Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.

[326125]

2. Name of Operator

[373910]

9. API Well No. **30-025-49871**

3a. Address

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

10. Field and Pool, or Exploratory **[97088]**

XXXXXXXXXX

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

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

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

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No of acres in lease

17. Spacing Unit dedicated to this well

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth

20. BLM/BIA Bond No. in file

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

22. Approximate date work will start*

23. Estimated duration

24. Attachments

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

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

25. Signature

Name *(Printed/Typed)*

Date

Title

Approved by *(Signature)*

Name *(Printed/Typed)*

Date

Title

Office

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

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

NGMP Rec 03/08/2022

SL

KZ
03/16/2022

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 03/07/2022

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

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

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

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

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

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

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

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

Approval Date: 03/07/2022

Additional Operator Remarks

Location of Well

0. SHL: TR B / 20 FNL / 1925 FEL / TWSP: 26S / RANGE: 35E / SECTION: 2 / LAT: 32.079514 / LONG: -103.335999 (TVD: 0 feet, MD: 0 feet)

PPP: NWNE / 0 FNL / 1876 FEL / TWSP: 26S / RANGE: 35E / SECTION: 11 / LAT: 32.065052 / LONG: -103.335831 (TVD: 10720 feet, MD: 15700 feet)

PPP: NWSE / 2654 FNL / 1886 FEL / TWSP: 26S / RANGE: 35E / SECTION: 2 / LAT: 32.072274 / LONG: -103.335835 (TVD: 10720 feet, MD: 13100 feet)

PPP: TR B / 624 FNL / 1878 FEL / TWSP: 26S / RANGE: 35E / SECTION: 2 / LAT: 32.077855 / LONG: -103.335838 (TVD: 10720 feet, MD: 11048 feet)

BHL: TR O / 150 FSL / 1877 FEL / TWSP: 26S / RANGE: 35E / SECTION: 11 / LAT: 32.050938 / LONG: -103.335824 (TVD: 10720 feet, MD: 20841 feet)

BLM Point of Contact

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

Review and Appeal Rights

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

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-49871	97088	WC-025 G-08 S253534O;BONE SPRING

[4] Property Code	[5] Property Name	[6] Well Number
326125	TATANKA FED COM	503H

[7] OGRID No.	[8] Operator Name	[9] Elevation
373910	FRANKLIN MOUNTAIN ENERGY LLC	3118.4'

[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
B	2	26S	35E		20	NORTH	1925	EAST	LEA

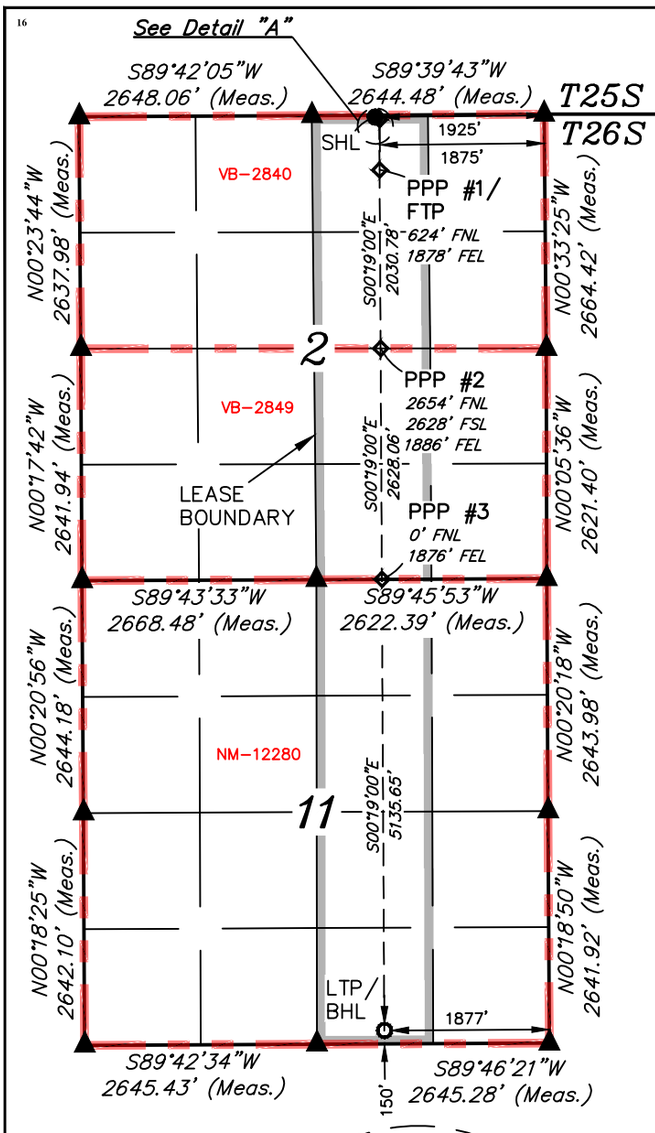
[11] Bottom Hole Location If Different From Surface

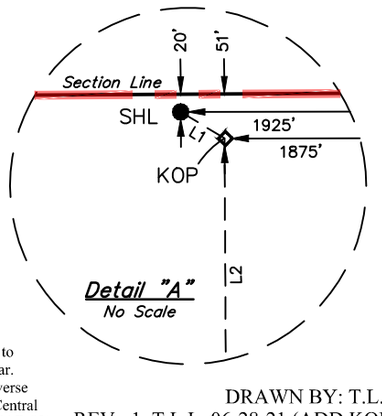
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	11	26S	35E		150	SOUTH	1877	EAST	LEA

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

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

[16]





● = SURFACE HOLE LOCATION
◇ = KICK OFF POINT/FTP/PPP
○ = LAST TAKE POINT/ BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED

NAD 83 (SURFACE HOLE LOCATION)
LATITUDE = 32°04'46.25" (32.079514°)
LONGITUDE = 103°20'09.60" (103.335999°)
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32°04'45.79" (32.079387°)
LONGITUDE = 103°20'07.94" (103.335538°)
STATE PLANE NAD 83 (N.M. EAST)
N: 394092.32' E: 850238.93'
STATE PLANE NAD 27 (N.M. EAST)
N: 394034.42' E: 809051.30'

NAD 83 (KOP)
LATITUDE = 32°04'45.95" (32.079430°)
LONGITUDE = 103°20'09.02" (103.335839°)
NAD 27 (KOP)
LATITUDE = 32°04'45.49" (32.079303°)
LONGITUDE = 103°20'07.36" (103.335378°)
STATE PLANE NAD 83 (N.M. EAST)
N: 394062.32' E: 850288.93'
STATE PLANE NAD 27 (N.M. EAST)
N: 394004.42' E: 809101.30'

NAD 83 (PPP #1/ FTP)
LATITUDE = 32°04'40.28" (32.077855°)
LONGITUDE = 103°20'09.02" (103.335838°)
NAD 27 (PPP #1/ FTP)
LATITUDE = 32°04'39.82" (32.077729°)
LONGITUDE = 103°20'07.36" (103.335377°)
STATE PLANE NAD 83 (N.M. EAST)
N: 393489.39' E: 850294.49'
STATE PLANE NAD 27 (N.M. EAST)
N: 393431.51' E: 809106.83'

NAD 83 (PPP #2)
LATITUDE = 32°04'20.19" (32.072274°)
LONGITUDE = 103°20'09.01" (103.335835°)
NAD 27 (PPP #2)
LATITUDE = 32°04'19.73" (32.072147°)
LONGITUDE = 103°20'07.35" (103.335374°)
STATE PLANE NAD 83 (N.M. EAST)
N: 391459.00' E: 850314.18'
STATE PLANE NAD 27 (N.M. EAST)
N: 391401.17' E: 809126.44'

NAD 83 (PPP #3)
LATITUDE = 32°03'54.19" (32.065052°)
LONGITUDE = 103°20'08.99" (103.335831°)
NAD 27 (PPP #3)
LATITUDE = 32°03'53.73" (32.064925°)
LONGITUDE = 103°20'07.33" (103.335371°)
STATE PLANE NAD 83 (N.M. EAST)
N: 388831.45' E: 850339.66'
STATE PLANE NAD 27 (N.M. EAST)
N: 388773.69' E: 809151.81'

NAD 83 (LTP/BHL)
LATITUDE = 32°03'03.38" (32.050938°)
LONGITUDE = 103°20'08.96" (103.335824°)
NAD 27 (LTP/BHL)
LATITUDE = 32°03'02.92" (32.050811°)
LONGITUDE = 103°20'07.31" (103.335364°)
STATE PLANE NAD 83 (N.M. EAST)
N: 383696.79' E: 850389.44'
STATE PLANE NAD 27 (N.M. EAST)
N: 383639.17' E: 809201.39'

SCALE

[17] OPERATOR CERTIFICATION

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

Signature 7/6/2021 Date

Shelly Albrecht
Printed Name

salbrecht@fmellc.com
E-mail Address

LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S58°47'51"E	58.31'
L2	S00°19'01"E	573.04'

[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.

APRIL 19, 2021
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 06-29-21

Certificate Number:

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103°53'00" (NAD 83)

DRAWN BY: T.L.L. 04-29-21
REV.: 1 T.L.L. 06-28-21 (ADD KOP & PPP'S & BHL CHANGE)

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: ___Franklin Mountain Energy, LLC_____ **OGRID:** ____373910_____ **Date:** __03/_08_/_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: ___Tatanka North CTB: (f#) TBD_____ [See 19.15.27.9(D)(1) NMAC]

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

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

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

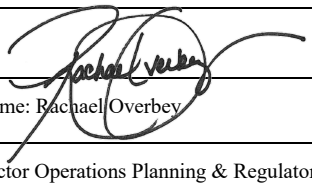
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Rachael Overbey
Title: Director Operations Planning & Regulatory
E-mail Address: roverbey@fmellc.com
Date: 3/8/2022
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
Tatanka Fed Com 101H	TBD	C-2-26S-35E	20 FNL 1347 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 102H	TBD	C-2-26S-35E	20 FNL 1372 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 103H	TBD	B-2-26S-35E	20 FNL 1875 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 104H	TBD	B-2-26S-35E	20 FNL 1850 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 501H	TBD	C-2-26S-35E	20 FNL 1397 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 502H	TBD	C-2-26S-35E	20 FNL 1422 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 503H	TBD **30-025-49871**	B-2-26S-35E	20 FNL 1925 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 504H	TBD	B-2-26S-35E	20 FNL 1900 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 601H	TBD	D-2-26S-35E	10 FNL 545 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 602H	TBD	N-35-25S-35E	998 FSL 1807 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 603H	TBD	N-35-25S-35E	998 FSL 1907 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 604H	TBD	A-2-26S-35E	20 FNL 885 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 701H	TBD	D-2-26S-35E	10 FNL 620 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 702H	TBD	N-35-25S-35E	998 FSL 1782 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 703H	TBD	N-35-25S-35E	998 FSL 1857 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 704H	TBD	A-2-26S-35E	20 FNL 935 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 705H	TBD	A-2-26S-35E	20 FNL 860 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 801H	TBD	D-2-26S-35E	10 FNL 570 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 802H	TBD	D-2-26S-35E	10 FNL 595 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 803H	TBD	N-35-25S-35E	998 FSL 1832 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 804H	TBD	N-35-25S-35E	998 FSL 1882 FWL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 805H	TBD	A-2-26S-35E	20 FNL 910 FEL	800 +/-	700 +/-	600 +/-
Tatanka Fed Com 806H	TBD	A-2-26S-35E	20 FNL 835 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
Tatanka Fed Com 101H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 102H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 103H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 104H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 501H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 502H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 503H	TBD **30-025-49871**	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 504H	TBD	TBD	TBD	TBD	TBD	TBD
Tatanka Fed Com 601H	TBD	7/15/2022	12/15/2022	2/28/2023	3/28/2023	4/2/2023
Tatanka Fed Com 602H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 603H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 604H	TBD	7/1/2022	12/15/2022	1/30/2023	3/1/2023	3/4/2023
Tatanka Fed Com 701H	TBD	7/15/2022	12/15/2022	2/28/2023	3/28/2023	4/2/2023
Tatanka Fed Com 702H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 703H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 704H	TBD	7/1/2022	12/15/2022	1/30/2023	3/1/2023	3/4/2023
Tatanka Fed Com 705H	TBD	7/1/2022	12/15/2022	1/30/2023	3/1/2023	3/4/2023
Tatanka Fed Com 801H	TBD	7/15/2022	12/15/2022	2/28/2023	3/28/2023	4/2/2023
Tatanka Fed Com 802H	TBD	7/15/2022	12/15/2022	2/28/2023	3/28/2023	4/2/2023
Tatanka Fed Com 803H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 804H	TBD	6/15/2022	12/15/2022	1/30/2023	3/10/2023	3/13/2023
Tatanka Fed Com 805H	TBD	7/1/2022	12/15/2022	1/30/2023	3/1/2023	3/4/2023
Tatanka Fed Com 806H	TBD	7/1/2022	12/15/2022	1/30/2023	3/1/2023	3/4/2023

FRANKLIN MOUNTAIN ENERGY

Natural Gas Management Plan

Items VI-VIII

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

- Data from surrounding wells is used to generate type curves which provides the basis for expected gas rates during initial production, peak production and then the natural decline.
- Separation equipment will be sized to provide adequate separation for peak production.
- Facility design includes multiple stages of separation to minimize gas waste. Wells flow through a high pressure 2-phase separator to remove bulk gas, liquid from the 2-phase separator is sent to a 3-phase separator where additional gas is separated. Gas from the 2 Phase and 3 Phase separators are then sent through a gas scrubber before being route to treatment and/or sales. As production declines the 2-phase separator may be removed.
- Industry standard sizing calculations are used for gas-liquid separation and liquid-liquid separation.

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

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

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

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

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

FRANKLIN MOUNTAIN ENERGY

Tatanka Fed Com 503H

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)	3,117'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,359'	788'			Carbonates
Salado	1,942'	1,205'			Salt, Carbonate & Clastics
Base Salt	-440'	3,587'			Shaley Carbonate & Shale
Lamar	-1,987'	5,134'			Carbonate & Clastics
Bell Canyon	-2,074'	5,221'			Sandstone - oil/gas/water
Cherry Canyon	-2,936'	6,083'			Sandstone - oil/gas/water
Brushy Canyon	-4,366'	7,513'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,678'	8,825'			Shale/Carbonates - oil/gas
Avalon	-5,718'	8,865'			Shale/Carbonates - oil/gas
Chert Zone	-5,898'	9,045'			Chert/Carbonate
First Bone Spring Sand	-6,997'	10,144'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-7,180'	10,327'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,512'	10,659'			Sandstone - oil/gas/water
HZ Target at Landing	-7,573'	10,720'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-8,046'	11,193'			Shale/Carbonates - oil/gas

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

Upper Permian Sands	0- 400’	Fresh Water
Delaware Sands	5,221’	Oil
Bone Spring Sand	10,144’	Oil
Bone Spring Carbonate	11,193’	Oil

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Surface freshwater sands will be protected by setting 13 3/8” casing at 1,300’and circulating cement back to surface.

4. **Casing Program:**

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

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
						BTC					
Surface 13 3/8"	54.5	J-55	2730	1130	853	909	1300	1.18	1.67	4.99	5.32
						BTC					
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	1042	5170	1.77	1.75	2.99	3.40
						Stinger					
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	564	11048	1.20	1.38	1.93	1.32
						Eagle					
Long string 5 1/2"	23	P-110	14520	14520	729	606	20841	1.32	1.49	1.26	1.05
						TVD	10720				1.75

7 5/8”casing will be set at 11,048’MD/10,720’ TVD at 90°Inc. Stress calculations on 5 ½” casing performed assuming 20,841’ depth. Actual max vertical depth is 10,720’.

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

String Type	Hole Size	Casing Size	Setting Depth	Sacks	Lead Type of cmt	Lead Yield ft3/sk	Lead Water gal/sk	Lead TOC ft	Tail Sacks	Tail Type of cmt	Tail Yield ft3/sk	Tail Water gal/sk	Tail TOC	Excess
Surf	17.5	13.375	1300	795	Extenda Cem, 12.8 ppg Class C, 3lb/sk Kol-Seal	1.747	9.06	0	334	Tail, 14.8 ppg, Class C,	1.349	6.51	1000	100%
Int1	12.25	9.625	5170	1512	0.125pps Poly-E-Flake Lead, 12.8 ppg, Class C 5% Salt, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal	1.79	9.74	0	154	1% CaCl2, 0.125pps Celo-Flake Tail, 14.8 ppg, Class C, 0.1% HR 800 .125 pps Poly-E-Flake	1.33	6.37	4870	100%
Int2	8.75	7.625	11048	315	Lite Fill, 9.5 ppg, Class C 3lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake	2.13	5.97	4200	94	NeoCem 14.8 ppg, Class C 0.25 pps Cello-Flake, 2% CaICl2	1.33	6.29	10048	50%
Prod	6.75	5.5	20841	805	Tail, 14.5 ppg, Gas Migration Control	1.34	6.22	10048						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 2000 psi for 30 minutes prior to drillout.
Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

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

FRANKLIN MOUNTAIN ENERGY

6. Types and characteristics of the proposed mud system:

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,300'	Fresh - Gel	8.6-8.8	28-34	N/c
1,300' – 11,048'	Brine	8.8-10.2	28-34	N/c
11,048' – 20,841' Lateral	Oil Base	10.0-12.0	58-68	3 - 6

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

7. Auxiliary well control and monitoring equipment:

(A) A kelly cock will be kept in the drill string at all times.
(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
(C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.
(D) A wear bushing will be installed in the wellhead prior to drilling out of the surface casing.

8. Logging, testing and coring program:

GR–CCL-CNL Will be run in cased hole during completions phase of operations.
Open-hole logs are not planned for this well.

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

The estimated bottom-hole temperature at 10,720' TVD (deepest point of the well) is 170F with an estimated maximum bottom-hole pressure (BHP) at the same point of 6,689 psig (based on 12 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

A. All personnel shall receive proper awareness H2S training.
B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
C. Required Emergency Equipment
    a. Well Control Equipment
        i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.
        ii. Choke manifold with a remotely operated hydraulic choke.
        iii. Mud/gas separator
    b. Protective equipment for essential personnel
        i. Breathing Apparatus
            1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.
            2. Work/Escape packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity

3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

ii. Auxiliary Rescue Equipment
1. Stretcher
2. Two OSHA full body harnesses
3. 100 feet of 5/8 inches OSHA approved rope
4. 1-20# class ABC fire extinguisher

c. H2S Detection and Monitoring Equipment
i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
1. Rig Floor
2. Below Rig Floor / Near BOPs
3. End of flow line or where well bore fluid is being discharged (near shakers)
ii. If H2S is encountered, measured values and formations will be provided to the BLM.

d. Visual Warning Systems
i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
iii. Two windsocks will be placed in strategic locations, visible from all angles.

e. Mud Program
i. The Mud program will be designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

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

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

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

11. Anticipated starting date and duration of operations:

The drilling operations on the well should be finished in approximately one month. However, in order to minimize disturbance in the area and to improve efficiency Franklin Mountain is planning to drill all the wells on the pad prior to commence completion operations. To even further reduce the time heavy machinery is used the “batch drilling” method may be used. A batch drilling sequence sundry will be submitted for BLM approval prior to spud. A drilling rig with walking/skidding capabilities will be used.

FRANKLIN MOUNTAIN ENERGY

12. Disposal/environmental concerns:

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

13. Wellhead:

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

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

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

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

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

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

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

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

14. Additional variance requests

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

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

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: Tatanka Fed Com
Well: Tatanka Fed Com 503H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.53°
Magnetic North: 5.89°

Magnetic Field
Strength: 47431.4nT
Dip Angle: 59.80°
Date: 6/24/2021
Model: IGRF2020

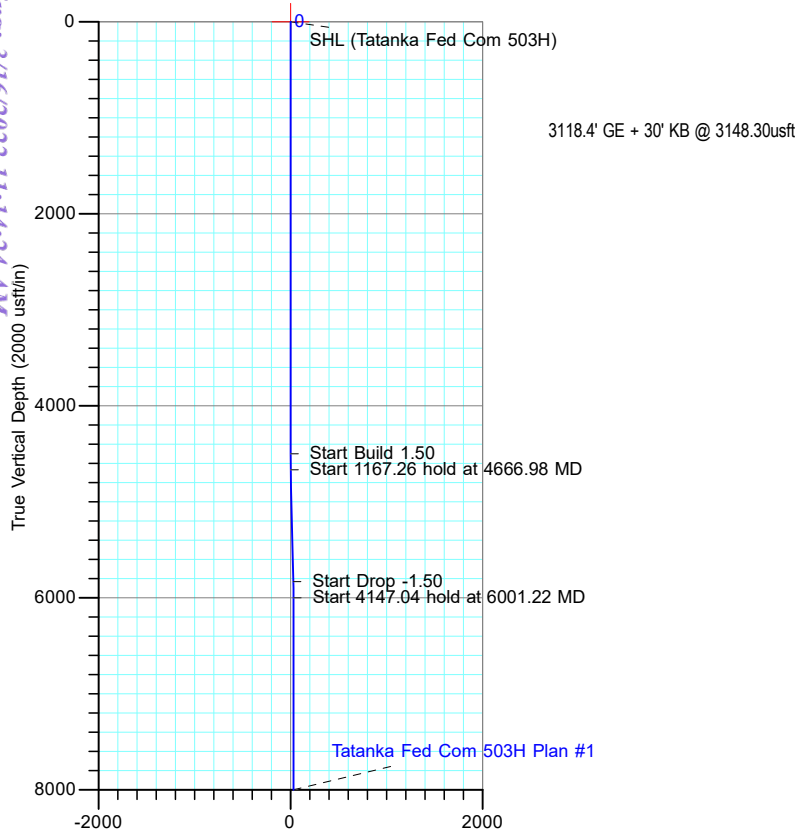
PROJECT DETAILS: Lea County, NM (NAD83)

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

FRANKLIN MOUNTAIN ENERGY

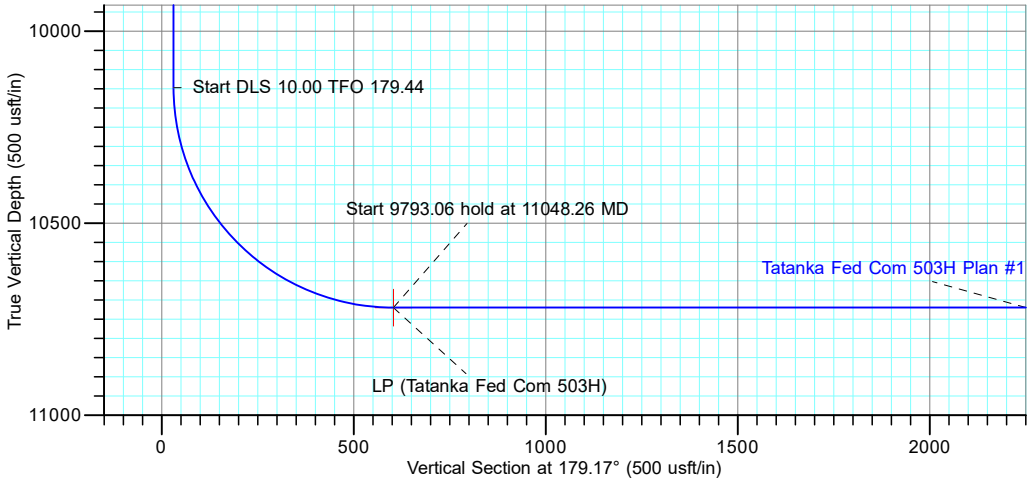
SECTION DETAILS

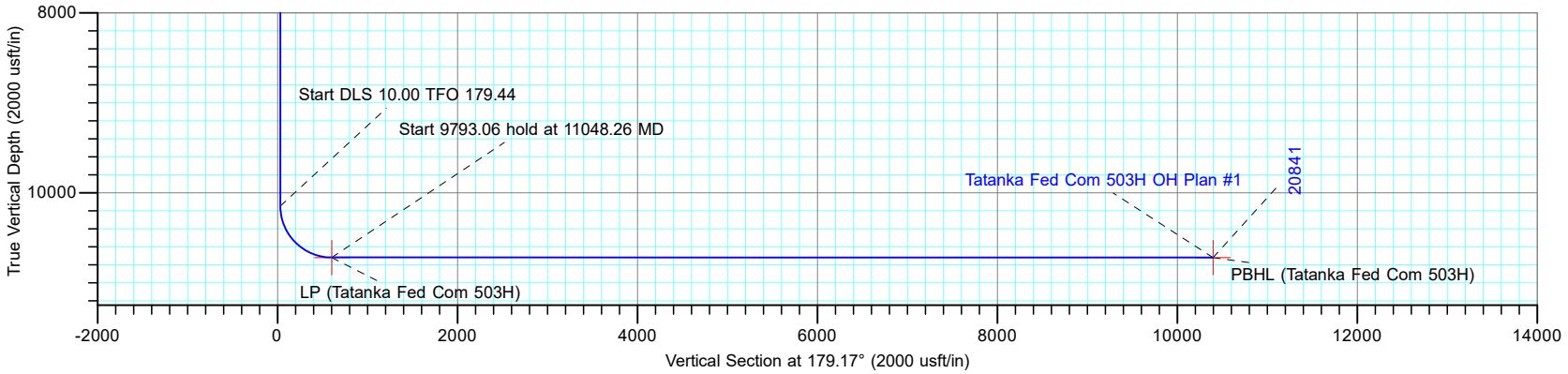
MD	Inc	Azi	TVD	+N/-S	+E/-W	DIeg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
4666.98	2.50	120.96	4666.93	-1.88	3.13	1.50	120.96	1.92	Start 1167.26 hold at 4666.98 MD
5834.24	2.50	120.96	5833.07	-28.12	46.87	0.00	0.00	28.80	Start Drop -1.50
6001.22	0.00	0.00	6000.00	-30.00	50.00	1.50	180.00	30.72	Start 4147.04 hold at 6001.22 MD
10148.26	0.00	0.00	10147.04	-30.00	50.00	0.00	0.00	30.72	Start DLS 10.00 TFO 179.44
11048.26	90.00	179.44	10720.00	-602.93	55.56	10.00	179.44	603.67	Start 9793.06 hold at 11048.26 MD
20841.32	90.00	179.44	10720.00	-10395.53	150.51	0.00	0.00	10396.62	TD at 20841.32



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (Tatanka Fed Com 503H)	10720.00	-602.93	55.56	32.077855	-103.335838
PBHL (Tatanka Fed Com 503H)	10720.00	-10395.53	150.51	32.050938	-103.335824
SHL (Tatanka Fed Com 503H)	0.00	0.00	0.00	32.079514	-103.335999





TOTAL DIRECTIONAL SERVICES LLC
671 Academy Ct, Windsor, CO 80550
Phone: (970) 460-9402

Plan: Plan #1 (Tatanka Fed Com 503H/OH)
Tatanka Fed Com
Created By: Dustin Ault Date: 1:34, June 25 2021
Date: _____
Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: Tatanka Fed Com
Well: Tatanka Fed Com 503H
Wellbore: OH
Design: Plan #1

Azimuths to Grid North
True North: -0.53°
Magnetic North: 5.89°

Magnetic Field
Strength: 47431.4nT
Dip Angle: 59.80°
Date: 6/24/2021
Model: IGRF2020

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

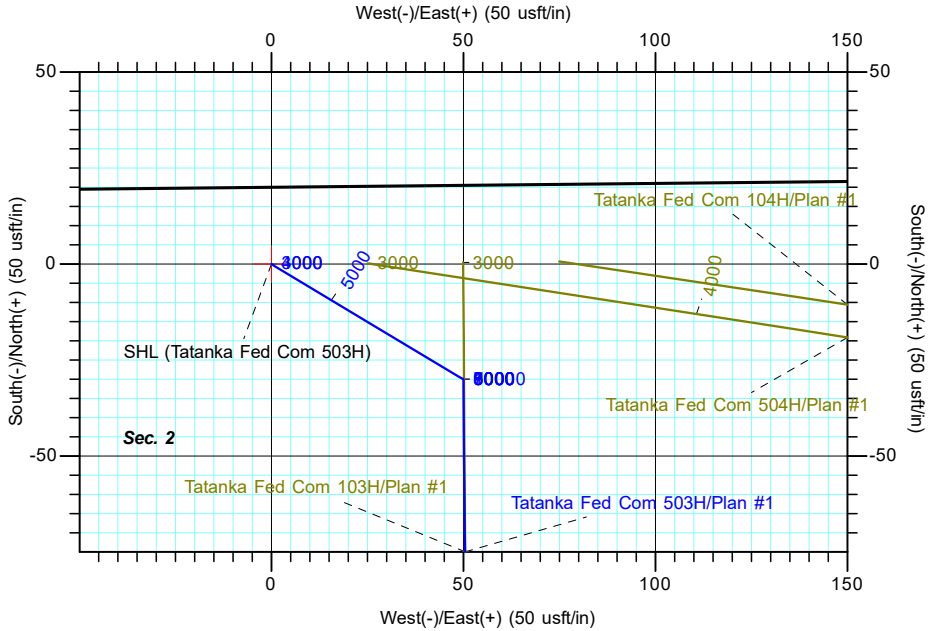
FRANKLIN MOUNTAIN ENERGY

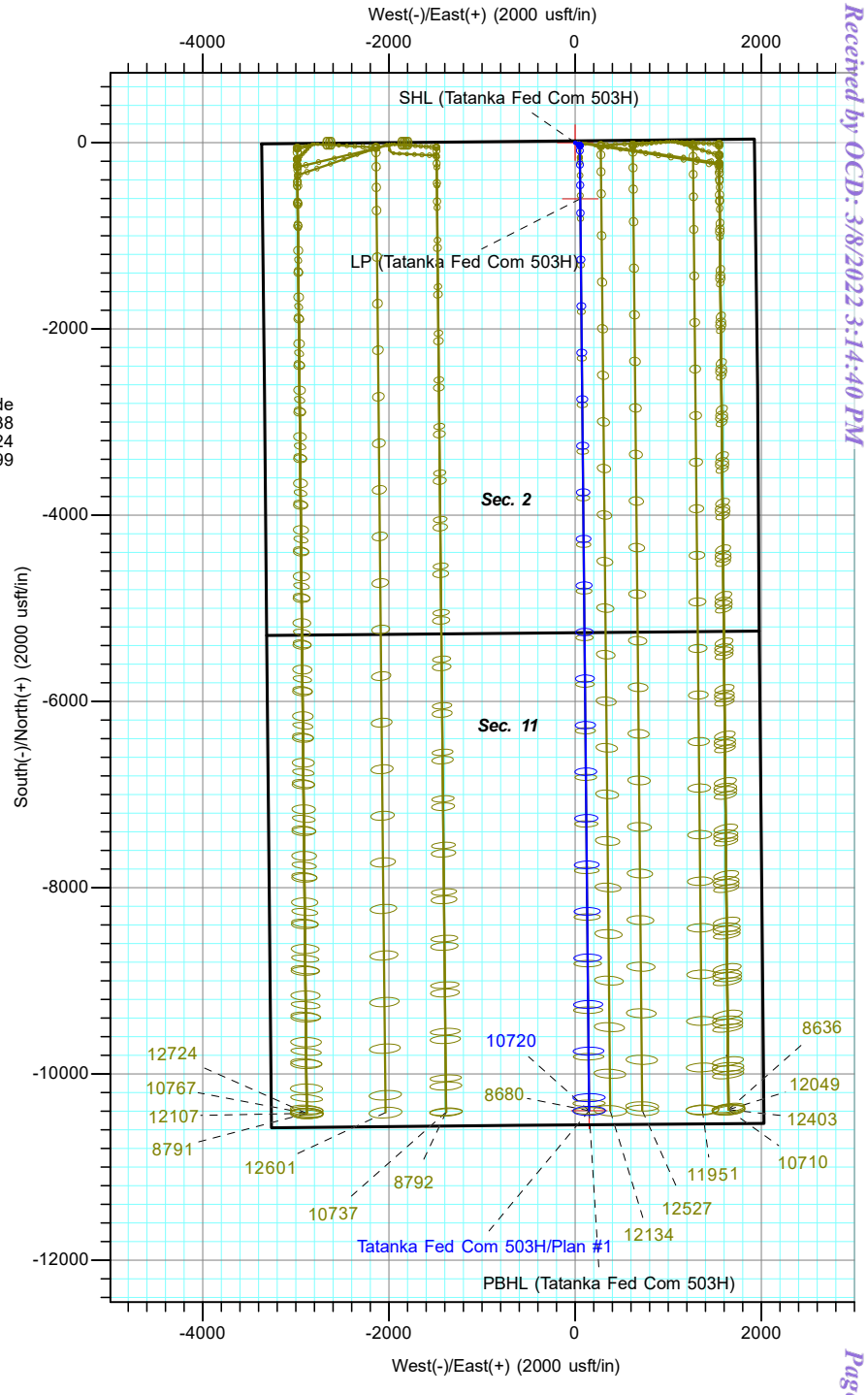
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (Tatanka Fed Com 503H)	10720.00	-602.93	55.56	393489.39	850294.49	32.077855	-103.335838
PBHL (Tatanka Fed Com 503H)	10720.00	-10395.53	150.51	383696.79	850389.44	32.050938	-103.335824
SHL (Tatanka Fed Com 503H)	0.00	0.00	0.00	394092.32	850238.93	32.079514	-103.335999

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	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
4666.98	2.50	120.96	4666.93	-1.88	3.13	1.50	120.96	1.92	Start 1167.26 hold at 4666.98 MD
5834.24	2.50	120.96	5833.07	-28.12	46.87	0.00	0.00	28.80	Start Drop -1.50
6001.22	0.00	0.00	6000.00	-30.00	50.00	1.50	180.00	30.72	Start 4147.04 hold at 6001.22 MD
10148.26	0.00	0.00	10147.04	-30.00	50.00	0.00	0.00	30.72	Start DLS 10.00 TFO 179.44
11048.26	90.00	179.44	10720.00	-602.93	55.56	10.00	179.44	603.67	Start 9793.06 hold at 11048.26 MD
20841.32	90.00	179.44	10720.00	-10395.53	150.51	0.00	0.00	10396.62	TD at 20841.32





TOTAL DIRECTIONAL SERVICES LLC
671 Academy Ct, Windsor, CO 80550
Phone: (970) 460-9402

Plan: Plan #1 (Tatanka Fed Com 503H/OH)
Tatanka Fed Com
Created By: Dustin Ault Date: 1:39, June 25 2021
Date:
Approved: Date:

Franklin Mountain Energy

Lea County, NM (NAD83)
Tatanka Fed Com
Tatanka Fed Com 503H

OH

Plan: Plan #1

Standard Planning Report

25 June, 2021

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Company:	Franklin Mountain Energy	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project Lea County, NM (NAD83)

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

Site Tatanka Fed Com

Site Position:		**Northing:**	394,075.36 usft	**Latitude:**	32.079539
From:	Map	**Easting:**	847,416.74 usft	**Longitude:**	-103.345111
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.52 °

Well Tatanka Fed Com 503H

Well Position	**+N/-S**	16.96 usft	**Northing:**	394,092.32 usft	**Latitude:**	32.079514
	+E/-W	2,822.19 usft	**Easting:**	850,238.93 usft	**Longitude:**	-103.335999
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,118.40 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	6/24/2021	6.42	59.80	47,431.41919299

Design Plan #1

Audit Notes:

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

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.17

Plan Survey Tool Program **Date** 6/25/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,840.90	Plan #1 (OH)	OWSG (Rev2) MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,666.98	2.50	120.96	4,666.93	-1.88	3.13	1.50	1.50	0.00	120.96	
5,834.24	2.50	120.96	5,833.07	-28.12	46.87	0.00	0.00	0.00	0.00	
6,001.22	0.00	0.00	6,000.00	-30.00	50.00	1.50	-1.50	0.00	180.00	
10,148.26	0.00	0.00	10,147.04	-30.00	50.00	0.00	0.00	0.00	0.00	
11,048.26	90.00	179.44	10,720.00	-602.93	55.56	10.00	10.00	19.94	179.44	
20,841.32	90.00	179.44	10,720.00	-10,395.53	150.51	0.00	0.00	0.00	0.00	PBHL (Tatanka Fed C

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Company:	Franklin Mountain Energy	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (Tatanka Fed Com 503H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
4,600.00	1.50	120.96	4,599.99	-0.67	1.12	0.69	1.50	1.50	0.00
4,666.98	2.50	120.96	4,666.93	-1.88	3.13	1.92	1.50	1.50	0.00
Start 1167.26 hold at 4666.98 MD									
4,700.00	2.50	120.96	4,699.92	-2.62	4.37	2.68	0.00	0.00	0.00
4,800.00	2.50	120.96	4,799.82	-4.87	8.11	4.99	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Company:	Franklin Mountain Energy	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	2.50	120.96	4,899.72	-7.12	11.86	7.29	0.00	0.00	0.00
5,000.00	2.50	120.96	4,999.63	-9.37	15.61	9.59	0.00	0.00	0.00
5,100.00	2.50	120.96	5,099.53	-11.61	19.36	11.89	0.00	0.00	0.00
5,200.00	2.50	120.96	5,199.44	-13.86	23.10	14.20	0.00	0.00	0.00
5,300.00	2.50	120.96	5,299.34	-16.11	26.85	16.50	0.00	0.00	0.00
5,400.00	2.50	120.96	5,399.25	-18.36	30.60	18.80	0.00	0.00	0.00
5,500.00	2.50	120.96	5,499.15	-20.61	34.35	21.10	0.00	0.00	0.00
5,600.00	2.50	120.96	5,599.06	-22.86	38.09	23.40	0.00	0.00	0.00
5,700.00	2.50	120.96	5,698.96	-25.10	41.84	25.71	0.00	0.00	0.00
5,800.00	2.50	120.96	5,798.86	-27.35	45.59	28.01	0.00	0.00	0.00
5,834.24	2.50	120.96	5,833.07	-28.12	46.87	28.80	0.00	0.00	0.00
Start Drop -1.50									
5,900.00	1.52	120.96	5,898.79	-29.31	48.85	30.01	1.50	-1.50	0.00
6,001.22	0.00	0.00	6,000.00	-30.00	50.00	30.72	1.50	-1.50	0.00
Start 4147.04 hold at 6001.22 MD									
6,100.00	0.00	0.00	6,098.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,200.00	0.00	0.00	6,198.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,300.00	0.00	0.00	6,298.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,400.00	0.00	0.00	6,398.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,500.00	0.00	0.00	6,498.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,600.00	0.00	0.00	6,598.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,700.00	0.00	0.00	6,698.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,800.00	0.00	0.00	6,798.78	-30.00	50.00	30.72	0.00	0.00	0.00
6,900.00	0.00	0.00	6,898.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,000.00	0.00	0.00	6,998.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,100.00	0.00	0.00	7,098.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,200.00	0.00	0.00	7,198.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,300.00	0.00	0.00	7,298.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,400.00	0.00	0.00	7,398.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,500.00	0.00	0.00	7,498.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,600.00	0.00	0.00	7,598.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,700.00	0.00	0.00	7,698.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,800.00	0.00	0.00	7,798.78	-30.00	50.00	30.72	0.00	0.00	0.00
7,900.00	0.00	0.00	7,898.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,000.00	0.00	0.00	7,998.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,100.00	0.00	0.00	8,098.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,200.00	0.00	0.00	8,198.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,300.00	0.00	0.00	8,298.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,400.00	0.00	0.00	8,398.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,500.00	0.00	0.00	8,498.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,600.00	0.00	0.00	8,598.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,700.00	0.00	0.00	8,698.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,800.00	0.00	0.00	8,798.78	-30.00	50.00	30.72	0.00	0.00	0.00
8,900.00	0.00	0.00	8,898.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,000.00	0.00	0.00	8,998.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,100.00	0.00	0.00	9,098.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,200.00	0.00	0.00	9,198.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,300.00	0.00	0.00	9,298.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,400.00	0.00	0.00	9,398.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,500.00	0.00	0.00	9,498.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,600.00	0.00	0.00	9,598.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,700.00	0.00	0.00	9,698.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,800.00	0.00	0.00	9,798.78	-30.00	50.00	30.72	0.00	0.00	0.00
9,900.00	0.00	0.00	9,898.78	-30.00	50.00	30.72	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

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Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.00	0.00	0.00	9,998.78	-30.00	50.00	30.72	0.00	0.00	0.00
10,100.00	0.00	0.00	10,098.78	-30.00	50.00	30.72	0.00	0.00	0.00
10,148.26	0.00	0.00	10,147.04	-30.00	50.00	30.72	0.00	0.00	0.00
Start DLS 10.00 TFO 179.44									
10,150.00	0.17	179.44	10,148.78	-30.00	50.00	30.72	10.00	10.00	0.00
10,200.00	5.17	179.44	10,198.71	-32.33	50.02	33.06	10.00	10.00	0.00
10,250.00	10.17	179.44	10,248.24	-39.01	50.09	39.73	10.00	10.00	0.00
10,300.00	15.17	179.44	10,297.01	-49.97	50.19	50.70	10.00	10.00	0.00
10,350.00	20.17	179.44	10,344.64	-65.15	50.34	65.87	10.00	10.00	0.00
10,400.00	25.17	179.44	10,390.76	-84.42	50.53	85.14	10.00	10.00	0.00
10,450.00	30.17	179.44	10,435.02	-107.63	50.75	108.35	10.00	10.00	0.00
10,500.00	35.17	179.44	10,477.10	-134.61	51.01	135.34	10.00	10.00	0.00
10,550.00	40.17	179.44	10,516.66	-165.16	51.31	165.89	10.00	10.00	0.00
10,600.00	45.17	179.44	10,553.41	-199.04	51.64	199.77	10.00	10.00	0.00
10,650.00	50.17	179.44	10,587.07	-235.99	52.00	236.72	10.00	10.00	0.00
10,700.00	55.17	179.44	10,617.37	-275.74	52.38	276.47	10.00	10.00	0.00
10,750.00	60.17	179.44	10,644.10	-317.97	52.79	318.70	10.00	10.00	0.00
10,800.00	65.17	179.44	10,667.05	-362.38	53.22	363.11	10.00	10.00	0.00
10,850.00	70.17	179.44	10,686.04	-408.61	53.67	409.35	10.00	10.00	0.00
10,900.00	75.17	179.44	10,700.92	-456.33	54.13	457.06	10.00	10.00	0.00
10,950.00	80.17	179.44	10,711.59	-505.15	54.61	505.89	10.00	10.00	0.00
11,000.00	85.17	179.44	10,717.97	-554.73	55.09	555.47	10.00	10.00	0.00
11,048.26	90.00	179.44	10,720.00	-602.93	55.56	603.67	10.00	10.00	0.00
Start 9793.06 hold at 11048.26 MD - LP (Tatanka Fed Com 503H)									
11,100.00	90.00	179.44	10,720.00	-654.67	56.06	655.41	0.00	0.00	0.00
11,200.00	90.00	179.44	10,720.00	-754.66	57.03	755.41	0.00	0.00	0.00
11,300.00	90.00	179.44	10,720.00	-854.66	58.00	855.41	0.00	0.00	0.00
11,400.00	90.00	179.44	10,720.00	-954.65	58.97	955.41	0.00	0.00	0.00
11,500.00	90.00	179.44	10,720.00	-1,054.65	59.94	1,055.41	0.00	0.00	0.00
11,600.00	90.00	179.44	10,720.00	-1,154.64	60.91	1,155.40	0.00	0.00	0.00
11,700.00	90.00	179.44	10,720.00	-1,254.64	61.87	1,255.40	0.00	0.00	0.00
11,800.00	90.00	179.44	10,720.00	-1,354.63	62.84	1,355.40	0.00	0.00	0.00
11,900.00	90.00	179.44	10,720.00	-1,454.63	63.81	1,455.40	0.00	0.00	0.00
12,000.00	90.00	179.44	10,720.00	-1,554.62	64.78	1,555.40	0.00	0.00	0.00
12,100.00	90.00	179.44	10,720.00	-1,654.62	65.75	1,655.40	0.00	0.00	0.00
12,200.00	90.00	179.44	10,720.00	-1,754.62	66.72	1,755.40	0.00	0.00	0.00
12,300.00	90.00	179.44	10,720.00	-1,854.61	67.69	1,855.40	0.00	0.00	0.00
12,400.00	90.00	179.44	10,720.00	-1,954.61	68.66	1,955.39	0.00	0.00	0.00
12,500.00	90.00	179.44	10,720.00	-2,054.60	69.63	2,055.39	0.00	0.00	0.00
12,600.00	90.00	179.44	10,720.00	-2,154.60	70.60	2,155.39	0.00	0.00	0.00
12,700.00	90.00	179.44	10,720.00	-2,254.59	71.57	2,255.39	0.00	0.00	0.00
12,800.00	90.00	179.44	10,720.00	-2,354.59	72.54	2,355.39	0.00	0.00	0.00
12,900.00	90.00	179.44	10,720.00	-2,454.58	73.51	2,455.39	0.00	0.00	0.00
13,000.00	90.00	179.44	10,720.00	-2,554.58	74.48	2,555.39	0.00	0.00	0.00
13,100.00	90.00	179.44	10,720.00	-2,654.57	75.45	2,655.39	0.00	0.00	0.00
13,200.00	90.00	179.44	10,720.00	-2,754.57	76.42	2,755.39	0.00	0.00	0.00
13,300.00	90.00	179.44	10,720.00	-2,854.56	77.39	2,855.38	0.00	0.00	0.00
13,400.00	90.00	179.44	10,720.00	-2,954.56	78.36	2,955.38	0.00	0.00	0.00
13,500.00	90.00	179.44	10,720.00	-3,054.55	79.33	3,055.38	0.00	0.00	0.00
13,600.00	90.00	179.44	10,720.00	-3,154.55	80.30	3,155.38	0.00	0.00	0.00
13,700.00	90.00	179.44	10,720.00	-3,254.54	81.27	3,255.38	0.00	0.00	0.00
13,800.00	90.00	179.44	10,720.00	-3,354.54	82.24	3,355.38	0.00	0.00	0.00
13,900.00	90.00	179.44	10,720.00	-3,454.54	83.21	3,455.38	0.00	0.00	0.00
14,000.00	90.00	179.44	10,720.00	-3,554.53	84.18	3,555.38	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Company:	Franklin Mountain Energy	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,100.00	90.00	179.44	10,720.00	-3,654.53	85.15	3,655.38	0.00	0.00	0.00
14,200.00	90.00	179.44	10,720.00	-3,754.52	86.12	3,755.37	0.00	0.00	0.00
14,300.00	90.00	179.44	10,720.00	-3,854.52	87.08	3,855.37	0.00	0.00	0.00
14,400.00	90.00	179.44	10,720.00	-3,954.51	88.05	3,955.37	0.00	0.00	0.00
14,500.00	90.00	179.44	10,720.00	-4,054.51	89.02	4,055.37	0.00	0.00	0.00
14,600.00	90.00	179.44	10,720.00	-4,154.50	89.99	4,155.37	0.00	0.00	0.00
14,700.00	90.00	179.44	10,720.00	-4,254.50	90.96	4,255.37	0.00	0.00	0.00
14,800.00	90.00	179.44	10,720.00	-4,354.49	91.93	4,355.37	0.00	0.00	0.00
14,900.00	90.00	179.44	10,720.00	-4,454.49	92.90	4,455.37	0.00	0.00	0.00
15,000.00	90.00	179.44	10,720.00	-4,554.48	93.87	4,555.37	0.00	0.00	0.00
15,100.00	90.00	179.44	10,720.00	-4,654.48	94.84	4,655.36	0.00	0.00	0.00
15,200.00	90.00	179.44	10,720.00	-4,754.47	95.81	4,755.36	0.00	0.00	0.00
15,300.00	90.00	179.44	10,720.00	-4,854.47	96.78	4,855.36	0.00	0.00	0.00
15,400.00	90.00	179.44	10,720.00	-4,954.46	97.75	4,955.36	0.00	0.00	0.00
15,500.00	90.00	179.44	10,720.00	-5,054.46	98.72	5,055.36	0.00	0.00	0.00
15,600.00	90.00	179.44	10,720.00	-5,154.46	99.69	5,155.36	0.00	0.00	0.00
15,700.00	90.00	179.44	10,720.00	-5,254.45	100.66	5,255.36	0.00	0.00	0.00
15,800.00	90.00	179.44	10,720.00	-5,354.45	101.63	5,355.36	0.00	0.00	0.00
15,900.00	90.00	179.44	10,720.00	-5,454.44	102.60	5,455.36	0.00	0.00	0.00
16,000.00	90.00	179.44	10,720.00	-5,554.44	103.57	5,555.35	0.00	0.00	0.00
16,100.00	90.00	179.44	10,720.00	-5,654.43	104.54	5,655.35	0.00	0.00	0.00
16,200.00	90.00	179.44	10,720.00	-5,754.43	105.51	5,755.35	0.00	0.00	0.00
16,300.00	90.00	179.44	10,720.00	-5,854.42	106.48	5,855.35	0.00	0.00	0.00
16,400.00	90.00	179.44	10,720.00	-5,954.42	107.45	5,955.35	0.00	0.00	0.00
16,500.00	90.00	179.44	10,720.00	-6,054.41	108.42	6,055.35	0.00	0.00	0.00
16,600.00	90.00	179.44	10,720.00	-6,154.41	109.39	6,155.35	0.00	0.00	0.00
16,700.00	90.00	179.44	10,720.00	-6,254.40	110.36	6,255.35	0.00	0.00	0.00
16,800.00	90.00	179.44	10,720.00	-6,354.40	111.32	6,355.34	0.00	0.00	0.00
16,900.00	90.00	179.44	10,720.00	-6,454.39	112.29	6,455.34	0.00	0.00	0.00
17,000.00	90.00	179.44	10,720.00	-6,554.39	113.26	6,555.34	0.00	0.00	0.00
17,100.00	90.00	179.44	10,720.00	-6,654.38	114.23	6,655.34	0.00	0.00	0.00
17,200.00	90.00	179.44	10,720.00	-6,754.38	115.20	6,755.34	0.00	0.00	0.00
17,300.00	90.00	179.44	10,720.00	-6,854.38	116.17	6,855.34	0.00	0.00	0.00
17,400.00	90.00	179.44	10,720.00	-6,954.37	117.14	6,955.34	0.00	0.00	0.00
17,500.00	90.00	179.44	10,720.00	-7,054.37	118.11	7,055.34	0.00	0.00	0.00
17,600.00	90.00	179.44	10,720.00	-7,154.36	119.08	7,155.34	0.00	0.00	0.00
17,700.00	90.00	179.44	10,720.00	-7,254.36	120.05	7,255.33	0.00	0.00	0.00
17,800.00	90.00	179.44	10,720.00	-7,354.35	121.02	7,355.33	0.00	0.00	0.00
17,900.00	90.00	179.44	10,720.00	-7,454.35	121.99	7,455.33	0.00	0.00	0.00
18,000.00	90.00	179.44	10,720.00	-7,554.34	122.96	7,555.33	0.00	0.00	0.00
18,100.00	90.00	179.44	10,720.00	-7,654.34	123.93	7,655.33	0.00	0.00	0.00
18,200.00	90.00	179.44	10,720.00	-7,754.33	124.90	7,755.33	0.00	0.00	0.00
18,300.00	90.00	179.44	10,720.00	-7,854.33	125.87	7,855.33	0.00	0.00	0.00
18,400.00	90.00	179.44	10,720.00	-7,954.32	126.84	7,955.33	0.00	0.00	0.00
18,500.00	90.00	179.44	10,720.00	-8,054.32	127.81	8,055.33	0.00	0.00	0.00
18,600.00	90.00	179.44	10,720.00	-8,154.31	128.78	8,155.32	0.00	0.00	0.00
18,700.00	90.00	179.44	10,720.00	-8,254.31	129.75	8,255.32	0.00	0.00	0.00
18,800.00	90.00	179.44	10,720.00	-8,354.31	130.72	8,355.32	0.00	0.00	0.00
18,900.00	90.00	179.44	10,720.00	-8,454.30	131.69	8,455.32	0.00	0.00	0.00
19,000.00	90.00	179.44	10,720.00	-8,554.30	132.66	8,555.32	0.00	0.00	0.00
19,100.00	90.00	179.44	10,720.00	-8,654.29	133.63	8,655.32	0.00	0.00	0.00
19,200.00	90.00	179.44	10,720.00	-8,754.29	134.60	8,755.32	0.00	0.00	0.00
19,300.00	90.00	179.44	10,720.00	-8,854.28	135.57	8,855.32	0.00	0.00	0.00
19,400.00	90.00	179.44	10,720.00	-8,954.28	136.53	8,955.32	0.00	0.00	0.00

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Planning Report

total

Database:	EDM 5000.15 Single User Db	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Company:	Franklin Mountain Energy	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Project:	Lea County, NM (NAD83)	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site:	Tatanka Fed Com	**North Reference:**	Grid
Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,500.00	90.00	179.44	10,720.00	-9,054.27	137.50	9,055.31	0.00	0.00	0.00
19,600.00	90.00	179.44	10,720.00	-9,154.27	138.47	9,155.31	0.00	0.00	0.00
19,700.00	90.00	179.44	10,720.00	-9,254.26	139.44	9,255.31	0.00	0.00	0.00
19,800.00	90.00	179.44	10,720.00	-9,354.26	140.41	9,355.31	0.00	0.00	0.00
19,900.00	90.00	179.44	10,720.00	-9,454.25	141.38	9,455.31	0.00	0.00	0.00
20,000.00	90.00	179.44	10,720.00	-9,554.25	142.35	9,555.31	0.00	0.00	0.00
20,100.00	90.00	179.44	10,720.00	-9,654.24	143.32	9,655.31	0.00	0.00	0.00
20,200.00	90.00	179.44	10,720.00	-9,754.24	144.29	9,755.31	0.00	0.00	0.00
20,300.00	90.00	179.44	10,720.00	-9,854.23	145.26	9,855.30	0.00	0.00	0.00
20,400.00	90.00	179.44	10,720.00	-9,954.23	146.23	9,955.30	0.00	0.00	0.00
20,500.00	90.00	179.44	10,720.00	-10,054.23	147.20	10,055.30	0.00	0.00	0.00
20,600.00	90.00	179.44	10,720.00	-10,154.22	148.17	10,155.30	0.00	0.00	0.00
20,700.00	90.00	179.44	10,720.00	-10,254.22	149.14	10,255.30	0.00	0.00	0.00
20,800.00	90.00	179.44	10,720.00	-10,354.21	150.11	10,355.30	0.00	0.00	0.00
20,841.32	90.00	179.44	10,720.00	-10,395.53	150.51	10,396.62	0.00	0.00	0.00
TD at 20841.32 - PBHL (Tatanka Fed Com 503H)									

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 (Tatanka Fed Com - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	394,092.32	850,238.93	32.079514	-103.335999
PBHL (Tatanka Fed Con - plan hits target center - Point	0.00	0.00	10,720.00	-10,395.53	150.51	383,696.79	850,389.44	32.050938	-103.335824
LP (Tatanka Fed Com 5(- plan misses target center by 0.01usft at 11048.26usft MD (10720.00 TVD, -602.93 N, 55.56 E) - Point	0.00	0.00	10,720.00	-602.93	55.56	393,489.39	850,294.49	32.077856	-103.335838

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,500.00	4,500.00	0.00	0.00	Start Build 1.50
4,666.98	4,666.93	-1.88	3.13	Start 1167.26 hold at 4666.98 MD
5,834.24	5,833.07	-28.12	46.87	Start Drop -1.50
6,001.22	6,000.00	-30.00	50.00	Start 4147.04 hold at 6001.22 MD
10,148.26	10,147.04	-30.00	50.00	Start DLS 10.00 TFO 179.44
11,048.26	10,720.00	-602.93	55.56	Start 9793.06 hold at 11048.26 MD
20,841.32	10,720.00	-10,395.53	150.51	TD at 20841.32

Franklin Mountain Energy

Lea County, NM (NAD83)
Tatanka Fed Com
Tatanka Fed Com 503H

OH
Plan #1

Anticollision Report

25 June, 2021

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

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

Survey Tool Program **Date** 6/25/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,840.90	Plan #1 (OH)	OWSG (Rev2) MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Tatanka Fed Com						
Tatanka Fed Com 101H - OH - Plan #1	3,115.24	3,119.34	2,020.37	2,004.90	130.567	CC
Tatanka Fed Com 101H - OH - Plan #1	3,200.00	3,200.00	2,020.38	2,004.48	127.123	ES
Tatanka Fed Com 101H - OH - Plan #1	20,841.32	18,762.37	3,594.72	3,377.53	16.551	SF
Tatanka Fed Com 102H - OH - Plan #1	8,200.00	8,244.90	1,541.09	1,500.27	37.750	CC
Tatanka Fed Com 102H - OH - Plan #1	8,300.00	8,333.38	1,541.39	1,500.11	37.335	ES
Tatanka Fed Com 102H - OH - Plan #1	20,841.32	18,862.99	2,465.65	2,291.34	14.145	SF
Tatanka Fed Com 103H - OH - Plan #1	3,035.36	3,036.06	49.99	34.94	3.321	CC
Tatanka Fed Com 103H - OH - Plan #1	3,200.00	3,200.52	50.25	34.40	3.169	ES
Tatanka Fed Com 103H - OH - Plan #1	3,300.00	3,300.00	51.33	35.00	3.143	SF
Tatanka Fed Com 104H - OH - Plan #1	1,916.63	1,916.73	74.99	65.61	7.989	CC
Tatanka Fed Com 104H - OH - Plan #1	2,000.00	2,000.00	74.99	65.18	7.645	ES
Tatanka Fed Com 104H - OH - Plan #1	2,100.00	2,097.54	76.68	66.38	7.446	SF
Tatanka Fed Com 501H - OH - Plan #1	3,315.64	3,318.64	1,970.38	1,953.89	119.511	CC
Tatanka Fed Com 501H - OH - Plan #1	3,400.00	3,400.00	1,970.38	1,953.48	116.542	ES
Tatanka Fed Com 501H - OH - Plan #1	20,841.32	20,841.66	3,033.61	2,786.16	12.260	SF
Tatanka Fed Com 502H - OH - Plan #1	20,839.36	20,879.44	1,536.55	1,288.63	6.198	CC
Tatanka Fed Com 502H - OH - Plan #1	20,841.32	20,879.44	1,536.55	1,288.62	6.198	ES, SF
Tatanka Fed Com 504H - OH - Plan #1	3,300.00	3,299.70	25.00	8.60	1.525	CC, ES, SF
Tatanka Fed Com 601H - OH - Plan #2	3,110.22	3,126.42	2,822.24	2,806.76	182.325	CC
Tatanka Fed Com 601H - OH - Plan #2	3,200.00	3,200.00	2,822.29	2,806.39	177.581	ES
Tatanka Fed Com 601H - OH - Plan #2	20,841.32	22,129.15	3,335.23	3,104.90	14.480	SF
Tatanka Fed Com 604H - OH - Plan #2	3,400.00	3,374.40	1,039.83	1,022.99	61.739	CC, ES
Tatanka Fed Com 604H - OH - Plan #2	20,841.32	22,053.45	1,730.62	1,541.83	9.167	SF
Tatanka Fed Com 704H - OH - Plan #2	10,148.26	10,189.04	225.80	175.17	4.459	CC
Tatanka Fed Com 704H - OH - Plan #2	10,250.00	10,290.24	226.00	174.88	4.421	ES
Tatanka Fed Com 704H - OH - Plan #2	10,300.00	10,339.01	226.71	175.36	4.415	SF
Tatanka Fed Com 705H - OH - Plan #2	3,300.00	3,273.70	1,064.82	1,048.49	65.192	CC, ES
Tatanka Fed Com 705H - OH - Plan #2	20,841.32	22,055.89	2,001.85	1,804.98	10.168	SF
Tatanka Fed Com 801H - OH - Plan #2	3,210.32	3,226.32	2,797.24	2,781.25	174.980	CC
Tatanka Fed Com 801H - OH - Plan #2	3,300.00	3,300.00	2,797.29	2,780.89	170.567	ES
Tatanka Fed Com 801H - OH - Plan #2	20,841.32	22,865.07	3,635.46	3,419.26	16.815	SF
Tatanka Fed Com 802H - OH - Plan #2	10,148.26	10,214.56	2,189.30	2,138.58	43.171	CC
Tatanka Fed Com 802H - OH - Plan #2	10,350.00	10,412.15	2,189.59	2,137.93	42.383	ES
Tatanka Fed Com 802H - OH - Plan #2	20,841.32	22,787.51	2,884.91	2,681.90	14.210	SF
Tatanka Fed Com 805H - OH - Plan #2	10,148.26	10,141.64	569.81	519.29	11.280	CC
Tatanka Fed Com 805H - OH - Plan #2	10,250.00	10,242.85	569.88	518.88	11.173	ES
Tatanka Fed Com 805H - OH - Plan #2	10,400.00	10,385.36	572.42	520.73	11.073	SF

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Tatanka Fed Com						
Tatanka Fed Com 806H - OH - Plan #2	3,200.00	3,171.90	1,089.83	1,074.00	68.880	CC, ES
Tatanka Fed Com 806H - OH - Plan #2	20,841.32	22,521.43	2,252.38	2,069.39	12.309	SF

