

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. 30-025-49812
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [97779]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

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

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

NGMP Rec 03/03/2022

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 / 345 FSL / 1977 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.167667 / LONG: -103.319109 (TVD: 0 feet, MD: 0 feet)
PPP: SESE / 0 FSL / 380 FEL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.181229 / LONG: -103.313948 (TVD: 8280 feet, MD: 13300 feet)
PPP: SESE / 815 FSL / 380 FEL / TWSP: 24S / RANGE: 35E / SECTION: 36 / LAT: 32.168953 / LONG: -103.313948 (TVD: 8280 feet, MD: 8842 feet)
BHL: TR A / 150 FNL / 380 FEL / TWSP: 24S / RANGE: 35E / SECTION: 25 / LAT: 32.19533 / LONG: -103.313949 (TVD: 8280 feet, MD: 18438 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 30-025-49811		² Pool Code 97779		³ Pool Name DOGIE DRAW;DELAWARE	
⁴ Property Code 332472		⁵ Property Name FMM FED COM			⁶ Well Number 104H
⁷ OGRID No. 373910		⁸ Operator Name FRANKLIN MOUNTAIN ENERGY LLC			⁹ Elevation 3333.0'

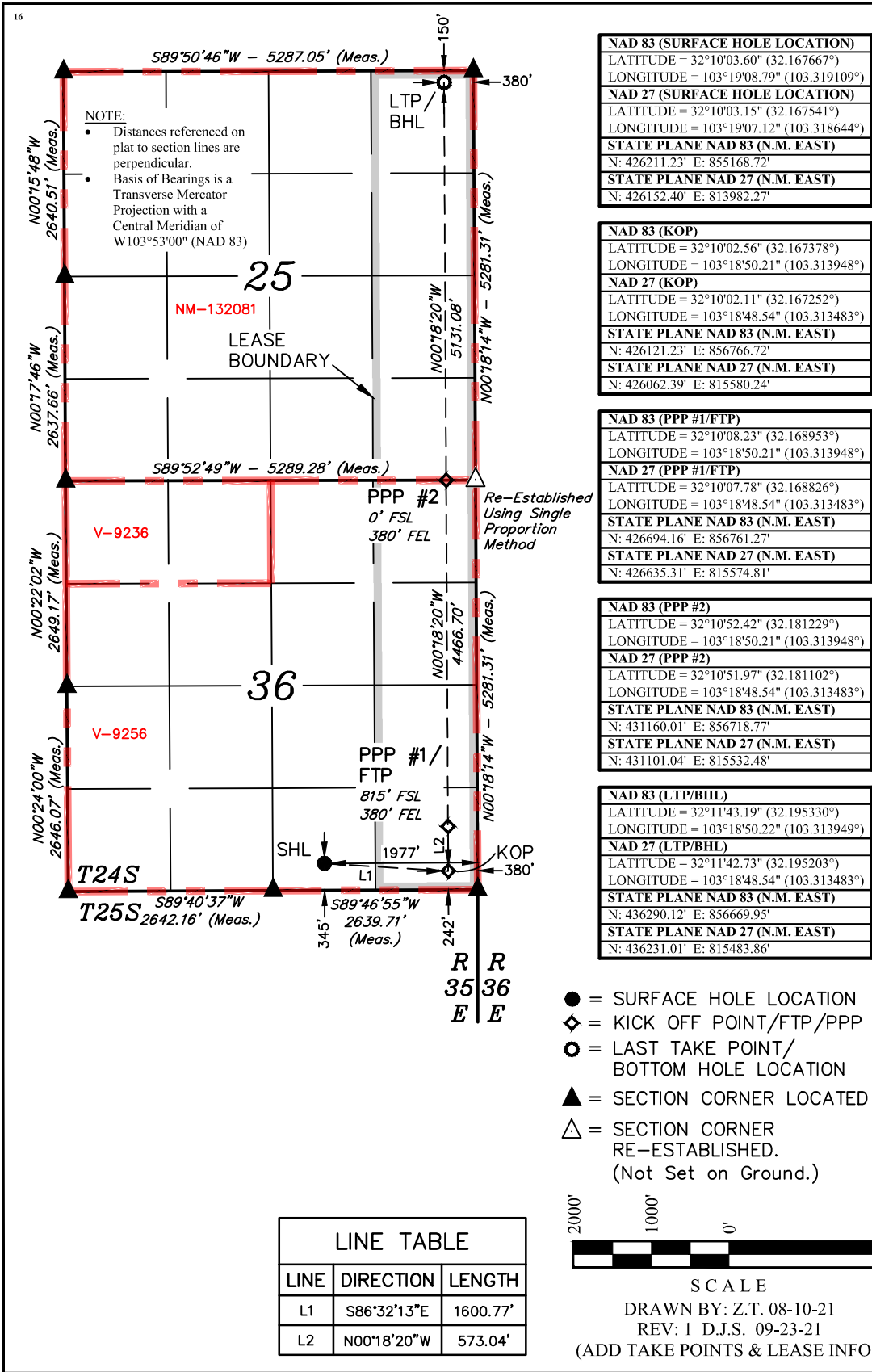
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	36	24S	35E		345	SOUTH	1977	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	24S	35E		150	NORTH	380	EAST	LEA
¹² Dedicated Acres 320		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.

Shelly Albrecht 9/24/2021
Signature Date

Shelly Albrecht
Printed Name

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
23782
09-23-21
PROFESSIONAL SURVEYOR

Certificate Number:

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

Submit Electronically
Via E-permitting

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

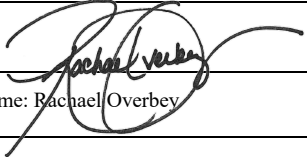
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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 104H

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	2,058'	1,305'			Carbonates
Salado	1,799'	1,564'			Salt, Carbonate & Clastics
Base Salt	47'	3,316'			Shaley Carbonate & Shale
Capitan	-767'	4,130'			Carbonates
Lamar	-1,929'	5,292'			Carbonate & Clastics
Bell Canyon	-2,024'	5,387'			Sandstone - oil/gas/water
Cherry Canyon	-2,646'	6,009'			Sandstone - oil/gas/water
Brushy Canyon	-3,943'	7,306'			Sand/carb/shales - oil/gas/water
Leonard	-4,764'	8,127'			Sand/carb/shales - oil/gas/water
HZ Target at Landing	-4,917'	8,280'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,030'	8,393'			Shale/Carbonates - oil/gas
Avalon	-5,093'	8,456'			Shale/Carbonates - oil/gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	5,387'	Oil
Leonard	8,127'	Oil
Avalon	8,456'	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	5320	1.74	1.70	2.93	3.33
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	8842	1.50	1.73	2.28	1.56
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606 TVD	18438 8280	1.32	1.68	1.39	1.16 2.09

7 5/8" casing will be set at 8,842' MD/8,280' TVD at 90° Inc. Stress calculations on 5 1/2" casing performed assuming 18,438' depth. Actual max vertical depth is 8,280'.



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%
					0.125pps Poly-E-Flake					1% CaCl ₂ , 0.125pps Celo-Flake				
Int1	12.25	9.625	5320	1565	Lead, 12.8 ppg, Class C 5% Salt,	1.79	9.74	0	154	Tail, 14.8 ppg, Class C,	1.33	6.37	5020	100%
					0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal					0.1% HR 800 .125 pps Poly-E-Flake				
Int2	8.75	7.625	8842	187	Lite Fill, 9.5 ppg, Class C 3lb/sk	2.13	5.97	4320	94	NeoCem 14.8 ppg, Class C	1.33	6.29	7842	50%
					Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake					0.25 pps Cello-Flake, 2% CaCl ₂				
Prod	6.75	5.5	18438	790	Tail, 14.5 ppg, Gas Migration Control	1.34	6.22	7842						20%

5. Minimum Specifications for Pressure Control:

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

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5,000/250 psig and the annular preventer to 5,000/250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

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

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.



6. Types and characteristics of the proposed mud system:

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 8,842'	Brine	8.8-10.2	28-34	N/c
8,842' – 18,438'	Oil Base	10.0-12.0	58-68	3 - 6
Lateral				

The highest mud weight needed to balance formation is expected to be 10-11 ppg. In order to maintain hole stability, mud weights up to 12 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary well control and monitoring equipment:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

(D) A wear bushing will be installed in the wellhead prior to drilling out of the surface casing.

8. Logging, testing and coring program:

GR–CCL–CNL Will be run in cased hole during completions phase of operations.

Open-hole logs are not planned for this well.

9. Abnormal conditions, pressures, temperatures and potential hazards:

The estimated bottom-hole temperature at 8,280' TVD (deepest point of the well) is 160F with an estimated maximum bottom-hole pressure (BHP) at the same point of 5,166 psig (based on 12 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

- A. All personnel shall receive proper awareness H₂S training.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment
 - a. Well Control Equipment
 - i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.
 - ii. Choke manifold with a remotely operated hydraulic choke.
 - iii. Mud/gas separator
 - b. Protective equipment for essential personnel
 - i. Breathing Apparatus
 1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.



2. Work/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.

Released for Imaging: 3/7/2022 10:50:58 AM

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 104H
Wellbore: OH
Design: Plan #2



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

Magnetic Field
Strength: 47462.3nT
Dip Angle: 59.88°
Date: 9/7/2021
Model: IGRF2020

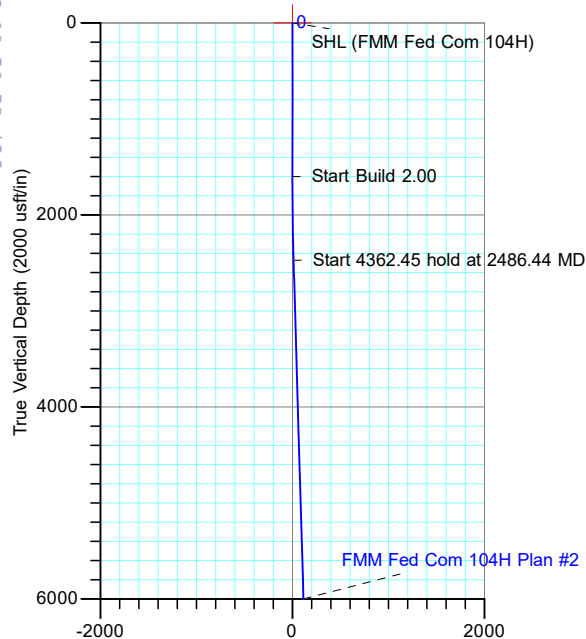
PROJECT DETAILS: Lea County, NM (NAD83)

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



Received by OCD: 3/3/2022 1:07:11 PM

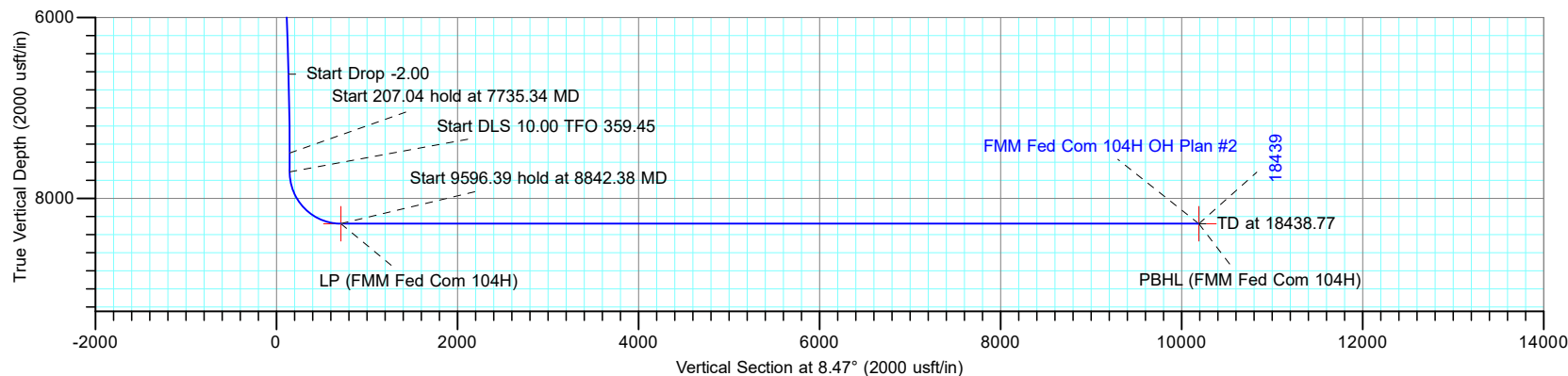
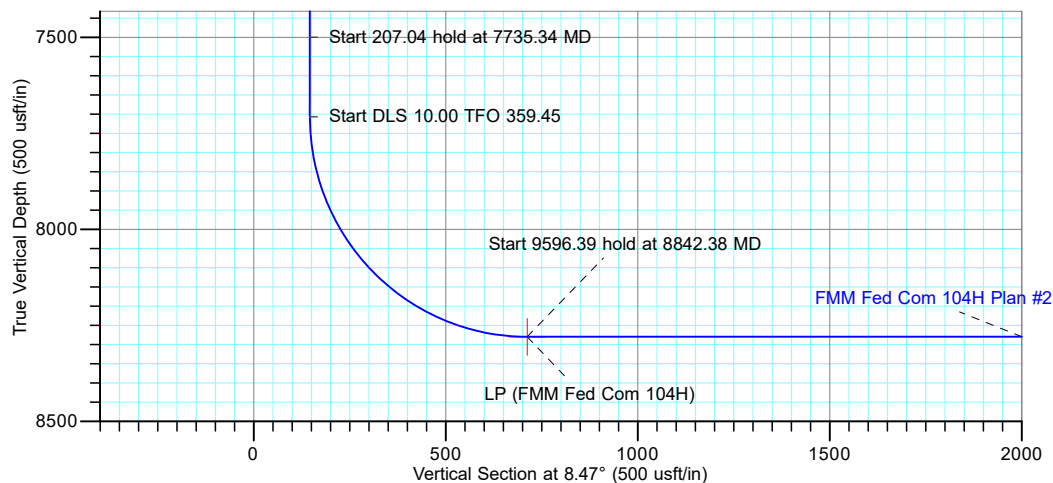
3333' GE + 30' KB @ 3363.00usft



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		
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00		Start Build 2.00
2486.44	17.73	93.22	2472.37	-7.65	135.84	2.00	93.22	12.45		Start 4362.45 hold at 2486.44 MD
6848.89	17.73	93.22	6627.63	-82.35	1462.16	0.00	0.00	133.96		Start Drop -2.00
7735.34	0.00	0.00	7500.00	-90.00	1598.00	2.00	180.00	146.40		Start 207.04 hold at 7735.34 MD
7942.38	0.00	0.00	7707.04	-90.00	1598.00	0.00	0.00	146.40		Start DLS 10.00 TFO 359.45
8842.38	90.00	359.45	8280.00	482.93	1592.55	10.00	359.45	712.28		Start 9596.39 hold at 8842.38 MD
18438.77	90.00	359.45	8280.00	10078.89	1501.23	0.00	0.00	10190.08		TD at 18438.77

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (FMM Fed Com 104H)	8280.00	482.93	1592.55	32.168953	-103.313948
PBHL (FMM Fed Com 104H)	8280.00	10078.89	1501.23	32.195330	-103.313949
SHL (FMM Fed Com 104H)	0.00	0.00	0.00	32.167667	-103.319109



TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #2 (FMM Fed Com 104H/OH)
Created By: Dustin Ault
Date: 14:58, September 09 2021
Approved: _____ Date: _____

Page 18 of 107

Released to Imaging: 3/7/2022 10:50:58 AM

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: FMM Fed Com
Well: FMM Fed Com 104H
Wellbore: OH
Design: Plan #2

T

G

M

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

Magnetic Field
Strength: 47462.3nT
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

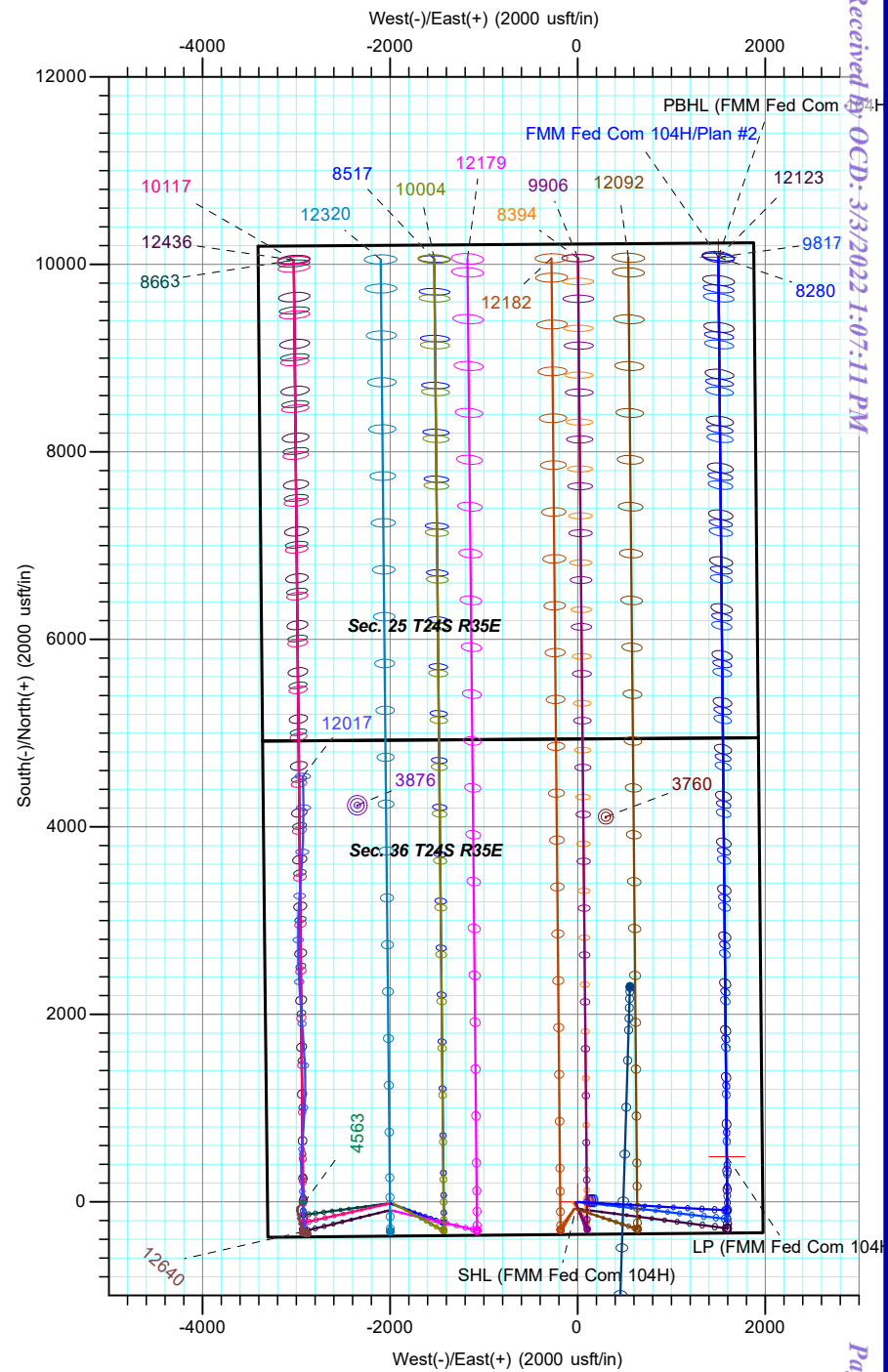
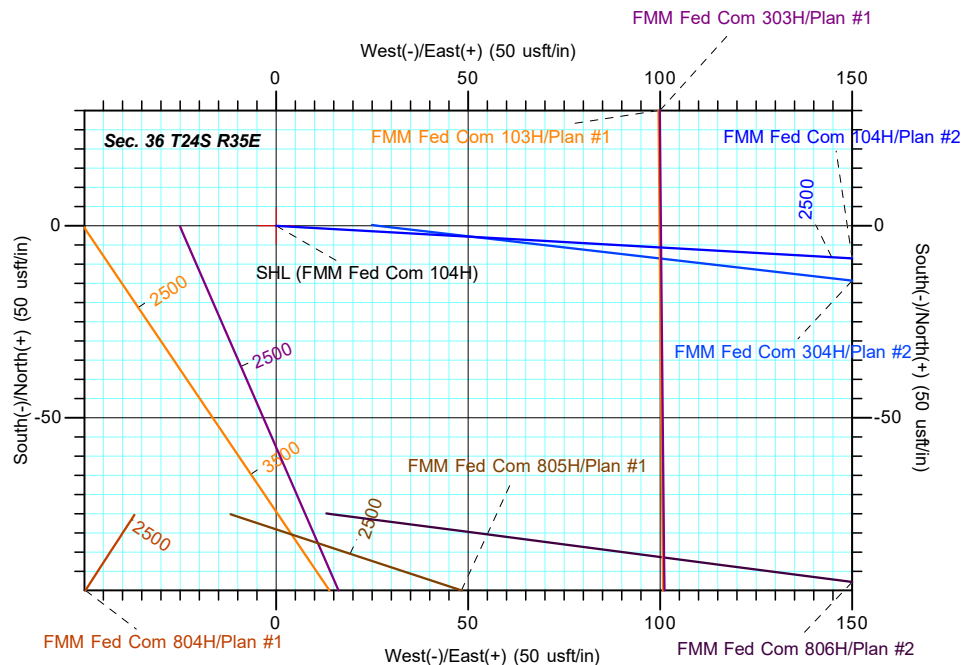


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (FMM Fed Com 104H)	8280.00	482.93	1592.55	426694.16	856761.27	32.168953	-103.313948
PBHL (FMM Fed Com 104H)	8280.00	10078.89	1501.23	436290.12	856669.95	32.195330	-103.313949
SHL (FMM Fed Com 104H)	0.00	0.00	0.00	426211.23	855168.72	32.167667	-103.319109

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	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
2486.44	17.73	93.22	2472.37	-7.65	135.84	2.00	93.22	12.45	Start 4362.45 hold at 2486.44 MD
6848.89	17.73	93.22	6627.63	-82.35	1462.16	0.00	0.00	133.96	Start Drop -2.00
7735.34	0.00	0.00	7500.00	-90.00	1598.00	2.00	180.00	146.40	Start 207.04 hold at 7735.34 MD
7942.38	0.00	0.00	7707.04	-90.00	1598.00	0.00	0.00	146.40	Start DLS 10.00 TFO 359.45
8842.38	90.00	359.45	8280.00	482.93	1592.55	10.00	359.45	712.28	Start 9596.39 hold at 8842.38 MD
18438.77	90.00	359.45	8280.00	10078.89	1501.23	0.00	0.00	10190.08	TD at 18438.77



TOTAL DIRECTIONAL SERVICES LLC

Plan: Plan #2 (FMM Fed Com 104H/OH)
Created By: Dustin Ault
Date: 14:59, September 09 2021
Approved: _____ Date: _____

Received by OCD: 3/3/2022 1:07:11 PM

Page 19 of 107



Franklin Mountain Energy

Lea County, NM (NAD83)

FMM Fed Com

FMM Fed Com 104H

OH

Plan: Plan #2

Standard Planning Report

09 September, 2021





Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 104H					
Well Position	+N/-S	18.84 usft	Northing:	426,211.23 usft	Latitude:	32.167667
	+E/-W	2,035.93 usft	Easting:	855,168.72 usft	Longitude:	-103.319109
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,333.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/7/2021	6.40	59.88	47,462.33054873

Design	Plan #2			
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	8.47

Plan Survey Tool Program	Date	9/9/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,438.77 Plan #2 (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	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,486.44	17.73	93.22	2,472.37	-7.65	135.84	2.00	2.00	0.00	93.22	
6,848.89	17.73	93.22	6,627.63	-82.35	1,462.16	0.00	0.00	0.00	0.00	
7,735.34	0.00	0.00	7,500.00	-90.00	1,598.00	2.00	-2.00	0.00	180.00	
7,942.38	0.00	0.00	7,707.04	-90.00	1,598.00	0.00	0.00	0.00	0.00	
8,842.38	90.00	359.45	8,280.00	482.93	1,592.55	10.00	10.00	-0.06	359.45	
18,438.77	90.00	359.45	8,280.00	10,078.89	1,501.23	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 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 104H)									
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
Start Build 2.00									
1,700.00	2.00	93.22	1,699.98	-0.10	1.74	0.16	2.00	2.00	0.00
1,800.00	4.00	93.22	1,799.84	-0.39	6.97	0.64	2.00	2.00	0.00
1,900.00	6.00	93.22	1,899.45	-0.88	15.67	1.44	2.00	2.00	0.00
2,000.00	8.00	93.22	1,998.70	-1.57	27.84	2.55	2.00	2.00	0.00
2,100.00	10.00	93.22	2,097.47	-2.45	43.45	3.98	2.00	2.00	0.00
2,200.00	12.00	93.22	2,195.62	-3.52	62.50	5.73	2.00	2.00	0.00
2,300.00	14.00	93.22	2,293.06	-4.79	84.96	7.78	2.00	2.00	0.00
2,400.00	16.00	93.22	2,389.64	-6.24	110.80	10.15	2.00	2.00	0.00
2,486.44	17.73	93.22	2,472.37	-7.65	135.84	12.45	2.00	2.00	0.00
Start 4362.45 hold at 2486.44 MD									
2,500.00	17.73	93.22	2,485.28	-7.88	139.96	12.82	0.00	0.00	0.00
2,600.00	17.73	93.22	2,580.53	-9.59	170.36	15.61	0.00	0.00	0.00
2,700.00	17.73	93.22	2,675.78	-11.31	200.77	18.39	0.00	0.00	0.00
2,800.00	17.73	93.22	2,771.03	-13.02	231.17	21.18	0.00	0.00	0.00
2,900.00	17.73	93.22	2,866.28	-14.73	261.57	23.96	0.00	0.00	0.00
3,000.00	17.73	93.22	2,961.53	-16.44	291.98	26.75	0.00	0.00	0.00
3,100.00	17.73	93.22	3,056.78	-18.16	322.38	29.54	0.00	0.00	0.00
3,200.00	17.73	93.22	3,152.03	-19.87	352.78	32.32	0.00	0.00	0.00
3,300.00	17.73	93.22	3,247.28	-21.58	383.19	35.11	0.00	0.00	0.00
3,400.00	17.73	93.22	3,342.54	-23.29	413.59	37.89	0.00	0.00	0.00
3,500.00	17.73	93.22	3,437.79	-25.01	443.99	40.68	0.00	0.00	0.00
3,600.00	17.73	93.22	3,533.04	-26.72	474.40	43.46	0.00	0.00	0.00
3,700.00	17.73	93.22	3,628.29	-28.43	504.80	46.25	0.00	0.00	0.00
3,800.00	17.73	93.22	3,723.54	-30.14	535.20	49.03	0.00	0.00	0.00
3,900.00	17.73	93.22	3,818.79	-31.86	565.60	51.82	0.00	0.00	0.00
4,000.00	17.73	93.22	3,914.04	-33.57	596.01	54.60	0.00	0.00	0.00
4,100.00	17.73	93.22	4,009.29	-35.28	626.41	57.39	0.00	0.00	0.00
4,200.00	17.73	93.22	4,104.54	-36.99	656.81	60.18	0.00	0.00	0.00
4,300.00	17.73	93.22	4,199.79	-38.70	687.22	62.96	0.00	0.00	0.00
4,400.00	17.73	93.22	4,295.04	-40.42	717.62	65.75	0.00	0.00	0.00
4,500.00	17.73	93.22	4,390.29	-42.13	748.02	68.53	0.00	0.00	0.00
4,600.00	17.73	93.22	4,485.55	-43.84	778.43	71.32	0.00	0.00	0.00
4,700.00	17.73	93.22	4,580.80	-45.55	808.83	74.10	0.00	0.00	0.00
4,800.00	17.73	93.22	4,676.05	-47.27	839.23	76.89	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 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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	17.73	93.22	4,771.30	-48.98	869.64	79.67	0.00	0.00	0.00
5,000.00	17.73	93.22	4,866.55	-50.69	900.04	82.46	0.00	0.00	0.00
5,100.00	17.73	93.22	4,961.80	-52.40	930.44	85.24	0.00	0.00	0.00
5,200.00	17.73	93.22	5,057.05	-54.12	960.85	88.03	0.00	0.00	0.00
5,300.00	17.73	93.22	5,152.30	-55.83	991.25	90.82	0.00	0.00	0.00
5,400.00	17.73	93.22	5,247.55	-57.54	1,021.65	93.60	0.00	0.00	0.00
5,500.00	17.73	93.22	5,342.80	-59.25	1,052.06	96.39	0.00	0.00	0.00
5,600.00	17.73	93.22	5,438.05	-60.96	1,082.46	99.17	0.00	0.00	0.00
5,700.00	17.73	93.22	5,533.30	-62.68	1,112.86	101.96	0.00	0.00	0.00
5,800.00	17.73	93.22	5,628.56	-64.39	1,143.26	104.74	0.00	0.00	0.00
5,900.00	17.73	93.22	5,723.81	-66.10	1,173.67	107.53	0.00	0.00	0.00
6,000.00	17.73	93.22	5,819.06	-67.81	1,204.07	110.31	0.00	0.00	0.00
6,100.00	17.73	93.22	5,914.31	-69.53	1,234.47	113.10	0.00	0.00	0.00
6,200.00	17.73	93.22	6,009.56	-71.24	1,264.88	115.88	0.00	0.00	0.00
6,300.00	17.73	93.22	6,104.81	-72.95	1,295.28	118.67	0.00	0.00	0.00
6,400.00	17.73	93.22	6,200.06	-74.66	1,325.68	121.45	0.00	0.00	0.00
6,500.00	17.73	93.22	6,295.31	-76.38	1,356.09	124.24	0.00	0.00	0.00
6,600.00	17.73	93.22	6,390.56	-78.09	1,386.49	127.03	0.00	0.00	0.00
6,700.00	17.73	93.22	6,485.81	-79.80	1,416.89	129.81	0.00	0.00	0.00
6,800.00	17.73	93.22	6,581.06	-81.51	1,447.30	132.60	0.00	0.00	0.00
6,848.89	17.73	93.22	6,627.63	-82.35	1,462.16	133.96	0.00	0.00	0.00
Start Drop -2.00									
6,900.00	16.71	93.22	6,676.45	-83.20	1,477.26	135.34	2.00	-2.00	0.00
7,000.00	14.71	93.22	6,772.71	-84.72	1,504.29	137.82	2.00	-2.00	0.00
7,100.00	12.71	93.22	6,869.86	-86.05	1,527.95	139.99	2.00	-2.00	0.00
7,200.00	10.71	93.22	6,967.77	-87.20	1,548.21	141.84	2.00	-2.00	0.00
7,300.00	8.71	93.22	7,066.34	-88.14	1,565.04	143.38	2.00	-2.00	0.00
7,400.00	6.71	93.22	7,165.43	-88.90	1,578.43	144.61	2.00	-2.00	0.00
7,500.00	4.71	93.22	7,264.93	-89.46	1,588.35	145.52	2.00	-2.00	0.00
7,600.00	2.71	93.22	7,364.71	-89.82	1,594.81	146.11	2.00	-2.00	0.00
7,700.00	0.71	93.22	7,464.66	-89.99	1,597.78	146.38	2.00	-2.00	0.00
7,735.34	0.00	0.00	7,500.00	-90.00	1,598.00	146.40	2.00	-2.00	0.00
Start 207.04 hold at 7735.34 MD									
7,800.00	0.00	0.00	7,564.66	-90.00	1,598.00	146.40	0.00	0.00	0.00
7,900.00	0.00	0.00	7,664.66	-90.00	1,598.00	146.40	0.00	0.00	0.00
7,942.38	0.00	0.00	7,707.04	-90.00	1,598.00	146.40	0.00	0.00	0.00
Start DLS 10.00 TFO 359.45									
7,950.00	0.76	359.45	7,714.66	-89.95	1,598.00	146.45	10.00	10.00	0.00
8,000.00	5.76	359.45	7,764.57	-87.10	1,597.97	149.26	10.00	10.00	0.00
8,050.00	10.76	359.45	7,814.03	-79.92	1,597.90	156.36	10.00	10.00	0.00
8,100.00	15.76	359.45	7,862.68	-68.46	1,597.80	167.68	10.00	10.00	0.00
8,150.00	20.76	359.45	7,910.15	-52.79	1,597.65	183.15	10.00	10.00	0.00
8,200.00	25.76	359.45	7,956.07	-33.05	1,597.46	202.65	10.00	10.00	0.00
8,250.00	30.76	359.45	8,000.10	-9.39	1,597.23	226.02	10.00	10.00	0.00
8,300.00	35.76	359.45	8,041.89	18.03	1,596.97	253.10	10.00	10.00	0.00
8,350.00	40.76	359.45	8,081.14	48.98	1,596.68	283.67	10.00	10.00	0.00
8,400.00	45.76	359.45	8,117.54	83.23	1,596.35	317.50	10.00	10.00	0.00
8,450.00	50.76	359.45	8,150.81	120.53	1,596.00	354.34	10.00	10.00	0.00
8,500.00	55.76	359.45	8,180.71	160.58	1,595.62	393.90	10.00	10.00	0.00
8,550.00	60.76	359.45	8,207.00	203.09	1,595.21	435.89	10.00	10.00	0.00
8,600.00	65.76	359.45	8,229.49	247.73	1,594.79	479.98	10.00	10.00	0.00
8,650.00	70.76	359.45	8,248.00	294.16	1,594.34	525.83	10.00	10.00	0.00
8,700.00	75.76	359.45	8,262.40	342.02	1,593.89	573.11	10.00	10.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,750.00	80.76	359.45	8,272.57	390.96	1,593.42	621.44	10.00	10.00	0.00
8,800.00	85.76	359.45	8,278.43	440.60	1,592.95	670.47	10.00	10.00	0.00
8,842.38	90.00	359.45	8,280.00	482.93	1,592.55	712.28	10.00	10.00	0.00
Start 9596.39 hold at 8842.38 MD - LP (FMM Fed Com 104H)									
8,900.00	90.00	359.45	8,280.00	540.55	1,592.00	769.19	0.00	0.00	0.00
9,000.00	90.00	359.45	8,280.00	640.55	1,591.05	867.96	0.00	0.00	0.00
9,100.00	90.00	359.45	8,280.00	740.54	1,590.10	966.72	0.00	0.00	0.00
9,200.00	90.00	359.45	8,280.00	840.54	1,589.14	1,065.48	0.00	0.00	0.00
9,300.00	90.00	359.45	8,280.00	940.53	1,588.19	1,164.25	0.00	0.00	0.00
9,400.00	90.00	359.45	8,280.00	1,040.53	1,587.24	1,263.01	0.00	0.00	0.00
9,500.00	90.00	359.45	8,280.00	1,140.53	1,586.29	1,361.78	0.00	0.00	0.00
9,600.00	90.00	359.45	8,280.00	1,240.52	1,585.34	1,460.54	0.00	0.00	0.00
9,700.00	90.00	359.45	8,280.00	1,340.52	1,584.39	1,559.31	0.00	0.00	0.00
9,800.00	90.00	359.45	8,280.00	1,440.51	1,583.44	1,658.07	0.00	0.00	0.00
9,900.00	90.00	359.45	8,280.00	1,540.51	1,582.48	1,756.83	0.00	0.00	0.00
10,000.00	90.00	359.45	8,280.00	1,640.50	1,581.53	1,855.60	0.00	0.00	0.00
10,100.00	90.00	359.45	8,280.00	1,740.50	1,580.58	1,954.36	0.00	0.00	0.00
10,200.00	90.00	359.45	8,280.00	1,840.49	1,579.63	2,053.13	0.00	0.00	0.00
10,300.00	90.00	359.45	8,280.00	1,940.49	1,578.68	2,151.89	0.00	0.00	0.00
10,400.00	90.00	359.45	8,280.00	2,040.48	1,577.73	2,250.65	0.00	0.00	0.00
10,500.00	90.00	359.45	8,280.00	2,140.48	1,576.77	2,349.42	0.00	0.00	0.00
10,600.00	90.00	359.45	8,280.00	2,240.48	1,575.82	2,448.18	0.00	0.00	0.00
10,700.00	90.00	359.45	8,280.00	2,340.47	1,574.87	2,546.95	0.00	0.00	0.00
10,800.00	90.00	359.45	8,280.00	2,440.47	1,573.92	2,645.71	0.00	0.00	0.00
10,900.00	90.00	359.45	8,280.00	2,540.46	1,572.97	2,744.48	0.00	0.00	0.00
11,000.00	90.00	359.45	8,280.00	2,640.46	1,572.02	2,843.24	0.00	0.00	0.00
11,100.00	90.00	359.45	8,280.00	2,740.45	1,571.06	2,942.00	0.00	0.00	0.00
11,200.00	90.00	359.45	8,280.00	2,840.45	1,570.11	3,040.77	0.00	0.00	0.00
11,300.00	90.00	359.45	8,280.00	2,940.44	1,569.16	3,139.53	0.00	0.00	0.00
11,400.00	90.00	359.45	8,280.00	3,040.44	1,568.21	3,238.30	0.00	0.00	0.00
11,500.00	90.00	359.45	8,280.00	3,140.43	1,567.26	3,337.06	0.00	0.00	0.00
11,600.00	90.00	359.45	8,280.00	3,240.43	1,566.31	3,435.82	0.00	0.00	0.00
11,700.00	90.00	359.45	8,280.00	3,340.43	1,565.36	3,534.59	0.00	0.00	0.00
11,800.00	90.00	359.45	8,280.00	3,440.42	1,564.40	3,633.35	0.00	0.00	0.00
11,900.00	90.00	359.45	8,280.00	3,540.42	1,563.45	3,732.12	0.00	0.00	0.00
12,000.00	90.00	359.45	8,280.00	3,640.41	1,562.50	3,830.88	0.00	0.00	0.00
12,100.00	90.00	359.45	8,280.00	3,740.41	1,561.55	3,929.65	0.00	0.00	0.00
12,200.00	90.00	359.45	8,280.00	3,840.40	1,560.60	4,028.41	0.00	0.00	0.00
12,300.00	90.00	359.45	8,280.00	3,940.40	1,559.65	4,127.17	0.00	0.00	0.00
12,400.00	90.00	359.45	8,280.00	4,040.39	1,558.69	4,225.94	0.00	0.00	0.00
12,500.00	90.00	359.45	8,280.00	4,140.39	1,557.74	4,324.70	0.00	0.00	0.00
12,600.00	90.00	359.45	8,280.00	4,240.38	1,556.79	4,423.47	0.00	0.00	0.00
12,700.00	90.00	359.45	8,280.00	4,340.38	1,555.84	4,522.23	0.00	0.00	0.00
12,800.00	90.00	359.45	8,280.00	4,440.38	1,554.89	4,620.99	0.00	0.00	0.00
12,900.00	90.00	359.45	8,280.00	4,540.37	1,553.94	4,719.76	0.00	0.00	0.00
13,000.00	90.00	359.45	8,280.00	4,640.37	1,552.98	4,818.52	0.00	0.00	0.00
13,100.00	90.00	359.45	8,280.00	4,740.36	1,552.03	4,917.29	0.00	0.00	0.00
13,200.00	90.00	359.45	8,280.00	4,840.36	1,551.08	5,016.05	0.00	0.00	0.00
13,300.00	90.00	359.45	8,280.00	4,940.35	1,550.13	5,114.82	0.00	0.00	0.00
13,400.00	90.00	359.45	8,280.00	5,040.35	1,549.18	5,213.58	0.00	0.00	0.00
13,500.00	90.00	359.45	8,280.00	5,140.34	1,548.23	5,312.34	0.00	0.00	0.00
13,600.00	90.00	359.45	8,280.00	5,240.34	1,547.28	5,411.11	0.00	0.00	0.00
13,700.00	90.00	359.45	8,280.00	5,340.34	1,546.32	5,509.87	0.00	0.00	0.00
13,800.00	90.00	359.45	8,280.00	5,440.33	1,545.37	5,608.64	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 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,900.00	90.00	359.45	8,280.00	5,540.33	1,544.42	5,707.40	0.00	0.00	0.00
14,000.00	90.00	359.45	8,280.00	5,640.32	1,543.47	5,806.16	0.00	0.00	0.00
14,100.00	90.00	359.45	8,280.00	5,740.32	1,542.52	5,904.93	0.00	0.00	0.00
14,200.00	90.00	359.45	8,280.00	5,840.31	1,541.57	6,003.69	0.00	0.00	0.00
14,300.00	90.00	359.45	8,280.00	5,940.31	1,540.61	6,102.46	0.00	0.00	0.00
14,400.00	90.00	359.45	8,280.00	6,040.30	1,539.66	6,201.22	0.00	0.00	0.00
14,500.00	90.00	359.45	8,280.00	6,140.30	1,538.71	6,299.99	0.00	0.00	0.00
14,600.00	90.00	359.45	8,280.00	6,240.29	1,537.76	6,398.75	0.00	0.00	0.00
14,700.00	90.00	359.45	8,280.00	6,340.29	1,536.81	6,497.51	0.00	0.00	0.00
14,800.00	90.00	359.45	8,280.00	6,440.29	1,535.86	6,596.28	0.00	0.00	0.00
14,900.00	90.00	359.45	8,280.00	6,540.28	1,534.90	6,695.04	0.00	0.00	0.00
15,000.00	90.00	359.45	8,280.00	6,640.28	1,533.95	6,793.81	0.00	0.00	0.00
15,100.00	90.00	359.45	8,280.00	6,740.27	1,533.00	6,892.57	0.00	0.00	0.00
15,200.00	90.00	359.45	8,280.00	6,840.27	1,532.05	6,991.34	0.00	0.00	0.00
15,300.00	90.00	359.45	8,280.00	6,940.26	1,531.10	7,090.10	0.00	0.00	0.00
15,400.00	90.00	359.45	8,280.00	7,040.26	1,530.15	7,188.86	0.00	0.00	0.00
15,500.00	90.00	359.45	8,280.00	7,140.25	1,529.19	7,287.63	0.00	0.00	0.00
15,600.00	90.00	359.45	8,280.00	7,240.25	1,528.24	7,386.39	0.00	0.00	0.00
15,700.00	90.00	359.45	8,280.00	7,340.24	1,527.29	7,485.16	0.00	0.00	0.00
15,800.00	90.00	359.45	8,280.00	7,440.24	1,526.34	7,583.92	0.00	0.00	0.00
15,900.00	90.00	359.45	8,280.00	7,540.24	1,525.39	7,682.68	0.00	0.00	0.00
16,000.00	90.00	359.45	8,280.00	7,640.23	1,524.44	7,781.45	0.00	0.00	0.00
16,100.00	90.00	359.45	8,280.00	7,740.23	1,523.49	7,880.21	0.00	0.00	0.00
16,200.00	90.00	359.45	8,280.00	7,840.22	1,522.53	7,978.98	0.00	0.00	0.00
16,300.00	90.00	359.45	8,280.00	7,940.22	1,521.58	8,077.74	0.00	0.00	0.00
16,400.00	90.00	359.45	8,280.00	8,040.21	1,520.63	8,176.51	0.00	0.00	0.00
16,500.00	90.00	359.45	8,280.00	8,140.21	1,519.68	8,275.27	0.00	0.00	0.00
16,600.00	90.00	359.45	8,280.00	8,240.20	1,518.73	8,374.03	0.00	0.00	0.00
16,700.00	90.00	359.45	8,280.00	8,340.20	1,517.78	8,472.80	0.00	0.00	0.00
16,800.00	90.00	359.45	8,280.00	8,440.19	1,516.82	8,571.56	0.00	0.00	0.00
16,900.00	90.00	359.45	8,280.00	8,540.19	1,515.87	8,670.33	0.00	0.00	0.00
17,000.00	90.00	359.45	8,280.00	8,640.19	1,514.92	8,769.09	0.00	0.00	0.00
17,100.00	90.00	359.45	8,280.00	8,740.18	1,513.97	8,867.85	0.00	0.00	0.00
17,200.00	90.00	359.45	8,280.00	8,840.18	1,513.02	8,966.62	0.00	0.00	0.00
17,300.00	90.00	359.45	8,280.00	8,940.17	1,512.07	9,065.38	0.00	0.00	0.00
17,400.00	90.00	359.45	8,280.00	9,040.17	1,511.11	9,164.15	0.00	0.00	0.00
17,500.00	90.00	359.45	8,280.00	9,140.16	1,510.16	9,262.91	0.00	0.00	0.00
17,600.00	90.00	359.45	8,280.00	9,240.16	1,509.21	9,361.68	0.00	0.00	0.00
17,700.00	90.00	359.45	8,280.00	9,340.15	1,508.26	9,460.44	0.00	0.00	0.00
17,800.00	90.00	359.45	8,280.00	9,440.15	1,507.31	9,559.20	0.00	0.00	0.00
17,900.00	90.00	359.45	8,280.00	9,540.14	1,506.36	9,657.97	0.00	0.00	0.00
18,000.00	90.00	359.45	8,280.00	9,640.14	1,505.41	9,756.73	0.00	0.00	0.00
18,100.00	90.00	359.45	8,280.00	9,740.14	1,504.45	9,855.50	0.00	0.00	0.00
18,200.00	90.00	359.45	8,280.00	9,840.13	1,503.50	9,954.26	0.00	0.00	0.00
18,300.00	90.00	359.45	8,280.00	9,940.13	1,502.55	10,053.02	0.00	0.00	0.00
18,400.00	90.00	359.45	8,280.00	10,040.12	1,501.60	10,151.79	0.00	0.00	0.00
18,438.77	90.00	359.45	8,280.00	10,078.89	1,501.23	10,190.08	0.00	0.00	0.00
TD at 18438.77 - PBHL (FMM Fed Com 104H)									



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well FMM Fed Com 104H
Company:	Franklin Mountain Energy	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Project:	Lea County, NM (NAD83)	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site:	FMM Fed Com	North Reference:	Grid
Well:	FMM Fed Com 104H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 104H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	426,211.23	855,168.72	32.167667	-103.319109
LP (FMM Fed Com 104H) - plan hits target center - Point	0.00	0.00	8,280.00	482.93	1,592.55	426,694.16	856,761.27	32.168953	-103.313948
PBHL (FMM Fed Com 104H) - plan hits target center - Point	0.00	0.00	8,280.00	10,078.89	1,501.23	436,290.12	856,669.95	32.195330	-103.313949

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,600.00	1,600.00	0.00	0.00	Start Build 2.00
2,486.44	2,472.37	-7.65	135.84	Start 4362.45 hold at 2486.44 MD
6,848.89	6,627.63	-82.35	1,462.16	Start Drop -2.00
7,735.34	7,500.00	-90.00	1,598.00	Start 207.04 hold at 7735.34 MD
7,942.38	7,707.04	-90.00	1,598.00	Start DLS 10.00 TFO 359.45
8,842.38	8,280.00	482.93	1,592.55	Start 9596.39 hold at 8842.38 MD
18,438.77	8,280.00	10,078.89	1,501.23	TD at 18438.77



Franklin Mountain Energy

Lea County, NM (NAD83)

FMM Fed Com

FMM Fed Com 104H

OH

Plan #2

Anticollision Report

09 September, 2021





Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2
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	9/9/2021
From (usft)	To (usft)	Survey (Wellbore)
0.00	18,438.77	Plan #2 (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	1,158.97	1,287.29	4,119.81	4,085.70	120.805	CC
Amoco State #001 (Offset) - OH - OH	3,500.00	3,452.61	4,137.23	4,065.57	57.730	ES
Amoco State #001 (Offset) - OH - OH	3,900.00	3,775.00	4,150.45	4,069.23	51.100	SF
Blue Bay WCA State Com #001C (Offset Plan) - OH - PI	10,668.74	8,290.00	1,016.15	959.00	17.779	CC, ES, SF
FMM Fed Com 101H - OH - Plan #1	1,600.00	1,554.80	2,036.02	2,028.35	265.520	CC, ES
FMM Fed Com 101H - OH - Plan #1	18,438.77	18,622.82	4,542.77	4,303.93	19.020	SF
FMM Fed Com 102H - OH - Plan #1	1,600.00	1,556.70	1,986.20	1,978.53	258.862	CC, ES
FMM Fed Com 102H - OH - Plan #1	18,438.77	18,538.91	3,038.85	2,799.38	12.690	SF
FMM Fed Com 103H - OH - Plan #1	1,600.00	1,600.30	50.00	42.22	6.425	CC, ES
FMM Fed Com 103H - OH - Plan #1	1,700.00	1,700.28	51.74	43.46	6.247	SF
FMM Fed Com 301H - OH - Plan #1	1,600.00	1,555.60	2,011.26	2,003.59	262.223	CC, ES
FMM Fed Com 301H - OH - Plan #1	18,438.77	20,171.40	4,885.28	4,658.09	21.503	SF
FMM Fed Com 302H - OH - Plan #1	1,600.00	1,557.30	1,961.13	1,953.46	255.546	CC, ES
FMM Fed Com 302H - OH - Plan #1	18,438.77	20,109.26	3,485.60	3,266.62	15.917	SF
FMM Fed Com 303H - OH - Plan #1	1,600.00	1,600.50	25.00	17.22	3.212	CC, ES, SF
FMM Fed Com 304H - OH - Plan #2	1,316.50	1,317.00	24.99	18.64	3.938	CC
FMM Fed Com 304H - OH - Plan #2	4,000.00	3,985.21	32.22	8.29	1.346	Level 3, ES, SF
FMM Fed Com 801H - OH - Plan #1	1,600.00	1,555.90	2,025.02	2,017.35	263.991	CC, ES
FMM Fed Com 801H - OH - Plan #1	10,200.00	8,323.61	4,991.27	4,943.55	104.608	SF
FMM Fed Com 802H - OH - Plan #1	1,600.00	1,556.20	1,999.97	1,992.30	260.700	CC, ES
FMM Fed Com 802H - OH - Plan #1	8,750.00	8,240.76	3,658.66	3,615.96	85.691	SF
FMM Fed Com 803H - OH - Plan #1	1,600.00	1,556.80	1,974.92	1,967.25	257.385	CC, ES
FMM Fed Com 803H - OH - Plan #1	18,438.77	22,335.03	4,728.42	4,556.18	27.452	SF
FMM Fed Com 804H - OH - Plan #1	1,600.00	1,599.10	83.85	76.07	10.778	CC, ES
FMM Fed Com 804H - OH - Plan #1	1,900.00	1,898.55	91.10	81.83	9.824	SF
FMM Fed Com 805H - OH - Plan #1	1,600.00	1,599.90	76.03	68.25	9.770	CC
FMM Fed Com 805H - OH - Plan #1	1,700.00	1,699.88	76.22	67.94	9.203	ES
FMM Fed Com 805H - OH - Plan #1	1,900.00	1,899.35	79.16	69.89	8.534	SF
FMM Fed Com 806H - OH - Plan #2	1,600.00	1,599.80	76.03	68.24	9.770	CC
FMM Fed Com 806H - OH - Plan #2	1,800.00	1,798.23	76.50	67.75	8.739	ES
FMM Fed Com 806H - OH - Plan #2	7,950.00	7,923.74	190.20	135.76	3.494	SF
Pre-Ongard Well #001 (Offset) - OH - OH	1,137.26	1,189.39	4,839.59	4,814.13	190.084	CC
Pre-Ongard Well #001 (Offset) - OH - OH	1,700.00	1,697.85	4,840.74	4,797.69	112.449	ES
Pre-Ongard Well #001 (Offset) - OH - OH	2,900.00	2,864.63	4,984.53	4,910.48	67.309	SF
Proxy WCA State Com #001H (Offset) - OH - OH	100.00	33.70	2,925.32	2,925.19	10,000.000	CC
Proxy WCA State Com #001H (Offset) - OH - OH	200.00	124.80	2,925.59	2,925.06	5,585.642	ES
Proxy WCA State Com #001H (Offset) - OH - OH	4,900.00	4,501.00	3,792.20	3,769.03	163.673	SF

CC - Min centre to center distance or covergent 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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) - ST01 - ST01	100.00	33.70	2,925.32	2,925.19	10,000.000	CC
Proxy WCA State Com #001H (Offset) - ST01 - ST01	200.00	124.80	2,925.59	2,925.06	5,585.642	ES
Proxy WCA State Com #001H (Offset) - ST01 - ST01	10,200.00	8,196.12	4,997.54	4,954.32	115.622	SF
Proxy WCA State Com #001H (Offset) - ST02 - ST02	100.00	33.70	2,925.32	2,925.19	10,000.000	CC
Proxy WCA State Com #001H (Offset) - ST02 - ST02	200.00	124.80	2,925.59	2,925.06	5,585.642	ES
Proxy WCA State Com #001H (Offset) - ST02 - ST02	10,200.00	8,196.12	4,997.54	4,954.32	115.622	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		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	14.00	14.00	0.00	0.22	4.20	4,109.78	301.72	4,120.84					
100.00	100.00	114.00	114.00	0.13	1.82	4.20	4,109.78	301.72	4,120.84	4,119.01	1.83	2,255.514		
200.00	200.00	214.00	214.00	0.48	3.42	4.20	4,109.78	301.72	4,120.84	4,117.38	3.46	1,192.510		
300.00	300.00	314.00	314.00	0.84	5.02	4.20	4,109.78	301.72	4,120.84	4,115.75	5.09	809.502		
400.00	400.00	414.00	414.00	1.20	6.62	4.20	4,109.78	301.72	4,120.84	4,114.11	6.73	612.554		
500.00	500.00	514.00	514.00	1.56	8.22	4.20	4,109.78	301.72	4,120.84	4,112.47	8.36	492.644		
600.00	600.00	614.00	614.00	1.92	9.82	4.20	4,109.78	301.72	4,120.84	4,110.84	10.00	411.979		
700.00	700.00	714.16	714.00	2.28	13.03	4.20	4,109.78	301.72	4,120.84	4,107.61	13.23	311.461		
800.00	800.00	814.16	814.00	2.63	16.67	4.20	4,109.78	301.72	4,120.84	4,103.96	16.88	244.137		
900.00	900.00	917.76	917.55	2.99	20.44	4.20	4,112.43	301.72	4,123.48	4,102.82	20.66	199.586		
1,000.00	1,000.00	1,060.41	1,060.16	3.35	25.63	4.20	4,111.57	301.72	4,122.88	4,097.03	25.85	159.493		
1,100.00	1,100.00	1,203.12	1,202.80	3.71	30.83	4.20	4,109.23	301.72	4,121.25	4,090.21	31.04	132.763		
1,158.97	1,158.97	1,287.29	1,286.92	3.92	33.89	4.20	4,107.16	301.72	4,119.81	4,085.70	34.10	120.805	CC	
1,200.00	1,200.00	1,214.75	1,214.00	4.07	30.80	4.20	4,109.78	301.72	4,120.84	4,089.77	31.07	132.628		
1,300.00	1,300.00	1,314.76	1,314.00	4.43	32.12	4.20	4,109.78	301.72	4,120.84	4,088.42	32.42	127.104		
1,400.00	1,400.00	1,414.76	1,414.00	4.79	33.07	4.20	4,109.78	301.72	4,120.84	4,087.43	33.41	123.340		
1,500.00	1,500.00	1,514.76	1,514.00	5.14	34.50	4.20	4,109.78	301.72	4,120.84	4,085.95	34.88	118.129		
1,600.00	1,600.00	1,614.76	1,614.00	5.50	35.94	4.20	4,109.78	301.72	4,120.84	4,084.48	36.36	113.334		
1,700.00	1,699.98	1,714.74	1,713.98	5.85	37.38	-89.05	4,109.78	301.72	4,120.81	4,082.97	37.83	108.917		
1,800.00	1,799.84	1,814.60	1,813.84	6.20	38.82	-89.12	4,109.78	301.72	4,120.73	4,081.42	39.31	104.835		
1,900.00	1,899.45	1,914.22	1,913.45	6.54	40.25	-89.25	4,109.78	301.72	4,120.60	4,079.82	40.78	101.054		
2,000.00	1,998.70	2,013.47	2,012.70	6.90	41.68	-89.42	4,109.78	301.72	4,120.46	4,078.22	42.24	97.543		
2,100.00	2,097.47	2,112.23	2,111.47	7.26	43.10	-89.64	4,109.78	301.72	4,120.33	4,076.62	43.70	94.278		
2,200.00	2,195.62	2,210.39	2,209.62	7.64	44.51	-89.90	4,109.78	301.72	4,120.25	4,075.09	45.16	91.238		
2,235.25	2,230.06	2,244.82	2,244.06	7.78	45.00	-90.00	4,109.78	301.72	4,120.24	4,074.57	45.67	90.215		
2,300.00	2,293.06	2,307.82	2,307.06	8.04	45.91	-90.20	4,109.78	301.72	4,120.27	4,073.66	46.61	88.403		
2,400.00	2,389.64	2,404.41	2,403.64	8.46	47.30	-90.55	4,109.78	301.72	4,120.44	4,072.39	48.05	85.754		
2,486.44	2,472.37	2,487.13	2,486.37	8.85	48.49	-90.87	4,109.78	301.72	4,120.77	4,071.48	49.29	83.604		
2,500.00	2,485.28	2,500.04	2,499.28	8.92	48.67	-90.93	4,109.78	301.72	4,120.84	4,071.35	49.48	83.277		
2,600.00	2,580.53	2,595.31	2,594.53	9.39	50.27	-91.33	4,109.78	301.72	4,121.47	4,070.32	51.14	80.589		
2,700.00	2,675.78	2,690.56	2,689.78	9.88	52.12	-91.73	4,109.78	301.72	4,122.32	4,069.27	53.05	77.704		
2,800.00	2,771.03	2,785.81	2,785.03	10.39	53.97	-92.14	4,109.78	301.72	4,123.40	4,068.44	54.96	75.020		
2,900.00	2,866.28	2,884.99	2,884.21	10.91	55.90	-92.56	4,110.35	301.72	4,125.28	4,068.32	56.95	72.431		
3,000.00	2,961.53	2,986.92	2,986.14	11.44	57.88	-92.99	4,110.17	301.72	4,126.64	4,067.64	59.00	69.944		
3,100.00	3,056.78	3,088.86	3,088.08	11.98	59.86	-93.42	4,109.82	301.72	4,128.07	4,067.02	61.05	67.622		
3,200.00	3,152.03	3,166.86	3,166.03	12.52	62.01	-93.75	4,109.78	301.72	4,129.96	4,066.71	63.26	65.289		
3,300.00	3,247.28	3,262.11	3,261.28	13.08	64.75	-94.15	4,109.78	301.72	4,132.16	4,066.10	66.06	62.553		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
3,400.00	3,342.54	3,357.36	3,356.54	13.64	67.50	-94.55	4,109.78	301.72	4,134.58	4,065.72	68.86	60.042		
3,500.00	3,437.79	3,452.61	3,451.79	14.21	70.25	-94.95	4,109.78	301.72	4,137.23	4,065.57	71.67	57.730 ES		
3,600.00	3,533.04	3,547.86	3,547.04	14.78	72.99	-95.35	4,109.78	301.72	4,140.10	4,065.63	74.47	55.595		
3,700.00	3,628.29	3,643.12	3,642.29	15.36	75.74	-95.75	4,109.78	301.72	4,143.19	4,065.91	77.27	53.616		
3,800.00	3,723.54	3,738.37	3,737.54	15.94	78.49	-96.15	4,109.78	301.72	4,146.50	4,066.42	80.08	51.779		
3,900.00	3,818.79	3,775.00	3,773.73	16.52	79.54	-96.30	4,109.78	301.72	4,150.45	4,069.23	81.22	51.100 SF		
4,000.00	3,914.04	3,775.00	3,773.73	17.11	79.54	-96.30	4,109.78	301.72	4,156.65	4,075.36	81.29	51.132		
4,100.00	4,009.29	3,775.00	3,773.73	17.69	79.54	-96.30	4,109.78	301.72	4,165.24	4,083.91	81.33	51.216		
4,200.00	4,104.54	3,775.00	3,773.73	18.29	79.54	-96.30	4,109.78	301.72	4,176.20	4,094.88	81.32	51.353		
4,300.00	4,199.79	3,775.00	3,773.73	18.88	79.54	-96.30	4,109.78	301.72	4,189.53	4,108.25	81.28	51.542		
4,400.00	4,295.04	3,775.00	3,773.73	19.48	79.54	-96.30	4,109.78	301.72	4,205.19	4,123.99	81.20	51.786		
4,500.00	4,390.29	3,775.00	3,773.73	20.08	79.54	-96.30	4,109.78	301.72	4,223.17	4,142.08	81.09	52.082		
4,600.00	4,485.55	3,775.00	3,773.73	20.68	79.54	-96.30	4,109.78	301.72	4,243.42	4,162.48	80.94	52.428		
4,700.00	4,580.80	3,775.00	3,773.73	21.28	79.54	-96.30	4,109.78	301.72	4,265.92	4,185.17	80.76	52.825		
4,800.00	4,676.05	3,775.00	3,773.73	21.88	79.54	-96.30	4,109.78	301.72	4,290.64	4,210.09	80.54	53.271		
4,900.00	4,771.30	3,775.00	3,773.73	22.48	79.54	-96.30	4,109.78	301.72	4,317.53	4,237.23	80.30	53.766		
5,000.00	4,866.55	3,775.00	3,773.73	23.09	79.54	-96.30	4,109.78	301.72	4,346.55	4,266.52	80.03	54.309		
5,100.00	4,961.80	3,775.00	3,773.73	23.70	79.54	-96.30	4,109.78	301.72	4,377.67	4,297.93	79.74	54.899		
5,200.00	5,057.05	3,775.00	3,773.73	24.30	79.54	-96.30	4,109.78	301.72	4,410.84	4,331.42	79.42	55.536		
5,300.00	5,152.30	3,775.00	3,773.73	24.91	79.54	-96.30	4,109.78	301.72	4,446.01	4,366.92	79.08	56.220		
5,400.00	5,247.55	3,775.00	3,773.73	25.52	79.54	-96.30	4,109.78	301.72	4,483.13	4,404.41	78.72	56.948		
5,500.00	5,342.80	3,775.00	3,773.73	26.13	79.54	-96.30	4,109.78	301.72	4,522.16	4,443.82	78.34	57.722		
5,600.00	5,438.05	3,775.00	3,773.73	26.74	79.54	-96.30	4,109.78	301.72	4,563.05	4,485.10	77.94	58.542		
5,700.00	5,533.30	3,775.00	3,773.73	27.36	79.54	-96.30	4,109.78	301.72	4,605.75	4,528.22	77.53	59.406		
5,800.00	5,628.56	3,775.00	3,773.73	27.97	79.54	-96.30	4,109.78	301.72	4,650.20	4,573.10	77.10	60.312		
5,900.00	5,723.81	3,775.00	3,773.73	28.58	79.54	-96.30	4,109.78	301.72	4,696.37	4,619.70	76.66	61.259		
6,000.00	5,819.06	3,775.00	3,773.73	29.20	79.54	-96.30	4,109.78	301.72	4,744.19	4,667.98	76.21	62.248		
6,100.00	5,914.31	3,775.00	3,773.73	29.81	79.54	-96.30	4,109.78	301.72	4,793.62	4,717.87	75.76	63.276		
6,200.00	6,009.56	3,775.00	3,773.73	30.43	79.54	-96.30	4,109.78	301.72	4,844.62	4,769.32	75.29	64.344		
6,300.00	6,104.81	3,775.00	3,773.73	31.04	79.54	-96.30	4,109.78	301.72	4,897.12	4,822.30	74.82	65.449		
6,400.00	6,200.06	3,775.00	3,773.73	31.66	79.54	-96.30	4,109.78	301.72	4,951.09	4,876.74	74.35	66.590		
10,800.00	8,280.00	3,775.00	3,773.73	54.74	79.54	-15.53	4,109.78	301.72	4,983.77	4,938.00	45.77	108.886		
10,900.00	8,280.00	3,775.00	3,773.73	55.95	79.54	-15.53	4,109.78	301.72	4,950.93	4,905.65	45.28	109.343		
11,000.00	8,280.00	3,775.00	3,773.73	57.18	79.54	-15.53	4,109.78	301.72	4,919.90	4,875.07	44.83	109.742		
11,100.00	8,280.00	3,775.00	3,773.73	58.43	79.54	-15.53	4,109.78	301.72	4,890.72	4,846.29	44.43	110.070		
11,200.00	8,280.00	3,775.00	3,773.73	59.71	79.54	-15.53	4,109.78	301.72	4,863.42	4,819.33	44.09	110.313		
11,300.00	8,280.00	3,775.00	3,773.73	61.00	79.54	-15.53	4,109.78	301.72	4,838.04	4,794.24	43.80	110.461		
11,400.00	8,280.00	3,775.00	3,773.73	62.31	79.54	-15.53	4,109.78	301.72	4,814.60	4,771.03	43.57	110.501		
11,500.00	8,280.00	3,775.00	3,773.73	63.64	79.54	-15.53	4,109.78	301.72	4,793.13	4,749.72	43.41	110.424		
11,600.00	8,280.00	3,775.00	3,773.73	64.99	79.54	-15.53	4,109.78	301.72	4,773.66	4,730.35	43.31	110.222		
11,700.00	8,280.00	3,775.00	3,773.73	66.35	79.54	-15.53	4,109.78	301.72	4,756.21	4,712.93	43.28	109.890		
11,800.00	8,280.00	3,775.00	3,773.73	67.72	79.54	-15.53	4,109.78	301.72	4,740.81	4,697.48	43.32	109.426		
11,900.00	8,280.00	3,775.00	3,773.73	69.11	79.54	-15.53	4,109.78	301.72	4,727.47	4,684.04	43.44	108.836		
12,000.00	8,280.00	3,775.00	3,773.73	70.51	79.54	-15.53	4,109.78	301.72	4,716.22	4,672.60	43.62	108.124		
12,100.00	8,280.00	3,775.00	3,773.73	71.92	79.54	-15.53	4,109.78	301.72	4,707.06	4,663.19	43.87	107.289		
12,200.00	8,280.00	3,775.00	3,773.73	73.34	79.54	-15.53	4,109.78	301.72	4,700.02	4,655.82	44.20	106.341		
12,300.00	8,280.00	3,775.00	3,773.73	74.77	79.54	-15.53	4,109.78	301.72	4,695.10	4,650.50	44.59	105.284		
12,400.00	8,280.00	3,775.00	3,773.73	76.21	79.54	-15.53	4,109.78	301.72	4,692.30	4,647.24	45.06	104.139		
12,481.34	8,280.00	3,775.00	3,773.73	77.38	79.54	-15.53	4,109.78	301.72	4,691.59	4,646.11	45.48	103.151		
12,500.00	8,280.00	3,775.00	3,773.73	77.65	79.54	-15.53	4,109.78	301.72	4,691.63	4,646.04	45.59	102.919		
12,600.00	8,280.00	3,775.00	3,773.73	79.11	79.54	-15.53	4,109.78	301.72	4,693.09	4,646.92	46.17	101.648		
12,700.00	8,280.00	3,775.00	3,773.73	80.57	79.54	-15.53	4,109.78	301.72	4,696.68	4,649.88	46.81	100.336		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	
12,800.00	8,280.00	3,775.00	3,773.73	82.04	79.54	-15.53	4,109.78	301.72	4,702.40	4,654.90	47.50	98.993	
12,900.00	8,280.00	3,775.00	3,773.73	83.52	79.54	-15.53	4,109.78	301.72	4,710.23	4,661.99	48.24	97.636	
13,000.00	8,280.00	3,775.00	3,773.73	85.01	79.54	-15.53	4,109.78	301.72	4,720.17	4,671.15	49.03	96.276	
13,100.00	8,280.00	3,775.00	3,773.73	86.50	79.54	-15.53	4,109.78	301.72	4,732.21	4,682.35	49.85	94.926	
13,200.00	8,280.00	3,775.00	3,773.73	87.99	79.54	-15.53	4,109.78	301.72	4,746.32	4,695.60	50.71	93.596	
13,300.00	8,280.00	3,775.00	3,773.73	89.50	79.54	-15.53	4,109.78	301.72	4,762.48	4,710.88	51.60	92.297	
13,400.00	8,280.00	3,775.00	3,773.73	91.00	79.54	-15.53	4,109.78	301.72	4,780.69	4,728.17	52.51	91.037	
13,500.00	8,280.00	3,775.00	3,773.73	92.52	79.54	-15.53	4,109.78	301.72	4,800.91	4,747.46	53.45	89.824	
13,600.00	8,280.00	3,775.00	3,773.73	94.03	79.54	-15.53	4,109.78	301.72	4,823.11	4,768.72	54.40	88.665	
13,700.00	8,280.00	3,775.00	3,773.73	95.56	79.54	-15.53	4,109.78	301.72	4,847.28	4,791.93	55.36	87.561	
13,800.00	8,280.00	3,775.00	3,773.73	97.08	79.54	-15.53	4,109.78	301.72	4,873.39	4,817.06	56.33	86.515	
13,900.00	8,280.00	3,775.00	3,773.73	98.61	79.54	-15.53	4,109.78	301.72	4,901.39	4,844.08	57.31	85.529	
14,000.00	8,280.00	3,775.00	3,773.73	100.15	79.54	-15.53	4,109.78	301.72	4,931.26	4,872.98	58.29	84.605	
14,100.00	8,280.00	3,775.00	3,773.73	101.69	79.54	-15.53	4,109.78	301.72	4,962.97	4,903.71	59.26	83.743	
14,200.00	8,280.00	3,775.00	3,773.73	103.23	79.54	-15.53	4,109.78	301.72	4,996.48	4,936.24	60.24	82.944	

