100.00	8,053.02	8,026.83	8,015.85	30.46	28.23	-79.58	-116.18	113.58	547.72	507.83	39.89	13.730		
8,200.00	8,153.02	8,100.00	8,082.88	30.78	28.42	-76.61	-86.98	113.30	557.21	517.26	39.95	13.947		
8,300.00	8,253.02	8,167.36	8,140.85	31.11	28.58	-73.22	-52.75	112.98	573.12	533.33	39.79	14.403		
8,400.00	8,353.02	8,224.41	8,186.53	31.43	28.71	-69.96	-18.61	112.65	596.86	557.56	39.30	15.186		
8,500.00	8,453.02	8,273.41	8,222.88	31.76	28.82	-66.95	14.22	112.34	629.16	590.65	38.51	16.336		
8,600.00	8,553.02	8,315.36	8,251.68	32.09	28.91	-64.27	44.71	112.05	670.05	632.56	37.49	17.873		
8,700.00	8,653.02	8,350.00	8,273.73	32.42	28.99	-62.02	71.42	111.80	718.98	682.69	36.30	19.807		
8,800.00	8,753.02	8,382.26	8,292.77	32.74	29.06	-59.92	97.45	111.55	775.13	740.00	35.12	22.070		
8,900.00	8,853.02	8,400.00	8,302.62	33.07	29.11	-58.77	112.21	111.41	837.62	803.84	33.78	24.795		
9,000.00	8,953.02	8,432.27	8,319.33	33.40	29.19	-56.69	139.81	111.15	905.21	872.33	32.87	27.537		
9,100.00	9,053.02	8,450.00	8,327.84	33.73	29.24	-55.56	155.36	111.00	977.36	945.50	31.85	30.683		
9,200.00	9,153.02	8,470.54	8,337.09	34.07	29.29	-54.26	173.69	110.83	1,053.21	1,022.16	31.05	33.921		
9,300.00	9,253.02	8,500.00	8,349.21	34.40	29.38	-52.44	200.55	110.58	1,132.40	1,101.88	30.52	37.100		
9,400.00	9,353.02	8,500.00	8,349.21	34.73	29.38	-52.44	200.55	110.58	1,213.75	1,184.06	29.69	40.881		
9,500.00	9,453.02	8,500.00	8,349.21	35.06	29.38	-52.44	200.55	110.58	1,297.70	1,268.69	29.01	44.738		
9,600.00	9,553.02	8,524.51	8,358.22	35.39	29.45	-50.97	223.33	110.36	1,383.09	1,354.33	28.76	48.098		
9,700.00	9,653.02	8,550.00	8,366.55	35.73	29.52	-49.47	247.42	110.13	1,470.51	1,441.92	28.59	51.442		
9,800.00	9,753.02	8,550.00	8,366.55	36.06	29.52	-49.47	247.42	110.13	1,558.77	1,530.57	28.20	55.271		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 103H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
9,900.00	9,853.02	8,550.00	8,366.55	36.40	29.52	-49.47	247.42	110.13	1,648.38	1,620.47	27.91	59.066				
10,000.00	9,953.02	8,550.00	8,366.55	36.73	29.52	-49.47	247.42	110.13	1,739.11	1,711.43	27.69	62.818				
10,100.00	10,053.02	8,550.00	8,366.55	37.07	29.52	-49.47	247.42	110.13	1,830.82	1,803.29	27.53	66.508				
10,200.00	10,153.02	8,573.99	8,373.41	37.40	29.60	-48.10	270.41	109.91	1,922.72	1,895.10	27.62	69.619				
10,300.00	10,253.02	8,580.05	8,374.99	37.74	29.62	-47.77	276.25	109.86	2,015.61	1,988.01	27.60	73.042				
10,400.00	10,353.02	8,600.00	8,379.75	38.08	29.68	-46.67	295.63	109.67	2,109.30	2,081.60	27.71	76.132				
10,500.00	10,453.02	8,600.00	8,379.75	38.41	29.68	-46.67	295.63	109.67	2,203.16	2,175.45	27.71	79.522				
10,600.00	10,553.02	8,600.00	8,379.75	38.75	29.68	-46.67	295.63	109.67	2,297.53	2,269.79	27.74	82.826				
10,700.00	10,653.02	8,600.00	8,379.75	39.09	29.68	-46.67	295.63	109.67	2,392.36	2,364.55	27.80	86.048				
10,800.00	10,753.02	8,600.00	8,379.75	39.43	29.68	-46.67	295.63	109.67	2,487.59	2,459.70	27.89	89.194				
10,900.00	10,853.02	8,600.00	8,379.75	39.77	29.68	-46.67	295.63	109.67	2,583.18	2,555.18	28.00	92.254				
11,000.00	10,953.02	8,600.00	8,379.75	40.10	29.68	-46.67	295.63	109.67	2,679.10	2,650.97	28.13	95.229				
11,100.00	11,053.02	8,600.00	8,379.75	40.44	29.68	-46.67	295.63	109.67	2,775.30	2,747.02	28.28	98.120				
11,200.00	11,153.02	8,600.00	8,379.75	40.78	29.68	-46.67	295.63	109.67	2,871.77	2,843.31	28.45	100.928				
11,300.00	11,253.02	8,622.00	8,384.21	41.12	29.76	-45.50	317.17	109.47	2,967.97	2,939.24	28.73	103.304				
11,400.00	11,353.02	8,624.94	8,384.74	41.46	29.77	-45.35	320.06	109.44	3,064.74	3,035.80	28.94	105.914				
11,500.00	11,453.02	8,627.72	8,385.23	41.80	29.78	-45.20	322.80	109.42	3,161.69	3,132.54	29.15	108.450				
11,566.02	11,519.04	8,650.00	8,388.69	42.03	29.85	-44.06	344.81	109.21	3,226.22	3,196.84	29.38	109.809				
11,600.00	11,553.00	8,650.00	8,388.69	42.14	29.85	-35.56	344.81	109.21	3,229.01	3,229.56	29.45	110.659				
11,650.00	11,602.72	8,650.00	8,388.69	42.31	29.85	-27.69	344.81	109.21	3,306.44	3,276.90	29.55	111.908				
11,700.00	11,651.80	8,650.00	8,388.69	42.46	29.85	-22.57	344.81	109.21	3,352.62	3,322.99	29.63	113.144				
11,750.00	11,699.87	8,650.00	8,388.69	42.61	29.85	-19.05	344.81	109.21	3,397.25	3,367.54	29.71	114.359				
11,800.00	11,746.57	8,650.00	8,388.69	42.75	29.85	-16.52	344.81	109.21	3,440.05	3,410.28	29.77	115.543				
11,850.00	11,791.53	8,650.00	8,388.69	42.87	29.85	-14.63	344.81	109.21	3,480.78	3,450.95	29.83	116.689				
11,900.00	11,834.42	8,650.00	8,388.69	42.98	29.85	-13.19	344.81	109.21	3,519.21	3,489.33	29.88	117.791				
11,950.00	11,874.92	8,650.00	8,388.69	43.08	29.85	-12.06	344.81	109.21	3,555.11	3,525.20	29.92	118.837				
12,000.00	11,912.70	8,650.00	8,388.69	43.17	29.85	-11.17	344.81	109.21	3,588.31	3,558.36	29.95	119.817				
12,050.00	11,947.48	8,650.00	8,388.69	43.24	29.85	-10.45	344.81	109.21	3,618.61	3,588.63	29.97	120.725				
12,100.00	11,979.01	8,650.00	8,388.69	43.29	29.85	-9.88	344.81	109.21	3,645.87	3,615.87	30.00	121.546				
12,150.00	12,007.03	8,677.55	8,391.77	43.34	29.95	-9.38	372.18	108.95	3,669.19	3,639.11	30.07	122.004				
12,200.00	12,031.34	8,700.00	8,393.31	43.37	30.03	-9.00	394.57	108.74	3,689.85	3,659.71	30.13	122.446				
12,250.00	12,051.76	8,700.00	8,393.31	43.40	30.03	-8.73	394.57	108.74	3,706.59	3,676.44	30.15	122.953				
12,300.00	12,068.11	8,700.00	8,393.31	43.43	30.03	-8.52	394.57	108.74	3,719.83	3,689.67	30.16	123.328				
12,350.00	12,080.29	8,700.00	8,393.31	43.46	30.03	-8.38	394.57	108.74	3,729.51	3,699.32	30.18	123.561				
12,400.00	12,088.20	8,700.00	8,393.31	43.51	30.03	-8.29	394.57	108.74	3,735.58	3,705.37	30.21	123.643				
12,450.00	12,091.77	8,728.06	8,394.00	43.58	30.14	-8.25	422.62	108.47	3,737.87	3,707.59	30.28	123.437				
12,466.02	12,092.00	8,728.06	8,394.00	43.60	30.14	-8.25	422.62	108.47	3,737.76	3,707.47	30.29	123.383				
12,500.00	12,092.00	8,728.06	8,394.00	43.67	30.14	-8.25	422.62	108.47	3,737.28	3,706.96	30.33	123.241				
12,536.30	12,092.00	8,728.56	8,394.00	43.75	30.14	-8.25	423.12	108.47	3,737.11	3,706.74	30.37	123.052				
12,600.00	12,092.00	8,792.26	8,394.00	43.93	30.40	-8.25	486.82	107.86	3,737.11	3,706.60	30.51	122.494				
12,700.00	12,092.00	8,892.26	8,394.00	44.27	30.87	-8.25	586.82	106.92	3,737.11	3,706.35	30.76	121.481				
12,800.00	12,092.00	8,992.26	8,394.00	44.68	31.43	-8.25	686.81	105.97	3,737.11	3,706.05	31.06	120.328				
12,900.00	12,092.00	9,092.26	8,394.00	45.15	32.05	-8.25	786.81	105.02	3,737.11	3,705.72	31.39	119.049				
13,000.00	12,092.00	9,192.26	8,394.00	45.68	32.75	-8.25	886.81	104.07	3,737.11	3,705.35	31.76	117.655				
13,100.00	12,092.00	9,292.26	8,394.00	46.26	33.52	-8.25	986.80	103.13	3,737.11	3,704.94	32.17	116.162				
13,200.00	12,092.00	9,392.26	8,394.00	46.89	34.35	-8.25	1,086.80	102.18	3,737.11	3,704.50	32.62	114.581				
13,300.00	12,092.00	9,492.26	8,394.00	47.57	35.23	-8.25	1,186.79	101.23	3,737.11	3,704.02	33.09	112.927				
13,400.00	12,092.00	9,592.26	8,394.00	48.30	36.17	-8.25	1,286.79	100.28	3,737.12	3,703.51	33.60	111.213				
13,500.00	12,092.00	9,692.26	8,394.00	49.06	37.16	-8.25	1,386.78	99.34	3,737.12	3,702.97	34.14	109.451				
13,600.00	12,092.00	9,792.26	8,394.00	49.88	38.20	-8.25	1,486.78	98.39	3,737.12	3,702.40	34.71	107.652				
13,700.00	12,092.00	9,892.26	8,394.00	50.73	39.27	-8.25	1,586.77	97.44	3,737.12	3,701.80	35.31	105.826				
13,800.00	12,092.00	9,992.26	8,394.00	51.62	40.39	-8.25	1,686.77	96.49	3,737.12	3,701.18	35.94	103.985				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	10,092.26	8,394.00	52.54	41.54	-8.25	1,786.76	95.55	3,737.12	3,700.53	36.59	102.135		
14,000.00	12,092.00	10,192.26	8,394.00	53.51	42.73	-8.25	1,886.76	94.60	3,737.12	3,699.85	37.26	100.286		
14,100.00	12,092.00	10,292.26	8,394.00	54.50	43.94	-8.25	1,986.76	93.65	3,737.12	3,699.16	37.96	98.444		
14,200.00	12,092.00	10,392.26	8,394.00	55.52	45.18	-8.25	2,086.75	92.71	3,737.12	3,698.44	38.68	96.614		
14,300.00	12,092.00	10,492.26	8,394.00	56.58	46.45	-8.25	2,186.75	91.76	3,737.12	3,697.70	39.42	94.802		
14,400.00	12,092.00	10,592.26	8,394.00	57.66	47.74	-8.26	2,286.74	90.81	3,737.12	3,696.94	40.18	93.015		
14,500.00	12,092.00	10,692.26	8,394.00	58.77	49.06	-8.26	2,386.74	89.86	3,737.12	3,696.17	40.95	91.254		
14,600.00	12,092.00	10,792.26	8,394.00	59.90	50.39	-8.26	2,486.73	88.92	3,737.12	3,695.38	41.75	89.522		
14,700.00	12,092.00	10,892.26	8,394.00	61.06	51.74	-8.26	2,586.73	87.97	3,737.12	3,694.57	42.55	87.821		
14,800.00	12,092.00	10,992.26	8,394.00	62.24	53.11	-8.26	2,686.72	87.02	3,737.12	3,693.75	43.38	86.151		
14,900.00	12,092.00	11,092.26	8,394.00	63.44	54.49	-8.26	2,786.72	86.07	3,737.12	3,692.91	44.22	84.517		
15,000.00	12,092.00	11,192.26	8,394.00	64.66	55.89	-8.26	2,886.72	85.13	3,737.13	3,692.06	45.07	82.918		
15,100.00	12,092.00	11,292.26	8,394.00	65.90	57.30	-8.26	2,986.71	84.18	3,737.13	3,691.19	45.94	81.356		
15,200.00	12,092.00	11,392.26	8,394.00	67.16	58.73	-8.26	3,086.71	83.23	3,737.13	3,690.32	46.81	79.833		
15,300.00	12,092.00	11,492.26	8,394.00	68.43	60.17	-8.26	3,186.70	82.28	3,737.13	3,689.43	47.70	78.348		
15,400.00	12,092.00	11,592.26	8,394.00	69.72	61.61	-8.26	3,286.70	81.34	3,737.13	3,688.53	48.60	76.899		
15,500.00	12,092.00	11,692.26	8,394.00	71.02	63.07	-8.26	3,386.69	80.39	3,737.13	3,687.62	49.51	75.488		
15,600.00	12,092.00	11,792.26	8,394.00	72.34	64.54	-8.26	3,486.69	79.44	3,737.13	3,686.70	50.42	74.113		
15,700.00	12,092.00	11,892.26	8,394.00	73.67	66.01	-8.26	3,586.68	78.49	3,737.13	3,685.78	51.35	72.774		
15,800.00	12,092.00	11,992.26	8,394.00	75.02	67.50	-8.26	3,686.68	77.55	3,737.13	3,684.84	52.29	71.471		
15,900.00	12,092.00	12,092.26	8,394.00	76.37	68.99	-8.26	3,786.68	76.60	3,737.13	3,683.90	53.23	70.203		
16,000.00	12,092.00	12,192.26	8,394.00	77.74	70.49	-8.26	3,886.67	75.65	3,737.13	3,682.95	54.19	68.970		
16,100.00	12,092.00	12,292.26	8,394.00	79.12	71.99	-8.26	3,986.67	74.70	3,737.13	3,681.99	55.14	67.769		
16,200.00	12,092.00	12,392.26	8,394.00	80.51	73.50	-8.26	4,086.66	73.76	3,737.13	3,681.02	56.11	66.602		
16,300.00	12,092.00	12,492.26	8,394.00	81.91	75.02	-8.26	4,186.66	72.81	3,737.13	3,680.05	57.08	65.467		
16,400.00	12,092.00	12,592.26	8,394.00	83.31	76.54	-8.26	4,286.65	71.86	3,737.13	3,679.07	58.06	64.362		
16,500.00	12,092.00	12,692.26	8,394.00	84.73	78.07	-8.26	4,386.65	70.91	3,737.14	3,678.09	59.05	63.288		
16,600.00	12,092.00	12,792.26	8,394.00	86.16	79.61	-8.26	4,486.64	69.97	3,737.14	3,677.10	60.04	62.243		
16,700.00	12,092.00	12,892.26	8,394.00	87.59	81.14	-8.26	4,586.64	69.02	3,737.14	3,676.10	61.04	61.227		
16,800.00	12,092.00	12,992.26	8,394.00	89.03	82.69	-8.26	4,686.63	68.07	3,737.14	3,675.10	62.04	60.239		
16,900.00	12,092.00	13,092.26	8,394.00	90.48	84.23	-8.26	4,786.63	67.13	3,737.14	3,674.09	63.05	59.277		
17,000.00	12,092.00	13,192.26	8,394.00	91.93	85.78	-8.26	4,886.63	66.18	3,737.14	3,673.08	64.06	58.341		
17,100.00	12,092.00	13,292.26	8,394.00	93.39	87.34	-8.26	4,986.62	65.23	3,737.14	3,672.07	65.07	57.430		
17,200.00	12,092.00	13,392.26	8,394.00	94.86	88.89	-8.26	5,086.62	64.28	3,737.14	3,671.05	66.09	56.544		
17,300.00	12,092.00	13,492.26	8,394.00	96.33	90.46	-8.26	5,186.61	63.34	3,737.14	3,670.02	67.12	55.681		
17,400.00	12,092.00	13,592.26	8,394.00	97.81	92.02	-8.26	5,286.61	62.39	3,737.14	3,669.00	68.14	54.841		
17,500.00	12,092.00	13,692.26	8,394.00	99.30	93.59	-8.26	5,386.60	61.44	3,737.14	3,667.97	69.18	54.023		
17,600.00	12,092.00	13,792.26	8,394.00	100.79	95.16	-8.26	5,486.60	60.49	3,737.14	3,666.93	70.21	53.227		
17,700.00	12,092.00	13,892.26	8,394.00	102.28	96.73	-8.26	5,586.59	59.55	3,737.14	3,665.89	71.25	52.451		
17,800.00	12,092.00	13,992.26	8,394.00	103.78	98.31	-8.26	5,686.59	58.60	3,737.14	3,664.85	72.29	51.696		
17,900.00	12,092.00	14,092.26	8,394.00	105.29	99.88	-8.26	5,786.59	57.65	3,737.14	3,663.81	73.33	50.960		
18,000.00	12,092.00	14,192.26	8,394.00	106.80	101.46	-8.26	5,886.58	56.70	3,737.14	3,662.76	74.38	50.243		
18,100.00	12,092.00	14,292.26	8,394.00	108.31	103.05	-8.26	5,986.58	55.76	3,737.15	3,661.72	75.43	49.544		
18,200.00	12,092.00	14,392.26	8,394.00	109.83	104.63	-8.26	6,086.57	54.81	3,737.15	3,660.66	76.48	48.863		
18,300.00	12,092.00	14,492.26	8,394.00	111.35	106.22	-8.26	6,186.57	53.86	3,737.15	3,659.61	77.54	48.198		
18,400.00	12,092.00	14,592.26	8,394.00	112.87	107.81	-8.26	6,286.56	52.91	3,737.15	3,658.55	78.59	47.550		
18,500.00	12,092.00	14,692.26	8,394.00	114.40	109.40	-8.26	6,386.56	51.97	3,737.15	3,657.49	79.65	46.918		
18,600.00	12,092.00	14,792.26	8,394.00	115.93	110.99	-8.26	6,486.55	51.02	3,737.15	3,656.43	80.71	46.301		
18,700.00	12,092.00	14,892.26	8,394.00	117.46	112.59	-8.26	6,586.55	50.07	3,737.15	3,655.37	81.78	45.698		
18,800.00	12,092.00	14,992.26	8,394.00	119.00	114.18	-8.26	6,686.55	49.12	3,737.15	3,654.30	82.85	45.109		
18,900.00	12,092.00	15,092.26	8,394.00	120.54	115.78	-8.26	6,786.54	48.18	3,737.15	3,653.24	83.92	44.535		
19,000.00	12,092.00	15,192.26	8,394.00	122.09	117.38	-8.26	6,886.54	47.23	3,737.15	3,652.17	84.99	43.974		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 103H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
							+N/-S (usft)	+E/-W (usft)								
19,100.00	12,092.00	15,292.26	8,394.00	123.63	118.98	-8.26	6,986.53	46.28	3,737.15	3,651.09	86.06	43.426				
19,200.00	12,092.00	15,392.26	8,394.00	125.18	120.58	-8.26	7,086.53	45.34	3,737.15	3,650.02	87.13	42.890				
19,300.00	12,092.00	15,492.26	8,394.00	126.73	122.18	-8.26	7,186.52	44.39	3,737.15	3,648.94	88.21	42.367				
19,400.00	12,092.00	15,592.26	8,394.00	128.29	123.79	-8.26	7,286.52	43.44	3,737.15	3,647.87	89.29	41.855				
19,500.00	12,092.00	15,692.26	8,394.00	129.84	125.39	-8.26	7,386.51	42.49	3,737.15	3,646.79	90.37	41.356				
19,600.00	12,092.00	15,792.26	8,394.00	131.40	127.00	-8.26	7,486.51	41.55	3,737.16	3,645.71	91.45	40.868				
19,700.00	12,092.00	15,892.26	8,394.00	132.96	128.61	-8.26	7,586.50	40.60	3,737.16	3,644.63	92.53	40.390				
19,800.00	12,092.00	15,992.26	8,394.00	134.53	130.22	-8.26	7,686.50	39.65	3,737.16	3,643.55	93.61	39.923				
19,900.00	12,092.00	16,092.26	8,394.00	136.09	131.83	-8.26	7,786.50	38.70	3,737.16	3,642.46	94.69	39.466				
20,000.00	12,092.00	16,192.26	8,394.00	137.66	133.44	-8.26	7,886.49	37.76	3,737.16	3,641.38	95.78	39.018				
20,100.00	12,092.00	16,292.26	8,394.00	139.23	135.05	-8.26	7,986.49	36.81	3,737.16	3,640.29	96.87	38.580				
20,200.00	12,092.00	16,392.26	8,394.00	140.80	136.66	-8.26	8,086.48	35.86	3,737.16	3,639.20	97.96	38.151				
20,300.00	12,092.00	16,492.26	8,394.00	142.37	138.28	-8.26	8,186.48	34.91	3,737.16	3,638.11	99.05	37.731				
20,400.00	12,092.00	16,592.26	8,394.00	143.95	139.89	-8.26	8,286.47	33.97	3,737.16	3,637.02	100.14	37.320				
20,500.00	12,092.00	16,692.26	8,394.00	145.53	141.51	-8.26	8,386.47	33.02	3,737.16	3,635.93	101.23	36.918				
20,600.00	12,092.00	16,792.26	8,394.00	147.10	143.13	-8.26	8,486.46	32.07	3,737.16	3,634.84	102.32	36.524				
20,700.00	12,092.00	16,892.26	8,394.00	148.68	144.74	-8.26	8,586.46	31.12	3,737.16	3,633.75	103.42	36.137				
20,800.00	12,092.00	16,992.26	8,394.00	150.27	146.36	-8.26	8,686.46	30.18	3,737.16	3,632.65	104.51	35.759				
20,900.00	12,092.00	17,092.26	8,394.00	151.85	147.98	-8.26	8,786.45	29.23	3,737.16	3,631.56	105.61	35.388				
21,000.00	12,092.00	17,192.26	8,394.00	153.43	149.60	-8.26	8,886.45	28.28	3,737.16	3,630.46	106.70	35.024				
21,100.00	12,092.00	17,292.26	8,394.00	155.02	151.22	-8.26	8,986.44	27.33	3,737.16	3,629.37	107.80	34.668				
21,200.00	12,092.00	17,392.26	8,394.00	156.61	152.84	-8.26	9,086.44	26.39	3,737.17	3,628.27	108.90	34.318				
21,300.00	12,092.00	17,492.26	8,394.00	158.19	154.47	-8.26	9,186.43	25.44	3,737.17	3,627.17	110.00	33.975				
21,400.00	12,092.00	17,592.26	8,394.00	159.78	156.09	-8.26	9,286.43	24.49	3,737.17	3,626.07	111.10	33.639				
21,500.00	12,092.00	17,692.26	8,394.00	161.38	157.71	-8.26	9,386.42	23.54	3,737.17	3,624.97	112.20	33.309				
21,600.00	12,092.00	17,792.26	8,394.00	162.97	159.33	-8.26	9,486.42	22.60	3,737.17	3,623.87	113.30	32.985				
21,700.00	12,092.00	17,892.26	8,394.00	164.56	160.96	-8.26	9,586.42	21.65	3,737.17	3,622.77	114.40	32.667				
21,800.00	12,092.00	17,992.26	8,394.00	166.16	162.58	-8.26	9,686.41	20.70	3,737.17	3,621.66	115.51	32.354				
21,900.00	12,092.00	18,092.26	8,394.00	167.75	164.21	-8.26	9,786.41	19.76	3,737.17	3,620.56	116.61	32.048				
22,000.00	12,092.00	18,192.26	8,394.00	169.35	165.83	-8.26	9,886.40	18.81	3,737.17	3,619.45	117.72	31.747				
22,100.00	12,092.00	18,292.26	8,394.00	170.95	167.46	-8.26	9,986.40	17.86	3,737.17	3,618.35	118.82	31.451				
22,200.00	12,092.00	18,392.26	8,394.00	172.55	169.09	-8.26	10,086.39	16.91	3,737.17	3,617.24	119.93	31.161				
22,255.91	12,092.00	18,448.18	8,394.00	173.44	170.00	-8.26	10,142.30	16.38	3,737.17	3,616.62	120.55	31.001				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 104H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD															Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)					
0.00	0.00	0.10	0.10	0.00	0.00	9.01	75.09	11.90	76.03							
100.00	100.00	100.10	100.10	0.13	0.13	9.01	75.09	11.90	76.03	75.85	0.18	427.868				
200.00	200.00	200.10	200.10	0.48	0.48	9.01	75.09	11.90	76.03	75.34	0.68	111.046				
300.00	300.00	300.10	300.10	0.84	0.84	9.01	75.09	11.90	76.03	74.84	1.19	63.803				
400.00	400.00	400.10	400.10	1.20	1.20	9.01	75.09	11.90	76.03	74.33	1.70	44.760				
500.00	500.00	500.10	500.10	1.56	1.56	9.01	75.09	11.90	76.03	73.82	2.21	34.471				
600.00	600.00	600.10	600.10	1.92	1.92	9.01	75.09	11.90	76.03	73.31	2.71	28.029				
700.00	700.00	700.10	700.10	2.28	2.28	9.01	75.09	11.90	76.03	72.81	3.22	23.615				
800.00	800.00	800.10	800.10	2.63	2.64	9.01	75.09	11.90	76.03	72.30	3.73	20.402				
900.00	900.00	900.10	900.10	2.99	2.99	9.01	75.09	11.90	76.03	71.79	4.23	17.959				
1,000.00	1,000.00	1,000.10	1,000.10	3.35	3.35	9.01	75.09	11.90	76.03	71.29	4.74	16.039				
1,100.00	1,100.00	1,100.10	1,100.10	3.71	3.71	9.01	75.09	11.90	76.03	70.78	5.25	14.489				
1,200.00	1,200.00	1,200.10	1,200.10	4.07	4.07	9.01	75.09	11.90	76.03	70.27	5.75	13.212				
1,300.00	1,300.00	1,300.10	1,300.10	4.43	4.43	9.01	75.09	11.90	76.03	69.77	6.26	12.143				
1,400.00	1,400.00	1,400.10	1,400.10	4.79	4.79	9.01	75.09	11.90	76.03	69.26	6.77	11.233				
1,500.00	1,500.00	1,500.10	1,500.10	5.14	5.14	9.01	75.09	11.90	76.03	68.75	7.28	10.450				
1,516.63	1,516.63	1,516.73	1,516.73	5.20	5.20	9.01	75.09	11.90	76.03	68.67	7.36	10.331 CC				
1,600.00	1,600.00	1,600.00	1,600.00	5.50	5.50	9.01	75.09	11.90	76.03	68.25	7.78	9.770				
1,700.00	1,700.00	1,699.79	1,699.77	5.86	5.85	10.31	74.99	13.64	76.22	67.94	8.28	9.204 ES				
1,800.00	1,800.00	1,799.24	1,799.08	6.22	6.19	14.14	74.70	18.81	77.04	68.26	8.78	8.779				
1,900.00	1,900.00	1,898.22	1,897.68	6.58	6.54	20.25	74.22	27.38	79.15	69.88	9.27	8.538 SF				
2,000.00	2,000.00	1,996.48	1,995.22	6.94	6.89	28.09	73.55	39.25	83.51	73.75	9.76	8.558				
2,100.00	2,099.99	2,094.02	2,091.57	7.28	7.24	-72.17	72.70	54.32	90.75	80.52	10.23	8.874				
2,200.00	2,199.91	2,190.94	2,186.76	7.62	7.61	-65.28	71.67	72.54	100.58	89.90	10.67	9.423				
2,300.00	2,299.69	2,287.21	2,280.64	7.96	7.99	-59.60	70.48	93.80	112.67	101.56	11.11	10.141				
2,400.00	2,399.27	2,382.80	2,373.10	8.31	8.39	-55.01	69.11	118.02	126.69	115.15	11.54	10.983				
2,500.00	2,498.57	2,477.70	2,464.03	8.66	8.81	-51.35	67.59	145.09	142.37	130.42	11.95	11.911				
2,543.01	2,541.19	2,518.30	2,502.65	8.81	9.00	-50.02	66.88	157.59	149.57	137.44	12.13	12.331				
2,600.00	2,597.60	2,573.87	2,555.34	9.02	9.27	-48.46	65.89	175.23	159.46	147.06	12.40	12.856				
2,700.00	2,696.59	2,672.07	2,648.45	9.38	9.76	-46.13	64.13	206.41	177.09	164.19	12.91	13.721				
2,800.00	2,795.58	2,770.28	2,741.55	9.75	10.26	-44.22	62.38	237.60	194.96	181.54	13.42	14.530				
2,900.00	2,894.57	2,868.48	2,834.65	10.12	10.78	-42.63	60.62	268.79	212.99	199.06	13.93	15.286				
3,000.00	2,993.56	2,966.68	2,927.75	10.50	11.31	-41.28	58.87	299.98	231.17	216.71	14.46	15.992				
3,100.00	3,092.55	3,064.88	3,020.85	10.88	11.85	-40.14	57.11	331.16	249.44	234.46	14.98	16.650				
3,200.00	3,191.55	3,163.08	3,113.95	11.27	12.40	-39.15	55.35	362.35	267.80	252.29	15.51	17.266				
3,300.00	3,290.54	3,261.28	3,207.06	11.65	12.95	-38.29	53.60	393.54	286.23	270.19	16.04	17.841				
3,400.00	3,389.53	3,359.49	3,300.16	12.04	13.52	-37.53	51.84	424.72	304.71	288.13	16.58	18.379				
3,500.00	3,488.52	3,457.69	3,393.26	12.44	14.09	-36.86	50.08	455.91	323.24	306.12	17.12	18.884				
3,600.00	3,587.51	3,555.89	3,486.36	12.83	14.67	-36.26	48.33	487.10	341.81	324.15	17.66	19.357				
3,700.00	3,686.50	3,654.09	3,579.46	13.23	15.25	-35.72	46.57	518.28	360.41	342.21	18.20	19.801				
3,800.00	3,785.49	3,752.29	3,672.56	13.62	15.83	-35.24	44.81	549.47	379.04	360.29	18.75	20.220				
3,900.00	3,884.48	3,850.50	3,765.66	14.02	16.42	-34.80	43.06	580.66	397.69	378.39	19.29	20.614				
4,000.00	3,983.48	3,948.70	3,858.77	14.43	17.02	-34.40	41.30	611.84	416.36	396.52	19.84	20.986				
4,100.00	4,082.47	4,046.90	3,951.87	14.83	17.61	-34.04	39.54	643.03	435.05	414.66	20.39	21.338				
4,200.00	4,181.46	4,145.10	4,044.97	15.23	18.21	-33.70	37.79	674.22	453.75	432.81	20.94	21.670				
4,300.00	4,280.45	4,243.30	4,138.07	15.64	18.81	-33.39	36.03	705.41	472.47	450.98	21.49	21.985				
4,400.00	4,379.44	4,341.51	4,231.17	16.04	19.42	-33.11	34.28	736.59	491.20	469.16	22.04	22.284				
4,500.00	4,478.43	4,439.71	4,324.27	16.45	20.02	-32.84	32.52	767.78	509.94	487.34	22.60	22.568				
4,600.00	4,577.42	4,537.91	4,417.38	16.86	20.63	-32.60	30.76	798.97	528.69	505.54	23.15	22.837				
4,700.00	4,676.41	4,636.11	4,510.48	17.27	21.24	-32.37	29.01	830.15	547.45	523.75	23.71	23.094				
4,800.00	4,775.40	4,734.31	4,603.58	17.68	21.85	-32.16	27.25	861.34	566.22	541.96	24.26	23.338				
4,900.00	4,874.40	4,832.52	4,696.68	18.09	22.46	-31.96	25.49	892.53	584.99	560.18	24.82	23.571				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	4,930.72	4,789.78	18.50	23.08	-31.77	23.74	923.71	603.78	578.40	25.38	23.793		
5,100.00	5,072.38	5,028.92	4,882.88	18.91	23.69	-31.59	21.98	954.90	622.56	596.63	25.93	24.006		
5,200.00	5,171.37	5,127.12	4,975.99	19.32	24.31	-31.43	20.22	986.09	641.35	614.86	26.49	24.209		
5,300.00	5,270.36	5,225.32	5,069.09	19.73	24.92	-31.27	18.47	1,017.28	660.15	633.10	27.05	24.403		
5,400.00	5,369.35	5,323.53	5,162.19	20.15	25.54	-31.12	16.71	1,048.46	678.95	651.34	27.61	24.589		
5,500.00	5,468.34	5,421.73	5,255.29	20.56	26.16	-30.98	14.95	1,079.65	697.76	669.59	28.17	24.767		
5,600.00	5,567.33	5,519.93	5,348.39	20.97	26.78	-30.85	13.20	1,110.84	716.57	687.84	28.73	24.938		
5,700.00	5,666.33	5,618.13	5,441.49	21.39	27.40	-30.72	11.44	1,142.02	735.38	706.09	29.30	25.102		
5,800.00	5,765.32	5,716.33	5,534.60	21.80	28.02	-30.61	9.68	1,173.21	754.20	724.34	29.86	25.260		
5,900.00	5,864.31	5,814.53	5,627.70	22.22	28.65	-30.49	7.93	1,204.40	773.02	742.60	30.42	25.412		
6,000.00	5,963.30	5,912.74	5,720.80	22.64	29.27	-30.38	6.17	1,235.58	791.84	760.86	30.98	25.558		
6,100.00	6,062.29	6,010.94	5,813.90	23.05	29.89	-30.28	4.42	1,266.77	810.67	779.12	31.55	25.699		
6,200.00	6,161.28	6,109.14	5,907.00	23.47	30.52	-30.18	2.66	1,297.96	829.49	797.38	32.11	25.834		
6,300.00	6,260.27	6,207.34	6,000.10	23.88	31.14	-30.09	0.90	1,329.15	848.32	815.65	32.67	25.964		
6,400.00	6,359.26	6,305.54	6,093.20	24.30	31.77	-30.00	-0.85	1,360.33	867.15	833.92	33.24	26.090		
6,500.00	6,458.26	6,403.75	6,186.31	24.72	32.39	-29.91	-2.61	1,391.52	885.99	852.19	33.80	26.212		
6,600.00	6,557.25	6,501.95	6,279.41	25.14	33.02	-29.83	-4.37	1,422.71	904.82	870.46	34.37	26.329		
6,700.00	6,656.24	6,600.15	6,372.51	25.55	33.65	-29.75	-6.12	1,453.89	923.66	888.73	34.93	26.443		
6,800.00	6,755.23	6,733.14	6,499.23	25.97	34.46	-29.68	-8.39	1,494.14	941.12	905.37	35.74	26.329		
6,837.97	6,792.81	6,788.26	6,552.27	26.13	34.78	-29.68	-9.23	1,509.13	946.54	910.47	36.07	26.241		
6,900.00	6,854.29	6,878.85	6,640.03	26.39	35.27	-29.75	-10.50	1,531.54	954.32	917.75	36.57	26.092		
7,000.00	6,953.65	7,025.90	6,783.87	26.79	35.99	-29.85	-12.21	1,561.99	964.72	927.40	37.31	25.854		
7,100.00	7,053.27	7,173.99	6,930.10	27.17	36.62	-29.93	-13.52	1,585.17	972.42	934.46	37.95	25.620		
7,200.00	7,153.09	7,322.79	7,078.06	27.53	37.16	-30.00	-14.40	1,600.83	977.38	938.89	38.49	25.391		
7,300.00	7,253.03	7,472.01	7,227.05	27.88	37.61	-30.04	-14.85	1,608.81	979.59	940.67	38.93	25.166		
7,380.98	7,334.00	7,579.07	7,334.10	28.15	37.89	78.21	-14.91	1,609.90	979.55	940.32	39.24	24.965		
7,400.00	7,353.02	7,598.09	7,353.12	28.21	37.93	78.21	-14.91	1,609.90	979.55	940.23	39.32	24.911		
7,500.00	7,453.02	7,698.09	7,453.12	28.53	38.17	78.21	-14.91	1,609.90	979.55	939.78	39.77	24.631		
7,600.00	7,553.02	7,798.09	7,553.12	28.85	38.42	78.21	-14.91	1,609.90	979.55	939.33	40.22	24.356		
7,700.00	7,653.02	7,898.09	7,653.12	29.17	38.66	78.21	-14.91	1,609.90	979.55	938.88	40.67	24.086		
7,708.32	7,661.34	7,906.41	7,661.44	29.19	38.68	78.21	-14.91	1,609.90	979.55	938.85	40.71	24.064		
7,800.00	7,753.02	7,986.53	7,741.54	29.49	38.88	78.15	-13.87	1,609.89	979.83	938.67	41.15	23.809		
7,900.00	7,853.02	8,060.27	7,814.65	29.81	39.06	77.63	-4.71	1,609.80	982.35	940.65	41.69	23.561		
8,000.00	7,953.02	8,130.56	7,882.72	30.13	39.22	76.64	12.69	1,609.64	987.82	945.58	42.24	23.387		
8,100.00	8,053.02	8,200.00	7,947.36	30.46	39.36	75.22	37.92	1,609.40	996.84	954.06	42.77	23.304		
8,200.00	8,153.02	8,250.00	7,991.78	30.78	39.46	73.94	60.85	1,609.18	1,010.06	966.86	43.20	23.380		
8,300.00	8,253.02	8,300.00	8,034.03	31.11	39.54	72.47	87.55	1,608.92	1,028.18	984.65	43.53	23.619		
8,400.00	8,353.02	8,350.00	8,073.79	31.43	39.62	70.83	117.84	1,608.64	1,051.61	1,007.85	43.76	24.032		
8,500.00	8,453.02	8,400.00	8,110.76	31.76	39.69	69.05	151.48	1,608.32	1,080.73	1,036.84	43.89	24.626		
8,600.00	8,553.02	8,431.23	8,132.31	32.09	39.73	67.88	174.07	1,608.10	1,115.57	1,071.85	43.72	25.517		
8,700.00	8,653.02	8,450.00	8,144.66	32.42	39.76	67.15	188.21	1,607.97	1,156.24	1,112.92	43.32	26.688		
8,800.00	8,753.02	8,500.00	8,175.22	32.74	39.82	65.16	227.76	1,607.59	1,202.11	1,158.93	43.18	27.841		
8,900.00	8,853.02	8,515.16	8,183.80	33.07	39.83	64.55	240.26	1,607.47	1,253.03	1,210.45	42.58	29.425		
9,000.00	8,953.02	8,550.00	8,202.23	33.40	39.87	63.11	269.82	1,607.19	1,308.89	1,266.71	42.18	31.033		
9,100.00	9,053.02	8,550.00	8,202.23	33.73	39.87	63.11	269.82	1,607.19	1,368.71	1,327.36	41.35	33.104		
9,200.00	9,153.02	8,573.55	8,213.65	34.07	39.89	62.14	290.41	1,606.99	1,432.47	1,391.66	40.80	35.107		
9,300.00	9,253.02	8,600.00	8,225.46	34.40	39.92	61.03	314.07	1,606.77	1,499.83	1,459.52	40.31	37.208		
9,400.00	9,353.02	8,600.00	8,225.46	34.73	39.92	61.03	314.07	1,606.77	1,570.04	1,530.49	39.54	39.703		
9,500.00	9,453.02	8,600.00	8,225.46	35.06	39.92	61.03	314.07	1,606.77	1,643.33	1,604.51	38.82	42.327		
9,600.00	9,553.02	8,627.21	8,236.46	35.39	39.95	59.90	338.96	1,606.53	1,718.57	1,680.12	38.45	44.691		
9,700.00	9,653.02	8,650.00	8,244.75	35.73	39.97	58.95	360.18	1,606.33	1,796.38	1,758.31	38.07	47.183		
9,800.00	9,753.02	8,650.00	8,244.75	36.06	39.97	58.95	360.18	1,606.33	1,875.81	1,838.31	37.50	50.019		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 104H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,900.00	9,853.02	8,650.00	8,244.75	36.40	39.97	58.95	360.18	1,606.33	1,957.12	1,920.14	36.99	52.915		
10,000.00	9,953.02	8,650.00	8,244.75	36.73	39.97	58.95	360.18	1,606.33	2,040.10	2,003.57	36.52	55.857		
10,100.00	10,053.02	8,671.65	8,251.84	37.07	39.99	58.05	380.63	1,606.14	2,124.07	2,087.75	36.31	58.496		
10,200.00	10,153.02	8,678.57	8,253.95	37.40	40.00	57.77	387.23	1,606.07	2,209.46	2,173.45	36.00	61.368		
10,300.00	10,253.02	8,700.00	8,259.95	37.74	40.02	56.89	407.79	1,605.88	2,296.17	2,260.31	35.86	64.035		
10,400.00	10,353.02	8,700.00	8,259.95	38.08	40.02	56.89	407.79	1,605.88	2,383.49	2,347.92	35.57	67.012		
10,500.00	10,453.02	8,700.00	8,259.95	38.41	40.02	56.89	407.79	1,605.88	2,471.77	2,436.45	35.32	69.986		
10,600.00	10,553.02	8,700.00	8,259.95	38.75	40.02	56.89	407.79	1,605.88	2,560.91	2,525.81	35.11	72.947		
10,700.00	10,653.02	8,700.00	8,259.95	39.09	40.02	56.89	407.79	1,605.88	2,650.83	2,615.90	34.93	75.889		
10,800.00	10,753.02	8,700.00	8,259.95	39.43	40.02	56.89	407.79	1,605.88	2,741.45	2,706.66	34.79	78.807		
10,900.00	10,853.02	8,700.00	8,259.95	39.77	40.02	56.89	407.79	1,605.88	2,832.70	2,798.03	34.67	81.696		
11,000.00	10,953.02	8,700.00	8,259.95	40.10	40.02	56.89	407.79	1,605.88	2,924.52	2,889.93	34.59	84.553		
11,100.00	11,053.02	8,723.41	8,265.63	40.44	40.05	55.94	430.50	1,605.66	3,016.32	2,981.64	34.68	86.973		
11,200.00	11,153.02	8,727.02	8,266.42	40.78	40.05	55.79	434.03	1,605.63	3,108.95	3,074.29	34.67	89.685		
11,300.00	11,253.02	8,750.00	8,270.94	41.12	40.08	54.87	456.55	1,605.41	3,202.39	3,167.60	34.79	92.051		
11,400.00	11,353.02	8,750.00	8,270.94	41.46	40.08	54.87	456.55	1,605.41	3,295.71	3,260.92	34.79	94.727		
11,500.00	11,453.02	8,750.00	8,270.94	41.80	40.08	54.87	456.55	1,605.41	3,389.42	3,354.60	34.82	97.354		
11,566.02	11,519.04	8,750.00	8,270.94	42.03	40.08	54.87	456.55	1,605.41	3,451.48	3,416.63	34.84	99.061		
11,600.00	11,553.00	8,750.00	8,270.94	42.14	40.08	48.34	456.55	1,605.41	3,483.26	3,448.41	34.85	99.938		
11,650.00	11,602.72	8,750.00	8,270.94	42.31	40.08	40.22	456.55	1,605.41	3,529.19	3,494.33	34.86	101.231		
11,700.00	11,651.80	8,750.00	8,270.94	42.46	40.08	34.22	456.55	1,605.41	3,573.84	3,538.98	34.86	102.514		
11,750.00	11,699.87	8,750.00	8,270.94	42.61	40.08	29.72	456.55	1,605.41	3,616.93	3,582.08	34.85	103.778		
11,800.00	11,746.57	8,750.00	8,270.94	42.75	40.08	26.29	456.55	1,605.41	3,658.19	3,623.36	34.84	105.011		
11,850.00	11,791.53	8,750.00	8,270.94	42.87	40.08	23.62	456.55	1,605.41	3,697.37	3,662.56	34.81	106.205		
11,900.00	11,834.42	8,750.00	8,270.94	42.98	40.08	21.53	456.55	1,605.41	3,734.25	3,699.46	34.79	107.348		
11,950.00	11,874.92	8,750.00	8,270.94	43.08	40.08	19.85	456.55	1,605.41	3,768.61	3,733.85	34.76	108.431		
12,000.00	11,912.70	8,750.00	8,270.94	43.17	40.08	18.51	456.55	1,605.41	3,800.26	3,765.54	34.72	109.443		
12,050.00	11,947.48	8,775.27	8,274.87	43.24	40.11	17.35	481.52	1,605.18	3,828.42	3,793.61	34.80	110.008		
12,100.00	11,979.01	8,800.00	8,277.64	43.29	40.14	16.43	506.08	1,604.94	3,854.21	3,819.34	34.87	110.529		
12,150.00	12,007.03	8,800.00	8,277.64	43.34	40.14	15.75	506.08	1,604.94	3,876.22	3,841.38	34.84	111.270		
12,200.00	12,031.34	8,800.00	8,277.64	43.37	40.14	15.21	506.08	1,604.94	3,894.94	3,860.13	34.81	111.899		
12,250.00	12,051.76	8,800.00	8,277.64	43.40	40.14	14.79	506.08	1,604.94	3,910.27	3,875.48	34.79	112.405		
12,300.00	12,068.11	8,800.00	8,277.64	43.43	40.14	14.48	506.08	1,604.94	3,922.13	3,887.35	34.78	112.780		
12,350.00	12,080.29	8,800.00	8,277.64	43.46	40.14	14.27	506.08	1,604.94	3,930.46	3,895.69	34.78	113.015		
12,400.00	12,088.20	8,800.00	8,277.64	43.51	40.14	14.16	506.08	1,604.94	3,935.24	3,900.44	34.79	113.104		
12,450.00	12,091.77	8,824.99	8,279.36	43.58	40.18	14.13	531.01	1,604.70	3,935.81	3,900.92	34.89	112.791		
12,466.02	12,092.00	8,827.08	8,279.46	43.60	40.18	14.14	533.10	1,604.69	3,935.32	3,900.41	34.91	112.722		
12,500.00	12,092.00	8,852.01	8,280.00	43.67	40.22	14.14	558.02	1,604.45	3,934.43	3,899.42	35.01	112.386		
12,600.00	12,092.00	8,852.01	8,280.00	43.93	40.22	14.14	558.02	1,604.45	3,931.70	3,896.57	35.13	111.911		
12,700.00	12,092.00	8,895.03	8,280.00	44.27	40.29	14.14	601.04	1,604.04	3,931.29	3,895.87	35.42	111.004		
12,728.50	12,092.00	8,923.53	8,280.00	44.39	40.34	14.14	629.54	1,603.77	3,931.29	3,895.75	35.54	110.611		
12,800.00	12,092.00	8,995.03	8,280.00	44.68	40.50	14.14	701.04	1,603.09	3,931.29	3,895.43	35.86	109.632		
12,900.00	12,092.00	9,095.03	8,280.00	45.15	40.77	14.14	801.03	1,602.14	3,931.28	3,894.95	36.34	108.188		
13,000.00	12,092.00	9,195.03	8,280.00	45.68	41.10	14.14	901.03	1,601.18	3,931.28	3,894.43	36.85	106.684		
13,100.00	12,092.00	9,295.03	8,280.00	46.26	41.50	14.14	1,001.03	1,600.23	3,931.28	3,893.89	37.39	105.130		
13,200.00	12,092.00	9,395.03	8,280.00	46.89	41.96	14.14	1,101.02	1,599.28	3,931.28	3,893.31	37.97	103.535		
13,300.00	12,092.00	9,495.03	8,280.00	47.57	42.49	14.14	1,201.02	1,598.33	3,931.28	3,892.70	38.58	101.910		
13,400.00	12,092.00	9,595.03	8,280.00	48.30	43.09	14.14	1,301.01	1,597.38	3,931.27	3,892.06	39.21	100.262		
13,500.00	12,092.00	9,695.03	8,280.00	49.06	43.76	14.14	1,401.01	1,596.43	3,931.27	3,891.40	39.87	98.601		
13,600.00	12,092.00	9,795.03	8,280.00	49.88	44.49	14.14	1,501.00	1,595.47	3,931.27	3,890.72	40.55	96.937		
13,700.00	12,092.00	9,895.03	8,280.00	50.73	45.29	14.14	1,601.00	1,594.52	3,931.27	3,890.00	41.26	95.273		
13,800.00	12,092.00	9,995.03	8,280.00	51.62	46.14	14.14	1,700.99	1,593.57	3,931.27	3,889.27	42.00	93.613		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 104H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	10,095.03	8,280.00	52.54	47.04	14.14	1,800.99	1,592.62	3,931.26	3,888.51	42.75	91.959		
14,000.00	12,092.00	10,195.03	8,280.00	53.51	47.99	14.14	1,900.98	1,591.67	3,931.26	3,887.74	43.53	90.320		
14,100.00	12,092.00	10,295.03	8,280.00	54.50	48.99	14.14	2,000.98	1,590.72	3,931.26	3,886.94	44.32	88.700		
14,200.00	12,092.00	10,395.03	8,280.00	55.52	50.03	14.14	2,100.98	1,589.76	3,931.26	3,886.12	45.14	87.100		
14,300.00	12,092.00	10,495.03	8,280.00	56.58	51.10	14.14	2,200.97	1,588.81	3,931.26	3,885.29	45.97	85.524		
14,400.00	12,092.00	10,595.03	8,280.00	57.66	52.22	14.14	2,300.97	1,587.86	3,931.25	3,884.44	46.81	83.974		
14,500.00	12,092.00	10,695.03	8,280.00	58.77	53.36	14.14	2,400.96	1,586.91	3,931.25	3,883.57	47.68	82.453		
14,600.00	12,092.00	10,795.03	8,280.00	59.90	54.53	14.14	2,500.96	1,585.96	3,931.25	3,882.69	48.56	80.960		
14,700.00	12,092.00	10,895.03	8,280.00	61.06	55.74	14.14	2,600.95	1,585.01	3,931.25	3,881.80	49.45	79.501		
14,800.00	12,092.00	10,995.03	8,280.00	62.24	56.96	14.14	2,700.95	1,584.06	3,931.24	3,880.89	50.35	78.073		
14,900.00	12,092.00	11,095.03	8,280.00	63.44	58.21	14.14	2,800.94	1,583.10	3,931.24	3,879.97	51.27	76.677		
15,000.00	12,092.00	11,195.03	8,280.00	64.66	59.48	14.14	2,900.94	1,582.15	3,931.24	3,879.04	52.20	75.313		
15,100.00	12,092.00	11,295.03	8,280.00	65.90	60.77	14.14	3,000.93	1,581.20	3,931.24	3,878.10	53.14	73.980		
15,200.00	12,092.00	11,395.03	8,280.00	67.16	62.08	14.14	3,100.93	1,580.25	3,931.24	3,877.15	54.09	72.679		
15,300.00	12,092.00	11,495.03	8,280.00	68.43	63.41	14.14	3,200.93	1,579.30	3,931.23	3,876.18	55.05	71.410		
15,400.00	12,092.00	11,595.03	8,280.00	69.72	64.75	14.14	3,300.92	1,578.35	3,931.23	3,875.21	56.02	70.170		
15,500.00	12,092.00	11,695.03	8,280.00	71.02	66.11	14.14	3,400.92	1,577.39	3,931.23	3,874.22	57.01	68.962		
15,600.00	12,092.00	11,795.03	8,280.00	72.34	67.48	14.14	3,500.91	1,576.44	3,931.23	3,873.23	58.00	67.784		
15,700.00	12,092.00	11,895.03	8,280.00	73.67	68.87	14.14	3,600.91	1,575.49	3,931.23	3,872.23	58.99	66.637		
15,800.00	12,092.00	11,995.03	8,280.00	75.02	70.26	14.14	3,700.90	1,574.54	3,931.22	3,871.22	60.00	65.520		
15,900.00	12,092.00	12,095.03	8,280.00	76.37	71.67	14.14	3,800.90	1,573.59	3,931.22	3,870.21	61.01	64.433		
16,000.00	12,092.00	12,195.03	8,280.00	77.74	73.09	14.14	3,900.89	1,572.64	3,931.22	3,869.19	62.03	63.375		
16,100.00	12,092.00	12,295.03	8,280.00	79.12	74.52	14.14	4,000.89	1,571.68	3,931.22	3,868.16	63.06	62.345		
16,200.00	12,092.00	12,395.03	8,280.00	80.51	75.96	14.14	4,100.89	1,570.73	3,931.21	3,867.13	64.09	61.341		
16,300.00	12,092.00	12,495.03	8,280.00	81.91	77.40	14.14	4,200.88	1,569.78	3,931.21	3,866.09	65.13	60.363		
16,400.00	12,092.00	12,595.03	8,280.00	83.31	78.86	14.14	4,300.88	1,568.83	3,931.21	3,865.04	66.17	59.411		
16,500.00	12,092.00	12,695.03	8,280.00	84.73	80.32	14.14	4,400.87	1,567.88	3,931.21	3,863.99	67.22	58.483		
16,600.00	12,092.00	12,795.03	8,280.00	86.16	81.79	14.14	4,500.87	1,566.93	3,931.21	3,862.93	68.27	57.579		
16,700.00	12,092.00	12,895.03	8,280.00	87.59	83.27	14.14	4,600.86	1,565.98	3,931.20	3,861.87	69.33	56.699		
16,800.00	12,092.00	12,995.03	8,280.00	89.03	84.75	14.14	4,700.86	1,565.02	3,931.20	3,860.80	70.40	55.842		
16,900.00	12,092.00	13,095.03	8,280.00	90.48	86.24	14.14	4,800.85	1,564.07	3,931.20	3,859.73	71.47	55.006		
17,000.00	12,092.00	13,195.03	8,280.00	91.93	87.74	14.14	4,900.85	1,563.12	3,931.20	3,858.66	72.54	54.192		
17,100.00	12,092.00	13,295.03	8,280.00	93.39	89.24	14.14	5,000.84	1,562.17	3,931.20	3,857.58	73.62	53.398		
17,200.00	12,092.00	13,395.03	8,280.00	94.86	90.75	14.14	5,100.84	1,561.22	3,931.19	3,856.49	74.70	52.625		
17,300.00	12,092.00	13,495.03	8,280.00	96.33	92.26	14.14	5,200.84	1,560.27	3,931.19	3,855.40	75.79	51.871		
17,400.00	12,092.00	13,595.03	8,280.00	97.81	93.78	14.14	5,300.83	1,559.31	3,931.19	3,854.31	76.88	51.136		
17,500.00	12,092.00	13,695.03	8,280.00	99.30	95.30	14.14	5,400.83	1,558.36	3,931.19	3,853.22	77.97	50.421		
17,600.00	12,092.00	13,795.03	8,280.00	100.79	96.82	14.14	5,500.82	1,557.41	3,931.18	3,852.12	79.06	49.723		
17,700.00	12,092.00	13,895.03	8,280.00	102.28	98.35	14.14	5,600.82	1,556.46	3,931.18	3,851.02	80.16	49.042		
17,800.00	12,092.00	13,995.03	8,280.00	103.78	99.89	14.14	5,700.81	1,555.51	3,931.18	3,849.92	81.26	48.376		
17,900.00	12,092.00	14,095.03	8,280.00	105.29	101.43	14.14	5,800.81	1,554.56	3,931.18	3,848.81	82.37	47.727		
18,000.00	12,092.00	14,195.03	8,280.00	106.80	102.97	14.14	5,900.80	1,553.60	3,931.18	3,847.70	83.48	47.094		
18,100.00	12,092.00	14,295.03	8,280.00	108.31	104.51	14.14	6,000.80	1,552.65	3,931.17	3,846.59	84.58	46.477		
18,200.00	12,092.00	14,395.03	8,280.00	109.83	106.06	14.14	6,100.79	1,551.70	3,931.17	3,845.48	85.69	45.874		
18,300.00	12,092.00	14,495.03	8,280.00	111.35	107.61	14.14	6,200.79	1,550.75	3,931.17	3,844.36	86.81	45.286		
18,400.00	12,092.00	14,595.03	8,280.00	112.87	109.17	14.14	6,300.79	1,549.80	3,931.17	3,843.24	87.92	44.711		
18,500.00	12,092.00	14,695.03	8,280.00	114.40	110.72	14.14	6,400.78	1,548.85	3,931.17	3,842.12	89.04	44.149		
18,600.00	12,092.00	14,795.03	8,280.00	115.93	112.28	14.14	6,500.78	1,547.89	3,931.16	3,841.00	90.16	43.600		
18,700.00	12,092.00	14,895.03	8,280.00	117.46	113.84	14.14	6,600.77	1,546.94	3,931.16	3,839.87	91.29	43.064		
18,800.00	12,092.00	14,995.03	8,280.00	119.00	115.41	14.14	6,700.77	1,545.99	3,931.16	3,838.75	92.41	42.540		
18,900.00	12,092.00	15,095.03	8,280.00	120.54	116.98	14.14	6,800.76	1,545.04	3,931.16	3,837.62	93.54	42.027		
19,000.00	12,092.00	15,195.03	8,280.00	122.09	118.55	14.14	6,900.76	1,544.09	3,931.16	3,836.49	94.67	41.526		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 104H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
							+N/-S (usft)	+E/-W (usft)								
19,100.00	12,092.00	15,295.03	8,280.00	123.63	120.12	14.14	7,000.75	1,543.14	3,931.15	3,835.35	95.80	41.036				
19,200.00	12,092.00	15,395.03	8,280.00	125.18	121.69	14.14	7,100.75	1,542.19	3,931.15	3,834.22	96.93	40.556				
19,300.00	12,092.00	15,495.03	8,280.00	126.73	123.27	14.14	7,200.74	1,541.23	3,931.15	3,833.08	98.07	40.087				
19,400.00	12,092.00	15,595.03	8,280.00	128.29	124.85	14.14	7,300.74	1,540.28	3,931.15	3,831.94	99.20	39.628				
19,500.00	12,092.00	15,695.03	8,280.00	129.84	126.43	14.14	7,400.74	1,539.33	3,931.14	3,830.80	100.34	39.178				
19,600.00	12,092.00	15,795.03	8,280.00	131.40	128.01	14.14	7,500.73	1,538.38	3,931.14	3,829.66	101.48	38.738				
19,700.00	12,092.00	15,895.03	8,280.00	132.96	129.59	14.14	7,600.73	1,537.43	3,931.14	3,828.52	102.62	38.308				
19,800.00	12,092.00	15,995.03	8,280.00	134.53	131.18	14.14	7,700.72	1,536.48	3,931.14	3,827.38	103.76	37.886				
19,900.00	12,092.00	16,095.03	8,280.00	136.09	132.76	14.14	7,800.72	1,535.52	3,931.14	3,826.23	104.90	37.474				
20,000.00	12,092.00	16,195.03	8,280.00	137.66	134.35	14.14	7,900.71	1,534.57	3,931.13	3,825.09	106.05	37.070				
20,100.00	12,092.00	16,295.03	8,280.00	139.23	135.94	14.14	8,000.71	1,533.62	3,931.13	3,823.94	107.19	36.674				
20,200.00	12,092.00	16,395.03	8,280.00	140.80	137.53	14.14	8,100.70	1,532.67	3,931.13	3,822.79	108.34	36.285				
20,300.00	12,092.00	16,495.03	8,280.00	142.37	139.13	14.14	8,200.70	1,531.72	3,931.13	3,821.64	109.49	35.905				
20,400.00	12,092.00	16,595.03	8,280.00	143.95	140.72	14.14	8,300.69	1,530.77	3,931.13	3,820.49	110.63	35.533				
20,500.00	12,092.00	16,695.03	8,280.00	145.53	142.32	14.14	8,400.69	1,529.81	3,931.12	3,819.34	111.78	35.168				
20,600.00	12,092.00	16,795.03	8,280.00	147.10	143.91	14.13	8,500.69	1,528.86	3,931.12	3,818.19	112.93	34.810				
20,700.00	12,092.00	16,895.03	8,280.00	148.68	145.51	14.13	8,600.68	1,527.91	3,931.12	3,817.04	114.08	34.459				
20,800.00	12,092.00	16,995.03	8,280.00	150.27	147.11	14.13	8,700.68	1,526.96	3,931.12	3,815.88	115.23	34.114				
20,900.00	12,092.00	17,095.03	8,280.00	151.85	148.71	14.13	8,800.67	1,526.01	3,931.11	3,814.73	116.39	33.776				
21,000.00	12,092.00	17,195.03	8,280.00	153.43	150.31	14.13	8,900.67	1,525.06	3,931.11	3,813.57	117.54	33.445				
21,100.00	12,092.00	17,295.03	8,280.00	155.02	151.91	14.13	9,000.66	1,524.11	3,931.11	3,812.42	118.69	33.120				
21,200.00	12,092.00	17,395.03	8,280.00	156.61	153.52	14.13	9,100.66	1,523.15	3,931.11	3,811.26	119.85	32.800				
21,300.00	12,092.00	17,495.03	8,280.00	158.19	155.12	14.13	9,200.65	1,522.20	3,931.11	3,810.10	121.01	32.487				
21,400.00	12,092.00	17,595.03	8,280.00	159.78	156.73	14.13	9,300.65	1,521.25	3,931.10	3,808.94	122.16	32.179				
21,500.00	12,092.00	17,695.03	8,280.00	161.38	158.33	14.13	9,400.65	1,520.30	3,931.10	3,807.78	123.32	31.877				
21,600.00	12,092.00	17,795.03	8,280.00	162.97	159.94	14.13	9,500.64	1,519.35	3,931.10	3,806.62	124.48	31.580				
21,700.00	12,092.00	17,895.03	8,280.00	164.56	161.55	14.13	9,600.64	1,518.40	3,931.10	3,805.46	125.64	31.288				
21,800.00	12,092.00	17,995.03	8,280.00	166.16	163.16	14.13	9,700.63	1,517.44	3,931.10	3,804.29	126.80	31.002				
21,900.00	12,092.00	18,095.03	8,280.00	167.75	164.77	14.13	9,800.63	1,516.49	3,931.09	3,803.13	127.96	30.720				
22,000.00	12,092.00	18,195.03	8,280.00	169.35	166.38	14.13	9,900.62	1,515.54	3,931.09	3,801.97	129.13	30.444				
22,100.00	12,092.00	18,295.03	8,280.00	170.95	167.99	14.13	10,000.62	1,514.59	3,931.09	3,800.80	130.29	30.172				
22,200.00	12,092.00	18,395.03	8,280.00	172.55	169.61	14.13	10,100.61	1,513.64	3,931.09	3,799.63	131.45	29.905				
22,253.84	12,092.00	18,448.40	8,280.00	173.41	170.47	14.13	10,153.98	1,513.13	3,931.09	3,799.01	132.08	29.764				
22,255.91	12,092.00	18,448.40	8,280.00	173.44	170.47	14.13	10,153.98	1,513.13	3,931.09	3,798.99	132.09	29.760				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.38	56.48	-1,999.28	2,000.57					
100.00	100.00	55.70	55.70	0.13	0.07	-88.38	56.48	-1,999.28	2,000.08	1,999.93	0.14	N/A		
200.00	200.00	155.70	155.70	0.48	0.33	-88.38	56.48	-1,999.28	2,000.08	1,999.49	0.58	3,430.571		
300.00	300.00	255.70	255.70	0.84	0.68	-88.38	56.48	-1,999.28	2,000.08	1,998.99	1.08	1,843.589		
400.00	400.00	355.70	355.70	1.20	1.04	-88.38	56.48	-1,999.28	2,000.08	1,998.49	1.59	1,257.925		
500.00	500.00	455.70	455.70	1.56	1.40	-88.38	56.48	-1,999.28	2,000.08	1,997.98	2.10	954.246		
600.00	600.00	555.70	555.70	1.92	1.76	-88.38	56.48	-1,999.28	2,000.08	1,997.47	2.60	768.567		
700.00	700.00	655.70	655.70	2.28	2.12	-88.38	56.48	-1,999.28	2,000.08	1,996.97	3.11	643.338		
800.00	800.00	755.70	755.70	2.63	2.48	-88.38	56.48	-1,999.28	2,000.08	1,996.46	3.62	553.183		
900.00	900.00	855.70	855.70	2.99	2.83	-88.38	56.48	-1,999.28	2,000.08	1,995.95	4.12	485.182		
1,000.00	1,000.00	955.70	955.70	3.35	3.19	-88.38	56.48	-1,999.28	2,000.08	1,995.45	4.63	432.065		
1,100.00	1,100.00	1,055.70	1,055.70	3.71	3.55	-88.38	56.48	-1,999.28	2,000.08	1,994.94	5.14	389.429		
1,200.00	1,200.00	1,155.70	1,155.70	4.07	3.91	-88.38	56.48	-1,999.28	2,000.08	1,994.43	5.64	354.449		
1,300.00	1,300.00	1,255.70	1,255.70	4.43	4.27	-88.38	56.48	-1,999.28	2,000.08	1,993.93	6.15	325.235		
1,400.00	1,400.00	1,355.70	1,355.70	4.79	4.63	-88.38	56.48	-1,999.28	2,000.08	1,993.42	6.66	300.469		
1,500.00	1,500.00	1,455.70	1,455.70	5.14	4.99	-88.38	56.48	-1,999.28	2,000.08	1,992.91	7.16	279.208		
1,600.00	1,600.00	1,555.70	1,555.70	5.50	5.34	-88.38	56.48	-1,999.28	2,000.08	1,992.41	7.67	260.756		
1,700.00	1,700.00	1,655.70	1,655.70	5.86	5.70	-88.38	56.48	-1,999.28	2,000.08	1,991.90	8.18	244.592		
1,800.00	1,800.00	1,755.70	1,755.70	6.22	6.06	-88.38	56.48	-1,999.28	2,000.08	1,991.39	8.68	230.314		
1,900.00	1,900.00	1,855.70	1,855.70	6.58	6.42	-88.38	56.48	-1,999.28	2,000.08	1,990.88	9.19	217.612		
2,000.00	2,000.00	1,955.70	1,955.70	6.94	6.78	-88.38	56.48	-1,999.28	2,000.08	1,990.38	9.70	206.237 CC, ES		
2,100.00	2,099.99	2,036.93	2,036.93	7.28	7.06	163.34	56.44	-1,999.45	2,001.59	1,991.44	10.15	197.275		
2,200.00	2,199.91	2,100.00	2,099.99	7.62	7.28	163.33	56.20	-2,000.56	2,007.13	1,996.59	10.54	190.470		
2,300.00	2,299.69	2,168.99	2,168.93	7.96	7.52	163.31	55.67	-2,002.93	2,016.84	2,005.90	10.94	184.376		
2,400.00	2,399.27	2,234.41	2,234.26	8.31	7.74	163.27	54.92	-2,006.30	2,030.69	2,019.36	11.33	179.237		
2,500.00	2,498.57	2,300.00	2,299.69	8.66	7.97	163.22	53.92	-2,010.77	2,048.65	2,036.93	11.72	174.810		
2,543.01	2,541.19	2,326.88	2,326.49	8.81	8.06	163.20	53.44	-2,012.92	2,057.63	2,045.74	11.88	173.146		
2,600.00	2,597.60	2,363.35	2,362.80	9.02	8.19	163.22	52.73	-2,016.13	2,070.27	2,058.17	12.10	171.079		
2,700.00	2,696.59	2,426.97	2,426.08	9.38	8.41	163.25	51.30	-2,022.55	2,093.70	2,081.22	12.48	167.764		
2,800.00	2,795.58	2,500.00	2,498.57	9.75	8.67	163.27	49.38	-2,031.18	2,118.73	2,105.84	12.89	164.432		
2,900.00	2,894.57	2,552.67	2,550.74	10.12	8.86	163.28	47.81	-2,038.24	2,145.22	2,131.99	13.23	162.166		
3,000.00	2,993.56	2,600.00	2,597.54	10.50	9.03	163.28	46.26	-2,045.18	2,173.34	2,159.79	13.55	160.385		
3,100.00	3,092.55	2,676.15	2,672.63	10.88	9.31	163.28	43.51	-2,057.54	2,202.81	2,188.85	13.96	157.767		
3,200.00	3,191.55	2,737.00	2,732.43	11.27	9.54	163.27	41.08	-2,068.46	2,233.84	2,219.52	14.32	155.958		
3,300.00	3,290.54	2,818.14	2,811.99	11.65	9.85	163.25	37.61	-2,084.07	2,266.05	2,251.30	14.75	153.609		
3,400.00	3,389.53	2,912.77	2,904.74	12.04	10.22	163.23	33.54	-2,102.34	2,298.38	2,283.15	15.23	150.919		
3,500.00	3,488.52	3,007.39	2,997.50	12.44	10.60	163.21	29.47	-2,120.62	2,330.71	2,315.00	15.71	148.368		
3,600.00	3,587.51	3,102.02	3,090.25	12.83	10.98	163.19	25.40	-2,138.89	2,363.04	2,346.85	16.19	145.946		
3,700.00	3,686.50	3,196.65	3,183.01	13.23	11.37	163.17	21.34	-2,157.17	2,395.37	2,378.69	16.68	143.645		
3,800.00	3,785.49	3,291.27	3,275.77	13.62	11.76	163.15	17.27	-2,175.45	2,427.70	2,410.54	17.16	141.457		
3,900.00	3,884.48	3,385.90	3,368.52	14.02	12.16	163.13	13.20	-2,193.72	2,460.03	2,442.38	17.65	139.374		
4,000.00	3,983.48	3,480.53	3,461.28	14.43	12.57	163.12	9.13	-2,212.00	2,492.36	2,474.22	18.14	137.391		
4,100.00	4,082.47	3,575.15	3,554.03	14.83	12.97	163.10	5.06	-2,230.27	2,524.69	2,506.06	18.63	135.500		
4,200.00	4,181.46	3,669.78	3,646.79	15.23	13.38	163.08	1.00	-2,248.55	2,557.02	2,537.89	19.13	133.697		
4,300.00	4,280.45	3,764.41	3,739.55	15.64	13.79	163.06	-3.07	-2,266.82	2,589.35	2,569.73	19.62	131.974		
4,400.00	4,379.44	3,859.03	3,832.30	16.04	14.21	163.05	-7.14	-2,285.10	2,621.68	2,601.56	20.12	130.329		
4,500.00	4,478.43	3,953.66	3,925.06	16.45	14.63	163.03	-11.21	-2,303.38	2,654.01	2,633.40	20.61	128.755		
4,600.00	4,577.42	4,048.29	4,017.81	16.86	15.05	163.02	-15.28	-2,321.65	2,686.34	2,665.23	21.11	127.248		
4,700.00	4,676.41	4,142.91	4,110.57	17.27	15.47	163.00	-19.34	-2,339.93	2,718.67	2,697.06	21.61	125.805		
4,800.00	4,775.40	4,237.54	4,203.33	17.68	15.89	162.99	-23.41	-2,358.20	2,751.01	2,728.89	22.11	124.421		
4,900.00	4,874.40	4,332.17	4,296.08	18.09	16.32	162.97	-27.48	-2,376.48	2,783.34	2,760.73	22.61	123.094		
5,000.00	4,973.39	4,426.79	4,388.84	18.50	16.75	162.96	-31.55	-2,394.76	2,815.67	2,792.56	23.11	121.819		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	4,521.42	4,481.59	18.91	17.18	162.94	-35.62	-2,413.03	2,848.00	2,824.38	23.62	120.595		
5,200.00	5,171.37	4,616.05	4,574.35	19.32	17.61	162.93	-39.68	-2,431.31	2,880.33	2,856.21	24.12	119.418		
5,300.00	5,270.36	4,710.68	4,667.10	19.73	18.04	162.92	-43.75	-2,449.58	2,912.66	2,888.04	24.62	118.285		
5,400.00	5,369.35	4,805.30	4,759.86	20.15	18.47	162.90	-47.82	-2,467.86	2,945.00	2,919.87	25.13	117.195		
5,500.00	5,468.34	4,899.93	4,852.62	20.56	18.91	162.89	-51.89	-2,486.14	2,977.33	2,951.70	25.63	116.145		
5,600.00	5,567.33	4,994.56	4,945.37	20.97	19.34	162.88	-55.96	-2,504.41	3,009.66	2,983.52	26.14	115.132		
5,700.00	5,666.33	5,089.18	5,038.13	21.39	19.78	162.86	-60.02	-2,522.69	3,042.00	3,015.35	26.65	114.156		
5,800.00	5,765.32	5,183.81	5,130.88	21.80	20.22	162.85	-64.09	-2,540.96	3,074.33	3,047.17	27.16	113.213		
5,900.00	5,864.31	5,278.44	5,223.64	22.22	20.65	162.84	-68.16	-2,559.24	3,106.66	3,079.00	27.66	112.303		
6,000.00	5,963.30	5,373.06	5,316.40	22.64	21.09	162.83	-72.23	-2,577.52	3,138.99	3,110.82	28.17	111.424		
6,100.00	6,062.29	5,467.69	5,409.15	23.05	21.53	162.82	-76.30	-2,595.79	3,171.33	3,142.65	28.68	110.574		
6,200.00	6,161.28	5,562.32	5,501.91	23.47	21.97	162.81	-80.36	-2,614.07	3,203.66	3,174.47	29.19	109.752		
6,300.00	6,260.27	5,656.94	5,594.66	23.88	22.41	162.80	-84.43	-2,632.34	3,235.99	3,206.29	29.70	108.957		
6,400.00	6,359.26	5,751.57	5,687.42	24.30	22.86	162.79	-88.50	-2,650.62	3,268.33	3,238.12	30.21	108.186		
6,500.00	6,458.26	5,846.20	5,780.18	24.72	23.30	162.78	-92.57	-2,668.90	3,300.66	3,269.94	30.72	107.440		
6,600.00	6,557.25	5,940.82	5,872.93	25.14	23.74	162.77	-96.64	-2,687.17	3,333.00	3,301.76	31.23	106.717		
6,700.00	6,656.24	6,035.45	5,965.69	25.55	24.18	162.76	-100.70	-2,705.45	3,365.33	3,333.59	31.74	106.016		
6,800.00	6,755.23	6,130.08	6,058.44	25.97	24.63	162.75	-104.77	-2,723.72	3,397.66	3,365.41	32.26	105.336		
6,837.97	6,792.81	6,166.00	6,093.66	26.13	24.80	162.74	-106.32	-2,730.66	3,409.94	3,377.49	32.45	105.083		
6,900.00	6,854.29	6,224.86	6,151.35	26.39	25.07	162.83	-108.85	-2,742.03	3,429.54	3,396.77	32.77	104.663		
7,000.00	6,953.65	6,320.34	6,244.94	26.79	25.52	162.94	-112.95	-2,760.47	3,459.21	3,425.93	33.28	103.944		
7,100.00	7,053.27	6,416.52	6,339.23	27.17	25.97	163.03	-117.09	-2,779.05	3,486.48	3,452.69	33.79	103.176		
7,200.00	7,153.09	6,513.34	6,434.13	27.53	26.43	163.09	-121.25	-2,797.75	3,511.34	3,477.03	34.30	102.362		
7,300.00	7,253.03	6,610.72	6,529.58	27.88	26.89	163.13	-125.43	-2,816.55	3,533.76	3,498.95	34.81	101.504		
7,380.98	7,334.00	6,689.94	6,607.24	28.15	27.26	-88.58	-128.84	-2,831.86	3,550.13	3,514.91	35.22	100.790		
7,400.00	7,353.02	6,708.59	6,625.52	28.21	27.35	-88.60	-129.64	-2,835.46	3,553.79	3,518.47	35.32	100.622		
7,500.00	7,453.02	7,497.03	7,408.72	28.53	30.40	-88.90	-146.52	-2,911.28	3,562.94	3,524.93	38.01	93.740		
7,600.00	7,553.02	7,597.03	7,508.72	28.85	30.70	-88.90	-146.52	-2,911.28	3,562.94	3,524.46	38.48	92.593		
7,700.00	7,653.02	7,697.03	7,608.72	29.17	31.00	-88.90	-146.52	-2,911.28	3,562.94	3,523.99	38.95	91.472		
7,800.00	7,753.02	7,797.03	7,708.72	29.49	31.31	-88.90	-146.52	-2,911.28	3,562.94	3,523.51	39.42	90.375		
7,900.00	7,853.02	7,897.03	7,808.72	29.81	31.61	-88.90	-146.52	-2,911.28	3,562.94	3,523.04	39.90	89.303		
8,000.00	7,953.02	7,997.03	7,908.72	30.13	31.91	-88.90	-146.52	-2,911.28	3,562.94	3,522.56	40.37	88.254		
8,100.00	8,053.02	8,097.03	8,008.72	30.46	32.22	-88.90	-146.52	-2,911.28	3,562.94	3,522.09	40.85	87.227		
8,200.00	8,153.02	8,197.03	8,108.72	30.78	32.53	-88.90	-146.52	-2,911.28	3,562.94	3,521.61	41.32	86.223		
8,300.00	8,253.02	8,297.03	8,208.72	31.11	32.83	-88.90	-146.52	-2,911.28	3,562.94	3,521.14	41.80	85.240		
8,400.00	8,353.02	8,397.03	8,308.72	31.43	33.14	-88.90	-146.52	-2,911.28	3,562.94	3,520.66	42.28	84.278		
8,500.00	8,453.02	8,497.03	8,408.72	31.76	33.45	-88.90	-146.52	-2,911.28	3,562.94	3,520.18	42.75	83.336		
8,600.00	8,553.02	8,597.03	8,508.72	32.09	33.76	-88.90	-146.52	-2,911.28	3,562.94	3,519.70	43.23	82.413		
8,700.00	8,653.02	8,697.03	8,608.72	32.42	34.08	-88.90	-146.52	-2,911.28	3,562.94	3,519.22	43.71	81.510		
8,800.00	8,753.02	8,797.03	8,708.72	32.74	34.39	-88.90	-146.52	-2,911.28	3,562.94	3,518.74	44.19	80.625		
8,900.00	8,853.02	8,897.03	8,808.72	33.07	34.70	-88.90	-146.52	-2,911.28	3,562.94	3,518.26	44.67	79.757		
9,000.00	8,953.02	8,997.03	8,908.72	33.40	35.02	-88.90	-146.52	-2,911.28	3,562.94	3,517.78	45.15	78.908		
9,100.00	9,053.02	9,097.03	9,008.72	33.73	35.33	-88.90	-146.52	-2,911.28	3,562.94	3,517.30	45.63	78.075		
9,200.00	9,153.02	9,197.03	9,108.72	34.07	35.65	-88.90	-146.52	-2,911.28	3,562.94	3,516.82	46.12	77.259		
9,300.00	9,253.02	9,297.03	9,208.72	34.40	35.96	-88.90	-146.52	-2,911.28	3,562.94	3,516.34	46.60	76.459		
9,400.00	9,353.02	9,397.03	9,308.72	34.73	36.28	-88.90	-146.52	-2,911.28	3,562.94	3,515.85	47.08	75.674		
9,500.00	9,453.02	9,497.03	9,408.72	35.06	36.60	-88.90	-146.52	-2,911.28	3,562.94	3,515.37	47.57	74.904		
9,513.50	9,466.52	9,510.53	9,422.22	35.11	36.64	-88.90	-146.52	-2,911.28	3,562.94	3,515.30	47.63	74.802		
9,600.00	9,553.02	9,595.69	9,507.39	35.39	36.91	-88.90	-146.47	-2,911.28	3,562.94	3,514.89	48.05	74.154		
9,700.00	9,653.02	9,679.57	9,590.87	35.73	37.17	-88.78	-139.27	-2,911.35	3,563.20	3,514.71	48.49	73.488		
9,800.00	9,753.02	9,759.70	9,668.85	36.06	37.40	-88.49	-121.09	-2,911.53	3,563.99	3,515.09	48.91	72.875		
9,900.00	9,853.02	9,833.50	9,737.78	36.40	37.59	-88.07	-94.87	-2,911.79	3,565.52	3,516.23	49.30	72.329		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,000.00	9,953.02	9,900.00	9,796.55	36.73	37.74	-87.57	-63.83	-2,912.10	3,568.07	3,518.41	49.66	71.851		
10,100.00	10,053.02	9,950.00	9,838.15	37.07	37.83	-87.13	-36.13	-2,912.38	3,571.94	3,521.96	49.98	71.471		
10,200.00	10,153.02	10,000.00	9,877.18	37.40	37.92	-86.63	-4.90	-2,912.69	3,577.37	3,527.09	50.28	71.147		
10,300.00	10,253.02	10,050.00	9,913.34	37.74	37.99	-86.07	29.61	-2,913.03	3,584.60	3,534.03	50.57	70.883		
10,400.00	10,353.02	10,100.00	9,946.35	38.08	38.05	-85.47	67.14	-2,913.40	3,593.87	3,543.02	50.84	70.683		
10,500.00	10,453.02	10,121.53	9,959.54	38.41	38.07	-85.20	84.16	-2,913.57	3,605.20	3,554.15	51.04	70.630		
10,600.00	10,553.02	10,150.00	9,975.97	38.75	38.11	-84.83	107.40	-2,913.80	3,618.78	3,567.54	51.24	70.627		
10,700.00	10,653.02	10,174.31	9,989.07	39.09	38.13	-84.51	127.88	-2,914.01	3,634.67	3,583.26	51.40	70.709		
10,800.00	10,753.02	10,200.00	10,001.96	39.43	38.15	-84.15	150.10	-2,914.23	3,652.90	3,601.34	51.55	70.855		
10,900.00	10,853.02	10,200.00	10,001.96	39.77	38.15	-84.15	150.10	-2,914.23	3,673.55	3,621.93	51.62	71.159		
11,000.00	10,953.02	10,231.71	10,016.48	40.10	38.18	-83.71	178.28	-2,914.51	3,696.43	3,644.68	51.75	71.424		
11,100.00	11,053.02	10,250.00	10,024.13	40.44	38.19	-83.44	194.89	-2,914.67	3,721.75	3,669.92	51.83	71.812		
11,200.00	11,153.02	10,250.00	10,024.13	40.78	38.19	-83.44	194.89	-2,914.67	3,749.45	3,697.61	51.84	72.331		
11,300.00	11,253.02	10,272.25	10,032.73	41.12	38.21	-83.12	215.41	-2,914.88	3,779.38	3,727.49	51.89	72.834		
11,400.00	11,353.02	10,300.00	10,042.32	41.46	38.23	-82.71	241.45	-2,915.13	3,811.75	3,759.81	51.94	73.388		
11,500.00	11,453.02	10,300.00	10,042.32	41.80	38.23	-82.71	241.45	-2,915.13	3,846.13	3,794.22	51.91	74.097		
11,566.02	11,519.04	10,300.00	10,042.32	42.03	38.23	-82.71	241.45	-2,915.13	3,870.08	3,818.20	51.88	74.600		
11,600.00	11,553.00	10,300.00	10,042.32	42.14	38.23	-80.83	241.45	-2,915.13	3,882.65	3,830.79	51.86	74.869		