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	4.10	4.10	0.00	0.01	-90.55	-19.43	-2,020.28	2,020.37				
100.00	100.00	104.10	104.10	0.13	0.14	-90.55	-19.43	-2,020.28	2,020.37	2,020.19	0.19	N/A	
200.00	200.00	204.10	204.10	0.48	0.50	-90.55	-19.43	-2,020.28	2,020.37	2,019.68	0.69	2,907.075	
300.00	300.00	304.10	304.10	0.84	0.86	-90.55	-19.43	-2,020.28	2,020.37	2,019.17	1.20	1,680.971	
400.00	400.00	404.10	404.10	1.20	1.22	-90.55	-19.43	-2,020.28	2,020.37	2,018.66	1.71	1,182.300	
500.00	500.00	504.10	504.10	1.56	1.57	-90.55	-19.43	-2,020.28	2,020.37	2,018.16	2.22	911.804	
600.00	600.00	604.10	604.10	1.92	1.93	-90.55	-19.43	-2,020.28	2,020.37	2,017.65	2.72	742.034	
700.00	700.00	704.10	704.10	2.28	2.29	-90.55	-19.43	-2,020.28	2,020.37	2,017.14	3.23	625.560	
800.00	800.00	804.10	804.10	2.63	2.65	-90.55	-19.43	-2,020.28	2,020.37	2,016.64	3.74	540.690	
900.00	900.00	904.10	904.10	2.99	3.01	-90.55	-19.43	-2,020.28	2,020.37	2,016.13	4.24	476.098	
1,000.00	1,000.00	1,004.10	1,004.10	3.35	3.37	-90.55	-19.43	-2,020.28	2,020.37	2,015.62	4.75	425.291	
1,100.00	1,100.00	1,104.10	1,104.10	3.71	3.72	-90.55	-19.43	-2,020.28	2,020.37	2,015.12	5.26	384.283	
1,200.00	1,200.00	1,204.10	1,204.10	4.07	4.08	-90.55	-19.43	-2,020.28	2,020.37	2,014.61	5.76	350.487	
1,300.00	1,300.00	1,304.10	1,304.10	4.43	4.44	-90.55	-19.43	-2,020.28	2,020.37	2,014.10	6.27	322.155	
1,400.00	1,400.00	1,404.10	1,404.10	4.79	4.80	-90.55	-19.43	-2,020.28	2,020.37	2,013.60	6.78	298.061	
1,500.00	1,500.00	1,504.10	1,504.10	5.14	5.16	-90.55	-19.43	-2,020.28	2,020.37	2,013.09	7.29	277.321	
1,600.00	1,600.00	1,604.10	1,604.10	5.50	5.52	-90.55	-19.43	-2,020.28	2,020.37	2,012.58	7.79	259.279	
1,700.00	1,700.00	1,704.10	1,704.10	5.86	5.88	-90.55	-19.43	-2,020.28	2,020.37	2,012.07	8.30	243.441	
1,800.00	1,800.00	1,804.10	1,804.10	6.22	6.23	-90.55	-19.43	-2,020.28	2,020.37	2,011.57	8.81	229.426	
1,900.00	1,900.00	1,904.10	1,904.10	6.58	6.59	-90.55	-19.43	-2,020.28	2,020.37	2,011.06	9.31	216.938	
2,000.00	2,000.00	2,004.10	2,004.10	6.94	6.95	-90.55	-19.43	-2,020.28	2,020.37	2,010.55	9.82	205.738	
2,100.00	2,100.00	2,104.10	2,104.10	7.30	7.31	-90.55	-19.43	-2,020.28	2,020.37	2,010.05	10.33	195.639	
2,200.00	2,200.00	2,204.10	2,204.10	7.65	7.67	-90.55	-19.43	-2,020.28	2,020.37	2,009.54	10.83	186.484	
2,300.00	2,300.00	2,304.10	2,304.10	8.01	8.03	-90.55	-19.43	-2,020.28	2,020.37	2,009.03	11.34	178.148	
2,400.00	2,400.00	2,404.10	2,404.10	8.37	8.39	-90.55	-19.43	-2,020.28	2,020.37	2,008.53	11.85	170.525	
2,500.00	2,500.00	2,504.10	2,504.10	8.73	8.74	-90.55	-19.43	-2,020.28	2,020.37	2,008.02	12.35	163.528	
2,600.00	2,600.00	2,604.10	2,604.10	9.09	9.10	-90.55	-19.43	-2,020.28	2,020.37	2,007.51	12.86	157.083	
2,700.00	2,700.00	2,704.10	2,704.10	9.45	9.46	-90.55	-19.43	-2,020.28	2,020.37	2,007.00	13.37	151.126	
2,800.00	2,800.00	2,804.10	2,804.10	9.80	9.82	-90.55	-19.43	-2,020.28	2,020.37	2,006.50	13.88	145.605	
2,900.00	2,900.00	2,904.10	2,904.10	10.16	10.18	-90.55	-19.43	-2,020.28	2,020.37	2,005.99	14.38	140.472	
3,000.00	3,000.00	3,004.10	3,004.10	10.52	10.54	-90.55	-19.43	-2,020.28	2,020.37	2,005.48	14.89	135.690	
3,100.00	3,100.00	3,104.10	3,104.10	10.88	10.89	-90.55	-19.43	-2,020.28	2,020.37	2,004.98	15.40	131.222	
3,115.24	3,115.24	3,119.34	3,119.34	10.93	10.95	-90.55	-19.43	-2,020.28	2,020.37	2,004.90	15.47	130.567	CC
3,200.00	3,200.00	3,200.00	3,200.00	11.24	11.24	-90.55	-19.43	-2,020.28	2,020.38	2,004.48	15.89	127.123	ES
3,300.00	3,300.00	3,269.30	3,269.30	11.60	11.48	-90.56	-19.63	-2,020.87	2,021.27	2,004.96	16.31	123.894	
3,400.00	3,400.00	3,335.83	3,335.80	11.96	11.71	-90.57	-20.21	-2,022.56	2,023.82	2,007.10	16.72	121.022	
3,500.00	3,500.00	3,400.00	3,399.91	12.31	11.92	-90.60	-21.13	-2,025.23	2,028.02	2,010.90	17.12	118.469	
3,600.00	3,600.00	3,468.60	3,468.38	12.67	12.15	-90.63	-22.49	-2,029.21	2,033.87	2,016.35	17.52	116.069	
3,700.00	3,700.00	3,534.76	3,534.33	13.03	12.38	-90.68	-24.18	-2,034.15	2,041.36	2,023.45	17.92	113.934	
3,800.00	3,800.00	3,600.00	3,599.27	13.39	12.60	-90.74	-26.21	-2,040.07	2,050.50	2,032.20	18.30	112.023	
3,900.00	3,900.00	3,666.44	3,665.29	13.75	12.83	-90.80	-28.65	-2,047.19	2,061.27	2,042.58	18.69	110.279	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,000.00	4,000.00	3,731.89	3,730.17	14.11	13.06	-90.88	-31.42	-2,055.26	2,073.67	2,054.60	19.07	108.732	
4,100.00	4,100.00	3,800.00	3,797.54	14.46	13.30	-90.96	-34.67	-2,064.77	2,087.69	2,068.23	19.46	107.302	
4,200.00	4,200.00	3,861.81	3,858.50	14.82	13.52	-91.05	-37.97	-2,074.38	2,103.32	2,083.50	19.82	106.145	
4,300.00	4,300.00	3,926.21	3,921.84	15.18	13.75	-91.15	-41.74	-2,085.39	2,120.55	2,100.37	20.18	105.085	
4,400.00	4,400.00	4,000.00	3,994.16	15.54	14.02	-91.27	-46.49	-2,099.24	2,139.40	2,118.82	20.58	103.980	
4,500.00	4,500.00	4,053.74	4,046.65	15.90	14.22	-91.36	-50.23	-2,110.16	2,159.76	2,138.87	20.89	103.387	
4,600.00	4,599.99	4,100.00	4,091.70	16.24	14.40	147.40	-53.64	-2,120.12	2,182.89	2,161.74	21.16	103.174	
4,666.98	4,666.93	4,158.35	4,148.33	16.47	14.63	147.17	-58.20	-2,133.42	2,200.27	2,178.83	21.44	102.615	
4,700.00	4,699.92	4,178.77	4,168.10	16.58	14.71	147.14	-59.86	-2,138.26	2,209.38	2,187.83	21.55	102.536	
4,800.00	4,799.82	4,240.22	4,227.41	16.91	14.95	147.05	-65.06	-2,153.45	2,237.93	2,216.07	21.86	102.371	
4,900.00	4,899.72	4,300.00	4,284.86	17.24	15.19	146.96	-70.42	-2,169.08	2,267.96	2,245.80	22.16	102.323	
5,000.00	4,999.63	4,361.28	4,343.48	17.58	15.45	146.86	-76.22	-2,185.99	2,299.45	2,276.97	22.47	102.325	
5,100.00	5,099.53	4,445.05	4,423.29	17.92	15.81	146.72	-84.46	-2,210.04	2,332.03	2,309.15	22.88	101.905	
5,200.00	5,199.44	4,539.37	4,513.15	18.26	16.23	146.57	-93.75	-2,237.16	2,364.70	2,341.35	23.35	101.274	
5,300.00	5,299.34	4,633.69	4,603.01	18.60	16.66	146.41	-103.04	-2,264.28	2,397.38	2,373.56	23.82	100.655	
5,400.00	5,399.25	4,728.02	4,692.87	18.94	17.10	146.27	-112.34	-2,291.39	2,430.07	2,405.78	24.29	100.049	
5,500.00	5,499.15	4,822.34	4,782.73	19.28	17.55	146.13	-121.63	-2,318.51	2,462.78	2,438.02	24.76	99.455	
5,600.00	5,599.06	4,916.66	4,872.60	19.62	18.00	145.99	-130.92	-2,345.63	2,495.50	2,470.27	25.24	98.875	
5,700.00	5,698.96	5,010.98	4,962.46	19.96	18.46	145.85	-140.21	-2,372.75	2,528.24	2,502.52	25.72	98.307	
5,800.00	5,798.86	5,105.31	5,052.32	20.31	18.93	145.72	-149.51	-2,399.87	2,560.99	2,534.79	26.20	97.751	
5,834.24	5,833.07	5,137.60	5,083.09	20.42	19.09	145.67	-152.69	-2,409.16	2,572.20	2,545.84	26.36	97.564	
5,900.00	5,898.79	5,199.76	5,142.30	20.65	19.41	145.77	-158.81	-2,427.03	2,593.31	2,566.62	26.68	97.192	
6,001.22	6,000.00	5,295.92	5,233.91	21.00	19.90	-93.16	-168.29	-2,454.67	2,624.06	2,596.88	27.18	96.544	
6,100.00	6,098.78	5,390.03	5,323.57	21.36	20.39	-93.34	-177.56	-2,481.73	2,653.07	2,625.39	27.67	95.871	
6,200.00	6,198.78	5,485.30	5,414.33	21.71	20.89	-93.51	-186.95	-2,509.12	2,682.45	2,654.28	28.17	95.209	
6,300.00	6,298.78	5,580.56	5,505.09	22.07	21.39	-93.68	-196.33	-2,536.51	2,711.86	2,683.18	28.68	94.566	
6,400.00	6,398.78	5,675.83	5,595.86	22.43	21.90	-93.85	-205.72	-2,563.91	2,741.29	2,712.11	29.18	93.942	
6,500.00	6,498.78	5,771.10	5,686.62	22.78	22.41	-94.01	-215.11	-2,591.30	2,770.74	2,741.05	29.69	93.337	
6,600.00	6,598.78	5,866.37	5,777.38	23.14	22.92	-94.17	-224.49	-2,618.69	2,800.21	2,770.02	30.19	92.750	
6,700.00	6,698.78	5,961.64	5,868.14	23.50	23.44	-94.32	-233.88	-2,646.08	2,829.70	2,799.00	30.70	92.179	
6,800.00	6,798.78	6,056.91	5,958.91	23.85	23.97	-94.48	-243.26	-2,673.47	2,859.21	2,828.00	31.21	91.625	
6,900.00	6,898.78	6,152.18	6,049.67	24.21	24.49	-94.63	-252.65	-2,700.86	2,888.73	2,857.02	31.71	91.087	
7,000.00	6,998.78	6,247.45	6,140.43	24.57	25.02	-94.77	-262.04	-2,728.25	2,918.28	2,886.05	32.22	90.564	
7,100.00	7,098.78	6,342.72	6,231.20	24.93	25.56	-94.92	-271.42	-2,755.64	2,947.84	2,915.11	32.73	90.056	
7,200.00	7,198.78	6,437.99	6,321.96	25.28	26.09	-95.06	-280.81	-2,783.04	2,977.42	2,944.17	33.24	89.562	
7,300.00	7,298.78	6,533.26	6,412.72	25.64	26.63	-95.20	-290.20	-2,810.43	3,007.01	2,973.26	33.76	89.081	
7,400.00	7,398.78	6,868.53	6,736.10	26.00	28.41	-95.60	-318.74	-2,893.71	3,032.07	2,996.71	35.36	85.758	
7,500.00	7,498.78	7,372.55	7,233.51	26.35	30.59	-95.95	-344.33	-2,968.38	3,046.64	3,009.37	37.27	81.753	
7,600.00	7,598.78	7,742.39	7,602.88	26.71	31.83	-96.01	-349.43	-2,983.28	3,050.05	3,011.69	38.37	79.497	
7,700.00	7,698.78	7,842.39	7,702.88	27.07	32.12	-96.01	-349.43	-2,983.28	3,050.05	3,011.20	38.85	78.501	
7,800.00	7,798.78	7,942.39	7,802.88	27.43	32.42	-96.01	-349.43	-2,983.28	3,050.05	3,010.71	39.34	77.528	
7,900.00	7,898.78	8,042.39	7,902.88	27.78	32.72	-96.01	-349.43	-2,983.28	3,050.05	3,010.22	39.83	76.578	
8,000.00	7,998.78	8,142.39	8,002.88	28.14	33.01	-96.01	-349.43	-2,983.28	3,050.05	3,009.74	40.32	75.650	
8,100.00	8,098.78	8,242.39	8,102.88	28.50	33.32	-96.01	-349.43	-2,983.28	3,050.05	3,009.25	40.81	74.744	
8,200.00	8,198.78	8,342.39	8,202.88	28.86	33.62	-96.01	-349.43	-2,983.28	3,050.05	3,008.76	41.30	73.858	
8,300.00	8,298.78	8,415.13	8,275.53	29.21	33.84	-96.06	-351.93	-2,983.26	3,050.41	3,008.68	41.74	73.087	
8,400.00	8,398.78	8,480.03	8,339.67	29.57	34.05	-96.24	-361.63	-2,983.16	3,051.89	3,009.73	42.16	72.384	
8,500.00	8,498.78	8,550.00	8,407.11	29.93	34.28	-96.59	-380.14	-2,982.97	3,054.62	3,012.02	42.60	71.708	
8,600.00	8,598.78	8,600.00	8,453.66	30.29	34.45	-96.92	-398.33	-2,982.79	3,058.72	3,015.73	42.99	71.154	
8,700.00	8,698.78	8,650.00	8,498.46	30.64	34.63	-97.34	-420.51	-2,982.57	3,064.44	3,021.07	43.37	70.661	
8,800.00	8,798.78	8,700.00	8,541.15	31.00	34.81	-97.82	-446.51	-2,982.31	3,071.95	3,028.21	43.74	70.232	
8,900.00	8,898.78	8,750.00	8,581.41	31.36	35.00	-98.37	-476.13	-2,982.01	3,081.47	3,037.37	44.10	69.871	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,000.00	8,998.78	8,783.25	8,606.68	31.72	35.12	-98.77	-497.73	-2,981.80	3,093.14	3,048.74	44.40	69.665	
9,100.00	9,098.78	8,817.73	8,631.52	32.07	35.25	-99.21	-521.63	-2,981.56	3,107.12	3,062.44	44.68	69.537	
9,200.00	9,198.78	8,850.00	8,653.44	32.43	35.38	-99.65	-545.31	-2,981.32	3,123.52	3,078.58	44.94	69.506	
9,300.00	9,298.78	8,875.80	8,669.97	32.79	35.48	-100.01	-565.11	-2,981.12	3,142.39	3,097.24	45.15	69.595	
9,400.00	9,398.78	8,900.00	8,684.66	33.15	35.58	-100.36	-584.34	-2,980.93	3,163.81	3,118.47	45.34	69.785	
9,500.00	9,498.78	8,922.13	8,697.37	33.51	35.66	-100.70	-602.46	-2,980.75	3,187.79	3,142.30	45.49	70.076	
9,600.00	9,598.78	8,950.00	8,712.36	33.86	35.78	-101.13	-625.95	-2,980.52	3,214.38	3,168.73	45.64	70.421	
9,700.00	9,698.78	8,950.00	8,712.36	34.22	35.78	-101.13	-625.95	-2,980.52	3,243.50	3,197.84	45.66	71.030	
9,800.00	9,798.78	8,975.51	8,725.07	34.58	35.89	-101.53	-648.06	-2,980.30	3,275.11	3,229.35	45.77	71.559	
9,900.00	9,898.78	9,000.00	8,736.33	34.94	35.99	-101.92	-669.81	-2,980.08	3,309.32	3,263.47	45.85	72.179	
10,000.00	9,998.78	9,000.00	8,736.33	35.29	35.99	-101.92	-669.81	-2,980.08	3,345.87	3,300.07	45.81	73.045	
10,100.00	10,098.78	9,000.00	8,736.33	35.65	35.99	-101.92	-669.81	-2,980.08	3,384.99	3,339.25	45.74	73.997	
10,148.26	10,147.04	9,020.77	8,745.14	35.82	36.09	-102.26	-688.61	-2,979.89	3,404.53	3,358.73	45.80	74.327	
10,150.00	10,148.78	9,020.96	8,745.22	35.83	36.09	78.21	-688.79	-2,979.89	3,405.25	3,359.44	45.80	74.344	
10,200.00	10,198.71	9,026.93	8,747.63	35.99	36.11	75.93	-694.25	-2,979.83	3,425.74	3,379.96	45.78	74.826	
10,250.00	10,248.24	9,050.00	8,756.38	36.16	36.22	73.47	-715.59	-2,979.62	3,445.98	3,400.15	45.84	75.181	
10,300.00	10,297.01	9,050.00	8,756.38	36.32	36.22	71.46	-715.59	-2,979.62	3,465.40	3,419.61	45.79	75.687	
10,350.00	10,344.64	9,050.00	8,756.38	36.48	36.22	69.55	-715.59	-2,979.62	3,484.15	3,438.42	45.74	76.180	
10,400.00	10,390.76	9,050.00	8,756.38	36.63	36.22	67.76	-715.59	-2,979.62	3,502.11	3,456.42	45.69	76.653	
10,450.00	10,435.02	9,050.00	8,756.38	36.78	36.22	66.09	-715.59	-2,979.62	3,519.15	3,473.50	45.64	77.102	
10,500.00	10,477.10	9,076.20	8,765.28	36.94	36.34	64.33	-740.23	-2,979.37	3,534.74	3,489.02	45.72	77.308	
10,550.00	10,516.66	9,100.00	8,772.37	37.09	36.45	62.77	-762.95	-2,979.15	3,549.35	3,503.55	45.80	77.503	
10,600.00	10,553.41	9,100.00	8,772.37	37.25	36.45	61.58	-762.95	-2,979.15	3,562.36	3,516.58	45.77	77.825	
10,650.00	10,587.07	9,100.00	8,772.37	37.41	36.45	60.53	-762.95	-2,979.15	3,574.01	3,528.24	45.76	78.098	
10,700.00	10,617.37	9,100.00	8,772.37	37.57	36.45	59.63	-762.95	-2,979.15	3,584.23	3,538.47	45.77	78.317	
10,750.00	10,644.10	9,128.43	8,779.60	37.74	36.59	58.76	-790.44	-2,978.87	3,592.48	3,546.57	45.91	78.253	
10,800.00	10,667.05	9,150.00	8,784.17	37.91	36.70	58.11	-811.51	-2,978.66	3,599.27	3,553.23	46.04	78.185	
10,850.00	10,686.04	9,150.00	8,784.17	38.09	36.70	57.70	-811.51	-2,978.66	3,604.17	3,558.09	46.09	78.200	
10,900.00	10,700.92	9,150.00	8,784.17	38.28	36.70	57.42	-811.51	-2,978.66	3,607.45	3,561.28	46.16	78.145	
10,950.00	10,711.59	9,173.36	8,788.22	38.47	36.82	57.28	-834.52	-2,978.43	3,608.73	3,562.38	46.36	77.848	
11,000.00	10,717.97	9,200.00	8,791.69	38.67	36.97	57.33	-860.93	-2,978.17	3,608.43	3,561.85	46.58	77.470	
11,048.26	10,720.00	9,200.00	8,791.69	38.86	36.97	57.52	-860.93	-2,978.17	3,606.14	3,559.43	46.71	77.200	
11,100.00	10,720.00	9,200.00	8,791.69	39.07	36.97	57.52	-860.93	-2,978.17	3,603.23	3,556.36	46.87	76.875	
11,200.00	10,720.00	9,230.13	8,794.14	39.54	37.13	57.56	-890.95	-2,977.87	3,599.15	3,551.82	47.34	76.035	
11,300.00	10,720.00	9,250.00	8,794.88	40.07	37.24	57.57	-910.81	-2,977.67	3,597.26	3,549.46	47.81	75.247	
11,400.00	10,720.00	9,324.19	8,795.00	40.66	37.68	57.57	-984.99	-2,976.93	3,597.08	3,548.56	48.52	74.137	
11,414.99	10,720.00	9,339.18	8,795.00	40.76	37.77	57.57	-999.98	-2,976.78	3,597.08	3,548.43	48.65	73.939	
11,500.00	10,720.00	9,424.19	8,795.00	41.31	38.32	57.57	-1,084.99	-2,975.93	3,597.06	3,547.67	49.39	72.828	
11,600.00	10,720.00	9,524.19	8,795.00	42.02	39.03	57.57	-1,184.98	-2,974.93	3,597.03	3,546.70	50.33	71.467	
11,700.00	10,720.00	9,624.19	8,795.00	42.77	39.79	57.57	-1,284.98	-2,973.93	3,597.01	3,545.67	51.34	70.067	
11,800.00	10,720.00	9,724.19	8,795.00	43.58	40.61	57.57	-1,384.97	-2,972.93	3,596.98	3,544.58	52.40	68.640	
11,900.00	10,720.00	9,824.19	8,795.00	44.43	41.49	57.57	-1,484.97	-2,971.93	3,596.96	3,543.43	53.53	67.198	
12,000.00	10,720.00	9,924.19	8,795.00	45.33	42.41	57.57	-1,584.96	-2,970.93	3,596.93	3,542.23	54.70	65.752	
12,100.00	10,720.00	10,024.19	8,795.00	46.26	43.38	57.57	-1,684.96	-2,969.93	3,596.91	3,540.98	55.93	64.309	
12,200.00	10,720.00	10,124.19	8,795.00	47.24	44.39	57.57	-1,784.95	-2,968.93	3,596.88	3,539.68	57.21	62.876	
12,300.00	10,720.00	10,224.19	8,795.00	48.26	45.44	57.57	-1,884.95	-2,967.93	3,596.86	3,538.33	58.52	61.459	
12,400.00	10,720.00	10,324.19	8,795.00	49.30	46.52	57.57	-1,984.94	-2,966.94	3,596.83	3,536.95	59.89	60.062	
12,500.00	10,720.00	10,424.19	8,795.00	50.38	47.64	57.57	-2,084.94	-2,965.94	3,596.81	3,535.52	61.28	58.690	
12,600.00	10,720.00	10,524.19	8,795.00	51.50	48.79	57.57	-2,184.93	-2,964.94	3,596.78	3,534.06	62.72	57.347	
12,700.00	10,720.00	10,624.19	8,795.00	52.63	49.97	57.56	-2,284.93	-2,963.94	3,596.76	3,532.57	64.19	56.034	
12,800.00	10,720.00	10,724.19	8,795.00	53.80	51.17	57.56	-2,384.92	-2,962.94	3,596.73	3,531.04	65.69	54.754	
12,900.00	10,720.00	10,824.19	8,795.00	54.99	52.41	57.56	-2,484.92	-2,961.94	3,596.71	3,529.49	67.22	53.508	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,000.00	10,720.00	10,924.19	8,795.00	56.20	53.66	57.56	-2,584.91	-2,960.94	3,596.68	3,527.91	68.77	52.297	
13,100.00	10,720.00	11,024.19	8,795.00	57.44	54.93	57.56	-2,684.91	-2,959.94	3,596.66	3,526.30	70.35	51.123	
13,200.00	10,720.00	11,124.19	8,795.00	58.70	56.23	57.56	-2,784.90	-2,958.94	3,596.63	3,524.67	71.96	49.983	
13,300.00	10,720.00	11,224.19	8,795.00	59.97	57.54	57.56	-2,884.90	-2,957.94	3,596.61	3,523.02	73.58	48.879	
13,400.00	10,720.00	11,324.19	8,795.00	61.27	58.88	57.56	-2,984.89	-2,956.94	3,596.58	3,521.35	75.23	47.809	
13,500.00	10,720.00	11,424.19	8,795.00	62.58	60.22	57.56	-3,084.89	-2,955.94	3,596.56	3,519.66	76.90	46.772	
13,600.00	10,720.00	11,524.19	8,795.00	63.90	61.58	57.56	-3,184.88	-2,954.94	3,596.53	3,517.95	78.58	45.768	
13,700.00	10,720.00	11,624.19	8,795.00	65.24	62.96	57.56	-3,284.88	-2,953.94	3,596.51	3,516.22	80.28	44.797	
13,800.00	10,720.00	11,724.19	8,795.00	66.60	64.35	57.56	-3,384.87	-2,952.94	3,596.48	3,514.48	82.00	43.858	
13,900.00	10,720.00	11,824.19	8,795.00	67.97	65.75	57.56	-3,484.87	-2,951.95	3,596.46	3,512.72	83.73	42.951	
14,000.00	10,720.00	11,924.19	8,795.00	69.35	67.17	57.56	-3,584.86	-2,950.95	3,596.43	3,510.95	85.48	42.074	
14,100.00	10,720.00	12,024.19	8,795.00	70.74	68.59	57.56	-3,684.86	-2,949.95	3,596.41	3,509.17	87.24	41.225	
14,200.00	10,720.00	12,124.19	8,795.00	72.14	70.02	57.56	-3,784.85	-2,948.95	3,596.38	3,507.37	89.01	40.405	
14,300.00	10,720.00	12,224.19	8,795.00	73.55	71.47	57.56	-3,884.85	-2,947.95	3,596.36	3,505.56	90.79	39.612	
14,400.00	10,720.00	12,324.19	8,795.00	74.98	72.92	57.56	-3,984.84	-2,946.95	3,596.33	3,503.75	92.58	38.844	
14,500.00	10,720.00	12,424.19	8,795.00	76.41	74.38	57.56	-4,084.84	-2,945.95	3,596.30	3,501.92	94.39	38.102	
14,600.00	10,720.00	12,524.19	8,795.00	77.85	75.85	57.56	-4,184.83	-2,944.95	3,596.28	3,500.08	96.20	37.383	
14,700.00	10,720.00	12,624.19	8,795.00	79.30	77.33	57.56	-4,284.83	-2,943.95	3,596.25	3,498.23	98.02	36.688	
14,800.00	10,720.00	12,724.19	8,795.00	80.76	78.81	57.56	-4,384.82	-2,942.95	3,596.23	3,496.38	99.85	36.015	
14,900.00	10,720.00	12,824.19	8,795.00	82.22	80.30	57.56	-4,484.82	-2,941.95	3,596.20	3,494.51	101.69	35.364	
15,000.00	10,720.00	12,924.19	8,795.00	83.69	81.80	57.56	-4,584.81	-2,940.95	3,596.18	3,492.64	103.54	34.733	
15,100.00	10,720.00	13,024.19	8,795.00	85.17	83.30	57.56	-4,684.81	-2,939.95	3,596.15	3,490.76	105.39	34.122	
15,200.00	10,720.00	13,124.19	8,795.00	86.65	84.81	57.56	-4,784.80	-2,938.95	3,596.13	3,488.88	107.25	33.530	
15,300.00	10,720.00	13,224.19	8,795.00	88.14	86.32	57.56	-4,884.80	-2,937.95	3,596.10	3,486.99	109.12	32.956	
15,400.00	10,720.00	13,324.19	8,795.00	89.64	87.84	57.56	-4,984.79	-2,936.96	3,596.08	3,485.09	110.99	32.400	
15,500.00	10,720.00	13,424.19	8,795.00	91.14	89.36	57.56	-5,084.79	-2,935.96	3,596.05	3,483.18	112.87	31.860	
15,600.00	10,720.00	13,524.19	8,795.00	92.65	90.89	57.56	-5,184.78	-2,934.96	3,596.03	3,481.27	114.75	31.337	
15,700.00	10,720.00	13,624.19	8,795.00	94.16	92.42	57.56	-5,284.78	-2,933.96	3,596.00	3,479.36	116.64	30.829	
15,800.00	10,720.00	13,724.19	8,795.00	95.67	93.95	57.56	-5,384.77	-2,932.96	3,595.98	3,477.44	118.54	30.336	
15,900.00	10,720.00	13,824.19	8,795.00	97.19	95.49	57.56	-5,484.77	-2,931.96	3,595.95	3,475.52	120.43	29.858	
16,000.00	10,720.00	13,924.19	8,795.00	98.72	97.04	57.56	-5,584.76	-2,930.96	3,595.93	3,473.59	122.34	29.393	
16,100.00	10,720.00	14,024.19	8,795.00	100.25	98.58	57.56	-5,684.76	-2,929.96	3,595.90	3,471.66	124.25	28.942	
16,200.00	10,720.00	14,124.19	8,795.00	101.78	100.13	57.56	-5,784.75	-2,928.96	3,595.88	3,469.72	126.16	28.503	
16,300.00	10,720.00	14,224.19	8,795.00	103.31	101.69	57.56	-5,884.75	-2,927.96	3,595.85	3,467.78	128.07	28.077	
16,400.00	10,720.00	14,324.19	8,795.00	104.85	103.24	57.56	-5,984.74	-2,926.96	3,595.83	3,465.84	129.99	27.662	
16,500.00	10,720.00	14,424.19	8,795.00	106.40	104.80	57.56	-6,084.74	-2,925.96	3,595.80	3,463.89	131.92	27.258	
16,600.00	10,720.00	14,524.19	8,795.00	107.94	106.37	57.55	-6,184.73	-2,924.96	3,595.78	3,461.93	133.84	26.866	
16,700.00	10,720.00	14,624.19	8,795.00	109.49	107.93	57.55	-6,284.73	-2,923.96	3,595.75	3,459.98	135.77	26.484	
16,800.00	10,720.00	14,724.19	8,795.00	111.04	109.50	57.55	-6,384.72	-2,922.96	3,595.73	3,458.03	137.70	26.112	
16,900.00	10,720.00	14,824.19	8,795.00	112.60	111.07	57.55	-6,484.72	-2,921.97	3,595.70	3,456.07	139.64	25.751	
17,000.00	10,720.00	14,924.19	8,795.00	114.16	112.64	57.55	-6,584.71	-2,920.97	3,595.68	3,454.10	141.57	25.398	
17,100.00	10,720.00	15,024.19	8,795.00	115.72	114.21	57.55	-6,684.71	-2,919.97	3,595.65	3,452.14	143.52	25.054	
17,200.00	10,720.00	15,124.19	8,795.00	117.28	115.79	57.55	-6,784.70	-2,918.97	3,595.63	3,450.17	145.46	24.719	
17,300.00	10,720.00	15,224.19	8,795.00	118.84	117.37	57.55	-6,884.70	-2,917.97	3,595.60	3,448.20	147.41	24.392	
17,400.00	10,720.00	15,324.19	8,795.00	120.41	118.95	57.55	-6,984.69	-2,916.97	3,595.58	3,446.22	149.35	24.074	
17,500.00	10,720.00	15,424.19	8,795.00	121.98	120.53	57.55	-7,084.69	-2,915.97	3,595.55	3,444.25	151.30	23.764	
17,600.00	10,720.00	15,524.19	8,795.00	123.55	122.12	57.55	-7,184.68	-2,914.97	3,595.53	3,442.27	153.25	23.461	
17,700.00	10,720.00	15,624.19	8,795.00	125.13	123.70	57.55	-7,284.68	-2,913.97	3,595.50	3,440.29	155.21	23.166	
17,800.00	10,720.00	15,724.19	8,795.00	126.70	125.29	57.55	-7,384.67	-2,912.97	3,595.48	3,438.31	157.16	22.877	
17,900.00	10,720.00	15,824.19	8,795.00	128.28	126.88	57.55	-7,484.67	-2,911.97	3,595.45	3,436.33	159.12	22.596	
18,000.00	10,720.00	15,924.19	8,795.00	129.86	128.47	57.55	-7,584.66	-2,910.97	3,595.43	3,434.34	161.08	22.320	
18,100.00	10,720.00	16,024.19	8,795.00	131.44	130.06	57.55	-7,684.66	-2,909.97	3,595.40	3,432.36	163.04	22.052	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
18,200.00	10,720.00	16,124.19	8,795.00	133.02	131.66	57.55	-7,784.65	-2,908.97	3,595.38	3,430.37	165.01	21.789	
18,300.00	10,720.00	16,224.19	8,795.00	134.61	133.25	57.55	-7,884.65	-2,907.97	3,595.35	3,428.38	166.97	21.533	
18,400.00	10,720.00	16,324.19	8,795.00	136.19	134.85	57.55	-7,984.64	-2,906.98	3,595.33	3,426.39	168.94	21.282	
18,500.00	10,720.00	16,424.19	8,795.00	137.78	136.45	57.55	-8,084.64	-2,905.98	3,595.30	3,424.40	170.90	21.037	
18,600.00	10,720.00	16,524.19	8,795.00	139.37	138.05	57.55	-8,184.63	-2,904.98	3,595.28	3,422.40	172.87	20.797	
18,700.00	10,720.00	16,624.19	8,795.00	140.96	139.65	57.55	-8,284.63	-2,903.98	3,595.25	3,420.41	174.84	20.563	
18,800.00	10,720.00	16,724.19	8,795.00	142.55	141.25	57.55	-8,384.62	-2,902.98	3,595.23	3,418.41	176.82	20.333	
18,900.00	10,720.00	16,824.19	8,795.00	144.15	142.85	57.55	-8,484.62	-2,901.98	3,595.20	3,416.41	178.79	20.109	
19,000.00	10,720.00	16,924.19	8,795.00	145.74	144.46	57.55	-8,584.61	-2,900.98	3,595.18	3,414.41	180.76	19.889	
19,100.00	10,720.00	17,024.19	8,795.00	147.34	146.06	57.55	-8,684.61	-2,899.98	3,595.15	3,412.41	182.74	19.674	
19,200.00	10,720.00	17,124.19	8,795.00	148.93	147.67	57.55	-8,784.60	-2,898.98	3,595.13	3,410.41	184.71	19.463	
19,300.00	10,720.00	17,224.19	8,795.00	150.53	149.27	57.55	-8,884.60	-2,897.98	3,595.10	3,408.41	186.69	19.257	
19,400.00	10,720.00	17,324.19	8,795.00	152.13	150.88	57.55	-8,984.59	-2,896.98	3,595.08	3,406.41	188.67	19.055	
19,500.00	10,720.00	17,424.19	8,795.00	153.73	152.49	57.55	-9,084.59	-2,895.98	3,595.05	3,404.40	190.65	18.857	
19,600.00	10,720.00	17,524.19	8,795.00	155.33	154.10	57.55	-9,184.58	-2,894.98	3,595.03	3,402.40	192.63	18.663	
19,700.00	10,720.00	17,624.19	8,795.00	156.94	155.71	57.55	-9,284.58	-2,893.98	3,595.00	3,400.39	194.61	18.473	
19,800.00	10,720.00	17,724.19	8,795.00	158.54	157.32	57.55	-9,384.57	-2,892.98	3,594.98	3,398.39	196.59	18.287	
19,900.00	10,720.00	17,824.19	8,795.00	160.14	158.94	57.55	-9,484.57	-2,891.99	3,594.95	3,396.38	198.57	18.104	
20,000.00	10,720.00	17,924.19	8,795.00	161.75	160.55	57.55	-9,584.56	-2,890.99	3,594.93	3,394.37	200.56	17.925	
20,100.00	10,720.00	18,024.19	8,795.00	163.36	162.16	57.55	-9,684.56	-2,889.99	3,594.90	3,392.36	202.54	17.749	
20,200.00	10,720.00	18,124.19	8,795.00	164.96	163.78	57.55	-9,784.55	-2,888.99	3,594.88	3,390.35	204.52	17.577	
20,300.00	10,720.00	18,224.19	8,795.00	166.57	165.39	57.55	-9,884.55	-2,887.99	3,594.85	3,388.34	206.51	17.408	
20,400.00	10,720.00	18,324.19	8,795.00	168.18	167.01	57.55	-9,984.54	-2,886.99	3,594.83	3,386.33	208.50	17.242	
20,500.00	10,720.00	18,424.19	8,795.00	169.79	168.63	57.55	-10,084.54	-2,885.99	3,594.80	3,384.32	210.48	17.079	
20,600.00	10,720.00	18,524.19	8,795.00	171.40	170.24	57.54	-10,184.53	-2,884.99	3,594.78	3,382.31	212.47	16.919	
20,700.00	10,720.00	18,624.19	8,795.00	173.01	171.86	57.54	-10,284.53	-2,883.99	3,594.75	3,380.29	214.46	16.762	
20,800.00	10,720.00	18,724.19	8,795.00	174.63	173.48	57.54	-10,384.52	-2,882.99	3,594.72	3,378.28	216.44	16.608	
20,840.00	10,720.00	18,762.37	8,795.00	175.20	174.10	57.54	-10,422.70	-2,882.61	3,594.72	3,377.55	217.17	16.553	
20,841.32	10,720.00	18,762.37	8,795.00	175.22	174.10	57.54	-10,422.70	-2,882.61	3,594.72	3,377.53	217.18	16.551	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	3.40	3.40	0.00	0.00	-90.55	-19.20	-1,995.29	1,995.38				
100.00	100.00	103.40	103.40	0.13	0.14	-90.55	-19.20	-1,995.29	1,995.38	1,995.20	0.19	N/A	
200.00	200.00	203.40	203.40	0.48	0.50	-90.55	-19.20	-1,995.29	1,995.38	1,994.69	0.69	2,878.563	
300.00	300.00	303.40	303.40	0.84	0.85	-90.55	-19.20	-1,995.29	1,995.38	1,994.18	1.20	1,662.652	
400.00	400.00	403.40	403.40	1.20	1.21	-90.55	-19.20	-1,995.29	1,995.38	1,993.68	1.71	1,168.895	
500.00	500.00	503.40	503.40	1.56	1.57	-90.55	-19.20	-1,995.29	1,995.38	1,993.17	2.21	901.250	
600.00	600.00	603.40	603.40	1.92	1.93	-90.55	-19.20	-1,995.29	1,995.38	1,992.66	2.72	733.335	
700.00	700.00	703.40	703.40	2.28	2.29	-90.55	-19.20	-1,995.29	1,995.38	1,992.15	3.23	618.163	
800.00	800.00	803.40	803.40	2.63	2.65	-90.55	-19.20	-1,995.29	1,995.38	1,991.65	3.73	534.257	
900.00	900.00	903.40	903.40	2.99	3.01	-90.55	-19.20	-1,995.29	1,995.38	1,991.14	4.24	470.406	
1,000.00	1,000.00	1,003.40	1,003.40	3.35	3.36	-90.55	-19.20	-1,995.29	1,995.38	1,990.63	4.75	420.188	
1,100.00	1,100.00	1,103.40	1,103.40	3.71	3.72	-90.55	-19.20	-1,995.29	1,995.38	1,990.13	5.26	379.658	
1,200.00	1,200.00	1,203.40	1,203.40	4.07	4.08	-90.55	-19.20	-1,995.29	1,995.38	1,989.62	5.76	346.259	
1,300.00	1,300.00	1,303.40	1,303.40	4.43	4.44	-90.55	-19.20	-1,995.29	1,995.38	1,989.11	6.27	318.261	
1,400.00	1,400.00	1,403.40	1,403.40	4.79	4.80	-90.55	-19.20	-1,995.29	1,995.38	1,988.61	6.78	294.452	
1,500.00	1,500.00	1,503.40	1,503.40	5.14	5.16	-90.55	-19.20	-1,995.29	1,995.38	1,988.10	7.28	273.957	
1,600.00	1,600.00	1,603.40	1,603.40	5.50	5.51	-90.55	-19.20	-1,995.29	1,995.38	1,987.59	7.79	256.130	
1,700.00	1,700.00	1,703.40	1,703.40	5.86	5.87	-90.55	-19.20	-1,995.29	1,995.38	1,987.08	8.30	240.481	
1,800.00	1,800.00	1,803.40	1,803.40	6.22	6.23	-90.55	-19.20	-1,995.29	1,995.38	1,986.58	8.80	226.634	
1,900.00	1,900.00	1,903.40	1,903.40	6.58	6.59	-90.55	-19.20	-1,995.29	1,995.38	1,986.07	9.31	214.295	
2,000.00	2,000.00	2,003.40	2,003.40	6.94	6.95	-90.55	-19.20	-1,995.29	1,995.38	1,985.56	9.82	203.230	
2,100.00	2,100.00	2,103.40	2,103.40	7.30	7.31	-90.55	-19.20	-1,995.29	1,995.38	1,985.06	10.33	193.252	
2,200.00	2,200.00	2,203.40	2,203.40	7.65	7.67	-90.55	-19.20	-1,995.29	1,995.38	1,984.55	10.83	184.208	
2,300.00	2,300.00	2,303.40	2,303.40	8.01	8.02	-90.55	-19.20	-1,995.29	1,995.38	1,984.04	11.34	175.972	
2,400.00	2,400.00	2,403.40	2,403.40	8.37	8.38	-90.55	-19.20	-1,995.29	1,995.38	1,983.54	11.85	168.441	
2,500.00	2,500.00	2,503.40	2,503.40	8.73	8.74	-90.55	-19.20	-1,995.29	1,995.38	1,983.03	12.35	161.529	
2,600.00	2,600.00	2,603.40	2,603.40	9.09	9.10	-90.55	-19.20	-1,995.29	1,995.38	1,982.52	12.86	155.161	
2,700.00	2,700.00	2,703.40	2,703.40	9.45	9.46	-90.55	-19.20	-1,995.29	1,995.38	1,982.02	13.37	149.277	
2,800.00	2,800.00	2,803.40	2,803.40	9.80	9.82	-90.55	-19.20	-1,995.29	1,995.38	1,981.51	13.87	143.822	
2,900.00	2,900.00	2,903.40	2,903.40	10.16	10.17	-90.55	-19.20	-1,995.29	1,995.38	1,981.00	14.38	138.752	
3,000.00	3,000.00	3,003.40	3,003.40	10.52	10.53	-90.55	-19.20	-1,995.29	1,995.38	1,980.49	14.89	134.027	
3,100.00	3,100.00	3,103.40	3,103.40	10.88	10.89	-90.55	-19.20	-1,995.29	1,995.38	1,979.99	15.39	129.614	
3,115.49	3,115.49	3,118.89	3,118.89	10.94	10.95	-90.55	-19.20	-1,995.29	1,995.38	1,979.91	15.47	128.956	
3,200.00	3,200.00	3,203.38	3,203.38	11.24	11.25	-90.55	-19.20	-1,995.29	1,995.38	1,979.48	15.90	125.485	
3,300.00	3,300.00	3,302.86	3,302.85	11.60	11.59	-90.59	-20.58	-1,995.29	1,995.40	1,979.00	16.39	121.719	
3,400.00	3,400.00	3,402.19	3,402.10	11.96	11.91	-90.70	-24.55	-1,995.29	1,995.44	1,978.57	16.87	118.260	
3,500.00	3,500.00	3,501.26	3,500.94	12.31	12.23	-90.89	-31.07	-1,995.29	1,995.53	1,978.18	17.35	114.989	
3,600.00	3,600.00	3,600.00	3,599.27	12.67	12.55	-91.15	-40.12	-1,995.29	1,995.70	1,977.86	17.84	111.893	
3,700.00	3,700.00	3,698.04	3,696.63	13.03	12.88	-91.48	-51.62	-1,995.29	1,995.97	1,977.65	18.32	108.959	
3,800.00	3,800.00	3,842.11	3,839.44	13.39	13.36	-92.03	-70.55	-1,994.08	1,995.65	1,976.74	18.91	105.524	
3,900.00	3,900.00	4,013.07	4,009.26	13.75	13.95	-92.56	-88.94	-1,987.30	1,992.10	1,972.54	19.56	101.853	
4,000.00	4,000.00	4,184.25	4,179.40	14.11	14.54	-92.97	-102.54	-1,974.53	1,985.01	1,964.82	20.19	98.313	
4,100.00	4,100.00	4,354.96	4,348.85	14.46	15.14	-93.26	-111.28	-1,955.88	1,974.36	1,953.56	20.80	94.912	
4,200.00	4,200.00	4,524.53	4,516.61	14.82	15.75	-93.41	-115.19	-1,931.54	1,960.15	1,938.77	21.39	91.649	
4,300.00	4,300.00	4,624.73	4,615.50	15.18	16.12	-93.47	-116.02	-1,915.37	1,944.10	1,922.22	21.88	88.839	
4,400.00	4,400.00	4,723.42	4,712.89	15.54	16.48	-93.52	-116.85	-1,899.46	1,928.05	1,905.67	22.38	86.156	
4,500.00	4,500.00	4,822.11	4,810.28	15.90	16.84	-93.57	-117.67	-1,883.54	1,912.00	1,889.12	22.87	83.587	
4,600.00	4,599.99	4,920.97	4,907.84	16.24	17.22	145.56	-118.50	-1,867.59	1,897.01	1,873.65	23.36	81.200	
4,666.98	4,666.93	4,987.36	4,973.36	16.47	17.47	145.64	-119.05	-1,856.88	1,888.17	1,864.49	23.68	79.725	
4,700.00	4,699.92	5,020.12	5,005.69	16.58	17.59	145.64	-119.33	-1,851.59	1,884.05	1,860.21	23.84	79.021	
4,800.00	4,799.82	5,119.34	5,103.61	16.91	17.97	145.66	-120.16	-1,835.59	1,871.57	1,847.24	24.33	76.940	
4,900.00	4,899.72	5,218.55	5,201.52	17.24	18.35	145.68	-120.99	-1,819.59	1,859.09	1,834.28	24.81	74.935	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	5,317.77	5,299.43	17.58	18.73	145.70	-121.82	-1,803.58	1,846.61	1,821.31	25.30	73.002	
5,100.00	5,099.53	5,416.99	5,397.35	17.92	19.12	145.72	-122.64	-1,787.58	1,834.13	1,808.34	25.78	71.139	
5,200.00	5,199.44	5,516.20	5,495.26	18.26	19.51	145.75	-123.47	-1,771.57	1,821.64	1,795.37	26.27	69.342	
5,300.00	5,299.34	5,615.42	5,593.17	18.60	19.90	145.77	-124.30	-1,755.57	1,809.16	1,782.40	26.76	67.607	
5,400.00	5,399.25	5,714.63	5,691.08	18.94	20.29	145.79	-125.13	-1,739.56	1,796.68	1,769.43	27.25	65.932	
5,500.00	5,499.15	5,813.85	5,789.00	19.28	20.69	145.81	-125.96	-1,723.56	1,784.20	1,756.46	27.74	64.314	
5,600.00	5,599.06	5,913.07	5,886.91	19.62	21.08	145.83	-126.79	-1,707.56	1,771.72	1,743.49	28.23	62.750	
5,700.00	5,698.96	6,012.28	5,984.82	19.96	21.48	145.85	-127.62	-1,691.55	1,759.24	1,730.52	28.73	61.237	
5,800.00	5,798.86	6,111.50	6,082.74	20.31	21.88	145.88	-128.45	-1,675.55	1,746.77	1,717.54	29.22	59.774	
5,834.24	5,833.07	6,145.47	6,116.26	20.42	22.02	145.89	-128.73	-1,670.07	1,742.49	1,713.10	29.39	59.284	
5,900.00	5,898.79	6,210.65	6,180.59	20.65	22.28	145.82	-129.28	-1,659.55	1,733.82	1,704.10	29.72	58.342	
6,001.22	6,000.00	6,310.73	6,279.35	21.00	22.69	-93.38	-130.11	-1,643.41	1,718.66	1,688.44	30.22	56.864	
6,100.00	6,098.78	6,408.21	6,375.55	21.36	23.08	-93.44	-130.93	-1,627.69	1,702.81	1,672.08	30.72	55.426	
6,200.00	6,198.78	6,506.89	6,472.94	21.71	23.49	-93.50	-131.75	-1,611.77	1,686.75	1,655.53	31.23	54.017	
6,300.00	6,298.78	6,605.58	6,570.33	22.07	23.89	-93.57	-132.58	-1,595.85	1,670.70	1,638.97	31.73	52.652	
6,400.00	6,398.78	6,704.27	6,667.72	22.43	24.30	-93.63	-133.40	-1,579.93	1,654.65	1,622.41	32.24	51.329	
6,500.00	6,498.78	6,802.95	6,765.11	22.78	24.70	-93.69	-134.23	-1,564.01	1,638.60	1,605.86	32.74	50.046	
6,600.00	6,598.78	6,901.64	6,862.50	23.14	25.11	-93.76	-135.05	-1,548.09	1,622.56	1,589.31	33.25	48.802	
6,700.00	6,698.78	6,990.81	6,950.51	23.50	25.48	-93.82	-135.79	-1,533.77	1,606.61	1,572.86	33.75	47.606	
6,800.00	6,798.78	7,060.68	7,019.63	23.85	25.76	-93.87	-136.32	-1,523.54	1,592.05	1,557.82	34.23	46.508	
6,900.00	6,898.78	7,130.91	7,089.27	24.21	26.04	-93.90	-136.79	-1,514.54	1,579.30	1,544.59	34.71	45.502	
7,000.00	6,998.78	7,200.00	7,157.94	24.57	26.32	-93.94	-137.18	-1,506.92	1,568.36	1,533.19	35.17	44.588	
7,100.00	7,098.78	7,272.25	7,229.88	24.93	26.59	-93.97	-137.53	-1,500.29	1,559.26	1,523.62	35.64	43.755	
7,200.00	7,198.78	7,343.27	7,300.71	25.28	26.85	-93.99	-137.80	-1,495.10	1,551.99	1,515.90	36.09	43.007	
7,300.00	7,298.78	7,414.46	7,371.79	25.64	27.11	-94.01	-138.00	-1,491.21	1,546.56	1,510.03	36.53	42.340	
7,400.00	7,398.78	7,500.00	7,457.28	26.00	27.42	-94.02	-138.15	-1,488.30	1,543.08	1,506.08	36.99	41.711	
7,500.00	7,498.78	7,557.15	7,514.42	26.35	27.61	-94.03	-138.19	-1,487.41	1,541.26	1,503.89	37.38	41.237	
7,558.30	7,557.08	7,603.20	7,560.48	26.56	27.77	-94.03	-138.20	-1,487.29	1,541.09	1,503.46	37.63	40.955	
7,600.00	7,598.78	7,644.90	7,602.18	26.71	27.91	-94.03	-138.20	-1,487.29	1,541.09	1,503.26	37.84	40.731	
7,700.00	7,698.78	7,744.90	7,702.18	27.07	28.25	-94.03	-138.20	-1,487.29	1,541.09	1,502.76	38.33	40.202	
7,800.00	7,798.78	7,844.90	7,802.18	27.43	28.58	-94.03	-138.20	-1,487.29	1,541.09	1,502.26	38.83	39.687	
7,900.00	7,898.78	7,944.90	7,902.18	27.78	28.92	-94.03	-138.20	-1,487.29	1,541.09	1,501.76	39.33	39.185	
8,000.00	7,998.78	8,044.90	8,002.18	28.14	29.26	-94.03	-138.20	-1,487.29	1,541.09	1,501.27	39.83	38.695	
8,100.00	8,098.78	8,144.90	8,102.18	28.50	29.60	-94.03	-138.20	-1,487.29	1,541.09	1,500.77	40.33	38.217	
8,200.00	8,198.78	8,244.90	8,202.18	28.86	29.93	-94.03	-138.20	-1,487.29	1,541.09	1,500.27	40.82	37.750	CC
8,300.00	8,298.78	8,333.38	8,290.49	29.21	30.23	-94.18	-142.30	-1,487.25	1,541.39	1,500.11	41.29	37.335	ES
8,400.00	8,398.78	8,416.12	8,371.64	29.57	30.51	-94.76	-158.07	-1,487.09	1,542.72	1,500.99	41.73	36.967	
8,500.00	8,498.78	8,492.90	8,444.20	29.93	30.77	-95.69	-183.02	-1,486.85	1,545.53	1,503.38	42.16	36.661	
8,600.00	8,598.78	8,561.94	8,506.07	30.29	30.99	-96.81	-213.55	-1,486.55	1,550.45	1,507.91	42.54	36.444	
8,700.00	8,698.78	8,622.66	8,557.11	30.64	31.19	-98.02	-246.39	-1,486.22	1,558.15	1,515.29	42.87	36.347	
8,800.00	8,798.78	8,675.36	8,598.38	31.00	31.37	-99.21	-279.12	-1,485.90	1,569.26	1,526.15	43.11	36.398	
8,900.00	8,898.78	8,720.79	8,631.42	31.36	31.52	-100.34	-310.29	-1,485.59	1,584.27	1,541.00	43.27	36.614	
9,000.00	8,998.78	8,750.00	8,651.32	31.72	31.62	-101.12	-331.67	-1,485.38	1,603.59	1,560.33	43.26	37.072	
9,100.00	9,098.78	8,800.00	8,682.76	32.07	31.79	-102.51	-370.53	-1,485.00	1,627.29	1,583.96	43.33	37.555	
9,200.00	9,198.78	8,822.81	8,695.95	32.43	31.88	-103.17	-389.14	-1,484.81	1,655.57	1,612.42	43.14	38.372	
9,300.00	9,298.78	8,850.00	8,710.69	32.79	31.98	-103.98	-411.98	-1,484.59	1,688.41	1,645.48	42.93	39.328	
9,400.00	9,398.78	8,870.39	8,721.03	33.15	32.06	-104.60	-429.55	-1,484.41	1,725.70	1,683.08	42.62	40.491	
9,500.00	9,498.78	8,900.00	8,734.91	33.51	32.18	-105.51	-455.70	-1,484.16	1,767.36	1,725.02	42.34	41.743	
9,600.00	9,598.78	8,900.00	8,734.91	33.86	32.18	-105.51	-455.70	-1,484.16	1,813.01	1,771.22	41.79	43.383	
9,700.00	9,698.78	8,922.51	8,744.54	34.22	32.27	-106.21	-476.05	-1,483.95	1,862.54	1,821.13	41.41	44.979	
9,800.00	9,798.78	8,950.00	8,755.22	34.58	32.39	-107.08	-501.37	-1,483.70	1,915.87	1,874.81	41.06	46.661	
9,900.00	9,898.78	8,950.00	8,755.22	34.94	32.39	-107.08	-501.37	-1,483.70	1,972.30	1,931.81	40.49	48.711	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,998.78	8,950.00	8,755.22	35.29	32.39	-107.08	-501.37	-1,483.70	2,032.08	1,992.15	39.93	50.886	
10,100.00	10,098.78	8,969.71	8,762.12	35.65	32.48	-107.71	-519.83	-1,483.52	2,094.61	2,055.06	39.55	52.958	
10,148.26	10,147.04	8,974.24	8,763.61	35.82	32.50	-107.86	-524.11	-1,483.48	2,125.79	2,086.46	39.34	54.042	
10,150.00	10,148.78	8,974.40	8,763.66	35.83	32.51	72.55	-524.26	-1,483.48	2,126.93	2,087.60	39.33	54.081	
10,200.00	10,198.71	8,979.47	8,765.30	35.99	32.53	68.39	-529.06	-1,483.43	2,159.32	2,120.22	39.10	55.226	
10,250.00	10,248.24	9,000.00	8,771.47	36.16	32.63	64.05	-548.64	-1,483.24	2,191.28	2,152.30	38.98	56.213	
10,300.00	10,297.01	9,000.00	8,771.47	36.32	32.63	60.59	-548.64	-1,483.24	2,222.10	2,183.39	38.71	57.403	
10,350.00	10,344.64	9,000.00	8,771.47	36.48	32.63	57.40	-548.64	-1,483.24	2,251.93	2,213.49	38.44	58.580	
10,400.00	10,390.76	9,000.00	8,771.47	36.63	32.63	54.51	-548.64	-1,483.24	2,280.58	2,242.40	38.18	59.734	
10,450.00	10,435.02	9,000.00	8,771.47	36.78	32.63	51.90	-548.64	-1,483.24	2,307.89	2,269.96	37.92	60.856	
10,500.00	10,477.10	9,025.18	8,778.08	36.94	32.75	49.22	-572.93	-1,483.00	2,333.14	2,295.29	37.85	61.648	
10,550.00	10,516.66	9,050.00	8,783.54	37.09	32.87	46.91	-597.14	-1,482.76	2,357.00	2,319.24	37.77	62.409	
10,600.00	10,553.41	9,050.00	8,783.54	37.25	32.87	45.19	-597.14	-1,482.76	2,378.52	2,340.97	37.54	63.353	
10,650.00	10,587.07	9,050.00	8,783.54	37.41	32.87	43.70	-597.14	-1,482.76	2,398.10	2,360.76	37.34	64.225	
10,700.00	10,617.37	9,050.00	8,783.54	37.57	32.87	42.42	-597.14	-1,482.76	2,415.65	2,378.50	37.16	65.012	
10,750.00	10,644.10	9,076.18	8,788.16	37.74	33.01	41.20	-622.91	-1,482.50	2,430.49	2,393.35	37.14	65.441	
10,800.00	10,667.05	9,100.00	8,791.34	37.91	33.13	40.23	-646.51	-1,482.27	2,443.26	2,406.14	37.12	65.813	
10,850.00	10,686.04	9,100.00	8,791.34	38.09	33.13	39.57	-646.51	-1,482.27	2,453.26	2,416.25	37.01	66.280	
10,900.00	10,700.92	9,100.00	8,791.34	38.28	33.13	39.08	-646.51	-1,482.27	2,460.94	2,424.00	36.94	66.628	
10,950.00	10,711.59	9,121.00	8,793.33	38.47	33.24	38.72	-667.41	-1,482.07	2,465.86	2,428.88	36.98	66.679	
11,000.00	10,717.97	9,150.00	8,794.81	38.67	33.40	38.55	-696.37	-1,481.78	2,468.53	2,431.45	37.08	66.572	
11,048.26	10,720.00	9,150.00	8,794.81	38.86	33.40	38.57	-696.37	-1,481.78	2,468.11	2,431.02	37.10	66.530	
11,100.00	10,720.00	9,150.00	8,794.81	39.07	33.40	38.57	-696.37	-1,481.78	2,467.01	2,429.86	37.15	66.411	
11,200.00	10,720.00	9,223.48	8,795.00	39.54	33.83	38.58	-769.85	-1,481.05	2,466.71	2,429.19	37.52	65.741	
11,226.33	10,720.00	9,249.81	8,795.00	39.68	33.99	38.58	-796.18	-1,480.79	2,466.71	2,429.05	37.66	65.507	
11,300.00	10,720.00	9,323.48	8,795.00	40.07	34.46	38.58	-869.84	-1,480.07	2,466.70	2,428.66	38.04	64.847	
11,400.00	10,720.00	9,423.48	8,795.00	40.66	35.17	38.58	-969.84	-1,479.08	2,466.69	2,428.06	38.62	63.867	
11,500.00	10,720.00	9,523.48	8,795.00	41.31	35.93	38.58	-1,069.83	-1,478.09	2,466.68	2,427.41	39.27	62.815	
11,600.00	10,720.00	9,623.48	8,795.00	42.02	36.75	38.58	-1,169.83	-1,477.11	2,466.66	2,426.69	39.98	61.702	
11,700.00	10,720.00	9,723.48	8,795.00	42.77	37.63	38.58	-1,269.82	-1,476.12	2,466.65	2,425.91	40.74	60.542	
11,800.00	10,720.00	9,823.48	8,795.00	43.58	38.56	38.58	-1,369.82	-1,475.13	2,466.64	2,425.08	41.56	59.348	
11,900.00	10,720.00	9,923.48	8,795.00	44.43	39.53	38.57	-1,469.81	-1,474.14	2,466.63	2,424.20	42.43	58.132	
12,000.00	10,720.00	10,023.48	8,795.00	45.33	40.55	38.57	-1,569.81	-1,473.16	2,466.62	2,423.27	43.35	56.903	
12,100.00	10,720.00	10,123.48	8,795.00	46.26	41.61	38.57	-1,669.80	-1,472.17	2,466.61	2,422.30	44.31	55.669	
12,200.00	10,720.00	10,223.48	8,795.00	47.24	42.70	38.57	-1,769.80	-1,471.18	2,466.60	2,421.29	45.31	54.436	
12,300.00	10,720.00	10,323.48	8,795.00	48.26	43.83	38.57	-1,869.79	-1,470.19	2,466.59	2,420.23	46.35	53.212	
12,400.00	10,720.00	10,423.48	8,795.00	49.30	45.00	38.57	-1,969.79	-1,469.21	2,466.58	2,419.14	47.43	52.001	
12,500.00	10,720.00	10,523.48	8,795.00	50.38	46.19	38.57	-2,069.78	-1,468.22	2,466.57	2,418.02	48.55	50.809	
12,600.00	10,720.00	10,623.48	8,795.00	51.50	47.41	38.57	-2,169.78	-1,467.23	2,466.55	2,416.86	49.69	49.638	
12,700.00	10,720.00	10,723.48	8,795.00	52.63	48.65	38.57	-2,269.77	-1,466.25	2,466.54	2,415.68	50.86	48.493	
12,800.00	10,720.00	10,823.48	8,795.00	53.80	49.92	38.57	-2,369.77	-1,465.26	2,466.53	2,414.47	52.06	47.376	
12,900.00	10,720.00	10,923.48	8,795.00	54.99	51.21	38.57	-2,469.76	-1,464.27	2,466.52	2,413.23	53.29	46.285	
13,000.00	10,720.00	11,023.48	8,795.00	56.20	52.52	38.57	-2,569.76	-1,463.28	2,466.51	2,411.97	54.54	45.224	
13,100.00	10,720.00	11,123.48	8,795.00	57.44	53.85	38.57	-2,669.76	-1,462.30	2,466.50	2,410.69	55.81	44.193	
13,200.00	10,720.00	11,223.48	8,795.00	58.70	55.20	38.57	-2,769.75	-1,461.31	2,466.49	2,409.38	57.10	43.193	
13,300.00	10,720.00	11,323.48	8,795.00	59.97	56.56	38.57	-2,869.75	-1,460.32	2,466.48	2,408.06	58.41	42.224	
13,400.00	10,720.00	11,423.48	8,795.00	61.27	57.94	38.57	-2,969.74	-1,459.33	2,466.47	2,406.72	59.74	41.285	
13,500.00	10,720.00	11,523.48	8,795.00	62.58	59.33	38.57	-3,069.74	-1,458.35	2,466.46	2,405.37	61.09	40.374	
13,600.00	10,720.00	11,623.48	8,795.00	63.90	60.74	38.57	-3,169.73	-1,457.36	2,466.44	2,403.99	62.45	39.494	
13,700.00	10,720.00	11,723.48	8,795.00	65.24	62.15	38.57	-3,269.73	-1,456.37	2,466.43	2,402.61	63.83	38.643	
13,800.00	10,720.00	11,823.48	8,795.00	66.60	63.58	38.57	-3,369.72	-1,455.39	2,466.42	2,401.21	65.21	37.820	
13,900.00	10,720.00	11,923.48	8,795.00	67.97	65.02	38.57	-3,469.72	-1,454.40	2,466.41	2,399.80	66.62	37.025	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	10,720.00	12,023.48	8,795.00	69.35	66.47	38.57	-3,569.71	-1,453.41	2,466.40	2,398.37	68.03	36.255	
14,100.00	10,720.00	12,123.48	8,795.00	70.74	67.93	38.57	-3,669.71	-1,452.42	2,466.39	2,396.94	69.45	35.511	
14,200.00	10,720.00	12,223.48	8,795.00	72.14	69.39	38.57	-3,769.70	-1,451.44	2,466.38	2,395.49	70.89	34.793	
14,300.00	10,720.00	12,323.48	8,795.00	73.55	70.87	38.57	-3,869.70	-1,450.45	2,466.37	2,394.04	72.33	34.098	
14,400.00	10,720.00	12,423.48	8,795.00	74.98	72.35	38.57	-3,969.69	-1,449.46	2,466.36	2,392.57	73.78	33.427	
14,500.00	10,720.00	12,523.48	8,795.00	76.41	73.84	38.57	-4,069.69	-1,448.48	2,466.35	2,391.10	75.25	32.777	
14,600.00	10,720.00	12,623.48	8,795.00	77.85	75.33	38.57	-4,169.68	-1,447.49	2,466.33	2,389.62	76.72	32.149	
14,700.00	10,720.00	12,723.48	8,795.00	79.30	76.84	38.57	-4,269.68	-1,446.50	2,466.32	2,388.13	78.19	31.542	
14,800.00	10,720.00	12,823.48	8,795.00	80.76	78.35	38.57	-4,369.67	-1,445.51	2,466.31	2,386.64	79.68	30.954	
14,900.00	10,720.00	12,923.48	8,795.00	82.22	79.86	38.57	-4,469.67	-1,444.53	2,466.30	2,385.14	81.17	30.386	
15,000.00	10,720.00	13,023.48	8,795.00	83.69	81.38	38.56	-4,569.66	-1,443.54	2,466.29	2,383.63	82.66	29.835	
15,100.00	10,720.00	13,123.48	8,795.00	85.17	82.90	38.56	-4,669.66	-1,442.55	2,466.28	2,382.11	84.17	29.302	
15,200.00	10,720.00	13,223.48	8,795.00	86.65	84.43	38.56	-4,769.65	-1,441.56	2,466.27	2,380.60	85.67	28.787	
15,300.00	10,720.00	13,323.48	8,795.00	88.14	85.97	38.56	-4,869.65	-1,440.58	2,466.26	2,379.07	87.18	28.288	
15,400.00	10,720.00	13,423.48	8,795.00	89.64	87.51	38.56	-4,969.64	-1,439.59	2,466.25	2,377.54	88.70	27.803	
15,500.00	10,720.00	13,523.48	8,795.00	91.14	89.05	38.56	-5,069.64	-1,438.60	2,466.24	2,376.01	90.23	27.334	
15,600.00	10,720.00	13,623.48	8,795.00	92.65	90.59	38.56	-5,169.63	-1,437.62	2,466.22	2,374.47	91.75	26.879	
15,700.00	10,720.00	13,723.48	8,795.00	94.16	92.14	38.56	-5,269.63	-1,436.63	2,466.21	2,372.93	93.28	26.438	
15,800.00	10,720.00	13,823.48	8,795.00	95.67	93.70	38.56	-5,369.62	-1,435.64	2,466.20	2,371.39	94.82	26.010	
15,900.00	10,720.00	13,923.48	8,795.00	97.19	95.25	38.56	-5,469.62	-1,434.65	2,466.19	2,369.84	96.36	25.594	
16,000.00	10,720.00	14,023.48	8,795.00	98.72	96.81	38.56	-5,569.61	-1,433.67	2,466.18	2,368.28	97.90	25.191	
16,100.00	10,720.00	14,123.48	8,795.00	100.25	98.38	38.56	-5,669.61	-1,432.68	2,466.17	2,366.73	99.44	24.800	
16,200.00	10,720.00	14,223.48	8,795.00	101.78	99.94	38.56	-5,769.60	-1,431.69	2,466.16	2,365.17	100.99	24.420	
16,300.00	10,720.00	14,323.48	8,795.00	103.31	101.51	38.56	-5,869.60	-1,430.71	2,466.15	2,363.61	102.54	24.050	
16,400.00	10,720.00	14,423.48	8,795.00	104.85	103.08	38.56	-5,969.59	-1,429.72	2,466.14	2,362.04	104.10	23.691	
16,500.00	10,720.00	14,523.48	8,795.00	106.40	104.65	38.56	-6,069.59	-1,428.73	2,466.13	2,360.47	105.65	23.342	
16,600.00	10,720.00	14,623.48	8,795.00	107.94	106.23	38.56	-6,169.58	-1,427.74	2,466.12	2,358.91	107.21	23.003	
16,700.00	10,720.00	14,723.48	8,795.00	109.49	107.81	38.56	-6,269.58	-1,426.76	2,466.10	2,357.33	108.77	22.673	
16,800.00	10,720.00	14,823.48	8,795.00	111.04	109.39	38.56	-6,369.57	-1,425.77	2,466.09	2,355.76	110.33	22.351	
16,900.00	10,720.00	14,923.48	8,795.00	112.60	110.97	38.56	-6,469.57	-1,424.78	2,466.08	2,354.18	111.90	22.039	
17,000.00	10,720.00	15,023.48	8,795.00	114.16	112.55	38.56	-6,569.57	-1,423.79	2,466.07	2,352.61	113.46	21.734	
17,100.00	10,720.00	15,123.48	8,795.00	115.72	114.14	38.56	-6,669.56	-1,422.81	2,466.06	2,351.03	115.03	21.438	
17,200.00	10,720.00	15,223.48	8,795.00	117.28	115.73	38.56	-6,769.56	-1,421.82	2,466.05	2,349.45	116.60	21.149	
17,300.00	10,720.00	15,323.48	8,795.00	118.84	117.32	38.56	-6,869.55	-1,420.83	2,466.04	2,347.86	118.18	20.867	
17,400.00	10,720.00	15,423.48	8,795.00	120.41	118.91	38.56	-6,969.55	-1,419.85	2,466.03	2,346.28	119.75	20.593	
17,500.00	10,720.00	15,523.48	8,795.00	121.98	120.50	38.56	-7,069.54	-1,418.86	2,466.02	2,344.69	121.32	20.326	
17,600.00	10,720.00	15,623.48	8,795.00	123.55	122.10	38.56	-7,169.54	-1,417.87	2,466.01	2,343.10	122.90	20.065	
17,700.00	10,720.00	15,723.48	8,795.00	125.13	123.69	38.56	-7,269.53	-1,416.88	2,465.99	2,341.51	124.48	19.810	
17,800.00	10,720.00	15,823.48	8,795.00	126.70	125.29	38.56	-7,369.53	-1,415.90	2,465.98	2,339.92	126.06	19.562	
17,900.00	10,720.00	15,923.48	8,795.00	128.28	126.89	38.56	-7,469.52	-1,414.91	2,465.97	2,338.33	127.64	19.320	
18,000.00	10,720.00	16,023.48	8,795.00	129.86	128.49	38.56	-7,569.52	-1,413.92	2,465.96	2,336.74	129.22	19.083	
18,100.00	10,720.00	16,123.48	8,795.00	131.44	130.09	38.55	-7,669.51	-1,412.94	2,465.95	2,335.15	130.80	18.853	
18,200.00	10,720.00	16,223.48	8,795.00	133.02	131.69	38.55	-7,769.51	-1,411.95	2,465.94	2,333.55	132.39	18.627	
18,300.00	10,720.00	16,323.48	8,795.00	134.61	133.30	38.55	-7,869.50	-1,410.96	2,465.93	2,331.96	133.97	18.406	
18,400.00	10,720.00	16,423.48	8,795.00	136.19	134.90	38.55	-7,969.50	-1,409.97	2,465.92	2,330.36	135.55	18.191	
18,500.00	10,720.00	16,523.48	8,795.00	137.78	136.51	38.55	-8,069.49	-1,408.99	2,465.91	2,328.77	137.14	17.981	
18,600.00	10,720.00	16,623.48	8,795.00	139.37	138.11	38.55	-8,169.49	-1,408.00	2,465.90	2,327.17	138.73	17.775	
18,700.00	10,720.00	16,723.48	8,795.00	140.96	139.72	38.55	-8,269.48	-1,407.01	2,465.88	2,325.57	140.32	17.574	
18,800.00	10,720.00	16,823.48	8,795.00	142.55	141.33	38.55	-8,369.48	-1,406.02	2,465.87	2,323.97	141.90	17.377	
18,900.00	10,720.00	16,923.48	8,795.00	144.15	142.94	38.55	-8,469.47	-1,405.04	2,465.86	2,322.37	143.49	17.185	
19,000.00	10,720.00	17,023.48	8,795.00	145.74	144.55	38.55	-8,569.47	-1,404.05	2,465.85	2,320.77	145.08	16.996	
19,100.00	10,720.00	17,123.48	8,795.00	147.34	146.16	38.55	-8,669.46	-1,403.06	2,465.84	2,319.17	146.67	16.812	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,200.00	10,720.00	17,223.48	8,795.00	148.93	147.78	38.55	-8,769.46	-1,402.08	2,465.83	2,317.57	148.26	16.632	
19,300.00	10,720.00	17,323.48	8,795.00	150.53	149.39	38.55	-8,869.45	-1,401.09	2,465.82	2,315.97	149.85	16.455	
19,400.00	10,720.00	17,423.48	8,795.00	152.13	151.01	38.55	-8,969.45	-1,400.10	2,465.81	2,314.36	151.44	16.282	
19,500.00	10,720.00	17,523.48	8,795.00	153.73	152.62	38.55	-9,069.44	-1,399.11	2,465.80	2,312.76	153.04	16.113	
19,600.00	10,720.00	17,623.48	8,795.00	155.33	154.24	38.55	-9,169.44	-1,398.13	2,465.79	2,311.16	154.63	15.947	
19,700.00	10,720.00	17,723.48	8,795.00	156.94	155.85	38.55	-9,269.43	-1,397.14	2,465.77	2,309.56	156.22	15.784	
19,800.00	10,720.00	17,823.48	8,795.00	158.54	157.47	38.55	-9,369.43	-1,396.15	2,465.76	2,307.95	157.81	15.625	
19,900.00	10,720.00	17,923.48	8,795.00	160.14	159.09	38.55	-9,469.42	-1,395.17	2,465.75	2,306.35	159.40	15.469	
20,000.00	10,720.00	18,023.48	8,795.00	161.75	160.71	38.55	-9,569.42	-1,394.18	2,465.74	2,304.74	161.00	15.315	
20,100.00	10,720.00	18,123.48	8,795.00	163.36	162.33	38.55	-9,669.41	-1,393.19	2,465.73	2,303.14	162.59	15.165	
20,200.00	10,720.00	18,223.48	8,795.00	164.96	163.95	38.55	-9,769.41	-1,392.20	2,465.72	2,301.54	164.18	15.018	
20,300.00	10,720.00	18,323.48	8,795.00	166.57	165.57	38.55	-9,869.40	-1,391.22	2,465.71	2,299.93	165.78	14.874	
20,400.00	10,720.00	18,423.48	8,795.00	168.18	167.19	38.55	-9,969.40	-1,390.23	2,465.70	2,298.32	167.37	14.732	