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	10.00	10.00	0.00	0.01	13.66	2,299.54	559.06	2,366.53					
100.00	100.00	110.00	110.00	0.13	0.17	13.66	2,299.54	559.06	2,366.53	2,366.31	0.21	N/A		
200.00	200.00	210.00	210.00	0.48	0.53	13.66	2,299.54	559.06	2,366.53	2,365.81	0.72	3,301.628		
300.00	300.00	310.00	310.00	0.84	0.89	13.66	2,299.54	559.06	2,366.53	2,365.30	1.22	1,934.320		
400.00	400.00	410.00	410.00	1.20	1.25	13.66	2,299.54	559.06	2,366.53	2,364.80	1.73	1,367.716		
500.00	500.00	510.00	510.00	1.56	1.60	13.66	2,299.54	559.06	2,366.53	2,364.29	2.24	1,057.823		
600.00	600.00	610.00	610.00	1.92	1.96	13.66	2,299.54	559.06	2,366.53	2,363.78	2.74	862.412		
700.00	700.00	710.00	710.00	2.28	2.32	13.66	2,299.54	559.06	2,366.53	2,363.27	3.25	727.936		
800.00	800.00	810.00	810.00	2.63	2.68	13.66	2,299.54	559.06	2,366.53	2,362.77	3.76	629.740		
900.00	900.00	910.00	910.00	2.99	3.04	13.66	2,299.54	559.06	2,366.53	2,362.26	4.26	554.887		
1,000.00	1,000.00	1,010.00	1,010.00	3.35	3.40	13.66	2,299.54	559.06	2,366.53	2,361.75	4.77	495.937		
1,100.00	1,100.00	1,110.00	1,110.00	3.71	3.75	13.66	2,299.54	559.06	2,366.53	2,361.25	5.28	448.310		
1,200.00	1,200.00	1,210.00	1,210.00	4.07	4.11	13.66	2,299.54	559.06	2,366.53	2,360.74	5.79	409.029		
1,300.00	1,300.00	1,310.00	1,310.00	4.43	4.47	13.66	2,299.54	559.06	2,366.53	2,360.23	6.29	376.077		
1,400.00	1,400.00	1,410.00	1,410.00	4.79	4.83	13.66	2,299.54	559.06	2,366.53	2,359.73	6.80	348.038		
1,500.00	1,500.00	1,510.00	1,510.00	5.14	5.19	13.66	2,299.54	559.06	2,366.53	2,359.22	7.31	323.890		
1,600.00	1,600.00	1,610.00	1,610.00	5.50	5.55	13.66	2,299.54	559.06	2,366.53	2,358.71	7.81	302.876		
1,700.00	1,699.98	1,709.98	1,709.98	5.85	5.91	-79.61	2,299.54	559.06	2,366.21	2,357.90	8.31	284.603		
1,800.00	1,799.84	1,809.84	1,809.84	6.20	6.26	-79.75	2,299.54	559.06	2,365.27	2,356.46	8.81	268.482		
1,900.00	1,899.45	1,909.45	1,909.45	6.54	6.62	-79.99	2,299.54	559.06	2,363.73	2,354.42	9.31	253.937		
2,000.00	1,998.70	2,008.70	2,008.70	6.90	6.98	-80.32	2,299.54	559.06	2,361.63	2,351.82	9.81	240.714		
2,100.00	2,097.47	2,107.47	2,107.47	7.26	7.33	-80.74	2,299.54	559.06	2,359.03	2,348.71	10.32	228.598		
2,200.00	2,195.62	2,205.62	2,205.62	7.64	7.68	-81.25	2,299.54	559.06	2,355.98	2,345.15	10.84	217.411		
2,300.00	2,293.06	2,303.06	2,303.06	8.04	8.03	-81.84	2,299.54	559.06	2,352.59	2,341.23	11.36	207.005		
2,400.00	2,389.64	2,399.64	2,399.64	8.46	8.38	-82.52	2,299.54	559.06	2,348.95	2,337.04	11.91	197.259		
2,486.44	2,472.37	2,482.37	2,482.37	8.85	8.67	-83.17	2,299.54	559.06	2,345.69	2,333.30	12.39	189.291		
2,500.00	2,485.28	2,495.28	2,495.28	8.92	8.72	-83.26	2,299.54	559.06	2,345.18	2,332.71	12.47	188.078		
2,600.00	2,580.53	2,590.53	2,590.53	9.39	9.06	-83.97	2,299.54	559.06	2,341.62	2,328.58	13.05	179.470		
2,700.00	2,675.78	2,685.78	2,685.78	9.88	9.40	-84.67	2,299.54	559.06	2,338.46	2,324.82	13.64	171.456		
2,800.00	2,771.03	2,781.03	2,781.03	10.39	9.75	-85.38	2,299.54	559.06	2,335.69	2,321.45	14.24	164.003		
2,900.00	2,866.28	2,876.28	2,876.28	10.91	10.09	-86.09	2,299.54	559.06	2,333.32	2,318.46	14.85	157.074		
3,000.00	2,961.53	2,971.53	2,971.53	11.44	10.43	-86.80	2,299.54	559.06	2,331.34	2,315.86	15.48	150.635		
3,100.00	3,056.78	3,066.78	3,066.78	11.98	10.77	-87.52	2,299.54	559.06	2,329.75	2,313.65	16.11	144.648		
3,200.00	3,152.03	3,162.03	3,162.03	12.52	11.11	-88.23	2,299.54	559.06	2,328.57	2,311.82	16.74	139.080		
3,300.00	3,247.28	3,257.28	3,257.28	13.08	11.45	-88.94	2,299.54	559.06	2,327.78	2,310.39	17.38	133.896		
3,400.00	3,342.54	3,352.54	3,352.54	13.64	11.79	-89.66	2,299.54	559.06	2,327.39	2,309.35	18.03	129.068		
3,448.03	3,388.29	3,398.29	3,398.29	13.91	11.96	-90.00	2,299.54	559.06	2,327.34	2,308.99	18.35	126.864		
3,500.00	3,437.79	3,447.79	3,447.79	14.21	12.14	-90.37	2,299.54	559.06	2,327.39	2,308.71	18.68	124.567		
3,600.00	3,533.04	3,543.04	3,543.04	14.78	12.48	-91.09	2,299.54	559.06	2,327.80	2,308.46	19.34	120.367		
3,700.00	3,628.29	3,638.29	3,638.29	15.36	12.82	-91.80	2,299.54	559.06	2,328.60	2,308.61	20.00	116.443		
3,800.00	3,723.54	3,733.54	3,733.54	15.94	13.16	-92.51	2,299.54	559.06	2,329.81	2,309.15	20.66	112.775		
3,900.00	3,818.79	3,828.79	3,828.79	16.52	13.50	-93.22	2,299.54	559.06	2,331.41	2,310.08	21.32	109.341		
4,000.00	3,914.04	3,924.04	3,924.04	17.11	13.84	-93.94	2,299.54	559.06	2,333.40	2,311.41	21.99	106.125		
4,100.00	4,009.29	4,019.29	4,019.29	17.69	14.18	-94.65	2,299.54	559.06	2,335.79	2,313.14	22.65	103.109		
4,200.00	4,104.54	4,114.54	4,114.54	18.29	14.53	-95.35	2,299.54	559.06	2,338.58	2,315.26	23.32	100.279		
4,300.00	4,199.79	4,209.79	4,209.79	18.88	14.87	-96.06	2,299.54	559.06	2,341.76	2,317.77	23.99	97.620		
4,400.00	4,295.04	4,305.04	4,305.04	19.48	15.21	-96.77	2,299.54	559.06	2,345.32	2,320.67	24.66	95.120		
4,500.00	4,390.29	4,400.29	4,400.29	20.08	15.55	-97.47	2,299.54	559.06	2,349.28	2,323.96	25.32	92.767		
4,600.00	4,485.55	4,495.55	4,495.55	20.68	15.89	-98.17	2,299.54	559.06	2,353.63	2,327.64	25.99	90.551		
4,700.00	4,580.80	4,590.80	4,590.80	21.28	16.23	-98.87	2,299.54	559.06	2,358.36	2,331.70	26.66	88.463		
4,800.00	4,676.05	4,686.05	4,686.05	21.88	16.57	-99.56	2,299.54	559.06	2,363.47	2,336.15	27.33	86.493		
4,900.00	4,771.30	4,781.30	4,781.30	22.48	16.92	-100.26	2,299.54	559.06	2,368.97	2,340.98	27.99	84.634		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design FMM Fed Com - Blue Bay WCA State Com #001C (Offset Plan) - 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	4,866.55	4,876.55	4,876.55	23.09	17.26	-100.95	2,299.54	559.06	2,374.84	2,346.18	28.65	82.878		
5,100.00	4,961.80	4,971.80	4,971.80	23.70	17.60	-101.63	2,299.54	559.06	2,381.09	2,351.77	29.32	81.219		
5,200.00	5,057.05	5,067.05	5,067.05	24.30	17.94	-102.32	2,299.54	559.06	2,387.70	2,357.73	29.98	79.649		
5,300.00	5,152.30	5,162.30	5,162.30	24.91	18.28	-103.00	2,299.54	559.06	2,394.69	2,364.06	30.64	78.164		
5,400.00	5,247.55	5,257.55	5,257.55	25.52	18.62	-103.67	2,299.54	559.06	2,402.05	2,370.75	31.29	76.758		
5,500.00	5,342.80	5,352.80	5,352.80	26.13	18.96	-104.34	2,299.54	559.06	2,409.76	2,377.81	31.95	75.426		
5,600.00	5,438.05	5,448.05	5,448.05	26.74	19.31	-105.01	2,299.54	559.06	2,417.84	2,385.24	32.60	74.163		
5,700.00	5,533.30	5,543.30	5,543.30	27.36	19.65	-105.68	2,299.54	559.06	2,426.27	2,393.01	33.25	72.966		
5,800.00	5,628.56	5,638.56	5,638.56	27.97	19.99	-106.34	2,299.54	559.06	2,435.05	2,401.15	33.90	71.830		
5,900.00	5,723.81	5,733.81	5,733.81	28.58	20.33	-106.99	2,299.54	559.06	2,444.18	2,409.63	34.55	70.752		
6,000.00	5,819.06	5,829.06	5,829.06	29.20	20.67	-107.64	2,299.54	559.06	2,453.65	2,418.46	35.19	69.728		
6,100.00	5,914.31	5,924.31	5,924.31	29.81	21.01	-108.29	2,299.54	559.06	2,463.47	2,427.64	35.83	68.756		
6,200.00	6,009.56	6,019.56	6,019.56	30.43	21.35	-108.93	2,299.54	559.06	2,473.62	2,437.15	36.47	67.832		
6,300.00	6,104.81	6,114.81	6,114.81	31.04	21.70	-109.57	2,299.54	559.06	2,484.10	2,447.00	37.10	66.954		
6,400.00	6,200.06	6,210.06	6,210.06	31.66	22.04	-110.20	2,299.54	559.06	2,494.91	2,457.17	37.73	66.119		
6,500.00	6,295.31	6,305.31	6,305.31	32.27	22.38	-110.82	2,299.54	559.06	2,506.04	2,467.68	38.36	65.325		
6,600.00	6,390.56	6,400.56	6,400.56	32.89	22.72	-111.45	2,299.54	559.06	2,517.49	2,478.50	38.99	64.570		
6,700.00	6,485.81	6,495.81	6,495.81	33.51	23.06	-112.06	2,299.54	559.06	2,529.26	2,489.65	39.61	63.851		
6,800.00	6,581.06	6,591.06	6,591.06	34.13	23.40	-112.67	2,299.54	559.06	2,541.33	2,501.10	40.23	63.168		
6,848.89	6,627.63	6,637.63	6,637.63	34.43	23.57	-112.97	2,299.54	559.06	2,547.35	2,506.82	40.53	62.846		
6,900.00	6,676.45	6,686.45	6,686.45	34.74	23.74	-113.38	2,299.54	559.06	2,553.54	2,512.69	40.84	62.518		
7,000.00	6,772.71	6,782.71	6,782.71	35.31	24.09	-114.13	2,299.54	559.06	2,564.80	2,523.36	41.44	61.899		
7,100.00	6,869.86	6,879.86	6,879.86	35.84	24.44	-114.78	2,299.54	559.06	2,574.84	2,532.84	42.00	61.305		
7,200.00	6,967.77	6,977.77	6,977.77	36.33	24.79	-115.34	2,299.54	559.06	2,583.59	2,541.05	42.54	60.731		
7,300.00	7,066.34	7,076.34	7,076.34	36.77	25.14	-115.81	2,299.54	559.06	2,590.95	2,547.89	43.06	60.171		
7,400.00	7,165.43	7,175.43	7,175.43	37.17	25.50	-116.18	2,299.54	559.06	2,596.87	2,553.32	43.56	59.621		
7,500.00	7,264.93	7,274.93	7,274.93	37.52	25.85	-116.45	2,299.54	559.06	2,601.30	2,557.27	44.03	59.079		
7,600.00	7,364.71	7,374.71	7,374.71	37.84	26.21	-116.63	2,299.54	559.06	2,604.19	2,559.71	44.49	58.541		
7,700.00	7,464.66	7,474.66	7,474.66	38.12	26.57	-116.72	2,299.54	559.06	2,605.53	2,560.61	44.92	58.004		
7,735.34	7,500.00	7,510.00	7,510.00	38.21	26.70	-23.50	2,299.54	559.06	2,605.63	2,560.56	45.07	57.814		
7,800.00	7,564.66	7,574.66	7,574.66	38.37	26.93	-23.50	2,299.54	559.06	2,605.63	2,560.29	45.34	57.470		
7,900.00	7,664.66	7,674.66	7,674.66	38.61	27.29	-23.50	2,299.54	559.06	2,605.63	2,559.87	45.76	56.943		
7,942.38	7,707.04	7,717.04	7,717.04	38.72	27.44	-23.50	2,299.54	559.06	2,605.63	2,559.69	45.94	56.722		
7,950.00	7,714.66	7,724.66	7,724.66	38.74	27.47	-22.96	2,299.54	559.06	2,605.58	2,559.61	45.97	56.681		
8,000.00	7,764.57	7,774.57	7,774.57	38.86	27.65	-23.08	2,299.54	559.06	2,602.96	2,556.78	46.18	56.363		
8,050.00	7,814.03	7,824.03	7,824.03	38.98	27.82	-23.41	2,299.54	559.06	2,596.35	2,549.96	46.40	55.960		
8,100.00	7,862.68	7,872.68	7,872.68	39.09	28.00	-23.94	2,299.54	559.06	2,585.80	2,539.19	46.61	55.475		
8,150.00	7,910.15	7,920.15	7,920.15	39.20	28.17	-24.71	2,299.54	559.06	2,571.41	2,524.58	46.83	54.915		
8,200.00	7,956.07	7,966.07	7,966.07	39.30	28.33	-25.72	2,299.54	559.06	2,553.29	2,506.25	47.03	54.285		
8,250.00	8,000.10	8,010.10	8,010.10	39.39	28.49	-27.02	2,299.54	559.06	2,531.59	2,484.35	47.24	53.590		
8,300.00	8,041.89	8,051.89	8,051.89	39.48	28.64	-28.66	2,299.54	559.06	2,506.51	2,459.07	47.44	52.836		
8,350.00	8,081.14	8,091.14	8,091.14	39.56	28.78	-30.69	2,299.54	559.06	2,478.24	2,430.61	47.63	52.029		
8,400.00	8,117.54	8,127.54	8,127.54	39.63	28.91	-33.20	2,299.54	559.06	2,447.04	2,399.22	47.82	51.174		
8,450.00	8,150.81	8,160.81	8,160.81	39.69	29.03	-36.28	2,299.54	559.06	2,413.16	2,365.16	48.00	50.278		
8,500.00	8,180.71	8,190.71	8,190.71	39.75	29.14	-40.05	2,299.54	559.06	2,376.89	2,328.72	48.17	49.346		
8,550.00	8,207.00	8,217.00	8,217.00	39.80	29.23	-44.65	2,299.54	559.06	2,338.53	2,290.20	48.33	48.385		
8,600.00	8,229.49	8,239.49	8,239.49	39.85	29.31	-50.21	2,299.54	559.06	2,298.40	2,249.91	48.49	47.401		
8,650.00	8,248.00	8,258.00	8,258.00	39.91	29.38	-56.84	2,299.54	559.06	2,256.85	2,208.21	48.64	46.399		
8,700.00	8,262.40	8,272.40	8,272.40	39.96	29.43	-64.54	2,299.54	559.06	2,214.22	2,165.43	48.79	45.387		
8,750.00	8,272.57	8,282.57	8,282.57	40.02	29.47	-73.14	2,299.54	559.06	2,170.85	2,121.92	48.93	44.369		
8,800.00	8,278.43	8,288.43	8,288.43	40.08	29.49	-82.26	2,299.54	559.06	2,127.11	2,078.05	49.06	43.354		
8,842.38	8,280.00	8,290.00	8,290.00	40.15	29.49	-90.00	2,299.54	559.06	2,090.02	2,040.84	49.18	42.499		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
8,900.00	8,280.00	8,290.00	8,290.00	40.25	29.49	-90.00	2,299.54	559.06	2,039.85	1,990.52	49.34	41.346		
9,000.00	8,280.00	8,290.00	8,290.00	40.47	29.49	-90.00	2,299.54	559.06	1,953.78	1,904.15	49.63	39.365		
9,100.00	8,280.00	8,290.00	8,290.00	40.75	29.49	-90.00	2,299.54	559.06	1,869.09	1,819.13	49.96	37.412		
9,200.00	8,280.00	8,290.00	8,290.00	41.10	29.49	-90.00	2,299.54	559.06	1,785.99	1,735.67	50.32	35.491		
9,300.00	8,280.00	8,290.00	8,290.00	41.51	29.49	-90.00	2,299.54	559.06	1,704.70	1,653.98	50.72	33.610		
9,400.00	8,280.00	8,290.00	8,290.00	42.00	29.49	-90.00	2,299.54	559.06	1,625.51	1,574.35	51.16	31.773		
9,500.00	8,280.00	8,290.00	8,290.00	42.55	29.49	-90.00	2,299.54	559.06	1,548.72	1,497.07	51.64	29.990		
9,600.00	8,280.00	8,290.00	8,290.00	43.17	29.49	-90.00	2,299.54	559.06	1,474.71	1,422.54	52.17	28.269		
9,700.00	8,280.00	8,290.00	8,290.00	43.85	29.49	-90.00	2,299.54	559.06	1,403.93	1,351.20	52.74	26.622		
9,800.00	8,280.00	8,290.00	8,290.00	44.60	29.49	-90.00	2,299.54	559.06	1,336.89	1,283.55	53.34	25.062		
9,900.00	8,280.00	8,290.00	8,290.00	45.41	29.49	-90.00	2,299.54	559.06	1,274.18	1,220.20	53.98	23.604		
10,000.00	8,280.00	8,290.00	8,290.00	46.27	29.49	-90.00	2,299.54	559.06	1,216.46	1,161.83	54.63	22.266		
10,100.00	8,280.00	8,290.00	8,290.00	47.19	29.49	-90.00	2,299.54	559.06	1,164.49	1,109.20	55.28	21.064		
10,200.00	8,280.00	8,290.00	8,290.00	48.15	29.49	-90.00	2,299.54	559.06	1,119.05	1,063.16	55.90	20.020		
10,300.00	8,280.00	8,290.00	8,290.00	49.16	29.49	-90.00	2,299.54	559.06	1,080.99	1,024.55	56.44	19.153		
10,400.00	8,280.00	8,290.00	8,290.00	50.20	29.49	-90.00	2,299.54	559.06	1,051.09	994.23	56.86	18.484		
10,500.00	8,280.00	8,290.00	8,290.00	51.29	29.49	-90.00	2,299.54	559.06	1,030.07	972.93	57.13	18.029		
10,600.00	8,280.00	8,290.00	8,290.00	52.41	29.49	-90.00	2,299.54	559.06	1,018.48	961.26	57.21	17.801		
10,668.74	8,280.00	8,290.00	8,290.00	53.20	29.49	-90.00	2,299.54	559.06	1,016.15	959.00	57.16	17.779 CC, ES, SF		
10,700.00	8,280.00	8,290.00	8,290.00	53.56	29.49	-90.00	2,299.54	559.06	1,016.63	959.54	57.09	17.806		
10,800.00	8,280.00	8,290.00	8,290.00	54.74	29.49	-90.00	2,299.54	559.06	1,024.60	967.83	56.77	18.048		
10,900.00	8,280.00	8,290.00	8,290.00	55.95	29.49	-90.00	2,299.54	559.06	1,042.14	985.86	56.27	18.519		
11,000.00	8,280.00	8,290.00	8,290.00	57.18	29.49	-90.00	2,299.54	559.06	1,068.79	1,013.14	55.64	19.207		
11,100.00	8,280.00	8,290.00	8,290.00	58.43	29.49	-90.00	2,299.54	559.06	1,103.88	1,048.95	54.93	20.097		
11,200.00	8,280.00	8,290.00	8,290.00	59.71	29.49	-90.00	2,299.54	559.06	1,146.65	1,092.48	54.17	21.166		
11,300.00	8,280.00	8,290.00	8,290.00	61.00	29.49	-90.00	2,299.54	559.06	1,196.27	1,142.85	53.42	22.395		
11,400.00	8,280.00	8,290.00	8,290.00	62.31	29.49	-90.00	2,299.54	559.06	1,251.92	1,199.24	52.69	23.762		
11,500.00	8,280.00	8,290.00	8,290.00	63.64	29.49	-90.00	2,299.54	559.06	1,312.85	1,260.84	52.00	25.246		
11,600.00	8,280.00	8,290.00	8,290.00	64.99	29.49	-90.00	2,299.54	559.06	1,378.34	1,326.97	51.37	26.831		
11,700.00	8,280.00	8,290.00	8,290.00	66.35	29.49	-90.00	2,299.54	559.06	1,447.78	1,396.98	50.80	28.499		
11,800.00	8,280.00	8,290.00	8,290.00	67.72	29.49	-90.00	2,299.54	559.06	1,520.63	1,470.34	50.29	30.235		
11,900.00	8,280.00	8,290.00	8,290.00	69.11	29.49	-90.00	2,299.54	559.06	1,596.42	1,546.58	49.84	32.029		
12,000.00	8,280.00	8,290.00	8,290.00	70.51	29.49	-90.00	2,299.54	559.06	1,674.76	1,625.31	49.45	33.869		
12,100.00	8,280.00	8,290.00	8,290.00	71.92	29.49	-90.00	2,299.54	559.06	1,755.30	1,706.20	49.10	35.752		
12,200.00	8,280.00	8,290.00	8,290.00	73.34	29.49	-90.00	2,299.54	559.06	1,837.75	1,788.96	48.79	37.666		
12,300.00	8,280.00	8,290.00	8,290.00	74.77	29.49	-90.00	2,299.54	559.06	1,921.87	1,873.35	48.52	39.607		
12,400.00	8,280.00	8,290.00	8,290.00	76.21	29.49	-90.00	2,299.54	559.06	2,007.44	1,959.15	48.29	41.569		
12,500.00	8,280.00	8,290.00	8,290.00	77.65	29.49	-90.00	2,299.54	559.06	2,094.30	2,046.21	48.09	43.549		
12,600.00	8,280.00	8,290.00	8,290.00	79.11	29.49	-90.00	2,299.54	559.06	2,182.28	2,134.37	47.91	45.547		
12,700.00	8,280.00	8,290.00	8,290.00	80.57	29.49	-90.00	2,299.54	559.06	2,271.25	2,223.49	47.76	47.555		
12,800.00	8,280.00	8,290.00	8,290.00	82.04	29.49	-90.00	2,299.54	559.06	2,361.11	2,313.48	47.63	49.573		
12,900.00	8,280.00	8,290.00	8,290.00	83.52	29.49	-90.00	2,299.54	559.06	2,451.75	2,404.24	47.51	51.601		
13,000.00	8,280.00	8,290.00	8,290.00	85.01	29.49	-90.00	2,299.54	559.06	2,543.10	2,495.68	47.41	53.635		
13,100.00	8,280.00	8,290.00	8,290.00	86.50	29.49	-90.00	2,299.54	559.06	2,635.07	2,587.74	47.33	55.675		
13,200.00	8,280.00	8,290.00	8,290.00	87.99	29.49	-90.00	2,299.54	559.06	2,727.61	2,680.35	47.26	57.719		
13,300.00	8,280.00	8,290.00	8,290.00	89.50	29.49	-90.00	2,299.54	559.06	2,820.66	2,773.46	47.19	59.766		
13,400.00	8,280.00	8,290.00	8,290.00	91.00	29.49	-90.00	2,299.54	559.06	2,914.16	2,867.02	47.14	61.816		
13,500.00	8,280.00	8,290.00	8,290.00	92.52	29.49	-90.00	2,299.54	559.06	3,008.09	2,960.99	47.10	63.869		
13,600.00	8,280.00	8,290.00	8,290.00	94.03	29.49	-90.00	2,299.54	559.06	3,102.40	3,055.33	47.06	65.923		
13,700.00	8,280.00	8,290.00	8,290.00	95.56	29.49	-90.00	2,299.54	559.06	3,197.05	3,150.02	47.03	67.977		
13,800.00	8,280.00	8,290.00	8,290.00	97.08	29.49	-90.00	2,299.54	559.06	3,292.01	3,245.01	47.01	70.031		
13,900.00	8,280.00	8,290.00	8,290.00	98.61	29.49	-90.00	2,299.54	559.06	3,387.27	3,340.28	46.99	72.084		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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						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	8,280.00	8,290.00	8,290.00	100.15	29.49	-90.00	2,299.54	559.06	3,482.80	3,435.82	46.98	74.136	
14,100.00	8,280.00	8,290.00	8,290.00	101.69	29.49	-90.00	2,299.54	559.06	3,578.56	3,531.59	46.97	76.186	
14,200.00	8,280.00	8,290.00	8,290.00	103.23	29.49	-90.00	2,299.54	559.06	3,674.56	3,627.59	46.97	78.235	
14,300.00	8,280.00	8,290.00	8,290.00	104.77	29.49	-90.00	2,299.54	559.06	3,770.76	3,723.79	46.97	80.281	
14,400.00	8,280.00	8,290.00	8,290.00	106.32	29.49	-90.00	2,299.54	559.06	3,867.15	3,820.18	46.97	82.325	
14,500.00	8,280.00	8,290.00	8,290.00	107.87	29.49	-90.00	2,299.54	559.06	3,963.73	3,916.74	46.98	84.367	
14,600.00	8,280.00	8,290.00	8,290.00	109.43	29.49	-90.00	2,299.54	559.06	4,060.47	4,013.47	46.99	86.405	
14,700.00	8,280.00	8,290.00	8,290.00	110.98	29.49	-90.00	2,299.54	559.06	4,157.36	4,110.35	47.01	88.441	
14,800.00	8,280.00	8,290.00	8,290.00	112.54	29.49	-90.00	2,299.54	559.06	4,254.40	4,207.37	47.02	90.473	
14,900.00	8,280.00	8,290.00	8,290.00	114.10	29.49	-90.00	2,299.54	559.06	4,351.57	4,304.52	47.04	92.503	
15,000.00	8,280.00	8,290.00	8,290.00	115.67	29.49	-90.00	2,299.54	559.06	4,448.86	4,401.80	47.06	94.531	
15,100.00	8,280.00	8,290.00	8,290.00	117.24	29.49	-90.00	2,299.54	559.06	4,546.28	4,499.19	47.08	96.556	
15,200.00	8,280.00	8,290.00	8,290.00	118.81	29.49	-90.00	2,299.54	559.06	4,643.80	4,596.69	47.11	98.577	
15,300.00	8,280.00	8,290.00	8,290.00	120.38	29.49	-90.00	2,299.54	559.06	4,741.43	4,694.29	47.13	100.594	
15,400.00	8,280.00	8,290.00	8,290.00	121.95	29.49	-90.00	2,299.54	559.06	4,839.15	4,791.99	47.16	102.605	
15,500.00	8,280.00	8,290.00	8,290.00	123.53	29.49	-90.00	2,299.54	559.06	4,936.97	4,889.77	47.19	104.611	