11,650.00	11,602.72	10,300.00	10,042.32	42.31	38.23	-78.88	241.45	-2,915.13	3,901.06	3,849.23	51.83	75.269		
11,700.00	11,651.80	10,300.00	10,042.32	42.46	38.23	-76.97	241.45	-2,915.13	3,919.24	3,867.45	51.79	75.673		
11,750.00	11,699.87	10,321.13	10,048.77	42.61	38.25	-74.86	261.57	-2,915.33	3,936.83	3,885.02	51.81	75.989		
11,800.00	11,746.57	10,328.77	10,050.92	42.75	38.26	-73.02	268.89	-2,915.41	3,953.96	3,902.18	51.78	76.354		
11,850.00	11,791.53	10,350.00	10,056.38	42.87	38.28	-71.14	289.41	-2,915.61	3,970.48	3,918.69	51.79	76.661		
11,900.00	11,834.42	10,350.00	10,056.38	42.98	38.28	-69.60	289.41	-2,915.61	3,986.00	3,934.25	51.75	77.029		
11,950.00	11,874.92	10,350.00	10,056.38	43.08	38.28	-68.17	289.41	-2,915.61	4,000.64	3,948.93	51.70	77.381		
12,000.00	11,912.70	10,350.00	10,056.38	43.17	38.28	-66.86	289.41	-2,915.61	4,014.29	3,962.64	51.66	77.710		
12,050.00	11,947.48	10,374.40	10,061.71	43.24	38.30	-65.51	313.22	-2,915.85	4,026.56	3,974.88	51.68	77.909		
12,100.00	11,979.01	10,400.00	10,066.20	43.29	38.33	-64.33	338.42	-2,916.10	4,037.78	3,986.07	51.71	78.079		
12,150.00	12,007.03	10,400.00	10,066.20	43.34	38.33	-63.45	338.42	-2,916.10	4,047.41	3,995.71	51.69	78.301		
12,200.00	12,031.34	10,400.00	10,066.20	43.37	38.33	-62.70	338.42	-2,916.10	4,055.71	4,004.03	51.68	78.482		
12,250.00	12,051.76	10,400.00	10,066.20	43.40	38.33	-62.08	338.42	-2,916.10	4,062.63	4,010.95	51.67	78.619		
12,300.00	12,068.11	10,427.82	10,069.80	43.43	38.37	-61.53	366.00	-2,916.37	4,067.71	4,015.96	51.75	78.597		
12,350.00	12,080.29	10,450.00	10,071.72	43.46	38.40	-61.17	388.09	-2,916.59	4,071.42	4,019.59	51.83	78.553		
12,400.00	12,088.20	10,450.00	10,071.72	43.51	38.40	-61.00	388.09	-2,916.59	4,073.37	4,021.50	51.87	78.528		
12,450.00	12,091.77	10,450.00	10,071.72	43.58	38.40	-60.96	388.09	-2,916.59	4,073.82	4,021.89	51.93	78.451		
12,466.02	12,092.00	10,465.00	10,072.52	43.60	38.42	-60.99	403.07	-2,916.74	4,073.53	4,021.54	51.98	78.362		
12,500.00	12,092.00	10,472.63	10,072.78	43.67	38.43	-60.99	410.70	-2,916.82	4,072.98	4,020.93	52.05	78.251		
12,568.08	12,092.00	10,488.35	10,073.00	43.84	38.46	-61.00	426.41	-2,916.97	4,072.55	4,020.34	52.20	78.012		
12,600.00	12,092.00	10,518.44	10,073.00	43.93	38.51	-61.00	456.50	-2,917.27	4,072.56	4,020.23	52.33	77.827		
12,700.00	12,092.00	10,618.44	10,073.00	44.27	38.75	-61.00	556.50	-2,918.27	4,072.60	4,019.81	52.79	77.148		
12,800.00	12,092.00	10,718.44	10,073.00	44.68	39.08	-61.00	656.49	-2,919.26	4,072.65	4,019.32	53.33	76.367		
12,900.00	12,092.00	10,818.44	10,073.00	45.15	39.49	-61.00	756.49	-2,920.25	4,072.69	4,018.75	53.95	75.494		
13,000.00	12,092.00	10,918.44	10,073.00	45.68	39.98	-61.00	856.48	-2,921.25	4,072.74	4,018.10	54.64	74.538		
13,100.00	12,092.00	11,018.44	10,073.00	46.26	40.55	-61.00	956.48	-2,922.24	4,072.78	4,017.38	55.40	73.511		
13,200.00	12,092.00	11,118.44	10,073.00	46.89	41.19	-61.00	1,056.47	-2,923.24	4,072.83	4,016.59	56.24	72.423		
13,300.00	12,092.00	11,218.44	10,073.00	47.57	41.88	-61.00	1,156.47	-2,924.23	4,072.87	4,015.74	57.14	71.285		
13,400.00	12,092.00	11,318.44	10,073.00	48.30	42.64	-61.00	1,256.46	-2,925.22	4,072.92	4,014.82	58.10	70.106		
13,500.00	12,092.00	11,418.44	10,073.00	49.06	43.44	-61.00	1,356.46	-2,926.22	4,072.96	4,013.84	59.12	68.896		
13,600.00	12,092.00	11,518.44	10,073.00	49.88	44.30	-61.00	1,456.45	-2,927.21	4,073.01	4,012.81	60.20	67.663		
13,700.00	12,092.00	11,618.44	10,073.00	50.73	45.20	-61.00	1,556.45	-2,928.21	4,073.05	4,011.72	61.33	66.416		
13,800.00	12,092.00	11,718.44	10,073.00	51.62	46.14	-61.00	1,656.44	-2,929.20	4,073.10	4,010.59	62.51	65.160		
13,900.00	12,092.00	11,818.44	10,073.00	52.54	47.12	-61.00	1,756.44	-2,930.19	4,073.14	4,009.40	63.74	63.904		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,000.00	12,092.00	11,918.44	10,073.00	53.51	48.14	-61.00	1,856.43	-2,931.19	4,073.18	4,008.17	65.01	62.651		
14,100.00	12,092.00	12,018.44	10,073.00	54.50	49.20	-61.00	1,956.43	-2,932.18	4,073.23	4,006.90	66.33	61.407		
14,200.00	12,092.00	12,118.44	10,073.00	55.52	50.28	-61.00	2,056.42	-2,933.18	4,073.27	4,005.58	67.69	60.175		
14,300.00	12,092.00	12,218.44	10,073.00	56.58	51.40	-61.00	2,156.42	-2,934.17	4,073.32	4,004.23	69.09	58.960		
14,400.00	12,092.00	12,318.44	10,073.00	57.66	52.55	-61.00	2,256.41	-2,935.16	4,073.36	4,002.85	70.52	57.764		
14,500.00	12,092.00	12,418.44	10,073.00	58.77	53.72	-61.00	2,356.41	-2,936.16	4,073.41	4,001.43	71.98	56.590		
14,600.00	12,092.00	12,518.44	10,073.00	59.90	54.91	-61.00	2,456.40	-2,937.15	4,073.45	3,999.98	73.48	55.440		
14,700.00	12,092.00	12,618.44	10,073.00	61.06	56.13	-61.00	2,556.40	-2,938.15	4,073.50	3,998.50	75.00	54.314		
14,800.00	12,092.00	12,718.44	10,073.00	62.24	57.37	-61.00	2,656.39	-2,939.14	4,073.54	3,996.99	76.55	53.214		
14,900.00	12,092.00	12,818.44	10,073.00	63.44	58.64	-61.00	2,756.39	-2,940.13	4,073.59	3,995.46	78.13	52.141		
15,000.00	12,092.00	12,918.44	10,073.00	64.66	59.92	-61.00	2,856.38	-2,941.13	4,073.63	3,993.90	79.73	51.094		
15,100.00	12,092.00	13,018.44	10,073.00	65.90	61.21	-61.00	2,956.38	-2,942.12	4,073.68	3,992.32	81.35	50.074		
15,200.00	12,092.00	13,118.44	10,073.00	67.16	62.53	-61.00	3,056.37	-2,943.12	4,073.72	3,990.72	83.00	49.081		
15,300.00	12,092.00	13,218.44	10,073.00	68.43	63.86	-61.00	3,156.37	-2,944.11	4,073.77	3,989.10	84.67	48.115		
15,400.00	12,092.00	13,318.44	10,073.00	69.72	65.20	-61.01	3,256.36	-2,945.10	4,073.81	3,987.46	86.35	47.176		
15,500.00	12,092.00	13,418.44	10,073.00	71.02	66.56	-61.01	3,356.36	-2,946.10	4,073.86	3,985.80	88.06	46.263		
15,600.00	12,092.00	13,518.44	10,073.00	72.34	67.93	-61.01	3,456.35	-2,947.09	4,073.90	3,984.12	89.78	45.376		
15,700.00	12,092.00	13,618.44	10,073.00	73.67	69.32	-61.01	3,556.35	-2,948.09	4,073.95	3,982.43	91.52	44.514		
15,800.00	12,092.00	13,718.44	10,073.00	75.02	70.71	-61.01	3,656.34	-2,949.08	4,073.99	3,980.72	93.27	43.679		
15,900.00	12,092.00	13,818.44	10,073.00	76.37	72.12	-61.01	3,756.34	-2,950.07	4,074.03	3,979.00	95.04	42.868		
16,000.00	12,092.00	13,918.44	10,073.00	77.74	73.54	-61.01	3,856.33	-2,951.07	4,074.08	3,977.26	96.82	42.080		
16,100.00	12,092.00	14,018.44	10,073.00	79.12	74.96	-61.01	3,956.33	-2,952.06	4,074.12	3,975.51	98.61	41.316		
16,200.00	12,092.00	14,118.44	10,073.00	80.51	76.40	-61.01	4,056.32	-2,953.06	4,074.17	3,973.75	100.42	40.573		
16,300.00	12,092.00	14,218.44	10,073.00	81.91	77.84	-61.01	4,156.32	-2,954.05	4,074.21	3,971.98	102.23	39.853		
16,400.00	12,092.00	14,318.44	10,073.00	83.31	79.29	-61.01	4,256.31	-2,955.04	4,074.26	3,970.20	104.06	39.154		
16,500.00	12,092.00	14,418.44	10,073.00	84.73	80.75	-61.01	4,356.31	-2,956.04	4,074.30	3,968.41	105.89	38.475		
16,600.00	12,092.00	14,518.44	10,073.00	86.16	82.22	-61.01	4,456.30	-2,957.03	4,074.35	3,966.61	107.74	37.816		
16,700.00	12,092.00	14,618.44	10,073.00	87.59	83.69	-61.01	4,556.30	-2,958.03	4,074.39	3,964.80	109.60	37.177		
16,800.00	12,092.00	14,718.44	10,073.00	89.03	85.17	-61.01	4,656.29	-2,959.02	4,074.44	3,962.98	111.46	36.555		
16,900.00	12,092.00	14,818.44	10,073.00	90.48	86.66	-61.01	4,756.29	-2,960.01	4,074.48	3,961.15	113.33	35.951		
17,000.00	12,092.00	14,918.44	10,073.00	91.93	88.15	-61.01	4,856.28	-2,961.01	4,074.53	3,959.31	115.21	35.365		
17,100.00	12,092.00	15,018.44	10,073.00	93.39	89.65	-61.01	4,956.28	-2,962.00	4,074.57	3,957.47	117.10	34.795		
17,200.00	12,092.00	15,118.44	10,073.00	94.86	91.15	-61.01	5,056.27	-2,963.00	4,074.62	3,955.62	119.00	34.240		
17,300.00	12,092.00	15,218.44	10,073.00	96.33	92.66	-61.01	5,156.27	-2,963.99	4,074.66	3,953.76	120.90	33.702		
17,400.00	12,092.00	15,318.44	10,073.00	97.81	94.17	-61.01	5,256.26	-2,964.98	4,074.71	3,951.89	122.81	33.178		
17,500.00	12,092.00	15,418.44	10,073.00	99.30	95.69	-61.01	5,356.26	-2,965.98	4,074.75	3,950.02	124.73	32.670		
17,600.00	12,092.00	15,518.44	10,073.00	100.79	97.21	-61.01	5,456.25	-2,966.97	4,074.79	3,948.15	126.65	32.175		
17,700.00	12,092.00	15,618.44	10,073.00	102.28	98.74	-61.01	5,556.25	-2,967.97	4,074.84	3,946.27	128.57	31.693		
17,800.00	12,092.00	15,718.44	10,073.00	103.78	100.27	-61.01	5,656.24	-2,968.96	4,074.88	3,944.38	130.50	31.225		
17,900.00	12,092.00	15,818.44	10,073.00	105.29	101.80	-61.01	5,756.24	-2,969.95	4,074.93	3,942.49	132.44	30.769		
18,000.00	12,092.00	15,918.44	10,073.00	106.80	103.34	-61.01	5,856.23	-2,970.95	4,074.97	3,940.59	134.38	30.324		
18,100.00	12,092.00	16,018.44	10,073.00	108.31	104.88	-61.01	5,956.23	-2,971.94	4,075.02	3,938.69	136.32	29.892		
18,200.00	12,092.00	16,118.44	10,073.00	109.83	106.43	-61.01	6,056.22	-2,972.94	4,075.06	3,936.79	138.28	29.471		
18,300.00	12,092.00	16,218.44	10,073.00	111.35	107.97	-61.02	6,156.22	-2,973.93	4,075.11	3,934.88	140.23	29.060		
18,400.00	12,092.00	16,318.44	10,073.00	112.87	109.52	-61.02	6,256.21	-2,974.93	4,075.15	3,932.96	142.19	28.660		
18,500.00	12,092.00	16,418.44	10,073.00	114.40	111.08	-61.02	6,356.21	-2,975.92	4,075.20	3,931.04	144.15	28.270		
18,600.00	12,092.00	16,518.44	10,073.00	115.93	112.63	-61.02	6,456.20	-2,976.91	4,075.24	3,929.12	146.12	27.890		
18,700.00	12,092.00	16,618.44	10,073.00	117.46	114.19	-61.02	6,556.20	-2,977.91	4,075.29	3,927.20	148.09	27.519		
18,800.00	12,092.00	16,718.44	10,073.00	119.00	115.76	-61.02	6,656.19	-2,978.90	4,075.33	3,925.27	150.06	27.157		
18,900.00	12,092.00	16,818.44	10,073.00	120.54	117.32	-61.02	6,756.19	-2,979.90	4,075.38	3,923.33	152.04	26.804		
19,000.00	12,092.00	16,918.44	10,073.00	122.09	118.89	-61.02	6,856.18	-2,980.89	4,075.42	3,921.40	154.02	26.460		
19,100.00	12,092.00	17,018.44	10,073.00	123.63	120.45	-61.02	6,956.18	-2,981.88	4,075.47	3,919.46	156.00	26.124		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,200.00	12,092.00	17,118.44	10,073.00	125.18	122.03	-61.02	7,056.17	-2,982.88	4,075.51	3,917.52	157.99	25.796		
19,300.00	12,092.00	17,218.44	10,073.00	126.73	123.60	-61.02	7,156.17	-2,983.87	4,075.56	3,915.58	159.98	25.476		
19,400.00	12,092.00	17,318.44	10,073.00	128.29	125.17	-61.02	7,256.16	-2,984.87	4,075.60	3,913.63	161.97	25.163		
19,500.00	12,092.00	17,418.44	10,073.00	129.84	126.75	-61.02	7,356.16	-2,985.86	4,075.64	3,911.68	163.96	24.857		
19,600.00	12,092.00	17,518.44	10,073.00	131.40	128.33	-61.02	7,456.15	-2,986.85	4,075.69	3,909.73	165.96	24.559		
19,700.00	12,092.00	17,618.44	10,073.00	132.96	129.91	-61.02	7,556.15	-2,987.85	4,075.73	3,907.78	167.96	24.267		
19,800.00	12,092.00	17,718.44	10,073.00	134.53	131.49	-61.02	7,656.14	-2,988.84	4,075.78	3,905.82	169.96	23.981		
19,900.00	12,092.00	17,818.44	10,073.00	136.09	133.08	-61.02	7,756.14	-2,989.84	4,075.82	3,903.86	171.96	23.702		
20,000.00	12,092.00	17,918.44	10,073.00	137.66	134.66	-61.02	7,856.13	-2,990.83	4,075.87	3,901.90	173.97	23.429		
20,100.00	12,092.00	18,018.44	10,073.00	139.23	136.25	-61.02	7,956.13	-2,991.82	4,075.91	3,899.94	175.97	23.162		
20,200.00	12,092.00	18,118.44	10,073.00	140.80	137.84	-61.02	8,056.12	-2,992.82	4,075.96	3,897.98	177.98	22.901		
20,300.00	12,092.00	18,218.44	10,073.00	142.37	139.43	-61.02	8,156.12	-2,993.81	4,076.00	3,896.01	179.99	22.645		
20,400.00	12,092.00	18,318.44	10,073.00	143.95	141.02	-61.02	8,256.11	-2,994.81	4,076.05	3,894.04	182.01	22.395		
20,500.00	12,092.00	18,418.44	10,073.00	145.53	142.62	-61.02	8,356.11	-2,995.80	4,076.09	3,892.07	184.02	22.150		
20,600.00	12,092.00	18,518.44	10,073.00	147.10	144.21	-61.02	8,456.10	-2,996.79	4,076.14	3,890.10	186.04	21.910		
20,700.00	12,092.00	18,618.44	10,073.00	148.68	145.81	-61.02	8,556.10	-2,997.79	4,076.18	3,888.13	188.06	21.675		
20,800.00	12,092.00	18,718.44	10,073.00	150.27	147.40	-61.02	8,656.10	-2,998.78	4,076.23	3,886.15	190.07	21.445		
20,900.00	12,092.00	18,818.44	10,073.00	151.85	149.00	-61.02	8,756.09	-2,999.78	4,076.27	3,884.18	192.09	21.220		
21,000.00	12,092.00	18,918.44	10,073.00	153.43	150.60	-61.02	8,856.09	-3,000.77	4,076.32	3,882.20	194.12	20.999		
21,100.00	12,092.00	19,018.44	10,073.00	155.02	152.20	-61.03	8,956.08	-3,001.76	4,076.36	3,880.22	196.14	20.783		
21,200.00	12,092.00	19,118.44	10,073.00	156.61	153.80	-61.03	9,056.08	-3,002.76	4,076.41	3,878.24	198.17	20.571		
21,300.00	12,092.00	19,218.44	10,073.00	158.19	155.41	-61.03	9,156.07	-3,003.75	4,076.45	3,876.26	200.19	20.363		
21,400.00	12,092.00	19,318.44	10,073.00	159.78	157.01	-61.03	9,256.07	-3,004.75	4,076.49	3,874.27	202.22	20.159		
21,500.00	12,092.00	19,418.44	10,073.00	161.38	158.62	-61.03	9,356.06	-3,005.74	4,076.54	3,872.29	204.25	19.958		
21,600.00	12,092.00	19,518.44	10,073.00	162.97	160.22	-61.03	9,456.06	-3,006.73	4,076.58	3,870.30	206.28	19.762		
21,700.00	12,092.00	19,618.44	10,073.00	164.56	161.83	-61.03	9,556.05	-3,007.73	4,076.63	3,868.32	208.31	19.570		
21,800.00	12,092.00	19,718.44	10,073.00	166.16	163.44	-61.03	9,656.05	-3,008.72	4,076.67	3,866.33	210.34	19.381		
21,900.00	12,092.00	19,818.44	10,073.00	167.75	165.04	-61.03	9,756.04	-3,009.72	4,076.72	3,864.34	212.38	19.196		
22,000.00	12,092.00	19,918.44	10,073.00	169.35	166.65	-61.03	9,856.04	-3,010.71	4,076.76	3,862.35	214.41	19.014		
22,100.00	12,092.00	20,018.44	10,073.00	170.95	168.26	-61.03	9,956.03	-3,011.70	4,076.81	3,860.36	216.45	18.835		
22,200.00	12,092.00	20,118.44	10,073.00	172.55	169.88	-61.03	10,056.03	-3,012.70	4,076.85	3,858.37	218.48	18.660		
22,255.91	12,092.00	20,174.35	10,073.00	173.44	170.78	-61.03	10,111.94	-3,013.25	4,076.88	3,857.26	219.62	18.563 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.33	56.95	-1,949.15	1,950.45					
100.00	100.00	57.40	57.40	0.13	0.07	-88.33	56.95	-1,949.15	1,949.98	1,949.84	0.14	N/A		
200.00	200.00	157.40	157.40	0.48	0.33	-88.33	56.95	-1,949.15	1,949.98	1,949.39	0.59	3,325.139		
300.00	300.00	257.40	257.40	0.84	0.69	-88.33	56.95	-1,949.15	1,949.98	1,948.89	1.09	1,791.056		
400.00	400.00	357.40	357.40	1.20	1.05	-88.33	56.95	-1,949.15	1,949.98	1,948.39	1.59	1,223.340		
500.00	500.00	457.40	457.40	1.56	1.41	-88.33	56.95	-1,949.15	1,949.98	1,947.88	2.10	928.539		
600.00	600.00	557.40	557.40	1.92	1.77	-88.33	56.95	-1,949.15	1,949.98	1,947.37	2.61	748.131		
700.00	700.00	657.40	657.40	2.28	2.12	-88.33	56.95	-1,949.15	1,949.98	1,946.87	3.11	626.387		
800.00	800.00	757.40	757.40	2.63	2.48	-88.33	56.95	-1,949.15	1,949.98	1,946.36	3.62	538.705		
900.00	900.00	857.40	857.40	2.99	2.84	-88.33	56.95	-1,949.15	1,949.98	1,945.85	4.13	472.550		
1,000.00	1,000.00	957.40	957.40	3.35	3.20	-88.33	56.95	-1,949.15	1,949.98	1,945.35	4.63	420.861		
1,100.00	1,100.00	1,057.40	1,057.40	3.71	3.56	-88.33	56.95	-1,949.15	1,949.98	1,944.84	5.14	379.363		
1,200.00	1,200.00	1,157.40	1,157.40	4.07	3.92	-88.33	56.95	-1,949.15	1,949.98	1,944.33	5.65	345.313		
1,300.00	1,300.00	1,257.40	1,257.40	4.43	4.27	-88.33	56.95	-1,949.15	1,949.98	1,943.83	6.15	316.871		
1,400.00	1,400.00	1,357.40	1,357.40	4.79	4.63	-88.33	56.95	-1,949.15	1,949.98	1,943.32	6.66	292.757		
1,500.00	1,500.00	1,457.40	1,457.40	5.14	4.99	-88.33	56.95	-1,949.15	1,949.98	1,942.81	7.17	272.053		
1,600.00	1,600.00	1,557.40	1,557.40	5.50	5.35	-88.33	56.95	-1,949.15	1,949.98	1,942.31	7.67	254.084		
1,700.00	1,700.00	1,657.40	1,657.40	5.86	5.71	-88.33	56.95	-1,949.15	1,949.98	1,941.80	8.18	238.342		
1,800.00	1,800.00	1,757.40	1,757.40	6.22	6.07	-88.33	56.95	-1,949.15	1,949.98	1,941.29	8.69	224.436		
1,900.00	1,900.00	1,857.40	1,857.40	6.58	6.43	-88.33	56.95	-1,949.15	1,949.98	1,940.78	9.20	212.063		
2,000.00	2,000.00	1,957.40	1,957.40	6.94	6.78	-88.33	56.95	-1,949.15	1,949.98	1,940.28	9.70	200.983		
2,100.00	2,099.99	2,105.51	2,105.50	7.28	7.30	163.39	56.26	-1,947.87	1,950.53	1,940.22	10.31	189.207		
2,200.00	2,199.91	2,289.28	2,289.01	7.62	7.92	163.33	51.74	-1,939.52	1,949.67	1,938.71	10.97	177.801		
2,300.00	2,299.69	2,472.73	2,471.53	7.96	8.55	163.20	43.05	-1,923.45	1,947.04	1,935.43	11.61	167.653		
2,400.00	2,399.27	2,574.22	2,572.23	8.31	8.91	163.12	37.04	-1,912.35	1,944.70	1,932.60	12.10	160.737		
2,443.40	2,442.40	2,617.61	2,615.28	8.46	9.06	163.09	34.48	-1,907.61	1,944.46	1,932.15	12.31	157.969 CC, ES		
2,500.00	2,498.57	2,674.20	2,671.43	8.66	9.27	163.06	31.13	-1,901.42	1,944.87	1,932.28	12.58	154.543		
2,543.01	2,541.19	2,717.20	2,714.09	8.81	9.42	163.03	28.58	-1,896.72	1,945.71	1,932.91	12.79	152.070		
2,600.00	2,597.60	2,774.16	2,770.61	9.02	9.63	163.01	25.21	-1,890.49	1,947.13	1,934.06	13.07	148.929		
2,700.00	2,696.59	2,874.11	2,869.79	9.38	9.99	162.96	19.30	-1,879.56	1,949.63	1,936.06	13.57	143.704		
2,800.00	2,795.58	2,974.07	2,968.97	9.75	10.36	162.92	13.39	-1,868.63	1,952.13	1,938.06	14.06	138.813		
2,900.00	2,894.57	3,074.03	3,068.16	10.12	10.74	162.87	7.47	-1,857.70	1,954.63	1,940.06	14.56	134.229		
3,000.00	2,993.56	3,173.99	3,167.34	10.50	11.11	162.83	1.56	-1,846.76	1,957.13	1,942.06	15.06	129.926		
3,100.00	3,092.55	3,273.94	3,266.52	10.88	11.49	162.78	-4.36	-1,835.83	1,959.63	1,944.06	15.57	125.882		
3,200.00	3,191.55	3,373.90	3,365.70	11.27	11.87	162.74	-10.27	-1,824.90	1,962.13	1,946.06	16.07	122.075		
3,300.00	3,290.54	3,473.86	3,464.88	11.65	12.25	162.69	-16.19	-1,813.97	1,964.64	1,948.06	16.58	118.487		
3,400.00	3,389.53	3,573.81	3,564.06	12.04	12.63	162.65	-22.10	-1,803.04	1,967.14	1,950.05	17.09	115.099		
3,500.00	3,488.52	3,673.77	3,663.25	12.44	13.02	162.61	-28.02	-1,792.11	1,969.65	1,952.05	17.60	111.898		
3,600.00	3,587.51	3,773.73	3,762.43	12.83	13.40	162.56	-33.93	-1,781.18	1,972.16	1,954.05	18.12	108.869		
3,700.00	3,686.50	3,873.69	3,861.61	13.23	13.79	162.52	-39.84	-1,770.25	1,974.67	1,956.04	18.63	105.998		
3,800.00	3,785.49	3,973.64	3,960.79	13.62	14.18	162.48	-45.76	-1,759.31	1,977.18	1,958.04	19.14	103.275		
3,900.00	3,884.48	4,073.60	4,059.97	14.02	14.57	162.43	-51.67	-1,748.38	1,979.69	1,960.03	19.66	100.688		
4,000.00	3,983.48	4,173.56	4,159.15	14.43	14.96	162.39	-57.59	-1,737.45	1,982.20	1,962.03	20.18	98.229		
4,100.00	4,082.47	4,273.51	4,258.33	14.83	15.36	162.35	-63.50	-1,726.52	1,984.72	1,964.02	20.70	95.888		
4,200.00	4,181.46	4,373.47	4,357.52	15.23	15.75	162.30	-69.42	-1,715.59	1,987.23	1,966.02	21.22	93.658		
4,300.00	4,280.45	4,473.43	4,456.70	15.64	16.15	162.26	-75.33	-1,704.66	1,989.75	1,968.01	21.74	91.530		
4,400.00	4,379.44	4,573.39	4,555.88	16.04	16.54	162.22	-81.24	-1,693.73	1,992.27	1,970.01	22.26	89.499		
4,500.00	4,478.43	4,673.34	4,655.06	16.45	16.94	162.17	-87.16	-1,682.79	1,994.79	1,972.00	22.78	87.557		
4,600.00	4,577.42	4,773.30	4,754.24	16.86	17.33	162.13	-93.07	-1,671.86	1,997.31	1,974.00	23.31	85.700		
4,700.00	4,676.41	4,873.26	4,853.42	17.27	17.73	162.09	-98.99	-1,660.93	1,999.83	1,976.00	23.83	83.923		
4,800.00	4,775.40	4,973.21	4,952.60	17.68	18.13	162.05	-104.90	-1,650.00	2,002.35	1,977.99	24.35	82.219		
4,900.00	4,874.40	5,073.17	5,051.79	18.09	18.53	162.00	-110.82	-1,639.07	2,004.87	1,979.99	24.88	80.585		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	5,173.13	5,150.97	18.50	18.93	161.96	-116.73	-1,628.14	2,007.39	1,981.99	25.40	79.017		
5,100.00	5,072.38	5,273.09	5,250.15	18.91	19.33	161.92	-122.64	-1,617.21	2,009.92	1,983.99	25.93	77.511		
5,200.00	5,171.37	5,373.04	5,349.33	19.32	19.73	161.88	-128.56	-1,606.28	2,012.45	1,985.99	26.46	76.064		
5,300.00	5,270.36	5,473.00	5,448.51	19.73	20.13	161.83	-134.47	-1,595.34	2,014.97	1,987.99	26.98	74.671		
5,400.00	5,369.35	5,572.96	5,547.69	20.15	20.53	161.79	-140.39	-1,584.41	2,017.50	1,989.99	27.51	73.331		
5,500.00	5,468.34	5,672.92	5,646.87	20.56	20.93	161.75	-146.30	-1,573.48	2,020.03	1,991.99	28.04	72.040		
5,600.00	5,567.33	5,772.87	5,746.06	20.97	21.33	161.71	-152.22	-1,562.55	2,022.56	1,993.99	28.57	70.796		
5,700.00	5,666.33	5,872.83	5,845.24	21.39	21.73	161.67	-158.13	-1,551.62	2,025.09	1,996.00	29.10	69.596		
5,800.00	5,765.32	5,972.79	5,944.42	21.80	22.14	161.63	-164.04	-1,540.69	2,027.63	1,998.00	29.63	68.438		
5,900.00	5,864.31	6,072.74	6,043.60	22.22	22.54	161.58	-169.96	-1,529.76	2,030.16	2,000.00	30.16	67.320		
6,000.00	5,963.30	6,172.70	6,142.78	22.64	22.94	161.54	-175.87	-1,518.82	2,032.69	2,002.01	30.69	66.240		
6,100.00	6,062.29	6,272.66	6,241.96	23.05	23.35	161.50	-181.79	-1,507.89	2,035.23	2,004.01	31.22	65.195		
6,200.00	6,161.28	6,372.62	6,341.15	23.47	23.75	161.46	-187.70	-1,496.96	2,037.77	2,006.02	31.75	64.185		
6,300.00	6,260.27	6,472.57	6,440.33	23.88	24.15	161.42	-193.62	-1,486.03	2,040.30	2,008.03	32.28	63.208		
6,400.00	6,359.26	6,572.53	6,539.51	24.30	24.56	161.38	-199.53	-1,475.10	2,042.84	2,010.03	32.81	62.262		
6,500.00	6,458.26	6,672.49	6,638.69	24.72	24.96	161.34	-205.45	-1,464.17	2,045.38	2,012.04	33.34	61.345		
6,600.00	6,557.25	6,772.44	6,737.87	25.14	25.37	161.30	-211.36	-1,453.24	2,047.92	2,014.05	33.87	60.457		
6,700.00	6,656.24	6,872.40	6,837.05	25.55	25.77	161.26	-217.27	-1,442.31	2,050.47	2,016.06	34.41	59.595		
6,800.00	6,755.23	6,949.39	6,913.48	25.97	26.08	161.23	-221.68	-1,434.16	2,053.41	2,018.53	34.88	58.867		
6,837.97	6,792.81	6,975.18	6,939.12	26.13	26.18	161.23	-223.01	-1,431.70	2,054.91	2,019.86	35.05	58.624		
6,900.00	6,854.29	7,017.30	6,981.03	26.39	26.35	161.23	-225.01	-1,428.02	2,057.37	2,022.05	35.33	58.237		
7,000.00	6,953.65	7,100.00	7,063.44	26.79	26.66	161.24	-228.28	-1,421.97	2,060.67	2,024.87	35.80	57.557		
7,100.00	7,053.27	7,153.08	7,116.41	27.17	26.86	161.24	-229.93	-1,418.91	2,062.89	2,026.71	36.18	57.015		
7,200.00	7,153.09	7,220.96	7,184.20	27.53	27.10	161.24	-231.54	-1,415.94	2,064.27	2,027.68	36.59	56.416		
7,300.00	7,253.03	7,300.00	7,263.21	27.88	27.38	161.23	-232.68	-1,413.83	2,064.76	2,027.74	37.02	55.769		
7,380.98	7,334.00	7,343.81	7,307.01	28.15	27.53	-90.50	-232.98	-1,413.27	2,064.41	2,027.12	37.29	55.359		
7,400.00	7,353.02	7,356.72	7,319.92	28.21	27.57	-90.50	-233.02	-1,413.19	2,064.30	2,026.93	37.36	55.253		
7,447.34	7,400.35	7,394.56	7,357.75	28.36	27.69	-90.50	-233.05	-1,413.15	2,064.23	2,026.67	37.55	54.969		
7,500.00	7,453.02	7,447.22	7,410.42	28.53	27.86	-90.50	-233.05	-1,413.15	2,064.23	2,026.43	37.80	54.607		
7,600.00	7,553.02	7,547.22	7,510.42	28.85	28.19	-90.50	-233.05	-1,413.15	2,064.23	2,025.95	38.27	53.933		
7,700.00	7,653.02	7,647.22	7,610.42	29.17	28.51	-90.50	-233.05	-1,413.15	2,064.23	2,025.48	38.75	53.273		
7,800.00	7,753.02	7,747.22	7,710.42	29.49	28.83	-90.50	-233.05	-1,413.15	2,064.23	2,025.00	39.22	52.629		
7,900.00	7,853.02	7,847.22	7,810.42	29.81	29.16	-90.50	-233.05	-1,413.15	2,064.23	2,024.53	39.70	51.999		
8,000.00	7,953.02	7,947.22	7,910.42	30.13	29.48	-90.50	-233.05	-1,413.15	2,064.23	2,024.05	40.17	51.383		
8,100.00	8,053.02	8,047.22	8,010.42	30.46	29.81	-90.50	-233.05	-1,413.15	2,064.23	2,023.58	40.65	50.780		
8,200.00	8,153.02	8,147.22	8,110.42	30.78	30.14	-90.50	-233.05	-1,413.15	2,064.23	2,023.10	41.13	50.190		
8,300.00	8,253.02	8,247.22	8,210.42	31.11	30.46	-90.50	-233.05	-1,413.15	2,064.23	2,022.62	41.61	49.614		
8,400.00	8,353.02	8,347.22	8,310.42	31.43	30.79	-90.50	-233.05	-1,413.15	2,064.23	2,022.14	42.09	49.049		
8,500.00	8,453.02	8,447.22	8,410.42	31.76	31.12	-90.50	-233.05	-1,413.15	2,064.23	2,021.66	42.56	48.496		
8,600.00	8,553.02	8,547.22	8,510.42	32.09	31.45	-90.50	-233.05	-1,413.15	2,064.23	2,021.18	43.04	47.955		
8,700.00	8,653.02	8,647.22	8,610.42	32.42	31.78	-90.50	-233.05	-1,413.15	2,064.23	2,020.70	43.53	47.426		
8,800.00	8,753.02	8,747.22	8,710.42	32.74	32.11	-90.50	-233.05	-1,413.15	2,064.23	2,020.22	44.01	46.907		
8,900.00	8,853.02	8,847.22	8,810.42	33.07	32.44	-90.50	-233.05	-1,413.15	2,064.23	2,019.74	44.49	46.399		
9,000.00	8,953.02	8,947.22	8,910.42	33.40	32.78	-90.50	-233.05	-1,413.15	2,064.23	2,019.26	44.97	45.901		
9,100.00	9,053.02	9,047.22	9,010.42	33.73	33.11	-90.50	-233.05	-1,413.15	2,064.23	2,018.77	45.45	45.413		
9,200.00	9,153.02	9,147.22	9,110.42	34.07	33.44	-90.50	-233.05	-1,413.15	2,064.23	2,018.29	45.94	44.935		
9,300.00	9,253.02	9,247.22	9,210.42	34.40	33.78	-90.50	-233.05	-1,413.15	2,064.23	2,017.81	46.42	44.467		
9,400.00	9,353.02	9,347.22	9,310.42	34.73	34.11	-90.50	-233.05	-1,413.15	2,064.23	2,017.32	46.91	44.007		
9,407.95	9,360.97	9,355.17	9,318.37	34.76	34.14	-90.50	-233.05	-1,413.15	2,064.23	2,017.28	46.95	43.971		
9,500.00	9,453.02	9,447.11	9,410.30	35.06	34.44	-90.49	-232.62	-1,413.15	2,064.23	2,016.84	47.39	43.558		
9,600.00	9,553.02	9,544.90	9,507.22	35.39	34.75	-90.15	-220.52	-1,413.27	2,064.28	2,016.44	47.84	43.150		
9,700.00	9,653.02	9,636.12	9,594.57	35.73	34.99	-89.43	-194.53	-1,413.53	2,064.69	2,016.46	48.23	42.807		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,800.00	9,753.02	9,717.42	9,668.07	36.06	35.18	-88.47	-159.96	-1,413.88	2,066.04	2,017.48	48.56	42.543		
9,900.00	9,853.02	9,787.62	9,727.06	36.40	35.31	-87.42	-121.99	-1,414.25	2,069.03	2,020.19	48.83	42.368		
10,000.00	9,953.02	9,850.00	9,775.24	36.73	35.40	-86.33	-82.42	-1,414.65	2,074.31	2,025.26	49.05	42.290		
10,100.00	10,053.02	9,900.00	9,810.58	37.07	35.46	-85.35	-47.07	-1,415.00	2,082.43	2,033.23	49.19	42.333		
10,200.00	10,153.02	9,939.42	9,836.18	37.40	35.50	-84.53	-17.10	-1,415.30	2,093.79	2,044.53	49.26	42.508		
10,300.00	10,253.02	9,975.01	9,857.48	37.74	35.52	-83.75	11.40	-1,415.58	2,108.69	2,059.43	49.26	42.807		
10,400.00	10,353.02	10,000.00	9,871.35	38.08	35.54	-83.18	32.18	-1,415.79	2,127.32	2,078.14	49.18	43.256		
10,500.00	10,453.02	10,031.10	9,887.34	38.41	35.55	-82.45	58.86	-1,416.06	2,149.73	2,100.65	49.07	43.805		
10,600.00	10,553.02	10,050.00	9,896.33	38.75	35.56	-82.00	75.47	-1,416.22	2,175.98	2,127.10	48.88	44.517		
10,700.00	10,653.02	10,072.74	9,906.43	39.09	35.56	-81.45	95.85	-1,416.42	2,206.01	2,157.35	48.66	45.335		
10,800.00	10,753.02	10,100.00	9,917.45	39.43	35.57	-80.78	120.78	-1,416.67	2,239.83	2,191.40	48.42	46.256		
10,900.00	10,853.02	10,100.00	9,917.45	39.77	35.57	-80.78	120.78	-1,416.67	2,277.15	2,229.10	48.05	47.394		
11,000.00	10,953.02	10,117.77	9,923.99	40.10	35.57	-80.33	137.30	-1,416.84	2,318.00	2,270.27	47.72	48.572		
11,100.00	11,053.02	10,129.54	9,928.03	40.44	35.57	-80.03	148.35	-1,416.95	2,362.20	2,314.84	47.36	49.878		
11,200.00	11,153.02	10,150.00	9,934.53	40.78	35.57	-79.51	167.75	-1,417.14	2,409.65	2,362.63	47.02	51.245		
11,300.00	11,253.02	10,150.00	9,934.53	41.12	35.57	-79.51	167.75	-1,417.14	2,460.00	2,413.40	46.60	52.787		
11,400.00	11,353.02	10,150.00	9,934.53	41.46	35.57	-79.51	167.75	-1,417.14	2,513.32	2,467.13	46.19	54.417		
11,500.00	11,453.02	10,150.00	9,934.53	41.80	35.57	-79.51	167.75	-1,417.14	2,569.43	2,523.65	45.78	56.126		
11,566.02	11,519.04	10,170.78	9,940.41	42.03	35.57	-78.98	187.68	-1,417.34	2,607.60	2,562.00	45.60	57.185		
11,600.00	11,553.02	10,173.39	9,941.10	42.14	35.57	-75.97	190.19	-1,417.36	2,627.58	2,582.10	45.48	57.780		
11,650.00	11,602.72	10,177.97	9,942.28	42.31	35.57	-72.40	194.62	-1,417.41	2,656.74	2,611.45	45.30	58.654		
11,700.00	11,651.80	10,200.00	9,947.45	42.46	35.57	-68.62	216.03	-1,417.62	2,685.63	2,640.45	45.18	59.448		
11,750.00	11,699.87	10,200.00	9,947.45	42.61	35.57	-65.53	216.03	-1,417.62	2,713.47	2,668.49	44.98	60.327		
11,800.00	11,746.57	10,200.00	9,947.45	42.75	35.57	-62.65	216.03	-1,417.62	2,740.46	2,695.67	44.79	61.188		
11,850.00	11,791.53	10,200.00	9,947.45	42.87	35.57	-59.99	216.03	-1,417.62	2,766.40	2,721.80	44.60	62.026		
11,900.00	11,834.42	10,200.00	9,947.45	42.98	35.57	-57.56	216.03	-1,417.62	2,791.13	2,746.71	44.42	62.832		
11,950.00	11,874.92	10,220.18	9,951.46	43.08	35.57	-55.11	235.80	-1,417.82	2,814.18	2,769.87	44.32	63.503		
12,000.00	11,912.70	10,229.06	9,953.01	43.17	35.57	-53.08	244.55	-1,417.90	2,835.71	2,791.53	44.18	64.184		
12,050.00	11,947.48	10,250.00	9,956.12	43.24	35.58	-51.18	265.26	-1,418.11	2,855.55	2,811.46	44.09	64.764		
12,100.00	11,979.01	10,250.00	9,956.12	43.29	35.58	-49.72	265.26	-1,418.11	2,873.28	2,829.32	43.96	65.363		
12,150.00	12,007.03	10,250.00	9,956.12	43.34	35.58	-48.45	265.26	-1,418.11	2,889.12	2,845.27	43.85	65.893		
12,200.00	12,031.34	10,250.00	9,956.12	43.37	35.58	-47.38	265.26	-1,418.11	2,902.98	2,859.23	43.75	66.349		
12,250.00	12,051.76	10,278.29	9,959.11	43.40	35.60	-46.38	293.38	-1,418.39	2,914.17	2,870.43	43.74	66.625		
12,300.00	12,068.11	10,300.00	9,960.46	43.43	35.65	-45.64	315.05	-1,418.61	2,923.41	2,879.69	43.73	66.853		
12,350.00	12,080.29	10,300.00	9,960.46	43.46	35.65	-45.16	315.05	-1,418.61	2,930.11	2,886.41	43.70	67.045		
12,400.00	12,088.20	10,310.10	9,960.81	43.51	35.67	-44.83	325.14	-1,418.71	2,934.51	2,890.79	43.72	67.120		
12,450.00	12,091.77	10,324.84	9,961.00	43.58	35.71	-44.68	339.88	-1,418.85	2,936.51	2,892.74	43.77	67.094		
12,466.02	12,092.00	10,324.84	9,961.00	43.60	35.71	-44.67	339.88	-1,418.85	2,936.61	2,892.83	43.78	67.073		
12,467.44	12,092.00	10,324.84	9,961.00	43.61	35.71	-44.67	339.88	-1,418.85	2,936.61	2,892.83	43.78	67.070		
12,500.00	12,092.00	10,356.31	9,961.00	43.67	35.80	-44.67	371.35	-1,419.17	2,936.63	2,892.77	43.86	66.959		
12,600.00	12,092.00	10,456.31	9,961.00	43.93	36.15	-44.67	471.35	-1,420.16	2,936.66	2,892.53	44.13	66.546		
12,700.00	12,092.00	10,556.31	9,961.00	44.27	36.57	-44.67	571.34	-1,421.16	2,936.70	2,892.23	44.47	66.034		
12,800.00	12,092.00	10,656.31	9,961.00	44.68	37.06	-44.67	671.34	-1,422.15	2,936.74	2,891.85	44.89	65.426		
12,900.00	12,092.00	10,756.31	9,961.00	45.15	37.61	-44.67	771.33	-1,423.15	2,936.77	2,891.40	45.37	64.730		
13,000.00	12,092.00	10,856.31	9,961.00	45.68	38.22	-44.67	871.33	-1,424.15	2,936.81	2,890.89	45.92	63.955		
13,100.00	12,092.00	10,956.31	9,961.00	46.26	38.89	-44.68	971.32	-1,425.14	2,936.85	2,890.32	46.53	63.114		
13,200.00	12,092.00	11,056.31	9,961.00	46.89	39.61	-44.68	1,071.32	-1,426.14	2,936.89	2,889.68	47.21	62.212		
13,300.00	12,092.00	11,156.31	9,961.00	47.57	40.38	-44.68	1,171.31	-1,427.13	2,936.92	2,888.98	47.94	61.259		
13,400.00	12,092.00	11,256.31	9,961.00	48.30	41.21	-44.68	1,271.31	-1,428.13	2,936.96	2,888.23	48.73	60.267		
13,500.00	12,092.00	11,356.31	9,961.00	49.06	42.08	-44.68	1,371.30	-1,429.13	2,937.00	2,887.42	49.58	59.243		
13,600.00	12,092.00	11,456.31	9,961.00	49.88	43.00	-44.68	1,471.30	-1,430.12	2,937.03	2,886.56	50.47	58.193		
13,700.00	12,092.00	11,556.31	9,961.00	50.73	43.96	-44.68	1,571.29	-1,431.12	2,937.07	2,885.66	51.41	57.127		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,800.00	12,092.00	11,656.31	9,961.00	51.62	44.96	-44.68	1,671.29	-1,432.11	2,937.11	2,884.71	52.40	56.050		
13,900.00	12,092.00	11,756.31	9,961.00	52.54	46.00	-44.68	1,771.28	-1,433.11	2,937.15	2,883.71	53.43	54.968		
14,000.00	12,092.00	11,856.31	9,961.00	53.51	47.07	-44.68	1,871.28	-1,434.10	2,937.18	2,882.68	54.51	53.887		
14,100.00	12,092.00	11,956.31	9,961.00	54.50	48.17	-44.68	1,971.27	-1,435.10	2,937.22	2,881.60	55.62	52.811		
14,200.00	12,092.00	12,056.31	9,961.00	55.52	49.30	-44.68	2,071.27	-1,436.10	2,937.26	2,880.49	56.77	51.744		
14,300.00	12,092.00	12,156.31	9,961.00	56.58	50.47	-44.68	2,171.26	-1,437.09	2,937.30	2,879.35	57.95	50.689		
14,400.00	12,092.00	12,256.31	9,961.00	57.66	51.65	-44.68	2,271.26	-1,438.09	2,937.33	2,878.17	59.16	49.653		
14,500.00	12,092.00	12,356.31	9,961.00	58.77	52.87	-44.69	2,371.25	-1,439.08	2,937.37	2,876.97	60.40	48.633		
14,600.00	12,092.00	12,456.31	9,961.00	59.90	54.10	-44.69	2,471.25	-1,440.08	2,937.41	2,875.74	61.67	47.633		
14,700.00	12,092.00	12,556.31	9,961.00	61.06	55.36	-44.69	2,571.24	-1,441.08	2,937.44	2,874.48	62.96	46.654		
14,800.00	12,092.00	12,656.31	9,961.00	62.24	56.64	-44.69	2,671.24	-1,442.07	2,937.48	2,873.20	64.28	45.696		
14,900.00	12,092.00	12,756.31	9,961.00	63.44	57.94	-44.69	2,771.23	-1,443.07	2,937.52	2,871.89	65.63	44.761		
15,000.00	12,092.00	12,856.31	9,961.00	64.66	59.25	-44.69	2,871.23	-1,444.06	2,937.56	2,870.56	66.99	43.849		
15,100.00	12,092.00	12,956.31	9,961.00	65.90	60.58	-44.69	2,971.22	-1,445.06	2,937.59	2,869.21	68.38	42.961		
15,200.00	12,092.00	13,056.31	9,961.00	67.16	61.93	-44.69	3,071.22	-1,446.05	2,937.63	2,867.85	69.78	42.096		
15,300.00	12,092.00	13,156.31	9,961.00	68.43	63.29	-44.69	3,171.21	-1,447.05	2,937.67	2,866.46	71.21	41.256		
15,400.00	12,092.00	13,256.31	9,961.00	69.72	64.66	-44.69	3,271.21	-1,448.05	2,937.71	2,865.06	72.64	40.440		
15,500.00	12,092.00	13,356.31	9,961.00	71.02	66.05	-44.69	3,371.20	-1,449.04	2,937.74	2,863.64	74.10	39.647		
15,600.00	12,092.00	13,456.31	9,961.00	72.34	67.45	-44.69	3,471.20	-1,450.04	2,937.78	2,862.21	75.57	38.876		
15,700.00	12,092.00	13,556.31	9,961.00	73.67	68.86	-44.69	3,571.19	-1,451.03	2,937.82	2,860.76	77.05	38.128		
15,800.00	12,092.00	13,656.31	9,961.00	75.02	70.28	-44.70	3,671.19	-1,452.03	2,937.85	2,859.30	78.55	37.401		
15,900.00	12,092.00	13,756.31	9,961.00	76.37	71.71	-44.70	3,771.18	-1,453.03	2,937.89	2,857.83	80.06	36.697		
16,000.00	12,092.00	13,856.31	9,961.00	77.74	73.15	-44.70	3,871.18	-1,454.02	2,937.93	2,856.35	81.58	36.014		
16,100.00	12,092.00	13,956.31	9,961.00	79.12	74.60	-44.70	3,971.17	-1,455.02	2,937.97	2,854.86	83.11	35.351		
16,200.00	12,092.00	14,056.31	9,961.00	80.51	76.05	-44.70	4,071.17	-1,456.01	2,938.00	2,853.35	84.65	34.706		
16,300.00	12,092.00	14,156.31	9,961.00	81.91	77.52	-44.70	4,171.16	-1,457.01	2,938.04	2,851.83	86.21	34.081		
16,400.00	12,092.00	14,256.31	9,961.00	83.31	78.99	-44.70	4,271.16	-1,458.00	2,938.08	2,850.31	87.77	33.476		
16,500.00	12,092.00	14,356.31	9,961.00	84.73	80.47	-44.70	4,371.15	-1,459.00	2,938.11	2,848.78	89.34	32.888		
16,600.00	12,092.00	14,456.31	9,961.00	86.16	81.95	-44.70	4,471.15	-1,460.00	2,938.15	2,847.24	90.91	32.318		
16,700.00	12,092.00	14,556.31	9,961.00	87.59	83.44	-44.70	4,571.14	-1,460.99	2,938.19	2,845.69	92.50	31.764		
16,800.00	12,092.00	14,656.31	9,961.00	89.03	84.94	-44.70	4,671.14	-1,461.99	2,938.23	2,844.13	94.09	31.226		
16,900.00	12,092.00	14,756.31	9,961.00	90.48	86.45	-44.70	4,771.13	-1,462.98	2,938.26	2,842.57	95.70	30.704		
17,000.00	12,092.00	14,856.31	9,961.00	91.93	87.95	-44.70	4,871.13	-1,463.98	2,938.30	2,841.00	97.30	30.197		
17,100.00	12,092.00	14,956.31	9,961.00	93.39	89.47	-44.70	4,971.12	-1,464.98	2,938.34	2,839.42	98.92	29.705		
17,200.00	12,092.00	15,056.31	9,961.00	94.86	90.99	-44.71	5,071.12	-1,465.97	2,938.38	2,837.84	100.54	29.227		
17,300.00	12,092.00	15,156.31	9,961.00	96.33	92.51	-44.71	5,171.11	-1,466.97	2,938.41	2,836.25	102.16	28.763		
17,400.00	12,092.00	15,256.31	9,961.00	97.81	94.04	-44.71	5,271.11	-1,467.96	2,938.45	2,834.66	103.79	28.311		
17,500.00	12,092.00	15,356.31	9,961.00	99.30	95.57	-44.71	5,371.10	-1,468.96	2,938.49	2,833.06	105.43	27.872		
17,600.00	12,092.00	15,456.31	9,961.00	100.79	97.10	-44.71	5,471.10	-1,469.95	2,938.52	2,831.46	107.07	27.445		
17,700.00	12,092.00	15,556.31	9,961.00	102.28	98.64	-44.71	5,571.09	-1,470.95	2,938.56	2,829.85	108.71	27.031		
17,800.00	12,092.00	15,656.31	9,961.00	103.78	100.19	-44.71	5,671.09	-1,471.95	2,938.60	2,828.24	110.36	26.627		
17,900.00	12,092.00	15,756.31	9,961.00	105.29	101.73	-44.71	5,771.08	-1,472.94	2,938.64	2,826.62	112.01	26.235		
18,000.00	12,092.00	15,856.31	9,961.00	106.80	103.28	-44.71	5,871.08	-1,473.94	2,938.67	2,825.00	113.67	25.852		
18,100.00	12,092.00	15,956.31	9,961.00	108.31	104.84	-44.71	5,971.07	-1,474.93	2,938.71	2,823.38	115.33	25.480		
18,200.00	12,092.00	16,056.31	9,961.00	109.83	106.39	-44.71	6,071.07	-1,475.93	2,938.75	2,821.75	117.00	25.118		
18,300.00	12,092.00	16,156.31	9,961.00	111.35	107.95	-44.71	6,171.06	-1,476.93	2,938.79	2,820.12	118.66	24.766		
18,400.00	12,092.00	16,256.31	9,961.00	112.87	109.51	-44.71	6,271.06	-1,477.92	2,938.82	2,818.49	120.33	24.422		
18,500.00	12,092.00	16,356.31	9,961.00	114.40	111.08	-44.71	6,371.05	-1,478.92	2,938.86	2,816.85	122.01	24.087		
18,600.00	12,092.00	16,456.31	9,961.00	115.93	112.64	-44.72	6,471.05	-1,479.91	2,938.90	2,815.21	123.69	23.760		
18,700.00	12,092.00	16,556.31	9,961.00	117.46	114.21	-44.72	6,571.04	-1,480.91	2,938.93	2,813.56	125.37	23.442		
18,800.00	12,092.00	16,656.31	9,961.00	119.00	115.78	-44.72	6,671.04	-1,481.90	2,938.97	2,811.92	127.05	23.132		
18,900.00	12,092.00	16,756.31	9,961.00	120.54	117.36	-44.72	6,771.03	-1,482.90	2,939.01	2,810.27	128.74	22.830		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,000.00	12,092.00	16,856.31	9,961.00	122.09	118.93	-44.72	6,871.03	-1,483.90	2,939.05	2,808.62	130.42	22.534		
19,100.00	12,092.00	16,956.31	9,961.00	123.63	120.51	-44.72	6,971.02	-1,484.89	2,939.08	2,806.97	132.12	22.246		
19,200.00	12,092.00	17,056.31	9,961.00	125.18	122.09	-44.72	7,071.02	-1,485.89	2,939.12	2,805.31	133.81	21.965		
19,300.00	12,092.00	17,156.31	9,961.00	126.73	123.67	-44.72	7,171.01	-1,486.88	2,939.16	2,803.66	135.50	21.691		
19,400.00	12,092.00	17,256.31	9,961.00	128.29	125.25	-44.72	7,271.01	-1,487.88	2,939.20	2,802.00	137.20	21.423		
19,500.00	12,092.00	17,356.31	9,961.00	129.84	126.84	-44.72	7,371.00	-1,488.88	2,939.23	2,800.34	138.90	21.161		
19,600.00	12,092.00	17,456.31	9,961.00	131.40	128.43	-44.72	7,471.00	-1,489.87	2,939.27	2,798.67	140.60	20.906		
19,700.00	12,092.00	17,556.31	9,961.00	132.96	130.01	-44.72	7,570.99	-1,490.87	2,939.31	2,797.01	142.30	20.656		
19,800.00	12,092.00	17,656.31	9,961.00	134.53	131.60	-44.72	7,670.99	-1,491.86	2,939.34	2,795.34	144.00	20.411		
19,900.00	12,092.00	17,756.31	9,961.00	136.09	133.20	-44.73	7,770.98	-1,492.86	2,939.38	2,793.67	145.71	20.173		
20,000.00	12,092.00	17,856.31	9,961.00	137.66	134.79	-44.73	7,870.98	-1,493.85	2,939.42	2,792.00	147.41	19.940		
20,100.00	12,092.00	17,956.31	9,961.00	139.23	136.38	-44.73	7,970.97	-1,494.85	2,939.46	2,790.33	149.12	19.712		
20,200.00	12,092.00	18,056.31	9,961.00	140.80	137.98	-44.73	8,070.97	-1,495.85	2,939.49	2,788.66	150.83	19.488		
20,300.00	12,092.00	18,156.31	9,961.00	142.37	139.58	-44.73	8,170.96	-1,496.84	2,939.53	2,786.98	152.55	19.270		
20,400.00	12,092.00	18,256.31	9,961.00	143.95	141.17	-44.73	8,270.96	-1,497.84	2,939.57	2,785.31	154.26	19.056		
20,500.00	12,092.00	18,356.31	9,961.00	145.53	142.77	-44.73	8,370.95	-1,498.83	2,939.60	2,783.63	155.97	18.847		
20,600.00	12,092.00	18,456.31	9,961.00	147.10	144.37	-44.73	8,470.95	-1,499.83	2,939.64	2,781.96	157.68	18.643		
20,700.00	12,092.00	18,556.31	9,961.00	148.68	145.98	-44.73	8,570.94	-1,500.83	2,939.68	2,780.28	159.40	18.442		
20,800.00	12,092.00	18,656.31	9,961.00	150.27	147.58	-44.73	8,670.94	-1,501.82	2,939.72	2,778.60	161.12	18.246		
20,900.00	12,092.00	18,756.31	9,961.00	151.85	149.18	-44.73	8,770.93	-1,502.82	2,939.75	2,776.92	162.84	18.053		
21,000.00	12,092.00	18,856.31	9,961.00	153.43	150.79	-44.73	8,870.93	-1,503.81	2,939.79	2,775.24	164.55	17.865		
21,100.00	12,092.00	18,956.31	9,961.00	155.02	152.40	-44.73	8,970.92	-1,504.81	2,939.83	2,773.55	166.27	17.681		
21,200.00	12,092.00	19,056.31	9,961.00	156.61	154.00	-44.73	9,070.92	-1,505.80	2,939.87	2,771.87	167.99	17.500		
21,300.00	12,092.00	19,156.31	9,961.00	158.19	155.61	-44.74	9,170.91	-1,506.80	2,939.90	2,770.19	169.72	17.322		
21,400.00	12,092.00	19,256.31	9,961.00	159.78	157.22	-44.74	9,270.91	-1,507.80	2,939.94	2,768.50	171.44	17.149		
21,500.00	12,092.00	19,356.31	9,961.00	161.38	158.83	-44.74	9,370.90	-1,508.79	2,939.98	2,766.82	173.16	16.978		
21,600.00	12,092.00	19,456.31	9,961.00	162.97	160.44	-44.74	9,470.90	-1,509.79	2,940.01	2,765.13	174.88	16.811		
21,700.00	12,092.00	19,556.31	9,961.00	164.56	162.05	-44.74	9,570.89	-1,510.78	2,940.05	2,763.44	176.61	16.647		
21,800.00	12,092.00	19,656.31	9,961.00	166.16	163.66	-44.74	9,670.89	-1,511.78	2,940.09	2,761.75	178.33	16.486		
21,900.00	12,092.00	19,756.31	9,961.00	167.75	165.28	-44.74	9,770.88	-1,512.78	2,940.13	2,760.07	180.06	16.329		
22,000.00	12,092.00	19,856.31	9,961.00	169.35	166.89	-44.74	9,870.88	-1,513.77	2,940.16	2,758.38	181.79	16.174		
22,100.00	12,092.00	19,956.31	9,961.00	170.95	168.51	-44.74	9,970.87	-1,514.77	2,940.20	2,756.69	183.51	16.022		
22,200.00	12,092.00	20,056.31	9,961.00	172.55	170.12	-44.74	10,070.87	-1,515.76	2,940.24	2,755.00	185.24	15.873		
22,255.91	12,092.00	20,112.23	9,961.00	173.44	171.03	-44.74	10,126.78	-1,516.32	2,940.26	2,754.05	186.21	15.790 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.60	0.60	0.00	0.00	-9.92	74.89	-13.10	76.03					
100.00	100.00	100.60	100.60	0.13	0.13	-9.92	74.89	-13.10	76.03	75.85	0.18	424.823		
200.00	200.00	200.60	200.60	0.48	0.49	-9.92	74.89	-13.10	76.03	75.34	0.69	110.841		
300.00	300.00	300.60	300.60	0.84	0.84	-9.92	74.89	-13.10	76.03	74.83	1.19	63.735		
400.00	400.00	400.60	400.60	1.20	1.20	-9.92	74.89	-13.10	76.03	74.33	1.70	44.727		
500.00	500.00	500.60	500.60	1.56	1.56	-9.92	74.89	-13.10	76.03	73.82	2.21	34.452		
600.00	600.00	600.60	600.60	1.92	1.92	-9.92	74.89	-13.10	76.03	73.31	2.71	28.016		
700.00	700.00	700.60	700.60	2.28	2.28	-9.92	74.89	-13.10	76.03	72.81	3.22	23.606		
800.00	800.00	800.60	800.60	2.63	2.64	-9.92	74.89	-13.10	76.03	72.30	3.73	20.395		
900.00	900.00	900.60	900.60	2.99	3.00	-9.92	74.89	-13.10	76.03	71.79	4.23	17.954		
1,000.00	1,000.00	1,000.60	1,000.60	3.35	3.35	-9.92	74.89	-13.10	76.03	71.29	4.74	16.034		
1,100.00	1,100.00	1,100.60	1,100.60	3.71	3.71	-9.92	74.89	-13.10	76.03	70.78	5.25	14.485		
1,200.00	1,200.00	1,200.60	1,200.60	4.07	4.07	-9.92	74.89	-13.10	76.03	70.27	5.76	13.210		
1,300.00	1,300.00	1,300.60	1,300.60	4.43	4.43	-9.92	74.89	-13.10	76.03	69.76	6.26	12.140		
1,400.00	1,400.00	1,400.60	1,400.60	4.79	4.79	-9.92	74.89	-13.10	76.03	69.26	6.77	11.231		
1,500.00	1,500.00	1,500.60	1,500.60	5.14	5.15	-9.92	74.89	-13.10	76.03	68.75	7.28	10.449		
1,600.00	1,600.00	1,600.60	1,600.60	5.50	5.50	-9.92	74.89	-13.10	76.03	68.24	7.78	9.768		
1,700.00	1,700.00	1,700.60	1,700.60	5.86	5.86	-9.92	74.89	-13.10	76.03	67.74	8.29	9.171		
1,800.00	1,800.00	1,800.61	1,800.61	6.22	6.22	-9.92	74.89	-13.10	76.03	67.23	8.80	8.642		
1,900.00	1,900.00	1,902.56	1,902.55	6.58	6.57	-9.67	73.63	-12.55	74.72	65.42	9.29	8.039		
2,000.00	2,000.00	2,004.36	2,004.26	6.94	6.90	-8.88	69.88	-10.92	70.82	61.05	9.77	7.246		
2,100.00	2,099.99	2,105.29	2,104.98	7.28	7.24	-116.81	63.89	-8.31	65.15	54.91	10.24	6.360		
2,200.00	2,199.91	2,205.15	2,204.60	7.62	7.57	-118.49	57.50	-5.53	60.20	49.49	10.72	5.618		
2,300.00	2,299.69	2,304.99	2,304.20	7.96	7.91	-122.72	51.11	-2.75	56.68	45.49	11.19	5.064		
2,400.00	2,399.27	2,404.75	2,403.71	8.31	8.25	-129.59	44.72	0.03	55.12	43.45	11.67	4.723		
2,411.09	2,410.30	2,415.81	2,414.74	8.35	8.29	-130.50	44.02	0.34	55.10	43.38	11.72	4.700 CC, ES		
2,500.00	2,498.57	2,504.36	2,503.08	8.66	8.59	-138.52	38.35	2.81	56.33	44.18	12.15	4.635 SF		
2,543.01	2,541.19	2,547.14	2,545.76	8.81	8.74	-142.68	35.61	4.00	57.90	45.54	12.36	4.684		
2,600.00	2,597.60	2,603.79	2,602.27	9.02	8.94	-148.00	31.99	5.58	60.70	48.06	12.64	4.803		
2,700.00	2,696.59	2,703.20	2,701.43	9.38	9.28	-156.12	25.63	8.35	66.72	53.59	13.13	5.083		
2,800.00	2,795.58	2,802.61	2,800.60	9.75	9.63	-162.80	19.26	11.12	73.85	60.23	13.62	5.424		
2,900.00	2,894.57	2,902.02	2,899.77	10.12	9.98	-168.25	12.90	13.89	81.81	67.70	14.11	5.798		
3,000.00	2,993.56	3,001.43	2,998.93	10.50	10.34	-172.70	6.54	16.66	90.37	75.76	14.60	6.188		
3,100.00	3,092.55	3,100.84	3,098.10	10.88	10.69	-176.37	0.18	19.43	99.38	84.28	15.10	6.580		
3,200.00	3,191.55	3,200.25	3,197.27	11.27	11.05	-179.42	-6.18	22.20	108.73	93.12	15.60	6.968		
3,300.00	3,290.54	3,299.66	3,296.43	11.65	11.40	178.01	-12.54	24.97	118.33	102.23	16.11	7.347		
3,400.00	3,389.53	3,399.07	3,395.60	12.04	11.76	175.84	-18.90	27.74	128.14	111.53	16.61	7.715		
3,500.00	3,488.52	3,498.47	3,494.77	12.44	12.12	173.97	-25.27	30.51	138.10	120.99	17.12	8.068		
3,600.00	3,587.51	3,597.88	3,593.93	12.83	12.48	172.36	-31.63	33.28	148.19	130.57	17.62	8.408		
3,700.00	3,686.50	3,697.29	3,693.10	13.23	12.84	170.95	-37.99	36.04	158.38	140.25	18.13	8.734		
3,800.00	3,785.49	3,796.70	3,792.27	13.62	13.20	169.72	-44.35	38.81	168.65	150.01	18.65	9.045		
3,900.00	3,884.48	3,896.11	3,891.43	14.02	13.57	168.62	-50.71	41.58	179.00	159.84	19.16	9.343		
4,000.00	3,983.48	3,995.52	3,990.60	14.43	13.93	167.65	-57.07	44.35	189.40	169.72	19.67	9.627		
4,100.00	4,082.47	4,094.93	4,089.77	14.83	14.29	166.78	-63.43	47.12	199.84	179.66	20.19	9.899		
4,200.00	4,181.46	4,194.34	4,188.93	15.23	14.66	165.99	-69.80	49.89	210.33	189.63	20.71	10.158		
4,300.00	4,280.45	4,293.75	4,288.10	15.64	15.02	165.28	-76.16	52.66	220.86	199.64	21.22	10.406		
4,400.00	4,379.44	4,393.16	4,387.27	16.04	15.39	164.64	-82.52	55.43	231.42	209.67	21.74	10.644		
4,500.00	4,478.43	4,492.56	4,486.43	16.45	15.75	164.05	-88.88	58.20	242.00	219.74	22.26	10.871		
4,600.00	4,577.42	4,591.97	4,585.60	16.86	16.12	163.50	-95.24	60.97	252.60	229.82	22.78	11.088		
4,700.00	4,676.41	4,691.38	4,684.77	17.27	16.49	163.01	-101.60	63.74	263.23	239.93	23.30	11.296		
4,800.00	4,775.40	4,790.79	4,783.93	17.68	16.85	162.55	-107.96	66.51	273.87	250.05	23.82	11.495		
4,900.00	4,874.40	4,890.20	4,883.10	18.09	17.22	162.13	-114.33	69.28	284.53	260.19	24.35	11.687		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 303H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
5,000.00	4,973.39	4,989.61	4,982.27	18.50	17.59	161.73	-120.69	72.05	295.21	270.34	24.87	11.870				
5,100.00	5,072.38	5,089.02	5,081.43	18.91	17.96	161.37	-127.05	74.82	305.89	280.50	25.39	12.046				
5,200.00	5,171.37	5,188.43	5,180.60	19.32	18.32	161.03	-133.41	77.59	316.59	290.68	25.92	12.215				
5,300.00	5,270.36	5,287.84	5,279.76	19.73	18.69	160.71	-139.77	80.36	327.30	300.86	26.44	12.378				
5,400.00	5,369.35	5,387.25	5,378.93	20.15	19.06	160.41	-146.13	83.13	338.02	311.05	26.97	12.534				
5,500.00	5,468.34	5,486.65	5,478.10	20.56	19.43	160.13	-152.49	85.90	348.75	321.25	27.49	12.685				
5,600.00	5,567.33	5,586.06	5,577.26	20.97	19.80	159.86	-158.86	88.67	359.48	331.46	28.02	12.830				
5,700.00	5,666.33	5,685.47	5,676.43	21.39	20.17	159.62	-165.22	91.44	370.22	341.68	28.55	12.970				
5,800.00	5,765.32	5,784.88	5,775.60	21.80	20.54	159.38	-171.58	94.21	380.97	351.90	29.07	13.104				
5,900.00	5,864.31	5,884.29	5,874.76	22.22	20.91	159.16	-177.94	96.98	391.73	362.13	29.60	13.234				
6,000.00	5,963.30	5,983.70	5,973.93	22.64	21.28	158.95	-184.30	99.75	402.49	372.36	30.13	13.359				
6,100.00	6,062.29	6,083.11	6,073.10	23.05	21.65	158.75	-190.66	102.52	413.25	382.59	30.66	13.480				
6,200.00	6,161.28	6,182.52	6,172.26	23.47	22.02	158.56	-197.03	105.28	424.02	392.84	31.18	13.597				
6,300.00	6,260.27	6,281.93	6,271.43	23.88	22.39	158.38	-203.39	108.05	434.79	403.08	31.71	13.711				
6,400.00	6,359.26	6,381.34	6,370.60	24.30	22.76	158.21	-209.75	110.82	445.57	413.33	32.24	13.820				
6,500.00	6,458.26	6,477.33	6,466.41	24.72	23.11	158.16	-215.06	113.14	456.68	423.93	32.75	13.944				
6,600.00	6,557.25	6,572.60	6,561.62	25.14	23.45	158.39	-218.17	114.49	468.63	435.39	33.24	14.097				
6,700.00	6,656.24	6,667.82	6,656.84	25.55	23.78	158.87	-219.11	114.90	481.47	447.75	33.72	14.279				
6,800.00	6,755.23	6,766.82	6,755.83	25.97	24.11	159.46	-219.11	114.90	494.73	460.52	34.20	14.465				
6,837.97	6,792.81	6,804.40	6,793.41	26.13	24.23	159.68	-219.11	114.90	499.77	465.39	34.39	14.534				
6,900.00	6,854.29	6,865.88	6,854.89	26.39	24.44	160.04	-219.11	114.90	507.56	472.88	34.69	14.633				
7,000.00	6,953.65	6,965.24	6,954.25	26.79	24.77	160.52	-219.11	114.90	518.17	483.00	35.17	14.733				
7,100.00	7,053.27	7,064.86	7,053.87	27.17	25.10	160.88	-219.11	114.90	526.34	490.69	35.66	14.761				
7,200.00	7,153.09	7,164.67	7,153.69	27.53	25.43	161.12	-219.11	114.90	532.06	495.92	36.14	14.721				
7,300.00	7,253.03	7,264.61	7,253.63	27.88	25.76	161.25	-219.11	114.90	535.30	498.68	36.63	14.616				
7,380.98	7,334.00	7,345.59	7,334.60	28.15	26.04	-90.44	-219.11	114.90	536.12	499.10	37.01	14.485				
7,400.00	7,353.02	7,364.61	7,353.62	28.21	26.10	-90.44	-219.11	114.90	536.12	499.01	37.10	14.449				
7,500.00	7,453.02	7,464.61	7,453.62	28.53	26.43	-90.44	-219.11	114.90	536.12	498.54	37.58	14.267				
7,600.00	7,553.02	7,564.61	7,553.62	28.85	26.77	-90.44	-219.11	114.90	536.12	498.06	38.05	14.089				
7,700.00	7,653.02	7,664.61	7,653.62	29.17	27.11	-90.44	-219.11	114.90	536.12	497.59	38.53	13.915				
7,800.00	7,753.02	7,764.61	7,753.62	29.49	27.44	-90.44	-219.11	114.90	536.12	497.11	39.00	13.745				
7,900.00	7,853.02	7,864.61	7,853.62	29.81	27.78	-90.44	-219.11	114.90	536.12	496.63	39.48	13.579				
8,000.00	7,953.02	7,964.61	7,953.62	30.13	28.12	-90.44	-219.11	114.90	536.12	496.16	39.96	13.416				
8,100.00	8,053.02	8,064.61	8,053.62	30.46	28.46	-90.44	-219.11	114.90	536.12	495.68	40.44	13.257				
8,200.00	8,153.02	8,164.61	8,153.62	30.78	28.80	-90.44	-219.11	114.90	536.12	495.20	40.92	13.102				
8,300.00	8,253.02	8,264.61	8,253.62	31.11	29.13	-90.44	-219.11	114.90	536.12	494.72	41.40	12.950				
8,400.00	8,353.02	8,364.61	8,353.62	31.43	29.47	-90.44	-219.11	114.90	536.12	494.24	41.88	12.801				
8,500.00	8,453.02	8,464.61	8,453.62	31.76	29.81	-90.44	-219.11	114.90	536.12	493.76	42.36	12.656				
8,600.00	8,553.02	8,564.61	8,553.62	32.09	30.15	-90.44	-219.11	114.90	536.12	493.27	42.84	12.514				
8,700.00	8,653.02	8,664.61	8,653.62	32.42	30.50	-90.44	-219.11	114.90	536.12	492.79	43.33	12.374				
8,800.00	8,753.02	8,764.61	8,753.62	32.74	30.84	-90.44	-219.11	114.90	536.12	492.31	43.81	12.238				
8,900.00	8,853.02	8,864.61	8,853.62	33.07	31.18	-90.44	-219.11	114.90	536.12	491.82	44.29	12.104				
9,000.00	8,953.02	8,964.61	8,953.62	33.40	31.52	-90.44	-219.11	114.90	536.12	491.34	44.78	11.973				
9,100.00	9,053.02	9,064.61	9,053.62	33.73	31.86	-90.44	-219.11	114.90	536.12	490.85	45.26	11.845				
9,200.00	9,153.02	9,164.61	9,153.62	34.07	32.21	-90.44	-219.11	114.90	536.12	490.37	45.75	11.719				
9,300.00	9,253.02	9,264.61	9,253.62	34.40	32.55	-90.44	-219.11	114.90	536.12	489.88	46.23	11.596				
9,309.46	9,262.47	9,274.06	9,263.07	34.43	32.58	-90.44	-219.11	114.90	536.12	489.84	46.28	11.585				
9,400.00	9,353.02	9,364.61	9,353.57	34.73	32.89	-90.40	-218.74	114.90	536.12	489.40	46.72	11.476				
9,500.00	9,453.02	9,462.67	9,450.84	35.06	33.21	-89.13	-206.87	114.78	536.29	489.13	47.15	11.374				
9,600.00	9,553.02	9,554.25	9,538.58	35.39	33.47	-86.37	-180.97	114.54	537.75	490.26	47.49	11.324				
9,700.00	9,653.02	9,635.88	9,612.44	35.73	33.68	-82.71	-146.37	114.21	542.73	495.06	47.66	11.387				
9,800.00	9,753.02	9,706.36	9,671.70	36.06	33.84	-78.77	-108.31	113.85	553.74	506.18	47.56	11.643				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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												Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,900.00	9,853.02	9,766.11	9,717.97	36.40	33.97	-74.96	-70.55	113.49	572.87	525.79	47.08	12.168	
10,000.00	9,953.02	9,816.38	9,753.68	36.73	34.07	-71.51	-35.19	113.15	601.32	555.12	46.20	13.016	
10,100.00	10,053.02	9,850.00	9,775.77	37.07	34.14	-69.13	-9.86	112.91	639.40	594.57	44.83	14.264	
10,200.00	10,153.02	9,900.00	9,805.78	37.40	34.24	-65.52	30.11	112.53	686.31	642.61	43.70	15.704	
10,300.00	10,253.02	9,924.61	9,819.24	37.74	34.29	-63.74	50.71	112.33	741.24	699.10	42.14	17.589	
10,400.00	10,353.02	9,950.00	9,832.20	38.08	34.34	-61.92	72.54	112.13	803.09	762.35	40.74	19.714	
10,500.00	10,453.02	9,972.82	9,843.00	38.41	34.39	-60.29	92.64	111.94	870.68	831.21	39.47	22.058	
10,600.00	10,553.02	10,000.00	9,854.81	38.75	34.45	-58.37	117.12	111.70	943.12	904.64	38.48	24.508	
10,700.00	10,653.02	10,000.00	9,854.81	39.09	34.45	-58.37	117.12	111.70	1,019.43	982.19	37.24	27.372	
10,800.00	10,753.02	10,024.03	9,864.28	39.43	34.51	-56.71	139.20	111.49	1,098.84	1,062.26	36.58	30.041	
10,900.00	10,853.02	10,050.00	9,873.46	39.77	34.57	-54.96	163.49	111.26	1,181.22	1,145.14	36.08	32.738	
11,000.00	10,953.02	10,050.00	9,873.46	40.10	34.57	-54.96	163.49	111.26	1,265.43	1,230.05	35.38	35.768	
11,100.00	11,053.02	10,050.00	9,873.46	40.44	34.57	-54.96	163.49	111.26	1,351.80	1,316.97	34.82	38.818	
11,200.00	11,153.02	10,069.05	9,879.49	40.78	34.61	-53.70	181.56	111.09	1,439.51	1,404.91	34.59	41.614	
11,300.00	11,253.02	10,077.64	9,882.01	41.12	34.63	-53.14	189.78	111.01	1,528.64	1,494.31	34.33	44.522	
11,400.00	11,353.02	10,100.00	9,887.99	41.46	34.69	-51.72	211.31	110.81	1,619.14	1,584.86	34.28	47.231	
11,500.00	11,453.02	10,100.00	9,887.99	41.80	34.69	-51.72	211.31	110.81	1,710.19	1,676.10	34.09	50.169	
11,566.02	11,519.04	10,100.00	9,887.99	42.03	34.69	-51.72	211.31	110.81	1,770.83	1,736.83	34.00	52.086	
11,600.00	11,553.00	10,100.00	9,887.99	42.14	34.69	-45.42	211.31	110.81	1,801.93	1,767.97	33.96	53.068	
11,650.00	11,602.72	10,100.00	9,887.99	42.31	34.69	-38.62	211.31	110.81	1,846.79	1,812.91	33.88	54.503	
11,700.00	11,651.80	10,100.00	9,887.99	42.46	34.69	-33.39	211.31	110.81	1,890.37	1,856.56	33.80	55.921	
11,750.00	11,699.87	10,100.00	9,887.99	42.61	34.69	-29.35	211.31	110.81	1,932.42	1,898.70	33.72	57.311	
11,800.00	11,746.57	10,120.92	9,892.82	42.75	34.74	-25.83	231.67	110.61	1,972.25	1,938.50	33.76	58.425	
11,850.00	11,791.53	10,127.98	9,894.29	42.87	34.76	-23.29	238.57	110.55	2,010.26	1,976.56	33.70	59.654	
11,900.00	11,834.42	10,150.00	9,898.30	42.98	34.81	-21.12	260.22	110.34	2,046.24	2,012.53	33.72	60.686	
11,950.00	11,874.92	10,150.00	9,898.30	43.08	34.81	-19.58	260.22	110.34	2,079.39	2,045.77	33.61	61.866	
12,000.00	11,912.70	10,150.00	9,898.30	43.17	34.81	-18.32	260.22	110.34	2,110.08	2,076.57	33.51	62.968	
12,050.00	11,947.48	10,150.00	9,898.30	43.24	34.81	-17.28	260.22	110.34	2,138.19	2,104.78	33.42	63.986	
12,100.00	11,979.01	10,170.26	9,901.26	43.29	34.87	-16.34	280.27	110.15	2,163.19	2,129.78	33.41	64.745	
12,150.00	12,007.03	10,179.77	9,902.40	43.34	34.89	-15.62	289.70	110.06	2,185.33	2,151.96	33.37	65.494	
12,200.00	12,031.34	10,200.00	9,904.31	43.37	34.95	-15.02	309.84	109.87	2,204.52	2,171.15	33.36	66.075	
12,250.00	12,051.76	10,200.00	9,904.31	43.40	34.95	-14.60	309.84	109.87	2,220.31	2,187.00	33.31	66.652	
12,300.00	12,068.11	10,200.00	9,904.31	43.43	34.95	-14.27	309.84	109.87	2,233.09	2,199.80	33.28	67.092	
12,350.00	12,080.29	10,219.81	9,905.49	43.46	35.00	-14.01	329.61	109.68	2,242.39	2,209.08	33.31	67.313	
12,400.00	12,088.20	10,244.03	9,906.00	43.51	35.07	-13.84	353.82	109.45	2,248.68	2,215.32	33.36	67.410	
12,450.00	12,091.77	10,244.03	9,906.00	43.58	35.07	-13.78	353.82	109.45	2,251.22	2,217.83	33.39	67.418	
12,466.02	12,092.00	10,244.03	9,906.00	43.60	35.07	-13.78	353.82	109.45	2,251.37	2,217.97	33.41	67.387	
12,466.96	12,092.00	10,244.03	9,906.00	43.61	35.07	-13.78	353.82	109.45	2,251.37	2,217.96	33.41	67.385	
12,500.00	12,092.00	10,277.02	9,906.00	43.67	35.17	-13.78	386.81	109.14	2,251.38	2,217.90	33.47	67.261	
12,600.00	12,092.00	10,377.02	9,906.00	43.93	35.52	-13.78	486.81	108.19	2,251.38	2,217.69	33.69	66.833	
12,700.00	12,092.00	10,477.02	9,906.00	44.27	35.94	-13.78	586.80	107.24	2,251.38	2,217.44	33.94	66.331	
12,800.00	12,092.00	10,577.02	9,906.00	44.68	36.42	-13.78	686.80	106.29	2,251.38	2,217.14	34.24	65.758	
12,900.00	12,092.00	10,677.02	9,906.00	45.15	36.98	-13.78	786.79	105.34	2,251.38	2,216.81	34.57	65.120	
13,000.00	12,092.00	10,777.02	9,906.00	45.68	37.60	-13.78	886.79	104.39	2,251.38	2,216.44	34.95	64.423	
13,100.00	12,092.00	10,877.02	9,906.00	46.26	38.28	-13.78	986.79	103.43	2,251.39	2,216.03	35.36	63.673	
13,200.00	12,092.00	10,977.02	9,906.00	46.89	39.02	-13.78	1,086.78	102.48	2,251.39	2,215.58	35.81	62.877	
13,300.00	12,092.00	11,077.02	9,906.00	47.57	39.81	-13.78	1,186.78	101.53	2,251.39	2,215.10	36.29	62.041	
13,400.00	12,092.00	11,177.02	9,906.00	48.30	40.66	-13.78	1,286.77	100.58	2,251.39	2,214.59	36.80	61.172	
13,500.00	12,092.00	11,277.02	9,906.00	49.06	41.55	-13.78	1,386.77	99.63	2,251.39	2,214.04	37.35	60.275	
13,600.00	12,092.00	11,377.02	9,906.00	49.88	42.49	-13.78	1,486.76	98.68	2,251.40	2,213.46	37.93	59.355	
13,700.00	12,092.00	11,477.02	9,906.00	50.73	43.47	-13.78	1,586.76	97.73	2,251.40	2,212.86	38.54	58.419	
13,800.00	12,092.00	11,577.02	9,906.00	51.62	44.49	-13.78	1,686.75	96.78	2,251.40	2,212.23	39.17	57.473	