20,500.00	10,720.00	18,523.48	8,795.00	169.79	168.81	38.55	-10,069.39	-1,389.24	2,465.69	2,296.72	168.97	14.593	
20,600.00	10,720.00	18,623.48	8,795.00	171.40	170.44	38.55	-10,169.39	-1,388.25	2,465.68	2,295.12	170.56	14.456	
20,700.00	10,720.00	18,723.48	8,795.00	173.01	172.06	38.55	-10,269.38	-1,387.27	2,465.66	2,293.51	172.15	14.322	
20,800.00	10,720.00	18,823.48	8,795.00	174.63	173.68	38.55	-10,369.38	-1,386.28	2,465.65	2,291.91	173.75	14.191	
20,838.14	10,720.00	18,861.63	8,795.00	175.17	174.30	38.55	-10,407.52	-1,385.90	2,465.65	2,291.36	174.29	14.147	
20,841.32	10,720.00	18,862.99	8,795.00	175.22	174.32	38.55	-10,408.88	-1,385.89	2,465.65	2,291.34	174.31	14.145	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.70	0.70	0.00	0.00	89.45	0.48	49.99	49.99				
100.00	100.00	100.70	100.70	0.13	0.13	89.45	0.48	49.99	49.99	49.81	0.18	278.752	
200.00	200.00	200.70	200.70	0.48	0.49	89.45	0.48	49.99	49.99	49.31	0.69	72.844	
300.00	300.00	300.70	300.70	0.84	0.84	89.45	0.48	49.99	49.99	48.80	1.19	41.896	
400.00	400.00	400.70	400.70	1.20	1.20	89.45	0.48	49.99	49.99	48.29	1.70	29.404	
500.00	500.00	500.70	500.70	1.56	1.56	89.45	0.48	49.99	49.99	47.79	2.21	22.650	
600.00	600.00	600.70	600.70	1.92	1.92	89.45	0.48	49.99	49.99	47.28	2.71	18.419	
700.00	700.00	700.70	700.70	2.28	2.28	89.45	0.48	49.99	49.99	46.77	3.22	15.520	
800.00	800.00	800.70	800.70	2.63	2.64	89.45	0.48	49.99	49.99	46.26	3.73	13.410	
900.00	900.00	900.70	900.70	2.99	3.00	89.45	0.48	49.99	49.99	45.76	4.23	11.805	
1,000.00	1,000.00	1,000.70	1,000.70	3.35	3.35	89.45	0.48	49.99	49.99	45.25	4.74	10.543	
1,100.00	1,100.00	1,100.70	1,100.70	3.71	3.71	89.45	0.48	49.99	49.99	44.74	5.25	9.524	
1,200.00	1,200.00	1,200.70	1,200.70	4.07	4.07	89.45	0.48	49.99	49.99	44.24	5.76	8.685	
1,300.00	1,300.00	1,300.70	1,300.70	4.43	4.43	89.45	0.48	49.99	49.99	43.73	6.26	7.982	
1,400.00	1,400.00	1,400.70	1,400.70	4.79	4.79	89.45	0.48	49.99	49.99	43.22	6.77	7.385	
1,500.00	1,500.00	1,500.70	1,500.70	5.14	5.15	89.45	0.48	49.99	49.99	42.72	7.28	6.870	
1,600.00	1,600.00	1,600.70	1,600.70	5.50	5.51	89.45	0.48	49.99	49.99	42.21	7.78	6.423	
1,700.00	1,700.00	1,700.70	1,700.70	5.86	5.86	89.45	0.48	49.99	49.99	41.70	8.29	6.030	
1,800.00	1,800.00	1,800.70	1,800.70	6.22	6.22	89.45	0.48	49.99	49.99	41.19	8.80	5.683	
1,900.00	1,900.00	1,900.70	1,900.70	6.58	6.58	89.45	0.48	49.99	49.99	40.69	9.30	5.373	
2,000.00	2,000.00	2,000.70	2,000.70	6.94	6.94	89.45	0.48	49.99	49.99	40.18	9.81	5.095	
2,100.00	2,100.00	2,100.70	2,100.70	7.30	7.30	89.45	0.48	49.99	49.99	39.67	10.32	4.845	
2,200.00	2,200.00	2,200.70	2,200.70	7.65	7.66	89.45	0.48	49.99	49.99	39.17	10.83	4.618	
2,300.00	2,300.00	2,300.70	2,300.70	8.01	8.01	89.45	0.48	49.99	49.99	38.66	11.33	4.411	
2,400.00	2,400.00	2,400.70	2,400.70	8.37	8.37	89.45	0.48	49.99	49.99	38.15	11.84	4.223	
2,500.00	2,500.00	2,500.70	2,500.70	8.73	8.73	89.45	0.48	49.99	49.99	37.65	12.35	4.049	
2,600.00	2,600.00	2,600.70	2,600.70	9.09	9.09	89.45	0.48	49.99	49.99	37.14	12.85	3.889	
2,700.00	2,700.00	2,700.70	2,700.70	9.45	9.45	89.45	0.48	49.99	49.99	36.63	13.36	3.742	
2,800.00	2,800.00	2,800.70	2,800.70	9.80	9.81	89.45	0.48	49.99	49.99	36.13	13.87	3.605	
2,900.00	2,900.00	2,900.70	2,900.70	10.16	10.17	89.45	0.48	49.99	49.99	35.62	14.37	3.478	
3,000.00	3,000.00	3,000.70	3,000.70	10.52	10.52	89.45	0.48	49.99	49.99	35.11	14.88	3.359	
3,035.36	3,035.36	3,036.06	3,036.06	10.65	10.64	89.64	0.31	49.99	49.99	34.94	15.06	3.321	CC
3,100.00	3,100.00	3,100.68	3,100.67	10.88	10.86	90.97	-0.85	50.00	50.01	34.63	15.37	3.252	
3,200.00	3,200.00	3,200.52	3,200.43	11.24	11.19	95.46	-4.78	50.02	50.25	34.40	15.86	3.169	ES
3,300.00	3,300.00	3,300.00	3,299.69	11.60	11.51	102.71	-11.29	50.06	51.33	35.00	16.33	3.143	SF
3,400.00	3,400.00	3,399.26	3,398.53	11.96	11.83	112.11	-20.37	50.12	54.14	37.34	16.81	3.222	
3,500.00	3,500.00	3,497.88	3,496.47	12.31	12.16	122.46	-31.92	50.19	59.63	42.38	17.26	3.455	
3,600.00	3,600.00	3,596.61	3,594.27	12.67	12.49	132.14	-45.49	50.28	68.11	50.40	17.71	3.846	
3,700.00	3,700.00	3,695.64	3,692.33	13.03	12.83	139.64	-59.27	50.36	78.23	60.05	18.18	4.304	
3,800.00	3,800.00	3,794.67	3,790.40	13.39	13.17	145.37	-73.04	50.45	89.37	70.72	18.65	4.792	
3,900.00	3,900.00	3,893.70	3,888.46	13.75	13.52	149.80	-86.82	50.54	101.20	82.07	19.13	5.290	
4,000.00	4,000.00	3,992.72	3,986.53	14.11	13.87	153.29	-100.59	50.62	113.50	93.89	19.61	5.787	
4,100.00	4,100.00	4,091.75	4,084.59	14.46	14.23	156.09	-114.37	50.71	126.14	106.04	20.10	6.276	
4,200.00	4,200.00	4,192.23	4,184.13	14.82	14.59	158.37	-128.11	50.79	138.80	118.19	20.61	6.734	
4,300.00	4,300.00	4,295.22	4,286.44	15.18	14.96	160.02	-139.91	50.87	149.55	128.39	21.16	7.067	
4,400.00	4,400.00	4,398.78	4,389.59	15.54	15.33	161.13	-148.99	50.92	157.85	136.15	21.70	7.274	
4,500.00	4,500.00	4,502.76	4,493.37	15.90	15.70	161.83	-155.29	50.96	163.61	141.38	22.23	7.360	
4,600.00	4,599.99	4,607.00	4,597.56	16.24	16.06	41.52	-158.77	50.99	165.81	143.08	22.73	7.294	
4,666.98	4,666.93	4,676.85	4,667.40	16.47	16.30	42.17	-159.52	50.99	164.74	141.69	23.06	7.145	
4,700.00	4,699.92	4,710.06	4,700.62	16.58	16.42	42.51	-159.52	50.99	163.68	140.46	23.22	7.050	
4,800.00	4,799.82	4,809.97	4,800.52	16.91	16.77	43.57	-159.52	50.99	160.49	136.78	23.70	6.771	
4,900.00	4,899.72	4,909.87	4,900.42	17.24	17.12	44.66	-159.52	50.99	157.35	133.16	24.19	6.505	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	5,009.78	5,000.33	17.58	17.47	45.80	-159.52	50.99	154.27	129.59	24.67	6.253	
5,100.00	5,099.53	5,109.68	5,100.23	17.92	17.82	46.99	-159.52	50.99	151.25	126.09	25.16	6.012	
5,200.00	5,199.44	5,209.59	5,200.14	18.26	18.17	48.23	-159.52	50.99	148.30	122.66	25.65	5.782	
5,300.00	5,299.34	5,309.49	5,300.04	18.60	18.52	49.51	-159.52	50.99	145.43	119.29	26.14	5.564	
5,400.00	5,399.25	5,409.40	5,399.95	18.94	18.87	50.84	-159.52	50.99	142.63	116.00	26.63	5.357	
5,500.00	5,499.15	5,509.30	5,499.85	19.28	19.22	52.23	-159.52	50.99	139.91	112.79	27.12	5.159	
5,600.00	5,599.06	5,609.20	5,599.76	19.62	19.57	53.67	-159.52	50.99	137.27	109.66	27.61	4.972	
5,700.00	5,698.96	5,709.11	5,699.66	19.96	19.92	55.17	-159.52	50.99	134.73	106.63	28.10	4.794	
5,800.00	5,798.86	5,809.01	5,799.56	20.31	20.27	56.72	-159.52	50.99	132.28	103.68	28.59	4.626	
5,834.24	5,833.07	5,843.22	5,833.77	20.42	20.39	57.27	-159.52	50.99	131.46	102.70	28.76	4.571	
5,900.00	5,898.79	5,908.94	5,899.49	20.65	20.62	58.10	-159.52	50.99	130.23	101.14	29.09	4.477	
6,001.22	6,000.00	6,010.15	6,000.70	21.00	20.98	179.56	-159.52	50.99	129.52	99.93	29.59	4.377	
6,100.00	6,098.78	6,108.93	6,099.48	21.36	21.33	179.56	-159.52	50.99	129.52	99.43	30.09	4.305	
6,200.00	6,198.78	6,208.93	6,199.48	21.71	21.68	179.56	-159.52	50.99	129.52	98.93	30.59	4.234	
6,300.00	6,298.78	6,308.93	6,299.48	22.07	22.04	179.56	-159.52	50.99	129.52	98.43	31.10	4.165	
6,400.00	6,398.78	6,408.93	6,399.48	22.43	22.39	179.56	-159.52	50.99	129.52	97.92	31.60	4.099	
6,500.00	6,498.78	6,508.93	6,499.48	22.78	22.74	179.56	-159.52	50.99	129.52	97.42	32.10	4.034	
6,600.00	6,598.78	6,608.93	6,599.48	23.14	23.10	179.56	-159.52	50.99	129.52	96.92	32.61	3.972	
6,700.00	6,698.78	6,708.93	6,699.48	23.50	23.45	179.56	-159.52	50.99	129.52	96.41	33.11	3.912	
6,800.00	6,798.78	6,808.93	6,799.48	23.85	23.80	179.56	-159.52	50.99	129.52	95.91	33.62	3.853	
6,900.00	6,898.78	6,908.93	6,899.48	24.21	24.16	179.56	-159.52	50.99	129.52	95.40	34.12	3.796	
7,000.00	6,998.78	7,008.93	6,999.48	24.57	24.51	179.56	-159.52	50.99	129.52	94.90	34.63	3.741	
7,100.00	7,098.78	7,108.93	7,099.48	24.93	24.87	179.56	-159.52	50.99	129.52	94.39	35.13	3.687	
7,200.00	7,198.78	7,208.93	7,199.48	25.28	25.22	179.56	-159.52	50.99	129.52	93.89	35.63	3.635	
7,300.00	7,298.78	7,308.93	7,299.48	25.64	25.57	179.56	-159.52	50.99	129.52	93.39	36.14	3.584	
7,400.00	7,398.78	7,408.93	7,399.48	26.00	25.93	179.56	-159.52	50.99	129.52	92.88	36.64	3.535	
7,500.00	7,498.78	7,508.93	7,499.48	26.35	26.28	179.56	-159.52	50.99	129.52	92.38	37.15	3.487	
7,600.00	7,598.78	7,608.93	7,599.48	26.71	26.64	179.56	-159.52	50.99	129.52	91.87	37.65	3.440	
7,700.00	7,698.78	7,708.93	7,699.48	27.07	26.99	179.56	-159.52	50.99	129.52	91.37	38.16	3.394	
7,800.00	7,798.78	7,808.93	7,799.48	27.43	27.35	179.56	-159.52	50.99	129.52	90.86	38.66	3.350	
7,900.00	7,898.78	7,908.93	7,899.48	27.78	27.70	179.56	-159.52	50.99	129.52	90.36	39.17	3.307	
8,000.00	7,998.78	8,008.93	7,999.48	28.14	28.06	179.56	-159.52	50.99	129.52	89.85	39.67	3.265	
8,100.00	8,098.78	8,108.93	8,099.48	28.50	28.41	179.56	-159.52	50.99	129.52	89.35	40.18	3.224	
8,200.00	8,198.78	8,191.65	8,182.00	28.86	28.70	179.56	-164.31	51.04	135.45	95.10	40.35	3.357	
8,300.00	8,298.78	8,269.93	8,258.69	29.21	28.98	179.55	-179.68	51.19	155.14	115.32	39.82	3.896	
8,400.00	8,398.78	8,342.81	8,327.60	29.57	29.25	179.53	-203.25	51.42	187.58	148.75	38.83	4.831	
8,500.00	8,498.78	8,408.76	8,386.93	29.93	29.50	179.52	-231.97	51.69	231.22	193.61	37.61	6.148	
8,600.00	8,598.78	8,467.25	8,436.48	30.29	29.73	179.51	-262.99	52.00	284.36	248.04	36.32	7.830	
8,700.00	8,698.78	8,518.44	8,477.06	30.64	29.94	179.50	-294.17	52.30	345.34	310.29	35.06	9.851	
8,800.00	8,798.78	8,562.95	8,509.96	31.00	30.12	179.50	-324.13	52.59	412.72	378.84	33.89	12.179	
8,900.00	8,898.78	8,600.00	8,535.51	31.36	30.28	179.49	-350.95	52.85	485.28	452.51	32.77	14.809	
9,000.00	8,998.78	8,635.10	8,558.06	31.72	30.44	179.49	-377.84	53.11	562.01	530.08	31.92	17.605	
9,100.00	9,098.78	8,664.30	8,575.54	32.07	30.58	179.48	-401.22	53.34	642.13	610.99	31.14	20.622	
9,200.00	9,198.78	8,700.00	8,595.26	32.43	30.75	179.48	-430.98	53.63	725.17	694.38	30.79	23.549	
9,300.00	9,298.78	8,700.00	8,595.26	32.79	30.75	179.48	-430.98	53.63	810.38	780.80	29.58	27.397	
9,400.00	9,398.78	8,732.05	8,611.35	33.15	30.91	179.48	-458.68	53.90	897.18	867.71	29.46	30.452	
9,500.00	9,498.78	8,750.00	8,619.68	33.51	30.99	179.48	-474.59	54.05	985.75	956.65	29.10	33.876	
9,600.00	9,598.78	8,750.00	8,619.68	33.86	30.99	179.48	-474.59	54.05	1,075.95	1,047.46	28.49	37.770	
9,700.00	9,698.78	8,779.32	8,632.20	34.22	31.15	179.48	-501.09	54.31	1,166.63	1,138.06	28.56	40.843	
9,800.00	9,798.78	8,800.00	8,640.21	34.58	31.25	179.47	-520.16	54.50	1,258.64	1,230.11	28.53	44.122	
9,900.00	9,898.78	8,800.00	8,640.21	34.94	31.25	179.47	-520.16	54.50	1,351.30	1,323.09	28.21	47.897	
10,000.00	9,998.78	8,800.00	8,640.21	35.29	31.25	179.47	-520.16	54.50	1,444.95	1,416.96	27.99	51.621	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	8,823.19	8,648.37	35.65	31.38	179.47	-541.86	54.71	1,538.75	1,510.61	28.14	54.678	
10,148.26	10,147.04	8,827.45	8,649.77	35.82	31.40	179.47	-545.89	54.75	1,584.32	1,556.19	28.14	56.310	
10,150.00	10,148.78	8,827.60	8,649.82	35.83	31.40	0.03	-546.03	54.75	1,585.96	1,557.83	28.14	56.369	
10,200.00	10,198.71	8,850.00	8,656.69	35.99	31.52	0.02	-567.34	54.96	1,632.86	1,604.53	28.33	57.641	
10,250.00	10,248.24	8,850.00	8,656.69	36.16	31.52	0.02	-567.34	54.96	1,677.63	1,649.42	28.21	59.468	
10,300.00	10,297.01	8,850.00	8,656.69	36.32	31.52	0.02	-567.34	54.96	1,720.65	1,692.58	28.07	61.291	
10,350.00	10,344.64	8,850.00	8,656.69	36.48	31.52	0.01	-567.34	54.96	1,761.74	1,733.82	27.92	63.100	
10,400.00	10,390.76	8,850.00	8,656.69	36.63	31.52	0.01	-567.34	54.96	1,800.74	1,772.98	27.75	64.882	
10,450.00	10,435.02	8,850.00	8,656.69	36.78	31.52	0.01	-567.34	54.96	1,837.47	1,809.90	27.58	66.626	
10,500.00	10,477.10	8,875.89	8,663.59	36.94	31.67	0.01	-592.30	55.20	1,871.05	1,843.43	27.63	67.721	
10,550.00	10,516.66	8,900.00	8,668.99	37.09	31.80	0.01	-615.79	55.43	1,902.51	1,874.87	27.64	68.832	
10,600.00	10,553.41	8,900.00	8,668.99	37.25	31.80	0.01	-615.79	55.43	1,930.64	1,903.20	27.43	70.378	
10,650.00	10,587.07	8,900.00	8,668.99	37.41	31.80	0.01	-615.79	55.43	1,956.00	1,928.77	27.23	71.835	
10,700.00	10,617.37	8,900.00	8,668.99	37.57	31.80	0.01	-615.79	55.43	1,978.52	1,951.49	27.04	73.182	
10,750.00	10,644.10	8,924.69	8,673.50	37.74	31.94	0.01	-640.06	55.66	1,997.45	1,970.43	27.02	73.937	
10,800.00	10,667.05	8,950.00	8,677.03	37.91	32.09	0.01	-665.12	55.91	2,013.61	1,986.62	26.99	74.596	
10,850.00	10,686.04	8,950.00	8,677.03	38.09	32.09	0.01	-665.12	55.91	2,026.01	1,999.19	26.83	75.525	
10,900.00	10,700.92	8,950.00	8,677.03	38.28	32.09	0.01	-665.12	55.91	2,035.33	2,008.66	26.68	76.293	
10,950.00	10,711.59	8,950.00	8,677.03	38.47	32.09	0.01	-665.12	55.91	2,041.54	2,014.98	26.56	76.863	
11,000.00	10,717.97	8,978.54	8,679.67	38.67	32.26	0.01	-693.54	56.18	2,043.71	2,017.13	26.58	76.887	
11,048.26	10,720.00	9,000.00	8,680.73	38.86	32.38	0.01	-714.97	56.39	2,043.04	2,016.46	26.58	76.851	
11,100.00	10,720.00	9,000.00	8,680.73	39.07	32.38	0.01	-714.97	56.39	2,040.86	2,014.32	26.53	76.918	
11,200.00	10,720.00	9,039.70	8,681.00	39.54	32.63	0.01	-754.67	56.78	2,039.70	2,013.07	26.63	76.607	
11,300.00	10,720.00	9,139.70	8,681.00	40.07	33.28	0.01	-854.66	57.75	2,039.70	2,012.80	26.90	75.820	
11,400.00	10,720.00	9,239.70	8,681.00	40.66	34.00	0.01	-954.66	58.72	2,039.70	2,012.48	27.22	74.936	
11,500.00	10,720.00	9,339.70	8,681.00	41.31	34.78	0.01	-1,054.65	59.69	2,039.70	2,012.12	27.58	73.962	
11,600.00	10,720.00	9,439.70	8,681.00	42.02	35.62	0.01	-1,154.65	60.67	2,039.70	2,011.72	27.98	72.910	
11,700.00	10,720.00	9,539.70	8,681.00	42.77	36.52	0.01	-1,254.64	61.64	2,039.70	2,011.29	28.41	71.791	
11,800.00	10,720.00	9,639.70	8,681.00	43.58	37.47	0.01	-1,354.64	62.61	2,039.70	2,010.82	28.88	70.619	
11,900.00	10,720.00	9,739.70	8,681.00	44.43	38.47	0.01	-1,454.63	63.58	2,039.70	2,010.31	29.39	69.402	
12,000.00	10,720.00	9,839.70	8,681.00	45.33	39.51	0.01	-1,554.63	64.55	2,039.70	2,009.77	29.93	68.153	
12,100.00	10,720.00	9,939.70	8,681.00	46.26	40.59	0.01	-1,654.62	65.53	2,039.70	2,009.20	30.50	66.879	
12,200.00	10,720.00	10,039.70	8,681.00	47.24	41.70	0.01	-1,754.62	66.50	2,039.70	2,008.60	31.10	65.591	
12,300.00	10,720.00	10,139.70	8,681.00	48.26	42.86	0.01	-1,854.61	67.47	2,039.70	2,007.98	31.72	64.296	
12,400.00	10,720.00	10,239.70	8,681.00	49.30	44.04	0.01	-1,954.61	68.44	2,039.70	2,007.32	32.38	63.001	
12,500.00	10,720.00	10,339.70	8,681.00	50.38	45.26	0.01	-2,054.60	69.42	2,039.70	2,006.65	33.05	61.710	
12,600.00	10,720.00	10,439.70	8,681.00	51.50	46.50	0.01	-2,154.60	70.39	2,039.70	2,005.95	33.75	60.431	
12,700.00	10,720.00	10,539.70	8,681.00	52.63	47.76	0.01	-2,254.59	71.36	2,039.70	2,005.23	34.47	59.167	
12,800.00	10,720.00	10,639.70	8,681.00	53.80	49.05	0.01	-2,354.59	72.33	2,039.70	2,004.48	35.22	57.921	
12,900.00	10,720.00	10,739.70	8,681.00	54.99	50.36	0.01	-2,454.58	73.30	2,039.70	2,003.72	35.98	56.697	
13,000.00	10,720.00	10,839.70	8,681.00	56.20	51.69	0.01	-2,554.58	74.28	2,039.70	2,002.95	36.75	55.496	
13,100.00	10,720.00	10,939.70	8,681.00	57.44	53.04	0.01	-2,654.58	75.25	2,039.70	2,002.15	37.55	54.321	
13,200.00	10,720.00	11,039.70	8,681.00	58.70	54.40	0.01	-2,754.57	76.22	2,039.70	2,001.34	38.36	53.173	
13,300.00	10,720.00	11,139.70	8,681.00	59.97	55.78	0.01	-2,854.57	77.19	2,039.70	2,000.52	39.18	52.054	
13,400.00	10,720.00	11,239.70	8,681.00	61.27	57.17	0.01	-2,954.56	78.16	2,039.70	1,999.68	40.02	50.962	
13,500.00	10,720.00	11,339.70	8,681.00	62.58	58.58	0.01	-3,054.56	79.14	2,039.70	1,998.82	40.88	49.900	
13,600.00	10,720.00	11,439.70	8,681.00	63.90	60.00	0.01	-3,154.55	80.11	2,039.70	1,997.96	41.74	48.867	
13,700.00	10,720.00	11,539.70	8,681.00	65.24	61.43	0.01	-3,254.55	81.08	2,039.70	1,997.09	42.61	47.863	
13,800.00	10,720.00	11,639.70	8,681.00	66.60	62.88	0.01	-3,354.54	82.05	2,039.70	1,996.20	43.50	46.888	
13,900.00	10,720.00	11,739.70	8,681.00	67.97	64.33	0.01	-3,454.54	83.03	2,039.70	1,995.30	44.40	45.942	
14,000.00	10,720.00	11,839.70	8,681.00	69.35	65.79	0.00	-3,554.53	84.00	2,039.70	1,994.40	45.30	45.024	
14,100.00	10,720.00	11,939.70	8,681.00	70.74	67.26	0.00	-3,654.53	84.97	2,039.70	1,993.48	46.22	44.133	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	10,720.00	12,039.70	8,681.00	72.14	68.74	0.00	-3,754.52	85.94	2,039.70	1,992.56	47.14	43.269	
14,300.00	10,720.00	12,139.70	8,681.00	73.55	70.23	0.00	-3,854.52	86.91	2,039.70	1,991.63	48.07	42.431	
14,400.00	10,720.00	12,239.70	8,681.00	74.98	71.72	0.00	-3,954.51	87.89	2,039.70	1,990.69	49.01	41.618	
14,500.00	10,720.00	12,339.70	8,681.00	76.41	73.22	0.00	-4,054.51	88.86	2,039.70	1,989.75	49.95	40.831	
14,600.00	10,720.00	12,439.70	8,681.00	77.85	74.73	0.00	-4,154.50	89.83	2,039.70	1,988.79	50.91	40.067	
14,700.00	10,720.00	12,539.70	8,681.00	79.30	76.24	0.00	-4,254.50	90.80	2,039.70	1,987.83	51.87	39.327	
14,800.00	10,720.00	12,639.70	8,681.00	80.76	77.76	0.00	-4,354.50	91.78	2,039.70	1,986.87	52.83	38.609	
14,900.00	10,720.00	12,739.70	8,681.00	82.22	79.28	0.00	-4,454.49	92.75	2,039.70	1,985.90	53.80	37.913	
15,000.00	10,720.00	12,839.70	8,681.00	83.69	80.81	0.00	-4,554.49	93.72	2,039.70	1,984.93	54.77	37.238	
15,100.00	10,720.00	12,939.70	8,681.00	85.17	82.35	0.00	-4,654.48	94.69	2,039.70	1,983.95	55.75	36.584	
15,200.00	10,720.00	13,039.70	8,681.00	86.65	83.88	0.00	-4,754.48	95.66	2,039.70	1,982.96	56.74	35.948	
15,300.00	10,720.00	13,139.70	8,681.00	88.14	85.43	0.00	-4,854.47	96.64	2,039.70	1,981.97	57.73	35.332	
15,400.00	10,720.00	13,239.70	8,681.00	89.64	86.97	0.00	-4,954.47	97.61	2,039.70	1,980.98	58.72	34.734	
15,500.00	10,720.00	13,339.70	8,681.00	91.14	88.52	0.00	-5,054.46	98.58	2,039.70	1,979.98	59.72	34.154	
15,600.00	10,720.00	13,439.70	8,681.00	92.65	90.08	0.00	-5,154.46	99.55	2,039.70	1,978.98	60.72	33.591	
15,700.00	10,720.00	13,539.70	8,681.00	94.16	91.63	0.00	-5,254.45	100.53	2,039.70	1,977.97	61.73	33.043	
15,800.00	10,720.00	13,639.70	8,681.00	95.67	93.19	0.00	-5,354.45	101.50	2,039.70	1,976.96	62.74	32.512	
15,900.00	10,720.00	13,739.70	8,681.00	97.19	94.76	0.00	-5,454.44	102.47	2,039.70	1,975.95	63.75	31.996	
16,000.00	10,720.00	13,839.70	8,681.00	98.72	96.32	0.00	-5,554.44	103.44	2,039.70	1,974.94	64.76	31.494	
16,100.00	10,720.00	13,939.70	8,681.00	100.25	97.89	0.00	-5,654.43	104.41	2,039.70	1,973.92	65.78	31.006	
16,200.00	10,720.00	14,039.70	8,681.00	101.78	99.46	0.00	-5,754.43	105.39	2,039.70	1,972.90	66.80	30.532	
16,300.00	10,720.00	14,139.70	8,681.00	103.31	101.04	0.00	-5,854.42	106.36	2,039.70	1,971.87	67.83	30.071	
16,400.00	10,720.00	14,239.70	8,681.00	104.85	102.62	0.00	-5,954.42	107.33	2,039.70	1,970.84	68.86	29.623	
16,500.00	10,720.00	14,339.70	8,681.00	106.40	104.19	0.00	-6,054.41	108.30	2,039.70	1,969.81	69.89	29.186	
16,600.00	10,720.00	14,439.70	8,681.00	107.94	105.78	0.00	-6,154.41	109.28	2,039.70	1,968.78	70.92	28.762	
16,700.00	10,720.00	14,539.70	8,681.00	109.49	107.36	0.00	-6,254.41	110.25	2,039.70	1,967.75	71.95	28.348	
16,800.00	10,720.00	14,639.70	8,681.00	111.04	108.94	0.00	-6,354.40	111.22	2,039.70	1,966.71	72.99	27.946	
16,900.00	10,720.00	14,739.70	8,681.00	112.60	110.53	0.00	-6,454.40	112.19	2,039.70	1,965.67	74.03	27.554	
17,000.00	10,720.00	14,839.70	8,681.00	114.16	112.12	0.00	-6,554.39	113.16	2,039.70	1,964.63	75.07	27.172	
17,100.00	10,720.00	14,939.70	8,681.00	115.72	113.71	0.00	-6,654.39	114.14	2,039.70	1,963.59	76.11	26.799	
17,200.00	10,720.00	15,039.70	8,681.00	117.28	115.31	0.00	-6,754.38	115.11	2,039.70	1,962.55	77.15	26.437	
17,300.00	10,720.00	15,139.70	8,681.00	118.84	116.90	0.00	-6,854.38	116.08	2,039.70	1,961.50	78.20	26.083	
17,400.00	10,720.00	15,239.70	8,681.00	120.41	118.50	0.00	-6,954.37	117.05	2,039.70	1,960.45	79.25	25.738	
17,500.00	10,720.00	15,339.70	8,681.00	121.98	120.09	0.00	-7,054.37	118.03	2,039.70	1,959.40	80.30	25.402	
17,600.00	10,720.00	15,439.70	8,681.00	123.55	121.69	0.00	-7,154.36	119.00	2,039.70	1,958.35	81.35	25.073	
17,700.00	10,720.00	15,539.70	8,681.00	125.13	123.29	0.00	-7,254.36	119.97	2,039.70	1,957.30	82.40	24.753	
17,800.00	10,720.00	15,639.70	8,681.00	126.70	124.89	0.00	-7,354.35	120.94	2,039.70	1,956.24	83.46	24.440	
17,900.00	10,720.00	15,739.70	8,681.00	128.28	126.50	0.00	-7,454.35	121.91	2,039.70	1,955.19	84.51	24.135	
18,000.00	10,720.00	15,839.70	8,681.00	129.86	128.10	0.00	-7,554.34	122.89	2,039.70	1,954.13	85.57	23.837	
18,100.00	10,720.00	15,939.70	8,681.00	131.44	129.71	0.00	-7,654.34	123.86	2,039.70	1,953.07	86.63	23.546	
18,200.00	10,720.00	16,039.70	8,681.00	133.02	131.31	0.00	-7,754.33	124.83	2,039.70	1,952.01	87.69	23.261	
18,300.00	10,720.00	16,139.70	8,681.00	134.61	132.92	0.00	-7,854.33	125.80	2,039.70	1,950.95	88.75	22.983	
18,400.00	10,720.00	16,239.70	8,681.00	136.19	134.53	0.00	-7,954.32	126.78	2,039.70	1,949.89	89.81	22.711	
18,500.00	10,720.00	16,339.70	8,681.00	137.78	136.14	0.00	-8,054.32	127.75	2,039.70	1,948.83	90.87	22.446	
18,600.00	10,720.00	16,439.70	8,681.00	139.37	137.75	0.00	-8,154.32	128.72	2,039.70	1,947.76	91.94	22.186	
18,700.00	10,720.00	16,539.70	8,681.00	140.96	139.36	0.00	-8,254.31	129.69	2,039.70	1,946.70	93.00	21.932	
18,800.00	10,720.00	16,639.70	8,681.00	142.55	140.97	0.00	-8,354.31	130.66	2,039.70	1,945.63	94.07	21.683	
18,900.00	10,720.00	16,739.70	8,681.00	144.15	142.59	0.00	-8,454.30	131.64	2,039.70	1,944.56	95.14	21.440	
19,000.00	10,720.00	16,839.70	8,681.00	145.74	144.20	0.00	-8,554.30	132.61	2,039.70	1,943.50	96.20	21.202	
19,100.00	10,720.00	16,939.70	8,681.00	147.34	145.82	0.00	-8,654.29	133.58	2,039.70	1,942.43	97.27	20.969	
19,200.00	10,720.00	17,039.70	8,681.00	148.93	147.43	0.00	-8,754.29	134.55	2,039.70	1,941.36	98.34	20.740	
19,300.00	10,720.00	17,139.70	8,681.00	150.53	149.05	0.00	-8,854.28	135.53	2,039.70	1,940.28	99.42	20.517	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,720.00	17,239.70	8,681.00	152.13	150.67	0.00	-8,954.28	136.50	2,039.70	1,939.21	100.49	20.298	
19,500.00	10,720.00	17,339.70	8,681.00	153.73	152.28	0.00	-9,054.27	137.47	2,039.70	1,938.14	101.56	20.084	
19,600.00	10,720.00	17,439.70	8,681.00	155.33	153.90	0.00	-9,154.27	138.44	2,039.70	1,937.07	102.63	19.874	
19,700.00	10,720.00	17,539.70	8,681.00	156.94	155.52	0.00	-9,254.26	139.41	2,039.70	1,935.99	103.71	19.668	
19,800.00	10,720.00	17,639.70	8,681.00	158.54	157.14	0.00	-9,354.26	140.39	2,039.70	1,934.92	104.78	19.466	
19,900.00	10,720.00	17,739.70	8,681.00	160.14	158.76	0.00	-9,454.25	141.36	2,039.70	1,933.84	105.86	19.268	
20,000.00	10,720.00	17,839.70	8,681.00	161.75	160.38	0.00	-9,554.25	142.33	2,039.70	1,932.77	106.93	19.074	
20,100.00	10,720.00	17,939.70	8,681.00	163.36	162.01	0.00	-9,654.24	143.30	2,039.70	1,931.69	108.01	18.884	
20,200.00	10,720.00	18,039.70	8,681.00	164.96	163.63	0.00	-9,754.24	144.28	2,039.70	1,930.61	109.09	18.698	
20,300.00	10,720.00	18,139.70	8,681.00	166.57	165.25	0.00	-9,854.24	145.25	2,039.70	1,929.53	110.17	18.514	
20,400.00	10,720.00	18,239.70	8,681.00	168.18	166.88	0.00	-9,954.23	146.22	2,039.70	1,928.45	111.25	18.335	
20,500.00	10,720.00	18,339.70	8,681.00	169.79	168.50	0.00	-10,054.23	147.19	2,039.70	1,927.37	112.33	18.159	
20,600.00	10,720.00	18,439.70	8,681.00	171.40	170.13	0.00	-10,154.22	148.16	2,039.70	1,926.29	113.41	17.986	
20,700.00	10,720.00	18,539.70	8,681.00	173.01	171.75	0.00	-10,254.22	149.14	2,039.70	1,925.21	114.49	17.816	
20,800.00	10,720.00	18,639.70	8,681.00	174.63	173.38	0.00	-10,354.21	150.11	2,039.70	1,924.13	115.57	17.649	
20,827.83	10,720.00	18,667.54	8,681.00	175.02	173.83	0.00	-10,382.04	150.38	2,039.70	1,923.91	115.79	17.615	
20,841.32	10,720.00	18,681.03	8,681.00	175.22	174.05	0.00	-10,395.53	150.51	2,039.70	1,923.80	115.90	17.598	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 104H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.10	0.10	0.00	0.00	89.45	0.72	74.99	74.99				
100.00	100.00	100.10	100.10	0.13	0.13	89.45	0.72	74.99	74.99	74.82	0.18	421.750	
200.00	200.00	200.10	200.10	0.48	0.48	89.45	0.72	74.99	74.99	74.31	0.68	109.516	
300.00	300.00	300.10	300.10	0.84	0.84	89.45	0.72	74.99	74.99	73.80	1.19	62.928	
400.00	400.00	400.10	400.10	1.20	1.20	89.45	0.72	74.99	74.99	73.29	1.70	44.148	
500.00	500.00	500.10	500.10	1.56	1.56	89.45	0.72	74.99	74.99	72.79	2.21	34.001	
600.00	600.00	600.10	600.10	1.92	1.92	89.45	0.72	74.99	74.99	72.28	2.71	27.646	
700.00	700.00	700.10	700.10	2.28	2.28	89.45	0.72	74.99	74.99	71.77	3.22	23.293	
800.00	800.00	800.10	800.10	2.63	2.64	89.45	0.72	74.99	74.99	71.27	3.73	20.124	
900.00	900.00	900.10	900.10	2.99	2.99	89.45	0.72	74.99	74.99	70.76	4.23	17.714	
1,000.00	1,000.00	1,000.10	1,000.10	3.35	3.35	89.45	0.72	74.99	74.99	70.25	4.74	15.820	
1,100.00	1,100.00	1,100.10	1,100.10	3.71	3.71	89.45	0.72	74.99	74.99	69.75	5.25	14.292	
1,200.00	1,200.00	1,200.10	1,200.10	4.07	4.07	89.45	0.72	74.99	74.99	69.24	5.75	13.033	
1,300.00	1,300.00	1,300.10	1,300.10	4.43	4.43	89.45	0.72	74.99	74.99	68.73	6.26	11.977	
1,400.00	1,400.00	1,400.10	1,400.10	4.79	4.79	89.45	0.72	74.99	74.99	68.23	6.77	11.080	
1,500.00	1,500.00	1,500.10	1,500.10	5.14	5.14	89.45	0.72	74.99	74.99	67.72	7.28	10.308	
1,600.00	1,600.00	1,600.10	1,600.10	5.50	5.50	89.45	0.72	74.99	74.99	67.21	7.78	9.637	
1,700.00	1,700.00	1,700.10	1,700.10	5.86	5.86	89.45	0.72	74.99	74.99	66.70	8.29	9.047	
1,800.00	1,800.00	1,800.10	1,800.10	6.22	6.22	89.45	0.72	74.99	74.99	66.20	8.80	8.526	
1,900.00	1,900.00	1,900.10	1,900.10	6.58	6.58	89.45	0.72	74.99	74.99	65.69	9.30	8.061	
1,916.63	1,916.63	1,916.73	1,916.73	6.64	6.64	89.45	0.72	74.99	74.99	65.61	9.39	7.989	CC
2,000.00	2,000.00	2,000.00	2,000.00	6.94	6.94	89.45	0.72	74.99	74.99	65.18	9.81	7.645	ES
2,100.00	2,100.00	2,097.54	2,097.52	7.30	7.28	89.65	0.47	76.63	76.68	66.38	10.30	7.446	SF
2,200.00	2,200.00	2,194.76	2,194.61	7.65	7.61	90.18	-0.26	81.53	81.72	70.95	10.77	7.589	
2,300.00	2,300.00	2,291.53	2,291.02	8.01	7.94	90.94	-1.47	89.65	90.12	78.89	11.23	8.028	
2,400.00	2,400.00	2,387.63	2,386.45	8.37	8.28	91.79	-3.15	100.89	101.86	90.19	11.67	8.729	
2,500.00	2,500.00	2,482.87	2,480.59	8.73	8.62	92.63	-5.28	115.14	116.90	104.81	12.10	9.663	
2,600.00	2,600.00	2,577.04	2,573.15	9.09	8.97	93.39	-7.84	132.27	135.22	122.71	12.51	10.806	
2,700.00	2,700.00	2,669.97	2,663.88	9.45	9.33	94.06	-10.81	152.12	156.74	143.83	12.91	12.138	
2,800.00	2,800.00	2,761.48	2,752.55	9.80	9.70	94.64	-14.15	174.49	181.41	168.11	13.30	13.642	
2,900.00	2,900.00	2,851.43	2,838.95	10.16	10.08	95.12	-17.84	199.21	209.14	195.48	13.67	15.302	
3,000.00	3,000.00	2,942.98	2,926.14	10.52	10.49	95.53	-21.97	226.80	239.56	225.48	14.08	17.011	
3,100.00	3,100.00	3,038.08	3,016.59	10.88	10.93	95.87	-26.31	255.87	270.44	255.87	14.57	18.563	
3,200.00	3,200.00	3,133.19	3,107.04	11.24	11.39	96.14	-30.65	284.95	301.32	286.26	15.06	20.011	
3,300.00	3,300.00	3,228.29	3,197.48	11.60	11.86	96.36	-35.00	314.02	332.21	316.66	15.55	21.365	
3,400.00	3,400.00	3,323.39	3,287.93	11.96	12.34	96.54	-39.34	343.09	363.10	347.06	16.04	22.633	
3,500.00	3,500.00	3,418.50	3,378.38	12.31	12.84	96.70	-43.69	372.16	393.99	377.45	16.54	23.823	
3,600.00	3,600.00	3,513.60	3,468.82	12.67	13.34	96.83	-48.03	401.24	424.89	407.85	17.04	24.941	
3,700.00	3,700.00	3,608.70	3,559.27	13.03	13.85	96.94	-52.38	430.31	455.79	438.25	17.53	25.993	
3,800.00	3,800.00	3,703.81	3,649.72	13.39	14.37	97.04	-56.72	459.38	486.68	468.65	18.04	26.985	
3,900.00	3,900.00	3,798.91	3,740.16	13.75	14.89	97.13	-61.06	488.45	517.58	499.05	18.54	27.921	
4,000.00	4,000.00	3,894.01	3,830.61	14.11	15.42	97.20	-65.41	517.52	548.49	529.44	19.04	28.806	
4,100.00	4,100.00	3,989.12	3,921.06	14.46	15.96	97.27	-69.75	546.60	579.39	559.84	19.55	29.642	
4,200.00	4,200.00	4,084.22	4,011.50	14.82	16.50	97.33	-74.10	575.67	610.29	590.24	20.05	30.435	
4,300.00	4,300.00	4,179.32	4,101.95	15.18	17.04	97.39	-78.44	604.74	641.19	620.63	20.56	31.188	
4,400.00	4,400.00	4,274.43	4,192.40	15.54	17.59	97.44	-82.79	633.81	672.10	651.03	21.07	31.902	
4,500.00	4,500.00	4,369.53	4,282.84	15.90	18.14	97.49	-87.13	662.89	703.00	681.42	21.58	32.581	
4,600.00	4,599.99	4,465.00	4,373.64	16.24	18.70	-23.29	-91.49	692.07	732.76	710.68	22.08	33.189	
4,666.98	4,666.93	4,529.33	4,434.82	16.47	19.08	-23.22	-94.43	711.73	751.40	728.99	22.41	33.530	
4,700.00	4,699.92	4,561.11	4,465.04	16.58	19.26	-23.25	-95.88	721.45	760.34	737.77	22.57	33.681	
4,800.00	4,799.82	4,657.37	4,556.59	16.91	19.83	-23.34	-100.28	750.88	787.41	764.33	23.07	34.124	
4,900.00	4,899.72	4,753.63	4,648.14	17.24	20.40	-23.42	-104.68	780.30	814.47	790.90	23.58	34.546	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 104H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	4,849.90	4,739.69	17.58	20.97	-23.50	-109.07	809.73	841.54	817.46	24.08	34.947	
5,100.00	5,099.53	4,946.16	4,831.23	17.92	21.55	-23.58	-113.47	839.15	868.61	844.02	24.59	35.331	
5,200.00	5,199.44	5,042.42	4,922.78	18.26	22.12	-23.64	-117.87	868.58	895.68	870.59	25.09	35.697	
5,300.00	5,299.34	5,138.68	5,014.33	18.60	22.70	-23.71	-122.26	898.01	922.75	897.15	25.60	36.046	
5,400.00	5,399.25	5,234.94	5,105.88	18.94	23.28	-23.77	-126.66	927.43	949.82	923.72	26.11	36.381	
5,500.00	5,499.15	5,331.20	5,197.42	19.28	23.86	-23.83	-131.06	956.86	976.90	950.28	26.62	36.701	
5,600.00	5,599.06	5,427.46	5,288.97	19.62	24.45	-23.88	-135.46	986.28	1,003.97	976.84	27.13	37.008	
5,700.00	5,698.96	5,523.72	5,380.52	19.96	25.03	-23.93	-139.85	1,015.71	1,031.05	1,003.41	27.64	37.301	
5,800.00	5,798.86	5,619.98	5,472.06	20.31	25.62	-23.98	-144.25	1,045.14	1,058.12	1,029.97	28.15	37.583	
5,834.24	5,833.07	5,652.94	5,503.41	20.42	25.82	-24.00	-145.76	1,055.21	1,067.40	1,039.07	28.33	37.677	
5,900.00	5,898.79	5,716.10	5,563.48	20.65	26.20	-24.13	-148.64	1,074.52	1,085.70	1,057.03	28.67	37.872	
6,001.22	6,000.00	5,812.74	5,655.38	21.00	26.79	96.66	-153.06	1,104.06	1,115.80	1,086.61	29.19	38.225	
6,100.00	6,098.78	5,906.68	5,744.72	21.36	27.37	96.71	-157.35	1,132.78	1,146.32	1,116.62	29.70	38.593	
6,200.00	6,198.78	6,001.78	5,835.17	21.71	27.95	96.75	-161.69	1,161.85	1,177.22	1,146.99	30.22	38.953	
6,300.00	6,298.78	6,096.89	5,925.62	22.07	28.53	96.80	-166.04	1,190.92	1,208.11	1,177.37	30.74	39.301	
6,400.00	6,398.78	6,191.99	6,016.06	22.43	29.12	96.84	-170.38	1,219.99	1,239.01	1,207.75	31.26	39.636	
6,500.00	6,498.78	6,287.09	6,106.51	22.78	29.70	96.88	-174.72	1,249.07	1,269.90	1,238.13	31.78	39.960	
6,600.00	6,598.78	6,382.20	6,196.96	23.14	30.29	96.92	-179.07	1,278.14	1,300.80	1,268.50	32.30	40.273	
6,700.00	6,698.78	6,477.30	6,287.40	23.50	30.88	96.96	-183.41	1,307.21	1,331.70	1,298.88	32.82	40.575	
6,800.00	6,798.78	6,572.40	6,377.85	23.85	31.46	96.99	-187.76	1,336.28	1,362.60	1,329.26	33.34	40.868	
6,900.00	6,898.78	6,667.51	6,468.30	24.21	32.05	97.03	-192.10	1,365.36	1,393.50	1,359.64	33.86	41.151	
7,000.00	6,998.78	6,762.61	6,558.74	24.57	32.64	97.06	-196.45	1,394.43	1,424.40	1,390.01	34.38	41.426	
7,100.00	7,098.78	6,908.30	6,697.81	24.93	33.52	97.10	-202.86	1,437.33	1,454.44	1,419.21	35.24	41.278	
7,200.00	7,198.78	7,107.06	6,890.62	25.28	34.58	97.15	-209.97	1,484.95	1,478.69	1,442.38	36.30	40.732	
7,300.00	7,298.78	7,311.88	7,092.28	25.64	35.51	97.18	-215.22	1,520.08	1,496.04	1,458.82	37.22	40.195	
7,400.00	7,398.78	7,483.61	7,263.00	26.00	36.14	97.20	-217.94	1,538.25	1,506.21	1,468.31	37.90	39.741	
7,500.00	7,498.78	7,691.07	7,470.21	26.35	36.76	97.20	-219.23	1,546.91	1,509.09	1,470.58	38.51	39.187	
7,600.00	7,598.78	7,819.74	7,598.88	26.71	37.09	97.21	-219.28	1,547.24	1,509.16	1,470.17	38.99	38.708	
7,700.00	7,698.78	7,919.74	7,698.88	27.07	37.35	97.21	-219.28	1,547.24	1,509.16	1,469.69	39.46	38.241	
7,800.00	7,798.78	8,019.74	7,798.88	27.43	37.60	97.21	-219.28	1,547.24	1,509.16	1,469.22	39.94	37.784	
7,900.00	7,898.78	8,119.74	7,898.88	27.78	37.86	97.21	-219.28	1,547.24	1,509.16	1,468.74	40.42	37.338	
8,000.00	7,998.78	8,219.74	7,998.88	28.14	38.12	97.21	-219.28	1,547.24	1,509.16	1,468.26	40.90	36.901	
8,008.09	8,006.87	8,227.83	8,006.97	28.17	38.14	97.21	-219.28	1,547.24	1,509.16	1,468.22	40.94	36.866	
8,100.00	8,098.78	8,310.31	8,089.44	28.50	38.36	97.23	-219.89	1,547.25	1,509.27	1,467.89	41.38	36.477	
8,200.00	8,198.78	8,383.07	8,161.72	28.86	38.55	97.53	-227.84	1,547.32	1,510.80	1,468.95	41.84	36.106	
8,300.00	8,298.78	8,450.00	8,226.82	29.21	38.73	98.10	-243.19	1,547.48	1,514.29	1,471.99	42.30	35.803	
8,400.00	8,398.78	8,517.67	8,290.37	29.57	38.93	98.97	-266.31	1,547.70	1,520.11	1,477.38	42.73	35.574	
8,500.00	8,498.78	8,576.81	8,343.35	29.93	39.10	99.94	-292.53	1,547.96	1,528.72	1,485.59	43.13	35.445	
8,600.00	8,598.78	8,629.83	8,388.33	30.29	39.25	100.98	-320.57	1,548.24	1,540.61	1,497.13	43.48	35.433	
8,700.00	8,698.78	8,676.86	8,425.91	30.64	39.39	102.01	-348.83	1,548.51	1,556.18	1,512.42	43.77	35.556	
8,800.00	8,798.78	8,718.33	8,457.02	31.00	39.52	103.01	-376.23	1,548.78	1,575.78	1,531.81	43.98	35.831	
8,900.00	8,898.78	8,750.00	8,479.40	31.36	39.61	103.82	-398.63	1,549.00	1,599.64	1,555.56	44.08	36.290	
9,000.00	8,998.78	8,800.00	8,512.12	31.72	39.77	105.17	-436.41	1,549.38	1,627.95	1,583.75	44.21	36.826	
9,100.00	9,098.78	8,815.18	8,521.39	32.07	39.81	105.59	-448.43	1,549.49	1,660.44	1,616.34	44.10	37.653	
9,200.00	9,198.78	8,850.00	8,541.43	32.43	39.93	106.59	-476.90	1,549.77	1,697.44	1,653.40	44.04	38.546	
9,300.00	9,298.78	8,850.00	8,541.43	32.79	39.93	106.59	-476.90	1,549.77	1,738.62	1,694.90	43.72	39.769	
9,400.00	9,398.78	8,882.07	8,558.32	33.15	40.03	107.54	-504.16	1,550.04	1,783.68	1,740.13	43.55	40.956	
9,500.00	9,498.78	8,900.00	8,567.09	33.51	40.09	108.08	-519.80	1,550.20	1,832.68	1,789.42	43.26	42.363	
9,600.00	9,598.78	8,900.00	8,567.09	33.86	40.09	108.08	-519.80	1,550.20	1,885.49	1,842.66	42.83	44.023	
9,700.00	9,698.78	8,929.84	8,580.59	34.22	40.19	108.99	-546.41	1,550.46	1,941.30	1,898.71	42.59	45.583	
9,800.00	9,798.78	8,950.00	8,588.91	34.58	40.26	109.61	-564.76	1,550.64	2,000.48	1,958.20	42.27	47.321	
9,900.00	9,898.78	8,950.00	8,588.91	34.94	40.26	109.61	-564.76	1,550.64	2,062.50	2,020.67	41.83	49.311	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 104H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,998.78	8,950.00	8,588.91	35.29	40.26	109.61	-564.76	1,550.64	2,127.41	2,086.03	41.38	51.406	
10,100.00	10,098.78	8,975.01	8,598.34	35.65	40.35	110.39	-587.93	1,550.87	2,194.43	2,153.30	41.13	53.354	
10,148.26	10,147.04	8,979.45	8,599.90	35.82	40.36	110.53	-592.07	1,550.91	2,227.69	2,186.73	40.96	54.388	
10,150.00	10,148.78	8,979.60	8,599.96	35.83	40.36	-68.75	-592.22	1,550.91	2,228.90	2,187.94	40.95	54.425	
10,200.00	10,198.71	9,000.00	8,606.74	35.99	40.44	-63.83	-611.46	1,551.10	2,263.47	2,222.60	40.87	55.376	
10,250.00	10,248.24	9,000.00	8,606.74	36.16	40.44	-59.88	-611.46	1,551.10	2,296.87	2,256.21	40.66	56.493	
10,300.00	10,297.01	9,000.00	8,606.74	36.32	40.44	-56.27	-611.46	1,551.10	2,329.24	2,288.80	40.44	57.597	
10,350.00	10,344.64	9,000.00	8,606.74	36.48	40.44	-53.03	-611.46	1,551.10	2,360.37	2,320.15	40.23	58.679	
10,400.00	10,390.76	9,000.00	8,606.74	36.63	40.44	-50.13	-611.46	1,551.10	2,390.10	2,350.08	40.01	59.731	
10,450.00	10,435.02	9,019.64	8,612.61	36.78	40.51	-47.29	-630.20	1,551.28	2,417.89	2,377.96	39.93	60.547	
10,500.00	10,477.10	9,028.28	8,614.99	36.94	40.54	-44.98	-638.50	1,551.36	2,443.92	2,404.13	39.79	61.419	
10,550.00	10,516.66	9,050.00	8,620.42	37.09	40.63	-42.85	-659.53	1,551.57	2,468.05	2,428.32	39.73	62.114	
10,600.00	10,553.41	9,050.00	8,620.42	37.25	40.63	-41.24	-659.53	1,551.57	2,489.71	2,450.15	39.56	62.929	
10,650.00	10,587.07	9,050.00	8,620.42	37.41	40.63	-39.86	-659.53	1,551.57	2,509.22	2,469.81	39.41	63.668	
10,700.00	10,617.37	9,050.00	8,620.42	37.57	40.63	-38.70	-659.53	1,551.57	2,526.48	2,487.20	39.28	64.320	
10,750.00	10,644.10	9,076.63	8,625.99	37.74	40.73	-37.61	-685.57	1,551.83	2,540.76	2,501.44	39.31	64.628	
10,800.00	10,667.05	9,100.00	8,629.87	37.91	40.83	-36.78	-708.61	1,552.05	2,552.82	2,513.48	39.34	64.883	
10,850.00	10,686.04	9,100.00	8,629.87	38.09	40.83	-36.23	-708.61	1,552.05	2,561.91	2,522.63	39.29	65.207	
10,900.00	10,700.92	9,100.00	8,629.87	38.28	40.83	-35.84	-708.61	1,552.05	2,568.48	2,529.22	39.27	65.414	
10,950.00	10,711.59	9,100.00	8,629.87	38.47	40.83	-35.60	-708.61	1,552.05	2,572.50	2,533.22	39.28	65.498	
11,000.00	10,717.97	9,129.64	8,633.43	38.67	40.95	-35.53	-738.03	1,552.34	2,573.15	2,533.70	39.44	65.237	
11,048.26	10,720.00	9,150.00	8,635.00	38.86	41.04	-35.65	-758.33	1,552.54	2,571.53	2,531.94	39.59	64.948	
11,100.00	10,720.00	9,150.00	8,635.00	39.07	41.04	-35.65	-758.33	1,552.54	2,568.63	2,528.93	39.70	64.699	
11,200.00	10,720.00	9,183.90	8,636.00	39.54	41.19	-35.66	-792.21	1,552.88	2,565.63	2,525.55	40.08	64.019	
11,253.36	10,720.00	9,185.00	8,636.00	39.83	41.20	-35.66	-793.31	1,552.89	2,565.10	2,524.84	40.26	63.715	
11,300.00	10,720.00	9,231.64	8,636.00	40.07	41.42	-35.66	-839.94	1,553.35	2,565.10	2,524.56	40.55	63.259	
11,400.00	10,720.00	9,331.64	8,636.00	40.66	41.93	-35.66	-939.94	1,554.33	2,565.11	2,523.90	41.21	62.238	
11,500.00	10,720.00	9,431.64	8,636.00	41.31	42.50	-35.66	-1,039.93	1,555.31	2,565.12	2,523.19	41.93	61.174	
11,600.00	10,720.00	9,531.64	8,636.00	42.02	43.13	-35.66	-1,139.93	1,556.30	2,565.13	2,522.43	42.70	60.075	
11,700.00	10,720.00	9,631.64	8,636.00	42.77	43.81	-35.66	-1,239.92	1,557.28	2,565.14	2,521.63	43.51	58.952	
11,800.00	10,720.00	9,731.64	8,636.00	43.58	44.55	-35.66	-1,339.92	1,558.27	2,565.15	2,520.78	44.37	57.813	
11,900.00	10,720.00	9,831.64	8,636.00	44.43	45.34	-35.66	-1,439.92	1,559.25	2,565.16	2,519.89	45.27	56.665	
12,000.00	10,720.00	9,931.64	8,636.00	45.33	46.17	-35.66	-1,539.91	1,560.23	2,565.16	2,518.96	46.21	55.514	
12,100.00	10,720.00	10,031.64	8,636.00	46.26	47.05	-35.66	-1,639.91	1,561.22	2,565.17	2,517.99	47.18	54.367	
12,200.00	10,720.00	10,131.64	8,636.00	47.24	47.98	-35.66	-1,739.90	1,562.20	2,565.18	2,516.99	48.19	53.227	
12,300.00	10,720.00	10,231.64	8,636.00	48.26	48.95	-35.66	-1,839.90	1,563.19	2,565.19	2,515.95	49.24	52.100	
12,400.00	10,720.00	10,331.64	8,636.00	49.30	49.95	-35.66	-1,939.89	1,564.17	2,565.20	2,514.89	50.31	50.990	
12,500.00	10,720.00	10,431.64	8,636.00	50.38	50.99	-35.66	-2,039.89	1,565.15	2,565.21	2,513.80	51.41	49.899	
12,600.00	10,720.00	10,531.64	8,636.00	51.50	52.07	-35.66	-2,139.88	1,566.14	2,565.21	2,512.68	52.54	48.826	
12,700.00	10,720.00	10,631.64	8,636.00	52.63	53.17	-35.66	-2,239.88	1,567.12	2,565.22	2,511.53	53.69	47.780	
12,800.00	10,720.00	10,731.64	8,636.00	53.80	54.31	-35.66	-2,339.87	1,568.11	2,565.23	2,510.37	54.86	46.757	
12,900.00	10,720.00	10,831.64	8,636.00	54.99	55.47	-35.67	-2,439.87	1,569.09	2,565.24	2,509.18	56.06	45.759	
13,000.00	10,720.00	10,931.64	8,636.00	56.20	56.66	-35.67	-2,539.86	1,570.07	2,565.25	2,507.97	57.28	44.787	
13,100.00	10,720.00	11,031.64	8,636.00	57.44	57.87	-35.67	-2,639.86	1,571.06	2,565.26	2,506.74	58.51	43.841	
13,200.00	10,720.00	11,131.64	8,636.00	58.70	59.10	-35.67	-2,739.85	1,572.04	2,565.26	2,505.50	59.77	42.920	
13,300.00	10,720.00	11,231.64	8,636.00	59.97	60.36	-35.67	-2,839.85	1,573.03	2,565.27	2,504.23	61.04	42.026	
13,400.00	10,720.00	11,331.64	8,636.00	61.27	61.63	-35.67	-2,939.84	1,574.01	2,565.28	2,502.95	62.33	41.158	
13,500.00	10,720.00	11,431.64	8,636.00	62.58	62.93	-35.67	-3,039.84	1,574.99	2,565.29	2,501.66	63.63	40.315	
13,600.00	10,720.00	11,531.64	8,636.00	63.90	64.23	-35.67	-3,139.83	1,575.98	2,565.30	2,500.35	64.95	39.498	
13,700.00	10,720.00	11,631.64	8,636.00	65.24	65.56	-35.67	-3,239.83	1,576.96	2,565.31	2,499.03	66.27	38.708	
13,800.00	10,720.00	11,731.64	8,636.00	66.60	66.90	-35.67	-3,339.82	1,577.94	2,565.31	2,497.70	67.61	37.942	
13,900.00	10,720.00	11,831.64	8,636.00	67.97	68.26	-35.67	-3,439.82	1,578.93	2,565.32	2,496.36	68.96	37.199	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 104H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	10,720.00	11,931.64	8,636.00	69.35	69.62	-35.67	-3,539.81	1,579.91	2,565.33	2,495.01	70.32	36.479	
14,100.00	10,720.00	12,031.64	8,636.00	70.74	71.00	-35.67	-3,639.81	1,580.90	2,565.34	2,493.64	71.69	35.782	
14,200.00	10,720.00	12,131.64	8,636.00	72.14	72.40	-35.67	-3,739.80	1,581.88	2,565.35	2,492.27	73.08	35.106	
14,300.00	10,720.00	12,231.64	8,636.00	73.55	73.80	-35.67	-3,839.80	1,582.86	2,565.36	2,490.89	74.47	34.450	
14,400.00	10,720.00	12,331.64	8,636.00	74.98	75.21	-35.67	-3,939.79	1,583.85	2,565.36	2,489.50	75.87	33.815	
14,500.00	10,720.00	12,431.64	8,636.00	76.41	76.64	-35.67	-4,039.79	1,584.83	2,565.37	2,488.10	77.27	33.199	
14,600.00	10,720.00	12,531.64	8,636.00	77.85	78.07	-35.67	-4,139.78	1,585.82	2,565.38	2,486.69	78.69	32.602	
14,700.00	10,720.00	12,631.64	8,636.00	79.30	79.51	-35.67	-4,239.78	1,586.80	2,565.39	2,485.28	80.11	32.024	
14,800.00	10,720.00	12,731.64	8,636.00	80.76	80.96	-35.67	-4,339.77	1,587.78	2,565.40	2,483.86	81.53	31.465	
14,900.00	10,720.00	12,831.64	8,636.00	82.22	82.41	-35.67	-4,439.77	1,588.77	2,565.41	2,482.44	82.96	30.922	
15,000.00	10,720.00	12,931.64	8,636.00	83.69	83.88	-35.67	-4,539.77	1,589.75	2,565.41	2,481.01	84.40	30.395	
15,100.00	10,720.00	13,031.64	8,636.00	85.17	85.35	-35.67	-4,639.76	1,590.74	2,565.42	2,479.58	85.85	29.884	
15,200.00	10,720.00	13,131.64	8,636.00	86.65	86.83	-35.67	-4,739.76	1,591.72	2,565.43	2,478.14	87.30	29.388	
15,300.00	10,720.00	13,231.64	8,636.00	88.14	88.31	-35.67	-4,839.75	1,592.70	2,565.44	2,476.69	88.75	28.906	
15,400.00	10,720.00	13,331.64	8,636.00	89.64	89.80	-35.67	-4,939.75	1,593.69	2,565.45	2,475.24	90.21	28.439	
15,500.00	10,720.00	13,431.64	8,636.00	91.14	91.30	-35.67	-5,039.74	1,594.67	2,565.46	2,473.78	91.68	27.984	
15,600.00	10,720.00	13,531.64	8,636.00	92.65	92.80	-35.67	-5,139.74	1,595.66	2,565.46	2,472.32	93.14	27.544	
15,700.00	10,720.00	13,631.64	8,636.00	94.16	94.31	-35.67	-5,239.73	1,596.64	2,565.47	2,470.86	94.61	27.115	
15,800.00	10,720.00	13,731.64	8,636.00	95.67	95.82	-35.67	-5,339.73	1,597.62	2,565.48	2,469.39	96.09	26.699	
15,900.00	10,720.00	13,831.64	8,636.00	97.19	97.33	-35.67	-5,439.72	1,598.61	2,565.49	2,467.92	97.56	26.295	
16,000.00	10,720.00	13,931.64	8,636.00	98.72	98.85	-35.67	-5,539.72	1,599.59	2,565.50	2,466.45	99.05	25.902	
16,100.00	10,720.00	14,031.64	8,636.00	100.25	100.38	-35.67	-5,639.71	1,600.57	2,565.51	2,464.97	100.53	25.520	
16,200.00	10,720.00	14,131.64	8,636.00	101.78	101.90	-35.67	-5,739.71	1,601.56	2,565.51	2,463.49	102.02	25.147	
16,300.00	10,720.00	14,231.64	8,636.00	103.31	103.44	-35.67	-5,839.70	1,602.54	2,565.52	2,462.01	103.51	24.785	
16,400.00	10,720.00	14,331.64	8,636.00	104.85	104.97	-35.67	-5,939.70	1,603.53	2,565.53	2,460.52	105.01	24.432	
16,500.00	10,720.00	14,431.64	8,636.00	106.40	106.51	-35.67	-6,039.69	1,604.51	2,565.54	2,459.04	106.50	24.089	
16,600.00	10,720.00	14,531.64	8,636.00	107.94	108.05	-35.67	-6,139.69	1,605.49	2,565.55	2,457.55	108.00	23.755	
16,700.00	10,720.00	14,631.64	8,636.00	109.49	109.60	-35.67	-6,239.68	1,606.48	2,565.56	2,456.05	109.50	23.429	
16,800.00	10,720.00	14,731.64	8,636.00	111.04	111.15	-35.68	-6,339.68	1,607.46	2,565.56	2,454.56	111.00	23.112	
16,900.00	10,720.00	14,831.64	8,636.00	112.60	112.70	-35.68	-6,439.67	1,608.45	2,565.57	2,453.06	112.51	22.804	
17,000.00	10,720.00	14,931.64	8,636.00	114.16	114.26	-35.68	-6,539.67	1,609.43	2,565.58	2,451.57	114.01	22.502	
17,100.00	10,720.00	15,031.64	8,636.00	115.72	115.81	-35.68	-6,639.66	1,610.41	2,565.59	2,450.07	115.52	22.208	
17,200.00	10,720.00	15,131.64	8,636.00	117.28	117.37	-35.68	-6,739.66	1,611.40	2,565.60	2,448.56	117.03	21.922	
17,300.00	10,720.00	15,231.64	8,636.00	118.84	118.94	-35.68	-6,839.65	1,612.38	2,565.61	2,447.06	118.55	21.642	
17,400.00	10,720.00	15,331.64	8,636.00	120.41	120.50	-35.68	-6,939.65	1,613.37	2,565.61	2,445.55	120.06	21.369	
17,500.00	10,720.00	15,431.64	8,636.00	121.98	122.07	-35.68	-7,039.64	1,614.35	2,565.62	2,444.04	121.58	21.103	
17,600.00	10,720.00	15,531.64	8,636.00	123.55	123.64	-35.68	-7,139.64	1,615.33	2,565.63	2,442.53	123.10	20.843	
17,700.00	10,720.00	15,631.64	8,636.00	125.13	125.21	-35.68	-7,239.63	1,616.32	2,565.64	2,441.03	124.61	20.589	
17,800.00	10,720.00	15,731.64	8,636.00	126.70	126.78	-35.68	-7,339.63	1,617.30	2,565.65	2,439.52	126.13	20.341	
17,900.00	10,720.00	15,831.64	8,636.00	128.28	128.36	-35.68	-7,439.62	1,618.29	2,565.66	2,438.00	127.65	20.099	
18,000.00	10,720.00	15,931.64	8,636.00	129.86	129.93	-35.68	-7,539.62	1,619.27	2,565.66	2,436.49	129.17	19.862	
18,100.00	10,720.00	16,031.64	8,636.00	131.44	131.51	-35.68	-7,639.62	1,620.25	2,565.67	2,434.98	130.70	19.631	
18,200.00	10,720.00	16,131.64	8,636.00	133.02	133.09	-35.68	-7,739.61	1,621.24	2,565.68	2,433.46	132.22	19.404	
18,300.00	10,720.00	16,231.64	8,636.00	134.61	134.68	-35.68	-7,839.61	1,622.22	2,565.69	2,431.94	133.75	19.183	
18,400.00	10,720.00	16,331.64	8,636.00	136.19	136.26	-35.68	-7,939.60	1,623.20	2,565.70	2,430.42	135.27	18.967	
18,500.00	10,720.00	16,431.64	8,636.00	137.78	137.85	-35.68	-8,039.60	1,624.19	2,565.71	2,428.91	136.80	18.755	
18,600.00	10,720.00	16,531.64	8,636.00	139.37	139.44	-35.68	-8,139.59	1,625.17	2,565.71	2,427.39	138.33	18.548	
18,700.00	10,720.00	16,631.64	8,636.00	140.96	141.02	-35.68	-8,239.59	1,626.16	2,565.72	2,425.87	139.85	18.346	
18,800.00	10,720.00	16,731.64	8,636.00	142.55	142.61	-35.68	-8,339.58	1,627.14	2,565.73	2,424.35	141.38	18.147	
18,900.00	10,720.00	16,831.64	8,636.00	144.15	144.21	-35.68	-8,439.58	1,628.12	2,565.74	2,422.83	142.91	17.953	
19,000.00	10,720.00	16,931.64	8,636.00	145.74	145.80	-35.68	-8,539.57	1,629.11	2,565.75	2,421.30	144.44	17.763	
19,100.00	10,720.00	17,031.64	8,636.00	147.34	147.39	-35.68	-8,639.57	1,630.09	2,565.76	2,419.78	145.97	17.577	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 104H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,200.00	10,720.00	17,131.64	8,636.00	148.93	148.99	-35.68	-8,739.56	1,631.08	2,565.76	2,418.26	147.51	17.394	
19,300.00	10,720.00	17,231.64	8,636.00	150.53	150.59	-35.68	-8,839.56	1,632.06	2,565.77	2,416.73	149.04	17.215	
19,400.00	10,720.00	17,331.64	8,636.00	152.13	152.18	-35.68	-8,939.55	1,633.04	2,565.78	2,415.21	150.57	17.040	
19,500.00	10,720.00	17,431.64	8,636.00	153.73	153.78	-35.68	-9,039.55	1,634.03	2,565.79	2,413.68	152.11	16.868	
19,600.00	10,720.00	17,531.64	8,636.00	155.33	155.38	-35.68	-9,139.54	1,635.01	2,565.80	2,412.16	153.64	16.700	
19,700.00	10,720.00	17,631.64	8,636.00	156.94	156.99	-35.68	-9,239.54	1,636.00	2,565.81	2,410.63	155.17	16.535	
19,800.00	10,720.00	17,731.64	8,636.00	158.54	158.59	-35.68	-9,339.53	1,636.98	2,565.81	2,409.11	156.71	16.373	
19,900.00	10,720.00	17,831.64	8,636.00	160.14	160.19	-35.68	-9,439.53	1,637.96	2,565.82	2,407.58	158.24	16.215	
20,000.00	10,720.00	17,931.64	8,636.00	161.75	161.80	-35.68	-9,539.52	1,638.95	2,565.83	2,406.05	159.78	16.059	
20,100.00	10,720.00	18,031.64	8,636.00	163.36	163.40	-35.68	-9,639.52	1,639.93	2,565.84	2,404.53	161.31	15.906	
20,200.00	10,720.00	18,131.64	8,636.00	164.96	165.01	-35.68	-9,739.51	1,640.92	2,565.85	2,403.00	162.85	15.756	
20,300.00	10,720.00	18,231.64	8,636.00	166.57	166.61	-35.68	-9,839.51	1,641.90	2,565.86	2,401.47	164.38	15.609	
20,400.00	10,720.00	18,331.64	8,636.00	168.18	168.22	-35.68	-9,939.50	1,642.88	2,565.86	2,399.94	165.92	15.464	
20,500.00	10,720.00	18,431.64	8,636.00	169.79	169.83	-35.68	-10,039.50	1,643.87	2,565.87	2,398.42	167.46	15.323	
20,600.00	10,720.00	18,531.64	8,636.00	171.40	171.44	-35.69	-10,139.49	1,644.85	2,565.88	2,396.89	168.99	15.184	
20,700.00	10,720.00	18,631.64	8,636.00	173.01	173.05	-35.69	-10,239.49	1,645.83	2,565.89	2,395.36	170.53	15.047	
20,800.00	10,720.00	18,731.64	8,636.00	174.63	174.66	-35.69	-10,339.48	1,646.82	2,565.90	2,393.83	172.06	14.912	
20,841.32	10,720.00	18,772.96	8,636.00	175.22	175.33	-35.69	-10,380.80	1,647.23	2,565.90	2,393.27	172.63	14.864	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 501H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	3.00	3.00	0.00	0.00	-90.55	-18.96	-1,970.29	1,970.38				
100.00	100.00	103.00	103.00	0.13	0.14	-90.55	-18.96	-1,970.29	1,970.38	1,970.20	0.19	N/A	
200.00	200.00	203.00	203.00	0.48	0.49	-90.55	-18.96	-1,970.29	1,970.38	1,969.69	0.69	2,846.708	
300.00	300.00	303.00	303.00	0.84	0.85	-90.55	-18.96	-1,970.29	1,970.38	1,969.18	1.20	1,643.217	
400.00	400.00	403.00	403.00	1.20	1.21	-90.55	-18.96	-1,970.29	1,970.38	1,968.68	1.71	1,154.939	
500.00	500.00	503.00	503.00	1.56	1.57	-90.55	-18.96	-1,970.29	1,970.38	1,968.17	2.21	890.367	
600.00	600.00	603.00	603.00	1.92	1.93	-90.55	-18.96	-1,970.29	1,970.38	1,967.66	2.72	724.418	
700.00	700.00	703.00	703.00	2.28	2.29	-90.55	-18.96	-1,970.29	1,970.38	1,967.15	3.23	610.610	
800.00	800.00	803.00	803.00	2.63	2.65	-90.55	-18.96	-1,970.29	1,970.38	1,966.65	3.73	527.706	
900.00	900.00	903.00	903.00	2.99	3.00	-90.55	-18.96	-1,970.29	1,970.38	1,966.14	4.24	464.623	
1,000.00	1,000.00	1,003.00	1,003.00	3.35	3.36	-90.55	-18.96	-1,970.29	1,970.38	1,965.63	4.75	415.012	