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-90.53	-18.84	-2,035.93	2,036.52					
100.00	100.00	54.80	54.80	0.13	0.07	-90.53	-18.84	-2,035.93	2,036.02	2,035.88	0.14	N/A		
200.00	200.00	154.80	154.80	0.48	0.32	-90.53	-18.84	-2,035.93	2,036.02	2,035.44	0.58	3,502.998		
300.00	300.00	254.80	254.80	0.84	0.68	-90.53	-18.84	-2,035.93	2,036.02	2,034.94	1.08	1,880.240		
400.00	400.00	354.80	354.80	1.20	1.04	-90.53	-18.84	-2,035.93	2,036.02	2,034.43	1.59	1,282.236		
500.00	500.00	454.80	454.80	1.56	1.40	-90.53	-18.84	-2,035.93	2,036.02	2,033.93	2.09	972.395		
600.00	600.00	554.80	554.80	1.92	1.76	-90.53	-18.84	-2,035.93	2,036.02	2,033.42	2.60	783.035		
700.00	700.00	654.80	654.80	2.28	2.11	-90.53	-18.84	-2,035.93	2,036.02	2,032.91	3.11	655.363		
800.00	800.00	754.80	754.80	2.63	2.47	-90.53	-18.84	-2,035.93	2,036.02	2,032.41	3.61	563.469		
900.00	900.00	854.80	854.80	2.99	2.83	-90.53	-18.84	-2,035.93	2,036.02	2,031.90	4.12	494.168		
1,000.00	1,000.00	954.80	954.80	3.35	3.19	-90.53	-18.84	-2,035.93	2,036.02	2,031.39	4.63	440.042		
1,100.00	1,100.00	1,054.80	1,054.80	3.71	3.55	-90.53	-18.84	-2,035.93	2,036.02	2,030.89	5.13	396.599		
1,200.00	1,200.00	1,154.80	1,154.80	4.07	3.91	-90.53	-18.84	-2,035.93	2,036.02	2,030.38	5.64	360.962		
1,300.00	1,300.00	1,254.80	1,254.80	4.43	4.27	-90.53	-18.84	-2,035.93	2,036.02	2,029.87	6.15	331.201		
1,400.00	1,400.00	1,354.80	1,354.80	4.79	4.62	-90.53	-18.84	-2,035.93	2,036.02	2,029.37	6.65	305.972		
1,500.00	1,500.00	1,454.80	1,454.80	5.14	4.98	-90.53	-18.84	-2,035.93	2,036.02	2,028.86	7.16	284.315		
1,600.00	1,600.00	1,554.80	1,554.80	5.50	5.34	-90.53	-18.84	-2,035.93	2,036.02	2,028.35	7.67	265.520 CC, ES		
1,700.00	1,699.98	1,654.78	1,654.78	5.85	5.70	176.25	-18.84	-2,035.93	2,037.76	2,029.59	8.17	249.477		
1,800.00	1,799.84	1,754.64	1,754.64	6.20	6.06	176.25	-18.84	-2,035.93	2,042.98	2,034.32	8.66	235.835		
1,900.00	1,899.45	1,835.39	1,835.39	6.54	6.34	176.25	-18.86	-2,036.10	2,051.93	2,042.82	9.11	225.284		
2,000.00	1,998.70	1,900.00	1,899.99	6.90	6.57	176.24	-19.02	-2,037.23	2,065.83	2,056.32	9.51	217.219		
2,100.00	2,097.47	1,963.70	1,963.65	7.26	6.79	176.23	-19.31	-2,039.41	2,084.82	2,074.91	9.90	210.486		
2,200.00	2,195.62	2,026.55	2,026.42	7.64	7.00	176.21	-19.74	-2,042.59	2,108.80	2,098.51	10.29	204.838		
2,300.00	2,293.06	2,100.00	2,099.69	8.04	7.25	176.18	-20.42	-2,047.60	2,137.76	2,127.05	10.71	199.590		
2,400.00	2,389.64	2,148.61	2,148.13	8.46	7.42	176.14	-20.97	-2,051.69	2,171.43	2,160.37	11.06	196.352		
2,486.44	2,472.37	2,200.00	2,199.27	8.85	7.60	176.10	-21.64	-2,056.67	2,204.37	2,192.98	11.38	193.675		
2,500.00	2,485.28	2,200.00	2,199.27	8.92	7.60	176.10	-21.64	-2,056.67	2,209.83	2,198.42	11.41	193.653		
2,600.00	2,580.53	2,265.24	2,264.09	9.39	7.83	176.11	-22.63	-2,063.98	2,250.78	2,238.99	11.79	190.849		
2,700.00	2,675.78	2,322.22	2,320.59	9.88	8.04	176.12	-23.61	-2,071.25	2,293.10	2,280.95	12.15	188.701		
2,800.00	2,771.03	2,378.41	2,376.21	10.39	8.24	176.12	-24.69	-2,079.25	2,336.75	2,324.25	12.51	186.834		
2,900.00	2,866.28	2,433.81	2,430.90	10.91	8.45	176.13	-25.87	-2,087.92	2,381.70	2,368.84	12.86	185.225		
3,000.00	2,961.53	2,491.33	2,487.56	11.44	8.66	176.12	-27.20	-2,097.76	2,427.92	2,414.71	13.22	183.719		
3,100.00	3,056.78	2,574.87	2,569.73	11.98	8.98	176.12	-29.21	-2,112.66	2,474.83	2,461.17	13.66	181.189		
3,200.00	3,152.03	2,663.18	2,656.60	12.52	9.32	176.11	-31.34	-2,128.42	2,521.74	2,507.62	14.12	178.577		
3,300.00	3,247.28	2,751.49	2,743.47	13.08	9.67	176.11	-33.47	-2,144.17	2,568.66	2,554.07	14.59	176.095		
3,400.00	3,342.54	2,839.80	2,830.34	13.64	10.02	176.10	-35.60	-2,159.92	2,615.57	2,600.51	15.05	173.735		
3,500.00	3,437.79	2,928.12	2,917.21	14.21	10.38	176.10	-37.73	-2,175.68	2,662.48	2,646.96	15.53	171.490		
3,600.00	3,533.04	3,016.43	3,004.08	14.78	10.74	176.09	-39.85	-2,191.43	2,709.39	2,693.40	16.00	169.352		
3,700.00	3,628.29	3,104.74	3,090.95	15.36	11.10	176.09	-41.98	-2,207.18	2,756.31	2,739.83	16.47	167.317		
3,800.00	3,723.54	3,193.06	3,177.83	15.94	11.47	176.08	-44.11	-2,222.94	2,803.22	2,786.27	16.95	165.376		
3,900.00	3,818.79	3,281.37	3,264.70	16.52	11.84	176.08	-46.24	-2,238.69	2,850.13	2,832.70	17.43	163.524		
4,000.00	3,914.04	3,369.68	3,351.57	17.11	12.21	176.08	-48.37	-2,254.44	2,897.04	2,879.14	17.91	161.756		
4,100.00	4,009.29	3,457.99	3,438.44	17.69	12.59	176.07	-50.50	-2,270.20	2,943.96	2,925.57	18.39	160.068		
4,200.00	4,104.54	3,546.31	3,525.31	18.29	12.96	176.07	-52.63	-2,285.95	2,990.87	2,971.99	18.88	158.453		
4,300.00	4,199.79	3,634.62	3,612.18	18.88	13.34	176.07	-54.76	-2,301.70	3,037.78	3,018.42	19.36	156.909		
4,400.00	4,295.04	3,722.93	3,699.05	19.48	13.72	176.06	-56.88	-2,317.46	3,084.70	3,064.85	19.85	155.430		
4,500.00	4,390.29	3,811.25	3,785.92	20.08	14.11	176.06	-59.01	-2,333.21	3,131.61	3,111.28	20.33	154.013		
4,600.00	4,485.55	3,899.56	3,872.79	20.68	14.49	176.05	-61.14	-2,348.96	3,178.52	3,157.70	20.82	152.654		
4,700.00	4,580.80	3,987.87	3,959.66	21.28	14.87	176.05	-63.27	-2,364.72	3,225.43	3,204.12	21.31	151.350		
4,800.00	4,676.05	4,076.18	4,046.53	21.88	15.26	176.05	-65.40	-2,380.47	3,272.35	3,250.55	21.80	150.097		
4,900.00	4,771.30	4,164.50	4,133.40	22.48	15.65	176.05	-67.53	-2,396.23	3,319.26	3,296.97	22.29	148.894		
5,000.00	4,866.55	4,252.81	4,220.27	23.09	16.03	176.04	-69.66	-2,411.98	3,366.17	3,343.39	22.79	147.736		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,341.12	4,307.14	23.70	16.42	176.04	-71.79	-2,427.73	3,413.09	3,389.81	23.28	146.623		
5,200.00	5,057.05	4,429.44	4,394.01	24.30	16.81	176.04	-73.92	-2,443.49	3,460.00	3,436.23	23.77	145.550		
5,300.00	5,152.30	4,517.75	4,480.88	24.91	17.21	176.03	-76.04	-2,459.24	3,506.91	3,482.64	24.27	144.517		
5,400.00	5,247.55	4,606.06	4,567.75	25.52	17.60	176.03	-78.17	-2,474.99	3,553.82	3,529.06	24.76	143.521		
5,500.00	5,342.80	4,694.37	4,654.62	26.13	17.99	176.03	-80.30	-2,490.75	3,600.74	3,575.48	25.26	142.560		
5,600.00	5,438.05	4,782.69	4,741.49	26.74	18.38	176.03	-82.43	-2,506.50	3,647.65	3,621.89	25.75	141.632		
5,700.00	5,533.30	4,871.00	4,828.36	27.36	18.78	176.02	-84.56	-2,522.25	3,694.56	3,668.31	26.25	140.736		
5,800.00	5,628.56	4,959.31	4,915.23	27.97	19.17	176.02	-86.69	-2,538.01	3,741.47	3,714.73	26.75	139.870		
5,900.00	5,723.81	5,047.63	5,002.10	28.58	19.57	176.02	-88.82	-2,553.76	3,788.39	3,761.14	27.25	139.032		
6,000.00	5,819.06	5,135.94	5,088.97	29.20	19.96	176.02	-90.95	-2,569.51	3,835.30	3,807.55	27.75	138.222		
6,100.00	5,914.31	5,224.25	5,175.84	29.81	20.36	176.01	-93.07	-2,585.27	3,882.21	3,853.97	28.25	137.438		
6,200.00	6,009.56	5,312.56	5,262.71	30.43	20.76	176.01	-95.20	-2,601.02	3,929.13	3,900.38	28.75	136.678		
6,300.00	6,104.81	5,400.88	5,349.59	31.04	21.15	176.01	-97.33	-2,616.77	3,976.04	3,946.79	29.25	135.942		
6,400.00	6,200.06	5,489.19	5,436.46	31.66	21.55	176.01	-99.46	-2,632.53	4,022.95	3,993.20	29.75	135.229		
6,500.00	6,295.31	5,577.50	5,523.33	32.27	21.95	176.01	-101.59	-2,648.28	4,069.86	4,039.61	30.25	134.537		
6,600.00	6,390.56	5,665.82	5,610.20	32.89	22.35	176.00	-103.72	-2,664.03	4,116.78	4,086.02	30.75	133.865		
6,700.00	6,485.81	5,754.13	5,697.07	33.51	22.75	176.00	-105.85	-2,679.79	4,163.69	4,132.43	31.26	133.213		
6,800.00	6,581.06	5,842.44	5,783.94	34.13	23.15	176.00	-107.98	-2,695.54	4,210.60	4,178.84	31.76	132.579		
6,848.89	6,627.63	5,885.62	5,826.41	34.43	23.34	176.00	-109.02	-2,703.24	4,233.54	4,201.54	32.01	132.276		
6,900.00	6,676.45	5,930.97	5,871.01	34.74	23.55	176.03	-110.11	-2,711.33	4,257.11	4,224.85	32.26	131.953		
7,000.00	6,772.71	6,020.87	5,959.45	35.31	23.95	176.10	-112.28	-2,727.37	4,300.89	4,268.12	32.77	131.257		
7,100.00	6,869.86	6,112.24	6,049.33	35.84	24.37	176.15	-114.48	-2,743.67	4,341.50	4,308.23	33.27	130.485		
7,200.00	6,967.77	6,204.97	6,140.55	36.33	24.79	176.19	-116.72	-2,760.21	4,378.91	4,345.13	33.78	129.639		
7,300.00	7,066.34	6,298.95	6,232.98	36.77	25.22	176.22	-118.98	-2,776.97	4,413.07	4,378.79	34.28	128.727		
7,400.00	7,165.43	6,394.05	6,326.53	37.17	25.65	176.25	-121.27	-2,793.94	4,443.94	4,409.15	34.79	127.754		
7,500.00	7,264.93	6,490.17	6,421.08	37.52	26.08	176.26	-123.59	-2,811.08	4,471.47	4,436.18	35.28	126.725		
7,600.00	7,364.71	6,587.18	6,516.51	37.84	26.53	176.27	-125.93	-2,828.39	4,495.64	4,459.86	35.78	125.644		
7,700.00	7,464.66	6,684.97	6,612.70	38.12	26.97	176.27	-128.29	-2,845.83	4,516.42	4,480.15	36.27	124.516		
7,735.34	7,500.00	7,532.33	7,454.80	38.21	30.22	-90.62	-138.84	-2,923.93	4,522.20	4,482.90	39.29	115.085		
7,800.00	7,564.66	7,596.99	7,519.46	38.37	30.42	-90.62	-138.84	-2,923.93	4,522.20	4,482.61	39.59	114.230		
7,900.00	7,664.66	7,696.99	7,619.46	38.61	30.72	-90.62	-138.84	-2,923.93	4,522.20	4,482.15	40.04	112.930		
7,942.38	7,707.04	7,739.37	7,661.84	38.72	30.85	-90.62	-138.84	-2,923.93	4,522.20	4,481.96	40.24	112.386		
7,950.00	7,714.66	7,746.99	7,669.46	38.74	30.87	-90.07	-138.84	-2,923.93	4,522.20	4,481.92	40.27	112.289		
8,000.00	7,764.57	7,796.89	7,719.37	38.86	31.03	-90.11	-138.84	-2,923.93	4,522.20	4,481.70	40.50	111.660		
8,050.00	7,814.03	7,846.36	7,768.83	38.98	31.18	-90.20	-138.84	-2,923.93	4,522.22	4,481.50	40.72	111.048		
8,100.00	7,862.68	7,895.01	7,817.48	39.09	31.33	-90.33	-138.84	-2,923.93	4,522.28	4,481.33	40.94	110.456		
8,150.00	7,910.15	7,942.47	7,864.95	39.20	31.47	-90.51	-138.84	-2,923.93	4,522.40	4,481.24	41.16	109.886		
8,200.00	7,956.07	7,988.39	7,910.87	39.30	31.62	-90.72	-138.84	-2,923.93	4,522.63	4,481.27	41.36	109.342		
8,250.00	8,000.10	8,032.42	7,954.90	39.39	31.75	-90.94	-138.84	-2,923.93	4,523.02	4,481.46	41.56	108.825		
8,300.00	8,041.89	8,074.22	7,996.69	39.48	31.88	-91.17	-138.84	-2,923.93	4,523.63	4,481.87	41.76	108.337		
8,350.00	8,081.14	8,113.46	8,035.94	39.56	32.00	-91.39	-138.84	-2,923.93	4,524.51	4,482.57	41.94	107.879		
8,400.00	8,117.54	8,162.01	8,084.46	39.63	32.15	-91.68	-137.48	-2,923.95	4,525.70	4,483.55	42.15	107.369		
8,450.00	8,150.81	8,218.45	8,140.48	39.69	32.32	-92.01	-130.84	-2,924.01	4,527.13	4,484.75	42.38	106.821		
8,500.00	8,180.71	8,281.14	8,201.60	39.75	32.50	-92.36	-117.04	-2,924.15	4,528.77	4,486.14	42.62	106.250		
8,550.00	8,207.00	8,351.88	8,268.28	39.80	32.69	-92.74	-93.56	-2,924.38	4,530.57	4,487.69	42.88	105.650		
8,600.00	8,229.49	8,433.00	8,340.51	39.85	32.88	-93.16	-56.78	-2,924.75	4,532.48	4,489.31	43.16	105.009		
8,650.00	8,248.00	8,527.25	8,416.91	39.91	33.07	-93.61	-1.77	-2,925.30	4,534.38	4,490.91	43.47	104.308		
8,700.00	8,262.40	8,637.33	8,493.30	39.96	33.25	-94.07	77.25	-2,926.08	4,536.13	4,492.31	43.82	103.524		
8,750.00	8,272.57	8,739.00	8,548.92	40.02	33.40	-94.39	162.15	-2,926.93	4,537.55	4,493.38	44.16	102.746		
8,800.00	8,278.43	8,907.01	8,606.38	40.08	33.67	-94.78	319.32	-2,928.49	4,538.43	4,493.73	44.71	101.519		
8,842.38	8,280.00	9,026.43	8,618.00	40.15	33.95	-94.84	437.95	-2,929.67	4,538.65	4,493.50	45.15	100.519		
8,900.00	8,280.00	9,084.05	8,618.00	40.25	34.13	-94.84	495.57	-2,930.24	4,538.67	4,493.17	45.50	99.743		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	9,184.05	8,618.00	40.47	34.52	-94.84	595.56	-2,931.24	4,538.72	4,492.52	46.20	98.240		
9,100.00	8,280.00	9,284.05	8,618.00	40.75	35.01	-94.84	695.56	-2,932.23	4,538.76	4,491.76	47.00	96.568		
9,200.00	8,280.00	9,384.05	8,618.00	41.10	35.57	-94.84	795.55	-2,933.23	4,538.80	4,490.90	47.90	94.753		
9,300.00	8,280.00	9,484.05	8,618.00	41.51	36.22	-94.84	895.55	-2,934.22	4,538.84	4,489.95	48.90	92.825		
9,400.00	8,280.00	9,584.05	8,618.00	42.00	36.93	-94.84	995.54	-2,935.22	4,538.89	4,488.91	49.98	90.812		
9,500.00	8,280.00	9,684.05	8,618.00	42.55	37.71	-94.84	1,095.54	-2,936.21	4,538.93	4,487.78	51.15	88.740		
9,600.00	8,280.00	9,784.05	8,618.00	43.17	38.55	-94.84	1,195.53	-2,937.21	4,538.97	4,486.58	52.39	86.632		
9,700.00	8,280.00	9,884.05	8,618.00	43.85	39.44	-94.84	1,295.53	-2,938.20	4,539.02	4,485.31	53.71	84.508		
9,800.00	8,280.00	9,984.05	8,618.00	44.60	40.38	-94.84	1,395.52	-2,939.20	4,539.06	4,483.96	55.10	82.385		
9,900.00	8,280.00	10,084.05	8,618.00	45.41	41.37	-94.84	1,495.52	-2,940.19	4,539.10	4,482.56	56.54	80.277		
10,000.00	8,280.00	10,184.05	8,618.00	46.27	42.40	-94.84	1,595.51	-2,941.19	4,539.15	4,481.10	58.05	78.197		
10,100.00	8,280.00	10,284.05	8,618.00	47.19	43.47	-94.84	1,695.51	-2,942.18	4,539.19	4,479.58	59.60	76.155		
10,200.00	8,280.00	10,384.05	8,618.00	48.15	44.57	-94.84	1,795.50	-2,943.17	4,539.23	4,478.02	61.21	74.157		
10,300.00	8,280.00	10,484.05	8,618.00	49.16	45.71	-94.84	1,895.50	-2,944.17	4,539.27	4,476.41	62.86	72.209		
10,400.00	8,280.00	10,584.05	8,618.00	50.20	46.88	-94.84	1,995.49	-2,945.16	4,539.32	4,474.76	64.56	70.315		
10,500.00	8,280.00	10,684.05	8,618.00	51.29	48.08	-94.84	2,095.49	-2,946.16	4,539.36	4,473.07	66.29	68.477		
10,600.00	8,280.00	10,784.05	8,618.00	52.41	49.30	-94.84	2,195.48	-2,947.15	4,539.40	4,471.34	68.06	66.699		
10,700.00	8,280.00	10,884.05	8,618.00	53.56	50.55	-94.84	2,295.48	-2,948.15	4,539.45	4,469.59	69.86	64.980		
10,800.00	8,280.00	10,984.05	8,618.00	54.74	51.82	-94.84	2,395.47	-2,949.14	4,539.49	4,467.80	71.69	63.320		
10,900.00	8,280.00	11,084.05	8,618.00	55.95	53.11	-94.84	2,495.47	-2,950.14	4,539.53	4,465.98	73.55	61.719		
11,000.00	8,280.00	11,184.05	8,618.00	57.18	54.42	-94.84	2,595.46	-2,951.13	4,539.57	4,464.14	75.44	60.177		
11,100.00	8,280.00	11,284.05	8,618.00	58.43	55.75	-94.84	2,695.46	-2,952.13	4,539.62	4,462.27	77.35	58.691		
11,200.00	8,280.00	11,384.05	8,618.00	59.71	57.10	-94.84	2,795.45	-2,953.12	4,539.66	4,460.38	79.28	57.261		
11,300.00	8,280.00	11,484.05	8,618.00	61.00	58.46	-94.84	2,895.45	-2,954.12	4,539.70	4,458.47	81.23	55.884		
11,400.00	8,280.00	11,584.05	8,618.00	62.31	59.83	-94.84	2,995.44	-2,955.11	4,539.75	4,456.54	83.21	54.559		
11,500.00	8,280.00	11,684.05	8,618.00	63.64	61.22	-94.84	3,095.44	-2,956.11	4,539.79	4,454.59	85.20	53.285		
11,600.00	8,280.00	11,784.05	8,618.00	64.99	62.63	-94.84	3,195.43	-2,957.10	4,539.83	4,452.63	87.21	52.058		
11,700.00	8,280.00	11,884.05	8,618.00	66.35	64.04	-94.84	3,295.43	-2,958.09	4,539.88	4,450.64	89.23	50.878		
11,800.00	8,280.00	11,984.05	8,618.00	67.72	65.47	-94.84	3,395.42	-2,959.09	4,539.92	4,448.65	91.27	49.742		
11,900.00	8,280.00	12,084.05	8,618.00	69.11	66.90	-94.84	3,495.42	-2,960.08	4,539.96	4,446.64	93.32	48.649		
12,000.00	8,280.00	12,184.05	8,618.00	70.51	68.35	-94.84	3,595.41	-2,961.08	4,540.00	4,444.62	95.39	47.596		
12,100.00	8,280.00	12,284.05	8,618.00	71.92	69.80	-94.84	3,695.41	-2,962.07	4,540.05	4,442.58	97.46	46.583		
12,200.00	8,280.00	12,384.05	8,618.00	73.34	71.27	-94.84	3,795.40	-2,963.07	4,540.09	4,440.54	99.55	45.606		
12,300.00	8,280.00	12,484.05	8,618.00	74.77	72.74	-94.84	3,895.40	-2,964.06	4,540.13	4,438.48	101.65	44.665		
12,400.00	8,280.00	12,584.05	8,618.00	76.21	74.22	-94.84	3,995.40	-2,965.06	4,540.18	4,436.42	103.76	43.758		
12,500.00	8,280.00	12,684.05	8,618.00	77.65	75.70	-94.84	4,095.39	-2,966.05	4,540.22	4,434.34	105.88	42.883		
12,600.00	8,280.00	12,784.05	8,618.00	79.11	77.19	-94.84	4,195.39	-2,967.05	4,540.26	4,432.26	108.00	42.039		
12,700.00	8,280.00	12,884.05	8,618.00	80.57	78.69	-94.84	4,295.38	-2,968.04	4,540.30	4,430.17	110.14	41.224		
12,800.00	8,280.00	12,984.05	8,618.00	82.04	80.20	-94.84	4,395.38	-2,969.04	4,540.35	4,428.07	112.28	40.438		
12,900.00	8,280.00	13,084.05	8,618.00	83.52	81.71	-94.84	4,495.37	-2,970.03	4,540.39	4,425.96	114.43	39.679		
13,000.00	8,280.00	13,184.05	8,618.00	85.01	83.23	-94.84	4,595.37	-2,971.03	4,540.43	4,423.85	116.59	38.945		
13,100.00	8,280.00	13,284.05	8,618.00	86.50	84.75	-94.84	4,695.36	-2,972.02	4,540.48	4,421.73	118.75	38.236		
13,200.00	8,280.00	13,384.05	8,618.00	87.99	86.27	-94.84	4,795.36	-2,973.01	4,540.52	4,419.60	120.92	37.550		
13,300.00	8,280.00	13,484.05	8,618.00	89.50	87.80	-94.84	4,895.35	-2,974.01	4,540.56	4,417.47	123.09	36.887		
13,400.00	8,280.00	13,584.05	8,618.00	91.00	89.34	-94.84	4,995.35	-2,975.00	4,540.61	4,415.33	125.28	36.245		
13,500.00	8,280.00	13,684.05	8,618.00	92.52	90.88	-94.84	5,095.34	-2,976.00	4,540.65	4,413.19	127.46	35.624		
13,600.00	8,280.00	13,784.05	8,618.00	94.03	92.42	-94.84	5,195.34	-2,976.99	4,540.69	4,411.04	129.65	35.022		
13,700.00	8,280.00	13,884.05	8,618.00	95.56	93.97	-94.84	5,295.33	-2,977.99	4,540.73	4,408.88	131.85	34.439		
13,800.00	8,280.00	13,984.05	8,618.00	97.08	95.52	-94.84	5,395.33	-2,978.98	4,540.78	4,406.73	134.05	33.874		
13,900.00	8,280.00	14,084.05	8,618.00	98.61	97.07	-94.84	5,495.32	-2,979.98	4,540.82	4,404.56	136.26	33.326		
14,000.00	8,280.00	14,184.05	8,618.00	100.15	98.63	-94.84	5,595.32	-2,980.97	4,540.86	4,402.40	138.46	32.795		
14,100.00	8,280.00	14,284.05	8,618.00	101.69	100.19	-94.84	5,695.31	-2,981.97	4,540.91	4,400.23	140.68	32.279		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	14,384.05	8,618.00	103.23	101.75	-94.84	5,795.31	-2,982.96	4,540.95	4,398.06	142.89	31.779		
14,300.00	8,280.00	14,484.05	8,618.00	104.77	103.32	-94.84	5,895.30	-2,983.96	4,540.99	4,395.88	145.11	31.293		
14,400.00	8,280.00	14,584.05	8,618.00	106.32	104.88	-94.84	5,995.30	-2,984.95	4,541.03	4,393.70	147.34	30.821		
14,500.00	8,280.00	14,684.05	8,618.00	107.87	106.45	-94.84	6,095.29	-2,985.95	4,541.08	4,391.52	149.56	30.362		
14,600.00	8,280.00	14,784.05	8,618.00	109.43	108.03	-94.84	6,195.29	-2,986.94	4,541.12	4,389.33	151.79	29.917		
14,700.00	8,280.00	14,884.05	8,618.00	110.98	109.60	-94.84	6,295.28	-2,987.94	4,541.16	4,387.14	154.02	29.483		
14,800.00	8,280.00	14,984.05	8,618.00	112.54	111.18	-94.84	6,395.28	-2,988.93	4,541.21	4,384.95	156.26	29.062		
14,900.00	8,280.00	15,084.05	8,618.00	114.10	112.76	-94.84	6,495.27	-2,989.92	4,541.25	4,382.75	158.50	28.652		
15,000.00	8,280.00	15,184.05	8,618.00	115.67	114.34	-94.84	6,595.27	-2,990.92	4,541.29	4,380.55	160.74	28.253		
15,100.00	8,280.00	15,284.05	8,618.00	117.24	115.93	-94.84	6,695.26	-2,991.91	4,541.34	4,378.35	162.98	27.864		
15,200.00	8,280.00	15,384.05	8,618.00	118.81	117.51	-94.84	6,795.26	-2,992.91	4,541.38	4,376.15	165.23	27.486		
15,300.00	8,280.00	15,484.05	8,618.00	120.38	119.10	-94.84	6,895.25	-2,993.90	4,541.42	4,373.95	167.48	27.117		
15,400.00	8,280.00	15,584.05	8,618.00	121.95	120.69	-94.84	6,995.25	-2,994.90	4,541.46	4,371.74	169.73	26.758		
15,500.00	8,280.00	15,684.05	8,618.00	123.53	122.28	-94.84	7,095.24	-2,995.89	4,541.51	4,369.53	171.98	26.407		
15,600.00	8,280.00	15,784.05	8,618.00	125.11	123.87	-94.84	7,195.24	-2,996.89	4,541.55	4,367.32	174.23	26.066		
15,700.00	8,280.00	15,884.05	8,618.00	126.69	125.47	-94.84	7,295.23	-2,997.88	4,541.59	4,365.10	176.49	25.733		
15,800.00	8,280.00	15,984.05	8,618.00	128.27	127.06	-94.84	7,395.23	-2,998.88	4,541.64	4,362.89	178.75	25.408		
15,900.00	8,280.00	16,084.05	8,618.00	129.85	128.66	-94.84	7,495.22	-2,999.87	4,541.68	4,360.67	181.01	25.091		
16,000.00	8,280.00	16,184.05	8,618.00	131.44	130.26	-94.84	7,595.22	-3,000.87	4,541.72	4,358.45	183.27	24.782		
16,100.00	8,280.00	16,284.05	8,618.00	133.02	131.86	-94.84	7,695.21	-3,001.86	4,541.76	4,356.23	185.53	24.480		
16,200.00	8,280.00	16,384.05	8,618.00	134.61	133.46	-94.84	7,795.21	-3,002.86	4,541.81	4,354.01	187.80	24.184		
16,300.00	8,280.00	16,484.05	8,618.00	136.20	135.06	-94.84	7,895.20	-3,003.85	4,541.85	4,351.79	190.07	23.896		
16,400.00	8,280.00	16,584.05	8,618.00	137.79	136.66	-94.84	7,995.20	-3,004.84	4,541.89	4,349.56	192.33	23.615		
16,500.00	8,280.00	16,684.05	8,618.00	139.39	138.27	-94.84	8,095.19	-3,005.84	4,541.94	4,347.33	194.60	23.339		
16,600.00	8,280.00	16,784.05	8,618.00	140.98	139.87	-94.84	8,195.19	-3,006.83	4,541.98	4,345.10	196.87	23.070		
16,700.00	8,280.00	16,884.05	8,618.00	142.58	141.48	-94.84	8,295.18	-3,007.83	4,542.02	4,342.87	199.15	22.807		
16,800.00	8,280.00	16,984.05	8,618.00	144.17	143.09	-94.84	8,395.18	-3,008.82	4,542.06	4,340.64	201.42	22.550		
16,900.00	8,280.00	17,084.05	8,618.00	145.77	144.70	-94.84	8,495.17	-3,009.82	4,542.11	4,338.41	203.70	22.298		
17,000.00	8,280.00	17,184.05	8,618.00	147.37	146.31	-94.84	8,595.17	-3,010.81	4,542.15	4,336.18	205.97	22.052		
17,100.00	8,280.00	17,284.05	8,618.00	148.97	147.92	-94.84	8,695.16	-3,011.81	4,542.19	4,333.94	208.25	21.811		
17,200.00	8,280.00	17,384.05	8,618.00	150.57	149.53	-94.84	8,795.16	-3,012.80	4,542.24	4,331.71	210.53	21.575		
17,300.00	8,280.00	17,484.05	8,618.00	152.18	151.14	-94.84	8,895.15	-3,013.80	4,542.28	4,329.47	212.81	21.344		
17,400.00	8,280.00	17,584.05	8,618.00	153.78	152.76	-94.84	8,995.15	-3,014.79	4,542.32	4,327.23	215.09	21.118		
17,500.00	8,280.00	17,684.05	8,618.00	155.38	154.37	-94.84	9,095.14	-3,015.79	4,542.37	4,324.99	217.37	20.897		
17,600.00	8,280.00	17,784.05	8,618.00	156.99	155.98	-94.84	9,195.14	-3,016.78	4,542.41	4,322.75	219.66	20.680		
17,700.00	8,280.00	17,884.05	8,618.00	158.60	157.60	-94.84	9,295.13	-3,017.78	4,542.45	4,320.51	221.94	20.467		
17,800.00	8,280.00	17,984.05	8,618.00	160.20	159.22	-94.84	9,395.13	-3,018.77	4,542.49	4,318.27	224.23	20.259		
17,900.00	8,280.00	18,084.05	8,618.00	161.81	160.83	-94.84	9,495.12	-3,019.76	4,542.54	4,316.03	226.51	20.054		
18,000.00	8,280.00	18,184.05	8,618.00	163.42	162.45	-94.84	9,595.12	-3,020.76	4,542.58	4,313.78	228.80	19.854		
18,100.00	8,280.00	18,284.05	8,618.00	165.03	164.07	-94.84	9,695.11	-3,021.75	4,542.62	4,311.54	231.09	19.658		
18,200.00	8,280.00	18,384.05	8,618.00	166.64	165.69	-94.84	9,795.11	-3,022.75	4,542.67	4,309.29	233.38	19.465		
18,300.00	8,280.00	18,484.05	8,618.00	168.25	167.31	-94.84	9,895.10	-3,023.74	4,542.71	4,307.04	235.66	19.276		
18,400.00	8,280.00	18,584.05	8,618.00	169.87	168.93	-94.84	9,995.10	-3,024.74	4,542.75	4,304.80	237.95	19.091		
18,438.77	8,280.00	18,622.82	8,618.00	170.49	169.56	-94.84	10,033.87	-3,025.12	4,542.77	4,303.93	238.84	19.020 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 102H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		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	-18.37	-1,986.11	1,986.67					
100.00	100.00	56.70	56.70	0.13	0.07	-90.53	-18.37	-1,986.11	1,986.20	1,986.05	0.14	N/A		
200.00	200.00	156.70	156.70	0.48	0.33	-90.53	-18.37	-1,986.11	1,986.20	1,985.61	0.59	3,395.083		
300.00	300.00	256.70	256.70	0.84	0.69	-90.53	-18.37	-1,986.11	1,986.20	1,985.11	1.09	1,826.987		
400.00	400.00	356.70	356.70	1.20	1.05	-90.53	-18.37	-1,986.11	1,986.20	1,984.61	1.59	1,247.352		
500.00	500.00	456.70	456.70	1.56	1.40	-90.53	-18.37	-1,986.11	1,986.20	1,984.10	2.10	946.542		
600.00	600.00	556.70	556.70	1.92	1.76	-90.53	-18.37	-1,986.11	1,986.20	1,983.59	2.60	762.524		
700.00	700.00	656.70	656.70	2.28	2.12	-90.53	-18.37	-1,986.11	1,986.20	1,983.09	3.11	638.372		
800.00	800.00	756.70	756.70	2.63	2.48	-90.53	-18.37	-1,986.11	1,986.20	1,982.58	3.62	548.972		
900.00	900.00	856.70	856.70	2.99	2.84	-90.53	-18.37	-1,986.11	1,986.20	1,982.07	4.12	481.528		
1,000.00	1,000.00	956.70	956.70	3.35	3.20	-90.53	-18.37	-1,986.11	1,986.20	1,981.57	4.63	428.838		
1,100.00	1,100.00	1,056.70	1,056.70	3.71	3.55	-90.53	-18.37	-1,986.11	1,986.20	1,981.06	5.14	386.540		
1,200.00	1,200.00	1,156.70	1,156.70	4.07	3.91	-90.53	-18.37	-1,986.11	1,986.20	1,980.55	5.65	351.835		
1,300.00	1,300.00	1,256.70	1,256.70	4.43	4.27	-90.53	-18.37	-1,986.11	1,986.20	1,980.05	6.15	322.848		
1,400.00	1,400.00	1,356.70	1,356.70	4.79	4.63	-90.53	-18.37	-1,986.11	1,986.20	1,979.54	6.66	298.273		
1,500.00	1,500.00	1,456.70	1,456.70	5.14	4.99	-90.53	-18.37	-1,986.11	1,986.20	1,979.03	7.17	277.174		
1,600.00	1,600.00	1,556.70	1,556.70	5.50	5.35	-90.53	-18.37	-1,986.11	1,986.20	1,978.53	7.67	258.862 CC, ES		
1,700.00	1,699.98	1,656.68	1,656.68	5.85	5.71	176.25	-18.37	-1,986.11	1,987.94	1,979.77	8.17	243.236		
1,800.00	1,799.84	1,756.54	1,756.54	6.20	6.06	176.25	-18.37	-1,986.11	1,993.16	1,984.49	8.67	229.957		
1,900.00	1,899.45	1,856.15	1,856.15	6.54	6.42	176.26	-18.37	-1,986.11	2,001.86	1,992.70	9.16	218.475		
2,000.00	1,998.70	1,955.40	1,955.40	6.90	6.78	176.26	-18.37	-1,986.11	2,014.02	2,004.36	9.66	208.530		
2,100.00	2,097.47	2,107.60	2,107.59	7.26	7.31	176.27	-18.90	-1,984.69	2,028.92	2,018.64	10.28	197.433		
2,200.00	2,195.62	2,304.93	2,304.60	7.64	7.98	176.22	-22.60	-1,974.71	2,042.98	2,032.01	10.98	186.137		
2,300.00	2,293.06	2,485.14	2,483.85	8.04	8.60	176.09	-29.05	-1,957.31	2,055.78	2,044.15	11.63	176.732		
2,400.00	2,389.64	2,584.03	2,581.99	8.46	8.95	176.00	-33.24	-1,946.01	2,070.44	2,058.32	12.12	170.792		
2,486.44	2,472.37	2,669.05	2,666.39	8.85	9.26	175.92	-36.85	-1,936.29	2,085.88	2,073.33	12.55	166.225		
2,500.00	2,485.28	2,682.35	2,679.58	8.92	9.31	175.91	-37.41	-1,934.77	2,088.50	2,075.88	12.62	165.540		
2,600.00	2,580.53	2,780.44	2,776.94	9.39	9.66	175.85	-41.57	-1,923.56	2,107.84	2,094.73	13.11	160.780		
2,700.00	2,675.78	2,878.53	2,874.30	9.88	10.02	175.79	-45.72	-1,912.35	2,127.19	2,113.58	13.61	156.312		
2,800.00	2,771.03	2,976.61	2,971.65	10.39	10.39	175.73	-49.88	-1,901.14	2,146.54	2,132.43	14.11	152.115		
2,900.00	2,866.28	3,074.70	3,069.01	10.91	10.75	175.68	-54.03	-1,889.94	2,165.89	2,151.27	14.62	148.168		
3,000.00	2,961.53	3,172.79	3,166.36	11.44	11.12	175.62	-58.19	-1,878.73	2,185.24	2,170.11	15.13	144.454		
3,100.00	3,056.78	3,270.88	3,263.72	11.98	11.49	175.56	-62.35	-1,867.52	2,204.59	2,188.95	15.64	140.954		
3,200.00	3,152.03	3,368.96	3,361.08	12.52	11.86	175.51	-66.50	-1,856.31	2,223.95	2,207.79	16.16	137.652		
3,300.00	3,247.28	3,467.05	3,458.43	13.08	12.24	175.46	-70.66	-1,845.10	2,243.30	2,226.63	16.67	134.535		
3,400.00	3,342.54	3,565.14	3,555.79	13.64	12.61	175.41	-74.81	-1,833.89	2,262.66	2,245.47	17.20	131.587		
3,500.00	3,437.79	3,663.23	3,653.15	14.21	12.99	175.35	-78.97	-1,822.68	2,282.02	2,264.31	17.72	128.798		
3,600.00	3,533.04	3,761.31	3,750.50	14.78	13.37	175.30	-83.12	-1,811.48	2,301.39	2,283.14	18.24	126.154		
3,700.00	3,628.29	3,859.40	3,847.86	15.36	13.75	175.25	-87.28	-1,800.27	2,320.75	2,301.98	18.77	123.647		
3,800.00	3,723.54	3,957.49	3,945.22	15.94	14.13	175.21	-91.44	-1,789.06	2,340.12	2,320.82	19.30	121.266		
3,900.00	3,818.79	4,055.58	4,042.57	16.52	14.51	175.16	-95.59	-1,777.85	2,359.49	2,339.66	19.83	119.003		
4,000.00	3,914.04	4,153.66	4,139.93	17.11	14.90	175.11	-99.75	-1,766.64	2,378.85	2,358.50	20.36	116.850		
4,100.00	4,009.29	4,251.75	4,237.28	17.69	15.28	175.06	-103.90	-1,755.43	2,398.23	2,377.33	20.89	114.799		
4,200.00	4,104.54	4,349.84	4,334.64	18.29	15.66	175.02	-108.06	-1,744.22	2,417.60	2,396.17	21.42	112.843		
4,300.00	4,199.79	4,447.93	4,432.00	18.88	16.05	174.97	-112.21	-1,733.01	2,436.97	2,415.01	21.96	110.977		
4,400.00	4,295.04	4,546.01	4,529.35	19.48	16.44	174.93	-116.37	-1,721.81	2,456.35	2,433.85	22.50	109.194		
4,500.00	4,390.29	4,644.10	4,626.71	20.08	16.82	174.89	-120.53	-1,710.60	2,475.72	2,452.69	23.03	107.489		
4,600.00	4,485.55	4,742.19	4,724.07	20.68	17.21	174.84	-124.68	-1,699.39	2,495.10	2,471.53	23.57	105.858		
4,700.00	4,580.80	4,840.28	4,821.42	21.28	17.60	174.80	-128.84	-1,688.18	2,514.48	2,490.37	24.11	104.296		
4,800.00	4,676.05	4,938.36	4,918.78	21.88	17.99	174.76	-132.99	-1,676.97	2,533.86	2,509.21	24.65	102.799		
4,900.00	4,771.30	5,036.45	5,016.14	22.48	18.38	174.72	-137.15	-1,665.76	2,553.24	2,528.05	25.19	101.363		
5,000.00	4,866.55	5,134.54	5,113.49	23.09	18.77	174.68	-141.31	-1,654.55	2,572.62	2,546.89	25.73	99.984		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	5,232.63	5,210.85	23.70	19.16	174.64	-145.46	-1,643.34	2,592.01	2,565.74	26.27	98.660		
5,200.00	5,057.05	5,330.71	5,308.20	24.30	19.55	174.60	-149.62	-1,632.14	2,611.39	2,584.58	26.81	97.387		
5,300.00	5,152.30	5,428.80	5,405.56	24.91	19.94	174.56	-153.77	-1,620.93	2,630.78	2,603.42	27.36	96.162		
5,400.00	5,247.55	5,526.89	5,502.92	25.52	20.33	174.52	-157.93	-1,609.72	2,650.17	2,622.27	27.90	94.982		
5,500.00	5,342.80	5,624.98	5,600.27	26.13	20.73	174.48	-162.08	-1,598.51	2,669.56	2,641.11	28.45	93.846		
5,600.00	5,438.05	5,723.06	5,697.63	26.74	21.12	174.45	-166.24	-1,587.30	2,688.95	2,659.96	28.99	92.751		
5,700.00	5,533.30	5,821.15	5,794.99	27.36	21.51	174.41	-170.40	-1,576.09	2,708.34	2,678.80	29.54	91.695		
5,800.00	5,628.56	5,919.24	5,892.34	27.97	21.90	174.38	-174.55	-1,564.88	2,727.73	2,697.65	30.08	90.675		
5,900.00	5,723.81	6,017.33	5,989.70	28.58	22.30	174.34	-178.71	-1,553.68	2,747.12	2,716.49	30.63	89.691		
6,000.00	5,819.06	6,115.41	6,087.06	29.20	22.69	174.31	-182.86	-1,542.47	2,766.52	2,735.34	31.18	88.739		
6,100.00	5,914.31	6,213.50	6,184.41	29.81	23.08	174.27	-187.02	-1,531.26	2,785.91	2,754.19	31.72	87.820		
6,200.00	6,009.56	6,311.59	6,281.77	30.43	23.48	174.24	-191.17	-1,520.05	2,805.31	2,773.04	32.27	86.930		
6,300.00	6,104.81	6,409.68	6,379.12	31.04	23.87	174.20	-195.33	-1,508.84	2,824.70	2,791.88	32.82	86.069		
6,400.00	6,200.06	6,507.77	6,476.48	31.66	24.27	174.17	-199.49	-1,497.63	2,844.10	2,810.73	33.37	85.236		
6,500.00	6,295.31	6,605.85	6,573.84	32.27	24.66	174.14	-203.64	-1,486.42	2,863.50	2,829.58	33.92	84.428		
6,600.00	6,390.56	6,703.94	6,671.19	32.89	25.06	174.11	-207.80	-1,475.21	2,882.90	2,848.43	34.47	83.646		
6,700.00	6,485.81	6,802.03	6,768.55	33.51	25.45	174.07	-211.95	-1,464.01	2,902.30	2,867.28	35.02	82.887		
6,800.00	6,581.06	6,900.12	6,865.91	34.13	25.85	174.04	-216.11	-1,452.80	2,921.70	2,886.14	35.57	82.151		
6,848.89	6,627.63	6,931.78	6,897.35	34.43	25.97	174.03	-217.43	-1,449.24	2,931.30	2,895.51	35.78	81.918		
6,900.00	6,676.45	6,961.13	6,926.51	34.74	26.09	174.05	-218.57	-1,446.16	2,941.22	2,905.23	36.00	81.706		
7,000.00	6,772.71	7,000.00	6,965.17	35.31	26.24	174.08	-219.97	-1,442.40	2,959.20	2,922.85	36.35	81.419		
7,100.00	6,869.86	7,076.16	7,041.03	35.84	26.54	174.09	-222.30	-1,436.10	2,974.92	2,938.12	36.80	80.833		
7,200.00	6,967.77	7,133.78	7,098.50	36.33	26.75	174.12	-223.72	-1,432.28	2,988.68	2,951.49	37.19	80.372		
7,300.00	7,066.34	7,200.00	7,164.63	36.77	26.99	174.13	-224.97	-1,428.89	3,000.40	2,962.81	37.59	79.829		
7,400.00	7,165.43	7,249.16	7,213.75	37.17	27.17	174.15	-225.65	-1,427.07	3,010.00	2,972.09	37.91	79.404		
7,500.00	7,264.93	7,300.00	7,264.57	37.52	27.34	174.17	-226.12	-1,425.81	3,017.57	2,979.35	38.22	78.953		
7,600.00	7,364.71	7,375.43	7,340.00	37.84	27.60	174.18	-226.37	-1,425.11	3,023.06	2,984.46	38.61	78.299		
7,700.00	7,464.66	7,456.80	7,421.36	38.12	27.86	174.19	-226.37	-1,425.11	3,025.97	2,986.96	39.01	77.575		
7,735.34	7,500.00	7,492.13	7,456.70	38.21	27.97	-92.58	-226.37	-1,425.11	3,026.19	2,987.02	39.17	77.258		
7,800.00	7,564.66	7,556.80	7,521.36	38.37	28.18	-92.58	-226.37	-1,425.11	3,026.19	2,986.72	39.47	76.680		
7,900.00	7,664.66	7,656.80	7,621.36	38.61	28.51	-92.58	-226.37	-1,425.11	3,026.19	2,986.26	39.92	75.801		
7,942.38	7,707.04	7,699.17	7,663.74	38.72	28.65	-92.58	-226.37	-1,425.11	3,026.19	2,986.07	40.12	75.435		
7,950.00	7,714.66	7,706.80	7,671.36	38.74	28.67	-92.04	-226.37	-1,425.11	3,026.19	2,986.04	40.15	75.369		
8,000.00	7,764.57	7,756.70	7,721.27	38.86	28.84	-92.08	-226.37	-1,425.11	3,026.29	2,985.91	40.38	74.944		
8,050.00	7,814.03	7,806.16	7,770.73	38.98	29.00	-92.19	-226.37	-1,425.11	3,026.56	2,985.95	40.61	74.530		
8,100.00	7,862.68	7,854.82	7,819.38	39.09	29.16	-92.35	-226.37	-1,425.11	3,027.03	2,986.20	40.83	74.129		
8,150.00	7,910.15	7,902.28	7,866.85	39.20	29.31	-92.56	-226.37	-1,425.11	3,027.74	2,986.68	41.06	73.746		
8,200.00	7,956.07	7,952.86	7,917.43	39.30	29.48	-92.84	-226.14	-1,425.12	3,028.74	2,987.45	41.29	73.350		
8,250.00	8,000.10	8,018.60	7,982.89	39.39	29.68	-93.22	-220.50	-1,425.17	3,029.88	2,988.31	41.57	72.878		
8,300.00	8,041.89	8,088.54	8,051.33	39.48	29.89	-93.59	-206.31	-1,425.31	3,031.06	2,989.20	41.86	72.417		
8,350.00	8,081.14	8,162.91	8,121.63	39.56	30.08	-93.93	-182.21	-1,425.56	3,032.22	2,990.09	42.13	71.974		
8,400.00	8,117.54	8,241.78	8,192.10	39.63	30.26	-94.25	-146.94	-1,425.91	3,033.30	2,990.91	42.40	71.548		
8,450.00	8,150.81	8,324.94	8,260.42	39.69	30.41	-94.53	-99.66	-1,426.38	3,034.25	2,991.59	42.66	71.134		
8,500.00	8,180.71	8,411.83	8,323.71	39.75	30.53	-94.74	-40.24	-1,426.98	3,034.98	2,992.07	42.91	70.722		
8,550.00	8,207.00	8,501.54	8,378.86	39.80	30.62	-94.88	30.39	-1,427.69	3,035.46	2,992.28	43.18	70.294		
8,600.00	8,229.49	8,592.77	8,422.95	39.85	30.69	-94.92	110.15	-1,428.49	3,035.65	2,992.18	43.47	69.834		
8,650.00	8,248.00	8,684.06	8,453.84	39.91	30.76	-94.88	195.94	-1,429.35	3,035.53	2,991.74	43.79	69.327		
8,700.00	8,262.40	8,773.90	8,470.58	39.96	30.92	-94.74	284.11	-1,430.23	3,035.11	2,990.98	44.13	68.777		
8,750.00	8,272.57	8,850.54	8,474.00	40.02	31.16	-94.57	360.62	-1,431.00	3,034.46	2,990.00	44.46	68.246		
8,800.00	8,278.43	8,900.18	8,474.00	40.08	31.35	-94.51	410.25	-1,431.50	3,034.02	2,989.29	44.73	67.824		
8,838.61	8,279.99	8,938.74	8,474.00	40.14	31.52	-94.49	448.82	-1,431.89	3,033.92	2,988.95	44.97	67.468		
8,842.38	8,280.00	8,942.52	8,474.00	40.15	31.53	-94.49	452.59	-1,431.92	3,033.92	2,988.93	44.99	67.434		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
8,900.00	8,280.00	9,000.14	8,474.00	40.25	31.80	-94.49	510.21	-1,432.50	3,033.95	2,988.59	45.36	66.892		
9,000.00	8,280.00	9,100.14	8,474.00	40.47	32.35	-94.49	610.21	-1,433.51	3,034.00	2,987.91	46.09	65.831		
9,100.00	8,280.00	9,200.14	8,474.00	40.75	32.96	-94.49	710.20	-1,434.51	3,034.05	2,987.13	46.92	64.661		
9,200.00	8,280.00	9,300.14	8,474.00	41.10	33.64	-94.49	810.20	-1,435.51	3,034.10	2,986.25	47.86	63.401		
9,300.00	8,280.00	9,400.14	8,474.00	41.51	34.39	-94.49	910.19	-1,436.51	3,034.15	2,985.27	48.88	62.072		
9,400.00	8,280.00	9,500.14	8,474.00	42.00	35.20	-94.49	1,010.19	-1,437.52	3,034.21	2,984.21	49.99	60.691		
9,500.00	8,280.00	9,600.14	8,474.00	42.55	36.06	-94.49	1,110.18	-1,438.52	3,034.26	2,983.07	51.19	59.274		
9,600.00	8,280.00	9,700.14	8,474.00	43.17	36.98	-94.49	1,210.18	-1,439.52	3,034.31	2,981.85	52.46	57.838		
9,700.00	8,280.00	9,800.14	8,474.00	43.85	37.94	-94.49	1,310.17	-1,440.53	3,034.36	2,980.55	53.81	56.395		
9,800.00	8,280.00	9,900.14	8,474.00	44.60	38.95	-94.49	1,410.17	-1,441.53	3,034.41	2,979.20	55.21	54.957		
9,900.00	8,280.00	10,000.14	8,474.00	45.41	40.00	-94.49	1,510.16	-1,442.53	3,034.46	2,977.78	56.68	53.533		
10,000.00	8,280.00	10,100.14	8,474.00	46.27	41.09	-94.49	1,610.16	-1,443.54	3,034.51	2,976.30	58.21	52.130		
10,100.00	8,280.00	10,200.14	8,474.00	47.19	42.22	-94.49	1,710.15	-1,444.54	3,034.56	2,974.78	59.79	50.755		
10,200.00	8,280.00	10,300.14	8,474.00	48.15	43.38	-94.48	1,810.15	-1,445.54	3,034.62	2,973.20	61.41	49.412		
10,300.00	8,280.00	10,400.14	8,474.00	49.16	44.57	-94.48	1,910.14	-1,446.55	3,034.67	2,971.58	63.09	48.104		
10,400.00	8,280.00	10,500.14	8,474.00	50.20	45.79	-94.48	2,010.14	-1,447.55	3,034.72	2,969.92	64.80	46.834		
10,500.00	8,280.00	10,600.14	8,474.00	51.29	47.03	-94.48	2,110.13	-1,448.55	3,034.77	2,968.22	66.55	45.604		
10,600.00	8,280.00	10,700.14	8,474.00	52.41	48.30	-94.48	2,210.13	-1,449.56	3,034.82	2,966.49	68.33	44.414		
10,700.00	8,280.00	10,800.14	8,474.00	53.56	49.59	-94.48	2,310.12	-1,450.56	3,034.87	2,964.73	70.15	43.265		
10,800.00	8,280.00	10,900.14	8,474.00	54.74	50.90	-94.48	2,410.12	-1,451.56	3,034.92	2,962.93	71.99	42.156		
10,900.00	8,280.00	11,000.14	8,474.00	55.95	52.23	-94.48	2,510.11	-1,452.56	3,034.98	2,961.11	73.87	41.088		
11,000.00	8,280.00	11,100.14	8,474.00	57.18	53.58	-94.48	2,610.11	-1,453.57	3,035.03	2,959.26	75.76	40.059		
11,100.00	8,280.00	11,200.14	8,474.00	58.43	54.95	-94.48	2,710.10	-1,454.57	3,035.08	2,957.39	77.69	39.068		
11,200.00	8,280.00	11,300.14	8,474.00	59.71	56.33	-94.48	2,810.10	-1,455.57	3,035.13	2,955.50	79.63	38.115		
11,300.00	8,280.00	11,400.14	8,474.00	61.00	57.72	-94.48	2,910.09	-1,456.58	3,035.18	2,953.59	81.60	37.198		
11,400.00	8,280.00	11,500.14	8,474.00	62.31	59.13	-94.48	3,010.09	-1,457.58	3,035.23	2,951.65	83.58	36.316		
11,500.00	8,280.00	11,600.14	8,474.00	63.64	60.55	-94.48	3,110.08	-1,458.58	3,035.28	2,949.71	85.58	35.468		
11,600.00	8,280.00	11,700.14	8,474.00	64.99	61.99	-94.48	3,210.08	-1,459.59	3,035.34	2,947.74	87.60	34.652		
11,700.00	8,280.00	11,800.14	8,474.00	66.35	63.43	-94.48	3,310.07	-1,460.59	3,035.39	2,945.76	89.63	33.867		
11,800.00	8,280.00	11,900.14	8,474.00	67.72	64.88	-94.48	3,410.07	-1,461.59	3,035.44	2,943.76	91.67	33.111		
11,900.00	8,280.00	12,000.14	8,474.00	69.11	66.34	-94.48	3,510.06	-1,462.60	3,035.49	2,941.76	93.73	32.384		
12,000.00	8,280.00	12,100.14	8,474.00	70.51	67.81	-94.48	3,610.06	-1,463.60	3,035.54	2,939.74	95.81	31.684		
12,100.00	8,280.00	12,200.14	8,474.00	71.92	69.29	-94.48	3,710.05	-1,464.60	3,035.59	2,937.70	97.89	31.010		
12,200.00	8,280.00	12,300.14	8,474.00	73.34	70.78	-94.48	3,810.04	-1,465.61	3,035.64	2,935.66	99.98	30.361		
12,300.00	8,280.00	12,400.14	8,474.00	74.77	72.27	-94.48	3,910.04	-1,466.61	3,035.70	2,933.61	102.09	29.736		
12,400.00	8,280.00	12,500.14	8,474.00	76.21	73.77	-94.48	4,010.03	-1,467.61	3,035.75	2,931.54	104.20	29.133		
12,500.00	8,280.00	12,600.14	8,474.00	77.65	75.28	-94.48	4,110.03	-1,468.61	3,035.80	2,929.47	106.33	28.551		
12,600.00	8,280.00	12,700.14	8,474.00	79.11	76.79	-94.48	4,210.02	-1,469.62	3,035.85	2,927.39	108.46	27.990		
12,700.00	8,280.00	12,800.14	8,474.00	80.57	78.31	-94.48	4,310.02	-1,470.62	3,035.90	2,925.30	110.60	27.449		
12,800.00	8,280.00	12,900.14	8,474.00	82.04	79.83	-94.48	4,410.01	-1,471.62	3,035.95	2,923.20	112.75	26.927		
12,900.00	8,280.00	13,000.14	8,474.00	83.52	81.36	-94.48	4,510.01	-1,472.63	3,036.00	2,921.10	114.90	26.422		
13,000.00	8,280.00	13,100.14	8,474.00	85.01	82.89	-94.48	4,610.00	-1,473.63	3,036.05	2,918.99	117.06	25.935		
13,100.00	8,280.00	13,200.14	8,474.00	86.50	84.43	-94.48	4,710.00	-1,474.63	3,036.11	2,916.87	119.23	25.464		
13,200.00	8,280.00	13,300.14	8,474.00	87.99	85.97	-94.48	4,809.99	-1,475.64	3,036.16	2,914.75	121.41	25.008		
13,300.00	8,280.00	13,400.14	8,474.00	89.50	87.52	-94.48	4,909.99	-1,476.64	3,036.21	2,912.62	123.59	24.567		
13,400.00	8,280.00	13,500.14	8,474.00	91.00	89.07	-94.48	5,009.98	-1,477.64	3,036.26	2,910.49	125.77	24.141		
13,500.00	8,280.00	13,600.14	8,474.00	92.52	90.62	-94.48	5,109.98	-1,478.65	3,036.31	2,908.35	127.96	23.728		
13,600.00	8,280.00	13,700.14	8,474.00	94.03	92.18	-94.48	5,209.97	-1,479.65	3,036.36	2,906.21	130.16	23.328		
13,700.00	8,280.00	13,800.14	8,474.00	95.56	93.74	-94.48	5,309.97	-1,480.65	3,036.41	2,904.06	132.36	22.941		
13,800.00	8,280.00	13,900.14	8,474.00	97.08	95.30	-94.48	5,409.96	-1,481.66	3,036.47	2,901.90	134.56	22.566		
13,900.00	8,280.00	14,000.14	8,474.00	98.61	96.87	-94.48	5,509.96	-1,482.66	3,036.52	2,899.75	136.77	22.202		
14,000.00	8,280.00	14,100.14	8,474.00	100.15	98.44	-94.48	5,609.95	-1,483.66	3,036.57	2,897.59	138.98	21.848		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	14,200.14	8,474.00	101.69	100.01	-94.48	5,709.95	-1,484.66	3,036.62	2,895.42	141.20	21.506		
14,200.00	8,280.00	14,300.14	8,474.00	103.23	101.58	-94.48	5,809.94	-1,485.67	3,036.67	2,893.25	143.42	21.173		
14,300.00	8,280.00	14,400.14	8,474.00	104.77	103.16	-94.48	5,909.94	-1,486.67	3,036.72	2,891.08	145.64	20.850		
14,400.00	8,280.00	14,500.14	8,474.00	106.32	104.74	-94.48	6,009.93	-1,487.67	3,036.77	2,888.90	147.87	20.537		
14,500.00	8,280.00	14,600.14	8,474.00	107.87	106.32	-94.48	6,109.93	-1,488.68	3,036.83	2,886.73	150.10	20.232		
14,600.00	8,280.00	14,700.14	8,474.00	109.43	107.90	-94.48	6,209.92	-1,489.68	3,036.88	2,884.54	152.33	19.936		
14,700.00	8,280.00	14,800.14	8,474.00	110.98	109.49	-94.48	6,309.92	-1,490.68	3,036.93	2,882.36	154.57	19.648		
14,800.00	8,280.00	14,900.14	8,474.00	112.54	111.08	-94.48	6,409.91	-1,491.69	3,036.98	2,880.17	156.81	19.367		
14,900.00	8,280.00	15,000.14	8,474.00	114.10	112.66	-94.48	6,509.91	-1,492.69	3,037.03	2,877.98	159.05	19.095		
15,000.00	8,280.00	15,100.14	8,474.00	115.67	114.26	-94.48	6,609.90	-1,493.69	3,037.08	2,875.79	161.29	18.830		
15,100.00	8,280.00	15,200.14	8,474.00	117.24	115.85	-94.48	6,709.90	-1,494.70	3,037.13	2,873.59	163.54	18.571		
15,200.00	8,280.00	15,300.14	8,474.00	118.81	117.44	-94.48	6,809.89	-1,495.70	3,037.19	2,871.40	165.79	18.320		
15,300.00	8,280.00	15,400.14	8,474.00	120.38	119.04	-94.48	6,909.89	-1,496.70	3,037.24	2,869.20	168.04	18.074		
15,400.00	8,280.00	15,500.14	8,474.00	121.95	120.64	-94.48	7,009.88	-1,497.70	3,037.29	2,866.99	170.29	17.836		
15,500.00	8,280.00	15,600.14	8,474.00	123.53	122.23	-94.48	7,109.88	-1,498.71	3,037.34	2,864.79	172.55	17.603		
15,600.00	8,280.00	15,700.14	8,474.00	125.11	123.84	-94.48	7,209.87	-1,499.71	3,037.39	2,862.58	174.81	17.376		
15,700.00	8,280.00	15,800.14	8,474.00	126.69	125.44	-94.48	7,309.87	-1,500.71	3,037.44	2,860.38	177.07	17.154		
15,800.00	8,280.00	15,900.14	8,474.00	128.27	127.04	-94.48	7,409.86	-1,501.72	3,037.49	2,858.17	179.33	16.938		
15,900.00	8,280.00	16,000.14	8,474.00	129.85	128.64	-94.48	7,509.86	-1,502.72	3,037.54	2,855.96	181.59	16.728		
16,000.00	8,280.00	16,100.14	8,474.00	131.44	130.25	-94.48	7,609.85	-1,503.72	3,037.60	2,853.74	183.85	16.522		
16,100.00	8,280.00	16,200.14	8,474.00	133.02	131.86	-94.48	7,709.85	-1,504.73	3,037.65	2,851.53	186.12	16.321		
16,200.00	8,280.00	16,300.14	8,474.00	134.61	133.46	-94.48	7,809.84	-1,505.73	3,037.70	2,849.31	188.39	16.125		
16,300.00	8,280.00	16,400.14	8,474.00	136.20	135.07	-94.48	7,909.84	-1,506.73	3,037.75	2,847.10	190.66	15.933		
16,400.00	8,280.00	16,500.14	8,474.00	137.79	136.68	-94.48	8,009.83	-1,507.74	3,037.80	2,844.88	192.93	15.746		
16,500.00	8,280.00	16,600.14	8,474.00	139.39	138.29	-94.48	8,109.83	-1,508.74	3,037.85	2,842.66	195.20	15.563		
16,600.00	8,280.00	16,700.14	8,474.00	140.98	139.90	-94.48	8,209.82	-1,509.74	3,037.90	2,840.43	197.47	15.384		
16,700.00	8,280.00	16,800.14	8,474.00	142.58	141.52	-94.48	8,309.82	-1,510.75	3,037.96	2,838.21	199.75	15.209		
16,800.00	8,280.00	16,900.14	8,474.00	144.17	143.13	-94.48	8,409.81	-1,511.75	3,038.01	2,835.99	202.02	15.038		
16,900.00	8,280.00	17,000.14	8,474.00	145.77	144.75	-94.48	8,509.81	-1,512.75	3,038.06	2,833.76	204.30	14.871		
17,000.00	8,280.00	17,100.14	8,474.00	147.37	146.36	-94.48	8,609.80	-1,513.75	3,038.11	2,831.53	206.58	14.707		
17,100.00	8,280.00	17,200.14	8,474.00	148.97	147.98	-94.48	8,709.80	-1,514.76	3,038.16	2,829.31	208.86	14.547		
17,200.00	8,280.00	17,300.14	8,474.00	150.57	149.59	-94.48	8,809.79	-1,515.76	3,038.21	2,827.08	211.14	14.390		
17,300.00	8,280.00	17,400.14	8,474.00	152.18	151.21	-94.48	8,909.79	-1,516.76	3,038.26	2,824.85	213.42	14.236		
17,400.00	8,280.00	17,500.14	8,474.00	153.78	152.83	-94.48	9,009.78	-1,517.77	3,038.32	2,822.61	215.70	14.086		
17,500.00	8,280.00	17,600.14	8,474.00	155.38	154.45	-94.48	9,109.78	-1,518.77	3,038.37	2,820.38	217.98	13.938		
17,600.00	8,280.00	17,700.14	8,474.00	156.99	156.07	-94.48	9,209.77	-1,519.77	3,038.42	2,818.15	220.27	13.794		
17,700.00	8,280.00	17,800.14	8,474.00	158.60	157.69	-94.48	9,309.77	-1,520.78	3,038.47	2,815.91	222.55	13.653		
17,800.00	8,280.00	17,900.14	8,474.00	160.20	159.31	-94.48	9,409.76	-1,521.78	3,038.52	2,813.68	224.84	13.514		
17,900.00	8,280.00	18,000.14	8,474.00	161.81	160.93	-94.48	9,509.76	-1,522.78	3,038.57	2,811.44	227.13	13.378		
18,000.00	8,280.00	18,100.14	8,474.00	163.42	162.56	-94.48	9,609.75	-1,523.79	3,038.62	2,809.21	229.42	13.245		
18,100.00	8,280.00	18,200.14	8,474.00	165.03	164.18	-94.48	9,709.75	-1,524.79	3,038.68	2,806.97	231.71	13.114		
18,200.00	8,280.00	18,300.14	8,474.00	166.64	165.80	-94.48	9,809.74	-1,525.79	3,038.73	2,804.73	234.00	12.986		
18,300.00	8,280.00	18,400.14	8,474.00	168.25	167.43	-94.48	9,909.74	-1,526.80	3,038.78	2,802.49	236.29	12.861		
18,400.00	8,280.00	18,500.14	8,474.00	169.87	169.05	-94.48	10,009.73	-1,527.80	3,038.83	2,800.25	238.58	12.737		
18,438.77	8,280.00	18,538.91	8,474.00	170.49	169.68	-94.48	10,048.50	-1,528.19	3,038.85	2,799.38	239.47	12.690 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
0.00	0.00	0.30	0.30	0.00	0.00	-90.46	-0.40	-50.00	50.00					
100.00	100.00	100.30	100.30	0.13	0.13	-90.46	-0.40	-50.00	50.00	49.82	0.18	280.598		
200.00	200.00	200.30	200.30	0.48	0.49	-90.46	-0.40	-50.00	50.00	49.32	0.69	72.979		
300.00	300.00	300.30	300.30	0.84	0.84	-90.46	-0.40	-50.00	50.00	48.81	1.19	41.944		
400.00	400.00	400.30	400.30	1.20	1.20	-90.46	-0.40	-50.00	50.00	48.30	1.70	29.429		
500.00	500.00	500.30	500.30	1.56	1.56	-90.46	-0.40	-50.00	50.00	47.80	2.21	22.666		
600.00	600.00	600.30	600.30	1.92	1.92	-90.46	-0.40	-50.00	50.00	47.29	2.71	18.431		
700.00	700.00	700.30	700.30	2.28	2.28	-90.46	-0.40	-50.00	50.00	46.78	3.22	15.529		
800.00	800.00	800.30	800.30	2.63	2.64	-90.46	-0.40	-50.00	50.00	46.27	3.73	13.416		
900.00	900.00	900.30	900.30	2.99	2.99	-90.46	-0.40	-50.00	50.00	45.77	4.23	11.810		
1,000.00	1,000.00	1,000.30	1,000.30	3.35	3.35	-90.46	-0.40	-50.00	50.00	45.26	4.74	10.547		
1,100.00	1,100.00	1,100.30	1,100.30	3.71	3.71	-90.46	-0.40	-50.00	50.00	44.75	5.25	9.528		
1,200.00	1,200.00	1,200.30	1,200.30	4.07	4.07	-90.46	-0.40	-50.00	50.00	44.25	5.75	8.689		
1,300.00	1,300.00	1,300.30	1,300.30	4.43	4.43	-90.46	-0.40	-50.00	50.00	43.74	6.26	7.985		
1,400.00	1,400.00	1,400.30	1,400.30	4.79	4.79	-90.46	-0.40	-50.00	50.00	43.23	6.77	7.387		
1,500.00	1,500.00	1,500.30	1,500.30	5.14	5.15	-90.46	-0.40	-50.00	50.00	42.73	7.28	6.873		
1,600.00	1,600.00	1,600.30	1,600.30	5.50	5.50	-90.46	-0.40	-50.00	50.00	42.22	7.78	6.425 CC, ES		
1,700.00	1,699.98	1,700.28	1,700.28	5.85	5.86	176.44	-0.40	-50.00	51.74	43.46	8.28	6.247 SF		
1,800.00	1,799.84	1,800.14	1,800.14	6.20	6.22	176.76	-0.40	-50.00	56.97	48.19	8.78	6.490		
1,900.00	1,899.45	1,899.75	1,899.75	6.54	6.58	177.18	-0.40	-50.00	65.67	56.40	9.27	7.082		
2,000.00	1,998.70	1,999.92	1,999.92	6.90	6.92	177.10	-1.09	-49.53	77.37	67.61	9.76	7.927		
2,100.00	2,097.47	2,100.18	2,100.11	7.26	7.25	175.80	-3.92	-47.62	91.12	80.88	10.24	8.902		
2,200.00	2,195.62	2,199.07	2,198.87	7.64	7.58	174.20	-8.17	-44.75	107.40	96.69	10.71	10.026		
2,300.00	2,293.06	2,297.08	2,296.75	8.04	7.91	173.18	-12.42	-41.88	127.12	115.93	11.19	11.359		
2,400.00	2,389.64	2,394.36	2,393.89	8.46	8.23	172.58	-16.64	-39.03	150.24	138.57	11.67	12.874		
2,486.44	2,472.37	2,477.76	2,477.18	8.85	8.52	172.29	-20.26	-36.59	172.94	160.86	12.09	14.309		
2,500.00	2,485.28	2,490.79	2,490.19	8.92	8.56	172.27	-20.82	-36.20	176.70	164.55	12.15	14.540		
2,600.00	2,580.53	2,586.87	2,586.14	9.39	8.89	172.15	-24.99	-33.39	204.40	191.77	12.63	16.180		
2,700.00	2,675.78	2,682.96	2,682.09	9.88	9.22	172.05	-29.16	-30.57	232.11	218.99	13.12	17.693		
2,800.00	2,771.03	2,779.04	2,778.05	10.39	9.55	171.98	-33.33	-27.76	259.81	246.20	13.61	19.092		
2,900.00	2,866.28	2,875.13	2,874.00	10.91	9.89	171.92	-37.49	-24.94	287.51	273.41	14.10	20.389		
3,000.00	2,961.53	2,971.21	2,969.95	11.44	10.22	171.87	-41.66	-22.13	315.22	300.62	14.60	21.593		
3,100.00	3,056.78	3,067.30	3,065.91	11.98	10.56	171.83	-45.83	-19.31	342.92	327.82	15.10	22.713		
3,200.00	3,152.03	3,163.38	3,161.86	12.52	10.90	171.79	-50.00	-16.49	370.63	355.03	15.60	23.757		
3,300.00	3,247.28	3,259.47	3,257.82	13.08	11.23	171.76	-54.17	-13.68	398.33	382.22	16.11	24.731		
3,400.00	3,342.54	3,355.55	3,353.77	13.64	11.57	171.73	-58.33	-10.86	426.04	409.42	16.61	25.643		
3,500.00	3,437.79	3,451.64	3,449.72	14.21	11.91	171.71	-62.50	-8.05	453.74	436.62	17.12	26.498		
3,600.00	3,533.04	3,547.73	3,545.68	14.78	12.26	171.69	-66.67	-5.23	481.45	463.81	17.64	27.300		
3,700.00	3,628.29	3,643.81	3,641.63	15.36	12.60	171.67	-70.84	-2.42	509.15	491.00	18.15	28.054		
3,800.00	3,723.54	3,739.90	3,737.58	15.94	12.94	171.66	-75.00	0.40	536.86	518.19	18.66	28.765		
3,900.00	3,818.79	3,835.98	3,833.54	16.52	13.28	171.64	-79.17	3.22	564.56	545.38	19.18	29.435		
4,000.00	3,914.04	3,932.07	3,929.49	17.11	13.63	171.63	-83.34	6.03	592.27	572.57	19.70	30.067		
4,100.00	4,009.29	4,028.15	4,025.44	17.69	13.97	171.61	-87.51	8.85	619.97	599.75	20.22	30.665		
4,200.00	4,104.54	4,124.24	4,121.40	18.29	14.32	171.60	-91.68	11.66	647.68	626.94	20.74	31.232		
4,300.00	4,199.79	4,220.32	4,217.35	18.88	14.66	171.59	-95.84	14.48	675.38	654.12	21.26	31.769		
4,400.00	4,295.04	4,316.41	4,313.31	19.48	15.01	171.58	-100.01	17.29	703.09	681.31	21.78	32.279		
4,500.00	4,390.29	4,412.49	4,409.26	20.08	15.35	171.57	-104.18	20.11	730.79	708.49	22.31	32.763		
4,600.00	4,485.55	4,508.58	4,505.21	20.68	15.70	171.57	-108.35	22.93	758.50	735.67	22.83	33.224		
4,700.00	4,580.80	4,604.66	4,601.17	21.28	16.05	171.56	-112.52	25.74	786.20	762.85	23.36	33.663		
4,800.00	4,676.05	4,700.75	4,697.12	21.88	16.40	171.55	-116.68	28.56	813.91	790.03	23.88	34.081		
4,900.00	4,771.30	4,796.84	4,793.07	22.48	16.74	171.55	-120.85	31.37	841.61	817.21	24.41	34.480		
5,000.00	4,866.55	4,892.92	4,889.03	23.09	17.09	171.54	-125.02	34.19	869.32	844.38	24.94	34.862		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,989.01	4,984.98	23.70	17.44	171.53	-129.19	37.00	897.02	871.56	25.46	35.227		
5,200.00	5,057.05	5,085.09	5,080.93	24.30	17.79	171.53	-133.36	39.82	924.73	898.74	25.99	35.576		
5,300.00	5,152.30	5,181.18	5,176.89	24.91	18.14	171.52	-137.52	42.63	952.44	925.91	26.52	35.910		
5,400.00	5,247.55	5,277.26	5,272.84	25.52	18.49	171.52	-141.69	45.45	980.14	953.09	27.05	36.230		
5,500.00	5,342.80	5,373.35	5,368.80	26.13	18.84	171.51	-145.86	48.27	1,007.85	980.26	27.58	36.538		
5,600.00	5,438.05	5,469.43	5,464.75	26.74	19.18	171.51	-150.03	51.08	1,035.55	1,007.44	28.11	36.833		
5,700.00	5,533.30	5,565.52	5,560.70	27.36	19.53	171.50	-154.20	53.90	1,063.26	1,034.61	28.65	37.117		
5,800.00	5,628.56	5,661.60	5,656.66	27.97	19.88	171.50	-158.36	56.71	1,090.96	1,061.78	29.18	37.389		
5,900.00	5,723.81	5,757.69	5,752.61	28.58	20.23	171.50	-162.53	59.53	1,118.67	1,088.96	29.71	37.652		
6,000.00	5,819.06	5,853.78	5,848.56	29.20	20.58	171.49	-166.70	62.34	1,146.37	1,116.13	30.24	37.904		
6,100.00	5,914.31	5,949.86	5,944.52	29.81	20.93	171.49	-170.87	65.16	1,174.08	1,143.30	30.78	38.147		
6,200.00	6,009.56	6,045.95	6,040.47	30.43	21.28	171.49	-175.04	67.98	1,201.78	1,170.47	31.31	38.382		
6,300.00	6,104.81	6,142.03	6,136.43	31.04	21.64	171.48	-179.20	70.79	1,229.49	1,197.64	31.85	38.608		
6,400.00	6,200.06	6,238.12	6,232.38	31.66	21.99	171.48	-183.37	73.61	1,257.19	1,224.81	32.38	38.827		
6,500.00	6,295.31	6,334.20	6,328.33	32.27	22.34	171.48	-187.54	76.42	1,284.90	1,251.99	32.91	39.037		
6,600.00	6,390.56	6,430.29	6,424.29	32.89	22.69	171.48	-191.71	79.24	1,312.61	1,279.16	33.45	39.241		
6,700.00	6,485.81	6,526.37	6,520.24	33.51	23.04	171.47	-195.88	82.05	1,340.31	1,306.33	33.99	39.438		
6,800.00	6,581.06	6,622.46	6,616.19	34.13	23.39	171.47	-200.04	84.87	1,368.02	1,333.49	34.52	39.629		
6,848.89	6,627.63	6,669.44	6,663.11	34.43	23.56	171.47	-202.08	86.25	1,381.56	1,346.78	34.78	39.719		
6,900.00	6,676.45	6,718.67	6,712.27	34.74	23.74	171.51	-204.22	87.69	1,395.29	1,360.23	35.06	39.801		
7,000.00	6,772.71	6,815.65	6,809.12	35.31	24.10	171.56	-208.42	90.53	1,419.62	1,384.03	35.59	39.888		
7,100.00	6,869.86	6,913.42	6,906.75	35.84	24.45	171.58	-212.66	93.40	1,440.59	1,404.47	36.12	39.882		
7,200.00	6,967.77	7,011.84	7,005.04	36.33	24.81	171.57	-216.93	96.28	1,458.18	1,421.53	36.65	39.788		
7,300.00	7,066.34	7,106.97	7,100.04	36.77	25.16	171.53	-221.06	99.07	1,472.36	1,435.21	37.15	39.629		
7,400.00	7,165.43	7,200.00	7,192.99	37.17	25.50	171.51	-224.16	101.16	1,483.70	1,446.06	37.64	39.422		
7,500.00	7,264.93	7,277.76	7,270.74	37.52	25.77	171.53	-225.31	101.94	1,492.62	1,454.60	38.02	39.256		
7,600.00	7,364.71	7,372.03	7,365.01	37.84	26.09	171.58	-225.40	102.00	1,498.95	1,460.48	38.47	38.961		
7,700.00	7,464.66	7,471.98	7,464.96	38.12	26.42	171.60	-225.40	102.00	1,501.90	1,462.96	38.94	38.568		
7,735.34	7,500.00	7,507.32	7,500.30	38.21	26.54	-95.17	-225.40	102.00	1,502.11	1,463.01	39.10	38.413		
7,800.00	7,564.66	7,571.98	7,564.96	38.37	26.76	-95.17	-225.40	102.00	1,502.11	1,462.72	39.40	38.127		
7,900.00	7,664.66	7,671.98	7,664.96	38.61	27.09	-95.17	-225.40	102.00	1,502.11	1,462.26	39.85	37.691		
7,942.38	7,707.04	7,714.36	7,707.34	38.72	27.24	-95.17	-225.40	102.00	1,502.11	1,462.07	40.05	37.508		
7,950.00	7,714.66	7,721.98	7,714.96	38.74	27.26	-94.63	-225.40	102.00	1,502.12	1,462.04	40.08	37.476		
8,000.00	7,764.57	7,771.89	7,764.87	38.86	27.43	-94.71	-225.40	102.00	1,502.35	1,462.04	40.31	37.268		
8,050.00	7,814.03	7,821.35	7,814.33	38.98	27.60	-94.92	-225.40	102.00	1,502.96	1,462.42	40.54	37.069		
8,100.00	7,862.68	7,869.75	7,866.64	39.09	27.80	-95.28	-222.70	101.97	1,503.81	1,462.98	40.84	36.825		
8,150.00	7,910.15	7,949.78	7,941.84	39.20	28.01	-95.61	-212.52	101.88	1,504.60	1,463.48	41.12	36.587		
8,200.00	7,956.07	8,017.27	8,006.83	39.30	28.20	-95.89	-194.44	101.71	1,505.28	1,463.89	41.39	36.368		
8,250.00	8,000.10	8,086.00	8,070.35	39.39	28.39	-96.10	-168.32	101.46	1,505.82	1,464.18	41.63	36.167		
8,300.00	8,041.89	8,155.65	8,131.07	39.48	28.56	-96.25	-134.28	101.14	1,506.19	1,464.33	41.86	35.980		
8,350.00	8,081.14	8,225.87	8,187.65	39.56	28.72	-96.32	-92.77	100.74	1,506.38	1,464.31	42.07	35.803		
8,400.00	8,117.54	8,296.28	8,238.86	39.63	28.87	-96.32	-44.51	100.29	1,506.38	1,464.10	42.28	35.630		
8,450.00	8,150.81	8,366.49	8,283.65	39.69	29.03	-96.25	9.50	99.77	1,506.18	1,463.69	42.49	35.451		
8,500.00	8,180.71	8,436.11	8,321.21	39.75	29.20	-96.10	68.06	99.22	1,505.79	1,463.09	42.70	35.261		
8,550.00	8,207.00	8,504.79	8,351.04	39.80	29.39	-95.88	129.88	98.63	1,505.25	1,462.31	42.94	35.056		
8,600.00	8,229.49	8,572.23	8,372.94	39.85	29.60	-95.60	193.63	98.03	1,504.56	1,461.37	43.19	34.833		
8,650.00	8,248.00	8,638.20	8,386.97	39.91	29.81	-95.27	258.05	97.42	1,503.77	1,460.30	43.47	34.595		
8,700.00	8,262.40	8,702.53	8,393.43	39.96	30.04	-94.89	322.01	96.81	1,502.91	1,459.15	43.76	34.346		
8,750.00	8,272.57	8,757.30	8,394.00	40.02	30.26	-94.57	376.77	96.29	1,502.09	1,458.05	44.04	34.111		
8,800.00	8,278.43	8,806.94	8,394.00	40.08	30.46	-94.39	426.41	95.82	1,501.62	1,457.31	44.31	33.887		
8,842.38	8,280.00	8,849.28	8,394.00	40.15	30.67	-94.34	468.75	95.42	1,501.50	1,456.93	44.58	33.684		
8,900.00	8,280.00	8,906.90	8,394.00	40.25	30.95	-94.34	526.37	94.88	1,501.50	1,456.55	44.95	33.401		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	9,006.90	8,394.00	40.47	31.51	-94.34	626.36	93.93	1,501.50	1,455.79	45.70	32.853		
9,100.00	8,280.00	9,106.90	8,394.00	40.75	32.15	-94.34	726.36	92.98	1,501.49	1,454.93	46.56	32.250		
9,200.00	8,280.00	9,206.90	8,394.00	41.10	32.86	-94.34	826.35	92.04	1,501.49	1,453.98	47.51	31.602		
9,300.00	8,280.00	9,306.90	8,394.00	41.51	33.64	-94.34	926.35	91.09	1,501.48	1,452.92	48.56	30.920		
9,400.00	8,280.00	9,406.90	8,394.00	42.00	34.47	-94.34	1,026.35	90.14	1,501.48	1,451.78	49.69	30.214		
9,500.00	8,280.00	9,506.90	8,394.00	42.55	35.37	-94.34	1,126.34	89.19	1,501.48	1,450.56	50.91	29.492		
9,600.00	8,280.00	9,606.90	8,394.00	43.17	36.31	-94.34	1,226.34	88.25	1,501.47	1,449.27	52.20	28.762		
9,700.00	8,280.00	9,706.90	8,394.00	43.85	37.31	-94.34	1,326.33	87.30	1,501.47	1,447.90	53.57	28.030		
9,800.00	8,280.00	9,806.90	8,394.00	44.60	38.35	-94.34	1,426.33	86.35	1,501.46	1,446.47	54.99	27.302		
9,900.00	8,280.00	9,906.90	8,394.00	45.41	39.43	-94.34	1,526.32	85.40	1,501.46	1,444.98	56.48	26.583		
10,000.00	8,280.00	10,006.90	8,394.00	46.27	40.56	-94.34	1,626.32	84.46	1,501.45	1,443.43	58.02	25.877		
10,100.00	8,280.00	10,106.90	8,394.00	47.19	41.71	-94.34	1,726.31	83.51	1,501.45	1,441.83	59.62	25.185		
10,200.00	8,280.00	10,206.90	8,394.00	48.15	42.90	-94.34	1,826.31	82.56	1,501.45	1,440.19	61.26	24.510		
10,300.00	8,280.00	10,306.90	8,394.00	49.16	44.12	-94.34	1,926.31	81.61	1,501.44	1,438.50	62.94	23.854		
10,400.00	8,280.00	10,406.90	8,394.00	50.20	45.37	-94.34	2,026.30	80.67	1,501.44	1,436.77	64.67	23.217		
10,500.00	8,280.00	10,506.90	8,394.00	51.29	46.64	-94.34	2,126.30	79.72	1,501.43	1,435.00	66.43	22.602		
10,600.00	8,280.00	10,606.90	8,394.00	52.41	47.93	-94.34	2,226.29	78.77	1,501.43	1,433.20	68.23	22.007		
10,700.00	8,280.00	10,706.90	8,394.00	53.56	49.25	-94.34	2,326.29	77.82	1,501.43	1,431.37	70.05	21.432		
10,800.00	8,280.00	10,806.90	8,394.00	54.74	50.59	-94.34	2,426.28	76.88	1,501.42	1,429.51	71.91	20.879		
10,900.00	8,280.00	10,906.90	8,394.00	55.95	51.94	-94.34	2,526.28	75.93	1,501.42	1,427.62	73.79	20.346		
11,000.00	8,280.00	11,006.90	8,394.00	57.18	53.31	-94.34	2,626.27	74.98	1,501.41	1,425.71	75.70	19.833		
11,100.00	8,280.00	11,106.90	8,394.00	58.43	54.70	-94.34	2,726.27	74.03	1,501.41	1,423.77	77.63	19.339		
11,200.00	8,280.00	11,206.90	8,394.00	59.71	56.10	-94.34	2,826.26	73.09	1,501.40	1,421.82	79.59	18.865		
11,300.00	8,280.00	11,306.90	8,394.00	61.00	57.51	-94.34	2,926.26	72.14	1,501.40	1,419.84	81.56	18.408		
11,400.00	8,280.00	11,406.90	8,394.00	62.31	58.94	-94.34	3,026.26	71.19	1,501.40	1,417.84	83.55	17.969		
11,500.00	8,280.00	11,506.90	8,394.00	63.64	60.38	-94.34	3,126.25	70.24	1,501.39	1,415.83	85.56	17.548		
11,600.00	8,280.00	11,606.90	8,394.00	64.99	61.83	-94.34	3,226.25	69.30	1,501.39	1,413.80	87.59	17.142		
11,700.00	8,280.00	11,706.90	8,394.00	66.35	63.28	-94.34	3,326.24	68.35	1,501.38	1,411.76	89.63	16.752		
11,800.00	8,280.00	11,806.90	8,394.00	67.72	64.75	-94.34	3,426.24	67.40	1,501.38	1,409.70	91.68	16.376		
11,900.00	8,280.00	11,906.90	8,394.00	69.11	66.23	-94.34	3,526.23	66.46	1,501.38	1,407.63	93.75	16.015		
12,000.00	8,280.00	12,006.90	8,394.00	70.51	67.71	-94.34	3,626.23	65.51	1,501.37	1,405.55	95.83	15.668		
12,100.00	8,280.00	12,106.90	8,394.00	71.92	69.21	-94.34	3,726.22	64.56	1,501.37	1,403.45	97.92	15.333		
12,200.00	8,280.00	12,206.90	8,394.00	73.34	70.71	-94.34	3,826.22	63.61	1,501.36	1,401.35	100.02	15.011		
12,300.00	8,280.00	12,306.90	8,394.00	74.77	72.21	-94.34	3,926.22	62.67	1,501.36	1,399.23	102.13	14.701		
12,400.00	8,280.00	12,406.90	8,394.00	76.21	73.72	-94.34	4,026.21	61.72	1,501.35	1,397.11	104.25	14.402		
12,500.00	8,280.00	12,506.90	8,394.00	77.65	75.24	-94.34	4,126.21	60.77	1,501.35	1,394.97	106.38	14.114		
12,600.00	8,280.00	12,606.90	8,394.00	79.11	76.77	-94.34	4,226.20	59.82	1,501.35	1,392.83	108.51	13.836		
12,700.00	8,280.00	12,706.90	8,394.00	80.57	78.30	-94.34	4,326.20	58.88	1,501.34	1,390.68	110.66	13.567		
12,800.00	8,280.00	12,806.90	8,394.00	82.04	79.83	-94.34	4,426.19	57.93	1,501.34	1,388.53	112.81	13.308		
12,900.00	8,280.00	12,906.90	8,394.00	83.52	81.37	-94.34	4,526.19	56.98	1,501.33	1,386.36	114.97	13.058		
13,000.00	8,280.00	13,006.90	8,394.00	85.01	82.91	-94.34	4,626.18	56.03	1,501.33	1,384.19	117.14	12.817		
13,100.00	8,280.00	13,106.90	8,394.00	86.50	84.46	-94.34	4,726.18	55.09	1,501.33	1,382.02	119.31	12.583		
13,200.00	8,280.00	13,206.90	8,394.00	87.99	86.01	-94.34	4,826.17	54.14	1,501.32	1,379.83	121.49	12.358		
13,300.00	8,280.00	13,306.90	8,394.00	89.50	87.56	-94.34	4,926.17	53.19	1,501.32	1,377.65	123.67	12.140		
13,400.00	8,280.00	13,406.90	8,394.00	91.00	89.12	-94.34	5,026.17	52.24	1,501.31	1,375.45	125.86	11.928		
13,500.00	8,280.00	13,506.90	8,394.00	92.52	90.68	-94.34	5,126.16	51.30	1,501.31	1,373.26	128.05	11.724		
13,600.00	8,280.00	13,606.90	8,394.00	94.03	92.25	-94.34	5,226.16	50.35	1,501.30	1,371.05	130.25	11.526		
13,700.00	8,280.00	13,706.90	8,394.00	95.56	93.82	-94.34	5,326.15	49.40	1,501.30	1,368.85	132.45	11.334		
13,800.00	8,280.00	13,806.90	8,394.00	97.08	95.39	-94.34	5,426.15	48.45	1,501.30	1,366.63	134.66	11.149		
13,900.00	8,280.00	13,906.90	8,394.00	98.61	96.96	-94.34	5,526.14	47.51	1,501.29	1,364.42	136.87	10.968		
14,000.00	8,280.00	14,006.90	8,394.00	100.15	98.54	-94.34	5,626.14	46.56	1,501.29	1,362.20	139.09	10.794		
14,100.00	8,280.00	14,106.90	8,394.00	101.69	100.12	-94.34	5,726.13	45.61	1,501.28	1,359.98	141.31	10.624		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	14,206.90	8,394.00	103.23	101.70	-94.34	5,826.13	44.67	1,501.28	1,357.75	143.53	10.460		
14,300.00	8,280.00	14,306.90	8,394.00	104.77	103.28	-94.34	5,926.13	43.72	1,501.28	1,355.52	145.76	10.300		
14,400.00	8,280.00	14,406.90	8,394.00	106.32	104.86	-94.34	6,026.12	42.77	1,501.27	1,353.28	147.99	10.145		
14,500.00	8,280.00	14,506.90	8,394.00	107.87	106.45	-94.34	6,126.12	41.82	1,501.27	1,351.05	150.22	9.994		
14,600.00	8,280.00	14,606.90	8,394.00	109.43	108.04	-94.34	6,226.11	40.88	1,501.26	1,348.81	152.45	9.847		
14,700.00	8,280.00	14,706.90	8,394.00	110.98	109.63	-94.34	6,326.11	39.93	1,501.26	1,346.57	154.69	9.705		
14,800.00	8,280.00	14,806.90	8,394.00	112.54	111.22	-94.34	6,426.10	38.98	1,501.25	1,344.32	156.93	9.566		
14,900.00	8,280.00	14,906.90	8,394.00	114.10	112.82	-94.34	6,526.10	38.03	1,501.25	1,342.07	159.18	9.431		
15,000.00	8,280.00	15,006.90	8,394.00	115.67	114.42	-94.34	6,626.09	37.09	1,501.25	1,339.82	161.42	9.300		
15,100.00	8,280.00	15,106.90	8,394.00	117.24	116.01	-94.34	6,726.09	36.14	1,501.24	1,337.57	163.67	9.172		
15,200.00	8,280.00	15,206.90	8,394.00	118.81	117.61	-94.34	6,826.09	35.19	1,501.24	1,335.32	165.92	9.048		
15,300.00	8,280.00	15,306.90	8,394.00	120.38	119.21	-94.34	6,926.08	34.24	1,501.23	1,333.06	168.18	8.927		
15,400.00	8,280.00	15,406.90	8,394.00	121.95	120.81	-94.34	7,026.08	33.30	1,501.23	1,330.80	170.43	8.808		
15,500.00	8,280.00	15,506.90	8,394.00	123.53	122.42	-94.34	7,126.07	32.35	1,501.23	1,328.54	172.69	8.693		
15,600.00	8,280.00	15,606.90	8,394.00	125.11	124.02	-94.34	7,226.07	31.40	1,501.22	1,326.27	174.95	8.581		
15,700.00	8,280.00	15,706.90	8,394.00	126.69	125.63	-94.34	7,326.06	30.45	1,501.22	1,324.01	177.21	8.472		
15,800.00	8,280.00	15,806.90	8,394.00	128.27	127.24	-94.34	7,426.06	29.51	1,501.21	1,321.74	179.47	8.365		
15,900.00	8,280.00	15,906.90	8,394.00	129.85	128.84	-94.34	7,526.05	28.56	1,501.21	1,319.47	181.73	8.260		
16,000.00	8,280.00	16,006.90	8,394.00	131.44	130.45	-94.34	7,626.05	27.61	1,501.20	1,317.20	184.00	8.159		
16,100.00	8,280.00	16,106.90	8,394.00	133.02	132.06	-94.34	7,726.04	26.66	1,501.20	1,314.93	186.27	8.059		
16,200.00	8,280.00	16,206.90	8,394.00	134.61	133.68	-94.34	7,826.04	25.72	1,501.20	1,312.66	188.54	7.962		
16,300.00	8,280.00	16,306.90	8,394.00	136.20	135.29	-94.34	7,926.04	24.77	1,501.19	1,310.38	190.81	7.868		
16,400.00	8,280.00	16,406.90	8,394.00	137.79	136.90	-94.34	8,026.03	23.82	1,501.19	1,308.11	193.08	7.775		
16,500.00	8,280.00	16,506.90	8,394.00	139.39	138.52	-94.34	8,126.03	22.87	1,501.18	1,305.83	195.35	7.684		
16,600.00	8,280.00	16,606.90	8,394.00	140.98	140.13	-94.34	8,226.02	21.93	1,501.18	1,303.55	197.63	7.596		
16,700.00	8,280.00	16,706.90	8,394.00	142.58	141.75	-94.34	8,326.02	20.98	1,501.18	1,301.27	199.90	7.510		
16,800.00	8,280.00	16,806.90	8,394.00	144.17	143.36	-94.34	8,426.01	20.03	1,501.17	1,298.99	202.18	7.425		
16,900.00	8,280.00	16,906.90	8,394.00	145.77	144.98	-94.34	8,526.01	19.09	1,501.17	1,296.71	204.46	7.342		
17,000.00	8,280.00	17,006.90	8,394.00	147.37	146.60	-94.34	8,626.00	18.14	1,501.16	1,294.43	206.74	7.261		
17,100.00	8,280.00	17,106.90	8,394.00	148.97	148.22	-94.34	8,726.00	17.19	1,501.16	1,292.14	209.02	7.182		
17,200.00	8,280.00	17,206.90	8,394.00	150.57	149.84	-94.34	8,826.00	16.24	1,501.15	1,289.86	211.30	7.104		
17,300.00	8,280.00	17,306.90	8,394.00	152.18	151.46	-94.34	8,925.99	15.30	1,501.15	1,287.57	213.58	7.028		
17,400.00	8,280.00	17,406.90	8,394.00	153.78	153.08	-94.34	9,025.99	14.35	1,501.15	1,285.28	215.86	6.954		
17,500.00	8,280.00	17,506.90	8,394.00	155.38	154.70	-94.34	9,125.98	13.40	1,501.14	1,282.99	218.15	6.881		
17,600.00	8,280.00	17,606.90	8,394.00	156.99	156.33	-94.34	9,225.98	12.45	1,501.14	1,280.70	220.43	6.810		
17,700.00	8,280.00	17,706.90	8,394.00	158.60	157.95	-94.34	9,325.97	11.51	1,501.13	1,278.41	222.72	6.740		
17,800.00	8,280.00	17,806.90	8,394.00	160.20	159.57	-94.34	9,425.97	10.56	1,501.13	1,276.12	225.01	6.671		
17,900.00	8,280.00	17,906.90	8,394.00	161.81	161.20	-94.34	9,525.96	9.61	1,501.12	1,273.83	227.30	6.604		
18,000.00	8,280.00	18,006.90	8,394.00	163.42	162.82	-94.34	9,625.96	8.66	1,501.12	1,271.54	229.59	6.538		
18,100.00	8,280.00	18,106.90	8,394.00	165.03	164.45	-94.34	9,725.96	7.72	1,501.12	1,269.24	231.88	6.474		
18,200.00	8,280.00	18,206.90	8,394.00	166.64	166.07	-94.34	9,825.95	6.77	1,501.11	1,266.95	234.17	6.410		
18,300.00	8,280.00	18,306.90	8,394.00	168.25	167.70	-94.34	9,925.95	5.82	1,501.11	1,264.65	236.46	6.348		
18,400.00	8,280.00	18,406.90	8,394.00	169.87	169.33	-94.34	10,025.94	4.87	1,501.10	1,262.35	238.75	6.287		
18,438.77	8,280.00	18,445.67	8,394.00	170.49	169.96	-94.34	10,064.71	4.51	1,501.10	1,261.46	239.64	6.264		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-90.53	-18.61	-2,011.18	2,011.75					
100.00	100.00	55.60	55.60	0.13	0.07	-90.53	-18.61	-2,011.18	2,011.26	2,011.12	0.14	N/A		
200.00	200.00	155.60	155.60	0.48	0.32	-90.53	-18.61	-2,011.18	2,011.26	2,010.68	0.58	3,450.945		
300.00	300.00	255.60	255.60	0.84	0.68	-90.53	-18.61	-2,011.18	2,011.26	2,010.18	1.08	1,854.288		
400.00	400.00	355.60	355.60	1.20	1.04	-90.53	-18.61	-2,011.18	2,011.26	2,009.67	1.59	1,265.149		
500.00	500.00	455.60	455.60	1.56	1.40	-90.53	-18.61	-2,011.18	2,011.26	2,009.17	2.10	959.693		
600.00	600.00	555.60	555.60	1.92	1.76	-90.53	-18.61	-2,011.18	2,011.26	2,008.66	2.60	772.938		
700.00	700.00	655.60	655.60	2.28	2.12	-90.53	-18.61	-2,011.18	2,011.26	2,008.16	3.11	646.987		
800.00	800.00	755.60	755.60	2.63	2.48	-90.53	-18.61	-2,011.18	2,011.26	2,007.65	3.62	556.315		
900.00	900.00	855.60	855.60	2.99	2.83	-90.53	-18.61	-2,011.18	2,011.26	2,007.14	4.12	487.926		
1,000.00	1,000.00	955.60	955.60	3.35	3.19	-90.53	-18.61	-2,011.18	2,011.26	2,006.64	4.63	434.506		
1,100.00	1,100.00	1,055.60	1,055.60	3.71	3.55	-90.53	-18.61	-2,011.18	2,011.26	2,006.13	5.14	391.626		
1,200.00	1,200.00	1,155.60	1,155.60	4.07	3.91	-90.53	-18.61	-2,011.18	2,011.26	2,005.62	5.64	356.448		
1,300.00	1,300.00	1,255.60	1,255.60	4.43	4.27	-90.53	-18.61	-2,011.18	2,011.26	2,005.11	6.15	327.068		
1,400.00	1,400.00	1,355.60	1,355.60	4.79	4.63	-90.53	-18.61	-2,011.18	2,011.26	2,004.61	6.66	302.161		
1,500.00	1,500.00	1,455.60	1,455.60	5.14	4.98	-90.53	-18.61	-2,011.18	2,011.26	2,004.10	7.16	280.779		
1,600.00	1,600.00	1,555.60	1,555.60	5.50	5.34	-90.53	-18.61	-2,011.18	2,011.26	2,003.59	7.67	262.223 CC, ES		
1,700.00	1,699.98	1,655.58	1,655.58	5.85	5.70	176.25	-18.61	-2,011.18	2,013.01	2,004.84	8.17	246.385		
1,800.00	1,799.84	1,755.44	1,755.44	6.20	6.06	176.25	-18.61	-2,011.18	2,018.23	2,009.56	8.66	232.923		
1,900.00	1,899.45	1,855.05	1,855.05	6.54	6.42	176.25	-18.61	-2,011.18	2,026.92	2,017.76	9.16	221.278		
2,000.00	1,998.70	1,954.30	1,954.30	6.90	6.77	176.26	-18.61	-2,011.18	2,039.08	2,029.43	9.66	211.186		
2,100.00	2,097.47	2,034.77	2,034.77	7.26	7.06	176.26	-18.64	-2,011.33	2,054.93	2,044.83	10.10	203.436		
2,200.00	2,195.62	2,100.00	2,099.99	7.64	7.28	176.25	-18.89	-2,012.46	2,075.65	2,065.14	10.50	197.596		
2,300.00	2,293.06	2,161.74	2,161.69	8.04	7.49	176.23	-19.35	-2,014.52	2,101.33	2,090.44	10.89	192.915		
2,400.00	2,389.64	2,223.50	2,223.37	8.46	7.70	176.20	-20.03	-2,017.56	2,131.89	2,120.61	11.28	189.032		
2,486.44	2,472.37	2,275.76	2,275.52	8.85	7.88	176.16	-20.77	-2,020.89	2,162.15	2,150.54	11.61	186.289		
2,500.00	2,485.28	2,300.00	2,299.69	8.92	7.97	176.17	-21.17	-2,022.67	2,167.28	2,155.57	11.70	185.197		
2,600.00	2,580.53	2,343.19	2,342.73	9.39	8.12	176.17	-21.96	-2,026.22	2,205.11	2,193.08	12.03	183.317		
2,700.00	2,675.78	2,400.00	2,399.27	9.88	8.31	176.17	-23.16	-2,031.60	2,244.44	2,232.04	12.39	181.142		
2,800.00	2,771.03	2,459.61	2,458.50	10.39	8.52	176.16	-24.61	-2,038.14	2,285.12	2,272.36	12.76	179.094		
2,900.00	2,866.28	2,500.00	2,498.57	10.91	8.67	176.16	-25.71	-2,043.08	2,327.24	2,314.17	13.07	178.092		
3,000.00	2,961.53	2,572.95	2,570.81	11.44	8.93	176.14	-27.93	-2,053.04	2,370.48	2,357.01	13.48	175.906		
3,100.00	3,056.78	2,628.45	2,625.62	11.98	9.13	176.12	-29.82	-2,061.53	2,415.11	2,401.28	13.83	174.653		
3,200.00	3,152.03	2,700.00	2,696.09	12.52	9.40	176.09	-32.51	-2,073.61	2,461.08	2,446.85	14.23	172.917		
3,300.00	3,247.28	2,737.06	2,732.49	13.08	9.54	176.07	-34.01	-2,080.38	2,508.10	2,493.58	14.52	172.743		
3,400.00	3,342.54	2,809.38	2,803.40	13.64	9.81	176.04	-37.10	-2,094.27	2,556.23	2,541.31	14.93	171.254		
3,500.00	3,437.79	2,896.95	2,889.24	14.21	10.16	175.99	-40.87	-2,111.19	2,604.49	2,589.10	15.39	169.230		
3,600.00	3,533.04	2,984.52	2,975.07	14.78	10.50	175.95	-44.63	-2,128.10	2,652.74	2,636.89	15.86	167.294		
3,700.00	3,628.29	3,072.09	3,060.91	15.36	10.86	175.90	-48.40	-2,145.01	2,701.00	2,684.67	16.33	165.443		
3,800.00	3,723.54	3,159.66	3,146.75	15.94	11.22	175.86	-52.16	-2,161.92	2,749.26	2,732.46	16.80	163.672		
3,900.00	3,818.79	3,247.23	3,232.59	16.52	11.58	175.83	-55.93	-2,178.84	2,797.52	2,780.24	17.27	161.977		
4,000.00	3,914.04	3,334.80	3,318.43	17.11	11.95	175.79	-59.69	-2,195.75	2,845.77	2,828.03	17.75	160.355		
4,100.00	4,009.29	3,422.36	3,404.26	17.69	12.32	175.75	-63.46	-2,212.66	2,894.04	2,875.81	18.22	158.801		
4,200.00	4,104.54	3,509.93	3,490.10	18.29	12.69	175.72	-67.22	-2,229.58	2,942.30	2,923.59	18.70	157.312		
4,300.00	4,199.79	3,597.50	3,575.94	18.88	13.07	175.68	-70.99	-2,246.49	2,990.56	2,971.37	19.18	155.884		
4,400.00	4,295.04	3,685.07	3,661.78	19.48	13.45	175.65	-74.75	-2,263.40	3,038.82	3,019.15	19.67	154.513		
4,500.00	4,390.29	3,772.64	3,747.62	20.08	13.83	175.62	-78.52	-2,280.32	3,087.09	3,066.93	20.15	153.197		
4,600.00	4,485.55	3,860.21	3,833.45	20.68	14.21	175.59	-82.28	-2,297.23	3,135.35	3,114.71	20.64	151.933		
4,700.00	4,580.80	3,947.78	3,919.29	21.28	14.60	175.56	-86.04	-2,314.14	3,183.61	3,162.49	21.12	150.718		
4,800.00	4,676.05	4,035.35	4,005.13	21.88	14.99	175.53	-89.81	-2,331.05	3,231.88	3,210.27	21.61	149.550		
4,900.00	4,771.30	4,122.92	4,090.97	22.48	15.38	175.50	-93.57	-2,347.97	3,280.15	3,258.05	22.10	148.426		
5,000.00	4,866.55	4,210.49	4,176.81	23.09	15.77	175.47	-97.34	-2,364.88	3,328.41	3,305.82	22.59	147.344		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,298.06	4,262.64	23.70	16.17	175.44	-101.10	-2,381.79	3,376.68	3,353.60	23.08	146.301		
5,200.00	5,057.05	4,385.63	4,348.48	24.30	16.56	175.42	-104.87	-2,398.71	3,424.95	3,401.38	23.57	145.295		
5,300.00	5,152.30	4,473.20	4,434.32	24.91	16.96	175.39	-108.63	-2,415.62	3,473.22	3,449.15	24.07	144.326		
5,400.00	5,247.55	4,560.76	4,520.16	25.52	17.36	175.37	-112.40	-2,432.53	3,521.49	3,496.93	24.56	143.390		
5,500.00	5,342.80	4,648.33	4,606.00	26.13	17.75	175.35	-116.16	-2,449.44	3,569.76	3,544.70	25.05	142.486		
5,600.00	5,438.05	4,735.90	4,691.83	26.74	18.15	175.32	-119.93	-2,466.36	3,618.03	3,592.48	25.55	141.613		
5,700.00	5,533.30	4,823.47	4,777.67	27.36	18.56	175.30	-123.69	-2,483.27	3,666.30	3,640.25	26.04	140.769		
5,800.00	5,628.56	4,911.04	4,863.51	27.97	18.96	175.28	-127.46	-2,500.18	3,714.57	3,688.03	26.54	139.953		
5,900.00	5,723.81	4,998.61	4,949.35	28.58	19.36	175.26	-131.22	-2,517.10	3,762.84	3,735.80	27.04	139.163		
6,000.00	5,819.06	5,086.18	5,035.19	29.20	19.76	175.23	-134.98	-2,534.01	3,811.11	3,783.57	27.54	138.398		
6,100.00	5,914.31	5,173.75	5,121.02	29.81	20.17	175.21	-138.75	-2,550.92	3,859.38	3,831.35	28.04	137.657		
6,200.00	6,009.56	5,261.32	5,206.86	30.43	20.57	175.19	-142.51	-2,567.83	3,907.66	3,879.12	28.54	136.939		
6,300.00	6,104.81	5,348.89	5,292.70	31.04	20.98	175.18	-146.28	-2,584.75	3,955.93	3,926.89	29.04	136.243		
6,400.00	6,200.06	5,436.46	5,378.54	31.66	21.39	175.16	-150.04	-2,601.66	4,004.20	3,974.66	29.54	135.567		
6,500.00	6,295.31	5,524.03	5,464.38	32.27	21.79	175.14	-153.81	-2,618.57	4,052.48	4,022.44	30.04	134.912		
6,600.00	6,390.56	5,611.60	5,550.21	32.89	22.20	175.12	-157.57	-2,635.49	4,100.75	4,070.21	30.54	134.275		
6,700.00	6,485.81	5,699.17	5,636.05	33.51	22.61	175.10	-161.34	-2,652.40	4,149.02	4,117.98	31.04	133.657		
6,800.00	6,581.06	5,786.73	5,721.89	34.13	23.02	175.08	-165.10	-2,669.31	4,197.30	4,165.75	31.55	133.056		
6,848.89	6,627.63	5,829.55	5,763.86	34.43	23.22	175.08	-166.94	-2,677.58	4,220.90	4,189.11	31.79	132.769		
6,900.00	6,676.45	5,874.52	5,807.94	34.74	23.43	175.11	-168.88	-2,686.27	4,245.17	4,213.12	32.05	132.461		
7,000.00	6,772.71	5,963.72	5,895.38	35.31	23.85	175.18	-172.71	-2,703.50	4,290.34	4,257.78	32.55	131.796		
7,100.00	6,869.86	6,054.44	5,984.30	35.84	24.27	175.23	-176.61	-2,721.02	4,332.37	4,299.31	33.06	131.051		
7,200.00	6,967.77	6,146.55	6,074.60	36.33	24.71	175.27	-180.57	-2,738.81	4,371.23	4,337.66	33.56	130.232		
7,300.00	7,066.34	6,239.96	6,166.15	36.77	25.14	175.30	-184.59	-2,756.85	4,406.85	4,372.78	34.07	129.345		
7,400.00	7,165.43	6,334.54	6,258.86	37.17	25.59	175.32	-188.65	-2,775.11	4,439.21	4,404.64	34.57	128.396		
7,500.00	7,264.93	6,430.18	6,352.61	37.52	26.04	175.33	-192.76	-2,793.58	4,468.26	4,433.18	35.08	127.389		
7,600.00	7,364.71	6,526.76	6,447.28	37.84	26.49	175.34	-196.92	-2,812.24	4,493.96	4,458.39	35.57	126.330		
7,700.00	7,464.66	6,624.17	6,542.76	38.12	26.95	175.33	-201.10	-2,831.05	4,516.29	4,480.23	36.07	125.221		
7,735.34	7,500.00	7,543.91	7,455.60	38.21	30.54	-91.67	-221.61	-2,923.18	4,523.09	4,483.70	39.39	114.829		
7,800.00	7,564.66	7,608.57	7,520.26	38.37	30.74	-91.67	-221.61	-2,923.18	4,523.09	4,483.41	39.68	113.981		
7,900.00	7,664.66	7,708.57	7,620.26	38.61	31.04	-91.67	-221.61	-2,923.18	4,523.09	4,482.96	40.14	112.691		
7,942.38	7,707.04	7,750.95	7,662.64	38.72	31.17	-91.67	-221.61	-2,923.18	4,523.09	4,482.76	40.33	112.152		
7,950.00	7,714.66	7,758.57	7,670.26	38.74	31.19	-91.12	-221.61	-2,923.18	4,523.09	4,482.73	40.36	112.056		
8,000.00	7,764.57	7,808.47	7,720.17	38.86	31.34	-91.15	-221.61	-2,923.18	4,523.15	4,482.56	40.59	111.434		
8,050.00	7,814.03	7,857.94	7,769.63	38.98	31.49	-91.23	-221.61	-2,923.18	4,523.30	4,482.49	40.81	110.832		
8,100.00	7,862.68	7,906.59	7,818.28	39.09	31.64	-91.34	-221.61	-2,923.18	4,523.57	4,482.54	41.03	110.254		
8,150.00	7,910.15	7,954.06	7,865.75	39.20	31.78	-91.49	-221.61	-2,923.18	4,523.97	4,482.74	41.24	109.700		
8,200.00	7,956.07	7,999.98	7,911.67	39.30	31.92	-91.66	-221.61	-2,923.18	4,524.57	4,483.12	41.44	109.175		
8,250.00	8,000.10	8,044.00	7,955.70	39.39	32.06	-91.84	-221.61	-2,923.18	4,525.39	4,483.75	41.64	108.680		
8,300.00	8,041.89	8,085.80	7,997.49	39.48	32.19	-92.02	-221.61	-2,923.18	4,526.50	4,484.67	41.83	108.216		
8,350.00	8,081.14	8,125.04	8,036.74	39.56	32.31	-92.18	-221.61	-2,923.18	4,527.95	4,485.94	42.01	107.785		
8,400.00	8,117.54	8,161.44	8,073.14	39.63	32.42	-92.31	-221.61	-2,923.18	4,529.80	4,487.62	42.18	107.387		
8,450.00	8,150.81	8,194.72	8,106.41	39.69	32.52	-92.40	-221.61	-2,923.18	4,532.11	4,489.76	42.35	107.024		
8,500.00	8,180.71	8,224.62	8,136.31	39.75	32.61	-92.42	-221.61	-2,923.18	4,534.93	4,492.42	42.50	106.698		
8,550.00	8,207.00	8,250.91	8,162.60	39.80	32.69	-92.36	-221.61	-2,923.18	4,538.30	4,495.65	42.65	106.408		
8,600.00	8,229.49	8,273.40	8,185.09	39.85	32.76	-92.22	-221.61	-2,923.18	4,542.28	4,499.49	42.79	106.156		
8,650.00	8,248.00	8,291.91	8,203.60	39.91	32.82	-91.97	-221.61	-2,923.18	4,546.87	4,503.95	42.92	105.944		
8,700.00	8,262.40	8,306.31	8,218.00	39.96	32.86	-91.62	-221.61	-2,923.18	4,552.10	4,509.06	43.04	105.771		
8,750.00	8,272.57	8,316.47	8,228.17	40.02	32.89	-91.16	-221.61	-2,923.18	4,557.95	4,514.81	43.15	105.640		
8,800.00	8,278.43	8,322.34	8,234.03	40.08	32.91	-90.58	-221.61	-2,923.18	4,564.42	4,521.18	43.24	105.551		
8,842.38	8,280.00	8,323.90	8,235.60	40.15	32.92	-90.00	-221.61	-2,923.18	4,570.36	4,527.04	43.32	105.510		
8,900.00	8,280.00	8,323.90	8,235.60	40.25	32.92	-90.00	-221.61	-2,923.18	4,579.05	4,535.64	43.42	105.468		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	8,323.90	8,235.60	40.47	32.92	-90.00	-221.61	-2,923.18	4,595.82	4,552.20	43.62	105.368		
9,100.00	8,280.00	8,323.90	8,235.60	40.75	32.92	-90.00	-221.61	-2,923.18	4,614.69	4,570.84	43.85	105.241		
9,200.00	8,280.00	8,323.90	8,235.60	41.10	32.92	-90.00	-221.61	-2,923.18	4,635.65	4,591.54	44.11	105.091		
9,300.00	8,280.00	8,323.90	8,235.60	41.51	32.92	-90.00	-221.61	-2,923.18	4,658.65	4,614.25	44.40	104.924		
9,400.00	8,280.00	8,323.90	8,235.60	42.00	32.92	-90.00	-221.61	-2,923.18	4,683.68	4,638.97	44.72	104.744		
9,500.00	8,280.00	8,323.90	8,235.60	42.55	32.92	-90.00	-221.61	-2,923.18	4,710.70	4,665.65	45.05	104.556		
9,600.00	8,280.00	8,323.90	8,235.60	43.17	32.92	-90.00	-221.61	-2,923.18	4,739.68	4,694.26	45.41	104.365		
9,700.00	8,280.00	8,323.90	8,235.60	43.85	32.92	-90.00	-221.61	-2,923.18	4,770.57	4,724.78	45.79	104.176		
9,800.00	8,280.00	8,323.90	8,235.60	44.60	32.92	-90.00	-221.61	-2,923.18	4,803.35	4,757.16	46.19	103.994		
9,900.00	8,280.00	8,323.90	8,235.60	45.41	32.92	-90.00	-221.61	-2,923.18	4,837.98	4,791.38	46.60	103.821		
10,000.00	8,280.00	8,323.90	8,235.60	46.27	32.92	-90.00	-221.61	-2,923.18	4,874.41	4,827.39	47.02	103.663		
10,100.00	8,280.00	11,832.63	10,073.00	47.19	47.27	-112.11	1,695.54	-2,942.24	4,882.00	4,822.10	59.90	81.507		
10,200.00	8,280.00	11,932.63	10,073.00	48.15	48.29	-112.11	1,795.53	-2,943.23	4,882.04	4,820.68	61.36	79.565		
10,300.00	8,280.00	12,032.63	10,073.00	49.16	49.35	-112.11	1,895.53	-2,944.22	4,882.08	4,819.21	62.86	77.660		
10,400.00	8,280.00	12,132.63	10,073.00	50.20	50.44	-112.11	1,995.52	-2,945.22	4,882.12	4,817.71	64.41	75.797		
10,500.00	8,280.00	12,232.63	10,073.00	51.29	51.56	-112.11	2,095.52	-2,946.21	4,882.16	4,816.16	65.99	73.979		
10,600.00	8,280.00	12,332.63	10,073.00	52.41	52.71	-112.11	2,195.51	-2,947.21	4,882.20	4,814.59	67.61	72.210		
10,700.00	8,280.00	12,432.63	10,073.00	53.56	53.89	-112.11	2,295.51	-2,948.20	4,882.24	4,812.97	69.26	70.490		
10,800.00	8,280.00	12,532.63	10,073.00	54.74	55.09	-112.11	2,395.50	-2,949.19	4,882.28	4,811.33	70.94	68.821		
10,900.00	8,280.00	12,632.63	10,073.00	55.95	56.31	-112.11	2,495.50	-2,950.19	4,882.31	4,809.66	72.65	67.203		
11,000.00	8,280.00	12,732.63	10,073.00	57.18	57.55	-112.11	2,595.49	-2,951.18	4,882.35	4,807.97	74.38	65.637		
11,100.00	8,280.00	12,832.63	10,073.00	58.43	58.82	-112.11	2,695.49	-2,952.18	4,882.39	4,806.25	76.14	64.122		
11,200.00	8,280.00	12,932.63	10,073.00	59.71	60.10	-112.11	2,795.48	-2,953.17	4,882.43	4,804.51	77.92	62.657		
11,300.00	8,280.00	13,032.63	10,073.00	61.00	61.40	-112.11	2,895.48	-2,954.16	4,882.47	4,802.75	79.73	61.241		
11,400.00	8,280.00	13,132.63	10,073.00	62.31	62.72	-112.11	2,995.47	-2,955.16	4,882.51	4,800.96	81.55	59.874		
11,500.00	8,280.00	13,232.63	10,073.00	63.64	64.05	-112.11	3,095.47	-2,956.15	4,882.55	4,799.16	83.39	58.553		
11,600.00	8,280.00	13,332.63	10,073.00	64.99	65.40	-112.11	3,195.46	-2,957.15	4,882.59	4,797.35	85.24	57.277		
11,700.00	8,280.00	13,432.63	10,073.00	66.35	66.76	-112.11	3,295.46	-2,958.14	4,882.63	4,795.51	87.12	56.046		
11,800.00	8,280.00	13,532.63	10,073.00	67.72	68.13	-112.11	3,395.45	-2,959.13	4,882.67	4,793.66	89.01	54.858		
11,900.00	8,280.00	13,632.63	10,073.00	69.11	69.52	-112.11	3,495.45	-2,960.13	4,882.71	4,791.80	90.91	53.710		
12,000.00	8,280.00	13,732.63	10,073.00	70.51	70.91	-112.10	3,595.44	-2,961.12	4,882.75	4,789.92	92.82	52.602		
12,100.00	8,280.00	13,832.63	10,073.00	71.92	72.32	-112.10	3,695.44	-2,962.12	4,882.79	4,788.03	94.75	51.532		
12,200.00	8,280.00	13,932.63	10,073.00	73.34	73.74	-112.10	3,795.43	-2,963.11	4,882.83	4,786.13	96.69	50.498		
12,300.00	8,280.00	14,032.63	10,073.00	74.77	75.16	-112.10	3,895.43	-2,964.10	4,882.87	4,784.22	98.64	49.500		
12,400.00	8,280.00	14,132.63	10,073.00	76.21	76.60	-112.10	3,995.42	-2,965.10	4,882.90	4,782.30	100.61	48.535		
12,500.00	8,280.00	14,232.63	10,073.00	77.65	78.05	-112.10	4,095.42	-2,966.09	4,882.94	4,780.37	102.58	47.602		
12,600.00	8,280.00	14,332.63	10,073.00	79.11	79.50	-112.10	4,195.41	-2,967.09	4,882.98	4,778.42	104.56	46.701		
12,700.00	8,280.00	14,432.63	10,073.00	80.57	80.96	-112.10	4,295.41	-2,968.08	4,883.02	4,776.48	106.55	45.830		
12,800.00	8,280.00	14,532.63	10,073.00	82.04	82.43	-112.10	4,395.40	-2,969.07	4,883.06	4,774.52	108.54	44.988		
12,900.00	8,280.00	14,632.63	10,073.00	83.52	83.90	-112.10	4,495.40	-2,970.07	4,883.10	4,772.56	110.55	44.173		
13,000.00	8,280.00	14,732.63	10,073.00	85.01	85.38	-112.10	4,595.39	-2,971.06	4,883.14	4,770.58	112.56	43.384		
13,100.00	8,280.00	14,832.63	10,073.00	86.50	86.87	-112.10	4,695.39	-2,972.06	4,883.18	4,768.61	114.57	42.620		
13,200.00	8,280.00	14,932.63	10,073.00	87.99	88.36	-112.10	4,795.38	-2,973.05	4,883.22	4,766.62	116.60	41.881		
13,300.00	8,280.00	15,032.63	10,073.00	89.50	89.86	-112.10	4,895.38	-2,974.04	4,883.26	4,764.63	118.63	41.164		
13,400.00	8,280.00	15,132.63	10,073.00	91.00	91.37	-112.10	4,995.37	-2,975.04	4,883.30	4,762.63	120.67	40.470		
13,500.00	8,280.00	15,232.63	10,073.00	92.52	92.87	-112.10	5,095.37	-2,976.03	4,883.34	4,760.63	122.71	39.796		
13,600.00	8,280.00	15,332.63	10,073.00	94.03	94.39	-112.10	5,195.36	-2,977.03	4,883.38	4,758.62	124.76	39.143		
13,700.00	8,280.00	15,432.63	10,073.00	95.56	95.91	-112.10	5,295.36	-2,978.02	4,883.42	4,756.60	126.81	38.510		
13,800.00	8,280.00	15,532.63	10,073.00	97.08	97.43	-112.10	5,395.35	-2,979.01	4,883.45	4,754.59	128.87	37.895		
13,900.00	8,280.00	15,632.63	10,073.00	98.61	98.96	-112.10	5,495.35	-2,980.01	4,883.49	4,752.56	130.93	37.298		
14,000.00	8,280.00	15,732.63	10,073.00	100.15	100.49	-112.10	5,595.35	-2,981.00	4,883.53	4,750.53	133.00	36.719		
14,100.00	8,280.00	15,832.63	10,073.00	101.69	102.02	-112.10	5,695.34	-2,982.00	4,883.57	4,748.50	135.07	36.156		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	15,932.63	10,073.00	103.23	103.56	-112.10	5,795.34	-2,982.99	4,883.61	4,746.47	137.15	35.609		
14,300.00	8,280.00	16,032.63	10,073.00	104.77	105.10	-112.10	5,895.33	-2,983.98	4,883.65	4,744.43	139.23	35.077		
14,400.00	8,280.00	16,132.63	10,073.00	106.32	106.65	-112.10	5,995.33	-2,984.98	4,883.69	4,742.38	141.31	34.561		
14,500.00	8,280.00	16,232.63	10,073.00	107.87	108.19	-112.10	6,095.32	-2,985.97	4,883.73	4,740.34	143.39	34.059		
14,600.00	8,280.00	16,332.63	10,073.00	109.43	109.74	-112.10	6,195.32	-2,986.97	4,883.77	4,738.29	145.48	33.570		
14,700.00	8,280.00	16,432.63	10,073.00	110.98	111.30	-112.10	6,295.31	-2,987.96	4,883.81	4,736.24	147.57	33.095		
14,800.00	8,280.00	16,532.63	10,073.00	112.54	112.86	-112.10	6,395.31	-2,988.95	4,883.85	4,734.18	149.67	32.632		
14,900.00	8,280.00	16,632.63	10,073.00	114.10	114.42	-112.10	6,495.30	-2,989.95	4,883.89	4,732.12	151.76	32.181		
15,000.00	8,280.00	16,732.63	10,073.00	115.67	115.98	-112.10	6,595.30	-2,990.94	4,883.93	4,730.06	153.87	31.742		
15,100.00	8,280.00	16,832.63	10,073.00	117.24	117.54	-112.10	6,695.29	-2,991.94	4,883.97	4,728.00	155.97	31.314		
15,200.00	8,280.00	16,932.63	10,073.00	118.81	119.11	-112.10	6,795.29	-2,992.93	4,884.01	4,725.93	158.08	30.897		
15,300.00	8,280.00	17,032.63	10,073.00	120.38	120.68	-112.10	6,895.28	-2,993.92	4,884.04	4,723.86	160.19	30.490		
15,400.00	8,280.00	17,132.63	10,073.00	121.95	122.25	-112.10	6,995.28	-2,994.92	4,884.08	4,721.79	162.30	30.094		
15,500.00	8,280.00	17,232.63	10,073.00	123.53	123.82	-112.10	7,095.27	-2,995.91	4,884.12	4,719.71	164.41	29.707		
15,600.00	8,280.00	17,332.63	10,073.00	125.11	125.40	-112.10	7,195.27	-2,996.91	4,884.16	4,717.64	166.52	29.330		
15,700.00	8,280.00	17,432.63	10,073.00	126.69	126.98	-112.10	7,295.26	-2,997.90	4,884.20	4,715.56	168.64	28.962		
15,800.00	8,280.00	17,532.63	10,073.00	128.27	128.55	-112.10	7,395.26	-2,998.89	4,884.24	4,713.48	170.76	28.603		
15,900.00	8,280.00	17,632.63	10,073.00	129.85	130.14	-112.10	7,495.25	-2,999.89	4,884.28	4,711.40	172.88	28.253		
16,000.00	8,280.00	17,732.63	10,073.00	131.44	131.72	-112.10	7,595.25	-3,000.88	4,884.32	4,709.32	175.00	27.910		
16,100.00	8,280.00	17,832.63	10,073.00	133.02	133.30	-112.10	7,695.24	-3,001.88	4,884.36	4,707.23	177.13	27.576		
16,200.00	8,280.00	17,932.63	10,073.00	134.61	134.89	-112.10	7,795.24	-3,002.87	4,884.40	4,705.15	179.25	27.249		
16,300.00	8,280.00	18,032.63	10,073.00	136.20	136.48	-112.10	7,895.23	-3,003.86	4,884.44	4,703.06	181.38	26.929		
16,400.00	8,280.00	18,132.63	10,073.00	137.79	138.07	-112.10	7,995.23	-3,004.86	4,884.48	4,700.97	183.51	26.617		
16,500.00	8,280.00	18,232.63	10,073.00	139.39	139.66	-112.10	8,095.22	-3,005.85	4,884.52	4,698.88	185.64	26.312		
16,600.00	8,280.00	18,332.63	10,073.00	140.98	141.25	-112.10	8,195.22	-3,006.85	4,884.56	4,696.78	187.77	26.013		
16,700.00	8,280.00	18,432.63	10,073.00	142.58	142.84	-112.10	8,295.21	-3,007.84	4,884.59	4,694.69	189.91	25.721		
16,800.00	8,280.00	18,532.63	10,073.00	144.17	144.44	-112.10	8,395.21	-3,008.83	4,884.63	4,692.59	192.04	25.435		
16,900.00	8,280.00	18,632.63	10,073.00	145.77	146.03	-112.10	8,495.20	-3,009.83	4,884.67	4,690.49	194.18	25.155		
17,000.00	8,280.00	18,732.63	10,073.00	147.37	147.63	-112.10	8,595.20	-3,010.82	4,884.71	4,688.39	196.32	24.881		
17,100.00	8,280.00	18,832.63	10,073.00	148.97	149.23	-112.10	8,695.19	-3,011.82	4,884.75	4,686.29	198.46	24.613		
17,200.00	8,280.00	18,932.63	10,073.00	150.57	150.83	-112.10	8,795.19	-3,012.81	4,884.79	4,684.19	200.60	24.351		
17,300.00	8,280.00	19,032.63	10,073.00	152.18	152.43	-112.10	8,895.18	-3,013.80	4,884.83	4,682.09	202.74	24.094		
17,400.00	8,280.00	19,132.63	10,073.00	153.78	154.03	-112.09	8,995.18	-3,014.80	4,884.87	4,679.99	204.88	23.843		
17,500.00	8,280.00	19,232.63	10,073.00	155.38	155.63	-112.09	9,095.17	-3,015.79	4,884.91	4,677.89	207.02	23.596		
17,600.00	8,280.00	19,332.63	10,073.00	156.99	157.24	-112.09	9,195.17	-3,016.79	4,884.95	4,675.78	209.17	23.354		
17,700.00	8,280.00	19,432.63	10,073.00	158.60	158.84	-112.09	9,295.16	-3,017.78	4,884.99	4,673.67	211.31	23.117		
17,800.00	8,280.00	19,532.63	10,073.00	160.20	160.45	-112.09	9,395.16	-3,018.77	4,885.03	4,671.57	213.46	22.885		
17,900.00	8,280.00	19,632.63	10,073.00	161.81	162.06	-112.09	9,495.15	-3,019.77	4,885.07	4,669.46	215.61	22.657		
18,000.00	8,280.00	19,732.63	10,073.00	163.42	163.66	-112.09	9,595.15	-3,020.76	4,885.11	4,667.35	217.76	22.434		
18,100.00	8,280.00	19,832.63	10,073.00	165.03	165.27	-112.09	9,695.14	-3,021.76	4,885.15	4,665.24	219.90	22.215		
18,200.00	8,280.00	19,932.63	10,073.00	166.64	166.88	-112.09	9,795.14	-3,022.75	4,885.18	4,663.13	222.05	22.000		
18,300.00	8,280.00	20,032.63	10,073.00	168.25	168.49	-112.09	9,895.13	-3,023.74	4,885.22	4,661.02	224.21	21.789		
18,400.00	8,280.00	20,132.63	10,073.00	169.87	170.10	-112.09	9,995.13	-3,024.74	4,885.26	4,658.91	226.36	21.582		
18,438.77	8,280.00	20,171.40	10,073.00	170.49	170.73	-112.09	10,033.90	-3,025.12	4,885.28	4,658.09	227.19	21.503 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-90.53	-18.14	-1,961.05	1,961.60					
100.00	100.00	57.30	57.30	0.13	0.07	-90.53	-18.14	-1,961.05	1,961.13	1,960.99	0.14	N/A		
200.00	200.00	157.30	157.30	0.48	0.33	-90.53	-18.14	-1,961.05	1,961.13	1,960.55	0.59	3,345.310		
300.00	300.00	257.30	257.30	0.84	0.69	-90.53	-18.14	-1,961.05	1,961.13	1,960.04	1.09	1,801.675		
400.00	400.00	357.30	357.30	1.20	1.05	-90.53	-18.14	-1,961.05	1,961.13	1,959.54	1.59	1,230.518		
500.00	500.00	457.30	457.30	1.56	1.41	-90.53	-18.14	-1,961.05	1,961.13	1,959.03	2.10	933.956		
600.00	600.00	557.30	557.30	1.92	1.76	-90.53	-18.14	-1,961.05	1,961.13	1,958.53	2.61	752.480		
700.00	700.00	657.30	657.30	2.28	2.12	-90.53	-18.14	-1,961.05	1,961.13	1,958.02	3.11	630.019		
800.00	800.00	757.30	757.30	2.63	2.48	-90.53	-18.14	-1,961.05	1,961.13	1,957.51	3.62	541.823		
900.00	900.00	857.30	857.30	2.99	2.84	-90.53	-18.14	-1,961.05	1,961.13	1,957.01	4.13	475.281		
1,000.00	1,000.00	957.30	957.30	3.35	3.20	-90.53	-18.14	-1,961.05	1,961.13	1,956.50	4.63	423.291		
1,100.00	1,100.00	1,057.30	1,057.30	3.71	3.56	-90.53	-18.14	-1,961.05	1,961.13	1,955.99	5.14	381.551		
1,200.00	1,200.00	1,157.30	1,157.30	4.07	3.92	-90.53	-18.14	-1,961.05	1,961.13	1,955.49	5.65	347.303		
1,300.00	1,300.00	1,257.30	1,257.30	4.43	4.27	-90.53	-18.14	-1,961.05	1,961.13	1,954.98	6.15	318.696		
1,400.00	1,400.00	1,357.30	1,357.30	4.79	4.63	-90.53	-18.14	-1,961.05	1,961.13	1,954.47	6.66	294.442		
1,500.00	1,500.00	1,457.30	1,457.30	5.14	4.99	-90.53	-18.14	-1,961.05	1,961.13	1,953.96	7.17	273.619		
1,600.00	1,600.00	1,557.30	1,557.30	5.50	5.35	-90.53	-18.14	-1,961.05	1,961.13	1,953.46	7.67	255.546 CC, ES		
1,700.00	1,699.98	1,657.28	1,657.28	5.85	5.71	176.25	-18.14	-1,961.05	1,962.87	1,954.70	8.17	240.124		
1,800.00	1,799.84	1,757.14	1,757.14	6.20	6.07	176.25	-18.14	-1,961.05	1,968.10	1,959.43	8.67	227.026		
1,900.00	1,899.45	1,856.75	1,856.75	6.54	6.42	176.26	-18.14	-1,961.05	1,976.79	1,967.63	9.16	215.704		
2,000.00	1,998.70	1,956.00	1,956.00	6.90	6.78	176.26	-18.14	-1,961.05	1,988.95	1,979.29	9.66	205.903		
2,100.00	2,097.47	2,101.32	2,101.31	7.26	7.29	176.27	-18.78	-1,959.87	2,003.93	1,993.67	10.26	195.300		
2,200.00	2,195.62	2,284.84	2,284.57	7.64	7.90	176.19	-23.19	-1,951.71	2,018.61	2,007.68	10.93	184.715		
2,300.00	2,293.06	2,469.50	2,468.32	8.04	8.54	175.99	-31.85	-1,935.70	2,032.57	2,020.97	11.59	175.319		
2,400.00	2,389.64	2,571.36	2,569.39	8.46	8.90	175.85	-37.88	-1,924.57	2,047.73	2,035.64	12.09	169.383		
2,486.44	2,472.37	2,656.26	2,653.63	8.85	9.20	175.73	-42.90	-1,915.28	2,063.61	2,051.10	12.51	164.893		
2,500.00	2,485.28	2,669.54	2,666.80	8.92	9.25	175.72	-43.69	-1,913.83	2,066.31	2,053.72	12.58	164.220		
2,600.00	2,580.53	2,767.47	2,763.98	9.39	9.60	175.61	-49.48	-1,903.12	2,086.16	2,073.09	13.08	159.540		
2,700.00	2,675.78	2,865.41	2,861.16	9.88	9.96	175.51	-55.28	-1,892.41	2,106.03	2,092.45	13.57	155.144		
2,800.00	2,771.03	2,963.35	2,958.34	10.39	10.32	175.41	-61.07	-1,881.70	2,125.90	2,111.82	14.08	151.012		
2,900.00	2,866.28	3,061.29	3,055.51	10.91	10.69	175.31	-66.87	-1,870.99	2,145.77	2,131.19	14.58	147.124		
3,000.00	2,961.53	3,159.22	3,152.69	11.44	11.05	175.21	-72.66	-1,860.28	2,165.65	2,150.56	15.10	143.462		
3,100.00	3,056.78	3,257.16	3,249.87	11.98	11.42	175.12	-78.45	-1,849.57	2,185.54	2,169.93	15.61	140.011		
3,200.00	3,152.03	3,355.10	3,347.05	12.52	11.80	175.02	-84.25	-1,838.86	2,205.43	2,189.31	16.13	136.755		
3,300.00	3,247.28	3,453.04	3,444.23	13.08	12.17	174.93	-90.04	-1,828.15	2,225.33	2,208.69	16.65	133.678		
3,400.00	3,342.54	3,550.98	3,541.40	13.64	12.54	174.84	-95.84	-1,817.44	2,245.24	2,228.07	17.17	130.769		
3,500.00	3,437.79	3,648.91	3,638.58	14.21	12.92	174.75	-101.63	-1,806.73	2,265.15	2,247.45	17.69	128.016		
3,600.00	3,533.04	3,746.85	3,735.76	14.78	13.30	174.66	-107.43	-1,796.02	2,285.06	2,266.84	18.22	125.406		
3,700.00	3,628.29	3,844.79	3,832.94	15.36	13.68	174.58	-113.22	-1,785.31	2,304.98	2,286.23	18.75	122.930		
3,800.00	3,723.54	3,942.73	3,930.11	15.94	14.06	174.49	-119.02	-1,774.59	2,324.91	2,305.63	19.28	120.579		
3,900.00	3,818.79	4,040.67	4,027.29	16.52	14.44	174.41	-124.81	-1,763.88	2,344.84	2,325.02	19.81	118.344		
4,000.00	3,914.04	4,138.60	4,124.47	17.11	14.83	174.33	-130.61	-1,753.17	2,364.77	2,344.42	20.35	116.217		
4,100.00	4,009.29	4,236.54	4,221.65	17.69	15.21	174.25	-136.40	-1,742.46	2,384.71	2,363.83	20.88	114.190		
4,200.00	4,104.54	4,334.48	4,318.83	18.29	15.60	174.17	-142.20	-1,731.75	2,404.65	2,383.23	21.42	112.259		
4,300.00	4,199.79	4,432.42	4,416.00	18.88	15.98	174.09	-147.99	-1,721.04	2,424.60	2,402.64	21.96	110.415		
4,400.00	4,295.04	4,530.35	4,513.18	19.48	16.37	174.02	-153.79	-1,710.33	2,444.55	2,422.05	22.50	108.654		
4,500.00	4,390.29	4,628.29	4,610.36	20.08	16.76	173.94	-159.58	-1,699.62	2,464.51	2,441.47	23.04	106.970		
4,600.00	4,485.55	4,726.23	4,707.54	20.68	17.15	173.87	-165.38	-1,688.91	2,484.47	2,460.89	23.58	105.358		
4,700.00	4,580.80	4,824.17	4,804.71	21.28	17.54	173.79	-171.17	-1,678.20	2,504.43	2,480.31	24.12	103.815		
4,800.00	4,676.05	4,922.11	4,901.89	21.88	17.93	173.72	-176.97	-1,667.49	2,524.40	2,499.73	24.67	102.336		
4,900.00	4,771.30	5,020.04	4,999.07	22.48	18.32	173.65	-182.76	-1,656.78	2,544.37	2,519.16	25.21	100.917		
5,000.00	4,866.55	5,117.98	5,096.25	23.09	18.71	173.58	-188.56	-1,646.07	2,564.35	2,538.59	25.76	99.555		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	5,215.92	5,193.43	23.70	19.10	173.51	-194.35	-1,635.36	2,584.33	2,558.02	26.30	98.247		
5,200.00	5,057.05	5,313.86	5,290.60	24.30	19.49	173.45	-200.15	-1,624.65	2,604.31	2,577.46	26.85	96.989		
5,300.00	5,152.30	5,411.80	5,387.78	24.91	19.88	173.38	-205.94	-1,613.94	2,624.29	2,596.89	27.40	95.779		
5,400.00	5,247.55	5,509.73	5,484.96	25.52	20.28	173.32	-211.74	-1,603.23	2,644.28	2,616.33	27.95	94.614		
5,500.00	5,342.80	5,607.67	5,582.14	26.13	20.67	173.25	-217.53	-1,592.52	2,664.27	2,635.78	28.50	93.492		
5,600.00	5,438.05	5,705.61	5,679.31	26.74	21.06	173.19	-223.33	-1,581.81	2,684.27	2,655.22	29.05	92.410		
5,700.00	5,533.30	5,803.55	5,776.49	27.36	21.46	173.13	-229.12	-1,571.10	2,704.27	2,674.67	29.60	91.367		
5,800.00	5,628.56	5,901.48	5,873.67	27.97	21.85	173.07	-234.92	-1,560.39	2,724.27	2,694.12	30.15	90.360		
5,900.00	5,723.81	5,999.42	5,970.85	28.58	22.24	173.00	-240.71	-1,549.67	2,744.27	2,713.57	30.70	89.387		
6,000.00	5,819.06	6,097.36	6,068.03	29.20	22.64	172.94	-246.51	-1,538.96	2,764.28	2,733.03	31.25	88.448		
6,100.00	5,914.31	6,195.30	6,165.20	29.81	23.03	172.89	-252.30	-1,528.25	2,784.29	2,752.48	31.81	87.540		
6,200.00	6,009.56	6,293.24	6,262.38	30.43	23.43	172.83	-258.10	-1,517.54	2,804.30	2,771.94	32.36	86.661		
6,300.00	6,104.81	6,391.17	6,359.56	31.04	23.82	172.77	-263.89	-1,506.83	2,824.32	2,791.40	32.91	85.811		
6,400.00	6,200.06	6,489.11	6,456.74	31.66	24.22	172.71	-269.69	-1,496.12	2,844.34	2,810.87	33.47	84.988		
6,500.00	6,295.31	6,587.05	6,553.91	32.27	24.62	172.66	-275.48	-1,485.41	2,864.36	2,830.33	34.02	84.191		
6,600.00	6,390.56	6,684.99	6,651.09	32.89	25.01	172.60	-281.27	-1,474.70	2,884.38	2,849.80	34.58	83.418		
6,700.00	6,485.81	6,782.92	6,748.27	33.51	25.41	172.55	-287.07	-1,463.99	2,904.41	2,869.27	35.13	82.669		
6,800.00	6,581.06	6,880.86	6,845.45	34.13	25.81	172.50	-292.86	-1,453.28	2,924.43	2,888.74	35.69	81.942		
6,848.89	6,627.63	6,900.62	6,866.05	34.43	25.89	172.49	-294.03	-1,451.12	2,934.36	2,898.49	35.87	81.805		
6,900.00	6,676.45	6,948.04	6,912.14	34.74	26.07	172.49	-296.70	-1,446.19	2,944.43	2,908.29	36.14	81.464		
7,000.00	6,772.71	7,000.00	6,963.81	35.31	26.28	172.52	-299.30	-1,441.38	2,962.72	2,926.18	36.54	81.087		
7,100.00	6,869.86	7,067.10	7,030.64	35.84	26.54	172.54	-302.17	-1,436.08	2,978.86	2,941.89	36.97	80.580		
7,200.00	6,967.77	7,126.76	7,090.14	36.33	26.76	172.56	-304.25	-1,432.24	2,992.90	2,955.54	37.36	80.112		
7,300.00	7,066.34	7,200.00	7,163.26	36.77	27.03	172.58	-306.19	-1,428.65	3,004.86	2,967.08	37.79	79.525		
7,400.00	7,165.43	7,246.30	7,209.52	37.17	27.19	172.60	-307.08	-1,427.01	3,014.59	2,976.50	38.10	79.128		
7,500.00	7,264.93	7,300.00	7,263.21	37.52	27.38	172.62	-307.77	-1,425.73	3,022.26	2,983.83	38.42	78.660		
7,600.00	7,364.71	7,376.80	7,340.00	37.84	27.64	172.64	-308.14	-1,425.05	3,027.79	2,988.98	38.81	78.006		
7,700.00	7,464.66	7,458.76	7,421.96	38.12	27.90	172.65	-308.14	-1,425.05	3,030.69	2,991.48	39.21	77.289		
7,735.34	7,500.00	7,494.10	7,457.30	38.21	28.01	-94.13	-308.14	-1,425.05	3,030.91	2,991.53	39.37	76.977		
7,800.00	7,564.66	7,558.76	7,521.96	38.37	28.22	-94.13	-308.14	-1,425.05	3,030.91	2,991.24	39.67	76.409		
7,900.00	7,664.66	7,658.76	7,621.96	38.61	28.55	-94.13	-308.14	-1,425.05	3,030.91	2,990.79	40.12	75.544		
7,942.38	7,707.04	7,701.14	7,664.34	38.72	28.68	-94.13	-308.14	-1,425.05	3,030.91	2,990.59	40.31	75.183		
7,950.00	7,714.66	7,708.76	7,671.96	38.74	28.71	-93.58	-308.14	-1,425.05	3,030.91	2,990.56	40.35	75.118		
8,000.00	7,764.57	7,758.67	7,721.87	38.86	28.87	-93.62	-308.14	-1,425.05	3,031.09	2,990.51	40.58	74.701		
8,050.00	7,814.03	7,808.13	7,771.33	38.98	29.03	-93.71	-308.14	-1,425.05	3,031.55	2,990.75	40.80	74.297		
8,100.00	7,862.68	7,856.78	7,819.98	39.09	29.19	-93.84	-308.14	-1,425.05	3,032.33	2,991.30	41.03	73.910		
8,150.00	7,910.15	7,904.25	7,867.45	39.20	29.34	-94.01	-308.14	-1,425.05	3,033.46	2,992.21	41.25	73.541		
8,200.00	7,956.07	7,950.17	7,913.37	39.30	29.49	-94.19	-308.14	-1,425.05	3,035.00	2,993.53	41.47	73.193		
8,250.00	8,000.10	7,994.20	7,957.40	39.39	29.64	-94.39	-308.14	-1,425.05	3,037.01	2,995.33	41.68	72.870		
8,300.00	8,041.89	8,035.99	7,999.19	39.48	29.77	-94.56	-308.14	-1,425.05	3,039.57	2,997.69	41.88	72.573		
8,350.00	8,081.14	8,075.24	8,038.44	39.56	29.90	-94.70	-308.14	-1,425.05	3,042.76	3,000.67	42.08	72.306		
8,400.00	8,117.54	8,111.64	8,074.84	39.63	30.02	-94.78	-308.14	-1,425.05	3,046.64	3,004.37	42.27	72.070		
8,450.00	8,150.81	8,144.91	8,108.11	39.69	30.13	-94.78	-308.14	-1,425.05	3,051.31	3,008.85	42.46	71.868		
8,500.00	8,180.71	8,174.81	8,138.01	39.75	30.23	-94.68	-308.14	-1,425.05	3,056.81	3,014.18	42.63	71.703		
8,550.00	8,207.00	8,201.10	8,164.30	39.80	30.31	-94.45	-308.14	-1,425.05	3,063.22	3,020.42	42.80	71.576		
8,600.00	8,229.49	8,223.59	8,186.79	39.85	30.39	-94.09	-308.14	-1,425.05	3,070.57	3,027.62	42.95	71.490		
8,650.00	8,248.00	8,242.10	8,205.30	39.91	30.45	-93.57	-308.14	-1,425.05	3,078.88	3,035.78	43.09	71.446		
8,700.00	8,262.40	8,256.50	8,219.70	39.96	30.49	-92.89	-308.14	-1,425.05	3,088.15	3,044.93	43.22	71.446		
8,750.00	8,272.57	8,266.67	8,229.87	40.02	30.53	-92.04	-308.14	-1,425.05	3,098.37	3,055.03	43.34	71.490		
8,800.00	8,278.43	8,272.53	8,235.73	40.08	30.55	-91.01	-308.14	-1,425.05	3,109.49	3,066.05	43.44	71.580		
8,842.38	8,280.00	8,274.10	8,237.30	40.15	30.55	-90.00	-308.14	-1,425.05	3,119.56	3,076.05	43.51	71.691		
8,900.00	8,280.00	8,274.10	8,237.30	40.25	30.55	-90.00	-308.14	-1,425.05	3,134.14	3,090.53	43.61	71.870		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 302H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		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		
9,000.00	8,280.00	8,274.10	8,237.30	40.47	30.55	-90.00	-308.14	-1,425.05	3,161.78	3,117.99	43.79	72.205		
9,100.00	8,280.00	8,274.10	8,237.30	40.75	30.55	-90.00	-308.14	-1,425.05	3,192.31	3,148.32	43.99	72.575		
9,200.00	8,280.00	8,274.10	8,237.30	41.10	30.55	-90.00	-308.14	-1,425.05	3,225.65	3,181.45	44.20	72.982		
9,300.00	8,280.00	8,274.10	8,237.30	41.51	30.55	-90.00	-308.14	-1,425.05	3,261.72	3,217.30	44.42	73.426		
9,400.00	8,280.00	8,274.10	8,237.30	42.00	30.55	-90.00	-308.14	-1,425.05	3,300.42	3,255.77	44.66	73.909		
9,500.00	8,280.00	8,274.10	8,237.30	42.55	30.55	-90.00	-308.14	-1,425.05	3,341.67	3,296.78	44.90	74.429		
9,600.00	8,280.00	8,274.10	8,237.30	43.17	30.55	-90.00	-308.14	-1,425.05	3,385.38	3,340.23	45.15	74.989		
9,700.00	8,280.00	8,274.10	8,237.30	43.85	30.55	-90.00	-308.14	-1,425.05	3,431.44	3,386.04	45.40	75.588		
9,800.00	8,280.00	8,274.10	8,237.30	44.60	30.55	-90.00	-308.14	-1,425.05	3,479.76	3,434.11	45.65	76.227		
9,900.00	8,280.00	11,570.49	9,961.00	45.41	44.10	-119.67	1,510.37	-1,443.16	3,482.32	3,425.30	57.02	61.069		
10,000.00	8,280.00	11,670.49	9,961.00	46.27	45.10	-119.67	1,610.37	-1,444.15	3,482.36	3,424.00	58.36	59.667		
10,100.00	8,280.00	11,770.49	9,961.00	47.19	46.14	-119.67	1,710.36	-1,445.15	3,482.40	3,422.65	59.75	58.286		
10,200.00	8,280.00	11,870.49	9,961.00	48.15	47.22	-119.67	1,810.36	-1,446.15	3,482.44	3,421.26	61.17	56.929		
10,300.00	8,280.00	11,970.49	9,961.00	49.16	48.33	-119.67	1,910.35	-1,447.14	3,482.47	3,419.84	62.63	55.602		
10,400.00	8,280.00	12,070.49	9,961.00	50.20	49.47	-119.67	2,010.35	-1,448.14	3,482.51	3,418.38	64.13	54.305		
10,500.00	8,280.00	12,170.49	9,961.00	51.29	50.63	-119.67	2,110.34	-1,449.13	3,482.55	3,416.89	65.66	53.041		
10,600.00	8,280.00	12,270.49	9,961.00	52.41	51.82	-119.67	2,210.34	-1,450.13	3,482.59	3,415.37	67.22	51.811		
10,700.00	8,280.00	12,370.49	9,961.00	53.56	53.04	-119.67	2,310.34	-1,451.13	3,482.63	3,413.82	68.81	50.615		
10,800.00	8,280.00	12,470.49	9,961.00	54.74	54.28	-119.67	2,410.33	-1,452.12	3,482.67	3,412.25	70.42	49.454		
10,900.00	8,280.00	12,570.49	9,961.00	55.95	55.54	-119.67	2,510.33	-1,453.12	3,482.71	3,410.64	72.06	48.329		
11,000.00	8,280.00	12,670.49	9,961.00	57.18	56.82	-119.66	2,610.32	-1,454.11	3,482.74	3,409.02	73.73	47.239		
11,100.00	8,280.00	12,770.49	9,961.00	58.43	58.12	-119.66	2,710.32	-1,455.11	3,482.78	3,407.37	75.41	46.184		
11,200.00	8,280.00	12,870.49	9,961.00	59.71	59.44	-119.66	2,810.31	-1,456.10	3,482.82	3,405.70	77.12	45.163		
11,300.00	8,280.00	12,970.49	9,961.00	61.00	60.77	-119.66	2,910.31	-1,457.10	3,482.86	3,404.02	78.84	44.175		
11,400.00	8,280.00	13,070.49	9,961.00	62.31	62.12	-119.66	3,010.30	-1,458.10	3,482.90	3,402.31	80.58	43.221		
11,500.00	8,280.00	13,170.49	9,961.00	63.64	63.48	-119.66	3,110.30	-1,459.09	3,482.94	3,400.59	82.34	42.298		
11,600.00	8,280.00	13,270.49	9,961.00	64.99	64.86	-119.66	3,210.29	-1,460.09	3,482.97	3,398.86	84.12	41.406		
11,700.00	8,280.00	13,370.49	9,961.00	66.35	66.25	-119.66	3,310.29	-1,461.08	3,483.01	3,397.11	85.91	40.544		
11,800.00	8,280.00	13,470.49	9,961.00	67.72	67.65	-119.66	3,410.28	-1,462.08	3,483.05	3,395.34	87.71	39.711		
11,900.00	8,280.00	13,570.49	9,961.00	69.11	69.06	-119.66	3,510.28	-1,463.08	3,483.09	3,393.56	89.53	38.906		
12,000.00	8,280.00	13,670.49	9,961.00	70.51	70.48	-119.66	3,610.27	-1,464.07	3,483.13	3,391.77	91.35	38.128		
12,100.00	8,280.00	13,770.49	9,961.00	71.92	71.91	-119.66	3,710.27	-1,465.07	3,483.17	3,389.98	93.19	37.377		
12,200.00	8,280.00	13,870.49	9,961.00	73.34	73.35	-119.66	3,810.26	-1,466.06	3,483.21	3,388.17	95.04	36.650		
12,300.00	8,280.00	13,970.49	9,961.00	74.77	74.80	-119.66	3,910.26	-1,467.06	3,483.24	3,386.35	96.90	35.947		
12,400.00	8,280.00	14,070.49	9,961.00	76.21	76.26	-119.66	4,010.25	-1,468.05	3,483.28	3,384.52	98.77	35.268		
12,500.00	8,280.00	14,170.49	9,961.00	77.65	77.72	-119.66	4,110.25	-1,469.05	3,483.32	3,382.68	100.64	34.611		
12,600.00	8,280.00	14,270.49	9,961.00	79.11	79.20	-119.66	4,210.24	-1,470.05	3,483.36	3,380.83	102.53	33.975		
12,700.00	8,280.00	14,370.49	9,961.00	80.57	80.68	-119.66	4,310.24	-1,471.04	3,483.40	3,378.98	104.42	33.360		
12,800.00	8,280.00	14,470.49	9,961.00	82.04	82.16	-119.66	4,410.23	-1,472.04	3,483.44	3,377.12	106.32	32.764		
12,900.00	8,280.00	14,570.49	9,961.00	83.52	83.66	-119.66	4,510.23	-1,473.03	3,483.47	3,375.25	108.22	32.187		
13,000.00	8,280.00	14,670.49	9,961.00	85.01	85.16	-119.66	4,610.22	-1,474.03	3,483.51	3,373.37	110.14	31.628		
13,100.00	8,280.00	14,770.49	9,961.00	86.50	86.66	-119.66	4,710.22	-1,475.03	3,483.55	3,371.49	112.06	31.087		
13,200.00	8,280.00	14,870.49	9,961.00	87.99	88.17	-119.66	4,810.21	-1,476.02	3,483.59	3,369.60	113.99	30.562		
13,300.00	8,280.00	14,970.49	9,961.00	89.50	89.68	-119.66	4,910.21	-1,477.02	3,483.63	3,367.71	115.92	30.053		
13,400.00	8,280.00	15,070.49	9,961.00	91.00	91.20	-119.66	5,010.20	-1,478.01	3,483.67	3,365.81	117.86	29.559		
13,500.00	8,280.00	15,170.49	9,961.00	92.52	92.73	-119.66	5,110.20	-1,479.01	3,483.71	3,363.91	119.80	29.080		
13,600.00	8,280.00	15,270.49	9,961.00	94.03	94.25	-119.66	5,210.19	-1,480.00	3,483.74	3,362.00	121.75	28.615		
13,700.00	8,280.00	15,370.49	9,961.00	95.56	95.79	-119.66	5,310.19	-1,481.00	3,483.78	3,360.08	123.70	28.163		
13,800.00	8,280.00	15,470.49	9,961.00	97.08	97.32	-119.65	5,410.18	-1,482.00	3,483.82	3,358.17	125.65	27.725		
13,900.00	8,280.00	15,570.49	9,961.00	98.61	98.86	-119.65	5,510.18	-1,482.99	3,483.86	3,356.24	127.61	27.300		
14,000.00	8,280.00	15,670.49	9,961.00	100.15	100.41	-119.65	5,610.17	-1,483.99	3,483.90	3,354.32	129.58	26.886		
14,100.00	8,280.00	15,770.49	9,961.00	101.69	101.95	-119.65	5,710.17	-1,484.98	3,483.94	3,352.39	131.55	26.484		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	15,870.49	9,961.00	103.23	103.50	-119.65	5,810.16	-1,485.98	3,483.97	3,350.45	133.52	26.093		
14,300.00	8,280.00	15,970.49	9,961.00	104.77	105.06	-119.65	5,910.16	-1,486.98	3,484.01	3,348.52	135.50	25.713		
14,400.00	8,280.00	16,070.49	9,961.00	106.32	106.61	-119.65	6,010.15	-1,487.97	3,484.05	3,346.58	137.47	25.343		
14,500.00	8,280.00	16,170.49	9,961.00	107.87	108.17	-119.65	6,110.15	-1,488.97	3,484.09	3,344.64	139.45	24.984		
14,600.00	8,280.00	16,270.49	9,961.00	109.43	109.73	-119.65	6,210.14	-1,489.96	3,484.13	3,342.69	141.44	24.633		
14,700.00	8,280.00	16,370.49	9,961.00	110.98	111.30	-119.65	6,310.14	-1,490.96	3,484.17	3,340.74	143.43	24.292		
14,800.00	8,280.00	16,470.49	9,961.00	112.54	112.86	-119.65	6,410.13	-1,491.95	3,484.21	3,338.79	145.42	23.960		
14,900.00	8,280.00	16,570.49	9,961.00	114.10	114.43	-119.65	6,510.13	-1,492.95	3,484.24	3,336.83	147.41	23.637		
15,000.00	8,280.00	16,670.49	9,961.00	115.67	116.00	-119.65	6,610.12	-1,493.95	3,484.28	3,334.88	149.40	23.321		
15,100.00	8,280.00	16,770.49	9,961.00	117.24	117.58	-119.65	6,710.12	-1,494.94	3,484.32	3,332.92	151.40	23.014		
15,200.00	8,280.00	16,870.49	9,961.00	118.81	119.15	-119.65	6,810.11	-1,495.94	3,484.36	3,330.96	153.40	22.714		
15,300.00	8,280.00	16,970.49	9,961.00	120.38	120.73	-119.65	6,910.11	-1,496.93	3,484.40	3,328.99	155.41	22.421		
15,400.00	8,280.00	17,070.49	9,961.00	121.95	122.31	-119.65	7,010.10	-1,497.93	3,484.44	3,327.02	157.41	22.136		
15,500.00	8,280.00	17,170.49	9,961.00	123.53	123.89	-119.65	7,110.10	-1,498.93	3,484.47	3,325.06	159.42	21.858		
15,600.00	8,280.00	17,270.49	9,961.00	125.11	125.48	-119.65	7,210.09	-1,499.92	3,484.51	3,323.09	161.42	21.586		
15,700.00	8,280.00	17,370.49	9,961.00	126.69	127.06	-119.65	7,310.09	-1,500.92	3,484.55	3,321.12	163.43	21.321		
15,800.00	8,280.00	17,470.49	9,961.00	128.27	128.65	-119.65	7,410.08	-1,501.91	3,484.59	3,319.14	165.44	21.062		
15,900.00	8,280.00	17,570.49	9,961.00	129.85	130.24	-119.65	7,510.08	-1,502.91	3,484.63	3,317.17	167.46	20.809		
16,000.00	8,280.00	17,670.49	9,961.00	131.44	131.83	-119.65	7,610.07	-1,503.90	3,484.67	3,315.19	169.48	20.562		
16,100.00	8,280.00	17,770.49	9,961.00	133.02	133.42	-119.65	7,710.07	-1,504.90	3,484.71	3,313.21	171.49	20.320		
16,200.00	8,280.00	17,870.49	9,961.00	134.61	135.01	-119.65	7,810.06	-1,505.90	3,484.74	3,311.23	173.51	20.084		
16,300.00	8,280.00	17,970.49	9,961.00	136.20	136.61	-119.65	7,910.06	-1,506.89	3,484.78	3,309.25	175.53	19.853		
16,400.00	8,280.00	18,070.49	9,961.00	137.79	138.21	-119.65	8,010.05	-1,507.89	3,484.82	3,307.27	177.55	19.627		
16,500.00	8,280.00	18,170.49	9,961.00	139.39	139.80	-119.65	8,110.05	-1,508.88	3,484.86	3,305.29	179.57	19.407		
16,600.00	8,280.00	18,270.49	9,961.00	140.98	141.40	-119.64	8,210.04	-1,509.88	3,484.90	3,303.30	181.60	19.190		
16,700.00	8,280.00	18,370.49	9,961.00	142.58	143.00	-119.64	8,310.04	-1,510.88	3,484.94	3,301.32	183.62	18.979		
16,800.00	8,280.00	18,470.49	9,961.00	144.17	144.60	-119.64	8,410.03	-1,511.87	3,484.97	3,299.33	185.65	18.772		
16,900.00	8,280.00	18,570.49	9,961.00	145.77	146.20	-119.64	8,510.03	-1,512.87	3,485.01	3,297.34	187.67	18.569		
17,000.00	8,280.00	18,670.49	9,961.00	147.37	147.81	-119.64	8,610.02	-1,513.86	3,485.05	3,295.35	189.70	18.371		
17,100.00	8,280.00	18,770.49	9,961.00	148.97	149.41	-119.64	8,710.02	-1,514.86	3,485.09	3,293.36	191.73	18.177		
17,200.00	8,280.00	18,870.49	9,961.00	150.57	151.02	-119.64	8,810.01	-1,515.85	3,485.13	3,291.37	193.76	17.987		
17,300.00	8,280.00	18,970.49	9,961.00	152.18	152.62	-119.64	8,910.01	-1,516.85	3,485.17	3,289.38	195.79	17.800		
17,400.00	8,280.00	19,070.49	9,961.00	153.78	154.23	-119.64	9,010.00	-1,517.85	3,485.21	3,287.38	197.82	17.618		
17,500.00	8,280.00	19,170.49	9,961.00	155.38	155.84	-119.64	9,110.00	-1,518.84	3,485.24	3,285.39	199.86	17.439		
17,600.00	8,280.00	19,270.49	9,961.00	156.99	157.45	-119.64	9,209.99	-1,519.84	3,485.28	3,283.39	201.89	17.263		
17,700.00	8,280.00	19,370.49	9,961.00	158.60	159.06	-119.64	9,309.99	-1,520.83	3,485.32	3,281.39	203.93	17.091		
17,800.00	8,280.00	19,470.49	9,961.00	160.20	160.67	-119.64	9,409.98	-1,521.83	3,485.36	3,279.40	205.96	16.922		
17,900.00	8,280.00	19,570.49	9,961.00	161.81	162.28	-119.64	9,509.98	-1,522.83	3,485.40	3,277.40	208.00	16.757		
18,000.00	8,280.00	19,670.49	9,961.00	163.42	163.89	-119.64	9,609.97	-1,523.82	3,485.44	3,275.40	210.04	16.595		
18,100.00	8,280.00	19,770.49	9,961.00	165.03	165.51	-119.64	9,709.97	-1,524.82	3,485.47	3,273.40	212.07	16.435		
18,200.00	8,280.00	19,870.49	9,961.00	166.64	167.12	-119.64	9,809.96	-1,525.81	3,485.51	3,271.40	214.11	16.279		
18,300.00	8,280.00	19,970.49	9,961.00	168.25	168.74	-119.64	9,909.96	-1,526.81	3,485.55	3,269.40	216.15	16.126		
18,400.00	8,280.00	20,070.49	9,961.00	169.87	170.35	-119.64	10,009.95	-1,527.80	3,485.59	3,267.40	218.19	15.975		
18,438.77	8,280.00	20,109.26	9,961.00	170.49	170.98	-119.64	10,048.72	-1,528.19	3,485.60	3,266.62	218.98	15.917 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	0.50	0.50	0.00	0.00	-90.46	-0.20	-25.00	25.00					
100.00	100.00	100.50	100.50	0.13	0.13	-90.46	-0.20	-25.00	25.00	24.82	0.18	139.899		
200.00	200.00	200.50	200.50	0.48	0.49	-90.46	-0.20	-25.00	25.00	24.32	0.69	36.462		
300.00	300.00	300.50	300.50	0.84	0.84	-90.46	-0.20	-25.00	25.00	23.81	1.19	20.963		
400.00	400.00	400.50	400.50	1.20	1.20	-90.46	-0.20	-25.00	25.00	23.30	1.70	14.710		
500.00	500.00	500.50	500.50	1.56	1.56	-90.46	-0.20	-25.00	25.00	22.79	2.21	11.330		
600.00	600.00	600.50	600.50	1.92	1.92	-90.46	-0.20	-25.00	25.00	22.29	2.71	9.214		
700.00	700.00	700.50	700.50	2.28	2.28	-90.46	-0.20	-25.00	25.00	21.78	3.22	7.763		
800.00	800.00	800.50	800.50	2.63	2.64	-90.46	-0.20	-25.00	25.00	21.27	3.73	6.707		
900.00	900.00	900.50	900.50	2.99	3.00	-90.46	-0.20	-25.00	25.00	20.77	4.23	5.904		
1,000.00	1,000.00	1,000.50	1,000.50	3.35	3.35	-90.46	-0.20	-25.00	25.00	20.26	4.74	5.273		
1,100.00	1,100.00	1,100.50	1,100.50	3.71	3.71	-90.46	-0.20	-25.00	25.00	19.75	5.25	4.764		
1,200.00	1,200.00	1,200.50	1,200.50	4.07	4.07	-90.46	-0.20	-25.00	25.00	19.25	5.76	4.344		
1,300.00	1,300.00	1,300.50	1,300.50	4.43	4.43	-90.46	-0.20	-25.00	25.00	18.74	6.26	3.992		
1,400.00	1,400.00	1,400.50	1,400.50	4.79	4.79	-90.46	-0.20	-25.00	25.00	18.23	6.77	3.693		
1,500.00	1,500.00	1,500.50	1,500.50	5.14	5.15	-90.46	-0.20	-25.00	25.00	17.72	7.28	3.436		
1,600.00	1,600.00	1,600.50	1,600.50	5.50	5.50	-90.46	-0.20	-25.00	25.00	17.22	7.78	3.212 CC, ES, SF		
1,700.00	1,699.98	1,700.48	1,700.48	5.85	5.86	176.56	-0.20	-25.00	26.74	18.46	8.28	3.229		
1,800.00	1,799.84	1,800.34	1,800.34	6.20	6.22	177.11	-0.20	-25.00	31.97	23.19	8.78	3.642		
1,900.00	1,899.45	1,900.37	1,900.36	6.54	6.56	176.01	-1.41	-24.47	40.15	30.89	9.26	4.335		
2,000.00	1,998.70	2,000.19	2,000.10	6.90	6.89	172.85	-5.01	-22.91	50.87	41.13	9.73	5.225		
2,100.00	2,097.47	2,099.51	2,099.21	7.26	7.22	169.17	-10.83	-20.37	64.39	54.17	10.21	6.305		
2,200.00	2,195.62	2,198.02	2,197.49	7.64	7.55	166.90	-17.14	-17.63	81.29	70.60	10.69	7.603		
2,300.00	2,293.06	2,295.93	2,295.15	8.04	7.88	165.87	-23.40	-14.90	101.59	90.42	11.17	9.091		
2,400.00	2,389.64	2,393.09	2,392.08	8.46	8.21	165.54	-29.62	-12.19	125.21	113.55	11.66	10.738		
2,486.44	2,472.37	2,476.40	2,475.18	8.85	8.49	165.57	-34.95	-9.87	148.26	136.18	12.08	12.273		
2,500.00	2,485.28	2,489.41	2,488.16	8.92	8.54	165.61	-35.78	-9.51	152.07	139.92	12.15	12.518		
2,600.00	2,580.53	2,585.39	2,583.90	9.39	8.87	165.86	-41.93	-6.83	180.15	167.51	12.63	14.258		
2,700.00	2,675.78	2,681.36	2,679.65	9.88	9.21	166.04	-48.07	-4.16	208.22	195.10	13.13	15.863		
2,800.00	2,771.03	2,777.34	2,775.39	10.39	9.54	166.17	-54.21	-1.49	236.31	222.68	13.62	17.347		
2,900.00	2,866.28	2,873.31	2,871.13	10.91	9.88	166.28	-60.35	1.19	264.39	250.26	14.12	18.720		
3,000.00	2,961.53	2,969.29	2,966.87	11.44	10.22	166.37	-66.49	3.86	292.47	277.84	14.63	19.995		
3,100.00	3,056.78	3,065.26	3,062.61	11.98	10.56	166.44	-72.63	6.54	320.55	305.42	15.13	21.180		
3,200.00	3,152.03	3,161.24	3,158.35	12.52	10.91	166.50	-78.78	9.21	348.63	332.99	15.65	22.284		
3,300.00	3,247.28	3,257.21	3,254.09	13.08	11.25	166.55	-84.92	11.88	376.72	360.56	16.16	23.314		
3,400.00	3,342.54	3,353.19	3,349.83	13.64	11.60	166.59	-91.06	14.56	404.80	388.13	16.67	24.277		
3,500.00	3,437.79	3,449.16	3,445.57	14.21	11.94	166.63	-97.20	17.23	432.89	415.69	17.19	25.179		
3,600.00	3,533.04	3,545.14	3,541.32	14.78	12.29	166.66	-103.34	19.91	460.97	443.26	17.71	26.025		
3,700.00	3,628.29	3,641.11	3,637.06	15.36	12.64	166.69	-109.48	22.58	489.05	470.82	18.23	26.820		
3,800.00	3,723.54	3,737.09	3,732.80	15.94	12.99	166.72	-115.63	25.25	517.14	498.38	18.76	27.568		
3,900.00	3,818.79	3,833.06	3,828.54	16.52	13.34	166.74	-121.77	27.93	545.22	525.94	19.28	28.273		
4,000.00	3,914.04	3,929.04	3,924.28	17.11	13.69	166.76	-127.91	30.60	573.31	553.49	19.81	28.939		
4,100.00	4,009.29	4,025.01	4,020.02	17.69	14.04	166.78	-134.05	33.28	601.39	581.05	20.34	29.568		
4,200.00	4,104.54	4,120.99	4,115.76	18.29	14.39	166.80	-140.19	35.95	629.47	608.61	20.87	30.164		
4,300.00	4,199.79	4,216.96	4,211.50	18.88	14.74	166.82	-146.33	38.62	657.56	636.16	21.40	30.728		
4,400.00	4,295.04	4,312.94	4,307.24	19.48	15.09	166.83	-152.48	41.30	685.64	663.71	21.93	31.263		
4,500.00	4,390.29	4,408.91	4,402.99	20.08	15.45	166.85	-158.62	43.97	713.73	691.26	22.46	31.772		
4,600.00	4,485.55	4,504.89	4,498.73	20.68	15.80	166.86	-164.76	46.64	741.81	718.82	23.00	32.256		
4,700.00	4,580.80	4,600.86	4,594.47	21.28	16.15	166.87	-170.90	49.32	769.90	746.37	23.53	32.716		
4,800.00	4,676.05	4,696.84	4,690.21	21.88	16.51	166.88	-177.04	51.99	797.98	773.91	24.07	33.155		
4,900.00	4,771.30	4,792.81	4,785.95	22.48	16.86	166.89	-183.18	54.67	826.07	801.46	24.60	33.574		
5,000.00	4,866.55	4,888.79	4,881.69	23.09	17.21	166.90	-189.33	57.34	854.15	829.01	25.14	33.974		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,984.76	4,977.43	23.70	17.57	166.91	-195.47	60.01	882.24	856.56	25.68	34.356		
5,200.00	5,057.05	5,080.74	5,073.17	24.30	17.92	166.92	-201.61	62.69	910.32	884.10	26.22	34.721		
5,300.00	5,152.30	5,176.71	5,168.91	24.91	18.28	166.93	-207.75	65.36	938.41	911.65	26.76	35.071		
5,400.00	5,247.55	5,272.69	5,264.66	25.52	18.64	166.93	-213.89	68.04	966.49	939.19	27.30	35.407		
5,500.00	5,342.80	5,368.67	5,360.40	26.13	18.99	166.94	-220.03	70.71	994.58	966.74	27.84	35.729		
5,600.00	5,438.05	5,464.64	5,456.14	26.74	19.35	166.95	-226.18	73.38	1,022.66	994.28	28.38	36.037		
5,700.00	5,533.30	5,560.62	5,551.88	27.36	19.70	166.95	-232.32	76.06	1,050.75	1,021.83	28.92	36.334		
5,800.00	5,628.56	5,656.59	5,647.62	27.97	20.06	166.96	-238.46	78.73	1,078.83	1,049.37	29.46	36.619		
5,900.00	5,723.81	5,752.57	5,743.36	28.58	20.42	166.96	-244.60	81.41	1,106.92	1,076.91	30.00	36.893		
6,000.00	5,819.06	5,848.54	5,839.10	29.20	20.77	166.97	-250.74	84.08	1,135.00	1,104.45	30.55	37.157		
6,100.00	5,914.31	5,944.52	5,934.84	29.81	21.13	166.97	-256.88	86.75	1,163.08	1,132.00	31.09	37.412		
6,200.00	6,009.56	6,040.49	6,030.58	30.43	21.49	166.98	-263.03	89.43	1,191.17	1,159.54	31.63	37.657		
6,300.00	6,104.81	6,136.47	6,126.33	31.04	21.85	166.98	-269.17	92.10	1,219.25	1,187.08	32.18	37.893		
6,400.00	6,200.06	6,232.44	6,222.07	31.66	22.20	166.99	-275.31	94.78	1,247.34	1,214.62	32.72	38.121		
6,500.00	6,295.31	6,328.42	6,317.81	32.27	22.56	166.99	-281.45	97.45	1,275.42	1,242.16	33.27	38.341		
6,600.00	6,390.56	6,422.04	6,411.21	32.89	22.91	167.00	-287.35	100.02	1,303.54	1,269.74	33.80	38.569		
6,700.00	6,485.81	6,510.32	6,499.37	33.51	23.23	167.08	-291.48	101.81	1,332.07	1,297.77	34.30	38.841		
6,800.00	6,581.06	6,600.00	6,589.02	34.13	23.55	167.24	-293.75	102.81	1,361.16	1,326.37	34.79	39.124		
6,848.89	6,627.63	6,640.95	6,629.96	34.43	23.69	167.34	-294.15	102.98	1,375.59	1,340.58	35.01	39.290		
6,900.00	6,676.45	6,687.94	6,676.95	34.74	23.85	167.54	-294.20	103.00	1,390.37	1,355.11	35.26	39.434		
7,000.00	6,772.71	6,784.20	6,773.21	35.31	24.17	167.89	-294.20	103.00	1,416.86	1,381.11	35.76	39.626		
7,100.00	6,869.86	6,881.34	6,870.36	35.84	24.49	168.18	-294.20	103.00	1,440.07	1,403.82	36.25	39.725		
7,200.00	6,967.77	6,979.26	6,968.27	36.33	24.81	168.43	-294.20	103.00	1,459.96	1,423.21	36.74	39.733		
7,300.00	7,066.34	7,077.82	7,066.84	36.77	25.14	168.63	-294.20	103.00	1,476.49	1,439.25	37.23	39.655		
7,400.00	7,165.43	7,176.91	7,165.93	37.17	25.47	168.78	-294.20	103.00	1,489.64	1,451.92	37.72	39.494		
7,500.00	7,264.93	7,276.41	7,265.43	37.52	25.80	168.89	-294.20	103.00	1,499.40	1,461.20	38.20	39.253		
7,600.00	7,364.71	7,376.20	7,365.21	37.84	26.14	168.96	-294.20	103.00	1,505.74	1,467.07	38.67	38.936		
7,700.00	7,464.66	7,476.15	7,465.16	38.12	26.47	169.00	-294.20	103.00	1,508.67	1,469.53	39.14	38.546		
7,735.34	7,500.00	7,511.49	7,500.50	38.21	26.59	-97.78	-294.20	103.00	1,508.88	1,469.58	39.30	38.393		
7,800.00	7,564.66	7,576.15	7,565.16	38.37	26.81	-97.78	-294.20	103.00	1,508.88	1,469.29	39.59	38.108		
7,900.00	7,664.66	7,676.15	7,665.16	38.61	27.14	-97.78	-294.20	103.00	1,508.88	1,468.83	40.05	37.676		
7,942.38	7,707.04	7,718.53	7,707.54	38.72	27.29	-97.78	-294.20	103.00	1,508.88	1,468.64	40.24	37.495		
7,950.00	7,714.66	7,726.15	7,715.16	38.74	27.31	-97.23	-294.20	103.00	1,508.89	1,468.61	40.28	37.463		
8,000.00	7,764.57	7,776.05	7,765.07	38.86	27.48	-97.30	-294.20	103.00	1,509.25	1,468.74	40.51	37.259		
8,050.00	7,814.03	7,825.52	7,814.53	38.98	27.65	-97.48	-294.20	103.00	1,510.18	1,469.44	40.74	37.069		
8,100.00	7,862.68	7,874.17	7,863.18	39.09	27.81	-97.74	-294.20	103.00	1,511.74	1,470.77	40.97	36.896		
8,150.00	7,910.15	7,921.64	7,910.65	39.20	27.97	-98.08	-294.20	103.00	1,514.02	1,472.81	41.21	36.742		
8,200.00	7,956.07	7,967.56	7,956.57	39.30	28.13	-98.45	-294.20	103.00	1,517.10	1,475.66	41.44	36.610		
8,250.00	8,000.10	8,011.58	8,000.60	39.39	28.28	-98.83	-294.20	103.00	1,521.13	1,479.47	41.67	36.505		
8,300.00	8,041.89	8,053.38	8,042.39	39.48	28.42	-99.18	-294.20	103.00	1,526.25	1,484.35	41.90	36.430		
8,350.00	8,081.14	8,092.62	8,081.64	39.56	28.55	-99.45	-294.20	103.00	1,532.59	1,490.48	42.12	36.389		
8,400.00	8,117.54	8,129.02	8,118.04	39.63	28.67	-99.61	-294.20	103.00	1,540.31	1,497.98	42.33	36.387		
8,450.00	8,150.81	8,162.30	8,151.31	39.69	28.79	-99.61	-294.20	103.00	1,549.53	1,506.99	42.54	36.426		
8,500.00	8,180.71	8,192.20	8,181.21	39.75	28.89	-99.40	-294.20	103.00	1,560.36	1,517.63	42.74	36.512		
8,550.00	8,207.00	8,218.49	8,207.50	39.80	28.98	-98.96	-294.20	103.00	1,572.89	1,529.97	42.92	36.646		
8,600.00	8,229.49	8,240.98	8,229.99	39.85	29.05	-98.24	-294.20	103.00	1,587.17	1,544.08	43.09	36.831		
8,650.00	8,248.00	8,259.49	8,248.50	39.91	29.12	-97.20	-294.20	103.00	1,603.21	1,559.96	43.25	37.070		
8,700.00	8,262.40	8,273.89	8,262.90	39.96	29.17	-95.84	-294.20	103.00	1,620.97	1,577.58	43.39	37.362		
8,750.00	8,272.57	8,284.05	8,273.07	40.02	29.20	-94.12	-294.20	103.00	1,640.37	1,596.86	43.50	37.707		
8,800.00	8,278.43	8,289.92	8,278.93	40.08	29.22	-92.04	-294.20	103.00	1,661.29	1,617.69	43.60	38.105		
8,842.38	8,280.00	8,291.48	8,280.50	40.15	29.23	-90.00	-294.20	103.00	1,680.09	1,636.42	43.66	38.481		
8,900.00	8,280.00	8,291.48	8,280.50	40.25	29.23	-90.00	-294.20	103.00	1,707.02	1,663.29	43.73	39.032		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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						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		
9,000.00	8,280.00	8,291.48	8,280.50	40.47	29.23	-90.00	-294.20	103.00	1,757.28	1,713.42	43.86	40.066		
9,100.00	8,280.00	8,291.48	8,280.50	40.75	29.23	-90.00	-294.20	103.00	1,811.67	1,767.69	43.98	41.193		
9,200.00	8,280.00	8,291.48	8,280.50	41.10	29.23	-90.00	-294.20	103.00	1,869.83	1,825.74	44.09	42.407		
9,300.00	8,280.00	8,291.48	8,280.50	41.51	29.23	-90.00	-294.20	103.00	1,931.42	1,887.22	44.20	43.699		
9,400.00	8,280.00	8,291.48	8,280.50	42.00	29.23	-90.00	-294.20	103.00	1,996.12	1,951.82	44.30	45.062		
9,500.00	8,280.00	8,291.48	8,280.50	42.55	29.23	-90.00	-294.20	103.00	2,063.63	2,019.25	44.39	46.491		
9,600.00	8,280.00	8,291.48	8,280.50	43.17	29.23	-90.00	-294.20	103.00	2,133.70	2,089.23	44.47	47.977		
9,700.00	8,280.00	8,291.48	8,280.50	43.85	29.23	-90.00	-294.20	103.00	2,206.08	2,161.53	44.55	49.517		
9,800.00	8,280.00	11,391.63	9,906.00	44.60	42.63	-137.36	1,426.28	86.64	2,209.72	2,161.29	48.42	45.633		
9,900.00	8,280.00	11,491.63	9,906.00	45.41	43.62	-137.36	1,526.28	85.69	2,209.72	2,160.18	49.54	44.607		
10,000.00	8,280.00	11,591.63	9,906.00	46.27	44.64	-137.36	1,626.27	84.74	2,209.71	2,159.03	50.69	43.593		
10,100.00	8,280.00	11,691.63	9,906.00	47.19	45.71	-137.36	1,726.27	83.79	2,209.71	2,157.84	51.88	42.596		
10,200.00	8,280.00	11,791.63	9,906.00	48.15	46.81	-137.36	1,826.26	82.84	2,209.71	2,156.62	53.10	41.618		
10,300.00	8,280.00	11,891.63	9,906.00	49.16	47.94	-137.36	1,926.26	81.89	2,209.71	2,155.37	54.34	40.661		
10,400.00	8,280.00	11,991.63	9,906.00	50.20	49.09	-137.36	2,026.25	80.94	2,209.71	2,154.09	55.62	39.729		
10,500.00	8,280.00	12,091.63	9,906.00	51.29	50.28	-137.36	2,126.25	79.99	2,209.71	2,152.79	56.92	38.821		
10,600.00	8,280.00	12,191.63	9,906.00	52.41	51.49	-137.36	2,226.24	79.04	2,209.71	2,151.47	58.25	37.938		
10,700.00	8,280.00	12,291.63	9,906.00	53.56	52.73	-137.36	2,326.24	78.08	2,209.71	2,150.12	59.59	37.080		
10,800.00	8,280.00	12,391.63	9,906.00	54.74	53.99	-137.36	2,426.23	77.13	2,209.71	2,148.75	60.96	36.247		
10,900.00	8,280.00	12,491.63	9,906.00	55.95	55.27	-137.36	2,526.23	76.18	2,209.71	2,147.36	62.35	35.440		
11,000.00	8,280.00	12,591.63	9,906.00	57.18	56.57	-137.36	2,626.23	75.23	2,209.71	2,145.95	63.76	34.658		
11,100.00	8,280.00	12,691.63	9,906.00	58.43	57.88	-137.36	2,726.22	74.28	2,209.71	2,144.53	65.18	33.900		
11,200.00	8,280.00	12,791.63	9,906.00	59.71	59.22	-137.36	2,826.22	73.33	2,209.71	2,143.08	66.62	33.167		
11,300.00	8,280.00	12,891.63	9,906.00	61.00	60.57	-137.36	2,926.21	72.38	2,209.71	2,141.63	68.08	32.459		
11,400.00	8,280.00	12,991.63	9,906.00	62.31	61.93	-137.36	3,026.21	71.43	2,209.71	2,140.16	69.55	31.774		
11,500.00	8,280.00	13,091.63	9,906.00	63.64	63.31	-137.36	3,126.20	70.48	2,209.71	2,138.68	71.03	31.110		
11,600.00	8,280.00	13,191.63	9,906.00	64.99	64.70	-137.36	3,226.20	69.53	2,209.71	2,137.18	72.52	30.469		
11,700.00	8,280.00	13,291.63	9,906.00	66.35	66.10	-137.36	3,326.19	68.58	2,209.71	2,135.68	74.03	29.850		
11,800.00	8,280.00	13,391.63	9,906.00	67.72	67.52	-137.36	3,426.19	67.63	2,209.70	2,134.16	75.54	29.252		
11,900.00	8,280.00	13,491.63	9,906.00	69.11	68.94	-137.36	3,526.18	66.68	2,209.70	2,132.64	77.07	28.673		
12,000.00	8,280.00	13,591.63	9,906.00	70.51	70.37	-137.36	3,626.18	65.72	2,209.70	2,131.10	78.60	28.113		
12,100.00	8,280.00	13,691.63	9,906.00	71.92	71.82	-137.36	3,726.18	64.77	2,209.70	2,129.56	80.15	27.571		
12,200.00	8,280.00	13,791.63	9,906.00	73.34	73.27	-137.36	3,826.17	63.82	2,209.70	2,128.01	81.69	27.048		
12,300.00	8,280.00	13,891.63	9,906.00	74.77	74.73	-137.36	3,926.17	62.87	2,209.70	2,126.45	83.25	26.542		
12,400.00	8,280.00	13,991.63	9,906.00	76.21	76.20	-137.36	4,026.16	61.92	2,209.70	2,124.88	84.82	26.052		
12,500.00	8,280.00	14,091.63	9,906.00	77.65	77.68	-137.36	4,126.16	60.97	2,209.70	2,123.31	86.39	25.577		
12,600.00	8,280.00	14,191.63	9,906.00	79.11	79.16	-137.36	4,226.15	60.02	2,209.70	2,121.73	87.97	25.118		
12,700.00	8,280.00	14,291.63	9,906.00	80.57	80.65	-137.36	4,326.15	59.07	2,209.70	2,120.14	89.56	24.673		
12,800.00	8,280.00	14,391.63	9,906.00	82.04	82.14	-137.36	4,426.14	58.12	2,209.70	2,118.55	91.15	24.243		
12,900.00	8,280.00	14,491.63	9,906.00	83.52	83.65	-137.36	4,526.14	57.17	2,209.70	2,116.95	92.75	23.825		
13,000.00	8,280.00	14,591.63	9,906.00	85.01	85.15	-137.36	4,626.14	56.22	2,209.70	2,115.35	94.35	23.421		
13,100.00	8,280.00	14,691.63	9,906.00	86.50	86.67	-137.36	4,726.13	55.27	2,209.70	2,113.75	95.95	23.029		
13,200.00	8,280.00	14,791.63	9,906.00	87.99	88.18	-137.36	4,826.13	54.32	2,209.70	2,112.13	97.56	22.649		
13,300.00	8,280.00	14,891.63	9,906.00	89.50	89.71	-137.36	4,926.12	53.36	2,209.70	2,110.52	99.18	22.280		
13,400.00	8,280.00	14,991.63	9,906.00	91.00	91.23	-137.36	5,026.12	52.41	2,209.70	2,108.90	100.80	21.922		
13,500.00	8,280.00	15,091.63	9,906.00	92.52	92.77	-137.36	5,126.11	51.46	2,209.70	2,107.28	102.42	21.575		
13,600.00	8,280.00	15,191.63	9,906.00	94.03	94.30	-137.36	5,226.11	50.51	2,209.69	2,105.65	104.04	21.238		
13,700.00	8,280.00	15,291.63	9,906.00	95.56	95.84	-137.36	5,326.10	49.56	2,209.69	2,104.02	105.67	20.911		
13,800.00	8,280.00	15,391.63	9,906.00	97.08	97.38	-137.36	5,426.10	48.61	2,209.69	2,102.39	107.31	20.592		
13,900.00	8,280.00	15,491.63	9,906.00	98.61	98.93	-137.36	5,526.09	47.66	2,209.69	2,100.75	108.94	20.283		
14,000.00	8,280.00	15,591.63	9,906.00	100.15	100.48	-137.36	5,626.09	46.71	2,209.69	2,099.11	110.58	19.983		
14,100.00	8,280.00	15,691.63	9,906.00	101.69	102.03	-137.36	5,726.09	45.76	2,209.69	2,097.47	112.22	19.690		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	15,791.63	9,906.00	103.23	103.59	-137.36	5,826.08	44.81	2,209.69	2,095.83	113.87	19.406		
14,300.00	8,280.00	15,891.63	9,906.00	104.77	105.15	-137.36	5,926.08	43.86	2,209.69	2,094.18	115.51	19.130		
14,400.00	8,280.00	15,991.63	9,906.00	106.32	106.71	-137.36	6,026.07	42.91	2,209.69	2,092.53	117.16	18.861		
14,500.00	8,280.00	16,091.63	9,906.00	107.87	108.27	-137.36	6,126.07	41.96	2,209.69	2,090.88	118.81	18.599		
14,600.00	8,280.00	16,191.63	9,906.00	109.43	109.84	-137.36	6,226.06	41.01	2,209.69	2,089.23	120.46	18.343		
14,700.00	8,280.00	16,291.63	9,906.00	110.98	111.41	-137.36	6,326.06	40.05	2,209.69	2,087.57	122.11	18.095		
14,800.00	8,280.00	16,391.63	9,906.00	112.54	112.98	-137.36	6,426.05	39.10	2,209.69	2,085.92	123.77	17.853		
14,900.00	8,280.00	16,491.63	9,906.00	114.10	114.56	-137.36	6,526.05	38.15	2,209.69	2,084.26	125.43	17.617		
15,000.00	8,280.00	16,591.63	9,906.00	115.67	116.13	-137.36	6,626.04	37.20	2,209.69	2,082.60	127.09	17.387		
15,100.00	8,280.00	16,691.63	9,906.00	117.24	117.71	-137.36	6,726.04	36.25	2,209.69	2,080.94	128.75	17.163		
15,200.00	8,280.00	16,791.63	9,906.00	118.81	119.29	-137.36	6,826.04	35.30	2,209.69	2,079.27	130.41	16.944		
15,300.00	8,280.00	16,891.63	9,906.00	120.38	120.87	-137.36	6,926.03	34.35	2,209.69	2,077.61	132.07	16.731		
15,400.00	8,280.00	16,991.63	9,906.00	121.95	122.46	-137.36	7,026.03	33.40	2,209.68	2,075.95	133.74	16.522		
15,500.00	8,280.00	17,091.63	9,906.00	123.53	124.04	-137.36	7,126.02	32.45	2,209.68	2,074.28	135.41	16.319		
15,600.00	8,280.00	17,191.63	9,906.00	125.11	125.63	-137.36	7,226.02	31.50	2,209.68	2,072.61	137.07	16.120		
15,700.00	8,280.00	17,291.63	9,906.00	126.69	127.22	-137.36	7,326.01	30.55	2,209.68	2,070.94	138.74	15.927		
15,800.00	8,280.00	17,391.63	9,906.00	128.27	128.81	-137.36	7,426.01	29.60	2,209.68	2,069.27	140.41	15.737		
15,900.00	8,280.00	17,491.63	9,906.00	129.85	130.40	-137.36	7,526.00	28.65	2,209.68	2,067.60	142.08	15.552		
16,000.00	8,280.00	17,591.63	9,906.00	131.44	132.00	-137.36	7,626.00	27.69	2,209.68	2,065.93	143.75	15.372		
16,100.00	8,280.00	17,691.63	9,906.00	133.02	133.59	-137.36	7,725.99	26.74	2,209.68	2,064.26	145.42	15.195		
16,200.00	8,280.00	17,791.63	9,906.00	134.61	135.19	-137.36	7,825.99	25.79	2,209.68	2,062.58	147.10	15.022		
16,300.00	8,280.00	17,891.63	9,906.00	136.20	136.79	-137.36	7,925.99	24.84	2,209.68	2,060.91	148.77	14.853		
16,400.00	8,280.00	17,991.63	9,906.00	137.79	138.39	-137.36	8,025.98	23.89	2,209.68	2,059.24	150.44	14.688		
16,500.00	8,280.00	18,091.63	9,906.00	139.39	139.99	-137.36	8,125.98	22.94	2,209.68	2,057.56	152.12	14.526		
16,600.00	8,280.00	18,191.63	9,906.00	140.98	141.59	-137.36	8,225.97	21.99	2,209.68	2,055.88	153.79	14.368		
16,700.00	8,280.00	18,291.63	9,906.00	142.58	143.19	-137.36	8,325.97	21.04	2,209.68	2,054.21	155.47	14.213		
16,800.00	8,280.00	18,391.63	9,906.00	144.17	144.80	-137.36	8,425.96	20.09	2,209.68	2,052.53	157.15	14.061		
16,900.00	8,280.00	18,491.63	9,906.00	145.77	146.40	-137.36	8,525.96	19.14	2,209.68	2,050.85	158.82	13.913		
17,000.00	8,280.00	18,591.63	9,906.00	147.37	148.01	-137.36	8,625.95	18.19	2,209.68	2,049.18	160.50	13.767		
17,100.00	8,280.00	18,691.63	9,906.00	148.97	149.62	-137.36	8,725.95	17.24	2,209.68	2,047.50	162.18	13.625		
17,200.00	8,280.00	18,791.63	9,906.00	150.57	151.22	-137.36	8,825.95	16.29	2,209.67	2,045.82	163.86	13.485		
17,300.00	8,280.00	18,891.63	9,906.00	152.18	152.83	-137.36	8,925.94	15.33	2,209.67	2,044.14	165.54	13.349		
17,400.00	8,280.00	18,991.63	9,906.00	153.78	154.44	-137.36	9,025.94	14.38	2,209.67	2,042.46	167.21	13.215		
17,500.00	8,280.00	19,091.63	9,906.00	155.38	156.05	-137.36	9,125.93	13.43	2,209.67	2,040.78	168.89	13.083		
17,600.00	8,280.00	19,191.63	9,906.00	156.99	157.67	-137.36	9,225.93	12.48	2,209.67	2,039.10	170.57	12.955		
17,700.00	8,280.00	19,291.63	9,906.00	158.60	159.28	-137.36	9,325.92	11.53	2,209.67	2,037.42	172.25	12.828		
17,800.00	8,280.00	19,391.63	9,906.00	160.20	160.89	-137.36	9,425.92	10.58	2,209.67	2,035.74	173.93	12.704		
17,900.00	8,280.00	19,491.63	9,906.00	161.81	162.51	-137.36	9,525.91	9.63	2,209.67	2,034.06	175.61	12.583		
18,000.00	8,280.00	19,591.63	9,906.00	163.42	164.12	-137.36	9,625.91	8.68	2,209.67	2,032.38	177.29	12.464		
18,100.00	8,280.00	19,691.63	9,906.00	165.03	165.74	-137.36	9,725.90	7.73	2,209.67	2,030.70	178.97	12.347		
18,200.00	8,280.00	19,791.63	9,906.00	166.64	167.35	-137.36	9,825.90	6.78	2,209.67	2,029.02	180.65	12.232		
18,300.00	8,280.00	19,891.63	9,906.00	168.25	168.97	-137.36	9,925.90	5.83	2,209.67	2,027.34	182.33	12.119		
18,400.00	8,280.00	19,991.63	9,906.00	169.87	170.59	-137.36	10,025.89	4.88	2,209.67	2,025.66	184.01	12.008		
18,438.77	8,280.00	20,030.40	9,906.00	170.49	171.21	-137.36	10,064.66	4.51	2,209.67	2,025.00	184.66	11.966		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	0.50	0.50	0.00	0.00	89.54	0.20	24.99	24.99					
100.00	100.00	100.50	100.50	0.13	0.13	89.54	0.20	24.99	24.99	24.81	0.18	139.843		
200.00	200.00	200.50	200.50	0.48	0.49	89.54	0.20	24.99	24.99	24.31	0.69	36.448		
300.00	300.00	300.50	300.50	0.84	0.84	89.54	0.20	24.99	24.99	23.80	1.19	20.955		
400.00	400.00	400.50	400.50	1.20	1.20	89.54	0.20	24.99	24.99	23.29	1.70	14.704		
500.00	500.00	500.50	500.50	1.56	1.56	89.54	0.20	24.99	24.99	22.78	2.21	11.326		
600.00	600.00	600.50	600.50	1.92	1.92	89.54	0.20	24.99	24.99	22.28	2.71	9.210		
700.00	700.00	700.50	700.50	2.28	2.28	89.54	0.20	24.99	24.99	21.77	3.22	7.760		
800.00	800.00	800.50	800.50	2.63	2.64	89.54	0.20	24.99	24.99	21.26	3.73	6.705		
900.00	900.00	900.50	900.50	2.99	3.00	89.54	0.20	24.99	24.99	20.76	4.23	5.902		
1,000.00	1,000.00	1,000.50	1,000.50	3.35	3.35	89.54	0.20	24.99	24.99	20.25	4.74	5.271		
1,100.00	1,100.00	1,100.50	1,100.50	3.71	3.71	89.54	0.20	24.99	24.99	19.74	5.25	4.762		
1,200.00	1,200.00	1,200.50	1,200.50	4.07	4.07	89.54	0.20	24.99	24.99	19.24	5.76	4.342		
1,300.00	1,300.00	1,300.50	1,300.50	4.43	4.43	89.54	0.20	24.99	24.99	18.73	6.26	3.991		
1,316.50	1,316.50	1,317.00	1,317.00	4.49	4.49	89.54	0.20	24.99	24.99	18.64	6.35	3.938 CC		
1,400.00	1,400.00	1,400.50	1,400.50	4.79	4.79	89.54	0.20	24.99	24.99	18.22	6.77	3.692		
1,500.00	1,500.00	1,500.00	1,499.98	5.14	5.13	90.00	0.00	26.72	26.73	19.46	7.27	3.678		
1,600.00	1,600.00	1,598.46	1,598.30	5.50	5.47	91.06	-0.59	31.82	31.90	24.16	7.74	4.120		
1,700.00	1,699.98	1,697.01	1,696.48	5.85	5.81	-1.04	-1.57	40.27	38.76	30.56	8.20	4.725		
1,800.00	1,799.84	1,795.33	1,794.08	6.20	6.16	0.00	-2.93	52.04	45.58	36.93	8.65	5.269		
1,900.00	1,899.45	1,893.42	1,890.99	6.54	6.52	0.98	-4.67	67.10	52.34	43.25	9.09	5.759		
2,000.00	1,998.70	1,991.29	1,987.10	6.90	6.90	1.92	-6.79	85.39	59.05	49.53	9.52	6.203		
2,100.00	2,097.47	2,088.94	2,082.32	7.26	7.29	2.84	-9.28	106.89	65.69	55.75	9.94	6.608		
2,200.00	2,195.62	2,187.24	2,177.42	7.64	7.71	3.76	-12.13	131.56	72.06	61.67	10.39	6.937		
2,300.00	2,293.06	2,287.16	2,273.92	8.04	8.15	4.73	-15.11	157.32	75.68	64.79	10.89	6.950		
2,400.00	2,389.64	2,387.14	2,370.48	8.46	8.61	5.88	-18.09	183.09	75.85	64.45	11.40	6.654		
2,486.44	2,472.37	2,473.53	2,453.91	8.85	9.01	7.14	-20.67	205.36	73.23	61.39	11.84	6.184		
2,500.00	2,485.28	2,487.07	2,466.98	8.92	9.08	7.36	-21.07	208.85	72.62	60.71	11.91	6.096		
2,600.00	2,580.53	2,586.94	2,563.43	9.39	9.55	9.15	-24.05	234.60	68.16	55.72	12.44	5.481		
2,700.00	2,675.78	2,686.82	2,659.89	9.88	10.04	11.18	-27.03	260.35	63.77	50.80	12.97	4.917		
2,800.00	2,771.03	2,786.70	2,756.34	10.39	10.53	13.51	-30.01	286.10	59.47	45.95	13.51	4.401		
2,900.00	2,866.28	2,886.57	2,852.80	10.91	11.03	16.19	-32.99	311.85	55.28	41.21	14.08	3.927		
3,000.00	2,961.53	2,986.45	2,949.25	11.44	11.54	19.31	-35.97	337.59	51.24	36.58	14.66	3.494		
3,100.00	3,056.78	3,086.32	3,045.71	11.98	12.05	22.94	-38.95	363.34	47.37	32.09	15.28	3.100		
3,200.00	3,152.03	3,186.20	3,142.16	12.52	12.57	27.21	-41.93	389.09	43.73	27.78	15.95	2.742		
3,300.00	3,247.28	3,286.08	3,238.61	13.08	13.09	32.21	-44.91	414.84	40.37	23.70	16.68	2.421		
3,400.00	3,342.54	3,385.95	3,335.07	13.64	13.61	38.06	-47.89	440.59	37.38	19.89	17.49	2.137		
3,500.00	3,437.79	3,485.83	3,431.52	14.21	14.13	44.85	-50.86	466.33	34.84	16.43	18.41	1.893		
3,600.00	3,533.04	3,585.71	3,527.98	14.78	14.66	52.57	-53.84	492.08	32.86	13.42	19.44	1.690		
3,700.00	3,628.29	3,685.58	3,624.43	15.36	15.19	61.10	-56.82	517.83	31.54	10.96	20.58	1.533		
3,800.00	3,723.54	3,785.46	3,720.89	15.94	15.72	70.16	-59.80	543.58	30.98	9.21	21.77	1.423 Level 3		
3,821.11	3,743.65	3,806.55	3,741.25	16.06	15.83	72.10	-60.43	549.02	30.96	8.94	22.02	1.406 Level 3		
3,900.00	3,818.79	3,885.34	3,817.34	16.52	16.26	79.31	-62.78	569.33	31.21	8.29	22.92	1.362 Level 3		
4,000.00	3,914.04	3,985.21	3,913.80	17.11	16.79	88.11	-65.76	595.08	32.22	8.29	23.93	1.346 Level 3, ES, SF		
4,100.00	4,009.29	4,085.09	4,010.25	17.69	17.33	96.20	-68.74	620.82	33.93	9.18	24.75	1.371 Level 3		
4,200.00	4,104.54	4,184.96	4,106.70	18.29	17.87	103.38	-71.72	646.57	36.24	10.85	25.39	1.427 Level 3		
4,300.00	4,199.79	4,284.84	4,203.16	18.88	18.41	109.62	-74.70	672.32	39.06	13.14	25.92	1.507		
4,400.00	4,295.04	4,384.72	4,299.61	19.48	18.95	114.97	-77.68	698.07	42.27	15.89	26.39	1.602		
4,500.00	4,390.29	4,484.59	4,396.07	20.08	19.49	119.53	-80.66	723.82	45.81	18.98	26.83	1.707		
4,600.00	4,485.55	4,584.47	4,492.52	20.68	20.03	123.42	-83.64	749.56	49.58	22.32	27.27	1.818		
4,700.00	4,580.80	4,684.35	4,588.98	21.28	20.58	126.75	-86.61	775.31	53.56	25.84	27.71	1.933		
4,800.00	4,676.05	4,784.22	4,685.43	21.88	21.12	129.60	-89.59	801.06	57.69	29.52	28.17	2.048		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
4,900.00	4,771.30	4,884.10	4,781.88	22.48	21.67	132.07	-92.57	826.81	61.94	33.30	28.64	2.163		
5,000.00	4,866.55	4,983.97	4,878.34	23.09	22.22	134.22	-95.55	852.56	66.29	37.17	29.13	2.276		
5,100.00	4,961.80	5,083.85	4,974.79	23.70	22.76	136.11	-98.53	878.30	70.73	41.10	29.62	2.388		
5,200.00	5,057.05	5,183.73	5,071.25	24.30	23.31	137.77	-101.51	904.05	75.23	45.10	30.13	2.497		
5,300.00	5,152.30	5,283.60	5,167.70	24.91	23.86	139.24	-104.49	929.80	79.79	49.14	30.65	2.603		
5,400.00	5,247.55	5,383.48	5,264.16	25.52	24.41	140.55	-107.47	955.55	84.39	53.22	31.18	2.707		
5,500.00	5,342.80	5,483.36	5,360.61	26.13	24.96	141.72	-110.45	981.30	89.03	57.32	31.71	2.808		
5,600.00	5,438.05	5,583.23	5,457.06	26.74	25.51	142.78	-113.43	1,007.05	93.71	61.46	32.25	2.906		
5,700.00	5,533.30	5,683.11	5,553.52	27.36	26.06	143.74	-116.41	1,032.79	98.42	65.62	32.80	3.001		
5,800.00	5,628.56	5,782.99	5,649.97	27.97	26.61	144.61	-119.38	1,058.54	103.15	69.80	33.35	3.093		
5,900.00	5,723.81	5,882.86	5,746.43	28.58	27.16	145.40	-122.36	1,084.29	107.90	73.99	33.91	3.182		
6,000.00	5,819.06	5,982.74	5,842.88	29.20	27.71	146.13	-125.34	1,110.04	112.68	78.20	34.47	3.268		
6,100.00	5,914.31	6,082.61	5,939.34	29.81	28.27	146.80	-128.32	1,135.79	117.46	82.42	35.04	3.352		
6,200.00	6,009.56	6,182.49	6,035.79	30.43	28.82	147.41	-131.30	1,161.53	122.27	86.66	35.61	3.434		
6,300.00	6,104.81	6,282.37	6,132.24	31.04	29.37	147.98	-134.28	1,187.28	127.08	90.90	36.18	3.512		
6,400.00	6,200.06	6,382.24	6,228.70	31.66	29.92	148.51	-137.26	1,213.03	131.91	95.15	36.76	3.589		
6,500.00	6,295.31	6,482.12	6,325.15	32.27	30.48	149.00	-140.24	1,238.78	136.75	99.41	37.34	3.663		
6,600.00	6,390.56	6,582.00	6,421.61	32.89	31.03	149.45	-143.22	1,264.53	141.60	103.68	37.92	3.735		
6,700.00	6,485.81	6,681.87	6,518.06	33.51	31.58	149.88	-146.20	1,290.27	146.45	107.96	38.50	3.804		
6,800.00	6,581.06	6,781.75	6,614.52	34.13	32.14	150.28	-149.18	1,316.02	151.32	112.24	39.08	3.872		
6,848.89	6,627.63	6,830.58	6,661.68	34.43	32.41	150.46	-150.63	1,328.61	153.70	114.33	39.37	3.904		
6,900.00	6,676.45	6,881.64	6,710.99	34.74	32.69	150.59	-152.16	1,341.78	155.79	116.11	39.68	3.926		
7,000.00	6,772.71	6,981.62	6,807.54	35.31	33.25	150.34	-155.14	1,367.55	157.59	117.23	40.36	3.905		
7,100.00	6,869.86	7,081.58	6,904.07	35.84	33.80	149.42	-158.12	1,393.32	156.38	115.24	41.14	3.802		
7,200.00	6,967.77	7,181.39	7,000.47	36.33	34.36	147.78	-161.10	1,419.05	152.25	110.21	42.03	3.622		
7,300.00	7,066.34	7,280.95	7,096.61	36.77	34.91	145.25	-164.07	1,444.72	145.36	102.27	43.09	3.374		
7,400.00	7,165.43	7,380.12	7,192.38	37.17	35.46	141.57	-167.02	1,470.28	136.01	91.65	44.36	3.066		
7,500.00	7,264.93	7,478.78	7,287.67	37.52	36.01	136.28	-169.97	1,495.72	124.73	78.76	45.97	2.713		
7,600.00	7,364.71	7,575.01	7,380.87	37.84	36.53	129.29	-172.72	1,519.51	113.08	65.13	47.95	2.358		
7,700.00	7,464.66	7,671.30	7,474.85	38.12	37.01	120.88	-175.12	1,540.25	103.20	53.10	50.10	2.060		
7,735.34	7,500.00	7,705.46	7,508.37	38.21	37.18	-149.23	-175.88	1,546.86	100.27	49.39	50.88	1.971		
7,800.00	7,564.66	7,768.31	7,570.21	38.37	37.47	-155.33	-177.17	1,557.96	96.06	43.89	52.17	1.841		
7,900.00	7,664.66	7,866.40	7,667.18	38.61	37.88	-164.05	-178.86	1,572.60	92.44	38.80	53.65	1.723		
7,942.38	7,707.04	7,908.26	7,708.71	38.72	38.05	-167.30	-179.47	1,577.84	91.72	37.64	54.07	1.696		
7,949.11	7,713.77	7,914.92	7,715.32	38.74	38.08	-167.25	-179.56	1,578.62	91.68	37.54	54.13	1.694		
7,950.00	7,714.66	7,915.80	7,716.20	38.74	38.08	-167.32	-179.57	1,578.72	91.68	37.54	54.14	1.693		
8,000.00	7,764.57	7,965.27	7,765.38	38.86	38.26	-170.88	-180.18	1,584.01	94.12	39.63	54.49	1.727		
8,050.00	7,814.03	8,014.45	7,814.35	38.98	38.44	-173.98	-180.69	1,588.43	101.22	46.49	54.73	1.849		
8,100.00	7,862.68	8,062.94	7,862.72	39.09	38.60	-176.35	-181.10	1,591.97	112.80	57.91	54.89	2.055		
8,150.00	7,910.15	8,110.38	7,910.08	39.20	38.76	-177.98	-181.41	1,594.64	128.66	73.62	55.03	2.338		
8,200.00	7,956.07	8,156.39	7,956.05	39.30	38.89	-178.98	-181.63	1,596.49	148.58	93.41	55.17	2.693		
8,250.00	8,000.10	8,200.61	8,000.25	39.39	39.02	-179.50	-181.75	1,597.58	172.37	117.05	55.32	3.116		
8,300.00	8,041.89	8,242.69	8,042.33	39.48	39.13	-179.69	-181.80	1,597.98	199.83	144.37	55.46	3.603		
8,350.00	8,081.14	8,281.99	8,081.64	39.56	39.24	-179.71	-181.80	1,597.99	230.78	175.19	55.59	4.151		
8,400.00	8,117.54	8,318.39	8,118.04	39.63	39.33	-179.73	-181.80	1,597.99	265.04	209.33	55.71	4.757		
8,450.00	8,150.81	8,351.67	8,151.31	39.69	39.41	-179.74	-181.80	1,597.99	302.34	246.52	55.82	5.416		
8,500.00	8,180.71	8,381.57	8,181.21	39.75	39.49	-179.74	-181.80	1,597.99	342.39	286.48	55.92	6.123		
8,550.00	8,207.00	8,407.86	8,207.50	39.80	39.56	-179.73	-181.80	1,597.99	384.90	328.91	56.00	6.874		
8,600.00	8,229.49	8,430.35	8,229.99	39.85	39.61	-179.71	-181.80	1,597.99	429.54	373.48	56.06	7.662		
8,650.00	8,248.00	8,448.86	8,248.50	39.91	39.66	-179.68	-181.80	1,597.99	475.97	419.86	56.12	8.482		
8,700.00	8,262.40	8,463.26	8,262.90	39.96	39.70	-179.61	-181.80	1,597.99	523.84	467.68	56.16	9.328		
8,750.00	8,272.57	8,473.42	8,273.07	40.02	39.73	-179.45	-181.80	1,597.99	572.78	516.59	56.18	10.195		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
8,800.00	8,278.43	8,479.29	8,278.93	40.08	39.74	-178.90	-181.80	1,597.99	622.42	566.22	56.20	11.075		
8,842.38	8,280.00	8,480.85	8,280.50	40.15	39.74	-90.01	-181.80	1,597.99	664.75	608.55	56.20	11.827		
8,900.00	8,280.00	8,480.85	8,280.50	40.25	39.74	-90.01	-181.80	1,597.99	722.38	666.17	56.21	12.852		
9,000.00	8,280.00	8,480.85	8,280.50	40.47	39.74	-90.01	-181.80	1,597.99	822.38	766.17	56.21	14.631		
9,100.00	8,280.00	8,480.85	8,280.50	40.75	39.74	-90.01	-181.80	1,597.99	922.38	866.16	56.21	16.409		
9,200.00	8,280.00	8,480.85	8,280.50	41.10	39.74	-90.02	-181.80	1,597.99	1,022.38	966.16	56.22	18.187		
9,300.00	8,280.00	8,480.85	8,280.50	41.51	39.74	-90.02	-181.80	1,597.99	1,122.38	1,066.16	56.22	19.964		
9,400.00	8,280.00	8,480.85	8,280.50	42.00	39.74	-90.02	-181.80	1,597.99	1,222.38	1,166.15	56.22	21.741		
9,500.00	8,280.00	8,480.85	8,280.50	42.55	39.74	-90.02	-181.80	1,597.99	1,322.38	1,266.15	56.23	23.518		
9,600.00	8,280.00	8,480.85	8,280.50	43.17	39.74	-90.02	-181.80	1,597.99	1,422.38	1,366.14	56.23	25.294		
9,700.00	8,280.00	8,480.85	8,280.50	43.85	39.74	-90.02	-181.80	1,597.99	1,522.38	1,466.14	56.24	27.069		
9,800.00	8,280.00	11,393.82	9,817.00	44.60	47.96	-179.97	1,440.50	1,582.69	1,536.50	1,504.63	31.87	48.211		
9,900.00	8,280.00	11,493.82	9,817.00	45.41	48.74	-179.97	1,540.50	1,581.75	1,536.50	1,503.90	32.60	47.127		
10,000.00	8,280.00	11,593.82	9,817.00	46.27	49.57	-179.97	1,640.50	1,580.81	1,536.50	1,503.14	33.36	46.061		
10,100.00	8,280.00	11,693.82	9,817.00	47.19	50.46	-179.97	1,740.49	1,579.86	1,536.50	1,502.37	34.13	45.015		
10,200.00	8,280.00	11,793.82	9,817.00	48.15	51.38	-179.97	1,840.49	1,578.92	1,536.50	1,501.57	34.93	43.994		
10,300.00	8,280.00	11,893.82	9,817.00	49.16	52.35	-179.97	1,940.48	1,577.98	1,536.50	1,500.77	35.73	42.998		
10,400.00	8,280.00	11,993.82	9,817.00	50.20	53.36	-179.97	2,040.48	1,577.03	1,536.50	1,499.94	36.56	42.027		
10,500.00	8,280.00	12,093.82	9,817.00	51.29	54.40	-179.97	2,140.47	1,576.09	1,536.50	1,499.10	37.40	41.083		
10,600.00	8,280.00	12,193.82	9,817.00	52.41	55.48	-179.97	2,240.47	1,575.15	1,536.50	1,498.25	38.25	40.166		
10,700.00	8,280.00	12,293.82	9,817.00	53.56	56.58	-179.98	2,340.46	1,574.20	1,536.50	1,497.38	39.12	39.277		
10,800.00	8,280.00	12,393.82	9,817.00	54.74	57.72	-179.98	2,440.46	1,573.26	1,536.50	1,496.50	40.00	38.414		
10,900.00	8,280.00	12,493.82	9,817.00	55.95	58.88	-179.98	2,540.46	1,572.32	1,536.50	1,495.61	40.89	37.578		
11,000.00	8,280.00	12,593.82	9,817.00	57.18	60.06	-179.98	2,640.45	1,571.38	1,536.50	1,494.71	41.79	36.768		
11,100.00	8,280.00	12,693.82	9,817.00	58.43	61.27	-179.98	2,740.45	1,570.43	1,536.50	1,493.80	42.70	35.984		
11,200.00	8,280.00	12,793.82	9,817.00	59.71	62.50	-179.98	2,840.44	1,569.49	1,536.50	1,492.88	43.62	35.225		
11,300.00	8,280.00	12,893.82	9,817.00	61.00	63.75	-179.98	2,940.44	1,568.55	1,536.50	1,491.95	44.55	34.491		
11,400.00	8,280.00	12,993.82	9,817.00	62.31	65.02	-179.98	3,040.43	1,567.60	1,536.50	1,491.02	45.48	33.781		
11,500.00	8,280.00	13,093.82	9,817.00	63.64	66.31	-179.98	3,140.43	1,566.66	1,536.50	1,490.07	46.43	33.094		
11,600.00	8,280.00	13,193.82	9,817.00	64.99	67.61	-179.98	3,240.42	1,565.72	1,536.50	1,489.12	47.38	32.430		
11,700.00	8,280.00	13,293.82	9,817.00	66.35	68.93	-179.98	3,340.42	1,564.77	1,536.50	1,488.16	48.34	31.787		
11,800.00	8,280.00	13,393.82	9,817.00	67.72	70.27	-179.98	3,440.42	1,563.83	1,536.50	1,487.20	49.30	31.165		
11,900.00	8,280.00	13,493.82	9,817.00	69.11	71.61	-179.98	3,540.41	1,562.89	1,536.50	1,486.23	50.27	30.563		
12,000.00	8,280.00	13,593.82	9,817.00	70.51	72.97	-179.98	3,640.41	1,561.95	1,536.50	1,485.25	51.25	29.981		
12,100.00	8,280.00	13,693.82	9,817.00	71.92	74.34	-179.98	3,740.40	1,561.00	1,536.50	1,484.27	52.23	29.418		
12,200.00	8,280.00	13,793.82	9,817.00	73.34	75.73	-179.98	3,840.40	1,560.06	1,536.50	1,483.28	53.22	28.872		
12,300.00	8,280.00	13,893.82	9,817.00	74.77	77.12	-179.98	3,940.39	1,559.12	1,536.50	1,482.29	54.21	28.344		
12,400.00	8,280.00	13,993.82	9,817.00	76.21	78.52	-179.98	4,040.39	1,558.17	1,536.50	1,481.30	55.20	27.833		
12,500.00	8,280.00	14,093.82	9,817.00	77.65	79.94	-179.98	4,140.38	1,557.23	1,536.50	1,480.30	56.21	27.337		
12,600.00	8,280.00	14,193.82	9,817.00	79.11	81.36	-179.98	4,240.38	1,556.29	1,536.50	1,479.29	57.21	26.858		
12,700.00	8,280.00	14,293.82	9,817.00	80.57	82.79	-179.98	4,340.38	1,555.35	1,536.50	1,478.28	58.22	26.393		
12,800.00	8,280.00	14,393.82	9,817.00	82.04	84.23	-179.98	4,440.37	1,554.40	1,536.50	1,477.27	59.23	25.942		
12,900.00	8,280.00	14,493.82	9,817.00	83.52	85.68	-179.98	4,540.37	1,553.46	1,536.50	1,476.26	60.24	25.505		
13,000.00	8,280.00	14,593.82	9,817.00	85.01	87.13	-179.98	4,640.36	1,552.52	1,536.50	1,475.24	61.26	25.081		
13,100.00	8,280.00	14,693.82	9,817.00	86.50	88.60	-179.98	4,740.36	1,551.57	1,536.50	1,474.22	62.28	24.669		
13,200.00	8,280.00	14,793.82	9,817.00	87.99	90.06	-179.98	4,840.35	1,550.63	1,536.50	1,473.19	63.31	24.270		
13,300.00	8,280.00	14,893.82	9,817.00	89.50	91.54	-179.98	4,940.35	1,549.69	1,536.50	1,472.16	64.34	23.882		
13,400.00	8,280.00	14,993.82	9,817.00	91.00	93.02	-179.98	5,040.34	1,548.74	1,536.50	1,471.13	65.37	23.506		
13,500.00	8,280.00	15,093.82	9,817.00	92.52	94.51	-179.98	5,140.34	1,547.80	1,536.50	1,470.10	66.40	23.141		
13,600.00	8,280.00	15,193.82	9,817.00	94.03	96.00	-179.98	5,240.34	1,546.86	1,536.50	1,469.07	67.43	22.785		
13,700.00	8,280.00	15,293.82	9,817.00	95.56	97.50	-179.98	5,340.33	1,545.92	1,536.50	1,468.03	68.47	22.440		
13,800.00	8,280.00	15,393.82	9,817.00	97.08	99.00	-179.99	5,440.33	1,544.97	1,536.50	1,466.99	69.51	22.104		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	15,493.82	9,817.00	98.61	100.50	-179.99	5,540.32	1,544.03	1,536.50	1,465.95	70.55	21.778		
14,000.00	8,280.00	15,593.82	9,817.00	100.15	102.02	-179.99	5,640.32	1,543.09	1,536.50	1,464.90	71.60	21.461		
14,100.00	8,280.00	15,693.82	9,817.00	101.69	103.53	-179.99	5,740.31	1,542.14	1,536.50	1,463.86	72.64	21.152		
14,200.00	8,280.00	15,793.82	9,817.00	103.23	105.05	-179.99	5,840.31	1,541.20	1,536.50	1,462.81	73.69	20.851		
14,300.00	8,280.00	15,893.82	9,817.00	104.77	106.57	-179.99	5,940.30	1,540.26	1,536.50	1,461.76	74.74	20.558		
14,400.00	8,280.00	15,993.82	9,817.00	106.32	108.10	-179.99	6,040.30	1,539.31	1,536.50	1,460.71	75.79	20.273		
14,500.00	8,280.00	16,093.82	9,817.00	107.87	109.63	-179.99	6,140.30	1,538.37	1,536.50	1,459.66	76.84	19.995		
14,600.00	8,280.00	16,193.82	9,817.00	109.43	111.17	-179.99	6,240.29	1,537.43	1,536.50	1,458.60	77.90	19.724		
14,700.00	8,280.00	16,293.82	9,817.00	110.98	112.70	-179.99	6,340.29	1,536.49	1,536.50	1,457.55	78.95	19.461		
14,800.00	8,280.00	16,393.82	9,817.00	112.54	114.25	-179.99	6,440.28	1,535.54	1,536.50	1,456.49	80.01	19.203		
14,900.00	8,280.00	16,493.82	9,817.00	114.10	115.79	-179.99	6,540.28	1,534.60	1,536.50	1,455.43	81.07	18.953		
15,000.00	8,280.00	16,593.82	9,817.00	115.67	117.34	-179.99	6,640.27	1,533.66	1,536.50	1,454.37	82.13	18.708		
15,100.00	8,280.00	16,693.82	9,817.00	117.24	118.89	-179.99	6,740.27	1,532.71	1,536.50	1,453.31	83.19	18.469		
15,200.00	8,280.00	16,793.82	9,817.00	118.81	120.44	-179.99	6,840.26	1,531.77	1,536.50	1,452.24	84.26	18.236		
15,300.00	8,280.00	16,893.82	9,817.00	120.38	121.99	-179.99	6,940.26	1,530.83	1,536.50	1,451.18	85.32	18.009		
15,400.00	8,280.00	16,993.82	9,817.00	121.95	123.55	-179.99	7,040.26	1,529.88	1,536.50	1,450.12	86.38	17.787		
15,500.00	8,280.00	17,093.82	9,817.00	123.53	125.11	-179.99	7,140.25	1,528.94	1,536.50	1,449.05	87.45	17.570		
15,600.00	8,280.00	17,193.82	9,817.00	125.11	126.67	-179.99	7,240.25	1,528.00	1,536.50	1,447.98	88.52	17.358		
15,700.00	8,280.00	17,293.82	9,817.00	126.69	128.24	-179.99	7,340.24	1,527.06	1,536.50	1,446.91	89.59	17.151		
15,800.00	8,280.00	17,393.82	9,817.00	128.27	129.81	-179.99	7,440.24	1,526.11	1,536.50	1,445.84	90.66	16.949		
15,900.00	8,280.00	17,493.82	9,817.00	129.85	131.38	-179.99	7,540.23	1,525.17	1,536.50	1,444.77	91.73	16.751		
16,000.00	8,280.00	17,593.82	9,817.00	131.44	132.95	-179.99	7,640.23	1,524.23	1,536.50	1,443.70	92.80	16.558		
16,100.00	8,280.00	17,693.82	9,817.00	133.02	134.52	-179.99	7,740.22	1,523.28	1,536.50	1,442.63	93.87	16.368		
16,200.00	8,280.00	17,793.82	9,817.00	134.61	136.09	-179.99	7,840.22	1,522.34	1,536.50	1,441.56	94.94	16.184		
16,300.00	8,280.00	17,893.82	9,817.00	136.20	137.67	-179.99	7,940.22	1,521.40	1,536.50	1,440.48	96.02	16.003		
16,400.00	8,280.00	17,993.82	9,817.00	137.79	139.25	-179.99	8,040.21	1,520.46	1,536.50	1,439.41	97.09	15.825		
16,500.00	8,280.00	18,093.82	9,817.00	139.39	140.83	-179.99	8,140.21	1,519.51	1,536.50	1,438.33	98.17	15.652		
16,600.00	8,280.00	18,193.82	9,817.00	140.98	142.41	-179.99	8,240.20	1,518.57	1,536.50	1,437.26	99.24	15.482		
16,700.00	8,280.00	18,293.82	9,817.00	142.58	143.99	-179.99	8,340.20	1,517.63	1,536.50	1,436.18	100.32	15.316		
16,800.00	8,280.00	18,393.82	9,817.00	144.17	145.58	-179.99	8,440.19	1,516.68	1,536.50	1,435.10	101.40	15.153		
16,900.00	8,280.00	18,493.82	9,817.00	145.77	147.16	-180.00	8,540.19	1,515.74	1,536.50	1,434.02	102.48	14.994		
17,000.00	8,280.00	18,593.82	9,817.00	147.37	148.75	-180.00	8,640.18	1,514.80	1,536.50	1,432.95	103.55	14.838		
17,100.00	8,280.00	18,693.82	9,817.00	148.97	150.34	-180.00	8,740.18	1,513.85	1,536.50	1,431.87	104.63	14.684		
17,200.00	8,280.00	18,793.82	9,817.00	150.57	151.93	-180.00	8,840.18	1,512.91	1,536.50	1,430.79	105.71	14.534		
17,300.00	8,280.00	18,893.82	9,817.00	152.18	153.52	-180.00	8,940.17	1,511.97	1,536.50	1,429.70	106.80	14.387		
17,400.00	8,280.00	18,993.82	9,817.00	153.78	155.12	-180.00	9,040.17	1,511.03	1,536.50	1,428.62	107.88	14.243		
17,500.00	8,280.00	19,093.82	9,817.00	155.38	156.71	-180.00	9,140.16	1,510.08	1,536.50	1,427.54	108.96	14.102		
17,600.00	8,280.00	19,193.82	9,817.00	156.99	158.31	-180.00	9,240.16	1,509.14	1,536.50	1,426.46	110.04	13.963		
17,700.00	8,280.00	19,293.82	9,817.00	158.60	159.90	-180.00	9,340.15	1,508.20	1,536.50	1,425.38	111.12	13.827		
17,800.00	8,280.00	19,393.82	9,817.00	160.20	161.50	-180.00	9,440.15	1,507.25	1,536.50	1,424.29	112.21	13.693		
17,900.00	8,280.00	19,493.82	9,817.00	161.81	163.10	-180.00	9,540.14	1,506.31	1,536.50	1,423.21	113.29	13.562		
18,000.00	8,280.00	19,593.82	9,817.00	163.42	164.70	-180.00	9,640.14	1,505.37	1,536.50	1,422.12	114.38	13.434		
18,100.00	8,280.00	19,693.82	9,817.00	165.03	166.30	-180.00	9,740.14	1,504.42	1,536.50	1,421.04	115.46	13.307		
18,200.00	8,280.00	19,793.82	9,817.00	166.64	167.90	-180.00	9,840.13	1,503.48	1,536.50	1,419.95	116.55	13.183		
18,300.00	8,280.00	19,893.82	9,817.00	168.25	169.50	-180.00	9,940.13	1,502.54	1,536.50	1,418.87	117.63	13.062		
18,400.00	8,280.00	19,993.82	9,817.00	169.87	171.11	-180.00	10,040.12	1,501.60	1,536.50	1,417.78	118.72	12.942		
18,438.77	8,280.00	20,032.59	9,817.00	170.49	171.73	180.00	10,078.89	1,501.23	1,536.50	1,417.36	119.14	12.896		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-92.65	-93.67	-2,022.85	2,025.50					
100.00	100.00	55.90	55.90	0.13	0.07	-92.65	-93.67	-2,022.85	2,025.02	2,024.88	0.14	N/A		
200.00	200.00	155.90	155.90	0.48	0.33	-92.65	-93.67	-2,022.85	2,025.02	2,024.44	0.58	3,470.977		
300.00	300.00	255.90	255.90	0.84	0.68	-92.65	-93.67	-2,022.85	2,025.02	2,023.94	1.09	1,865.806		
400.00	400.00	355.90	355.90	1.20	1.04	-92.65	-93.67	-2,022.85	2,025.02	2,023.43	1.59	1,273.238		
500.00	500.00	455.90	455.90	1.56	1.40	-92.65	-93.67	-2,022.85	2,025.02	2,022.92	2.10	965.927		
600.00	600.00	555.90	555.90	1.92	1.76	-92.65	-93.67	-2,022.85	2,025.02	2,022.42	2.60	778.008		
700.00	700.00	655.90	655.90	2.28	2.12	-92.65	-93.67	-2,022.85	2,025.02	2,021.91	3.11	651.259		
800.00	800.00	755.90	755.90	2.63	2.48	-92.65	-93.67	-2,022.85	2,025.02	2,021.41	3.62	560.007		
900.00	900.00	855.90	855.90	2.99	2.84	-92.65	-93.67	-2,022.85	2,025.02	2,020.90	4.12	491.175		
1,000.00	1,000.00	955.90	955.90	3.35	3.19	-92.65	-93.67	-2,022.85	2,025.02	2,020.39	4.63	437.408		
1,100.00	1,100.00	1,055.90	1,055.90	3.71	3.55	-92.65	-93.67	-2,022.85	2,025.02	2,019.88	5.14	394.248		
1,200.00	1,200.00	1,155.90	1,155.90	4.07	3.91	-92.65	-93.67	-2,022.85	2,025.02	2,019.38	5.64	358.839		
1,300.00	1,300.00	1,255.90	1,255.90	4.43	4.27	-92.65	-93.67	-2,022.85	2,025.02	2,018.87	6.15	329.265		
1,400.00	1,400.00	1,355.90	1,355.90	4.79	4.63	-92.65	-93.67	-2,022.85	2,025.02	2,018.36	6.66	304.194		
1,500.00	1,500.00	1,455.90	1,455.90	5.14	4.99	-92.65	-93.67	-2,022.85	2,025.02	2,017.86	7.16	282.670		
1,600.00	1,600.00	1,555.90	1,555.90	5.50	5.34	-92.65	-93.67	-2,022.85	2,025.02	2,017.35	7.67	263.991 CC, ES		
1,700.00	1,699.98	1,655.88	1,655.88	5.85	5.70	174.13	-93.67	-2,022.85	2,026.76	2,018.59	8.17	248.046		
1,800.00	1,799.84	1,755.74	1,755.74	6.20	6.06	174.13	-93.67	-2,022.85	2,031.96	2,023.30	8.67	234.488		
1,900.00	1,899.45	1,855.35	1,855.35	6.54	6.42	174.14	-93.67	-2,022.85	2,040.63	2,031.47	9.16	222.755		
2,000.00	1,998.70	1,954.60	1,954.60	6.90	6.77	174.15	-93.67	-2,022.85	2,052.76	2,043.10	9.66	212.583		
2,100.00	2,097.47	2,034.85	2,034.85	7.26	7.06	174.15	-93.71	-2,023.01	2,068.56	2,058.46	10.10	204.778		
2,200.00	2,195.62	2,100.00	2,099.99	7.64	7.28	174.14	-93.98	-2,024.13	2,089.22	2,078.72	10.50	198.883		
2,300.00	2,293.06	2,161.40	2,161.35	8.04	7.49	174.11	-94.48	-2,026.17	2,114.85	2,103.96	10.89	194.163		
2,400.00	2,389.64	2,222.96	2,222.83	8.46	7.70	174.07	-95.21	-2,029.17	2,145.34	2,134.06	11.28	190.235		
2,486.44	2,472.37	2,275.06	2,274.82	8.85	7.88	174.03	-96.02	-2,032.47	2,175.53	2,163.92	11.61	187.452		
2,500.00	2,485.28	2,300.00	2,299.69	8.92	7.97	174.04	-96.46	-2,034.29	2,180.65	2,168.95	11.70	186.321		
2,600.00	2,580.53	2,342.29	2,341.83	9.39	8.11	174.06	-97.31	-2,037.74	2,218.40	2,206.37	12.03	184.430		
2,700.00	2,675.78	2,400.00	2,399.27	9.88	8.31	174.08	-98.64	-2,043.18	2,257.64	2,245.25	12.39	182.167		
2,800.00	2,771.03	2,458.38	2,457.28	10.39	8.52	174.10	-100.19	-2,049.54	2,298.25	2,285.49	12.76	180.123		
2,900.00	2,866.28	2,500.00	2,498.57	10.91	8.66	174.10	-101.43	-2,054.60	2,340.27	2,327.20	13.07	179.025		
3,000.00	2,961.53	2,571.44	2,569.31	11.44	8.92	174.11	-103.80	-2,064.30	2,383.45	2,369.98	13.48	176.859		
3,100.00	3,056.78	2,626.80	2,623.99	11.98	9.12	174.11	-105.85	-2,072.70	2,428.00	2,414.17	13.83	175.570		
3,200.00	3,152.03	2,700.00	2,696.09	12.52	9.39	174.11	-108.86	-2,084.99	2,473.91	2,459.67	14.24	173.726		
3,300.00	3,247.28	2,735.16	2,730.63	13.08	9.53	174.10	-110.42	-2,091.37	2,520.83	2,506.31	14.52	173.592		
3,400.00	3,342.54	2,805.00	2,799.10	13.64	9.79	174.09	-113.68	-2,104.73	2,568.93	2,554.01	14.92	172.170		
3,500.00	3,437.79	2,892.58	2,884.95	14.21	10.14	174.07	-117.81	-2,121.60	2,617.19	2,601.80	15.39	170.111		
3,600.00	3,533.04	2,980.17	2,970.79	14.78	10.49	174.05	-121.93	-2,138.47	2,665.45	2,649.60	15.85	168.142		
3,700.00	3,628.29	3,067.75	3,056.63	15.36	10.84	174.03	-126.05	-2,155.34	2,713.71	2,697.38	16.32	166.259		
3,800.00	3,723.54	3,155.33	3,142.47	15.94	11.20	174.02	-130.18	-2,172.22	2,761.97	2,745.17	16.79	164.458		
3,900.00	3,818.79	3,242.91	3,228.32	16.52	11.56	174.00	-134.30	-2,189.09	2,810.22	2,792.96	17.27	162.736		
4,000.00	3,914.04	3,330.50	3,314.16	17.11	11.93	173.99	-138.43	-2,205.96	2,858.48	2,840.74	17.75	161.086		
4,100.00	4,009.29	3,418.08	3,400.00	17.69	12.30	173.97	-142.55	-2,222.84	2,906.74	2,888.52	18.22	159.507		
4,200.00	4,104.54	3,505.66	3,485.84	18.29	12.67	173.96	-146.68	-2,239.71	2,955.00	2,936.30	18.70	157.993		
4,300.00	4,199.79	3,593.24	3,571.69	18.88	13.05	173.95	-150.80	-2,256.58	3,003.26	2,984.08	19.19	156.541		
4,400.00	4,295.04	3,680.83	3,657.53	19.48	13.43	173.93	-154.93	-2,273.45	3,051.52	3,031.85	19.67	155.149		
4,500.00	4,390.29	3,768.41	3,743.37	20.08	13.81	173.92	-159.05	-2,290.33	3,099.78	3,079.63	20.15	153.811		
4,600.00	4,485.55	3,855.99	3,829.22	20.68	14.19	173.91	-163.17	-2,307.20	3,148.04	3,127.40	20.64	152.527		
4,700.00	4,580.80	3,943.57	3,915.06	21.28	14.58	173.90	-167.30	-2,324.07	3,196.30	3,175.17	21.13	151.293		
4,800.00	4,676.05	4,031.15	4,000.90	21.88	14.97	173.88	-171.42	-2,340.95	3,244.56	3,222.95	21.62	150.106		
4,900.00	4,771.30	4,118.74	4,086.74	22.48	15.36	173.87	-175.55	-2,357.82	3,292.82	3,270.72	22.10	148.965		
5,000.00	4,866.55	4,206.32	4,172.59	23.09	15.75	173.86	-179.67	-2,374.69	3,341.08	3,318.48	22.60	147.865		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,293.90	4,258.43	23.70	16.15	173.85	-183.80	-2,391.56	3,389.34	3,366.25	23.09	146.806		
5,200.00	5,057.05	4,381.48	4,344.27	24.30	16.54	173.84	-187.92	-2,408.44	3,437.60	3,414.02	23.58	145.785		
5,300.00	5,152.30	4,469.07	4,430.11	24.91	16.94	173.83	-192.05	-2,425.31	3,485.86	3,461.79	24.07	144.800		
5,400.00	5,247.55	4,556.65	4,515.96	25.52	17.34	173.82	-196.17	-2,442.18	3,534.12	3,509.55	24.57	143.849		
5,500.00	5,342.80	4,644.23	4,601.80	26.13	17.74	173.81	-200.30	-2,459.06	3,582.38	3,557.32	25.06	142.932		
5,600.00	5,438.05	4,731.81	4,687.64	26.74	18.14	173.80	-204.42	-2,475.93	3,630.64	3,605.08	25.56	142.045		
5,700.00	5,533.30	4,819.39	4,773.48	27.36	18.54	173.79	-208.54	-2,492.80	3,678.90	3,652.85	26.06	141.188		
5,800.00	5,628.56	4,906.98	4,859.33	27.97	18.94	173.78	-212.67	-2,509.67	3,727.16	3,700.61	26.55	140.360		
5,900.00	5,723.81	4,994.56	4,945.17	28.58	19.34	173.78	-216.79	-2,526.55	3,775.43	3,748.37	27.05	139.558		
6,000.00	5,819.06	5,082.14	5,031.01	29.20	19.75	173.77	-220.92	-2,543.42	3,823.69	3,796.13	27.55	138.781		
6,100.00	5,914.31	5,169.72	5,116.85	29.81	20.15	173.76	-225.04	-2,560.29	3,871.95	3,843.90	28.05	138.029		
6,200.00	6,009.56	5,257.31	5,202.70	30.43	20.56	173.75	-229.17	-2,577.17	3,920.21	3,891.66	28.55	137.301		
6,300.00	6,104.81	5,344.89	5,288.54	31.04	20.97	173.74	-233.29	-2,594.04	3,968.47	3,939.42	29.05	136.594		
6,400.00	6,200.06	5,432.47	5,374.38	31.66	21.37	173.74	-237.42	-2,610.91	4,016.73	3,987.18	29.55	135.909		
6,500.00	6,295.31	5,520.05	5,460.22	32.27	21.78	173.73	-241.54	-2,627.78	4,064.99	4,034.94	30.06	135.244		
6,600.00	6,390.56	5,607.63	5,546.07	32.89	22.19	173.72	-245.66	-2,644.66	4,113.25	4,082.69	30.56	134.598		
6,700.00	6,485.81	5,695.22	5,631.91	33.51	22.60	173.71	-249.79	-2,661.53	4,161.51	4,130.45	31.06	133.971		
6,800.00	6,581.06	5,782.80	5,717.75	34.13	23.01	173.71	-253.91	-2,678.40	4,209.78	4,178.21	31.57	133.361		
6,848.89	6,627.63	5,825.62	5,759.72	34.43	23.21	173.70	-255.93	-2,686.65	4,233.37	4,201.56	31.81	133.070		
6,900.00	6,676.45	5,870.60	5,803.81	34.74	23.42	173.76	-258.05	-2,695.32	4,257.64	4,225.57	32.07	132.758		
7,000.00	6,772.71	5,959.81	5,891.25	35.31	23.84	173.86	-262.25	-2,712.50	4,302.80	4,270.22	32.58	132.085		
7,100.00	6,869.86	6,050.53	5,980.17	35.84	24.26	173.94	-266.52	-2,729.98	4,344.83	4,311.75	33.08	131.334		
7,200.00	6,967.77	6,142.65	6,070.46	36.33	24.69	174.00	-270.86	-2,747.73	4,383.69	4,350.10	33.59	130.509		
7,300.00	7,066.34	6,236.06	6,162.01	36.77	25.13	174.06	-275.26	-2,765.72	4,419.33	4,385.24	34.10	129.618		
7,400.00	7,165.43	6,330.64	6,254.71	37.17	25.58	174.10	-279.71	-2,783.94	4,451.71	4,417.11	34.60	128.665		
7,500.00	7,264.93	6,426.28	6,348.45	37.52	26.03	174.12	-284.22	-2,802.37	4,480.78	4,445.68	35.10	127.655		
7,600.00	7,364.71	6,522.86	6,443.11	37.84	26.49	174.14	-288.76	-2,820.97	4,506.52	4,470.92	35.60	126.594		
7,700.00	7,464.66	6,619.27	6,528.56	38.12	30.37	173.94	-313.67	-2,922.85	4,526.17	4,486.92	39.25	115.320		
7,735.34	7,500.00	7,543.61	7,455.90	38.21	30.47	-92.83	-313.67	-2,922.85	4,526.38	4,486.97	39.41	114.852		
7,800.00	7,564.66	7,608.27	7,520.56	38.37	30.67	-92.83	-313.67	-2,922.85	4,526.38	4,486.68	39.70	114.005		
7,900.00	7,664.66	7,708.27	7,620.56	38.61	30.97	-92.83	-313.67	-2,922.85	4,526.38	4,486.23	40.16	112.717		
7,942.38	7,707.04	7,750.65	7,662.94	38.72	31.10	-92.83	-313.67	-2,922.85	4,526.38	4,486.03	40.35	112.178		
7,950.00	7,714.66	7,758.27	7,670.56	38.74	31.12	-92.29	-313.67	-2,922.85	4,526.39	4,486.00	40.38	112.082		
8,000.00	7,764.57	7,808.17	7,720.47	38.86	31.27	-92.31	-313.67	-2,922.85	4,526.50	4,485.89	40.61	111.463		
8,050.00	7,814.03	7,857.64	7,769.93	38.98	31.42	-92.37	-313.67	-2,922.85	4,526.80	4,485.97	40.83	110.866		
8,100.00	7,862.68	7,906.29	7,818.58	39.09	31.57	-92.46	-313.67	-2,922.85	4,527.29	4,486.25	41.05	110.295		
8,150.00	7,910.15	7,953.76	7,866.05	39.20	31.71	-92.58	-313.67	-2,922.85	4,528.02	4,486.76	41.26	109.751		
8,200.00	7,956.07	7,999.68	7,911.97	39.30	31.85	-92.71	-313.67	-2,922.85	4,529.01	4,487.55	41.46	109.239		
8,250.00	8,000.10	8,043.70	7,956.00	39.39	31.99	-92.84	-313.67	-2,922.85	4,530.32	4,488.66	41.66	108.758		
8,300.00	8,041.89	8,085.50	7,997.79	39.48	32.12	-92.96	-313.67	-2,922.85	4,531.98	4,490.14	41.84	108.311		
8,350.00	8,081.14	8,124.75	8,037.04	39.56	32.24	-93.06	-313.67	-2,922.85	4,534.06	4,492.04	42.02	107.899		
8,400.00	8,117.54	8,161.15	8,073.44	39.63	32.35	-93.12	-313.67	-2,922.85	4,536.60	4,494.41	42.19	107.522		
8,450.00	8,150.81	8,194.42	8,106.71	39.69	32.45	-93.13	-313.67	-2,922.85	4,539.66	4,497.31	42.35	107.183		
8,500.00	8,180.71	8,224.32	8,136.61	39.75	32.54	-93.07	-313.67	-2,922.85	4,543.29	4,500.78	42.51	106.881		
8,550.00	8,207.00	8,250.61	8,162.90	39.80	32.62	-92.93	-313.67	-2,922.85	4,547.52	4,504.87	42.65	106.618		
8,600.00	8,229.49	8,273.10	8,185.39	39.85	32.69	-92.69	-313.67	-2,922.85	4,552.39	4,509.60	42.79	106.395		
8,650.00	8,248.00	8,291.61	8,203.90	39.91	32.75	-92.36	-313.67	-2,922.85	4,557.91	4,515.00	42.91	106.212		
8,700.00	8,262.40	8,306.01	8,218.30	39.96	32.79	-91.91	-313.67	-2,922.85	4,564.09	4,521.06	43.03	106.071		
8,750.00	8,272.57	8,316.18	8,228.47	40.02	32.83	-91.35	-313.67	-2,922.85	4,570.91	4,527.78	43.13	105.972		
8,800.00	8,278.43	8,322.04	8,234.33	40.08	32.84	-90.67	-313.67	-2,922.85	4,578.36	4,535.14	43.23	105.917		
8,842.38	8,280.00	8,323.61	8,235.90	40.15	32.85	-90.00	-313.67	-2,922.85	4,585.13	4,541.84	43.30	105.904		
8,900.00	8,280.00	8,323.61	8,235.90	40.25	32.85	-90.00	-313.67	-2,922.85	4,594.95	4,551.56	43.39	105.902		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
FMM Fed Com - FMM Fed Com 801H - OH - Plan #1												Offset Well Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													
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	
9,000.00	8,280.00	8,323.61	8,235.90	40.47	32.85	-90.00	-313.67	-2,922.85	4,613.66	4,570.08	43.58	105.869	
9,100.00	8,280.00	8,323.61	8,235.90	40.75	32.85	-90.00	-313.67	-2,922.85	4,634.45	4,590.64	43.80	105.809	
9,200.00	8,280.00	8,323.61	8,235.90	41.10	32.85	-90.00	-313.67	-2,922.85	4,657.29	4,613.24	44.05	105.725	
9,300.00	8,280.00	8,323.61	8,235.90	41.51	32.85	-90.00	-313.67	-2,922.85	4,682.15	4,637.83	44.33	105.622	
9,400.00	8,280.00	8,323.61	8,235.90	42.00	32.85	-90.00	-313.67	-2,922.85	4,709.01	4,664.38	44.63	105.505	
9,500.00	8,280.00	8,323.61	8,235.90	42.55	32.85	-90.00	-313.67	-2,922.85	4,737.83	4,692.87	44.96	105.379	
9,600.00	8,280.00	8,323.61	8,235.90	43.17	32.85	-90.00	-313.67	-2,922.85	4,768.57	4,723.27	45.31	105.249	
9,700.00	8,280.00	8,323.61	8,235.90	43.85	32.85	-90.00	-313.67	-2,922.85	4,801.20	4,755.53	45.67	105.119	
9,800.00	8,280.00	8,323.61	8,235.90	44.60	32.85	-90.00	-313.67	-2,922.85	4,835.68	4,789.62	46.06	104.993	
9,900.00	8,280.00	8,323.61	8,235.90	45.41	32.85	-90.00	-313.67	-2,922.85	4,871.96	4,825.51	46.45	104.876	
10,000.00	8,280.00	8,323.61	8,235.90	46.27	32.85	-90.00	-313.67	-2,922.85	4,910.02	4,863.15	46.86	104.770	
10,100.00	8,280.00	8,323.61	8,235.90	47.19	32.85	-90.00	-313.67	-2,922.85	4,949.80	4,902.52	47.28	104.680	
10,200.00	8,280.00	8,323.61	8,235.90	48.15	32.85	-90.00	-313.67	-2,922.85	4,991.27	4,943.55	47.71	104.608 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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 +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	-92.68	-93.43	-1,997.79	2,000.45					
100.00	100.00	56.20	56.20	0.13	0.07	-92.68	-93.43	-1,997.79	1,999.97	1,999.83	0.14	N/A		
200.00	200.00	156.20	156.20	0.48	0.33	-92.68	-93.43	-1,997.79	1,999.97	1,999.39	0.58	3,424.512		
300.00	300.00	256.20	256.20	0.84	0.69	-92.68	-93.43	-1,997.79	1,999.97	1,998.89	1.09	1,841.575		
400.00	400.00	356.20	356.20	1.20	1.04	-92.68	-93.43	-1,997.79	1,999.97	1,998.38	1.59	1,256.931		
500.00	500.00	456.20	456.20	1.56	1.40	-92.68	-93.43	-1,997.79	1,999.97	1,997.88	2.10	953.651		
600.00	600.00	556.20	556.20	1.92	1.76	-92.68	-93.43	-1,997.79	1,999.97	1,997.37	2.60	768.170		
700.00	700.00	656.20	656.20	2.28	2.12	-92.68	-93.43	-1,997.79	1,999.97	1,996.86	3.11	643.052		
800.00	800.00	756.20	756.20	2.63	2.48	-92.68	-93.43	-1,997.79	1,999.97	1,996.36	3.62	552.967		
900.00	900.00	856.20	856.20	2.99	2.84	-92.68	-93.43	-1,997.79	1,999.97	1,995.85	4.12	485.012		
1,000.00	1,000.00	956.20	956.20	3.35	3.19	-92.68	-93.43	-1,997.79	1,999.97	1,995.34	4.63	431.928		
1,100.00	1,100.00	1,056.20	1,056.20	3.71	3.55	-92.68	-93.43	-1,997.79	1,999.97	1,994.84	5.14	389.315		
1,200.00	1,200.00	1,156.20	1,156.20	4.07	3.91	-92.68	-93.43	-1,997.79	1,999.97	1,994.33	5.64	354.353		
1,300.00	1,300.00	1,256.20	1,256.20	4.43	4.27	-92.68	-93.43	-1,997.79	1,999.97	1,993.82	6.15	325.152		
1,400.00	1,400.00	1,356.20	1,356.20	4.79	4.63	-92.68	-93.43	-1,997.79	1,999.97	1,993.31	6.66	300.397		
1,500.00	1,500.00	1,456.20	1,456.20	5.14	4.99	-92.68	-93.43	-1,997.79	1,999.97	1,992.81	7.16	279.145		
1,600.00	1,600.00	1,556.20	1,556.20	5.50	5.35	-92.68	-93.43	-1,997.79	1,999.97	1,992.30	7.67	260.700 CC, ES		
1,700.00	1,699.98	1,656.18	1,656.18	5.85	5.70	174.10	-93.43	-1,997.79	2,001.71	1,993.54	8.17	244.958		
1,800.00	1,799.84	1,756.04	1,756.04	6.20	6.06	174.11	-93.43	-1,997.79	2,006.91	1,998.25	8.67	231.577		
1,900.00	1,899.45	1,855.65	1,855.65	6.54	6.42	174.11	-93.43	-1,997.79	2,015.58	2,006.42	9.16	220.002		
2,000.00	1,998.70	1,954.90	1,954.90	6.90	6.77	174.12	-93.43	-1,997.79	2,027.71	2,018.05	9.66	209.972		
2,100.00	2,097.47	2,053.67	2,053.67	7.26	7.13	174.14	-93.43	-1,997.79	2,043.27	2,033.12	10.15	201.269		
2,200.00	2,195.62	2,151.82	2,151.82	7.64	7.48	174.15	-93.43	-1,997.79	2,062.25	2,051.61	10.65	193.711		
2,300.00	2,293.06	2,248.25	2,248.25	8.04	7.82	174.16	-93.74	-1,997.79	2,084.65	2,073.52	11.13	187.298		
2,400.00	2,389.64	2,342.87	2,342.84	8.46	8.13	174.11	-96.11	-1,997.78	2,110.49	2,098.90	11.60	181.949		
2,486.44	2,472.37	2,423.85	2,423.72	8.85	8.40	174.01	-99.99	-1,997.76	2,135.60	2,123.60	12.00	177.974		
2,500.00	2,485.28	2,436.48	2,436.32	8.92	8.44	174.00	-100.75	-1,997.76	2,139.74	2,127.67	12.06	177.371		
2,600.00	2,580.53	2,529.51	2,529.10	9.39	8.74	173.89	-107.64	-1,997.72	2,170.32	2,157.79	12.53	173.276		
2,700.00	2,675.78	2,622.25	2,621.39	9.88	9.05	173.73	-116.75	-1,997.68	2,201.00	2,188.01	12.99	169.416		
2,800.00	2,771.03	2,716.27	2,714.77	10.39	9.37	173.51	-127.75	-1,997.63	2,231.79	2,218.32	13.47	165.707		
2,900.00	2,866.28	2,811.07	2,808.90	10.91	9.69	173.30	-138.96	-1,997.58	2,262.61	2,248.66	13.95	162.162		
3,000.00	2,961.53	2,905.88	2,903.04	11.44	10.02	173.10	-150.18	-1,997.53	2,293.46	2,279.01	14.44	158.794		
3,100.00	3,056.78	3,000.68	2,997.17	11.98	10.35	172.89	-161.40	-1,997.48	2,324.33	2,309.39	14.94	155.595		
3,200.00	3,152.03	3,095.48	3,091.31	12.52	10.69	172.70	-172.61	-1,997.43	2,355.23	2,339.79	15.44	152.556		
3,300.00	3,247.28	3,190.28	3,185.44	13.08	11.03	172.51	-183.83	-1,997.38	2,386.15	2,370.21	15.94	149.670		
3,400.00	3,342.54	3,285.08	3,279.58	13.64	11.37	172.32	-195.04	-1,997.33	2,417.10	2,400.65	16.45	146.927		
3,500.00	3,437.79	3,379.88	3,373.71	14.21	11.72	172.14	-206.26	-1,997.28	2,448.07	2,431.11	16.96	144.320		
3,600.00	3,533.04	3,474.68	3,467.85	14.78	12.06	171.97	-217.47	-1,997.23	2,479.06	2,461.58	17.48	141.840		
3,700.00	3,628.29	3,569.48	3,561.98	15.36	12.41	171.79	-228.69	-1,997.17	2,510.07	2,492.08	18.00	139.479		
3,800.00	3,723.54	3,664.28	3,656.12	15.94	12.77	171.63	-239.91	-1,997.12	2,541.11	2,522.59	18.52	137.231		
3,900.00	3,818.79	3,759.08	3,750.25	16.52	13.12	171.46	-251.12	-1,997.07	2,572.16	2,553.12	19.04	135.089		
4,000.00	3,914.04	3,853.88	3,844.39	17.11	13.48	171.30	-262.34	-1,997.02	2,603.23	2,583.66	19.57	133.045		
4,100.00	4,009.29	3,948.68	3,938.52	17.69	13.84	171.14	-273.55	-1,996.97	2,634.32	2,614.22	20.09	131.095		
4,200.00	4,104.54	4,043.48	4,032.66	18.29	14.19	170.99	-284.77	-1,996.92	2,665.42	2,644.80	20.62	129.233		
4,300.00	4,199.79	4,143.75	4,132.32	18.88	14.57	170.86	-295.70	-1,996.87	2,696.47	2,675.29	21.17	127.358		
4,400.00	4,295.04	4,245.45	4,233.67	19.48	14.95	170.78	-304.14	-1,996.83	2,727.29	2,705.57	21.72	125.566		
4,500.00	4,390.29	4,347.44	4,335.49	20.08	15.32	170.76	-309.89	-1,996.81	2,757.88	2,735.62	22.26	123.879		
4,600.00	4,485.55	4,449.55	4,437.55	20.68	15.68	170.80	-312.92	-1,996.79	2,788.24	2,765.44	22.80	122.295		
4,700.00	4,580.80	4,548.99	4,537.00	21.28	16.02	170.90	-313.43	-1,996.79	2,818.38	2,795.06	23.32	120.848		
4,800.00	4,676.05	4,644.24	4,632.25	21.88	16.34	170.99	-313.43	-1,996.79	2,848.48	2,824.66	23.83	119.540		
4,900.00	4,771.30	4,739.49	4,727.50	22.48	16.66	171.09	-313.43	-1,996.79	2,878.60	2,854.26	24.34	118.283		
5,000.00	4,866.55	4,834.75	4,822.75	23.09	16.99	171.18	-313.43	-1,996.79	2,908.72	2,883.87	24.85	117.072		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,930.00	4,918.00	23.70	17.31	171.27	-313.43	-1,996.79	2,938.85	2,913.49	25.36	115.907		
5,200.00	5,057.05	5,025.25	5,013.25	24.30	17.64	171.36	-313.43	-1,996.79	2,968.98	2,943.12	25.87	114.785		
5,300.00	5,152.30	5,120.50	5,108.50	24.91	17.96	171.45	-313.43	-1,996.79	2,999.12	2,972.74	26.38	113.703		
5,400.00	5,247.55	5,215.75	5,203.75	25.52	18.29	171.53	-313.43	-1,996.79	3,029.27	3,002.38	26.89	112.659		
5,500.00	5,342.80	5,311.00	5,299.00	26.13	18.62	171.62	-313.43	-1,996.79	3,059.42	3,032.02	27.40	111.652		
5,600.00	5,438.05	5,406.25	5,394.25	26.74	18.95	171.70	-313.43	-1,996.79	3,089.58	3,061.67	27.91	110.679		
5,700.00	5,533.30	5,501.50	5,489.50	27.36	19.27	171.78	-313.43	-1,996.79	3,119.74	3,091.32	28.43	109.740		
5,800.00	5,628.56	5,596.75	5,584.76	27.97	19.60	171.86	-313.43	-1,996.79	3,149.91	3,120.97	28.94	108.832		
5,900.00	5,723.81	5,692.00	5,680.01	28.58	19.93	171.94	-313.43	-1,996.79	3,180.09	3,150.63	29.46	107.954		
6,000.00	5,819.06	5,787.25	5,775.26	29.20	20.26	172.01	-313.43	-1,996.79	3,210.27	3,180.30	29.97	107.104		
6,100.00	5,914.31	5,882.50	5,870.51	29.81	20.59	172.09	-313.43	-1,996.79	3,240.46	3,209.97	30.49	106.282		
6,200.00	6,009.56	5,977.76	5,965.76	30.43	20.92	172.16	-313.43	-1,996.79	3,270.65	3,239.64	31.01	105.485		
6,300.00	6,104.81	6,073.01	6,061.01	31.04	21.25	172.23	-313.43	-1,996.79	3,300.84	3,269.32	31.52	104.713		
6,400.00	6,200.06	6,168.26	6,156.26	31.66	21.58	172.30	-313.43	-1,996.79	3,331.04	3,299.00	32.04	103.965		
6,500.00	6,295.31	6,263.51	6,251.51	32.27	21.92	172.37	-313.43	-1,996.79	3,361.25	3,328.69	32.56	103.240		
6,600.00	6,390.56	6,358.76	6,346.76	32.89	22.25	172.44	-313.43	-1,996.79	3,391.45	3,358.38	33.08	102.536		
6,700.00	6,485.81	6,454.01	6,442.01	33.51	22.58	172.51	-313.43	-1,996.79	3,421.67	3,388.07	33.59	101.852		
6,800.00	6,581.06	6,549.26	6,537.26	34.13	22.91	172.58	-313.43	-1,996.79	3,451.88	3,417.77	34.11	101.189		
6,848.89	6,627.63	6,595.83	6,583.83	34.43	23.07	172.61	-313.43	-1,996.79	3,466.66	3,432.29	34.37	100.872		
6,900.00	6,676.45	6,644.65	6,632.65	34.74	23.24	172.68	-313.43	-1,996.79	3,481.67	3,447.04	34.63	100.534		
7,000.00	6,772.71	6,740.91	6,728.91	35.31	23.58	172.81	-313.43	-1,996.79	3,508.54	3,473.39	35.15	99.820		
7,100.00	6,869.86	6,838.06	6,826.06	35.84	23.92	172.91	-313.43	-1,996.79	3,532.06	3,496.40	35.66	99.040		
7,200.00	6,967.77	6,935.97	6,923.97	36.33	24.26	173.00	-313.43	-1,996.79	3,552.21	3,516.03	36.17	98.199		
7,300.00	7,066.34	7,034.53	7,022.54	36.77	24.61	173.08	-313.43	-1,996.79	3,568.95	3,532.27	36.68	97.299		
7,400.00	7,165.43	7,133.63	7,121.63	37.17	24.95	173.14	-313.43	-1,996.79	3,582.26	3,545.08	37.18	96.347		
7,500.00	7,264.93	7,233.12	7,221.13	37.52	25.30	173.18	-313.43	-1,996.79	3,592.13	3,554.46	37.68	95.344		
7,600.00	7,364.71	7,332.91	7,320.91	37.84	25.65	173.21	-313.43	-1,996.79	3,598.55	3,560.39	38.16	94.294		
7,700.00	7,464.66	7,432.86	7,420.86	38.12	26.00	173.22	-313.43	-1,996.79	3,601.51	3,562.87	38.64	93.199		
7,735.34	7,500.00	7,468.20	7,456.20	38.21	26.13	-93.56	-313.43	-1,996.79	3,601.73	3,562.92	38.81	92.806		
7,800.00	7,564.66	7,532.86	7,520.86	38.37	26.35	-93.56	-313.43	-1,996.79	3,601.73	3,562.62	39.11	92.092		
7,900.00	7,664.66	7,632.86	7,620.86	38.61	26.71	-93.56	-313.43	-1,996.79	3,601.73	3,562.15	39.58	91.007		
7,942.38	7,707.04	7,675.24	7,663.24	38.72	26.86	-93.56	-313.43	-1,996.79	3,601.73	3,561.95	39.77	90.554		
7,950.00	7,714.66	7,682.86	7,670.86	38.74	26.88	-93.01	-313.43	-1,996.79	3,601.73	3,561.92	39.81	90.473		
8,000.00	7,764.57	7,732.76	7,720.77	38.86	27.06	-93.04	-313.43	-1,996.79	3,601.88	3,561.84	40.04	89.952		
8,050.00	7,814.03	7,782.23	7,770.23	38.98	27.23	-93.12	-313.43	-1,996.79	3,602.27	3,562.00	40.27	89.449		
8,100.00	7,862.68	7,830.88	7,818.88	39.09	27.40	-93.23	-313.43	-1,996.79	3,602.92	3,562.43	40.50	88.968		
8,150.00	7,910.15	7,878.35	7,866.35	39.20	27.57	-93.37	-313.43	-1,996.79	3,603.87	3,563.16	40.72	88.510		
8,200.00	7,956.07	7,924.27	7,912.27	39.30	27.73	-93.53	-313.43	-1,996.79	3,605.17	3,564.24	40.93	88.080		
8,250.00	8,000.10	7,968.29	7,956.30	39.39	27.89	-93.69	-313.43	-1,996.79	3,606.86	3,565.72	41.14	87.679		
8,300.00	8,041.89	8,010.09	7,998.09	39.48	28.03	-93.84	-313.43	-1,996.79	3,609.01	3,567.68	41.34	87.308		
8,350.00	8,081.14	8,049.33	8,037.34	39.56	28.17	-93.95	-313.43	-1,996.79	3,611.70	3,570.17	41.53	86.972		
8,400.00	8,117.54	8,085.73	8,073.74	39.63	28.30	-94.02	-313.43	-1,996.79	3,614.97	3,573.26	41.71	86.670		
8,450.00	8,150.81	8,119.01	8,107.01	39.69	28.42	-94.02	-313.43	-1,996.79	3,618.90	3,577.02	41.88	86.405		
8,500.00	8,180.71	8,148.91	8,136.91	39.75	28.52	-93.94	-313.43	-1,996.79	3,623.54	3,581.50	42.05	86.180		
8,550.00	8,207.00	8,175.20	8,163.20	39.80	28.61	-93.75	-313.43	-1,996.79	3,628.95	3,586.75	42.20	85.995		
8,600.00	8,229.49	8,197.69	8,185.69	39.85	28.69	-93.44	-313.43	-1,996.79	3,635.15	3,592.81	42.34	85.852		
8,650.00	8,248.00	8,216.20	8,204.20	39.91	28.76	-93.01	-313.43	-1,996.79	3,642.17	3,599.70	42.47	85.754		
8,700.00	8,262.40	8,230.60	8,218.60	39.96	28.81	-92.43	-313.43	-1,996.79	3,650.01	3,607.42	42.59	85.700		
8,750.00	8,272.57	8,240.76	8,228.77	40.02	28.85	-91.71	-313.43	-1,996.79	3,658.66	3,615.96	42.70	85.691 SF		
8,800.00	8,278.43	8,246.63	8,234.63	40.08	28.87	-90.85	-313.43	-1,996.79	3,668.08	3,625.29	42.79	85.730		
8,842.38	8,280.00	8,248.19	8,236.20	40.15	28.87	-90.00	-313.43	-1,996.79	3,676.62	3,633.77	42.85	85.799		
8,900.00	8,280.00	8,248.19	8,236.20	40.25	28.87	-90.00	-313.43	-1,996.79	3,689.00	3,646.06	42.94	85.917		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	8,248.19	8,236.20	40.47	28.87	-90.00	-313.43	-1,996.79	3,712.50	3,669.39	43.11	86.125		
9,100.00	8,280.00	8,248.19	8,236.20	40.75	28.87	-90.00	-313.43	-1,996.79	3,738.53	3,695.23	43.30	86.344		
9,200.00	8,280.00	8,248.19	8,236.20	41.10	28.87	-90.00	-313.43	-1,996.79	3,767.04	3,723.53	43.51	86.577		
9,300.00	8,280.00	8,248.19	8,236.20	41.51	28.87	-90.00	-313.43	-1,996.79	3,797.96	3,754.22	43.74	86.825		
9,400.00	8,280.00	8,248.19	8,236.20	42.00	28.87	-90.00	-313.43	-1,996.79	3,831.25	3,787.26	43.99	87.091		
9,500.00	8,280.00	8,248.19	8,236.20	42.55	28.87	-90.00	-313.43	-1,996.79	3,866.84	3,822.59	44.25	87.378		
9,600.00	8,280.00	8,248.19	8,236.20	43.17	28.87	-90.00	-313.43	-1,996.79	3,904.67	3,860.14	44.53	87.687		
9,700.00	8,280.00	8,248.20	8,236.20	43.85	28.87	-90.00	-313.43	-1,996.79	3,944.66	3,899.85	44.82	88.019		
9,800.00	8,280.00	8,248.20	8,236.20	44.60	28.87	-90.00	-313.43	-1,996.79	3,986.77	3,941.66	45.11	88.380		
9,900.00	8,280.00	8,248.20	8,236.20	45.41	28.87	-90.00	-313.43	-1,996.79	4,030.92	3,985.51	45.41	88.768		
10,000.00	8,280.00	8,248.20	8,236.20	46.27	28.87	-90.00	-313.43	-1,996.79	4,077.04	4,031.32	45.72	89.184		
10,100.00	8,280.00	8,248.20	8,236.20	47.19	28.87	-90.00	-313.43	-1,996.79	4,125.07	4,079.05	46.03	89.626		
10,200.00	8,280.00	8,248.20	8,236.20	48.15	28.87	-90.00	-313.43	-1,996.79	4,174.94	4,128.61	46.33	90.104		
10,300.00	8,280.00	8,248.20	8,236.20	49.16	28.87	-90.00	-313.43	-1,996.79	4,226.60	4,179.95	46.65	90.612		
10,400.00	8,280.00	8,248.20	8,236.20	50.20	28.87	-90.00	-313.43	-1,996.79	4,279.96	4,233.01	46.95	91.150		
10,500.00	8,280.00	8,248.20	8,236.20	51.29	28.87	-90.00	-313.43	-1,996.79	4,334.98	4,287.72	47.26	91.720		
10,600.00	8,280.00	8,248.20	8,236.20	52.41	28.87	-90.00	-313.43	-1,996.79	4,391.58	4,344.01	47.57	92.319		
10,700.00	8,280.00	8,248.20	8,236.20	53.56	28.87	-90.00	-313.43	-1,996.79	4,449.71	4,401.84	47.87	92.949		
10,800.00	8,280.00	8,248.20	8,236.20	54.74	28.87	-90.00	-313.43	-1,996.79	4,509.31	4,461.14	48.17	93.609		
10,900.00	8,280.00	8,248.20	8,236.20	55.95	28.87	-90.00	-313.43	-1,996.79	4,570.33	4,521.86	48.47	94.298		
11,000.00	8,280.00	8,248.20	8,236.20	57.18	28.87	-90.00	-313.43	-1,996.79	4,632.69	4,583.94	48.76	95.016		
11,100.00	8,280.00	8,248.20	8,236.20	58.43	28.87	-90.00	-313.43	-1,996.79	4,696.36	4,647.32	49.04	95.762		
11,200.00	8,280.00	8,248.20	8,236.20	59.71	28.87	-90.00	-313.43	-1,996.79	4,761.28	4,711.96	49.32	96.536		
11,300.00	8,280.00	8,248.20	8,236.20	61.00	28.87	-90.00	-313.43	-1,996.79	4,827.39	4,777.80	49.60	97.336		
11,400.00	8,280.00	8,248.20	8,236.20	62.31	28.87	-90.00	-313.43	-1,996.79	4,894.66	4,844.80	49.86	98.162		
11,500.00	8,280.00	8,248.20	8,236.20	63.64	28.87	-90.00	-313.43	-1,996.79	4,963.03	4,912.90	50.12	99.013		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-92.70	-93.20	-1,972.72	1,975.40							
100.00	100.00	56.80	56.80	0.13	0.07	-92.70	-93.20	-1,972.72	1,974.92	1,974.78	0.14	N/A				
200.00	200.00	156.80	156.80	0.48	0.33	-92.70	-93.20	-1,972.72	1,974.92	1,974.34	0.59	3,374.650				
300.00	300.00	256.80	256.80	0.84	0.69	-92.70	-93.20	-1,972.72	1,974.92	1,973.84	1.09	1,816.238				
400.00	400.00	356.80	356.80	1.20	1.05	-92.70	-93.20	-1,972.72	1,974.92	1,973.33	1.59	1,240.088				
500.00	500.00	456.80	456.80	1.56	1.40	-92.70	-93.20	-1,972.72	1,974.92	1,972.83	2.10	941.062				
600.00	600.00	556.80	556.80	1.92	1.76	-92.70	-93.20	-1,972.72	1,974.92	1,972.32	2.61	758.125				
700.00	700.00	656.80	656.80	2.28	2.12	-92.70	-93.20	-1,972.72	1,974.92	1,971.81	3.11	634.699				
800.00	800.00	756.80	756.80	2.63	2.48	-92.70	-93.20	-1,972.72	1,974.92	1,971.31	3.62	545.819				
900.00	900.00	856.80	856.80	2.99	2.84	-92.70	-93.20	-1,972.72	1,974.92	1,970.80	4.13	478.766				
1,000.00	1,000.00	956.80	956.80	3.35	3.20	-92.70	-93.20	-1,972.72	1,974.92	1,970.29	4.63	426.381				
1,100.00	1,100.00	1,056.80	1,056.80	3.71	3.56	-92.70	-93.20	-1,972.72	1,974.92	1,969.79	5.14	384.327				
1,200.00	1,200.00	1,156.80	1,156.80	4.07	3.91	-92.70	-93.20	-1,972.72	1,974.92	1,969.28	5.65	349.823				
1,300.00	1,300.00	1,256.80	1,256.80	4.43	4.27	-92.70	-93.20	-1,972.72	1,974.92	1,968.77	6.15	321.002				
1,400.00	1,400.00	1,356.80	1,356.80	4.79	4.63	-92.70	-93.20	-1,972.72	1,974.92	1,968.26	6.66	296.568				
1,500.00	1,500.00	1,456.80	1,456.80	5.14	4.99	-92.70	-93.20	-1,972.72	1,974.92	1,967.76	7.17	275.591				
1,600.00	1,600.00	1,556.80	1,556.80	5.50	5.35	-92.70	-93.20	-1,972.72	1,974.92	1,967.25	7.67	257.385	CC, ES			
1,700.00	1,699.98	1,656.78	1,656.78	5.85	5.71	174.07	-93.20	-1,972.72	1,976.66	1,968.49	8.17	241.848				
1,800.00	1,799.84	1,756.64	1,756.64	6.20	6.06	174.08	-93.20	-1,972.72	1,981.87	1,973.20	8.67	228.647				
1,900.00	1,899.45	1,856.25	1,856.25	6.54	6.42	174.09	-93.20	-1,972.72	1,990.53	1,981.37	9.16	217.232				
2,000.00	1,998.70	1,955.50	1,955.50	6.90	6.78	174.10	-93.20	-1,972.72	2,002.66	1,993.00	9.66	207.346				
2,100.00	2,097.47	2,110.39	2,110.37	7.26	7.32	174.13	-93.56	-1,971.17	2,017.46	2,007.18	10.28	196.185				
2,200.00	2,195.62	2,312.59	2,312.24	7.64	8.01	174.12	-96.11	-1,960.28	2,031.20	2,020.20	11.00	184.718				
2,300.00	2,293.06	2,516.57	2,514.99	8.04	8.72	174.06	-101.14	-1,938.76	2,043.29	2,031.59	11.70	174.620				
2,400.00	2,389.64	2,722.08	2,717.78	8.46	9.48	173.94	-108.70	-1,906.47	2,053.72	2,041.32	12.40	165.647				
2,486.44	2,472.37	2,829.85	2,823.46	8.85	9.89	173.85	-113.53	-1,885.83	2,062.48	2,049.61	12.87	160.250				
2,500.00	2,485.28	2,843.32	2,836.65	8.92	9.95	173.84	-114.13	-1,883.23	2,064.04	2,051.10	12.94	159.520				
2,600.00	2,580.53	2,942.63	2,933.98	9.39	10.34	173.78	-118.63	-1,864.01	2,075.55	2,062.10	13.44	154.386				
2,700.00	2,675.78	3,041.94	3,031.31	9.88	10.74	173.72	-123.13	-1,844.79	2,087.05	2,073.10	13.95	149.564				
2,800.00	2,771.03	3,141.25	3,128.64	10.39	11.14	173.66	-127.62	-1,825.57	2,098.56	2,084.09	14.47	145.033				
2,900.00	2,866.28	3,240.56	3,225.97	10.91	11.55	173.60	-132.12	-1,806.35	2,110.08	2,095.09	14.99	140.772				
3,000.00	2,961.53	3,339.87	3,323.30	11.44	11.97	173.55	-136.61	-1,787.14	2,121.59	2,106.08	15.51	136.761				
3,100.00	3,056.78	3,439.19	3,420.63	11.98	12.39	173.49	-141.11	-1,767.92	2,133.11	2,117.07	16.04	132.982				
3,200.00	3,152.03	3,538.50	3,517.96	12.52	12.82	173.43	-145.60	-1,748.70	2,144.63	2,128.06	16.57	129.418				
3,300.00	3,247.28	3,637.81	3,615.30	13.08	13.24	173.37	-150.10	-1,729.48	2,156.15	2,139.04	17.11	126.052				
3,400.00	3,342.54	3,737.12	3,712.63	13.64	13.68	173.32	-154.59	-1,710.26	2,167.67	2,150.03	17.64	122.871				
3,500.00	3,437.79	3,836.43	3,809.96	14.21	14.11	173.26	-159.09	-1,691.05	2,179.20	2,161.02	18.18	119.861				
3,600.00	3,533.04	3,935.74	3,907.29	14.78	14.55	173.21	-163.59	-1,671.83	2,190.72	2,172.00	18.72	117.010				
3,700.00	3,628.29	4,035.06	4,004.62	15.36	14.99	173.15	-168.08	-1,652.61	2,202.25	2,182.99	19.27	114.307				
3,800.00	3,723.54	4,134.37	4,101.95	15.94	15.43	173.10	-172.58	-1,633.39	2,213.78	2,193.97	19.81	111.740				
3,900.00	3,818.79	4,233.68	4,199.28	16.52	15.88	173.05	-177.07	-1,614.17	2,225.32	2,204.96	20.36	109.301				
4,000.00	3,914.04	4,332.99	4,296.61	17.11	16.33	173.00	-181.57	-1,594.96	2,236.85	2,215.94	20.91	106.982				
4,100.00	4,009.29	4,432.30	4,393.94	17.69	16.78	172.94	-186.06	-1,575.74	2,248.39	2,226.93	21.46	104.773				
4,200.00	4,104.54	4,531.61	4,491.27	18.29	17.23	172.89	-190.56	-1,556.52	2,259.93	2,237.92	22.01	102.668				
4,300.00	4,199.79	4,630.93	4,588.60	18.88	17.68	172.84	-195.05	-1,537.30	2,271.47	2,248.90	22.57	100.660				
4,400.00	4,295.04	4,730.24	4,685.93	19.48	18.13	172.79	-199.55	-1,518.08	2,283.01	2,259.89	23.12	98.743				
4,500.00	4,390.29	4,829.55	4,783.26	20.08	18.59	172.74	-204.05	-1,498.87	2,294.55	2,270.88	23.68	96.910				
4,600.00	4,485.55	4,928.86	4,880.60	20.68	19.05	172.69	-208.54	-1,479.65	2,306.10	2,281.86	24.23	95.157				
4,700.00	4,580.80	5,028.17	4,977.93	21.28	19.50	172.64	-213.04	-1,460.43	2,317.65	2,292.85	24.79	93.479				
4,800.00	4,676.05	5,127.49	5,075.26	21.88	19.96	172.59	-217.53	-1,441.21	2,329.19	2,303.84	25.35	91.872				
4,900.00	4,771.30	5,226.80	5,172.59	22.48	20.42	172.55	-222.03	-1,421.99	2,340.74	2,314.83	25.91	90.330				
5,000.00	4,866.55	5,326.11	5,269.92	23.09	20.88	172.50	-226.52	-1,402.78	2,352.30	2,325.82	26.47	88.851				