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	11,677.02	9,906.00	52.54	45.55	-13.78	1,786.75	95.83	2,251.40	2,211.57	39.83	56.520		
14,000.00	12,092.00	11,777.02	9,906.00	53.51	46.64	-13.78	1,886.74	94.88	2,251.40	2,210.88	40.52	55.563		
14,100.00	12,092.00	11,877.02	9,906.00	54.50	47.77	-13.78	1,986.74	93.93	2,251.41	2,210.18	41.23	54.607		
14,200.00	12,092.00	11,977.02	9,906.00	55.52	48.92	-13.78	2,086.74	92.98	2,251.41	2,209.44	41.96	53.652		
14,300.00	12,092.00	12,077.02	9,906.00	56.58	50.11	-13.78	2,186.73	92.03	2,251.41	2,208.69	42.72	52.704		
14,400.00	12,092.00	12,177.02	9,906.00	57.66	51.32	-13.78	2,286.73	91.07	2,251.41	2,207.92	43.49	51.765		
14,500.00	12,092.00	12,277.02	9,906.00	58.77	52.55	-13.78	2,386.72	90.12	2,251.41	2,207.13	44.29	50.836		
14,600.00	12,092.00	12,377.02	9,906.00	59.90	53.80	-13.78	2,486.72	89.17	2,251.41	2,206.31	45.10	49.920		
14,700.00	12,092.00	12,477.02	9,906.00	61.06	55.08	-13.78	2,586.71	88.22	2,251.42	2,205.49	45.93	49.020		
14,800.00	12,092.00	12,577.02	9,906.00	62.24	56.38	-13.78	2,686.71	87.27	2,251.42	2,204.65	46.77	48.135		
14,900.00	12,092.00	12,677.02	9,906.00	63.44	57.69	-13.78	2,786.70	86.32	2,251.42	2,203.79	47.63	47.265		
15,000.00	12,092.00	12,777.02	9,906.00	64.66	59.02	-13.78	2,886.70	85.37	2,251.42	2,202.91	48.51	46.411		
15,100.00	12,092.00	12,877.02	9,906.00	65.90	60.37	-13.78	2,986.70	84.42	2,251.42	2,202.02	49.40	45.575		
15,200.00	12,092.00	12,977.02	9,906.00	67.16	61.73	-13.78	3,086.69	83.47	2,251.43	2,201.12	50.30	44.757		
15,300.00	12,092.00	13,077.02	9,906.00	68.43	63.11	-13.78	3,186.69	82.52	2,251.43	2,200.21	51.22	43.958		
15,400.00	12,092.00	13,177.02	9,906.00	69.72	64.50	-13.78	3,286.68	81.57	2,251.43	2,199.29	52.14	43.178		
15,500.00	12,092.00	13,277.02	9,906.00	71.02	65.90	-13.78	3,386.68	80.62	2,251.43	2,198.35	53.08	42.416		
15,600.00	12,092.00	13,377.02	9,906.00	72.34	67.31	-13.78	3,486.67	79.67	2,251.43	2,197.41	54.03	41.672		
15,700.00	12,092.00	13,477.02	9,906.00	73.67	68.73	-13.78	3,586.67	78.71	2,251.44	2,196.45	54.99	40.946		
15,800.00	12,092.00	13,577.02	9,906.00	75.02	70.16	-13.78	3,686.66	77.76	2,251.44	2,195.48	55.95	40.238		
15,900.00	12,092.00	13,677.02	9,906.00	76.37	71.61	-13.78	3,786.66	76.81	2,251.44	2,194.51	56.93	39.548		
16,000.00	12,092.00	13,777.02	9,906.00	77.74	73.06	-13.78	3,886.65	75.86	2,251.44	2,193.53	57.91	38.876		
16,100.00	12,092.00	13,877.02	9,906.00	79.12	74.52	-13.78	3,986.65	74.91	2,251.44	2,192.54	58.90	38.222		
16,200.00	12,092.00	13,977.02	9,906.00	80.51	75.99	-13.78	4,086.65	73.96	2,251.44	2,191.54	59.90	37.584		
16,300.00	12,092.00	14,077.02	9,906.00	81.91	77.46	-13.78	4,186.64	73.01	2,251.45	2,190.54	60.91	36.963		
16,400.00	12,092.00	14,177.02	9,906.00	83.31	78.94	-13.78	4,286.64	72.06	2,251.45	2,189.52	61.92	36.358		
16,500.00	12,092.00	14,277.02	9,906.00	84.73	80.43	-13.79	4,386.63	71.11	2,251.45	2,188.51	62.94	35.769		
16,600.00	12,092.00	14,377.02	9,906.00	86.16	81.93	-13.79	4,486.63	70.16	2,251.45	2,187.48	63.97	35.195		
16,700.00	12,092.00	14,477.02	9,906.00	87.59	83.43	-13.79	4,586.62	69.21	2,251.45	2,186.45	65.00	34.635		
16,800.00	12,092.00	14,577.02	9,906.00	89.03	84.93	-13.79	4,686.62	68.26	2,251.46	2,185.41	66.04	34.092		
16,900.00	12,092.00	14,677.02	9,906.00	90.48	86.45	-13.79	4,786.61	67.31	2,251.46	2,184.37	67.08	33.562		
17,000.00	12,092.00	14,777.02	9,906.00	91.93	87.96	-13.79	4,886.61	66.35	2,251.46	2,183.33	68.13	33.046		
17,100.00	12,092.00	14,877.02	9,906.00	93.39	89.48	-13.79	4,986.60	65.40	2,251.46	2,182.28	69.18	32.543		
17,200.00	12,092.00	14,977.02	9,906.00	94.86	91.01	-13.79	5,086.60	64.45	2,251.46	2,181.22	70.24	32.053		
17,300.00	12,092.00	15,077.02	9,906.00	96.33	92.54	-13.79	5,186.60	63.50	2,251.47	2,180.16	71.30	31.576		
17,400.00	12,092.00	15,177.02	9,906.00	97.81	94.08	-13.79	5,286.59	62.55	2,251.47	2,179.10	72.37	31.111		
17,500.00	12,092.00	15,277.02	9,906.00	99.30	95.61	-13.79	5,386.59	61.60	2,251.47	2,178.03	73.44	30.658		
17,600.00	12,092.00	15,377.02	9,906.00	100.79	97.16	-13.79	5,486.58	60.65	2,251.47	2,176.96	74.51	30.217		
17,700.00	12,092.00	15,477.02	9,906.00	102.28	98.70	-13.79	5,586.58	59.70	2,251.47	2,175.89	75.59	29.786		
17,800.00	12,092.00	15,577.02	9,906.00	103.78	100.25	-13.79	5,686.57	58.75	2,251.47	2,174.81	76.67	29.367		
17,900.00	12,092.00	15,677.02	9,906.00	105.29	101.80	-13.79	5,786.57	57.80	2,251.48	2,173.72	77.75	28.957		
18,000.00	12,092.00	15,777.02	9,906.00	106.80	103.36	-13.79	5,886.56	56.85	2,251.48	2,172.64	78.84	28.557		
18,100.00	12,092.00	15,877.02	9,906.00	108.31	104.92	-13.79	5,986.56	55.90	2,251.48	2,171.55	79.93	28.168		
18,200.00	12,092.00	15,977.02	9,906.00	109.83	106.48	-13.79	6,086.55	54.95	2,251.48	2,170.46	81.02	27.788		
18,300.00	12,092.00	16,077.02	9,906.00	111.35	108.04	-13.79	6,186.55	53.99	2,251.48	2,169.37	82.12	27.418		
18,400.00	12,092.00	16,177.02	9,906.00	112.87	109.61	-13.79	6,286.55	53.04	2,251.49	2,168.27	83.22	27.056		
18,500.00	12,092.00	16,277.02	9,906.00	114.40	111.18	-13.79	6,386.54	52.09	2,251.49	2,167.17	84.32	26.703		
18,600.00	12,092.00	16,377.02	9,906.00	115.93	112.75	-13.79	6,486.54	51.14	2,251.49	2,166.07	85.42	26.358		
18,700.00	12,092.00	16,477.02	9,906.00	117.46	114.33	-13.79	6,586.53	50.19	2,251.49	2,164.97	86.53	26.021		
18,800.00	12,092.00	16,577.02	9,906.00	119.00	115.90	-13.79	6,686.53	49.24	2,251.49	2,163.86	87.63	25.692		
18,900.00	12,092.00	16,677.02	9,906.00	120.54	117.48	-13.79	6,786.52	48.29	2,251.50	2,162.75	88.74	25.371		
19,000.00	12,092.00	16,777.02	9,906.00	122.09	119.06	-13.79	6,886.52	47.34	2,251.50	2,161.64	89.85	25.057		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,100.00	12,092.00	16,877.02	9,906.00	123.63	120.64	-13.79	6,986.51	46.39	2,251.50	2,160.53	90.97	24.750		
19,200.00	12,092.00	16,977.02	9,906.00	125.18	122.23	-13.79	7,086.51	45.44	2,251.50	2,159.42	92.08	24.451		
19,300.00	12,092.00	17,077.02	9,906.00	126.73	123.81	-13.79	7,186.51	44.49	2,251.50	2,158.30	93.20	24.158		
19,400.00	12,092.00	17,177.02	9,906.00	128.29	125.40	-13.79	7,286.50	43.54	2,251.50	2,157.18	94.32	23.871		
19,500.00	12,092.00	17,277.02	9,906.00	129.84	126.99	-13.79	7,386.50	42.59	2,251.51	2,156.06	95.44	23.590		
19,600.00	12,092.00	17,377.02	9,906.00	131.40	128.58	-13.79	7,486.49	41.63	2,251.51	2,154.94	96.56	23.316		
19,700.00	12,092.00	17,477.02	9,906.00	132.96	130.17	-13.79	7,586.49	40.68	2,251.51	2,153.82	97.69	23.048		
19,800.00	12,092.00	17,577.02	9,906.00	134.53	131.77	-13.79	7,686.48	39.73	2,251.51	2,152.70	98.81	22.786		
19,900.00	12,092.00	17,677.02	9,906.00	136.09	133.36	-13.79	7,786.48	38.78	2,251.51	2,151.58	99.94	22.529		
20,000.00	12,092.00	17,777.02	9,906.00	137.66	134.96	-13.79	7,886.47	37.83	2,251.52	2,150.45	101.07	22.278		
20,100.00	12,092.00	17,877.02	9,906.00	139.23	136.56	-13.79	7,986.47	36.88	2,251.52	2,149.32	102.20	22.031		
20,200.00	12,092.00	17,977.02	9,906.00	140.80	138.15	-13.79	8,086.46	35.93	2,251.52	2,148.19	103.33	21.790		
20,300.00	12,092.00	18,077.02	9,906.00	142.37	139.76	-13.79	8,186.46	34.98	2,251.52	2,147.06	104.46	21.554		
20,400.00	12,092.00	18,177.02	9,906.00	143.95	141.36	-13.79	8,286.46	34.03	2,251.52	2,145.93	105.59	21.323		
20,500.00	12,092.00	18,277.02	9,906.00	145.53	142.96	-13.79	8,386.45	33.08	2,251.53	2,144.80	106.72	21.097		
20,600.00	12,092.00	18,377.02	9,906.00	147.10	144.56	-13.79	8,486.45	32.13	2,251.53	2,143.67	107.86	20.875		
20,700.00	12,092.00	18,477.02	9,906.00	148.68	146.17	-13.79	8,586.44	31.18	2,251.53	2,142.53	108.99	20.657		
20,800.00	12,092.00	18,577.02	9,906.00	150.27	147.77	-13.79	8,686.44	30.23	2,251.53	2,141.40	110.13	20.444		
20,900.00	12,092.00	18,677.02	9,906.00	151.85	149.38	-13.79	8,786.43	29.27	2,251.53	2,140.26	111.27	20.234		
21,000.00	12,092.00	18,777.02	9,906.00	153.43	150.99	-13.79	8,886.43	28.32	2,251.53	2,139.12	112.41	20.029		
21,100.00	12,092.00	18,877.02	9,906.00	155.02	152.60	-13.79	8,986.42	27.37	2,251.54	2,137.98	113.55	19.828		
21,200.00	12,092.00	18,977.02	9,906.00	156.61	154.21	-13.79	9,086.42	26.42	2,251.54	2,136.85	114.69	19.631		
21,300.00	12,092.00	19,077.02	9,906.00	158.19	155.82	-13.79	9,186.41	25.47	2,251.54	2,135.71	115.83	19.438		
21,400.00	12,092.00	19,177.02	9,906.00	159.78	157.43	-13.79	9,286.41	24.52	2,251.54	2,134.57	116.98	19.248		
21,500.00	12,092.00	19,277.02	9,906.00	161.38	159.04	-13.79	9,386.41	23.57	2,251.54	2,133.42	118.12	19.062		
21,600.00	12,092.00	19,377.02	9,906.00	162.97	160.66	-13.80	9,486.40	22.62	2,251.55	2,132.28	119.26	18.879		
21,700.00	12,092.00	19,477.02	9,906.00	164.56	162.27	-13.80	9,586.40	21.67	2,251.55	2,131.14	120.41	18.699		
21,800.00	12,092.00	19,577.02	9,906.00	166.16	163.88	-13.80	9,686.39	20.72	2,251.55	2,130.00	121.55	18.523		
21,900.00	12,092.00	19,677.02	9,906.00	167.75	165.50	-13.80	9,786.39	19.77	2,251.55	2,128.85	122.70	18.350		
22,000.00	12,092.00	19,777.02	9,906.00	169.35	167.12	-13.80	9,886.38	18.82	2,251.55	2,127.71	123.85	18.180		
22,100.00	12,092.00	19,877.02	9,906.00	170.95	168.73	-13.80	9,986.38	17.87	2,251.56	2,126.56	124.99	18.013		
22,200.00	12,092.00	19,977.02	9,906.00	172.55	170.35	-13.80	10,086.37	16.92	2,251.56	2,125.42	126.14	17.849		
22,255.91	12,092.00	20,032.93	9,906.00	173.44	171.26	-13.80	10,142.29	16.38	2,251.56	2,124.77	126.78	17.759		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 304H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation				
Depth	Depth	Depth	Depth	Reference	Offset	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)					
0.00	0.00	0.60	0.60	0.00	0.00	26.10	75.29	36.89	83.84							
100.00	100.00	100.60	100.60	0.13	0.13	26.10	75.29	36.89	83.84	83.66	0.18	468.490				
200.00	200.00	200.60	200.60	0.48	0.49	26.10	75.29	36.89	83.84	83.16	0.69	122.234				
300.00	300.00	300.60	300.60	0.84	0.84	26.10	75.29	36.89	83.84	82.65	1.19	70.286				
400.00	400.00	400.60	400.60	1.20	1.20	26.10	75.29	36.89	83.84	82.14	1.70	49.324				
500.00	500.00	500.60	500.60	1.56	1.56	26.10	75.29	36.89	83.84	81.64	2.21	37.993				
600.00	600.00	600.60	600.60	1.92	1.92	26.10	75.29	36.89	83.84	81.13	2.71	30.895				
700.00	700.00	700.60	700.60	2.28	2.28	26.10	75.29	36.89	83.84	80.62	3.22	26.032				
800.00	800.00	800.60	800.60	2.63	2.64	26.10	75.29	36.89	83.84	80.11	3.73	22.492				
900.00	900.00	900.60	900.60	2.99	3.00	26.10	75.29	36.89	83.84	79.61	4.23	19.799				
1,000.00	1,000.00	1,000.60	1,000.60	3.35	3.35	26.10	75.29	36.89	83.84	79.10	4.74	17.682				
1,100.00	1,100.00	1,100.60	1,100.60	3.71	3.71	26.10	75.29	36.89	83.84	78.59	5.25	15.974				
1,200.00	1,200.00	1,200.60	1,200.60	4.07	4.07	26.10	75.29	36.89	83.84	78.09	5.76	14.567				
1,300.00	1,300.00	1,300.60	1,300.60	4.43	4.43	26.10	75.29	36.89	83.84	77.58	6.26	13.388				
1,316.47	1,316.47	1,317.07	1,317.07	4.49	4.49	26.10	75.29	36.89	83.84	77.50	6.35	13.212 CC				
1,400.00	1,400.00	1,400.59	1,400.59	4.79	4.79	26.10	75.29	36.89	83.84	77.07	6.77	12.386 ES				
1,500.00	1,500.00	1,500.00	1,499.98	5.14	5.13	27.22	75.09	38.62	84.44	77.17	7.27	11.619				
1,600.00	1,600.00	1,598.34	1,598.18	5.50	5.47	30.40	74.50	43.71	86.41	78.65	7.76	11.139				
1,700.00	1,700.00	1,696.63	1,696.10	5.86	5.81	35.34	73.53	52.13	90.24	82.00	8.25	10.944 SF				
1,800.00	1,800.00	1,794.22	1,792.97	6.22	6.16	41.47	72.18	63.79	96.63	87.90	8.73	11.071				
1,900.00	1,900.00	1,890.89	1,888.50	6.58	6.52	48.11	70.47	78.57	106.23	97.03	9.20	11.548				
2,000.00	2,000.00	1,986.46	1,982.37	6.94	6.88	54.61	68.41	96.31	119.54	109.88	9.65	12.382				
2,100.00	2,099.99	2,080.99	2,074.60	7.28	7.26	-47.94	66.03	116.92	135.90	125.82	10.08	13.477				
2,200.00	2,199.91	2,174.72	2,165.31	7.62	7.66	-43.47	63.32	140.32	154.20	143.71	10.49	14.693				
2,300.00	2,299.69	2,267.61	2,254.41	7.96	8.07	-39.98	60.30	166.40	174.06	163.16	10.90	15.975				
2,400.00	2,399.27	2,364.88	2,347.18	8.31	8.54	-37.29	56.94	195.45	194.01	182.63	11.37	17.059				
2,500.00	2,498.57	2,463.05	2,440.80	8.66	9.02	-35.49	53.55	224.78	212.17	200.30	11.87	17.874				
2,543.01	2,541.19	2,505.41	2,481.21	8.81	9.23	-34.93	52.09	237.43	219.37	207.29	12.09	18.150				
2,600.00	2,597.60	2,561.59	2,534.78	9.02	9.52	-34.36	50.15	254.21	228.69	216.31	12.38	18.475				
2,700.00	2,696.59	2,660.17	2,628.80	9.38	10.04	-33.47	46.74	283.66	245.07	232.18	12.89	19.006				
2,800.00	2,795.58	2,758.75	2,722.82	9.75	10.56	-32.70	43.33	313.11	261.51	248.09	13.41	19.494				
2,900.00	2,894.57	2,857.34	2,816.84	10.12	11.09	-32.01	39.92	342.56	277.98	264.05	13.94	19.944				
3,000.00	2,993.56	2,955.92	2,910.86	10.50	11.64	-31.40	36.52	372.00	294.50	280.03	14.47	20.358				
3,100.00	3,092.55	3,054.50	3,004.88	10.88	12.18	-30.86	33.11	401.45	311.04	296.04	15.00	20.741				
3,200.00	3,191.55	3,153.08	3,098.90	11.27	12.74	-30.37	29.70	430.90	327.60	312.07	15.53	21.097				
3,300.00	3,290.54	3,251.66	3,192.92	11.65	13.30	-29.93	26.29	460.35	344.19	328.12	16.06	21.426				
3,400.00	3,389.53	3,350.24	3,286.94	12.04	13.86	-29.53	22.89	489.80	360.79	344.19	16.60	21.733				
3,500.00	3,488.52	3,448.83	3,380.95	12.44	14.43	-29.16	19.48	519.24	377.41	360.27	17.14	22.019				
3,600.00	3,587.51	3,547.41	3,474.97	12.83	15.00	-28.82	16.07	548.69	394.04	376.36	17.68	22.287				
3,700.00	3,686.50	3,645.99	3,568.99	13.23	15.58	-28.52	12.67	578.14	410.69	392.47	18.22	22.538				
3,800.00	3,785.49	3,744.57	3,663.01	13.62	16.15	-28.23	9.26	607.59	427.35	408.58	18.77	22.773				
3,900.00	3,884.48	3,843.15	3,757.03	14.02	16.73	-27.97	5.85	637.04	444.01	424.70	19.31	22.994				
4,000.00	3,983.48	3,941.74	3,851.05	14.43	17.32	-27.73	2.44	666.49	460.69	440.83	19.86	23.202				
4,100.00	4,082.47	4,040.32	3,945.07	14.83	17.90	-27.50	-0.96	695.93	477.37	456.96	20.40	23.398				
4,200.00	4,181.46	4,138.90	4,039.09	15.23	18.49	-27.29	-4.37	725.38	494.06	473.11	20.95	23.582				
4,300.00	4,280.45	4,237.48	4,133.11	15.64	19.07	-27.09	-7.78	754.83	510.75	489.25	21.50	23.757				
4,400.00	4,379.44	4,336.06	4,227.13	16.04	19.66	-26.91	-11.18	784.28	527.45	505.40	22.05	23.923				
4,500.00	4,478.43	4,434.64	4,321.15	16.45	20.25	-26.73	-14.59	813.73	544.15	521.56	22.60	24.080				
4,600.00	4,577.42	4,533.23	4,415.16	16.86	20.85	-26.57	-18.00	843.17	560.86	537.72	23.15	24.228				
4,700.00	4,676.41	4,631.81	4,509.18	17.27	21.44	-26.41	-21.41	872.62	577.58	553.88	23.70	24.370				
4,800.00	4,775.40	4,730.39	4,603.20	17.68	22.03	-26.27	-24.81	902.07	594.30	570.04	24.25	24.504				
4,900.00	4,874.40	4,828.97	4,697.22	18.09	22.63	-26.13	-28.22	931.52	611.02	586.21	24.81	24.632				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 304H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	4,927.55	4,791.24	18.50	23.23	-26.00	-31.63	960.97	627.74	602.38	25.36	24.754		
5,100.00	5,072.38	5,026.14	4,885.26	18.91	23.82	-25.88	-35.04	990.41	644.47	618.56	25.91	24.871		
5,200.00	5,171.37	5,124.72	4,979.28	19.32	24.42	-25.76	-38.44	1,019.86	661.20	634.73	26.47	24.982		
5,300.00	5,270.36	5,223.30	5,073.30	19.73	25.02	-25.65	-41.85	1,049.31	677.93	650.91	27.02	25.089		
5,400.00	5,369.35	5,321.88	5,167.32	20.15	25.62	-25.54	-45.26	1,078.76	694.67	667.09	27.58	25.190		
5,500.00	5,468.34	5,420.46	5,261.34	20.56	26.22	-25.44	-48.66	1,108.21	711.40	683.27	28.13	25.288		
5,600.00	5,567.33	5,519.04	5,355.35	20.97	26.82	-25.35	-52.07	1,137.65	728.14	699.45	28.69	25.382		
5,700.00	5,666.33	5,617.63	5,449.37	21.39	27.42	-25.26	-55.48	1,167.10	744.88	715.64	29.24	25.471		
5,800.00	5,765.32	5,716.21	5,543.39	21.80	28.02	-25.17	-58.89	1,196.55	761.63	731.83	29.80	25.557		
5,900.00	5,864.31	5,814.79	5,637.41	22.22	28.63	-25.08	-62.29	1,226.00	778.37	748.01	30.36	25.640		
6,000.00	5,963.30	5,913.37	5,731.43	22.64	29.23	-25.00	-65.70	1,255.45	795.12	764.20	30.91	25.720		
6,100.00	6,062.29	6,011.95	5,825.45	23.05	29.83	-24.93	-69.11	1,284.90	811.86	780.39	31.47	25.796		
6,200.00	6,161.28	6,110.54	5,919.47	23.47	30.44	-24.85	-72.51	1,314.34	828.61	796.58	32.03	25.870		
6,300.00	6,260.27	6,209.12	6,013.49	23.88	31.04	-24.78	-75.92	1,343.79	845.36	812.78	32.59	25.941		
6,400.00	6,359.26	6,307.70	6,107.51	24.30	31.64	-24.71	-79.33	1,373.24	862.12	828.97	33.15	26.009		
6,500.00	6,458.26	6,406.28	6,201.53	24.72	32.25	-24.65	-82.74	1,402.69	878.87	845.16	33.70	26.076		
6,600.00	6,557.25	6,504.86	6,295.54	25.14	32.85	-24.58	-86.14	1,432.14	895.62	861.36	34.26	26.140		
6,700.00	6,656.24	6,603.44	6,389.56	25.55	33.46	-24.52	-89.55	1,461.58	912.38	877.55	34.82	26.201		
6,800.00	6,755.23	6,721.91	6,502.74	25.97	34.17	-24.46	-93.57	1,496.31	928.67	893.15	35.52	26.146		
6,837.97	6,792.81	6,776.95	6,555.74	26.13	34.49	-24.45	-95.28	1,511.10	933.88	898.04	35.84	26.057		
6,900.00	6,854.29	6,867.37	6,643.38	26.39	34.98	-24.50	-97.84	1,533.19	941.32	904.98	36.34	25.904		
7,000.00	6,953.65	7,014.12	6,786.97	26.79	35.70	-24.57	-101.30	1,563.16	951.23	914.16	37.07	25.658		
7,100.00	7,053.27	7,161.84	6,932.89	27.17	36.32	-24.62	-103.94	1,585.91	958.52	920.81	37.71	25.421		
7,200.00	7,153.09	7,310.23	7,080.46	27.53	36.87	-24.67	-105.71	1,601.21	963.16	924.92	38.24	25.187		
7,300.00	7,253.03	7,459.00	7,229.01	27.88	37.31	-24.70	-106.60	1,608.91	965.12	926.46	38.67	24.960		
7,380.98	7,334.00	7,564.59	7,334.60	28.15	37.58	83.56	-106.71	1,609.89	964.99	926.01	38.98	24.756		
7,400.00	7,353.02	7,583.61	7,353.62	28.21	37.63	83.56	-106.71	1,609.89	964.99	925.92	39.07	24.702		
7,500.00	7,453.02	7,683.61	7,453.62	28.53	37.87	83.56	-106.71	1,609.89	964.99	925.47	39.52	24.421		
7,600.00	7,553.02	7,783.61	7,553.62	28.85	38.12	83.56	-106.71	1,609.89	964.99	925.02	39.97	24.145		
7,700.00	7,653.02	7,883.61	7,653.62	29.17	38.36	83.56	-106.71	1,609.89	964.99	924.57	40.42	23.875		
7,800.00	7,753.02	7,983.61	7,753.62	29.49	38.61	83.56	-106.71	1,609.89	964.99	924.11	40.87	23.610		
7,900.00	7,853.02	8,083.61	7,853.62	29.81	38.86	83.56	-106.71	1,609.89	964.99	923.66	41.33	23.350		
8,000.00	7,953.02	8,183.61	7,953.62	30.13	39.11	83.56	-106.71	1,609.89	964.99	923.20	41.78	23.095		
8,100.00	8,053.02	8,283.61	8,053.62	30.46	39.37	83.56	-106.71	1,609.89	964.99	922.75	42.24	22.845		
8,200.00	8,153.02	8,383.61	8,153.62	30.78	39.62	83.56	-106.71	1,609.89	964.99	922.29	42.70	22.600		
8,300.00	8,253.02	8,483.61	8,253.62	31.11	39.88	83.56	-106.71	1,609.89	964.99	921.83	43.16	22.359		
8,400.00	8,353.02	8,583.61	8,353.62	31.43	40.14	83.56	-106.71	1,609.89	964.99	921.37	43.62	22.123		
8,500.00	8,453.02	8,683.61	8,453.62	31.76	40.40	83.56	-106.71	1,609.89	964.99	920.91	44.08	21.892		
8,600.00	8,553.02	8,783.61	8,553.62	32.09	40.66	83.56	-106.71	1,609.89	964.99	920.44	44.54	21.664		
8,700.00	8,653.02	8,883.61	8,653.62	32.42	40.92	83.56	-106.71	1,609.89	964.99	919.98	45.01	21.441		
8,800.00	8,753.02	8,983.61	8,753.62	32.74	41.18	83.56	-106.71	1,609.89	964.99	919.52	45.47	21.222		
8,900.00	8,853.02	9,083.61	8,853.62	33.07	41.45	83.56	-106.71	1,609.89	964.99	919.05	45.94	21.007		
9,000.00	8,953.02	9,183.61	8,953.62	33.40	41.72	83.56	-106.71	1,609.89	964.99	918.58	46.40	20.796		
9,100.00	9,053.02	9,283.61	9,053.62	33.73	41.98	83.56	-106.71	1,609.89	964.99	918.12	46.87	20.589		
9,200.00	9,153.02	9,383.61	9,153.62	34.07	42.25	83.56	-106.71	1,609.89	964.99	917.65	47.34	20.386		
9,213.14	9,166.16	9,396.75	9,166.76	34.11	42.29	83.56	-106.71	1,609.89	964.99	917.59	47.40	20.359		
9,300.00	9,253.02	9,482.20	9,252.20	34.40	42.52	83.55	-106.65	1,609.89	964.99	917.18	47.81	20.184		
9,400.00	9,353.02	9,566.62	9,336.22	34.73	42.74	83.12	-99.25	1,609.82	965.94	917.60	48.34	19.984		
9,500.00	9,453.02	9,650.00	9,417.25	35.06	42.94	81.98	-79.90	1,609.64	968.79	919.90	48.89	19.816		
9,600.00	9,553.02	9,721.32	9,483.72	35.39	43.09	80.47	-54.17	1,609.39	974.31	924.86	49.45	19.703		
9,700.00	9,653.02	9,787.58	9,542.17	35.73	43.22	78.67	-23.04	1,609.10	983.48	933.50	49.97	19.680		
9,800.00	9,753.02	9,850.00	9,593.60	36.06	43.32	76.65	12.27	1,608.77	997.29	946.87	50.42	19.780		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,853.02	9,900.00	9,631.84	36.40	43.38	74.84	44.47	1,608.46	1,016.49	965.79	50.69	20.052		
10,000.00	9,953.02	9,939.53	9,659.99	36.73	43.43	73.30	72.20	1,608.20	1,041.60	990.86	50.75	20.526		
10,100.00	10,053.02	9,977.00	9,684.85	37.07	43.47	71.77	100.23	1,607.94	1,072.89	1,022.26	50.63	21.191		
10,200.00	10,153.02	10,000.00	9,699.19	37.40	43.49	70.80	118.21	1,607.77	1,110.38	1,060.16	50.22	22.109		
10,300.00	10,253.02	10,050.00	9,727.79	37.74	43.53	68.63	159.20	1,607.38	1,153.77	1,103.78	50.00	23.076		
10,400.00	10,353.02	10,050.00	9,727.79	38.08	43.53	68.63	159.20	1,607.38	1,202.65	1,153.51	49.14	24.474		
10,500.00	10,453.02	10,083.41	9,744.86	38.41	43.55	67.15	187.91	1,607.11	1,256.52	1,207.91	48.61	25.849		
10,600.00	10,553.02	10,100.00	9,752.71	38.75	43.56	66.41	202.53	1,606.97	1,315.17	1,267.30	47.87	27.471		
10,700.00	10,653.02	10,119.08	9,761.20	39.09	43.57	65.55	219.61	1,606.81	1,377.99	1,330.83	47.16	29.217		
10,800.00	10,753.02	10,150.00	9,773.75	39.43	43.59	64.15	247.86	1,606.55	1,444.80	1,398.17	46.63	30.982		
10,900.00	10,853.02	10,150.00	9,773.75	39.77	43.59	64.15	247.86	1,606.55	1,514.40	1,468.62	45.79	33.074		
11,000.00	10,953.02	10,150.00	9,773.75	40.10	43.59	64.15	247.86	1,606.55	1,587.26	1,542.26	45.00	35.270		
11,100.00	11,053.02	10,170.25	9,781.14	40.44	43.60	63.24	266.72	1,606.37	1,662.52	1,618.03	44.49	37.365		
11,200.00	11,153.02	10,180.11	9,784.49	40.78	43.61	62.80	275.98	1,606.28	1,740.16	1,696.22	43.93	39.611		
11,300.00	11,253.02	10,200.00	9,790.77	41.12	43.62	61.91	294.86	1,606.10	1,819.92	1,776.40	43.52	41.819		
11,400.00	11,353.02	10,200.00	9,790.77	41.46	43.62	61.91	294.86	1,606.10	1,901.23	1,858.25	42.98	44.234		
11,500.00	11,453.02	10,200.00	9,790.77	41.80	43.62	61.91	294.86	1,606.10	1,984.25	1,941.74	42.51	46.681		
11,566.02	11,519.04	10,200.00	9,790.77	42.03	43.62	61.91	294.86	1,606.10	2,039.90	1,997.67	42.23	48.309		
11,600.00	11,553.00	10,200.00	9,790.77	42.14	43.62	57.84	294.86	1,606.10	2,068.51	2,026.43	42.09	49.150		
11,650.00	11,602.72	10,200.00	9,790.77	42.31	43.62	51.85	294.86	1,606.10	2,109.83	2,067.96	41.87	50.388		
11,700.00	11,651.80	10,221.53	9,796.82	42.46	43.63	46.15	315.52	1,605.91	2,149.52	2,107.70	41.82	51.393		
11,750.00	11,699.87	10,227.36	9,798.33	42.61	43.63	41.82	321.16	1,605.86	2,188.00	2,146.36	41.64	52.542		
11,800.00	11,746.57	10,250.00	9,803.63	42.75	43.65	37.91	343.16	1,605.65	2,225.03	2,183.44	41.58	53.508		
11,850.00	11,791.53	10,250.00	9,803.63	42.87	43.65	35.05	343.16	1,605.65	2,259.67	2,218.31	41.35	54.643		
11,900.00	11,834.42	10,250.00	9,803.63	42.98	43.65	32.66	343.16	1,605.65	2,292.27	2,251.15	41.13	55.734		
11,950.00	11,874.92	10,250.00	9,803.63	43.08	43.65	30.65	343.16	1,605.65	2,322.69	2,281.77	40.91	56.769		
12,000.00	11,912.70	10,250.00	9,803.63	43.17	43.65	28.96	343.16	1,605.65	2,350.77	2,310.05	40.71	57.738		
12,050.00	11,947.48	10,273.45	9,808.19	43.24	43.66	27.39	366.15	1,605.43	2,375.83	2,335.16	40.67	58.419		
12,100.00	11,979.01	10,300.00	9,812.22	43.29	43.68	26.11	392.40	1,605.18	2,398.67	2,358.03	40.64	59.017		
12,150.00	12,007.03	10,300.00	9,812.22	43.34	43.68	25.19	392.40	1,605.18	2,418.10	2,377.62	40.49	59.726		
12,200.00	12,031.34	10,300.00	9,812.22	43.37	43.68	24.45	392.40	1,605.18	2,434.75	2,394.40	40.36	60.332		
12,250.00	12,051.76	10,300.00	9,812.22	43.40	43.68	23.86	392.40	1,605.18	2,448.55	2,408.30	40.26	60.825		
12,300.00	12,068.11	10,320.85	9,814.53	43.43	43.69	23.38	413.12	1,604.99	2,459.01	2,418.74	40.27	61.061		
12,350.00	12,080.29	10,350.00	9,816.49	43.46	43.71	23.04	442.20	1,604.71	2,466.80	2,426.47	40.34	61.158		
12,400.00	12,088.20	10,350.00	9,816.49	43.51	43.71	22.89	442.20	1,604.71	2,470.75	2,430.43	40.32	61.280		
12,450.00	12,091.77	10,350.00	9,816.49	43.58	43.71	22.85	442.20	1,604.71	2,471.70	2,431.36	40.34	61.268		
12,466.02	12,092.00	10,350.00	9,816.49	43.60	43.71	22.87	442.20	1,604.71	2,471.37	2,431.01	40.36	61.236		
12,500.00	12,092.00	10,360.91	9,816.85	43.67	43.72	22.87	453.10	1,604.61	2,470.45	2,430.02	40.43	61.107		
12,600.00	12,092.00	10,408.77	9,817.00	43.93	43.77	22.87	500.96	1,604.16	2,469.76	2,429.04	40.72	60.657		
12,646.51	12,092.00	10,455.28	9,817.00	44.08	43.82	22.87	547.46	1,603.72	2,469.76	2,428.84	40.92	60.358		
12,700.00	12,092.00	10,508.77	9,817.00	44.27	43.90	22.87	600.95	1,603.22	2,469.76	2,428.61	41.15	60.015		
12,800.00	12,092.00	10,608.77	9,817.00	44.68	44.09	22.87	700.95	1,602.27	2,469.76	2,428.13	41.63	59.330		
12,900.00	12,092.00	10,708.77	9,817.00	45.15	44.33	22.87	800.94	1,601.33	2,469.76	2,427.62	42.14	58.607		
13,000.00	12,092.00	10,808.77	9,817.00	45.68	44.63	22.87	900.94	1,600.39	2,469.76	2,427.07	42.69	57.850		
13,100.00	12,092.00	10,908.77	9,817.00	46.26	45.00	22.87	1,000.93	1,599.44	2,469.76	2,426.48	43.28	57.067		
13,200.00	12,092.00	11,008.77	9,817.00	46.89	45.43	22.87	1,100.93	1,598.50	2,469.76	2,425.86	43.90	56.260		
13,300.00	12,092.00	11,108.77	9,817.00	47.57	45.93	22.87	1,200.93	1,597.56	2,469.76	2,425.21	44.55	55.437		
13,400.00	12,092.00	11,208.77	9,817.00	48.30	46.50	22.87	1,300.92	1,596.62	2,469.76	2,424.52	45.23	54.600		
13,500.00	12,092.00	11,308.77	9,817.00	49.06	47.14	22.87	1,400.92	1,595.67	2,469.76	2,423.81	45.95	53.752		
13,600.00	12,092.00	11,408.77	9,817.00	49.88	47.83	22.87	1,500.91	1,594.73	2,469.76	2,423.07	46.69	52.899		
13,700.00	12,092.00	11,508.77	9,817.00	50.73	48.59	22.87	1,600.91	1,593.79	2,469.76	2,422.30	47.46	52.042		
13,800.00	12,092.00	11,608.77	9,817.00	51.62	49.40	22.87	1,700.90	1,592.84	2,469.76	2,421.50	48.25	51.184		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	11,708.77	9,817.00	52.54	50.26	22.87	1,800.90	1,591.90	2,469.76	2,420.69	49.07	50.330		
14,000.00	12,092.00	11,808.77	9,817.00	53.51	51.17	22.87	1,900.89	1,590.96	2,469.76	2,419.84	49.91	49.480		
14,100.00	12,092.00	11,908.77	9,817.00	54.50	52.12	22.87	2,000.89	1,590.02	2,469.76	2,418.98	50.78	48.636		
14,200.00	12,092.00	12,008.77	9,817.00	55.52	53.11	22.87	2,100.89	1,589.07	2,469.76	2,418.09	51.67	47.803		
14,300.00	12,092.00	12,108.77	9,817.00	56.58	54.14	22.87	2,200.88	1,588.13	2,469.76	2,417.19	52.57	46.980		
14,400.00	12,092.00	12,208.77	9,817.00	57.66	55.21	22.87	2,300.88	1,587.19	2,469.76	2,416.26	53.49	46.170		
14,500.00	12,092.00	12,308.77	9,817.00	58.77	56.31	22.87	2,400.87	1,586.24	2,469.76	2,415.32	54.43	45.373		
14,600.00	12,092.00	12,408.77	9,817.00	59.90	57.43	22.87	2,500.87	1,585.30	2,469.76	2,414.37	55.39	44.588		
14,700.00	12,092.00	12,508.77	9,817.00	61.06	58.59	22.87	2,600.86	1,584.36	2,469.76	2,413.39	56.36	43.818		
14,800.00	12,092.00	12,608.77	9,817.00	62.24	59.77	22.87	2,700.86	1,583.41	2,469.76	2,412.40	57.35	43.062		
14,900.00	12,092.00	12,708.77	9,817.00	63.44	60.97	22.87	2,800.85	1,582.47	2,469.76	2,411.40	58.36	42.322		
15,000.00	12,092.00	12,808.77	9,817.00	64.66	62.20	22.87	2,900.85	1,581.53	2,469.76	2,410.38	59.37	41.596		
15,100.00	12,092.00	12,908.77	9,817.00	65.90	63.44	22.87	3,000.85	1,580.59	2,469.76	2,409.35	60.41	40.887		
15,200.00	12,092.00	13,008.77	9,817.00	67.16	64.71	22.87	3,100.84	1,579.64	2,469.76	2,408.31	61.45	40.192		
15,300.00	12,092.00	13,108.77	9,817.00	68.43	65.99	22.87	3,200.84	1,578.70	2,469.76	2,407.25	62.50	39.514		
15,400.00	12,092.00	13,208.77	9,817.00	69.72	67.29	22.87	3,300.83	1,577.76	2,469.76	2,406.19	63.57	38.852		
15,500.00	12,092.00	13,308.77	9,817.00	71.02	68.61	22.87	3,400.83	1,576.81	2,469.76	2,405.11	64.64	38.207		
15,600.00	12,092.00	13,408.77	9,817.00	72.34	69.94	22.87	3,500.82	1,575.87	2,469.76	2,404.03	65.73	37.575		
15,700.00	12,092.00	13,508.77	9,817.00	73.67	71.29	22.87	3,600.82	1,574.93	2,469.76	2,402.93	66.82	36.960		
15,800.00	12,092.00	13,608.77	9,817.00	75.02	72.64	22.87	3,700.81	1,573.98	2,469.76	2,401.83	67.92	36.360		
15,900.00	12,092.00	13,708.77	9,817.00	76.37	74.01	22.87	3,800.81	1,573.04	2,469.76	2,400.72	69.04	35.775		
16,000.00	12,092.00	13,808.77	9,817.00	77.74	75.40	22.87	3,900.81	1,572.10	2,469.76	2,399.60	70.16	35.204		
16,100.00	12,092.00	13,908.77	9,817.00	79.12	76.79	22.87	4,000.80	1,571.16	2,469.76	2,398.47	71.28	34.648		
16,200.00	12,092.00	14,008.77	9,817.00	80.51	78.19	22.87	4,100.80	1,570.21	2,469.76	2,397.34	72.42	34.105		
16,300.00	12,092.00	14,108.77	9,817.00	81.91	79.61	22.87	4,200.79	1,569.27	2,469.76	2,396.20	73.56	33.575		
16,400.00	12,092.00	14,208.77	9,817.00	83.31	81.03	22.87	4,300.79	1,568.33	2,469.76	2,395.05	74.71	33.059		
16,500.00	12,092.00	14,308.77	9,817.00	84.73	82.46	22.87	4,400.78	1,567.38	2,469.76	2,393.90	75.86	32.557		
16,600.00	12,092.00	14,408.77	9,817.00	86.16	83.90	22.87	4,500.78	1,566.44	2,469.76	2,392.74	77.02	32.067		
16,700.00	12,092.00	14,508.77	9,817.00	87.59	85.35	22.87	4,600.77	1,565.50	2,469.76	2,391.57	78.18	31.589		
16,800.00	12,092.00	14,608.77	9,817.00	89.03	86.80	22.87	4,700.77	1,564.55	2,469.76	2,390.40	79.36	31.122		
16,900.00	12,092.00	14,708.77	9,817.00	90.48	88.26	22.87	4,800.77	1,563.61	2,469.76	2,389.22	80.53	30.668		
17,000.00	12,092.00	14,808.77	9,817.00	91.93	89.73	22.87	4,900.76	1,562.67	2,469.76	2,388.04	81.71	30.225		
17,100.00	12,092.00	14,908.77	9,817.00	93.39	91.20	22.87	5,000.76	1,561.73	2,469.76	2,386.86	82.90	29.793		
17,200.00	12,092.00	15,008.77	9,817.00	94.86	92.69	22.87	5,100.75	1,560.78	2,469.76	2,385.67	84.09	29.371		
17,300.00	12,092.00	15,108.77	9,817.00	96.33	94.17	22.87	5,200.75	1,559.84	2,469.76	2,384.47	85.28	28.960		
17,400.00	12,092.00	15,208.77	9,817.00	97.81	95.66	22.87	5,300.74	1,558.90	2,469.76	2,383.28	86.48	28.559		
17,500.00	12,092.00	15,308.77	9,817.00	99.30	97.16	22.87	5,400.74	1,557.95	2,469.76	2,382.08	87.68	28.168		
17,600.00	12,092.00	15,408.77	9,817.00	100.79	98.66	22.87	5,500.73	1,557.01	2,469.76	2,380.87	88.89	27.786		
17,700.00	12,092.00	15,508.77	9,817.00	102.28	100.17	22.87	5,600.73	1,556.07	2,469.76	2,379.66	90.09	27.413		
17,800.00	12,092.00	15,608.77	9,817.00	103.78	101.68	22.87	5,700.73	1,555.12	2,469.76	2,378.45	91.30	27.050		
17,900.00	12,092.00	15,708.77	9,817.00	105.29	103.20	22.87	5,800.72	1,554.18	2,469.76	2,377.24	92.52	26.694		
18,000.00	12,092.00	15,808.77	9,817.00	106.80	104.72	22.87	5,900.72	1,553.24	2,469.76	2,376.02	93.74	26.347		
18,100.00	12,092.00	15,908.77	9,817.00	108.31	106.24	22.87	6,000.71	1,552.30	2,469.76	2,374.80	94.96	26.009		
18,200.00	12,092.00	16,008.77	9,817.00	109.83	107.77	22.87	6,100.71	1,551.35	2,469.76	2,373.57	96.18	25.678		
18,300.00	12,092.00	16,108.77	9,817.00	111.35	109.30	22.87	6,200.70	1,550.41	2,469.76	2,372.35	97.41	25.355		
18,400.00	12,092.00	16,208.77	9,817.00	112.87	110.83	22.87	6,300.70	1,549.47	2,469.76	2,371.12	98.64	25.039		
18,500.00	12,092.00	16,308.77	9,817.00	114.40	112.37	22.87	6,400.69	1,548.52	2,469.76	2,369.89	99.87	24.730		
18,600.00	12,092.00	16,408.77	9,817.00	115.93	113.91	22.87	6,500.69	1,547.58	2,469.76	2,368.65	101.10	24.428		
18,700.00	12,092.00	16,508.77	9,817.00	117.46	115.46	22.87	6,600.69	1,546.64	2,469.76	2,367.42	102.34	24.133		
18,800.00	12,092.00	16,608.77	9,817.00	119.00	117.01	22.87	6,700.68	1,545.70	2,469.76	2,366.18	103.57	23.845		
18,900.00	12,092.00	16,708.77	9,817.00	120.54	118.56	22.87	6,800.68	1,544.75	2,469.76	2,364.94	104.82	23.563		
19,000.00	12,092.00	16,808.77	9,817.00	122.09	120.11	22.87	6,900.67	1,543.81	2,469.76	2,363.70	106.06	23.287		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 304H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
							+N/-S (usft)	+E/-W (usft)								
19,100.00	12,092.00	16,908.77	9,817.00	123.63	121.66	22.87	7,000.67	1,542.87	2,469.76	2,362.45	107.30	23.017				
19,200.00	12,092.00	17,008.77	9,817.00	125.18	123.22	22.87	7,100.66	1,541.92	2,469.76	2,361.21	108.55	22.753				
19,300.00	12,092.00	17,108.77	9,817.00	126.73	124.78	22.87	7,200.66	1,540.98	2,469.76	2,359.96	109.79	22.495				
19,400.00	12,092.00	17,208.77	9,817.00	128.29	126.35	22.87	7,300.65	1,540.04	2,469.76	2,358.71	111.04	22.242				
19,500.00	12,092.00	17,308.77	9,817.00	129.84	127.91	22.87	7,400.65	1,539.09	2,469.76	2,357.46	112.29	21.994				
19,600.00	12,092.00	17,408.77	9,817.00	131.40	129.48	22.87	7,500.65	1,538.15	2,469.76	2,356.21	113.55	21.751				
19,700.00	12,092.00	17,508.77	9,817.00	132.96	131.05	22.87	7,600.64	1,537.21	2,469.76	2,354.96	114.80	21.514				
19,800.00	12,092.00	17,608.77	9,817.00	134.53	132.62	22.87	7,700.64	1,536.27	2,469.76	2,353.70	116.05	21.282				
19,900.00	12,092.00	17,708.77	9,817.00	136.09	134.19	22.87	7,800.63	1,535.32	2,469.76	2,352.45	117.31	21.054				
20,000.00	12,092.00	17,808.77	9,817.00	137.66	135.77	22.87	7,900.63	1,534.38	2,469.75	2,351.19	118.56	20.830				
20,100.00	12,092.00	17,908.77	9,817.00	139.23	137.34	22.87	8,000.62	1,533.44	2,469.75	2,349.93	119.82	20.612				
20,200.00	12,092.00	18,008.77	9,817.00	140.80	138.92	22.87	8,100.62	1,532.49	2,469.75	2,348.67	121.08	20.397				
20,300.00	12,092.00	18,108.77	9,817.00	142.37	140.50	22.87	8,200.61	1,531.55	2,469.75	2,347.41	122.34	20.187				
20,400.00	12,092.00	18,208.77	9,817.00	143.95	142.08	22.87	8,300.61	1,530.61	2,469.75	2,346.15	123.61	19.981				
20,500.00	12,092.00	18,308.77	9,817.00	145.53	143.67	22.87	8,400.61	1,529.66	2,469.75	2,344.89	124.87	19.779				
20,600.00	12,092.00	18,408.77	9,817.00	147.10	145.25	22.87	8,500.60	1,528.72	2,469.75	2,343.62	126.13	19.581				
20,700.00	12,092.00	18,508.77	9,817.00	148.68	146.84	22.87	8,600.60	1,527.78	2,469.75	2,342.36	127.40	19.386				
20,800.00	12,092.00	18,608.77	9,817.00	150.27	148.43	22.87	8,700.59	1,526.84	2,469.75	2,341.09	128.66	19.196				
20,900.00	12,092.00	18,708.77	9,817.00	151.85	150.02	22.87	8,800.59	1,525.89	2,469.75	2,339.83	129.93	19.009				
21,000.00	12,092.00	18,808.77	9,817.00	153.43	151.61	22.87	8,900.58	1,524.95	2,469.75	2,338.56	131.19	18.825				
21,100.00	12,092.00	18,908.77	9,817.00	155.02	153.20	22.87	9,000.58	1,524.01	2,469.75	2,337.29	132.46	18.645				
21,200.00	12,092.00	19,008.77	9,817.00	156.61	154.79	22.87	9,100.57	1,523.06	2,469.75	2,336.02	133.73	18.468				
21,300.00	12,092.00	19,108.77	9,817.00	158.19	156.39	22.87	9,200.57	1,522.12	2,469.75	2,334.75	135.00	18.295				
21,400.00	12,092.00	19,208.77	9,817.00	159.78	157.98	22.87	9,300.57	1,521.18	2,469.75	2,333.49	136.27	18.124				
21,500.00	12,092.00	19,308.77	9,817.00	161.38	159.58	22.87	9,400.56	1,520.23	2,469.75	2,332.21	137.54	17.957				
21,600.00	12,092.00	19,408.77	9,817.00	162.97	161.18	22.87	9,500.56	1,519.29	2,469.75	2,330.94	138.81	17.792				
21,700.00	12,092.00	19,508.77	9,817.00	164.56	162.78	22.87	9,600.55	1,518.35	2,469.75	2,329.67	140.08	17.630				
21,800.00	12,092.00	19,608.77	9,817.00	166.16	164.38	22.87	9,700.55	1,517.41	2,469.75	2,328.40	141.36	17.472				
21,900.00	12,092.00	19,708.77	9,817.00	167.75	165.98	22.87	9,800.54	1,516.46	2,469.75	2,327.13	142.63	17.316				
22,000.00	12,092.00	19,808.77	9,817.00	169.35	167.58	22.87	9,900.54	1,515.52	2,469.75	2,325.85	143.90	17.163				
22,100.00	12,092.00	19,908.77	9,817.00	170.95	169.18	22.87	10,000.53	1,514.58	2,469.75	2,324.58	145.17	17.012				
22,200.00	12,092.00	20,008.77	9,817.00	172.55	170.79	22.87	10,100.53	1,513.63	2,469.75	2,323.31	146.45	16.864				
22,253.43	12,092.00	20,062.20	9,817.00	173.40	171.65	22.87	10,153.95	1,513.13	2,469.75	2,322.62	147.13	16.786				
22,255.91	12,092.00	20,062.22	9,817.00	173.44	171.65	22.87	10,153.98	1,513.13	2,469.76	2,322.59	147.16	16.782				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-90.53	-18.58	-2,010.95	2,011.52					
100.00	100.00	56.00	56.00	0.13	0.07	-90.53	-18.58	-2,010.95	2,011.04	2,010.90	0.14	N/A		
200.00	200.00	156.00	156.00	0.48	0.33	-90.53	-18.58	-2,010.95	2,011.04	2,010.46	0.58	3,445.829		
300.00	300.00	256.00	256.00	0.84	0.68	-90.53	-18.58	-2,010.95	2,011.04	2,009.95	1.09	1,852.537		
400.00	400.00	356.00	356.00	1.20	1.04	-90.53	-18.58	-2,010.95	2,011.04	2,009.45	1.59	1,264.260		
500.00	500.00	456.00	456.00	1.56	1.40	-90.53	-18.58	-2,010.95	2,011.04	2,008.94	2.10	959.148		
600.00	600.00	556.00	556.00	1.92	1.76	-90.53	-18.58	-2,010.95	2,011.04	2,008.44	2.60	772.564		
700.00	700.00	656.00	656.00	2.28	2.12	-90.53	-18.58	-2,010.95	2,011.04	2,007.93	3.11	646.712		
800.00	800.00	756.00	756.00	2.63	2.48	-90.53	-18.58	-2,010.95	2,011.04	2,007.42	3.62	556.102		
900.00	900.00	856.00	856.00	2.99	2.84	-90.53	-18.58	-2,010.95	2,011.04	2,006.92	4.12	487.755		
1,000.00	1,000.00	956.00	956.00	3.35	3.19	-90.53	-18.58	-2,010.95	2,011.04	2,006.41	4.63	434.364		
1,100.00	1,100.00	1,056.00	1,056.00	3.71	3.55	-90.53	-18.58	-2,010.95	2,011.04	2,005.90	5.14	391.507		
1,200.00	1,200.00	1,156.00	1,156.00	4.07	3.91	-90.53	-18.58	-2,010.95	2,011.04	2,005.40	5.64	356.345		
1,300.00	1,300.00	1,256.00	1,256.00	4.43	4.27	-90.53	-18.58	-2,010.95	2,011.04	2,004.89	6.15	326.978		
1,400.00	1,400.00	1,356.00	1,356.00	4.79	4.63	-90.53	-18.58	-2,010.95	2,011.04	2,004.38	6.66	302.082		
1,500.00	1,500.00	1,456.00	1,456.00	5.14	4.99	-90.53	-18.58	-2,010.95	2,011.04	2,003.88	7.16	280.709		
1,600.00	1,600.00	1,556.00	1,556.00	5.50	5.34	-90.53	-18.58	-2,010.95	2,011.04	2,003.37	7.67	262.160		
1,700.00	1,700.00	1,656.00	1,656.00	5.86	5.70	-90.53	-18.58	-2,010.95	2,011.04	2,002.86	8.18	245.910		
1,800.00	1,800.00	1,756.00	1,756.00	6.22	6.06	-90.53	-18.58	-2,010.95	2,011.04	2,002.35	8.68	231.557		
1,900.00	1,900.00	1,856.00	1,856.00	6.58	6.42	-90.53	-18.58	-2,010.95	2,011.04	2,001.85	9.19	218.787		
2,000.00	2,000.00	1,956.00	1,956.00	6.94	6.78	-90.53	-18.58	-2,010.95	2,011.04	2,001.34	9.70	207.352 CC, ES		
2,100.00	2,099.99	2,037.01	2,037.01	7.28	7.07	161.19	-18.62	-2,011.13	2,012.54	2,002.40	10.15	198.351		
2,200.00	2,199.91	2,100.00	2,099.99	7.62	7.28	161.18	-18.89	-2,012.23	2,018.04	2,007.51	10.54	191.508		
2,300.00	2,299.69	2,168.64	2,168.59	7.96	7.52	161.16	-19.46	-2,014.57	2,027.68	2,016.75	10.94	185.386		
2,400.00	2,399.27	2,233.87	2,233.72	8.31	7.74	161.13	-20.28	-2,017.91	2,041.44	2,030.12	11.33	180.212		
2,500.00	2,498.57	2,300.00	2,299.69	8.66	7.97	161.08	-21.37	-2,022.39	2,059.28	2,047.57	11.72	175.720		
2,543.01	2,541.19	2,326.06	2,325.67	8.81	8.06	161.05	-21.88	-2,024.46	2,068.20	2,056.32	11.88	174.070		
2,600.00	2,597.60	2,362.42	2,361.88	9.02	8.18	161.08	-22.66	-2,027.64	2,080.77	2,068.67	12.10	171.981		
2,700.00	2,696.59	2,425.86	2,424.98	9.38	8.40	161.12	-24.21	-2,033.99	2,104.05	2,091.58	12.48	168.629		
2,800.00	2,795.58	2,500.00	2,498.57	9.75	8.66	161.16	-26.34	-2,042.70	2,128.95	2,116.06	12.89	165.214		
2,900.00	2,894.57	2,551.22	2,549.31	10.12	8.85	161.18	-28.01	-2,049.52	2,155.30	2,142.07	13.23	162.963		
3,000.00	2,993.56	2,600.00	2,597.54	10.50	9.02	161.19	-29.74	-2,056.64	2,183.27	2,169.72	13.55	161.090		
3,100.00	3,092.55	2,674.39	2,670.89	10.88	9.30	161.20	-32.68	-2,068.63	2,212.63	2,198.67	13.96	158.503		
3,200.00	3,191.55	2,735.09	2,730.56	11.27	9.53	161.21	-35.32	-2,079.45	2,243.53	2,229.21	14.32	156.665		
3,300.00	3,290.54	2,814.03	2,807.95	11.65	9.83	161.20	-39.02	-2,094.56	2,275.67	2,260.93	14.74	154.366		
3,400.00	3,389.53	2,908.67	2,900.71	12.04	10.20	161.20	-43.47	-2,112.80	2,307.96	2,292.74	15.22	151.646		
3,500.00	3,488.52	3,003.31	2,993.48	12.44	10.58	161.20	-47.93	-2,131.03	2,340.25	2,324.55	15.70	149.067		
3,600.00	3,587.51	3,097.96	3,086.24	12.83	10.96	161.20	-52.39	-2,149.26	2,372.55	2,356.37	16.18	146.618		
3,700.00	3,686.50	3,192.60	3,179.00	13.23	11.35	161.19	-56.84	-2,167.50	2,404.84	2,388.17	16.67	144.291		
3,800.00	3,785.49	3,287.24	3,271.76	13.62	11.75	161.19	-61.30	-2,185.73	2,437.13	2,419.98	17.15	142.079		
3,900.00	3,884.48	3,381.88	3,364.53	14.02	12.14	161.19	-65.76	-2,203.96	2,469.43	2,451.78	17.64	139.974		
4,000.00	3,983.48	3,476.53	3,457.29	14.43	12.55	161.19	-70.22	-2,222.20	2,501.72	2,483.59	18.13	137.969		
4,100.00	4,082.47	3,571.17	3,550.05	14.83	12.95	161.18	-74.67	-2,240.43	2,534.01	2,515.39	18.62	136.058		
4,200.00	4,181.46	3,665.81	3,642.81	15.23	13.36	161.18	-79.13	-2,258.66	2,566.30	2,547.19	19.12	134.235		
4,300.00	4,280.45	3,760.45	3,735.58	15.64	13.78	161.18	-83.59	-2,276.89	2,598.60	2,578.98	19.61	132.494		
4,400.00	4,379.44	3,855.09	3,828.34	16.04	14.19	161.18	-88.04	-2,295.13	2,630.89	2,610.78	20.11	130.830		
4,500.00	4,478.43	3,949.74	3,921.10	16.45	14.61	161.18	-92.50	-2,313.36	2,663.18	2,642.58	20.61	129.239		
4,600.00	4,577.42	4,044.38	4,013.86	16.86	15.03	161.17	-96.96	-2,331.59	2,695.47	2,674.37	21.11	127.717		
4,700.00	4,676.41	4,139.02	4,106.62	17.27	15.45	161.17	-101.41	-2,349.83	2,727.77	2,706.16	21.60	126.258		
4,800.00	4,775.40	4,233.66	4,199.39	17.68	15.88	161.17	-105.87	-2,368.06	2,760.06	2,737.95	22.11	124.860		
4,900.00	4,874.40	4,328.31	4,292.15	18.09	16.30	161.17	-110.33	-2,386.29	2,792.35	2,769.75	22.61	123.518		
5,000.00	4,973.39	4,422.95	4,384.91	18.50	16.73	161.17	-114.78	-2,404.53	2,824.65	2,801.54	23.11	122.230		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	4,517.59	4,477.67	18.91	17.16	161.16	-119.24	-2,422.76	2,856.94	2,833.33	23.61	120.993		
5,200.00	5,171.37	4,612.23	4,570.44	19.32	17.59	161.16	-123.70	-2,440.99	2,889.23	2,865.11	24.12	119.803		
5,300.00	5,270.36	4,706.88	4,663.20	19.73	18.02	161.16	-128.16	-2,459.22	2,921.52	2,896.90	24.62	118.659		
5,400.00	5,369.35	4,801.52	4,755.96	20.15	18.46	161.16	-132.61	-2,477.46	2,953.82	2,928.69	25.13	117.557		
5,500.00	5,468.34	4,896.16	4,848.72	20.56	18.89	161.16	-137.07	-2,495.69	2,986.11	2,960.48	25.63	116.496		
5,600.00	5,567.33	4,990.80	4,941.49	20.97	19.33	161.15	-141.53	-2,513.92	3,018.40	2,992.26	26.14	115.473		
5,700.00	5,666.33	5,085.44	5,034.25	21.39	19.76	161.15	-145.98	-2,532.16	3,050.70	3,024.05	26.65	114.486		
5,800.00	5,765.32	5,180.09	5,127.01	21.80	20.20	161.15	-150.44	-2,550.39	3,082.99	3,055.83	27.15	113.534		
5,900.00	5,864.31	5,274.73	5,219.77	22.22	20.64	161.15	-154.90	-2,568.62	3,115.28	3,087.62	27.66	112.615		
6,000.00	5,963.30	5,369.37	5,312.54	22.64	21.08	161.15	-159.35	-2,586.85	3,147.57	3,119.40	28.17	111.726		
6,100.00	6,062.29	5,464.01	5,405.30	23.05	21.52	161.15	-163.81	-2,605.09	3,179.87	3,151.18	28.68	110.868		
6,200.00	6,161.28	5,558.66	5,498.06	23.47	21.96	161.15	-168.27	-2,623.32	3,212.16	3,182.97	29.19	110.037		
6,300.00	6,260.27	5,653.30	5,590.82	23.88	22.40	161.14	-172.72	-2,641.55	3,244.45	3,214.75	29.70	109.233		
6,400.00	6,359.26	5,747.94	5,683.59	24.30	22.84	161.14	-177.18	-2,659.79	3,276.74	3,246.53	30.21	108.455		
6,500.00	6,458.26	5,842.58	5,776.35	24.72	23.29	161.14	-181.64	-2,678.02	3,309.04	3,278.31	30.72	107.701		
6,600.00	6,557.25	5,937.23	5,869.11	25.14	23.73	161.14	-186.10	-2,696.25	3,341.33	3,310.09	31.24	106.971		
6,700.00	6,656.24	6,031.87	5,961.87	25.55	24.17	161.14	-190.55	-2,714.49	3,373.62	3,341.87	31.75	106.262		
6,800.00	6,755.23	6,126.51	6,054.64	25.97	24.62	161.14	-195.01	-2,732.72	3,405.92	3,373.66	32.26	105.575		
6,837.97	6,792.81	6,162.44	6,089.85	26.13	24.79	161.14	-196.70	-2,739.64	3,418.18	3,385.72	32.46	105.320		
6,900.00	6,854.29	6,221.30	6,147.55	26.39	25.06	161.23	-199.47	-2,750.98	3,437.76	3,404.98	32.77	104.896		
7,000.00	6,953.65	6,316.80	6,241.14	26.79	25.51	161.36	-203.97	-2,769.38	3,467.41	3,434.12	33.29	104.172		
7,100.00	7,053.27	6,412.99	6,335.42	27.17	25.97	161.47	-208.50	-2,787.91	3,494.68	3,460.89	33.80	103.400		
7,200.00	7,153.09	6,509.80	6,430.31	27.53	26.42	161.55	-213.06	-2,806.56	3,519.56	3,485.25	34.31	102.583		
7,300.00	7,253.03	6,607.18	6,525.76	27.88	26.88	161.60	-217.65	-2,825.32	3,542.03	3,507.21	34.82	101.724		
7,380.98	7,334.00	6,653.56	6,668.06	28.15	28.01	-90.22	-228.21	-2,868.53	3,558.05	3,522.17	35.88	99.170		
7,400.00	7,353.02	7,055.52	6,968.42	28.21	28.83	-90.31	-234.18	-2,892.97	3,560.35	3,523.75	36.60	97.273		
7,500.00	7,453.02	7,496.73	7,409.02	28.53	30.33	-90.38	-238.58	-2,910.95	3,562.03	3,524.03	38.01	93.723		
7,600.00	7,553.02	7,596.73	7,509.02	28.85	30.63	-90.38	-238.58	-2,910.95	3,562.03	3,523.56	38.48	92.576		
7,700.00	7,653.02	7,696.73	7,609.02	29.17	30.93	-90.38	-238.58	-2,910.95	3,562.03	3,523.08	38.95	91.455		
7,800.00	7,753.02	7,796.73	7,709.02	29.49	31.23	-90.38	-238.58	-2,910.95	3,562.03	3,522.61	39.42	90.359		
7,900.00	7,853.02	7,896.73	7,809.02	29.81	31.54	-90.38	-238.58	-2,910.95	3,562.03	3,522.14	39.89	89.287		
8,000.00	7,953.02	7,996.73	7,909.02	30.13	31.84	-90.38	-238.58	-2,910.95	3,562.03	3,521.66	40.37	88.238		
8,100.00	8,053.02	8,096.73	8,009.02	30.46	32.15	-90.38	-238.58	-2,910.95	3,562.03	3,521.19	40.84	87.212		
8,200.00	8,153.02	8,196.73	8,109.02	30.78	32.46	-90.38	-238.58	-2,910.95	3,562.03	3,520.71	41.32	86.208		
8,300.00	8,253.02	8,296.73	8,209.02	31.11	32.77	-90.38	-238.58	-2,910.95	3,562.03	3,520.24	41.80	85.225		
8,400.00	8,353.02	8,396.73	8,309.02	31.43	33.07	-90.38	-238.58	-2,910.95	3,562.03	3,519.76	42.27	84.263		
8,500.00	8,453.02	8,496.73	8,409.02	31.76	33.38	-90.38	-238.58	-2,910.95	3,562.03	3,519.28	42.75	83.321		
8,600.00	8,553.02	8,596.73	8,509.02	32.09	33.70	-90.38	-238.58	-2,910.95	3,562.03	3,518.80	43.23	82.398		
8,700.00	8,653.02	8,696.73	8,609.02	32.42	34.01	-90.38	-238.58	-2,910.95	3,562.03	3,518.32	43.71	81.495		
8,800.00	8,753.02	8,796.73	8,709.02	32.74	34.32	-90.38	-238.58	-2,910.95	3,562.03	3,517.84	44.19	80.610		
8,900.00	8,853.02	8,896.73	8,809.02	33.07	34.64	-90.38	-238.58	-2,910.95	3,562.03	3,517.36	44.67	79.743		
9,000.00	8,953.02	8,996.73	8,909.02	33.40	34.95	-90.38	-238.58	-2,910.95	3,562.03	3,516.88	45.15	78.894		
9,100.00	9,053.02	9,096.73	9,009.02	33.73	35.27	-90.38	-238.58	-2,910.95	3,562.03	3,516.40	45.63	78.061		
9,200.00	9,153.02	9,196.73	9,109.02	34.07	35.58	-90.38	-238.58	-2,910.95	3,562.03	3,515.92	46.11	77.245		
9,300.00	9,253.02	9,296.73	9,209.02	34.40	35.90	-90.38	-238.58	-2,910.95	3,562.03	3,515.44	46.60	76.445		
9,400.00	9,353.02	9,396.73	9,309.02	34.73	36.22	-90.38	-238.58	-2,910.95	3,562.03	3,514.95	47.08	75.661		
9,500.00	9,453.02	9,496.73	9,409.02	35.06	36.54	-90.38	-238.58	-2,910.95	3,562.03	3,514.47	47.56	74.891		
9,600.00	9,553.02	9,596.73	9,509.02	35.39	36.86	-90.38	-238.58	-2,910.95	3,562.03	3,513.99	48.05	74.137		
9,700.00	9,653.02	9,696.73	9,609.02	35.73	37.18	-90.38	-238.58	-2,910.95	3,562.03	3,513.50	48.53	73.396		
9,800.00	9,753.02	9,796.73	9,709.02	36.06	37.50	-90.38	-238.58	-2,910.95	3,562.03	3,513.02	49.02	72.670		
9,900.00	9,853.02	9,896.73	9,809.02	36.40	37.82	-90.38	-238.58	-2,910.95	3,562.03	3,512.53	49.50	71.958		
10,000.00	9,953.02	9,996.73	9,909.02	36.73	38.14	-90.38	-238.58	-2,910.95	3,562.03	3,512.04	49.99	71.258		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,053.02	10,096.73	10,009.02	37.07	38.46	-90.38	-238.58	-2,910.95	3,562.03	3,511.56	50.47	70.572		
10,200.00	10,153.02	10,196.73	10,109.02	37.40	38.79	-90.38	-238.58	-2,910.95	3,562.03	3,511.07	50.96	69.898		
10,300.00	10,253.02	10,296.73	10,209.02	37.74	39.11	-90.38	-238.58	-2,910.95	3,562.03	3,510.58	51.45	69.236		
10,400.00	10,353.02	10,396.73	10,309.02	38.08	39.44	-90.38	-238.58	-2,910.95	3,562.03	3,510.10	51.94	68.586		
10,500.00	10,453.02	10,496.73	10,409.02	38.41	39.76	-90.38	-238.58	-2,910.95	3,562.03	3,509.61	52.42	67.948		