1,100.00	1,100.00	1,103.00	1,103.00	3.71	3.72	-90.55	-18.96	-1,970.29	1,970.38	1,965.13	5.25	374.973	
1,200.00	1,200.00	1,203.00	1,203.00	4.07	4.08	-90.55	-18.96	-1,970.29	1,970.38	1,964.62	5.76	341.980	
1,300.00	1,300.00	1,303.00	1,303.00	4.43	4.44	-90.55	-18.96	-1,970.29	1,970.38	1,964.11	6.27	314.324	
1,400.00	1,400.00	1,403.00	1,403.00	4.79	4.80	-90.55	-18.96	-1,970.29	1,970.38	1,963.61	6.78	290.806	
1,500.00	1,500.00	1,503.00	1,503.00	5.14	5.15	-90.55	-18.96	-1,970.29	1,970.38	1,963.10	7.28	270.562	
1,600.00	1,600.00	1,603.00	1,603.00	5.50	5.51	-90.55	-18.96	-1,970.29	1,970.38	1,962.59	7.79	252.954	
1,700.00	1,700.00	1,703.00	1,703.00	5.86	5.87	-90.55	-18.96	-1,970.29	1,970.38	1,962.08	8.30	237.497	
1,800.00	1,800.00	1,803.00	1,803.00	6.22	6.23	-90.55	-18.96	-1,970.29	1,970.38	1,961.58	8.80	223.820	
1,900.00	1,900.00	1,903.00	1,903.00	6.58	6.59	-90.55	-18.96	-1,970.29	1,970.38	1,961.07	9.31	211.633	
2,000.00	2,000.00	2,003.00	2,003.00	6.94	6.95	-90.55	-18.96	-1,970.29	1,970.38	1,960.56	9.82	200.705	
2,100.00	2,100.00	2,103.00	2,103.00	7.30	7.31	-90.55	-18.96	-1,970.29	1,970.38	1,960.06	10.32	190.849	
2,200.00	2,200.00	2,203.00	2,203.00	7.65	7.66	-90.55	-18.96	-1,970.29	1,970.38	1,959.55	10.83	181.917	
2,300.00	2,300.00	2,303.00	2,303.00	8.01	8.02	-90.55	-18.96	-1,970.29	1,970.38	1,959.04	11.34	173.783	
2,400.00	2,400.00	2,403.00	2,403.00	8.37	8.38	-90.55	-18.96	-1,970.29	1,970.38	1,958.54	11.85	166.345	
2,500.00	2,500.00	2,503.00	2,503.00	8.73	8.74	-90.55	-18.96	-1,970.29	1,970.38	1,958.03	12.35	159.518	
2,600.00	2,600.00	2,603.00	2,603.00	9.09	9.10	-90.55	-18.96	-1,970.29	1,970.38	1,957.52	12.86	153.229	
2,700.00	2,700.00	2,703.00	2,703.00	9.45	9.46	-90.55	-18.96	-1,970.29	1,970.38	1,957.02	13.37	147.417	
2,800.00	2,800.00	2,803.00	2,803.00	9.80	9.81	-90.55	-18.96	-1,970.29	1,970.38	1,956.51	13.87	142.030	
2,900.00	2,900.00	2,903.00	2,903.00	10.16	10.17	-90.55	-18.96	-1,970.29	1,970.38	1,956.00	14.38	137.023	
3,000.00	3,000.00	3,003.00	3,003.00	10.52	10.53	-90.55	-18.96	-1,970.29	1,970.38	1,955.49	14.89	132.357	
3,100.00	3,100.00	3,103.00	3,103.00	10.88	10.89	-90.55	-18.96	-1,970.29	1,970.38	1,954.99	15.39	127.998	
3,200.00	3,200.00	3,203.00	3,203.00	11.24	11.25	-90.55	-18.96	-1,970.29	1,970.38	1,954.48	15.90	123.917	
3,300.00	3,300.00	3,303.00	3,303.00	11.60	11.61	-90.55	-18.96	-1,970.29	1,970.38	1,953.97	16.41	120.089	
3,315.64	3,315.64	3,318.64	3,318.64	11.65	11.66	-90.55	-18.96	-1,970.29	1,970.38	1,953.89	16.49	119.511	CC
3,400.00	3,400.00	3,400.00	3,400.00	11.96	11.96	-90.55	-18.96	-1,970.29	1,970.38	1,953.48	16.91	116.542	ES
3,500.00	3,500.00	3,468.54	3,468.54	12.31	12.19	-90.56	-19.10	-1,970.89	1,971.28	1,953.95	17.33	113.771	
3,600.00	3,600.00	3,535.04	3,535.01	12.67	12.42	-90.57	-19.52	-1,972.61	1,973.88	1,956.14	17.73	111.299	
3,700.00	3,700.00	3,600.00	3,599.91	13.03	12.64	-90.59	-20.19	-1,975.38	1,978.17	1,960.04	18.13	109.096	
3,800.00	3,800.00	3,667.76	3,667.54	13.39	12.87	-90.61	-21.16	-1,979.41	1,984.15	1,965.62	18.53	107.058	
3,900.00	3,900.00	3,733.89	3,733.47	13.75	13.10	-90.65	-22.38	-1,984.47	1,991.82	1,972.90	18.93	105.243	
4,000.00	4,000.00	3,800.00	3,799.27	14.11	13.32	-90.69	-23.86	-1,990.63	2,001.17	1,981.86	19.31	103.614	
4,100.00	4,100.00	3,865.52	3,864.37	14.46	13.55	-90.73	-25.59	-1,997.83	2,012.20	1,992.50	19.70	102.166	
4,200.00	4,200.00	3,930.95	3,929.24	14.82	13.78	-90.79	-27.59	-2,006.11	2,024.89	2,004.82	20.07	100.882	
4,300.00	4,300.00	4,000.00	3,997.54	15.18	14.02	-90.85	-29.97	-2,016.01	2,039.24	2,018.78	20.46	99.685	
4,400.00	4,400.00	4,060.82	4,057.53	15.54	14.24	-90.91	-32.31	-2,025.72	2,055.23	2,034.42	20.81	98.771	
4,500.00	4,500.00	4,125.20	4,120.85	15.90	14.47	-90.99	-35.03	-2,037.02	2,072.85	2,051.68	21.17	97.929	
4,600.00	4,599.99	4,200.00	4,194.16	16.24	14.75	147.81	-38.51	-2,051.44	2,093.22	2,071.67	21.55	97.119	
4,666.98	4,666.93	4,231.37	4,224.82	16.47	14.86	147.66	-40.06	-2,057.90	2,108.89	2,087.16	21.73	97.054	
4,700.00	4,699.92	4,252.11	4,245.06	16.58	14.94	147.65	-41.12	-2,062.31	2,117.14	2,095.30	21.84	96.956	
4,800.00	4,799.82	4,300.00	4,291.70	16.91	15.12	147.61	-43.67	-2,072.89	2,143.21	2,121.12	22.09	97.011	
4,900.00	4,899.72	4,376.50	4,365.89	17.24	15.42	147.55	-48.03	-2,090.98	2,170.67	2,148.20	22.47	96.607	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 501H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	4,437.82	4,425.10	17.58	15.66	147.50	-51.77	-2,106.52	2,199.72	2,176.94	22.78	96.578	
5,100.00	5,099.53	4,500.00	4,484.86	17.92	15.92	147.44	-55.79	-2,123.21	2,230.26	2,207.18	23.08	96.611	
5,200.00	5,199.44	4,558.62	4,540.93	18.26	16.16	147.38	-59.79	-2,139.82	2,262.28	2,238.91	23.37	96.786	
5,300.00	5,299.34	4,600.00	4,580.36	18.60	16.34	147.34	-62.74	-2,152.04	2,295.87	2,272.29	23.57	97.388	
5,400.00	5,399.25	4,676.82	4,653.18	18.94	16.68	147.25	-68.47	-2,175.83	2,330.66	2,306.71	23.95	97.315	
5,500.00	5,499.15	4,734.90	4,707.90	19.28	16.94	147.18	-73.03	-2,194.76	2,366.96	2,342.74	24.23	97.690	
5,600.00	5,599.06	4,820.55	4,788.28	19.62	17.34	147.08	-79.95	-2,223.50	2,404.22	2,379.57	24.65	97.522	
5,700.00	5,698.96	4,913.23	4,875.27	19.96	17.78	146.96	-87.44	-2,254.61	2,441.51	2,416.39	25.12	97.206	
5,800.00	5,798.86	5,005.92	4,962.25	20.31	18.24	146.86	-94.94	-2,285.72	2,478.81	2,453.23	25.58	96.892	
5,834.24	5,833.07	5,037.66	4,992.04	20.42	18.40	146.82	-97.50	-2,296.37	2,491.58	2,465.84	25.74	96.784	
5,900.00	5,898.79	5,098.76	5,049.39	20.65	18.71	146.96	-102.44	-2,316.88	2,515.67	2,489.62	26.05	96.561	
6,001.22	6,000.00	5,193.42	5,138.22	21.00	19.20	-91.91	-110.10	-2,348.65	2,551.04	2,524.50	26.54	96.130	
6,100.00	6,098.78	5,286.12	5,225.23	21.36	19.68	-92.06	-117.59	-2,379.77	2,584.53	2,557.51	27.02	95.656	
6,200.00	6,198.78	5,379.98	5,313.31	21.71	20.18	-92.21	-125.18	-2,411.27	2,618.45	2,590.94	27.51	95.184	
6,300.00	6,298.78	5,473.83	5,401.39	22.07	20.70	-92.36	-132.77	-2,442.77	2,652.39	2,624.39	28.00	94.723	
6,400.00	6,398.78	5,567.68	5,489.47	22.43	21.21	-92.50	-140.35	-2,474.27	2,686.35	2,657.85	28.50	94.272	
6,500.00	6,498.78	5,661.53	5,577.55	22.78	21.74	-92.64	-147.94	-2,505.78	2,720.31	2,691.32	28.99	93.833	
6,600.00	6,598.78	5,755.38	5,665.63	23.14	22.27	-92.78	-155.53	-2,537.28	2,754.30	2,724.81	29.49	93.403	
6,700.00	6,698.78	5,849.23	5,753.71	23.50	22.81	-92.91	-163.12	-2,568.78	2,788.29	2,758.30	29.99	92.984	
6,800.00	6,798.78	5,943.08	5,841.79	23.85	23.35	-93.04	-170.71	-2,600.28	2,822.30	2,791.81	30.49	92.575	
6,900.00	6,898.78	6,036.93	5,929.87	24.21	23.90	-93.17	-178.29	-2,631.78	2,856.32	2,825.33	30.99	92.176	
7,000.00	6,998.78	6,130.78	6,017.95	24.57	24.45	-93.29	-185.88	-2,663.28	2,890.35	2,858.86	31.49	91.785	
7,100.00	7,098.78	6,224.63	6,106.03	24.93	25.01	-93.41	-193.47	-2,694.79	2,924.40	2,892.40	31.99	91.405	
7,200.00	7,198.78	6,318.48	6,194.11	25.28	25.57	-93.53	-201.06	-2,726.29	2,958.45	2,925.95	32.50	91.033	
7,300.00	7,298.78	6,441.27	6,309.40	25.64	26.31	-93.67	-210.94	-2,767.33	2,992.48	2,959.32	33.16	90.250	
7,400.00	7,398.78	6,871.32	6,721.71	26.00	28.68	-94.08	-239.38	-2,885.39	3,020.41	2,985.16	35.24	85.702	
7,500.00	7,498.78	7,266.17	7,110.16	26.35	30.47	-94.30	-255.72	-2,953.21	3,037.04	3,000.20	36.84	82.444	
7,600.00	7,598.78	7,739.33	7,581.99	26.71	32.12	-94.39	-262.94	-2,983.22	3,042.22	3,003.96	38.26	79.523	
7,700.00	7,698.78	7,859.12	7,701.78	27.07	32.48	-94.39	-262.96	-2,983.29	3,042.22	3,003.44	38.78	78.451	
7,800.00	7,798.78	7,959.12	7,801.78	27.43	32.77	-94.39	-262.96	-2,983.29	3,042.22	3,002.95	39.27	77.474	
7,900.00	7,898.78	8,059.12	7,901.78	27.78	33.07	-94.39	-262.96	-2,983.29	3,042.22	3,002.47	39.76	76.520	
8,000.00	7,998.78	8,159.12	8,001.78	28.14	33.37	-94.39	-262.96	-2,983.29	3,042.22	3,001.98	40.25	75.588	
8,100.00	8,098.78	8,259.12	8,101.78	28.50	33.66	-94.39	-262.96	-2,983.29	3,042.22	3,001.48	40.74	74.678	
8,200.00	8,198.78	8,359.12	8,201.78	28.86	33.96	-94.39	-262.96	-2,983.29	3,042.22	3,000.99	41.23	73.789	
8,300.00	8,298.78	8,459.12	8,301.78	29.21	34.27	-94.39	-262.96	-2,983.29	3,042.22	3,000.50	41.72	72.921	
8,400.00	8,398.78	8,559.12	8,401.78	29.57	34.57	-94.39	-262.96	-2,983.29	3,042.22	3,000.01	42.21	72.071	
8,500.00	8,498.78	8,659.12	8,501.78	29.93	34.87	-94.39	-262.96	-2,983.29	3,042.22	2,999.52	42.70	71.241	
8,600.00	8,598.78	8,759.12	8,601.78	30.29	35.18	-94.39	-262.96	-2,983.29	3,042.22	2,999.03	43.20	70.429	
8,700.00	8,698.78	8,859.12	8,701.78	30.64	35.48	-94.39	-262.96	-2,983.29	3,042.22	2,998.53	43.69	69.635	
8,800.00	8,798.78	8,959.12	8,801.78	31.00	35.79	-94.39	-262.96	-2,983.29	3,042.22	2,998.04	44.18	68.858	
8,900.00	8,898.78	9,059.12	8,901.78	31.36	36.10	-94.39	-262.96	-2,983.29	3,042.22	2,997.55	44.67	68.098	
9,000.00	8,998.78	9,159.12	9,001.78	31.72	36.40	-94.39	-262.96	-2,983.29	3,042.22	2,997.06	45.17	67.354	
9,100.00	9,098.78	9,259.12	9,101.78	32.07	36.71	-94.39	-262.96	-2,983.29	3,042.22	2,996.56	45.66	66.626	
9,200.00	9,198.78	9,359.12	9,201.78	32.43	37.02	-94.39	-262.96	-2,983.29	3,042.22	2,996.07	46.16	65.912	
9,300.00	9,298.78	9,459.12	9,301.78	32.79	37.33	-94.39	-262.96	-2,983.29	3,042.22	2,995.57	46.65	65.214	
9,400.00	9,398.78	9,559.12	9,401.78	33.15	37.65	-94.39	-262.96	-2,983.29	3,042.22	2,995.08	47.14	64.530	
9,500.00	9,498.78	9,659.12	9,501.78	33.51	37.96	-94.39	-262.96	-2,983.29	3,042.22	2,994.58	47.64	63.859	
9,600.00	9,598.78	9,759.12	9,601.78	33.86	38.27	-94.39	-262.96	-2,983.29	3,042.22	2,994.09	48.13	63.202	
9,700.00	9,698.78	9,859.12	9,701.78	34.22	38.59	-94.39	-262.96	-2,983.29	3,042.22	2,993.59	48.63	62.558	
9,800.00	9,798.78	9,959.12	9,801.78	34.58	38.90	-94.39	-262.96	-2,983.29	3,042.22	2,993.10	49.13	61.927	
9,900.00	9,898.78	10,059.12	9,901.78	34.94	39.22	-94.39	-262.96	-2,983.29	3,042.22	2,992.60	49.62	61.308	
10,000.00	9,998.78	10,159.12	10,001.78	35.29	39.53	-94.39	-262.96	-2,983.29	3,042.22	2,992.11	50.12	60.702	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 501H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,259.12	10,101.78	35.65	39.85	-94.39	-262.96	-2,983.29	3,042.22	2,991.61	50.61	60.106	
10,148.26	10,147.04	10,307.38	10,150.04	35.82	40.00	-94.39	-262.96	-2,983.29	3,042.22	2,991.37	50.85	59.823	
10,150.00	10,148.78	10,309.12	10,151.78	35.83	40.01	86.16	-262.96	-2,983.29	3,042.22	2,991.36	50.86	59.813	
10,200.00	10,198.71	10,354.38	10,197.04	35.99	40.15	86.22	-262.96	-2,983.29	3,042.07	2,990.98	51.09	59.541	
10,250.00	10,248.24	10,400.00	10,242.61	36.16	40.30	86.33	-264.78	-2,983.27	3,041.76	2,990.44	51.32	59.270	
10,300.00	10,297.01	10,431.96	10,274.38	36.32	40.39	86.44	-268.20	-2,983.24	3,041.38	2,989.86	51.52	59.031	
10,350.00	10,344.64	10,469.31	10,311.20	36.48	40.51	86.58	-274.45	-2,983.18	3,040.95	2,989.21	51.73	58.782	
10,400.00	10,390.76	10,506.91	10,347.77	36.63	40.63	86.74	-283.14	-2,983.09	3,040.47	2,988.52	51.94	58.534	
10,450.00	10,435.02	10,550.00	10,388.88	36.78	40.77	86.94	-296.03	-2,982.96	3,039.96	2,987.79	52.17	58.276	
10,500.00	10,477.10	10,583.03	10,419.67	36.94	40.88	87.12	-307.98	-2,982.84	3,039.41	2,987.04	52.37	58.039	
10,550.00	10,516.66	10,621.66	10,454.73	37.09	41.00	87.34	-324.18	-2,982.68	3,038.85	2,986.27	52.58	57.790	
10,600.00	10,553.41	10,660.74	10,489.01	37.25	41.12	87.58	-342.93	-2,982.50	3,038.29	2,985.49	52.80	57.540	
10,650.00	10,587.07	10,700.00	10,522.08	37.41	41.25	87.82	-364.07	-2,982.29	3,037.75	2,984.72	53.03	57.287	
10,700.00	10,617.37	10,740.49	10,554.58	37.57	41.37	88.09	-388.20	-2,982.05	3,037.23	2,983.97	53.26	57.029	
10,750.00	10,644.10	10,781.30	10,585.54	37.74	41.50	88.36	-414.78	-2,981.79	3,036.75	2,983.25	53.49	56.767	
10,800.00	10,667.05	10,822.85	10,615.03	37.91	41.62	88.64	-444.03	-2,981.50	3,036.32	2,982.58	53.74	56.501	
10,850.00	10,686.04	10,865.22	10,642.84	38.09	41.75	88.94	-475.99	-2,981.18	3,035.95	2,981.96	53.99	56.229	
10,900.00	10,700.92	10,908.51	10,668.74	38.28	41.88	89.24	-510.66	-2,980.84	3,035.66	2,981.40	54.25	55.952	
10,950.00	10,711.59	10,952.84	10,692.46	38.47	42.02	89.54	-548.09	-2,980.46	3,035.46	2,980.93	54.53	55.670	
11,000.00	10,717.97	10,998.32	10,713.72	38.67	42.16	89.86	-588.28	-2,980.07	3,035.35	2,980.54	54.80	55.385	
11,027.60	10,719.63	11,023.97	10,724.29	38.78	42.25	90.03	-611.65	-2,979.83	3,035.33	2,980.37	54.96	55.225	
11,048.26	10,720.00	11,043.44	10,731.60	38.86	42.31	90.16	-629.69	-2,979.66	3,035.34	2,980.26	55.08	55.106	
11,100.00	10,720.00	11,094.04	10,747.71	39.07	42.48	90.47	-677.64	-2,979.18	3,035.43	2,980.03	55.39	54.796	
11,200.00	10,720.00	11,198.83	10,767.31	39.54	42.87	90.84	-780.43	-2,978.16	3,035.62	2,979.55	56.07	54.139	
11,300.00	10,720.00	11,303.23	10,770.00	40.07	43.30	90.89	-884.73	-2,977.13	3,035.64	2,978.82	56.82	53.428	
11,400.00	10,720.00	11,403.23	10,770.00	40.66	43.78	90.89	-984.73	-2,976.14	3,035.62	2,977.98	57.64	52.668	
11,500.00	10,720.00	11,503.23	10,770.00	41.31	44.31	90.89	-1,084.72	-2,975.15	3,035.60	2,977.06	58.54	51.858	
11,600.00	10,720.00	11,603.23	10,770.00	42.02	44.90	90.89	-1,184.72	-2,974.16	3,035.57	2,976.06	59.52	51.004	
11,700.00	10,720.00	11,703.23	10,770.00	42.77	45.55	90.89	-1,284.71	-2,973.16	3,035.55	2,974.98	60.57	50.117	
11,800.00	10,720.00	11,803.23	10,770.00	43.58	46.26	90.89	-1,384.71	-2,972.17	3,035.53	2,973.84	61.69	49.204	
11,900.00	10,720.00	11,903.23	10,770.00	44.43	47.01	90.89	-1,484.71	-2,971.18	3,035.51	2,972.63	62.88	48.272	
12,000.00	10,720.00	12,003.23	10,770.00	45.33	47.82	90.89	-1,584.70	-2,970.19	3,035.49	2,971.35	64.14	47.329	
12,100.00	10,720.00	12,103.23	10,770.00	46.26	48.67	90.89	-1,684.70	-2,969.20	3,035.47	2,970.02	65.45	46.379	
12,200.00	10,720.00	12,203.23	10,770.00	47.24	49.56	90.89	-1,784.69	-2,968.21	3,035.45	2,968.63	66.82	45.429	
12,300.00	10,720.00	12,303.23	10,770.00	48.26	50.49	90.89	-1,884.69	-2,967.22	3,035.42	2,967.19	68.24	44.483	
12,400.00	10,720.00	12,403.23	10,770.00	49.30	51.46	90.89	-1,984.68	-2,966.23	3,035.40	2,965.70	69.71	43.545	
12,500.00	10,720.00	12,503.23	10,770.00	50.38	52.47	90.89	-2,084.68	-2,965.24	3,035.38	2,964.16	71.22	42.618	
12,600.00	10,720.00	12,603.23	10,770.00	51.50	53.51	90.89	-2,184.67	-2,964.25	3,035.36	2,962.58	72.78	41.705	
12,700.00	10,720.00	12,703.23	10,770.00	52.63	54.58	90.89	-2,284.67	-2,963.26	3,035.34	2,960.96	74.38	40.808	
12,800.00	10,720.00	12,803.23	10,770.00	53.80	55.69	90.89	-2,384.66	-2,962.26	3,035.32	2,959.30	76.02	39.928	
12,900.00	10,720.00	12,903.23	10,770.00	54.99	56.82	90.89	-2,484.66	-2,961.27	3,035.30	2,957.60	77.69	39.068	
13,000.00	10,720.00	13,003.23	10,770.00	56.20	57.97	90.89	-2,584.65	-2,960.28	3,035.28	2,955.88	79.40	38.228	
13,100.00	10,720.00	13,103.23	10,770.00	57.44	59.15	90.89	-2,684.65	-2,959.29	3,035.25	2,954.12	81.14	37.408	
13,200.00	10,720.00	13,203.23	10,770.00	58.70	60.35	90.89	-2,784.64	-2,958.30	3,035.23	2,952.33	82.91	36.611	
13,300.00	10,720.00	13,303.23	10,770.00	59.97	61.58	90.89	-2,884.64	-2,957.31	3,035.21	2,950.51	84.70	35.834	
13,400.00	10,720.00	13,403.23	10,770.00	61.27	62.82	90.89	-2,984.63	-2,956.32	3,035.19	2,948.67	86.52	35.080	
13,500.00	10,720.00	13,503.23	10,770.00	62.58	64.08	90.89	-3,084.63	-2,955.33	3,035.17	2,946.80	88.37	34.347	
13,600.00	10,720.00	13,603.23	10,770.00	63.90	65.36	90.89	-3,184.62	-2,954.34	3,035.15	2,944.91	90.24	33.636	
13,700.00	10,720.00	13,703.23	10,770.00	65.24	66.66	90.89	-3,284.62	-2,953.35	3,035.13	2,943.00	92.12	32.946	
13,800.00	10,720.00	13,803.23	10,770.00	66.60	67.97	90.89	-3,384.61	-2,952.36	3,035.10	2,941.07	94.03	32.277	
13,900.00	10,720.00	13,903.23	10,770.00	67.97	69.30	90.89	-3,484.61	-2,951.36	3,035.08	2,939.12	95.96	31.628	
14,000.00	10,720.00	14,003.23	10,770.00	69.35	70.64	90.89	-3,584.60	-2,950.37	3,035.06	2,937.15	97.91	30.999	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 501H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	10,720.00	14,103.23	10,770.00	70.74	71.99	90.89	-3,684.60	-2,949.38	3,035.04	2,935.17	99.87	30.390	
14,200.00	10,720.00	14,203.23	10,770.00	72.14	73.36	90.89	-3,784.59	-2,948.39	3,035.02	2,933.17	101.85	29.799	
14,300.00	10,720.00	14,303.23	10,770.00	73.55	74.74	90.89	-3,884.59	-2,947.40	3,035.00	2,931.16	103.84	29.227	
14,400.00	10,720.00	14,403.23	10,770.00	74.98	76.13	90.89	-3,984.58	-2,946.41	3,034.98	2,929.13	105.85	28.673	
14,500.00	10,720.00	14,503.23	10,770.00	76.41	77.52	90.89	-4,084.58	-2,945.42	3,034.96	2,927.09	107.87	28.136	
14,600.00	10,720.00	14,603.23	10,770.00	77.85	78.93	90.89	-4,184.57	-2,944.43	3,034.93	2,925.03	109.90	27.615	
14,700.00	10,720.00	14,703.23	10,770.00	79.30	80.35	90.89	-4,284.57	-2,943.44	3,034.91	2,922.97	111.95	27.110	
14,800.00	10,720.00	14,803.23	10,770.00	80.76	81.78	90.89	-4,384.56	-2,942.45	3,034.89	2,920.89	114.00	26.621	
14,900.00	10,720.00	14,903.23	10,770.00	82.22	83.22	90.89	-4,484.56	-2,941.46	3,034.87	2,918.80	116.07	26.147	
15,000.00	10,720.00	15,003.23	10,770.00	83.69	84.66	90.89	-4,584.55	-2,940.46	3,034.85	2,916.70	118.14	25.688	
15,100.00	10,720.00	15,103.23	10,770.00	85.17	86.11	90.89	-4,684.55	-2,939.47	3,034.83	2,914.60	120.23	25.242	
15,200.00	10,720.00	15,203.23	10,770.00	86.65	87.57	90.89	-4,784.54	-2,938.48	3,034.81	2,912.48	122.33	24.809	
15,300.00	10,720.00	15,303.23	10,770.00	88.14	89.04	90.89	-4,884.54	-2,937.49	3,034.79	2,910.36	124.43	24.390	
15,400.00	10,720.00	15,403.23	10,770.00	89.64	90.51	90.89	-4,984.53	-2,936.50	3,034.76	2,908.22	126.54	23.982	
15,500.00	10,720.00	15,503.23	10,770.00	91.14	91.98	90.89	-5,084.53	-2,935.51	3,034.74	2,906.08	128.66	23.587	
15,600.00	10,720.00	15,603.23	10,770.00	92.65	93.47	90.89	-5,184.52	-2,934.52	3,034.72	2,903.93	130.79	23.204	
15,700.00	10,720.00	15,703.23	10,770.00	94.16	94.96	90.89	-5,284.52	-2,933.53	3,034.70	2,901.78	132.92	22.831	
15,800.00	10,720.00	15,803.23	10,770.00	95.67	96.45	90.89	-5,384.51	-2,932.54	3,034.68	2,899.62	135.06	22.469	
15,900.00	10,720.00	15,903.23	10,770.00	97.19	97.95	90.89	-5,484.51	-2,931.55	3,034.66	2,897.45	137.21	22.117	
16,000.00	10,720.00	16,003.23	10,770.00	98.72	99.46	90.89	-5,584.50	-2,930.56	3,034.64	2,895.28	139.36	21.775	
16,100.00	10,720.00	16,103.23	10,770.00	100.25	100.97	90.89	-5,684.50	-2,929.56	3,034.61	2,893.10	141.52	21.443	
16,200.00	10,720.00	16,203.23	10,770.00	101.78	102.48	90.89	-5,784.49	-2,928.57	3,034.59	2,890.91	143.68	21.120	
16,300.00	10,720.00	16,303.23	10,770.00	103.31	104.00	90.89	-5,884.49	-2,927.58	3,034.57	2,888.72	145.85	20.806	
16,400.00	10,720.00	16,403.23	10,770.00	104.85	105.52	90.89	-5,984.48	-2,926.59	3,034.55	2,886.52	148.03	20.500	
16,500.00	10,720.00	16,503.23	10,770.00	106.40	107.05	90.89	-6,084.48	-2,925.60	3,034.53	2,884.32	150.21	20.202	
16,600.00	10,720.00	16,603.23	10,770.00	107.94	108.57	90.89	-6,184.47	-2,924.61	3,034.51	2,882.12	152.39	19.913	
16,700.00	10,720.00	16,703.23	10,770.00	109.49	110.11	90.89	-6,284.47	-2,923.62	3,034.49	2,879.91	154.58	19.631	
16,800.00	10,720.00	16,803.23	10,770.00	111.04	111.64	90.89	-6,384.46	-2,922.63	3,034.47	2,877.69	156.77	19.356	
16,900.00	10,720.00	16,903.23	10,770.00	112.60	113.18	90.89	-6,484.46	-2,921.64	3,034.44	2,875.48	158.97	19.088	
17,000.00	10,720.00	17,003.23	10,770.00	114.16	114.73	90.89	-6,584.45	-2,920.65	3,034.42	2,873.25	161.17	18.828	
17,100.00	10,720.00	17,103.23	10,770.00	115.72	116.27	90.89	-6,684.45	-2,919.66	3,034.40	2,871.03	163.37	18.574	
17,200.00	10,720.00	17,203.23	10,770.00	117.28	117.82	90.89	-6,784.44	-2,918.66	3,034.38	2,868.80	165.58	18.326	
17,300.00	10,720.00	17,303.23	10,770.00	118.84	119.37	90.89	-6,884.44	-2,917.67	3,034.36	2,866.57	167.79	18.084	
17,400.00	10,720.00	17,403.23	10,770.00	120.41	120.93	90.89	-6,984.44	-2,916.68	3,034.34	2,864.33	170.01	17.848	
17,500.00	10,720.00	17,503.23	10,770.00	121.98	122.48	90.89	-7,084.43	-2,915.69	3,034.32	2,862.09	172.22	17.618	
17,600.00	10,720.00	17,603.23	10,770.00	123.55	124.04	90.89	-7,184.43	-2,914.70	3,034.30	2,859.85	174.44	17.394	
17,700.00	10,720.00	17,703.23	10,770.00	125.13	125.60	90.89	-7,284.42	-2,913.71	3,034.27	2,857.61	176.67	17.175	
17,800.00	10,720.00	17,803.23	10,770.00	126.70	127.17	90.89	-7,384.42	-2,912.72	3,034.25	2,855.36	178.90	16.961	
17,900.00	10,720.00	17,903.23	10,770.00	128.28	128.73	90.89	-7,484.41	-2,911.73	3,034.23	2,853.11	181.12	16.752	
18,000.00	10,720.00	18,003.23	10,770.00	129.86	130.30	90.89	-7,584.41	-2,910.74	3,034.21	2,850.85	183.36	16.548	
18,100.00	10,720.00	18,103.23	10,770.00	131.44	131.87	90.89	-7,684.40	-2,909.75	3,034.19	2,848.60	185.59	16.349	
18,200.00	10,720.00	18,203.23	10,770.00	133.02	133.44	90.89	-7,784.40	-2,908.75	3,034.17	2,846.34	187.83	16.154	
18,300.00	10,720.00	18,303.23	10,770.00	134.61	135.02	90.89	-7,884.39	-2,907.76	3,034.15	2,844.08	190.07	15.963	
18,400.00	10,720.00	18,403.23	10,770.00	136.19	136.59	90.89	-7,984.39	-2,906.77	3,034.12	2,841.82	192.31	15.777	
18,500.00	10,720.00	18,503.23	10,770.00	137.78	138.17	90.89	-8,084.38	-2,905.78	3,034.10	2,839.55	194.55	15.595	
18,600.00	10,720.00	18,603.23	10,770.00	139.37	139.75	90.89	-8,184.38	-2,904.79	3,034.08	2,837.28	196.80	15.417	
18,700.00	10,720.00	18,703.23	10,770.00	140.96	141.33	90.89	-8,284.37	-2,903.80	3,034.06	2,835.01	199.05	15.243	
18,800.00	10,720.00	18,803.23	10,770.00	142.55	142.91	90.89	-8,384.37	-2,902.81	3,034.04	2,832.74	201.30	15.072	
18,900.00	10,720.00	18,903.23	10,770.00	144.15	144.50	90.89	-8,484.36	-2,901.82	3,034.02	2,830.47	203.55	14.906	
19,000.00	10,720.00	19,003.23	10,770.00	145.74	146.08	90.89	-8,584.36	-2,900.83	3,034.00	2,828.19	205.80	14.742	
19,100.00	10,720.00	19,103.23	10,770.00	147.34	147.67	90.89	-8,684.35	-2,899.84	3,033.98	2,825.92	208.06	14.582	
19,200.00	10,720.00	19,203.23	10,770.00	148.93	149.26	90.89	-8,784.35	-2,898.85	3,033.95	2,823.64	210.32	14.426	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 501H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,720.00	19,303.23	10,770.00	150.53	150.85	90.89	-8,884.34	-2,897.85	3,033.93	2,821.36	212.58	14.272	
19,400.00	10,720.00	19,403.23	10,770.00	152.13	152.44	90.89	-8,984.34	-2,896.86	3,033.91	2,819.08	214.84	14.122	
19,500.00	10,720.00	19,503.23	10,770.00	153.73	154.03	90.89	-9,084.33	-2,895.87	3,033.89	2,816.79	217.10	13.975	
19,600.00	10,720.00	19,603.23	10,770.00	155.33	155.63	90.89	-9,184.33	-2,894.88	3,033.87	2,814.51	219.36	13.830	
19,700.00	10,720.00	19,703.23	10,770.00	156.94	157.22	90.89	-9,284.32	-2,893.89	3,033.85	2,812.22	221.63	13.689	
19,800.00	10,720.00	19,803.23	10,770.00	158.54	158.82	90.89	-9,384.32	-2,892.90	3,033.83	2,809.93	223.89	13.550	
19,900.00	10,720.00	19,903.23	10,770.00	160.14	160.41	90.89	-9,484.31	-2,891.91	3,033.81	2,807.64	226.16	13.414	
20,000.00	10,720.00	20,003.23	10,770.00	161.75	162.01	90.89	-9,584.31	-2,890.92	3,033.78	2,805.35	228.43	13.281	
20,100.00	10,720.00	20,103.23	10,770.00	163.36	163.61	90.89	-9,684.30	-2,889.93	3,033.76	2,803.06	230.70	13.150	
20,200.00	10,720.00	20,203.23	10,770.00	164.96	165.21	90.89	-9,784.30	-2,888.94	3,033.74	2,800.77	232.97	13.022	
20,300.00	10,720.00	20,303.23	10,770.00	166.57	166.81	90.89	-9,884.29	-2,887.95	3,033.72	2,798.47	235.25	12.896	
20,400.00	10,720.00	20,403.23	10,770.00	168.18	168.41	90.89	-9,984.29	-2,886.95	3,033.70	2,796.18	237.52	12.772	
20,500.00	10,720.00	20,503.23	10,770.00	169.79	170.02	90.89	-10,084.28	-2,885.96	3,033.68	2,793.88	239.80	12.651	
20,600.00	10,720.00	20,603.23	10,770.00	171.40	171.62	90.89	-10,184.28	-2,884.97	3,033.66	2,791.58	242.07	12.532	
20,700.00	10,720.00	20,703.23	10,770.00	173.01	173.23	90.89	-10,284.27	-2,883.98	3,033.63	2,789.28	244.35	12.415	
20,800.00	10,720.00	20,803.23	10,770.00	174.63	174.83	90.89	-10,384.27	-2,882.99	3,033.61	2,786.99	246.63	12.300	
20,839.08	10,720.00	20,841.66	10,770.00	175.19	175.40	90.89	-10,422.70	-2,882.61	3,033.61	2,786.19	247.41	12.261	
20,841.32	10,720.00	20,841.66	10,770.00	175.22	175.40	90.89	-10,422.70	-2,882.61	3,033.61	2,786.16	247.44	12.260	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 502H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.50	2.50	0.00	0.00	-90.55	-18.72	-1,945.30	1,945.39				
100.00	100.00	102.50	102.50	0.13	0.13	-90.55	-18.72	-1,945.30	1,945.39	1,945.21	0.18	N/A	
200.00	200.00	202.50	202.50	0.48	0.49	-90.55	-18.72	-1,945.30	1,945.39	1,944.70	0.69	2,815.809	
300.00	300.00	302.50	302.50	0.84	0.85	-90.55	-18.72	-1,945.30	1,945.39	1,944.19	1.20	1,624.102	
400.00	400.00	402.50	402.50	1.20	1.21	-90.55	-18.72	-1,945.30	1,945.39	1,943.69	1.70	1,141.141	
500.00	500.00	502.50	502.50	1.56	1.57	-90.55	-18.72	-1,945.30	1,945.39	1,943.18	2.21	879.579	
600.00	600.00	602.50	602.50	1.92	1.93	-90.55	-18.72	-1,945.30	1,945.39	1,942.67	2.72	715.564	
700.00	700.00	702.50	702.50	2.28	2.29	-90.55	-18.72	-1,945.30	1,945.39	1,942.16	3.23	603.103	
800.00	800.00	802.50	802.50	2.63	2.64	-90.55	-18.72	-1,945.30	1,945.39	1,941.66	3.73	521.190	
900.00	900.00	902.50	902.50	2.99	3.00	-90.55	-18.72	-1,945.30	1,945.39	1,941.15	4.24	458.868	
1,000.00	1,000.00	1,002.50	1,002.50	3.35	3.36	-90.55	-18.72	-1,945.30	1,945.39	1,940.64	4.75	409.858	
1,100.00	1,100.00	1,102.50	1,102.50	3.71	3.72	-90.55	-18.72	-1,945.30	1,945.39	1,940.14	5.25	370.307	
1,200.00	1,200.00	1,202.50	1,202.50	4.07	4.08	-90.55	-18.72	-1,945.30	1,945.39	1,939.63	5.76	337.717	
1,300.00	1,300.00	1,302.50	1,302.50	4.43	4.44	-90.55	-18.72	-1,945.30	1,945.39	1,939.12	6.27	310.400	
1,400.00	1,400.00	1,402.50	1,402.50	4.79	4.79	-90.55	-18.72	-1,945.30	1,945.39	1,938.62	6.77	287.171	
1,500.00	1,500.00	1,502.50	1,502.50	5.14	5.15	-90.55	-18.72	-1,945.30	1,945.39	1,938.11	7.28	267.177	
1,600.00	1,600.00	1,602.50	1,602.50	5.50	5.51	-90.55	-18.72	-1,945.30	1,945.39	1,937.60	7.79	249.786	
1,700.00	1,700.00	1,702.50	1,702.50	5.86	5.87	-90.55	-18.72	-1,945.30	1,945.39	1,937.09	8.30	234.520	
1,800.00	1,800.00	1,802.50	1,802.50	6.22	6.23	-90.55	-18.72	-1,945.30	1,945.39	1,936.59	8.80	221.013	
1,900.00	1,900.00	1,902.50	1,902.50	6.58	6.59	-90.55	-18.72	-1,945.30	1,945.39	1,936.08	9.31	208.977	
2,000.00	2,000.00	2,002.50	2,002.50	6.94	6.95	-90.55	-18.72	-1,945.30	1,945.39	1,935.57	9.82	198.185	
2,100.00	2,100.00	2,102.50	2,102.50	7.30	7.30	-90.55	-18.72	-1,945.30	1,945.39	1,935.07	10.32	188.452	
2,200.00	2,200.00	2,202.50	2,202.50	7.65	7.66	-90.55	-18.72	-1,945.30	1,945.39	1,934.56	10.83	179.630	
2,300.00	2,300.00	2,302.50	2,302.50	8.01	8.02	-90.55	-18.72	-1,945.30	1,945.39	1,934.05	11.34	171.598	
2,400.00	2,400.00	2,402.50	2,402.50	8.37	8.38	-90.55	-18.72	-1,945.30	1,945.39	1,933.55	11.84	164.253	
2,500.00	2,500.00	2,502.50	2,502.50	8.73	8.74	-90.55	-18.72	-1,945.30	1,945.39	1,933.04	12.35	157.511	
2,600.00	2,600.00	2,602.50	2,602.50	9.09	9.10	-90.55	-18.72	-1,945.30	1,945.39	1,932.53	12.86	151.301	
2,700.00	2,700.00	2,702.50	2,702.50	9.45	9.45	-90.55	-18.72	-1,945.30	1,945.39	1,932.03	13.36	145.561	
2,800.00	2,800.00	2,802.50	2,802.50	9.80	9.81	-90.55	-18.72	-1,945.30	1,945.39	1,931.52	13.87	140.242	
2,900.00	2,900.00	2,902.50	2,902.50	10.16	10.17	-90.55	-18.72	-1,945.30	1,945.39	1,931.01	14.38	135.297	
3,000.00	3,000.00	3,002.50	3,002.50	10.52	10.53	-90.55	-18.72	-1,945.30	1,945.39	1,930.50	14.89	130.689	
3,100.00	3,100.00	3,102.50	3,102.50	10.88	10.89	-90.55	-18.72	-1,945.30	1,945.39	1,930.00	15.39	126.385	
3,200.00	3,200.00	3,205.08	3,205.08	11.24	11.26	-90.55	-18.72	-1,945.30	1,945.39	1,929.48	15.91	122.308	
3,300.00	3,300.00	3,408.07	3,407.96	11.60	11.96	-90.56	-19.09	-1,939.65	1,942.61	1,925.97	16.63	116.784	
3,400.00	3,400.00	3,609.89	3,609.10	11.96	12.65	-90.60	-20.16	-1,923.38	1,934.55	1,917.23	17.32	111.710	
3,500.00	3,500.00	3,727.28	3,725.72	12.31	13.06	-90.63	-21.05	-1,909.91	1,923.02	1,905.18	17.84	107.798	
3,600.00	3,600.00	3,826.60	3,824.36	12.67	13.41	-90.66	-21.81	-1,898.37	1,911.41	1,893.08	18.33	104.267	
3,700.00	3,700.00	3,925.92	3,923.01	13.03	13.77	-90.69	-22.57	-1,886.83	1,899.81	1,880.98	18.83	100.915	
3,800.00	3,800.00	4,025.24	4,021.65	13.39	14.13	-90.71	-23.33	-1,875.29	1,888.20	1,868.88	19.32	97.731	
3,900.00	3,900.00	4,124.56	4,120.30	13.75	14.48	-90.74	-24.08	-1,863.76	1,876.59	1,856.78	19.82	94.702	
4,000.00	4,000.00	4,223.88	4,218.94	14.11	14.85	-90.77	-24.84	-1,852.22	1,864.99	1,844.68	20.31	91.817	
4,100.00	4,100.00	4,323.20	4,317.59	14.46	15.21	-90.80	-25.60	-1,840.68	1,853.38	1,832.57	20.81	89.066	
4,200.00	4,200.00	4,422.52	4,416.23	14.82	15.57	-90.83	-26.36	-1,829.14	1,841.78	1,820.47	21.31	86.441	
4,300.00	4,300.00	4,521.84	4,514.88	15.18	15.94	-90.85	-27.12	-1,817.61	1,830.17	1,808.37	21.80	83.934	
4,400.00	4,400.00	4,621.16	4,613.52	15.54	16.31	-90.88	-27.88	-1,806.07	1,818.57	1,796.27	22.30	81.536	
4,500.00	4,500.00	4,720.48	4,712.17	15.90	16.68	-90.91	-28.64	-1,794.53	1,806.97	1,784.16	22.80	79.242	
4,600.00	4,599.99	4,819.93	4,810.93	16.24	17.05	148.20	-29.40	-1,782.98	1,796.47	1,773.17	23.29	77.122	
4,666.98	4,666.93	4,886.65	4,877.21	16.47	17.30	148.26	-29.91	-1,775.23	1,790.67	1,767.06	23.62	75.823	
4,700.00	4,699.92	4,919.57	4,909.90	16.58	17.42	148.28	-30.16	-1,771.41	1,788.06	1,764.29	23.78	75.204	
4,800.00	4,799.82	5,019.25	5,008.90	16.91	17.80	148.32	-30.92	-1,759.83	1,780.16	1,755.90	24.26	73.377	
4,900.00	4,899.72	5,118.92	5,107.90	17.24	18.17	148.37	-31.68	-1,748.25	1,772.26	1,747.51	24.75	71.618	
5,000.00	4,999.63	5,218.60	5,206.90	17.58	18.55	148.41	-32.45	-1,736.67	1,764.35	1,739.12	25.23	69.923	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 502H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	5,318.28	5,305.90	17.92	18.93	148.46	-33.21	-1,725.09	1,756.45	1,730.73	25.72	68.290	
5,200.00	5,199.44	5,417.96	5,404.90	18.26	19.31	148.50	-33.97	-1,713.51	1,748.55	1,722.34	26.21	66.714	
5,300.00	5,299.34	5,517.63	5,503.90	18.60	19.69	148.55	-34.73	-1,701.93	1,740.65	1,713.95	26.70	65.194	
5,400.00	5,399.25	5,617.31	5,602.90	18.94	20.07	148.59	-35.49	-1,690.35	1,732.75	1,705.56	27.19	63.727	
5,500.00	5,499.15	5,716.99	5,701.89	19.28	20.45	148.64	-36.25	-1,678.77	1,724.85	1,697.17	27.68	62.310	
5,600.00	5,599.06	5,816.67	5,800.89	19.62	20.84	148.69	-37.02	-1,667.20	1,716.96	1,688.78	28.17	60.941	
5,700.00	5,698.96	5,916.34	5,899.89	19.96	21.22	148.74	-37.78	-1,655.62	1,709.06	1,680.40	28.67	59.617	
5,800.00	5,798.86	6,016.02	5,998.89	20.31	21.60	148.78	-38.54	-1,644.04	1,701.17	1,672.01	29.16	58.336	
5,834.24	5,833.07	6,050.15	6,032.79	20.42	21.74	148.80	-38.80	-1,640.07	1,698.47	1,669.14	29.33	57.907	
5,900.00	5,898.79	6,115.66	6,097.86	20.65	21.99	148.78	-39.30	-1,632.46	1,692.79	1,663.14	29.66	57.081	
6,001.22	6,000.00	6,216.32	6,197.83	21.00	22.38	-90.35	-40.07	-1,620.77	1,682.18	1,652.02	30.16	55.772	
6,100.00	6,098.78	6,314.43	6,295.27	21.36	22.76	-90.37	-40.82	-1,609.37	1,670.71	1,640.05	30.66	54.493	
6,200.00	6,198.78	6,413.75	6,393.92	21.71	23.14	-90.40	-41.58	-1,597.84	1,659.10	1,627.94	31.16	53.239	
6,300.00	6,298.78	6,513.07	6,492.56	22.07	23.53	-90.43	-42.34	-1,586.30	1,647.49	1,615.82	31.67	52.025	
6,400.00	6,398.78	6,612.39	6,591.21	22.43	23.91	-90.46	-43.10	-1,574.76	1,635.88	1,603.71	32.17	50.849	
6,500.00	6,498.78	6,711.71	6,689.85	22.78	24.30	-90.49	-43.86	-1,563.22	1,624.27	1,591.59	32.68	49.708	
6,600.00	6,598.78	6,811.03	6,788.50	23.14	24.69	-90.52	-44.62	-1,551.69	1,612.66	1,579.48	33.18	48.602	
6,700.00	6,698.78	6,910.35	6,887.14	23.50	25.08	-90.55	-45.37	-1,540.15	1,601.05	1,567.36	33.69	47.529	
6,800.00	6,798.78	7,009.67	6,985.79	23.85	25.46	-90.59	-46.13	-1,528.61	1,589.44	1,555.25	34.19	46.487	
6,900.00	6,898.78	7,108.99	7,084.43	24.21	25.85	-90.62	-46.89	-1,517.07	1,577.83	1,543.14	34.70	45.476	
7,000.00	6,998.78	7,184.13	7,159.11	24.57	26.14	-90.64	-47.44	-1,508.80	1,566.87	1,531.70	35.17	44.550	
7,100.00	7,098.78	7,254.86	7,229.54	24.93	26.41	-90.66	-47.86	-1,502.32	1,557.71	1,522.08	35.63	43.717	
7,200.00	7,198.78	7,325.81	7,300.30	25.28	26.68	-90.67	-48.20	-1,497.13	1,550.40	1,514.32	36.08	42.967	
7,300.00	7,298.78	7,400.00	7,374.38	25.64	26.95	-90.69	-48.47	-1,493.10	1,544.95	1,508.41	36.53	42.289	
7,400.00	7,398.78	7,468.18	7,442.51	26.00	27.19	-90.69	-48.63	-1,490.67	1,541.34	1,504.38	36.96	41.705	
7,500.00	7,498.78	7,539.49	7,513.81	26.35	27.44	-90.70	-48.71	-1,489.43	1,539.59	1,502.21	37.38	41.188	
7,559.23	7,558.01	7,586.19	7,560.51	26.57	27.60	-90.70	-48.72	-1,489.30	1,539.41	1,501.78	37.64	40.901	
7,600.00	7,598.78	7,626.96	7,601.28	26.71	27.74	-90.70	-48.72	-1,489.30	1,539.41	1,501.57	37.84	40.681	
7,700.00	7,698.78	7,726.96	7,701.28	27.07	28.08	-90.70	-48.72	-1,489.30	1,539.41	1,501.07	38.34	40.151	
7,800.00	7,798.78	7,826.96	7,801.28	27.43	28.42	-90.70	-48.72	-1,489.30	1,539.41	1,500.57	38.84	39.635	
7,900.00	7,898.78	7,926.96	7,901.28	27.78	28.76	-90.70	-48.72	-1,489.30	1,539.41	1,500.07	39.34	39.131	
8,000.00	7,998.78	8,026.96	8,001.28	28.14	29.10	-90.70	-48.72	-1,489.30	1,539.41	1,499.57	39.84	38.640	
8,100.00	8,098.78	8,126.96	8,101.28	28.50	29.44	-90.70	-48.72	-1,489.30	1,539.41	1,499.07	40.34	38.161	
8,200.00	8,198.78	8,226.96	8,201.28	28.86	29.79	-90.70	-48.72	-1,489.30	1,539.41	1,498.57	40.84	37.694	
8,300.00	8,298.78	8,326.96	8,301.28	29.21	30.13	-90.70	-48.72	-1,489.30	1,539.41	1,498.07	41.34	37.238	
8,400.00	8,398.78	8,426.96	8,401.28	29.57	30.47	-90.70	-48.72	-1,489.30	1,539.41	1,497.57	41.84	36.792	
8,500.00	8,498.78	8,526.96	8,501.28	29.93	30.82	-90.70	-48.72	-1,489.30	1,539.41	1,497.07	42.34	36.357	
8,600.00	8,598.78	8,626.96	8,601.28	30.29	31.16	-90.70	-48.72	-1,489.30	1,539.41	1,496.57	42.84	35.932	
8,700.00	8,698.78	8,726.96	8,701.28	30.64	31.50	-90.70	-48.72	-1,489.30	1,539.41	1,496.07	43.34	35.517	
8,800.00	8,798.78	8,826.96	8,801.28	31.00	31.85	-90.70	-48.72	-1,489.30	1,539.41	1,495.57	43.84	35.111	
8,900.00	8,898.78	8,926.96	8,901.28	31.36	32.19	-90.70	-48.72	-1,489.30	1,539.41	1,495.07	44.35	34.714	
9,000.00	8,998.78	9,026.96	9,001.28	31.72	32.54	-90.70	-48.72	-1,489.30	1,539.41	1,494.57	44.85	34.326	
9,100.00	9,098.78	9,126.96	9,101.28	32.07	32.88	-90.70	-48.72	-1,489.30	1,539.41	1,494.07	45.35	33.946	
9,200.00	9,198.78	9,226.96	9,201.28	32.43	33.23	-90.70	-48.72	-1,489.30	1,539.41	1,493.56	45.85	33.575	
9,300.00	9,298.78	9,326.96	9,301.28	32.79	33.58	-90.70	-48.72	-1,489.30	1,539.41	1,493.06	46.35	33.212	
9,400.00	9,398.78	9,426.96	9,401.28	33.15	33.92	-90.70	-48.72	-1,489.30	1,539.41	1,492.56	46.85	32.856	
9,500.00	9,498.78	9,526.96	9,501.28	33.51	34.27	-90.70	-48.72	-1,489.30	1,539.41	1,492.06	47.36	32.508	
9,600.00	9,598.78	9,626.96	9,601.28	33.86	34.61	-90.70	-48.72	-1,489.30	1,539.41	1,491.56	47.86	32.167	
9,700.00	9,698.78	9,726.96	9,701.28	34.22	34.96	-90.70	-48.72	-1,489.30	1,539.41	1,491.05	48.36	31.833	
9,800.00	9,798.78	9,826.96	9,801.28	34.58	35.31	-90.70	-48.72	-1,489.30	1,539.41	1,490.55	48.86	31.505	
9,900.00	9,898.78	9,926.96	9,901.28	34.94	35.66	-90.70	-48.72	-1,489.30	1,539.41	1,490.05	49.36	31.185	
10,000.00	9,998.78	10,026.96	10,001.28	35.29	36.00	-90.70	-48.72	-1,489.30	1,539.41	1,489.55	49.87	30.871	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 502H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,126.96	10,101.28	35.65	36.35	-90.70	-48.72	-1,489.30	1,539.41	1,489.04	50.37	30.563	
10,148.26	10,147.04	10,175.22	10,149.54	35.82	36.52	-90.70	-48.72	-1,489.30	1,539.41	1,488.80	50.61	30.416	
10,150.00	10,148.78	10,176.96	10,151.28	35.83	36.53	89.86	-48.72	-1,489.30	1,539.41	1,488.79	50.62	30.411	
10,200.00	10,198.71	10,226.78	10,201.08	35.99	36.69	89.91	-49.79	-1,489.29	1,539.41	1,488.56	50.86	30.270	
10,250.00	10,248.24	10,276.64	10,250.65	36.16	36.85	89.96	-55.00	-1,489.24	1,539.41	1,488.32	51.09	30.133	
10,300.00	10,297.01	10,326.63	10,299.71	36.32	37.02	90.02	-64.53	-1,489.14	1,539.40	1,488.09	51.32	29.997	
10,350.00	10,344.64	10,376.74	10,347.87	36.48	37.18	90.07	-78.33	-1,489.00	1,539.40	1,487.86	51.55	29.864	
10,400.00	10,390.76	10,426.99	10,394.75	36.63	37.33	90.12	-96.35	-1,488.82	1,539.40	1,487.63	51.77	29.734	
10,450.00	10,435.02	10,477.36	10,439.99	36.78	37.48	90.18	-118.46	-1,488.60	1,539.40	1,487.40	52.00	29.605	
10,500.00	10,477.10	10,527.86	10,483.23	36.94	37.63	90.23	-144.52	-1,488.34	1,539.39	1,487.17	52.22	29.477	
10,550.00	10,516.66	10,578.48	10,524.09	37.09	37.77	90.28	-174.37	-1,488.05	1,539.39	1,486.94	52.45	29.350	
10,600.00	10,553.41	10,629.22	10,562.25	37.25	37.91	90.33	-207.78	-1,487.71	1,539.39	1,486.71	52.68	29.222	
10,650.00	10,587.07	10,680.07	10,597.37	37.41	38.04	90.38	-244.53	-1,487.35	1,539.39	1,486.48	52.91	29.094	
10,700.00	10,617.37	10,731.03	10,629.17	37.57	38.18	90.42	-284.33	-1,486.95	1,539.38	1,486.23	53.15	28.963	
10,750.00	10,644.10	10,782.09	10,657.35	37.74	38.32	90.46	-326.89	-1,486.52	1,539.38	1,485.99	53.39	28.831	
10,800.00	10,667.05	10,833.24	10,681.68	37.91	38.48	90.49	-371.86	-1,486.07	1,539.37	1,485.73	53.65	28.695	
10,850.00	10,686.04	10,884.48	10,701.93	38.09	38.64	90.53	-418.91	-1,485.60	1,539.37	1,485.46	53.91	28.556	
10,900.00	10,700.92	10,935.79	10,717.91	38.28	38.82	90.56	-467.65	-1,485.12	1,539.36	1,485.19	54.18	28.414	
10,950.00	10,711.59	10,987.16	10,729.48	38.47	39.01	90.58	-517.68	-1,484.62	1,539.35	1,484.90	54.45	28.269	
11,000.00	10,717.97	11,038.59	10,736.54	38.67	39.21	90.60	-568.60	-1,484.11	1,539.35	1,484.61	54.74	28.123	
11,048.26	10,720.00	11,088.26	10,738.99	38.86	39.41	90.61	-618.19	-1,483.62	1,539.34	1,484.32	55.02	27.980	
11,100.00	10,720.00	11,140.10	10,739.00	39.07	39.63	90.61	-670.03	-1,483.10	1,539.32	1,483.99	55.33	27.821	
11,200.00	10,720.00	11,240.10	10,739.00	39.54	40.11	90.61	-770.02	-1,482.10	1,539.29	1,483.30	56.00	27.490	
11,300.00	10,720.00	11,340.10	10,739.00	40.07	40.64	90.61	-870.02	-1,481.10	1,539.26	1,482.51	56.75	27.124	
11,400.00	10,720.00	11,440.10	10,739.00	40.66	41.23	90.61	-970.01	-1,480.10	1,539.24	1,481.65	57.59	26.728	
11,500.00	10,720.00	11,540.10	10,739.00	41.31	41.88	90.61	-1,070.01	-1,479.11	1,539.21	1,480.70	58.51	26.307	
11,600.00	10,720.00	11,640.10	10,739.00	42.02	42.58	90.61	-1,170.01	-1,478.11	1,539.18	1,479.67	59.51	25.865	
11,700.00	10,720.00	11,740.10	10,739.00	42.77	43.34	90.61	-1,270.00	-1,477.11	1,539.15	1,478.57	60.58	25.407	
11,800.00	10,720.00	11,840.10	10,739.00	43.58	44.14	90.61	-1,370.00	-1,476.11	1,539.12	1,477.40	61.72	24.937	
11,900.00	10,720.00	11,940.10	10,739.00	44.43	44.99	90.61	-1,469.99	-1,475.11	1,539.09	1,476.17	62.93	24.458	
12,000.00	10,720.00	12,040.10	10,739.00	45.33	45.88	90.61	-1,569.99	-1,474.12	1,539.06	1,474.87	64.20	23.974	
12,100.00	10,720.00	12,140.10	10,739.00	46.26	46.81	90.61	-1,669.98	-1,473.12	1,539.04	1,473.51	65.53	23.488	
12,200.00	10,720.00	12,240.10	10,739.00	47.24	47.78	90.61	-1,769.98	-1,472.12	1,539.01	1,472.10	66.91	23.002	
12,300.00	10,720.00	12,340.10	10,739.00	48.26	48.79	90.61	-1,869.97	-1,471.12	1,538.98	1,470.64	68.34	22.518	
12,400.00	10,720.00	12,440.10	10,739.00	49.30	49.83	90.61	-1,969.97	-1,470.12	1,538.95	1,469.12	69.83	22.040	
12,500.00	10,720.00	12,540.10	10,739.00	50.38	50.91	90.61	-2,069.96	-1,469.13	1,538.92	1,467.57	71.36	21.567	
12,600.00	10,720.00	12,640.10	10,739.00	51.50	52.01	90.61	-2,169.96	-1,468.13	1,538.89	1,465.97	72.93	21.102	
12,700.00	10,720.00	12,740.10	10,739.00	52.63	53.15	90.61	-2,269.95	-1,467.13	1,538.86	1,464.32	74.54	20.645	
12,800.00	10,720.00	12,840.10	10,739.00	53.80	54.30	90.61	-2,369.95	-1,466.13	1,538.84	1,462.65	76.19	20.197	
12,900.00	10,720.00	12,940.10	10,739.00	54.99	55.49	90.61	-2,469.94	-1,465.13	1,538.81	1,460.93	77.87	19.760	
13,000.00	10,720.00	13,040.10	10,739.00	56.20	56.70	90.61	-2,569.94	-1,464.13	1,538.78	1,459.19	79.59	19.333	
13,100.00	10,720.00	13,140.10	10,739.00	57.44	57.93	90.61	-2,669.93	-1,463.14	1,538.75	1,457.41	81.34	18.917	
13,200.00	10,720.00	13,240.10	10,739.00	58.70	59.18	90.61	-2,769.93	-1,462.14	1,538.72	1,455.60	83.12	18.513	
13,300.00	10,720.00	13,340.10	10,739.00	59.97	60.45	90.61	-2,869.92	-1,461.14	1,538.69	1,453.77	84.92	18.119	
13,400.00	10,720.00	13,440.10	10,739.00	61.27	61.73	90.61	-2,969.92	-1,460.14	1,538.67	1,451.91	86.75	17.737	
13,500.00	10,720.00	13,540.10	10,739.00	62.58	63.04	90.61	-3,069.91	-1,459.14	1,538.64	1,450.03	88.60	17.365	
13,600.00	10,720.00	13,640.10	10,739.00	63.90	64.36	90.61	-3,169.91	-1,458.15	1,538.61	1,448.13	90.48	17.005	
13,700.00	10,720.00	13,740.10	10,739.00	65.24	65.69	90.61	-3,269.90	-1,457.15	1,538.58	1,446.20	92.38	16.655	
13,800.00	10,720.00	13,840.10	10,739.00	66.60	67.04	90.61	-3,369.90	-1,456.15	1,538.55	1,444.26	94.29	16.317	
13,900.00	10,720.00	13,940.10	10,739.00	67.97	68.41	90.61	-3,469.89	-1,455.15	1,538.52	1,442.29	96.23	15.988	
14,000.00	10,720.00	14,040.10	10,739.00	69.35	69.78	90.61	-3,569.89	-1,454.15	1,538.49	1,440.31	98.18	15.670	
14,100.00	10,720.00	14,140.10	10,739.00	70.74	71.17	90.61	-3,669.88	-1,453.16	1,538.47	1,438.32	100.15	15.362	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 502H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	10,720.00	14,240.10	10,739.00	72.14	72.57	90.61	-3,769.88	-1,452.16	1,538.44	1,436.30	102.13	15.063	
14,300.00	10,720.00	14,340.10	10,739.00	73.55	73.97	90.61	-3,869.87	-1,451.16	1,538.41	1,434.28	104.13	14.774	
14,400.00	10,720.00	14,440.10	10,739.00	74.98	75.39	90.61	-3,969.87	-1,450.16	1,538.38	1,432.24	106.14	14.493	
14,500.00	10,720.00	14,540.10	10,739.00	76.41	76.82	90.61	-4,069.86	-1,449.16	1,538.35	1,430.18	108.17	14.222	
14,600.00	10,720.00	14,640.10	10,739.00	77.85	78.26	90.61	-4,169.86	-1,448.16	1,538.32	1,428.12	110.21	13.958	
14,700.00	10,720.00	14,740.10	10,739.00	79.30	79.70	90.61	-4,269.85	-1,447.17	1,538.30	1,426.04	112.26	13.703	
14,800.00	10,720.00	14,840.10	10,739.00	80.76	81.15	90.61	-4,369.85	-1,446.17	1,538.27	1,423.95	114.32	13.456	
14,900.00	10,720.00	14,940.10	10,739.00	82.22	82.61	90.61	-4,469.84	-1,445.17	1,538.24	1,421.85	116.39	13.216	
15,000.00	10,720.00	15,040.10	10,739.00	83.69	84.08	90.61	-4,569.84	-1,444.17	1,538.21	1,419.74	118.47	12.984	
15,100.00	10,720.00	15,140.10	10,739.00	85.17	85.56	90.61	-4,669.83	-1,443.17	1,538.18	1,417.62	120.56	12.759	
15,200.00	10,720.00	15,240.10	10,739.00	86.65	87.04	90.61	-4,769.83	-1,442.18	1,538.15	1,415.49	122.66	12.540	
15,300.00	10,720.00	15,340.10	10,739.00	88.14	88.52	90.61	-4,869.82	-1,441.18	1,538.12	1,413.36	124.77	12.328	
15,400.00	10,720.00	15,440.10	10,739.00	89.64	90.01	90.61	-4,969.82	-1,440.18	1,538.10	1,411.22	126.88	12.122	
15,500.00	10,720.00	15,540.10	10,739.00	91.14	91.51	90.61	-5,069.81	-1,439.18	1,538.07	1,409.06	129.00	11.923	
15,600.00	10,720.00	15,640.10	10,739.00	92.65	93.01	90.61	-5,169.81	-1,438.18	1,538.04	1,406.91	131.13	11.729	
15,700.00	10,720.00	15,740.10	10,739.00	94.16	94.52	90.61	-5,269.80	-1,437.19	1,538.01	1,404.74	133.27	11.541	
15,800.00	10,720.00	15,840.10	10,739.00	95.67	96.03	90.61	-5,369.80	-1,436.19	1,537.98	1,402.57	135.41	11.358	
15,900.00	10,720.00	15,940.10	10,739.00	97.19	97.55	90.61	-5,469.79	-1,435.19	1,537.95	1,400.39	137.56	11.180	
16,000.00	10,720.00	16,040.10	10,739.00	98.72	99.07	90.61	-5,569.79	-1,434.19	1,537.92	1,398.21	139.72	11.007	
16,100.00	10,720.00	16,140.10	10,739.00	100.25	100.60	90.61	-5,669.78	-1,433.19	1,537.90	1,396.02	141.88	10.839	
16,200.00	10,720.00	16,240.10	10,739.00	101.78	102.13	90.61	-5,769.78	-1,432.20	1,537.87	1,393.82	144.05	10.676	
16,300.00	10,720.00	16,340.10	10,739.00	103.31	103.66	90.61	-5,869.77	-1,431.20	1,537.84	1,391.62	146.22	10.517	
16,400.00	10,720.00	16,440.10	10,739.00	104.85	105.20	90.61	-5,969.77	-1,430.20	1,537.81	1,389.41	148.40	10.363	
16,500.00	10,720.00	16,540.10	10,739.00	106.40	106.74	90.61	-6,069.76	-1,429.20	1,537.78	1,387.20	150.58	10.213	
16,600.00	10,720.00	16,640.10	10,739.00	107.94	108.28	90.61	-6,169.76	-1,428.20	1,537.75	1,384.99	152.76	10.066	
16,700.00	10,720.00	16,740.10	10,739.00	109.49	109.83	90.61	-6,269.75	-1,427.20	1,537.73	1,382.77	154.95	9.924	
16,800.00	10,720.00	16,840.10	10,739.00	111.04	111.38	90.61	-6,369.75	-1,426.21	1,537.70	1,380.55	157.15	9.785	
16,900.00	10,720.00	16,940.10	10,739.00	112.60	112.93	90.61	-6,469.74	-1,425.21	1,537.67	1,378.32	159.35	9.650	
17,000.00	10,720.00	17,040.10	10,739.00	114.16	114.48	90.61	-6,569.74	-1,424.21	1,537.64	1,376.09	161.55	9.518	
17,100.00	10,720.00	17,140.10	10,739.00	115.72	116.04	90.61	-6,669.73	-1,423.21	1,537.61	1,373.85	163.76	9.390	
17,200.00	10,720.00	17,240.10	10,739.00	117.28	117.60	90.61	-6,769.73	-1,422.21	1,537.58	1,371.62	165.97	9.264	
17,300.00	10,720.00	17,340.10	10,739.00	118.84	119.17	90.61	-6,869.72	-1,421.22	1,537.55	1,369.37	168.18	9.142	
17,400.00	10,720.00	17,440.10	10,739.00	120.41	120.73	90.61	-6,969.72	-1,420.22	1,537.53	1,367.13	170.40	9.023	
17,500.00	10,720.00	17,540.10	10,739.00	121.98	122.30	90.61	-7,069.71	-1,419.22	1,537.50	1,364.88	172.62	8.907	
17,600.00	10,720.00	17,640.10	10,739.00	123.55	123.87	90.61	-7,169.71	-1,418.22	1,537.47	1,362.63	174.84	8.794	
17,700.00	10,720.00	17,740.10	10,739.00	125.13	125.44	90.61	-7,269.70	-1,417.22	1,537.44	1,360.38	177.06	8.683	
17,800.00	10,720.00	17,840.10	10,739.00	126.70	127.01	90.61	-7,369.70	-1,416.23	1,537.41	1,358.12	179.29	8.575	
17,900.00	10,720.00	17,940.10	10,739.00	128.28	128.59	90.61	-7,469.69	-1,415.23	1,537.38	1,355.86	181.52	8.469	
18,000.00	10,720.00	18,040.10	10,739.00	129.86	130.17	90.61	-7,569.69	-1,414.23	1,537.35	1,353.60	183.76	8.366	
18,100.00	10,720.00	18,140.10	10,739.00	131.44	131.75	90.61	-7,669.68	-1,413.23	1,537.33	1,351.33	185.99	8.265	
18,200.00	10,720.00	18,240.10	10,739.00	133.02	133.33	90.61	-7,769.68	-1,412.23	1,537.30	1,349.07	188.23	8.167	
18,300.00	10,720.00	18,340.10	10,739.00	134.61	134.91	90.61	-7,869.67	-1,411.24	1,537.27	1,346.80	190.47	8.071	
18,400.00	10,720.00	18,440.10	10,739.00	136.19	136.50	90.61	-7,969.67	-1,410.24	1,537.24	1,344.52	192.72	7.977	
18,500.00	10,720.00	18,540.10	10,739.00	137.78	138.08	90.62	-8,069.66	-1,409.24	1,537.21	1,342.25	194.96	7.885	
18,600.00	10,720.00	18,640.10	10,739.00	139.37	139.67	90.62	-8,169.66	-1,408.24	1,537.18	1,339.97	197.21	7.795	
18,700.00	10,720.00	18,740.10	10,739.00	140.96	141.26	90.62	-8,269.65	-1,407.24	1,537.16	1,337.70	199.46	7.707	
18,800.00	10,720.00	18,840.10	10,739.00	142.55	142.85	90.62	-8,369.65	-1,406.24	1,537.13	1,335.42	201.71	7.620	
18,900.00	10,720.00	18,940.10	10,739.00	144.15	144.44	90.62	-8,469.64	-1,405.25	1,537.10	1,333.14	203.96	7.536	
19,000.00	10,720.00	19,040.10	10,739.00	145.74	146.03	90.62	-8,569.64	-1,404.25	1,537.07	1,330.85	206.22	7.454	
19,100.00	10,720.00	19,140.10	10,739.00	147.34	147.63	90.62	-8,669.63	-1,403.25	1,537.04	1,328.57	208.48	7.373	
19,200.00	10,720.00	19,240.10	10,739.00	148.93	149.22	90.62	-8,769.63	-1,402.25	1,537.01	1,326.28	210.73	7.294	
19,300.00	10,720.00	19,340.10	10,739.00	150.53	150.82	90.62	-8,869.62	-1,401.25	1,536.98	1,323.99	212.99	7.216	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 502H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,720.00	19,440.10	10,739.00	152.13	152.42	90.62	-8,969.62	-1,400.26	1,536.96	1,321.70	215.26	7.140	
19,500.00	10,720.00	19,540.10	10,739.00	153.73	154.02	90.62	-9,069.61	-1,399.26	1,536.93	1,319.41	217.52	7.066	
19,600.00	10,720.00	19,640.10	10,739.00	155.33	155.62	90.62	-9,169.61	-1,398.26	1,536.90	1,317.11	219.78	6.993	
19,700.00	10,720.00	19,740.10	10,739.00	156.94	157.22	90.62	-9,269.60	-1,397.26	1,536.87	1,314.82	222.05	6.921	
19,800.00	10,720.00	19,840.10	10,739.00	158.54	158.82	90.62	-9,369.60	-1,396.26	1,536.84	1,312.52	224.32	6.851	
19,900.00	10,720.00	19,940.10	10,739.00	160.14	160.43	90.62	-9,469.59	-1,395.27	1,536.81	1,310.23	226.59	6.782	
20,000.00	10,720.00	20,040.10	10,739.00	161.75	162.03	90.62	-9,569.59	-1,394.27	1,536.79	1,307.93	228.86	6.715	
20,100.00	10,720.00	20,140.10	10,739.00	163.36	163.63	90.62	-9,669.58	-1,393.27	1,536.76	1,305.63	231.13	6.649	
20,200.00	10,720.00	20,240.10	10,739.00	164.96	165.24	90.62	-9,769.58	-1,392.27	1,536.73	1,303.33	233.40	6.584	
20,300.00	10,720.00	20,340.10	10,739.00	166.57	166.85	90.62	-9,869.57	-1,391.27	1,536.70	1,301.02	235.68	6.520	
20,400.00	10,720.00	20,440.10	10,739.00	168.18	168.46	90.62	-9,969.57	-1,390.28	1,536.67	1,298.72	237.95	6.458	
20,500.00	10,720.00	20,540.10	10,739.00	169.79	170.06	90.62	-10,069.56	-1,389.28	1,536.64	1,296.41	240.23	6.397	
20,600.00	10,720.00	20,640.10	10,739.00	171.40	171.67	90.62	-10,169.56	-1,388.28	1,536.61	1,294.11	242.51	6.336	
20,700.00	10,720.00	20,740.10	10,739.00	173.01	173.28	90.62	-10,269.55	-1,387.28	1,536.59	1,291.80	244.78	6.277	
20,800.00	10,720.00	20,840.10	10,739.00	174.63	174.90	90.62	-10,369.55	-1,386.28	1,536.56	1,289.49	247.06	6.219	
20,839.36	10,720.00	20,879.44	10,739.00	175.19	175.53	90.62	-10,408.88	-1,385.89	1,536.55	1,288.63	247.91	6.198	CC
20,841.32	10,720.00	20,879.44	10,739.00	175.22	175.53	90.62	-10,408.88	-1,385.89	1,536.55	1,288.62	247.92	6.198	ES, SF