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	5,425.42	5,367.25	23.70	21.34	172.45	-231.02	-1,383.56	2,363.85	2,336.81	27.04	87.430		
5,200.00	5,057.05	5,524.73	5,464.58	24.30	21.81	172.40	-235.51	-1,364.34	2,375.41	2,347.81	27.60	86.065		
5,300.00	5,152.30	5,624.04	5,561.91	24.91	22.27	172.36	-240.01	-1,345.12	2,386.96	2,358.80	28.16	84.752		
5,400.00	5,247.55	5,723.36	5,659.24	25.52	22.73	172.31	-244.51	-1,325.90	2,398.52	2,369.79	28.73	83.488		
5,500.00	5,342.80	5,822.67	5,756.57	26.13	23.20	172.27	-249.00	-1,306.69	2,410.08	2,380.79	29.29	82.271		
5,600.00	5,438.05	5,921.98	5,853.90	26.74	23.66	172.22	-253.50	-1,287.47	2,421.64	2,391.78	29.86	81.099		
5,700.00	5,533.30	6,021.29	5,951.23	27.36	24.13	172.18	-257.99	-1,268.25	2,433.20	2,402.78	30.43	79.968		
5,800.00	5,628.56	6,120.60	6,048.56	27.97	24.60	172.13	-262.49	-1,249.03	2,444.77	2,413.77	30.99	78.878		
5,900.00	5,723.81	6,219.91	6,145.90	28.58	25.06	172.09	-266.98	-1,229.81	2,456.33	2,424.77	31.56	77.825		
6,000.00	5,819.06	6,319.23	6,243.23	29.20	25.53	172.05	-271.48	-1,210.60	2,467.90	2,435.77	32.13	76.808		
6,100.00	5,914.31	6,418.54	6,340.56	29.81	26.00	172.01	-275.97	-1,191.38	2,479.47	2,446.77	32.70	75.825		
6,200.00	6,009.56	6,517.85	6,437.89	30.43	26.47	171.96	-280.47	-1,172.16	2,491.04	2,457.77	33.27	74.874		
6,300.00	6,104.81	6,617.16	6,535.22	31.04	26.93	171.92	-284.97	-1,152.94	2,502.61	2,468.77	33.84	73.955		
6,400.00	6,200.06	6,700.00	6,616.45	31.66	27.32	171.89	-288.67	-1,137.13	2,514.45	2,480.08	34.37	73.168		
6,500.00	6,295.31	6,755.07	6,670.61	32.27	27.57	171.87	-290.94	-1,127.42	2,527.64	2,492.83	34.81	72.615		
6,600.00	6,390.56	6,800.00	6,714.90	32.89	27.78	171.86	-292.66	-1,120.06	2,542.43	2,507.21	35.21	72.205		
6,700.00	6,485.81	6,876.03	6,790.03	33.51	28.10	171.86	-295.30	-1,108.77	2,558.54	2,522.84	35.70	71.672		
6,800.00	6,581.06	6,936.05	6,849.51	34.13	28.35	171.86	-297.14	-1,100.89	2,576.21	2,540.08	36.13	71.309		
6,848.89	6,627.63	6,965.28	6,878.52	34.43	28.47	171.86	-297.96	-1,097.38	2,585.39	2,549.05	36.33	71.157		
6,900.00	6,676.45	7,000.00	6,913.01	34.74	28.61	171.90	-298.87	-1,093.49	2,594.91	2,558.35	36.56	70.976		
7,000.00	6,772.71	7,055.54	6,968.25	35.31	28.83	171.95	-300.18	-1,087.91	2,612.07	2,575.12	36.95	70.693		
7,100.00	6,869.86	7,100.00	7,012.53	35.84	29.00	172.00	-301.09	-1,084.00	2,627.37	2,590.09	37.28	70.474		
7,200.00	6,967.77	7,175.16	7,087.48	36.33	29.27	172.05	-302.37	-1,078.54	2,640.58	2,602.86	37.71	70.020		
7,300.00	7,066.34	7,235.03	7,147.25	36.77	29.48	172.09	-303.15	-1,075.22	2,651.90	2,613.84	38.07	69.662		
7,400.00	7,165.43	7,300.00	7,212.16	37.17	29.70	172.12	-303.75	-1,072.65	2,661.29	2,622.86	38.43	69.250		
7,500.00	7,264.93	7,354.84	7,266.98	37.52	29.88	172.15	-304.06	-1,071.31	2,668.70	2,629.96	38.73	68.901		
7,600.00	7,364.71	7,414.77	7,326.91	37.84	30.07	172.17	-304.20	-1,070.73	2,674.15	2,635.11	39.04	68.498		
7,700.00	7,464.66	7,509.32	7,421.46	38.12	30.35	172.19	-304.20	-1,070.72	2,677.09	2,637.61	39.48	67.807		
7,735.34	7,500.00	7,544.66	7,456.80	38.21	30.46	-94.59	-304.20	-1,070.72	2,677.31	2,637.66	39.64	67.538		
7,800.00	7,564.66	7,609.32	7,521.46	38.37	30.65	-94.59	-304.20	-1,070.72	2,677.31	2,637.37	39.93	67.045		
7,900.00	7,664.66	7,709.32	7,621.46	38.61	30.96	-94.59	-304.20	-1,070.72	2,677.31	2,636.92	40.38	66.295		
7,942.38	7,707.04	7,751.70	7,663.84	38.72	31.08	-94.59	-304.20	-1,070.72	2,677.31	2,636.73	40.58	65.981		
7,950.00	7,714.66	7,759.32	7,671.46	38.74	31.11	-94.04	-304.20	-1,070.72	2,677.31	2,636.70	40.61	65.925		
8,000.00	7,764.57	7,809.22	7,721.37	38.86	31.26	-94.08	-304.20	-1,070.72	2,677.51	2,636.67	40.84	65.563		
8,050.00	7,814.03	7,858.69	7,770.83	38.98	31.41	-94.18	-304.20	-1,070.72	2,678.04	2,636.97	41.07	65.211		
8,100.00	7,862.68	7,907.34	7,819.48	39.09	31.56	-94.33	-304.20	-1,070.72	2,678.91	2,637.62	41.29	64.873		
8,150.00	7,910.15	7,954.81	7,866.95	39.20	31.70	-94.52	-304.20	-1,070.72	2,680.19	2,638.67	41.52	64.551		
8,200.00	7,956.07	8,000.73	7,912.87	39.30	31.84	-94.74	-304.20	-1,070.72	2,681.92	2,640.18	41.74	64.249		
8,250.00	8,000.10	8,044.75	7,956.90	39.39	31.98	-94.95	-304.20	-1,070.72	2,684.20	2,642.23	41.96	63.967		
8,300.00	8,041.89	8,086.55	7,998.69	39.48	32.11	-95.15	-304.20	-1,070.72	2,687.09	2,644.91	42.18	63.710		
8,350.00	8,081.14	8,125.80	8,037.94	39.56	32.23	-95.31	-304.20	-1,070.72	2,690.68	2,648.29	42.39	63.480		
8,400.00	8,117.54	8,162.19	8,074.34	39.63	32.34	-95.40	-304.20	-1,070.72	2,695.07	2,652.48	42.59	63.279		
8,450.00	8,150.81	8,195.47	8,107.61	39.69	32.44	-95.40	-304.20	-1,070.72	2,700.33	2,657.55	42.79	63.112		
8,500.00	8,180.71	8,225.37	8,137.51	39.75	32.53	-95.29	-304.20	-1,070.72	2,706.55	2,663.57	42.98	62.978		
8,550.00	8,207.00	8,251.66	8,163.80	39.80	32.62	-95.04	-304.20	-1,070.72	2,713.77	2,670.61	43.16	62.883		
8,600.00	8,229.49	8,274.15	8,186.29	39.85	32.69	-94.63	-304.20	-1,070.72	2,722.05	2,678.73	43.33	62.826		
8,650.00	8,248.00	8,292.66	8,204.80	39.91	32.74	-94.04	-304.20	-1,070.72	2,731.41	2,687.93	43.49	62.812		
8,700.00	8,262.40	8,307.06	8,219.20	39.96	32.79	-93.27	-304.20	-1,070.72	2,741.85	2,698.22	43.63	62.840		
8,750.00	8,272.57	8,317.23	8,229.37	40.02	32.82	-92.31	-304.20	-1,070.72	2,753.35	2,709.58	43.77	62.912		
8,800.00	8,278.43	8,323.09	8,235.23	40.08	32.84	-91.14	-304.20	-1,070.72	2,765.84	2,721.96	43.88	63.027		
8,842.38	8,280.00	8,324.66	8,236.80	40.15	32.84	-90.00	-304.20	-1,070.72	2,777.16	2,733.18	43.97	63.160		
8,900.00	8,280.00	8,324.66	8,236.80	40.25	32.84	-90.00	-304.20	-1,070.72	2,793.51	2,749.43	44.08	63.369		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	8,324.66	8,236.80	40.47	32.84	-90.00	-304.20	-1,070.72	2,824.46	2,780.17	44.29	63.766		
9,100.00	8,280.00	8,324.66	8,236.80	40.75	32.84	-90.00	-304.20	-1,070.72	2,858.57	2,814.06	44.52	64.212		
9,200.00	8,280.00	8,324.66	8,236.80	41.10	32.84	-90.00	-304.20	-1,070.72	2,895.74	2,850.99	44.75	64.705		
9,300.00	8,280.00	8,324.66	8,236.80	41.51	32.84	-90.00	-304.20	-1,070.72	2,935.85	2,890.85	45.00	65.247		
9,400.00	8,280.00	8,324.66	8,236.80	42.00	32.84	-90.00	-304.20	-1,070.72	2,978.77	2,933.53	45.24	65.837		
9,500.00	8,280.00	8,324.66	8,236.80	42.55	32.84	-90.00	-304.20	-1,070.72	3,024.39	2,978.89	45.50	66.474		
9,600.00	8,280.00	8,324.66	8,236.80	43.17	32.84	-90.00	-304.20	-1,070.72	3,072.59	3,026.84	45.75	67.158		
9,700.00	8,280.00	8,324.66	8,236.80	43.85	32.84	-90.00	-304.20	-1,070.72	3,123.25	3,077.25	46.01	67.889		
9,800.00	8,280.00	8,324.66	8,236.80	44.60	32.84	-90.00	-304.20	-1,070.72	3,176.25	3,130.00	46.26	68.666		
9,900.00	8,280.00	8,324.66	8,236.80	45.41	32.84	-90.00	-304.20	-1,070.72	3,231.48	3,184.97	46.50	69.488		
10,000.00	8,280.00	8,324.66	8,236.80	46.27	32.84	-90.00	-304.20	-1,070.72	3,288.82	3,242.07	46.75	70.352		
10,100.00	8,280.00	8,324.66	8,236.80	47.19	32.84	-90.00	-304.20	-1,070.72	3,348.16	3,301.18	46.99	71.257		
10,200.00	8,280.00	8,324.66	8,236.80	48.15	32.84	-90.00	-304.20	-1,070.72	3,409.41	3,362.19	47.22	72.201		
10,300.00	8,280.00	8,324.66	8,236.80	49.16	32.84	-90.00	-304.20	-1,070.72	3,472.46	3,425.01	47.45	73.184		
10,400.00	8,280.00	8,324.66	8,236.80	50.20	32.84	-90.00	-304.20	-1,070.72	3,537.21	3,489.54	47.67	74.202		
10,500.00	8,280.00	8,324.66	8,236.80	51.29	32.84	-90.00	-304.20	-1,070.72	3,603.57	3,555.68	47.88	75.255		
10,600.00	8,280.00	8,324.66	8,236.80	52.41	32.84	-90.00	-304.20	-1,070.72	3,671.45	3,623.36	48.09	76.339		
10,700.00	8,280.00	8,324.66	8,236.80	53.56	32.84	-90.00	-304.20	-1,070.72	3,740.78	3,692.49	48.30	77.456		
10,800.00	8,280.00	8,324.66	8,236.80	54.74	32.84	-90.00	-304.20	-1,070.72	3,811.47	3,762.98	48.49	78.605		
10,900.00	8,280.00	8,324.66	8,236.80	55.95	32.84	-90.00	-304.20	-1,070.72	3,883.45	3,834.78	48.67	79.784		
11,000.00	8,280.00	8,324.66	8,236.80	57.18	32.84	-90.00	-304.20	-1,070.72	3,956.65	3,907.80	48.85	80.989		
11,100.00	8,280.00	8,324.66	8,236.80	58.43	32.84	-90.00	-304.20	-1,070.72	4,031.00	3,981.97	49.03	82.221		
11,200.00	8,280.00	8,324.66	8,236.80	59.71	32.84	-90.00	-304.20	-1,070.72	4,106.44	4,057.24	49.19	83.476		
11,300.00	8,280.00	8,324.66	8,236.80	61.00	32.84	-90.00	-304.20	-1,070.72	4,182.91	4,133.55	49.35	84.754		
11,400.00	8,280.00	8,324.66	8,236.80	62.31	32.84	-90.00	-304.20	-1,070.72	4,260.35	4,210.84	49.51	86.054		
11,500.00	8,280.00	8,324.66	8,236.80	63.64	32.84	-90.00	-304.20	-1,070.72	4,338.72	4,289.06	49.66	87.374		
11,600.00	8,280.00	8,324.66	8,236.80	64.99	32.84	-90.00	-304.20	-1,070.72	4,417.95	4,368.15	49.80	88.714		
11,700.00	8,280.00	8,324.66	8,236.80	66.35	32.84	-90.00	-304.20	-1,070.72	4,498.02	4,448.08	49.94	90.072		
11,800.00	8,280.00	8,324.66	8,236.80	67.72	32.84	-90.00	-304.20	-1,070.72	4,578.87	4,528.80	50.07	91.447		
11,900.00	8,280.00	8,324.66	8,236.80	69.11	32.84	-90.00	-304.20	-1,070.72	4,660.47	4,610.27	50.20	92.838		
12,000.00	8,280.00	15,896.26	12,136.00	70.51	75.73	-145.58	3,613.93	-1,109.56	4,726.98	4,649.85	77.13	61.285		
12,100.00	8,280.00	15,996.26	12,136.00	71.92	77.08	-145.58	3,713.92	-1,110.55	4,727.00	4,648.53	78.48	60.233		
12,200.00	8,280.00	16,096.26	12,136.00	73.34	78.44	-145.58	3,813.92	-1,111.54	4,727.03	4,647.19	79.83	59.210		
12,300.00	8,280.00	16,196.26	12,136.00	74.77	79.81	-145.58	3,913.91	-1,112.53	4,727.05	4,645.85	81.20	58.215		
12,400.00	8,280.00	16,296.26	12,136.00	76.21	81.19	-145.57	4,013.91	-1,113.52	4,727.07	4,644.50	82.57	57.247		
12,500.00	8,280.00	16,396.26	12,136.00	77.65	82.58	-145.57	4,113.90	-1,114.51	4,727.09	4,643.14	83.95	56.305		
12,600.00	8,280.00	16,496.26	12,136.00	79.11	83.98	-145.57	4,213.90	-1,115.50	4,727.12	4,641.77	85.34	55.389		
12,700.00	8,280.00	16,596.26	12,136.00	80.57	85.39	-145.57	4,313.89	-1,116.49	4,727.14	4,640.40	86.74	54.498		
12,800.00	8,280.00	16,696.26	12,136.00	82.04	86.81	-145.57	4,413.89	-1,117.49	4,727.16	4,639.02	88.14	53.631		
12,900.00	8,280.00	16,796.26	12,136.00	83.52	88.24	-145.57	4,513.88	-1,118.48	4,727.18	4,637.63	89.55	52.787		
13,000.00	8,280.00	16,896.26	12,136.00	85.01	89.67	-145.57	4,613.88	-1,119.47	4,727.20	4,636.24	90.97	51.966		
13,100.00	8,280.00	16,996.26	12,136.00	86.50	91.11	-145.57	4,713.87	-1,120.46	4,727.23	4,634.84	92.39	51.167		
13,200.00	8,280.00	17,096.26	12,136.00	87.99	92.56	-145.57	4,813.87	-1,121.45	4,727.25	4,633.43	93.82	50.389		
13,300.00	8,280.00	17,196.26	12,136.00	89.50	94.01	-145.57	4,913.86	-1,122.44	4,727.27	4,632.02	95.25	49.631		
13,400.00	8,280.00	17,296.26	12,136.00	91.00	95.48	-145.57	5,013.86	-1,123.43	4,727.29	4,630.61	96.68	48.895		
13,500.00	8,280.00	17,396.26	12,136.00	92.52	96.94	-145.57	5,113.85	-1,124.42	4,727.32	4,629.20	98.12	48.179		
13,600.00	8,280.00	17,496.26	12,136.00	94.03	98.42	-145.57	5,213.85	-1,125.41	4,727.34	4,627.78	99.56	47.481		
13,700.00	8,280.00	17,596.26	12,136.00	95.56	99.90	-145.57	5,313.84	-1,126.41	4,727.36	4,626.35	101.01	46.801		
13,800.00	8,280.00	17,696.26	12,136.00	97.08	101.38	-145.57	5,413.84	-1,127.40	4,727.38	4,624.92	102.46	46.139		
13,900.00	8,280.00	17,796.26	12,136.00	98.61	102.87	-145.57	5,513.83	-1,128.39	4,727.41	4,623.49	103.91	45.493		
14,000.00	8,280.00	17,896.26	12,136.00	100.15	104.36	-145.57	5,613.83	-1,129.38	4,727.43	4,622.05	105.37	44.863		
14,100.00	8,280.00	17,996.26	12,136.00	101.69	105.86	-145.57	5,713.82	-1,130.37	4,727.45	4,620.61	106.84	44.250		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	18,096.26	12,136.00	103.23	107.37	-145.57	5,813.82	-1,131.36	4,727.47	4,619.17	108.30	43.651		
14,300.00	8,280.00	18,196.26	12,136.00	104.77	108.87	-145.57	5,913.81	-1,132.35	4,727.50	4,617.72	109.77	43.066		
14,400.00	8,280.00	18,296.26	12,136.00	106.32	110.38	-145.57	6,013.81	-1,133.34	4,727.52	4,616.27	111.24	42.496		
14,500.00	8,280.00	18,396.26	12,136.00	107.87	111.90	-145.57	6,113.80	-1,134.33	4,727.54	4,614.82	112.72	41.940		
14,600.00	8,280.00	18,496.26	12,136.00	109.43	113.42	-145.57	6,213.80	-1,135.33	4,727.56	4,613.36	114.20	41.397		
14,700.00	8,280.00	18,596.26	12,136.00	110.98	114.94	-145.57	6,313.80	-1,136.32	4,727.58	4,611.90	115.68	40.867		
14,800.00	8,280.00	18,696.26	12,136.00	112.54	116.47	-145.57	6,413.79	-1,137.31	4,727.61	4,610.44	117.17	40.349		
14,900.00	8,280.00	18,796.26	12,136.00	114.10	118.00	-145.57	6,513.79	-1,138.30	4,727.63	4,608.97	118.66	39.843		
15,000.00	8,280.00	18,896.26	12,136.00	115.67	119.53	-145.56	6,613.78	-1,139.29	4,727.65	4,607.51	120.15	39.349		
15,100.00	8,280.00	18,996.26	12,136.00	117.24	121.07	-145.56	6,713.78	-1,140.28	4,727.67	4,606.03	121.64	38.867		
15,200.00	8,280.00	19,096.26	12,136.00	118.81	122.61	-145.56	6,813.77	-1,141.27	4,727.70	4,604.56	123.13	38.396		
15,300.00	8,280.00	19,196.26	12,136.00	120.38	124.15	-145.56	6,913.77	-1,142.26	4,727.72	4,603.09	124.62	37.936		
15,400.00	8,280.00	19,296.26	12,136.00	121.95	125.70	-145.56	7,013.76	-1,143.25	4,727.74	4,601.62	126.12	37.486		
15,500.00	8,280.00	19,396.26	12,136.00	123.53	127.24	-145.56	7,113.76	-1,144.24	4,727.76	4,600.15	127.62	37.047		
15,600.00	8,280.00	19,496.26	12,136.00	125.11	128.79	-145.56	7,213.75	-1,145.24	4,727.79	4,598.67	129.12	36.617		
15,700.00	8,280.00	19,596.26	12,136.00	126.69	130.35	-145.56	7,313.75	-1,146.23	4,727.81	4,597.19	130.62	36.196		
15,800.00	8,280.00	19,696.26	12,136.00	128.27	131.90	-145.56	7,413.74	-1,147.22	4,727.83	4,595.71	132.12	35.784		
15,900.00	8,280.00	19,796.26	12,136.00	129.85	133.46	-145.56	7,513.74	-1,148.21	4,727.85	4,594.23	133.63	35.381		
16,000.00	8,280.00	19,896.26	12,136.00	131.44	135.02	-145.56	7,613.73	-1,149.20	4,727.87	4,592.74	135.13	34.987		
16,100.00	8,280.00	19,996.26	12,136.00	133.02	136.58	-145.56	7,713.73	-1,150.19	4,727.90	4,591.26	136.64	34.601		
16,200.00	8,280.00	20,096.26	12,136.00	134.61	138.15	-145.56	7,813.72	-1,151.18	4,727.92	4,589.77	138.15	34.223		
16,300.00	8,280.00	20,196.26	12,136.00	136.20	139.71	-145.56	7,913.72	-1,152.17	4,727.94	4,588.28	139.66	33.852		
16,400.00	8,280.00	20,296.26	12,136.00	137.79	141.28	-145.56	8,013.71	-1,153.16	4,727.96	4,586.79	141.18	33.489		
16,500.00	8,280.00	20,396.26	12,136.00	139.39	142.85	-145.56	8,113.71	-1,154.16	4,727.99	4,585.29	142.69	33.134		
16,600.00	8,280.00	20,496.26	12,136.00	140.98	144.42	-145.56	8,213.70	-1,155.15	4,728.01	4,583.80	144.21	32.785		
16,700.00	8,280.00	20,596.26	12,136.00	142.58	146.00	-145.56	8,313.70	-1,156.14	4,728.03	4,582.30	145.73	32.444		
16,800.00	8,280.00	20,696.26	12,136.00	144.17	147.57	-145.56	8,413.69	-1,157.13	4,728.05	4,580.80	147.25	32.109		
16,900.00	8,280.00	20,796.26	12,136.00	145.77	149.15	-145.56	8,513.69	-1,158.12	4,728.08	4,579.31	148.77	31.782		
17,000.00	8,280.00	20,896.26	12,136.00	147.37	150.73	-145.56	8,613.68	-1,159.11	4,728.10	4,577.81	150.29	31.460		
17,100.00	8,280.00	20,996.26	12,136.00	148.97	152.31	-145.56	8,713.68	-1,160.10	4,728.12	4,576.31	151.81	31.146		
17,200.00	8,280.00	21,096.26	12,136.00	150.57	153.89	-145.56	8,813.67	-1,161.09	4,728.14	4,574.82	153.33	30.837		
17,300.00	8,280.00	21,196.26	12,136.00	152.18	155.47	-145.56	8,913.67	-1,162.08	4,728.16	4,573.32	154.85	30.535		
17,400.00	8,280.00	21,296.26	12,136.00	153.78	157.06	-145.56	9,013.66	-1,163.07	4,728.19	4,571.82	156.37	30.237		
17,500.00	8,280.00	21,396.26	12,136.00	155.38	158.64	-145.55	9,113.66	-1,164.07	4,728.21	4,570.32	157.89	29.946		
17,600.00	8,280.00	21,496.26	12,136.00	156.99	160.23	-145.55	9,213.65	-1,165.06	4,728.23	4,568.82	159.42	29.660		
17,700.00	8,280.00	21,596.26	12,136.00	158.60	161.82	-145.55	9,313.65	-1,166.05	4,728.25	4,567.31	160.94	29.379		
17,800.00	8,280.00	21,696.26	12,136.00	160.20	163.41	-145.55	9,413.64	-1,167.04	4,728.28	4,565.81	162.47	29.103		
17,900.00	8,280.00	21,796.26	12,136.00	161.81	165.00	-145.55	9,513.64	-1,168.03	4,728.30	4,564.30	164.00	28.832		
18,000.00	8,280.00	21,896.26	12,136.00	163.42	166.59	-145.55	9,613.63	-1,169.02	4,728.32	4,562.80	165.53	28.566		
18,100.00	8,280.00	21,996.26	12,136.00	165.03	168.19	-145.55	9,713.63	-1,170.01	4,728.34	4,561.29	167.05	28.304		
18,200.00	8,280.00	22,096.26	12,136.00	166.64	169.78	-145.55	9,813.62	-1,171.00	4,728.37	4,559.78	168.59	28.047		
18,300.00	8,280.00	22,196.26	12,136.00	168.25	171.38	-145.55	9,913.62	-1,171.99	4,728.39	4,558.27	170.12	27.795		
18,400.00	8,280.00	22,296.26	12,136.00	169.87	172.97	-145.55	10,013.61	-1,172.99	4,728.41	4,556.76	171.65	27.547		
18,438.77	8,280.00	22,335.03	12,136.00	170.49	173.59	-145.55	10,052.38	-1,173.37	4,728.42	4,556.18	172.24	27.452 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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 +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	-153.89	-75.29	-36.90	83.85				
100.00	100.00	99.10	99.10	0.13	0.12	-153.89	-75.29	-36.90	83.85	83.67	0.18	474.679	
200.00	200.00	199.10	199.10	0.48	0.48	-153.89	-75.29	-36.90	83.85	83.16	0.68	122.921	
300.00	300.00	299.10	299.10	0.84	0.84	-153.89	-75.29	-36.90	83.85	82.66	1.19	70.514	
400.00	400.00	399.10	399.10	1.20	1.20	-153.89	-75.29	-36.90	83.85	82.15	1.70	49.437	
500.00	500.00	499.10	499.10	1.56	1.56	-153.89	-75.29	-36.90	83.85	81.64	2.20	38.060	
600.00	600.00	599.10	599.10	1.92	1.91	-153.89	-75.29	-36.90	83.85	81.14	2.71	30.940	
700.00	700.00	699.10	699.10	2.28	2.27	-153.89	-75.29	-36.90	83.85	80.63	3.22	26.064	
800.00	800.00	799.10	799.10	2.63	2.63	-153.89	-75.29	-36.90	83.85	80.12	3.72	22.516	
900.00	900.00	899.10	899.10	2.99	2.99	-153.89	-75.29	-36.90	83.85	79.62	4.23	19.818	
1,000.00	1,000.00	999.10	999.10	3.35	3.35	-153.89	-75.29	-36.90	83.85	79.11	4.74	17.697	
1,100.00	1,100.00	1,099.10	1,099.10	3.71	3.71	-153.89	-75.29	-36.90	83.85	78.60	5.24	15.987	
1,200.00	1,200.00	1,199.10	1,199.10	4.07	4.07	-153.89	-75.29	-36.90	83.85	78.09	5.75	14.578	
1,300.00	1,300.00	1,299.10	1,299.10	4.43	4.42	-153.89	-75.29	-36.90	83.85	77.59	6.26	13.397	
1,400.00	1,400.00	1,399.10	1,399.10	4.79	4.78	-153.89	-75.29	-36.90	83.85	77.08	6.77	12.393	
1,500.00	1,500.00	1,499.10	1,499.10	5.14	5.14	-153.89	-75.29	-36.90	83.85	76.57	7.27	11.529	
1,600.00	1,600.00	1,599.10	1,599.10	5.50	5.50	-153.89	-75.29	-36.90	83.85	76.07	7.78	10.778 CC, ES	
1,700.00	1,699.98	1,699.08	1,699.08	5.85	5.86	113.96	-75.29	-36.90	84.54	76.26	8.28	10.210	
1,800.00	1,799.84	1,798.94	1,798.94	6.20	6.22	117.08	-75.29	-36.90	86.80	78.02	8.78	9.891	
1,900.00	1,899.45	1,898.55	1,898.55	6.54	6.57	121.88	-75.29	-36.90	91.10	81.83	9.27	9.824 SF	
2,000.00	1,998.70	1,997.80	1,997.80	6.90	6.93	127.79	-75.29	-36.90	98.11	88.34	9.77	10.039	
2,100.00	2,097.47	2,096.57	2,096.57	7.26	7.28	134.14	-75.29	-36.90	108.46	98.18	10.27	10.556	
2,200.00	2,195.62	2,194.72	2,194.72	7.64	7.63	140.33	-75.29	-36.90	122.60	111.83	10.78	11.379	
2,300.00	2,293.06	2,292.16	2,292.16	8.04	7.98	145.93	-75.29	-36.90	140.79	129.51	11.27	12.487	
2,400.00	2,389.64	2,388.74	2,388.74	8.46	8.33	150.77	-75.29	-36.90	163.04	151.27	11.77	13.851	
2,486.44	2,472.37	2,468.74	2,468.74	8.85	8.61	154.09	-75.81	-37.24	186.03	173.85	12.18	15.273	
2,500.00	2,485.28	2,481.12	2,481.11	8.92	8.65	154.57	-76.01	-37.37	190.00	177.75	12.24	15.517	
2,600.00	2,580.53	2,571.94	2,571.88	9.39	8.95	157.34	-78.53	-39.01	220.57	207.87	12.70	17.374	
2,700.00	2,675.78	2,663.32	2,663.11	9.88	9.25	159.15	-82.79	-41.79	253.14	239.99	13.15	19.251	
2,800.00	2,771.03	2,757.46	2,757.09	10.39	9.56	160.53	-87.61	-44.93	286.29	272.67	13.62	21.015	
2,900.00	2,866.28	2,851.61	2,851.06	10.91	9.87	161.62	-92.43	-48.07	319.56	305.46	14.10	22.661	
3,000.00	2,961.53	2,945.76	2,945.03	11.44	10.19	162.51	-97.24	-51.20	352.91	338.33	14.58	24.200	
3,100.00	3,056.78	3,039.90	3,039.00	11.98	10.51	163.25	-102.06	-54.34	386.32	371.25	15.07	25.639	
3,200.00	3,152.03	3,134.05	3,132.97	12.52	10.83	163.86	-106.88	-57.48	419.78	404.23	15.56	26.985	
3,300.00	3,247.28	3,228.20	3,226.94	13.08	11.15	164.39	-111.69	-60.62	453.28	437.23	16.05	28.248	
3,400.00	3,342.54	3,322.35	3,320.91	13.64	11.48	164.84	-116.51	-63.76	486.81	470.27	16.54	29.432	
3,500.00	3,437.79	3,416.49	3,414.89	14.21	11.80	165.24	-121.33	-66.90	520.36	503.32	17.04	30.545	
3,600.00	3,533.04	3,510.64	3,508.86	14.78	12.13	165.59	-126.14	-70.04	553.92	536.39	17.53	31.592	
3,700.00	3,628.29	3,604.79	3,602.83	15.36	12.46	165.89	-130.96	-73.17	587.51	569.48	18.03	32.579	
3,800.00	3,723.54	3,698.93	3,696.80	15.94	12.79	166.17	-135.78	-76.31	621.11	602.57	18.54	33.510	
3,900.00	3,818.79	3,793.08	3,790.77	16.52	13.12	166.41	-140.59	-79.45	654.72	635.68	19.04	34.389	
4,000.00	3,914.04	3,887.23	3,884.74	17.11	13.45	166.64	-145.41	-82.59	688.34	668.79	19.54	35.220	
4,100.00	4,009.29	3,981.38	3,978.71	17.69	13.79	166.84	-150.23	-85.73	721.97	701.92	20.05	36.007	
4,200.00	4,104.54	4,075.52	4,072.69	18.29	14.12	167.02	-155.04	-88.87	755.60	735.04	20.56	36.754	
4,300.00	4,199.79	4,169.67	4,166.66	18.88	14.46	167.19	-159.86	-92.01	789.24	768.18	21.07	37.462	
4,400.00	4,295.04	4,263.82	4,260.63	19.48	14.79	167.34	-164.68	-95.14	822.89	801.31	21.58	38.135	
4,500.00	4,390.29	4,357.96	4,354.60	20.08	15.13	167.49	-169.50	-98.28	856.54	834.45	22.09	38.775	
4,600.00	4,485.55	4,452.11	4,448.57	20.68	15.46	167.62	-174.31	-101.42	890.20	867.60	22.60	39.385	
4,700.00	4,580.80	4,546.26	4,542.54	21.28	15.80	167.74	-179.13	-104.56	923.86	900.74	23.12	39.966	
4,800.00	4,676.05	4,640.41	4,636.51	21.88	16.14	167.85	-183.95	-107.70	957.52	933.89	23.63	40.520	
4,900.00	4,771.30	4,734.55	4,730.49	22.48	16.48	167.96	-188.76	-110.84	991.19	967.04	24.15	41.049	
5,000.00	4,866.55	4,828.70	4,824.46	23.09	16.82	168.06	-193.58	-113.98	1,024.86	1,000.20	24.66	41.555	