10,600.00	10,553.02	10,596.73	10,509.02	38.75	40.09	-90.38	-238.58	-2,910.95	3,562.03	3,509.12	52.91	67.321		
10,700.00	10,653.02	10,696.73	10,609.02	39.09	40.41	-90.38	-238.58	-2,910.95	3,562.03	3,508.63	53.40	66.705		
10,800.00	10,753.02	10,796.73	10,709.02	39.43	40.74	-90.38	-238.58	-2,910.95	3,562.03	3,508.14	53.89	66.100		
10,900.00	10,853.02	10,896.73	10,809.02	39.77	41.07	-90.38	-238.58	-2,910.95	3,562.03	3,507.65	54.38	65.505		
11,000.00	10,953.02	10,996.73	10,909.02	40.10	41.39	-90.38	-238.58	-2,910.95	3,562.03	3,507.16	54.87	64.920		
11,100.00	11,053.02	11,096.73	11,009.02	40.44	41.72	-90.38	-238.58	-2,910.95	3,562.03	3,506.67	55.36	64.346		
11,200.00	11,153.02	11,196.73	11,109.02	40.78	42.05	-90.38	-238.58	-2,910.95	3,562.03	3,506.18	55.85	63.781		
11,300.00	11,253.02	11,296.73	11,209.02	41.12	42.38	-90.38	-238.58	-2,910.95	3,562.03	3,505.69	56.34	63.226		
11,400.00	11,353.02	11,396.73	11,309.02	41.46	42.71	-90.38	-238.58	-2,910.95	3,562.03	3,505.20	56.83	62.680		
11,500.00	11,453.02	11,496.73	11,409.02	41.80	43.04	-90.38	-238.58	-2,910.95	3,562.03	3,504.71	57.32	62.143		
11,566.02	11,519.04	11,562.75	11,475.04	42.03	43.26	-90.38	-238.58	-2,910.95	3,562.03	3,504.39	57.64	61.793		
11,600.00	11,553.00	11,596.71	11,509.00	42.14	43.37	-89.86	-238.58	-2,910.95	3,562.03	3,504.22	57.81	61.616		
11,650.00	11,602.72	11,646.43	11,558.72	42.31	43.54	-89.94	-238.58	-2,910.95	3,562.02	3,503.97	58.05	61.362		
11,673.26	11,625.65	11,669.36	11,581.65	42.38	43.61	-90.00	-238.58	-2,910.95	3,562.02	3,503.86	58.16	61.247		
11,700.00	11,651.80	11,695.51	11,607.80	42.46	43.70	-90.09	-238.58	-2,910.95	3,562.02	3,503.74	58.28	61.117		
11,750.00	11,699.87	11,743.58	11,655.87	42.61	43.86	-90.29	-238.58	-2,910.95	3,562.07	3,503.56	58.51	60.882		
11,800.00	11,746.57	11,790.28	11,702.57	42.75	44.01	-90.55	-238.58	-2,910.95	3,562.21	3,503.49	58.72	60.661		
11,850.00	11,791.53	11,835.24	11,747.53	42.87	44.16	-90.83	-238.58	-2,910.95	3,562.51	3,503.58	58.93	60.454		
11,900.00	11,834.42	11,878.13	11,790.42	42.98	44.31	-91.14	-238.58	-2,910.95	3,563.02	3,503.90	59.13	60.262		
11,950.00	11,874.92	11,921.52	11,833.80	43.08	44.45	-91.46	-238.39	-2,910.96	3,563.83	3,504.52	59.32	60.082		
12,000.00	11,912.70	11,972.94	11,885.08	43.17	44.62	-91.85	-234.76	-2,910.99	3,564.92	3,505.40	59.52	59.896		
12,050.00	11,947.48	12,028.30	11,939.68	43.24	44.79	-92.25	-225.73	-2,911.08	3,566.25	3,506.53	59.72	59.716		
12,100.00	11,979.01	12,088.49	11,997.75	43.29	44.96	-92.66	-210.00	-2,911.24	3,567.79	3,507.87	59.92	59.541		
12,150.00	12,007.03	12,154.58	12,059.22	43.34	45.14	-93.08	-185.81	-2,911.48	3,569.52	3,509.40	60.12	59.371		
12,200.00	12,031.34	12,227.85	12,123.60	43.37	45.31	-93.53	-150.94	-2,911.82	3,571.37	3,511.05	60.32	59.206		
12,250.00	12,051.76	12,309.70	12,189.58	43.40	45.46	-93.99	-102.64	-2,912.30	3,573.26	3,512.74	60.52	59.042		
12,300.00	12,068.11	12,401.45	12,254.53	43.43	45.60	-94.46	-37.96	-2,912.94	3,575.07	3,514.35	60.72	58.878		
12,350.00	12,080.29	12,503.94	12,313.82	43.46	45.70	-94.89	45.45	-2,913.76	3,576.69	3,515.76	60.93	58.706		
12,400.00	12,088.20	12,616.81	12,360.80	43.51	45.78	-95.25	147.88	-2,914.77	3,577.95	3,516.80	61.15	58.515		
12,450.00	12,091.77	12,737.83	12,387.86	43.58	45.87	-95.47	265.61	-2,915.94	3,578.70	3,517.31	61.39	58.294		
12,466.02	12,092.00	12,777.68	12,391.26	43.60	45.92	-95.50	305.30	-2,916.33	3,578.82	3,517.34	61.47	58.217		
12,500.00	12,092.00	12,829.10	12,392.00	43.67	45.98	-95.52	356.70	-2,916.84	3,578.86	3,517.24	61.62	58.083		
12,600.00	12,092.00	12,929.10	12,392.00	43.93	46.16	-95.52	456.70	-2,917.83	3,578.90	3,516.89	62.01	57.714		
12,700.00	12,092.00	13,029.10	12,392.00	44.27	46.41	-95.52	556.69	-2,918.81	3,578.95	3,516.46	62.49	57.274		
12,800.00	12,092.00	13,129.10	12,392.00	44.68	46.73	-95.52	656.69	-2,919.80	3,579.00	3,515.95	63.05	56.766		
12,900.00	12,092.00	13,229.10	12,392.00	45.15	47.13	-95.52	756.68	-2,920.79	3,579.04	3,515.35	63.69	56.196		
13,000.00	12,092.00	13,329.10	12,392.00	45.68	47.59	-95.52	856.68	-2,921.78	3,579.09	3,514.68	64.41	55.570		
13,100.00	12,092.00	13,429.10	12,392.00	46.26	48.11	-95.52	956.67	-2,922.77	3,579.13	3,513.93	65.20	54.894		
13,200.00	12,092.00	13,529.10	12,392.00	46.89	48.69	-95.52	1,056.67	-2,923.76	3,579.18	3,513.11	66.07	54.175		
13,300.00	12,092.00	13,629.10	12,392.00	47.57	49.32	-95.52	1,156.66	-2,924.74	3,579.22	3,512.22	67.00	53.419		
13,400.00	12,092.00	13,729.10	12,392.00	48.30	50.00	-95.52	1,256.66	-2,925.73	3,579.27	3,511.26	68.01	52.632		
13,500.00	12,092.00	13,829.10	12,392.00	49.06	50.73	-95.52	1,356.65	-2,926.72	3,579.31	3,510.24	69.07	51.820		
13,600.00	12,092.00	13,929.10	12,392.00	49.88	51.50	-95.52	1,456.65	-2,927.71	3,579.36	3,509.16	70.20	50.988		
13,700.00	12,092.00	14,029.10	12,392.00	50.73	52.31	-95.51	1,556.64	-2,928.70	3,579.40	3,508.02	71.39	50.141		
13,800.00	12,092.00	14,129.10	12,392.00	51.62	53.16	-95.51	1,656.64	-2,929.69	3,579.45	3,506.82	72.63	49.285		
13,900.00	12,092.00	14,229.10	12,392.00	52.54	54.05	-95.51	1,756.63	-2,930.67	3,579.49	3,505.57	73.92	48.423		
14,000.00	12,092.00	14,329.10	12,392.00	53.51	54.98	-95.51	1,856.63	-2,931.66	3,579.54	3,504.27	75.27	47.559		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	12,092.00	14,429.10	12,392.00	54.50	55.94	-95.51	1,956.62	-2,932.65	3,579.58	3,502.93	76.66	46.697		
14,200.00	12,092.00	14,529.10	12,392.00	55.52	56.93	-95.51	2,056.62	-2,933.64	3,579.63	3,501.54	78.09	45.839		
14,300.00	12,092.00	14,629.10	12,392.00	56.58	57.95	-95.51	2,156.62	-2,934.63	3,579.67	3,500.10	79.57	44.988		
14,400.00	12,092.00	14,729.10	12,392.00	57.66	59.00	-95.51	2,256.61	-2,935.62	3,579.72	3,498.63	81.09	44.147		
14,500.00	12,092.00	14,829.10	12,392.00	58.77	60.08	-95.51	2,356.61	-2,936.60	3,579.76	3,497.12	82.64	43.316		
14,600.00	12,092.00	14,929.10	12,392.00	59.90	61.18	-95.51	2,456.60	-2,937.59	3,579.81	3,495.58	84.23	42.499		
14,700.00	12,092.00	15,029.10	12,392.00	61.06	62.31	-95.51	2,556.60	-2,938.58	3,579.85	3,494.00	85.86	41.695		
14,800.00	12,092.00	15,129.10	12,392.00	62.24	63.46	-95.51	2,656.59	-2,939.57	3,579.90	3,492.38	87.51	40.906		
14,900.00	12,092.00	15,229.10	12,392.00	63.44	64.63	-95.51	2,756.59	-2,940.56	3,579.94	3,490.74	89.20	40.133		
15,000.00	12,092.00	15,329.10	12,392.00	64.66	65.82	-95.51	2,856.58	-2,941.55	3,579.99	3,489.07	90.92	39.377		
15,100.00	12,092.00	15,429.10	12,392.00	65.90	67.04	-95.51	2,956.58	-2,942.53	3,580.04	3,487.38	92.66	38.637		
15,200.00	12,092.00	15,529.10	12,392.00	67.16	68.27	-95.51	3,056.57	-2,943.52	3,580.08	3,485.66	94.42	37.915		
15,300.00	12,092.00	15,629.10	12,392.00	68.43	69.51	-95.51	3,156.57	-2,944.51	3,580.13	3,483.91	96.22	37.210		
15,400.00	12,092.00	15,729.10	12,392.00	69.72	70.78	-95.51	3,256.56	-2,945.50	3,580.17	3,482.14	98.03	36.522		
15,500.00	12,092.00	15,829.10	12,392.00	71.02	72.06	-95.51	3,356.56	-2,946.49	3,580.22	3,480.35	99.86	35.851		
15,600.00	12,092.00	15,929.10	12,392.00	72.34	73.35	-95.51	3,456.55	-2,947.47	3,580.26	3,478.54	101.72	35.198		
15,700.00	12,092.00	16,029.10	12,392.00	73.67	74.66	-95.51	3,556.55	-2,948.46	3,580.31	3,476.72	103.59	34.562		
15,800.00	12,092.00	16,129.10	12,392.00	75.02	75.98	-95.51	3,656.54	-2,949.45	3,580.35	3,474.87	105.48	33.942		
15,900.00	12,092.00	16,229.10	12,392.00	76.37	77.32	-95.51	3,756.54	-2,950.44	3,580.40	3,473.00	107.39	33.339		
16,000.00	12,092.00	16,329.10	12,392.00	77.74	78.66	-95.51	3,856.53	-2,951.43	3,580.44	3,471.12	109.32	32.752		
16,100.00	12,092.00	16,429.10	12,392.00	79.12	80.02	-95.51	3,956.53	-2,952.42	3,580.49	3,469.23	111.26	32.181		
16,200.00	12,092.00	16,529.10	12,392.00	80.51	81.39	-95.51	4,056.52	-2,953.40	3,580.53	3,467.32	113.21	31.626		
16,300.00	12,092.00	16,629.10	12,392.00	81.91	82.77	-95.51	4,156.52	-2,954.39	3,580.58	3,465.39	115.18	31.086		
16,400.00	12,092.00	16,729.10	12,392.00	83.31	84.16	-95.51	4,256.51	-2,955.38	3,580.62	3,463.46	117.17	30.560		
16,500.00	12,092.00	16,829.10	12,392.00	84.73	85.56	-95.51	4,356.51	-2,956.37	3,580.67	3,461.51	119.16	30.049		
16,600.00	12,092.00	16,929.10	12,392.00	86.16	86.97	-95.51	4,456.50	-2,957.36	3,580.71	3,459.55	121.17	29.552		
16,700.00	12,092.00	17,029.10	12,392.00	87.59	88.38	-95.51	4,556.50	-2,958.35	3,580.76	3,457.57	123.19	29.068		
16,800.00	12,092.00	17,129.10	12,392.00	89.03	89.81	-95.51	4,656.49	-2,959.33	3,580.80	3,455.59	125.21	28.597		
16,900.00	12,092.00	17,229.10	12,392.00	90.48	91.24	-95.51	4,756.49	-2,960.32	3,580.85	3,453.60	127.25	28.140		
17,000.00	12,092.00	17,329.10	12,392.00	91.93	92.68	-95.51	4,856.48	-2,961.31	3,580.89	3,451.59	129.30	27.694		
17,100.00	12,092.00	17,429.10	12,392.00	93.39	94.12	-95.51	4,956.48	-2,962.30	3,580.94	3,449.58	131.36	27.261		
17,200.00	12,092.00	17,529.10	12,392.00	94.86	95.58	-95.51	5,056.47	-2,963.29	3,580.98	3,447.56	133.43	26.839		
17,300.00	12,092.00	17,629.10	12,392.00	96.33	97.03	-95.51	5,156.47	-2,964.28	3,581.03	3,445.53	135.50	26.428		
17,400.00	12,092.00	17,729.10	12,392.00	97.81	98.50	-95.51	5,256.46	-2,965.26	3,581.08	3,443.49	137.58	26.028		
17,500.00	12,092.00	17,829.10	12,392.00	99.30	99.97	-95.51	5,356.46	-2,966.25	3,581.12	3,441.44	139.68	25.639		
17,600.00	12,092.00	17,929.10	12,392.00	100.79	101.45	-95.51	5,456.45	-2,967.24	3,581.17	3,439.39	141.77	25.260		
17,700.00	12,092.00	18,029.10	12,392.00	102.28	102.93	-95.51	5,556.45	-2,968.23	3,581.21	3,437.33	143.88	24.890		
17,800.00	12,092.00	18,129.10	12,392.00	103.78	104.42	-95.51	5,656.44	-2,969.22	3,581.26	3,435.26	145.99	24.530		
17,900.00	12,092.00	18,229.10	12,392.00	105.29	105.91	-95.51	5,756.44	-2,970.21	3,581.30	3,433.19	148.11	24.180		
18,000.00	12,092.00	18,329.10	12,392.00	106.80	107.40	-95.51	5,856.43	-2,971.19	3,581.35	3,431.11	150.24	23.838		
18,100.00	12,092.00	18,429.10	12,392.00	108.31	108.91	-95.51	5,956.43	-2,972.18	3,581.39	3,429.02	152.37	23.505		
18,200.00	12,092.00	18,529.10	12,392.00	109.83	110.41	-95.51	6,056.42	-2,973.17	3,581.44	3,426.93	154.50	23.180		
18,300.00	12,092.00	18,629.10	12,392.00	111.35	111.92	-95.51	6,156.42	-2,974.16	3,581.48	3,424.84	156.65	22.864		
18,400.00	12,092.00	18,729.10	12,392.00	112.87	113.43	-95.51	6,256.41	-2,975.15	3,581.53	3,422.73	158.79	22.555		
18,500.00	12,092.00	18,829.10	12,392.00	114.40	114.95	-95.51	6,356.41	-2,976.14	3,581.57	3,420.63	160.94	22.253		
18,600.00	12,092.00	18,929.10	12,392.00	115.93	116.47	-95.51	6,456.40	-2,977.12	3,581.62	3,418.52	163.10	21.959		
18,700.00	12,092.00	19,029.10	12,392.00	117.46	118.00	-95.51	6,556.40	-2,978.11	3,581.66	3,416.40	165.26	21.672		
18,800.00	12,092.00	19,129.10	12,392.00	119.00	119.52	-95.51	6,656.39	-2,979.10	3,581.71	3,414.28	167.43	21.392		
18,900.00	12,092.00	19,229.10	12,392.00	120.54	121.06	-95.51	6,756.39	-2,980.09	3,581.75	3,412.15	169.60	21.119		
19,000.00	12,092.00	19,329.10	12,392.00	122.09	122.59	-95.51	6,856.39	-2,981.08	3,581.80	3,410.02	171.77	20.852		
19,100.00	12,092.00	19,429.10	12,392.00	123.63	124.13	-95.51	6,956.38	-2,982.07	3,581.84	3,407.89	173.95	20.591		
19,200.00	12,092.00	19,529.10	12,392.00	125.18	125.67	-95.51	7,056.38	-2,983.05	3,581.89	3,405.75	176.14	20.336		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,300.00	12,092.00	19,629.10	12,392.00	126.73	127.21	-95.51	7,156.37	-2,984.04	3,581.93	3,403.61	178.32	20.087		
19,400.00	12,092.00	19,729.10	12,392.00	128.29	128.76	-95.51	7,256.37	-2,985.03	3,581.98	3,401.47	180.51	19.844		
19,500.00	12,092.00	19,829.10	12,392.00	129.84	130.30	-95.51	7,356.36	-2,986.02	3,582.02	3,399.32	182.70	19.606		
19,600.00	12,092.00	19,929.10	12,392.00	131.40	131.86	-95.51	7,456.36	-2,987.01	3,582.07	3,397.17	184.90	19.373		
19,700.00	12,092.00	20,029.10	12,392.00	132.96	133.41	-95.51	7,556.35	-2,988.00	3,582.12	3,395.01	187.10	19.145		
19,800.00	12,092.00	20,129.10	12,392.00	134.53	134.96	-95.51	7,656.35	-2,988.98	3,582.16	3,392.86	189.30	18.923		
19,900.00	12,092.00	20,229.10	12,392.00	136.09	136.52	-95.51	7,756.34	-2,989.97	3,582.21	3,390.70	191.51	18.705		
20,000.00	12,092.00	20,329.10	12,392.00	137.66	138.08	-95.51	7,856.34	-2,990.96	3,582.25	3,388.53	193.72	18.492		
20,100.00	12,092.00	20,429.10	12,392.00	139.23	139.64	-95.51	7,956.33	-2,991.95	3,582.30	3,386.37	195.93	18.284		
20,200.00	12,092.00	20,529.10	12,392.00	140.80	141.21	-95.51	8,056.33	-2,992.94	3,582.34	3,384.20	198.14	18.080		
20,300.00	12,092.00	20,629.10	12,392.00	142.37	142.77	-95.51	8,156.32	-2,993.93	3,582.39	3,382.03	200.36	17.880		
20,400.00	12,092.00	20,729.10	12,392.00	143.95	144.34	-95.51	8,256.32	-2,994.91	3,582.43	3,379.85	202.58	17.684		
20,500.00	12,092.00	20,829.10	12,392.00	145.53	145.91	-95.51	8,356.31	-2,995.90	3,582.48	3,377.68	204.80	17.493		
20,600.00	12,092.00	20,929.10	12,392.00	147.10	147.48	-95.51	8,456.31	-2,996.89	3,582.52	3,375.50	207.02	17.305		
20,700.00	12,092.00	21,029.10	12,392.00	148.68	149.06	-95.51	8,556.30	-2,997.88	3,582.57	3,373.32	209.25	17.121		
20,800.00	12,092.00	21,129.10	12,392.00	150.27	150.63	-95.51	8,656.30	-2,998.87	3,582.61	3,371.14	211.48	16.941		
20,900.00	12,092.00	21,229.10	12,392.00	151.85	152.21	-95.51	8,756.29	-2,999.86	3,582.66	3,368.95	213.71	16.764		
21,000.00	12,092.00	21,329.10	12,392.00	153.43	153.79	-95.51	8,856.29	-3,000.84	3,582.70	3,366.76	215.94	16.591		
21,100.00	12,092.00	21,429.10	12,392.00	155.02	155.37	-95.51	8,956.28	-3,001.83	3,582.75	3,364.58	218.17	16.422		
21,200.00	12,092.00	21,529.10	12,392.00	156.61	156.95	-95.51	9,056.28	-3,002.82	3,582.79	3,362.38	220.41	16.255		
21,300.00	12,092.00	21,629.10	12,392.00	158.19	158.53	-95.51	9,156.27	-3,003.81	3,582.84	3,360.19	222.65	16.092		
21,400.00	12,092.00	21,729.10	12,392.00	159.78	160.12	-95.51	9,256.27	-3,004.80	3,582.88	3,358.00	224.89	15.932		
21,500.00	12,092.00	21,829.10	12,392.00	161.38	161.70	-95.51	9,356.26	-3,005.79	3,582.93	3,355.80	227.13	15.775		
21,600.00	12,092.00	21,929.10	12,392.00	162.97	163.29	-95.51	9,456.26	-3,006.77	3,582.97	3,353.60	229.37	15.621		
21,700.00	12,092.00	22,029.10	12,392.00	164.56	164.88	-95.51	9,556.25	-3,007.76	3,583.02	3,351.40	231.62	15.470		
21,800.00	12,092.00	22,129.10	12,392.00	166.16	166.47	-95.51	9,656.25	-3,008.75	3,583.06	3,349.20	233.86	15.321		
21,900.00	12,092.00	22,229.10	12,392.00	167.75	168.06	-95.51	9,756.24	-3,009.74	3,583.11	3,347.00	236.11	15.175		
22,000.00	12,092.00	22,329.10	12,392.00	169.35	169.65	-95.51	9,856.24	-3,010.73	3,583.15	3,344.79	238.36	15.032		
22,100.00	12,092.00	22,429.10	12,392.00	170.95	171.24	-95.51	9,956.23	-3,011.72	3,583.20	3,342.59	240.61	14.892		
22,200.00	12,092.00	22,529.10	12,392.00	172.55	172.84	-95.51	10,056.23	-3,012.70	3,583.25	3,340.38	242.87	14.754		
22,255.91	12,092.00	22,585.01	12,392.00	173.44	173.73	-95.51	10,112.14	-3,013.26	3,583.27	3,339.14	244.13	14.678 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
							+N/-S (usft)	+E/-W (usft)								
0.00	0.00	0.00	0.00	0.00	0.00	-90.53	-18.34	-1,985.89	1,986.45							
100.00	100.00	56.30	56.30	0.13	0.07	-90.53	-18.34	-1,985.89	1,985.97	1,985.83	0.14	N/A				
200.00	200.00	156.30	156.30	0.48	0.33	-90.53	-18.34	-1,985.89	1,985.97	1,985.39	0.58	3,399.374				
300.00	300.00	256.30	256.30	0.84	0.69	-90.53	-18.34	-1,985.89	1,985.97	1,984.89	1.09	1,828.304				
400.00	400.00	356.30	356.30	1.20	1.04	-90.53	-18.34	-1,985.89	1,985.97	1,984.38	1.59	1,247.949				
500.00	500.00	456.30	456.30	1.56	1.40	-90.53	-18.34	-1,985.89	1,985.97	1,983.88	2.10	946.868				
600.00	600.00	556.30	556.30	1.92	1.76	-90.53	-18.34	-1,985.89	1,985.97	1,983.37	2.60	762.722				
700.00	700.00	656.30	656.30	2.28	2.12	-90.53	-18.34	-1,985.89	1,985.97	1,982.86	3.11	638.501				
800.00	800.00	756.30	756.30	2.63	2.48	-90.53	-18.34	-1,985.89	1,985.97	1,982.36	3.62	549.059				
900.00	900.00	856.30	856.30	2.99	2.84	-90.53	-18.34	-1,985.89	1,985.97	1,981.85	4.12	481.589				
1,000.00	1,000.00	956.30	956.30	3.35	3.20	-90.53	-18.34	-1,985.89	1,985.97	1,981.34	4.63	428.882				
1,100.00	1,100.00	1,056.30	1,056.30	3.71	3.55	-90.53	-18.34	-1,985.89	1,985.97	1,980.84	5.14	386.571				
1,200.00	1,200.00	1,156.30	1,156.30	4.07	3.91	-90.53	-18.34	-1,985.89	1,985.97	1,980.33	5.64	351.857				
1,300.00	1,300.00	1,256.30	1,256.30	4.43	4.27	-90.53	-18.34	-1,985.89	1,985.97	1,979.82	6.15	322.863				
1,400.00	1,400.00	1,356.30	1,356.30	4.79	4.63	-90.53	-18.34	-1,985.89	1,985.97	1,979.32	6.66	298.284				
1,500.00	1,500.00	1,456.30	1,456.30	5.14	4.99	-90.53	-18.34	-1,985.89	1,985.97	1,978.81	7.16	277.181				
1,600.00	1,600.00	1,556.30	1,556.30	5.50	5.35	-90.53	-18.34	-1,985.89	1,985.97	1,978.30	7.67	258.867				
1,700.00	1,700.00	1,656.30	1,656.30	5.86	5.70	-90.53	-18.34	-1,985.89	1,985.97	1,977.79	8.18	242.823				
1,800.00	1,800.00	1,756.30	1,756.30	6.22	6.06	-90.53	-18.34	-1,985.89	1,985.97	1,977.29	8.69	228.651				
1,900.00	1,900.00	1,856.30	1,856.30	6.58	6.42	-90.53	-18.34	-1,985.89	1,985.97	1,976.78	9.19	216.042				
2,000.00	2,000.00	1,956.30	1,956.30	6.94	6.78	-90.53	-18.34	-1,985.89	1,985.97	1,976.27	9.70	204.751	CC, ES			
2,100.00	2,099.99	2,056.29	2,056.29	7.28	7.14	161.20	-18.34	-1,985.89	1,987.21	1,977.01	10.20	194.866				
2,200.00	2,199.91	2,156.21	2,156.21	7.62	7.50	161.22	-18.34	-1,985.89	1,990.93	1,980.24	10.69	186.262				
2,300.00	2,299.69	2,255.91	2,255.90	7.96	7.84	161.24	-18.75	-1,985.89	1,997.12	1,985.95	11.17	178.739				
2,400.00	2,399.27	2,355.38	2,355.33	8.31	8.17	161.20	-21.50	-1,985.87	2,005.80	1,994.15	11.65	172.224				
2,500.00	2,498.57	2,454.57	2,454.38	8.66	8.50	161.10	-26.82	-1,985.85	2,016.95	2,004.83	12.12	166.468				
2,543.01	2,541.19	2,497.11	2,496.82	8.81	8.64	161.04	-29.89	-1,985.84	2,022.50	2,010.18	12.32	164.177				
2,600.00	2,597.60	2,553.40	2,552.89	9.02	8.82	160.98	-34.68	-1,985.81	2,030.17	2,017.58	12.59	161.269				
2,700.00	2,696.59	2,651.96	2,650.90	9.38	9.15	160.81	-45.05	-1,985.77	2,043.64	2,030.58	13.06	156.434				
2,800.00	2,795.58	2,750.78	2,749.03	9.75	9.48	160.61	-56.74	-1,985.71	2,057.15	2,043.60	13.55	151.860				
2,900.00	2,894.57	2,849.61	2,847.17	10.12	9.82	160.42	-68.43	-1,985.66	2,070.68	2,056.64	14.03	147.552				
3,000.00	2,993.56	2,948.44	2,945.30	10.50	10.17	160.22	-80.13	-1,985.61	2,084.23	2,069.70	14.53	143.489				
3,100.00	3,092.55	3,047.27	3,043.44	10.88	10.52	160.03	-91.82	-1,985.55	2,097.81	2,082.78	15.02	139.653				
3,200.00	3,191.55	3,146.10	3,141.57	11.27	10.87	159.84	-103.51	-1,985.50	2,111.41	2,095.88	15.52	136.031				
3,300.00	3,290.54	3,244.93	3,239.71	11.65	11.23	159.65	-115.20	-1,985.45	2,125.03	2,109.00	16.03	132.606				
3,400.00	3,389.53	3,343.76	3,337.84	12.04	11.58	159.47	-126.89	-1,985.40	2,138.67	2,122.14	16.53	129.367				
3,500.00	3,488.52	3,442.58	3,435.98	12.44	11.95	159.28	-138.59	-1,985.34	2,152.34	2,135.30	17.04	126.299				
3,600.00	3,587.51	3,541.41	3,534.11	12.83	12.31	159.10	-150.28	-1,985.29	2,166.02	2,148.47	17.55	123.392				
3,700.00	3,686.50	3,640.24	3,632.25	13.23	12.68	158.93	-161.97	-1,985.24	2,179.73	2,161.66	18.07	120.635				
3,800.00	3,785.49	3,739.07	3,730.38	13.62	13.05	158.75	-173.66	-1,985.18	2,193.46	2,174.87	18.59	118.017				
3,900.00	3,884.48	3,837.90	3,828.52	14.02	13.42	158.58	-185.36	-1,985.13	2,207.21	2,188.10	19.11	115.528				
4,000.00	3,983.48	3,936.73	3,926.65	14.43	13.79	158.40	-197.05	-1,985.08	2,220.98	2,201.35	19.63	113.162				
4,100.00	4,082.47	4,035.56	4,024.79	14.83	14.16	158.24	-208.74	-1,985.02	2,234.76	2,214.61	20.15	110.909				
4,200.00	4,181.46	4,136.93	4,125.54	15.23	14.55	158.08	-219.94	-1,984.97	2,248.53	2,227.85	20.68	108.734				
4,300.00	4,280.45	4,239.35	4,227.58	15.64	14.93	158.00	-228.62	-1,984.93	2,262.16	2,240.95	21.21	106.668				
4,400.00	4,379.44	4,341.90	4,329.96	16.04	15.30	157.99	-234.56	-1,984.91	2,275.64	2,253.91	21.73	104.723				
4,500.00	4,478.43	4,444.46	4,432.46	16.45	15.66	158.05	-237.75	-1,984.89	2,288.97	2,266.73	22.25	102.893				
4,600.00	4,577.42	4,545.72	4,533.72	16.86	16.01	158.17	-238.34	-1,984.89	2,302.17	2,279.42	22.75	101.183				
4,700.00	4,676.41	4,644.71	4,632.71	17.27	16.34	158.30	-238.34	-1,984.89	2,315.34	2,292.09	23.25	99.586				
4,800.00	4,775.40	4,743.70	4,731.70	17.68	16.68	158.42	-238.34	-1,984.89	2,328.53	2,304.78	23.75	98.054				
4,900.00	4,874.40	4,842.69	4,830.70	18.09	17.01	158.55	-238.34	-1,984.89	2,341.73	2,317.48	24.25	96.581				
5,000.00	4,973.39	4,941.68	4,929.69	18.50	17.35	158.68	-238.34	-1,984.89	2,354.94	2,330.20	24.75	95.166				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	5,040.68	5,028.68	18.91	17.69	158.80	-238.34	-1,984.89	2,368.16	2,342.92	25.25	93.805		
5,200.00	5,171.37	5,139.67	5,127.67	19.32	18.03	158.93	-238.34	-1,984.89	2,381.40	2,355.65	25.75	92.495		
5,300.00	5,270.36	5,238.66	5,226.66	19.73	18.37	159.05	-238.34	-1,984.89	2,394.64	2,368.39	26.25	91.233		
5,400.00	5,369.35	5,337.65	5,325.65	20.15	18.71	159.17	-238.34	-1,984.89	2,407.89	2,381.14	26.75	90.017		
5,500.00	5,468.34	5,436.64	5,424.64	20.56	19.05	159.29	-238.34	-1,984.89	2,421.16	2,393.90	27.25	88.845		
5,600.00	5,567.33	5,535.63	5,523.63	20.97	19.39	159.40	-238.34	-1,984.89	2,434.43	2,406.68	27.75	87.714		
5,700.00	5,666.33	5,634.62	5,622.62	21.39	19.73	159.52	-238.34	-1,984.89	2,447.71	2,419.46	28.26	86.622		
5,800.00	5,765.32	5,733.61	5,721.61	21.80	20.08	159.64	-238.34	-1,984.89	2,461.01	2,432.25	28.76	85.568		
5,900.00	5,864.31	5,832.61	5,820.61	22.22	20.42	159.75	-238.34	-1,984.89	2,474.31	2,445.05	29.26	84.549		
6,000.00	5,963.30	5,931.60	5,919.60	22.64	20.76	159.86	-238.34	-1,984.89	2,487.63	2,457.86	29.77	83.563		
6,100.00	6,062.29	6,030.59	6,018.59	23.05	21.11	159.97	-238.34	-1,984.89	2,500.95	2,470.67	30.27	82.610		
6,200.00	6,161.28	6,129.58	6,117.58	23.47	21.45	160.08	-238.34	-1,984.89	2,514.28	2,483.50	30.78	81.688		
6,300.00	6,260.27	6,228.57	6,216.57	23.88	21.79	160.19	-238.34	-1,984.89	2,527.62	2,496.34	31.28	80.795		
6,400.00	6,359.26	6,327.56	6,315.56	24.30	22.14	160.30	-238.34	-1,984.89	2,540.97	2,509.18	31.79	79.929		
6,500.00	6,458.26	6,426.55	6,414.55	24.72	22.48	160.41	-238.34	-1,984.89	2,554.33	2,522.03	32.30	79.091		
6,600.00	6,557.25	6,525.54	6,513.55	25.14	22.83	160.52	-238.34	-1,984.89	2,567.70	2,534.89	32.80	78.278		
6,700.00	6,656.24	6,624.53	6,612.54	25.55	23.17	160.62	-238.34	-1,984.89	2,581.07	2,547.76	33.31	77.489		
6,800.00	6,755.23	6,723.53	6,711.53	25.97	23.52	160.72	-238.34	-1,984.89	2,594.46	2,560.64	33.82	76.724		
6,837.97	6,792.81	6,761.11	6,749.11	26.13	23.65	160.76	-238.34	-1,984.89	2,599.54	2,565.53	34.01	76.439		
6,900.00	6,854.29	6,822.59	6,810.59	26.39	23.87	160.86	-238.34	-1,984.89	2,607.38	2,573.06	34.32	75.968		
7,000.00	6,953.65	6,921.95	6,909.95	26.79	24.21	160.99	-238.34	-1,984.89	2,618.03	2,583.20	34.83	75.173		
7,100.00	7,053.27	7,021.57	7,009.57	27.17	24.56	161.10	-238.34	-1,984.89	2,626.21	2,590.89	35.33	74.335		
7,200.00	7,153.09	7,121.38	7,109.39	27.53	24.91	161.17	-238.34	-1,984.89	2,631.93	2,596.10	35.83	73.457		
7,300.00	7,253.03	7,221.32	7,209.33	27.88	25.26	161.21	-238.34	-1,984.89	2,635.18	2,598.85	36.33	72.541		
7,380.98	7,334.00	7,302.30	7,290.30	28.15	25.55	-90.51	-238.34	-1,984.89	2,635.99	2,599.27	36.72	71.779		
7,400.00	7,353.02	7,321.32	7,309.32	28.21	25.61	-90.51	-238.34	-1,984.89	2,635.99	2,599.18	36.82	71.599		
7,500.00	7,453.02	7,421.32	7,409.32	28.53	25.96	-90.51	-238.34	-1,984.89	2,635.99	2,598.69	37.30	70.669		
7,600.00	7,553.02	7,521.32	7,509.32	28.85	26.31	-90.51	-238.34	-1,984.89	2,635.99	2,598.21	37.79	69.761		
7,700.00	7,653.02	7,621.32	7,609.32	29.17	26.67	-90.51	-238.34	-1,984.89	2,635.99	2,597.72	38.27	68.876		
7,800.00	7,753.02	7,721.32	7,709.32	29.49	27.02	-90.51	-238.34	-1,984.89	2,635.99	2,597.23	38.76	68.011		
7,900.00	7,853.02	7,821.32	7,809.32	29.81	27.37	-90.51	-238.34	-1,984.89	2,635.99	2,596.75	39.25	67.167		
8,000.00	7,953.02	7,921.32	7,909.32	30.13	27.72	-90.51	-238.34	-1,984.89	2,635.99	2,596.26	39.73	66.343		
8,100.00	8,053.02	8,021.32	8,009.32	30.46	28.07	-90.51	-238.34	-1,984.89	2,635.99	2,595.77	40.22	65.538		
8,200.00	8,153.02	8,121.32	8,109.32	30.78	28.42	-90.51	-238.34	-1,984.89	2,635.99	2,595.28	40.71	64.752		
8,300.00	8,253.02	8,221.32	8,209.32	31.11	28.78	-90.51	-238.34	-1,984.89	2,635.99	2,594.79	41.20	63.984		
8,400.00	8,353.02	8,321.32	8,309.32	31.43	29.13	-90.51	-238.34	-1,984.89	2,635.99	2,594.31	41.69	63.233		
8,500.00	8,453.02	8,421.32	8,409.32	31.76	29.48	-90.51	-238.34	-1,984.89	2,635.99	2,593.82	42.18	62.498		
8,600.00	8,553.02	8,521.32	8,509.32	32.09	29.84	-90.51	-238.34	-1,984.89	2,635.99	2,593.33	42.67	61.781		
8,700.00	8,653.02	8,621.32	8,609.32	32.42	30.19	-90.51	-238.34	-1,984.89	2,635.99	2,592.83	43.16	61.078		
8,800.00	8,753.02	8,721.32	8,709.32	32.74	30.54	-90.51	-238.34	-1,984.89	2,635.99	2,592.34	43.65	60.391		
8,900.00	8,853.02	8,821.32	8,809.32	33.07	30.89	-90.51	-238.34	-1,984.89	2,635.99	2,591.85	44.14	59.719		
9,000.00	8,953.02	8,921.32	8,909.32	33.40	31.25	-90.51	-238.34	-1,984.89	2,635.99	2,591.36	44.63	59.062		
9,100.00	9,053.02	9,021.32	9,009.32	33.73	31.60	-90.51	-238.34	-1,984.89	2,635.99	2,590.87	45.12	58.418		
9,200.00	9,153.02	9,121.32	9,109.32	34.07	31.95	-90.51	-238.34	-1,984.89	2,635.99	2,590.38	45.62	57.787		
9,300.00	9,253.02	9,221.32	9,209.32	34.40	32.31	-90.51	-238.34	-1,984.89	2,635.99	2,589.88	46.11	57.170		
9,400.00	9,353.02	9,321.32	9,309.32	34.73	32.66	-90.51	-238.34	-1,984.89	2,635.99	2,589.39	46.60	56.565		
9,500.00	9,453.02	9,421.32	9,409.32	35.06	33.02	-90.51	-238.34	-1,984.89	2,635.99	2,588.90	47.09	55.973		
9,600.00	9,553.02	9,521.32	9,509.32	35.39	33.37	-90.51	-238.34	-1,984.89	2,635.99	2,588.40	47.59	55.392		
9,700.00	9,653.02	9,621.32	9,609.32	35.73	33.72	-90.51	-238.34	-1,984.89	2,635.99	2,587.91	48.08	54.824		
9,800.00	9,753.02	9,721.32	9,709.32	36.06	34.08	-90.51	-238.34	-1,984.89	2,635.99	2,587.42	48.58	54.266		
9,900.00	9,853.02	9,821.32	9,809.32	36.40	34.43	-90.51	-238.34	-1,984.89	2,635.99	2,586.92	49.07	53.719		
10,000.00	9,953.02	9,921.32	9,909.32	36.73	34.79	-90.51	-238.34	-1,984.89	2,635.99	2,586.43	49.56	53.183		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,053.02	10,021.32	10,009.32	37.07	35.14	-90.51	-238.34	-1,984.89	2,635.99	2,585.93	50.06	52.658		
10,200.00	10,153.02	10,121.32	10,109.32	37.40	35.50	-90.51	-238.34	-1,984.89	2,635.99	2,585.44	50.55	52.142		
10,300.00	10,253.02	10,221.32	10,209.32	37.74	35.85	-90.51	-238.34	-1,984.89	2,635.99	2,584.94	51.05	51.636		
10,400.00	10,353.02	10,321.32	10,309.32	38.08	36.20	-90.51	-238.34	-1,984.89	2,635.99	2,584.45	51.54	51.140		
10,500.00	10,453.02	10,421.32	10,409.32	38.41	36.56	-90.51	-238.34	-1,984.89	2,635.99	2,583.95	52.04	50.653		
10,600.00	10,553.02	10,521.32	10,509.32	38.75	36.91	-90.51	-238.34	-1,984.89	2,635.99	2,583.46	52.54	50.175		
10,700.00	10,653.02	10,621.32	10,609.32	39.09	37.27	-90.51	-238.34	-1,984.89	2,635.99	2,582.96	53.03	49.705		
10,800.00	10,753.02	10,721.32	10,709.32	39.43	37.62	-90.51	-238.34	-1,984.89	2,635.99	2,582.46	53.53	49.244		
10,900.00	10,853.02	10,821.32	10,809.32	39.77	37.98	-90.51	-238.34	-1,984.89	2,635.99	2,581.97	54.03	48.792		
11,000.00	10,953.02	10,921.32	10,909.32	40.10	38.33	-90.51	-238.34	-1,984.89	2,635.99	2,581.47	54.52	48.347		
11,100.00	11,053.02	11,021.32	11,009.32	40.44	38.69	-90.51	-238.34	-1,984.89	2,635.99	2,580.97	55.02	47.910		
11,200.00	11,153.02	11,121.32	11,109.32	40.78	39.04	-90.51	-238.34	-1,984.89	2,635.99	2,580.48	55.52	47.481		
11,300.00	11,253.02	11,221.32	11,209.32	41.12	39.40	-90.51	-238.34	-1,984.89	2,635.99	2,579.98	56.01	47.060		
11,400.00	11,353.02	11,321.32	11,309.32	41.46	39.75	-90.51	-238.34	-1,984.89	2,635.99	2,579.48	56.51	46.646		
11,500.00	11,453.02	11,421.32	11,409.32	41.80	40.11	-90.51	-238.34	-1,984.89	2,635.99	2,578.98	57.01	46.239		
11,566.02	11,519.04	11,487.34	11,475.34	42.03	40.34	-90.51	-238.34	-1,984.89	2,635.99	2,578.66	57.34	45.974		
11,600.00	11,553.00	11,521.30	11,509.30	42.14	40.47	-89.99	-238.34	-1,984.89	2,635.99	2,578.49	57.51	45.839		
11,607.63	11,560.61	11,528.90	11,516.91	42.17	40.49	-90.00	-238.34	-1,984.89	2,635.99	2,578.45	57.54	45.809		
11,650.00	11,602.72	11,571.02	11,559.02	42.31	40.64	-90.10	-238.34	-1,984.89	2,636.00	2,578.25	57.75	45.645		
11,700.00	11,651.80	11,620.10	11,608.10	42.46	40.82	-90.30	-238.34	-1,984.89	2,636.03	2,578.04	57.99	45.458		
11,750.00	11,699.87	11,668.17	11,656.17	42.61	40.99	-90.57	-238.34	-1,984.89	2,636.14	2,577.92	58.22	45.279		
11,800.00	11,746.57	11,714.87	11,702.87	42.75	41.15	-90.91	-238.34	-1,984.89	2,636.39	2,577.94	58.44	45.109		
11,850.00	11,791.53	11,765.55	11,753.49	42.87	41.33	-91.31	-236.12	-1,984.91	2,636.81	2,578.13	58.67	44.941		
11,900.00	11,834.42	11,818.33	11,805.78	42.98	41.51	-91.70	-229.06	-1,984.98	2,637.37	2,578.47	58.90	44.779		
11,950.00	11,874.92	11,873.43	11,859.43	43.08	41.68	-92.09	-216.59	-1,985.10	2,638.07	2,578.96	59.12	44.624		
12,000.00	11,912.70	11,931.09	11,914.01	43.17	41.86	-92.48	-198.09	-1,985.29	2,638.90	2,579.56	59.33	44.476		
12,050.00	11,947.48	11,991.55	11,968.94	43.24	42.03	-92.87	-172.91	-1,985.54	2,639.82	2,580.28	59.54	44.336		
12,100.00	11,979.01	12,055.03	12,023.43	43.29	42.21	-93.24	-140.40	-1,985.86	2,640.80	2,581.06	59.74	44.202		
12,150.00	12,007.03	12,121.70	12,076.41	43.34	42.38	-93.60	-99.99	-1,986.26	2,641.82	2,581.88	59.94	44.075		
12,200.00	12,031.34	12,191.67	12,126.57	43.37	42.55	-93.94	-51.27	-1,986.74	2,642.83	2,582.70	60.13	43.950		
12,250.00	12,051.76	12,264.91	12,172.31	43.40	42.72	-94.24	5.86	-1,987.30	2,643.78	2,583.45	60.32	43.827		
12,300.00	12,068.11	12,341.24	12,211.81	43.43	42.90	-94.50	71.10	-1,987.95	2,644.61	2,584.10	60.52	43.701		
12,350.00	12,080.29	12,420.27	12,243.21	43.46	43.09	-94.71	143.56	-1,988.67	2,645.30	2,584.58	60.72	43.568		
12,400.00	12,088.20	12,501.43	12,264.77	43.51	43.28	-94.86	221.72	-1,989.44	2,645.78	2,584.85	60.93	43.425		
12,450.00	12,091.77	12,583.93	12,275.15	43.58	43.47	-94.93	303.49	-1,990.25	2,646.04	2,584.89	61.15	43.271		
12,466.02	12,092.00	12,610.50	12,275.98	43.60	43.54	-94.94	330.05	-1,990.51	2,646.07	2,584.85	61.22	43.219		
12,500.00	12,092.00	12,646.28	12,276.00	43.67	43.63	-94.94	365.83	-1,990.87	2,646.09	2,584.74	61.35	43.129		
12,600.00	12,092.00	12,746.28	12,276.00	43.93	43.93	-94.94	465.82	-1,991.86	2,646.13	2,584.37	61.77	42.839		
12,700.00	12,092.00	12,846.28	12,276.00	44.27	44.28	-94.94	565.82	-1,992.84	2,646.18	2,583.91	62.27	42.497		
12,800.00	12,092.00	12,946.28	12,276.00	44.68	44.69	-94.94	665.82	-1,993.83	2,646.23	2,583.38	62.85	42.104		
12,900.00	12,092.00	13,046.28	12,276.00	45.15	45.16	-94.94	765.81	-1,994.82	2,646.27	2,582.76	63.51	41.666		
13,000.00	12,092.00	13,146.28	12,276.00	45.68	45.68	-94.94	865.81	-1,995.81	2,646.32	2,582.07	64.25	41.187		
13,100.00	12,092.00	13,246.28	12,276.00	46.26	46.26	-94.94	965.80	-1,996.80	2,646.36	2,581.30	65.07	40.672		
13,200.00	12,092.00	13,346.28	12,276.00	46.89	46.89	-94.94	1,065.80	-1,997.79	2,646.41	2,580.46	65.95	40.125		
13,300.00	12,092.00	13,446.28	12,276.00	47.57	47.56	-94.94	1,165.79	-1,998.78	2,646.46	2,579.55	66.91	39.552		
13,400.00	12,092.00	13,546.28	12,276.00	48.30	48.29	-94.94	1,265.79	-1,999.77	2,646.50	2,578.57	67.93	38.957		
13,500.00	12,092.00	13,646.28	12,276.00	49.06	49.06	-94.94	1,365.78	-2,000.76	2,646.55	2,577.53	69.02	38.345		
13,600.00	12,092.00	13,746.28	12,276.00	49.88	49.87	-94.94	1,465.78	-2,001.75	2,646.60	2,576.43	70.17	37.718		
13,700.00	12,092.00	13,846.28	12,276.00	50.73	50.72	-94.94	1,565.77	-2,002.74	2,646.64	2,575.27	71.37	37.082		
13,800.00	12,092.00	13,946.28	12,276.00	51.62	51.61	-94.94	1,665.77	-2,003.73	2,646.69	2,574.06	72.63	36.440		
13,900.00	12,092.00	14,046.28	12,276.00	52.54	52.54	-94.94	1,765.76	-2,004.72	2,646.73	2,572.79	73.94	35.794		
14,000.00	12,092.00	14,146.28	12,276.00	53.51	53.50	-94.94	1,865.76	-2,005.71	2,646.78	2,571.48	75.30	35.148		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	12,092.00	14,246.28	12,276.00	54.50	54.50	-94.94	1,965.75	-2,006.69	2,646.83	2,570.12	76.71	34.504		
14,200.00	12,092.00	14,346.28	12,276.00	55.52	55.53	-94.94	2,065.75	-2,007.68	2,646.87	2,568.71	78.16	33.863		
14,300.00	12,092.00	14,446.28	12,276.00	56.58	56.58	-94.93	2,165.74	-2,008.67	2,646.92	2,567.26	79.66	33.229		
14,400.00	12,092.00	14,546.28	12,276.00	57.66	57.67	-94.93	2,265.74	-2,009.66	2,646.97	2,565.78	81.19	32.602		
14,500.00	12,092.00	14,646.28	12,276.00	58.77	58.78	-94.93	2,365.73	-2,010.65	2,647.01	2,564.25	82.76	31.984		
14,600.00	12,092.00	14,746.28	12,276.00	59.90	59.92	-94.93	2,465.73	-2,011.64	2,647.06	2,562.69	84.37	31.376		
14,700.00	12,092.00	14,846.28	12,276.00	61.06	61.08	-94.93	2,565.72	-2,012.63	2,647.10	2,561.10	86.00	30.779		
14,800.00	12,092.00	14,946.28	12,276.00	62.24	62.26	-94.93	2,665.72	-2,013.62	2,647.15	2,559.48	87.67	30.193		
14,900.00	12,092.00	15,046.28	12,276.00	63.44	63.46	-94.93	2,765.71	-2,014.61	2,647.20	2,557.82	89.37	29.620		
15,000.00	12,092.00	15,146.28	12,276.00	64.66	64.69	-94.93	2,865.71	-2,015.60	2,647.24	2,556.14	91.10	29.059		
15,100.00	12,092.00	15,246.28	12,276.00	65.90	65.93	-94.93	2,965.70	-2,016.59	2,647.29	2,554.44	92.85	28.511		
15,200.00	12,092.00	15,346.28	12,276.00	67.16	67.19	-94.93	3,065.70	-2,017.58	2,647.34	2,552.70	94.63	27.976		
15,300.00	12,092.00	15,446.28	12,276.00	68.43	68.46	-94.93	3,165.69	-2,018.57	2,647.38	2,550.95	96.43	27.453		
15,400.00	12,092.00	15,546.28	12,276.00	69.72	69.76	-94.93	3,265.69	-2,019.55	2,647.43	2,549.17	98.26	26.944		
15,500.00	12,092.00	15,646.28	12,276.00	71.02	71.06	-94.93	3,365.68	-2,020.54	2,647.47	2,547.37	100.10	26.448		
15,600.00	12,092.00	15,746.28	12,276.00	72.34	72.38	-94.93	3,465.68	-2,021.53	2,647.52	2,545.55	101.97	25.965		
15,700.00	12,092.00	15,846.28	12,276.00	73.67	73.72	-94.93	3,565.67	-2,022.52	2,647.57	2,543.72	103.85	25.494		
15,800.00	12,092.00	15,946.28	12,276.00	75.02	75.07	-94.93	3,665.67	-2,023.51	2,647.61	2,541.86	105.75	25.036		
15,900.00	12,092.00	16,046.28	12,276.00	76.37	76.42	-94.93	3,765.66	-2,024.50	2,647.66	2,539.99	107.67	24.591		
16,000.00	12,092.00	16,146.28	12,276.00	77.74	77.79	-94.93	3,865.66	-2,025.49	2,647.70	2,538.10	109.60	24.157		
16,100.00	12,092.00	16,246.28	12,276.00	79.12	79.18	-94.93	3,965.65	-2,026.48	2,647.75	2,536.20	111.55	23.736		
16,200.00	12,092.00	16,346.28	12,276.00	80.51	80.57	-94.93	4,065.65	-2,027.47	2,647.80	2,534.28	113.52	23.325		
16,300.00	12,092.00	16,446.28	12,276.00	81.91	81.97	-94.93	4,165.64	-2,028.46	2,647.84	2,532.35	115.49	22.926		
16,400.00	12,092.00	16,546.28	12,276.00	83.31	83.38	-94.93	4,265.64	-2,029.45	2,647.89	2,530.41	117.48	22.538		
16,500.00	12,092.00	16,646.28	12,276.00	84.73	84.80	-94.93	4,365.63	-2,030.44	2,647.94	2,528.45	119.49	22.161		
16,600.00	12,092.00	16,746.28	12,276.00	86.16	86.23	-94.93	4,465.63	-2,031.43	2,647.98	2,526.48	121.50	21.794		
16,700.00	12,092.00	16,846.28	12,276.00	87.59	87.66	-94.93	4,565.62	-2,032.42	2,648.03	2,524.50	123.52	21.437		
16,800.00	12,092.00	16,946.28	12,276.00	89.03	89.10	-94.93	4,665.62	-2,033.40	2,648.07	2,522.51	125.56	21.090		
16,900.00	12,092.00	17,046.28	12,276.00	90.48	90.55	-94.93	4,765.61	-2,034.39	2,648.12	2,520.51	127.61	20.752		
17,000.00	12,092.00	17,146.28	12,276.00	91.93	92.01	-94.93	4,865.61	-2,035.38	2,648.17	2,518.51	129.66	20.424		
17,100.00	12,092.00	17,246.28	12,276.00	93.39	93.47	-94.93	4,965.60	-2,036.37	2,648.21	2,516.49	131.73	20.104		
17,200.00	12,092.00	17,346.28	12,276.00	94.86	94.94	-94.93	5,065.60	-2,037.36	2,648.26	2,514.46	133.80	19.793		
17,300.00	12,092.00	17,446.28	12,276.00	96.33	96.42	-94.93	5,165.59	-2,038.35	2,648.31	2,512.42	135.88	19.490		
17,400.00	12,092.00	17,546.28	12,276.00	97.81	97.90	-94.93	5,265.59	-2,039.34	2,648.35	2,510.38	137.97	19.195		
17,500.00	12,092.00	17,646.28	12,276.00	99.30	99.39	-94.93	5,365.58	-2,040.33	2,648.40	2,508.33	140.07	18.908		
17,600.00	12,092.00	17,746.28	12,276.00	100.79	100.88	-94.93	5,465.58	-2,041.32	2,648.44	2,506.27	142.17	18.628		
17,700.00	12,092.00	17,846.28	12,276.00	102.28	102.38	-94.93	5,565.57	-2,042.31	2,648.49	2,504.21	144.28	18.356		
17,800.00	12,092.00	17,946.28	12,276.00	103.78	103.88	-94.93	5,665.57	-2,043.30	2,648.54	2,502.14	146.40	18.091		
17,900.00	12,092.00	18,046.28	12,276.00	105.29	105.38	-94.93	5,765.57	-2,044.29	2,648.58	2,500.06	148.53	17.833		
18,000.00	12,092.00	18,146.28	12,276.00	106.80	106.89	-94.93	5,865.56	-2,045.28	2,648.63	2,497.97	150.66	17.581		
18,100.00	12,092.00	18,246.28	12,276.00	108.31	108.41	-94.93	5,965.56	-2,046.26	2,648.68	2,495.88	152.79	17.335		
18,200.00	12,092.00	18,346.28	12,276.00	109.83	109.93	-94.93	6,065.55	-2,047.25	2,648.72	2,493.79	154.93	17.096		
18,300.00	12,092.00	18,446.28	12,276.00	111.35	111.45	-94.93	6,165.55	-2,048.24	2,648.77	2,491.69	157.08	16.862		
18,400.00	12,092.00	18,546.28	12,276.00	112.87	112.97	-94.93	6,265.54	-2,049.23	2,648.81	2,489.58	159.23	16.635		
18,500.00	12,092.00	18,646.28	12,276.00	114.40	114.50	-94.93	6,365.54	-2,050.22	2,648.86	2,487.47	161.39	16.413		
18,600.00	12,092.00	18,746.28	12,276.00	115.93	116.04	-94.93	6,465.53	-2,051.21	2,648.91	2,485.35	163.55	16.196		
18,700.00	12,092.00	18,846.28	12,276.00	117.46	117.57	-94.93	6,565.53	-2,052.20	2,648.95	2,483.23	165.72	15.985		
18,800.00	12,092.00	18,946.28	12,276.00	119.00	119.11	-94.93	6,665.52	-2,053.19	2,649.00	2,481.11	167.89	15.778		
18,900.00	12,092.00	19,046.28	12,276.00	120.54	120.65	-94.93	6,765.52	-2,054.18	2,649.04	2,478.98	170.06	15.577		
19,000.00	12,092.00	19,146.28	12,276.00	122.09	122.20	-94.93	6,865.51	-2,055.17	2,649.09	2,476.85	172.24	15.380		
19,100.00	12,092.00	19,246.28	12,276.00	123.63	123.75	-94.93	6,965.51	-2,056.16	2,649.14	2,474.71	174.42	15.188		
19,200.00	12,092.00	19,346.28	12,276.00	125.18	125.30	-94.93	7,065.50	-2,057.15	2,649.18	2,472.57	176.61	15.000		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,300.00	12,092.00	19,446.28	12,276.00	126.73	126.85	-94.93	7,165.50	-2,058.14	2,649.23	2,470.43	178.80	14.817		
19,400.00	12,092.00	19,546.28	12,276.00	128.29	128.40	-94.93	7,265.49	-2,059.13	2,649.28	2,468.28	180.99	14.637		
19,500.00	12,092.00	19,646.28	12,276.00	129.84	129.96	-94.93	7,365.49	-2,060.11	2,649.32	2,466.13	183.19	14.462		
19,600.00	12,092.00	19,746.28	12,276.00	131.40	131.52	-94.93	7,465.48	-2,061.10	2,649.37	2,463.98	185.39	14.291		
19,700.00	12,092.00	19,846.28	12,276.00	132.96	133.09	-94.93	7,565.48	-2,062.09	2,649.41	2,461.82	187.59	14.123		
19,800.00	12,092.00	19,946.28	12,276.00	134.53	134.65	-94.93	7,665.47	-2,063.08	2,649.46	2,459.66	189.80	13.959		
19,900.00	12,092.00	20,046.28	12,276.00	136.09	136.22	-94.93	7,765.47	-2,064.07	2,649.51	2,457.50	192.01	13.799		
20,000.00	12,092.00	20,146.28	12,276.00	137.66	137.78	-94.93	7,865.46	-2,065.06	2,649.55	2,455.33	194.22	13.642		
20,100.00	12,092.00	20,246.28	12,276.00	139.23	139.36	-94.93	7,965.46	-2,066.05	2,649.60	2,453.16	196.44	13.488		
20,200.00	12,092.00	20,346.28	12,276.00	140.80	140.93	-94.93	8,065.45	-2,067.04	2,649.65	2,450.99	198.65	13.338		
20,300.00	12,092.00	20,446.28	12,276.00	142.37	142.50	-94.93	8,165.45	-2,068.03	2,649.69	2,448.82	200.87	13.191		
20,400.00	12,092.00	20,546.28	12,276.00	143.95	144.08	-94.93	8,265.44	-2,069.02	2,649.74	2,446.64	203.10	13.047		
20,500.00	12,092.00	20,646.28	12,276.00	145.53	145.66	-94.93	8,365.44	-2,070.01	2,649.78	2,444.46	205.32	12.906		
20,600.00	12,092.00	20,746.28	12,276.00	147.10	147.24	-94.93	8,465.43	-2,071.00	2,649.83	2,442.28	207.55	12.767		
20,700.00	12,092.00	20,846.28	12,276.00	148.68	148.82	-94.93	8,565.43	-2,071.99	2,649.88	2,440.10	209.78	12.632		
20,800.00	12,092.00	20,946.28	12,276.00	150.27	150.40	-94.93	8,665.42	-2,072.98	2,649.92	2,437.91	212.01	12.499		
20,900.00	12,092.00	21,046.28	12,276.00	151.85	151.98	-94.93	8,765.42	-2,073.96	2,649.97	2,435.73	214.24	12.369		
21,000.00	12,092.00	21,146.28	12,276.00	153.43	153.57	-94.93	8,865.41	-2,074.95	2,650.02	2,433.54	216.48	12.241		
21,100.00	12,092.00	21,246.28	12,276.00	155.02	155.15	-94.93	8,965.41	-2,075.94	2,650.06	2,431.35	218.72	12.116		
21,200.00	12,092.00	21,346.28	12,276.00	156.61	156.74	-94.93	9,065.40	-2,076.93	2,650.11	2,429.15	220.96	11.994		
21,300.00	12,092.00	21,446.28	12,276.00	158.19	158.33	-94.93	9,165.40	-2,077.92	2,650.15	2,426.96	223.20	11.874		
21,400.00	12,092.00	21,546.28	12,276.00	159.78	159.92	-94.93	9,265.39	-2,078.91	2,650.20	2,424.76	225.44	11.756		
21,500.00	12,092.00	21,646.28	12,276.00	161.38	161.52	-94.93	9,365.39	-2,079.90	2,650.25	2,422.56	227.68	11.640		
21,600.00	12,092.00	21,746.28	12,276.00	162.97	163.11	-94.93	9,465.38	-2,080.89	2,650.29	2,420.36	229.93	11.526		
21,700.00	12,092.00	21,846.28	12,276.00	164.56	164.70	-94.93	9,565.38	-2,081.88	2,650.34	2,418.16	232.18	11.415		
21,800.00	12,092.00	21,946.28	12,276.00	166.16	166.30	-94.93	9,665.37	-2,082.87	2,650.38	2,415.96	234.43	11.306		
21,900.00	12,092.00	22,046.28	12,276.00	167.75	167.89	-94.93	9,765.37	-2,083.86	2,650.43	2,413.75	236.68	11.198		
22,000.00	12,092.00	22,146.28	12,276.00	169.35	169.49	-94.93	9,865.36	-2,084.85	2,650.48	2,411.55	238.93	11.093		
22,100.00	12,092.00	22,246.28	12,276.00	170.95	171.09	-94.93	9,965.36	-2,085.84	2,650.52	2,409.34	241.19	10.990		
22,200.00	12,092.00	22,346.28	12,276.00	172.55	172.69	-94.93	10,065.35	-2,086.82	2,650.57	2,407.13	243.44	10.888		
22,255.91	12,092.00	22,402.20	12,276.00	173.44	173.59	-94.93	10,121.27	-2,087.38	2,650.60	2,405.89	244.70	10.832 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
0.00	0.00	0.00	0.00	0.00	0.00	-90.53	-18.11	-1,960.82	1,961.38							
100.00	100.00	56.90	56.90	0.13	0.07	-90.53	-18.11	-1,960.82	1,960.91	1,960.76	0.14	N/A				
200.00	200.00	156.90	156.90	0.48	0.33	-90.53	-18.11	-1,960.82	1,960.91	1,960.32	0.59	3,349.545				
300.00	300.00	256.90	256.90	0.84	0.69	-90.53	-18.11	-1,960.82	1,960.91	1,959.82	1.09	1,802.972				
400.00	400.00	356.90	356.90	1.20	1.05	-90.53	-18.11	-1,960.82	1,960.91	1,959.31	1.59	1,231.105				
500.00	500.00	456.90	456.90	1.56	1.40	-90.53	-18.11	-1,960.82	1,960.91	1,958.81	2.10	934.276				
600.00	600.00	556.90	556.90	1.92	1.76	-90.53	-18.11	-1,960.82	1,960.91	1,958.30	2.61	752.674				
700.00	700.00	656.90	656.90	2.28	2.12	-90.53	-18.11	-1,960.82	1,960.91	1,957.80	3.11	630.145				
800.00	800.00	756.90	756.90	2.63	2.48	-90.53	-18.11	-1,960.82	1,960.91	1,957.29	3.62	541.908				
900.00	900.00	856.90	856.90	2.99	2.84	-90.53	-18.11	-1,960.82	1,960.91	1,956.78	4.13	475.340				
1,000.00	1,000.00	956.90	956.90	3.35	3.20	-90.53	-18.11	-1,960.82	1,960.91	1,956.28	4.63	423.333				
1,100.00	1,100.00	1,056.90	1,056.90	3.71	3.56	-90.53	-18.11	-1,960.82	1,960.91	1,955.77	5.14	381.581				
1,200.00	1,200.00	1,156.90	1,156.90	4.07	3.91	-90.53	-18.11	-1,960.82	1,960.91	1,955.26	5.65	347.324				
1,300.00	1,300.00	1,256.90	1,256.90	4.43	4.27	-90.53	-18.11	-1,960.82	1,960.91	1,954.75	6.15	318.711				
1,400.00	1,400.00	1,356.90	1,356.90	4.79	4.63	-90.53	-18.11	-1,960.82	1,960.91	1,954.25	6.66	294.453				
1,500.00	1,500.00	1,456.90	1,456.90	5.14	4.99	-90.53	-18.11	-1,960.82	1,960.91	1,953.74	7.17	273.625				
1,600.00	1,600.00	1,556.90	1,556.90	5.50	5.35	-90.53	-18.11	-1,960.82	1,960.91	1,953.23	7.67	255.550				
1,700.00	1,700.00	1,656.90	1,656.90	5.86	5.71	-90.53	-18.11	-1,960.82	1,960.91	1,952.73	8.18	239.714				
1,800.00	1,800.00	1,756.90	1,756.90	6.22	6.06	-90.53	-18.11	-1,960.82	1,960.91	1,952.22	8.69	225.726				
1,900.00	1,900.00	1,856.90	1,856.90	6.58	6.42	-90.53	-18.11	-1,960.82	1,960.91	1,951.71	9.19	213.281				
2,000.00	2,000.00	1,956.90	1,956.90	6.94	6.78	-90.53	-18.11	-1,960.82	1,960.91	1,951.21	9.70	202.136				
2,100.00	2,099.99	2,113.54	2,113.52	7.28	7.33	161.20	-18.49	-1,959.18	1,961.33	1,951.00	10.33	189.868				
2,200.00	2,199.91	2,313.00	2,312.65	7.62	8.01	161.21	-21.03	-1,948.34	1,959.62	1,948.59	11.02	177.772				
2,300.00	2,299.69	2,511.99	2,510.46	7.96	8.71	161.20	-25.91	-1,927.46	1,955.32	1,943.62	11.70	167.095				
2,400.00	2,399.27	2,710.11	2,706.03	8.31	9.43	161.19	-33.10	-1,896.74	1,948.46	1,936.09	12.36	157.599				
2,500.00	2,498.57	2,836.57	2,830.04	8.66	9.92	161.19	-38.74	-1,872.63	1,940.37	1,927.47	12.90	150.467				
2,543.01	2,541.19	2,879.49	2,872.10	8.81	10.09	161.20	-40.68	-1,864.33	1,937.57	1,924.46	13.11	147.832				
2,600.00	2,597.60	2,936.37	2,927.85	9.02	10.31	161.20	-43.26	-1,853.32	1,934.17	1,920.78	13.39	144.473				
2,700.00	2,696.59	3,036.20	3,025.68	9.38	10.71	161.19	-47.78	-1,834.00	1,928.19	1,914.31	13.88	138.876				
2,800.00	2,795.58	3,136.02	3,123.51	9.75	11.12	161.19	-52.29	-1,814.68	1,922.22	1,907.83	14.38	133.632				
2,900.00	2,894.57	3,235.84	3,221.34	10.12	11.53	161.18	-56.81	-1,795.37	1,916.24	1,901.35	14.89	128.713				
3,000.00	2,993.56	3,335.66	3,319.17	10.50	11.95	161.18	-61.33	-1,776.05	1,910.27	1,894.87	15.39	124.092				
3,100.00	3,092.55	3,435.48	3,417.00	10.88	12.37	161.17	-65.85	-1,756.74	1,904.29	1,888.39	15.90	119.746				
3,200.00	3,191.55	3,535.30	3,514.83	11.27	12.80	161.17	-70.37	-1,737.42	1,898.32	1,881.90	16.41	115.653				
3,300.00	3,290.54	3,635.12	3,612.66	11.65	13.23	161.16	-74.89	-1,718.10	1,892.34	1,875.41	16.93	111.793				
3,400.00	3,389.53	3,734.94	3,710.49	12.04	13.67	161.16	-79.41	-1,698.79	1,886.37	1,868.92	17.44	108.148				
3,500.00	3,488.52	3,834.76	3,808.32	12.44	14.10	161.15	-83.92	-1,679.47	1,880.39	1,862.43	17.96	104.701				
3,600.00	3,587.51	3,934.59	3,906.15	12.83	14.54	161.15	-88.44	-1,660.15	1,874.42	1,855.94	18.48	101.439				
3,700.00	3,686.50	4,034.41	4,003.98	13.23	14.99	161.14	-92.96	-1,640.84	1,868.44	1,849.44	19.00	98.347				
3,800.00	3,785.49	4,134.23	4,101.81	13.62	15.43	161.14	-97.48	-1,621.52	1,862.47	1,842.95	19.52	95.413				
3,900.00	3,884.48	4,234.05	4,199.64	14.02	15.88	161.13	-102.00	-1,602.20	1,856.49	1,836.45	20.04	92.625				
4,000.00	3,983.48	4,333.87	4,297.47	14.43	16.33	161.13	-106.52	-1,582.89	1,850.52	1,829.95	20.57	89.974				
4,100.00	4,082.47	4,433.69	4,395.30	14.83	16.78	161.12	-111.04	-1,563.57	1,844.54	1,823.45	21.09	87.451				
4,200.00	4,181.46	4,533.51	4,493.13	15.23	17.24	161.12	-115.55	-1,544.25	1,838.57	1,816.95	21.62	85.046				
4,300.00	4,280.45	4,633.33	4,590.96	15.64	17.69	161.11	-120.07	-1,524.94	1,832.59	1,810.44	22.15	82.751				
4,400.00	4,379.44	4,733.16	4,688.79	16.04	18.15	161.10	-124.59	-1,505.62	1,826.62	1,803.94	22.67	80.561				
4,500.00	4,478.43	4,832.98	4,786.62	16.45	18.60	161.10	-129.11	-1,486.30	1,820.64	1,797.44	23.20	78.467				
4,600.00	4,577.42	4,932.80	4,884.45	16.86	19.06	161.09	-133.63	-1,466.99	1,814.67	1,790.93	23.73	76.464				
4,700.00	4,676.41	5,032.62	4,982.28	17.27	19.52	161.09	-138.15	-1,447.67	1,808.69	1,784.43	24.26	74.546				
4,800.00	4,775.40	5,132.44	5,080.11	17.68	19.98	161.08	-142.67	-1,428.35	1,802.72	1,777.92	24.79	72.709				
4,900.00	4,874.40	5,232.26	5,177.94	18.09	20.45	161.08	-147.19	-1,409.04	1,796.74	1,771.42	25.33	70.946				
5,000.00	4,973.39	5,332.08	5,275.77	18.50	20.91	161.07	-151.70	-1,389.72	1,790.77	1,764.91	25.86	69.255				