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 504H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.45	0.24	25.00	25.00				
100.00	100.00	99.70	99.70	0.13	0.13	89.45	0.24	25.00	25.00	24.82	0.18	141.014	
200.00	200.00	199.70	199.70	0.48	0.48	89.45	0.24	25.00	25.00	24.32	0.68	36.564	
300.00	300.00	299.70	299.70	0.84	0.84	89.45	0.24	25.00	25.00	23.81	1.19	20.997	
400.00	400.00	399.70	399.70	1.20	1.20	89.45	0.24	25.00	25.00	23.30	1.70	14.727	
500.00	500.00	499.70	499.70	1.56	1.56	89.45	0.24	25.00	25.00	22.80	2.20	11.340	
600.00	600.00	599.70	599.70	1.92	1.92	89.45	0.24	25.00	25.00	22.29	2.71	9.220	
700.00	700.00	699.70	699.70	2.28	2.28	89.45	0.24	25.00	25.00	21.78	3.22	7.768	
800.00	800.00	799.70	799.70	2.63	2.63	89.45	0.24	25.00	25.00	21.28	3.73	6.711	
900.00	900.00	899.70	899.70	2.99	2.99	89.45	0.24	25.00	25.00	20.77	4.23	5.907	
1,000.00	1,000.00	999.70	999.70	3.35	3.35	89.45	0.24	25.00	25.00	20.26	4.74	5.275	
1,100.00	1,100.00	1,099.70	1,099.70	3.71	3.71	89.45	0.24	25.00	25.00	19.75	5.25	4.765	
1,200.00	1,200.00	1,199.70	1,199.70	4.07	4.07	89.45	0.24	25.00	25.00	19.25	5.75	4.346	
1,300.00	1,300.00	1,299.70	1,299.70	4.43	4.43	89.45	0.24	25.00	25.00	18.74	6.26	3.994	
1,400.00	1,400.00	1,399.70	1,399.70	4.79	4.78	89.45	0.24	25.00	25.00	18.23	6.77	3.694	
1,500.00	1,500.00	1,499.70	1,499.70	5.14	5.14	89.45	0.24	25.00	25.00	17.73	7.27	3.437	
1,600.00	1,600.00	1,599.70	1,599.70	5.50	5.50	89.45	0.24	25.00	25.00	17.22	7.78	3.213	
1,700.00	1,700.00	1,699.70	1,699.70	5.86	5.86	89.45	0.24	25.00	25.00	16.71	8.29	3.017	
1,800.00	1,800.00	1,799.70	1,799.70	6.22	6.22	89.45	0.24	25.00	25.00	16.21	8.80	2.843	
1,900.00	1,900.00	1,899.70	1,899.70	6.58	6.58	89.45	0.24	25.00	25.00	15.70	9.30	2.688	
2,000.00	2,000.00	1,999.70	1,999.70	6.94	6.94	89.45	0.24	25.00	25.00	15.19	9.81	2.549	
2,100.00	2,100.00	2,099.70	2,099.70	7.30	7.29	89.45	0.24	25.00	25.00	14.69	10.32	2.424	
2,200.00	2,200.00	2,199.70	2,199.70	7.65	7.65	89.45	0.24	25.00	25.00	14.18	10.82	2.310	
2,300.00	2,300.00	2,299.70	2,299.70	8.01	8.01	89.45	0.24	25.00	25.00	13.67	11.33	2.207	
2,400.00	2,400.00	2,399.70	2,399.70	8.37	8.37	89.45	0.24	25.00	25.00	13.16	11.84	2.112	
2,500.00	2,500.00	2,499.70	2,499.70	8.73	8.73	89.45	0.24	25.00	25.00	12.66	12.34	2.025	
2,600.00	2,600.00	2,599.70	2,599.70	9.09	9.09	89.45	0.24	25.00	25.00	12.15	12.85	1.946	
2,700.00	2,700.00	2,699.70	2,699.70	9.45	9.44	89.45	0.24	25.00	25.00	11.64	13.36	1.872	
2,800.00	2,800.00	2,799.70	2,799.70	9.80	9.80	89.45	0.24	25.00	25.00	11.14	13.86	1.803	
2,900.00	2,900.00	2,899.70	2,899.70	10.16	10.16	89.45	0.24	25.00	25.00	10.63	14.37	1.740	
3,000.00	3,000.00	2,999.70	2,999.70	10.52	10.52	89.45	0.24	25.00	25.00	10.12	14.88	1.680	
3,100.00	3,100.00	3,099.70	3,099.70	10.88	10.88	89.45	0.24	25.00	25.00	9.62	15.39	1.625	
3,200.00	3,200.00	3,199.70	3,199.70	11.24	11.24	89.45	0.24	25.00	25.00	9.11	15.89	1.573	
3,300.00	3,300.00	3,299.70	3,299.70	11.60	11.60	89.45	0.24	25.00	25.00	8.60	16.40	1.525	CC, ES, SF
3,400.00	3,400.00	3,398.81	3,398.79	11.96	11.94	90.04	-0.02	26.68	26.70	9.82	16.88	1.582	
3,500.00	3,500.00	3,497.68	3,497.52	12.31	12.28	91.44	-0.80	31.74	31.82	14.50	17.32	1.837	
3,600.00	3,600.00	3,596.08	3,595.56	12.67	12.61	92.98	-2.09	40.11	40.38	22.63	17.75	2.275	
3,700.00	3,700.00	3,693.79	3,692.55	13.03	12.95	94.29	-3.88	51.71	52.34	34.18	18.16	2.882	
3,800.00	3,800.00	3,790.58	3,788.19	13.39	13.29	95.29	-6.15	66.41	67.68	49.13	18.56	3.647	
3,900.00	3,900.00	3,886.26	3,882.17	13.75	13.64	96.02	-8.87	84.08	86.34	67.41	18.93	4.561	
4,000.00	4,000.00	3,980.62	3,974.24	14.11	13.99	96.56	-12.02	104.53	108.26	88.97	19.29	5.613	
4,100.00	4,100.00	4,073.51	4,064.15	14.46	14.34	96.96	-15.58	127.58	133.36	113.73	19.62	6.796	
4,200.00	4,200.00	4,168.56	4,155.57	14.82	14.72	97.27	-19.54	153.29	160.71	140.64	20.07	8.008	
4,300.00	4,300.00	4,264.71	4,248.02	15.18	15.11	97.48	-23.57	179.40	188.17	167.61	20.56	9.152	
4,400.00	4,400.00	4,360.87	4,340.48	15.54	15.52	97.65	-27.59	205.50	215.64	194.59	21.05	10.243	
4,500.00	4,500.00	4,457.02	4,432.93	15.90	15.93	97.77	-31.62	231.61	243.10	221.56	21.54	11.285	
4,600.00	4,599.99	4,553.50	4,525.69	16.24	16.35	-23.04	-35.66	257.80	269.41	247.38	22.03	12.232	
4,666.98	4,666.93	4,618.46	4,588.15	16.47	16.64	-23.07	-38.38	275.43	285.73	263.38	22.34	12.788	
4,700.00	4,699.92	4,650.54	4,619.01	16.58	16.79	-23.15	-39.72	284.14	293.51	271.01	22.50	13.044	
4,800.00	4,799.82	4,747.71	4,712.44	16.91	17.23	-23.37	-43.79	310.52	317.10	294.11	22.98	13.798	
4,900.00	4,899.72	4,844.89	4,805.88	17.24	17.68	-23.55	-47.86	336.90	340.68	317.22	23.46	14.519	
5,000.00	4,999.63	4,942.06	4,899.31	17.58	18.13	-23.72	-51.92	363.29	364.27	340.32	23.95	15.211	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 504H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	5,039.23	4,992.75	17.92	18.60	-23.86	-55.99	389.67	387.86	363.43	24.43	15.874	
5,200.00	5,199.44	5,136.41	5,086.18	18.26	19.06	-23.99	-60.06	416.05	411.46	386.54	24.92	16.510	
5,300.00	5,299.34	5,233.58	5,179.61	18.60	19.54	-24.10	-64.13	442.43	435.06	409.64	25.41	17.121	
5,400.00	5,399.25	5,330.75	5,273.05	18.94	20.01	-24.20	-68.20	468.81	458.65	432.75	25.90	17.707	
5,500.00	5,499.15	5,427.92	5,366.48	19.28	20.50	-24.29	-72.26	495.19	482.25	455.86	26.40	18.270	
5,600.00	5,599.06	5,525.10	5,459.92	19.62	20.98	-24.38	-76.33	521.57	505.85	478.96	26.89	18.812	
5,700.00	5,698.96	5,622.27	5,553.35	19.96	21.47	-24.45	-80.40	547.95	529.45	502.07	27.39	19.334	
5,800.00	5,798.86	5,719.44	5,646.79	20.31	21.97	-24.52	-84.47	574.33	553.06	525.17	27.88	19.835	
5,834.24	5,833.07	5,752.71	5,678.78	20.42	22.14	-24.55	-85.86	583.37	561.14	533.08	28.05	20.003	
5,900.00	5,898.79	5,816.49	5,740.10	20.65	22.46	-24.67	-88.53	600.68	577.16	548.78	28.38	20.337	
6,001.22	6,000.00	5,914.15	5,834.01	21.00	22.97	96.19	-92.62	627.19	603.76	574.87	28.89	20.900	
6,100.00	6,098.78	6,009.13	5,925.33	21.36	23.46	96.30	-96.59	652.98	630.87	601.48	29.39	21.468	
6,200.00	6,198.78	6,105.28	6,017.78	21.71	23.96	96.41	-100.62	679.08	658.32	628.43	29.89	22.023	
6,300.00	6,298.78	6,201.43	6,110.24	22.07	24.46	96.50	-104.64	705.19	685.77	655.37	30.40	22.560	
6,400.00	6,398.78	6,297.59	6,202.69	22.43	24.97	96.59	-108.67	731.29	713.22	682.31	30.90	23.079	
6,500.00	6,498.78	6,393.74	6,295.15	22.78	25.48	96.67	-112.69	757.40	740.67	709.26	31.41	23.580	
6,600.00	6,598.78	6,489.89	6,387.60	23.14	25.99	96.74	-116.72	783.50	768.12	736.20	31.92	24.065	
6,700.00	6,698.78	6,586.05	6,480.06	23.50	26.50	96.81	-120.75	809.60	795.58	763.15	32.43	24.534	
6,800.00	6,798.78	6,682.20	6,572.51	23.85	27.01	96.88	-124.77	835.71	823.03	790.09	32.94	24.988	
6,900.00	6,898.78	6,778.35	6,664.97	24.21	27.53	96.94	-128.80	861.81	850.49	817.04	33.45	25.429	
7,000.00	6,998.78	6,874.51	6,757.42	24.57	28.05	97.00	-132.82	887.92	877.94	843.99	33.96	25.855	
7,100.00	7,098.78	6,970.66	6,849.87	24.93	28.57	97.05	-136.85	914.02	905.40	870.93	34.47	26.268	
7,200.00	7,198.78	7,066.81	6,942.33	25.28	29.09	97.10	-140.87	940.12	932.86	897.88	34.98	26.670	
7,300.00	7,298.78	7,162.97	7,034.78	25.64	29.61	97.15	-144.90	966.23	960.32	924.83	35.49	27.059	
7,400.00	7,398.78	7,259.12	7,127.24	26.00	30.13	97.19	-148.92	992.33	987.78	951.78	36.00	27.437	
7,500.00	7,498.78	7,355.27	7,219.69	26.35	30.66	97.24	-152.95	1,018.44	1,015.24	978.72	36.51	27.804	
7,600.00	7,598.78	7,451.43	7,312.15	26.71	31.19	97.28	-156.97	1,044.54	1,042.70	1,005.67	37.03	28.160	
7,700.00	7,698.78	7,547.58	7,404.60	27.07	31.71	97.31	-161.00	1,070.65	1,070.16	1,032.62	37.54	28.507	
7,800.00	7,798.78	7,643.73	7,497.05	27.43	32.24	97.35	-165.02	1,096.75	1,097.62	1,059.57	38.05	28.844	
7,900.00	7,898.78	7,739.89	7,589.51	27.78	32.77	97.38	-169.05	1,122.85	1,125.08	1,086.51	38.57	29.171	
8,000.00	7,998.78	7,836.04	7,681.96	28.14	33.30	97.42	-173.07	1,148.96	1,152.54	1,113.46	39.08	29.490	
8,100.00	8,098.78	7,932.19	7,774.42	28.50	33.83	97.45	-177.10	1,175.06	1,180.01	1,140.41	39.60	29.800	
8,200.00	8,198.78	8,028.34	7,866.87	28.86	34.37	97.48	-181.12	1,201.17	1,207.47	1,167.36	40.11	30.101	
8,300.00	8,298.78	8,124.50	7,959.33	29.21	34.90	97.51	-185.15	1,227.27	1,234.93	1,194.30	40.63	30.395	
8,400.00	8,398.78	8,220.65	8,051.78	29.57	35.43	97.53	-189.17	1,253.37	1,262.40	1,221.25	41.15	30.682	
8,500.00	8,498.78	8,316.80	8,144.23	29.93	35.97	97.56	-193.20	1,279.48	1,289.86	1,248.20	41.66	30.960	
8,600.00	8,598.78	8,412.96	8,236.69	30.29	36.50	97.59	-197.23	1,305.58	1,317.32	1,275.15	42.18	31.232	
8,700.00	8,698.78	8,509.11	8,329.14	30.64	37.04	97.61	-201.25	1,331.69	1,344.79	1,302.09	42.70	31.497	
8,800.00	8,798.78	8,605.26	8,421.60	31.00	37.58	97.63	-205.28	1,357.79	1,372.25	1,329.04	43.21	31.755	
8,900.00	8,898.78	8,701.42	8,514.05	31.36	38.12	97.66	-209.30	1,383.89	1,399.72	1,355.99	43.73	32.007	
9,000.00	8,998.78	8,797.57	8,606.51	31.72	38.65	97.68	-213.33	1,410.00	1,427.18	1,382.93	44.25	32.253	
9,100.00	9,098.78	8,893.72	8,698.96	32.07	39.19	97.70	-217.35	1,436.10	1,454.65	1,409.88	44.77	32.493	
9,200.00	9,198.78	9,077.00	8,876.46	32.43	40.17	97.73	-224.29	1,481.12	1,479.71	1,433.86	45.85	32.270	
9,300.00	9,298.78	9,281.72	9,077.69	32.79	41.11	97.76	-229.99	1,518.07	1,497.99	1,451.10	46.89	31.946	
9,400.00	9,398.78	9,490.88	9,285.50	33.15	41.93	97.77	-233.53	1,541.05	1,509.11	1,461.38	47.73	31.616	
9,500.00	9,498.78	9,702.35	9,496.78	33.51	42.59	97.78	-234.76	1,549.00	1,512.92	1,464.56	48.36	31.284	
9,600.00	9,598.78	9,804.05	9,598.48	33.86	42.88	97.78	-234.76	1,549.00	1,512.92	1,464.07	48.85	30.973	
9,700.00	9,698.78	9,904.05	9,698.48	34.22	43.15	97.78	-234.76	1,549.00	1,512.92	1,463.59	49.33	30.669	
9,800.00	9,798.78	10,004.05	9,798.48	34.58	43.44	97.78	-234.76	1,549.00	1,512.92	1,463.11	49.82	30.371	
9,900.00	9,898.78	10,104.05	9,898.48	34.94	43.72	97.78	-234.76	1,549.00	1,512.92	1,462.62	50.30	30.078	
10,000.00	9,998.78	10,204.05	9,998.48	35.29	44.00	97.78	-234.76	1,549.00	1,512.92	1,462.13	50.79	29.790	
10,100.00	10,098.78	10,304.05	10,098.48	35.65	44.28	97.78	-234.76	1,549.00	1,512.92	1,461.65	51.27	29.507	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 504H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,103.11	10,101.89	10,307.16	10,101.59	35.66	44.29	97.78	-234.76	1,549.00	1,512.92	1,461.63	51.29	29.499	
10,148.26	10,147.04	10,350.00	10,144.42	35.82	44.41	97.78	-234.81	1,549.00	1,512.93	1,461.42	51.51	29.374	
10,150.00	10,148.78	10,350.00	10,144.42	35.83	44.41	-81.66	-234.81	1,549.00	1,512.93	1,461.42	51.51	29.369	
10,200.00	10,198.71	10,387.04	10,181.42	35.99	44.52	-81.67	-236.48	1,549.02	1,512.93	1,461.19	51.74	29.242	
10,250.00	10,248.24	10,423.21	10,217.37	36.16	44.62	-81.72	-240.42	1,549.05	1,512.75	1,460.79	51.96	29.114	
10,300.00	10,297.01	10,459.44	10,253.05	36.32	44.72	-81.82	-246.63	1,549.11	1,512.40	1,460.22	52.18	28.986	
10,350.00	10,344.64	10,500.00	10,292.45	36.48	44.84	-81.98	-256.24	1,549.21	1,511.89	1,459.50	52.39	28.856	
10,400.00	10,390.76	10,532.18	10,323.16	36.63	44.94	-82.17	-265.83	1,549.30	1,511.21	1,458.61	52.60	28.730	
10,450.00	10,435.02	10,568.77	10,357.37	36.78	45.04	-82.41	-278.82	1,549.43	1,510.40	1,457.59	52.81	28.600	
10,500.00	10,477.10	10,600.00	10,385.86	36.94	45.14	-82.67	-291.60	1,549.55	1,509.48	1,456.47	53.01	28.474	
10,550.00	10,516.66	10,642.60	10,423.50	37.09	45.26	-83.04	-311.51	1,549.74	1,508.42	1,455.19	53.23	28.336	
10,600.00	10,553.41	10,679.91	10,455.19	37.25	45.38	-83.41	-331.20	1,549.93	1,507.30	1,453.85	53.45	28.200	
10,650.00	10,587.07	10,717.56	10,485.79	37.41	45.49	-83.83	-353.12	1,550.15	1,506.11	1,452.43	53.67	28.060	
10,700.00	10,617.37	10,755.58	10,515.17	37.57	45.60	-84.28	-377.25	1,550.38	1,504.89	1,450.98	53.91	27.916	
10,750.00	10,644.10	10,794.05	10,543.19	37.74	45.71	-84.77	-403.58	1,550.63	1,503.66	1,449.51	54.15	27.769	
10,800.00	10,667.05	10,833.01	10,569.72	37.91	45.83	-85.29	-432.11	1,550.91	1,502.45	1,448.05	54.40	27.618	
10,850.00	10,686.04	10,872.54	10,594.58	38.09	45.95	-85.83	-462.83	1,551.21	1,501.29	1,446.62	54.66	27.464	
10,900.00	10,700.92	10,912.70	10,617.61	38.28	46.07	-86.41	-495.72	1,551.53	1,500.21	1,445.27	54.94	27.308	
10,950.00	10,711.59	10,953.59	10,638.63	38.47	46.19	-87.00	-530.78	1,551.87	1,499.24	1,444.02	55.22	27.152	
11,000.00	10,717.97	10,995.28	10,657.44	38.67	46.33	-87.61	-567.98	1,552.23	1,498.41	1,442.91	55.50	26.998	
11,048.26	10,720.00	11,036.40	10,673.29	38.86	46.46	-88.22	-605.90	1,552.59	1,497.76	1,441.98	55.78	26.853	
11,100.00	10,720.00	11,082.21	10,687.69	39.07	46.61	-88.78	-649.38	1,553.01	1,497.31	1,441.22	56.08	26.698	
11,200.00	10,720.00	11,176.51	10,706.19	39.54	46.95	-89.48	-741.74	1,553.91	1,497.00	1,440.27	56.73	26.387	
11,300.00	10,720.00	11,275.09	10,710.00	40.07	47.35	-89.63	-840.17	1,554.86	1,496.97	1,439.50	57.46	26.050	
11,400.00	10,720.00	11,375.09	10,710.00	40.66	47.80	-89.63	-940.16	1,555.83	1,496.96	1,438.68	58.28	25.684	
11,500.00	10,720.00	11,475.09	10,710.00	41.31	48.30	-89.63	-1,040.16	1,556.80	1,496.96	1,437.78	59.18	25.294	
11,600.00	10,720.00	11,575.09	10,710.00	42.02	48.85	-89.63	-1,140.15	1,557.77	1,496.96	1,436.80	60.16	24.884	
11,700.00	10,720.00	11,675.09	10,710.00	42.77	49.45	-89.63	-1,240.15	1,558.73	1,496.96	1,435.75	61.21	24.457	
11,800.00	10,720.00	11,775.09	10,710.00	43.58	50.10	-89.63	-1,340.14	1,559.70	1,496.96	1,434.63	62.33	24.018	
11,900.00	10,720.00	11,875.09	10,710.00	44.43	50.80	-89.63	-1,440.14	1,560.67	1,496.96	1,433.45	63.51	23.570	
12,000.00	10,720.00	11,975.09	10,710.00	45.33	51.55	-89.63	-1,540.13	1,561.64	1,496.96	1,432.20	64.76	23.116	
12,100.00	10,720.00	12,075.09	10,710.00	46.26	52.34	-89.63	-1,640.13	1,562.61	1,496.95	1,430.89	66.06	22.659	
12,200.00	10,720.00	12,175.09	10,710.00	47.24	53.17	-89.63	-1,740.12	1,563.57	1,496.95	1,429.53	67.42	22.202	
12,300.00	10,720.00	12,275.09	10,710.00	48.26	54.04	-89.63	-1,840.12	1,564.54	1,496.95	1,428.11	68.84	21.746	
12,400.00	10,720.00	12,375.09	10,710.00	49.30	54.95	-89.63	-1,940.11	1,565.51	1,496.95	1,426.65	70.30	21.293	
12,500.00	10,720.00	12,475.09	10,710.00	50.38	55.89	-89.63	-2,040.11	1,566.48	1,496.95	1,425.14	71.81	20.846	
12,600.00	10,720.00	12,575.09	10,710.00	51.50	56.87	-89.63	-2,140.11	1,567.45	1,496.95	1,423.58	73.36	20.405	
12,700.00	10,720.00	12,675.09	10,710.00	52.63	57.88	-89.63	-2,240.10	1,568.41	1,496.94	1,421.99	74.96	19.971	
12,800.00	10,720.00	12,775.09	10,710.00	53.80	58.92	-89.63	-2,340.10	1,569.38	1,496.94	1,420.36	76.59	19.545	
12,900.00	10,720.00	12,875.09	10,710.00	54.99	59.99	-89.63	-2,440.09	1,570.35	1,496.94	1,418.69	78.25	19.129	
13,000.00	10,720.00	12,975.09	10,710.00	56.20	61.08	-89.63	-2,540.09	1,571.32	1,496.94	1,416.99	79.95	18.723	
13,100.00	10,720.00	13,075.09	10,710.00	57.44	62.20	-89.63	-2,640.08	1,572.29	1,496.94	1,415.25	81.69	18.326	
13,200.00	10,720.00	13,175.09	10,710.00	58.70	63.35	-89.63	-2,740.08	1,573.25	1,496.94	1,413.49	83.45	17.939	
13,300.00	10,720.00	13,275.09	10,710.00	59.97	64.52	-89.63	-2,840.07	1,574.22	1,496.94	1,411.70	85.23	17.563	
13,400.00	10,720.00	13,375.09	10,710.00	61.27	65.71	-89.63	-2,940.07	1,575.19	1,496.93	1,409.89	87.05	17.196	
13,500.00	10,720.00	13,475.09	10,710.00	62.58	66.92	-89.63	-3,040.06	1,576.16	1,496.93	1,408.04	88.89	16.841	
13,600.00	10,720.00	13,575.09	10,710.00	63.90	68.15	-89.63	-3,140.06	1,577.13	1,496.93	1,406.18	90.75	16.495	
13,700.00	10,720.00	13,675.09	10,710.00	65.24	69.40	-89.63	-3,240.05	1,578.09	1,496.93	1,404.30	92.63	16.160	
13,800.00	10,720.00	13,775.09	10,710.00	66.60	70.66	-89.63	-3,340.05	1,579.06	1,496.93	1,402.39	94.54	15.834	
13,900.00	10,720.00	13,875.09	10,710.00	67.97	71.94	-89.63	-3,440.04	1,580.03	1,496.93	1,400.47	96.46	15.519	
14,000.00	10,720.00	13,975.09	10,710.00	69.35	73.24	-89.63	-3,540.04	1,581.00	1,496.92	1,398.53	98.40	15.213	
14,100.00	10,720.00	14,075.09	10,710.00	70.74	74.55	-89.63	-3,640.03	1,581.97	1,496.92	1,396.57	100.36	14.916	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 504H - OH - Plan #1