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	4,922.85	4,918.43	23.70	17.16	168.15	-198.40	-117.11	1,058.53	1,033.35	25.18	42.039		
5,200.00	5,057.05	5,016.99	5,012.40	24.30	17.50	168.24	-203.21	-120.25	1,092.21	1,066.51	25.70	42.502		
5,300.00	5,152.30	5,111.14	5,106.37	24.91	17.84	168.32	-208.03	-123.39	1,125.88	1,099.67	26.22	42.946		
5,400.00	5,247.55	5,205.29	5,200.34	25.52	18.18	168.40	-212.85	-126.53	1,159.56	1,132.83	26.74	43.371		
5,500.00	5,342.80	5,299.44	5,294.31	26.13	18.52	168.47	-217.66	-129.67	1,193.24	1,165.99	27.26	43.779		
5,600.00	5,438.05	5,393.58	5,388.29	26.74	18.86	168.54	-222.48	-132.81	1,226.92	1,199.15	27.78	44.171		
5,700.00	5,533.30	5,487.73	5,482.26	27.36	19.20	168.60	-227.30	-135.94	1,260.61	1,232.31	28.30	44.548		
5,800.00	5,628.56	5,581.88	5,576.23	27.97	19.55	168.66	-232.11	-139.08	1,294.29	1,265.47	28.82	44.910		
5,900.00	5,723.81	5,676.02	5,670.20	28.58	19.89	168.72	-236.93	-142.22	1,327.98	1,298.64	29.34	45.259		
6,000.00	5,819.06	5,770.17	5,764.17	29.20	20.23	168.78	-241.75	-145.36	1,361.67	1,331.80	29.86	45.595		
6,100.00	5,914.31	5,864.32	5,858.14	29.81	20.57	168.83	-246.56	-148.50	1,395.35	1,364.97	30.39	45.918		
6,200.00	6,009.56	5,958.47	5,952.11	30.43	20.92	168.88	-251.38	-151.64	1,429.04	1,398.13	30.91	46.230		
6,300.00	6,104.81	6,052.61	6,046.09	31.04	21.26	168.93	-256.20	-154.78	1,462.73	1,431.30	31.44	46.531		
6,400.00	6,200.06	6,146.76	6,140.06	31.66	21.61	168.97	-261.01	-157.91	1,496.42	1,464.46	31.96	46.822		
6,500.00	6,295.31	6,240.91	6,234.03	32.27	21.95	169.02	-265.83	-161.05	1,530.12	1,497.63	32.49	47.102		
6,600.00	6,390.56	6,335.05	6,328.00	32.89	22.29	169.06	-270.65	-164.19	1,563.81	1,530.80	33.01	47.373		
6,700.00	6,485.81	6,429.20	6,421.97	33.51	22.64	169.10	-275.46	-167.33	1,597.50	1,563.96	33.54	47.635		
6,800.00	6,581.06	6,523.35	6,515.94	34.13	22.98	169.14	-280.28	-170.47	1,631.19	1,597.13	34.06	47.888		
6,848.89	6,627.63	6,569.38	6,561.89	34.43	23.15	169.16	-282.64	-172.00	1,647.67	1,613.35	34.32	48.009		
6,900.00	6,676.45	6,617.64	6,610.06	34.74	23.33	169.24	-285.11	-173.61	1,664.47	1,629.88	34.59	48.122		
7,000.00	6,772.71	6,712.90	6,705.14	35.31	23.68	169.37	-289.98	-176.79	1,694.88	1,659.76	35.11	48.268		
7,100.00	6,869.86	6,845.79	6,837.89	35.84	24.16	169.51	-295.03	-180.08	1,721.05	1,685.23	35.81	48.055		
7,200.00	6,967.77	6,974.79	6,966.87	36.33	24.61	169.71	-296.29	-180.90	1,741.70	1,705.24	36.46	47.765		
7,300.00	7,066.34	7,073.35	7,065.44	36.77	24.94	169.86	-296.29	-180.90	1,758.30	1,721.34	36.96	47.572		
7,400.00	7,165.43	7,172.44	7,164.53	37.17	25.28	169.99	-296.29	-180.90	1,771.51	1,734.06	37.45	47.301		
7,500.00	7,264.93	7,271.94	7,264.03	37.52	25.61	170.08	-296.29	-180.90	1,781.30	1,743.37	37.94	46.953		
7,600.00	7,364.71	7,371.73	7,363.81	37.84	25.95	170.13	-296.29	-180.90	1,787.67	1,749.26	38.42	46.533		
7,700.00	7,464.66	7,471.68	7,463.76	38.12	26.29	170.16	-296.29	-180.90	1,790.61	1,751.72	38.89	46.044		
7,735.34	7,500.00	7,507.02	7,499.10	38.21	26.41	-96.61	-296.29	-180.90	1,790.82	1,751.77	39.05	45.857		
7,800.00	7,564.66	7,571.68	7,563.76	38.37	26.63	-96.61	-296.29	-180.90	1,790.82	1,751.47	39.35	45.512		
7,900.00	7,664.66	7,671.68	7,663.76	38.61	26.97	-96.61	-296.29	-180.90	1,790.82	1,751.01	39.81	44.987		
7,942.38	7,707.04	7,714.06	7,706.14	38.72	27.12	-96.61	-296.29	-180.90	1,790.82	1,750.82	40.00	44.768		
7,950.00	7,714.66	7,721.68	7,713.76	38.74	27.15	-96.07	-296.29	-180.90	1,790.83	1,750.79	40.04	44.729		
8,000.00	7,764.57	7,771.58	7,763.67	38.86	27.32	-96.13	-296.29	-180.90	1,791.13	1,750.86	40.27	44.481		
8,050.00	7,814.03	7,821.05	7,813.13	38.98	27.49	-96.28	-296.29	-180.90	1,791.91	1,751.42	40.50	44.247		
8,100.00	7,862.68	7,869.70	7,861.78	39.09	27.65	-96.50	-296.29	-180.90	1,793.23	1,752.50	40.73	44.030		
8,150.00	7,910.15	7,917.16	7,909.25	39.20	27.81	-96.78	-296.29	-180.90	1,795.14	1,754.18	40.95	43.833		
8,200.00	7,956.07	7,963.09	7,955.17	39.30	27.97	-97.10	-296.29	-180.90	1,797.73	1,756.56	41.18	43.659		
8,250.00	8,000.10	8,007.11	7,999.20	39.39	28.12	-97.42	-296.29	-180.90	1,801.13	1,759.74	41.39	43.512		
8,300.00	8,041.89	8,048.91	8,040.99	39.48	28.27	-97.72	-296.29	-180.90	1,805.44	1,763.84	41.61	43.393		
8,350.00	8,081.14	8,088.15	8,080.24	39.56	28.40	-97.95	-296.29	-180.90	1,810.80	1,768.99	41.81	43.308		
8,400.00	8,117.54	8,124.55	8,116.64	39.63	28.52	-98.08	-296.29	-180.90	1,817.32	1,775.31	42.01	43.259		
8,450.00	8,150.81	8,157.83	8,149.91	39.69	28.64	-98.08	-296.29	-180.90	1,825.13	1,782.93	42.20	43.250		
8,500.00	8,180.71	8,187.73	8,179.81	39.75	28.74	-97.91	-296.29	-180.90	1,834.32	1,791.95	42.38	43.285		
8,550.00	8,207.00	8,214.02	8,206.10	39.80	28.83	-97.54	-296.29	-180.90	1,844.98	1,802.44	42.54	43.366		
8,600.00	8,229.49	8,236.51	8,228.59	39.85	28.91	-96.93	-296.29	-180.90	1,857.15	1,814.46	42.70	43.495		
8,650.00	8,248.00	8,255.02	8,247.10	39.91	28.97	-96.06	-296.29	-180.90	1,870.86	1,828.02	42.84	43.674		
8,700.00	8,262.40	8,269.41	8,261.50	39.96	29.02	-94.91	-296.29	-180.90	1,886.09	1,843.13	42.96	43.905		
8,750.00	8,272.57	8,279.58	8,271.67	40.02	29.06	-93.46	-296.29	-180.90	1,902.77	1,859.71	43.06	44.188		
8,800.00	8,278.43	8,285.45	8,277.53	40.08	29.08	-91.71	-296.29	-180.90	1,920.82	1,877.67	43.14	44.520		
8,842.38	8,280.00	8,287.01	8,279.10	40.15	29.08	-90.00	-296.29	-180.90	1,937.09	1,893.89	43.20	44.841		
8,900.00	8,280.00	8,287.01	8,279.10	40.25	29.08	-90.00	-296.29	-180.90	1,960.48	1,917.21	43.26	45.314		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	8,287.01	8,279.10	40.47	29.08	-90.00	-296.29	-180.90	2,004.36	1,960.98	43.38	46.204		
9,100.00	8,280.00	8,287.01	8,279.10	40.75	29.08	-90.00	-296.29	-180.90	2,052.18	2,008.68	43.50	47.176		
9,200.00	8,280.00	8,287.01	8,279.10	41.10	29.08	-90.00	-296.29	-180.90	2,103.67	2,060.05	43.62	48.227		
9,300.00	8,280.00	8,287.01	8,279.10	41.51	29.08	-90.00	-296.29	-180.90	2,158.57	2,114.83	43.74	49.351		
9,400.00	8,280.00	8,287.01	8,279.10	42.00	29.08	-90.00	-296.29	-180.90	2,216.62	2,172.77	43.86	50.543		
9,500.00	8,280.00	8,287.01	8,279.10	42.55	29.08	-90.00	-296.29	-180.90	2,277.59	2,233.62	43.97	51.799		
9,600.00	8,280.00	8,287.01	8,279.10	43.17	29.08	-90.00	-296.29	-180.90	2,341.24	2,297.16	44.08	53.114		
9,700.00	8,280.00	8,287.01	8,279.10	43.85	29.08	-90.00	-296.29	-180.90	2,407.36	2,363.17	44.18	54.484		
9,800.00	8,280.00	8,287.01	8,279.10	44.60	29.08	-90.00	-296.29	-180.90	2,475.75	2,431.47	44.29	55.905		
9,900.00	8,280.00	8,287.01	8,279.10	45.41	29.08	-90.00	-296.29	-180.90	2,546.24	2,501.86	44.38	57.372		
10,000.00	8,280.00	8,287.01	8,279.10	46.27	29.08	-90.00	-296.29	-180.90	2,618.65	2,574.18	44.47	58.881		
10,100.00	8,280.00	8,287.01	8,279.10	47.19	29.08	-90.00	-296.29	-180.90	2,692.83	2,648.27	44.56	60.430		
10,200.00	8,280.00	8,287.01	8,279.10	48.15	29.08	-90.00	-296.29	-180.90	2,768.63	2,723.98	44.64	62.015		
10,300.00	8,280.00	8,287.01	8,279.10	49.16	29.08	-90.00	-296.29	-180.90	2,845.93	2,801.20	44.72	63.633		
10,400.00	8,280.00	8,287.01	8,279.10	50.20	29.08	-90.00	-296.29	-180.90	2,924.60	2,879.80	44.80	65.281		
10,500.00	8,280.00	8,287.01	8,279.10	51.29	29.08	-90.00	-296.29	-180.90	3,004.54	2,959.67	44.87	66.958		
10,600.00	8,280.00	8,287.01	8,279.10	52.41	29.08	-90.00	-296.29	-180.90	3,085.65	3,040.71	44.94	68.659		
10,700.00	8,280.00	8,287.01	8,279.10	53.56	29.08	-90.00	-296.29	-180.90	3,167.84	3,122.84	45.01	70.385		
10,800.00	8,280.00	8,287.01	8,279.10	54.74	29.08	-90.00	-296.29	-180.90	3,251.03	3,205.96	45.07	72.131		
10,900.00	8,280.00	8,287.01	8,279.10	55.95	29.08	-90.00	-296.29	-180.90	3,335.15	3,290.02	45.13	73.898		
11,000.00	8,280.00	8,287.01	8,279.10	57.18	29.08	-90.00	-296.29	-180.90	3,420.12	3,374.93	45.19	75.682		
11,100.00	8,280.00	8,287.01	8,279.10	58.43	29.08	-90.00	-296.29	-180.90	3,505.88	3,460.63	45.25	77.483		
11,200.00	8,280.00	8,287.01	8,279.10	59.71	29.08	-90.00	-296.29	-180.90	3,592.38	3,547.08	45.30	79.299		
11,300.00	8,280.00	8,287.01	8,279.10	61.00	29.08	-90.00	-296.29	-180.90	3,679.56	3,634.20	45.35	81.128		
11,400.00	8,280.00	8,287.01	8,279.10	62.31	29.08	-90.00	-296.29	-180.90	3,767.38	3,721.97	45.41	82.971		
11,500.00	8,280.00	8,287.01	8,279.10	63.64	29.08	-90.00	-296.29	-180.90	3,855.79	3,810.34	45.46	84.824		
11,600.00	8,280.00	8,287.01	8,279.10	64.99	29.08	-90.00	-296.29	-180.90	3,944.76	3,899.25	45.50	86.689		
11,700.00	8,280.00	8,287.01	8,279.10	66.35	29.08	-90.00	-296.29	-180.90	4,034.24	3,988.69	45.55	88.562		
11,800.00	8,280.00	8,287.01	8,279.10	67.72	29.08	-90.00	-296.29	-180.90	4,124.21	4,078.61	45.60	90.445		
11,900.00	8,280.00	8,287.01	8,279.10	69.11	29.08	-90.00	-296.29	-180.90	4,214.63	4,168.98	45.64	92.335		
12,000.00	8,280.00	15,863.11	12,181.00	70.51	75.10	-155.47	3,623.65	-217.81	4,288.89	4,222.50	66.39	64.600		
12,100.00	8,280.00	15,963.11	12,181.00	71.92	76.46	-155.47	3,723.64	-218.75	4,288.89	4,221.33	67.56	63.485		
12,200.00	8,280.00	16,063.11	12,181.00	73.34	77.84	-155.47	3,823.64	-219.69	4,288.89	4,220.15	68.73	62.400		
12,300.00	8,280.00	16,163.11	12,181.00	74.77	79.23	-155.47	3,923.63	-220.64	4,288.88	4,218.97	69.91	61.345		
12,400.00	8,280.00	16,263.11	12,181.00	76.21	80.63	-155.47	4,023.63	-221.58	4,288.88	4,217.77	71.10	60.319		
12,500.00	8,280.00	16,363.11	12,181.00	77.65	82.04	-155.47	4,123.63	-222.52	4,288.87	4,216.57	72.30	59.321		
12,600.00	8,280.00	16,463.11	12,181.00	79.11	83.46	-155.47	4,223.62	-223.46	4,288.87	4,215.37	73.50	58.350		
12,700.00	8,280.00	16,563.11	12,181.00	80.57	84.88	-155.47	4,323.62	-224.40	4,288.87	4,214.15	74.71	57.405		
12,800.00	8,280.00	16,663.11	12,181.00	82.04	86.32	-155.47	4,423.61	-225.34	4,288.86	4,212.93	75.93	56.485		
12,900.00	8,280.00	16,763.11	12,181.00	83.52	87.76	-155.47	4,523.61	-226.29	4,288.86	4,211.71	77.15	55.593		
13,000.00	8,280.00	16,863.11	12,181.00	85.01	89.21	-155.47	4,623.60	-227.23	4,288.85	4,210.48	78.37	54.725		
13,100.00	8,280.00	16,963.11	12,181.00	86.50	90.66	-155.47	4,723.60	-228.17	4,288.85	4,209.25	79.60	53.880		
13,200.00	8,280.00	17,063.11	12,181.00	87.99	92.13	-155.47	4,823.59	-229.11	4,288.84	4,208.01	80.84	53.056		
13,300.00	8,280.00	17,163.11	12,181.00	89.50	93.60	-155.47	4,923.59	-230.05	4,288.84	4,206.76	82.08	52.253		
13,400.00	8,280.00	17,263.11	12,181.00	91.00	95.07	-155.48	5,023.59	-230.99	4,288.84	4,205.51	83.32	51.472		
13,500.00	8,280.00	17,363.11	12,181.00	92.52	96.55	-155.48	5,123.58	-231.93	4,288.83	4,204.26	84.57	50.713		
13,600.00	8,280.00	17,463.11	12,181.00	94.03	98.04	-155.48	5,223.58	-232.88	4,288.83	4,203.01	85.82	49.973		
13,700.00	8,280.00	17,563.11	12,181.00	95.56	99.53	-155.48	5,323.57	-233.82	4,288.82	4,201.75	87.08	49.253		
13,800.00	8,280.00	17,663.11	12,181.00	97.08	101.03	-155.48	5,423.57	-234.76	4,288.82	4,200.48	88.34	48.551		
13,900.00	8,280.00	17,763.11	12,181.00	98.61	102.53	-155.48	5,523.56	-235.70	4,288.82	4,199.22	89.60	47.867		
14,000.00	8,280.00	17,863.11	12,181.00	100.15	104.03	-155.48	5,623.56	-236.64	4,288.81	4,197.95	90.86	47.200		
14,100.00	8,280.00	17,963.11	12,181.00	101.69	105.54	-155.48	5,723.55	-237.58	4,288.81	4,196.67	92.13	46.550		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	18,063.11	12,181.00	103.23	107.06	-155.48	5,823.55	-238.53	4,288.80	4,195.40	93.41	45.915		
14,300.00	8,280.00	18,163.11	12,181.00	104.77	108.58	-155.48	5,923.55	-239.47	4,288.80	4,194.12	94.68	45.297		
14,400.00	8,280.00	18,263.11	12,181.00	106.32	110.10	-155.48	6,023.54	-240.41	4,288.79	4,192.83	95.96	44.693		
14,500.00	8,280.00	18,363.11	12,181.00	107.87	111.62	-155.48	6,123.54	-241.35	4,288.79	4,191.55	97.24	44.104		
14,600.00	8,280.00	18,463.11	12,181.00	109.43	113.15	-155.48	6,223.53	-242.29	4,288.79	4,190.26	98.53	43.529		
14,700.00	8,280.00	18,563.11	12,181.00	110.98	114.69	-155.48	6,323.53	-243.23	4,288.78	4,188.97	99.81	42.968		
14,800.00	8,280.00	18,663.11	12,181.00	112.54	116.22	-155.48	6,423.52	-244.18	4,288.78	4,187.68	101.10	42.421		
14,900.00	8,280.00	18,763.11	12,181.00	114.10	117.76	-155.48	6,523.52	-245.12	4,288.77	4,186.39	102.39	41.887		
15,000.00	8,280.00	18,863.11	12,181.00	115.67	119.30	-155.48	6,623.51	-246.06	4,288.77	4,185.09	103.68	41.365		
15,100.00	8,280.00	18,963.11	12,181.00	117.24	120.85	-155.48	6,723.51	-247.00	4,288.77	4,183.79	104.98	40.855		
15,200.00	8,280.00	19,063.11	12,181.00	118.81	122.40	-155.48	6,823.51	-247.94	4,288.76	4,182.49	106.27	40.356		
15,300.00	8,280.00	19,163.11	12,181.00	120.38	123.95	-155.48	6,923.50	-248.88	4,288.76	4,181.19	107.57	39.870		
15,400.00	8,280.00	19,263.11	12,181.00	121.95	125.50	-155.48	7,023.50	-249.82	4,288.75	4,179.89	108.87	39.394		
15,500.00	8,280.00	19,363.11	12,181.00	123.53	127.06	-155.48	7,123.49	-250.77	4,288.75	4,178.58	110.17	38.929		
15,600.00	8,280.00	19,463.11	12,181.00	125.11	128.62	-155.48	7,223.49	-251.71	4,288.74	4,177.28	111.47	38.475		
15,700.00	8,280.00	19,563.11	12,181.00	126.69	130.18	-155.48	7,323.48	-252.65	4,288.74	4,175.97	112.77	38.030		
15,800.00	8,280.00	19,663.11	12,181.00	128.27	131.74	-155.48	7,423.48	-253.59	4,288.74	4,174.66	114.08	37.595		
15,900.00	8,280.00	19,763.11	12,181.00	129.85	133.30	-155.48	7,523.47	-254.53	4,288.73	4,173.35	115.39	37.169		
16,000.00	8,280.00	19,863.11	12,181.00	131.44	134.87	-155.48	7,623.47	-255.47	4,288.73	4,172.03	116.69	36.752		
16,100.00	8,280.00	19,963.11	12,181.00	133.02	136.44	-155.48	7,723.47	-256.42	4,288.72	4,170.72	118.01	36.343		
16,200.00	8,280.00	20,063.11	12,181.00	134.61	138.01	-155.48	7,823.46	-257.36	4,288.72	4,169.40	119.32	35.944		
16,300.00	8,280.00	20,163.11	12,181.00	136.20	139.58	-155.48	7,923.46	-258.30	4,288.72	4,168.08	120.63	35.552		
16,400.00	8,280.00	20,263.11	12,181.00	137.79	141.16	-155.48	8,023.45	-259.24	4,288.71	4,166.77	121.95	35.169		
16,500.00	8,280.00	20,363.11	12,181.00	139.39	142.74	-155.48	8,123.45	-260.18	4,288.71	4,165.45	123.26	34.794		
16,600.00	8,280.00	20,463.11	12,181.00	140.98	144.31	-155.48	8,223.44	-261.12	4,288.70	4,164.13	124.58	34.426		
16,700.00	8,280.00	20,563.11	12,181.00	142.58	145.89	-155.48	8,323.44	-262.07	4,288.70	4,162.81	125.89	34.067		
16,800.00	8,280.00	20,663.11	12,181.00	144.17	147.48	-155.48	8,423.43	-263.01	4,288.69	4,161.48	127.21	33.713		
16,900.00	8,280.00	20,763.11	12,181.00	145.77	149.06	-155.48	8,523.43	-263.95	4,288.69	4,160.16	128.53	33.367		
17,000.00	8,280.00	20,863.11	12,181.00	147.37	150.64	-155.48	8,623.43	-264.89	4,288.69	4,158.84	129.85	33.028		
17,100.00	8,280.00	20,963.11	12,181.00	148.97	152.23	-155.48	8,723.42	-265.83	4,288.68	4,157.51	131.17	32.696		
17,200.00	8,280.00	21,063.11	12,181.00	150.57	153.82	-155.48	8,823.42	-266.77	4,288.68	4,156.19	132.49	32.370		
17,300.00	8,280.00	21,163.11	12,181.00	152.18	155.40	-155.48	8,923.41	-267.71	4,288.67	4,154.87	133.81	32.051		
17,400.00	8,280.00	21,263.11	12,181.00	153.78	156.99	-155.48	9,023.41	-268.66	4,288.67	4,153.54	135.13	31.737		
17,500.00	8,280.00	21,363.11	12,181.00	155.38	158.59	-155.48	9,123.40	-269.60	4,288.67	4,152.21	136.45	31.429		
17,600.00	8,280.00	21,463.11	12,181.00	156.99	160.18	-155.48	9,223.40	-270.54	4,288.66	4,150.88	137.78	31.127		
17,700.00	8,280.00	21,563.11	12,181.00	158.60	161.77	-155.48	9,323.39	-271.48	4,288.66	4,149.55	139.10	30.831		
17,800.00	8,280.00	21,663.11	12,181.00	160.20	163.37	-155.48	9,423.39	-272.42	4,288.65	4,148.22	140.43	30.540		
17,900.00	8,280.00	21,763.11	12,181.00	161.81	164.96	-155.48	9,523.39	-273.36	4,288.65	4,146.89	141.76	30.254		
18,000.00	8,280.00	21,863.11	12,181.00	163.42	166.56	-155.48	9,623.38	-274.31	4,288.65	4,145.56	143.08	29.973		
18,100.00	8,280.00	21,963.11	12,181.00	165.03	168.16	-155.48	9,723.38	-275.25	4,288.64	4,144.23	144.41	29.697		
18,200.00	8,280.00	22,063.11	12,181.00	166.64	169.76	-155.48	9,823.37	-276.19	4,288.64	4,142.89	145.74	29.426		
18,300.00	8,280.00	22,163.11	12,181.00	168.25	171.36	-155.48	9,923.37	-277.13	4,288.63	4,141.56	147.07	29.160		
18,400.00	8,280.00	22,263.11	12,181.00	169.87	172.96	-155.48	10,023.36	-278.07	4,288.63	4,140.23	148.40	28.899		
18,438.77	8,280.00	22,301.88	12,181.00	170.49	173.58	-155.48	10,062.13	-278.44	4,288.63	4,139.71	148.91	28.799		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design FMM Fed Com - FMM Fed Com 805H - 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	-170.99	-75.09	-11.90	76.03					
100.00	100.00	99.90	99.90	0.13	0.13	-170.99	-75.09	-11.90	76.03	75.85	0.18	428.694		
200.00	200.00	199.90	199.90	0.48	0.48	-170.99	-75.09	-11.90	76.03	75.34	0.68	111.129		
300.00	300.00	299.90	299.90	0.84	0.84	-170.99	-75.09	-11.90	76.03	74.84	1.19	63.830		
400.00	400.00	399.90	399.90	1.20	1.20	-170.99	-75.09	-11.90	76.03	74.33	1.70	44.773		
500.00	500.00	499.90	499.90	1.56	1.56	-170.99	-75.09	-11.90	76.03	73.82	2.21	34.479		
600.00	600.00	599.90	599.90	1.92	1.92	-170.99	-75.09	-11.90	76.03	73.32	2.71	28.034		
700.00	700.00	699.90	699.90	2.28	2.28	-170.99	-75.09	-11.90	76.03	72.81	3.22	23.619		
800.00	800.00	799.90	799.90	2.63	2.63	-170.99	-75.09	-11.90	76.03	72.30	3.73	20.405		
900.00	900.00	899.90	899.90	2.99	2.99	-170.99	-75.09	-11.90	76.03	71.79	4.23	17.961		
1,000.00	1,000.00	999.90	999.90	3.35	3.35	-170.99	-75.09	-11.90	76.03	71.29	4.74	16.040		
1,100.00	1,100.00	1,099.90	1,099.90	3.71	3.71	-170.99	-75.09	-11.90	76.03	70.78	5.25	14.490		
1,200.00	1,200.00	1,199.90	1,199.90	4.07	4.07	-170.99	-75.09	-11.90	76.03	70.27	5.75	13.214		
1,300.00	1,300.00	1,299.90	1,299.90	4.43	4.43	-170.99	-75.09	-11.90	76.03	69.77	6.26	12.144		
1,400.00	1,400.00	1,399.90	1,399.90	4.79	4.79	-170.99	-75.09	-11.90	76.03	69.26	6.77	11.234		
1,500.00	1,500.00	1,499.90	1,499.90	5.14	5.14	-170.99	-75.09	-11.90	76.03	68.75	7.27	10.451		
1,600.00	1,600.00	1,599.90	1,599.90	5.50	5.50	-170.99	-75.09	-11.90	76.03	68.25	7.78	9.770 CC		
1,700.00	1,699.98	1,699.88	1,699.88	5.85	5.86	97.08	-75.09	-11.90	76.22	67.94	8.28	9.203 ES		
1,800.00	1,799.84	1,799.74	1,799.74	6.20	6.22	100.93	-75.09	-11.90	77.04	68.27	8.78	8.777		
1,900.00	1,899.45	1,899.35	1,899.35	6.54	6.58	107.07	-75.09	-11.90	79.16	69.89	9.28	8.534 SF		
2,000.00	1,998.70	1,998.60	1,998.60	6.90	6.93	114.95	-75.09	-11.90	83.57	73.80	9.78	8.548		
2,100.00	2,097.47	2,098.11	2,098.10	7.26	7.28	123.00	-75.49	-10.70	90.93	80.65	10.27	8.850		
2,200.00	2,195.62	2,197.85	2,197.76	7.64	7.61	129.90	-76.70	-7.04	100.97	90.20	10.77	9.377		
2,300.00	2,293.06	2,297.81	2,297.51	8.04	7.95	135.57	-78.73	-0.88	113.39	102.13	11.26	10.067		
2,400.00	2,389.64	2,398.02	2,397.30	8.46	8.30	140.11	-81.59	7.77	127.88	116.11	11.76	10.873		
2,486.44	2,472.37	2,484.85	2,483.55	8.85	8.61	143.27	-84.73	17.28	141.86	129.67	12.19	11.633		
2,500.00	2,485.28	2,498.49	2,497.08	8.92	8.65	143.73	-85.28	18.94	144.14	131.88	12.26	11.754		
2,600.00	2,580.53	2,598.01	2,595.63	9.39	9.01	146.38	-89.62	32.09	160.48	147.71	12.77	12.566		
2,700.00	2,675.78	2,696.47	2,693.09	9.88	9.37	148.45	-93.99	45.33	176.92	163.63	13.29	13.313		
2,800.00	2,771.03	2,794.92	2,790.56	10.39	9.73	150.17	-98.37	58.58	193.54	179.73	13.81	14.015		
2,900.00	2,866.28	2,893.38	2,888.02	10.91	10.10	151.62	-102.74	71.83	210.30	195.97	14.33	14.671		
3,000.00	2,961.53	2,991.84	2,985.48	11.44	10.47	152.85	-107.12	85.07	227.18	212.31	14.86	15.285		
3,100.00	3,056.78	3,090.29	3,082.95	11.98	10.85	153.92	-111.49	98.32	244.14	228.75	15.39	15.860		
3,200.00	3,152.03	3,188.75	3,180.41	12.52	11.22	154.84	-115.87	111.56	261.18	245.25	15.93	16.398		
3,300.00	3,247.28	3,287.21	3,277.87	13.08	11.61	155.65	-120.24	124.81	278.27	261.81	16.46	16.902		
3,400.00	3,342.54	3,385.66	3,375.33	13.64	11.99	156.37	-124.61	138.05	295.41	278.41	17.00	17.375		
3,500.00	3,437.79	3,484.12	3,472.80	14.21	12.37	157.01	-128.99	151.30	312.59	295.05	17.54	17.819		
3,600.00	3,533.04	3,582.57	3,570.26	14.78	12.76	157.58	-133.36	164.55	329.81	311.72	18.08	18.237		
3,700.00	3,628.29	3,681.03	3,667.72	15.36	13.15	158.10	-137.74	177.79	347.05	328.42	18.63	18.630		
3,800.00	3,723.54	3,779.49	3,765.19	15.94	13.54	158.56	-142.11	191.04	364.32	345.15	19.17	19.001		
3,900.00	3,818.79	3,877.94	3,862.65	16.52	13.94	158.99	-146.49	204.28	381.61	361.89	19.72	19.351		
4,000.00	3,914.04	3,976.40	3,960.11	17.11	14.33	159.38	-150.86	217.53	398.92	378.65	20.27	19.681		
4,100.00	4,009.29	4,074.86	4,057.58	17.69	14.73	159.73	-155.24	230.78	416.24	395.42	20.82	19.994		
4,200.00	4,104.54	4,173.31	4,155.04	18.29	15.12	160.06	-159.61	244.02	433.58	412.21	21.37	20.291		
4,300.00	4,199.79	4,271.77	4,252.50	18.88	15.52	160.36	-163.99	257.27	450.93	429.01	21.92	20.572		
4,400.00	4,295.04	4,370.23	4,349.97	19.48	15.92	160.64	-168.36	270.51	468.30	445.83	22.47	20.839		
4,500.00	4,390.29	4,468.68	4,447.43	20.08	16.32	160.90	-172.73	283.76	485.67	462.65	23.02	21.094		
4,600.00	4,485.55	4,567.14	4,544.89	20.68	16.72	161.14	-177.11	297.00	503.05	479.47	23.58	21.335		
4,700.00	4,580.80	4,665.59	4,642.35	21.28	17.13	161.37	-181.48	310.25	520.44	496.31	24.13	21.566		
4,800.00	4,676.05	4,764.05	4,739.82	21.88	17.53	161.58	-185.86	323.50	537.84	513.15	24.69	21.785		
4,900.00	4,771.30	4,862.51	4,837.28	22.48	17.93	161.78	-190.23	336.74	555.24	530.00	25.24	21.995		
5,000.00	4,866.55	4,960.96	4,934.74	23.09	18.34	161.96	-194.61	349.99	572.65	546.85	25.80	22.195		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													FMM Fed Com - FMM Fed Com 805H - 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			
5,100.00	4,961.80	5,059.42	5,032.21	23.70	18.74	162.14	-198.98	363.23	590.07	563.71	26.36	22.386				
5,200.00	5,057.05	5,157.88	5,129.67	24.30	19.15	162.30	-203.36	376.48	607.49	580.57	26.92	22.570				
5,300.00	5,152.30	5,256.33	5,227.13	24.91	19.55	162.46	-207.73	389.73	624.92	597.44	27.47	22.745				
5,400.00	5,247.55	5,354.79	5,324.60	25.52	19.96	162.60	-212.11	402.97	642.35	614.31	28.03	22.913				
5,500.00	5,342.80	5,453.24	5,422.06	26.13	20.37	162.74	-216.48	416.22	659.78	631.19	28.59	23.075				
5,600.00	5,438.05	5,551.70	5,519.52	26.74	20.77	162.87	-220.86	429.46	677.22	648.06	29.15	23.230				
5,700.00	5,533.30	5,650.16	5,616.99	27.36	21.18	163.00	-225.23	442.71	694.66	664.94	29.71	23.379				
5,800.00	5,628.56	5,748.61	5,714.45	27.97	21.59	163.12	-229.60	455.95	712.10	681.83	30.27	23.522				
5,900.00	5,723.81	5,847.07	5,811.91	28.58	22.00	163.23	-233.98	469.20	729.55	698.71	30.83	23.660				
6,000.00	5,819.06	5,945.53	5,909.38	29.20	22.41	163.34	-238.35	482.45	746.99	715.60	31.40	23.793				
6,100.00	5,914.31	6,043.98	6,006.84	29.81	22.82	163.45	-242.73	495.69	764.45	732.49	31.96	23.920				
6,200.00	6,009.56	6,142.44	6,104.30	30.43	23.23	163.54	-247.10	508.94	781.90	749.38	32.52	24.044				
6,300.00	6,104.81	6,240.90	6,201.76	31.04	23.64	163.64	-251.48	522.18	799.36	766.27	33.08	24.163				
6,400.00	6,200.06	6,339.35	6,299.23	31.66	24.05	163.73	-255.85	535.43	816.81	783.17	33.65	24.277				
6,500.00	6,295.31	6,437.81	6,396.69	32.27	24.46	163.82	-260.23	548.68	834.27	800.07	34.21	24.388				
6,600.00	6,390.56	6,536.26	6,494.15	32.89	24.87	163.90	-264.60	561.92	851.73	816.96	34.77	24.495				
6,700.00	6,485.81	6,634.72	6,591.62	33.51	25.28	163.98	-268.98	575.17	869.20	833.86	35.33	24.599				
6,800.00	6,581.06	6,733.18	6,689.08	34.13	25.69	164.06	-273.35	588.41	886.66	850.76	35.90	24.699				
6,848.89	6,627.63	6,781.31	6,736.73	34.43	25.90	164.09	-275.49	594.89	895.20	859.03	36.17	24.747				
6,900.00	6,676.45	6,831.71	6,786.62	34.74	26.11	164.17	-277.73	601.67	903.70	867.23	36.46	24.785				
7,000.00	6,772.71	6,914.79	6,868.97	35.31	26.45	164.28	-281.18	612.12	918.61	881.66	36.95	24.860				
7,100.00	6,869.86	7,000.00	6,953.65	35.84	26.79	164.40	-284.14	621.07	932.04	894.61	37.43	24.900				
7,200.00	6,967.77	7,078.70	7,032.03	36.33	27.09	164.51	-286.34	627.75	943.95	906.10	37.85	24.937				
7,300.00	7,066.34	7,160.59	7,113.73	36.77	27.39	164.61	-288.10	633.06	954.37	916.10	38.27	24.939				
7,400.00	7,165.43	7,242.44	7,195.49	37.17	27.68	164.72	-289.30	636.71	963.27	924.61	38.66	24.918				
7,500.00	7,264.93	7,324.26	7,277.28	37.52	27.96	164.82	-289.96	638.70	970.67	931.65	39.02	24.874				
7,600.00	7,364.71	7,411.59	7,364.61	37.84	28.25	164.93	-290.09	639.10	976.47	937.06	39.40	24.781				
7,700.00	7,464.66	7,511.55	7,464.56	38.12	28.57	164.99	-290.09	639.10	979.34	939.48	39.86	24.567				
7,735.34	7,500.00	7,546.88	7,499.90	38.21	28.68	-101.79	-290.09	639.10	979.55	939.53	40.02	24.474				
7,800.00	7,564.66	7,611.54	7,564.56	38.37	28.88	-101.79	-290.09	639.10	979.55	939.24	40.31	24.298				
7,900.00	7,664.66	7,711.54	7,664.56	38.61	29.21	-101.79	-290.09	639.10	979.55	938.79	40.76	24.030				
7,942.38	7,707.04	7,753.92	7,706.94	38.72	29.34	-101.79	-290.09	639.10	979.55	938.60	40.96	23.918				
7,950.00	7,714.66	7,761.54	7,714.56	38.74	29.37	-101.24	-290.09	639.10	979.56	938.57	40.99	23.898				
8,000.00	7,764.57	7,811.45	7,764.47	38.86	29.53	-101.35	-290.09	639.10	980.12	938.90	41.23	23.775				
8,050.00	7,814.03	7,860.91	7,813.93	38.98	29.69	-101.62	-290.09	639.10	981.57	940.09	41.48	23.666				
8,100.00	7,862.68	7,909.56	7,862.58	39.09	29.84	-102.02	-290.09	639.10	983.98	942.24	41.74	23.574				
8,150.00	7,910.15	7,957.03	7,910.05	39.20	30.00	-102.52	-290.09	639.10	987.48	945.47	42.01	23.503				
8,200.00	7,956.07	8,002.95	7,955.97	39.30	30.14	-103.08	-290.09	639.10	992.23	949.93	42.30	23.457				
8,250.00	8,000.10	8,046.98	8,000.00	39.39	30.29	-103.65	-290.09	639.10	998.41	955.81	42.59	23.440				
8,300.00	8,041.89	8,088.77	8,041.79	39.48	30.42	-104.17	-290.09	639.10	1,006.21	963.31	42.90	23.457				
8,350.00	8,081.14	8,128.02	8,081.04	39.56	30.55	-104.58	-290.09	639.10	1,015.84	972.63	43.20	23.514				
8,400.00	8,117.54	8,164.42	8,117.44	39.63	30.67	-104.81	-290.09	639.10	1,027.47	983.97	43.51	23.616				
8,450.00	8,150.81	8,197.69	8,150.71	39.69	30.78	-104.81	-290.09	639.10	1,041.28	997.47	43.81	23.768				
8,500.00	8,180.71	8,227.59	8,180.61	39.75	30.87	-104.50	-290.09	639.10	1,057.37	1,013.26	44.11	23.973				
8,550.00	8,207.00	8,253.88	8,206.90	39.80	30.96	-103.83	-290.09	639.10	1,075.81	1,031.42	44.39	24.235				
8,600.00	8,229.49	8,276.37	8,229.39	39.85	31.03	-102.73	-290.09	639.10	1,096.62	1,051.97	44.66	24.556				
8,650.00	8,248.00	8,294.89	8,247.90	39.91	31.09	-101.16	-290.09	639.10	1,119.75	1,074.84	44.91	24.936				
8,700.00	8,262.40	8,309.28	8,262.30	39.96	31.14	-99.06	-290.09	639.10	1,145.07	1,099.94	45.13	25.375				
8,750.00	8,272.57	8,319.45	8,272.47	40.02	31.17	-96.41	-290.09	639.10	1,172.42	1,127.10	45.32	25.869				
8,800.00	8,278.43	8,325.31	8,278.33	40.08	31.19	-93.18	-290.09	639.10	1,201.55	1,156.07	45.48	26.417				
8,842.38	8,280.00	8,326.88	8,279.90	40.15	31.20	-90.00	-290.09	639.10	1,227.45	1,181.85	45.60	26.918				
8,900.00	8,280.00	8,326.88	8,279.90	40.25	31.20	-90.00	-290.09	639.10	1,264.11	1,218.38	45.73	27.640				