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



Total Directional Services

Anticollision Report



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Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	5,431.90	5,373.60	18.91	21.37	161.07	-156.22	-1,370.40	1,784.79	1,758.40	26.39	67.630		
5,200.00	5,171.37	5,531.72	5,471.43	19.32	21.84	161.06	-160.74	-1,351.09	1,778.82	1,751.89	26.92	66.068		
5,300.00	5,270.36	5,631.55	5,569.26	19.73	22.30	161.05	-165.26	-1,331.77	1,772.84	1,745.38	27.46	64.566		
5,400.00	5,369.35	5,731.37	5,667.09	20.15	22.77	161.05	-169.78	-1,312.45	1,766.87	1,738.88	27.99	63.120		
5,500.00	5,468.34	5,831.19	5,764.92	20.56	23.24	161.04	-174.30	-1,293.14	1,760.89	1,732.37	28.53	61.727		
5,600.00	5,567.33	5,931.01	5,862.75	20.97	23.71	161.04	-178.82	-1,273.82	1,754.92	1,725.86	29.06	60.385		
5,700.00	5,666.33	6,030.83	5,960.58	21.39	24.17	161.03	-183.33	-1,254.50	1,748.94	1,719.35	29.60	59.090		
5,800.00	5,765.32	6,130.65	6,058.41	21.80	24.64	161.02	-187.85	-1,235.19	1,742.97	1,712.84	30.13	57.841		
5,900.00	5,864.31	6,230.47	6,156.24	22.22	25.11	161.02	-192.37	-1,215.87	1,736.99	1,706.32	30.67	56.635		
6,000.00	5,963.30	6,330.29	6,254.07	22.64	25.58	161.01	-196.89	-1,196.55	1,731.02	1,699.81	31.21	55.469		
6,100.00	6,062.29	6,430.12	6,351.90	23.05	26.05	161.01	-201.41	-1,177.24	1,725.05	1,693.30	31.74	54.342		
6,200.00	6,161.28	6,529.94	6,449.73	23.47	26.52	161.00	-205.93	-1,157.92	1,719.07	1,686.79	32.28	53.253		
6,300.00	6,260.27	6,629.76	6,547.56	23.88	26.99	160.99	-210.45	-1,138.60	1,713.10	1,680.28	32.82	52.198		
6,400.00	6,359.26	6,700.00	6,616.45	24.30	27.32	160.99	-213.58	-1,125.23	1,707.59	1,674.29	33.31	51.266		
6,500.00	6,458.26	6,777.84	6,693.04	24.72	27.68	161.00	-216.73	-1,111.73	1,703.73	1,669.93	33.80	50.403		
6,600.00	6,557.25	6,847.62	6,761.94	25.14	27.98	161.02	-219.26	-1,100.92	1,701.67	1,667.40	34.27	49.651		
6,672.39	6,628.91	6,900.00	6,813.77	25.44	28.21	161.04	-220.97	-1,093.61	1,701.28	1,666.67	34.61	49.154 CC		
6,700.00	6,656.24	6,917.43	6,831.05	25.55	28.28	161.05	-221.50	-1,091.34	1,701.38	1,666.65	34.73	48.986		
6,800.00	6,755.23	7,000.00	6,913.01	25.97	28.61	161.09	-223.78	-1,081.59	1,702.93	1,667.72	35.21	48.360		
6,837.97	6,792.81	7,000.00	6,913.01	26.13	28.61	161.09	-223.78	-1,081.59	1,703.97	1,668.66	35.31	48.258		
6,900.00	6,854.29	7,056.95	6,969.65	26.39	28.83	161.14	-225.12	-1,075.88	1,705.65	1,670.03	35.62	47.889		
7,000.00	6,953.65	7,126.65	7,039.09	26.79	29.10	161.19	-226.49	-1,070.00	1,707.91	1,671.87	36.04	47.390		
7,100.00	7,053.27	7,200.00	7,112.27	27.17	29.36	161.22	-227.63	-1,065.15	1,709.47	1,673.01	36.46	46.885		
7,200.00	7,153.09	7,266.02	7,178.21	27.53	29.59	161.25	-228.38	-1,061.96	1,710.31	1,673.47	36.84	46.423		
7,300.00	7,253.03	7,335.70	7,247.85	27.88	29.82	161.25	-228.88	-1,059.79	1,710.46	1,673.24	37.22	45.954		
7,380.98	7,334.00	7,400.00	7,312.14	28.15	30.02	-90.47	-229.09	-1,058.89	1,710.08	1,672.53	37.55	45.546		
7,400.00	7,353.02	7,405.38	7,317.52	28.21	30.04	-90.47	-229.10	-1,058.86	1,709.94	1,672.36	37.58	45.502		
7,444.49	7,397.51	7,442.27	7,354.41	28.35	30.15	-90.47	-229.11	-1,058.82	1,709.88	1,672.13	37.76	45.287		
7,500.00	7,453.02	7,497.78	7,409.92	28.53	30.32	-90.47	-229.11	-1,058.82	1,709.88	1,671.86	38.02	44.976		
7,600.00	7,553.02	7,597.78	7,509.92	28.85	30.62	-90.47	-229.11	-1,058.82	1,709.88	1,671.39	38.49	44.425		
7,700.00	7,653.02	7,697.78	7,609.92	29.17	30.92	-90.47	-229.11	-1,058.82	1,709.88	1,670.92	38.96	43.887		
7,800.00	7,753.02	7,797.78	7,709.92	29.49	31.22	-90.47	-229.11	-1,058.82	1,709.88	1,670.45	39.43	43.361		
7,900.00	7,853.02	7,897.78	7,809.92	29.81	31.53	-90.47	-229.11	-1,058.82	1,709.88	1,669.98	39.91	42.847		
8,000.00	7,953.02	7,997.78	7,909.92	30.13	31.83	-90.47	-229.11	-1,058.82	1,709.88	1,669.50	40.38	42.343		
8,100.00	8,053.02	8,097.78	8,009.92	30.46	32.14	-90.47	-229.11	-1,058.82	1,709.88	1,669.03	40.86	41.851		
8,200.00	8,153.02	8,197.78	8,109.92	30.78	32.45	-90.47	-229.11	-1,058.82	1,709.88	1,668.55	41.33	41.369		
8,300.00	8,253.02	8,297.78	8,209.92	31.11	32.76	-90.47	-229.11	-1,058.82	1,709.88	1,668.07	41.81	40.898		
8,400.00	8,353.02	8,397.78	8,309.92	31.43	33.07	-90.47	-229.11	-1,058.82	1,709.88	1,667.60	42.29	40.436		
8,500.00	8,453.02	8,497.78	8,409.92	31.76	33.38	-90.47	-229.11	-1,058.82	1,709.88	1,667.12	42.76	39.984		
8,600.00	8,553.02	8,597.78	8,509.92	32.09	33.69	-90.47	-229.11	-1,058.82	1,709.88	1,666.64	43.24	39.541		
8,700.00	8,653.02	8,697.78	8,609.92	32.42	34.00	-90.47	-229.11	-1,058.82	1,709.88	1,666.16	43.72	39.108		
8,800.00	8,753.02	8,797.78	8,709.92	32.74	34.32	-90.47	-229.11	-1,058.82	1,709.88	1,665.68	44.20	38.683		
8,900.00	8,853.02	8,897.78	8,809.92	33.07	34.63	-90.47	-229.11	-1,058.82	1,709.88	1,665.20	44.68	38.267		
9,000.00	8,953.02	8,997.78	8,909.92	33.40	34.95	-90.47	-229.11	-1,058.82	1,709.88	1,664.72	45.16	37.860		
9,100.00	9,053.02	9,097.78	9,009.92	33.73	35.26	-90.47	-229.11	-1,058.82	1,709.88	1,664.24	45.65	37.460		
9,200.00	9,153.02	9,197.78	9,109.92	34.07	35.58	-90.47	-229.11	-1,058.82	1,709.88	1,663.75	46.13	37.068		
9,300.00	9,253.02	9,297.78	9,209.92	34.40	35.90	-90.47	-229.11	-1,058.82	1,709.88	1,663.27	46.61	36.685		
9,400.00	9,353.02	9,397.78	9,309.92	34.73	36.22	-90.47	-229.11	-1,058.82	1,709.88	1,662.79	47.09	36.308		
9,500.00	9,453.02	9,497.78	9,409.92	35.06	36.53	-90.47	-229.11	-1,058.82	1,709.88	1,662.30	47.58	35.939		
9,600.00	9,553.02	9,597.78	9,509.92	35.39	36.85	-90.47	-229.11	-1,058.82	1,709.88	1,661.82	48.06	35.577		
9,700.00	9,653.02	9,697.78	9,609.92	35.73	37.17	-90.47	-229.11	-1,058.82	1,709.88	1,661.34	48.55	35.222		
9,800.00	9,753.02	9,797.78	9,709.92	36.06	37.50	-90.47	-229.11	-1,058.82	1,709.88	1,660.85	49.03	34.873		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,853.02	9,897.78	9,809.92	36.40	37.82	-90.47	-229.11	-1,058.82	1,709.88	1,660.37	49.52	34.531		
10,000.00	9,953.02	9,997.78	9,909.92	36.73	38.14	-90.47	-229.11	-1,058.82	1,709.88	1,659.88	50.00	34.196		
10,100.00	10,053.02	10,097.78	10,009.92	37.07	38.46	-90.47	-229.11	-1,058.82	1,709.88	1,659.39	50.49	33.866		
10,200.00	10,153.02	10,197.78	10,109.92	37.40	38.79	-90.47	-229.11	-1,058.82	1,709.88	1,658.91	50.98	33.543		
10,300.00	10,253.02	10,297.78	10,209.92	37.74	39.11	-90.47	-229.11	-1,058.82	1,709.88	1,658.42	51.46	33.225		
10,400.00	10,353.02	10,397.78	10,309.92	38.08	39.44	-90.47	-229.11	-1,058.82	1,709.88	1,657.93	51.95	32.913		
10,500.00	10,453.02	10,497.78	10,409.92	38.41	39.76	-90.47	-229.11	-1,058.82	1,709.88	1,657.44	52.44	32.607		
10,600.00	10,553.02	10,597.78	10,509.92	38.75	40.09	-90.47	-229.11	-1,058.82	1,709.88	1,656.95	52.93	32.306		
10,700.00	10,653.02	10,697.78	10,609.92	39.09	40.42	-90.47	-229.11	-1,058.82	1,709.88	1,656.47	53.42	32.011		
10,800.00	10,753.02	10,797.78	10,709.92	39.43	40.74	-90.47	-229.11	-1,058.82	1,709.88	1,655.98	53.90	31.720		
10,900.00	10,853.02	10,897.78	10,809.92	39.77	41.07	-90.47	-229.11	-1,058.82	1,709.88	1,655.49	54.39	31.435		
11,000.00	10,953.02	10,997.78	10,909.92	40.10	41.40	-90.47	-229.11	-1,058.82	1,709.88	1,655.00	54.88	31.155		
11,100.00	11,053.02	11,097.78	11,009.92	40.44	41.73	-90.47	-229.11	-1,058.82	1,709.88	1,654.51	55.37	30.879		
11,200.00	11,153.02	11,197.78	11,109.92	40.78	42.06	-90.47	-229.11	-1,058.82	1,709.88	1,654.02	55.86	30.608		
11,300.00	11,253.02	11,297.78	11,209.92	41.12	42.39	-90.47	-229.11	-1,058.82	1,709.88	1,653.53	56.35	30.341		
11,400.00	11,353.02	11,397.78	11,309.92	41.46	42.72	-90.47	-229.11	-1,058.82	1,709.88	1,653.04	56.85	30.079		
11,500.00	11,453.02	11,497.78	11,409.92	41.80	43.05	-90.47	-229.11	-1,058.82	1,709.88	1,652.55	57.34	29.822		
11,566.02	11,519.04	11,563.80	11,475.94	42.03	43.27	-90.47	-229.11	-1,058.82	1,709.88	1,652.22	57.66	29.654		
11,600.00	11,553.00	11,597.76	11,509.90	42.14	43.38	-89.97	-229.11	-1,058.82	1,709.88	1,652.05	57.83	29.568		
11,614.09	11,567.05	11,611.81	11,523.95	42.19	43.43	-90.00	-229.11	-1,058.82	1,709.88	1,651.98	57.90	29.533		
11,650.00	11,602.72	11,647.48	11,559.62	42.31	43.54	-90.14	-229.11	-1,058.82	1,709.89	1,651.81	58.07	29.444		
11,700.00	11,651.80	11,697.50	11,609.59	42.46	43.71	-90.39	-227.21	-1,058.84	1,709.92	1,651.61	58.31	29.322		
11,750.00	11,699.87	11,748.22	11,659.90	42.61	43.87	-90.64	-220.86	-1,058.91	1,709.99	1,651.44	58.55	29.205		
11,800.00	11,746.57	11,799.65	11,710.13	42.75	44.02	-90.89	-209.91	-1,059.01	1,710.10	1,651.32	58.78	29.094		
11,850.00	11,791.53	11,851.81	11,759.86	42.87	44.17	-91.13	-194.24	-1,059.17	1,710.24	1,651.24	59.00	28.988		
11,900.00	11,834.42	11,904.71	11,808.63	42.98	44.30	-91.36	-173.81	-1,059.37	1,710.40	1,651.19	59.21	28.888		
11,950.00	11,874.92	11,958.34	11,855.94	43.08	44.42	-91.59	-148.59	-1,059.62	1,710.59	1,651.18	59.41	28.793		
12,000.00	11,912.70	12,012.71	11,901.28	43.17	44.53	-91.80	-118.62	-1,059.92	1,710.80	1,651.19	59.60	28.703		
12,050.00	11,947.48	12,067.79	11,944.11	43.24	44.63	-92.01	-84.02	-1,060.26	1,711.02	1,651.23	59.79	28.618		
12,100.00	11,979.01	12,123.57	11,983.89	43.29	44.71	-92.19	-44.96	-1,060.65	1,711.24	1,651.27	59.97	28.535		
12,150.00	12,007.03	12,180.00	12,020.09	43.34	44.77	-92.36	-1.69	-1,061.08	1,711.46	1,651.31	60.14	28.456		
12,200.00	12,031.34	12,237.04	12,052.16	43.37	44.83	-92.51	45.44	-1,061.54	1,711.67	1,651.35	60.32	28.377		
12,250.00	12,051.76	12,294.61	12,079.63	43.40	44.87	-92.64	96.01	-1,062.05	1,711.87	1,651.37	60.49	28.299		
12,300.00	12,068.11	12,352.65	12,102.04	43.43	44.90	-92.74	149.52	-1,062.58	1,712.04	1,651.37	60.67	28.220		
12,350.00	12,080.29	12,411.07	12,119.02	43.46	44.93	-92.83	205.38	-1,063.13	1,712.18	1,651.33	60.85	28.139		
12,400.00	12,088.20	12,469.78	12,130.26	43.51	44.96	-92.88	262.97	-1,063.70	1,712.29	1,651.26	61.03	28.057		
12,450.00	12,091.77	12,528.66	12,135.57	43.58	45.01	-92.91	321.59	-1,064.28	1,712.36	1,651.14	61.22	27.973		
12,466.02	12,092.00	12,547.55	12,135.99	43.60	45.03	-92.92	340.47	-1,064.47	1,712.37	1,651.10	61.28	27.945		
12,500.00	12,092.00	12,582.04	12,136.00	43.67	45.07	-92.92	374.96	-1,064.81	1,712.39	1,650.99	61.40	27.890		
12,600.00	12,092.00	12,682.04	12,136.00	43.93	45.24	-92.92	474.96	-1,065.80	1,712.44	1,650.63	61.81	27.705		
12,700.00	12,092.00	12,782.04	12,136.00	44.27	45.48	-92.92	574.95	-1,066.79	1,712.49	1,650.18	62.31	27.485		
12,800.00	12,092.00	12,882.04	12,136.00	44.68	45.81	-92.92	674.95	-1,067.78	1,712.53	1,649.65	62.88	27.233		
12,900.00	12,092.00	12,982.04	12,136.00	45.15	46.22	-92.92	774.94	-1,068.78	1,712.58	1,649.04	63.54	26.952		
13,000.00	12,092.00	13,082.04	12,136.00	45.68	46.69	-92.92	874.94	-1,069.77	1,712.63	1,648.35	64.28	26.644		
13,100.00	12,092.00	13,182.04	12,136.00	46.26	47.23	-92.92	974.93	-1,070.76	1,712.68	1,647.59	65.09	26.313		
13,200.00	12,092.00	13,282.04	12,136.00	46.89	47.83	-92.92	1,074.93	-1,071.75	1,712.73	1,646.75	65.97	25.961		
13,300.00	12,092.00	13,382.04	12,136.00	47.57	48.48	-92.91	1,174.92	-1,072.74	1,712.77	1,645.85	66.93	25.592		
13,400.00	12,092.00	13,482.04	12,136.00	48.30	49.18	-92.91	1,274.92	-1,073.73	1,712.82	1,644.88	67.95	25.209		
13,500.00	12,092.00	13,582.04	12,136.00	49.06	49.92	-92.91	1,374.91	-1,074.72	1,712.87	1,643.84	69.03	24.814		
13,600.00	12,092.00	13,682.04	12,136.00	49.88	50.71	-92.91	1,474.91	-1,075.71	1,712.92	1,642.74	70.17	24.409		
13,700.00	12,092.00	13,782.04	12,136.00	50.73	51.55	-92.91	1,574.90	-1,076.70	1,712.97	1,641.59	71.38	23.999		
13,800.00	12,092.00	13,882.04	12,136.00	51.62	52.42	-92.91	1,674.90	-1,077.69	1,713.01	1,640.38	72.64	23.584		