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	10,720.00	14,175.09	10,710.00	72.14	75.87	-89.63	-3,740.03	1,582.94	1,496.92	1,394.59	102.33	14.628	
14,300.00	10,720.00	14,275.09	10,710.00	73.55	77.21	-89.63	-3,840.03	1,583.90	1,496.92	1,392.60	104.32	14.350	
14,400.00	10,720.00	14,375.09	10,710.00	74.98	78.56	-89.63	-3,940.02	1,584.87	1,496.92	1,390.60	106.32	14.079	
14,500.00	10,720.00	14,475.09	10,710.00	76.41	79.92	-89.63	-4,040.02	1,585.84	1,496.92	1,388.58	108.33	13.818	
14,600.00	10,720.00	14,575.09	10,710.00	77.85	81.29	-89.63	-4,140.01	1,586.81	1,496.92	1,386.55	110.36	13.564	
14,700.00	10,720.00	14,675.09	10,710.00	79.30	82.67	-89.63	-4,240.01	1,587.78	1,496.91	1,384.51	112.40	13.317	
14,800.00	10,720.00	14,775.09	10,710.00	80.76	84.06	-89.63	-4,340.00	1,588.74	1,496.91	1,382.46	114.45	13.079	
14,900.00	10,720.00	14,875.09	10,710.00	82.22	85.46	-89.63	-4,440.00	1,589.71	1,496.91	1,380.40	116.52	12.847	
15,000.00	10,720.00	14,975.09	10,710.00	83.69	86.87	-89.63	-4,539.99	1,590.68	1,496.91	1,378.32	118.59	12.623	
15,100.00	10,720.00	15,075.09	10,710.00	85.17	88.29	-89.63	-4,639.99	1,591.65	1,496.91	1,376.24	120.67	12.405	
15,200.00	10,720.00	15,175.09	10,710.00	86.65	89.72	-89.63	-4,739.98	1,592.62	1,496.91	1,374.15	122.76	12.194	
15,300.00	10,720.00	15,275.09	10,710.00	88.14	91.15	-89.63	-4,839.98	1,593.58	1,496.90	1,372.05	124.86	11.989	
15,400.00	10,720.00	15,375.09	10,710.00	89.64	92.59	-89.63	-4,939.97	1,594.55	1,496.90	1,369.94	126.97	11.790	
15,500.00	10,720.00	15,475.09	10,710.00	91.14	94.04	-89.63	-5,039.97	1,595.52	1,496.90	1,367.82	129.08	11.597	
15,600.00	10,720.00	15,575.09	10,710.00	92.65	95.50	-89.63	-5,139.96	1,596.49	1,496.90	1,365.70	131.20	11.409	
15,700.00	10,720.00	15,675.09	10,710.00	94.16	96.96	-89.63	-5,239.96	1,597.46	1,496.90	1,363.56	133.33	11.227	
15,800.00	10,720.00	15,775.09	10,710.00	95.67	98.43	-89.63	-5,339.96	1,598.42	1,496.90	1,361.43	135.47	11.050	
15,900.00	10,720.00	15,875.09	10,710.00	97.19	99.90	-89.63	-5,439.95	1,599.39	1,496.90	1,359.28	137.61	10.877	
16,000.00	10,720.00	15,975.09	10,710.00	98.72	101.38	-89.63	-5,539.95	1,600.36	1,496.89	1,357.13	139.76	10.710	
16,100.00	10,720.00	16,075.09	10,710.00	100.25	102.86	-89.63	-5,639.94	1,601.33	1,496.89	1,354.97	141.92	10.547	
16,200.00	10,720.00	16,175.09	10,710.00	101.78	104.35	-89.63	-5,739.94	1,602.30	1,496.89	1,352.81	144.08	10.389	
16,300.00	10,720.00	16,275.09	10,710.00	103.31	105.85	-89.63	-5,839.93	1,603.26	1,496.89	1,350.64	146.25	10.235	
16,400.00	10,720.00	16,375.09	10,710.00	104.85	107.35	-89.63	-5,939.93	1,604.23	1,496.89	1,348.47	148.42	10.086	
16,500.00	10,720.00	16,475.09	10,710.00	106.40	108.85	-89.63	-6,039.92	1,605.20	1,496.89	1,346.29	150.59	9.940	
16,600.00	10,720.00	16,575.09	10,710.00	107.94	110.36	-89.63	-6,139.92	1,606.17	1,496.88	1,344.11	152.78	9.798	
16,700.00	10,720.00	16,675.09	10,710.00	109.49	111.87	-89.63	-6,239.91	1,607.14	1,496.88	1,341.92	154.96	9.660	
16,800.00	10,720.00	16,775.09	10,710.00	111.04	113.39	-89.63	-6,339.91	1,608.10	1,496.88	1,339.73	157.15	9.525	
16,900.00	10,720.00	16,875.09	10,710.00	112.60	114.91	-89.63	-6,439.90	1,609.07	1,496.88	1,337.54	159.34	9.394	
17,000.00	10,720.00	16,975.09	10,710.00	114.16	116.43	-89.63	-6,539.90	1,610.04	1,496.88	1,335.34	161.54	9.266	
17,100.00	10,720.00	17,075.09	10,710.00	115.72	117.96	-89.63	-6,639.89	1,611.01	1,496.88	1,333.13	163.74	9.142	
17,200.00	10,720.00	17,175.09	10,710.00	117.28	119.49	-89.63	-6,739.89	1,611.98	1,496.88	1,330.93	165.95	9.020	
17,300.00	10,720.00	17,275.09	10,710.00	118.84	121.02	-89.63	-6,839.89	1,612.95	1,496.87	1,328.72	168.16	8.902	
17,400.00	10,720.00	17,375.09	10,710.00	120.41	122.56	-89.63	-6,939.88	1,613.91	1,496.87	1,326.50	170.37	8.786	
17,500.00	10,720.00	17,475.09	10,710.00	121.98	124.09	-89.63	-7,039.88	1,614.88	1,496.87	1,324.28	172.59	8.673	
17,600.00	10,720.00	17,575.09	10,710.00	123.55	125.64	-89.63	-7,139.87	1,615.85	1,496.87	1,322.06	174.81	8.563	
17,700.00	10,720.00	17,675.09	10,710.00	125.13	127.18	-89.63	-7,239.87	1,616.82	1,496.87	1,319.84	177.03	8.456	
17,800.00	10,720.00	17,775.09	10,710.00	126.70	128.73	-89.63	-7,339.86	1,617.79	1,496.87	1,317.61	179.25	8.351	
17,900.00	10,720.00	17,875.09	10,710.00	128.28	130.28	-89.63	-7,439.86	1,618.75	1,496.86	1,315.39	181.48	8.248	
18,000.00	10,720.00	17,975.09	10,710.00	129.86	131.83	-89.63	-7,539.85	1,619.72	1,496.86	1,313.15	183.71	8.148	
18,100.00	10,720.00	18,075.09	10,710.00	131.44	133.39	-89.63	-7,639.85	1,620.69	1,496.86	1,310.92	185.94	8.050	
18,200.00	10,720.00	18,175.09	10,710.00	133.02	134.94	-89.63	-7,739.84	1,621.66	1,496.86	1,308.68	188.18	7.955	
18,300.00	10,720.00	18,275.09	10,710.00	134.61	136.50	-89.63	-7,839.84	1,622.63	1,496.86	1,306.44	190.41	7.861	
18,400.00	10,720.00	18,375.09	10,710.00	136.19	138.07	-89.63	-7,939.83	1,623.59	1,496.86	1,304.20	192.65	7.770	
18,500.00	10,720.00	18,475.09	10,710.00	137.78	139.63	-89.63	-8,039.83	1,624.56	1,496.86	1,301.96	194.90	7.680	
18,600.00	10,720.00	18,575.09	10,710.00	139.37	141.19	-89.63	-8,139.82	1,625.53	1,496.85	1,299.71	197.14	7.593	
18,700.00	10,720.00	18,675.09	10,710.00	140.96	142.76	-89.63	-8,239.82	1,626.50	1,496.85	1,297.47	199.39	7.507	
18,800.00	10,720.00	18,775.09	10,710.00	142.55	144.33	-89.63	-8,339.81	1,627.47	1,496.85	1,295.22	201.63	7.424	
18,900.00	10,720.00	18,875.09	10,710.00	144.15	145.90	-89.63	-8,439.81	1,628.43	1,496.85	1,292.96	203.89	7.342	
19,000.00	10,720.00	18,975.09	10,710.00	145.74	147.48	-89.63	-8,539.81	1,629.40	1,496.85	1,290.71	206.14	7.261	
19,100.00	10,720.00	19,075.09	10,710.00	147.34	149.05	-89.63	-8,639.80	1,630.37	1,496.85	1,288.45	208.39	7.183	
19,200.00	10,720.00	19,175.09	10,710.00	148.93	150.63	-89.63	-8,739.80	1,631.34	1,496.84	1,286.20	210.65	7.106	
19,300.00	10,720.00	19,275.09	10,710.00	150.53	152.21	-89.63	-8,839.79	1,632.31	1,496.84	1,283.94	212.90	7.031	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 504H - OH - Plan #1