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
9,000.00	8,280.00	8,326.88	8,279.90	40.47	31.20	-90.00	-290.09	639.10	1,331.27	1,285.33	45.94	28.978		
9,100.00	8,280.00	8,326.88	8,279.90	40.75	31.20	-90.00	-290.09	639.10	1,402.35	1,356.24	46.11	30.411		
9,200.00	8,280.00	8,326.88	8,279.90	41.10	31.20	-90.00	-290.09	639.10	1,476.79	1,430.53	46.26	31.924		
9,300.00	8,280.00	8,326.88	8,279.90	41.51	31.20	-90.00	-290.09	639.10	1,554.10	1,507.71	46.38	33.507		
9,400.00	8,280.00	8,326.88	8,279.90	42.00	31.20	-90.00	-290.09	639.10	1,633.87	1,587.38	46.48	35.150		
9,500.00	8,280.00	8,326.88	8,279.90	42.55	31.20	-90.00	-290.09	639.10	1,715.76	1,669.19	46.57	36.844		
9,600.00	8,280.00	8,326.88	8,279.90	43.17	31.20	-90.00	-290.09	639.10	1,799.48	1,752.84	46.64	38.583		
9,700.00	8,280.00	8,326.88	8,279.90	43.85	31.20	-90.00	-290.09	639.10	1,884.79	1,838.09	46.70	40.359		
9,800.00	8,280.00	8,326.88	8,279.90	44.60	31.20	-90.00	-290.09	639.10	1,971.48	1,924.73	46.75	42.169		
9,900.00	8,280.00	8,326.88	8,279.90	45.41	31.20	-90.00	-290.09	639.10	2,059.38	2,012.59	46.80	44.007		
10,000.00	8,280.00	8,326.88	8,279.90	46.27	31.20	-90.00	-290.09	639.10	2,148.34	2,101.50	46.84	45.870		
10,100.00	8,280.00	8,326.88	8,279.90	47.19	31.20	-90.00	-290.09	639.10	2,238.23	2,191.36	46.87	47.754		
10,200.00	8,280.00	8,326.88	8,279.90	48.15	31.20	-90.00	-290.09	639.10	2,328.94	2,282.04	46.90	49.658		
10,300.00	8,280.00	8,326.88	8,279.90	49.16	31.20	-90.00	-290.09	639.10	2,420.39	2,373.46	46.93	51.578		
10,400.00	8,280.00	8,326.88	8,279.90	50.20	31.20	-90.00	-290.09	639.10	2,512.49	2,465.54	46.95	53.513		
10,500.00	8,280.00	8,326.88	8,279.90	51.29	31.20	-90.00	-290.09	639.10	2,605.17	2,558.20	46.97	55.461		
10,600.00	8,280.00	8,326.88	8,279.90	52.41	31.20	-90.00	-290.09	639.10	2,698.37	2,651.38	46.99	57.419		
10,700.00	8,280.00	8,326.88	8,279.90	53.56	31.20	-90.00	-290.09	639.10	2,792.05	2,745.03	47.01	59.387		
10,800.00	8,280.00	8,326.88	8,279.90	54.74	31.20	-90.00	-290.09	639.10	2,886.14	2,839.11	47.03	61.364		
10,900.00	8,280.00	8,326.88	8,279.90	55.95	31.20	-90.00	-290.09	639.10	2,980.63	2,933.58	47.05	63.349		
11,000.00	8,280.00	8,326.88	8,279.90	57.18	31.20	-90.00	-290.09	639.10	3,075.46	3,028.39	47.07	65.341		
11,100.00	8,280.00	8,326.88	8,279.90	58.43	31.20	-90.00	-290.09	639.10	3,170.61	3,123.52	47.09	67.337		
11,200.00	8,280.00	8,326.88	8,279.90	59.71	31.20	-90.00	-290.09	639.10	3,266.05	3,218.94	47.10	69.339		
11,300.00	8,280.00	8,326.88	8,279.90	61.00	31.20	-90.00	-290.09	639.10	3,361.75	3,314.63	47.12	71.345		
11,400.00	8,280.00	8,326.88	8,279.90	62.31	31.20	-90.00	-290.09	639.10	3,457.70	3,410.56	47.14	73.354		
11,500.00	8,280.00	8,326.88	8,279.90	63.64	31.20	-90.00	-290.09	639.10	3,553.87	3,506.71	47.15	75.367		
11,600.00	8,280.00	8,326.88	8,279.90	64.99	31.20	-90.00	-290.09	639.10	3,650.24	3,603.07	47.17	77.382		
11,700.00	8,280.00	8,326.88	8,279.90	66.35	31.20	-90.00	-290.09	639.10	3,746.81	3,699.62	47.19	79.400		
11,800.00	8,280.00	8,326.88	8,279.90	67.72	31.20	-90.00	-290.09	639.10	3,843.55	3,796.35	47.21	81.418		
11,900.00	8,280.00	15,714.68	12,092.00	69.11	73.87	-165.86	3,531.36	603.07	3,931.22	3,872.15	59.07	66.547		
12,000.00	8,280.00	15,814.68	12,092.00	70.51	75.22	-165.86	3,631.36	602.12	3,931.22	3,871.14	60.08	65.431		
12,100.00	8,280.00	15,914.68	12,092.00	71.92	76.57	-165.86	3,731.35	601.18	3,931.22	3,870.13	61.09	64.347		
12,200.00	8,280.00	16,014.68	12,092.00	73.34	77.94	-165.86	3,831.35	600.24	3,931.22	3,869.11	62.11	63.291		
12,300.00	8,280.00	16,114.68	12,092.00	74.77	79.32	-165.86	3,931.34	599.29	3,931.22	3,868.08	63.14	62.263		
12,400.00	8,280.00	16,214.68	12,092.00	76.21	80.71	-165.86	4,031.34	598.35	3,931.21	3,867.04	64.17	61.261		
12,500.00	8,280.00	16,314.68	12,092.00	77.65	82.11	-165.86	4,131.33	597.41	3,931.21	3,866.00	65.21	60.286		
12,600.00	8,280.00	16,414.68	12,092.00	79.11	83.52	-165.86	4,231.33	596.47	3,931.21	3,864.96	66.25	59.336		
12,700.00	8,280.00	16,514.68	12,092.00	80.57	84.94	-165.86	4,331.32	595.52	3,931.21	3,863.90	67.30	58.410		
12,800.00	8,280.00	16,614.68	12,092.00	82.04	86.37	-165.86	4,431.32	594.58	3,931.21	3,862.85	68.36	57.509		
12,900.00	8,280.00	16,714.68	12,092.00	83.52	87.80	-165.86	4,531.32	593.64	3,931.20	3,861.79	69.42	56.630		
13,000.00	8,280.00	16,814.68	12,092.00	85.01	89.24	-165.86	4,631.31	592.69	3,931.20	3,860.72	70.48	55.775		
13,100.00	8,280.00	16,914.68	12,092.00	86.50	90.69	-165.86	4,731.31	591.75	3,931.20	3,859.65	71.55	54.941		
13,200.00	8,280.00	17,014.68	12,092.00	87.99	92.15	-165.86	4,831.30	590.81	3,931.20	3,858.57	72.63	54.129		
13,300.00	8,280.00	17,114.68	12,092.00	89.50	93.61	-165.86	4,931.30	589.87	3,931.20	3,857.49	73.71	53.337		
13,400.00	8,280.00	17,214.68	12,092.00	91.00	95.08	-165.86	5,031.29	588.92	3,931.19	3,856.41	74.79	52.565		
13,500.00	8,280.00	17,314.68	12,092.00	92.52	96.55	-165.86	5,131.29	587.98	3,931.19	3,855.32	75.87	51.813		
13,600.00	8,280.00	17,414.68	12,092.00	94.03	98.03	-165.86	5,231.28	587.04	3,931.19	3,854.23	76.96	51.079		
13,700.00	8,280.00	17,514.68	12,092.00	95.56	99.52	-165.86	5,331.28	586.09	3,931.19	3,853.13	78.06	50.364		
13,800.00	8,280.00	17,614.68	12,092.00	97.08	101.01	-165.86	5,431.28	585.15	3,931.18	3,852.03	79.15	49.666		
13,900.00	8,280.00	17,714.68	12,092.00	98.61	102.50	-165.86	5,531.27	584.21	3,931.18	3,850.93	80.25	48.986		
14,000.00	8,280.00	17,814.68	12,092.00	100.15	104.00	-165.86	5,631.27	583.27	3,931.18	3,849.83	81.35	48.323		
14,100.00	8,280.00	17,914.68	12,092.00	101.69	105.51	-165.86	5,731.26	582.32	3,931.18	3,848.72	82.46	47.676		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	18,014.68	12,092.00	103.23	107.02	-165.86	5,831.26	581.38	3,931.18	3,847.61	83.56	47.044		
14,300.00	8,280.00	18,114.68	12,092.00	104.77	108.53	-165.86	5,931.25	580.44	3,931.17	3,846.50	84.67	46.427		
14,400.00	8,280.00	18,214.68	12,092.00	106.32	110.05	-165.86	6,031.25	579.49	3,931.17	3,845.39	85.79	45.825		
14,500.00	8,280.00	18,314.68	12,092.00	107.87	111.57	-165.86	6,131.24	578.55	3,931.17	3,844.27	86.90	45.238		
14,600.00	8,280.00	18,414.68	12,092.00	109.43	113.09	-165.86	6,231.24	577.61	3,931.17	3,843.15	88.02	44.664		
14,700.00	8,280.00	18,514.68	12,092.00	110.98	114.62	-165.86	6,331.24	576.67	3,931.17	3,842.03	89.13	44.104		
14,800.00	8,280.00	18,614.68	12,092.00	112.54	116.15	-165.86	6,431.23	575.72	3,931.16	3,840.91	90.25	43.556		
14,900.00	8,280.00	18,714.68	12,092.00	114.10	117.69	-165.86	6,531.23	574.78	3,931.16	3,839.78	91.38	43.021		
15,000.00	8,280.00	18,814.68	12,092.00	115.67	119.23	-165.86	6,631.22	573.84	3,931.16	3,838.66	92.50	42.498		
15,100.00	8,280.00	18,914.68	12,092.00	117.24	120.77	-165.86	6,731.22	572.89	3,931.16	3,837.53	93.63	41.987		
15,200.00	8,280.00	19,014.68	12,092.00	118.81	122.31	-165.86	6,831.21	571.95	3,931.15	3,836.40	94.76	41.486		
15,300.00	8,280.00	19,114.68	12,092.00	120.38	123.86	-165.86	6,931.21	571.01	3,931.15	3,835.26	95.89	40.997		
15,400.00	8,280.00	19,214.68	12,092.00	121.95	125.41	-165.86	7,031.20	570.07	3,931.15	3,834.13	97.02	40.519		
15,500.00	8,280.00	19,314.68	12,092.00	123.53	126.96	-165.86	7,131.20	569.12	3,931.15	3,832.99	98.16	40.050		
15,600.00	8,280.00	19,414.68	12,092.00	125.11	128.52	-165.86	7,231.20	568.18	3,931.15	3,831.86	99.29	39.592		
15,700.00	8,280.00	19,514.68	12,092.00	126.69	130.07	-165.86	7,331.19	567.24	3,931.14	3,830.72	100.43	39.144		
15,800.00	8,280.00	19,614.68	12,092.00	128.27	131.63	-165.86	7,431.19	566.29	3,931.14	3,829.57	101.57	38.705		
15,900.00	8,280.00	19,714.68	12,092.00	129.85	133.19	-165.86	7,531.18	565.35	3,931.14	3,828.43	102.71	38.275		
16,000.00	8,280.00	19,814.68	12,092.00	131.44	134.76	-165.86	7,631.18	564.41	3,931.14	3,827.29	103.85	37.854		
16,100.00	8,280.00	19,914.68	12,092.00	133.02	136.32	-165.86	7,731.17	563.47	3,931.14	3,826.14	104.99	37.441		
16,200.00	8,280.00	20,014.68	12,092.00	134.61	137.89	-165.86	7,831.17	562.52	3,931.13	3,824.99	106.14	37.037		
16,300.00	8,280.00	20,114.68	12,092.00	136.20	139.46	-165.86	7,931.16	561.58	3,931.13	3,823.85	107.29	36.642		
16,400.00	8,280.00	20,214.68	12,092.00	137.79	141.03	-165.86	8,031.16	560.64	3,931.13	3,822.70	108.43	36.255		
16,500.00	8,280.00	20,314.68	12,092.00	139.39	142.61	-165.86	8,131.16	559.69	3,931.13	3,821.55	109.58	35.875		
16,600.00	8,280.00	20,414.68	12,092.00	140.98	144.18	-165.86	8,231.15	558.75	3,931.13	3,820.40	110.73	35.503		
16,700.00	8,280.00	20,514.68	12,092.00	142.58	145.76	-165.86	8,331.15	557.81	3,931.12	3,819.25	111.88	35.138		
16,800.00	8,280.00	20,614.68	12,092.00	144.17	147.34	-165.87	8,431.14	556.86	3,931.12	3,818.09	113.03	34.781		
16,900.00	8,280.00	20,714.68	12,092.00	145.77	148.92	-165.87	8,531.14	555.92	3,931.12	3,816.94	114.18	34.430		
17,000.00	8,280.00	20,814.68	12,092.00	147.37	150.50	-165.87	8,631.13	554.98	3,931.12	3,815.79	115.33	34.086		
17,100.00	8,280.00	20,914.68	12,092.00	148.97	152.08	-165.87	8,731.13	554.04	3,931.11	3,814.63	116.48	33.749		
17,200.00	8,280.00	21,014.68	12,092.00	150.57	153.67	-165.87	8,831.12	553.09	3,931.11	3,813.48	117.63	33.418		
17,300.00	8,280.00	21,114.68	12,092.00	152.18	155.25	-165.87	8,931.12	552.15	3,931.11	3,812.32	118.79	33.094		
17,400.00	8,280.00	21,214.68	12,092.00	153.78	156.84	-165.87	9,031.12	551.21	3,931.11	3,811.17	119.94	32.775		
17,500.00	8,280.00	21,314.68	12,092.00	155.38	158.43	-165.87	9,131.11	550.26	3,931.11	3,810.01	121.10	32.462		
17,600.00	8,280.00	21,414.68	12,092.00	156.99	160.02	-165.87	9,231.11	549.32	3,931.10	3,808.85	122.26	32.155		
17,700.00	8,280.00	21,514.68	12,092.00	158.60	161.61	-165.87	9,331.10	548.38	3,931.10	3,807.69	123.41	31.853		
17,800.00	8,280.00	21,614.68	12,092.00	160.20	163.20	-165.87	9,431.10	547.44	3,931.10	3,806.53	124.57	31.557		
17,900.00	8,280.00	21,714.68	12,092.00	161.81	164.80	-165.87	9,531.09	546.49	3,931.10	3,805.37	125.73	31.266		
18,000.00	8,280.00	21,814.68	12,092.00	163.42	166.39	-165.87	9,631.09	545.55	3,931.10	3,804.20	126.89	30.980		
18,100.00	8,280.00	21,914.68	12,092.00	165.03	167.99	-165.87	9,731.08	544.61	3,931.09	3,803.04	128.05	30.699		
18,200.00	8,280.00	22,014.68	12,092.00	166.64	169.58	-165.87	9,831.08	543.66	3,931.09	3,801.88	129.22	30.423		
18,300.00	8,280.00	22,114.68	12,092.00	168.25	171.18	-165.87	9,931.08	542.72	3,931.09	3,800.71	130.38	30.151		
18,400.00	8,280.00	22,214.68	12,092.00	169.87	172.78	-165.87	10,031.07	541.78	3,931.09	3,799.55	131.54	29.885		
18,438.77	8,280.00	22,253.45	12,092.00	170.49	173.40	-165.87	10,069.84	541.41	3,931.09	3,799.09	131.99	29.783		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													FMM Fed Com - FMM Fed Com 806H - OH - Plan #2		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	170.09	-74.89	13.09	76.03							
100.00	100.00	99.80	99.80	0.13	0.13	170.09	-74.89	13.09	76.03	75.85	0.18	428.899				
200.00	200.00	199.80	199.80	0.48	0.48	170.09	-74.89	13.09	76.03	75.34	0.68	111.167				
300.00	300.00	299.80	299.80	0.84	0.84	170.09	-74.89	13.09	76.03	74.83	1.19	63.842				
400.00	400.00	399.80	399.80	1.20	1.20	170.09	-74.89	13.09	76.03	74.33	1.70	44.779				
500.00	500.00	499.80	499.80	1.56	1.56	170.09	-74.89	13.09	76.03	73.82	2.20	34.483				
600.00	600.00	599.80	599.80	1.92	1.92	170.09	-74.89	13.09	76.03	73.31	2.71	28.036				
700.00	700.00	699.80	699.80	2.28	2.28	170.09	-74.89	13.09	76.03	72.81	3.22	23.620				
800.00	800.00	799.80	799.80	2.63	2.63	170.09	-74.89	13.09	76.03	72.30	3.73	20.406				
900.00	900.00	899.80	899.80	2.99	2.99	170.09	-74.89	13.09	76.03	71.79	4.23	17.962				
1,000.00	1,000.00	999.80	999.80	3.35	3.35	170.09	-74.89	13.09	76.03	71.29	4.74	16.041				
1,100.00	1,100.00	1,099.80	1,099.80	3.71	3.71	170.09	-74.89	13.09	76.03	70.78	5.25	14.491				
1,200.00	1,200.00	1,199.80	1,199.80	4.07	4.07	170.09	-74.89	13.09	76.03	70.27	5.75	13.214				
1,300.00	1,300.00	1,299.80	1,299.80	4.43	4.43	170.09	-74.89	13.09	76.03	69.77	6.26	12.144				
1,400.00	1,400.00	1,399.80	1,399.80	4.79	4.78	170.09	-74.89	13.09	76.03	69.26	6.77	11.234				
1,500.00	1,500.00	1,499.80	1,499.80	5.14	5.14	170.09	-74.89	13.09	76.03	68.75	7.27	10.451				
1,600.00	1,600.00	1,599.80	1,599.80	5.50	5.50	170.09	-74.89	13.09	76.03	68.24	7.78	9.770 CC				
1,700.00	1,699.98	1,699.02	1,699.00	5.85	5.85	76.90	-75.11	14.79	76.14	67.87	8.27	9.204				
1,800.00	1,799.84	1,798.23	1,798.07	6.20	6.19	77.00	-75.78	19.89	76.50	67.75	8.75	8.739 ES				
1,900.00	1,899.45	1,897.45	1,896.91	6.54	6.53	77.17	-76.89	28.39	77.10	67.86	9.24	8.343				
2,000.00	1,998.70	1,996.66	1,995.40	6.90	6.88	77.39	-78.44	40.28	77.93	68.20	9.74	8.005				
2,100.00	2,097.47	2,095.88	2,093.41	7.26	7.24	77.67	-80.43	55.54	79.01	68.76	10.24	7.713				
2,200.00	2,195.62	2,195.09	2,190.82	7.64	7.62	78.00	-82.86	74.16	80.32	69.55	10.77	7.457				
2,300.00	2,293.06	2,294.31	2,287.53	8.04	8.01	78.37	-85.73	96.11	81.88	70.56	11.32	7.232				
2,400.00	2,389.64	2,393.59	2,383.48	8.46	8.43	78.79	-89.02	121.38	83.67	71.76	11.91	7.028				
2,486.44	2,472.37	2,480.00	2,466.67	8.85	8.81	80.19	-92.05	144.56	85.03	72.57	12.45	6.829				
2,500.00	2,485.28	2,493.54	2,479.71	8.92	8.87	80.54	-92.52	148.19	85.21	72.67	12.54	6.796				
2,600.00	2,580.53	2,593.46	2,575.89	9.39	9.33	83.12	-96.02	175.00	86.66	73.46	13.20	6.563				
2,700.00	2,675.78	2,693.37	2,672.08	9.88	9.79	85.60	-99.52	201.80	88.29	74.40	13.89	6.355				
2,800.00	2,771.03	2,793.29	2,768.27	10.39	10.27	87.99	-103.02	228.61	90.07	75.47	14.60	6.170				
2,900.00	2,866.28	2,893.20	2,864.46	10.91	10.76	90.28	-106.52	255.41	92.01	76.69	15.32	6.007				
3,000.00	2,961.53	2,993.12	2,960.65	11.44	11.26	92.47	-110.02	282.22	94.08	78.03	16.05	5.863				
3,100.00	3,056.78	3,093.03	3,056.84	11.98	11.76	94.57	-113.51	309.02	96.29	79.50	16.78	5.737				
3,200.00	3,152.03	3,192.95	3,153.03	12.52	12.27	96.57	-117.01	335.83	98.62	81.09	17.53	5.626				
3,300.00	3,247.28	3,292.86	3,249.21	13.08	12.79	98.48	-120.51	362.64	101.06	82.79	18.27	5.531				
3,400.00	3,342.54	3,392.78	3,345.40	13.64	13.31	100.29	-124.01	389.44	103.62	84.59	19.02	5.447				
3,500.00	3,437.79	3,492.69	3,441.59	14.21	13.84	102.02	-127.51	416.25	106.27	86.50	19.77	5.375				
3,600.00	3,533.04	3,592.61	3,537.78	14.78	14.37	103.66	-131.01	443.05	109.01	88.49	20.52	5.313				
3,700.00	3,628.29	3,692.52	3,633.97	15.36	14.90	105.21	-134.51	469.86	111.84	90.58	21.26	5.260				
3,800.00	3,723.54	3,792.43	3,730.16	15.94	15.44	106.70	-138.00	496.66	114.74	92.74	22.00	5.215				
3,900.00	3,818.79	3,892.35	3,826.34	16.52	15.98	108.10	-141.50	523.47	117.72	94.98	22.74	5.176				
4,000.00	3,914.04	3,992.26	3,922.53	17.11	16.52	109.44	-145.00	550.27	120.77	97.29	23.48	5.143				
4,100.00	4,009.29	4,092.18	4,018.72	17.69	17.06	110.71	-148.50	577.08	123.88	99.66	24.22	5.116				
4,200.00	4,104.54	4,192.09	4,114.91	18.29	17.61	111.92	-152.00	603.88	127.04	102.10	24.95	5.093				
4,300.00	4,199.79	4,292.01	4,211.10	18.88	18.15	113.06	-155.50	630.69	130.26	104.59	25.67	5.074				
4,400.00	4,295.04	4,391.92	4,307.29	19.48	18.70	114.16	-159.00	657.50	133.53	107.14	26.40	5.059				
4,500.00	4,390.29	4,491.84	4,403.47	20.08	19.25	115.20	-162.49	684.30	136.85	109.73	27.12	5.047				
4,600.00	4,485.55	4,591.75	4,499.66	20.68	19.81	116.19	-165.99	711.11	140.21	112.37	27.83	5.038				
4,700.00	4,580.80	4,691.67	4,595.85	21.28	20.36	117.13	-169.49	737.91	143.61	115.06	28.55	5.031				
4,800.00	4,676.05	4,791.58	4,692.04	21.88	20.92	118.03	-172.99	764.72	147.04	117.79	29.26	5.026				
4,900.00	4,771.30	4,891.50	4,788.23	22.48	21.47	118.89	-176.49	791.52	150.51	120.55	29.96	5.023				
5,000.00	4,866.55	4,991.41	4,884.42	23.09	22.03	119.71	-179.99	818.33	154.02	123.35	30.67	5.022				