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



Total Directional Services

Anticollision Report



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Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,900.00	12,092.00	13,982.04	12,136.00	52.54	53.33	-92.91	1,774.89	-1,078.69	1,713.06	1,639.12	73.95	23.166		
14,000.00	12,092.00	14,082.04	12,136.00	53.51	54.27	-92.91	1,874.89	-1,079.68	1,713.11	1,637.80	75.31	22.749		
14,100.00	12,092.00	14,182.04	12,136.00	54.50	55.25	-92.91	1,974.88	-1,080.67	1,713.16	1,636.45	76.71	22.332		
14,200.00	12,092.00	14,282.04	12,136.00	55.52	56.26	-92.91	2,074.88	-1,081.66	1,713.21	1,635.04	78.17	21.918		
14,300.00	12,092.00	14,382.04	12,136.00	56.58	57.30	-92.91	2,174.87	-1,082.65	1,713.26	1,633.60	79.66	21.507		
14,400.00	12,092.00	14,482.04	12,136.00	57.66	58.37	-92.91	2,274.87	-1,083.64	1,713.30	1,632.11	81.19	21.102		
14,500.00	12,092.00	14,582.04	12,136.00	58.77	59.46	-92.91	2,374.86	-1,084.63	1,713.35	1,630.59	82.76	20.702		
14,600.00	12,092.00	14,682.04	12,136.00	59.90	60.58	-92.91	2,474.86	-1,085.62	1,713.40	1,629.03	84.37	20.308		
14,700.00	12,092.00	14,782.04	12,136.00	61.06	61.72	-92.91	2,574.85	-1,086.61	1,713.45	1,627.44	86.01	19.922		
14,800.00	12,092.00	14,882.04	12,136.00	62.24	62.89	-92.91	2,674.85	-1,087.61	1,713.50	1,625.82	87.68	19.543		
14,900.00	12,092.00	14,982.04	12,136.00	63.44	64.07	-92.91	2,774.84	-1,088.60	1,713.54	1,624.16	89.38	19.171		
15,000.00	12,092.00	15,082.04	12,136.00	64.66	65.28	-92.91	2,874.84	-1,089.59	1,713.59	1,622.48	91.11	18.808		
15,100.00	12,092.00	15,182.04	12,136.00	65.90	66.51	-92.91	2,974.83	-1,090.58	1,713.64	1,620.78	92.86	18.453		
15,200.00	12,092.00	15,282.04	12,136.00	67.16	67.75	-92.91	3,074.83	-1,091.57	1,713.69	1,619.05	94.64	18.107		
15,300.00	12,092.00	15,382.04	12,136.00	68.43	69.01	-92.91	3,174.82	-1,092.56	1,713.74	1,617.29	96.45	17.769		
15,400.00	12,092.00	15,482.04	12,136.00	69.72	70.29	-92.91	3,274.82	-1,093.55	1,713.78	1,615.51	98.27	17.439		
15,500.00	12,092.00	15,582.04	12,136.00	71.02	71.58	-92.91	3,374.81	-1,094.54	1,713.83	1,613.71	100.12	17.118		
15,600.00	12,092.00	15,682.04	12,136.00	72.34	72.89	-92.91	3,474.81	-1,095.53	1,713.88	1,611.90	101.99	16.805		
15,700.00	12,092.00	15,782.04	12,136.00	73.67	74.21	-92.91	3,574.80	-1,096.53	1,713.93	1,610.06	103.87	16.500		
15,800.00	12,092.00	15,882.04	12,136.00	75.02	75.54	-92.91	3,674.80	-1,097.52	1,713.98	1,608.20	105.78	16.204		
15,900.00	12,092.00	15,982.04	12,136.00	76.37	76.89	-92.91	3,774.79	-1,098.51	1,714.02	1,606.33	107.70	15.915		
16,000.00	12,092.00	16,082.04	12,136.00	77.74	78.25	-92.91	3,874.79	-1,099.50	1,714.07	1,604.44	109.63	15.635		
16,100.00	12,092.00	16,182.04	12,136.00	79.12	79.62	-92.91	3,974.78	-1,100.49	1,714.12	1,602.54	111.58	15.362		
16,200.00	12,092.00	16,282.04	12,136.00	80.51	81.00	-92.91	4,074.78	-1,101.48	1,714.17	1,600.62	113.55	15.096		
16,300.00	12,092.00	16,382.04	12,136.00	81.91	82.39	-92.91	4,174.77	-1,102.47	1,714.22	1,598.69	115.53	14.838		
16,400.00	12,092.00	16,482.04	12,136.00	83.31	83.79	-92.91	4,274.77	-1,103.46	1,714.27	1,596.74	117.52	14.586		
16,500.00	12,092.00	16,582.04	12,136.00	84.73	85.19	-92.91	4,374.76	-1,104.45	1,714.31	1,594.78	119.53	14.342		
16,600.00	12,092.00	16,682.04	12,136.00	86.16	86.61	-92.91	4,474.76	-1,105.44	1,714.36	1,592.81	121.55	14.105		
16,700.00	12,092.00	16,782.04	12,136.00	87.59	88.03	-92.91	4,574.75	-1,106.44	1,714.41	1,590.83	123.58	13.873		
16,800.00	12,092.00	16,882.04	12,136.00	89.03	89.47	-92.91	4,674.75	-1,107.43	1,714.46	1,588.84	125.61	13.649		
16,900.00	12,092.00	16,982.04	12,136.00	90.48	90.91	-92.91	4,774.74	-1,108.42	1,714.51	1,586.84	127.66	13.430		
17,000.00	12,092.00	17,082.04	12,136.00	91.93	92.35	-92.91	4,874.74	-1,109.41	1,714.55	1,584.83	129.72	13.217		
17,100.00	12,092.00	17,182.04	12,136.00	93.39	93.81	-92.91	4,974.73	-1,110.40	1,714.60	1,582.81	131.79	13.010		
17,200.00	12,092.00	17,282.04	12,136.00	94.86	95.27	-92.91	5,074.73	-1,111.39	1,714.65	1,580.78	133.87	12.809		
17,300.00	12,092.00	17,382.04	12,136.00	96.33	96.73	-92.91	5,174.72	-1,112.38	1,714.70	1,578.75	135.95	12.612		
17,400.00	12,092.00	17,482.04	12,136.00	97.81	98.21	-92.91	5,274.72	-1,113.37	1,714.75	1,576.70	138.05	12.422		
17,500.00	12,092.00	17,582.04	12,136.00	99.30	99.69	-92.91	5,374.71	-1,114.36	1,714.79	1,574.65	140.15	12.236		
17,600.00	12,092.00	17,682.04	12,136.00	100.79	101.17	-92.91	5,474.71	-1,115.36	1,714.84	1,572.59	142.25	12.055		
17,700.00	12,092.00	17,782.04	12,136.00	102.28	102.66	-92.91	5,574.70	-1,116.35	1,714.89	1,570.52	144.37	11.878		
17,800.00	12,092.00	17,882.04	12,136.00	103.78	104.15	-92.91	5,674.70	-1,117.34	1,714.94	1,568.45	146.49	11.707		
17,900.00	12,092.00	17,982.04	12,136.00	105.29	105.65	-92.91	5,774.69	-1,118.33	1,714.99	1,566.37	148.62	11.539		
18,000.00	12,092.00	18,082.04	12,136.00	106.80	107.15	-92.91	5,874.69	-1,119.32	1,715.04	1,564.28	150.75	11.376		
18,100.00	12,092.00	18,182.04	12,136.00	108.31	108.66	-92.91	5,974.69	-1,120.31	1,715.08	1,562.19	152.89	11.217		
18,200.00	12,092.00	18,282.04	12,136.00	109.83	110.17	-92.91	6,074.68	-1,121.30	1,715.13	1,560.09	155.04	11.063		
18,300.00	12,092.00	18,382.04	12,136.00	111.35	111.68	-92.91	6,174.68	-1,122.29	1,715.18	1,557.99	157.19	10.911		
18,400.00	12,092.00	18,482.04	12,136.00	112.87	113.20	-92.91	6,274.67	-1,123.28	1,715.23	1,555.88	159.35	10.764		
18,500.00	12,092.00	18,582.04	12,136.00	114.40	114.73	-92.91	6,374.67	-1,124.28	1,715.28	1,553.77	161.51	10.620		
18,600.00	12,092.00	18,682.04	12,136.00	115.93	116.25	-92.91	6,474.66	-1,125.27	1,715.32	1,551.65	163.67	10.480		
18,700.00	12,092.00	18,782.04	12,136.00	117.46	117.78	-92.91	6,574.66	-1,126.26	1,715.37	1,549.53	165.84	10.343		
18,800.00	12,092.00	18,882.04	12,136.00	119.00	119.31	-92.91	6,674.65	-1,127.25	1,715.42	1,547.40	168.02	10.210		
18,900.00	12,092.00	18,982.04	12,136.00	120.54	120.85	-92.91	6,774.65	-1,128.24	1,715.47	1,545.27	170.20	10.079		
19,000.00	12,092.00	19,082.04	12,136.00	122.09	122.39	-92.91	6,874.64	-1,129.23	1,715.52	1,543.14	172.38	9.952		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
19,100.00	12,092.00	19,182.04	12,136.00	123.63	123.93	-92.91	6,974.64	-1,130.22	1,715.56	1,541.00	174.57	9.827				
19,200.00	12,092.00	19,282.04	12,136.00	125.18	125.48	-92.91	7,074.63	-1,131.21	1,715.61	1,538.85	176.76	9.706				
19,300.00	12,092.00	19,382.04	12,136.00	126.73	127.02	-92.91	7,174.63	-1,132.20	1,715.66	1,536.71	178.95	9.587				
19,400.00	12,092.00	19,482.04	12,136.00	128.29	128.57	-92.91	7,274.62	-1,133.19	1,715.71	1,534.56	181.15	9.471				
19,500.00	12,092.00	19,582.04	12,136.00	129.84	130.13	-92.91	7,374.62	-1,134.19	1,715.76	1,532.40	183.35	9.358				
19,600.00	12,092.00	19,682.04	12,136.00	131.40	131.68	-92.91	7,474.61	-1,135.18	1,715.81	1,530.25	185.56	9.247				
19,700.00	12,092.00	19,782.04	12,136.00	132.96	133.24	-92.91	7,574.61	-1,136.17	1,715.85	1,528.09	187.77	9.138				
19,800.00	12,092.00	19,882.04	12,136.00	134.53	134.80	-92.91	7,674.60	-1,137.16	1,715.90	1,525.92	189.98	9.032				
19,900.00	12,092.00	19,982.04	12,136.00	136.09	136.36	-92.91	7,774.60	-1,138.15	1,715.95	1,523.76	192.19	8.928				
20,000.00	12,092.00	20,082.04	12,136.00	137.66	137.92	-92.91	7,874.59	-1,139.14	1,716.00	1,521.59	194.41	8.827				
20,100.00	12,092.00	20,182.04	12,136.00	139.23	139.49	-92.91	7,974.59	-1,140.13	1,716.05	1,519.42	196.63	8.727				
20,200.00	12,092.00	20,282.04	12,136.00	140.80	141.06	-92.91	8,074.58	-1,141.12	1,716.09	1,517.25	198.85	8.630				
20,300.00	12,092.00	20,382.04	12,136.00	142.37	142.63	-92.91	8,174.58	-1,142.11	1,716.14	1,515.07	201.07	8.535				
20,400.00	12,092.00	20,482.04	12,136.00	143.95	144.20	-92.91	8,274.57	-1,143.11	1,716.19	1,512.89	203.30	8.442				
20,500.00	12,092.00	20,582.04	12,136.00	145.53	145.77	-92.91	8,374.57	-1,144.10	1,716.24	1,510.71	205.53	8.350				
20,600.00	12,092.00	20,682.04	12,136.00	147.10	147.35	-92.91	8,474.56	-1,145.09	1,716.29	1,508.53	207.76	8.261				
20,700.00	12,092.00	20,782.04	12,136.00	148.68	148.92	-92.91	8,574.56	-1,146.08	1,716.33	1,506.34	209.99	8.173				
20,800.00	12,092.00	20,882.04	12,136.00	150.27	150.50	-92.91	8,674.55	-1,147.07	1,716.38	1,504.15	212.23	8.087				
20,900.00	12,092.00	20,982.04	12,136.00	151.85	152.08	-92.91	8,774.55	-1,148.06	1,716.43	1,501.96	214.47	8.003				
21,000.00	12,092.00	21,082.04	12,136.00	153.43	153.66	-92.91	8,874.54	-1,149.05	1,716.48	1,499.77	216.71	7.921				
21,100.00	12,092.00	21,182.04	12,136.00	155.02	155.25	-92.91	8,974.54	-1,150.04	1,716.53	1,497.58	218.95	7.840				
21,200.00	12,092.00	21,282.04	12,136.00	156.61	156.83	-92.91	9,074.53	-1,151.03	1,716.58	1,495.38	221.19	7.761				
21,300.00	12,092.00	21,382.04	12,136.00	158.19	158.42	-92.91	9,174.53	-1,152.03	1,716.62	1,493.19	223.44	7.683				
21,400.00	12,092.00	21,482.04	12,136.00	159.78	160.01	-92.91	9,274.52	-1,153.02	1,716.67	1,490.99	225.68	7.606				
21,500.00	12,092.00	21,582.04	12,136.00	161.38	161.59	-92.91	9,374.52	-1,154.01	1,716.72	1,488.79	227.93	7.532				
21,600.00	12,092.00	21,682.04	12,136.00	162.97	163.18	-92.91	9,474.51	-1,155.00	1,716.77	1,486.58	230.19	7.458				
21,700.00	12,092.00	21,782.04	12,136.00	164.56	164.77	-92.91	9,574.51	-1,155.99	1,716.82	1,484.38	232.44	7.386				
21,800.00	12,092.00	21,882.04	12,136.00	166.16	166.37	-92.91	9,674.50	-1,156.98	1,716.86	1,482.17	234.69	7.315				
21,900.00	12,092.00	21,982.04	12,136.00	167.75	167.96	-92.91	9,774.50	-1,157.97	1,716.91	1,479.96	236.95	7.246				
22,000.00	12,092.00	22,082.04	12,136.00	169.35	169.55	-92.91	9,874.49	-1,158.96	1,716.96	1,477.76	239.20	7.178				
22,100.00	12,092.00	22,182.04	12,136.00	170.95	171.15	-92.91	9,974.49	-1,159.95	1,717.01	1,475.54	241.46	7.111				
22,200.00	12,092.00	22,282.04	12,136.00	172.55	172.75	-92.91	10,074.48	-1,160.94	1,717.06	1,473.33	243.72	7.045				
22,255.91	12,092.00	22,337.95	12,136.00	173.44	173.64	-92.91	10,130.39	-1,161.50	1,717.08	1,472.10	244.99	7.009 ES, SF				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-90.46	-0.20	-25.00	25.01					
100.00	100.00	99.20	99.20	0.13	0.12	-90.46	-0.20	-25.00	25.00	24.82	0.18	141.466		
200.00	200.00	199.20	199.20	0.48	0.48	-90.46	-0.20	-25.00	25.00	24.32	0.68	36.638		
300.00	300.00	299.20	299.20	0.84	0.84	-90.46	-0.20	-25.00	25.00	23.81	1.19	21.021		
400.00	400.00	399.20	399.20	1.20	1.20	-90.46	-0.20	-25.00	25.00	23.30	1.70	14.739		
500.00	500.00	499.20	499.20	1.56	1.56	-90.46	-0.20	-25.00	25.00	22.80	2.20	11.347		
600.00	600.00	599.20	599.20	1.92	1.91	-90.46	-0.20	-25.00	25.00	22.29	2.71	9.225		
700.00	700.00	699.20	699.20	2.28	2.27	-90.46	-0.20	-25.00	25.00	21.78	3.22	7.771		
800.00	800.00	799.20	799.20	2.63	2.63	-90.46	-0.20	-25.00	25.00	21.28	3.72	6.713		
900.00	900.00	899.20	899.20	2.99	2.99	-90.46	-0.20	-25.00	25.00	20.77	4.23	5.909		
1,000.00	1,000.00	999.20	999.20	3.35	3.35	-90.46	-0.20	-25.00	25.00	20.26	4.74	5.277		
1,100.00	1,100.00	1,099.20	1,099.20	3.71	3.71	-90.46	-0.20	-25.00	25.00	19.76	5.24	4.767		
1,200.00	1,200.00	1,199.20	1,199.20	4.07	4.07	-90.46	-0.20	-25.00	25.00	19.25	5.75	4.347		
1,300.00	1,300.00	1,299.20	1,299.20	4.43	4.42	-90.46	-0.20	-25.00	25.00	18.74	6.26	3.994		
1,400.00	1,400.00	1,399.20	1,399.20	4.79	4.78	-90.46	-0.20	-25.00	25.00	18.23	6.77	3.695		
1,500.00	1,500.00	1,499.20	1,499.20	5.14	5.14	-90.46	-0.20	-25.00	25.00	17.73	7.27	3.438		
1,600.00	1,600.00	1,599.20	1,599.20	5.50	5.50	-90.46	-0.20	-25.00	25.00	17.22	7.78	3.214		
1,700.00	1,700.00	1,699.20	1,699.20	5.86	5.86	-90.46	-0.20	-25.00	25.00	16.71	8.29	3.017		
1,800.00	1,800.00	1,799.20	1,799.20	6.22	6.22	-90.46	-0.20	-25.00	25.00	16.21	8.79	2.843		
1,900.00	1,900.00	1,899.20	1,899.20	6.58	6.58	-90.46	-0.20	-25.00	25.00	15.70	9.30	2.688		
2,000.00	2,000.00	1,999.20	1,999.20	6.94	6.93	-90.46	-0.20	-25.00	25.00	15.19	9.81	2.549 CC, ES		
2,100.00	2,099.99	2,099.19	2,099.19	7.28	7.29	162.18	-0.20	-25.00	26.24	15.94	10.31	2.546 SF		
2,200.00	2,199.91	2,199.11	2,199.11	7.62	7.65	164.46	-0.20	-25.00	30.01	19.21	10.80	2.779		
2,300.00	2,299.69	2,298.89	2,298.89	7.96	8.01	167.20	-0.20	-25.00	36.35	25.06	11.29	3.220		
2,400.00	2,399.27	2,398.47	2,398.47	8.31	8.36	169.74	-0.20	-25.00	45.32	33.54	11.78	3.846		
2,500.00	2,498.57	2,497.19	2,497.18	8.66	8.70	170.66	-1.24	-25.67	57.42	45.16	12.26	4.683		
2,543.01	2,541.19	2,539.46	2,539.43	8.81	8.84	170.41	-2.33	-26.39	63.74	51.27	12.46	5.115		
2,600.00	2,597.60	2,595.31	2,595.23	9.02	9.02	169.68	-4.38	-27.73	72.72	60.00	12.73	5.714		
2,700.00	2,696.59	2,693.59	2,693.33	9.38	9.35	167.87	-9.25	-30.90	89.18	75.99	13.19	6.759		
2,800.00	2,795.58	2,792.18	2,791.73	9.75	9.68	166.53	-14.30	-34.18	105.79	92.12	13.67	7.740		
2,900.00	2,894.57	2,890.76	2,890.14	10.12	10.01	165.56	-19.34	-37.47	122.44	108.30	14.15	8.656		
3,000.00	2,993.56	2,989.35	2,988.54	10.50	10.34	164.81	-24.38	-40.76	139.12	124.50	14.63	9.512		
3,100.00	3,092.55	3,087.93	3,086.94	10.88	10.67	164.23	-29.43	-44.04	155.82	140.71	15.11	10.312		
3,200.00	3,191.55	3,186.52	3,185.34	11.27	11.01	163.76	-34.47	-47.33	172.53	156.93	15.60	11.062		
3,300.00	3,290.54	3,285.10	3,283.74	11.65	11.35	163.37	-39.52	-50.62	189.24	173.16	16.08	11.765		
3,400.00	3,389.53	3,383.69	3,382.14	12.04	11.69	163.05	-44.56	-53.90	205.97	189.39	16.58	12.426		
3,500.00	3,488.52	3,482.27	3,480.54	12.44	12.03	162.77	-49.60	-57.19	222.70	205.63	17.07	13.047		
3,600.00	3,587.51	3,580.86	3,578.94	12.83	12.38	162.53	-54.65	-60.48	239.43	221.87	17.56	13.633		
3,700.00	3,686.50	3,679.44	3,677.35	13.23	12.72	162.33	-59.69	-63.76	256.17	238.11	18.06	14.185		
3,800.00	3,785.49	3,778.03	3,775.75	13.62	13.07	162.15	-64.73	-67.05	272.91	254.36	18.56	14.707		
3,900.00	3,884.48	3,876.61	3,874.15	14.02	13.42	161.99	-69.78	-70.34	289.66	270.60	19.06	15.200		
4,000.00	3,983.48	3,975.20	3,972.55	14.43	13.77	161.84	-74.82	-73.62	306.40	286.84	19.56	15.667		
4,100.00	4,082.47	4,073.78	4,070.95	14.83	14.11	161.71	-79.87	-76.91	323.15	303.09	20.06	16.110		
4,200.00	4,181.46	4,172.37	4,169.35	15.23	14.47	161.60	-84.91	-80.20	339.90	319.34	20.56	16.531		
4,300.00	4,280.45	4,270.96	4,267.75	15.64	14.82	161.49	-89.95	-83.48	356.65	335.58	21.06	16.931		
4,400.00	4,379.44	4,369.54	4,366.16	16.04	15.17	161.40	-95.00	-86.77	373.40	351.83	21.57	17.311		
4,500.00	4,478.43	4,468.13	4,464.56	16.45	15.52	161.31	-100.04	-90.05	390.15	368.07	22.08	17.673		
4,600.00	4,577.42	4,566.71	4,562.96	16.86	15.88	161.23	-105.09	-93.34	406.90	384.32	22.58	18.019		
4,700.00	4,676.41	4,665.30	4,661.36	17.27	16.23	161.16	-110.13	-96.63	423.65	400.56	23.09	18.348		
4,800.00	4,775.40	4,763.88	4,759.76	17.68	16.58	161.09	-115.17	-99.91	440.41	416.81	23.60	18.663		
4,900.00	4,874.40	4,862.47	4,858.16	18.09	16.94	161.03	-120.22	-103.20	457.16	433.05	24.11	18.965		
5,000.00	4,973.39	4,961.05	4,956.56	18.50	17.30	160.97	-125.26	-106.49	473.92	449.30	24.62	19.253		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 804H - OH - Plan #1		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
							+N/-S (usft)	+E/-W (usft)								
5,100.00	5,072.38	5,059.64	5,054.96	18.91	17.65	160.92	-130.30	-109.77	490.67	465.54	25.13	19.529				
5,200.00	5,171.37	5,158.22	5,153.37	19.32	18.01	160.87	-135.35	-113.06	507.43	481.79	25.64	19.793				
5,300.00	5,270.36	5,256.81	5,251.77	19.73	18.37	160.82	-140.39	-116.35	524.18	498.03	26.15	20.047				
5,400.00	5,369.35	5,355.39	5,350.17	20.15	18.72	160.77	-145.44	-119.63	540.94	514.28	26.66	20.291				
5,500.00	5,468.34	5,453.98	5,448.57	20.56	19.08	160.73	-150.48	-122.92	557.69	530.52	27.17	20.525				
5,600.00	5,567.33	5,552.56	5,546.97	20.97	19.44	160.69	-155.52	-126.21	574.45	546.77	27.68	20.751				
5,700.00	5,666.33	5,651.15	5,645.37	21.39	19.80	160.65	-160.57	-129.49	591.21	563.01	28.20	20.967				
5,800.00	5,765.32	5,749.73	5,743.77	21.80	20.16	160.62	-165.61	-132.78	607.97	579.26	28.71	21.176				
5,900.00	5,864.31	5,848.32	5,842.18	22.22	20.52	160.59	-170.66	-136.07	624.72	595.50	29.22	21.377				
6,000.00	5,963.30	5,946.91	5,940.58	22.64	20.88	160.55	-175.70	-139.35	641.48	611.74	29.74	21.571				
6,100.00	6,062.29	6,045.49	6,038.98	23.05	21.24	160.52	-180.74	-142.64	658.24	627.99	30.25	21.758				
6,200.00	6,161.28	6,144.08	6,137.38	23.47	21.60	160.50	-185.79	-145.93	675.00	644.23	30.77	21.939				
6,300.00	6,260.27	6,242.66	6,235.78	23.88	21.96	160.47	-190.83	-149.21	691.75	660.47	31.28	22.113				
6,400.00	6,359.26	6,341.25	6,334.18	24.30	22.32	160.44	-195.87	-152.50	708.51	676.71	31.80	22.281				
6,500.00	6,458.26	6,439.83	6,432.58	24.72	22.68	160.42	-200.92	-155.78	725.27	692.96	32.31	22.444				
6,600.00	6,557.25	6,538.42	6,530.98	25.14	23.04	160.39	-205.96	-159.07	742.03	709.20	32.83	22.602				
6,700.00	6,656.24	6,637.00	6,629.39	25.55	23.40	160.37	-211.01	-162.36	758.79	725.44	33.35	22.754				
6,800.00	6,755.23	6,737.66	6,729.86	25.97	23.77	160.35	-216.12	-165.69	775.53	741.65	33.87	22.895				
6,837.97	6,792.81	6,779.98	6,772.12	26.13	23.92	160.37	-217.92	-166.86	781.67	747.58	34.09	22.928				
6,900.00	6,854.29	6,849.36	6,841.46	26.39	24.17	160.49	-220.02	-168.23	790.74	756.29	34.45	22.955				
7,000.00	6,953.65	6,960.77	6,952.85	26.79	24.56	160.77	-221.20	-169.00	802.07	767.07	35.00	22.917				
7,100.00	7,053.27	7,060.39	7,052.47	27.17	24.90	161.01	-221.20	-169.00	810.25	774.75	35.49	22.829				
7,200.00	7,153.09	7,160.20	7,152.29	27.53	25.24	161.17	-221.20	-169.00	815.96	779.98	35.98	22.676				
7,300.00	7,253.03	7,260.14	7,252.23	27.88	25.57	161.27	-221.20	-169.00	819.21	782.74	36.47	22.461				
7,380.98	7,334.00	7,341.12	7,333.20	28.15	25.85	-90.43	-221.20	-169.00	820.02	783.16	36.86	22.245				
7,400.00	7,353.02	7,360.13	7,352.22	28.21	25.91	-90.43	-221.20	-169.00	820.02	783.07	36.95	22.190				
7,500.00	7,453.02	7,460.13	7,452.22	28.53	26.25	-90.43	-221.20	-169.00	820.02	782.59	37.43	21.907				
7,600.00	7,553.02	7,560.13	7,552.22	28.85	26.59	-90.43	-221.20	-169.00	820.02	782.11	37.91	21.630				
7,700.00	7,653.02	7,660.13	7,652.22	29.17	26.94	-90.43	-221.20	-169.00	820.02	781.63	38.39	21.360				
7,800.00	7,753.02	7,760.13	7,752.22	29.49	27.28	-90.43	-221.20	-169.00	820.02	781.15	38.87	21.096				
7,900.00	7,853.02	7,860.13	7,852.22	29.81	27.62	-90.43	-221.20	-169.00	820.02	780.67	39.35	20.839				
8,000.00	7,953.02	7,960.13	7,952.22	30.13	27.96	-90.43	-221.20	-169.00	820.02	780.19	39.83	20.587				
8,100.00	8,053.02	8,060.13	8,052.22	30.46	28.30	-90.43	-221.20	-169.00	820.02	779.71	40.31	20.341				
8,200.00	8,153.02	8,160.13	8,152.22	30.78	28.65	-90.43	-221.20	-169.00	820.02	779.23	40.80	20.100				
8,300.00	8,253.02	8,260.13	8,252.22	31.11	28.99	-90.43	-221.20	-169.00	820.02	778.74	41.28	19.865				
8,400.00	8,353.02	8,360.13	8,352.22	31.43	29.33	-90.43	-221.20	-169.00	820.02	778.26	41.76	19.635				
8,500.00	8,453.02	8,460.13	8,452.22	31.76	29.68	-90.43	-221.20	-169.00	820.02	777.78	42.25	19.410				
8,600.00	8,553.02	8,560.13	8,552.22	32.09	30.02	-90.43	-221.20	-169.00	820.02	777.29	42.73	19.190				
8,700.00	8,653.02	8,660.13	8,652.22	32.42	30.37	-90.43	-221.20	-169.00	820.02	776.81	43.22	18.974				
8,800.00	8,753.02	8,760.13	8,752.22	32.74	30.71	-90.43	-221.20	-169.00	820.02	776.32	43.70	18.763				
8,900.00	8,853.02	8,860.13	8,852.22	33.07	31.06	-90.43	-221.20	-169.00	820.02	775.83	44.19	18.557				
9,000.00	8,953.02	8,960.13	8,952.22	33.40	31.40	-90.43	-221.20	-169.00	820.02	775.35	44.68	18.355				
9,100.00	9,053.02	9,060.13	9,052.22	33.73	31.75	-90.43	-221.20	-169.00	820.02	774.86	45.16	18.157				
9,200.00	9,153.02	9,160.13	9,152.22	34.07	32.10	-90.43	-221.20	-169.00	820.02	774.37	45.65	17.963				
9,300.00	9,253.02	9,260.13	9,252.22	34.40	32.44	-90.43	-221.20	-169.00	820.02	773.88	46.14	17.773				
9,400.00	9,353.02	9,360.14	9,352.22	34.73	32.79	-90.43	-221.20	-169.00	820.02	773.40	46.63	17.587				
9,500.00	9,453.02	9,460.14	9,452.22	35.06	33.14	-90.43	-221.20	-169.00	820.02	772.91	47.12	17.404				
9,600.00	9,553.02	9,560.14	9,552.22	35.39	33.48	-90.43	-221.20	-169.00	820.02	772.42	47.61	17.225				
9,700.00	9,653.02	9,660.14	9,652.22	35.73	33.83	-90.43	-221.20	-169.00	820.02	771.93	48.10	17.050				
9,800.00	9,753.02	9,760.14	9,752.22	36.06	34.18	-90.43	-221.20	-169.00	820.02	771.44	48.59	16.878				
9,900.00	9,853.02	9,860.14	9,852.22	36.40	34.53	-90.43	-221.20	-169.00	820.02	770.95	49.08	16.709				
10,000.00	9,953.02	9,960.14	9,952.22	36.73	34.87	-90.43	-221.20	-169.00	820.02	770.46	49.57	16.544				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,053.02	10,060.14	10,052.22	37.07	35.22	-90.43	-221.20	-169.00	820.02	769.97	50.06	16.382		
10,200.00	10,153.02	10,160.14	10,152.22	37.40	35.57	-90.43	-221.20	-169.00	820.02	769.48	50.55	16.223		
10,300.00	10,253.02	10,260.14	10,252.22	37.74	35.92	-90.43	-221.20	-169.00	820.02	768.98	51.04	16.066		
10,400.00	10,353.02	10,360.14	10,352.22	38.08	36.27	-90.43	-221.20	-169.00	820.02	768.49	51.53	15.913		
10,500.00	10,453.02	10,460.14	10,452.22	38.41	36.62	-90.43	-221.20	-169.00	820.02	768.00	52.02	15.762		
10,600.00	10,553.02	10,560.14	10,552.22	38.75	36.97	-90.43	-221.20	-169.00	820.02	767.51	52.52	15.615		
10,700.00	10,653.02	10,660.14	10,652.22	39.09	37.32	-90.43	-221.20	-169.00	820.02	767.01	53.01	15.470		
10,800.00	10,753.02	10,760.14	10,752.22	39.43	37.67	-90.43	-221.20	-169.00	820.02	766.52	53.50	15.327		
10,900.00	10,853.02	10,860.14	10,852.22	39.77	38.02	-90.43	-221.20	-169.00	820.02	766.03	54.00	15.187		
11,000.00	10,953.02	10,960.14	10,952.22	40.10	38.37	-90.43	-221.20	-169.00	820.02	765.53	54.49	15.049		
11,100.00	11,053.02	11,060.14	11,052.22	40.44	38.72	-90.43	-221.20	-169.00	820.02	765.04	54.98	14.914		
11,200.00	11,153.02	11,160.14	11,152.22	40.78	39.07	-90.43	-221.20	-169.00	820.02	764.55	55.48	14.782		
11,300.00	11,253.02	11,260.14	11,252.22	41.12	39.42	-90.43	-221.20	-169.00	820.02	764.05	55.97	14.651		
11,400.00	11,353.02	11,360.14	11,352.22	41.46	39.77	-90.43	-221.20	-169.00	820.02	763.56	56.46	14.523		
11,500.00	11,453.02	11,460.14	11,452.22	41.80	40.12	-90.43	-221.20	-169.00	820.02	763.06	56.96	14.397		
11,566.02	11,519.04	11,526.16	11,518.24	42.03	40.35	-90.43	-221.20	-169.00	820.02	762.74	57.29	14.315		
11,600.00	11,553.00	11,560.12	11,552.20	42.14	40.47	-89.96	-221.20	-169.00	820.02	762.57	57.45	14.273		
11,607.95	11,560.93	11,568.05	11,560.13	42.17	40.50	-90.00	-221.20	-169.00	820.02	762.53	57.49	14.263		
11,650.00	11,602.72	11,609.83	11,601.92	42.31	40.64	-90.32	-221.20	-169.00	820.03	762.34	57.70	14.212		
11,700.00	11,651.80	11,659.91	11,651.95	42.46	40.82	-90.86	-219.51	-169.02	820.12	762.18	57.94	14.155		
11,750.00	11,699.87	11,710.75	11,702.40	42.61	40.99	-91.39	-213.38	-169.07	820.27	762.10	58.18	14.100		
11,800.00	11,746.57	11,762.32	11,752.82	42.75	41.15	-91.93	-202.61	-169.18	820.50	762.09	58.40	14.049		
11,850.00	11,791.53	11,814.65	11,802.77	42.87	41.31	-92.45	-187.09	-169.32	820.79	762.17	58.62	14.002		
11,900.00	11,834.42	11,867.74	11,851.80	42.98	41.46	-92.95	-166.77	-169.51	821.13	762.31	58.82	13.959		
11,950.00	11,874.92	11,921.59	11,899.39	43.08	41.61	-93.44	-141.60	-169.75	821.53	762.51	59.02	13.920		
12,000.00	11,912.70	11,976.21	11,945.02	43.17	41.74	-93.90	-111.63	-170.03	821.95	762.75	59.20	13.884		
12,050.00	11,947.48	12,031.57	11,988.15	43.24	41.87	-94.33	-76.96	-170.36	822.40	763.02	59.38	13.851		
12,100.00	11,979.01	12,087.65	12,028.23	43.29	41.99	-94.73	-37.77	-170.73	822.85	763.31	59.54	13.820		
12,150.00	12,007.03	12,144.40	12,064.69	43.34	42.12	-95.09	5.69	-171.14	823.29	763.59	59.70	13.791		
12,200.00	12,031.34	12,201.77	12,096.99	43.37	42.24	-95.40	53.07	-171.58	823.71	763.85	59.85	13.762		
12,250.00	12,051.76	12,259.69	12,124.64	43.40	42.38	-95.68	103.94	-172.06	824.08	764.07	60.01	13.733		
12,300.00	12,068.11	12,318.09	12,147.17	43.43	42.51	-95.90	157.78	-172.57	824.40	764.23	60.16	13.702		
12,350.00	12,080.29	12,376.87	12,164.20	43.46	42.66	-96.07	214.01	-173.10	824.65	764.32	60.33	13.669		
12,400.00	12,088.20	12,435.92	12,175.42	43.51	42.80	-96.18	271.96	-173.64	824.82	764.31	60.50	13.633		
12,450.00	12,091.77	12,495.16	12,180.62	43.58	42.95	-96.24	330.94	-174.20	824.91	764.22	60.69	13.592		
12,466.02	12,092.00	12,514.15	12,181.00	43.60	43.00	-96.25	349.93	-174.38	824.92	764.17	60.75	13.579		
12,500.00	12,092.00	12,548.41	12,181.00	43.67	43.09	-96.25	384.19	-174.70	824.92	764.04	60.88	13.550		
12,600.00	12,092.00	12,648.41	12,181.00	43.93	43.40	-96.25	484.18	-175.64	824.92	763.61	61.30	13.457		
12,700.00	12,092.00	12,748.41	12,181.00	44.27	43.77	-96.25	584.18	-176.58	824.91	763.11	61.81	13.347		
12,800.00	12,092.00	12,848.41	12,181.00	44.68	44.19	-96.25	684.18	-177.53	824.91	762.52	62.40	13.221		
12,900.00	12,092.00	12,948.41	12,181.00	45.15	44.68	-96.25	784.17	-178.47	824.91	761.85	63.07	13.080		
13,000.00	12,092.00	13,048.41	12,181.00	45.68	45.21	-96.25	884.17	-179.41	824.91	761.10	63.81	12.927		
13,100.00	12,092.00	13,148.41	12,181.00	46.26	45.80	-96.25	984.16	-180.35	824.91	760.27	64.63	12.763		
13,200.00	12,092.00	13,248.41	12,181.00	46.89	46.44	-96.25	1,084.16	-181.29	824.91	759.38	65.53	12.589		
13,300.00	12,092.00	13,348.41	12,181.00	47.57	47.13	-96.25	1,184.15	-182.23	824.91	758.42	66.49	12.406		
13,400.00	12,092.00	13,448.41	12,181.00	48.30	47.87	-96.25	1,284.15	-183.17	824.90	757.38	67.52	12.217		
13,500.00	12,092.00	13,548.41	12,181.00	49.06	48.65	-96.25	1,384.14	-184.12	824.90	756.29	68.61	12.022		
13,600.00	12,092.00	13,648.41	12,181.00	49.88	49.48	-96.25	1,484.14	-185.06	824.90	755.14	69.77	11.824		
13,700.00	12,092.00	13,748.41	12,181.00	50.73	50.34	-96.25	1,584.14	-186.00	824.90	753.92	70.98	11.622		
13,800.00	12,092.00	13,848.41	12,181.00	51.62	51.25	-96.25	1,684.13	-186.94	824.90	752.66	72.24	11.418		
13,900.00	12,092.00	13,948.41	12,181.00	52.54	52.19	-96.25	1,784.13	-187.88	824.90	751.34	73.56	11.214		
14,000.00	12,092.00	14,048.41	12,181.00	53.51	53.16	-96.25	1,884.12	-188.82	824.90	749.97	74.93	11.009		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	12,092.00	14,148.41	12,181.00	54.50	54.17	-96.25	1,984.12	-189.77	824.90	748.56	76.34	10.806		
14,200.00	12,092.00	14,248.41	12,181.00	55.52	55.21	-96.25	2,084.11	-190.71	824.89	747.10	77.79	10.603		
14,300.00	12,092.00	14,348.41	12,181.00	56.58	56.28	-96.25	2,184.11	-191.65	824.89	745.60	79.29	10.403		
14,400.00	12,092.00	14,448.41	12,181.00	57.66	57.38	-96.25	2,284.10	-192.59	824.89	744.06	80.83	10.205		
14,500.00	12,092.00	14,548.41	12,181.00	58.77	58.50	-96.25	2,384.10	-193.53	824.89	742.49	82.40	10.011		
14,600.00	12,092.00	14,648.41	12,181.00	59.90	59.64	-96.25	2,484.10	-194.47	824.89	740.88	84.01	9.819		
14,700.00	12,092.00	14,748.41	12,181.00	61.06	60.81	-96.25	2,584.09	-195.42	824.89	739.24	85.65	9.631		
14,800.00	12,092.00	14,848.41	12,181.00	62.24	62.01	-96.25	2,684.09	-196.36	824.89	737.56	87.32	9.446		
14,900.00	12,092.00	14,948.41	12,181.00	63.44	63.22	-96.25	2,784.08	-197.30	824.89	735.86	89.03	9.266		
15,000.00	12,092.00	15,048.41	12,181.00	64.66	64.45	-96.25	2,884.08	-198.24	824.88	734.13	90.76	9.089		
15,100.00	12,092.00	15,148.41	12,181.00	65.90	65.70	-96.25	2,984.07	-199.18	824.88	732.37	92.51	8.917		
15,200.00	12,092.00	15,248.41	12,181.00	67.16	66.97	-96.25	3,084.07	-200.12	824.88	730.59	94.29	8.748		
15,300.00	12,092.00	15,348.41	12,181.00	68.43	68.26	-96.25	3,184.06	-201.06	824.88	728.78	96.10	8.584		
15,400.00	12,092.00	15,448.41	12,181.00	69.72	69.56	-96.25	3,284.06	-202.01	824.88	726.96	97.92	8.424		
15,500.00	12,092.00	15,548.41	12,181.00	71.02	70.87	-96.25	3,384.06	-202.95	824.88	725.11	99.77	8.268		
15,600.00	12,092.00	15,648.41	12,181.00	72.34	72.20	-96.25	3,484.05	-203.89	824.88	723.24	101.63	8.116		
15,700.00	12,092.00	15,748.41	12,181.00	73.67	73.54	-96.25	3,584.05	-204.83	824.87	721.36	103.52	7.969		
15,800.00	12,092.00	15,848.41	12,181.00	75.02	74.90	-96.25	3,684.04	-205.77	824.87	719.46	105.42	7.825		
15,900.00	12,092.00	15,948.41	12,181.00	76.37	76.26	-96.25	3,784.04	-206.71	824.87	717.54	107.34	7.685		
16,000.00	12,092.00	16,048.41	12,181.00	77.74	77.64	-96.25	3,884.03	-207.66	824.87	715.60	109.27	7.549		
16,100.00	12,092.00	16,148.41	12,181.00	79.12	79.03	-96.25	3,984.03	-208.60	824.87	713.65	111.22	7.417		
16,200.00	12,092.00	16,248.41	12,181.00	80.51	80.43	-96.25	4,084.02	-209.54	824.87	711.69	113.18	7.288		
16,300.00	12,092.00	16,348.41	12,181.00	81.91	81.83	-96.25	4,184.02	-210.48	824.87	709.71	115.16	7.163		
16,400.00	12,092.00	16,448.41	12,181.00	83.31	83.25	-96.25	4,284.02	-211.42	824.87	707.72	117.15	7.041		
16,500.00	12,092.00	16,548.41	12,181.00	84.73	84.67	-96.25	4,384.01	-212.36	824.86	705.72	119.15	6.923		
16,600.00	12,092.00	16,648.41	12,181.00	86.16	86.11	-96.25	4,484.01	-213.31	824.86	703.70	121.16	6.808		
16,700.00	12,092.00	16,748.41	12,181.00	87.59	87.55	-96.25	4,584.00	-214.25	824.86	701.68	123.18	6.696		
16,800.00	12,092.00	16,848.41	12,181.00	89.03	88.99	-96.25	4,684.00	-215.19	824.86	699.64	125.22	6.587		
16,900.00	12,092.00	16,948.41	12,181.00	90.48	90.45	-96.25	4,783.99	-216.13	824.86	697.60	127.26	6.482		
17,000.00	12,092.00	17,048.41	12,181.00	91.93	91.91	-96.25	4,883.99	-217.07	824.86	695.54	129.32	6.379		
17,100.00	12,092.00	17,148.41	12,181.00	93.39	93.38	-96.25	4,983.98	-218.01	824.86	693.48	131.38	6.279		
17,200.00	12,092.00	17,248.41	12,181.00	94.86	94.85	-96.25	5,083.98	-218.95	824.86	691.41	133.45	6.181		
17,300.00	12,092.00	17,348.41	12,181.00	96.33	96.33	-96.25	5,183.98	-219.90	824.85	689.33	135.53	6.086		
17,400.00	12,092.00	17,448.41	12,181.00	97.81	97.82	-96.25	5,283.97	-220.84	824.85	687.24	137.61	5.994		
17,500.00	12,092.00	17,548.41	12,181.00	99.30	99.31	-96.25	5,383.97	-221.78	824.85	685.14	139.71	5.904		
17,600.00	12,092.00	17,648.41	12,181.00	100.79	100.81	-96.25	5,483.96	-222.72	824.85	683.04	141.81	5.817		
17,700.00	12,092.00	17,748.41	12,181.00	102.28	102.31	-96.25	5,583.96	-223.66	824.85	680.93	143.92	5.731		
17,800.00	12,092.00	17,848.41	12,181.00	103.78	103.81	-96.25	5,683.95	-224.60	824.85	678.82	146.03	5.648		
17,900.00	12,092.00	17,948.41	12,181.00	105.29	105.32	-96.25	5,783.95	-225.55	824.85	676.70	148.15	5.568		
18,000.00	12,092.00	18,048.41	12,181.00	106.80	106.83	-96.25	5,883.94	-226.49	824.85	674.57	150.28	5.489		
18,100.00	12,092.00	18,148.41	12,181.00	108.31	108.35	-96.25	5,983.94	-227.43	824.84	672.43	152.41	5.412		
18,200.00	12,092.00	18,248.41	12,181.00	109.83	109.87	-96.25	6,083.94	-228.37	824.84	670.30	154.55	5.337		
18,300.00	12,092.00	18,348.41	12,181.00	111.35	111.40	-96.25	6,183.93	-229.31	824.84	668.15	156.69	5.264		
18,400.00	12,092.00	18,448.41	12,181.00	112.87	112.93	-96.25	6,283.93	-230.25	824.84	666.00	158.84	5.193		
18,500.00	12,092.00	18,548.41	12,181.00	114.40	114.46	-96.25	6,383.92	-231.20	824.84	663.85	160.99	5.124		
18,600.00	12,092.00	18,648.41	12,181.00	115.93	116.00	-96.25	6,483.92	-232.14	824.84	661.69	163.15	5.056		
18,700.00	12,092.00	18,748.41	12,181.00	117.46	117.54	-96.25	6,583.91	-233.08	824.84	659.53	165.31	4.990		
18,800.00	12,092.00	18,848.41	12,181.00	119.00	119.08	-96.25	6,683.91	-234.02	824.83	657.36	167.47	4.925		
18,900.00	12,092.00	18,948.41	12,181.00	120.54	120.62	-96.25	6,783.90	-234.96	824.83	655.19	169.64	4.862		
19,000.00	12,092.00	19,048.41	12,181.00	122.09	122.17	-96.25	6,883.90	-235.90	824.83	653.01	171.82	4.801		
19,100.00	12,092.00	19,148.41	12,181.00	123.63	123.72	-96.25	6,983.90	-236.84	824.83	650.83	174.00	4.741		
19,200.00	12,092.00	19,248.41	12,181.00	125.18	125.27	-96.25	7,083.89	-237.79	824.83	648.65	176.18	4.682		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,300.00	12,092.00	19,348.41	12,181.00	126.73	126.83	-96.25	7,183.89	-238.73	824.83	646.47	178.36	4.624		
19,400.00	12,092.00	19,448.41	12,181.00	128.29	128.39	-96.25	7,283.88	-239.67	824.83	644.28	180.55	4.568		
19,500.00	12,092.00	19,548.41	12,181.00	129.84	129.95	-96.25	7,383.88	-240.61	824.83	642.08	182.74	4.514		
19,600.00	12,092.00	19,648.41	12,181.00	131.40	131.51	-96.25	7,483.87	-241.55	824.82	639.89	184.94	4.460		
19,700.00	12,092.00	19,748.41	12,181.00	132.96	133.07	-96.25	7,583.87	-242.49	824.82	637.69	187.13	4.408		
19,800.00	12,092.00	19,848.41	12,181.00	134.53	134.64	-96.25	7,683.87	-243.44	824.82	635.49	189.33	4.356		
19,900.00	12,092.00	19,948.41	12,181.00	136.09	136.21	-96.25	7,783.86	-244.38	824.82	633.28	191.54	4.306		
20,000.00	12,092.00	20,048.41	12,181.00	137.66	137.78	-96.25	7,883.86	-245.32	824.82	631.08	193.74	4.257		
20,100.00	12,092.00	20,148.41	12,181.00	139.23	139.35	-96.25	7,983.85	-246.26	824.82	628.87	195.95	4.209		
20,200.00	12,092.00	20,248.41	12,181.00	140.80	140.93	-96.25	8,083.85	-247.20	824.82	626.65	198.16	4.162		
20,300.00	12,092.00	20,348.41	12,181.00	142.37	142.50	-96.25	8,183.84	-248.14	824.82	624.44	200.38	4.116		
20,400.00	12,092.00	20,448.41	12,181.00	143.95	144.08	-96.25	8,283.84	-249.09	824.81	622.22	202.59	4.071		
20,500.00	12,092.00	20,548.41	12,181.00	145.53	145.66	-96.25	8,383.83	-250.03	824.81	620.00	204.81	4.027		
20,600.00	12,092.00	20,648.41	12,181.00	147.10	147.24	-96.25	8,483.83	-250.97	824.81	617.78	207.03	3.984		
20,700.00	12,092.00	20,748.41	12,181.00	148.68	148.83	-96.25	8,583.83	-251.91	824.81	615.56	209.25	3.942		
20,800.00	12,092.00	20,848.41	12,181.00	150.27	150.41	-96.25	8,683.82	-252.85	824.81	613.33	211.48	3.900		
20,900.00	12,092.00	20,948.41	12,181.00	151.85	152.00	-96.25	8,783.82	-253.79	824.81	611.10	213.70	3.860		
21,000.00	12,092.00	21,048.41	12,181.00	153.43	153.58	-96.25	8,883.81	-254.73	824.81	608.87	215.93	3.820		
21,100.00	12,092.00	21,148.41	12,181.00	155.02	155.17	-96.25	8,983.81	-255.68	824.80	606.64	218.16	3.781		
21,200.00	12,092.00	21,248.41	12,181.00	156.61	156.76	-96.25	9,083.80	-256.62	824.80	604.41	220.39	3.742		
21,300.00	12,092.00	21,348.41	12,181.00	158.19	158.35	-96.25	9,183.80	-257.56	824.80	602.18	222.63	3.705		
21,400.00	12,092.00	21,448.41	12,181.00	159.78	159.94	-96.25	9,283.79	-258.50	824.80	599.94	224.86	3.668		
21,500.00	12,092.00	21,548.41	12,181.00	161.38	161.54	-96.25	9,383.79	-259.44	824.80	597.70	227.10	3.632		
21,600.00	12,092.00	21,648.41	12,181.00	162.97	163.13	-96.25	9,483.79	-260.38	824.80	595.46	229.34	3.596		
21,700.00	12,092.00	21,748.41	12,181.00	164.56	164.73	-96.25	9,583.78	-261.33	824.80	593.22	231.58	3.562		
21,800.00	12,092.00	21,848.41	12,181.00	166.16	166.32	-96.25	9,683.78	-262.27	824.80	590.98	233.82	3.528		
21,900.00	12,092.00	21,948.41	12,181.00	167.75	167.92	-96.25	9,783.77	-263.21	824.79	588.73	236.06	3.494		
22,000.00	12,092.00	22,048.41	12,181.00	169.35	169.52	-96.25	9,883.77	-264.15	824.79	586.49	238.31	3.461		
22,100.00	12,092.00	22,148.41	12,181.00	170.95	171.12	-96.25	9,983.76	-265.09	824.79	584.24	240.55	3.429		
22,200.00	12,092.00	22,248.41	12,181.00	172.55	172.72	-96.25	10,083.76	-266.03	824.79	581.99	242.80	3.397		
22,255.91	12,092.00	22,304.33	12,181.00	173.44	173.62	-96.25	10,139.67	-266.56	824.79	580.74	244.05	3.380		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 806H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	89.54	0.20	24.99	24.99					
100.00	100.00	99.90	99.90	0.13	0.13	89.54	0.20	24.99	24.99	24.81	0.18	140.916		
200.00	200.00	199.90	199.90	0.48	0.48	89.54	0.20	24.99	24.99	24.31	0.68	36.529		
300.00	300.00	299.90	299.90	0.84	0.84	89.54	0.20	24.99	24.99	23.80	1.19	20.981		
400.00	400.00	399.90	399.90	1.20	1.20	89.54	0.20	24.99	24.99	23.29	1.70	14.717		
500.00	500.00	499.90	499.90	1.56	1.56	89.54	0.20	24.99	24.99	22.79	2.21	11.334		
600.00	600.00	599.90	599.90	1.92	1.92	89.54	0.20	24.99	24.99	22.28	2.71	9.215		
700.00	700.00	699.90	699.90	2.28	2.28	89.54	0.20	24.99	24.99	21.77	3.22	7.764		
800.00	800.00	799.90	799.90	2.63	2.63	89.54	0.20	24.99	24.99	21.26	3.73	6.707		
900.00	900.00	899.90	899.90	2.99	2.99	89.54	0.20	24.99	24.99	20.76	4.23	5.904		
1,000.00	1,000.00	999.90	999.90	3.35	3.35	89.54	0.20	24.99	24.99	20.25	4.74	5.273		
1,100.00	1,100.00	1,099.90	1,099.90	3.71	3.71	89.54	0.20	24.99	24.99	19.74	5.25	4.763		
1,200.00	1,200.00	1,199.90	1,199.90	4.07	4.07	89.54	0.20	24.99	24.99	19.24	5.75	4.343		
1,300.00	1,300.00	1,299.90	1,299.90	4.43	4.43	89.54	0.20	24.99	24.99	18.73	6.26	3.992		
1,400.00	1,400.00	1,399.90	1,399.90	4.79	4.79	89.54	0.20	24.99	24.99	18.22	6.77	3.693		
1,500.00	1,500.00	1,499.90	1,499.90	5.14	5.14	89.54	0.20	24.99	24.99	17.72	7.27	3.435		
1,600.00	1,600.00	1,599.90	1,599.90	5.50	5.50	89.54	0.20	24.99	24.99	17.21	7.78	3.212 CC, ES, SF		
1,700.00	1,700.00	1,699.00	1,698.99	5.86	5.85	90.05	-0.02	26.69	26.70	18.43	8.27	3.227		
1,800.00	1,800.00	1,797.87	1,797.71	6.22	6.19	91.23	-0.68	31.76	31.85	23.10	8.75	3.640		
1,900.00	1,900.00	1,896.27	1,895.74	6.58	6.53	92.54	-1.78	40.17	40.42	31.21	9.22	4.386		
2,000.00	2,000.00	1,993.97	1,992.73	6.94	6.87	93.64	-3.30	51.81	52.41	42.74	9.67	5.420		
2,100.00	2,099.99	2,090.96	2,088.56	7.28	7.23	-14.00	-5.23	66.60	66.51	56.41	10.10	6.583		
2,200.00	2,199.91	2,187.36	2,183.25	7.62	7.59	-13.88	-7.57	84.49	81.44	70.92	10.52	7.742		
2,300.00	2,299.69	2,283.14	2,276.68	7.96	7.97	-14.05	-10.29	105.37	97.16	86.24	10.92	8.895		
2,400.00	2,399.27	2,378.27	2,368.73	8.31	8.37	-14.36	-13.40	129.17	113.67	102.35	11.32	10.041		
2,500.00	2,498.57	2,472.74	2,459.30	8.66	8.79	-14.76	-16.87	155.79	130.94	119.23	11.71	11.184		
2,543.01	2,541.19	2,513.17	2,497.78	8.81	8.97	-14.95	-18.48	168.09	138.59	126.72	11.87	11.674		
2,600.00	2,597.60	2,568.53	2,550.28	9.02	9.24	-15.22	-20.75	185.50	149.06	136.92	12.14	12.280		
2,700.00	2,696.59	2,666.81	2,643.46	9.38	9.72	-15.63	-24.79	216.48	167.49	154.85	12.64	13.251		
2,800.00	2,795.58	2,765.09	2,736.65	9.75	10.23	-15.95	-28.84	247.46	185.93	172.78	13.15	14.143		
2,900.00	2,894.57	2,863.37	2,829.83	10.12	10.74	-16.22	-32.88	278.43	204.37	190.71	13.66	14.965		
3,000.00	2,993.56	2,961.65	2,923.02	10.50	11.27	-16.44	-36.92	309.41	222.81	208.64	14.17	15.724		
3,100.00	3,092.55	3,059.93	3,016.20	10.88	11.81	-16.63	-40.96	340.38	241.26	226.57	14.69	16.425		
3,200.00	3,191.55	3,158.21	3,109.38	11.27	12.36	-16.79	-45.01	371.36	259.71	244.50	15.21	17.076		
3,300.00	3,290.54	3,256.49	3,202.57	11.65	12.92	-16.93	-49.05	402.33	278.17	262.43	15.73	17.680		
3,400.00	3,389.53	3,354.77	3,295.75	12.04	13.49	-17.05	-53.09	433.31	296.62	280.36	16.26	18.242		
3,500.00	3,488.52	3,453.05	3,388.94	12.44	14.06	-17.16	-57.14	464.28	315.07	298.29	16.79	18.767		
3,600.00	3,587.51	3,551.33	3,482.12	12.83	14.63	-17.25	-61.18	495.26	333.53	316.21	17.32	19.256		
3,700.00	3,686.50	3,649.61	3,575.30	13.23	15.21	-17.34	-65.22	526.23	351.99	334.13	17.85	19.715		
3,800.00	3,785.49	3,747.89	3,668.49	13.62	15.80	-17.42	-69.26	557.21	370.44	352.06	18.39	20.145		
3,900.00	3,884.48	3,846.17	3,761.67	14.02	16.39	-17.49	-73.31	588.19	388.90	369.98	18.93	20.549		
4,000.00	3,983.48	3,944.46	3,854.86	14.43	16.98	-17.55	-77.35	619.16	407.36	387.90	19.46	20.929		
4,100.00	4,082.47	4,042.74	3,948.04	14.83	17.58	-17.61	-81.39	650.14	425.82	405.82	20.00	21.287		
4,200.00	4,181.46	4,141.02	4,041.22	15.23	18.18	-17.66	-85.44	681.11	444.28	423.73	20.55	21.624		
4,300.00	4,280.45	4,239.30	4,134.41	15.64	18.78	-17.71	-89.48	712.09	462.74	441.65	21.09	21.943		
4,400.00	4,379.44	4,337.58	4,227.59	16.04	19.39	-17.76	-93.52	743.06	481.20	459.57	21.63	22.245		
4,500.00	4,478.43	4,435.86	4,320.78	16.45	19.99	-17.80	-97.56	774.04	499.66	477.48	22.18	22.531		
4,600.00	4,577.42	4,534.14	4,413.96	16.86	20.60	-17.84	-101.61	805.01	518.12	495.40	22.72	22.802		
4,700.00	4,676.41	4,632.42	4,507.15	17.27	21.21	-17.87	-105.65	835.99	536.58	513.31	23.27	23.060		
4,800.00	4,775.40	4,730.70	4,600.33	17.68	21.82	-17.91	-109.69	866.96	555.04	531.22	23.82	23.305		
4,900.00	4,874.40	4,828.98	4,693.51	18.09	22.43	-17.94	-113.73	897.94	573.50	549.14	24.36	23.538		
5,000.00	4,973.39	4,927.26	4,786.70	18.50	23.05	-17.97	-117.78	928.91	591.96	567.05	24.91	23.761		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,072.38	5,025.54	4,879.88	18.91	23.66	-18.00	-121.82	959.89	610.42	584.96	25.46	23.973		
5,200.00	5,171.37	5,123.82	4,973.07	19.32	24.28	-18.02	-125.86	990.87	628.88	602.87	26.01	24.175		
5,300.00	5,270.36	5,222.10	5,066.25	19.73	24.90	-18.05	-129.91	1,021.84	647.35	620.78	26.56	24.369		
5,400.00	5,369.35	5,320.39	5,159.43	20.15	25.52	-18.07	-133.95	1,052.82	665.81	638.69	27.12	24.554		
5,500.00	5,468.34	5,418.67	5,252.62	20.56	26.14	-18.09	-137.99	1,083.79	684.27	656.60	27.67	24.731		
5,600.00	5,567.33	5,516.95	5,345.80	20.97	26.76	-18.11	-142.03	1,114.77	702.73	674.51	28.22	24.900		
5,700.00	5,666.33	5,615.23	5,438.99	21.39	27.38	-18.13	-146.08	1,145.74	721.19	692.42	28.78	25.063		
5,800.00	5,765.32	5,713.51	5,532.17	21.80	28.00	-18.15	-150.12	1,176.72	739.65	710.33	29.33	25.219		
5,900.00	5,864.31	5,811.79	5,625.35	22.22	28.62	-18.17	-154.16	1,207.69	758.12	728.23	29.88	25.369		
6,000.00	5,963.30	5,910.07	5,718.54	22.64	29.25	-18.19	-158.21	1,238.67	776.58	746.14	30.44	25.513		
6,100.00	6,062.29	6,008.35	5,811.72	23.05	29.87	-18.20	-162.25	1,269.64	795.04	764.05	30.99	25.652		
6,200.00	6,161.28	6,106.63	5,904.91	23.47	30.50	-18.22	-166.29	1,300.62	813.50	781.95	31.55	25.786		
6,300.00	6,260.27	6,204.91	5,998.09	23.88	31.12	-18.23	-170.33	1,331.60	831.97	799.86	32.10	25.914		
6,400.00	6,359.26	6,303.19	6,091.28	24.30	31.75	-18.25	-174.38	1,362.57	850.43	817.77	32.66	26.038		
6,500.00	6,458.26	6,401.47	6,184.46	24.72	32.37	-18.26	-178.42	1,393.55	868.89	835.67	33.22	26.158		
6,600.00	6,557.25	6,499.75	6,277.64	25.14	33.00	-18.28	-182.46	1,424.52	887.35	853.58	33.77	26.273		
6,700.00	6,656.24	6,598.03	6,370.83	25.55	33.63	-18.29	-186.51	1,455.50	905.82	871.48	34.33	26.384		
6,800.00	6,755.23	6,730.26	6,466.80	25.97	34.44	-18.32	-191.70	1,495.31	922.95	887.82	35.13	26.270		
6,837.97	6,792.81	6,785.56	6,550.00	26.13	34.76	-18.35	-193.66	1,510.29	928.22	892.77	35.46	26.180		
6,900.00	6,854.29	6,876.42	6,638.00	26.39	35.26	-18.43	-196.58	1,532.69	935.76	899.81	35.95	26.026		
7,000.00	6,953.65	7,023.90	6,782.24	26.79	35.98	-18.55	-200.55	1,563.11	945.82	909.13	36.69	25.782		
7,100.00	7,053.27	7,172.39	6,928.86	27.17	36.61	-18.64	-203.57	1,586.27	953.25	915.94	37.32	25.545		
7,200.00	7,153.09	7,321.58	7,077.20	27.53	37.16	-18.71	-205.62	1,601.92	958.02	920.18	37.84	25.315		
7,300.00	7,253.03	7,471.17	7,226.55	27.88	37.61	-18.75	-206.66	1,609.90	960.11	921.84	38.27	25.090		
7,380.98	7,334.00	7,578.53	7,333.90	28.15	37.88	89.51	-206.80	1,610.99	960.03	921.45	38.57	24.890		
7,400.00	7,353.02	7,597.55	7,352.92	28.21	37.93	89.51	-206.80	1,610.99	960.03	921.37	38.66	24.835		
7,500.00	7,453.02	7,697.55	7,452.92	28.53	38.17	89.51	-206.80	1,610.99	960.03	920.91	39.11	24.547		
7,600.00	7,553.02	7,797.55	7,552.92	28.85	38.41	89.51	-206.80	1,610.99	960.03	920.46	39.57	24.264		
7,700.00	7,653.02	7,897.55	7,652.92	29.17	38.66	89.51	-206.80	1,610.99	960.03	920.00	40.02	23.988		
7,800.00	7,753.02	7,997.55	7,752.92	29.49	38.90	89.51	-206.80	1,610.99	960.03	919.55	40.48	23.717		
7,900.00	7,853.02	8,097.55	7,852.92	29.81	39.15	89.51	-206.80	1,610.99	960.03	919.09	40.94	23.451		
8,000.00	7,953.02	8,197.55	7,952.92	30.13	39.40	89.51	-206.80	1,610.99	960.03	918.63	41.40	23.190		
8,100.00	8,053.02	8,297.55	8,052.92	30.46	39.65	89.51	-206.80	1,610.99	960.03	918.17	41.86	22.935		
8,200.00	8,153.02	8,397.55	8,152.92	30.78	39.91	89.51	-206.80	1,610.99	960.03	917.70	42.32	22.685		
8,300.00	8,253.02	8,497.55	8,252.92	31.11	40.16	89.51	-206.80	1,610.99	960.03	917.24	42.78	22.439		
8,400.00	8,353.02	8,597.55	8,352.92	31.43	40.42	89.51	-206.80	1,610.99	960.03	916.78	43.25	22.199		
8,500.00	8,453.02	8,697.55	8,452.92	31.76	40.68	89.51	-206.80	1,610.99	960.03	916.31	43.71	21.962		
8,600.00	8,553.02	8,797.55	8,552.92	32.09	40.94	89.51	-206.80	1,610.99	960.03	915.85	44.18	21.731		
8,700.00	8,653.02	8,897.55	8,652.92	32.42	41.20	89.51	-206.80	1,610.99	960.03	915.38	44.64	21.504		
8,800.00	8,753.02	8,997.55	8,752.92	32.74	41.46	89.51	-206.80	1,610.99	960.03	914.91	45.11	21.281		
8,900.00	8,853.02	9,097.55	8,852.92	33.07	41.72	89.51	-206.80	1,610.99	960.03	914.44	45.58	21.062		
9,000.00	8,953.02	9,197.55	8,952.92	33.40	41.99	89.51	-206.80	1,610.99	960.03	913.98	46.05	20.848		
9,100.00	9,053.02	9,297.55	9,052.92	33.73	42.26	89.51	-206.80	1,610.99	960.03	913.51	46.52	20.637		
9,200.00	9,153.02	9,397.55	9,152.92	34.07	42.52	89.51	-206.80	1,610.99	960.03	913.03	46.99	20.430		
9,300.00	9,253.02	9,497.55	9,252.92	34.40	42.79	89.51	-206.80	1,610.99	960.03	912.56	47.46	20.227		
9,400.00	9,353.02	9,597.55	9,352.92	34.73	43.06	89.51	-206.80	1,610.99	960.03	912.09	47.93	20.028		
9,500.00	9,453.02	9,697.55	9,452.92	35.06	43.34	89.51	-206.80	1,610.99	960.03	911.62	48.41	19.832		
9,600.00	9,553.02	9,797.55	9,552.92	35.39	43.61	89.51	-206.80	1,610.99	960.03	911.14	48.88	19.640		
9,700.00	9,653.02	9,897.55	9,652.92	35.73	43.88	89.51	-206.80	1,610.99	960.03	910.67	49.36	19.451		
9,800.00	9,753.02	9,997.55	9,752.92	36.06	44.16	89.51	-206.80	1,610.99	960.03	910.19	49.83	19.266		
9,900.00	9,853.02	10,097.55	9,852.92	36.40	44.44	89.51	-206.80	1,610.99	960.03	909.72	50.31	19.084		
10,000.00	9,953.02	10,197.55	9,952.92	36.73	44.71	89.51	-206.80	1,610.99	960.03	909.24	50.78	18.905		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,053.02	10,297.55	10,052.92	37.07	44.99	89.51	-206.80	1,610.99	960.03	908.77	51.26	18.729		
10,200.00	10,153.02	10,397.55	10,152.92	37.40	45.27	89.51	-206.80	1,610.99	960.03	908.29	51.74	18.556		
10,300.00	10,253.02	10,497.55	10,252.92	37.74	45.55	89.51	-206.80	1,610.99	960.03	907.81	52.21	18.386		
10,400.00	10,353.02	10,597.55	10,352.92	38.08	45.84	89.51	-206.80	1,610.99	960.03	907.33	52.69	18.219		
10,500.00	10,453.02	10,697.55	10,452.92	38.41	46.12	89.51	-206.80	1,610.99	960.03	906.85	53.17	18.055		
10,600.00	10,553.02	10,797.55	10,552.92	38.75	46.40	89.51	-206.80	1,610.99	960.03	906.37	53.65	17.894		