Survey Program: 0-OWSG (Rev2) MWD

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,720.00	19,375.09	10,710.00	152.13	153.79	-89.63	-8,939.79	1,633.27	1,496.84	1,281.68	215.16	6.957	
19,500.00	10,720.00	19,475.09	10,710.00	153.73	155.37	-89.63	-9,039.78	1,634.24	1,496.84	1,279.42	217.42	6.884	
19,600.00	10,720.00	19,575.09	10,710.00	155.33	156.95	-89.63	-9,139.78	1,635.21	1,496.84	1,277.15	219.69	6.814	
19,700.00	10,720.00	19,675.09	10,710.00	156.94	158.53	-89.63	-9,239.77	1,636.18	1,496.84	1,274.89	221.95	6.744	
19,800.00	10,720.00	19,775.09	10,710.00	158.54	160.12	-89.63	-9,339.77	1,637.15	1,496.84	1,272.62	224.22	6.676	
19,900.00	10,720.00	19,875.09	10,710.00	160.14	161.71	-89.63	-9,439.76	1,638.12	1,496.83	1,270.35	226.48	6.609	
20,000.00	10,720.00	19,975.09	10,710.00	161.75	163.29	-89.63	-9,539.76	1,639.08	1,496.83	1,268.08	228.75	6.543	
20,100.00	10,720.00	20,075.09	10,710.00	163.36	164.88	-89.63	-9,639.75	1,640.05	1,496.83	1,265.81	231.02	6.479	
20,200.00	10,720.00	20,175.09	10,710.00	164.96	166.47	-89.63	-9,739.75	1,641.02	1,496.83	1,263.54	233.29	6.416	
20,300.00	10,720.00	20,275.09	10,710.00	166.57	168.07	-89.63	-9,839.74	1,641.99	1,496.83	1,261.26	235.56	6.354	
20,400.00	10,720.00	20,375.09	10,710.00	168.18	169.66	-89.63	-9,939.74	1,642.96	1,496.83	1,258.99	237.84	6.294	
20,500.00	10,720.00	20,475.09	10,710.00	169.79	171.25	-89.63	-10,039.74	1,643.92	1,496.82	1,256.71	240.11	6.234	
20,600.00	10,720.00	20,575.09	10,710.00	171.40	172.85	-89.63	-10,139.73	1,644.89	1,496.82	1,254.44	242.39	6.175	
20,700.00	10,720.00	20,675.09	10,710.00	173.01	174.44	-89.63	-10,239.73	1,645.86	1,496.82	1,252.16	244.66	6.118	
20,800.00	10,720.00	20,775.09	10,710.00	174.63	176.04	-89.63	-10,339.72	1,646.83	1,496.82	1,249.88	246.94	6.061	
20,841.32	10,720.00	20,816.41	10,710.00	175.22	176.70	-89.63	-10,381.04	1,647.23	1,496.82	1,248.99	247.83	6.040	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 601H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	16.20	16.20	0.00	0.02	-90.34	-16.96	-2,822.19	2,822.24				
100.00	100.00	116.20	116.20	0.13	0.18	-90.34	-16.96	-2,822.19	2,822.24	2,822.02	0.22	N/A	
200.00	200.00	216.20	216.20	0.48	0.54	-90.34	-16.96	-2,822.19	2,822.24	2,821.51	0.73	3,883.458	
300.00	300.00	316.20	316.20	0.84	0.90	-90.34	-16.96	-2,822.19	2,822.24	2,821.01	1.23	2,288.523	
400.00	400.00	416.20	416.20	1.20	1.26	-90.34	-16.96	-2,822.19	2,822.24	2,820.50	1.74	1,622.003	
500.00	500.00	516.20	516.20	1.56	1.62	-90.34	-16.96	-2,822.19	2,822.24	2,819.99	2.25	1,256.105	
600.00	600.00	616.20	616.20	1.92	1.98	-90.34	-16.96	-2,822.19	2,822.24	2,819.49	2.75	1,024.888	
700.00	700.00	716.20	716.20	2.28	2.33	-90.34	-16.96	-2,822.19	2,822.24	2,818.98	3.26	865.555	
800.00	800.00	816.20	816.20	2.63	2.69	-90.34	-16.96	-2,822.19	2,822.24	2,818.47	3.77	749.095	
900.00	900.00	916.20	916.20	2.99	3.05	-90.34	-16.96	-2,822.19	2,822.24	2,817.97	4.27	660.256	
1,000.00	1,000.00	1,016.20	1,016.20	3.35	3.41	-90.34	-16.96	-2,822.19	2,822.24	2,817.46	4.78	590.254	
1,100.00	1,100.00	1,116.20	1,116.20	3.71	3.77	-90.34	-16.96	-2,822.19	2,822.24	2,816.95	5.29	533.673	
1,200.00	1,200.00	1,216.20	1,216.20	4.07	4.13	-90.34	-16.96	-2,822.19	2,822.24	2,816.45	5.80	486.990	
1,300.00	1,300.00	1,316.20	1,316.20	4.43	4.49	-90.34	-16.96	-2,822.19	2,822.24	2,815.94	6.30	447.817	
1,400.00	1,400.00	1,416.20	1,416.20	4.79	4.84	-90.34	-16.96	-2,822.19	2,822.24	2,815.43	6.81	414.477	
1,500.00	1,500.00	1,516.20	1,516.20	5.14	5.20	-90.34	-16.96	-2,822.19	2,822.24	2,814.92	7.32	385.757	
1,600.00	1,600.00	1,616.20	1,616.20	5.50	5.56	-90.34	-16.96	-2,822.19	2,822.24	2,814.42	7.82	360.759	
1,700.00	1,700.00	1,716.20	1,716.20	5.86	5.92	-90.34	-16.96	-2,822.19	2,822.24	2,813.91	8.33	338.804	
1,800.00	1,800.00	1,816.20	1,816.20	6.22	6.28	-90.34	-16.96	-2,822.19	2,822.24	2,813.40	8.84	319.368	
1,900.00	1,900.00	1,916.20	1,916.20	6.58	6.64	-90.34	-16.96	-2,822.19	2,822.24	2,812.90	9.34	302.041	
2,000.00	2,000.00	2,016.20	2,016.20	6.94	6.99	-90.34	-16.96	-2,822.19	2,822.24	2,812.39	9.85	286.497	
2,100.00	2,100.00	2,116.20	2,116.20	7.30	7.35	-90.34	-16.96	-2,822.19	2,822.24	2,811.88	10.36	272.475	
2,200.00	2,200.00	2,216.20	2,216.20	7.65	7.71	-90.34	-16.96	-2,822.19	2,822.24	2,811.38	10.86	259.761	
2,300.00	2,300.00	2,316.20	2,316.20	8.01	8.07	-90.34	-16.96	-2,822.19	2,822.24	2,810.87	11.37	248.181	
2,400.00	2,400.00	2,416.20	2,416.20	8.37	8.43	-90.34	-16.96	-2,822.19	2,822.24	2,810.36	11.88	237.589	
2,500.00	2,500.00	2,516.20	2,516.20	8.73	8.79	-90.34	-16.96	-2,822.19	2,822.24	2,809.86	12.39	227.864	
2,600.00	2,600.00	2,616.20	2,616.20	9.09	9.15	-90.34	-16.96	-2,822.19	2,822.24	2,809.35	12.89	218.904	
2,700.00	2,700.00	2,716.20	2,716.20	9.45	9.50	-90.34	-16.96	-2,822.19	2,822.24	2,808.84	13.40	210.622	
2,800.00	2,800.00	2,816.20	2,816.20	9.80	9.86	-90.34	-16.96	-2,822.19	2,822.24	2,808.33	13.91	202.944	
2,900.00	2,900.00	2,916.20	2,916.20	10.16	10.22	-90.34	-16.96	-2,822.19	2,822.24	2,807.83	14.41	195.806	
3,000.00	3,000.00	3,016.20	3,016.20	10.52	10.58	-90.34	-16.96	-2,822.19	2,822.24	2,807.32	14.92	189.153	
3,100.00	3,100.00	3,116.20	3,116.20	10.88	10.94	-90.34	-16.96	-2,822.19	2,822.24	2,806.81	15.43	182.938	
3,110.22	3,110.22	3,126.42	3,126.42	10.92	10.97	-90.34	-16.96	-2,822.19	2,822.24	2,806.76	15.48	182.325	CC
3,200.00	3,200.00	3,200.00	3,200.00	11.24	11.24	-90.34	-16.96	-2,822.19	2,822.29	2,806.39	15.89	177.581	ES
3,300.00	3,300.00	3,276.08	3,276.07	11.60	11.50	-90.36	-17.49	-2,822.73	2,823.07	2,806.74	16.33	172.879	
3,400.00	3,400.00	3,341.50	3,341.47	11.96	11.72	-90.38	-18.81	-2,824.05	2,825.10	2,808.37	16.73	168.818	
3,500.00	3,500.00	3,400.00	3,399.91	12.31	11.91	-90.42	-20.65	-2,825.90	2,828.37	2,811.25	17.12	165.228	
3,600.00	3,600.00	3,474.79	3,474.55	12.67	12.16	-90.48	-23.92	-2,829.19	2,832.84	2,815.30	17.54	161.499	
3,700.00	3,700.00	3,574.54	3,574.06	13.03	12.49	-90.58	-28.83	-2,834.13	2,837.84	2,819.81	18.03	157.414	
3,800.00	3,800.00	3,674.30	3,673.57	13.39	12.82	-90.68	-33.74	-2,839.07	2,842.85	2,824.34	18.52	153.533	
3,900.00	3,900.00	3,774.05	3,773.09	13.75	13.16	-90.78	-38.65	-2,844.01	2,847.88	2,828.87	19.01	149.841	
4,000.00	4,000.00	3,873.81	3,872.60	14.11	13.50	-90.88	-43.56	-2,848.96	2,852.90	2,833.41	19.50	146.326	
4,100.00	4,100.00	3,973.56	3,972.11	14.46	13.84	-90.97	-48.47	-2,853.90	2,857.94	2,837.95	19.99	142.975	
4,200.00	4,200.00	4,073.32	4,071.62	14.82	14.18	-91.07	-53.38	-2,858.84	2,862.99	2,842.51	20.48	139.779	
4,300.00	4,300.00	4,173.08	4,171.14	15.18	14.53	-91.17	-58.29	-2,863.78	2,868.04	2,847.07	20.98	136.727	
4,400.00	4,400.00	4,272.83	4,270.65	15.54	14.87	-91.26	-63.20	-2,868.72	2,873.10	2,851.63	21.47	133.810	
4,500.00	4,500.00	4,372.59	4,370.16	15.90	15.22	-91.36	-68.11	-2,873.66	2,878.17	2,856.21	21.97	131.020	
4,600.00	4,599.99	4,472.31	4,469.64	16.24	15.57	147.55	-73.02	-2,878.60	2,884.36	2,861.90	22.45	128.456	
4,666.98	4,666.93	4,539.05	4,536.21	16.47	15.80	147.47	-76.31	-2,881.90	2,889.73	2,866.96	22.77	126.888	
4,700.00	4,699.92	4,571.93	4,569.01	16.58	15.92	147.45	-77.93	-2,883.53	2,892.62	2,869.69	22.93	126.141	
4,800.00	4,799.82	4,671.51	4,668.36	16.91	16.27	147.40	-82.83	-2,888.46	2,901.39	2,877.98	23.41	123.938	
4,900.00	4,899.72	4,771.10	4,767.70	17.24	16.62	147.35	-87.73	-2,893.40	2,910.15	2,886.26	23.89	121.815	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 601H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	4,870.69	4,867.04	17.58	16.97	147.31	-92.63	-2,898.33	2,918.92	2,894.55	24.37	119.768	
5,100.00	5,099.53	4,970.27	4,966.38	17.92	17.32	147.26	-97.53	-2,903.26	2,927.69	2,902.84	24.85	117.795	
5,200.00	5,199.44	5,069.86	5,065.73	18.26	17.68	147.21	-102.44	-2,908.19	2,936.47	2,911.13	25.34	115.890	
5,300.00	5,299.34	5,169.44	5,165.07	18.60	18.03	147.16	-107.34	-2,913.13	2,945.24	2,919.42	25.82	114.052	
5,400.00	5,399.25	5,269.03	5,264.41	18.94	18.39	147.12	-112.24	-2,918.06	2,954.02	2,927.71	26.31	112.277	
5,500.00	5,499.15	5,368.61	5,363.75	19.28	18.74	147.07	-117.14	-2,922.99	2,962.79	2,936.00	26.80	110.562	
5,600.00	5,599.06	5,468.20	5,463.10	19.62	19.10	147.03	-122.05	-2,927.92	2,971.57	2,944.29	27.29	108.904	
5,700.00	5,698.96	5,567.78	5,562.44	19.96	19.46	146.98	-126.95	-2,932.86	2,980.36	2,952.58	27.78	107.301	
5,800.00	5,798.86	5,667.37	5,661.78	20.31	19.82	146.93	-131.85	-2,937.79	2,989.14	2,960.87	28.27	105.750	
5,834.24	5,833.07	5,701.47	5,695.80	20.42	19.94	146.92	-133.53	-2,939.48	2,992.15	2,963.71	28.43	105.231	
5,900.00	5,898.79	5,766.99	5,761.16	20.65	20.18	146.93	-136.75	-2,942.72	2,997.45	2,968.69	28.76	104.233	
6,001.22	6,000.00	5,867.93	5,861.85	21.00	20.54	-92.13	-141.72	-2,947.72	3,003.77	2,974.51	29.26	102.656	
6,100.00	6,098.78	5,966.46	5,960.15	21.36	20.90	-92.22	-146.57	-2,952.60	3,008.85	2,979.09	29.76	101.113	
6,200.00	6,198.78	6,066.22	6,059.66	21.71	21.26	-92.31	-151.48	-2,957.54	3,014.00	2,983.74	30.26	99.601	
6,300.00	6,298.78	6,165.98	6,159.17	22.07	21.62	-92.40	-156.39	-2,962.48	3,019.16	2,988.39	30.76	98.138	
6,400.00	6,398.78	6,265.73	6,258.68	22.43	21.98	-92.49	-161.30	-2,967.43	3,024.32	2,993.05	31.27	96.722	
6,500.00	6,498.78	6,365.49	6,358.19	22.78	22.35	-92.58	-166.22	-2,972.37	3,029.49	2,997.72	31.77	95.349	
6,600.00	6,598.78	6,465.24	6,457.71	23.14	22.71	-92.67	-171.13	-2,977.31	3,034.67	3,002.40	32.28	94.019	
6,700.00	6,698.78	6,672.18	6,664.38	23.50	23.45	-92.80	-178.28	-2,984.51	3,038.55	3,005.48	33.07	91.879	
6,800.00	6,798.78	6,822.79	6,814.98	23.85	23.98	-92.81	-178.96	-2,985.19	3,038.84	3,005.15	33.69	90.188	
6,900.00	6,898.78	6,922.79	6,914.98	24.21	24.32	-92.81	-178.96	-2,985.19	3,038.84	3,004.65	34.19	88.875	
7,000.00	6,998.78	7,022.79	7,014.98	24.57	24.67	-92.81	-178.96	-2,985.19	3,038.84	3,004.15	34.69	87.599	
7,100.00	7,098.78	7,122.79	7,114.98	24.93	25.01	-92.81	-178.96	-2,985.19	3,038.84	3,003.65	35.19	86.358	
7,200.00	7,198.78	7,222.79	7,214.98	25.28	25.36	-92.81	-178.96	-2,985.19	3,038.84	3,003.16	35.69	85.152	
7,300.00	7,298.78	7,322.79	7,314.98	25.64	25.71	-92.81	-178.96	-2,985.19	3,038.84	3,002.66	36.19	83.978	
7,400.00	7,398.78	7,422.79	7,414.98	26.00	26.05	-92.81	-178.96	-2,985.19	3,038.84	3,002.16	36.69	82.835	
7,500.00	7,498.78	7,522.79	7,514.98	26.35	26.40	-92.81	-178.96	-2,985.19	3,038.84	3,001.66	37.18	81.723	
7,600.00	7,598.78	7,622.79	7,614.98	26.71	26.75	-92.81	-178.96	-2,985.19	3,038.84	3,001.16	37.68	80.640	
7,700.00	7,698.78	7,722.79	7,714.98	27.07	27.10	-92.81	-178.96	-2,985.19	3,038.84	3,000.66	38.18	79.585	
7,800.00	7,798.78	7,822.79	7,814.98	27.43	27.45	-92.81	-178.96	-2,985.19	3,038.84	3,000.16	38.68	78.556	
7,900.00	7,898.78	7,922.79	7,914.98	27.78	27.80	-92.81	-178.96	-2,985.19	3,038.84	2,999.66	39.18	77.554	
8,000.00	7,998.78	8,022.79	8,014.98	28.14	28.14	-92.81	-178.96	-2,985.19	3,038.84	2,999.16	39.68	76.576	
8,100.00	8,098.78	8,122.79	8,114.98	28.50	28.49	-92.81	-178.96	-2,985.19	3,038.84	2,998.66	40.18	75.623	
8,200.00	8,198.78	8,222.79	8,214.98	28.86	28.84	-92.81	-178.96	-2,985.19	3,038.84	2,998.16	40.68	74.692	
8,300.00	8,298.78	8,322.79	8,314.98	29.21	29.19	-92.81	-178.96	-2,985.19	3,038.84	2,997.66	41.19	73.784	
8,400.00	8,398.78	8,422.79	8,414.98	29.57	29.54	-92.81	-178.96	-2,985.19	3,038.84	2,997.16	41.69	72.898	
8,500.00	8,498.78	8,522.79	8,514.98	29.93	29.89	-92.81	-178.96	-2,985.19	3,038.84	2,996.66	42.19	72.032	
8,600.00	8,598.78	8,622.79	8,614.98	30.29	30.24	-92.81	-178.96	-2,985.19	3,038.84	2,996.15	42.69	71.186	
8,700.00	8,698.78	8,722.79	8,714.98	30.64	30.59	-92.81	-178.96	-2,985.19	3,038.84	2,995.65	43.19	70.360	
8,800.00	8,798.78	8,822.79	8,814.98	31.00	30.94	-92.81	-178.96	-2,985.19	3,038.84	2,995.15	43.69	69.553	
8,900.00	8,898.78	8,922.79	8,914.98	31.36	31.29	-92.81	-178.96	-2,985.19	3,038.84	2,994.65	44.19	68.763	
9,000.00	8,998.78	9,022.79	9,014.98	31.72	31.64	-92.81	-178.96	-2,985.19	3,038.84	2,994.15	44.69	67.992	
9,100.00	9,098.78	9,122.79	9,114.98	32.07	32.00	-92.81	-178.96	-2,985.19	3,038.84	2,993.65	45.20	67.237	
9,200.00	9,198.78	9,222.79	9,214.98	32.43	32.35	-92.81	-178.96	-2,985.19	3,038.84	2,993.15	45.70	66.498	
9,300.00	9,298.78	9,322.79	9,314.98	32.79	32.70	-92.81	-178.96	-2,985.19	3,038.84	2,992.64	46.20	65.776	
9,400.00	9,398.78	9,422.79	9,414.98	33.15	33.05	-92.81	-178.96	-2,985.19	3,038.84	2,992.14	46.70	65.068	
9,500.00	9,498.78	9,522.79	9,514.98	33.51	33.40	-92.81	-178.96	-2,985.19	3,038.84	2,991.64	47.20	64.376	
9,600.00	9,598.78	9,622.80	9,614.98	33.86	33.75	-92.81	-178.96	-2,985.19	3,038.84	2,991.14	47.71	63.698	
9,700.00	9,698.78	9,722.80	9,714.98	34.22	34.10	-92.81	-178.96	-2,985.19	3,038.84	2,990.63	48.21	63.035	
9,800.00	9,798.78	9,822.80	9,814.98	34.58	34.46	-92.81	-178.96	-2,985.19	3,038.84	2,990.13	48.71	62.384	
9,900.00	9,898.78	9,922.80	9,914.98	34.94	34.81	-92.81	-178.96	-2,985.19	3,038.84	2,989.63	49.21	61.747	
10,000.00	9,998.78	10,022.80	10,014.98	35.29	35.16	-92.81	-178.96	-2,985.19	3,038.84	2,989.13	49.72	61.123	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 601H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,122.80	10,114.98	35.65	35.51	-92.81	-178.96	-2,985.19	3,038.84	2,988.62	50.22	60.511	
10,148.26	10,147.04	10,171.06	10,163.24	35.82	35.68	-92.81	-178.96	-2,985.19	3,038.84	2,988.38	50.46	60.220	
10,150.00	10,148.78	10,172.80	10,164.98	35.83	35.69	87.75	-178.96	-2,985.19	3,038.84	2,988.37	50.47	60.210	
10,200.00	10,198.71	10,222.72	10,214.91	35.99	35.87	87.80	-178.96	-2,985.19	3,038.75	2,988.04	50.71	59.922	
10,250.00	10,248.24	10,272.26	10,264.44	36.16	36.04	87.95	-178.96	-2,985.19	3,038.50	2,987.55	50.95	59.636	
10,300.00	10,297.01	10,321.03	10,313.21	36.32	36.21	88.19	-178.96	-2,985.19	3,038.12	2,986.94	51.19	59.353	
10,350.00	10,344.64	10,368.65	10,360.84	36.48	36.38	88.51	-178.96	-2,985.19	3,037.66	2,986.24	51.42	59.076	
10,400.00	10,390.76	10,414.77	10,406.96	36.63	36.54	88.89	-178.96	-2,985.19	3,037.19	2,985.54	51.65	58.807	
10,450.00	10,435.02	10,459.04	10,451.22	36.78	36.70	89.32	-178.96	-2,985.19	3,036.78	2,984.91	51.87	58.547	
10,500.00	10,477.10	10,501.11	10,493.30	36.94	36.85	89.77	-178.96	-2,985.19	3,036.53	2,984.44	52.09	58.298	
10,525.10	10,497.29	10,521.31	10,513.49	37.01	36.92	90.00	-178.96	-2,985.19	3,036.49	2,984.30	52.19	58.179	
10,550.00	10,516.66	10,540.68	10,532.86	37.09	36.99	90.23	-178.96	-2,985.19	3,036.53	2,984.24	52.30	58.064	
10,600.00	10,553.41	10,577.43	10,569.61	37.25	37.12	90.66	-178.96	-2,985.19	3,036.90	2,984.39	52.50	57.844	
10,650.00	10,587.07	10,611.08	10,603.27	37.41	37.24	91.04	-178.96	-2,985.19	3,037.72	2,985.02	52.70	57.642	
10,700.00	10,617.37	10,641.39	10,633.57	37.57	37.34	91.36	-178.96	-2,985.19	3,039.11	2,986.22	52.89	57.459	
10,750.00	10,644.10	10,668.12	10,660.30	37.74	37.44	91.58	-178.96	-2,985.19	3,041.16	2,988.08	53.08	57.295	
10,800.00	10,667.05	10,691.07	10,683.25	37.91	37.52	91.69	-178.96	-2,985.19	3,043.94	2,990.69	53.26	57.154	
10,850.00	10,686.04	10,710.05	10,702.24	38.09	37.59	91.66	-178.96	-2,985.19	3,047.53	2,994.09	53.43	57.036	
10,900.00	10,700.92	10,724.94	10,717.12	38.28	37.64	91.48	-178.96	-2,985.19	3,051.95	2,998.36	53.60	56.941	
10,950.00	10,711.59	10,735.61	10,727.79	38.47	37.68	91.15	-178.96	-2,985.19	3,057.25	3,003.49	53.76	56.872	
11,000.00	10,717.97	10,741.98	10,734.17	38.67	37.70	90.64	-178.96	-2,985.19	3,063.41	3,009.51	53.91	56.829	
11,048.26	10,720.00	10,744.01	10,736.20	38.86	37.71	90.00	-178.96	-2,985.19	3,070.16	3,016.12	54.04	56.812	
11,100.00	10,720.00	10,744.01	10,736.20	39.07	37.71	90.00	-178.96	-2,985.19	3,078.23	3,024.04	54.18	56.810	
11,200.00	10,720.00	10,744.01	10,736.20	39.54	37.71	90.00	-178.96	-2,985.19	3,096.21	3,041.72	54.49	56.818	
11,300.00	10,720.00	10,744.01	10,736.20	40.07	37.71	90.00	-178.96	-2,985.19	3,117.30	3,062.46	54.84	56.848	
11,400.00	10,720.00	10,744.01	10,736.20	40.66	37.71	90.00	-178.96	-2,985.19	3,141.43	3,086.22	55.21	56.902	
11,500.00	10,720.00	10,744.01	10,736.20	41.31	37.71	90.00	-178.96	-2,985.19	3,168.54	3,112.93	55.61	56.983	
11,600.00	10,720.00	10,744.01	10,736.20	42.02	37.71	90.00	-178.96	-2,985.19	3,198.54	3,142.52	56.02	57.092	
11,700.00	10,720.00	10,744.01	10,736.20	42.77	37.71	90.00	-178.96	-2,985.19	3,231.36	3,174.90	56.46	57.232	
11,800.00	10,720.00	10,744.01	10,736.20	43.58	37.71	90.00	-178.96	-2,985.19	3,266.91	3,210.00	56.91	57.404	
11,900.00	10,720.00	10,744.01	10,736.20	44.43	37.71	90.00	-178.96	-2,985.19	3,305.11	3,247.74	57.37	57.610	
12,000.00	10,720.00	13,291.03	12,123.00	45.33	49.43	114.55	-1,585.03	-2,971.11	3,337.78	3,275.12	62.66	53.264	
12,100.00	10,720.00	13,391.03	12,123.00	46.26	50.30	114.55	-1,685.02	-2,970.11	3,337.75	3,273.92	63.83	52.289	
12,200.00	10,720.00	13,491.03	12,123.00	47.24	51.21	114.55	-1,785.02	-2,969.11	3,337.72	3,272.67	65.05	51.308	
12,300.00	10,720.00	13,591.03	12,123.00	48.26	52.15	114.55	-1,885.01	-2,968.11	3,337.70	3,271.37	66.32	50.326	
12,400.00	10,720.00	13,691.03	12,123.00	49.30	53.13	114.55	-1,985.01	-2,967.10	3,337.67	3,270.03	67.64	49.348	
12,500.00	10,720.00	13,791.03	12,123.00	50.38	54.14	114.55	-2,085.00	-2,966.10	3,337.64	3,268.65	68.99	48.377	
12,600.00	10,720.00	13,891.03	12,123.00	51.50	55.18	114.55	-2,185.00	-2,965.10	3,337.61	3,267.22	70.39	47.417	
12,700.00	10,720.00	13,991.03	12,123.00	52.63	56.25	114.55	-2,284.99	-2,964.10	3,337.58	3,265.76	71.82	46.469	
12,800.00	10,720.00	14,091.03	12,123.00	53.80	57.35	114.55	-2,384.99	-2,963.10	3,337.55	3,264.26	73.30	45.536	
12,900.00	10,720.00	14,191.03	12,123.00	54.99	58.48	114.55	-2,484.98	-2,962.10	3,337.52	3,262.72	74.80	44.619	
13,000.00	10,720.00	14,291.03	12,123.00	56.20	59.63	114.55	-2,584.98	-2,961.10	3,337.49	3,261.16	76.34	43.720	
13,100.00	10,720.00	14,391.03	12,123.00	57.44	60.80	114.55	-2,684.97	-2,960.10	3,337.46	3,259.56	77.90	42.840	
13,200.00	10,720.00	14,491.03	12,123.00	58.70	61.99	114.55	-2,784.97	-2,959.09	3,337.44	3,257.94	79.50	41.980	
13,300.00	10,720.00	14,591.03	12,123.00	59.97	63.21	114.55	-2,884.96	-2,958.09	3,337.41	3,256.28	81.12	41.141	
13,400.00	10,720.00	14,691.03	12,123.00	61.27	64.44	114.55	-2,984.96	-2,957.09	3,337.38	3,254.61	82.77	40.321	
13,500.00	10,720.00	14,791.03	12,123.00	62.58	65.69	114.55	-3,084.95	-2,956.09	3,337.35	3,252.91	84.44	39.523	
13,600.00	10,720.00	14,891.03	12,123.00	63.90	66.96	114.55	-3,184.95	-2,955.09	3,337.32	3,251.19	86.13	38.746	
13,700.00	10,720.00	14,991.03	12,123.00	65.24	68.25	114.55	-3,284.94	-2,954.09	3,337.29	3,249.44	87.85	37.990	
13,800.00	10,720.00	15,091.03	12,123.00	66.60	69.55	114.55	-3,384.94	-2,953.09	3,337.26	3,247.68	89.58	37.255	
13,900.00	10,720.00	15,191.03	12,123.00	67.97	70.86	114.55	-3,484.93	-2,952.08	3,337.23	3,245.90	91.33	36.540	
14,000.00	10,720.00	15,291.03	12,123.00	69.35	72.19	114.55	-3,584.93	-2,951.08	3,337.20	3,244.11	93.10	35.846	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 601H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	10,720.00	15,391.03	12,123.00	70.74	73.54	114.55	-3,684.92	-2,950.08	3,337.18	3,242.29	94.88	35.171	
14,200.00	10,720.00	15,491.03	12,123.00	72.14	74.89	114.55	-3,784.92	-2,949.08	3,337.15	3,240.46	96.68	34.516	
14,300.00	10,720.00	15,591.03	12,123.00	73.55	76.26	114.56	-3,884.91	-2,948.08	3,337.12	3,238.62	98.50	33.880	
14,400.00	10,720.00	15,691.03	12,123.00	74.98	77.64	114.56	-3,984.91	-2,947.08	3,337.09	3,236.76	100.33	33.262	
14,500.00	10,720.00	15,791.03	12,123.00	76.41	79.02	114.56	-4,084.90	-2,946.08	3,337.06	3,234.89	102.17	32.662	
14,600.00	10,720.00	15,891.03	12,123.00	77.85	80.42	114.56	-4,184.90	-2,945.07	3,337.03	3,233.01	104.03	32.079	
14,700.00	10,720.00	15,991.03	12,123.00	79.30	81.83	114.56	-4,284.89	-2,944.07	3,337.00	3,231.11	105.89	31.513	
14,800.00	10,720.00	16,091.03	12,123.00	80.76	83.25	114.56	-4,384.88	-2,943.07	3,336.97	3,229.20	107.77	30.964	
14,900.00	10,720.00	16,191.03	12,123.00	82.22	84.67	114.56	-4,484.88	-2,942.07	3,336.94	3,227.29	109.66	30.430	
15,000.00	10,720.00	16,291.03	12,123.00	83.69	86.11	114.56	-4,584.87	-2,941.07	3,336.92	3,225.36	111.55	29.913	
15,100.00	10,720.00	16,391.03	12,123.00	85.17	87.55	114.56	-4,684.87	-2,940.07	3,336.89	3,223.43	113.46	29.410	
15,200.00	10,720.00	16,491.03	12,123.00	86.65	88.99	114.56	-4,784.86	-2,939.07	3,336.86	3,221.48	115.38	28.922	
15,300.00	10,720.00	16,591.03	12,123.00	88.14	90.45	114.56	-4,884.86	-2,938.07	3,336.83	3,219.53	117.30	28.447	
15,400.00	10,720.00	16,691.03	12,123.00	89.64	91.91	114.56	-4,984.85	-2,937.06	3,336.80	3,217.57	119.23	27.986	
15,500.00	10,720.00	16,791.03	12,123.00	91.14	93.38	114.56	-5,084.85	-2,936.06	3,336.77	3,215.60	121.17	27.537	
15,600.00	10,720.00	16,891.03	12,123.00	92.65	94.85	114.56	-5,184.84	-2,935.06	3,336.74	3,213.62	123.12	27.101	
15,700.00	10,720.00	16,991.03	12,123.00	94.16	96.33	114.56	-5,284.84	-2,934.06	3,336.71	3,211.64	125.07	26.678	
15,800.00	10,720.00	17,091.03	12,123.00	95.67	97.82	114.56	-5,384.83	-2,933.06	3,336.69	3,209.65	127.04	26.266	
15,900.00	10,720.00	17,191.03	12,123.00	97.19	99.31	114.56	-5,484.83	-2,932.06	3,336.66	3,207.65	129.00	25.865	
16,000.00	10,720.00	17,291.03	12,123.00	98.72	100.81	114.56	-5,584.82	-2,931.06	3,336.63	3,205.65	130.98	25.475	
16,100.00	10,720.00	17,391.03	12,123.00	100.25	102.31	114.56	-5,684.82	-2,930.05	3,336.60	3,203.64	132.96	25.095	
16,200.00	10,720.00	17,491.03	12,123.00	101.78	103.81	114.56	-5,784.81	-2,929.05	3,336.57	3,201.62	134.94	24.725	
16,300.00	10,720.00	17,591.03	12,123.00	103.31	105.32	114.56	-5,884.81	-2,928.05	3,336.54	3,199.60	136.94	24.366	
16,400.00	10,720.00	17,691.03	12,123.00	104.85	106.83	114.56	-5,984.80	-2,927.05	3,336.51	3,197.58	138.93	24.015	
16,500.00	10,720.00	17,791.03	12,123.00	106.40	108.35	114.56	-6,084.80	-2,926.05	3,336.48	3,195.55	140.93	23.674	
16,600.00	10,720.00	17,891.03	12,123.00	107.94	109.87	114.56	-6,184.79	-2,925.05	3,336.45	3,193.51	142.94	23.342	
16,700.00	10,720.00	17,991.03	12,123.00	109.49	111.40	114.56	-6,284.79	-2,924.05	3,336.43	3,191.47	144.95	23.018	
16,800.00	10,720.00	18,091.03	12,123.00	111.04	112.93	114.56	-6,384.78	-2,923.05	3,336.40	3,189.43	146.96	22.702	
16,900.00	10,720.00	18,191.03	12,123.00	112.60	114.46	114.56	-6,484.78	-2,922.04	3,336.37	3,187.39	148.98	22.394	
17,000.00	10,720.00	18,291.03	12,123.00	114.16	116.00	114.56	-6,584.77	-2,921.04	3,336.34	3,185.34	151.00	22.095	
17,100.00	10,720.00	18,391.03	12,123.00	115.72	117.53	114.56	-6,684.77	-2,920.04	3,336.31	3,183.28	153.03	21.802	
17,200.00	10,720.00	18,491.03	12,123.00	117.28	119.08	114.56	-6,784.76	-2,919.04	3,336.28	3,181.23	155.05	21.517	
17,300.00	10,720.00	18,591.03	12,123.00	118.84	120.62	114.56	-6,884.76	-2,918.04	3,336.25	3,179.17	157.08	21.239	
17,400.00	10,720.00	18,691.03	12,123.00	120.41	122.17	114.56	-6,984.75	-2,917.04	3,336.22	3,177.10	159.12	20.967	
17,500.00	10,720.00	18,791.03	12,123.00	121.98	123.72	114.56	-7,084.75	-2,916.04	3,336.19	3,175.04	161.16	20.701	
17,600.00	10,720.00	18,891.03	12,123.00	123.55	125.27	114.56	-7,184.74	-2,915.03	3,336.17	3,172.97	163.20	20.442	
17,700.00	10,720.00	18,991.03	12,123.00	125.13	126.83	114.56	-7,284.74	-2,914.03	3,336.14	3,170.89	165.24	20.189	
17,800.00	10,720.00	19,091.03	12,123.00	126.70	128.38	114.56	-7,384.73	-2,913.03	3,336.11	3,168.82	167.29	19.942	
17,900.00	10,720.00	19,191.03	12,123.00	128.28	129.94	114.56	-7,484.73	-2,912.03	3,336.08	3,166.74	169.34	19.701	
18,000.00	10,720.00	19,291.03	12,123.00	129.86	131.51	114.56	-7,584.72	-2,911.03	3,336.05	3,164.66	171.39	19.464	
18,100.00	10,720.00	19,391.03	12,123.00	131.44	133.07	114.56	-7,684.72	-2,910.03	3,336.02	3,162.57	173.45	19.234	
18,200.00	10,720.00	19,491.03	12,123.00	133.02	134.64	114.56	-7,784.71	-2,909.03	3,335.99	3,160.49	175.51	19.008	
18,300.00	10,720.00	19,591.03	12,123.00	134.61	136.20	114.56	-7,884.71	-2,908.03	3,335.96	3,158.40	177.57	18.787	
18,400.00	10,720.00	19,691.03	12,123.00	136.19	137.78	114.56	-7,984.70	-2,907.02	3,335.93	3,156.31	179.63	18.571	
18,500.00	10,720.00	19,791.03	12,123.00	137.78	139.35	114.56	-8,084.70	-2,906.02	3,335.91	3,154.21	181.69	18.360	
18,600.00	10,720.00	19,891.03	12,123.00	139.37	140.92	114.56	-8,184.69	-2,905.02	3,335.88	3,152.12	183.76	18.153	
18,700.00	10,720.00	19,991.03	12,123.00	140.96	142.50	114.57	-8,284.69	-2,904.02	3,335.85	3,150.02	185.83	17.951	
18,800.00	10,720.00	20,091.03	12,123.00	142.55	144.07	114.57	-8,384.68	-2,903.02	3,335.82	3,147.92	187.90	17.753	
18,900.00	10,720.00	20,191.03	12,123.00	144.15	145.65	114.57	-8,484.68	-2,902.02	3,335.79	3,145.82	189.97	17.560	
19,000.00	10,720.00	20,291.03	12,123.00	145.74	147.23	114.57	-8,584.67	-2,901.02	3,335.76	3,143.72	192.04	17.370	
19,100.00	10,720.00	20,391.03	12,123.00	147.34	148.82	114.57	-8,684.67	-2,900.01	3,335.73	3,141.62	194.11	17.184	
19,200.00	10,720.00	20,491.03	12,123.00	148.93	150.40	114.57	-8,784.66	-2,899.01	3,335.70	3,139.51	196.19	17.002	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 601H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,720.00	20,591.03	12,123.00	150.53	151.99	114.57	-8,884.66	-2,898.01	3,335.67	3,137.41	198.27	16.824	
19,400.00	10,720.00	20,691.03	12,123.00	152.13	153.57	114.57	-8,984.65	-2,897.01	3,335.65	3,135.30	200.35	16.649	
19,500.00	10,720.00	20,791.03	12,123.00	153.73	155.16	114.57	-9,084.65	-2,896.01	3,335.62	3,133.19	202.43	16.478	
19,600.00	10,720.00	20,891.03	12,123.00	155.33	156.75	114.57	-9,184.64	-2,895.01	3,335.59	3,131.08	204.51	16.310	
19,700.00	10,720.00	20,991.03	12,123.00	156.94	158.34	114.57	-9,284.64	-2,894.01	3,335.56	3,128.97	206.59	16.146	
19,800.00	10,720.00	21,091.03	12,123.00	158.54	159.93	114.57	-9,384.63	-2,893.01	3,335.53	3,126.85	208.68	15.984	
19,900.00	10,720.00	21,191.03	12,123.00	160.14	161.52	114.57	-9,484.63	-2,892.00	3,335.50	3,124.74	210.76	15.826	
20,000.00	10,720.00	21,291.03	12,123.00	161.75	163.12	114.57	-9,584.62	-2,891.00	3,335.47	3,122.62	212.85	15.670	
20,100.00	10,720.00	21,391.03	12,123.00	163.36	164.71	114.57	-9,684.62	-2,890.00	3,335.44	3,120.50	214.94	15.518	
20,200.00	10,720.00	21,491.03	12,123.00	164.96	166.31	114.57	-9,784.61	-2,889.00	3,335.42	3,118.38	217.03	15.368	
20,300.00	10,720.00	21,591.03	12,123.00	166.57	167.91	114.57	-9,884.61	-2,888.00	3,335.39	3,116.26	219.13	15.221	
20,400.00	10,720.00	21,691.03	12,123.00	168.18	169.51	114.57	-9,984.60	-2,887.00	3,335.36	3,114.14	221.22	15.077	
20,500.00	10,720.00	21,791.03	12,123.00	169.79	171.11	114.57	-10,084.60	-2,886.00	3,335.33	3,112.02	223.31	14.936	
20,600.00	10,720.00	21,891.03	12,123.00	171.40	172.71	114.57	-10,184.59	-2,884.99	3,335.30	3,109.89	225.41	14.797	
20,700.00	10,720.00	21,991.03	12,123.00	173.01	174.31	114.57	-10,284.59	-2,883.99	3,335.27	3,107.77	227.50	14.660	
20,800.00	10,720.00	22,091.03	12,123.00	174.63	175.91	114.57	-10,384.58	-2,882.99	3,335.24	3,105.64	229.60	14.526	
20,840.21	10,720.00	22,129.15	12,123.00	175.20	176.47	114.57	-10,422.70	-2,882.61	3,335.23	3,104.91	230.32	14.481	
20,841.32	10,720.00	22,129.15	12,123.00	175.22	176.47	114.57	-10,422.70	-2,882.61	3,335.23	3,104.90	230.33	14.480	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 604H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.42	10.51	1,039.78	1,040.15				
100.00	100.00	74.40	74.40	0.13	0.09	89.42	10.51	1,039.78	1,039.83	1,039.68	0.16	6,643.246	
200.00	200.00	174.40	174.40	0.48	0.39	89.42	10.51	1,039.78	1,039.83	1,039.21	0.62	1,668.999	
300.00	300.00	274.40	274.40	0.84	0.75	89.42	10.51	1,039.78	1,039.83	1,038.70	1.13	921.465	
400.00	400.00	374.40	374.40	1.20	1.11	89.42	10.51	1,039.78	1,039.83	1,038.20	1.63	636.050	
500.00	500.00	474.40	474.40	1.56	1.47	89.42	10.51	1,039.78	1,039.83	1,037.69	2.14	485.568	
600.00	600.00	574.40	574.40	1.92	1.83	89.42	10.51	1,039.78	1,039.83	1,037.18	2.65	392.650	
700.00	700.00	674.40	674.40	2.28	2.18	89.42	10.51	1,039.78	1,039.83	1,036.68	3.16	329.575	
800.00	800.00	774.40	774.40	2.63	2.54	89.42	10.51	1,039.78	1,039.83	1,036.17	3.66	283.957	
900.00	900.00	874.40	874.40	2.99	2.90	89.42	10.51	1,039.78	1,039.83	1,035.66	4.17	249.431	
1,000.00	1,000.00	974.40	974.40	3.35	3.26	89.42	10.51	1,039.78	1,039.83	1,035.16	4.68	222.390	
1,100.00	1,100.00	1,074.40	1,074.40	3.71	3.62	89.42	10.51	1,039.78	1,039.83	1,034.65	5.18	200.638	
1,200.00	1,200.00	1,174.40	1,174.40	4.07	3.98	89.42	10.51	1,039.78	1,039.83	1,034.14	5.69	182.762	
1,300.00	1,300.00	1,274.40	1,274.40	4.43	4.34	89.42	10.51	1,039.78	1,039.83	1,033.64	6.20	167.810	
1,400.00	1,400.00	1,374.40	1,374.40	4.79	4.69	89.42	10.51	1,039.78	1,039.83	1,033.13	6.70	155.120	
1,500.00	1,500.00	1,474.40	1,474.40	5.14	5.05	89.42	10.51	1,039.78	1,039.83	1,032.62	7.21	144.214	
1,600.00	1,600.00	1,574.40	1,574.40	5.50	5.41	89.42	10.51	1,039.78	1,039.83	1,032.12	7.72	134.741	
1,700.00	1,700.00	1,674.40	1,674.40	5.86	5.77	89.42	10.51	1,039.78	1,039.83	1,031.61	8.22	126.436	
1,800.00	1,800.00	1,774.40	1,774.40	6.22	6.13	89.42	10.51	1,039.78	1,039.83	1,031.10	8.73	119.095	
1,900.00	1,900.00	1,874.40	1,874.40	6.58	6.49	89.42	10.51	1,039.78	1,039.83	1,030.60	9.24	112.559	
2,000.00	2,000.00	1,974.40	1,974.40	6.94	6.84	89.42	10.51	1,039.78	1,039.83	1,030.09	9.75	106.704	
2,100.00	2,100.00	2,074.40	2,074.40	7.30	7.20	89.42	10.51	1,039.78	1,039.83	1,029.58	10.25	101.428	
2,200.00	2,200.00	2,174.40	2,174.40	7.65	7.56	89.42	10.51	1,039.78	1,039.83	1,029.07	10.76	96.648	
2,300.00	2,300.00	2,274.40	2,274.40	8.01	7.92	89.42	10.51	1,039.78	1,039.83	1,028.57	11.27	92.299	
2,400.00	2,400.00	2,374.40	2,374.40	8.37	8.28	89.42	10.51	1,039.78	1,039.83	1,028.06	11.77	88.325	
2,500.00	2,500.00	2,474.40	2,474.40	8.73	8.64	89.42	10.51	1,039.78	1,039.83	1,027.55	12.28	84.679	
2,600.00	2,600.00	2,574.40	2,574.40	9.09	9.00	89.42	10.51	1,039.78	1,039.83	1,027.05	12.79	81.321	
2,700.00	2,700.00	2,674.40	2,674.40	9.45	9.35	89.42	10.51	1,039.78	1,039.83	1,026.54	13.29	78.220	
2,800.00	2,800.00	2,774.40	2,774.40	9.80	9.71	89.42	10.51	1,039.78	1,039.83	1,026.03	13.80	75.347	
2,900.00	2,900.00	2,874.40	2,874.40	10.16	10.07	89.42	10.51	1,039.78	1,039.83	1,025.53	14.31	72.677	
3,000.00	3,000.00	2,974.40	2,974.40	10.52	10.43	89.42	10.51	1,039.78	1,039.83	1,025.02	14.81	70.190	
3,100.00	3,100.00	3,074.40	3,074.40	10.88	10.79	89.42	10.51	1,039.78	1,039.83	1,024.51	15.32	67.868	
3,200.00	3,200.00	3,174.40	3,174.40	11.24	11.15	89.42	10.51	1,039.78	1,039.83	1,024.00	15.83	65.694	
3,300.00	3,300.00	3,274.40	3,274.40	11.60	11.50	89.42	10.51	1,039.78	1,039.83	1,023.50	16.34	63.655	
3,400.00	3,400.00	3,374.40	3,374.40	11.96	11.86	89.42	10.51	1,039.78	1,039.83	1,022.99	16.84	61.739	CC, ES
3,500.00	3,500.00	3,458.59	3,458.58	12.31	12.16	89.42	10.45	1,040.23	1,040.40	1,023.10	17.30	60.127	
3,600.00	3,600.00	3,537.28	3,537.25	12.67	12.43	89.44	10.21	1,042.23	1,042.94	1,025.20	17.74	58.788	
3,700.00	3,700.00	3,615.87	3,615.75	13.03	12.70	89.47	9.76	1,045.83	1,047.52	1,029.35	18.17	57.655	
3,800.00	3,800.00	3,701.73	3,701.43	13.39	12.99	89.51	9.06	1,051.44	1,054.01	1,035.40	18.62	56.620	
3,900.00	3,900.00	3,801.49	3,800.94	13.75	13.33	89.56	8.21	1,058.36	1,060.94	1,041.83	19.11	55.521	
4,000.00	4,000.00	3,901.24	3,900.45	14.11	13.68	89.60	7.35	1,065.27	1,067.86	1,048.26	19.60	54.475	
4,100.00	4,100.00	4,001.00	3,999.96	14.46	14.03	89.65	6.50	1,072.19	1,074.79	1,054.69	20.10	53.478	
4,200.00	4,200.00	4,100.75	4,099.48	14.82	14.37	89.70	5.64	1,079.10	1,081.71	1,061.12	20.59	52.528	
4,300.00	4,300.00	4,200.51	4,198.99	15.18	14.72	89.75	4.78	1,086.01	1,088.64	1,067.55	21.09	51.621	
4,400.00	4,400.00	4,300.27	4,298.50	15.54	15.07	89.79	3.93	1,092.93	1,095.57	1,073.98	21.59	50.754	
4,500.00	4,500.00	4,400.02	4,398.01	15.90	15.42	89.84	3.07	1,099.84	1,102.49	1,080.41	22.08	49.925	
4,600.00	4,599.99	4,499.85	4,497.60	16.24	15.78	-31.07	2.21	1,106.76	1,108.30	1,085.73	22.57	49.103	
4,666.98	4,666.93	4,566.77	4,564.36	16.47	16.01	-31.08	1.64	1,111.40	1,110.94	1,088.05	22.89	48.531	
4,700.00	4,699.92	4,599.77	4,597.28	16.58	16.13	-31.10	1.35	1,113.68	1,112.00	1,088.95	23.05	48.243	
4,800.00	4,799.82	4,699.71	4,696.97	16.91	16.49	-31.17	0.50	1,120.61	1,115.19	1,091.66	23.53	47.393	
4,900.00	4,899.72	4,799.65	4,796.67	17.24	16.84	-31.24	-0.36	1,127.54	1,118.38	1,094.37	24.01	46.575	
5,000.00	4,999.63	4,899.59	4,896.37	17.58	17.20	-31.31	-1.22	1,134.46	1,121.58	1,097.08	24.50	45.786	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 604H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	4,999.53	4,996.06	17.92	17.56	-31.38	-2.08	1,141.39	1,124.77	1,099.79	24.98	45.026	
5,200.00	5,199.44	5,099.47	5,095.76	18.26	17.91	-31.45	-2.94	1,148.32	1,127.97	1,102.51	25.47	44.293	
5,300.00	5,299.34	5,199.41	5,195.45	18.60	18.27	-31.52	-3.80	1,155.24	1,131.17	1,105.22	25.95	43.586	
5,400.00	5,399.25	5,299.35	5,295.15	18.94	18.63	-31.59	-4.65	1,162.17	1,134.37	1,107.93	26.44	42.904	
5,500.00	5,499.15	5,399.29	5,394.84	19.28	18.99	-31.66	-5.51	1,169.10	1,137.58	1,110.65	26.93	42.244	
5,600.00	5,599.06	5,499.23	5,494.54	19.62	19.35	-31.73	-6.37	1,176.02	1,140.78	1,113.36	27.42	41.607	
5,700.00	5,698.96	5,599.17	5,594.23	19.96	19.71	-31.79	-7.23	1,182.95	1,143.99	1,116.08	27.91	40.992	
5,800.00	5,798.86	5,699.11	5,693.93	20.31	20.08	-31.86	-8.09	1,189.88	1,147.20	1,118.80	28.40	40.396	
5,834.24	5,833.07	5,733.33	5,728.07	20.42	20.20	-31.88	-8.38	1,192.25	1,148.30	1,119.73	28.57	40.196	
5,900.00	5,898.79	5,799.03	5,793.61	20.65	20.44	-31.93	-8.94	1,196.80	1,150.89	1,122.00	28.89	39.836	
6,001.22	6,000.00	5,900.08	5,894.41	21.00	20.81	89.00	-9.81	1,203.80	1,156.75	1,127.36	29.39	39.355	
6,100.00	6,098.78	5,998.62	5,992.71	21.36	21.16	89.05	-10.66	1,210.63	1,163.58	1,133.69	29.89	38.931	
6,200.00	6,198.78	6,098.37	6,092.22	21.71	21.53	89.09	-11.51	1,217.55	1,170.50	1,140.11	30.39	38.516	
6,300.00	6,298.78	6,198.13	6,191.73	22.07	21.89	89.14	-12.37	1,224.46	1,177.41	1,146.52	30.89	38.114	
6,400.00	6,398.78	6,297.89	6,291.25	22.43	22.25	89.19	-13.23	1,231.37	1,184.33	1,152.94	31.39	37.725	
6,500.00	6,498.78	6,397.64	6,390.76	22.78	22.62	89.23	-14.08	1,238.29	1,191.25	1,159.35	31.90	37.348	
6,600.00	6,598.78	6,497.40	6,490.27	23.14	22.98	89.28	-14.94	1,245.20	1,198.17	1,165.77	32.40	36.982	
6,700.00	6,698.78	6,597.15	6,589.78	23.50	23.35	89.32	-15.80	1,252.12	1,205.09	1,172.19	32.90	36.628	
6,800.00	6,798.78	6,713.48	6,705.85	23.85	23.77	89.37	-16.75	1,259.82	1,211.76	1,178.30	33.46	36.214	
6,900.00	6,898.78	6,859.35	6,851.61	24.21	24.29	89.41	-17.41	1,265.17	1,215.43	1,181.33	34.10	35.647	
7,000.00	6,998.78	6,980.92	6,973.18	24.57	24.72	89.41	-17.49	1,265.78	1,215.84	1,181.20	34.65	35.093	
7,100.00	7,098.78	7,080.92	7,073.18	24.93	25.07	89.41	-17.49	1,265.78	1,215.84	1,180.70	35.15	34.592	
7,200.00	7,198.78	7,180.92	7,173.18	25.28	25.42	89.41	-17.49	1,265.78	1,215.84	1,180.19	35.65	34.105	
7,300.00	7,298.78	7,280.92	7,273.18	25.64	25.77	89.41	-17.49	1,265.78	1,215.84	1,179.69	36.15	33.632	
7,400.00	7,398.78	7,380.92	7,373.18	26.00	26.12	89.41	-17.49	1,265.78	1,215.84	1,179.19	36.65	33.171	
7,500.00	7,498.78	7,480.92	7,473.18	26.35	26.47	89.41	-17.49	1,265.78	1,215.84	1,178.69	37.16	32.723	
7,600.00	7,598.78	7,580.92	7,573.18	26.71	26.82	89.41	-17.49	1,265.78	1,215.84	1,178.19	37.66	32.286	
7,700.00	7,698.78	7,680.92	7,673.18	27.07	27.17	89.41	-17.49	1,265.78	1,215.84	1,177.68	38.16	31.861	
7,800.00	7,798.78	7,780.92	7,773.18	27.43	27.52	89.41	-17.49	1,265.78	1,215.84	1,177.18	38.66	31.447	
7,900.00	7,898.78	7,880.92	7,873.18	27.78	27.88	89.41	-17.49	1,265.78	1,215.84	1,176.68	39.17	31.043	
8,000.00	7,998.78	7,980.92	7,973.18	28.14	28.23	89.41	-17.49	1,265.78	1,215.84	1,176.18	39.67	30.650	
8,100.00	8,098.78	8,080.92	8,073.18	28.50	28.58	89.41	-17.49	1,265.78	1,215.84	1,175.67	40.17	30.266	
8,200.00	8,198.78	8,180.92	8,173.18	28.86	28.93	89.41	-17.49	1,265.78	1,215.84	1,175.17	40.67	29.892	
8,300.00	8,298.78	8,280.92	8,273.18	29.21	29.28	89.41	-17.49	1,265.78	1,215.84	1,174.67	41.18	29.527	
8,400.00	8,398.78	8,380.92	8,373.18	29.57	29.64	89.41	-17.49	1,265.78	1,215.84	1,174.16	41.68	29.170	
8,500.00	8,498.78	8,480.92	8,473.18	29.93	29.99	89.41	-17.49	1,265.78	1,215.84	1,173.66	42.18	28.822	
8,600.00	8,598.78	8,580.92	8,573.18	30.29	30.34	89.41	-17.49	1,265.78	1,215.84	1,173.16	42.69	28.482	
8,700.00	8,698.78	8,680.92	8,673.18	30.64	30.69	89.41	-17.49	1,265.78	1,215.84	1,172.65	43.19	28.150	
8,800.00	8,798.78	8,780.92	8,773.18	31.00	31.05	89.41	-17.49	1,265.78	1,215.84	1,172.15	43.69	27.826	
8,900.00	8,898.78	8,880.92	8,873.18	31.36	31.40	89.41	-17.49	1,265.78	1,215.84	1,171.65	44.20	27.509	
9,000.00	8,998.78	8,980.92	8,973.18	31.72	31.75	89.41	-17.49	1,265.78	1,215.84	1,171.14	44.70	27.199	
9,100.00	9,098.78	9,080.92	9,073.18	32.07	32.11	89.41	-17.49	1,265.78	1,215.84	1,170.64	45.21	26.896	
9,200.00	9,198.78	9,180.92	9,173.18	32.43	32.46	89.41	-17.49	1,265.78	1,215.84	1,170.14	45.71	26.600	
9,300.00	9,298.78	9,280.92	9,273.18	32.79	32.81	89.41	-17.49	1,265.78	1,215.84	1,169.63	46.21	26.310	
9,400.00	9,398.78	9,380.92	9,373.18	33.15	33.17	89.41	-17.49	1,265.78	1,215.84	1,169.13	46.72	26.026	
9,500.00	9,498.78	9,480.92	9,473.18	33.51	33.52	89.41	-17.49	1,265.78	1,215.84	1,168.62	47.22	25.748	
9,600.00	9,598.78	9,580.92	9,573.18	33.86	33.87	89.41	-17.49	1,265.78	1,215.84	1,168.12	47.73	25.476	
9,700.00	9,698.78	9,680.92	9,673.18	34.22	34.23	89.41	-17.49	1,265.78	1,215.84	1,167.62	48.23	25.210	
9,800.00	9,798.78	9,780.92	9,773.18	34.58	34.58	89.41	-17.49	1,265.78	1,215.84	1,167.11	48.73	24.949	
9,900.00	9,898.78	9,880.92	9,873.18	34.94	34.94	89.41	-17.49	1,265.78	1,215.84	1,166.61	49.24	24.693	
10,000.00	9,998.78	9,980.92	9,973.18	35.29	35.29	89.41	-17.49	1,265.78	1,215.84	1,166.10	49.74	24.443	
10,100.00	10,098.78	10,080.92	10,073.18	35.65	35.64	89.41	-17.49	1,265.78	1,215.84	1,165.60	50.25	24.198	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 604H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,148.26	10,147.04	10,129.18	10,121.44	35.82	35.81	89.41	-17.49	1,265.78	1,215.84	1,165.35	50.49	24.081	
10,150.00	10,148.78	10,130.92	10,123.18	35.83	35.82	-90.03	-17.49	1,265.78	1,215.84	1,165.35	50.50	24.077	
10,200.00	10,198.71	10,180.85	10,173.11	35.99	36.00	-90.14	-17.49	1,265.78	1,215.85	1,165.11	50.74	23.962	
10,250.00	10,248.24	10,230.39	10,222.64	36.16	36.17	-90.45	-17.49	1,265.78	1,215.88	1,164.90	50.98	23.850	
10,300.00	10,297.01	10,279.16	10,271.41	36.32	36.35	-90.94	-17.49	1,265.78	1,216.02	1,164.80	51.22	23.743	
10,350.00	10,344.64	10,326.78	10,319.04	36.48	36.51	-91.59	-17.49	1,265.78	1,216.37	1,164.92	51.45	23.642	
10,400.00	10,390.76	10,372.90	10,365.16	36.63	36.68	-92.35	-17.49	1,265.78	1,217.09	1,165.41	51.68	23.551	
10,450.00	10,435.02	10,417.17	10,409.42	36.78	36.84	-93.19	-17.49	1,265.78	1,218.37	1,166.46	51.90	23.474	
10,500.00	10,477.10	10,459.24	10,451.50	36.94	36.98	-94.05	-17.49	1,265.78	1,220.40	1,168.28	52.12	23.414	
10,550.00	10,516.66	10,498.80	10,491.06	37.09	37.12	-94.88	-17.49	1,265.78	1,223.41	1,171.08	52.34	23.376	
10,600.00	10,553.41	10,535.55	10,527.81	37.25	37.26	-95.62	-17.49	1,265.78	1,227.64	1,175.10	52.54	23.364	
10,650.00	10,587.07	10,569.21	10,561.47	37.41	37.37	-96.21	-17.49	1,265.78	1,233.29	1,180.55	52.74	23.382	
10,700.00	10,617.37	10,599.52	10,591.77	37.57	37.48	-96.60	-17.49	1,265.78	1,240.57	1,187.63	52.94	23.434	
10,750.00	10,644.10	10,626.25	10,618.50	37.74	37.58	-96.74	-17.49	1,265.78	1,249.65	1,196.52	53.13	23.522	
10,800.00	10,667.05	10,649.19	10,641.45	37.91	37.66	-96.56	-17.49	1,265.78	1,260.65	1,207.34	53.31	23.649	
10,850.00	10,686.04	10,668.18	10,660.44	38.09	37.73	-96.04	-17.49	1,265.78	1,273.65	1,220.17	53.48	23.817	
10,900.00	10,700.92	10,683.07	10,675.32	38.28	37.78	-95.14	-17.49	1,265.78	1,288.67	1,235.03	53.63	24.027	
10,950.00	10,711.59	10,693.74	10,685.99	38.47	37.82	-93.82	-17.49	1,265.78	1,305.66	1,251.89	53.78	24.279	
11,000.00	10,717.97	10,700.11	10,692.37	38.67	37.84	-92.08	-17.49	1,265.78	1,324.54	1,270.63	53.91	24.570	
11,048.26	10,720.00	10,702.14	10,694.40	38.86	37.85	-90.00	-17.49	1,265.78	1,344.39	1,290.37	54.02	24.888	
11,100.00	10,720.00	10,702.14	10,694.40	39.07	37.85	-90.00	-17.49	1,265.78	1,367.27	1,313.14	54.13	25.260	
11,200.00	10,720.00	10,702.14	10,694.40	39.54	37.85	-90.00	-17.49	1,265.78	1,415.81	1,361.46	54.35	26.052	
11,300.00	10,720.00	10,702.14	10,694.40	40.07	37.85	-90.00	-17.49	1,265.78	1,469.55	1,414.99	54.56	26.934	
11,400.00	10,720.00	10,702.14	10,694.40	40.66	37.85	-90.00	-17.49	1,265.78	1,527.96	1,473.19	54.77	27.897	
11,500.00	10,720.00	10,702.14	10,694.40	41.31	37.85	-90.00	-17.49	1,265.78	1,590.52	1,535.55	54.97	28.934	
11,600.00	10,720.00	10,702.14	10,694.40	42.02	37.85	-90.00	-17.49	1,265.78	1,656.76	1,601.60	55.16	30.036	
11,700.00	10,720.00	10,702.14	10,694.40	42.77	37.85	-90.00	-17.49	1,265.78	1,726.25	1,670.91	55.33	31.198	
11,800.00	10,720.00	13,012.13	11,925.00	43.58	47.37	-135.34	-1,342.73	1,278.76	1,730.02	1,678.92	51.10	33.856	
11,900.00	10,720.00	13,112.13	11,925.00	44.43	48.15	-135.34	-1,442.72	1,279.74	1,730.02	1,678.09	51.94	33.309	
12,000.00	10,720.00	13,212.13	11,925.00	45.33	48.98	-135.34	-1,542.72	1,280.71	1,730.03	1,677.21	52.83	32.750	
12,100.00	10,720.00	13,312.13	11,925.00	46.26	49.85	-135.34	-1,642.71	1,281.69	1,730.04	1,676.28	53.76	32.182	
12,200.00	10,720.00	13,412.13	11,925.00	47.24	50.76	-135.34	-1,742.71	1,282.67	1,730.04	1,675.31	54.74	31.607	
12,300.00	10,720.00	13,512.13	11,925.00	48.26	51.71	-135.34	-1,842.70	1,283.65	1,730.05	1,674.30	55.75	31.030	
12,400.00	10,720.00	13,612.13	11,925.00	49.30	52.69	-135.34	-1,942.70	1,284.63	1,730.06	1,673.25	56.81	30.453	
12,500.00	10,720.00	13,712.13	11,925.00	50.38	53.70	-135.34	-2,042.69	1,285.61	1,730.06	1,672.16	57.90	29.878	
12,600.00	10,720.00	13,812.13	11,925.00	51.50	54.75	-135.34	-2,142.69	1,286.59	1,730.07	1,671.04	59.03	29.308	
12,700.00	10,720.00	13,912.13	11,925.00	52.63	55.82	-135.34	-2,242.68	1,287.57	1,730.08	1,669.89	60.19	28.744	
12,800.00	10,720.00	14,012.13	11,925.00	53.80	56.92	-135.34	-2,342.68	1,288.55	1,730.08	1,668.71	61.38	28.187	
12,900.00	10,720.00	14,112.13	11,925.00	54.99	58.05	-135.34	-2,442.68	1,289.53	1,730.09	1,667.49	62.60	27.639	
13,000.00	10,720.00	14,212.13	11,925.00	56.20	59.20	-135.34	-2,542.67	1,290.51	1,730.10	1,666.26	63.84	27.100	
13,100.00	10,720.00	14,312.13	11,925.00	57.44	60.38	-135.34	-2,642.67	1,291.48	1,730.10	1,664.99	65.11	26.571	
13,200.00	10,720.00	14,412.13	11,925.00	58.70	61.57	-135.34	-2,742.66	1,292.46	1,730.11	1,663.70	66.41	26.053	
13,300.00	10,720.00	14,512.13	11,925.00	59.97	62.79	-135.34	-2,842.66	1,293.44	1,730.12	1,662.39	67.73	25.546	
13,400.00	10,720.00	14,612.13	11,925.00	61.27	64.03	-135.34	-2,942.65	1,294.42	1,730.12	1,661.06	69.06	25.051	
13,500.00	10,720.00	14,712.13	11,925.00	62.58	65.28	-135.34	-3,042.65	1,295.40	1,730.13	1,659.71	70.42	24.568	
13,600.00	10,720.00	14,812.13	11,925.00	63.90	66.55	-135.34	-3,142.64	1,296.38	1,730.14	1,658.34	71.80	24.097	
13,700.00	10,720.00	14,912.13	11,925.00	65.24	67.84	-135.34	-3,242.64	1,297.36	1,730.14	1,656.95	73.19	23.638	
13,800.00	10,720.00	15,012.13	11,925.00	66.60	69.15	-135.34	-3,342.63	1,298.34	1,730.15	1,655.55	74.60	23.191	
13,900.00	10,720.00	15,112.13	11,925.00	67.97	70.47	-135.34	-3,442.63	1,299.32	1,730.16	1,654.13	76.03	22.757	
14,000.00	10,720.00	15,212.13	11,925.00	69.35	71.80	-135.34	-3,542.62	1,300.30	1,730.16	1,652.70	77.47	22.334	
14,100.00	10,720.00	15,312.13	11,925.00	70.74	73.15	-135.34	-3,642.62	1,301.28	1,730.17	1,651.25	78.92	21.922	
14,200.00	10,720.00	15,412.13	11,925.00	72.14	74.50	-135.34	-3,742.61	1,302.25	1,730.18	1,649.79	80.39	21.522	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 604H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,300.00	10,720.00	15,512.13	11,925.00	73.55	75.87	-135.34	-3,842.61	1,303.23	1,730.18	1,648.32	81.87	21.134	
14,400.00	10,720.00	15,612.13	11,925.00	74.98	77.25	-135.34	-3,942.60	1,304.21	1,730.19	1,646.83	83.36	20.756	
14,500.00	10,720.00	15,712.13	11,925.00	76.41	78.64	-135.34	-4,042.60	1,305.19	1,730.20	1,645.34	84.86	20.389	
14,600.00	10,720.00	15,812.13	11,925.00	77.85	80.05	-135.34	-4,142.59	1,306.17	1,730.20	1,643.83	86.37	20.032	
14,700.00	10,720.00	15,912.13	11,925.00	79.30	81.46	-135.34	-4,242.59	1,307.15	1,730.21	1,642.31	87.90	19.685	
14,800.00	10,720.00	16,012.13	11,925.00	80.76	82.88	-135.34	-4,342.58	1,308.13	1,730.22	1,640.79	89.43	19.348	
14,900.00	10,720.00	16,112.13	11,925.00	82.22	84.30	-135.34	-4,442.58	1,309.11	1,730.22	1,639.26	90.97	19.020	
15,000.00	10,720.00	16,212.13	11,925.00	83.69	85.74	-135.34	-4,542.57	1,310.09	1,730.23	1,637.72	92.51	18.702	
15,100.00	10,720.00	16,312.13	11,925.00	85.17	87.18	-135.34	-4,642.57	1,311.07	1,730.24	1,636.17	94.07	18.393	
15,200.00	10,720.00	16,412.13	11,925.00	86.65	88.63	-135.34	-4,742.57	1,312.05	1,730.24	1,634.61	95.63	18.093	
15,300.00	10,720.00	16,512.13	11,925.00	88.14	90.09	-135.33	-4,842.56	1,313.02	1,730.25	1,633.05	97.20	17.801	
15,400.00	10,720.00	16,612.13	11,925.00	89.64	91.55	-135.33	-4,942.56	1,314.00	1,730.26	1,631.48	98.78	17.517	
15,500.00	10,720.00	16,712.13	11,925.00	91.14	93.03	-135.33	-5,042.55	1,314.98	1,730.26	1,629.90	100.36	17.241	
15,600.00	10,720.00	16,812.13	11,925.00	92.65	94.50	-135.33	-5,142.55	1,315.96	1,730.27	1,628.32	101.95	16.972	
15,700.00	10,720.00	16,912.13	11,925.00	94.16	95.98	-135.33	-5,242.54	1,316.94	1,730.28	1,626.74	103.54	16.711	
15,800.00	10,720.00	17,012.13	11,925.00	95.67	97.47	-135.33	-5,342.54	1,317.92	1,730.28	1,625.15	105.14	16.458	
15,900.00	10,720.00	17,112.13	11,925.00	97.19	98.96	-135.33	-5,442.53	1,318.90	1,730.29	1,623.55	106.74	16.210	
16,000.00	10,720.00	17,212.13	11,925.00	98.72	100.46	-135.33	-5,542.53	1,319.88	1,730.30	1,621.95	108.35	15.970	
16,100.00	10,720.00	17,312.13	11,925.00	100.25	101.96	-135.33	-5,642.52	1,320.86	1,730.30	1,620.34	109.96	15.735	
16,200.00	10,720.00	17,412.13	11,925.00	101.78	103.47	-135.33	-5,742.52	1,321.84	1,730.31	1,618.73	111.58	15.507	
16,300.00	10,720.00	17,512.13	11,925.00	103.31	104.98	-135.33	-5,842.51	1,322.82	1,730.32	1,617.12	113.20	15.286	
16,400.00	10,720.00	17,612.13	11,925.00	104.85	106.50	-135.33	-5,942.51	1,323.80	1,730.32	1,615.50	114.82	15.069	
16,500.00	10,720.00	17,712.13	11,925.00	106.40	108.02	-135.33	-6,042.50	1,324.77	1,730.33	1,613.88	116.45	14.859	
16,600.00	10,720.00	17,812.13	11,925.00	107.94	109.54	-135.33	-6,142.50	1,325.75	1,730.34	1,612.25	118.08	14.653	
16,700.00	10,720.00	17,912.13	11,925.00	109.49	111.07	-135.33	-6,242.49	1,326.73	1,730.34	1,610.63	119.72	14.453	
16,800.00	10,720.00	18,012.13	11,925.00	111.04	112.60	-135.33	-6,342.49	1,327.71	1,730.35	1,608.99	121.36	14.258	
16,900.00	10,720.00	18,112.13	11,925.00	112.60	114.13	-135.33	-6,442.48	1,328.69	1,730.36	1,607.36	123.00	14.068	
17,000.00	10,720.00	18,212.13	11,925.00	114.16	115.67	-135.33	-6,542.48	1,329.67	1,730.36	1,605.73	124.64	13.883	
17,100.00	10,720.00	18,312.13	11,925.00	115.72	117.21	-135.33	-6,642.47	1,330.65	1,730.37	1,604.09	126.28	13.702	
17,200.00	10,720.00	18,412.13	11,925.00	117.28	118.75	-135.33	-6,742.47	1,331.63	1,730.38	1,602.45	127.93	13.526	
17,300.00	10,720.00	18,512.13	11,925.00	118.84	120.30	-135.33	-6,842.46	1,332.61	1,730.38	1,600.80	129.58	13.353	
17,400.00	10,720.00	18,612.13	11,925.00	120.41	121.85	-135.33	-6,942.46	1,333.59	1,730.39	1,599.15	131.24	13.185	
17,500.00	10,720.00	18,712.13	11,925.00	121.98	123.40	-135.33	-7,042.45	1,334.57	1,730.40	1,597.50	132.89	13.021	
17,600.00	10,720.00	18,812.13	11,925.00	123.55	124.95	-135.33	-7,142.45	1,335.54	1,730.40	1,595.86	134.55	12.861	
17,700.00	10,720.00	18,912.13	11,925.00	125.13	126.51	-135.33	-7,242.45	1,336.52	1,730.41	1,594.20	136.21	12.704	
17,800.00	10,720.00	19,012.13	11,925.00	126.70	128.07	-135.33	-7,342.44	1,337.50	1,730.42	1,592.55	137.87	12.551	
17,900.00	10,720.00	19,112.13	11,925.00	128.28	129.63	-135.33	-7,442.44	1,338.48	1,730.42	1,590.89	139.53	12.402	
18,000.00	10,720.00	19,212.13	11,925.00	129.86	131.19	-135.33	-7,542.43	1,339.46	1,730.43	1,589.24	141.20	12.256	
18,100.00	10,720.00	19,312.13	11,925.00	131.44	132.76	-135.33	-7,642.43	1,340.44	1,730.44	1,587.58	142.86	12.113	
18,200.00	10,720.00	19,412.13	11,925.00	133.02	134.33	-135.33	-7,742.42	1,341.42	1,730.44	1,585.92	144.53	11.973	
18,300.00	10,720.00	19,512.13	11,925.00	134.61	135.90	-135.33	-7,842.42	1,342.40	1,730.45	1,584.26	146.20	11.837	
18,400.00	10,720.00	19,612.13	11,925.00	136.19	137.47	-135.33	-7,942.41	1,343.38	1,730.46	1,582.59	147.86	11.703	
18,500.00	10,720.00	19,712.13	11,925.00	137.78	139.04	-135.33	-8,042.41	1,344.36	1,730.46	1,580.93	149.54	11.572	
18,600.00	10,720.00	19,812.13	11,925.00	139.37	140.62	-135.33	-8,142.40	1,345.34	1,730.47	1,579.26	151.21	11.444	
18,700.00	10,720.00	19,912.13	11,925.00	140.96	142.19	-135.33	-8,242.40	1,346.31	1,730.48	1,577.59	152.88	11.319	
18,800.00	10,720.00	20,012.13	11,925.00	142.55	143.77	-135.33	-8,342.39	1,347.29	1,730.48	1,575.93	154.56	11.196	
18,900.00	10,720.00	20,112.13	11,925.00	144.15	145.35	-135.33	-8,442.39	1,348.27	1,730.49	1,574.26	156.23	11.076	
19,000.00	10,720.00	20,212.13	11,925.00	145.74	146.93	-135.33	-8,542.38	1,349.25	1,730.50	1,572.59	157.91	10.959	
19,100.00	10,720.00	20,312.13	11,925.00	147.34	148.52	-135.33	-8,642.38	1,350.23	1,730.50	1,570.92	159.58	10.844	
19,200.00	10,720.00	20,412.13	11,925.00	148.93	150.10	-135.33	-8,742.37	1,351.21	1,730.51	1,569.25	161.26	10.731	
19,300.00	10,720.00	20,512.13	11,925.00	150.53	151.69	-135.33	-8,842.37	1,352.19	1,730.52	1,567.58	162.94	10.621	
19,400.00	10,720.00	20,612.13	11,925.00	152.13	153.28	-135.33	-8,942.36	1,353.17	1,730.52	1,565.91	164.62	10.512	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 604H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,500.00	10,720.00	20,712.13	11,925.00	153.73	154.87	-135.33	-9,042.36	1,354.15	1,730.53	1,564.24	166.30	10.406	
19,600.00	10,720.00	20,812.13	11,925.00	155.33	156.46	-135.33	-9,142.35	1,355.13	1,730.54	1,562.56	167.97	10.302	
19,700.00	10,720.00	20,912.13	11,925.00	156.94	158.05	-135.32	-9,242.35	1,356.11	1,730.54	1,560.89	169.66	10.200	
19,800.00	10,720.00	21,012.13	11,925.00	158.54	159.64	-135.32	-9,342.34	1,357.08	1,730.55	1,559.21	171.34	10.100	
19,900.00	10,720.00	21,112.13	11,925.00	160.14	161.23	-135.32	-9,442.34	1,358.06	1,730.56	1,557.54	173.02	10.002	
20,000.00	10,720.00	21,212.13	11,925.00	161.75	162.83	-135.32	-9,542.34	1,359.04	1,730.56	1,555.86	174.70	9.906	
20,100.00	10,720.00	21,312.13	11,925.00	163.36	164.42	-135.32	-9,642.33	1,360.02	1,730.57	1,554.19	176.38	9.811	
20,200.00	10,720.00	21,412.13	11,925.00	164.96	166.02	-135.32	-9,742.33	1,361.00	1,730.58	1,552.51	178.06	9.719	
20,300.00	10,720.00	21,512.13	11,925.00	166.57	167.62	-135.32	-9,842.32	1,361.98	1,730.58	1,550.84	179.75	9.628	
20,400.00	10,720.00	21,612.13	11,925.00	168.18	169.22	-135.32	-9,942.32	1,362.96	1,730.59	1,549.16	181.43	9.539	
20,500.00	10,720.00	21,712.13	11,925.00	169.79	170.82	-135.32	-10,042.31	1,363.94	1,730.60	1,547.48	183.11	9.451	
20,600.00	10,720.00	21,812.13	11,925.00	171.40	172.42	-135.32	-10,142.31	1,364.92	1,730.60	1,545.80	184.80	9.365	
20,700.00	10,720.00	21,912.13	11,925.00	173.01	174.02	-135.32	-10,242.30	1,365.90	1,730.61	1,544.13	186.48	9.280	
20,800.00	10,720.00	22,012.13	11,925.00	174.63	175.63	-135.32	-10,342.30	1,366.88	1,730.62	1,542.45	188.17	9.197	
20,841.32	10,720.00	22,053.45	11,925.00	175.22	176.29	-135.32	-10,383.62	1,367.28	1,730.62	1,541.83	188.79	9.167	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 704H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.42	10.00	989.79	990.14				
100.00	100.00	75.50	75.50	0.13	0.09	89.42	10.00	989.79	989.84	989.68	0.16	6,290.620	
200.00	200.00	175.50	175.50	0.48	0.40	89.42	10.00	989.79	989.84	989.22	0.63	1,582.434	
300.00	300.00	275.50	275.50	0.84	0.75	89.42	10.00	989.79	989.84	988.71	1.13	875.126	
400.00	400.00	375.50	375.50	1.20	1.11	89.42	10.00	989.79	989.84	988.20	1.64	604.480	
500.00	500.00	475.50	475.50	1.56	1.47	89.42	10.00	989.79	989.84	987.70	2.14	461.640	
600.00	600.00	575.50	575.50	1.92	1.83	89.42	10.00	989.79	989.84	987.19	2.65	373.389	
700.00	700.00	675.50	675.50	2.28	2.19	89.42	10.00	989.79	989.84	986.68	3.16	313.458	
800.00	800.00	775.50	775.50	2.63	2.55	89.42	10.00	989.79	989.84	986.18	3.66	270.103	
900.00	900.00	875.50	875.50	2.99	2.91	89.42	10.00	989.79	989.84	985.67	4.17	237.283	
1,000.00	1,000.00	975.50	975.50	3.35	3.26	89.42	10.00	989.79	989.84	985.16	4.68	211.574	
1,100.00	1,100.00	1,075.50	1,075.50	3.71	3.62	89.42	10.00	989.79	989.84	984.66	5.19	190.890	
1,200.00	1,200.00	1,175.50	1,175.50	4.07	3.98	89.42	10.00	989.79	989.84	984.15	5.69	173.891	
1,300.00	1,300.00	1,275.50	1,275.50	4.43	4.34	89.42	10.00	989.79	989.84	983.64	6.20	159.671	
1,400.00	1,400.00	1,375.50	1,375.50	4.79	4.70	89.42	10.00	989.79	989.84	983.13	6.71	147.602	
1,500.00	1,500.00	1,475.50	1,475.50	5.14	5.06	89.42	10.00	989.79	989.84	982.63	7.21	137.228	
1,600.00	1,600.00	1,575.50	1,575.50	5.50	5.41	89.42	10.00	989.79	989.84	982.12	7.72	128.217	
1,700.00	1,700.00	1,675.50	1,675.50	5.86	5.77	89.42	10.00	989.79	989.84	981.61	8.23	120.316	
1,800.00	1,800.00	1,775.50	1,775.50	6.22	6.13	89.42	10.00	989.79	989.84	981.11	8.73	113.333	
1,900.00	1,900.00	1,875.50	1,875.50	6.58	6.49	89.42	10.00	989.79	989.84	980.60	9.24	107.116	
2,000.00	2,000.00	1,975.50	1,975.50	6.94	6.85	89.42	10.00	989.79	989.84	980.09	9.75	101.545	
2,100.00	2,100.00	2,075.50	2,075.50	7.30	7.21	89.42	10.00	989.79	989.84	979.59	10.25	96.525	
2,200.00	2,200.00	2,175.50	2,175.50	7.65	7.57	89.42	10.00	989.79	989.84	979.08	10.76	91.978	
2,300.00	2,300.00	2,275.50	2,275.50	8.01	7.92	89.42	10.00	989.79	989.84	978.57	11.27	87.840	
2,400.00	2,400.00	2,375.50	2,375.50	8.37	8.28	89.42	10.00	989.79	989.84	978.06	11.78	84.059	
2,500.00	2,500.00	2,475.50	2,475.50	8.73	8.64	89.42	10.00	989.79	989.84	977.56	12.28	80.589	
2,600.00	2,600.00	2,575.50	2,575.50	9.09	9.00	89.42	10.00	989.79	989.84	977.05	12.79	77.395	
2,700.00	2,700.00	2,675.50	2,675.50	9.45	9.36	89.42	10.00	989.79	989.84	976.54	13.30	74.444	
2,800.00	2,800.00	2,775.50	2,775.50	9.80	9.72	89.42	10.00	989.79	989.84	976.04	13.80	71.710	
2,900.00	2,900.00	2,875.50	2,875.50	10.16	10.07	89.42	10.00	989.79	989.84	975.53	14.31	69.170	
3,000.00	3,000.00	2,975.50	2,975.50	10.52	10.43	89.42	10.00	989.79	989.84	975.02	14.82	66.803	
3,100.00	3,100.00	3,075.50	3,075.50	10.88	10.79	89.42	10.00	989.79	989.84	974.52	15.32	64.593	
3,200.00	3,200.00	3,175.50	3,175.50	11.24	11.15	89.42	10.00	989.79	989.84	974.01	15.83	62.525	
3,300.00	3,300.00	3,301.85	3,301.84	11.60	11.59	89.42	9.93	988.43	988.83	972.44	16.39	60.321	
3,400.00	3,400.00	3,436.51	3,436.36	11.96	12.05	89.44	9.62	982.48	984.41	967.46	16.95	58.084	
3,500.00	3,500.00	3,570.58	3,570.00	12.31	12.52	89.47	9.06	971.85	976.48	958.99	17.48	55.849	
3,600.00	3,600.00	3,703.74	3,702.28	12.67	12.98	89.51	8.26	956.67	965.07	947.07	18.00	53.616	
3,700.00	3,700.00	3,835.69	3,832.76	13.03	13.45	89.56	7.23	937.09	950.22	931.73	18.49	51.386	
3,800.00	3,800.00	3,966.11	3,960.99	13.39	13.93	89.62	5.98	913.32	931.99	913.03	18.96	49.153	
3,900.00	3,900.00	4,063.19	4,056.13	13.75	14.29	89.68	4.97	894.11	912.19	892.74	19.45	46.899	
4,000.00	4,000.00	4,161.20	4,152.20	14.11	14.67	89.74	3.96	874.71	892.38	872.45	19.94	44.755	
4,100.00	4,100.00	4,259.22	4,248.27	14.46	15.05	89.80	2.94	855.30	872.58	852.15	20.43	42.710	
4,200.00	4,200.00	4,357.23	4,344.35	14.82	15.43	89.87	1.92	835.90	852.78	831.86	20.92	40.759	
4,300.00	4,300.00	4,455.25	4,440.42	15.18	15.82	89.94	0.90	816.50	832.99	811.57	21.42	38.895	
4,400.00	4,400.00	4,553.26	4,536.49	15.54	16.22	90.01	-0.12	797.09	813.19	791.28	21.91	37.113	
4,500.00	4,500.00	4,651.28	4,632.56	15.90	16.61	90.08	-1.14	777.69	793.39	770.99	22.41	35.409	
4,600.00	4,599.99	4,749.07	4,728.40	16.24	17.02	-31.02	-2.16	758.33	772.50	749.60	22.89	33.744	
4,666.98	4,666.93	4,814.29	4,792.34	16.47	17.28	-31.18	-2.83	745.42	757.28	734.07	23.21	32.624	
4,700.00	4,699.92	4,846.39	4,823.80	16.58	17.42	-31.21	-3.17	739.07	749.53	726.16	23.37	32.073	
4,800.00	4,799.82	4,943.59	4,919.07	16.91	17.82	-31.31	-4.18	719.82	726.08	702.24	23.85	30.448	
4,900.00	4,899.72	5,040.80	5,014.34	17.24	18.23	-31.41	-5.19	700.58	702.63	678.31	24.32	28.886	
5,000.00	4,999.63	5,138.00	5,109.62	17.58	18.64	-31.53	-6.20	681.34	679.19	654.38	24.80	27.382	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 704H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	5,235.20	5,204.89	17.92	19.06	-31.65	-7.21	662.10	655.74	630.46	25.29	25.934	
5,200.00	5,199.44	5,332.41	5,300.17	18.26	19.47	-31.78	-8.22	642.85	632.30	606.53	25.77	24.539	
5,300.00	5,299.34	5,429.61	5,395.44	18.60	19.89	-31.92	-9.23	623.61	608.86	582.61	26.25	23.194	
5,400.00	5,399.25	5,526.81	5,490.72	18.94	20.31	-32.07	-10.24	604.37	585.43	558.69	26.74	21.897	
5,500.00	5,499.15	5,624.02	5,585.99	19.28	20.74	-32.23	-11.25	585.13	562.00	534.78	27.22	20.646	
5,600.00	5,599.06	5,721.22	5,681.26	19.62	21.16	-32.41	-12.26	565.89	538.58	510.87	27.71	19.438	
5,700.00	5,698.96	5,818.42	5,776.54	19.96	21.59	-32.60	-13.27	546.64	515.16	486.96	28.19	18.271	
5,800.00	5,798.86	5,915.63	5,871.81	20.31	22.02	-32.82	-14.29	527.40	491.74	463.06	28.68	17.144	
5,834.24	5,833.07	5,948.91	5,904.44	20.42	22.17	-32.89	-14.63	520.81	483.73	454.88	28.85	16.767	
5,900.00	5,898.79	6,012.94	5,967.20	20.65	22.45	-32.89	-15.30	508.14	468.80	439.63	29.17	16.070	
6,001.22	6,000.00	6,111.93	6,064.22	21.00	22.89	88.21	-16.33	488.54	447.63	417.96	29.67	15.085	
6,100.00	6,098.78	6,208.74	6,159.11	21.36	23.32	88.27	-17.33	469.38	428.06	397.89	30.17	14.187	
6,200.00	6,198.78	6,306.76	6,255.18	21.71	23.76	88.33	-18.35	449.97	408.24	377.56	30.68	13.308	
6,300.00	6,298.78	6,404.77	6,351.25	22.07	24.20	88.40	-19.37	430.57	388.42	357.24	31.18	12.457	
6,400.00	6,398.78	6,502.79	6,447.32	22.43	24.64	88.48	-20.39	411.17	368.60	336.92	31.68	11.634	
6,500.00	6,498.78	6,600.81	6,543.39	22.78	25.08	88.56	-21.41	391.76	348.79	316.60	32.19	10.836	
6,600.00	6,598.78	6,698.82	6,639.47	23.14	25.53	88.65	-22.43	372.36	328.97	296.28	32.69	10.062	
6,700.00	6,698.78	6,796.84	6,735.54	23.50	25.97	88.76	-23.45	352.96	309.16	275.96	33.20	9.312	
6,800.00	6,798.78	6,888.46	6,825.52	23.85	26.38	88.87	-24.35	335.73	290.34	256.56	33.78	8.595	
6,900.00	6,898.78	6,980.32	6,916.12	24.21	26.78	88.97	-25.15	320.62	273.88	239.52	34.36	7.972	
7,000.00	6,998.78	7,072.86	7,007.74	24.57	27.16	89.07	-25.83	307.60	259.80	224.88	34.92	7.440	
7,100.00	7,098.78	7,165.99	7,100.23	24.93	27.54	89.16	-26.40	296.74	248.13	212.66	35.46	6.997	
7,200.00	7,198.78	7,259.60	7,193.44	25.28	27.89	89.24	-26.85	288.10	238.89	202.90	35.99	6.638	
7,300.00	7,298.78	7,353.59	7,287.20	25.64	28.24	89.30	-27.19	281.71	232.09	195.60	36.50	6.359	
7,400.00	7,398.78	7,447.83	7,381.35	26.00	28.57	89.35	-27.40	277.63	227.76	190.77	36.98	6.159	
7,500.00	7,498.78	7,542.21	7,475.71	26.35	28.89	89.36	-27.50	275.87	225.89	188.44	37.44	6.033	
7,544.88	7,543.65	7,585.65	7,519.15	26.52	29.03	89.37	-27.50	275.79	225.80	188.15	37.65	5.997	
7,600.00	7,598.78	7,640.78	7,574.28	26.71	29.21	89.37	-27.50	275.79	225.80	187.88	37.93	5.954	
7,700.00	7,698.78	7,740.78	7,674.28	27.07	29.53	89.37	-27.50	275.79	225.80	187.38	38.42	5.877	
7,800.00	7,798.78	7,840.78	7,774.28	27.43	29.85	89.37	-27.50	275.79	225.80	186.88	38.92	5.802	
7,900.00	7,898.78	7,940.78	7,874.28	27.78	30.18	89.37	-27.50	275.79	225.80	186.39	39.42	5.729	
8,000.00	7,998.78	8,040.78	7,974.28	28.14	30.50	89.37	-27.50	275.79	225.80	185.89	39.91	5.657	
8,100.00	8,098.78	8,140.78	8,074.28	28.50	30.83	89.37	-27.50	275.79	225.80	185.39	40.41	5.588	
8,200.00	8,198.78	8,240.78	8,174.28	28.86	31.16	89.37	-27.50	275.79	225.80	184.90	40.91	5.520	
8,300.00	8,298.78	8,340.78	8,274.28	29.21	31.49	89.37	-27.50	275.79	225.80	184.40	41.41	5.453	
8,400.00	8,398.78	8,440.78	8,374.28	29.57	31.81	89.37	-27.50	275.79	225.80	183.90	41.90	5.389	
8,500.00	8,498.78	8,540.78	8,474.28	29.93	32.14	89.37	-27.50	275.79	225.80	183.40	42.40	5.325	
8,600.00	8,598.78	8,640.78	8,574.28	30.29	32.47	89.37	-27.50	275.79	225.80	182.90	42.90	5.264	
8,700.00	8,698.78	8,740.78	8,674.28	30.64	32.80	89.37	-27.50	275.79	225.80	182.41	43.40	5.203	
8,800.00	8,798.78	8,840.78	8,774.28	31.00	33.13	89.37	-27.50	275.79	225.80	181.91	43.90	5.144	
8,900.00	8,898.78	8,940.78	8,874.28	31.36	33.47	89.37	-27.50	275.79	225.80	181.41	44.40	5.086	
9,000.00	8,998.78	9,040.78	8,974.28	31.72	33.80	89.37	-27.50	275.79	225.80	180.91	44.90	5.030	
9,100.00	9,098.78	9,140.78	9,074.28	32.07	34.13	89.37	-27.50	275.79	225.80	180.41	45.39	4.974	
9,200.00	9,198.78	9,240.78	9,174.28	32.43	34.46	89.37	-27.50	275.79	225.80	179.91	45.89	4.920	
9,300.00	9,298.78	9,340.78	9,274.28	32.79	34.80	89.37	-27.50	275.79	225.80	179.41	46.39	4.867	
9,400.00	9,398.78	9,440.78	9,374.28	33.15	35.13	89.37	-27.50	275.79	225.80	178.91	46.89	4.815	
9,500.00	9,498.78	9,540.78	9,474.28	33.51	35.47	89.37	-27.50	275.79	225.80	178.41	47.39	4.765	
9,600.00	9,598.78	9,640.78	9,574.28	33.86	35.80	89.37	-27.50	275.79	225.80	177.91	47.89	4.715	
9,700.00	9,698.78	9,740.78	9,674.28	34.22	36.14	89.37	-27.50	275.79	225.80	177.41	48.39	4.666	
9,800.00	9,798.78	9,840.78	9,774.28	34.58	36.47	89.37	-27.50	275.79	225.80	176.91	48.89	4.618	
9,900.00	9,898.78	9,940.78	9,874.28	34.94	36.81	89.37	-27.50	275.79	225.80	176.41	49.39	4.572	
10,000.00	9,998.78	10,040.78	9,974.28	35.29	37.15	89.37	-27.50	275.79	225.80	175.91	49.89	4.526	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 704H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,140.78	10,074.28	35.65	37.48	89.37	-27.50	275.79	225.80	175.41	50.40	4.481	
10,148.26	10,147.04	10,189.04	10,122.54	35.82	37.65	89.37	-27.50	275.79	225.80	175.17	50.64	4.459	CC
10,150.00	10,148.78	10,190.78	10,124.28	35.83	37.65	-90.08	-27.50	275.79	225.80	175.16	50.65	4.459	
10,150.03	10,148.81	10,190.81	10,124.31	35.83	37.65	-90.08	-27.50	275.79	225.80	175.16	50.65	4.459	
10,200.00	10,198.71	10,240.71	10,174.21	35.99	37.82	-90.67	-27.50	275.79	225.82	174.94	50.88	4.438	
10,250.00	10,248.24	10,290.24	10,223.74	36.16	37.99	-92.33	-27.50	275.79	226.00	174.88	51.12	4.421	ES
10,300.00	10,297.01	10,339.01	10,272.51	36.32	38.15	-94.96	-27.50	275.79	226.71	175.36	51.36	4.415	SF
10,350.00	10,344.64	10,386.63	10,320.14	36.48	38.31	-98.39	-27.50	275.79	228.57	176.97	51.60	4.430	
10,400.00	10,390.76	10,432.75	10,366.26	36.63	38.47	-102.37	-27.50	275.79	232.34	180.49	51.86	4.481	
10,450.00	10,435.02	10,477.02	10,410.52	36.78	38.62	-106.62	-27.50	275.79	238.88	186.75	52.13	4.582	
10,500.00	10,477.10	10,519.10	10,452.60	36.94	38.76	-110.80	-27.50	275.79	248.99	196.57	52.43	4.749	
10,550.00	10,516.66	10,558.66	10,492.16	37.09	38.90	-114.63	-27.50	275.79	263.33	210.60	52.73	4.994	
10,600.00	10,553.41	10,595.41	10,528.91	37.25	39.02	-117.87	-27.50	275.79	282.26	229.22	53.04	5.322	
10,650.00	10,587.07	10,629.06	10,562.57	37.41	39.13	-120.34	-27.50	275.79	305.86	252.54	53.32	5.736	
10,700.00	10,617.37	10,659.37	10,592.87	37.57	39.24	-121.89	-27.50	275.79	333.96	280.38	53.58	6.233	
10,750.00	10,644.10	10,686.10	10,619.60	37.74	39.33	-122.42	-27.50	275.79	366.20	312.39	53.81	6.805	
10,800.00	10,667.05	10,709.05	10,642.55	37.91	39.41	-121.74	-27.50	275.79	402.09	348.09	54.00	7.446	
10,850.00	10,686.04	10,728.03	10,661.54	38.09	39.47	-119.65	-27.50	275.79	441.12	386.96	54.16	8.145	
10,900.00	10,700.92	10,742.92	10,676.42	38.28	39.52	-115.80	-27.50	275.79	482.72	428.45	54.28	8.894	
10,950.00	10,711.59	10,753.59	10,687.09	38.47	39.56	-109.77	-27.50	275.79	526.38	472.01	54.37	9.681	
11,000.00	10,717.97	10,759.96	10,693.47	38.67	39.58	-101.07	-27.50	275.79	571.56	517.12	54.44	10.500	
11,048.26	10,720.00	10,762.00	10,695.50	38.86	39.59	-90.00	-27.50	275.79	616.14	561.66	54.48	11.310	
11,100.00	10,720.00	10,762.00	10,695.50	39.07	39.59	-90.00	-27.50	275.79	664.55	610.04	54.51	12.192	
11,200.00	10,720.00	10,762.00	10,695.50	39.54	39.59	-90.00	-27.50	275.79	759.36	704.80	54.55	13.920	
11,300.00	10,720.00	10,762.00	10,695.50	40.07	39.59	-90.00	-27.50	275.79	855.35	800.76	54.59	15.669	
11,400.00	10,720.00	10,762.00	10,695.50	40.66	39.59	-90.00	-27.50	275.79	952.17	897.55	54.62	17.433	
11,500.00	10,720.00	10,762.00	10,695.50	41.31	39.59	-90.00	-27.50	275.79	1,049.58	994.94	54.64	19.209	
11,600.00	10,720.00	10,762.00	10,695.50	42.02	39.59	-90.00	-27.50	275.79	1,147.44	1,092.78	54.66	20.991	
11,700.00	10,720.00	10,762.00	10,695.50	42.77	39.59	-90.00	-27.50	275.79	1,245.64	1,190.96	54.68	22.779	
11,800.00	10,720.00	10,762.00	10,695.50	43.58	39.59	-90.00	-27.50	275.79	1,344.11	1,289.41	54.70	24.572	
11,900.00	10,720.00	13,354.56	12,109.00	44.43	49.68	-170.92	-1,452.41	289.77	1,431.45	1,393.16	38.29	37.383	
12,000.00	10,720.00	13,454.56	12,109.00	45.33	50.48	-170.92	-1,552.41	290.75	1,431.45	1,392.65	38.80	36.897	
12,100.00	10,720.00	13,554.56	12,109.00	46.26	51.32	-170.92	-1,652.40	291.73	1,431.45	1,392.12	39.33	36.398	
12,200.00	10,720.00	13,654.56	12,109.00	47.24	52.21	-170.92	-1,752.40	292.71	1,431.45	1,391.57	39.89	35.889	
12,300.00	10,720.00	13,754.56	12,109.00	48.26	53.12	-170.92	-1,852.39	293.69	1,431.45	1,390.99	40.47	35.372	
12,400.00	10,720.00	13,854.56	12,109.00	49.30	54.08	-170.92	-1,952.39	294.67	1,431.46	1,390.38	41.08	34.849	
12,500.00	10,720.00	13,954.56	12,109.00	50.38	55.06	-170.91	-2,052.38	295.65	1,431.46	1,389.75	41.71	34.323	
12,600.00	10,720.00	14,054.56	12,109.00	51.50	56.08	-170.91	-2,152.38	296.63	1,431.46	1,389.10	42.36	33.795	
12,700.00	10,720.00	14,154.56	12,109.00	52.63	57.13	-170.91	-2,252.37	297.61	1,431.46	1,388.43	43.03	33.267	
12,800.00	10,720.00	14,254.56	12,109.00	53.80	58.21	-170.91	-2,352.37	298.59	1,431.46	1,387.74	43.72	32.740	
12,900.00	10,720.00	14,354.56	12,109.00	54.99	59.31	-170.91	-2,452.36	299.58	1,431.47	1,387.03	44.43	32.216	
13,000.00	10,720.00	14,454.56	12,109.00	56.20	60.44	-170.91	-2,552.36	300.56	1,431.47	1,386.31	45.16	31.697	
13,100.00	10,720.00	14,554.56	12,109.00	57.44	61.59	-170.91	-2,652.35	301.54	1,431.47	1,385.56	45.91	31.182	
13,200.00	10,720.00	14,654.56	12,109.00	58.70	62.76	-170.91	-2,752.35	302.52	1,431.47	1,384.80	46.67	30.673	
13,300.00	10,720.00	14,754.56	12,109.00	59.97	63.96	-170.91	-2,852.35	303.50	1,431.47	1,384.03	47.45	30.170	
13,400.00	10,720.00	14,854.56	12,109.00	61.27	65.17	-170.91	-2,952.34	304.48	1,431.47	1,383.23	48.24	29.674	
13,500.00	10,720.00	14,954.56	12,109.00	62.58	66.40	-170.91	-3,052.34	305.46	1,431.48	1,382.43	49.05	29.187	
13,600.00	10,720.00	15,054.56	12,109.00	63.90	67.66	-170.91	-3,152.33	306.44	1,431.48	1,381.61	49.86	28.707	
13,700.00	10,720.00	15,154.56	12,109.00	65.24	68.92	-170.91	-3,252.33	307.42	1,431.48	1,380.78	50.70	28.236	
13,800.00	10,720.00	15,254.56	12,109.00	66.60	70.21	-170.91	-3,352.32	308.40	1,431.48	1,379.94	51.54	27.774	
13,900.00	10,720.00	15,354.56	12,109.00	67.97	71.51	-170.91	-3,452.32	309.38	1,431.48	1,379.09	52.40	27.320	
14,000.00	10,720.00	15,454.56	12,109.00	69.35	72.82	-170.91	-3,552.31	310.36	1,431.48	1,378.22	53.26	26.876	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 704H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	10,720.00	15,554.56	12,109.00	70.74	74.15	-170.91	-3,652.31	311.35	1,431.49	1,377.35	54.14	26.441	
14,200.00	10,720.00	15,654.56	12,109.00	72.14	75.49	-170.91	-3,752.30	312.33	1,431.49	1,376.46	55.03	26.014	
14,300.00	10,720.00	15,754.56	12,109.00	73.55	76.84	-170.91	-3,852.30	313.31	1,431.49	1,375.57	55.92	25.597	
14,400.00	10,720.00	15,854.56	12,109.00	74.98	78.21	-170.91	-3,952.29	314.29	1,431.49	1,374.66	56.83	25.189	
14,500.00	10,720.00	15,954.56	12,109.00	76.41	79.58	-170.91	-4,052.29	315.27	1,431.49	1,373.75	57.74	24.791	
14,600.00	10,720.00	16,054.56	12,109.00	77.85	80.96	-170.91	-4,152.28	316.25	1,431.50	1,372.83	58.67	24.401	
14,700.00	10,720.00	16,154.56	12,109.00	79.30	82.36	-170.91	-4,252.28	317.23	1,431.50	1,371.90	59.59	24.021	
14,800.00	10,720.00	16,254.56	12,109.00	80.76	83.76	-170.90	-4,352.27	318.21	1,431.50	1,370.97	60.53	23.649	
14,900.00	10,720.00	16,354.56	12,109.00	82.22	85.18	-170.90	-4,452.27	319.19	1,431.50	1,370.03	61.47	23.286	
15,000.00	10,720.00	16,454.56	12,109.00	83.69	86.60	-170.90	-4,552.26	320.17	1,431.50	1,369.08	62.42	22.932	
15,100.00	10,720.00	16,554.56	12,109.00	85.17	88.03	-170.90	-4,652.26	321.15	1,431.50	1,368.12	63.38	22.586	
15,200.00	10,720.00	16,654.56	12,109.00	86.65	89.46	-170.90	-4,752.25	322.13	1,431.51	1,367.16	64.34	22.248	
15,300.00	10,720.00	16,754.56	12,109.00	88.14	90.91	-170.90	-4,852.25	323.12	1,431.51	1,366.20	65.31	21.918	
15,400.00	10,720.00	16,854.56	12,109.00	89.64	92.36	-170.90	-4,952.24	324.10	1,431.51	1,365.22	66.28	21.596	
15,500.00	10,720.00	16,954.56	12,109.00	91.14	93.82	-170.90	-5,052.24	325.08	1,431.51	1,364.25	67.26	21.282	
15,600.00	10,720.00	17,054.56	12,109.00	92.65	95.28	-170.90	-5,152.23	326.06	1,431.51	1,363.26	68.25	20.975	
15,700.00	10,720.00	17,154.56	12,109.00	94.16	96.75	-170.90	-5,252.23	327.04	1,431.51	1,362.28	69.24	20.675	
15,800.00	10,720.00	17,254.56	12,109.00	95.67	98.23	-170.90	-5,352.23	328.02	1,431.52	1,361.28	70.23	20.383	
15,900.00	10,720.00	17,354.56	12,109.00	97.19	99.71	-170.90	-5,452.22	329.00	1,431.52	1,360.29	71.23	20.097	
16,000.00	10,720.00	17,454.56	12,109.00	98.72	101.20	-170.90	-5,552.22	329.98	1,431.52	1,359.29	72.23	19.818	
16,100.00	10,720.00	17,554.56	12,109.00	100.25	102.69	-170.90	-5,652.21	330.96	1,431.52	1,358.28	73.24	19.545	
16,200.00	10,720.00	17,654.56	12,109.00	101.78	104.19	-170.90	-5,752.21	331.94	1,431.52	1,357.27	74.25	19.279	
16,300.00	10,720.00	17,754.56	12,109.00	103.31	105.69	-170.90	-5,852.20	332.92	1,431.53	1,356.26	75.27	19.020	
16,400.00	10,720.00	17,854.56	12,109.00	104.85	107.19	-170.90	-5,952.20	333.90	1,431.53	1,355.24	76.28	18.766	
16,500.00	10,720.00	17,954.56	12,109.00	106.40	108.70	-170.90	-6,052.19	334.89	1,431.53	1,354.23	77.30	18.518	
16,600.00	10,720.00	18,054.56	12,109.00	107.94	110.22	-170.90	-6,152.19	335.87	1,431.53	1,353.20	78.33	18.276	
16,700.00	10,720.00	18,154.56	12,109.00	109.49	111.73	-170.90	-6,252.18	336.85	1,431.53	1,352.18	79.35	18.040	
16,800.00	10,720.00	18,254.56	12,109.00	111.04	113.26	-170.90	-6,352.18	337.83	1,431.53	1,351.15	80.38	17.809	
16,900.00	10,720.00	18,354.56	12,109.00	112.60	114.78	-170.90	-6,452.17	338.81	1,431.54	1,350.12	81.42	17.583	
17,000.00	10,720.00	18,454.56	12,109.00	114.16	116.31	-170.89	-6,552.17	339.79	1,431.54	1,349.08	82.45	17.362	
17,100.00	10,720.00	18,554.56	12,109.00	115.72	117.84	-170.89	-6,652.16	340.77	1,431.54	1,348.05	83.49	17.146	
17,200.00	10,720.00	18,654.56	12,109.00	117.28	119.38	-170.89	-6,752.16	341.75	1,431.54	1,347.01	84.54	16.934	
17,300.00	10,720.00	18,754.56	12,109.00	118.84	120.91	-170.89	-6,852.15	342.73	1,431.54	1,345.96	85.58	16.728	
17,400.00	10,720.00	18,854.56	12,109.00	120.41	122.46	-170.89	-6,952.15	343.71	1,431.55	1,344.92	86.63	16.526	
17,500.00	10,720.00	18,954.56	12,109.00	121.98	124.00	-170.89	-7,052.14	344.69	1,431.55	1,343.87	87.68	16.328	
17,600.00	10,720.00	19,054.56	12,109.00	123.55	125.55	-170.89	-7,152.14	345.67	1,431.55	1,342.82	88.73	16.134	
17,700.00	10,720.00	19,154.56	12,109.00	125.13	127.10	-170.89	-7,252.13	346.66	1,431.55	1,341.77	89.78	15.945	
17,800.00	10,720.00	19,254.56	12,109.00	126.70	128.65	-170.89	-7,352.13	347.64	1,431.55	1,340.72	90.83	15.760	
17,900.00	10,720.00	19,354.56	12,109.00	128.28	130.20	-170.89	-7,452.12	348.62	1,431.55	1,339.66	91.89	15.579	
18,000.00	10,720.00	19,454.56	12,109.00	129.86	131.76	-170.89	-7,552.12	349.60	1,431.56	1,338.61	92.95	15.401	
18,100.00	10,720.00	19,554.56	12,109.00	131.44	133.32	-170.89	-7,652.11	350.58	1,431.56	1,337.55	94.01	15.228	
18,200.00	10,720.00	19,654.56	12,109.00	133.02	134.88	-170.89	-7,752.11	351.56	1,431.56	1,336.49	95.07	15.058	
18,300.00	10,720.00	19,754.56	12,109.00	134.61	136.44	-170.89	-7,852.10	352.54	1,431.56	1,335.43	96.14	14.891	
18,400.00	10,720.00	19,854.56	12,109.00	136.19	138.01	-170.89	-7,952.10	353.52	1,431.56	1,334.36	97.20	14.728	
18,500.00	10,720.00	19,954.56	12,109.00	137.78	139.58	-170.89	-8,052.10	354.50	1,431.56	1,333.30	98.27	14.568	
18,600.00	10,720.00	20,054.56	12,109.00	139.37	141.14	-170.89	-8,152.09	355.48	1,431.57	1,332.23	99.34	14.411	
18,700.00	10,720.00	20,154.56	12,109.00	140.96	142.72	-170.89	-8,252.09	356.46	1,431.57	1,331.16	100.41	14.257	
18,800.00	10,720.00	20,254.56	12,109.00	142.55	144.29	-170.89	-8,352.08	357.44	1,431.57	1,330.09	101.48	14.107	
18,900.00	10,720.00	20,354.56	12,109.00	144.15	145.86	-170.89	-8,452.08	358.43	1,431.57	1,329.02	102.55	13.959	
19,000.00	10,720.00	20,454.56	12,109.00	145.74	147.44	-170.89	-8,552.07	359.41	1,431.57	1,327.94	103.63	13.814	
19,100.00	10,720.00	20,554.56	12,109.00	147.34	149.02	-170.89	-8,652.07	360.39	1,431.58	1,326.87	104.71	13.672	
19,200.00	10,720.00	20,654.56	12,109.00	148.93	150.60	-170.89	-8,752.06	361.37	1,431.58	1,325.79	105.78	13.533	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 704H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,720.00	20,754.56	12,109.00	150.53	152.18	-170.88	-8,852.06	362.35	1,431.58	1,324.72	106.86	13.397	
19,400.00	10,720.00	20,854.56	12,109.00	152.13	153.76	-170.88	-8,952.05	363.33	1,431.58	1,323.64	107.94	13.263	
19,500.00	10,720.00	20,954.56	12,109.00	153.73	155.34	-170.88	-9,052.05	364.31	1,431.58	1,322.56	109.02	13.131	
19,600.00	10,720.00	21,054.56	12,109.00	155.33	156.93	-170.88	-9,152.04	365.29	1,431.58	1,321.48	110.10	13.002	
19,700.00	10,720.00	21,154.56	12,109.00	156.94	158.52	-170.88	-9,252.04	366.27	1,431.59	1,320.40	111.18	12.876	
19,800.00	10,720.00	21,254.56	12,109.00	158.54	160.10	-170.88	-9,352.03	367.25	1,431.59	1,319.32	112.27	12.752	
19,900.00	10,720.00	21,354.56	12,109.00	160.14	161.69	-170.88	-9,452.03	368.23	1,431.59	1,318.24	113.35	12.630	
20,000.00	10,720.00	21,454.56	12,109.00	161.75	163.28	-170.88	-9,552.02	369.21	1,431.59	1,317.15	114.44	12.510	
20,100.00	10,720.00	21,554.56	12,109.00	163.36	164.88	-170.88	-9,652.02	370.20	1,431.59	1,316.07	115.52	12.392	