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	4,961.80	5,091.33	4,980.61	23.70	22.59	120.49	-183.49	845.13	157.55	126.18	31.37	5.022		
5,200.00	5,057.05	5,191.24	5,076.79	24.30	23.15	121.24	-186.98	871.94	161.11	129.04	32.07	5.023		
5,300.00	5,152.30	5,291.16	5,172.98	24.91	23.71	121.96	-190.48	898.75	164.70	131.93	32.77	5.026		
5,400.00	5,247.55	5,391.07	5,269.17	25.52	24.27	122.64	-193.98	925.55	168.31	134.84	33.47	5.029		
5,500.00	5,342.80	5,490.99	5,365.36	26.13	24.83	123.30	-197.48	952.36	171.94	137.78	34.16	5.034		
5,600.00	5,438.05	5,590.90	5,461.55	26.74	25.39	123.93	-200.98	979.16	175.60	140.75	34.85	5.039		
5,700.00	5,533.30	5,690.82	5,557.74	27.36	25.95	124.53	-204.48	1,005.97	179.28	143.74	35.54	5.044		
5,800.00	5,628.56	5,790.73	5,653.92	27.97	26.52	125.11	-207.98	1,032.77	182.97	146.74	36.23	5.050		
5,900.00	5,723.81	5,890.65	5,750.11	28.58	27.08	125.67	-211.47	1,059.58	186.69	149.77	36.92	5.057		
6,000.00	5,819.06	5,990.56	5,846.30	29.20	27.65	126.20	-214.97	1,086.38	190.42	152.82	37.60	5.064		
6,100.00	5,914.31	6,090.48	5,942.49	29.81	28.21	126.72	-218.47	1,113.19	194.17	155.88	38.28	5.072		
6,200.00	6,009.56	6,190.39	6,038.68	30.43	28.78	127.21	-221.97	1,139.99	197.93	158.96	38.97	5.079		
6,300.00	6,104.81	6,290.31	6,134.87	31.04	29.34	127.69	-225.47	1,166.80	201.70	162.06	39.65	5.087		
6,400.00	6,200.06	6,390.22	6,231.05	31.66	29.91	128.15	-228.97	1,193.61	205.49	165.16	40.33	5.095		
6,500.00	6,295.31	6,490.14	6,327.24	32.27	30.48	128.59	-232.47	1,220.41	209.30	168.29	41.01	5.104		
6,600.00	6,390.56	6,590.05	6,423.43	32.89	31.04	129.02	-235.96	1,247.22	213.11	171.42	41.69	5.112		
6,700.00	6,485.81	6,689.97	6,519.62	33.51	31.61	129.43	-239.46	1,274.02	216.94	174.57	42.36	5.121		
6,800.00	6,581.06	6,789.88	6,615.81	34.13	32.18	129.82	-242.96	1,300.83	220.77	177.73	43.04	5.130		
6,848.89	6,627.63	6,838.73	6,662.84	34.43	32.45	130.01	-244.67	1,313.93	222.65	179.28	43.37	5.134		
6,900.00	6,676.45	6,889.81	6,712.01	34.74	32.75	130.14	-246.46	1,327.64	224.32	180.60	43.73	5.130		
7,000.00	6,772.71	6,989.79	6,808.26	35.31	33.31	129.86	-249.96	1,354.46	225.90	181.40	44.51	5.076		
7,100.00	6,869.86	7,089.70	6,904.45	35.84	33.88	128.86	-253.46	1,381.26	225.28	179.88	45.39	4.963		
7,200.00	6,967.77	7,189.44	7,000.46	36.33	34.45	127.12	-256.95	1,408.02	222.60	176.20	46.40	4.798		
7,300.00	7,066.34	7,288.88	7,096.19	36.77	35.02	124.57	-260.43	1,434.70	218.12	170.60	47.52	4.590		
7,400.00	7,165.43	7,387.89	7,191.51	37.17	35.58	121.12	-263.90	1,461.26	212.24	163.47	48.77	4.352		
7,500.00	7,264.93	7,486.36	7,286.31	37.52	36.14	116.65	-267.35	1,487.68	205.54	155.42	50.12	4.101		
7,600.00	7,364.71	7,582.59	7,379.21	37.84	36.68	111.41	-270.59	1,512.54	199.16	147.70	51.46	3.870		
7,700.00	7,464.66	7,678.90	7,472.96	38.12	37.17	105.87	-273.44	1,534.37	194.29	141.67	52.62	3.692		
7,735.34	7,500.00	7,713.08	7,506.41	38.21	37.34	-162.92	-274.36	1,541.37	192.97	139.99	52.98	3.642		
7,800.00	7,564.66	7,775.98	7,568.17	38.37	37.64	-166.45	-275.90	1,553.20	191.26	137.72	53.54	3.572		
7,900.00	7,664.66	7,874.23	7,665.11	38.61	38.07	-171.23	-277.96	1,569.09	190.19	136.00	54.19	3.510		
7,932.07	7,696.73	7,905.96	7,696.53	38.69	38.20	-172.56	-278.54	1,573.39	190.14	135.78	54.35	3.498		
7,942.38	7,707.04	7,916.18	7,706.66	38.72	38.24	-172.97	-278.71	1,574.73	190.14	135.74	54.40	3.495		
7,950.00	7,714.66	7,923.74	7,714.16	38.74	38.27	-172.72	-278.84	1,575.70	190.20	135.76	54.44	3.494 SF		
8,000.00	7,764.57	7,973.34	7,763.40	38.86	38.46	-174.56	-279.60	1,581.58	193.20	138.55	54.65	3.535		
8,050.00	7,814.03	8,022.64	7,812.45	38.98	38.65	-176.15	-280.26	1,586.58	200.66	145.83	54.83	3.659		
8,100.00	7,862.68	8,071.28	7,860.91	39.09	38.82	-177.44	-280.79	1,590.69	212.46	157.46	55.00	3.863		
8,150.00	7,910.15	8,118.87	7,908.39	39.20	38.97	-178.42	-281.22	1,593.93	228.46	173.30	55.16	4.142		
8,200.00	7,956.07	8,165.05	7,954.50	39.30	39.12	-179.10	-281.53	1,596.32	248.48	193.17	55.31	4.493		
8,250.00	8,000.10	8,209.44	7,998.86	39.39	39.25	-179.53	-281.74	1,597.92	272.35	216.90	55.46	4.911		
8,300.00	8,041.89	8,251.71	8,041.12	39.48	39.37	-179.76	-281.85	1,598.81	299.89	244.29	55.60	5.394		
8,350.00	8,081.14	8,291.53	8,080.94	39.56	39.47	-179.83	-281.89	1,599.09	330.88	275.14	55.73	5.937		
8,400.00	8,117.54	8,327.93	8,117.34	39.63	39.57	-179.83	-281.89	1,599.09	365.13	309.28	55.85	6.537		
8,450.00	8,150.81	8,361.20	8,150.61	39.69	39.65	-179.83	-281.89	1,599.09	402.43	346.47	55.96	7.191		
8,500.00	8,180.71	8,391.10	8,180.51	39.75	39.73	-179.83	-281.89	1,599.09	442.49	386.43	56.06	7.894		
8,550.00	8,207.00	8,417.39	8,206.80	39.80	39.79	-179.82	-281.89	1,599.09	485.00	428.86	56.14	8.640		
8,600.00	8,229.49	8,439.88	8,229.29	39.85	39.85	-179.81	-281.89	1,599.09	529.64	473.43	56.20	9.423		
8,650.00	8,248.00	8,458.40	8,247.80	39.91	39.90	-179.78	-281.89	1,599.09	576.07	519.81	56.26	10.240		
8,700.00	8,262.40	8,472.79	8,262.20	39.96	39.94	-179.73	-281.89	1,599.09	623.93	567.64	56.30	11.083		
8,750.00	8,272.57	8,482.96	8,272.37	40.02	39.96	-179.61	-281.89	1,599.09	672.87	616.55	56.33	11.946		
8,800.00	8,278.43	8,488.82	8,278.23	40.08	39.98	-179.21	-281.89	1,599.09	722.51	666.17	56.34	12.824		
8,842.38	8,280.00	8,490.39	8,279.80	40.15	39.98	-90.01	-281.89	1,599.09	764.85	708.50	56.35	13.574		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
8,900.00	8,280.00	8,490.39	8,279.80	40.25	39.98	-90.01	-281.89	1,599.09	822.47	766.13	56.35	14.596		
9,000.00	8,280.00	8,490.39	8,279.80	40.47	39.98	-90.02	-281.89	1,599.09	922.47	866.12	56.35	16.370		
9,100.00	8,280.00	8,490.39	8,279.80	40.75	39.98	-90.02	-281.89	1,599.09	1,022.47	966.12	56.35	18.144		
9,200.00	8,280.00	8,490.39	8,279.80	41.10	39.98	-90.02	-281.89	1,599.09	1,122.47	1,066.11	56.36	19.917		
9,300.00	8,280.00	8,490.39	8,279.80	41.51	39.98	-90.02	-281.89	1,599.09	1,222.47	1,166.11	56.36	21.690		
9,400.00	8,280.00	8,490.39	8,279.80	42.00	39.98	-90.02	-281.89	1,599.09	1,322.47	1,266.11	56.37	23.462		
9,500.00	8,280.00	8,490.39	8,279.80	42.55	39.98	-90.03	-281.89	1,599.09	1,422.47	1,366.10	56.37	25.234		
9,600.00	8,280.00	8,490.39	8,279.80	43.17	39.98	-90.03	-281.89	1,599.09	1,522.47	1,466.10	56.38	27.005		
9,700.00	8,280.00	8,490.39	8,279.80	43.85	39.98	-90.03	-281.89	1,599.09	1,622.47	1,566.09	56.38	28.776		
9,800.00	8,280.00	8,490.39	8,279.80	44.60	39.98	-90.03	-281.89	1,599.09	1,722.47	1,666.08	56.39	30.546		
9,900.00	8,280.00	8,490.39	8,279.80	45.41	39.98	-90.03	-281.89	1,599.09	1,822.47	1,766.08	56.40	32.315		
10,000.00	8,280.00	8,490.39	8,279.80	46.27	39.98	-90.03	-281.89	1,599.09	1,922.47	1,866.07	56.41	34.083		
10,100.00	8,280.00	8,490.39	8,279.80	47.19	39.98	-90.04	-281.89	1,599.09	2,022.47	1,966.06	56.41	35.851		
10,200.00	8,280.00	8,490.39	8,279.80	48.15	39.98	-90.04	-281.89	1,599.09	2,122.47	2,066.05	56.42	37.618		
10,300.00	8,280.00	8,490.39	8,279.80	49.16	39.98	-90.04	-281.89	1,599.09	2,222.47	2,166.04	56.43	39.385		
10,400.00	8,280.00	8,490.39	8,279.80	50.20	39.98	-90.04	-281.89	1,599.09	2,322.47	2,266.03	56.44	41.150		
10,500.00	8,280.00	8,490.39	8,279.80	51.29	39.98	-90.04	-281.89	1,599.09	2,422.47	2,366.02	56.45	42.915		
10,600.00	8,280.00	8,490.39	8,279.80	52.41	39.98	-90.05	-281.89	1,599.09	2,522.47	2,466.01	56.46	44.678		
10,700.00	8,280.00	8,490.39	8,279.80	53.56	39.98	-90.05	-281.89	1,599.09	2,622.47	2,566.00	56.47	46.441		
10,800.00	8,280.00	8,490.39	8,279.80	54.74	39.98	-90.05	-281.89	1,599.09	2,722.47	2,665.99	56.48	48.202		
10,900.00	8,280.00	8,490.39	8,279.80	55.95	39.98	-90.05	-281.89	1,599.09	2,822.47	2,765.98	56.49	49.963		
11,000.00	8,280.00	8,490.39	8,279.80	57.18	39.98	-90.05	-281.89	1,599.09	2,922.47	2,865.97	56.50	51.722		
11,100.00	8,280.00	8,490.39	8,279.80	58.43	39.98	-90.05	-281.89	1,599.09	3,022.47	2,965.96	56.52	53.480		
11,200.00	8,280.00	8,490.39	8,279.80	59.71	39.98	-90.06	-281.89	1,599.09	3,122.47	3,065.94	56.53	55.236		
11,300.00	8,280.00	8,490.39	8,279.80	61.00	39.98	-90.06	-281.89	1,599.09	3,222.47	3,165.93	56.54	56.991		
11,400.00	8,280.00	8,490.39	8,279.80	62.31	39.98	-90.06	-281.89	1,599.09	3,322.47	3,265.92	56.56	58.745		
11,500.00	8,280.00	8,490.39	8,279.80	63.64	39.98	-90.06	-281.89	1,599.09	3,422.47	3,365.90	56.57	60.498		
11,600.00	8,280.00	8,490.39	8,279.80	64.99	39.98	-90.06	-281.89	1,599.09	3,522.47	3,465.89	56.59	62.249		
11,700.00	8,280.00	8,490.39	8,279.80	66.35	39.98	-90.06	-281.89	1,599.09	3,622.47	3,565.87	56.60	63.998		
11,800.00	8,280.00	8,490.39	8,279.80	67.72	39.98	-90.07	-281.89	1,599.09	3,722.47	3,665.85	56.62	65.746		
11,900.00	8,280.00	8,490.39	8,279.80	69.11	39.98	-90.07	-281.89	1,599.09	3,822.47	3,765.84	56.64	67.493		
12,000.00	8,280.00	16,010.15	12,123.00	70.51	77.99	-179.99	3,640.41	1,562.04	3,843.20	3,788.04	55.16	69.670		
12,100.00	8,280.00	16,110.15	12,123.00	71.92	79.30	-179.99	3,740.40	1,561.10	3,843.20	3,787.11	56.09	68.518		
12,200.00	8,280.00	16,210.15	12,123.00	73.34	80.63	-179.99	3,840.40	1,560.15	3,843.20	3,786.18	57.02	67.396		
12,300.00	8,280.00	16,310.15	12,123.00	74.77	81.96	-179.99	3,940.39	1,559.21	3,843.20	3,785.24	57.96	66.303		
12,400.00	8,280.00	16,410.15	12,123.00	76.21	83.30	-179.99	4,040.39	1,558.27	3,843.20	3,784.29	58.91	65.238		
12,500.00	8,280.00	16,510.15	12,123.00	77.65	84.66	-179.99	4,140.38	1,557.32	3,843.20	3,783.34	59.86	64.202		
12,600.00	8,280.00	16,610.15	12,123.00	79.11	86.03	-179.99	4,240.38	1,556.38	3,843.20	3,782.38	60.82	63.191		
12,700.00	8,280.00	16,710.15	12,123.00	80.57	87.41	-179.99	4,340.38	1,555.43	3,843.20	3,781.42	61.78	62.208		
12,800.00	8,280.00	16,810.15	12,123.00	82.04	88.79	-179.99	4,440.37	1,554.49	3,843.20	3,780.45	62.75	61.249		
12,900.00	8,280.00	16,910.15	12,123.00	83.52	90.19	-179.99	4,540.37	1,553.54	3,843.20	3,779.48	63.72	60.315		
13,000.00	8,280.00	17,010.15	12,123.00	85.01	91.59	-179.99	4,640.36	1,552.60	3,843.20	3,778.51	64.69	59.405		
13,100.00	8,280.00	17,110.15	12,123.00	86.50	93.00	-179.99	4,740.36	1,551.65	3,843.20	3,777.53	65.67	58.519		
13,200.00	8,280.00	17,210.15	12,123.00	87.99	94.42	-179.99	4,840.35	1,550.71	3,843.20	3,776.54	66.66	57.655		
13,300.00	8,280.00	17,310.15	12,123.00	89.50	95.85	-179.99	4,940.35	1,549.76	3,843.20	3,775.55	67.65	56.813		
13,400.00	8,280.00	17,410.15	12,123.00	91.00	97.29	-179.99	5,040.34	1,548.82	3,843.20	3,774.56	68.64	55.992		
13,500.00	8,280.00	17,510.15	12,123.00	92.52	98.73	-179.99	5,140.34	1,547.88	3,843.20	3,773.57	69.63	55.191		
13,600.00	8,280.00	17,610.15	12,123.00	94.03	100.18	-179.99	5,240.34	1,546.93	3,843.20	3,772.57	70.63	54.411		
13,700.00	8,280.00	17,710.15	12,123.00	95.56	101.63	-179.99	5,340.33	1,545.99	3,843.20	3,771.56	71.64	53.650		
13,800.00	8,280.00	17,810.15	12,123.00	97.08	103.09	-180.00	5,440.33	1,545.04	3,843.20	3,770.56	72.64	52.907		
13,900.00	8,280.00	17,910.15	12,123.00	98.61	104.56	-180.00	5,540.32	1,544.10	3,843.20	3,769.55	73.65	52.183		
14,000.00	8,280.00	18,010.15	12,123.00	100.15	106.03	-180.00	5,640.32	1,543.15	3,843.20	3,768.54	74.66	51.476		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	8,280.00	18,110.15	12,123.00	101.69	107.51	-180.00	5,740.31	1,542.21	3,843.20	3,767.53	75.67	50.786		
14,200.00	8,280.00	18,210.15	12,123.00	103.23	108.99	-180.00	5,840.31	1,541.26	3,843.20	3,766.51	76.69	50.113		
14,300.00	8,280.00	18,310.15	12,123.00	104.77	110.47	-180.00	5,940.30	1,540.32	3,843.20	3,765.49	77.71	49.456		
14,400.00	8,280.00	18,410.15	12,123.00	106.32	111.97	-180.00	6,040.30	1,539.38	3,843.20	3,764.47	78.73	48.814		
14,500.00	8,280.00	18,510.15	12,123.00	107.87	113.46	-180.00	6,140.30	1,538.43	3,843.20	3,763.45	79.75	48.188		
14,600.00	8,280.00	18,610.15	12,123.00	109.43	114.96	-180.00	6,240.29	1,537.49	3,843.20	3,762.42	80.78	47.575		
14,700.00	8,280.00	18,710.15	12,123.00	110.98	116.47	-180.00	6,340.29	1,536.54	3,843.20	3,761.39	81.81	46.977		
14,800.00	8,280.00	18,810.15	12,123.00	112.54	117.97	-180.00	6,440.28	1,535.60	3,843.20	3,760.36	82.84	46.393		
14,900.00	8,280.00	18,910.15	12,123.00	114.10	119.49	-180.00	6,540.28	1,534.65	3,843.20	3,759.33	83.87	45.822		
15,000.00	8,280.00	19,010.15	12,123.00	115.67	121.00	-180.00	6,640.27	1,533.71	3,843.20	3,758.29	84.91	45.264		
15,100.00	8,280.00	19,110.15	12,123.00	117.24	122.52	-180.00	6,740.27	1,532.76	3,843.20	3,757.26	85.94	44.718		
15,200.00	8,280.00	19,210.15	12,123.00	118.81	124.04	-180.00	6,840.26	1,531.82	3,843.20	3,756.22	86.98	44.184		
15,300.00	8,280.00	19,310.15	12,123.00	120.38	125.57	-180.00	6,940.26	1,530.88	3,843.20	3,755.18	88.02	43.662		
15,400.00	8,280.00	19,410.15	12,123.00	121.95	127.10	-180.00	7,040.26	1,529.93	3,843.20	3,754.14	89.06	43.152		
15,500.00	8,280.00	19,510.15	12,123.00	123.53	128.63	-180.00	7,140.25	1,528.99	3,843.20	3,753.09	90.11	42.652		
15,600.00	8,280.00	19,610.15	12,123.00	125.11	130.17	-180.00	7,240.25	1,528.04	3,843.20	3,752.05	91.15	42.163		
15,700.00	8,280.00	19,710.15	12,123.00	126.69	131.70	-180.00	7,340.24	1,527.10	3,843.20	3,751.00	92.20	41.685		
15,800.00	8,280.00	19,810.15	12,123.00	128.27	133.24	-180.00	7,440.24	1,526.15	3,843.20	3,749.96	93.25	41.216		
15,900.00	8,280.00	19,910.15	12,123.00	129.85	134.79	-180.00	7,540.23	1,525.21	3,843.20	3,748.91	94.29	40.758		
16,000.00	8,280.00	20,010.15	12,123.00	131.44	136.33	-180.00	7,640.23	1,524.26	3,843.20	3,747.86	95.34	40.308		
16,100.00	8,280.00	20,110.15	12,123.00	133.02	137.88	-180.00	7,740.22	1,523.32	3,843.20	3,746.80	96.40	39.869		
16,200.00	8,280.00	20,210.15	12,123.00	134.61	139.43	-180.00	7,840.22	1,522.37	3,843.20	3,745.75	97.45	39.438		
16,300.00	8,280.00	20,310.15	12,123.00	136.20	140.99	-180.00	7,940.22	1,521.43	3,843.20	3,744.70	98.50	39.016		
16,400.00	8,280.00	20,410.15	12,123.00	137.79	142.54	-180.00	8,040.21	1,520.49	3,843.20	3,743.64	99.56	38.602		
16,500.00	8,280.00	20,510.15	12,123.00	139.39	144.10	-180.00	8,140.21	1,519.54	3,843.20	3,742.58	100.62	38.196		
16,600.00	8,280.00	20,610.15	12,123.00	140.98	145.66	-180.00	8,240.20	1,518.60	3,843.20	3,741.53	101.67	37.799		
16,700.00	8,280.00	20,710.15	12,123.00	142.58	147.22	-180.00	8,340.20	1,517.65	3,843.20	3,740.47	102.73	37.409		
16,800.00	8,280.00	20,810.15	12,123.00	144.17	148.78	-180.00	8,440.19	1,516.71	3,843.20	3,739.41	103.79	37.027		
16,900.00	8,280.00	20,910.15	12,123.00	145.77	150.35	-180.00	8,540.19	1,515.76	3,843.20	3,738.34	104.86	36.652		
17,000.00	8,280.00	21,010.15	12,123.00	147.37	151.92	-180.00	8,640.18	1,514.82	3,843.20	3,737.28	105.92	36.285		
17,100.00	8,280.00	21,110.15	12,123.00	148.97	153.48	-180.00	8,740.18	1,513.87	3,843.20	3,736.22	106.98	35.924		
17,200.00	8,280.00	21,210.15	12,123.00	150.57	155.05	-180.00	8,840.17	1,512.93	3,843.20	3,735.16	108.04	35.571		
17,300.00	8,280.00	21,310.15	12,123.00	152.18	156.63	-180.00	8,940.17	1,511.99	3,843.20	3,734.09	109.11	35.223		
17,400.00	8,280.00	21,410.15	12,123.00	153.78	158.20	-180.00	9,040.17	1,511.04	3,843.20	3,733.02	110.18	34.883		
17,500.00	8,280.00	21,510.15	12,123.00	155.38	159.78	-180.00	9,140.16	1,510.10	3,843.20	3,731.96	111.24	34.548		
17,600.00	8,280.00	21,610.15	12,123.00	156.99	161.35	-180.00	9,240.16	1,509.15	3,843.20	3,730.89	112.31	34.220		
17,700.00	8,280.00	21,710.15	12,123.00	158.60	162.93	-180.00	9,340.15	1,508.21	3,843.20	3,729.82	113.38	33.897		
17,800.00	8,280.00	21,810.15	12,123.00	160.20	164.51	-180.00	9,440.15	1,507.26	3,843.20	3,728.75	114.45	33.581		
17,900.00	8,280.00	21,910.15	12,123.00	161.81	166.09	-180.00	9,540.14	1,506.32	3,843.20	3,727.68	115.52	33.270		
18,000.00	8,280.00	22,010.15	12,123.00	163.42	167.68	-180.00	9,640.14	1,505.37	3,843.20	3,726.61	116.59	32.964		
18,100.00	8,280.00	22,110.15	12,123.00	165.03	169.26	-180.00	9,740.13	1,504.43	3,843.20	3,725.54	117.66	32.664		
18,200.00	8,280.00	22,210.15	12,123.00	166.64	170.85	-180.00	9,840.13	1,503.49	3,843.20	3,724.47	118.73	32.369		
18,300.00	8,280.00	22,310.15	12,123.00	168.25	172.43	-180.00	9,940.13	1,502.54	3,843.20	3,723.40	119.80	32.079		
18,400.00	8,280.00	22,410.15	12,123.00	169.87	174.01	180.00	10,040.12	1,501.60	3,843.20	3,722.35	120.85	31.801		
18,438.77	8,280.00	22,448.92	12,123.00	170.49	174.61	180.00	10,078.89	1,501.23	3,843.20	3,722.04	121.16	31.719		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-29.02	4,231.97	-2,348.23	4,839.81					
100.00	100.00	97.00	97.00	0.13	0.82	-29.02	4,231.97	-2,348.23	4,839.81	4,838.98	0.83	5,832.743		
200.00	200.00	197.00	197.00	0.48	1.67	-29.02	4,231.97	-2,348.23	4,839.81	4,838.07	1.73	2,790.016		
300.00	300.00	297.00	297.00	0.84	3.22	-29.02	4,231.97	-2,348.23	4,839.81	4,836.48	3.33	1,452.201		
400.00	400.00	406.48	406.48	1.20	5.16	-29.02	4,231.96	-2,348.23	4,839.81	4,834.51	5.30	912.825		
406.93	406.93	414.19	414.19	1.23	5.30	-29.03	4,231.95	-2,348.23	4,839.80	4,834.36	5.44	889.566		
500.00	500.00	497.00	497.00	1.56	6.90	-29.02	4,231.97	-2,348.23	4,839.81	4,832.73	7.08	683.867		
600.00	600.00	606.06	606.06	1.92	8.99	-29.02	4,231.97	-2,348.23	4,839.82	4,830.63	9.20	526.283		
610.78	610.78	617.92	617.92	1.96	9.22	-29.03	4,231.95	-2,348.23	4,839.80	4,830.37	9.43	513.418		
700.00	700.00	697.00	697.00	2.28	11.50	-29.02	4,231.97	-2,348.23	4,839.81	4,828.08	11.73	412.763		
800.00	800.00	797.02	797.00	2.63	14.28	-29.02	4,231.97	-2,348.23	4,839.81	4,825.29	14.52	333.337		
900.00	900.00	902.02	901.98	2.99	17.19	-29.02	4,233.40	-2,348.23	4,841.06	4,823.61	17.45	277.401		
1,000.00	1,000.00	1,023.13	1,023.08	3.35	20.55	-29.02	4,232.96	-2,348.23	4,840.74	4,819.92	20.83	232.438		
1,100.00	1,100.00	1,144.25	1,144.19	3.71	23.92	-29.03	4,231.91	-2,348.23	4,839.99	4,815.78	24.20	199.982		
1,137.26	1,137.26	1,189.39	1,189.32	3.84	25.17	-29.03	4,231.36	-2,348.23	4,839.59	4,814.13	25.46	190.084 CC		
1,200.00	1,200.00	1,197.36	1,197.00	4.07	25.81	-29.02	4,231.97	-2,348.23	4,839.81	4,813.69	26.12	185.262		
1,300.00	1,300.00	1,344.69	1,344.27	4.43	30.94	-29.02	4,233.29	-2,348.23	4,841.19	4,809.94	31.25	154.897		
1,400.00	1,400.00	1,397.46	1,397.00	4.79	32.78	-29.02	4,231.97	-2,348.23	4,839.81	4,806.68	33.13	146.098		
1,500.00	1,500.00	1,497.68	1,497.00	5.14	36.32	-29.02	4,231.97	-2,348.23	4,839.81	4,803.13	36.68	131.945		
1,600.00	1,600.00	1,597.80	1,597.00	5.50	39.64	-29.02	4,231.97	-2,348.23	4,839.81	4,799.79	40.02	120.937		
1,700.00	1,699.98	1,697.85	1,696.98	5.85	42.65	-122.25	4,231.97	-2,348.23	4,840.74	4,797.69	43.05	112.449 ES		
1,800.00	1,799.84	1,797.71	1,796.84	6.20	45.40	-122.26	4,231.97	-2,348.23	4,843.54	4,797.72	45.82	105.708		
1,900.00	1,899.45	1,958.67	1,957.76	6.54	49.83	-122.33	4,232.09	-2,348.23	4,848.70	4,798.44	50.26	96.479		
2,000.00	1,998.70	1,996.72	1,995.70	6.90	50.81	-122.27	4,231.97	-2,348.23	4,854.74	4,803.47	51.28	94.676		
2,100.00	2,097.47	2,095.48	2,094.47	7.26	53.30	-122.28	4,231.97	-2,348.23	4,863.17	4,809.38	53.79	90.403		
2,200.00	2,195.62	2,196.88	2,195.84	7.64	55.86	-122.29	4,233.64	-2,348.23	4,874.95	4,818.57	56.38	86.468		
2,300.00	2,293.06	2,335.30	2,334.23	8.04	59.35	-122.41	4,232.86	-2,348.23	4,886.72	4,826.83	59.89	81.597		
2,400.00	2,389.64	2,472.60	2,471.49	8.46	62.82	-122.56	4,230.78	-2,348.23	4,899.63	4,836.26	63.37	77.320		
2,486.44	2,472.37	2,470.53	2,469.37	8.85	62.84	-122.32	4,231.97	-2,348.23	4,913.75	4,850.31	63.45	77.444		
2,500.00	2,485.28	2,483.44	2,482.28	8.92	63.18	-122.36	4,231.97	-2,348.23	4,916.04	4,852.24	63.79	77.061		
2,600.00	2,580.53	2,578.69	2,577.53	9.39	65.70	-122.65	4,231.97	-2,348.23	4,932.97	4,866.63	66.34	74.355		
2,700.00	2,675.78	2,686.19	2,685.01	9.88	68.53	-122.96	4,233.10	-2,348.23	4,951.01	4,881.80	69.21	71.532		
2,800.00	2,771.03	2,806.55	2,805.36	10.39	71.71	-123.33	4,232.40	-2,348.23	4,967.72	4,895.30	72.42	68.595		
2,900.00	2,866.28	2,864.63	2,863.28	10.91	73.29	-123.50	4,231.97	-2,348.23	4,984.53	4,910.48	74.05	67.309 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-89.85	7.77	-2,925.29	2,925.98					
100.00	100.00	33.70	33.70	0.13	0.05	-89.85	7.76	-2,925.31	2,925.32	2,925.19	0.14	N/A CC		
200.00	200.00	124.80	124.80	0.48	0.20	-89.85	7.68	-2,925.55	2,925.59	2,925.06	0.52	5,585.642 ES		
300.00	300.00	215.89	215.88	0.84	0.35	-89.85	7.49	-2,926.07	2,926.16	2,925.25	0.91	3,212.470		
400.00	400.00	311.51	311.50	1.20	0.65	-89.86	7.24	-2,926.85	2,926.97	2,925.60	1.37	2,143.953		
500.00	500.00	412.48	412.47	1.56	1.01	-89.86	7.12	-2,927.73	2,927.84	2,925.98	1.86	1,575.599		
600.00	600.00	509.43	509.42	1.92	1.36	-89.86	7.24	-2,928.58	2,928.72	2,926.37	2.35	1,246.539		
700.00	700.00	600.06	600.04	2.28	1.68	-89.86	7.37	-2,929.55	2,929.79	2,926.96	2.83	1,035.244		
800.00	800.00	692.00	691.97	2.63	2.01	-89.86	7.39	-2,930.90	2,931.26	2,927.95	3.31	884.401		
900.00	900.00	784.00	783.96	2.99	2.34	-89.86	7.37	-2,932.57	2,933.06	2,929.26	3.80	771.917		
1,000.00	1,000.00	861.59	861.53	3.35	2.62	-89.86	7.21	-2,934.32	2,935.30	2,931.04	4.25	690.135		
1,100.00	1,100.00	945.71	945.61	3.71	2.93	-89.86	7.02	-2,936.71	2,938.14	2,933.42	4.72	622.339		
1,200.00	1,200.00	1,040.49	1,040.34	4.07	3.27	-89.86	6.98	-2,939.78	2,941.38	2,936.16	5.21	564.228		
1,300.00	1,300.00	1,140.37	1,140.17	4.43	3.63	-89.86	7.07	-2,943.07	2,944.67	2,938.95	5.72	515.070		
1,400.00	1,400.00	1,230.25	1,229.99	4.79	3.95	-89.86	7.27	-2,946.16	2,948.11	2,941.91	6.20	475.639		
1,500.00	1,500.00	1,339.11	1,338.78	5.14	4.35	-89.85	7.57	-2,949.99	2,951.64	2,944.91	6.72	438.977		
1,600.00	1,600.00	1,455.22	1,454.84	5.50	4.77	-89.85	7.49	-2,953.63	2,954.78	2,947.51	7.27	406.576		
1,700.00	1,699.98	1,595.49	1,595.07	5.85	5.27	176.90	6.35	-2,956.52	2,958.57	2,950.71	7.86	376.324		
1,800.00	1,799.84	1,699.88	1,699.45	6.20	5.64	176.87	5.17	-2,957.84	2,965.05	2,956.68	8.36	354.493		
1,900.00	1,899.45	1,806.89	1,806.44	6.54	6.02	176.84	3.66	-2,959.07	2,974.90	2,966.02	8.87	335.262		
2,000.00	1,998.70	1,933.43	1,932.96	6.90	6.46	176.81	1.67	-2,960.10	2,987.94	2,978.52	9.43	316.955		
2,100.00	2,097.47	2,133.21	2,132.68	7.26	7.13	176.79	-0.27	-2,956.21	3,001.27	2,991.14	10.13	296.235		
2,200.00	2,195.62	2,243.54	2,242.95	7.64	7.49	176.79	-0.60	-2,952.38	3,016.91	3,006.27	10.63	283.722		
2,300.00	2,293.06	2,359.45	2,358.76	8.04	7.87	176.80	-0.25	-2,947.83	3,035.53	3,024.38	11.15	272.239		
2,400.00	2,389.64	2,428.84	2,428.11	8.46	8.10	176.80	0.11	-2,945.19	3,057.68	3,046.12	11.57	264.374		
2,486.44	2,472.37	2,495.32	2,494.55	8.85	8.32	176.80	0.38	-2,943.22	3,080.25	3,068.31	11.94	257.963		
2,500.00	2,485.28	2,506.71	2,505.94	8.92	8.36	176.81	0.42	-2,942.91	3,084.01	3,072.01	12.00	256.938		
2,600.00	2,580.53	2,591.37	2,590.57	9.39	8.65	176.84	0.58	-2,940.77	3,112.01	3,099.55	12.45	249.901		
2,700.00	2,675.78	2,679.88	2,679.06	9.88	8.95	176.86	0.53	-2,938.83	3,140.32	3,127.40	12.92	243.137		
2,800.00	2,771.03	2,772.46	2,771.62	10.39	9.26	176.90	0.67	-2,936.91	3,168.75	3,155.36	13.39	236.620		
2,900.00	2,866.28	2,866.08	2,865.22	10.91	9.58	176.93	0.71	-2,935.09	3,197.30	3,183.43	13.87	230.460		
3,000.00	2,961.53	2,956.18	2,955.31	11.44	9.89	176.95	0.50	-2,933.36	3,225.88	3,211.53	14.35	224.804		
3,100.00	3,056.78	3,036.43	3,035.55	11.98	10.17	176.97	0.36	-2,932.15	3,254.85	3,240.04	14.80	219.864		
3,200.00	3,152.03	3,110.00	3,109.11	12.52	10.42	176.98	-0.08	-2,931.34	3,284.25	3,269.00	15.24	215.460		
3,300.00	3,247.28	3,203.00	3,202.10	13.08	10.74	176.99	-1.12	-2,930.82	3,314.12	3,298.38	15.74	210.617		
3,400.00	3,342.54	3,289.86	3,288.96	13.64	11.05	177.00	-1.98	-2,930.60	3,344.27	3,328.06	16.21	206.264		
3,500.00	3,437.79	3,407.42	3,406.51	14.21	11.46	177.02	-2.89	-2,929.83	3,374.05	3,357.27	16.77	201.147		
3,600.00	3,533.04	3,497.33	3,496.41	14.78	11.77	177.03	-3.84	-2,929.08	3,403.66	3,386.40	17.26	197.167		
3,700.00	3,628.29	3,594.79	3,593.86	15.36	12.12	177.04	-4.74	-2,928.31	3,433.30	3,415.53	17.77	193.173		
3,800.00	3,723.54	3,693.19	3,692.26	15.94	12.46	177.05	-5.73	-2,927.47	3,462.90	3,444.61	18.29	189.357		
3,900.00	3,818.79	3,795.08	3,794.13	16.52	12.82	177.06	-6.85	-2,926.44	3,492.35	3,473.53	18.81	185.636		
4,000.00	3,914.04	3,890.84	3,889.89	17.11	13.15	177.07	-7.75	-2,925.36	3,521.67	3,502.35	19.32	182.258		
4,100.00	4,009.29	3,992.63	3,991.66	17.69	13.51	177.08	-8.64	-2,924.26	3,551.06	3,531.21	19.85	178.901		
4,200.00	4,104.54	4,101.35	4,100.37	18.29	13.89	177.10	-8.96	-2,922.59	3,580.00	3,559.60	20.40	175.532		
4,300.00	4,199.79	4,191.80	4,190.81	18.88	14.21	177.12	-9.19	-2,921.14	3,608.88	3,587.99	20.89	172.745		
4,400.00	4,295.04	4,281.62	4,280.62	19.48	14.52	177.14	-9.27	-2,919.89	3,637.97	3,616.58	21.39	170.107		
4,500.00	4,390.29	4,383.27	4,382.26	20.08	14.88	177.17	-9.21	-2,918.50	3,667.08	3,645.17	21.91	167.333		
4,600.00	4,485.55	4,482.90	4,481.88	20.68	15.23	177.19	-9.25	-2,916.92	3,695.98	3,673.54	22.44	164.713		
4,700.00	4,580.80	4,501.00	4,499.98	21.28	15.29	177.20	-9.25	-2,916.62	3,725.67	3,702.95	22.73	163.916		
4,800.00	4,676.05	4,501.00	4,499.98	21.88	15.29	177.20	-9.25	-2,916.62	3,757.75	3,734.80	22.96	163.696		
4,900.00	4,771.30	4,501.00	4,499.98	22.48	15.29	177.20	-9.25	-2,916.62	3,792.20	3,769.03	23.17	163.673 SF		
5,000.00	4,866.55	4,501.00	4,499.98	23.09	15.29	177.20	-9.25	-2,916.62	3,828.94	3,805.57	23.37	163.836		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
5,100.00	4,961.80	4,501.00	4,499.98	23.70	15.29	177.20	-9.25	-2,916.62	3,867.93	3,844.37	23.56	164.176		
5,200.00	5,057.05	4,501.00	4,499.98	24.30	15.29	177.20	-9.25	-2,916.62	3,909.08	3,885.34	23.74	164.681		
5,300.00	5,152.30	4,501.00	4,499.98	24.91	15.29	177.20	-9.25	-2,916.62	3,952.33	3,928.43	23.90	165.344		
5,400.00	5,247.55	4,501.00	4,499.98	25.52	15.29	177.20	-9.25	-2,916.62	3,997.62	3,973.56	24.06	166.154		
5,500.00	5,342.80	4,501.00	4,499.98	26.13	15.29	177.20	-9.25	-2,916.62	4,044.88	4,020.67	24.21	167.104		
5,600.00	5,438.05	4,501.00	4,499.98	26.74	15.29	177.20	-9.25	-2,916.62	4,094.03	4,069.69	24.34	168.184		
5,700.00	5,533.30	4,501.00	4,499.98	27.36	15.29	177.20	-9.25	-2,916.62	4,145.02	4,120.54	24.47	169.387		
5,800.00	5,628.56	4,501.00	4,499.98	27.97	15.29	177.20	-9.25	-2,916.62	4,197.76	4,173.17	24.59	170.705		
5,900.00	5,723.81	4,501.00	4,499.98	28.58	15.29	177.20	-9.25	-2,916.62	4,252.21	4,227.50	24.70	172.132		
6,000.00	5,819.06	4,501.00	4,499.98	29.20	15.29	177.20	-9.25	-2,916.62	4,308.28	4,283.48	24.81	173.666		
6,100.00	5,914.31	4,501.00	4,499.98	29.81	15.29	177.20	-9.25	-2,916.62	4,365.93	4,341.02	24.91	175.288		
6,200.00	6,009.56	4,501.00	4,499.98	30.43	15.29	177.20	-9.25	-2,916.62	4,425.09	4,400.09	25.00	177.002		
6,300.00	6,104.81	4,501.00	4,499.98	31.04	15.29	177.20	-9.25	-2,916.62	4,485.69	4,460.61	25.09	178.798		
6,400.00	6,200.06	4,501.00	4,499.98	31.66	15.29	177.20	-9.25	-2,916.62	4,547.69	4,522.52	25.17	180.668		
6,500.00	6,295.31	4,501.00	4,499.98	32.27	15.29	177.20	-9.25	-2,916.62	4,611.03	4,585.77	25.25	182.605		
6,600.00	6,390.56	4,501.00	4,499.98	32.89	15.29	177.20	-9.25	-2,916.62	4,675.64	4,650.31	25.33	184.604		
6,700.00	6,485.81	4,501.00	4,499.98	33.51	15.29	177.20	-9.25	-2,916.62	4,741.48	4,716.08	25.40	186.658		
6,800.00	6,581.06	4,501.00	4,499.98	34.13	15.29	177.20	-9.25	-2,916.62	4,808.50	4,783.03	25.47	188.763		
6,848.89	6,627.63	4,501.00	4,499.98	34.43	15.29	177.20	-9.25	-2,916.62	4,841.69	4,816.18	25.51	189.809		
6,900.00	6,676.45	4,501.00	4,499.98	34.74	15.29	177.24	-9.25	-2,916.62	4,876.32	4,850.78	25.54	190.912		
7,000.00	6,772.71	4,501.00	4,499.98	35.31	15.29	177.33	-9.25	-2,916.62	4,942.99	4,917.39	25.60	193.065		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	-89.85	7.77	-2,925.29	2,925.98					
100.00	100.00	33.70	33.70	0.13	0.05	-89.85	7.76	-2,925.31	2,925.32	2,925.19	0.14	N/A CC		
200.00	200.00	124.80	124.80	0.48	0.20	-89.85	7.68	-2,925.55	2,925.59	2,925.06	0.52	5,585.642 ES		
300.00	300.00	215.89	215.88	0.84	0.35	-89.85	7.49	-2,926.07	2,926.16	2,925.25	0.91	3,212.470		
400.00	400.00	311.51	311.50	1.20	0.65	-89.86	7.24	-2,926.85	2,926.97	2,925.60	1.37	2,143.953		
500.00	500.00	412.48	412.47	1.56	1.01	-89.86	7.12	-2,927.73	2,927.84	2,925.98	1.86	1,575.599		
600.00	600.00	509.43	509.42	1.92	1.36	-89.86	7.24	-2,928.58	2,928.72	2,926.37	2.35	1,246.539		
700.00	700.00	600.06	600.04	2.28	1.68	-89.86	7.37	-2,929.55	2,929.79	2,926.96	2.83	1,035.244		
800.00	800.00	692.00	691.97	2.63	2.01	-89.86	7.39	-2,930.90	2,931.26	2,927.95	3.31	884.401		
900.00	900.00	784.00	783.96	2.99	2.34	-89.86	7.37	-2,932.57	2,933.06	2,929.26	3.80	771.917		
1,000.00	1,000.00	861.59	861.53	3.35	2.62	-89.86	7.21	-2,934.32	2,935.30	2,931.04	4.25	690.135		
1,100.00	1,100.00	945.71	945.61	3.71	2.93	-89.86	7.02	-2,936.71	2,938.14	2,933.42	4.72	622.339		
1,200.00	1,200.00	1,040.49	1,040.34	4.07	3.27	-89.86	6.98	-2,939.78	2,941.38	2,936.16	5.21	564.228		
1,300.00	1,300.00	1,140.37	1,140.17	4.43	3.63	-89.86	7.07	-2,943.07	2,944.67	2,938.95	5.72	515.070		
1,400.00	1,400.00	1,230.25	1,229.99	4.79	3.95	-89.86	7.27	-2,946.16	2,948.11	2,941.91	6.20	475.639		
1,500.00	1,500.00	1,339.11	1,338.78	5.14	4.35	-89.85	7.57	-2,949.99	2,951.64	2,944.91	6.72	438.977		
1,600.00	1,600.00	1,455.22	1,454.84	5.50	4.77	-89.85	7.49	-2,953.63	2,954.78	2,947.51	7.27	406.576		
1,700.00	1,699.98	1,595.49	1,595.07	5.85	5.27	176.90	6.35	-2,956.52	2,958.57	2,950.71	7.86	376.324		
1,800.00	1,799.84	1,699.88	1,699.45	6.20	5.64	176.87	5.17	-2,957.84	2,965.05	2,956.68	8.36	354.493		
1,900.00	1,899.45	1,806.89	1,806.44	6.54	6.02	176.84	3.66	-2,959.07	2,974.90	2,966.02	8.87	335.262		
2,000.00	1,998.70	1,933.43	1,932.96	6.90	6.46	176.81	1.67	-2,960.10	2,987.94	2,978.52	9.43	316.955		
2,100.00	2,097.47	2,133.21	2,132.68	7.26	7.13	176.79	-0.27	-2,956.21	3,001.27	2,991.14	10.13	296.235		
2,200.00	2,195.62	2,243.54	2,242.95	7.64	7.49	176.79	-0.60	-2,952.38	3,016.91	3,006.27	10.63	283.722		
2,300.00	2,293.06	2,359.45	2,358.76	8.04	7.87	176.80	-0.25	-2,947.83	3,035.53	3,024.38	11.15	272.239		
2,400.00	2,389.64	2,428.84	2,428.11	8.46	8.10	176.80	0.11	-2,945.19	3,057.68	3,046.12	11.57	264.374		
2,486.44	2,472.37	2,495.32	2,494.55	8.85	8.32	176.80	0.38	-2,943.22	3,080.25	3,068.31	11.94	257.963		
2,500.00	2,485.28	2,506.71	2,505.94	8.92	8.36	176.81	0.42	-2,942.91	3,084.01	3,072.01	12.00	256.938		
2,600.00	2,580.53	2,591.37	2,590.57	9.39	8.65	176.84	0.58	-2,940.77	3,112.01	3,099.55	12.45	249.901		
2,700.00	2,675.78	2,679.88	2,679.06	9.88	8.95	176.86	0.53	-2,938.83	3,140.32	3,127.40	12.92	243.137		
2,800.00	2,771.03	2,735.00	2,734.17	10.39	9.13	176.88	0.60	-2,937.68	3,168.98	3,155.68	13.30	238.253		
2,900.00	2,866.28	2,806.76	2,805.91	10.91	9.26	176.88	-0.62	-2,936.91	3,198.52	3,184.87	13.65	234.406		
3,000.00	2,961.53	2,833.00	2,832.12	11.44	9.30	176.87	-1.75	-2,936.99	3,229.68	3,215.75	13.93	231.868		
3,100.00	3,056.78	2,875.44	2,874.46	11.98	9.31	176.83	-4.46	-2,937.91	3,262.50	3,248.31	14.19	229.924		
3,200.00	3,152.03	2,926.00	2,924.72	12.52	9.32	176.76	-9.23	-2,940.68	3,297.58	3,283.12	14.45	228.144		
3,300.00	3,247.28	2,926.00	2,924.72	13.08	9.32	176.76	-9.23	-2,940.68	3,334.01	3,319.32	14.69	226.992		
3,400.00	3,342.54	2,969.75	2,968.04	13.64	9.34	176.68	-14.15	-2,944.28	3,372.30	3,357.35	14.95	225.582		
3,500.00	3,437.79	3,021.00	3,018.66	14.21	9.35	176.59	-20.16	-2,949.58	3,412.21	3,397.00	15.22	224.224		
3,600.00	3,533.04	3,205.32	3,200.96	14.78	9.47	176.28	-40.76	-2,967.19	3,452.12	3,436.49	15.63	220.800		
3,700.00	3,628.29	3,380.07	3,374.74	15.36	9.63	176.08	-55.50	-2,978.08	3,488.19	3,472.12	16.07	217.097		
3,800.00	3,723.54	3,471.81	3,466.07	15.94	9.73	175.99	-62.55	-2,983.01	3,523.73	3,507.30	16.42	214.576		
3,900.00	3,818.79	3,811.26	3,804.63	16.52	10.16	175.73	-85.29	-2,987.75	3,554.09	3,536.99	17.10	207.897		
4,000.00	3,914.04	3,906.66	3,899.78	17.11	10.30	175.66	-91.87	-2,986.35	3,583.16	3,565.67	17.49	204.869		
4,100.00	4,009.29	4,003.85	3,996.74	17.69	10.45	175.58	-98.56	-2,984.90	3,612.22	3,594.33	17.89	201.858		
4,200.00	4,104.54	4,095.69	4,088.32	18.29	10.61	175.51	-105.20	-2,983.52	3,641.27	3,622.97	18.30	198.975		
4,300.00	4,199.79	4,207.34	4,199.63	18.88	10.81	175.41	-113.75	-2,981.84	3,670.37	3,651.62	18.74	195.833		
4,400.00	4,295.04	4,296.31	4,288.32	19.48	10.98	175.33	-120.69	-2,980.14	3,699.06	3,679.90	19.16	193.085		
4,500.00	4,390.29	4,399.27	4,390.90	20.08	11.19	175.24	-129.24	-2,978.42	3,728.00	3,708.40	19.60	190.181		
4,600.00	4,485.55	4,492.50	4,483.74	20.68	11.39	175.14	-137.64	-2,976.61	3,756.71	3,736.67	20.04	187.476		
4,700.00	4,580.80	4,576.73	4,567.57	21.28	11.58	175.05	-145.68	-2,975.16	3,785.64	3,765.18	20.46	184.989		
4,800.00	4,676.05	4,670.94	4,661.31	21.88	11.80	174.94	-154.87	-2,973.75	3,814.81	3,793.89	20.91	182.412		
4,900.00	4,771.30	4,759.79	4,749.71	22.48	12.01	174.84	-163.71	-2,972.42	3,843.99	3,822.63	21.36	179.986		
5,000.00	4,866.55	4,853.68	4,843.06	23.09	12.25	174.72	-173.74	-2,971.17	3,873.37	3,851.55	21.82	177.542		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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		
5,100.00	4,961.80	4,977.85	4,966.37	23.70	12.58	174.55	-188.17	-2,969.09	3,902.48	3,880.13	22.35	174.634		
5,200.00	5,057.05	5,131.62	5,118.85	24.30	13.00	174.33	-207.39	-2,964.04	3,929.86	3,906.91	22.95	171.228		
5,300.00	5,152.30	5,233.83	5,220.05	24.91	13.30	174.16	-221.23	-2,960.29	3,957.16	3,933.70	23.45	168.724		
5,400.00	5,247.55	5,334.73	5,319.82	25.52	13.60	173.99	-235.73	-2,956.29	3,984.23	3,960.27	23.96	166.289		
5,500.00	5,342.80	5,428.22	5,412.24	26.13	13.89	173.83	-249.29	-2,952.53	4,011.28	3,986.83	24.45	164.035		
5,600.00	5,438.05	5,566.54	5,549.54	26.74	14.30	173.66	-264.83	-2,946.60	4,037.98	4,012.93	25.05	161.224		
5,700.00	5,533.30	5,656.70	5,639.28	27.36	14.56	173.60	-272.34	-2,942.20	4,064.00	4,038.47	25.52	159.229		
5,800.00	5,628.56	5,727.00	5,709.35	27.97	14.76	173.56	-277.38	-2,939.53	4,090.88	4,064.92	25.95	157.617		
5,900.00	5,723.81	5,767.37	5,749.61	28.58	14.88	173.54	-280.00	-2,938.42	4,118.60	4,092.29	26.32	156.509		
6,000.00	5,819.06	5,831.56	5,813.68	29.20	15.06	173.51	-283.96	-2,937.10	4,147.21	4,120.48	26.73	155.159		
6,100.00	5,914.31	5,915.17	5,897.13	29.81	15.30	173.48	-288.80	-2,935.81	4,176.30	4,149.11	27.19	153.609		
6,200.00	6,009.56	6,009.00	5,990.83	30.43	15.57	173.46	-293.63	-2,934.53	4,205.52	4,177.85	27.67	151.982		
6,300.00	6,104.81	6,099.10	6,080.82	31.04	15.84	173.44	-297.83	-2,933.40	4,234.83	4,206.69	28.15	150.459		
6,400.00	6,200.06	6,195.70	6,177.31	31.66	16.12	173.42	-302.36	-2,932.26	4,264.22	4,235.58	28.64	148.898		
6,500.00	6,295.31	6,293.00	6,274.50	32.27	16.41	173.41	-306.78	-2,931.03	4,293.51	4,264.37	29.13	147.370		
6,600.00	6,390.56	6,379.31	6,360.73	32.89	16.66	173.40	-310.45	-2,930.02	4,322.89	4,293.29	29.60	146.028		
6,700.00	6,485.81	6,476.44	6,457.77	33.51	16.95	173.39	-314.47	-2,929.06	4,352.42	4,322.32	30.10	144.596		
6,800.00	6,581.06	6,598.93	6,580.13	34.13	17.32	173.38	-319.67	-2,927.41	4,381.63	4,350.96	30.66	142.891		
6,848.89	6,627.63	6,657.08	6,638.26	34.43	17.49	173.38	-321.25	-2,926.43	4,395.70	4,364.77	30.93	142.103		
6,900.00	6,676.45	6,715.17	6,696.33	34.74	17.66	173.43	-321.99	-2,925.35	4,409.87	4,378.66	31.20	141.330		
7,000.00	6,772.71	6,816.30	6,797.44	35.31	17.94	173.52	-322.52	-2,923.32	4,434.86	4,403.17	31.69	139.933		
7,100.00	6,869.86	6,905.70	6,886.82	35.84	18.20	173.60	-323.05	-2,921.58	4,456.55	4,424.40	32.15	138.621		
7,200.00	6,967.77	6,999.91	6,981.02	36.33	18.47	173.66	-323.69	-2,919.93	4,475.04	4,442.43	32.61	137.218		
7,300.00	7,066.34	7,105.52	7,086.60	36.77	18.77	173.70	-324.59	-2,918.02	4,490.06	4,456.96	33.10	135.655		
7,400.00	7,165.43	7,210.72	7,191.78	37.17	19.08	173.74	-325.35	-2,915.95	4,501.48	4,467.90	33.58	134.064		
7,500.00	7,264.93	7,309.48	7,290.52	37.52	19.37	173.76	-326.12	-2,913.95	4,509.39	4,475.36	34.03	132.505		
7,600.00	7,364.71	7,398.84	7,379.86	37.84	19.64	173.76	-327.02	-2,912.24	4,513.97	4,479.51	34.46	131.006		
7,700.00	7,464.66	7,451.65	7,432.66	38.12	19.79	173.76	-327.44	-2,911.54	4,515.67	4,480.90	34.77	129.862		
7,735.34	7,500.00	7,468.67	7,449.68	38.21	19.84	-93.01	-327.48	-2,911.45	4,515.72	4,480.84	34.88	129.480		
7,753.43	7,518.09	7,477.38	7,458.39	38.25	19.86	-93.01	-327.47	-2,911.44	4,515.69	4,480.76	34.93	129.288		
7,800.00	7,564.66	7,503.00	7,484.01	38.37	19.94	-93.01	-327.40	-2,911.50	4,515.78	4,480.71	35.07	128.773		
7,900.00	7,664.66	7,557.05	7,538.05	38.61	20.09	-93.01	-327.18	-2,912.04	4,516.72	4,481.36	35.36	127.724		
7,942.38	7,707.04	7,598.00	7,579.00	38.72	20.20	-93.01	-327.11	-2,912.76	4,517.45	4,481.92	35.54	127.127		
7,950.00	7,714.66	7,598.00	7,579.00	38.74	20.20	-92.45	-327.11	-2,912.76	4,517.57	4,482.02	35.55	127.088		
8,000.00	7,764.57	7,623.48	7,604.48	38.86	20.28	-92.36	-327.10	-2,913.29	4,518.69	4,483.00	35.69	126.612		
8,050.00	7,814.03	7,666.71	7,647.69	38.98	20.40	-92.30	-327.15	-2,914.25	4,520.10	4,484.23	35.88	125.987		
8,100.00	7,862.68	7,715.07	7,696.04	39.09	20.54	-92.28	-327.27	-2,915.37	4,521.77	4,485.69	36.08	125.335		
8,150.00	7,910.15	7,770.76	7,751.72	39.20	20.70	-92.32	-327.30	-2,916.60	4,523.59	4,487.29	36.30	124.632		
8,200.00	7,956.07	7,821.34	7,802.28	39.30	20.85	-92.37	-327.24	-2,917.64	4,525.58	4,489.08	36.50	123.994		
8,250.00	8,000.10	7,868.39	7,849.33	39.39	20.98	-92.42	-327.24	-2,918.57	4,527.83	4,491.14	36.69	123.406		
8,300.00	8,041.89	7,916.61	7,897.54	39.48	21.12	-92.51	-327.26	-2,919.48	4,530.36	4,493.47	36.89	122.821		
8,350.00	8,081.14	7,963.43	7,944.35	39.56	21.26	-92.59	-327.24	-2,920.28	4,533.20	4,496.12	37.08	122.262		
8,400.00	8,117.54	8,007.56	7,988.47	39.63	21.39	-92.65	-327.21	-2,920.97	4,536.41	4,499.14	37.26	121.737		
8,450.00	8,150.81	8,048.01	8,028.93	39.69	21.51	-92.66	-327.24	-2,921.52	4,540.04	4,502.60	37.44	121.255		
8,500.00	8,180.71	8,084.46	8,065.36	39.75	21.62	-92.62	-327.30	-2,921.97	4,544.15	4,506.54	37.61	120.816		
8,550.00	8,207.00	8,116.71	8,097.62	39.80	21.71	-92.50	-327.36	-2,922.31	4,548.80	4,511.02	37.77	120.422		
8,600.00	8,229.49	8,144.31	8,125.22	39.85	21.80	-92.29	-327.40	-2,922.58	4,554.01	4,516.09	37.93	120.077		
8,650.00	8,248.00	8,167.04	8,147.94	39.91	21.86	-91.97	-327.43	-2,922.77	4,559.83	4,521.76	38.07	119.783		
8,700.00	8,262.40	8,180.24	8,161.15	39.96	21.90	-91.48	-327.45	-2,922.88	4,566.27	4,528.09	38.19	119.581		
8,750.00	8,272.57	8,190.35	8,171.26	40.02	21.93	-90.89	-327.46	-2,922.96	4,573.33	4,535.03	38.30	119.415		
8,800.00	8,278.43	8,196.16	8,177.06	40.08	21.95	-90.19	-327.47	-2,923.01	4,580.97	4,542.57	38.40	119.296		
8,842.38	8,280.00	8,197.68	8,178.58	40.15	21.96	-89.51	-327.47	-2,923.02	4,587.88	4,549.40	38.48	119.233		