10,700.00	10,653.02	10,897.55	10,652.92	39.09	46.69	89.51	-206.80	1,610.99	960.03	905.89	54.13	17.735		
10,800.00	10,753.02	10,997.55	10,752.92	39.43	46.98	89.51	-206.80	1,610.99	960.03	905.41	54.61	17.579		
10,900.00	10,853.02	11,097.55	10,852.92	39.77	47.26	89.51	-206.80	1,610.99	960.03	904.93	55.09	17.426		
11,000.00	10,953.02	11,197.55	10,952.92	40.10	47.55	89.51	-206.80	1,610.99	960.03	904.45	55.57	17.275		
11,100.00	11,053.02	11,297.55	11,052.92	40.44	47.84	89.51	-206.80	1,610.99	960.03	903.97	56.06	17.126		
11,200.00	11,153.02	11,397.55	11,152.92	40.78	48.13	89.51	-206.80	1,610.99	960.03	903.49	56.54	16.980		
11,300.00	11,253.02	11,497.55	11,252.92	41.12	48.42	89.51	-206.80	1,610.99	960.03	903.00	57.02	16.836		
11,400.00	11,353.02	11,597.55	11,352.92	41.46	48.72	89.51	-206.80	1,610.99	960.03	902.52	57.50	16.695		
11,500.00	11,453.02	11,697.55	11,452.92	41.80	49.01	89.51	-206.80	1,610.99	960.03	902.04	57.99	16.556		
11,566.02	11,519.04	11,763.57	11,518.94	42.03	49.20	89.51	-206.80	1,610.99	960.03	901.72	58.31	16.465		
11,600.00	11,553.00	11,797.54	11,552.91	42.14	49.30	90.11	-206.79	1,610.99	960.03	901.56	58.47	16.420		
11,650.00	11,602.72	11,847.74	11,603.04	42.31	49.45	90.27	-204.34	1,610.97	960.04	901.34	58.69	16.357		
11,700.00	11,651.80	11,898.19	11,653.00	42.46	49.59	90.43	-197.47	1,610.90	960.05	901.14	58.91	16.297		
11,750.00	11,699.87	11,948.88	11,702.40	42.61	49.72	90.59	-186.17	1,610.80	960.08	900.96	59.12	16.241		
11,800.00	11,746.57	11,999.81	11,750.83	42.75	49.85	90.74	-170.47	1,610.65	960.10	900.79	59.31	16.188		
11,850.00	11,791.53	12,050.97	11,797.88	42.87	49.96	90.89	-150.43	1,610.46	960.14	900.65	59.49	16.138		
11,900.00	11,834.42	12,102.36	11,843.15	42.98	50.07	91.03	-126.15	1,610.23	960.18	900.51	59.67	16.092		
11,950.00	11,874.92	12,153.96	11,886.25	43.08	50.16	91.16	-97.79	1,609.96	960.22	900.39	59.83	16.048		
12,000.00	11,912.70	12,205.78	11,926.77	43.17	50.24	91.28	-65.54	1,609.66	960.26	900.27	59.99	16.006		
12,050.00	11,947.48	12,257.79	11,964.35	43.24	50.30	91.40	-29.61	1,609.32	960.31	900.16	60.15	15.966		
12,100.00	11,979.01	12,309.97	11,998.63	43.29	50.36	91.50	9.71	1,608.95	960.35	900.06	60.30	15.927		
12,150.00	12,007.03	12,362.32	12,029.28	43.34	50.40	91.59	52.13	1,608.54	960.39	899.95	60.44	15.889		
12,200.00	12,031.34	12,414.82	12,056.00	43.37	50.44	91.67	97.29	1,608.12	960.43	899.84	60.59	15.851		
12,250.00	12,051.76	12,467.43	12,078.52	43.40	50.46	91.74	144.82	1,607.67	960.46	899.72	60.74	15.813		
12,300.00	12,068.11	12,520.15	12,096.62	43.43	50.49	91.79	194.30	1,607.20	960.49	899.60	60.89	15.774		
12,350.00	12,080.29	12,572.94	12,110.12	43.46	50.51	91.83	245.32	1,606.72	960.51	899.46	61.04	15.735		
12,400.00	12,088.20	12,625.78	12,118.86	43.51	50.53	91.85	297.41	1,606.23	960.52	899.32	61.20	15.695		
12,450.00	12,091.77	12,678.64	12,122.77	43.58	50.55	91.86	350.11	1,605.73	960.52	899.16	61.36	15.655		
12,466.02	12,092.00	12,695.58	12,123.00	43.60	50.57	91.86	367.05	1,605.57	960.52	899.11	61.41	15.642		
12,500.00	12,092.00	12,729.51	12,123.00	43.67	50.59	91.86	400.98	1,605.25	960.52	898.99	61.53	15.611		
12,600.00	12,092.00	12,829.51	12,123.00	43.93	50.68	91.86	500.97	1,604.30	960.52	898.60	61.92	15.512		
12,700.00	12,092.00	12,929.51	12,123.00	44.27	50.82	91.86	600.97	1,603.36	960.52	898.12	62.40	15.393		
12,800.00	12,092.00	13,029.51	12,123.00	44.68	51.00	91.86	700.96	1,602.42	960.51	897.55	62.96	15.256		
12,900.00	12,092.00	13,129.51	12,123.00	45.15	51.23	91.86	800.96	1,601.47	960.51	896.91	63.60	15.102		
13,000.00	12,092.00	13,229.51	12,123.00	45.68	51.52	91.86	900.95	1,600.53	960.51	896.19	64.32	14.933		
13,100.00	12,092.00	13,329.51	12,123.00	46.26	51.86	91.86	1,000.95	1,599.58	960.51	895.39	65.12	14.751		
13,200.00	12,092.00	13,429.51	12,123.00	46.89	52.26	91.86	1,100.95	1,598.64	960.51	894.52	65.98	14.557		
13,300.00	12,092.00	13,529.51	12,123.00	47.57	52.72	91.86	1,200.94	1,597.69	960.51	893.59	66.92	14.353		
13,400.00	12,092.00	13,629.51	12,123.00	48.30	53.24	91.86	1,300.94	1,596.75	960.50	892.58	67.93	14.141		
13,500.00	12,092.00	13,729.51	12,123.00	49.06	53.82	91.86	1,400.93	1,595.80	960.50	891.51	68.99	13.922		
13,600.00	12,092.00	13,829.51	12,123.00	49.88	54.46	91.86	1,500.93	1,594.86	960.50	890.38	70.12	13.697		
13,700.00	12,092.00	13,929.51	12,123.00	50.73	55.16	91.86	1,600.92	1,593.92	960.50	889.19	71.31	13.469		
13,800.00	12,092.00	14,029.51	12,123.00	51.62	55.90	91.86	1,700.92	1,592.97	960.50	887.94	72.56	13.238		
13,900.00	12,092.00	14,129.51	12,123.00	52.54	56.69	91.86	1,800.91	1,592.03	960.50	886.64	73.85	13.005		
14,000.00	12,092.00	14,229.51	12,123.00	53.51	57.53	91.86	1,900.91	1,591.08	960.49	885.29	75.20	12.772		
14,100.00	12,092.00	14,329.51	12,123.00	54.50	58.41	91.86	2,000.91	1,590.14	960.49	883.90	76.59	12.540		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.00	12,092.00	14,429.51	12,123.00	55.52	59.32	91.86	2,100.90	1,589.19	960.49	882.46	78.03	12.309		
14,300.00	12,092.00	14,529.51	12,123.00	56.58	60.28	91.86	2,200.90	1,588.25	960.49	880.98	79.51	12.080		
14,400.00	12,092.00	14,629.51	12,123.00	57.66	61.26	91.86	2,300.89	1,587.30	960.49	879.45	81.04	11.853		
14,500.00	12,092.00	14,729.51	12,123.00	58.77	62.28	91.86	2,400.89	1,586.36	960.49	877.89	82.60	11.629		
14,600.00	12,092.00	14,829.51	12,123.00	59.90	63.33	91.86	2,500.88	1,585.42	960.49	876.29	84.19	11.408		
14,700.00	12,092.00	14,929.51	12,123.00	61.06	64.41	91.86	2,600.88	1,584.47	960.48	874.66	85.82	11.192		
14,800.00	12,092.00	15,029.51	12,123.00	62.24	65.51	91.86	2,700.87	1,583.53	960.48	873.00	87.48	10.980		
14,900.00	12,092.00	15,129.51	12,123.00	63.44	66.64	91.86	2,800.87	1,582.58	960.48	871.31	89.17	10.771		
15,000.00	12,092.00	15,229.51	12,123.00	64.66	67.79	91.86	2,900.87	1,581.64	960.48	869.59	90.89	10.568		
15,100.00	12,092.00	15,329.51	12,123.00	65.90	68.96	91.86	3,000.86	1,580.69	960.48	867.84	92.64	10.368		
15,200.00	12,092.00	15,429.51	12,123.00	67.16	70.16	91.86	3,100.86	1,579.75	960.48	866.07	94.41	10.174		
15,300.00	12,092.00	15,529.51	12,123.00	68.43	71.37	91.86	3,200.85	1,578.80	960.47	864.27	96.20	9.984		
15,400.00	12,092.00	15,629.51	12,123.00	69.72	72.60	91.86	3,300.85	1,577.86	960.47	862.45	98.02	9.799		
15,500.00	12,092.00	15,729.51	12,123.00	71.02	73.85	91.86	3,400.84	1,576.92	960.47	860.61	99.86	9.618		
15,600.00	12,092.00	15,829.51	12,123.00	72.34	75.11	91.86	3,500.84	1,575.97	960.47	858.75	101.72	9.442		
15,700.00	12,092.00	15,929.51	12,123.00	73.67	76.39	91.86	3,600.83	1,575.03	960.47	856.87	103.60	9.271		
15,800.00	12,092.00	16,029.51	12,123.00	75.02	77.68	91.86	3,700.83	1,574.08	960.47	854.97	105.50	9.104		
15,900.00	12,092.00	16,129.51	12,123.00	76.37	78.99	91.86	3,800.83	1,573.14	960.46	853.05	107.41	8.942		
16,000.00	12,092.00	16,229.51	12,123.00	77.74	80.31	91.86	3,900.82	1,572.19	960.46	851.12	109.35	8.784		
16,100.00	12,092.00	16,329.51	12,123.00	79.12	81.64	91.86	4,000.82	1,571.25	960.46	849.17	111.29	8.630		
16,200.00	12,092.00	16,429.51	12,123.00	80.51	82.99	91.86	4,100.81	1,570.30	960.46	847.21	113.25	8.481		
16,300.00	12,092.00	16,529.51	12,123.00	81.91	84.34	91.86	4,200.81	1,569.36	960.46	845.23	115.23	8.335		
16,400.00	12,092.00	16,629.51	12,123.00	83.31	85.71	91.86	4,300.80	1,568.41	960.46	843.24	117.22	8.194		
16,500.00	12,092.00	16,729.51	12,123.00	84.73	87.08	91.86	4,400.80	1,567.47	960.45	841.24	119.22	8.056		
16,600.00	12,092.00	16,829.51	12,123.00	86.16	88.47	91.86	4,500.79	1,566.53	960.45	839.22	121.23	7.923		
16,700.00	12,092.00	16,929.51	12,123.00	87.59	89.86	91.86	4,600.79	1,565.58	960.45	837.20	123.25	7.793		
16,800.00	12,092.00	17,029.51	12,123.00	89.03	91.27	91.86	4,700.79	1,564.64	960.45	835.16	125.29	7.666		
16,900.00	12,092.00	17,129.51	12,123.00	90.48	92.68	91.86	4,800.78	1,563.69	960.45	833.12	127.33	7.543		
17,000.00	12,092.00	17,229.51	12,123.00	91.93	94.10	91.86	4,900.78	1,562.75	960.45	831.06	129.39	7.423		
17,100.00	12,092.00	17,329.51	12,123.00	93.39	95.53	91.86	5,000.77	1,561.80	960.45	828.99	131.45	7.306		
17,200.00	12,092.00	17,429.51	12,123.00	94.86	96.96	91.86	5,100.77	1,560.86	960.44	826.92	133.53	7.193		
17,300.00	12,092.00	17,529.51	12,123.00	96.33	98.40	91.86	5,200.76	1,559.91	960.44	824.83	135.61	7.083		
17,400.00	12,092.00	17,629.51	12,123.00	97.81	99.85	91.86	5,300.76	1,558.97	960.44	822.74	137.70	6.975		
17,500.00	12,092.00	17,729.51	12,123.00	99.30	101.31	91.86	5,400.75	1,558.03	960.44	820.64	139.79	6.870		
17,600.00	12,092.00	17,829.51	12,123.00	100.79	102.77	91.86	5,500.75	1,557.08	960.44	818.54	141.90	6.768		
17,700.00	12,092.00	17,929.51	12,123.00	102.28	104.23	91.86	5,600.74	1,556.14	960.44	816.42	144.01	6.669		
17,800.00	12,092.00	18,029.51	12,123.00	103.78	105.70	91.86	5,700.74	1,555.19	960.43	814.30	146.13	6.572		
17,900.00	12,092.00	18,129.51	12,123.00	105.29	107.18	91.86	5,800.74	1,554.25	960.43	812.18	148.26	6.478		
18,000.00	12,092.00	18,229.51	12,123.00	106.80	108.66	91.86	5,900.73	1,553.30	960.43	810.04	150.39	6.386		
18,100.00	12,092.00	18,329.51	12,123.00	108.31	110.15	91.86	6,000.73	1,552.36	960.43	807.90	152.52	6.297		
18,200.00	12,092.00	18,429.51	12,123.00	109.83	111.64	91.86	6,100.72	1,551.41	960.43	805.76	154.67	6.210		
18,300.00	12,092.00	18,529.51	12,123.00	111.35	113.14	91.86	6,200.72	1,550.47	960.43	803.61	156.82	6.125		
18,400.00	12,092.00	18,629.51	12,123.00	112.87	114.64	91.86	6,300.71	1,549.53	960.42	801.45	158.97	6.042		
18,500.00	12,092.00	18,729.51	12,123.00	114.40	116.14	91.86	6,400.71	1,548.58	960.42	799.29	161.13	5.961		
18,600.00	12,092.00	18,829.51	12,123.00	115.93	117.65	91.86	6,500.70	1,547.64	960.42	797.13	163.29	5.882		
18,700.00	12,092.00	18,929.51	12,123.00	117.46	119.16	91.86	6,600.70	1,546.69	960.42	794.96	165.46	5.805		
18,800.00	12,092.00	19,029.51	12,123.00	119.00	120.68	91.86	6,700.70	1,545.75	960.42	792.79	167.63	5.729		
18,900.00	12,092.00	19,129.51	12,123.00	120.54	122.20	91.86	6,800.69	1,544.80	960.42	790.61	169.81	5.656		
19,000.00	12,092.00	19,229.51	12,123.00	122.09	123.72	91.86	6,900.69	1,543.86	960.42	788.42	171.99	5.584		
19,100.00	12,092.00	19,329.51	12,123.00	123.63	125.25	91.86	7,000.68	1,542.91	960.41	786.24	174.18	5.514		
19,200.00	12,092.00	19,429.51	12,123.00	125.18	126.78	91.86	7,100.68	1,541.97	960.41	784.05	176.37	5.446		
19,300.00	12,092.00	19,529.51	12,123.00	126.73	128.31	91.86	7,200.67	1,541.02	960.41	781.85	178.56	5.379		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 806H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,400.00	12,092.00	19,629.51	12,123.00	128.29	129.84	91.86	7,300.67	1,540.08	960.41	779.65	180.75	5.313		
19,500.00	12,092.00	19,729.51	12,123.00	129.84	131.38	91.86	7,400.66	1,539.14	960.41	777.45	182.95	5.249		
19,600.00	12,092.00	19,829.51	12,123.00	131.40	132.92	91.86	7,500.66	1,538.19	960.41	775.25	185.16	5.187		
19,700.00	12,092.00	19,929.51	12,123.00	132.96	134.47	91.86	7,600.66	1,537.25	960.40	773.04	187.36	5.126		
19,800.00	12,092.00	20,029.51	12,123.00	134.53	136.01	91.86	7,700.65	1,536.30	960.40	770.83	189.57	5.066		
19,900.00	12,092.00	20,129.51	12,123.00	136.09	137.56	91.86	7,800.65	1,535.36	960.40	768.62	191.78	5.008		
20,000.00	12,092.00	20,229.51	12,123.00	137.66	139.11	91.86	7,900.64	1,534.41	960.40	766.40	194.00	4.951		
20,100.00	12,092.00	20,329.51	12,123.00	139.23	140.66	91.86	8,000.64	1,533.47	960.40	764.18	196.22	4.895		
20,200.00	12,092.00	20,429.51	12,123.00	140.80	142.22	91.86	8,100.63	1,532.52	960.40	761.96	198.44	4.840		
20,300.00	12,092.00	20,529.51	12,123.00	142.37	143.78	91.86	8,200.63	1,531.58	960.39	759.74	200.66	4.786		
20,400.00	12,092.00	20,629.51	12,123.00	143.95	145.34	91.86	8,300.62	1,530.64	960.39	757.51	202.88	4.734		
20,500.00	12,092.00	20,729.51	12,123.00	145.53	146.90	91.86	8,400.62	1,529.69	960.39	755.28	205.11	4.682		
20,600.00	12,092.00	20,829.51	12,123.00	147.10	148.46	91.86	8,500.62	1,528.75	960.39	753.05	207.34	4.632		
20,700.00	12,092.00	20,929.51	12,123.00	148.68	150.03	91.86	8,600.61	1,527.80	960.39	750.81	209.57	4.583		
20,800.00	12,092.00	21,029.51	12,123.00	150.27	151.60	91.86	8,700.61	1,526.86	960.39	748.58	211.81	4.534		
20,900.00	12,092.00	21,129.51	12,123.00	151.85	153.16	91.86	8,800.60	1,525.91	960.38	746.34	214.04	4.487		
21,000.00	12,092.00	21,229.51	12,123.00	153.43	154.74	91.86	8,900.60	1,524.97	960.38	744.10	216.28	4.440		
21,100.00	12,092.00	21,329.51	12,123.00	155.02	156.31	91.86	9,000.59	1,524.02	960.38	741.86	218.52	4.395		
21,200.00	12,092.00	21,429.51	12,123.00	156.61	157.88	91.86	9,100.59	1,523.08	960.38	739.61	220.77	4.350		
21,300.00	12,092.00	21,529.51	12,123.00	158.19	159.46	91.86	9,200.58	1,522.14	960.38	737.37	223.01	4.306		
21,400.00	12,092.00	21,629.51	12,123.00	159.78	161.04	91.86	9,300.58	1,521.19	960.38	735.12	225.26	4.263		
21,500.00	12,092.00	21,729.51	12,123.00	161.38	162.61	91.86	9,400.58	1,520.25	960.38	732.87	227.51	4.221		
21,600.00	12,092.00	21,829.51	12,123.00	162.97	164.19	91.86	9,500.57	1,519.30	960.37	730.62	229.75	4.180		
21,700.00	12,092.00	21,929.51	12,123.00	164.56	165.78	91.86	9,600.57	1,518.36	960.37	728.37	232.01	4.139		
21,800.00	12,092.00	22,029.51	12,123.00	166.16	167.36	91.86	9,700.56	1,517.41	960.37	726.11	234.26	4.100		
21,900.00	12,092.00	22,129.51	12,123.00	167.75	168.94	91.86	9,800.56	1,516.47	960.37	723.85	236.51	4.061		
22,000.00	12,092.00	22,229.51	12,123.00	169.35	170.53	91.86	9,900.55	1,515.52	960.37	721.60	238.77	4.022		
22,100.00	12,092.00	22,329.51	12,123.00	170.95	172.12	91.86	10,000.55	1,514.58	960.37	719.34	241.03	3.984		
22,200.00	12,092.00	22,429.51	12,123.00	172.55	173.70	91.86	10,100.54	1,513.63	960.36	717.08	243.29	3.947		
22,253.43	12,092.00	22,482.94	12,123.00	173.40	174.55	91.86	10,153.97	1,513.13	960.36	715.87	244.49	3.928		
22,255.91	12,092.00	22,482.95	12,123.00	173.44	174.55	91.86	10,153.98	1,513.13	960.37	715.78	244.58	3.927		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 220-INC-ONLY													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-28.48	4,307.06	-2,336.33	4,899.92					
100.00	100.00	97.10	97.10	0.13	0.82	-28.48	4,307.06	-2,336.33	4,899.92	4,899.09	0.83	5,899.241		
200.00	200.00	197.10	197.10	0.48	1.67	-28.48	4,307.06	-2,336.33	4,899.92	4,898.18	1.74	2,823.345		
300.00	300.00	297.10	297.10	0.84	3.23	-28.48	4,307.06	-2,336.33	4,899.92	4,896.58	3.33	1,469.481		
400.00	400.00	406.78	406.78	1.20	5.17	-28.48	4,307.05	-2,336.33	4,899.92	4,894.62	5.31	923.264		
406.89	406.89	414.46	414.46	1.23	5.31	-28.48	4,307.04	-2,336.33	4,899.91	4,894.46	5.45	899.848		
500.00	500.00	497.10	497.10	1.56	6.91	-28.48	4,307.06	-2,336.33	4,899.92	4,892.84	7.08	692.178		
600.00	600.00	606.35	606.35	1.92	9.00	-28.48	4,307.06	-2,336.33	4,899.93	4,890.73	9.20	532.508		
610.61	610.61	618.04	618.03	1.96	9.22	-28.48	4,307.04	-2,336.33	4,899.91	4,890.48	9.43	519.681		
700.00	700.00	697.12	697.10	2.28	11.51	-28.48	4,307.06	-2,336.33	4,899.92	4,888.19	11.73	417.792		
800.00	800.00	797.12	797.10	2.63	14.28	-28.48	4,307.06	-2,336.33	4,899.92	4,885.40	14.52	337.413		
900.00	900.00	902.25	902.21	2.99	17.20	-28.47	4,308.49	-2,336.33	4,901.18	4,883.72	17.46	280.745		
1,000.00	1,000.00	1,023.81	1,023.76	3.35	20.57	-28.47	4,308.04	-2,336.33	4,900.85	4,880.01	20.84	235.113		
1,100.00	1,100.00	1,145.39	1,145.33	3.71	23.95	-28.48	4,306.99	-2,336.33	4,900.09	4,875.86	24.23	202.205		
1,141.53	1,141.53	1,195.88	1,195.81	3.86	25.35	-28.48	4,306.37	-2,336.33	4,899.65	4,874.00	25.64	191.088 CC		
1,200.00	1,200.00	1,197.46	1,197.10	4.07	25.81	-28.48	4,307.06	-2,336.33	4,899.92	4,873.79	26.13	187.539		
1,300.00	1,300.00	1,348.26	1,347.84	4.43	31.06	-28.47	4,308.34	-2,336.33	4,901.30	4,869.93	31.38	156.205		
1,400.00	1,400.00	1,397.56	1,397.10	4.79	32.78	-28.48	4,307.06	-2,336.33	4,899.92	4,866.79	33.13	147.897		
1,500.00	1,500.00	1,497.78	1,497.10	5.14	36.32	-28.48	4,307.06	-2,336.33	4,899.92	4,863.23	36.68	133.571		
1,600.00	1,600.00	1,597.90	1,597.10	5.50	39.64	-28.48	4,307.06	-2,336.33	4,899.92	4,859.90	40.02	122.430		
1,700.00	1,700.00	1,697.97	1,697.10	5.86	42.65	-28.48	4,307.06	-2,336.33	4,899.92	4,856.87	43.05	113.812		
1,800.00	1,800.00	1,797.97	1,797.10	6.22	45.41	-28.48	4,307.06	-2,336.33	4,899.92	4,854.09	45.83	106.914		
1,900.00	1,900.00	1,961.64	1,960.72	6.58	49.91	-28.48	4,307.14	-2,336.33	4,900.40	4,850.06	50.34	97.342		
2,000.00	2,000.00	1,998.11	1,997.10	6.94	50.85	-28.48	4,307.06	-2,336.33	4,899.92	4,848.60	51.32	95.481		
2,100.00	2,099.99	2,098.10	2,097.09	7.28	53.37	-136.75	4,307.06	-2,336.33	4,900.87	4,847.01	53.86	90.986 ES		
2,200.00	2,199.91	2,203.23	2,202.19	7.62	56.02	-136.75	4,308.72	-2,336.33	4,905.20	4,848.66	56.54	86.760		
2,300.00	2,299.69	2,346.04	2,344.98	7.96	59.62	-136.79	4,307.84	-2,336.33	4,909.42	4,849.27	60.15	81.618		
2,400.00	2,399.27	2,488.69	2,487.57	8.31	63.22	-136.85	4,305.54	-2,336.33	4,914.69	4,850.94	63.76	77.086		
2,500.00	2,498.57	2,496.84	2,495.67	8.66	63.54	-136.77	4,307.06	-2,336.33	4,923.77	4,859.65	64.12	76.789		
2,543.01	2,541.19	2,539.45	2,538.29	8.81	64.66	-136.77	4,307.06	-2,336.33	4,928.06	4,862.80	65.26	75.519		
2,600.00	2,597.60	2,595.86	2,594.70	9.02	66.15	-136.83	4,307.06	-2,336.33	4,933.97	4,867.21	66.76	73.909		
2,700.00	2,696.59	2,713.05	2,711.86	9.38	69.24	-136.96	4,308.09	-2,336.33	4,945.30	4,875.43	69.87	70.780		
2,800.00	2,795.58	2,838.82	2,837.62	9.75	72.56	-137.11	4,307.18	-2,336.33	4,955.08	4,881.88	73.20	67.690		
2,900.00	2,894.57	2,893.02	2,891.67	10.12	74.14	-137.17	4,307.06	-2,336.33	4,965.20	4,890.39	74.82	66.364		
3,000.00	2,993.56	3,000.00	2,998.56	10.50	77.33	-137.29	4,307.06	-2,336.33	4,975.66	4,897.63	78.03	63.766		
3,100.00	3,092.55	3,091.09	3,089.65	10.88	80.05	-137.39	4,307.06	-2,336.33	4,986.12	4,905.34	80.77	61.729		
3,200.00	3,191.55	3,190.08	3,188.65	11.27	83.01	-137.50	4,307.06	-2,336.33	4,996.60	4,912.85	83.75	59.658 SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.37	82.86	-2,913.39	2,915.25					
100.00	100.00	33.84	33.84	0.13	0.05	-88.37	82.85	-2,913.41	2,914.59	2,914.45	0.14	N/A CC		
200.00	200.00	125.03	125.03	0.48	0.20	-88.37	82.77	-2,913.65	2,914.85	2,914.33	0.52	5,563.593 ES		
300.00	300.00	216.23	216.23	0.84	0.35	-88.38	82.58	-2,914.17	2,915.42	2,914.51	0.91	3,199.936		
400.00	400.00	311.89	311.88	1.20	0.65	-88.38	82.33	-2,914.95	2,916.22	2,914.86	1.37	2,135.054		
500.00	500.00	412.63	412.62	1.56	1.01	-88.38	82.21	-2,915.83	2,917.09	2,915.23	1.86	1,569.553		
600.00	600.00	509.52	509.51	1.92	1.36	-88.38	82.33	-2,916.68	2,917.97	2,915.62	2.35	1,241.853		
700.00	700.00	600.22	600.20	2.28	1.68	-88.38	82.46	-2,917.65	2,919.05	2,916.22	2.83	1,031.313		
800.00	800.00	692.00	691.97	2.63	2.01	-88.38	82.48	-2,919.00	2,920.52	2,917.20	3.31	881.152		
900.00	900.00	784.00	783.96	2.99	2.34	-88.38	82.46	-2,920.67	2,922.31	2,918.51	3.80	769.082		
1,000.00	1,000.00	862.14	862.08	3.35	2.63	-88.39	82.29	-2,922.43	2,924.55	2,920.30	4.25	687.403		
1,100.00	1,100.00	946.17	946.07	3.71	2.93	-88.39	82.11	-2,924.82	2,927.39	2,922.67	4.72	619.919		
1,200.00	1,200.00	1,040.99	1,040.84	4.07	3.27	-88.39	82.07	-2,927.89	2,930.63	2,925.41	5.21	562.037		
1,300.00	1,300.00	1,140.68	1,140.47	4.43	3.63	-88.39	82.17	-2,931.18	2,933.92	2,928.20	5.72	513.118		
1,400.00	1,400.00	1,230.61	1,230.36	4.79	3.96	-88.39	82.36	-2,934.27	2,937.37	2,931.17	6.20	473.834		
1,500.00	1,500.00	1,339.30	1,338.97	5.14	4.35	-88.39	82.66	-2,938.10	2,940.90	2,934.17	6.72	437.344		
1,600.00	1,600.00	1,456.39	1,456.01	5.50	4.77	-88.39	82.57	-2,941.76	2,944.04	2,936.76	7.27	404.934		
1,700.00	1,700.00	1,596.92	1,596.51	5.86	5.28	-88.42	81.42	-2,944.64	2,946.05	2,938.18	7.87	374.229		
1,800.00	1,800.00	1,701.32	1,700.89	6.22	5.65	-88.44	80.24	-2,945.96	2,947.27	2,938.89	8.39	351.410		
1,900.00	1,900.00	1,809.13	1,808.68	6.58	6.03	-88.47	78.71	-2,947.20	2,948.38	2,939.48	8.91	330.942		
2,000.00	2,000.00	1,941.23	1,940.76	6.94	6.49	-88.51	76.64	-2,948.20	2,949.20	2,939.72	9.49	310.922		
2,100.00	2,099.99	2,134.54	2,134.01	7.28	7.13	163.20	74.81	-2,944.27	2,948.06	2,937.89	10.17	289.773		
2,137.10	2,137.07	2,176.00	2,175.44	7.41	7.27	163.20	74.63	-2,942.88	2,947.92	2,937.56	10.36	284.614		
2,200.00	2,199.91	2,245.58	2,244.98	7.62	7.49	163.21	74.49	-2,940.41	2,948.34	2,937.67	10.67	276.354		
2,300.00	2,299.69	2,362.64	2,361.95	7.96	7.88	163.26	74.86	-2,935.80	2,950.68	2,939.50	11.18	263.927		
2,400.00	2,399.27	2,433.06	2,432.32	8.31	8.12	163.28	75.22	-2,933.15	2,955.71	2,944.12	11.59	254.987		
2,500.00	2,498.57	2,515.41	2,514.64	8.66	8.39	163.30	75.53	-2,930.77	2,964.10	2,952.06	12.03	246.361		
2,543.01	2,541.19	2,553.14	2,552.36	8.81	8.52	163.32	75.62	-2,929.80	2,968.61	2,956.38	12.23	242.797		
2,600.00	2,597.60	2,603.80	2,603.00	9.02	8.69	163.36	75.67	-2,928.58	2,974.99	2,962.50	12.49	238.247		
2,700.00	2,696.59	2,697.01	2,696.19	9.38	9.00	163.43	75.63	-2,926.57	2,986.43	2,973.48	12.95	230.524		
2,800.00	2,795.58	2,792.64	2,791.80	9.75	9.33	163.51	75.79	-2,924.61	2,998.00	2,984.57	13.43	223.217		
2,900.00	2,894.57	2,891.37	2,890.50	10.12	9.67	163.59	75.76	-2,922.70	3,009.68	2,995.76	13.92	216.268		
3,000.00	2,993.56	2,980.32	2,979.44	10.50	9.97	163.65	75.54	-2,921.05	3,021.45	3,007.07	14.38	210.097		
3,100.00	3,092.55	3,065.51	3,064.62	10.88	10.27	163.71	75.34	-2,919.90	3,033.70	3,018.86	14.84	204.442		
3,200.00	3,191.55	3,149.53	3,148.64	11.27	10.56	163.76	74.60	-2,919.14	3,046.39	3,031.09	15.30	199.163		
3,300.00	3,290.54	3,237.21	3,236.31	11.65	10.86	163.81	73.57	-2,918.84	3,059.61	3,043.84	15.76	194.088		
3,400.00	3,389.53	3,349.06	3,348.15	12.04	11.26	163.88	72.69	-2,918.43	3,072.85	3,056.56	16.29	188.599		
3,500.00	3,488.52	3,453.32	3,452.41	12.44	11.62	163.94	71.74	-2,917.53	3,085.57	3,068.77	16.80	183.623		
3,600.00	3,587.51	3,551.55	3,550.63	12.83	11.96	163.99	70.71	-2,916.76	3,098.38	3,081.08	17.30	179.089		
3,700.00	3,686.50	3,652.31	3,651.38	13.23	12.32	164.05	69.80	-2,915.92	3,111.15	3,093.34	17.80	174.736		
3,800.00	3,785.49	3,757.50	3,756.56	13.62	12.69	164.10	68.64	-2,914.94	3,123.81	3,105.49	18.32	170.503		
3,900.00	3,884.48	3,860.05	3,859.10	14.02	13.05	164.16	67.62	-2,913.80	3,136.31	3,117.48	18.83	166.547		
4,000.00	3,983.48	3,955.23	3,954.27	14.43	13.38	164.21	66.73	-2,912.79	3,148.85	3,129.53	19.32	162.954		
4,100.00	4,082.47	4,071.96	4,070.99	14.83	13.79	164.28	66.20	-2,911.17	3,161.09	3,141.22	19.87	159.091		
4,200.00	4,181.46	4,169.48	4,168.49	15.23	14.13	164.35	65.95	-2,909.58	3,173.11	3,152.74	20.37	155.794		
4,300.00	4,280.45	4,261.58	4,260.58	15.64	14.45	164.41	65.82	-2,908.26	3,185.33	3,164.48	20.85	152.762		
4,400.00	4,379.44	4,363.28	4,362.28	16.04	14.81	164.48	65.88	-2,906.89	3,197.67	3,176.31	21.36	149.700		
4,500.00	4,478.43	4,468.08	4,467.06	16.45	15.18	164.55	65.85	-2,905.25	3,209.78	3,187.90	21.88	146.713		
4,600.00	4,577.42	4,501.00	4,499.98	16.86	15.29	164.58	65.84	-2,904.72	3,222.53	3,200.33	22.21	145.099		
4,700.00	4,676.41	4,501.00	4,499.98	17.27	15.29	164.58	65.84	-2,904.72	3,238.16	3,215.72	22.44	144.296		
4,800.00	4,775.40	4,501.00	4,499.98	17.68	15.29	164.58	65.84	-2,904.72	3,256.79	3,234.13	22.66	143.746		
4,900.00	4,874.40	4,501.00	4,499.98	18.09	15.29	164.58	65.84	-2,904.72	3,278.36	3,255.51	22.86	143.438		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,973.39	4,501.00	4,499.98	18.50	15.29	164.58	65.84	-2,904.72	3,302.82	3,279.78	23.04	143.362 SF		
5,100.00	5,072.38	4,501.00	4,499.98	18.91	15.29	164.58	65.84	-2,904.72	3,330.10	3,306.90	23.21	143.506		
5,200.00	5,171.37	4,501.00	4,499.98	19.32	15.29	164.58	65.84	-2,904.72	3,360.14	3,336.79	23.36	143.860		
5,300.00	5,270.36	4,501.00	4,499.98	19.73	15.29	164.58	65.84	-2,904.72	3,392.87	3,369.37	23.49	144.414		
5,400.00	5,369.35	4,501.00	4,499.98	20.15	15.29	164.58	65.84	-2,904.72	3,428.19	3,404.58	23.62	145.156		
5,500.00	5,468.34	4,501.00	4,499.98	20.56	15.29	164.58	65.84	-2,904.72	3,466.05	3,442.32	23.73	146.078		
5,600.00	5,567.33	4,501.00	4,499.98	20.97	15.29	164.58	65.84	-2,904.72	3,506.35	3,482.52	23.83	147.170		
5,700.00	5,666.33	4,501.00	4,499.98	21.39	15.29	164.58	65.84	-2,904.72	3,549.00	3,525.09	23.91	148.422		
5,800.00	5,765.32	4,501.00	4,499.98	21.80	15.29	164.58	65.84	-2,904.72	3,593.94	3,569.95	23.99	149.832		
5,900.00	5,864.31	4,501.00	4,499.98	22.22	15.29	164.58	65.84	-2,904.72	3,641.07	3,617.02	24.05	151.381		
6,000.00	5,963.30	4,501.00	4,499.98	22.64	15.29	164.58	65.84	-2,904.72	3,690.30	3,666.20	24.11	153.068		
6,100.00	6,062.29	4,501.00	4,499.98	23.05	15.29	164.58	65.84	-2,904.72	3,741.57	3,717.41	24.16	154.878		
6,200.00	6,161.28	4,501.00	4,499.98	23.47	15.29	164.58	65.84	-2,904.72	3,794.77	3,770.57	24.20	156.803		
6,300.00	6,260.27	4,501.00	4,499.98	23.88	15.29	164.58	65.84	-2,904.72	3,849.84	3,825.60	24.24	158.833		
6,400.00	6,359.26	4,501.00	4,499.98	24.30	15.29	164.58	65.84	-2,904.72	3,906.69	3,882.42	24.27	160.962		
6,500.00	6,458.26	4,501.00	4,499.98	24.72	15.29	164.58	65.84	-2,904.72	3,965.25	3,940.95	24.30	163.180		
6,600.00	6,557.25	4,501.00	4,499.98	25.14	15.29	164.58	65.84	-2,904.72	4,025.44	4,001.12	24.33	165.481		
6,700.00	6,656.24	4,501.00	4,499.98	25.55	15.29	164.58	65.84	-2,904.72	4,087.19	4,062.84	24.35	167.856		
6,800.00	6,755.23	4,501.00	4,499.98	25.97	15.29	164.58	65.84	-2,904.72	4,150.44	4,126.07	24.37	170.298		
6,837.97	6,792.81	4,501.00	4,499.98	26.13	15.29	164.58	65.84	-2,904.72	4,174.83	4,150.45	24.38	171.241		
6,900.00	6,854.29	4,501.00	4,499.98	26.39	15.29	164.78	65.84	-2,904.72	4,214.73	4,190.34	24.39	172.796		
7,000.00	6,953.65	4,501.00	4,499.98	26.79	15.29	165.11	65.84	-2,904.72	4,278.63	4,254.22	24.41	175.313		
7,100.00	7,053.27	4,501.00	4,499.98	27.17	15.29	165.42	65.84	-2,904.72	4,341.96	4,317.55	24.42	177.839		
7,200.00	7,153.09	4,501.00	4,499.98	27.53	15.29	165.72	65.84	-2,904.72	4,404.72	4,380.30	24.42	180.370		
7,300.00	7,253.03	4,501.00	4,499.98	27.88	15.29	166.01	65.84	-2,904.72	4,466.88	4,442.46	24.42	182.906		
7,380.98	7,334.00	4,501.00	4,499.98	28.15	15.29	-85.48	65.84	-2,904.72	4,516.77	4,492.35	24.42	184.986		
7,400.00	7,353.02	4,501.00	4,499.98	28.21	15.29	-85.48	65.84	-2,904.72	4,528.46	4,504.05	24.41	185.484		
7,500.00	7,453.02	4,501.00	4,499.98	28.53	15.29	-85.48	65.84	-2,904.72	4,590.75	4,566.34	24.41	188.082		
7,600.00	7,553.02	4,501.00	4,499.98	28.85	15.29	-85.48	65.84	-2,904.72	4,654.35	4,629.95	24.40	190.714		
7,700.00	7,653.02	4,501.00	4,499.98	29.17	15.29	-85.48	65.84	-2,904.72	4,719.22	4,694.81	24.41	193.371		
7,800.00	7,753.02	4,501.00	4,499.98	29.49	15.29	-85.48	65.84	-2,904.72	4,785.30	4,760.89	24.41	196.047		
7,900.00	7,853.02	4,501.00	4,499.98	29.81	15.29	-85.48	65.84	-2,904.72	4,852.53	4,828.12	24.42	198.737		
8,000.00	7,953.02	4,501.00	4,499.98	30.13	15.29	-85.48	65.84	-2,904.72	4,920.89	4,896.46	24.43	201.434		
8,100.00	8,053.02	4,501.00	4,499.98	30.46	15.29	-85.48	65.84	-2,904.72	4,990.31	4,965.86	24.45	204.133		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-88.37	82.86	-2,913.39	2,915.25					
100.00	100.00	33.84	33.84	0.13	0.05	-88.37	82.85	-2,913.41	2,914.59	2,914.45	0.14	N/A CC		
200.00	200.00	125.03	125.03	0.48	0.20	-88.37	82.77	-2,913.65	2,914.85	2,914.33	0.52	5,563.593 ES		
300.00	300.00	216.23	216.23	0.84	0.35	-88.38	82.58	-2,914.17	2,915.42	2,914.51	0.91	3,199.936		
400.00	400.00	311.89	311.88	1.20	0.65	-88.38	82.33	-2,914.95	2,916.22	2,914.86	1.37	2,135.054		
500.00	500.00	412.63	412.62	1.56	1.01	-88.38	82.21	-2,915.83	2,917.09	2,915.23	1.86	1,569.553		
600.00	600.00	509.52	509.51	1.92	1.36	-88.38	82.33	-2,916.68	2,917.97	2,915.62	2.35	1,241.853		
700.00	700.00	600.22	600.20	2.28	1.68	-88.38	82.46	-2,917.65	2,919.05	2,916.22	2.83	1,031.313		
800.00	800.00	692.00	691.97	2.63	2.01	-88.38	82.48	-2,919.00	2,920.52	2,917.20	3.31	881.152		
900.00	900.00	784.00	783.96	2.99	2.34	-88.38	82.46	-2,920.67	2,922.31	2,918.51	3.80	769.082		
1,000.00	1,000.00	862.14	862.08	3.35	2.63	-88.39	82.29	-2,922.43	2,924.55	2,920.30	4.25	687.403		
1,100.00	1,100.00	946.17	946.07	3.71	2.93	-88.39	82.11	-2,924.82	2,927.39	2,922.67	4.72	619.919		
1,200.00	1,200.00	1,040.99	1,040.84	4.07	3.27	-88.39	82.07	-2,927.89	2,930.63	2,925.41	5.21	562.037		
1,300.00	1,300.00	1,140.68	1,140.47	4.43	3.63	-88.39	82.17	-2,931.18	2,933.92	2,928.20	5.72	513.118		
1,400.00	1,400.00	1,230.61	1,230.36	4.79	3.96	-88.39	82.36	-2,934.27	2,937.37	2,931.17	6.20	473.834		
1,500.00	1,500.00	1,339.30	1,338.97	5.14	4.35	-88.39	82.66	-2,938.10	2,940.90	2,934.17	6.72	437.344		
1,600.00	1,600.00	1,456.39	1,456.01	5.50	4.77	-88.39	82.57	-2,941.76	2,944.04	2,936.76	7.27	404.934		
1,700.00	1,700.00	1,596.92	1,596.51	5.86	5.28	-88.42	81.42	-2,944.64	2,946.05	2,938.18	7.87	374.229		
1,800.00	1,800.00	1,701.32	1,700.89	6.22	5.65	-88.44	80.24	-2,945.96	2,947.27	2,938.89	8.39	351.410		
1,900.00	1,900.00	1,809.13	1,808.68	6.58	6.03	-88.47	78.71	-2,947.20	2,948.38	2,939.48	8.91	330.942		
2,000.00	2,000.00	1,941.23	1,940.76	6.94	6.49	-88.51	76.64	-2,948.20	2,949.20	2,939.72	9.49	310.922		
2,100.00	2,099.99	2,134.54	2,134.01	7.28	7.13	163.20	74.81	-2,944.27	2,948.06	2,937.89	10.17	289.773		
2,137.10	2,137.07	2,176.00	2,175.44	7.41	7.27	163.20	74.63	-2,942.88	2,947.92	2,937.56	10.36	284.614		
2,200.00	2,199.91	2,245.58	2,244.98	7.62	7.49	163.21	74.49	-2,940.41	2,948.34	2,937.67	10.67	276.354		
2,300.00	2,299.69	2,362.64	2,361.95	7.96	7.88	163.26	74.86	-2,935.80	2,950.68	2,939.50	11.18	263.927		
2,400.00	2,399.27	2,432.06	2,432.32	8.31	8.12	163.28	75.22	-2,933.15	2,955.71	2,944.12	11.59	254.987		
2,500.00	2,498.57	2,515.41	2,514.64	8.66	8.39	163.30	75.53	-2,930.77	2,964.10	2,952.06	12.03	246.361		
2,543.01	2,541.19	2,553.14	2,552.36	8.81	8.52	163.32	75.62	-2,929.80	2,968.61	2,956.38	12.23	242.797		
2,600.00	2,597.60	2,603.80	2,603.00	9.02	8.69	163.36	75.67	-2,928.58	2,974.99	2,962.50	12.49	238.247		
2,700.00	2,696.59	2,697.01	2,696.19	9.38	9.00	163.43	75.63	-2,926.57	2,986.43	2,973.48	12.95	230.524		
2,800.00	2,795.58	2,768.78	2,767.94	9.75	9.19	163.48	75.46	-2,925.24	2,998.24	2,984.91	13.34	224.822		
2,900.00	2,894.57	2,833.00	2,832.12	10.12	9.30	163.49	73.34	-2,925.09	3,011.41	2,997.75	13.67	220.365		
3,000.00	2,993.56	2,833.00	2,832.12	10.50	9.30	163.49	73.34	-2,925.09	3,026.61	3,012.70	13.91	217.532		
3,100.00	3,092.55	2,891.98	2,890.93	10.88	9.31	163.46	69.25	-2,926.72	3,043.26	3,029.08	14.17	214.712		
3,200.00	3,191.55	2,926.00	2,924.72	11.27	9.32	163.42	65.86	-2,928.78	3,062.43	3,048.01	14.42	212.301		
3,300.00	3,290.54	2,963.96	2,962.31	11.65	9.33	163.37	61.60	-2,931.86	3,083.60	3,068.92	14.68	210.062		
3,400.00	3,389.53	3,021.00	3,018.66	12.04	9.35	163.28	54.93	-2,937.68	3,106.66	3,091.71	14.95	207.858		
3,500.00	3,488.52	3,182.73	3,178.55	12.44	9.46	163.05	36.63	-2,953.50	3,129.94	3,114.63	15.31	204.439		
3,600.00	3,587.51	3,363.16	3,357.90	12.83	9.61	162.89	20.90	-2,965.26	3,149.48	3,133.77	15.71	200.455		
3,700.00	3,686.50	3,463.05	3,457.35	13.23	9.72	162.82	13.21	-2,970.63	3,168.17	3,152.11	16.06	197.318		
3,800.00	3,785.49	3,780.77	3,774.21	13.62	10.11	162.68	-8.07	-2,976.30	3,182.98	3,166.35	16.62	191.465		
3,900.00	3,884.48	3,879.23	3,872.42	14.02	10.26	162.63	-14.90	-2,974.85	3,194.92	3,177.92	17.00	187.937		
4,000.00	3,983.48	3,979.61	3,972.55	14.43	10.41	162.58	-21.78	-2,973.37	3,206.87	3,189.48	17.39	184.455		
4,100.00	4,082.47	4,078.05	4,070.73	14.83	10.58	162.53	-28.80	-2,971.88	3,218.77	3,200.99	17.78	181.061		
4,200.00	4,181.46	4,184.37	4,176.74	15.23	10.77	162.47	-36.89	-2,970.35	3,230.75	3,212.57	18.19	177.650		
4,300.00	4,280.45	4,286.16	4,278.20	15.64	10.96	162.40	-44.79	-2,968.42	3,242.27	3,223.67	18.60	174.345		
4,400.00	4,379.44	4,388.71	4,380.38	16.04	11.17	162.33	-53.24	-2,966.72	3,254.03	3,235.01	19.02	171.117		
4,500.00	4,478.43	4,488.83	4,480.08	16.45	11.38	162.25	-62.21	-2,964.78	3,265.50	3,246.06	19.44	167.977		
4,600.00	4,577.42	4,578.22	4,569.05	16.86	11.58	162.17	-70.73	-2,963.24	3,277.18	3,257.33	19.86	165.054		
4,700.00	4,676.41	4,676.85	4,667.20	17.27	11.81	162.08	-80.35	-2,961.76	3,289.09	3,268.80	20.29	162.110		
4,800.00	4,775.40	4,769.79	4,759.67	17.68	12.04	161.98	-89.66	-2,960.38	3,301.03	3,280.31	20.72	159.314		
4,900.00	4,874.40	4,870.16	4,859.45	18.09	12.29	161.87	-100.46	-2,959.05	3,313.12	3,291.95	21.17	156.506		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 - Proxy WCA State Com #001H (Offset) - ST01 - ST01		Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
5,000.00	4,973.39	5,019.42	5,007.61	18.50	12.69	161.68	-118.28	-2,956.14	3,324.70	3,302.99	21.71	153.136				
5,100.00	5,072.38	5,143.08	5,130.20	18.91	13.03	161.50	-133.79	-2,951.73	3,334.52	3,312.30	22.22	150.089				
5,200.00	5,171.37	5,253.16	5,239.17	19.32	13.35	161.33	-148.87	-2,947.63	3,344.29	3,321.58	22.71	147.274				
5,300.00	5,270.36	5,357.19	5,342.01	19.73	13.67	161.15	-163.99	-2,943.48	3,353.81	3,330.61	23.20	144.589				
5,400.00	5,369.35	5,449.17	5,432.99	20.15	13.95	161.00	-177.03	-2,939.81	3,363.36	3,339.70	23.66	142.131				
5,500.00	5,468.34	5,581.52	5,564.45	20.56	14.34	160.86	-191.06	-2,933.98	3,372.47	3,348.27	24.20	139.362				
5,600.00	5,567.33	5,665.76	5,648.30	20.97	14.58	160.81	-197.94	-2,929.90	3,381.19	3,356.55	24.64	137.205				
5,700.00	5,666.33	5,727.00	5,709.35	21.39	14.76	160.78	-202.29	-2,927.63	3,390.97	3,365.93	25.04	135.399				
5,800.00	5,765.32	5,790.77	5,772.96	21.80	14.94	160.76	-206.38	-2,925.97	3,401.84	3,376.39	25.45	133.682				
5,900.00	5,864.31	5,869.77	5,851.81	22.22	15.17	160.75	-211.12	-2,924.58	3,413.54	3,387.66	25.88	131.908				
6,000.00	5,963.30	5,962.80	5,944.69	22.64	15.44	160.73	-216.26	-2,923.25	3,425.59	3,399.25	26.34	130.072				
6,100.00	6,062.29	6,058.20	6,039.97	23.05	15.72	160.73	-220.84	-2,921.99	3,437.73	3,410.93	26.80	128.279				
6,200.00	6,161.28	6,155.10	6,136.76	23.47	16.00	160.73	-225.35	-2,920.84	3,450.01	3,422.74	27.27	126.532				
6,300.00	6,260.27	6,258.02	6,239.56	23.88	16.30	160.73	-230.15	-2,919.59	3,462.26	3,434.51	27.75	124.780				
6,400.00	6,359.26	6,351.16	6,332.60	24.30	16.58	160.73	-234.17	-2,918.42	3,474.47	3,446.26	28.21	123.170				
6,500.00	6,458.26	6,447.03	6,428.39	24.72	16.87	160.74	-238.17	-2,917.46	3,486.92	3,458.24	28.68	121.592				
6,600.00	6,557.25	6,563.15	6,544.39	25.14	17.22	160.75	-243.09	-2,916.07	3,499.19	3,470.00	29.19	119.877				
6,700.00	6,656.24	6,675.50	6,656.67	25.55	17.55	160.78	-246.45	-2,914.19	3,510.97	3,481.28	29.69	118.254				
6,800.00	6,755.23	6,782.44	6,763.59	25.97	17.85	160.85	-247.27	-2,912.10	3,522.43	3,492.26	30.17	116.751				
6,837.97	6,792.81	6,819.32	6,800.45	26.13	17.95	160.87	-247.45	-2,911.36	3,526.75	3,496.41	30.35	116.222				
6,900.00	6,854.29	6,877.57	6,858.70	26.39	18.12	160.94	-247.79	-2,910.21	3,533.38	3,502.76	30.63	115.369				
7,000.00	6,953.65	6,970.73	6,951.84	26.79	18.38	161.03	-248.38	-2,908.54	3,542.26	3,511.18	31.08	113.978				
7,100.00	7,053.27	7,074.23	7,055.32	27.17	18.68	161.10	-249.25	-2,906.71	3,548.69	3,517.14	31.55	112.480				
7,200.00	7,153.09	7,179.66	7,160.73	27.53	18.99	161.13	-250.04	-2,904.67	3,552.49	3,520.47	32.02	110.939				
7,300.00	7,253.03	7,280.62	7,261.67	27.88	19.28	161.15	-250.78	-2,902.63	3,553.72	3,521.24	32.48	109.404				
7,380.98	7,334.00	7,357.25	7,338.28	28.15	19.51	-90.59	-251.49	-2,901.11	3,552.93	3,520.09	32.84	108.190				
7,400.00	7,353.02	7,374.61	7,355.63	28.21	19.56	-90.59	-251.67	-2,900.79	3,552.58	3,519.66	32.92	107.911				
7,500.00	7,453.02	7,442.26	7,423.27	28.53	19.76	-90.60	-252.31	-2,899.71	3,551.06	3,517.77	33.30	106.644				
7,571.10	7,524.12	7,480.21	7,461.22	28.76	19.87	-90.60	-252.38	-2,899.54	3,550.73	3,517.19	33.54	105.859				
7,600.00	7,553.02	7,503.00	7,484.01	28.85	19.94	-90.60	-252.31	-2,899.60	3,550.80	3,517.15	33.66	105.502				
7,700.00	7,653.02	7,558.05	7,539.06	29.17	20.09	-90.60	-252.09	-2,900.15	3,551.71	3,517.72	34.00	104.473				
7,800.00	7,753.02	7,631.81	7,612.80	29.49	20.30	-90.60	-252.02	-2,901.57	3,553.61	3,519.23	34.38	103.372				
7,900.00	7,853.02	7,729.38	7,710.35	29.81	20.58	-90.60	-252.20	-2,903.80	3,555.89	3,521.07	34.81	102.140				
8,000.00	7,953.02	7,838.47	7,819.42	30.13	20.90	-90.60	-252.14	-2,906.08	3,557.98	3,522.70	35.28	100.854				
8,100.00	8,053.02	7,949.07	7,930.00	30.46	21.22	-90.60	-252.16	-2,908.14	3,559.84	3,524.10	35.75	99.582				
8,200.00	8,153.02	8,065.91	8,046.82	30.78	21.56	-90.60	-252.18	-2,909.85	3,561.31	3,525.07	36.23	98.287				
8,300.00	8,253.02	8,179.65	8,160.56	31.11	21.90	-90.60	-252.36	-2,910.97	3,562.29	3,525.58	36.72	97.024				
8,400.00	8,353.02	8,286.07	8,266.97	31.43	22.22	-90.60	-252.49	-2,911.83	3,563.10	3,525.92	37.18	95.826				
8,500.00	8,453.02	8,399.66	8,380.56	31.76	22.57	-90.61	-252.75	-2,912.27	3,563.48	3,525.81	37.67	94.595				
8,600.00	8,553.02	8,502.56	8,483.46	32.09	22.90	-90.61	-253.13	-2,912.50	3,563.71	3,525.57	38.14	93.441				
8,700.00	8,653.02	8,632.61	8,613.50	32.42	23.31	-90.63	-254.06	-2,912.30	3,563.59	3,524.91	38.67	92.150				
8,800.00	8,753.02	8,752.99	8,733.87	32.74	23.70	-90.65	-255.43	-2,911.15	3,562.65	3,523.47	39.18	90.922				
8,900.00	8,853.02	8,863.11	8,843.96	33.07	24.05	-90.68	-257.06	-2,909.56	3,561.22	3,521.54	39.67	89.764				
9,000.00	8,953.02	8,982.78	8,963.61	33.40	24.43	-90.70	-258.40	-2,907.52	3,559.54	3,519.36	40.18	88.583				
9,100.00	9,053.02	9,098.47	9,079.25	33.73	24.81	-90.73	-260.32	-2,904.80	3,557.20	3,516.52	40.69	87.431				
9,200.00	9,153.02	9,185.00	9,165.73	34.07	25.09	-90.77	-262.65	-2,902.74	3,554.86	3,513.73	41.13	86.432				
9,300.00	9,253.02	9,246.12	9,226.81	34.40	25.30	-90.79	-264.18	-2,901.74	3,553.27	3,511.75	41.51	85.592				
9,400.00	9,353.02	9,333.17	9,313.86	34.73	25.58	-90.81	-265.28	-2,901.18	3,552.62	3,510.66	41.96	84.674				
9,500.00	9,453.02	9,435.81	9,416.49	35.06	25.92	-90.83	-266.15	-2,900.38	3,551.85	3,509.41	42.43	83.703				
9,600.00	9,553.02	9,547.00	9,527.67	35.39	26.27	-90.83	-266.60	-2,899.44	3,551.01	3,508.08	42.93	82.722				
9,700.00	9,653.02	9,623.55	9,604.23	35.73	26.50	-90.82	-265.95	-2,898.85	3,550.24	3,506.91	43.33	81.928				
9,800.00	9,753.02	9,719.51	9,700.17	36.06	26.79	-90.80	-264.37	-2,898.66	3,550.02	3,506.24	43.78	81.088				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,853.02	9,824.57	9,805.20	36.40	27.10	-90.76	-262.08	-2,898.31	3,549.66	3,505.41	44.25	80.227		
10,000.00	9,953.02	9,917.92	9,898.50	36.73	27.38	-90.71	-259.05	-2,898.02	3,549.30	3,504.62	44.68	79.431		
10,100.00	10,053.02	10,110.01	10,090.48	37.07	27.97	-90.63	-254.24	-2,895.12	3,547.76	3,502.41	45.34	78.247		
10,200.00	10,153.02	10,186.07	10,166.50	37.40	28.21	-90.64	-254.60	-2,893.25	3,545.29	3,499.53	45.76	77.476		
10,300.00	10,253.02	10,228.56	10,208.96	37.74	28.34	-90.62	-253.22	-2,892.53	3,543.78	3,497.69	46.10	76.878		
10,400.00	10,353.02	10,373.27	10,353.64	38.08	28.81	-90.62	-253.33	-2,890.70	3,542.48	3,495.81	46.67	75.908		
10,500.00	10,453.02	10,540.00	10,520.30	38.41	29.35	-90.63	-253.98	-2,886.08	3,539.69	3,492.40	47.29	74.855		
10,600.00	10,553.02	10,607.90	10,588.14	38.75	29.58	-90.67	-256.20	-2,884.44	3,537.03	3,489.33	47.70	74.152		
10,700.00	10,653.02	10,760.00	10,740.07	39.09	30.10	-90.72	-259.17	-2,878.81	3,533.27	3,484.98	48.29	73.163		
10,800.00	10,753.02	10,960.00	10,939.67	39.43	30.77	-90.80	-264.19	-2,867.80	3,527.98	3,479.00	48.98	72.033		
10,900.00	10,853.02	10,991.72	10,971.33	39.77	30.88	-90.81	-264.90	-2,865.92	3,521.93	3,472.61	49.32	71.405		
11,000.00	10,953.02	11,060.00	11,039.52	40.10	31.11	-90.82	-265.59	-2,862.59	3,517.12	3,467.39	49.74	70.715		
11,100.00	11,053.02	11,080.00	11,059.52	40.44	31.17	-90.82	-265.40	-2,862.11	3,514.16	3,464.12	50.04	70.229		
11,189.39	11,142.41	11,100.00	11,079.51	40.75	31.23	-90.82	-265.00	-2,862.06	3,513.41	3,463.11	50.30	69.849		
11,200.00	11,153.02	11,100.00	11,079.51	40.78	31.23	-90.82	-265.00	-2,862.06	3,513.43	3,463.11	50.32	69.815		
11,300.00	11,253.02	11,140.00	11,119.50	41.12	31.35	-90.80	-263.96	-2,862.43	3,514.48	3,463.83	50.65	69.394		
11,400.00	11,353.02	11,160.00	11,139.48	41.46	31.42	-90.79	-263.44	-2,863.01	3,517.57	3,466.67	50.91	69.100		
11,500.00	11,453.02	11,200.00	11,179.42	41.80	31.54	-90.77	-262.36	-2,864.99	3,522.61	3,471.41	51.21	68.791		
11,566.02	11,519.04	11,220.00	11,199.36	42.03	31.60	-90.76	-261.72	-2,866.35	3,527.02	3,475.64	51.38	68.641		
11,600.00	11,553.02	11,227.55	11,206.88	42.14	31.62	-89.96	-261.44	-2,866.94	3,529.63	3,478.17	51.46	68.586		
11,650.00	11,602.72	11,240.00	11,219.28	42.31	31.66	-89.54	-260.96	-2,868.00	3,533.89	3,482.31	51.58	68.514		
11,700.00	11,651.80	11,265.60	11,244.74	42.46	31.74	-89.14	-259.99	-2,870.39	3,538.54	3,486.82	51.73	68.407		
11,750.00	11,699.87	11,302.41	11,281.35	42.61	31.85	-88.79	-258.68	-2,874.10	3,543.47	3,491.57	51.91	68.266		
11,800.00	11,746.57	11,443.56	11,421.86	42.75	32.28	-89.10	-254.02	-2,886.59	3,547.87	3,495.48	52.40	67.713		
11,850.00	11,791.53	11,514.78	11,492.87	42.87	32.50	-89.22	-251.87	-2,891.64	3,551.40	3,498.73	52.67	67.428		
11,900.00	11,834.42	11,602.47	11,580.36	42.98	32.78	-89.59	-249.31	-2,896.93	3,554.52	3,501.54	52.98	67.087		
11,950.00	11,874.92	11,645.70	11,623.51	43.08	32.91	-89.67	-248.18	-2,899.29	3,557.59	3,504.42	53.17	66.907		
12,000.00	11,912.70	11,684.89	11,662.63	43.17	33.04	-89.75	-247.16	-2,901.40	3,560.86	3,507.52	53.35	66.750		
12,050.00	11,947.48	11,719.05	11,696.74	43.24	33.14	-89.77	-246.46	-2,903.24	3,564.43	3,510.93	53.51	66.618		
12,100.00	11,979.01	11,740.00	11,717.65	43.29	33.21	-89.63	-246.21	-2,904.41	3,568.43	3,514.81	53.63	66.541		
12,150.00	12,007.03	11,753.71	11,731.33	43.34	33.25	-89.36	-246.13	-2,905.22	3,572.95	3,519.23	53.73	66.500		
12,200.00	12,031.34	11,769.96	11,747.55	43.37	33.31	-89.08	-246.09	-2,906.21	3,578.00	3,524.16	53.84	66.460		
12,250.00	12,051.76	11,784.06	11,761.63	43.40	33.35	-88.73	-246.07	-2,907.10	3,583.57	3,529.63	53.94	66.437		
12,300.00	12,068.11	11,794.70	11,772.24	43.43	33.39	-88.28	-246.06	-2,907.79	3,589.66	3,535.63	54.03	66.435 SF		
12,350.00	12,080.29	11,802.95	11,780.47	43.46	33.41	-87.74	-246.07	-2,908.33	3,596.27	3,542.15	54.12	66.449		
12,400.00	12,088.20	11,808.77	11,786.28	43.51	33.43	-87.11	-246.08	-2,908.72	3,603.37	3,549.17	54.20	66.480		
12,450.00	12,091.77	11,811.36	11,788.87	43.58	33.44	-86.39	-246.08	-2,908.89	3,610.93	3,556.66	54.28	66.529		
12,466.02	12,092.00	11,811.51	11,789.02	43.60	33.44	-86.14	-246.08	-2,908.90	3,613.44	3,559.14	54.30	66.549		
12,500.00	12,092.00	11,811.48	11,788.99	43.67	33.44	-86.14	-246.08	-2,908.90	3,618.96	3,564.62	54.34	66.593		
12,600.00	12,092.00	11,811.39	11,788.90	43.93	33.44	-86.14	-246.08	-2,908.90	3,637.00	3,582.49	54.51	66.727		
12,700.00	12,092.00	11,811.30	11,788.81	44.27	33.44	-86.14	-246.08	-2,908.89	3,657.68	3,602.98	54.70	66.869		
12,800.00	12,092.00	11,811.21	11,788.72	44.68	33.44	-86.14	-246.08	-2,908.88	3,680.97	3,626.05	54.92	67.022		
12,900.00	12,092.00	11,811.13	11,788.64	45.15	33.44	-86.14	-246.08	-2,908.88	3,706.81	3,651.64	55.17	67.187		
13,000.00	12,092.00	11,811.04	11,788.55	45.68	33.44	-86.13	-246.08	-2,908.87	3,735.15	3,679.70	55.45	67.367		
13,100.00	12,092.00	11,810.96	11,788.46	46.26	33.44	-86.13	-246.08	-2,908.87	3,765.93	3,710.19	55.74	67.562		
13,200.00	12,092.00	11,810.87	11,788.38	46.89	33.44	-86.13	-246.08	-2,908.86	3,799.09	3,743.04	56.06	67.774		
13,300.00	12,092.00	11,810.79	11,788.30	47.57	33.44	-86.13	-246.08	-2,908.86	3,834.58	3,778.19	56.39	68.005		
13,400.00	12,092.00	11,810.71	11,788.22	48.30	33.44	-86.13	-246.08	-2,908.85	3,872.32	3,815.59	56.73	68.256		
13,500.00	12,092.00	11,810.63	11,788.14	49.06	33.44	-86.13	-246.08	-2,908.84	3,912.26	3,855.17	57.09	68.528		
13,600.00	12,092.00	11,810.55	11,788.06	49.88	33.44	-86.13	-246.08	-2,908.84	3,954.32	3,896.87	57.46	68.823		
13,700.00	12,092.00	11,810.47	11,787.98	50.73	33.44	-86.13	-246.08	-2,908.83	3,998.44	3,940.61	57.83	69.141		
13,800.00	12,092.00	11,810.39	11,787.90	51.62	33.44	-86.12	-246.08	-2,908.83	4,044.56	3,986.35	58.21	69.483		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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												Offset Site Error:	0.00 usft
FMM Fed Com - Proxy WCA State Com #001H (Offset) - ST01 - ST01												Offset Well Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,900.00	12,092.00	11,810.31	11,787.82	52.54	33.44	-86.12	-246.08	-2,908.82	4,092.60	4,034.00	58.59	69.849	
14,000.00	12,092.00	11,810.24	11,787.75	53.51	33.44	-86.12	-246.08	-2,908.82	4,142.49	4,083.52	58.97	70.243	
14,100.00	12,092.00	11,810.16	11,787.67	54.50	33.44	-86.12	-246.08	-2,908.81	4,194.18	4,134.82	59.36	70.660	
14,200.00	12,092.00	11,810.09	11,787.60	55.52	33.44	-86.12	-246.08	-2,908.81	4,247.59	4,187.85	59.74	71.103	
14,300.00	12,092.00	11,810.01	11,787.52	56.58	33.44	-86.12	-246.08	-2,908.80	4,302.66	4,242.54	60.12	71.570	
14,400.00	12,092.00	11,809.94	11,787.45	57.66	33.44	-86.12	-246.08	-2,908.80	4,359.33	4,298.84	60.49	72.063	
14,500.00	12,092.00	11,809.87	11,787.38	58.77	33.44	-86.12	-246.08	-2,908.79	4,417.54	4,356.68	60.86	72.580	
14,600.00	12,092.00	11,809.80	11,787.31	59.90	33.44	-86.11	-246.08	-2,908.79	4,477.23	4,416.00	61.23	73.122	
14,700.00	12,092.00	11,809.73	11,787.24	61.06	33.44	-86.11	-246.08	-2,908.78	4,538.33	4,476.74	61.59	73.687	
14,800.00	12,092.00	11,809.66	11,787.17	62.24	33.44	-86.11	-246.08	-2,908.78	4,600.80	4,538.86	61.94	74.275	
14,900.00	12,092.00	11,809.59	11,787.10	63.44	33.44	-86.11	-246.08	-2,908.77	4,664.57	4,602.28	62.29	74.885	
15,000.00	12,092.00	11,809.52	11,787.03	64.66	33.44	-86.11	-246.08	-2,908.77	4,729.60	4,666.97	62.63	75.517	
15,100.00	12,092.00	11,809.45	11,786.97	65.90	33.43	-86.11	-246.08	-2,908.77	4,795.83	4,732.87	62.96	76.170	
15,200.00	12,092.00	11,809.39	11,786.90	67.16	33.43	-86.11	-246.08	-2,908.76	4,863.22	4,799.93	63.29	76.844	
15,300.00	12,092.00	11,809.32	11,786.84	68.43	33.43	-86.11	-246.08	-2,908.76	4,931.71	4,868.11	63.60	77.537	

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 - Proxy WCA State Com #001H (Offset) - ST02 - ST02		Offset Site Error:	0.00 usft
Survey Program:													236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD, 10215-OWSG (Rev2) MWD		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
0.00	0.00		0.00	0.00	0.00	-88.37	82.86	-2,913.39	2,915.25							
100.00	100.00	33.84	33.84	0.13	0.05	-88.37	82.85	-2,913.41	2,914.59	2,914.45	0.14	N/A CC				
200.00	200.00	125.03	125.03	0.48	0.20	-88.37	82.77	-2,913.65	2,914.85	2,914.33	0.52	5,563.593 ES				
300.00	300.00	216.23	216.23	0.84	0.35	-88.38	82.58	-2,914.17	2,915.42	2,914.51	0.91	3,199.936				
400.00	400.00	311.89	311.88	1.20	0.65	-88.38	82.33	-2,914.95	2,916.22	2,914.86	1.37	2,135.054				
500.00	500.00	412.63	412.62	1.56	1.01	-88.38	82.21	-2,915.83	2,917.09	2,915.23	1.86	1,569.553				
600.00	600.00	509.52	509.51	1.92	1.36	-88.38	82.33	-2,916.68	2,917.97	2,915.62	2.35	1,241.853				
700.00	700.00	600.22	600.20	2.28	1.68	-88.38	82.46	-2,917.65	2,919.05	2,916.22	2.83	1,031.313				
800.00	800.00	692.00	691.97	2.63	2.01	-88.38	82.48	-2,919.00	2,920.52	2,917.20	3.31	881.152				
900.00	900.00	784.00	783.96	2.99	2.34	-88.38	82.46	-2,920.67	2,922.31	2,918.51	3.80	769.082				
1,000.00	1,000.00	862.14	862.08	3.35	2.63	-88.39	82.29	-2,922.43	2,924.55	2,920.30	4.25	687.403				
1,100.00	1,100.00	946.17	946.07	3.71	2.93	-88.39	82.11	-2,924.82	2,927.39	2,922.67	4.72	619.919				
1,200.00	1,200.00	1,040.99	1,040.84	4.07	3.27	-88.39	82.07	-2,927.89	2,930.63	2,925.41	5.21	562.037				
1,300.00	1,300.00	1,140.68	1,140.47	4.43	3.63	-88.39	82.17	-2,931.18	2,933.92	2,928.20	5.72	513.118				
1,400.00	1,400.00	1,230.61	1,230.36	4.79	3.96	-88.39	82.36	-2,934.27	2,937.37	2,931.17	6.20	473.834				
1,500.00	1,500.00	1,339.30	1,338.97	5.14	4.35	-88.39	82.66	-2,938.10	2,940.90	2,934.17	6.72	437.344				
1,600.00	1,600.00	1,456.39	1,456.01	5.50	4.77	-88.39	82.57	-2,941.76	2,944.04	2,936.76	7.27	404.934				
1,700.00	1,700.00	1,596.92	1,596.51	5.86	5.28	-88.42	81.42	-2,944.64	2,946.05	2,938.18	7.87	374.229				
1,800.00	1,800.00	1,701.32	1,700.89	6.22	5.65	-88.44	80.24	-2,945.96	2,947.27	2,938.89	8.39	351.410				
1,900.00	1,900.00	1,809.13	1,808.68	6.58	6.03	-88.47	78.71	-2,947.20	2,948.38	2,939.48	8.91	330.942				
2,000.00	2,000.00	1,941.23	1,940.76	6.94	6.49	-88.51	76.64	-2,948.20	2,949.20	2,939.72	9.49	310.922				
2,100.00	2,099.99	2,134.54	2,134.01	7.28	7.13	163.20	74.81	-2,944.27	2,948.06	2,937.89	10.17	289.773				
2,137.10	2,137.07	2,176.00	2,175.44	7.41	7.27	163.20	74.63	-2,942.88	2,947.92	2,937.56	10.36	284.614				
2,200.00	2,199.91	2,245.58	2,244.98	7.62	7.49	163.21	74.49	-2,940.41	2,948.34	2,937.67	10.67	276.354				
2,300.00	2,299.69	2,362.64	2,361.95	7.96	7.88	163.26	74.86	-2,935.80	2,950.68	2,939.50	11.18	263.927				
2,400.00	2,399.27	2,433.06	2,432.32	8.31	8.12	163.28	75.22	-2,933.15	2,955.71	2,944.12	11.59	254.987				
2,500.00	2,498.57	2,515.41	2,514.64	8.66	8.39	163.30	75.53	-2,930.77	2,964.10	2,952.06	12.03	246.361				
2,543.01	2,541.19	2,553.14	2,552.36	8.81	8.52	163.32	75.62	-2,929.80	2,968.61	2,956.38	12.23	242.797				
2,600.00	2,597.60	2,603.80	2,603.00	9.02	8.69	163.36	75.67	-2,928.58	2,974.99	2,962.50	12.49	238.247				
2,700.00	2,696.59	2,697.01	2,696.19	9.38	9.00	163.43	75.63	-2,926.57	2,986.43	2,973.48	12.95	230.524				
2,800.00	2,795.58	2,768.78	2,767.94	9.75	9.19	163.48	75.46	-2,925.24	2,998.24	2,984.91	13.34	224.822				
2,900.00	2,894.57	2,833.00	2,832.12	10.12	9.30	163.49	73.34	-2,925.09	3,011.41	2,997.75	13.67	220.365				
3,000.00	2,993.56	2,833.00	2,832.12	10.50	9.30	163.49	73.34	-2,925.09	3,026.61	3,012.70	13.91	217.532				
3,100.00	3,092.55	2,891.98	2,890.93	10.88	9.31	163.46	69.25	-2,926.72	3,043.26	3,029.08	14.17	214.712				
3,200.00	3,191.55	2,926.00	2,924.72	11.27	9.32	163.42	65.86	-2,928.78	3,062.43	3,048.01	14.42	212.301				
3,300.00	3,290.54	2,963.96	2,962.31	11.65	9.33	163.37	61.60	-2,931.86	3,083.60	3,068.92	14.68	210.062				
3,400.00	3,389.53	3,021.00	3,018.66	12.04	9.35	163.28	54.93	-2,937.68	3,106.66	3,091.71	14.95	207.858				
3,500.00	3,488.52	3,182.73	3,178.55	12.44	9.46	163.05	36.63	-2,953.50	3,129.94	3,114.63	15.31	204.439				
3,600.00	3,587.51	3,363.16	3,357.90	12.83	9.61	162.89	20.90	-2,965.26	3,149.48	3,133.77	15.71	200.455				
3,700.00	3,686.50	3,463.05	3,457.35	13.23	9.72	162.82	13.21	-2,970.63	3,168.17	3,152.11	16.06	197.318				
3,800.00	3,785.49	3,780.77	3,774.21	13.62	10.11	162.68	-8.07	-2,976.30	3,182.98	3,166.35	16.62	191.465				
3,900.00	3,884.48	3,879.23	3,872.42	14.02	10.26	162.63	-14.90	-2,974.85	3,194.92	3,177.92	17.00	187.937				
4,000.00	3,983.48	3,979.61	3,972.55	14.43	10.41	162.58	-21.78	-2,973.37	3,206.87	3,189.48	17.39	184.455				
4,100.00	4,082.47	4,078.05	4,070.73	14.83	10.58	162.53	-28.80	-2,971.88	3,218.77	3,200.99	17.78	181.061				
4,200.00	4,181.46	4,184.37	4,176.74	15.23	10.77	162.47	-36.89	-2,970.35	3,230.75	3,212.57	18.19	177.650				
4,300.00	4,280.45	4,286.16	4,278.20	15.64	10.96	162.40	-44.79	-2,968.42	3,242.27	3,223.67	18.60	174.345				
4,400.00	4,379.44	4,388.71	4,380.38	16.04	11.17	162.33	-53.24	-2,966.72	3,254.03	3,235.01	19.02	171.117				
4,500.00	4,478.43	4,488.83	4,480.08	16.45	11.38	162.25	-62.21	-2,964.78	3,265.50	3,246.06	19.44	167.977				
4,600.00	4,577.42	4,578.22	4,569.05	16.86	11.58	162.17	-70.73	-2,963.24	3,277.18	3,257.33	19.86	165.054				
4,700.00	4,676.41	4,676.85	4,667.20	17.27	11.81	162.08	-80.35	-2,961.76	3,289.09	3,268.80	20.29	162.110				
4,800.00	4,775.40	4,769.79	4,759.67	17.68	12.04	161.98	-89.66	-2,960.38	3,301.03	3,280.31	20.72	159.314				
4,900.00	4,874.40	4,870.16	4,859.45	18.09	12.29	161.87	-100.46	-2,959.05	3,313.12	3,291.95	21.17	156.506				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 - Proxy WCA State Com #001H (Offset) - ST02 - ST02		Offset Site Error:	0.00 usft
Survey Program:													236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD, 10215-OWSG (Rev2) MWD		Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
5,000.00	4,973.39	5,019.42	5,007.61	18.50	12.69	161.68	-118.28	-2,956.14	3,324.70	3,302.99	21.71	153.136				
5,100.00	5,072.38	5,143.08	5,130.20	18.91	13.03	161.50	-133.79	-2,951.73	3,334.52	3,312.30	22.22	150.089				
5,200.00	5,171.37	5,253.16	5,239.17	19.32	13.35	161.33	-148.87	-2,947.63	3,344.29	3,321.58	22.71	147.274				
5,300.00	5,270.36	5,357.19	5,342.01	19.73	13.67	161.15	-163.99	-2,943.48	3,353.81	3,330.61	23.20	144.589				
5,400.00	5,369.35	5,449.17	5,432.99	20.15	13.95	161.00	-177.03	-2,939.81	3,363.36	3,339.70	23.66	142.131				
5,500.00	5,468.34	5,581.52	5,564.45	20.56	14.34	160.86	-191.06	-2,933.98	3,372.47	3,348.27	24.20	139.362				
5,600.00	5,567.33	5,665.76	5,648.30	20.97	14.58	160.81	-197.94	-2,929.90	3,381.19	3,356.55	24.64	137.205				
5,700.00	5,666.33	5,727.00	5,709.35	21.39	14.76	160.78	-202.29	-2,927.63	3,390.97	3,365.93	25.04	135.399				
5,800.00	5,765.32	5,790.77	5,772.96	21.80	14.94	160.76	-206.38	-2,925.97	3,401.84	3,376.39	25.45	133.682				
5,900.00	5,864.31	5,869.77	5,851.81	22.22	15.17	160.75	-211.12	-2,924.58	3,413.54	3,387.66	25.88	131.908				
6,000.00	5,963.30	5,962.80	5,944.69	22.64	15.44	160.73	-216.26	-2,923.25	3,425.59	3,399.25	26.34	130.072				
6,100.00	6,062.29	6,058.20	6,039.97	23.05	15.72	160.73	-220.84	-2,921.99	3,437.73	3,410.93	26.80	128.279				
6,200.00	6,161.28	6,155.10	6,136.76	23.47	16.00	160.73	-225.35	-2,920.84	3,450.01	3,422.74	27.27	126.532				
6,300.00	6,260.27	6,258.02	6,239.56	23.88	16.30	160.73	-230.15	-2,919.59	3,462.26	3,434.51	27.75	124.780				
6,400.00	6,359.26	6,351.16	6,332.60	24.30	16.58	160.73	-234.17	-2,918.42	3,474.47	3,446.26	28.21	123.170				
6,500.00	6,458.26	6,447.03	6,428.39	24.72	16.87	160.74	-238.17	-2,917.46	3,486.92	3,458.24	28.68	121.592				
6,600.00	6,557.25	6,563.15	6,544.39	25.14	17.22	160.75	-243.09	-2,916.07	3,499.19	3,470.00	29.19	119.877				
6,700.00	6,656.24	6,675.50	6,656.67	25.55	17.55	160.78	-246.45	-2,914.19	3,510.97	3,481.28	29.69	118.254				
6,800.00	6,755.23	6,782.44	6,763.59	25.97	17.85	160.85	-247.27	-2,912.10	3,522.43	3,492.26	30.17	116.751				
6,837.97	6,792.81	6,819.32	6,800.45	26.13	17.95	160.87	-247.45	-2,911.36	3,526.75	3,496.41	30.35	116.222				
6,900.00	6,854.29	6,877.57	6,858.70	26.39	18.12	160.94	-247.79	-2,910.21	3,533.38	3,502.76	30.63	115.369				
7,000.00	6,953.65	6,970.73	6,951.84	26.79	18.38	161.03	-248.38	-2,908.54	3,542.26	3,511.18	31.08	113.978				
7,100.00	7,053.27	7,074.23	7,055.32	27.17	18.68	161.10	-249.25	-2,906.71	3,548.69	3,517.14	31.55	112.480				
7,200.00	7,153.09	7,179.66	7,160.73	27.53	18.99	161.13	-250.04	-2,904.67	3,552.49	3,520.47	32.02	110.939				
7,300.00	7,253.03	7,280.62	7,261.67	27.88	19.28	161.15	-250.78	-2,902.63	3,553.72	3,521.24	32.48	109.404				
7,380.98	7,334.00	7,357.25	7,338.28	28.15	19.51	-90.59	-251.49	-2,901.11	3,552.93	3,520.09	32.84	108.190				
7,400.00	7,353.02	7,374.61	7,355.63	28.21	19.56	-90.59	-251.67	-2,900.79	3,552.58	3,519.66	32.92	107.911				
7,500.00	7,453.02	7,442.26	7,423.27	28.53	19.76	-90.60	-252.31	-2,899.71	3,551.06	3,517.77	33.30	106.644				
7,571.10	7,524.12	7,480.21	7,461.22	28.76	19.87	-90.60	-252.38	-2,899.54	3,550.73	3,517.19	33.54	105.859				
7,600.00	7,553.02	7,503.00	7,484.01	28.85	19.94	-90.60	-252.31	-2,899.60	3,550.80	3,517.15	33.66	105.502				
7,700.00	7,653.02	7,558.05	7,539.06	29.17	20.09	-90.60	-252.09	-2,900.15	3,551.71	3,517.72	34.00	104.473				
7,800.00	7,753.02	7,631.81	7,612.80	29.49	20.30	-90.60	-252.02	-2,901.57	3,553.61	3,519.23	34.38	103.372				
7,900.00	7,853.02	7,729.38	7,710.35	29.81	20.58	-90.60	-252.20	-2,903.80	3,555.89	3,521.07	34.81	102.140				
8,000.00	7,953.02	7,838.47	7,819.42	30.13	20.90	-90.60	-252.14	-2,906.08	3,557.98	3,522.70	35.28	100.854				
8,100.00	8,053.02	7,949.07	7,930.00	30.46	21.22	-90.60	-252.16	-2,908.14	3,559.84	3,524.10	35.75	99.582				
8,200.00	8,153.02	8,065.91	8,046.82	30.78	21.56	-90.60	-252.18	-2,909.85	3,561.31	3,525.07	36.23	98.287				
8,300.00	8,253.02	8,179.65	8,160.56	31.11	21.90	-90.60	-252.36	-2,910.97	3,562.29	3,525.58	36.72	97.024				
8,400.00	8,353.02	8,286.07	8,266.97	31.43	22.22	-90.60	-252.49	-2,911.83	3,563.10	3,525.92	37.18	95.826				
8,500.00	8,453.02	8,399.66	8,380.56	31.76	22.57	-90.61	-252.75	-2,912.27	3,563.48	3,525.81	37.67	94.595				
8,600.00	8,553.02	8,502.56	8,483.46	32.09	22.90	-90.61	-253.13	-2,912.50	3,563.71	3,525.57	38.14	93.441				
8,700.00	8,653.02	8,632.61	8,613.50	32.42	23.31	-90.63	-254.06	-2,912.30	3,563.59	3,524.91	38.67	92.150				
8,800.00	8,753.02	8,752.99	8,733.87	32.74	23.70	-90.65	-255.43	-2,911.15	3,562.65	3,523.47	39.18	90.922				
8,900.00	8,853.02	8,863.11	8,843.96	33.07	24.05	-90.68	-257.06	-2,909.56	3,561.22	3,521.54	39.67	89.764				
9,000.00	8,953.02	8,982.78	8,963.61	33.40	24.43	-90.70	-258.40	-2,907.52	3,559.54	3,519.36	40.18	88.583				
9,100.00	9,053.02	9,098.47	9,079.25	33.73	24.81	-90.73	-260.32	-2,904.80	3,557.20	3,516.52	40.69	87.431				
9,200.00	9,153.02	9,185.00	9,165.73	34.07	25.09	-90.77	-262.65	-2,902.74	3,554.86	3,513.73	41.13	86.432				
9,300.00	9,253.02	9,246.12	9,226.81	34.40	25.30	-90.79	-264.18	-2,901.74	3,553.27	3,511.75	41.51	85.592				
9,400.00	9,353.02	9,333.17	9,313.86	34.73	25.58	-90.81	-265.28	-2,901.18	3,552.62	3,510.66	41.96	84.674				
9,500.00	9,453.02	9,435.81	9,416.49	35.06	25.92	-90.83	-266.15	-2,900.38	3,551.85	3,509.41	42.43	83.703				
9,600.00	9,553.02	9,547.00	9,527.67	35.39	26.27	-90.83	-266.60	-2,899.44	3,551.01	3,508.08	42.93	82.722				
9,700.00	9,653.02	9,623.55	9,604.23	35.73	26.50	-90.82	-265.95	-2,898.85	3,550.24	3,506.91	43.33	81.928				
9,800.00	9,753.02	9,719.51	9,700.17	36.06	26.79	-90.80	-264.37	-2,898.66	3,550.02	3,506.24	43.78	81.088				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD, 10215-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,853.02	9,824.57	9,805.20	36.40	27.10	-90.76	-262.08	-2,898.31	3,549.66	3,505.41	44.25	80.227		
10,000.00	9,953.02	9,917.92	9,898.50	36.73	27.38	-90.71	-259.05	-2,898.02	3,549.30	3,504.62	44.68	79.431		
10,100.00	10,053.02	10,110.01	10,090.48	37.07	27.97	-90.63	-254.24	-2,895.12	3,547.76	3,502.41	45.34	78.247		
10,200.00	10,153.02	10,210.89	10,191.31	37.40	28.15	-90.65	-255.33	-2,892.18	3,544.85	3,499.12	45.73	77.524		
10,300.00	10,253.02	10,260.29	10,240.69	37.74	28.16	-90.67	-256.22	-2,891.08	3,542.68	3,496.69	46.00	77.022		
10,398.27	10,351.29	10,308.00	10,288.40	38.07	28.17	-90.68	-256.82	-2,890.75	3,542.00	3,495.74	46.25	76.580		
10,400.00	10,353.02	10,308.00	10,288.40	38.08	28.17	-90.68	-256.82	-2,890.75	3,542.00	3,495.74	46.26	76.573		
10,500.00	10,453.02	10,378.46	10,358.85	38.41	28.18	-90.69	-257.61	-2,891.08	3,542.47	3,495.95	46.52	76.142		
10,600.00	10,553.02	10,489.43	10,469.80	38.75	28.19	-90.72	-259.38	-2,892.06	3,543.39	3,496.58	46.82	75.687		
10,700.00	10,653.02	10,699.67	10,679.94	39.09	28.25	-90.81	-265.30	-2,889.99	3,542.49	3,495.33	47.16	75.116		
10,800.00	10,753.02	10,905.67	10,885.72	39.43	28.32	-90.90	-270.51	-2,882.55	3,539.40	3,491.91	47.49	74.533		
10,900.00	10,853.02	10,978.00	10,957.96	39.77	28.35	-90.92	-271.77	-2,878.97	3,534.41	3,486.63	47.78	73.965		
11,000.00	10,953.02	11,011.07	10,991.01	40.10	28.37	-90.93	-272.06	-2,877.77	3,530.68	3,482.61	48.07	73.452		
11,100.00	11,053.02	11,068.00	11,047.92	40.44	28.39	-90.92	-271.59	-2,876.88	3,528.81	3,480.45	48.35	72.980		
11,157.80	11,110.82	11,068.00	11,047.92	40.64	28.39	-90.92	-271.59	-2,876.88	3,528.33	3,479.83	48.50	72.750		
11,200.00	11,153.02	11,068.00	11,047.92	40.78	28.39	-90.92	-271.59	-2,876.88	3,528.58	3,479.98	48.60	72.603		
11,300.00	11,253.02	11,121.54	11,101.45	41.12	28.40	-90.90	-270.55	-2,877.48	3,530.03	3,481.16	48.87	72.231		
11,400.00	11,353.02	11,158.00	11,137.88	41.46	28.42	-90.89	-269.83	-2,878.76	3,533.47	3,484.35	49.12	71.931		
11,500.00	11,453.02	11,192.29	11,172.11	41.80	28.43	-90.88	-269.06	-2,880.59	3,538.72	3,489.36	49.36	71.686		
11,566.02	11,519.04	11,215.96	11,195.71	42.03	28.44	-90.87	-268.44	-2,882.20	3,543.18	3,493.66	49.52	71.550		
11,600.00	11,553.00	11,247.00	11,226.64	42.14	28.45	-90.07	-267.52	-2,884.73	3,545.93	3,496.31	49.62	71.461		
11,650.00	11,602.72	11,247.00	11,226.64	42.31	28.45	-89.66	-267.52	-2,884.73	3,550.00	3,500.29	49.71	71.414		
11,700.00	11,651.80	11,309.71	11,289.08	42.46	28.47	-89.39	-265.62	-2,890.20	3,554.34	3,504.47	49.87	71.271		
11,750.00	11,699.87	11,804.55	11,777.29	42.61	28.65	-90.75	-221.72	-2,900.35	3,554.03	3,503.70	50.33	70.618		
11,800.00	11,746.57	11,832.00	11,801.43	42.75	28.64	-90.86	-208.66	-2,899.80	3,552.54	3,502.10	50.44	70.430		
11,850.00	11,791.53	11,832.00	11,801.43	42.87	28.64	-90.97	-208.66	-2,899.80	3,551.45	3,500.90	50.55	70.255		
11,900.00	11,834.42	11,849.84	11,816.68	42.98	28.63	-91.01	-199.40	-2,899.73	3,551.00	3,500.35	50.65	70.108		
11,916.57	11,848.13	11,855.57	11,821.51	43.02	28.63	-91.02	-196.33	-2,899.74	3,550.97	3,500.29	50.68	70.064		
11,950.00	11,874.92	11,877.00	11,839.30	43.08	28.62	-91.03	-184.38	-2,899.97	3,551.13	3,500.39	50.74	69.981		
12,000.00	11,912.70	11,877.00	11,839.30	43.17	28.62	-90.97	-184.38	-2,899.97	3,551.74	3,500.91	50.83	69.869		
12,050.00	11,947.48	11,877.00	11,839.30	43.24	28.62	-90.83	-184.38	-2,899.97	3,553.13	3,502.21	50.92	69.781		
12,100.00	11,979.01	11,922.00	11,875.26	43.29	28.60	-90.82	-157.40	-2,901.69	3,554.99	3,503.99	51.00	69.702		
12,150.00	12,007.03	11,922.00	11,875.26	43.34	28.60	-90.59	-157.40	-2,901.69	3,557.30	3,506.22	51.08	69.639		
12,200.00	12,031.34	11,922.00	11,875.26	43.37	28.60	-90.28	-157.40	-2,901.69	3,560.35	3,509.19	51.16	69.594		
12,250.00	12,051.76	11,949.57	11,896.36	43.40	28.59	-90.12	-139.75	-2,903.51	3,563.86	3,512.62	51.24	69.552		
12,300.00	12,068.11	12,191.00	12,030.04	43.43	28.60	-90.86	56.90	-2,917.54	3,567.41	3,516.03	51.39	69.421		
12,350.00	12,080.29	12,222.08	12,038.54	43.46	28.63	-90.73	86.77	-2,918.77	3,568.93	3,517.43	51.49	69.309		
12,400.00	12,088.20	12,249.33	12,044.57	43.51	28.66	-90.58	113.31	-2,919.95	3,570.70	3,519.10	51.60	69.201		
12,450.00	12,091.77	12,303.99	12,051.31	43.58	28.73	-90.42	167.41	-2,922.78	3,572.86	3,521.13	51.73	69.061		
12,466.02	12,092.00	12,351.41	12,053.54	43.60	28.82	-90.39	214.72	-2,924.79	3,573.34	3,521.52	51.82	68.957		
12,500.00	12,092.00	12,372.55	12,053.98	43.67	28.87	-90.40	235.83	-2,925.67	3,574.44	3,522.53	51.91	68.858		
12,600.00	12,092.00	12,912.40	12,038.52	43.93	31.30	-90.15	774.27	-2,916.24	3,571.76	3,518.16	53.60	66.635		
12,700.00	12,092.00	12,952.00	12,038.66	44.27	31.56	-90.15	813.77	-2,913.40	3,563.72	3,509.67	54.04	65.942		
12,800.00	12,092.00	13,042.00	12,039.87	44.68	32.21	-90.17	903.58	-2,907.83	3,556.60	3,501.83	54.77	64.941		
12,900.00	12,092.00	13,115.03	12,041.19	45.15	32.77	-90.20	976.49	-2,903.75	3,550.08	3,494.59	55.48	63.983		
13,000.00	12,092.00	13,209.07	12,043.06	45.68	33.55	-90.23	1,070.39	-2,899.00	3,544.08	3,487.71	56.37	62.866		
13,100.00	12,092.00	13,309.04	12,043.82	46.26	34.43	-90.24	1,170.23	-2,893.96	3,538.10	3,480.73	57.37	61.668		
13,200.00	12,092.00	13,350.76	12,043.90	46.89	34.82	-90.24	1,211.91	-2,892.18	3,532.93	3,474.83	58.09	60.815		
13,300.00	12,092.00	13,400.00	12,043.92	47.57	35.28	-90.24	1,261.14	-2,891.01	3,529.45	3,470.56	58.89	59.931		
13,400.00	12,092.00	13,441.25	12,044.31	48.30	35.69	-90.25	1,302.38	-2,890.66	3,527.50	3,467.82	59.68	59.105		
13,491.50	12,092.00	13,490.00	12,045.79	49.00	36.17	-90.27	1,351.11	-2,890.82	3,526.93	3,466.43	60.51	58.292		
13,500.00	12,092.00	13,490.00	12,045.79	49.06	36.17	-90.27	1,351.11	-2,890.82	3,526.94	3,466.39	60.55	58.248		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD, 10215-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,600.00	12,092.00	13,565.40	12,048.73	49.88	36.95	-90.32	1,426.45	-2,891.86	3,527.43	3,465.78	61.65	57.219		
13,700.00	12,092.00	13,613.39	12,050.20	50.73	37.46	-90.34	1,474.40	-2,893.03	3,529.01	3,466.43	62.59	56.387		
13,800.00	12,092.00	13,670.00	12,050.87	51.62	38.07	-90.35	1,530.94	-2,895.54	3,532.29	3,468.68	63.61	55.527		
13,900.00	12,092.00	13,750.67	12,049.59	52.54	38.96	-90.33	1,611.48	-2,899.83	3,536.57	3,471.70	64.87	54.520		
14,000.00	12,092.00	13,819.51	12,046.72	53.51	39.75	-90.29	1,680.16	-2,903.60	3,541.11	3,475.05	66.06	53.602		
14,100.00	12,092.00	13,890.54	12,043.07	54.50	40.58	-90.23	1,750.95	-2,908.19	3,546.60	3,479.29	67.31	52.692		
14,200.00	12,092.00	13,966.90	12,039.84	55.52	41.49	-90.17	1,827.05	-2,913.64	3,552.78	3,484.15	68.63	51.765		
14,300.00	12,092.00	14,046.93	12,036.38	56.58	42.47	-90.12	1,906.75	-2,919.86	3,559.61	3,489.59	70.02	50.835		
14,400.00	12,092.00	14,229.91	12,028.09	57.66	44.77	-89.98	2,089.06	-2,932.95	3,566.08	3,493.67	72.41	49.248		
14,500.00	12,092.00	14,310.86	12,025.49	58.77	45.81	-89.94	2,169.83	-2,937.77	3,571.10	3,497.20	73.89	48.327		
14,600.00	12,092.00	14,394.84	12,022.58	59.90	46.91	-89.90	2,253.58	-2,943.17	3,576.59	3,501.16	75.44	47.413		
14,700.00	12,092.00	14,476.00	12,019.55	61.06	47.99	-89.85	2,334.49	-2,948.73	3,582.53	3,505.56	76.97	46.542		
14,800.00	12,092.00	14,657.35	12,008.92	62.24	50.44	-89.68	2,515.11	-2,960.78	3,588.78	3,509.22	79.57	45.104		
14,900.00	12,092.00	14,924.00	11,990.63	63.44	54.14	-89.39	2,781.02	-2,966.48	3,589.35	3,506.29	83.06	43.213		
15,000.00	12,092.00	15,014.00	11,983.21	64.66	55.40	-89.27	2,870.72	-2,966.70	3,588.76	3,503.96	84.80	42.320		
15,013.08	12,092.00	15,014.00	11,983.21	64.82	55.40	-89.27	2,870.72	-2,966.70	3,588.74	3,503.83	84.91	42.265		
15,100.00	12,092.00	15,084.13	11,977.65	65.90	56.40	-89.18	2,940.62	-2,967.54	3,589.03	3,502.68	86.36	41.560		
15,200.00	12,092.00	15,484.00	11,956.40	67.16	62.12	-88.83	3,339.37	-2,951.93	3,581.05	3,489.81	91.24	39.248		
15,300.00	12,092.00	15,593.00	11,951.05	68.43	63.70	-88.74	3,448.01	-2,944.91	3,573.83	3,480.58	93.25	38.326		
15,400.00	12,092.00	15,685.41	11,949.70	69.72	65.05	-88.72	3,540.19	-2,938.51	3,565.99	3,470.87	95.12	37.490		
15,500.00	12,092.00	15,766.00	11,948.86	71.02	66.23	-88.70	3,620.56	-2,932.67	3,557.94	3,461.05	96.89	36.723		
15,600.00	12,092.00	15,817.02	11,948.14	72.34	66.98	-88.69	3,671.47	-2,929.46	3,550.99	3,452.61	98.37	36.097		
15,700.00	12,092.00	15,916.17	11,947.79	73.67	68.45	-88.68	3,770.50	-2,924.88	3,545.43	3,445.08	100.35	35.330		
15,800.00	12,092.00	16,017.93	11,948.25	75.02	69.96	-88.69	3,872.10	-2,919.12	3,538.80	3,436.43	102.37	34.567		
15,900.00	12,092.00	16,069.72	11,948.68	76.37	70.74	-88.69	3,923.84	-2,916.88	3,533.48	3,429.59	103.89	34.011		
16,000.00	12,092.00	16,143.00	11,949.86	77.74	71.84	-88.71	3,997.07	-2,914.68	3,529.42	3,423.78	105.64	33.410		
16,100.00	12,092.00	16,202.79	11,951.01	79.12	72.74	-88.73	4,056.84	-2,913.45	3,526.25	3,419.01	107.25	32.880		
16,200.00	12,092.00	16,282.44	11,952.22	80.51	73.95	-88.75	4,136.47	-2,912.25	3,523.77	3,414.69	109.07	32.306		
16,300.00	12,092.00	16,363.47	11,953.22	81.91	75.18	-88.77	4,217.49	-2,911.46	3,521.82	3,410.89	110.92	31.750		
16,400.00	12,092.00	16,444.20	11,953.39	83.31	76.41	-88.77	4,298.22	-2,911.10	3,520.42	3,407.64	112.78	31.215		
16,500.00	12,092.00	16,521.00	11,953.63	84.73	77.59	-88.77	4,375.02	-2,911.15	3,519.56	3,404.97	114.59	30.714		
16,516.47	12,092.00	16,521.00	11,953.63	84.97	77.59	-88.77	4,375.02	-2,911.15	3,519.52	3,404.78	114.74	30.673		
16,600.00	12,092.00	16,561.56	11,953.78	86.16	78.21	-88.77	4,415.57	-2,911.65	3,519.90	3,403.92	115.98	30.350		
16,700.00	12,092.00	16,615.00	11,953.66	87.59	79.04	-88.77	4,468.98	-2,913.46	3,522.08	3,404.59	117.50	29.976		
16,800.00	12,092.00	16,756.12	11,953.51	89.03	81.22	-88.77	4,610.03	-2,917.79	3,524.28	3,404.16	120.12	29.339		
16,900.00	12,092.00	16,762.00	11,953.52	90.48	81.31	-88.77	4,615.91	-2,917.92	3,526.91	3,405.87	121.04	29.139		
17,000.00	12,092.00	16,762.00	11,953.52	91.93	81.31	-88.77	4,615.91	-2,917.92	3,532.37	3,410.56	121.81	28.999		
17,100.00	12,092.00	16,762.00	11,953.52	93.39	81.31	-88.77	4,615.91	-2,917.92	3,540.64	3,418.13	122.51	28.901		
17,200.00	12,092.00	16,762.00	11,953.52	94.86	81.31	-88.77	4,615.91	-2,917.92	3,551.71	3,428.57	123.14	28.844		
17,300.00	12,092.00	16,762.00	11,953.52	96.33	81.31	-88.77	4,615.91	-2,917.92	3,565.55	3,441.87	123.68	28.828 SF		
17,400.00	12,092.00	16,762.00	11,953.52	97.81	81.31	-88.77	4,615.91	-2,917.92	3,582.13	3,457.98	124.15	28.853		
17,500.00	12,092.00	16,762.00	11,953.52	99.30	81.31	-88.77	4,615.91	-2,917.92	3,601.42	3,476.87	124.55	28.916		
17,600.00	12,092.00	16,762.00	11,953.52	100.79	81.31	-88.77	4,615.91	-2,917.92	3,623.36	3,498.49	124.87	29.017		
17,700.00	12,092.00	16,762.00	11,953.52	102.28	81.31	-88.77	4,615.91	-2,917.92	3,647.91	3,522.79	125.12	29.155		
17,800.00	12,092.00	16,762.00	11,953.52	103.78	81.31	-88.77	4,615.91	-2,917.92	3,675.02	3,549.72	125.30	29.330		
17,900.00	12,092.00	16,762.00	11,953.52	105.29	81.31	-88.77	4,615.91	-2,917.92	3,704.63	3,579.22	125.41	29.540		
18,000.00	12,092.00	16,762.00	11,953.52	106.80	81.31	-88.77	4,615.91	-2,917.92	3,736.68	3,611.22	125.46	29.785		
18,100.00	12,092.00	16,762.00	11,953.52	108.31	81.31	-88.77	4,615.91	-2,917.92	3,771.11	3,645.67	125.44	30.062		
18,200.00	12,092.00	16,762.00	11,953.52	109.83	81.31	-88.77	4,615.91	-2,917.92	3,807.86	3,682.49	125.37	30.373		
18,300.00	12,092.00	16,762.00	11,953.52	111.35	81.31	-88.77	4,615.91	-2,917.92	3,846.86	3,721.62	125.24	30.715		
18,400.00	12,092.00	16,762.00	11,953.52	112.87	81.31	-88.77	4,615.91	-2,917.92	3,888.04	3,762.97	125.07	31.087		
18,500.00	12,092.00	16,762.00	11,953.52	114.40	81.31	-88.77	4,615.91	-2,917.92	3,931.33	3,806.49	124.84	31.490		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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													Offset Site Error:	0.00 usft
FMM Fed Com - Proxy WCA State Com #001H (Offset) - ST02 - ST02													Offset Well Error:	0.00 usft
Survey Program: 236-OWSG (Rev2) MWD, 2833-OWSG (Rev2) MWD, 10215-OWSG (Rev2) MWD														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
18,600.00	12,092.00	16,762.00	11,953.52	115.93	81.31	-88.77	4,615.91	-2,917.92	3,976.67	3,852.09	124.58	31.921		
18,700.00	12,092.00	16,762.00	11,953.52	117.46	81.31	-88.77	4,615.91	-2,917.92	4,023.98	3,899.71	124.27	32.380		
18,800.00	12,092.00	16,762.00	11,953.52	119.00	81.31	-88.77	4,615.91	-2,917.92	4,073.20	3,949.27	123.93	32.867		
18,900.00	12,092.00	16,762.00	11,953.52	120.54	81.31	-88.77	4,615.91	-2,917.92	4,124.25	4,000.69	123.56	33.380		
19,000.00	12,092.00	16,762.00	11,953.52	122.09	81.31	-88.77	4,615.91	-2,917.92	4,177.08	4,053.92	123.15	33.917		
19,100.00	12,092.00	16,762.00	11,953.52	123.63	81.31	-88.77	4,615.91	-2,917.92	4,231.60	4,108.88	122.73	34.480		
19,200.00	12,092.00	16,762.00	11,953.52	125.18	81.31	-88.77	4,615.91	-2,917.92	4,287.77	4,165.49	122.28	35.065		
19,300.00	12,092.00	16,762.00	11,953.52	126.73	81.31	-88.77	4,615.91	-2,917.92	4,345.52	4,223.70	121.81	35.673		
19,400.00	12,092.00	16,762.00	11,953.52	128.29	81.31	-88.77	4,615.91	-2,917.92	4,404.77	4,283.44	121.33	36.304		
19,500.00	12,092.00	16,762.00	11,953.52	129.84	81.31	-88.77	4,615.91	-2,917.92	4,465.48	4,344.65	120.83	36.956		
19,600.00	12,092.00	16,762.00	11,953.52	131.40	81.31	-88.77	4,615.91	-2,917.92	4,527.59	4,407.27	120.32	37.629		
19,700.00	12,092.00	16,762.00	11,953.52	132.96	81.31	-88.77	4,615.91	-2,917.92	4,591.03	4,471.23	119.80	38.322		
19,800.00	12,092.00	16,762.00	11,953.52	134.53	81.31	-88.77	4,615.91	-2,917.92	4,655.76	4,536.49	119.27	39.034		
19,900.00	12,092.00	16,762.00	11,953.52	136.09	81.31	-88.77	4,615.91	-2,917.92	4,721.72	4,602.98	118.74	39.765		
20,000.00	12,092.00	16,762.00	11,953.52	137.66	81.31	-88.77	4,615.91	-2,917.92	4,788.86	4,670.65	118.21	40.513		
20,100.00	12,092.00	16,762.00	11,953.52	139.23	81.31	-88.77	4,615.91	-2,917.92	4,857.12	4,739.46	117.67	41.278		
20,200.00	12,092.00	16,762.00	11,953.52	140.80	81.31	-88.77	4,615.91	-2,917.92	4,926.48	4,809.35	117.13	42.060		
20,300.00	12,092.00	16,762.00	11,953.52	142.37	81.31	-88.77	4,615.91	-2,917.92	4,996.87	4,880.27	116.59	42.857		

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



Total Directional Services

Anticollision Report

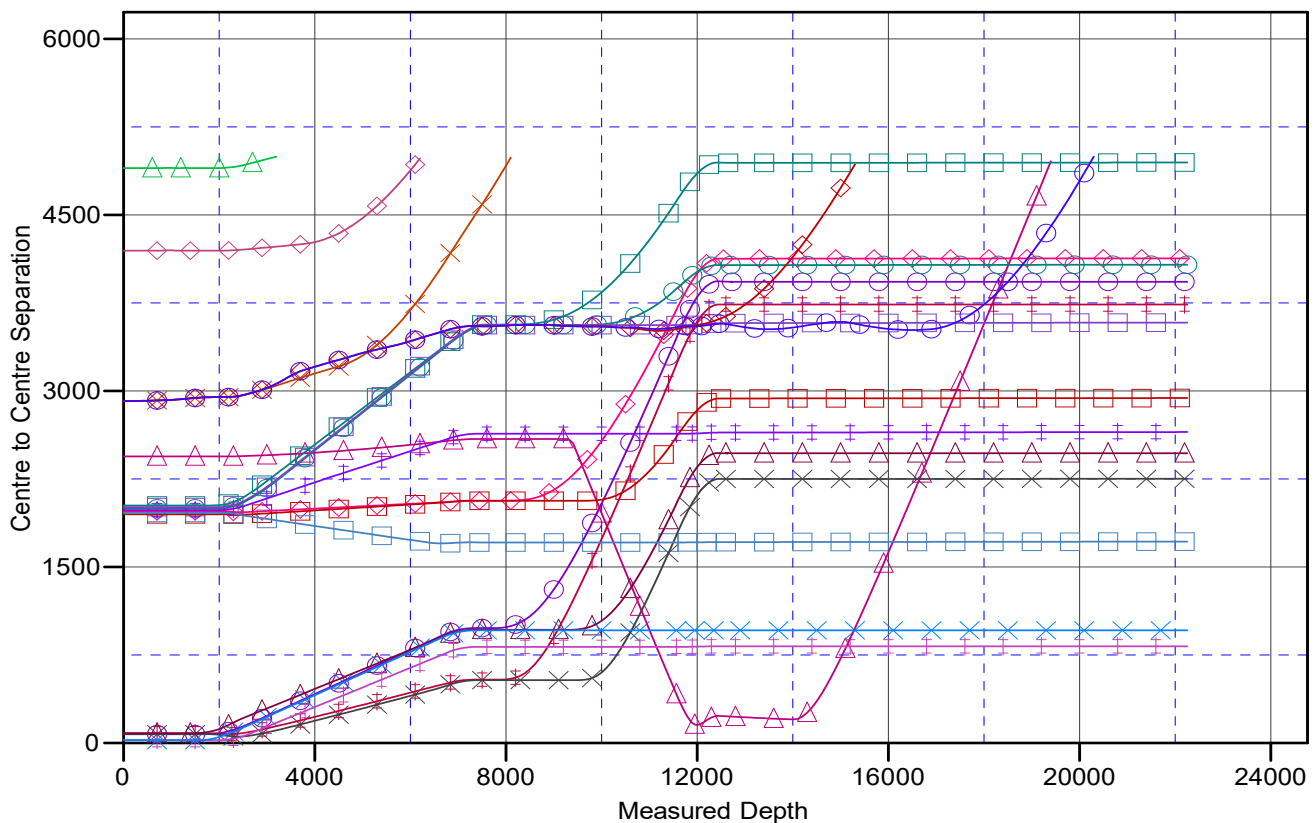


Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 3332.9' GE + 30' KB @ 3362.90usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 805H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.54°

Ladder Plot



LEGEND

Amoco State #001 (Offset), OH, OH V0	FMM Fed Com 302H, OH, Plan #1 V0	FMM Fed Com 806H, OH, Plan #1 V0
Blue Bay WCA State Com #001C (Offset Plan), OH, Plan #1 V0	FMM Fed Com 303H, OH, Plan #1 V0	Pre-Ongard Well #001 (Offset), OH, OH V0
FMM Fed Com 101H, OH, Plan #1 V0	FMM Fed Com 304H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), OH, OH V0
FMM Fed Com 102H, OH, Plan #1 V0	FMM Fed Com 801H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), ST01, ST01 V0
FMM Fed Com 103H, OH, Plan #1 V0	FMM Fed Com 802H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), ST02, ST02 V0
FMM Fed Com 104H, OH, Plan #1 V0	FMM Fed Com 803H, OH, Plan #1 V0	
FMM Fed Com 301H, OH, Plan #1 V0	FMM Fed Com 804H, OH, Plan #1 V0	

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



Total Directional Services

Anticollision Report

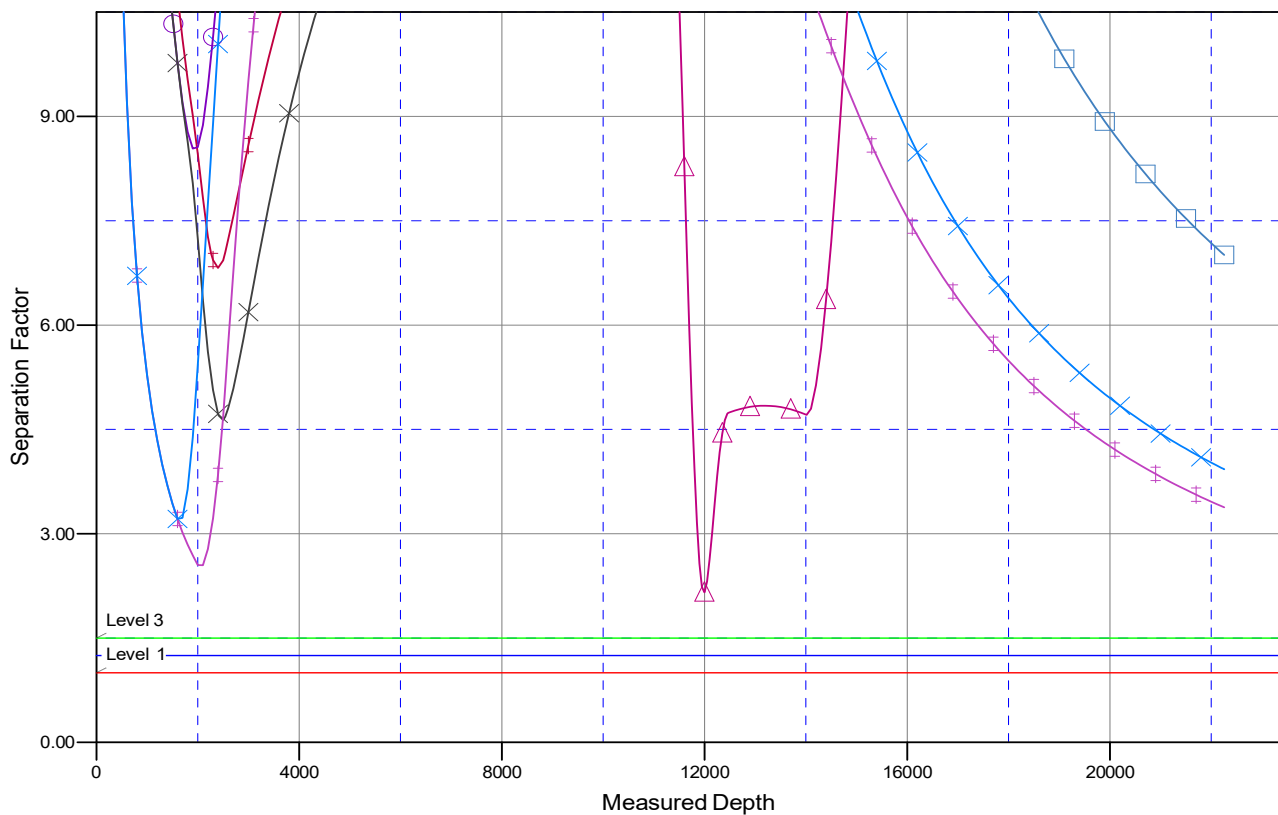


Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 805H
Project:	Lea County, NM (NAD83)	TVD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Reference Site:	FMM Fed Com	MD Reference:	3332.9' GE + 30' KB @ 3362.90usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 805H	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 3332.9' GE + 30' KB @ 3362.90usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 805H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.54°

Separation Factor Plot



LEGEND

Amoco State #001 (Offset), OH, OH V0	FMM Fed Com 302H, OH, Plan #1 V0	FMM Fed Com 806H, OH, Plan #1 V0
Blue Bay WCA State Com #001C (Offset Plan), OH, Plan #1 V0	FMM Fed Com 303H, OH, Plan #1 V0	Pre-Ongard Well #001 (Offset), OH, OH V0
FMM Fed Com 101H, OH, Plan #1 V0	FMM Fed Com 304H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), OH, OH V0
FMM Fed Com 102H, OH, Plan #1 V0	FMM Fed Com 801H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), ST01, ST01 V0
FMM Fed Com 103H, OH, Plan #1 V0	FMM Fed Com 802H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), ST02, ST02 V0
FMM Fed Com 104H, OH, Plan #1 V0	FMM Fed Com 803H, OH, Plan #1 V0	
FMM Fed Com 301H, OH, Plan #1 V0	FMM Fed Com 804H, OH, Plan #1 V0	

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

**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 103H
SURFACE HOLE FOOTAGE:	345'/S & 2027'/E
BOTTOM HOLE FOOTAGE:	150'/N & 1877'/E

WELL NAME & NO.:	FMM Fed Com 104H
SURFACE HOLE FOOTAGE:	345'/S & 1977'/E
BOTTOM HOLE FOOTAGE:	150'/N & 380'/E

WELL NAME & NO.:	FMM Fed Com 303H
SURFACE HOLE FOOTAGE:	345'/S & 2002'/E
BOTTOM HOLE FOOTAGE:	150'/N & 1877'/E

WELL NAME & NO.:	FMM Fed Com 304H
SURFACE HOLE FOOTAGE:	345'/S & 1952'/E
BOTTOM HOLE FOOTAGE:	150'/N & 380'/E

WELL NAME & NO.:	FMM Fed Com 804H
SURFACE HOLE FOOTAGE:	270'/S & 2015'/E
BOTTOM HOLE FOOTAGE:	150'/N & 2160'/E

WELL NAME & NO.:	FMM Fed Com 805H
SURFACE HOLE FOOTAGE:	270'/S & 1990'/E
BOTTOM HOLE FOOTAGE:	150'/N & 1340'/E

WELL NAME & NO.:	FMM Fed Com 806H
SURFACE HOLE FOOTAGE:	270'/S & 1965'/E
BOTTOM HOLE FOOTAGE:	150'/N & 380'/E

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	

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 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.

- 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.
Cement excess is less than 25%, more cement might be required.

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.

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 integrity 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 integrity 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

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

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 86014

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 86014
	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
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	3/7/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/7/2022
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	3/7/2022