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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
8,900.00	8,280.00	8,197.61	8,178.52	40.25	21.96	-89.51	-327.47	-2,923.02	4,597.87	4,559.28	38.59	119.162	
9,000.00	8,280.00	8,197.50	8,178.40	40.47	21.96	-89.51	-327.47	-2,923.02	4,616.86	4,578.06	38.80	118.994	
9,100.00	8,280.00	8,197.38	8,178.29	40.75	21.96	-89.51	-327.47	-2,923.02	4,637.93	4,598.88	39.05	118.783	
9,200.00	8,280.00	8,197.27	8,178.17	41.10	21.96	-89.51	-327.47	-2,923.02	4,661.05	4,621.73	39.32	118.536	
9,300.00	8,280.00	8,197.15	8,178.06	41.51	21.96	-89.51	-327.47	-2,923.02	4,686.19	4,646.56	39.63	118.260	
9,400.00	8,280.00	8,197.04	8,177.94	42.00	21.95	-89.51	-327.47	-2,923.02	4,713.32	4,673.36	39.96	117.963	
9,500.00	8,280.00	8,196.93	8,177.83	42.55	21.95	-89.50	-327.47	-2,923.02	4,742.40	4,702.09	40.31	117.652	
9,600.00	8,280.00	8,196.81	8,177.72	43.17	21.95	-89.50	-327.47	-2,923.02	4,773.40	4,732.72	40.68	117.333	
9,700.00	8,280.00	8,196.70	8,177.60	43.85	21.95	-89.50	-327.47	-2,923.02	4,806.29	4,765.21	41.07	117.013	
9,800.00	8,280.00	8,196.58	8,177.49	44.60	21.95	-89.50	-327.47	-2,923.01	4,841.01	4,799.53	41.48	116.703	
9,900.00	8,280.00	8,196.47	8,177.37	45.41	21.95	-89.50	-327.47	-2,923.01	4,877.54	4,835.64	41.90	116.404	
10,000.00	8,280.00	8,196.35	8,177.26	46.27	21.95	-89.50	-327.47	-2,923.01	4,915.83	4,873.50	42.33	116.118	
10,100.00	8,280.00	8,196.24	8,177.14	47.19	21.95	-89.50	-327.47	-2,923.01	4,955.85	4,913.07	42.78	115.857	
10,200.00	8,280.00	8,196.12	8,177.03	48.15	21.95	-89.49	-327.47	-2,923.01	4,997.54	4,954.32	43.22	115.622 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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	0.00	-89.85	7.77	-2,925.29	2,925.98							
100.00	100.00	33.70	33.70	0.13	0.05	-89.85	7.76	-2,925.31	2,925.32	2,925.19	0.14	N/A CC				
200.00	200.00	124.80	124.80	0.48	0.20	-89.85	7.68	-2,925.55	2,925.59	2,925.06	0.52	5,585.642 ES				
300.00	300.00	215.89	215.88	0.84	0.35	-89.85	7.49	-2,926.07	2,926.16	2,925.25	0.91	3,212.470				
400.00	400.00	311.51	311.50	1.20	0.65	-89.86	7.24	-2,926.85	2,926.97	2,925.60	1.37	2,143.953				
500.00	500.00	412.48	412.47	1.56	1.01	-89.86	7.12	-2,927.73	2,927.84	2,925.98	1.86	1,575.599				
600.00	600.00	509.43	509.42	1.92	1.36	-89.86	7.24	-2,928.58	2,928.72	2,926.37	2.35	1,246.539				
700.00	700.00	600.06	600.04	2.28	1.68	-89.86	7.37	-2,929.55	2,929.79	2,926.96	2.83	1,035.244				
800.00	800.00	692.00	691.97	2.63	2.01	-89.86	7.39	-2,930.90	2,931.26	2,927.95	3.31	884.401				
900.00	900.00	784.00	783.96	2.99	2.34	-89.86	7.37	-2,932.57	2,933.06	2,929.26	3.80	771.917				
1,000.00	1,000.00	861.59	861.53	3.35	2.62	-89.86	7.21	-2,934.32	2,935.30	2,931.04	4.25	690.135				
1,100.00	1,100.00	945.71	945.61	3.71	2.93	-89.86	7.02	-2,936.71	2,938.14	2,933.42	4.72	622.339				
1,200.00	1,200.00	1,040.49	1,040.34	4.07	3.27	-89.86	6.98	-2,939.78	2,941.38	2,936.16	5.21	564.228				
1,300.00	1,300.00	1,140.37	1,140.17	4.43	3.63	-89.86	7.07	-2,943.07	2,944.67	2,938.95	5.72	515.070				
1,400.00	1,400.00	1,230.25	1,229.99	4.79	3.95	-89.86	7.27	-2,946.16	2,948.11	2,941.91	6.20	475.639				
1,500.00	1,500.00	1,339.11	1,338.78	5.14	4.35	-89.85	7.57	-2,949.99	2,951.64	2,944.91	6.72	438.977				
1,600.00	1,600.00	1,455.22	1,454.84	5.50	4.77	-89.85	7.49	-2,953.63	2,954.78	2,947.51	7.27	406.576				
1,700.00	1,699.98	1,595.49	1,595.07	5.85	5.27	176.90	6.35	-2,956.52	2,958.57	2,950.71	7.86	376.324				
1,800.00	1,799.84	1,699.88	1,699.45	6.20	5.64	176.87	5.17	-2,957.84	2,965.05	2,956.68	8.36	354.493				
1,900.00	1,899.45	1,806.89	1,806.44	6.54	6.02	176.84	3.66	-2,959.07	2,974.90	2,966.02	8.87	335.262				
2,000.00	1,998.70	1,933.43	1,932.96	6.90	6.46	176.81	1.67	-2,960.10	2,987.94	2,978.52	9.43	316.955				
2,100.00	2,097.47	2,133.21	2,132.68	7.26	7.13	176.79	-0.27	-2,956.21	3,001.27	2,991.14	10.13	296.235				
2,200.00	2,195.62	2,243.54	2,242.95	7.64	7.49	176.79	-0.60	-2,952.38	3,016.91	3,006.27	10.63	283.722				
2,300.00	2,293.06	2,359.45	2,358.76	8.04	7.87	176.80	-0.25	-2,947.83	3,035.53	3,024.38	11.15	272.239				
2,400.00	2,389.64	2,428.84	2,428.11	8.46	8.10	176.80	0.11	-2,945.19	3,057.68	3,046.12	11.57	264.374				
2,486.44	2,472.37	2,495.32	2,494.55	8.85	8.32	176.80	0.38	-2,943.22	3,080.25	3,068.31	11.94	257.963				
2,500.00	2,485.28	2,506.71	2,505.94	8.92	8.36	176.81	0.42	-2,942.91	3,084.01	3,072.01	12.00	256.938				
2,600.00	2,580.53	2,591.37	2,590.57	9.39	8.65	176.84	0.58	-2,940.77	3,112.01	3,099.55	12.45	249.901				
2,700.00	2,675.78	2,679.88	2,679.06	9.88	8.95	176.86	0.53	-2,938.83	3,140.32	3,127.40	12.92	243.137				
2,800.00	2,771.03	2,735.00	2,734.17	10.39	9.13	176.88	0.60	-2,937.68	3,168.98	3,155.68	13.30	238.253				
2,900.00	2,866.28	2,806.76	2,805.91	10.91	9.26	176.88	-0.62	-2,936.91	3,198.52	3,184.87	13.65	234.406				
3,000.00	2,961.53	2,833.00	2,832.12	11.44	9.30	176.87	-1.75	-2,936.99	3,229.68	3,215.75	13.93	231.868				
3,100.00	3,056.78	2,875.44	2,874.46	11.98	9.31	176.83	-4.46	-2,937.91	3,262.50	3,248.31	14.19	229.924				
3,200.00	3,152.03	2,926.00	2,924.72	12.52	9.32	176.76	-9.23	-2,940.68	3,297.58	3,283.12	14.45	228.144				
3,300.00	3,247.28	2,926.00	2,924.72	13.08	9.32	176.76	-9.23	-2,940.68	3,334.01	3,319.32	14.69	226.992				
3,400.00	3,342.54	2,969.75	2,968.04	13.64	9.34	176.68	-14.15	-2,944.28	3,372.30	3,357.35	14.95	225.582				
3,500.00	3,437.79	3,021.00	3,018.66	14.21	9.35	176.59	-20.16	-2,949.58	3,412.21	3,397.00	15.22	224.224				
3,600.00	3,533.04	3,205.32	3,200.96	14.78	9.47	176.28	-40.76	-2,967.19	3,452.12	3,436.49	15.63	220.800				
3,700.00	3,628.29	3,380.07	3,374.74	15.36	9.63	176.08	-55.50	-2,978.08	3,488.19	3,472.12	16.07	217.097				
3,800.00	3,723.54	3,471.81	3,466.07	15.94	9.73	175.99	-62.55	-2,983.01	3,523.73	3,507.30	16.42	214.576				
3,900.00	3,818.79	3,811.26	3,804.63	16.52	10.16	175.73	-85.29	-2,987.75	3,554.09	3,536.99	17.10	207.897				
4,000.00	3,914.04	3,906.66	3,899.78	17.11	10.30	175.66	-91.87	-2,986.35	3,583.16	3,565.67	17.49	204.869				
4,100.00	4,009.29	4,003.85	3,996.74	17.69	10.45	175.58	-98.56	-2,984.90	3,612.22	3,594.33	17.89	201.858				
4,200.00	4,104.54	4,095.69	4,088.32	18.29	10.61	175.51	-105.20	-2,983.52	3,641.27	3,622.97	18.30	198.975				
4,300.00	4,199.79	4,207.34	4,199.63	18.88	10.81	175.41	-113.75	-2,981.84	3,670.37	3,651.62	18.74	195.833				
4,400.00	4,295.04	4,296.31	4,288.32	19.48	10.98	175.33	-120.69	-2,980.14	3,699.06	3,679.90	19.16	193.085				
4,500.00	4,390.29	4,399.27	4,390.90	20.08	11.19	175.24	-129.24	-2,978.42	3,728.00	3,708.40	19.60	190.181				
4,600.00	4,485.55	4,492.50	4,483.74	20.68	11.39	175.14	-137.64	-2,976.61	3,756.71	3,736.67	20.04	187.476				
4,700.00	4,580.80	4,576.73	4,567.57	21.28	11.58	175.05	-145.68	-2,975.16	3,785.64	3,765.18	20.46	184.989				
4,800.00	4,676.05	4,670.94	4,661.31	21.88	11.80	174.94	-154.87	-2,973.75	3,814.81	3,793.89	20.91	182.412				
4,900.00	4,771.30	4,759.79	4,749.71	22.48	12.01	174.84	-163.71	-2,972.42	3,843.99	3,822.63	21.36	179.986				
5,000.00	4,866.55	4,853.68	4,843.06	23.09	12.25	174.72	-173.74	-2,971.17	3,873.37	3,851.55	21.82	177.542				

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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				
5,100.00	4,961.80	4,977.85	4,966.37	23.70	12.58	174.55	-188.17	-2,969.09	3,902.48	3,880.13	22.35	174.634				
5,200.00	5,057.05	5,131.62	5,118.85	24.30	13.00	174.33	-207.39	-2,964.04	3,929.86	3,906.91	22.95	171.228				
5,300.00	5,152.30	5,233.83	5,220.05	24.91	13.30	174.16	-221.23	-2,960.29	3,957.16	3,933.70	23.45	168.724				
5,400.00	5,247.55	5,334.73	5,319.82	25.52	13.60	173.99	-235.73	-2,956.29	3,984.23	3,960.27	23.96	166.289				
5,500.00	5,342.80	5,428.22	5,412.24	26.13	13.89	173.83	-249.29	-2,952.53	4,011.28	3,986.83	24.45	164.035				
5,600.00	5,438.05	5,566.54	5,549.54	26.74	14.30	173.66	-264.83	-2,946.60	4,037.98	4,012.93	25.05	161.224				
5,700.00	5,533.30	5,656.70	5,639.28	27.36	14.56	173.60	-272.34	-2,942.20	4,064.00	4,038.47	25.52	159.229				
5,800.00	5,628.56	5,727.00	5,709.35	27.97	14.76	173.56	-277.38	-2,939.53	4,090.88	4,064.92	25.95	157.617				
5,900.00	5,723.81	5,767.37	5,749.61	28.58	14.88	173.54	-280.00	-2,938.42	4,118.60	4,092.29	26.32	156.509				
6,000.00	5,819.06	5,831.56	5,813.68	29.20	15.06	173.51	-283.96	-2,937.10	4,147.21	4,120.48	26.73	155.159				
6,100.00	5,914.31	5,915.17	5,897.13	29.81	15.30	173.48	-288.80	-2,935.81	4,176.30	4,149.11	27.19	153.609				
6,200.00	6,009.56	6,009.00	5,990.83	30.43	15.57	173.46	-293.63	-2,934.53	4,205.52	4,177.85	27.67	151.982				
6,300.00	6,104.81	6,099.10	6,080.82	31.04	15.84	173.44	-297.83	-2,933.40	4,234.83	4,206.69	28.15	150.459				
6,400.00	6,200.06	6,195.70	6,177.31	31.66	16.12	173.42	-302.36	-2,932.26	4,264.22	4,235.58	28.64	148.898				
6,500.00	6,295.31	6,293.00	6,274.50	32.27	16.41	173.41	-306.78	-2,931.03	4,293.51	4,264.37	29.13	147.370				
6,600.00	6,390.56	6,379.31	6,360.73	32.89	16.66	173.40	-310.45	-2,930.02	4,322.89	4,293.29	29.60	146.028				
6,700.00	6,485.81	6,476.44	6,457.77	33.51	16.95	173.39	-314.47	-2,929.06	4,352.42	4,322.32	30.10	144.596				
6,800.00	6,581.06	6,598.93	6,580.13	34.13	17.32	173.38	-319.67	-2,927.41	4,381.63	4,350.96	30.66	142.891				
6,848.89	6,627.63	6,657.08	6,638.26	34.43	17.49	173.38	-321.25	-2,926.43	4,395.70	4,364.77	30.93	142.103				
6,900.00	6,676.45	6,715.17	6,696.33	34.74	17.66	173.43	-321.99	-2,925.35	4,409.87	4,378.66	31.20	141.330				
7,000.00	6,772.71	6,816.30	6,797.44	35.31	17.94	173.52	-322.52	-2,923.32	4,434.86	4,403.17	31.69	139.933				
7,100.00	6,869.86	6,905.70	6,886.82	35.84	18.20	173.60	-323.05	-2,921.58	4,456.55	4,424.40	32.15	138.621				
7,200.00	6,967.77	6,999.91	6,981.02	36.33	18.47	173.66	-323.69	-2,919.93	4,475.04	4,442.43	32.61	137.218				
7,300.00	7,066.34	7,105.52	7,086.60	36.77	18.77	173.70	-324.59	-2,918.02	4,490.06	4,456.96	33.10	135.655				
7,400.00	7,165.43	7,210.72	7,191.78	37.17	19.08	173.74	-325.35	-2,915.95	4,501.48	4,467.90	33.58	134.064				
7,500.00	7,264.93	7,309.48	7,290.52	37.52	19.37	173.76	-326.12	-2,913.95	4,509.39	4,475.36	34.03	132.505				
7,600.00	7,364.71	7,398.84	7,379.86	37.84	19.64	173.76	-327.02	-2,912.24	4,513.97	4,479.51	34.46	131.006				
7,700.00	7,464.66	7,451.65	7,432.66	38.12	19.79	173.76	-327.44	-2,911.54	4,515.67	4,480.90	34.77	129.862				
7,735.34	7,500.00	7,468.67	7,449.68	38.21	19.84	-93.01	-327.48	-2,911.45	4,515.72	4,480.84	34.88	129.480				
7,753.43	7,518.09	7,477.38	7,458.39	38.25	19.86	-93.01	-327.47	-2,911.44	4,515.69	4,480.76	34.93	129.288				
7,800.00	7,564.66	7,503.00	7,484.01	38.37	19.94	-93.01	-327.40	-2,911.50	4,515.78	4,480.71	35.07	128.773				
7,900.00	7,664.66	7,557.05	7,538.05	38.61	20.09	-93.01	-327.18	-2,912.04	4,516.72	4,481.36	35.36	127.724				
7,942.38	7,707.04	7,598.00	7,579.00	38.72	20.20	-93.01	-327.11	-2,912.76	4,517.45	4,481.92	35.54	127.127				
7,950.00	7,714.66	7,598.00	7,579.00	38.74	20.20	-92.45	-327.11	-2,912.76	4,517.57	4,482.02	35.55	127.088				
8,000.00	7,764.57	7,623.48	7,604.48	38.86	20.28	-92.36	-327.10	-2,913.29	4,518.69	4,483.00	35.69	126.612				
8,050.00	7,814.03	7,666.71	7,647.69	38.98	20.40	-92.30	-327.15	-2,914.25	4,520.10	4,484.23	35.88	125.987				
8,100.00	7,862.68	7,715.07	7,696.04	39.09	20.54	-92.28	-327.27	-2,915.37	4,521.77	4,485.69	36.08	125.335				
8,150.00	7,910.15	7,770.76	7,751.72	39.20	20.70	-92.32	-327.30	-2,916.60	4,523.59	4,487.29	36.30	124.632				
8,200.00	7,956.07	7,821.34	7,802.28	39.30	20.85	-92.37	-327.24	-2,917.64	4,525.58	4,489.08	36.50	123.994				
8,250.00	8,000.10	7,868.39	7,849.33	39.39	20.98	-92.42	-327.24	-2,918.57	4,527.83	4,491.14	36.69	123.406				
8,300.00	8,041.89	7,916.61	7,897.54	39.48	21.12	-92.51	-327.26	-2,919.48	4,530.36	4,493.47	36.89	122.821				
8,350.00	8,081.14	7,963.43	7,944.35	39.56	21.26	-92.59	-327.24	-2,920.28	4,533.20	4,496.12	37.08	122.262				
8,400.00	8,117.54	8,007.56	7,988.47	39.63	21.39	-92.65	-327.21	-2,920.97	4,536.41	4,499.14	37.26	121.737				
8,450.00	8,150.81	8,048.01	8,028.93	39.69	21.51	-92.66	-327.24	-2,921.52	4,540.04	4,502.60	37.44	121.255				
8,500.00	8,180.71	8,084.46	8,065.36	39.75	21.62	-92.62	-327.30	-2,921.97	4,544.15	4,506.54	37.61	120.816				
8,550.00	8,207.00	8,116.71	8,097.62	39.80	21.71	-92.50	-327.36	-2,922.31	4,548.80	4,511.02	37.77	120.422				
8,600.00	8,229.49	8,144.31	8,125.22	39.85	21.80	-92.29	-327.40	-2,922.58	4,554.01	4,516.09	37.93	120.077				
8,650.00	8,248.00	8,167.04	8,147.94	39.91	21.86	-91.97	-327.43	-2,922.77	4,559.83	4,521.76	38.07	119.783				
8,700.00	8,262.40	8,180.24	8,161.15	39.96	21.90	-91.48	-327.45	-2,922.88	4,566.27	4,528.09	38.19	119.581				
8,750.00	8,272.57	8,190.35	8,171.26	40.02	21.93	-90.89	-327.46	-2,922.96	4,573.33	4,535.03	38.30	119.415				
8,800.00	8,278.43	8,196.16	8,177.06	40.08	21.95	-90.19	-327.47	-2,923.01	4,580.97	4,542.57	38.40	119.296				
8,842.38	8,280.00	8,197.68	8,178.58	40.15	21.96	-89.51	-327.47	-2,923.02	4,587.88	4,549.40	38.48	119.233				

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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	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
8,900.00	8,280.00	8,197.61	8,178.52	40.25	21.96	-89.51	-327.47	-2,923.02	4,597.87	4,559.28	38.59	119.162	
9,000.00	8,280.00	8,197.50	8,178.40	40.47	21.96	-89.51	-327.47	-2,923.02	4,616.86	4,578.06	38.80	118.994	
9,100.00	8,280.00	8,197.38	8,178.29	40.75	21.96	-89.51	-327.47	-2,923.02	4,637.93	4,598.88	39.05	118.783	
9,200.00	8,280.00	8,197.27	8,178.17	41.10	21.96	-89.51	-327.47	-2,923.02	4,661.05	4,621.73	39.32	118.536	
9,300.00	8,280.00	8,197.15	8,178.06	41.51	21.96	-89.51	-327.47	-2,923.02	4,686.19	4,646.56	39.63	118.260	
9,400.00	8,280.00	8,197.04	8,177.94	42.00	21.95	-89.51	-327.47	-2,923.02	4,713.32	4,673.36	39.96	117.963	
9,500.00	8,280.00	8,196.93	8,177.83	42.55	21.95	-89.50	-327.47	-2,923.02	4,742.40	4,702.09	40.31	117.652	
9,600.00	8,280.00	8,196.81	8,177.72	43.17	21.95	-89.50	-327.47	-2,923.02	4,773.40	4,732.72	40.68	117.333	
9,700.00	8,280.00	8,196.70	8,177.60	43.85	21.95	-89.50	-327.47	-2,923.02	4,806.29	4,765.21	41.07	117.013	
9,800.00	8,280.00	8,196.58	8,177.49	44.60	21.95	-89.50	-327.47	-2,923.01	4,841.01	4,799.53	41.48	116.703	
9,900.00	8,280.00	8,196.47	8,177.37	45.41	21.95	-89.50	-327.47	-2,923.01	4,877.54	4,835.64	41.90	116.404	
10,000.00	8,280.00	8,196.35	8,177.26	46.27	21.95	-89.50	-327.47	-2,923.01	4,915.83	4,873.50	42.33	116.118	
10,100.00	8,280.00	8,196.24	8,177.14	47.19	21.95	-89.50	-327.47	-2,923.01	4,955.85	4,913.07	42.78	115.857	
10,200.00	8,280.00	8,196.12	8,177.03	48.15	21.95	-89.49	-327.47	-2,923.01	4,997.54	4,954.32	43.22	115.622 SF	

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



Total Directional Services

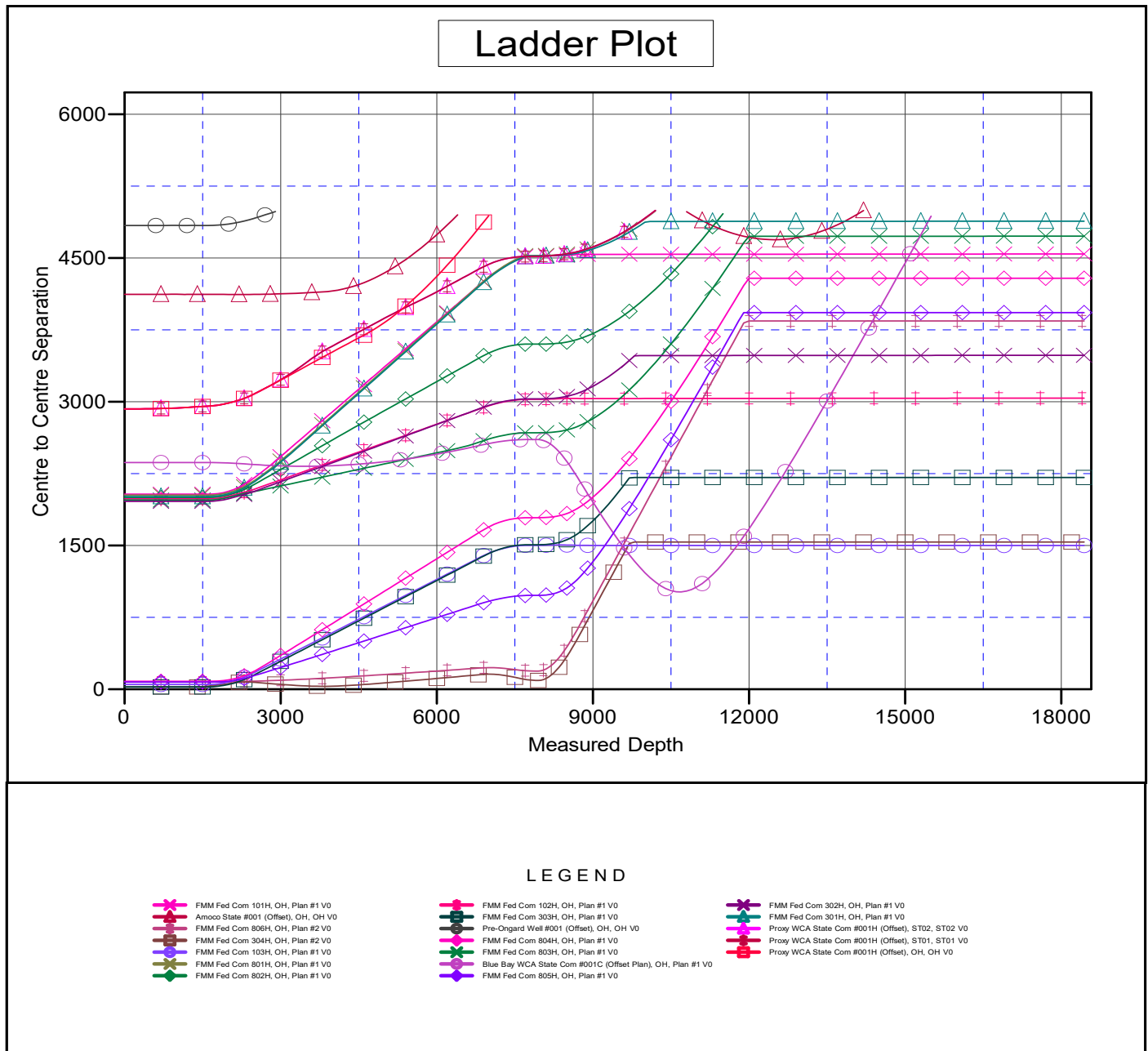
Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well FMM Fed Com 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3333' GE + 30' KB @ 3363.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: FMM Fed Com 104H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.54°



CC - Min centre to center distance or 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 104H
Project:	Lea County, NM (NAD83)	TVD Reference:	3333' GE + 30' KB @ 3363.00usft
Reference Site:	FMM Fed Com	MD Reference:	3333' GE + 30' KB @ 3363.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	FMM Fed Com 104H	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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3333' GE + 30' KB @ 3363.00usft

Coordinates are relative to: FMM Fed Com 104H

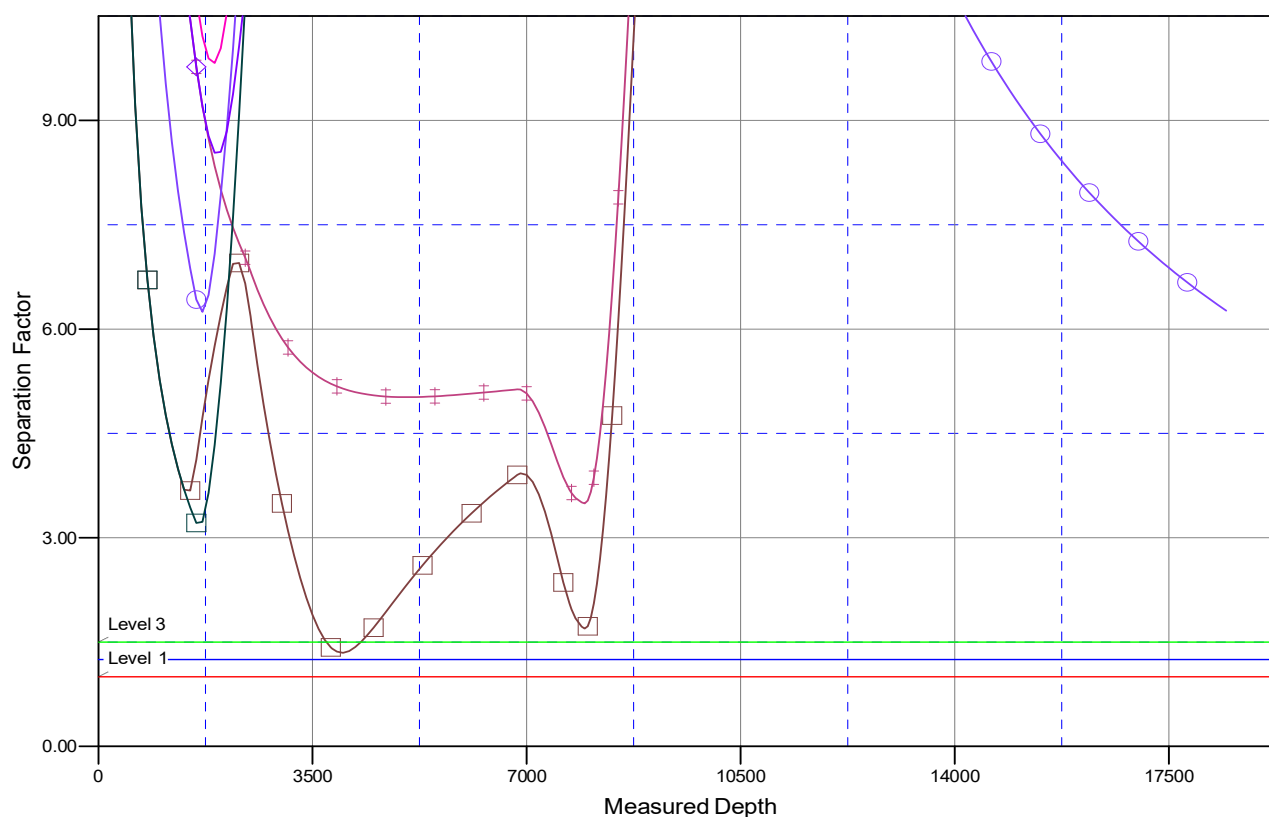
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.333334

Grid Convergence at Surface is: 0.54°

Separation Factor Plot



LEGEND

FMM Fed Com 101H, OH, Plan #1 V0	FMM Fed Com 102H, OH, Plan #1 V0	FMM Fed Com 302H, OH, Plan #1 V0
Amoco State #001 (Offset), OH, OH V0	FMM Fed Com 303H, OH, Plan #1 V0	FMM Fed Com 301H, OH, Plan #1 V0
FMM Fed Com 806H, OH, Plan #2 V0	Pre-Ordnard Well #001 (Offset), OH, OH V0	Proxy WCA State Com #001H (Offset), ST02, ST02 V0
FMM Fed Com 304H, OH, Plan #2 V0	FMM Fed Com 804H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), ST01, ST01 V0
FMM Fed Com 103H, OH, Plan #1 V0	FMM Fed Com 803H, OH, Plan #1 V0	Proxy WCA State Com #001H (Offset), OH, OH V0
FMM Fed Com 801H, OH, Plan #1 V0	Blue Bay WCA State Com #001C (Offset Plan), OH, Plan #1 V0	
FMM Fed Com 802H, OH, Plan #1 V0	FMM Fed Com 805H, 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 85988

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 85988
	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	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
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/7/2022