20,200.00	10,720.00	21,654.56	12,109.00	164.96	166.47	-170.88	-9,752.01	371.18	1,431.59	1,314.98	116.61	12.277	
20,300.00	10,720.00	21,754.56	12,109.00	166.57	168.06	-170.88	-9,852.01	372.16	1,431.60	1,313.90	117.70	12.163	
20,400.00	10,720.00	21,854.56	12,109.00	168.18	169.66	-170.88	-9,952.00	373.14	1,431.60	1,312.81	118.79	12.052	
20,500.00	10,720.00	21,954.56	12,109.00	169.79	171.25	-170.88	-10,052.00	374.12	1,431.60	1,311.72	119.88	11.942	
20,600.00	10,720.00	22,054.56	12,109.00	171.40	172.85	-170.88	-10,151.99	375.10	1,431.60	1,310.63	120.97	11.834	
20,700.00	10,720.00	22,154.56	12,109.00	173.01	174.45	-170.88	-10,251.99	376.08	1,431.60	1,309.54	122.06	11.728	
20,800.00	10,720.00	22,254.56	12,109.00	174.63	176.05	-170.88	-10,351.98	377.06	1,431.61	1,308.45	123.16	11.624	
20,841.32	10,720.00	22,295.88	12,109.00	175.22	176.71	-170.88	-10,393.30	377.47	1,431.61	1,308.10	123.51	11.591	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 705H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.42	10.76	1,064.77	1,065.15				
100.00	100.00	73.70	73.70	0.13	0.09	89.42	10.76	1,064.77	1,064.82	1,064.67	0.16	6,825.680	
200.00	200.00	173.70	173.70	0.48	0.39	89.42	10.76	1,064.77	1,064.82	1,064.20	0.62	1,713.447	
300.00	300.00	273.70	273.70	0.84	0.75	89.42	10.76	1,064.77	1,064.82	1,063.70	1.13	945.008	
400.00	400.00	373.70	373.70	1.20	1.11	89.42	10.76	1,064.77	1,064.82	1,063.19	1.63	652.015	
500.00	500.00	473.70	473.70	1.56	1.47	89.42	10.76	1,064.77	1,064.82	1,062.68	2.14	497.637	
600.00	600.00	573.70	573.70	1.92	1.82	89.42	10.76	1,064.77	1,064.82	1,062.18	2.65	402.349	
700.00	700.00	673.70	673.70	2.28	2.18	89.42	10.76	1,064.77	1,064.82	1,061.67	3.15	337.682	
800.00	800.00	773.70	773.70	2.63	2.54	89.42	10.76	1,064.77	1,064.82	1,061.16	3.66	290.920	
900.00	900.00	873.70	873.70	2.99	2.90	89.42	10.76	1,064.77	1,064.82	1,060.66	4.17	255.533	
1,000.00	1,000.00	973.70	973.70	3.35	3.26	89.42	10.76	1,064.77	1,064.82	1,060.15	4.67	227.820	
1,100.00	1,100.00	1,073.70	1,073.70	3.71	3.62	89.42	10.76	1,064.77	1,064.82	1,059.64	5.18	205.530	
1,200.00	1,200.00	1,173.70	1,173.70	4.07	3.97	89.42	10.76	1,064.77	1,064.82	1,059.14	5.69	187.212	
1,300.00	1,300.00	1,273.70	1,273.70	4.43	4.33	89.42	10.76	1,064.77	1,064.82	1,058.63	6.19	171.892	
1,400.00	1,400.00	1,373.70	1,373.70	4.79	4.69	89.42	10.76	1,064.77	1,064.82	1,058.12	6.70	158.890	
1,500.00	1,500.00	1,473.70	1,473.70	5.14	5.05	89.42	10.76	1,064.77	1,064.82	1,057.62	7.21	147.716	
1,600.00	1,600.00	1,573.70	1,573.70	5.50	5.41	89.42	10.76	1,064.77	1,064.82	1,057.11	7.72	138.011	
1,700.00	1,700.00	1,673.70	1,673.70	5.86	5.77	89.42	10.76	1,064.77	1,064.82	1,056.60	8.22	129.502	
1,800.00	1,800.00	1,773.70	1,773.70	6.22	6.13	89.42	10.76	1,064.77	1,064.82	1,056.09	8.73	121.981	
1,900.00	1,900.00	1,873.70	1,873.70	6.58	6.48	89.42	10.76	1,064.77	1,064.82	1,055.59	9.24	115.286	
2,000.00	2,000.00	1,973.70	1,973.70	6.94	6.84	89.42	10.76	1,064.77	1,064.82	1,055.08	9.74	109.288	
2,100.00	2,100.00	2,073.70	2,073.70	7.30	7.20	89.42	10.76	1,064.77	1,064.82	1,054.57	10.25	103.883	
2,200.00	2,200.00	2,173.70	2,173.70	7.65	7.56	89.42	10.76	1,064.77	1,064.82	1,054.07	10.76	98.987	
2,300.00	2,300.00	2,273.70	2,273.70	8.01	7.92	89.42	10.76	1,064.77	1,064.82	1,053.56	11.26	94.532	
2,400.00	2,400.00	2,373.70	2,373.70	8.37	8.28	89.42	10.76	1,064.77	1,064.82	1,053.05	11.77	90.461	
2,500.00	2,500.00	2,473.70	2,473.70	8.73	8.63	89.42	10.76	1,064.77	1,064.82	1,052.55	12.28	86.726	
2,600.00	2,600.00	2,573.70	2,573.70	9.09	8.99	89.42	10.76	1,064.77	1,064.82	1,052.04	12.78	83.287	
2,700.00	2,700.00	2,673.70	2,673.70	9.45	9.35	89.42	10.76	1,064.77	1,064.82	1,051.53	13.29	80.111	
2,800.00	2,800.00	2,773.70	2,773.70	9.80	9.71	89.42	10.76	1,064.77	1,064.82	1,051.03	13.80	77.168	
2,900.00	2,900.00	2,873.70	2,873.70	10.16	10.07	89.42	10.76	1,064.77	1,064.82	1,050.52	14.31	74.433	
3,000.00	3,000.00	2,973.70	2,973.70	10.52	10.43	89.42	10.76	1,064.77	1,064.82	1,050.01	14.81	71.886	
3,100.00	3,100.00	3,073.70	3,073.70	10.88	10.79	89.42	10.76	1,064.77	1,064.82	1,049.50	15.32	69.507	
3,200.00	3,200.00	3,173.70	3,173.70	11.24	11.14	89.42	10.76	1,064.77	1,064.82	1,049.00	15.83	67.280	
3,300.00	3,300.00	3,273.70	3,273.70	11.60	11.50	89.42	10.76	1,064.77	1,064.82	1,048.49	16.33	65.192	CC, ES
3,400.00	3,400.00	3,358.21	3,358.21	11.96	11.80	89.43	10.63	1,065.19	1,065.36	1,048.57	16.80	63.433	
3,500.00	3,500.00	3,437.15	3,437.12	12.31	12.07	89.46	10.05	1,067.13	1,067.80	1,050.57	17.23	61.964	
3,600.00	3,600.00	3,515.97	3,515.85	12.67	12.33	89.52	8.99	1,070.61	1,072.21	1,054.55	17.66	60.711	
3,700.00	3,700.00	3,600.00	3,599.69	13.03	12.62	89.61	7.35	1,076.04	1,078.61	1,060.51	18.10	59.587	
3,800.00	3,800.00	3,672.99	3,672.40	13.39	12.87	89.71	5.48	1,082.19	1,086.93	1,068.43	18.50	58.756	
3,900.00	3,900.00	3,751.06	3,750.01	13.75	13.14	89.84	3.05	1,090.23	1,097.23	1,078.32	18.91	58.031	
4,000.00	4,000.00	3,831.31	3,829.60	14.11	13.42	90.00	0.07	1,100.06	1,109.46	1,090.14	19.32	57.426	
4,100.00	4,100.00	3,930.39	3,927.77	14.46	13.77	90.20	-3.82	1,112.92	1,122.45	1,102.64	19.81	56.660	
4,200.00	4,200.00	4,029.47	4,025.93	14.82	14.12	90.39	-7.72	1,125.78	1,135.46	1,115.16	20.30	55.930	
4,300.00	4,300.00	4,128.54	4,124.09	15.18	14.47	90.58	-11.61	1,138.64	1,148.48	1,127.69	20.79	55.231	
4,400.00	4,400.00	4,227.62	4,222.25	15.54	14.83	90.77	-15.51	1,151.49	1,161.52	1,140.23	21.29	54.563	
4,500.00	4,500.00	4,326.69	4,320.41	15.90	15.20	90.95	-19.40	1,164.35	1,174.56	1,152.78	21.78	53.923	
4,600.00	4,599.99	4,425.93	4,418.73	16.24	15.56	-29.77	-23.31	1,177.23	1,186.49	1,164.22	22.27	53.282	
4,666.98	4,666.93	4,492.56	4,484.74	16.47	15.81	-29.66	-25.92	1,185.88	1,193.22	1,170.63	22.59	52.826	
4,700.00	4,699.92	4,525.43	4,517.31	16.58	15.93	-29.64	-27.22	1,190.15	1,196.29	1,173.54	22.75	52.593	
4,800.00	4,799.82	4,624.99	4,615.95	16.91	16.30	-29.57	-31.13	1,203.07	1,205.58	1,182.36	23.23	51.905	
4,900.00	4,899.72	4,724.55	4,714.59	17.24	16.67	-29.50	-35.04	1,215.99	1,214.88	1,191.17	23.71	51.241	
5,000.00	4,999.63	4,824.10	4,813.22	17.58	17.05	-29.43	-38.96	1,228.91	1,224.17	1,199.98	24.19	50.601	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 705H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	4,923.66	4,911.86	17.92	17.43	-29.36	-42.87	1,241.83	1,233.47	1,208.80	24.68	49.983	
5,200.00	5,199.44	5,023.21	5,010.50	18.26	17.81	-29.29	-46.79	1,254.75	1,242.77	1,217.61	25.16	49.386	
5,300.00	5,299.34	5,122.77	5,109.13	18.60	18.19	-29.23	-50.70	1,267.67	1,252.08	1,226.42	25.65	48.810	
5,400.00	5,399.25	5,222.33	5,207.77	18.94	18.57	-29.16	-54.61	1,280.59	1,261.38	1,235.24	26.14	48.253	
5,500.00	5,499.15	5,321.88	5,306.41	19.28	18.95	-29.10	-58.53	1,293.51	1,270.68	1,244.05	26.63	47.714	
5,600.00	5,599.06	5,421.44	5,405.04	19.62	19.34	-29.04	-62.44	1,306.43	1,279.99	1,252.87	27.12	47.193	
5,700.00	5,698.96	5,521.00	5,503.68	19.96	19.73	-28.98	-66.35	1,319.35	1,289.30	1,261.68	27.61	46.689	
5,800.00	5,798.86	5,620.55	5,602.32	20.31	20.11	-28.92	-70.27	1,332.27	1,298.61	1,270.50	28.11	46.201	
5,834.24	5,833.07	5,654.64	5,636.09	20.42	20.25	-28.90	-71.61	1,336.70	1,301.80	1,273.52	28.28	46.037	
5,900.00	5,898.79	5,720.06	5,700.90	20.65	20.50	-28.89	-74.18	1,345.19	1,308.41	1,279.81	28.60	45.746	
6,001.22	6,000.00	5,820.51	5,800.42	21.00	20.90	92.11	-78.13	1,358.22	1,320.52	1,291.42	29.11	45.369	
6,100.00	6,098.78	5,918.37	5,897.39	21.36	21.28	92.25	-81.98	1,370.92	1,333.49	1,303.89	29.60	45.046	
6,200.00	6,198.78	6,017.45	5,995.55	21.71	21.67	92.40	-85.87	1,383.78	1,346.63	1,316.52	30.11	44.730	
6,300.00	6,298.78	6,116.53	6,093.71	22.07	22.06	92.54	-89.76	1,396.64	1,359.77	1,329.16	30.61	44.424	
6,400.00	6,398.78	6,215.60	6,191.87	22.43	22.46	92.68	-93.66	1,409.50	1,372.92	1,341.81	31.11	44.127	
6,500.00	6,498.78	6,314.68	6,290.03	22.78	22.85	92.82	-97.55	1,422.36	1,386.08	1,354.46	31.62	43.840	
6,600.00	6,598.78	6,413.76	6,388.19	23.14	23.24	92.95	-101.45	1,435.21	1,399.25	1,367.12	32.12	43.562	
6,700.00	6,698.78	6,512.83	6,486.35	23.50	23.64	93.08	-105.34	1,448.07	1,412.42	1,379.79	32.63	43.292	
6,800.00	6,798.78	6,611.91	6,584.51	23.85	24.03	93.21	-109.24	1,460.93	1,425.60	1,392.47	33.13	43.031	
6,900.00	6,898.78	6,710.98	6,682.68	24.21	24.43	93.34	-113.13	1,473.79	1,438.79	1,405.15	33.63	42.777	
7,000.00	6,998.78	6,810.06	6,780.84	24.57	24.83	93.47	-117.03	1,486.65	1,451.98	1,417.84	34.14	42.530	
7,100.00	7,098.78	6,909.14	6,879.00	24.93	25.22	93.59	-120.92	1,499.51	1,465.19	1,430.54	34.65	42.291	
7,200.00	7,198.78	7,008.21	6,977.16	25.28	25.62	93.71	-124.82	1,512.36	1,478.39	1,443.24	35.15	42.058	
7,300.00	7,298.78	7,165.08	7,132.94	25.64	26.24	93.87	-130.12	1,529.85	1,489.78	1,453.90	35.89	41.511	
7,400.00	7,398.78	7,326.22	7,293.62	26.00	26.84	93.97	-133.62	1,541.43	1,497.10	1,460.51	36.59	40.913	
7,500.00	7,498.78	7,488.10	7,455.40	26.35	27.41	94.02	-135.16	1,546.52	1,500.31	1,463.06	37.24	40.283	
7,600.00	7,598.78	7,605.18	7,572.48	26.71	27.81	94.02	-135.24	1,546.77	1,500.47	1,462.69	37.77	39.722	
7,700.00	7,698.78	7,705.18	7,672.48	27.07	28.14	94.02	-135.24	1,546.77	1,500.47	1,462.19	38.27	39.205	
7,800.00	7,798.78	7,805.18	7,772.48	27.43	28.48	94.02	-135.24	1,546.77	1,500.47	1,461.70	38.77	38.702	
7,900.00	7,898.78	7,905.18	7,872.48	27.78	28.82	94.02	-135.24	1,546.77	1,500.47	1,461.20	39.27	38.211	
8,000.00	7,998.78	8,005.18	7,972.48	28.14	29.15	94.02	-135.24	1,546.77	1,500.47	1,460.70	39.77	37.732	
8,100.00	8,098.78	8,105.18	8,072.48	28.50	29.49	94.02	-135.24	1,546.77	1,500.47	1,460.20	40.26	37.265	
8,200.00	8,198.78	8,205.18	8,172.48	28.86	29.83	94.02	-135.24	1,546.77	1,500.47	1,459.70	40.76	36.809	
8,300.00	8,298.78	8,305.18	8,272.48	29.21	30.17	94.02	-135.24	1,546.77	1,500.47	1,459.20	41.26	36.364	
8,400.00	8,398.78	8,405.18	8,372.48	29.57	30.51	94.02	-135.24	1,546.77	1,500.47	1,458.70	41.76	35.930	
8,500.00	8,498.78	8,505.18	8,472.48	29.93	30.85	94.02	-135.24	1,546.77	1,500.47	1,458.21	42.26	35.505	
8,600.00	8,598.78	8,605.18	8,572.48	30.29	31.19	94.02	-135.24	1,546.77	1,500.47	1,457.71	42.76	35.091	
8,700.00	8,698.78	8,705.18	8,672.48	30.64	31.53	94.02	-135.24	1,546.77	1,500.47	1,457.21	43.26	34.685	
8,800.00	8,798.78	8,805.18	8,772.48	31.00	31.87	94.02	-135.24	1,546.77	1,500.47	1,456.71	43.76	34.289	
8,900.00	8,898.78	8,905.18	8,872.48	31.36	32.21	94.02	-135.24	1,546.77	1,500.47	1,456.21	44.26	33.902	
9,000.00	8,998.78	9,005.18	8,972.48	31.72	32.56	94.02	-135.24	1,546.77	1,500.47	1,455.71	44.76	33.523	
9,100.00	9,098.78	9,105.18	9,072.48	32.07	32.90	94.02	-135.24	1,546.77	1,500.47	1,455.21	45.26	33.153	
9,200.00	9,198.78	9,205.18	9,172.48	32.43	33.24	94.02	-135.24	1,546.77	1,500.47	1,454.71	45.76	32.790	
9,300.00	9,298.78	9,305.18	9,272.48	32.79	33.59	94.02	-135.24	1,546.77	1,500.47	1,454.21	46.26	32.435	
9,400.00	9,398.78	9,405.18	9,372.48	33.15	33.93	94.02	-135.24	1,546.77	1,500.47	1,453.70	46.76	32.088	
9,500.00	9,498.78	9,505.18	9,472.48	33.51	34.27	94.02	-135.24	1,546.77	1,500.47	1,453.20	47.26	31.748	
9,600.00	9,598.78	9,605.18	9,572.48	33.86	34.62	94.02	-135.24	1,546.77	1,500.47	1,452.70	47.76	31.415	
9,700.00	9,698.78	9,705.18	9,672.48	34.22	34.96	94.02	-135.24	1,546.77	1,500.47	1,452.20	48.26	31.089	
9,800.00	9,798.78	9,805.18	9,772.48	34.58	35.31	94.02	-135.24	1,546.77	1,500.47	1,451.70	48.76	30.769	
9,900.00	9,898.78	9,905.18	9,872.48	34.94	35.65	94.02	-135.24	1,546.77	1,500.47	1,451.20	49.27	30.456	
10,000.00	9,998.78	10,005.18	9,972.48	35.29	35.99	94.02	-135.24	1,546.77	1,500.47	1,450.70	49.77	30.149	
10,100.00	10,098.78	10,105.18	10,072.48	35.65	36.34	94.02	-135.24	1,546.77	1,500.47	1,450.20	50.27	29.849	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 705H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,148.26	10,147.04	10,153.44	10,120.74	35.82	36.51	94.02	-135.24	1,546.77	1,500.47	1,449.95	50.51	29.706	
10,150.00	10,148.78	10,155.18	10,122.48	35.83	36.51	-85.42	-135.24	1,546.77	1,500.47	1,449.95	50.52	29.701	
10,200.00	10,198.71	10,205.11	10,172.41	35.99	36.69	-85.53	-135.24	1,546.77	1,500.28	1,449.52	50.76	29.556	
10,250.00	10,248.24	10,254.65	10,221.94	36.16	36.86	-85.83	-135.24	1,546.77	1,499.77	1,448.77	51.00	29.407	
10,300.00	10,297.01	10,303.41	10,270.71	36.32	37.03	-86.32	-135.24	1,546.77	1,499.00	1,447.77	51.24	29.256	
10,350.00	10,344.64	10,351.04	10,318.34	36.48	37.19	-86.96	-135.24	1,546.77	1,498.07	1,446.60	51.47	29.105	
10,400.00	10,390.76	10,397.16	10,364.46	36.63	37.35	-87.74	-135.24	1,546.77	1,497.11	1,445.40	51.70	28.957	
10,450.00	10,435.02	10,441.42	10,408.72	36.78	37.50	-88.61	-135.24	1,546.77	1,496.27	1,444.34	51.93	28.814	
10,500.00	10,477.10	10,483.50	10,450.80	36.94	37.65	-89.53	-135.24	1,546.77	1,495.76	1,443.61	52.15	28.682	
10,525.47	10,497.58	10,503.98	10,471.28	37.01	37.72	-90.00	-135.24	1,546.77	1,495.68	1,443.42	52.26	28.619	
10,550.00	10,516.66	10,523.06	10,490.36	37.09	37.79	-90.45	-135.24	1,546.77	1,495.76	1,443.39	52.37	28.563	
10,600.00	10,553.41	10,559.81	10,527.11	37.25	37.91	-91.33	-135.24	1,546.77	1,496.49	1,443.91	52.58	28.461	
10,650.00	10,587.07	10,593.47	10,560.77	37.41	38.03	-92.12	-135.24	1,546.77	1,498.16	1,445.37	52.79	28.380	
10,700.00	10,617.37	10,623.78	10,591.07	37.57	38.14	-92.75	-135.24	1,546.77	1,500.98	1,447.98	52.99	28.323	
10,750.00	10,644.10	10,650.50	10,617.80	37.74	38.23	-93.20	-135.24	1,546.77	1,505.11	1,451.92	53.19	28.295	
10,800.00	10,667.05	10,673.45	10,640.75	37.91	38.31	-93.42	-135.24	1,546.77	1,510.72	1,457.33	53.39	28.297	
10,850.00	10,686.04	10,692.44	10,659.74	38.09	38.37	-93.36	-135.24	1,546.77	1,517.92	1,464.34	53.58	28.332	
10,900.00	10,700.92	10,707.32	10,674.62	38.28	38.42	-93.00	-135.24	1,546.77	1,526.78	1,473.02	53.76	28.402	
10,950.00	10,711.59	10,717.99	10,685.29	38.47	38.46	-92.32	-135.24	1,546.77	1,537.33	1,483.40	53.93	28.507	
11,000.00	10,717.97	10,724.37	10,691.67	38.67	38.48	-91.31	-135.24	1,546.77	1,549.54	1,495.46	54.09	28.649	
11,048.26	10,720.00	10,726.40	10,693.70	38.86	38.49	-90.00	-135.24	1,546.77	1,562.84	1,508.61	54.23	28.819	
11,100.00	10,720.00	10,726.40	10,693.70	39.07	38.49	-90.00	-135.24	1,546.77	1,578.62	1,524.24	54.38	29.031	
11,200.00	10,720.00	10,726.40	10,693.70	39.54	38.49	-90.00	-135.24	1,546.77	1,613.39	1,558.71	54.68	29.508	
11,300.00	10,720.00	10,726.40	10,693.70	40.07	38.49	-90.00	-135.24	1,546.77	1,653.48	1,598.50	54.98	30.072	
11,400.00	10,720.00	10,726.40	10,693.70	40.66	38.49	-90.00	-135.24	1,546.77	1,698.53	1,643.23	55.29	30.718	
11,500.00	10,720.00	10,726.40	10,693.70	41.31	38.49	-90.00	-135.24	1,546.77	1,748.14	1,692.54	55.60	31.443	
11,600.00	10,720.00	10,726.40	10,693.70	42.02	38.49	-90.00	-135.24	1,546.77	1,801.94	1,746.04	55.89	32.239	
11,700.00	10,720.00	10,726.40	10,693.70	42.77	38.49	-90.00	-135.24	1,546.77	1,859.56	1,803.39	56.17	33.104	
11,800.00	10,720.00	10,726.40	10,693.70	43.58	38.49	-90.00	-135.24	1,546.77	1,920.67	1,864.23	56.44	34.030	
11,900.00	10,720.00	10,726.40	10,693.70	44.43	38.49	-90.00	-135.24	1,546.77	1,984.93	1,928.24	56.69	35.015	
12,000.00	10,720.00	13,214.57	12,023.00	45.33	49.57	-131.63	-1,539.96	1,560.54	2,001.14	1,946.66	54.48	36.733	
12,100.00	10,720.00	13,314.57	12,023.00	46.26	50.42	-131.63	-1,639.95	1,561.52	2,001.15	1,945.70	55.45	36.092	
12,200.00	10,720.00	13,414.57	12,023.00	47.24	51.31	-131.63	-1,739.95	1,562.50	2,001.15	1,944.70	56.46	35.446	
12,300.00	10,720.00	13,514.57	12,023.00	48.26	52.24	-131.63	-1,839.94	1,563.48	2,001.16	1,943.65	57.51	34.795	
12,400.00	10,720.00	13,614.57	12,023.00	49.30	53.21	-131.63	-1,939.94	1,564.46	2,001.17	1,942.56	58.61	34.143	
12,500.00	10,720.00	13,714.57	12,023.00	50.38	54.21	-131.63	-2,039.93	1,565.45	2,001.18	1,941.43	59.75	33.493	
12,600.00	10,720.00	13,814.57	12,023.00	51.50	55.24	-131.63	-2,139.93	1,566.43	2,001.19	1,940.27	60.92	32.849	
12,700.00	10,720.00	13,914.57	12,023.00	52.63	56.29	-131.63	-2,239.93	1,567.41	2,001.19	1,939.07	62.13	32.212	
12,800.00	10,720.00	14,014.57	12,023.00	53.80	57.38	-131.62	-2,339.92	1,568.39	2,001.20	1,937.84	63.37	31.582	
12,900.00	10,720.00	14,114.57	12,023.00	54.99	58.49	-131.62	-2,439.92	1,569.37	2,001.21	1,936.57	64.64	30.962	
13,000.00	10,720.00	14,214.57	12,023.00	56.20	59.63	-131.62	-2,539.91	1,570.35	2,001.22	1,935.28	65.93	30.352	
13,100.00	10,720.00	14,314.57	12,023.00	57.44	60.79	-131.62	-2,639.91	1,571.33	2,001.23	1,933.97	67.26	29.754	
13,200.00	10,720.00	14,414.57	12,023.00	58.70	61.98	-131.62	-2,739.90	1,572.31	2,001.23	1,932.63	68.61	29.169	
13,300.00	10,720.00	14,514.57	12,023.00	59.97	63.18	-131.62	-2,839.90	1,573.29	2,001.24	1,931.26	69.98	28.596	
13,400.00	10,720.00	14,614.57	12,023.00	61.27	64.41	-131.62	-2,939.89	1,574.27	2,001.25	1,929.87	71.38	28.037	
13,500.00	10,720.00	14,714.57	12,023.00	62.58	65.65	-131.62	-3,039.89	1,575.25	2,001.26	1,928.46	72.80	27.491	
13,600.00	10,720.00	14,814.57	12,023.00	63.90	66.91	-131.62	-3,139.88	1,576.23	2,001.27	1,927.03	74.23	26.959	
13,700.00	10,720.00	14,914.57	12,023.00	65.24	68.19	-131.62	-3,239.88	1,577.21	2,001.27	1,925.58	75.69	26.440	
13,800.00	10,720.00	15,014.57	12,023.00	66.60	69.48	-131.62	-3,339.87	1,578.19	2,001.28	1,924.12	77.16	25.936	
13,900.00	10,720.00	15,114.57	12,023.00	67.97	70.79	-131.62	-3,439.87	1,579.17	2,001.29	1,922.64	78.65	25.444	
14,000.00	10,720.00	15,214.57	12,023.00	69.35	72.12	-131.62	-3,539.86	1,580.15	2,001.30	1,921.14	80.16	24.966	
14,100.00	10,720.00	15,314.57	12,023.00	70.74	73.45	-131.62	-3,639.86	1,581.13	2,001.31	1,919.63	81.68	24.502	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 705H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	10,720.00	15,414.57	12,023.00	72.14	74.80	-131.62	-3,739.85	1,582.11	2,001.31	1,918.10	83.21	24.051	
14,300.00	10,720.00	15,514.57	12,023.00	73.55	76.16	-131.62	-3,839.85	1,583.09	2,001.32	1,916.56	84.76	23.612	
14,400.00	10,720.00	15,614.57	12,023.00	74.98	77.53	-131.62	-3,939.84	1,584.07	2,001.33	1,915.01	86.32	23.185	
14,500.00	10,720.00	15,714.57	12,023.00	76.41	78.91	-131.62	-4,039.84	1,585.05	2,001.34	1,913.45	87.89	22.771	
14,600.00	10,720.00	15,814.57	12,023.00	77.85	80.31	-131.62	-4,139.83	1,586.03	2,001.35	1,911.88	89.47	22.369	
14,700.00	10,720.00	15,914.57	12,023.00	79.30	81.71	-131.62	-4,239.83	1,587.01	2,001.36	1,910.29	91.06	21.978	
14,800.00	10,720.00	16,014.57	12,023.00	80.76	83.12	-131.62	-4,339.82	1,587.99	2,001.36	1,908.70	92.66	21.598	
14,900.00	10,720.00	16,114.57	12,023.00	82.22	84.54	-131.62	-4,439.82	1,588.98	2,001.37	1,907.10	94.27	21.229	
15,000.00	10,720.00	16,214.57	12,023.00	83.69	85.97	-131.62	-4,539.81	1,589.96	2,001.38	1,905.49	95.89	20.871	
15,100.00	10,720.00	16,314.57	12,023.00	85.17	87.41	-131.62	-4,639.81	1,590.94	2,001.39	1,903.87	97.52	20.522	
15,200.00	10,720.00	16,414.57	12,023.00	86.65	88.85	-131.62	-4,739.80	1,591.92	2,001.40	1,902.24	99.16	20.184	
15,300.00	10,720.00	16,514.57	12,023.00	88.14	90.30	-131.62	-4,839.80	1,592.90	2,001.40	1,900.60	100.80	19.855	
15,400.00	10,720.00	16,614.57	12,023.00	89.64	91.76	-131.62	-4,939.80	1,593.88	2,001.41	1,898.96	102.45	19.536	
15,500.00	10,720.00	16,714.57	12,023.00	91.14	93.22	-131.62	-5,039.79	1,594.86	2,001.42	1,897.31	104.11	19.225	
15,600.00	10,720.00	16,814.57	12,023.00	92.65	94.69	-131.62	-5,139.79	1,595.84	2,001.43	1,895.66	105.77	18.923	
15,700.00	10,720.00	16,914.57	12,023.00	94.16	96.17	-131.62	-5,239.78	1,596.82	2,001.44	1,894.00	107.44	18.629	
15,800.00	10,720.00	17,014.57	12,023.00	95.67	97.65	-131.62	-5,339.78	1,597.80	2,001.44	1,892.33	109.11	18.343	
15,900.00	10,720.00	17,114.57	12,023.00	97.19	99.14	-131.62	-5,439.77	1,598.78	2,001.45	1,890.66	110.79	18.065	
16,000.00	10,720.00	17,214.57	12,023.00	98.72	100.63	-131.62	-5,539.77	1,599.76	2,001.46	1,888.98	112.48	17.795	
16,100.00	10,720.00	17,314.57	12,023.00	100.25	102.13	-131.62	-5,639.76	1,600.74	2,001.47	1,887.30	114.16	17.532	
16,200.00	10,720.00	17,414.57	12,023.00	101.78	103.63	-131.62	-5,739.76	1,601.72	2,001.48	1,885.62	115.86	17.275	
16,300.00	10,720.00	17,514.57	12,023.00	103.31	105.13	-131.62	-5,839.75	1,602.70	2,001.48	1,883.93	117.56	17.026	
16,400.00	10,720.00	17,614.57	12,023.00	104.85	106.64	-131.62	-5,939.75	1,603.68	2,001.49	1,882.23	119.26	16.783	
16,500.00	10,720.00	17,714.57	12,023.00	106.40	108.16	-131.62	-6,039.74	1,604.66	2,001.50	1,880.54	120.97	16.546	
16,600.00	10,720.00	17,814.57	12,023.00	107.94	109.68	-131.62	-6,139.74	1,605.64	2,001.51	1,878.83	122.68	16.316	
16,700.00	10,720.00	17,914.57	12,023.00	109.49	111.20	-131.62	-6,239.73	1,606.62	2,001.52	1,877.13	124.39	16.091	
16,800.00	10,720.00	18,014.57	12,023.00	111.04	112.73	-131.62	-6,339.73	1,607.60	2,001.53	1,875.42	126.11	15.872	
16,900.00	10,720.00	18,114.57	12,023.00	112.60	114.26	-131.62	-6,439.72	1,608.58	2,001.53	1,873.71	127.83	15.658	
17,000.00	10,720.00	18,214.57	12,023.00	114.16	115.79	-131.62	-6,539.72	1,609.56	2,001.54	1,871.99	129.55	15.450	
17,100.00	10,720.00	18,314.57	12,023.00	115.72	117.33	-131.62	-6,639.71	1,610.54	2,001.55	1,870.27	131.28	15.247	
17,200.00	10,720.00	18,414.57	12,023.00	117.28	118.86	-131.62	-6,739.71	1,611.53	2,001.56	1,868.55	133.01	15.049	
17,300.00	10,720.00	18,514.57	12,023.00	118.84	120.41	-131.62	-6,839.70	1,612.51	2,001.57	1,866.83	134.74	14.855	
17,400.00	10,720.00	18,614.57	12,023.00	120.41	121.95	-131.62	-6,939.70	1,613.49	2,001.57	1,865.10	136.47	14.667	
17,500.00	10,720.00	18,714.57	12,023.00	121.98	123.50	-131.62	-7,039.69	1,614.47	2,001.58	1,863.38	138.21	14.483	
17,600.00	10,720.00	18,814.57	12,023.00	123.55	125.05	-131.62	-7,139.69	1,615.45	2,001.59	1,861.64	139.95	14.303	
17,700.00	10,720.00	18,914.57	12,023.00	125.13	126.60	-131.61	-7,239.68	1,616.43	2,001.60	1,859.91	141.68	14.127	
17,800.00	10,720.00	19,014.57	12,023.00	126.70	128.16	-131.61	-7,339.68	1,617.41	2,001.61	1,858.18	143.43	13.956	
17,900.00	10,720.00	19,114.57	12,023.00	128.28	129.72	-131.61	-7,439.68	1,618.39	2,001.61	1,856.44	145.17	13.788	
18,000.00	10,720.00	19,214.57	12,023.00	129.86	131.28	-131.61	-7,539.67	1,619.37	2,001.62	1,854.70	146.92	13.624	
18,100.00	10,720.00	19,314.57	12,023.00	131.44	132.84	-131.61	-7,639.67	1,620.35	2,001.63	1,852.96	148.67	13.464	
18,200.00	10,720.00	19,414.57	12,023.00	133.02	134.40	-131.61	-7,739.66	1,621.33	2,001.64	1,851.22	150.42	13.307	
18,300.00	10,720.00	19,514.57	12,023.00	134.61	135.97	-131.61	-7,839.66	1,622.31	2,001.65	1,849.47	152.17	13.154	
18,400.00	10,720.00	19,614.57	12,023.00	136.19	137.54	-131.61	-7,939.65	1,623.29	2,001.65	1,847.73	153.92	13.004	
18,500.00	10,720.00	19,714.57	12,023.00	137.78	139.11	-131.61	-8,039.65	1,624.27	2,001.66	1,845.98	155.68	12.858	
18,600.00	10,720.00	19,814.57	12,023.00	139.37	140.68	-131.61	-8,139.64	1,625.25	2,001.67	1,844.24	157.43	12.714	
18,700.00	10,720.00	19,914.57	12,023.00	140.96	142.26	-131.61	-8,239.64	1,626.23	2,001.68	1,842.49	159.19	12.574	
18,800.00	10,720.00	20,014.57	12,023.00	142.55	143.83	-131.61	-8,339.63	1,627.21	2,001.69	1,840.74	160.95	12.437	
18,900.00	10,720.00	20,114.57	12,023.00	144.15	145.41	-131.61	-8,439.63	1,628.19	2,001.70	1,838.99	162.71	12.302	
19,000.00	10,720.00	20,214.57	12,023.00	145.74	146.99	-131.61	-8,539.62	1,629.17	2,001.70	1,837.23	164.47	12.171	
19,100.00	10,720.00	20,314.57	12,023.00	147.34	148.57	-131.61	-8,639.62	1,630.15	2,001.71	1,835.48	166.23	12.042	
19,200.00	10,720.00	20,414.57	12,023.00	148.93	150.15	-131.61	-8,739.61	1,631.13	2,001.72	1,833.72	168.00	11.915	
19,300.00	10,720.00	20,514.57	12,023.00	150.53	151.73	-131.61	-8,839.61	1,632.11	2,001.73	1,831.97	169.76	11.792	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 705H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,720.00	20,614.57	12,023.00	152.13	153.32	-131.61	-8,939.60	1,633.09	2,001.74	1,830.21	171.52	11.670	
19,500.00	10,720.00	20,714.57	12,023.00	153.73	154.91	-131.61	-9,039.60	1,634.07	2,001.74	1,828.45	173.29	11.551	
19,600.00	10,720.00	20,814.57	12,023.00	155.33	156.49	-131.61	-9,139.59	1,635.06	2,001.75	1,826.70	175.06	11.435	
19,700.00	10,720.00	20,914.57	12,023.00	156.94	158.08	-131.61	-9,239.59	1,636.04	2,001.76	1,824.94	176.82	11.321	
19,800.00	10,720.00	21,014.57	12,023.00	158.54	159.67	-131.61	-9,339.58	1,637.02	2,001.77	1,823.18	178.59	11.209	
19,900.00	10,720.00	21,114.57	12,023.00	160.14	161.27	-131.61	-9,439.58	1,638.00	2,001.78	1,821.42	180.36	11.099	
20,000.00	10,720.00	21,214.57	12,023.00	161.75	162.86	-131.61	-9,539.57	1,638.98	2,001.78	1,819.66	182.13	10.991	
20,100.00	10,720.00	21,314.57	12,023.00	163.36	164.45	-131.61	-9,639.57	1,639.96	2,001.79	1,817.89	183.90	10.885	
20,200.00	10,720.00	21,414.57	12,023.00	164.96	166.05	-131.61	-9,739.56	1,640.94	2,001.80	1,816.13	185.67	10.782	
20,300.00	10,720.00	21,514.57	12,023.00	166.57	167.64	-131.61	-9,839.56	1,641.92	2,001.81	1,814.37	187.44	10.680	
20,400.00	10,720.00	21,614.57	12,023.00	168.18	169.24	-131.61	-9,939.56	1,642.90	2,001.82	1,812.61	189.21	10.580	
20,500.00	10,720.00	21,714.57	12,023.00	169.79	170.84	-131.61	-10,039.55	1,643.88	2,001.82	1,810.84	190.98	10.482	
20,600.00	10,720.00	21,814.57	12,023.00	171.40	172.44	-131.61	-10,139.55	1,644.86	2,001.83	1,809.08	192.75	10.385	
20,700.00	10,720.00	21,914.57	12,023.00	173.01	174.04	-131.61	-10,239.54	1,645.84	2,001.84	1,807.32	194.53	10.291	
20,800.00	10,720.00	22,014.57	12,023.00	174.63	175.62	-131.61	-10,339.54	1,646.82	2,001.85	1,805.57	196.28	10.199	
20,841.32	10,720.00	22,055.89	12,023.00	175.22	176.21	-131.61	-10,380.86	1,647.23	2,001.85	1,804.98	196.87	10.168	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 801H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	16.00	16.00	0.00	0.02	-90.34	-16.73	-2,797.19	2,797.24				
100.00	100.00	116.00	116.00	0.13	0.18	-90.34	-16.73	-2,797.19	2,797.24	2,797.02	0.22	N/A	
200.00	200.00	216.00	216.00	0.48	0.54	-90.34	-16.73	-2,797.19	2,797.24	2,796.51	0.73	3,851.890	
300.00	300.00	316.00	316.00	0.84	0.90	-90.34	-16.73	-2,797.19	2,797.24	2,796.01	1.23	2,269.213	
400.00	400.00	416.00	416.00	1.20	1.26	-90.34	-16.73	-2,797.19	2,797.24	2,795.50	1.74	1,608.114	
500.00	500.00	516.00	516.00	1.56	1.62	-90.34	-16.73	-2,797.19	2,797.24	2,794.99	2.25	1,245.264	
600.00	600.00	616.00	616.00	1.92	1.98	-90.34	-16.73	-2,797.19	2,797.24	2,794.49	2.75	1,015.999	
700.00	700.00	716.00	716.00	2.28	2.33	-90.34	-16.73	-2,797.19	2,797.24	2,793.98	3.26	858.023	
800.00	800.00	816.00	816.00	2.63	2.69	-90.34	-16.73	-2,797.19	2,797.24	2,793.47	3.77	742.560	
900.00	900.00	916.00	916.00	2.99	3.05	-90.34	-16.73	-2,797.19	2,797.24	2,792.97	4.27	654.486	
1,000.00	1,000.00	1,016.00	1,016.00	3.35	3.41	-90.34	-16.73	-2,797.19	2,797.24	2,792.46	4.78	585.088	
1,100.00	1,100.00	1,116.00	1,116.00	3.71	3.77	-90.34	-16.73	-2,797.19	2,797.24	2,791.95	5.29	528.996	
1,200.00	1,200.00	1,216.00	1,216.00	4.07	4.13	-90.34	-16.73	-2,797.19	2,797.24	2,791.45	5.79	482.718	
1,300.00	1,300.00	1,316.00	1,316.00	4.43	4.48	-90.34	-16.73	-2,797.19	2,797.24	2,790.94	6.30	443.886	
1,400.00	1,400.00	1,416.00	1,416.00	4.79	4.84	-90.34	-16.73	-2,797.19	2,797.24	2,790.43	6.81	410.836	
1,500.00	1,500.00	1,516.00	1,516.00	5.14	5.20	-90.34	-16.73	-2,797.19	2,797.24	2,789.92	7.32	382.366	
1,600.00	1,600.00	1,616.00	1,616.00	5.50	5.56	-90.34	-16.73	-2,797.19	2,797.24	2,789.42	7.82	357.587	
1,700.00	1,700.00	1,716.00	1,716.00	5.86	5.92	-90.34	-16.73	-2,797.19	2,797.24	2,788.91	8.33	335.823	
1,800.00	1,800.00	1,816.00	1,816.00	6.22	6.28	-90.34	-16.73	-2,797.19	2,797.24	2,788.40	8.84	316.557	
1,900.00	1,900.00	1,916.00	1,916.00	6.58	6.64	-90.34	-16.73	-2,797.19	2,797.24	2,787.90	9.34	299.381	
2,000.00	2,000.00	2,016.00	2,016.00	6.94	6.99	-90.34	-16.73	-2,797.19	2,797.24	2,787.39	9.85	283.974	
2,100.00	2,100.00	2,116.00	2,116.00	7.30	7.35	-90.34	-16.73	-2,797.19	2,797.24	2,786.88	10.36	270.074	
2,200.00	2,200.00	2,216.00	2,216.00	7.65	7.71	-90.34	-16.73	-2,797.19	2,797.24	2,786.38	10.86	257.472	
2,300.00	2,300.00	2,316.00	2,316.00	8.01	8.07	-90.34	-16.73	-2,797.19	2,797.24	2,785.87	11.37	245.993	
2,400.00	2,400.00	2,416.00	2,416.00	8.37	8.43	-90.34	-16.73	-2,797.19	2,797.24	2,785.36	11.88	235.494	
2,500.00	2,500.00	2,516.00	2,516.00	8.73	8.79	-90.34	-16.73	-2,797.19	2,797.24	2,784.85	12.39	225.855	
2,600.00	2,600.00	2,616.00	2,616.00	9.09	9.14	-90.34	-16.73	-2,797.19	2,797.24	2,784.35	12.89	216.974	
2,700.00	2,700.00	2,716.00	2,716.00	9.45	9.50	-90.34	-16.73	-2,797.19	2,797.24	2,783.84	13.40	208.765	
2,800.00	2,800.00	2,816.00	2,816.00	9.80	9.86	-90.34	-16.73	-2,797.19	2,797.24	2,783.33	13.91	201.154	
2,900.00	2,900.00	2,916.00	2,916.00	10.16	10.22	-90.34	-16.73	-2,797.19	2,797.24	2,782.83	14.41	194.079	
3,000.00	3,000.00	3,016.00	3,016.00	10.52	10.58	-90.34	-16.73	-2,797.19	2,797.24	2,782.32	14.92	187.484	
3,100.00	3,100.00	3,116.00	3,116.00	10.88	10.94	-90.34	-16.73	-2,797.19	2,797.24	2,781.81	15.43	181.323	
3,200.00	3,200.00	3,216.00	3,216.00	11.24	11.30	-90.34	-16.73	-2,797.19	2,797.24	2,781.31	15.93	175.554	
3,210.32	3,210.32	3,226.32	3,226.32	11.28	11.33	-90.34	-16.73	-2,797.19	2,797.24	2,781.25	15.99	174.980	CC
3,300.00	3,300.00	3,300.00	3,300.00	11.60	11.60	-90.34	-16.73	-2,797.19	2,797.29	2,780.89	16.40	170.567	ES
3,400.00	3,400.00	3,367.61	3,367.60	11.96	11.83	-90.35	-16.86	-2,797.77	2,798.24	2,781.43	16.82	166.387	
3,500.00	3,500.00	3,425.86	3,425.83	12.31	12.03	-90.35	-17.18	-2,799.21	2,800.72	2,783.51	17.21	162.758	
3,600.00	3,600.00	3,500.00	3,499.91	12.67	12.28	-90.37	-17.87	-2,802.30	2,804.76	2,787.13	17.63	159.056	
3,700.00	3,700.00	3,542.15	3,541.99	13.03	12.43	-90.38	-18.40	-2,804.68	2,810.13	2,792.16	17.97	156.339	
3,800.00	3,800.00	3,624.16	3,623.80	13.39	12.71	-90.40	-19.63	-2,810.19	2,816.82	2,798.40	18.42	152.933	
3,900.00	3,900.00	3,723.91	3,723.31	13.75	13.05	-90.43	-21.15	-2,816.98	2,823.64	2,804.73	18.91	149.310	
4,000.00	4,000.00	3,823.67	3,822.82	14.11	13.39	-90.46	-22.67	-2,823.78	2,830.47	2,811.06	19.40	145.866	
4,100.00	4,100.00	3,923.42	3,922.34	14.46	13.74	-90.49	-24.19	-2,830.57	2,837.29	2,817.40	19.90	142.587	
4,200.00	4,200.00	4,023.18	4,021.85	14.82	14.08	-90.52	-25.71	-2,837.37	2,844.12	2,823.73	20.39	139.461	
4,300.00	4,300.00	4,122.94	4,121.36	15.18	14.43	-90.55	-27.22	-2,844.16	2,850.95	2,830.06	20.89	136.480	
4,400.00	4,400.00	4,222.69	4,220.88	15.54	14.78	-90.58	-28.74	-2,850.96	2,857.77	2,836.39	21.39	133.632	
4,500.00	4,500.00	4,322.45	4,320.39	15.90	15.13	-90.61	-30.26	-2,857.76	2,864.60	2,842.72	21.88	130.911	
4,600.00	4,599.99	4,422.13	4,419.82	16.24	15.48	148.35	-31.78	-2,864.55	2,872.54	2,850.17	22.37	128.416	
4,666.98	4,666.93	4,488.78	4,486.32	16.47	15.72	148.31	-32.79	-2,869.09	2,879.10	2,856.41	22.69	126.895	
4,700.00	4,699.92	4,521.62	4,519.07	16.58	15.84	148.31	-33.29	-2,871.32	2,882.58	2,859.74	22.85	126.171	
4,800.00	4,799.82	4,621.06	4,618.27	16.91	16.19	148.33	-34.81	-2,878.10	2,893.12	2,869.79	23.32	124.037	
4,900.00	4,899.72	4,720.50	4,717.47	17.24	16.54	148.34	-36.32	-2,884.87	2,903.66	2,879.85	23.80	121.982	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 801H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,999.63	4,819.94	4,816.66	17.58	16.90	148.36	-37.83	-2,891.65	2,914.19	2,889.91	24.28	120.002	
5,100.00	5,099.53	4,919.38	4,915.86	17.92	17.25	148.38	-39.35	-2,898.42	2,924.73	2,899.96	24.77	118.093	
5,200.00	5,199.44	5,018.82	5,015.06	18.26	17.61	148.39	-40.86	-2,905.19	2,935.27	2,910.02	25.25	116.251	
5,300.00	5,299.34	5,118.26	5,114.26	18.60	17.97	148.41	-42.37	-2,911.97	2,945.81	2,920.07	25.73	114.475	
5,400.00	5,399.25	5,217.70	5,213.45	18.94	18.32	148.43	-43.88	-2,918.74	2,956.34	2,930.13	26.22	112.759	
5,500.00	5,499.15	5,317.14	5,312.65	19.28	18.68	148.44	-45.40	-2,925.51	2,966.88	2,940.18	26.70	111.102	
5,600.00	5,599.06	5,416.58	5,411.85	19.62	19.04	148.46	-46.91	-2,932.29	2,977.42	2,950.23	27.19	109.500	
5,700.00	5,698.96	5,516.02	5,511.05	19.96	19.40	148.47	-48.42	-2,939.06	2,987.96	2,960.28	27.68	107.952	
5,800.00	5,798.86	5,615.46	5,610.24	20.31	19.76	148.49	-49.94	-2,945.84	2,998.50	2,970.33	28.17	106.454	
5,834.24	5,833.07	5,649.50	5,644.21	20.42	19.88	148.50	-50.46	-2,948.16	3,002.11	2,973.77	28.33	105.952	
5,900.00	5,898.79	5,714.95	5,709.49	20.65	20.12	148.55	-51.45	-2,952.61	3,008.56	2,979.90	28.66	104.988	
6,001.22	6,000.00	5,815.84	5,810.14	21.00	20.49	-90.44	-52.99	-2,959.49	3,016.61	2,987.45	29.16	103.458	
6,100.00	6,098.78	5,914.38	5,908.44	21.36	20.85	-90.47	-54.49	-2,966.20	3,023.35	2,993.70	29.65	101.958	
6,200.00	6,198.78	6,014.13	6,007.95	21.71	21.21	-90.49	-56.01	-2,973.00	3,030.17	3,000.02	30.15	100.488	
6,300.00	6,298.78	6,303.09	6,296.57	22.07	22.24	-90.54	-58.71	-2,985.12	3,035.31	3,004.14	31.17	97.390	
6,400.00	6,398.78	6,421.29	6,414.78	22.43	22.66	-90.54	-58.73	-2,985.19	3,035.33	3,003.61	31.71	95.715	
6,500.00	6,498.78	6,521.29	6,514.78	22.78	23.01	-90.54	-58.73	-2,985.19	3,035.33	3,003.11	32.21	94.224	
6,600.00	6,598.78	6,621.29	6,614.78	23.14	23.36	-90.54	-58.73	-2,985.19	3,035.33	3,002.61	32.72	92.779	
6,700.00	6,698.78	6,721.29	6,714.78	23.50	23.71	-90.54	-58.73	-2,985.19	3,035.33	3,002.11	33.22	91.377	
6,800.00	6,798.78	6,821.29	6,814.78	23.85	24.06	-90.54	-58.73	-2,985.19	3,035.33	3,001.61	33.72	90.016	
6,900.00	6,898.78	6,921.29	6,914.78	24.21	24.41	-90.54	-58.73	-2,985.19	3,035.33	3,001.10	34.22	88.695	
7,000.00	6,998.78	7,021.29	7,014.78	24.57	24.76	-90.54	-58.73	-2,985.19	3,035.33	3,000.60	34.72	87.412	
7,100.00	7,098.78	7,121.29	7,114.78	24.93	25.12	-90.54	-58.73	-2,985.19	3,035.33	3,000.10	35.23	86.165	
7,200.00	7,198.78	7,221.29	7,214.78	25.28	25.47	-90.54	-58.73	-2,985.19	3,035.33	2,999.60	35.73	84.953	
7,300.00	7,298.78	7,321.29	7,314.78	25.64	25.82	-90.54	-58.73	-2,985.19	3,035.33	2,999.09	36.23	83.774	
7,400.00	7,398.78	7,421.29	7,414.78	26.00	26.17	-90.54	-58.73	-2,985.19	3,035.33	2,998.59	36.74	82.627	
7,500.00	7,498.78	7,521.29	7,514.78	26.35	26.53	-90.54	-58.73	-2,985.19	3,035.33	2,998.09	37.24	81.511	
7,600.00	7,598.78	7,621.29	7,614.78	26.71	26.88	-90.54	-58.73	-2,985.19	3,035.33	2,997.58	37.74	80.424	
7,700.00	7,698.78	7,721.29	7,714.78	27.07	27.23	-90.54	-58.73	-2,985.19	3,035.33	2,997.08	38.24	79.366	
7,800.00	7,798.78	7,821.29	7,814.78	27.43	27.58	-90.54	-58.73	-2,985.19	3,035.33	2,996.58	38.75	78.335	
7,900.00	7,898.78	7,921.29	7,914.78	27.78	27.94	-90.54	-58.73	-2,985.19	3,035.33	2,996.07	39.25	77.330	
8,000.00	7,998.78	8,021.29	8,014.78	28.14	28.29	-90.54	-58.73	-2,985.19	3,035.33	2,995.57	39.75	76.351	
8,100.00	8,098.78	8,121.29	8,114.78	28.50	28.64	-90.54	-58.73	-2,985.19	3,035.33	2,995.07	40.26	75.396	
8,200.00	8,198.78	8,221.29	8,214.78	28.86	29.00	-90.54	-58.73	-2,985.19	3,035.33	2,994.56	40.76	74.464	
8,300.00	8,298.78	8,321.29	8,314.78	29.21	29.35	-90.54	-58.73	-2,985.19	3,035.33	2,994.06	41.27	73.555	
8,400.00	8,398.78	8,421.29	8,414.78	29.57	29.70	-90.54	-58.73	-2,985.19	3,035.33	2,993.56	41.77	72.668	
8,500.00	8,498.78	8,521.29	8,514.78	29.93	30.06	-90.54	-58.73	-2,985.19	3,035.33	2,993.05	42.27	71.802	
8,600.00	8,598.78	8,621.29	8,614.78	30.29	30.41	-90.54	-58.73	-2,985.19	3,035.33	2,992.55	42.78	70.956	
8,700.00	8,698.78	8,721.29	8,714.78	30.64	30.77	-90.54	-58.73	-2,985.19	3,035.33	2,992.04	43.28	70.130	
8,800.00	8,798.78	8,821.29	8,814.78	31.00	31.12	-90.54	-58.73	-2,985.19	3,035.33	2,991.54	43.79	69.322	
8,900.00	8,898.78	8,921.29	8,914.78	31.36	31.47	-90.54	-58.73	-2,985.19	3,035.33	2,991.04	44.29	68.533	
9,000.00	8,998.78	9,021.29	9,014.78	31.72	31.83	-90.54	-58.73	-2,985.19	3,035.33	2,990.53	44.79	67.762	
9,100.00	9,098.78	9,121.29	9,114.78	32.07	32.18	-90.54	-58.73	-2,985.19	3,035.33	2,990.03	45.30	67.007	
9,200.00	9,198.78	9,221.29	9,214.78	32.43	32.54	-90.54	-58.73	-2,985.19	3,035.33	2,989.52	45.80	66.269	
9,300.00	9,298.78	9,321.29	9,314.78	32.79	32.89	-90.54	-58.73	-2,985.19	3,035.33	2,989.02	46.31	65.548	
9,400.00	9,398.78	9,421.29	9,414.78	33.15	33.25	-90.54	-58.73	-2,985.19	3,035.33	2,988.51	46.81	64.841	
9,500.00	9,498.78	9,521.29	9,514.78	33.51	33.60	-90.54	-58.73	-2,985.19	3,035.33	2,988.01	47.32	64.150	
9,600.00	9,598.78	9,621.29	9,614.78	33.86	33.96	-90.54	-58.73	-2,985.19	3,035.33	2,987.51	47.82	63.473	
9,700.00	9,698.78	9,721.29	9,714.78	34.22	34.31	-90.54	-58.73	-2,985.19	3,035.33	2,987.00	48.33	62.810	
9,800.00	9,798.78	9,821.29	9,814.78	34.58	34.67	-90.54	-58.73	-2,985.19	3,035.33	2,986.50	48.83	62.161	
9,900.00	9,898.78	9,921.29	9,914.78	34.94	35.02	-90.54	-58.73	-2,985.19	3,035.33	2,985.99	49.33	61.525	
10,000.00	9,998.78	10,021.29	10,014.78	35.29	35.38	-90.54	-58.73	-2,985.19	3,035.33	2,985.49	49.84	60.902	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 801H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,121.29	10,114.78	35.65	35.73	-90.54	-58.73	-2,985.19	3,035.33	2,984.98	50.34	60.291	
10,148.26	10,147.04	10,169.55	10,163.04	35.82	35.90	-90.54	-58.73	-2,985.19	3,035.33	2,984.74	50.59	60.001	
10,150.00	10,148.78	10,171.29	10,164.78	35.83	35.91	90.01	-58.73	-2,985.19	3,035.33	2,984.73	50.60	59.991	
10,200.00	10,198.71	10,221.22	10,214.71	35.99	36.09	90.06	-58.73	-2,985.19	3,035.33	2,984.49	50.84	59.706	
10,250.00	10,248.24	10,270.76	10,264.24	36.16	36.26	90.18	-58.73	-2,985.19	3,035.34	2,984.26	51.08	59.425	
10,300.00	10,297.01	10,319.53	10,313.01	36.32	36.44	90.38	-58.73	-2,985.19	3,035.40	2,984.08	51.32	59.152	
10,350.00	10,344.64	10,367.15	10,360.64	36.48	36.61	90.64	-58.73	-2,985.19	3,035.54	2,983.99	51.55	58.888	
10,400.00	10,390.76	10,413.27	10,406.76	36.63	36.77	90.94	-58.73	-2,985.19	3,035.83	2,984.05	51.78	58.634	
10,450.00	10,435.02	10,457.54	10,451.02	36.78	36.93	91.28	-58.73	-2,985.19	3,036.34	2,984.34	52.00	58.393	
10,500.00	10,477.10	10,499.61	10,493.10	36.94	37.08	91.62	-58.73	-2,985.19	3,037.15	2,984.94	52.21	58.167	
10,550.00	10,516.66	10,539.17	10,532.66	37.09	37.22	91.96	-58.73	-2,985.19	3,038.37	2,985.94	52.42	57.957	
10,600.00	10,553.41	10,575.92	10,569.41	37.25	37.35	92.26	-58.73	-2,985.19	3,040.07	2,987.44	52.63	57.765	
10,650.00	10,587.07	10,609.58	10,603.07	37.41	37.47	92.50	-58.73	-2,985.19	3,042.36	2,989.53	52.83	57.592	
10,700.00	10,617.37	10,639.89	10,633.37	37.57	37.58	92.65	-58.73	-2,985.19	3,045.31	2,992.30	53.02	57.440	
10,750.00	10,644.10	10,666.62	10,660.10	37.74	37.67	92.71	-58.73	-2,985.19	3,049.02	2,995.82	53.20	57.310	
10,800.00	10,667.05	10,689.56	10,683.05	37.91	37.75	92.64	-58.73	-2,985.19	3,053.55	3,000.17	53.38	57.203	
10,850.00	10,686.04	10,708.55	10,702.04	38.09	37.82	92.43	-58.73	-2,985.19	3,058.94	3,005.39	53.55	57.121	
10,900.00	10,700.92	10,723.44	10,716.92	38.28	37.87	92.06	-58.73	-2,985.19	3,065.22	3,011.51	53.71	57.065	
10,950.00	10,711.59	10,734.11	10,727.59	38.47	37.91	91.53	-58.73	-2,985.19	3,072.40	3,018.53	53.87	57.034	
11,000.00	10,717.97	10,740.48	10,733.97	38.67	37.93	90.83	-58.73	-2,985.19	3,080.47	3,026.46	54.02	57.030	
11,048.26	10,720.00	10,742.51	10,736.00	38.86	37.94	90.00	-58.73	-2,985.19	3,089.06	3,034.91	54.15	57.051	
11,100.00	10,720.00	10,742.51	10,736.00	39.07	37.94	90.00	-58.73	-2,985.19	3,099.08	3,044.80	54.29	57.088	
11,200.00	10,720.00	10,742.51	10,736.00	39.54	37.94	90.00	-58.73	-2,985.19	3,120.80	3,066.22	54.58	57.174	
11,300.00	10,720.00	10,742.51	10,736.00	40.07	37.94	90.00	-58.73	-2,985.19	3,145.55	3,090.64	54.91	57.281	
11,400.00	10,720.00	10,742.51	10,736.00	40.66	37.94	90.00	-58.73	-2,985.19	3,173.26	3,117.98	55.27	57.410	
11,500.00	10,720.00	10,742.51	10,736.00	41.31	37.94	90.00	-58.73	-2,985.19	3,203.85	3,148.19	55.66	57.564	
11,600.00	10,720.00	10,742.51	10,736.00	42.02	37.94	90.00	-58.73	-2,985.19	3,237.24	3,181.18	56.06	57.746	
11,700.00	10,720.00	10,742.51	10,736.00	42.77	37.94	90.00	-58.73	-2,985.19	3,273.35	3,216.87	56.48	57.956	
11,800.00	10,720.00	10,742.51	10,736.00	43.58	37.94	90.00	-58.73	-2,985.19	3,312.08	3,255.17	56.91	58.197	
11,900.00	10,720.00	10,742.51	10,736.00	44.43	37.94	90.00	-58.73	-2,985.19	3,353.35	3,296.00	57.35	58.469	
12,000.00	10,720.00	10,742.51	10,736.00	45.33	37.94	90.00	-58.73	-2,985.19	3,397.06	3,339.26	57.80	58.774	
12,100.00	10,720.00	10,742.51	10,736.00	46.26	37.94	90.00	-58.73	-2,985.19	3,443.13	3,384.88	58.25	59.111	
12,200.00	10,720.00	10,742.51	10,736.00	47.24	37.94	90.00	-58.73	-2,985.19	3,491.45	3,432.75	58.70	59.482	
12,300.00	10,720.00	10,742.51	10,736.00	48.26	37.94	90.00	-58.73	-2,985.19	3,541.93	3,482.79	59.14	59.886	
12,400.00	10,720.00	10,742.51	10,736.00	49.30	37.94	90.00	-58.73	-2,985.19	3,594.49	3,534.90	59.59	60.325	
12,500.00	10,720.00	14,526.60	12,740.00	50.38	56.01	123.44	-2,084.64	-2,965.14	3,636.86	3,570.36	66.50	54.693	
12,600.00	10,720.00	14,626.60	12,740.00	51.50	57.01	123.44	-2,184.63	-2,964.15	3,636.84	3,569.07	67.77	53.666	
12,700.00	10,720.00	14,726.60	12,740.00	52.63	58.05	123.44	-2,284.63	-2,963.16	3,636.83	3,567.75	69.08	52.649	
12,800.00	10,720.00	14,826.60	12,740.00	53.80	59.11	123.44	-2,384.62	-2,962.17	3,636.81	3,566.39	70.42	51.644	
12,900.00	10,720.00	14,926.60	12,740.00	54.99	60.20	123.44	-2,484.62	-2,961.18	3,636.79	3,565.00	71.80	50.654	
13,000.00	10,720.00	15,026.60	12,740.00	56.20	61.31	123.44	-2,584.61	-2,960.19	3,636.78	3,563.57	73.20	49.680	
13,100.00	10,720.00	15,126.60	12,740.00	57.44	62.45	123.44	-2,684.61	-2,959.20	3,636.76	3,562.12	74.64	48.725	
13,200.00	10,720.00	15,226.60	12,740.00	58.70	63.61	123.44	-2,784.60	-2,958.21	3,636.74	3,560.64	76.10	47.788	
13,300.00	10,720.00	15,326.60	12,740.00	59.97	64.79	123.44	-2,884.60	-2,957.22	3,636.73	3,559.14	77.59	46.872	
13,400.00	10,720.00	15,426.60	12,740.00	61.27	65.99	123.44	-2,984.59	-2,956.23	3,636.71	3,557.61	79.10	45.976	
13,500.00	10,720.00	15,526.60	12,740.00	62.58	67.21	123.44	-3,084.59	-2,955.24	3,636.69	3,556.06	80.64	45.101	
13,600.00	10,720.00	15,626.60	12,740.00	63.90	68.45	123.44	-3,184.58	-2,954.25	3,636.67	3,554.48	82.19	44.246	
13,700.00	10,720.00	15,726.60	12,740.00	65.24	69.71	123.44	-3,284.58	-2,953.26	3,636.66	3,552.89	83.77	43.413	
13,800.00	10,720.00	15,826.60	12,740.00	66.60	70.98	123.44	-3,384.57	-2,952.27	3,636.64	3,551.28	85.37	42.601	
13,900.00	10,720.00	15,926.60	12,740.00	67.97	72.27	123.44	-3,484.57	-2,951.28	3,636.62	3,549.64	86.98	41.810	
14,000.00	10,720.00	16,026.60	12,740.00	69.35	73.57	123.44	-3,584.56	-2,950.29	3,636.61	3,548.00	88.61	41.040	
14,100.00	10,720.00	16,126.60	12,740.00	70.74	74.88	123.44	-3,684.56	-2,949.30	3,636.59	3,546.33	90.26	40.291	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 801H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,200.00	10,720.00	16,226.60	12,740.00	72.14	76.21	123.44	-3,784.55	-2,948.31	3,636.57	3,544.65	91.92	39.563	
14,300.00	10,720.00	16,326.60	12,740.00	73.55	77.55	123.44	-3,884.55	-2,947.32	3,636.56	3,542.96	93.60	38.854	
14,400.00	10,720.00	16,426.60	12,740.00	74.98	78.91	123.44	-3,984.54	-2,946.33	3,636.54	3,541.26	95.28	38.165	
14,500.00	10,720.00	16,526.60	12,740.00	76.41	80.27	123.44	-4,084.54	-2,945.34	3,636.52	3,539.54	96.99	37.495	
14,600.00	10,720.00	16,626.60	12,740.00	77.85	81.65	123.44	-4,184.54	-2,944.35	3,636.51	3,537.80	98.70	36.843	
14,700.00	10,720.00	16,726.60	12,740.00	79.30	83.03	123.44	-4,284.53	-2,943.36	3,636.49	3,536.06	100.43	36.210	
14,800.00	10,720.00	16,826.60	12,740.00	80.76	84.43	123.44	-4,384.53	-2,942.37	3,636.47	3,534.31	102.17	35.593	
14,900.00	10,720.00	16,926.60	12,740.00	82.22	85.83	123.44	-4,484.52	-2,941.38	3,636.46	3,532.54	103.92	34.994	
15,000.00	10,720.00	17,026.60	12,740.00	83.69	87.24	123.44	-4,584.52	-2,940.39	3,636.44	3,530.77	105.67	34.412	
15,100.00	10,720.00	17,126.60	12,740.00	85.17	88.66	123.44	-4,684.51	-2,939.41	3,636.42	3,528.98	107.44	33.845	
15,200.00	10,720.00	17,226.60	12,740.00	86.65	90.09	123.44	-4,784.51	-2,938.42	3,636.41	3,527.19	109.22	33.294	
15,300.00	10,720.00	17,326.60	12,740.00	88.14	91.53	123.44	-4,884.50	-2,937.43	3,636.39	3,525.38	111.01	32.758	
15,400.00	10,720.00	17,426.60	12,740.00	89.64	92.97	123.44	-4,984.50	-2,936.44	3,636.37	3,523.57	112.80	32.237	
15,500.00	10,720.00	17,526.60	12,740.00	91.14	94.42	123.44	-5,084.49	-2,935.45	3,636.36	3,521.75	114.60	31.730	
15,600.00	10,720.00	17,626.60	12,740.00	92.65	95.87	123.44	-5,184.49	-2,934.46	3,636.34	3,519.93	116.41	31.237	
15,700.00	10,720.00	17,726.60	12,740.00	94.16	97.34	123.44	-5,284.48	-2,933.47	3,636.32	3,518.09	118.23	30.756	
15,800.00	10,720.00	17,826.60	12,740.00	95.67	98.81	123.44	-5,384.48	-2,932.48	3,636.31	3,516.25	120.05	30.289	
15,900.00	10,720.00	17,926.60	12,740.00	97.19	100.28	123.44	-5,484.47	-2,931.49	3,636.29	3,514.41	121.88	29.835	
16,000.00	10,720.00	18,026.60	12,740.00	98.72	101.76	123.44	-5,584.47	-2,930.50	3,636.27	3,512.56	123.71	29.393	
16,100.00	10,720.00	18,126.60	12,740.00	100.25	103.25	123.44	-5,684.46	-2,929.51	3,636.26	3,510.70	125.55	28.962	
16,200.00	10,720.00	18,226.60	12,740.00	101.78	104.73	123.44	-5,784.46	-2,928.52	3,636.24	3,508.84	127.40	28.543	
16,300.00	10,720.00	18,326.60	12,740.00	103.31	106.23	123.44	-5,884.45	-2,927.53	3,636.22	3,506.98	129.25	28.134	
16,400.00	10,720.00	18,426.60	12,740.00	104.85	107.73	123.44	-5,984.45	-2,926.54	3,636.20	3,505.10	131.10	27.736	
16,500.00	10,720.00	18,526.60	12,740.00	106.40	109.23	123.44	-6,084.44	-2,925.55	3,636.19	3,503.23	132.96	27.348	
16,600.00	10,720.00	18,626.60	12,740.00	107.94	110.74	123.44	-6,184.44	-2,924.56	3,636.17	3,501.35	134.83	26.969	
16,700.00	10,720.00	18,726.60	12,740.00	109.49	112.25	123.44	-6,284.43	-2,923.57	3,636.15	3,499.46	136.70	26.600	
16,800.00	10,720.00	18,826.60	12,740.00	111.04	113.77	123.44	-6,384.43	-2,922.58	3,636.14	3,497.57	138.57	26.241	
16,900.00	10,720.00	18,926.60	12,740.00	112.60	115.29	123.45	-6,484.42	-2,921.59	3,636.12	3,495.67	140.45	25.890	
17,000.00	10,720.00	19,026.60	12,740.00	114.16	116.81	123.45	-6,584.42	-2,920.60	3,636.10	3,493.77	142.33	25.547	
17,100.00	10,720.00	19,126.60	12,740.00	115.72	118.34	123.45	-6,684.41	-2,919.61	3,636.09	3,491.87	144.22	25.213	
17,200.00	10,720.00	19,226.60	12,740.00	117.28	119.87	123.45	-6,784.41	-2,918.62	3,636.07	3,489.96	146.11	24.887	
17,300.00	10,720.00	19,326.60	12,740.00	118.84	121.40	123.45	-6,884.40	-2,917.63	3,636.05	3,488.05	148.00	24.568	
17,400.00	10,720.00	19,426.60	12,740.00	120.41	122.94	123.45	-6,984.40	-2,916.64	3,636.04	3,486.14	149.90	24.257	
17,500.00	10,720.00	19,526.60	12,740.00	121.98	124.48	123.45	-7,084.39	-2,915.65	3,636.02	3,484.22	151.80	23.953	
17,600.00	10,720.00	19,626.60	12,740.00	123.55	126.02	123.45	-7,184.39	-2,914.66	3,636.00	3,482.31	153.69	23.657	
17,700.00	10,720.00	19,726.60	12,740.00	125.13	127.56	123.45	-7,284.38	-2,913.67	3,635.99	3,480.39	155.60	23.368	
17,800.00	10,720.00	19,826.60	12,740.00	126.70	129.11	123.45	-7,384.38	-2,912.68	3,635.97	3,478.47	157.50	23.085	
17,900.00	10,720.00	19,926.60	12,740.00	128.28	130.66	123.45	-7,484.37	-2,911.69	3,635.95	3,476.54	159.41	22.809	
18,000.00	10,720.00	20,026.60	12,740.00	129.86	132.21	123.45	-7,584.37	-2,910.70	3,635.94	3,474.61	161.32	22.538	
18,100.00	10,720.00	20,126.60	12,740.00	131.44	133.77	123.45	-7,684.36	-2,909.71	3,635.92	3,472.68	163.24	22.274	
18,200.00	10,720.00	20,226.60	12,740.00	133.02	135.32	123.45	-7,784.36	-2,908.72	3,635.90	3,470.75	165.15	22.015	
18,300.00	10,720.00	20,326.60	12,740.00	134.61	136.88	123.45	-7,884.35	-2,907.73	3,635.89	3,468.81	167.07	21.762	
18,400.00	10,720.00	20,426.60	12,740.00	136.19	138.44	123.45	-7,984.35	-2,906.74	3,635.87	3,466.88	168.99	21.515	
18,500.00	10,720.00	20,526.60	12,740.00	137.78	140.01	123.45	-8,084.34	-2,905.75	3,635.85	3,464.94	170.92	21.273	
18,600.00	10,720.00	20,626.60	12,740.00	139.37	141.57	123.45	-8,184.34	-2,904.76	3,635.84	3,462.99	172.84	21.036	
18,700.00	10,720.00	20,726.60	12,740.00	140.96	143.14	123.45	-8,284.33	-2,903.78	3,635.82	3,461.05	174.77	20.803	
18,800.00	10,720.00	20,826.60	12,740.00	142.55	144.71	123.45	-8,384.33	-2,902.79	3,635.80	3,459.10	176.70	20.576	
18,900.00	10,720.00	20,926.60	12,740.00	144.15	146.28	123.45	-8,484.32	-2,901.80	3,635.79	3,457.15	178.63	20.353	
19,000.00	10,720.00	21,026.60	12,740.00	145.74	147.85	123.45	-8,584.32	-2,900.81	3,635.77	3,455.20	180.57	20.135	
19,100.00	10,720.00	21,126.60	12,740.00	147.34	149.43	123.45	-8,684.31	-2,899.82	3,635.75	3,453.25	182.50	19.922	
19,200.00	10,720.00	21,226.60	12,740.00	148.93	151.00	123.45	-8,784.31	-2,898.83	3,635.73	3,451.30	184.44	19.713	
19,300.00	10,720.00	21,326.60	12,740.00	150.53	152.58	123.45	-8,884.30	-2,897.84	3,635.72	3,449.35	186.37	19.508	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 801H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,720.00	21,426.60	12,740.00	152.13	154.16	123.45	-8,984.30	-2,896.85	3,635.70	3,447.39	188.31	19.307	
19,500.00	10,720.00	21,526.60	12,740.00	153.73	155.74	123.45	-9,084.30	-2,895.86	3,635.68	3,445.43	190.25	19.110	
19,600.00	10,720.00	21,626.60	12,740.00	155.33	157.32	123.45	-9,184.29	-2,894.87	3,635.67	3,443.48	192.19	18.917	
19,700.00	10,720.00	21,726.60	12,740.00	156.94	158.91	123.45	-9,284.29	-2,893.88	3,635.65	3,441.52	194.14	18.727	
19,800.00	10,720.00	21,826.60	12,740.00	158.54	160.49	123.45	-9,384.28	-2,892.89	3,635.63	3,439.55	196.08	18.542	
19,900.00	10,720.00	21,926.60	12,740.00	160.14	162.08	123.45	-9,484.28	-2,891.90	3,635.62	3,437.59	198.03	18.359	
20,000.00	10,720.00	22,026.60	12,740.00	161.75	163.67	123.45	-9,584.27	-2,890.91	3,635.60	3,435.63	199.97	18.181	
20,100.00	10,720.00	22,126.60	12,740.00	163.36	165.26	123.45	-9,684.27	-2,889.92	3,635.58	3,433.67	201.92	18.005	
20,200.00	10,720.00	22,226.60	12,740.00	164.96	166.85	123.45	-9,784.26	-2,888.93	3,635.57	3,431.70	203.87	17.833	
20,300.00	10,720.00	22,326.60	12,740.00	166.57	168.44	123.45	-9,884.26	-2,887.94	3,635.55	3,429.73	205.82	17.664	
20,400.00	10,720.00	22,426.60	12,740.00	168.18	170.03	123.45	-9,984.25	-2,886.95	3,635.53	3,427.77	207.77	17.498	
20,500.00	10,720.00	22,526.60	12,740.00	169.79	171.62	123.45	-10,084.25	-2,885.96	3,635.52	3,425.80	209.72	17.335	
20,600.00	10,720.00	22,626.60	12,740.00	171.40	173.22	123.45	-10,184.24	-2,884.97	3,635.50	3,423.83	211.67	17.175	
20,700.00	10,720.00	22,726.60	12,740.00	173.01	174.81	123.45	-10,284.24	-2,883.98	3,635.48	3,421.86	213.63	17.018	
20,800.00	10,720.00	22,826.60	12,740.00	174.63	176.36	123.45	-10,384.23	-2,882.99	3,635.47	3,419.93	215.54	16.867	
20,839.08	10,720.00	22,865.07	12,740.00	175.19	176.91	123.45	-10,422.70	-2,882.61	3,635.46	3,419.27	216.19	16.816	
20,841.32	10,720.00	22,865.07	12,740.00	175.22	176.91	123.45	-10,422.70	-2,882.61	3,635.46	3,419.26	216.20	16.815	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 802H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	16.00	16.00	0.00	0.02	-90.34	-16.49	-2,772.20	2,772.25				
100.00	100.00	116.00	116.00	0.13	0.18	-90.34	-16.49	-2,772.20	2,772.25	2,772.03	0.22	N/A	
200.00	200.00	216.00	216.00	0.48	0.54	-90.34	-16.49	-2,772.20	2,772.25	2,771.52	0.73	3,817.476	
300.00	300.00	316.00	316.00	0.84	0.90	-90.34	-16.49	-2,772.20	2,772.25	2,771.02	1.23	2,248.940	
400.00	400.00	416.00	416.00	1.20	1.26	-90.34	-16.49	-2,772.20	2,772.25	2,770.51	1.74	1,593.747	
500.00	500.00	516.00	516.00	1.56	1.62	-90.34	-16.49	-2,772.20	2,772.25	2,770.00	2.25	1,234.139	
600.00	600.00	616.00	616.00	1.92	1.98	-90.34	-16.49	-2,772.20	2,772.25	2,769.50	2.75	1,006.922	
700.00	700.00	716.00	716.00	2.28	2.33	-90.34	-16.49	-2,772.20	2,772.25	2,768.99	3.26	850.357	
800.00	800.00	816.00	816.00	2.63	2.69	-90.34	-16.49	-2,772.20	2,772.25	2,768.48	3.77	735.926	
900.00	900.00	916.00	916.00	2.99	3.05	-90.34	-16.49	-2,772.20	2,772.25	2,767.98	4.27	648.638	
1,000.00	1,000.00	1,016.00	1,016.00	3.35	3.41	-90.34	-16.49	-2,772.20	2,772.25	2,767.47	4.78	579.861	
1,100.00	1,100.00	1,116.00	1,116.00	3.71	3.77	-90.34	-16.49	-2,772.20	2,772.25	2,766.96	5.29	524.270	
1,200.00	1,200.00	1,216.00	1,216.00	4.07	4.13	-90.34	-16.49	-2,772.20	2,772.25	2,766.45	5.79	478.406	
1,300.00	1,300.00	1,316.00	1,316.00	4.43	4.48	-90.34	-16.49	-2,772.20	2,772.25	2,765.95	6.30	439.920	
1,400.00	1,400.00	1,416.00	1,416.00	4.79	4.84	-90.34	-16.49	-2,772.20	2,772.25	2,765.44	6.81	407.165	
1,500.00	1,500.00	1,516.00	1,516.00	5.14	5.20	-90.34	-16.49	-2,772.20	2,772.25	2,764.93	7.32	378.950	
1,600.00	1,600.00	1,616.00	1,616.00	5.50	5.56	-90.34	-16.49	-2,772.20	2,772.25	2,764.43	7.82	354.392	
1,700.00	1,700.00	1,716.00	1,716.00	5.86	5.92	-90.34	-16.49	-2,772.20	2,772.25	2,763.92	8.33	332.823	
1,800.00	1,800.00	1,816.00	1,816.00	6.22	6.28	-90.34	-16.49	-2,772.20	2,772.25	2,763.41	8.84	313.729	
1,900.00	1,900.00	1,916.00	1,916.00	6.58	6.64	-90.34	-16.49	-2,772.20	2,772.25	2,762.91	9.34	296.707	
2,000.00	2,000.00	2,016.00	2,016.00	6.94	6.99	-90.34	-16.49	-2,772.20	2,772.25	2,762.40	9.85	281.437	
2,100.00	2,100.00	2,116.00	2,116.00	7.30	7.35	-90.34	-16.49	-2,772.20	2,772.25	2,761.89	10.36	267.661	
2,200.00	2,200.00	2,216.00	2,216.00	7.65	7.71	-90.34	-16.49	-2,772.20	2,772.25	2,761.38	10.86	255.172	
2,300.00	2,300.00	2,316.00	2,316.00	8.01	8.07	-90.34	-16.49	-2,772.20	2,772.25	2,760.88	11.37	243.796	
2,400.00	2,400.00	2,416.00	2,416.00	8.37	8.43	-90.34	-16.49	-2,772.20	2,772.25	2,760.37	11.88	233.390	
2,500.00	2,500.00	2,516.00	2,516.00	8.73	8.79	-90.34	-16.49	-2,772.20	2,772.25	2,759.86	12.39	223.837	
2,600.00	2,600.00	2,616.00	2,616.00	9.09	9.14	-90.34	-16.49	-2,772.20	2,772.25	2,759.36	12.89	215.035	
2,700.00	2,700.00	2,716.00	2,716.00	9.45	9.50	-90.34	-16.49	-2,772.20	2,772.25	2,758.85	13.40	206.899	
2,800.00	2,800.00	2,816.00	2,816.00	9.80	9.86	-90.34	-16.49	-2,772.20	2,772.25	2,758.34	13.91	199.357	
2,900.00	2,900.00	2,916.00	2,916.00	10.16	10.22	-90.34	-16.49	-2,772.20	2,772.25	2,757.84	14.41	192.345	
3,000.00	3,000.00	3,016.00	3,016.00	10.52	10.58	-90.34	-16.49	-2,772.20	2,772.25	2,757.33	14.92	185.809	
3,100.00	3,100.00	3,116.00	3,116.00	10.88	10.94	-90.34	-16.49	-2,772.20	2,772.25	2,756.82	15.43	179.703	
3,200.00	3,200.00	3,258.07	3,258.07	11.24	11.44	-90.34	-16.51	-2,771.76	2,772.13	2,756.09	16.04	172.875	
3,300.00	3,300.00	3,619.34	3,618.49	11.60	12.69	-90.37	-17.72	-2,749.24	2,765.89	2,748.79	17.09	161.797	
3,400.00	3,400.00	3,890.88	3,887.14	11.96	13.65	-90.42	-19.82	-2,710.11	2,750.83	2,732.94	17.90	153.696	
3,500.00	3,500.00	3,989.40	3,984.20	12.31	14.01	-90.44	-20.73	-2,693.23	2,733.71	2,715.32	18.39	148.677	
3,600.00	3,600.00	4,087.92	4,081.26	12.67	14.38	-90.46	-21.64	-2,676.35	2,716.58	2,697.70	18.88	143.908	
3,700.00	3,700.00	4,186.43	4,178.31	13.03	14.75	-90.49	-22.54	-2,659.47	2,699.45	2,680.08	19.37	139.371	
3,800.00	3,800.00	4,284.95	4,275.37	13.39	15.13	-90.51	-23.45	-2,642.59	2,682.33	2,662.47	19.86	135.050	
3,900.00	3,900.00	4,383.47	4,372.42	13.75	15.50	-90.53	-24.36	-2,625.72	2,665.20	2,644.85	20.36	130.932	
4,000.00	4,000.00	4,481.98	4,469.48	14.11	15.89	-90.55	-25.26	-2,608.84	2,648.08	2,627.23	20.85	127.003	
4,100.00	4,100.00	4,580.50	4,566.54	14.46	16.27	-90.58	-26.17	-2,591.96	2,630.95	2,609.60	21.35	123.250	
4,200.00	4,200.00	4,679.02	4,663.59	14.82	16.66	-90.60	-27.08	-2,575.08	2,613.83	2,591.98	21.84	119.663	
4,300.00	4,300.00	4,777.53	4,760.65	15.18	17.05	-90.63	-27.98	-2,558.20	2,596.70	2,574.36	22.34	116.231	
4,400.00	4,400.00	4,876.05	4,857.70	15.54	17.44	-90.65	-28.89	-2,541.32	2,579.58	2,556.74	22.84	112.944	
4,500.00	4,500.00	4,974.57	4,954.76	15.90	17.84	-90.68	-29.80	-2,524.44	2,562.46	2,539.12	23.34	109.795	
4,600.00	4,599.99	5,073.27	5,052.00	16.24	18.24	148.48	-30.71	-2,507.53	2,546.43	2,522.60	23.83	106.860	
4,666.98	4,666.93	5,139.57	5,117.32	16.47	18.51	148.56	-31.32	-2,496.17	2,536.94	2,512.78	24.15	105.034	
4,700.00	4,699.92	5,172.29	5,149.55	16.58	18.64	148.57	-31.62	-2,490.56	2,532.50	2,508.18	24.31	104.161	
4,800.00	4,799.82	5,271.38	5,247.17	16.91	19.05	148.60	-32.53	-2,473.58	2,519.06	2,494.26	24.80	101.576	
4,900.00	4,899.72	5,370.46	5,344.78	17.24	19.46	148.63	-33.44	-2,456.61	2,505.62	2,480.33	25.29	99.086	
5,000.00	4,999.63	5,469.55	5,442.40	17.58	19.86	148.66	-34.35	-2,439.63	2,492.18	2,466.40	25.78	96.686	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 802H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	5,568.63	5,540.01	17.92	20.27	148.68	-35.27	-2,422.65	2,478.74	2,452.47	26.27	94.370	
5,200.00	5,199.44	5,667.72	5,637.63	18.26	20.69	148.71	-36.18	-2,405.68	2,465.30	2,438.55	26.76	92.135	
5,300.00	5,299.34	5,766.80	5,735.25	18.60	21.10	148.74	-37.09	-2,388.70	2,451.87	2,424.62	27.25	89.978	
5,400.00	5,399.25	5,865.89	5,832.86	18.94	21.52	148.77	-38.00	-2,371.72	2,438.43	2,410.69	27.74	87.894	
5,500.00	5,499.15	5,964.98	5,930.48	19.28	21.93	148.80	-38.91	-2,354.75	2,424.99	2,396.76	28.24	85.879	
5,600.00	5,599.06	6,064.06	6,028.10	19.62	22.35	148.83	-39.82	-2,337.77	2,411.56	2,382.83	28.73	83.932	
5,700.00	5,698.96	6,163.15	6,125.71	19.96	22.77	148.86	-40.74	-2,320.79	2,398.12	2,368.89	29.23	82.048	
5,800.00	5,798.86	6,262.23	6,223.33	20.31	23.19	148.89	-41.65	-2,303.82	2,384.69	2,354.96	29.73	80.224	
5,834.24	5,833.07	6,296.16	6,256.75	20.42	23.33	148.90	-41.96	-2,298.00	2,380.09	2,350.19	29.90	79.613	
5,900.00	5,898.79	6,361.25	6,320.88	20.65	23.61	148.84	-42.56	-2,286.85	2,370.78	2,340.55	30.22	78.443	
6,001.22	6,000.00	6,461.17	6,419.31	21.00	24.04	-90.33	-43.48	-2,269.73	2,354.57	2,323.84	30.73	76.620	
6,100.00	6,098.78	6,558.48	6,515.18	21.36	24.45	-90.36	-44.37	-2,253.06	2,337.65	2,306.42	31.23	74.852	
6,200.00	6,198.78	6,657.00	6,612.24	21.71	24.87	-90.38	-45.28	-2,236.18	2,320.52	2,288.78	31.74	73.120	
6,300.00	6,298.78	6,755.51	6,709.29	22.07	25.29	-90.41	-46.19	-2,219.30	2,303.39	2,271.15	32.24	71.441	
6,400.00	6,398.78	6,854.03	6,806.35	22.43	25.72	-90.43	-47.09	-2,202.42	2,286.27	2,253.52	32.75	69.813	
6,500.00	6,498.78	6,930.33	6,881.55	22.78	26.04	-90.46	-47.79	-2,189.53	2,269.43	2,236.21	33.23	68.303	
6,600.00	6,598.78	7,000.00	6,950.40	23.14	26.34	-90.47	-48.36	-2,178.89	2,254.09	2,220.40	33.69	66.904	
6,700.00	6,698.78	7,054.84	7,004.72	23.50	26.56	-90.48	-48.76	-2,171.40	2,240.32	2,206.19	34.13	65.643	
6,800.00	6,798.78	7,100.00	7,049.53	23.85	26.74	-90.49	-49.06	-2,165.82	2,228.30	2,193.76	34.54	64.515	
6,900.00	6,898.78	7,180.42	7,129.48	24.21	27.06	-90.51	-49.52	-2,157.19	2,217.69	2,182.68	35.01	63.348	
7,000.00	6,998.78	7,243.52	7,192.34	24.57	27.30	-90.52	-49.82	-2,151.59	2,208.83	2,173.39	35.44	62.330	
7,100.00	7,098.78	7,300.00	7,248.67	24.93	27.51	-90.52	-50.05	-2,147.47	2,201.63	2,165.79	35.84	61.424	
7,200.00	7,198.78	7,370.22	7,318.77	25.28	27.76	-90.53	-50.26	-2,143.50	2,196.05	2,159.78	36.27	60.541	
7,300.00	7,298.78	7,433.73	7,382.23	25.64	27.99	-90.53	-50.39	-2,141.01	2,192.15	2,155.47	36.68	59.764	
7,400.00	7,398.78	7,500.00	7,448.48	26.00	28.21	-90.54	-50.47	-2,139.55	2,189.90	2,152.82	37.09	59.050	
7,500.00	7,498.78	7,566.30	7,514.78	26.35	28.43	-90.54	-50.49	-2,139.20	2,189.30	2,151.81	37.48	58.407	
7,600.00	7,598.78	7,666.30	7,614.78	26.71	28.76	-90.54	-50.49	-2,139.20	2,189.30	2,151.32	37.98	57.643	
7,700.00	7,698.78	7,766.30	7,714.78	27.07	29.09	-90.54	-50.49	-2,139.20	2,189.30	2,150.82	38.48	56.898	
7,800.00	7,798.78	7,866.30	7,814.78	27.43	29.42	-90.54	-50.49	-2,139.20	2,189.30	2,150.32	38.97	56.172	
7,900.00	7,898.78	7,966.30	7,914.78	27.78	29.75	-90.54	-50.49	-2,139.20	2,189.30	2,149.82	39.47	55.463	
8,000.00	7,998.78	8,066.30	8,014.78	28.14	30.09	-90.54	-50.49	-2,139.20	2,189.30	2,149.33	39.97	54.772	
8,100.00	8,098.78	8,166.30	8,114.78	28.50	30.42	-90.54	-50.49	-2,139.20	2,189.30	2,148.83	40.47	54.098	
8,200.00	8,198.78	8,266.30	8,214.78	28.86	30.75	-90.54	-50.49	-2,139.20	2,189.30	2,148.33	40.97	53.440	
8,300.00	8,298.78	8,366.30	8,314.78	29.21	31.08	-90.54	-50.49	-2,139.20	2,189.30	2,147.83	41.47	52.797	
8,400.00	8,398.78	8,466.30	8,414.78	29.57	31.42	-90.54	-50.49	-2,139.20	2,189.30	2,147.33	41.96	52.170	
8,500.00	8,498.78	8,566.30	8,514.78	29.93	31.75	-90.54	-50.49	-2,139.20	2,189.30	2,146.83	42.46	51.557	
8,600.00	8,598.78	8,666.30	8,614.78	30.29	32.09	-90.54	-50.49	-2,139.20	2,189.30	2,146.33	42.96	50.958	
8,700.00	8,698.78	8,766.30	8,714.78	30.64	32.42	-90.54	-50.49	-2,139.20	2,189.30	2,145.83	43.46	50.372	
8,800.00	8,798.78	8,866.30	8,814.78	31.00	32.76	-90.54	-50.49	-2,139.20	2,189.30	2,145.33	43.96	49.800	
8,900.00	8,898.78	8,966.30	8,914.78	31.36	33.10	-90.54	-50.49	-2,139.20	2,189.30	2,144.83	44.46	49.240	
9,000.00	8,998.78	9,066.30	9,014.78	31.72	33.43	-90.54	-50.49	-2,139.20	2,189.30	2,144.33	44.96	48.693	
9,100.00	9,098.78	9,166.30	9,114.78	32.07	33.77	-90.54	-50.49	-2,139.20	2,189.30	2,143.83	45.46	48.157	
9,200.00	9,198.78	9,266.30	9,214.78	32.43	34.11	-90.54	-50.49	-2,139.20	2,189.30	2,143.33	45.96	47.633	
9,300.00	9,298.78	9,366.30	9,314.78	32.79	34.45	-90.54	-50.49	-2,139.20	2,189.30	2,142.83	46.46	47.120	
9,400.00	9,398.78	9,466.30	9,414.78	33.15	34.79	-90.54	-50.49	-2,139.20	2,189.30	2,142.33	46.96	46.618	
9,500.00	9,498.78	9,566.30	9,514.78	33.51	35.13	-90.54	-50.49	-2,139.20	2,189.30	2,141.83	47.46	46.126	
9,600.00	9,598.78	9,666.30	9,614.78	33.86	35.47	-90.54	-50.49	-2,139.20	2,189.30	2,141.33	47.96	45.645	
9,700.00	9,698.78	9,766.30	9,714.78	34.22	35.80	-90.54	-50.49	-2,139.20	2,189.30	2,140.83	48.46	45.173	
9,800.00	9,798.78	9,866.30	9,814.78	34.58	36.15	-90.54	-50.49	-2,139.20	2,189.30	2,140.33	48.97	44.711	
9,900.00	9,898.78	9,966.30	9,914.78	34.94	36.49	-90.54	-50.49	-2,139.20	2,189.30	2,139.83	49.47	44.258	
10,000.00	9,998.78	10,066.30	10,014.78	35.29	36.83	-90.54	-50.49	-2,139.20	2,189.30	2,139.33	49.97	43.814	
10,100.00	10,098.78	10,166.30	10,114.78	35.65	37.17	-90.54	-50.49	-2,139.20	2,189.30	2,138.83	50.47	43.378	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 802H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,148.26	10,147.04	10,214.56	10,163.04	35.82	37.33	-90.54	-50.49	-2,139.20	2,189.30	2,138.58	50.71	43.171	CC
10,150.00	10,148.78	10,216.30	10,164.78	35.83	37.34	90.02	-50.49	-2,139.20	2,189.30	2,138.58	50.72	43.164	
10,200.00	10,198.71	10,266.23	10,214.71	35.99	37.51	90.08	-50.49	-2,139.20	2,189.30	2,138.34	50.96	42.961	
10,250.00	10,248.24	10,315.76	10,264.24	36.16	37.68	90.25	-50.49	-2,139.20	2,189.32	2,138.12	51.20	42.762	
10,300.00	10,297.01	10,364.53	10,313.01	36.32	37.85	90.52	-50.49	-2,139.20	2,189.39	2,137.96	51.43	42.569	
10,350.00	10,344.64	10,412.15	10,360.64	36.48	38.01	90.88	-50.49	-2,139.20	2,189.59	2,137.93	51.66	42.383	ES
10,400.00	10,390.76	10,458.27	10,406.76	36.63	38.17	91.31	-50.49	-2,139.20	2,189.99	2,138.10	51.89	42.207	
10,450.00	10,435.02	10,502.54	10,451.02	36.78	38.32	91.77	-50.49	-2,139.20	2,190.70	2,138.59	52.11	42.044	
10,500.00	10,477.10	10,544.61	10,493.10	36.94	38.46	92.25	-50.49	-2,139.20	2,191.83	2,139.51	52.32	41.894	
10,550.00	10,516.66	10,584.18	10,532.66	37.09	38.60	92.72	-50.49	-2,139.20	2,193.51	2,140.98	52.53	41.761	
10,600.00	10,553.41	10,620.93	10,569.41	37.25	38.72	93.13	-50.49	-2,139.20	2,195.87	2,143.14	52.73	41.646	
10,650.00	10,587.07	10,654.58	10,603.07	37.41	38.84	93.46	-50.49	-2,139.20	2,199.04	2,146.11	52.92	41.553	
10,700.00	10,617.37	10,684.89	10,633.37	37.57	38.94	93.68	-50.49	-2,139.20	2,203.13	2,150.02	53.11	41.482	
10,750.00	10,644.10	10,711.62	10,660.10	37.74	39.03	93.75	-50.49	-2,139.20	2,208.25	2,154.96	53.29	41.436	
10,800.00	10,667.05	10,734.57	10,683.05	37.91	39.11	93.66	-50.49	-2,139.20	2,214.50	2,161.03	53.47	41.416	
10,850.00	10,686.04	10,753.55	10,702.04	38.09	39.18	93.36	-50.49	-2,139.20	2,221.92	2,168.28	53.64	41.425	
10,900.00	10,700.92	10,768.44	10,716.92	38.28	39.23	92.86	-50.49	-2,139.20	2,230.56	2,176.77	53.80	41.461	
10,950.00	10,711.59	10,779.11	10,727.59	38.47	39.27	92.12	-50.49	-2,139.20	2,240.43	2,186.48	53.95	41.527	
11,000.00	10,717.97	10,785.48	10,733.97	38.67	39.29	91.16	-50.49	-2,139.20	2,251.48	2,197.39	54.09	41.622	
11,048.26	10,720.00	10,787.51	10,736.00	38.86	39.29	90.00	-50.49	-2,139.20	2,263.22	2,209.00	54.22	41.742	
11,100.00	10,720.00	10,787.51	10,736.00	39.07	39.29	90.00	-50.49	-2,139.20	2,276.88	2,222.53	54.35	41.890	
11,200.00	10,720.00	10,787.51	10,736.00	39.54	39.29	90.00	-50.49	-2,139.20	2,306.35	2,251.72	54.64	42.212	
11,300.00	10,720.00	10,787.51	10,736.00	40.07	39.29	90.00	-50.49	-2,139.20	2,339.73	2,284.79	54.94	42.583	
11,400.00	10,720.00	10,787.51	10,736.00	40.66	39.29	90.00	-50.49	-2,139.20	2,376.86	2,321.58	55.27	43.004	
11,500.00	10,720.00	10,787.51	10,736.00	41.31	39.29	90.00	-50.49	-2,139.20	2,417.55	2,361.94	55.61	43.472	
11,600.00	10,720.00	10,787.51	10,736.00	42.02	39.29	90.00	-50.49	-2,139.20	2,461.63	2,405.67	55.96	43.989	
11,700.00	10,720.00	10,787.51	10,736.00	42.77	39.29	90.00	-50.49	-2,139.20	2,508.92	2,452.61	56.31	44.554	
11,800.00	10,720.00	10,787.52	10,736.00	43.58	39.29	90.00	-50.49	-2,139.20	2,559.26	2,502.59	56.67	45.164	
11,900.00	10,720.00	10,787.52	10,736.00	44.43	39.29	90.00	-50.49	-2,139.20	2,612.45	2,555.43	57.02	45.820	
12,000.00	10,720.00	10,787.52	10,736.00	45.33	39.29	90.00	-50.49	-2,139.20	2,668.33	2,610.97	57.36	46.518	
12,100.00	10,720.00	10,787.52	10,736.00	46.26	39.29	90.00	-50.49	-2,139.20	2,726.73	2,669.03	57.70	47.259	
12,200.00	10,720.00	10,787.52	10,736.00	47.24	39.29	90.00	-50.49	-2,139.20	2,787.50	2,729.47	58.02	48.041	
12,300.00	10,720.00	10,787.52	10,736.00	48.26	39.29	90.00	-50.49	-2,139.20	2,850.48	2,792.14	58.34	48.861	
12,400.00	10,720.00	14,348.44	12,617.00	49.30	55.43	130.67	-1,976.24	-2,120.17	2,886.11	2,823.25	62.86	45.913	
12,500.00	10,720.00	14,448.44	12,617.00	50.38	56.40	130.67	-2,076.23	-2,119.18	2,886.09	2,822.07	64.02	45.083	
12,600.00	10,720.00	14,548.44	12,617.00	51.50	57.40	130.67	-2,176.23	-2,118.19	2,886.08	2,820.87	65.21	44.258	
12,700.00	10,720.00	14,648.44	12,617.00	52.63	58.43	130.67	-2,276.22	-2,117.20	2,886.06	2,819.63	66.44	43.441	
12,800.00	10,720.00	14,748.44	12,617.00	53.80	59.49	130.67	-2,376.22	-2,116.22	2,886.05	2,818.36	67.69	42.634	
12,900.00	10,720.00	14,848.44	12,617.00	54.99	60.57	130.67	-2,476.21	-2,115.23	2,886.04	2,817.05	68.98	41.838	
13,000.00	10,720.00	14,948.44	12,617.00	56.20	61.68	130.67	-2,576.21	-2,114.24	2,886.02	2,815.72	70.30	41.055	
13,100.00	10,720.00	15,048.44	12,617.00	57.44	62.81	130.67	-2,676.20	-2,113.25	2,886.01	2,814.37	71.64	40.287	
13,200.00	10,720.00	15,148.44	12,617.00	58.70	63.97	130.68	-2,776.20	-2,112.26	2,885.99	2,812.99	73.00	39.534	
13,300.00	10,720.00	15,248.44	12,617.00	59.97	65.14	130.68	-2,876.19	-2,111.27	2,885.98	2,811.59	74.39	38.796	
13,400.00	10,720.00	15,348.44	12,617.00	61.27	66.34	130.68	-2,976.19	-2,110.29	2,885.96	2,810.17	75.80	38.074	
13,500.00	10,720.00	15,448.44	12,617.00	62.58	67.55	130.68	-3,076.18	-2,109.30	2,885.95	2,808.72	77.23	37.369	
13,600.00	10,720.00	15,548.44	12,617.00	63.90	68.79	130.68	-3,176.18	-2,108.31	2,885.94	2,807.26	78.68	36.680	
13,700.00	10,720.00	15,648.44	12,617.00	65.24	70.04	130.68	-3,276.17	-2,107.32	2,885.92	2,805.77	80.15	36.007	
13,800.00	10,720.00	15,748.44	12,617.00	66.60	71.31	130.68	-3,376.17	-2,106.33	2,885.91	2,804.27	81.63	35.351	
13,900.00	10,720.00	15,848.44	12,617.00	67.97	72.59	130.68	-3,476.16	-2,105.34	2,885.89	2,802.76	83.14	34.713	
14,000.00	10,720.00	15,948.44	12,617.00	69.35	73.89	130.68	-3,576.16	-2,104.36	2,885.88	2,801.22	84.65	34.090	
14,100.00	10,720.00	16,048.44	12,617.00	70.74	75.20	130.68	-3,676.15	-2,103.37	2,885.87	2,799.68	86.19	33.483	
14,200.00	10,720.00	16,148.44	12,617.00	72.14	76.52	130.68	-3,776.15	-2,102.38	2,885.85	2,798.12	87.74	32.893	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 802H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,300.00	10,720.00	16,248.44	12,617.00	73.55	77.86	130.68	-3,876.14	-2,101.39	2,885.84	2,796.54	89.30	32.318	
14,400.00	10,720.00	16,348.44	12,617.00	74.98	79.21	130.68	-3,976.14	-2,100.40	2,885.82	2,794.95	90.87	31.758	
14,500.00	10,720.00	16,448.44	12,617.00	76.41	80.57	130.68	-4,076.13	-2,099.42	2,885.81	2,793.35	92.45	31.213	
14,600.00	10,720.00	16,548.44	12,617.00	77.85	81.94	130.68	-4,176.13	-2,098.43	2,885.79	2,791.75	94.05	30.684	
14,700.00	10,720.00	16,648.44	12,617.00	79.30	83.32	130.68	-4,276.12	-2,097.44	2,885.78	2,790.13	95.65	30.169	
14,800.00	10,720.00	16,748.44	12,617.00	80.76	84.71	130.68	-4,376.12	-2,096.45	2,885.77	2,788.50	97.27	29.667	
14,900.00	10,720.00	16,848.44	12,617.00	82.22	86.11	130.68	-4,476.12	-2,095.46	2,885.75	2,786.85	98.90	29.179	
15,000.00	10,720.00	16,948.44	12,617.00	83.69	87.52	130.68	-4,576.11	-2,094.47	2,885.74	2,785.20	100.53	28.704	
15,100.00	10,720.00	17,048.44	12,617.00	85.17	88.94	130.68	-4,676.11	-2,093.49	2,885.72	2,783.55	102.18	28.243	
15,200.00	10,720.00	17,148.44	12,617.00	86.65	90.37	130.68	-4,776.10	-2,092.50	2,885.71	2,781.88	103.83	27.793	
15,300.00	10,720.00	17,248.44	12,617.00	88.14	91.80	130.68	-4,876.10	-2,091.51	2,885.70	2,780.21	105.49	27.356	
15,400.00	10,720.00	17,348.44	12,617.00	89.64	93.24	130.68	-4,976.09	-2,090.52	2,885.68	2,778.53	107.15	26.930	
15,500.00	10,720.00	17,448.44	12,617.00	91.14	94.68	130.68	-5,076.09	-2,089.53	2,885.67	2,776.84	108.83	26.516	
15,600.00	10,720.00	17,548.44	12,617.00	92.65	96.14	130.68	-5,176.08	-2,088.54	2,885.65	2,775.14	110.51	26.112	
15,700.00	10,720.00	17,648.44	12,617.00	94.16	97.60	130.68	-5,276.08	-2,087.56	2,885.64	2,773.44	112.20	25.719	
15,800.00	10,720.00	17,748.44	12,617.00	95.67	99.06	130.68	-5,376.07	-2,086.57	2,885.63	2,771.74	113.89	25.337	
15,900.00	10,720.00	17,848.44	12,617.00	97.19	100.54	130.68	-5,476.07	-2,085.58	2,885.61	2,770.02	115.59	24.965	
16,000.00	10,720.00	17,948.44	12,617.00	98.72	102.01	130.68	-5,576.06	-2,084.59	2,885.60	2,768.30	117.29	24.602	
16,100.00	10,720.00	18,048.44	12,617.00	100.25	103.49	130.68	-5,676.06	-2,083.60	2,885.58	2,766.58	119.00	24.248	
16,200.00	10,720.00	18,148.44	12,617.00	101.78	104.98	130.68	-5,776.05	-2,082.62	2,885.57	2,764.85	120.72	23.904	
16,300.00	10,720.00	18,248.44	12,617.00	103.31	106.47	130.68	-5,876.05	-2,081.63	2,885.55	2,763.12	122.43	23.568	
16,400.00	10,720.00	18,348.44	12,617.00	104.85	107.97	130.68	-5,976.04	-2,080.64	2,885.54	2,761.38	124.16	23.241	
16,500.00	10,720.00	18,448.44	12,617.00	106.40	109.47	130.68	-6,076.04	-2,079.65	2,885.53	2,759.64	125.88	22.922	
16,600.00	10,720.00	18,548.44	12,617.00	107.94	110.98	130.68	-6,176.03	-2,078.66	2,885.51	2,757.90	127.62	22.611	
16,700.00	10,720.00	18,648.44	12,617.00	109.49	112.49	130.68	-6,276.03	-2,077.67	2,885.50	2,756.14	129.35	22.307	
16,800.00	10,720.00	18,748.44	12,617.00	111.04	114.00	130.68	-6,376.02	-2,076.69	2,885.48	2,754.39	131.09	22.011	
16,900.00	10,720.00	18,848.44	12,617.00	112.60	115.52	130.68	-6,476.02	-2,075.70	2,885.47	2,752.63	132.84	21.721	
17,000.00	10,720.00	18,948.44	12,617.00	114.16	117.04	130.68	-6,576.01	-2,074.71	2,885.46	2,750.87	134.58	21.440	
17,100.00	10,720.00	19,048.44	12,617.00	115.72	118.56	130.68	-6,676.01	-2,073.72	2,885.44	2,749.11	136.33	21.164	
17,200.00	10,720.00	19,148.44	12,617.00	117.28	120.09	130.68	-6,776.00	-2,072.73	2,885.43	2,747.34	138.09	20.895	
17,300.00	10,720.00	19,248.44	12,617.00	118.84	121.62	130.68	-6,876.00	-2,071.74	2,885.41	2,745.57	139.84	20.633	
17,400.00	10,720.00	19,348.44	12,617.00	120.41	123.16	130.69	-6,975.99	-2,070.76	2,885.40	2,743.80	141.60	20.377	
17,500.00	10,720.00	19,448.44	12,617.00	121.98	124.70	130.69	-7,075.99	-2,069.77	2,885.39	2,742.02	143.36	20.126	
17,600.00	10,720.00	19,548.44	12,617.00	123.55	126.24	130.69	-7,175.98	-2,068.78	2,885.37	2,740.24	145.13	19.882	
17,700.00	10,720.00	19,648.44	12,617.00	125.13	127.78	130.69	-7,275.98	-2,067.79	2,885.36	2,738.46	146.90	19.642	
17,800.00	10,720.00	19,748.44	12,617.00	126.70	129.32	130.69	-7,375.97	-2,066.80	2,885.34	2,736.68	148.67	19.408	
17,900.00	10,720.00	19,848.44	12,617.00	128.28	130.87	130.69	-7,475.97	-2,065.82	2,885.33	2,734.89	150.44	19.180	
18,000.00	10,720.00	19,948.44	12,617.00	129.86	132.42	130.69	-7,575.96	-2,064.83	2,885.31	2,733.10	152.21	18.956	
18,100.00	10,720.00	20,048.44	12,617.00	131.44	133.98	130.69	-7,675.96	-2,063.84	2,885.30	2,731.31	153.99	18.737	
18,200.00	10,720.00	20,148.44	12,617.00	133.02	135.53	130.69	-7,775.95	-2,062.85	2,885.29	2,729.52	155.77	18.523	
18,300.00	10,720.00	20,248.44	12,617.00	134.61	137.09	130.69	-7,875.95	-2,061.86	2,885.27	2,727.72	157.55	18.314	
18,400.00	10,720.00	20,348.44	12,617.00	136.19	138.65	130.69	-7,975.94	-2,060.87	2,885.26	2,725.93	159.33	18.109	
18,500.00	10,720.00	20,448.44	12,617.00	137.78	140.21	130.69	-8,075.94	-2,059.89	2,885.24	2,724.13	161.11	17.908	
18,600.00	10,720.00	20,548.44	12,617.00	139.37	141.77	130.69	-8,175.93	-2,058.90	2,885.23	2,722.33	162.90	17.712	
18,700.00	10,720.00	20,648.44	12,617.00	140.96	143.34	130.69	-8,275.93	-2,057.91	2,885.22	2,720.53	164.68	17.520	
18,800.00	10,720.00	20,748.44	12,617.00	142.55	144.91	130.69	-8,375.92	-2,056.92	2,885.20	2,718.73	166.47	17.331	
18,900.00	10,720.00	20,848.44	12,617.00	144.15	146.48	130.69	-8,475.92	-2,055.93	2,885.19	2,716.92	168.26	17.147	
19,000.00	10,720.00	20,948.44	12,617.00	145.74	148.05	130.69	-8,575.92	-2,054.94	2,885.17	2,715.12	170.06	16.966	
19,100.00	10,720.00	21,048.44	12,617.00	147.34	149.62	130.69	-8,675.91	-2,053.96	2,885.16	2,713.31	171.85	16.789	
19,200.00	10,720.00	21,148.44	12,617.00	148.93	151.20	130.69	-8,775.91	-2,052.97	2,885.15	2,711.50	173.65	16.615	
19,300.00	10,720.00	21,248.44	12,617.00	150.53	152.77	130.69	-8,875.90	-2,051.98	2,885.13	2,709.69	175.44	16.445	
19,400.00	10,720.00	21,348.44	12,617.00	152.13	154.35	130.69	-8,975.90	-2,050.99	2,885.12	2,707.88	177.24	16.278	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 802H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,500.00	10,720.00	21,448.44	12,617.00	153.73	155.93	130.69	-9,075.89	-2,050.00	2,885.10	2,706.07	179.03	16.115	
19,600.00	10,720.00	21,548.44	12,617.00	155.33	157.51	130.69	-9,175.89	-2,049.01	2,885.09	2,704.26	180.83	15.954	
19,700.00	10,720.00	21,648.44	12,617.00	156.94	159.09	130.69	-9,275.88	-2,048.03	2,885.07	2,702.44	182.63	15.797	
19,800.00	10,720.00	21,748.44	12,617.00	158.54	160.68	130.69	-9,375.88	-2,047.04	2,885.06	2,700.63	184.43	15.643	
19,900.00	10,720.00	21,848.44	12,617.00	160.14	162.26	130.69	-9,475.87	-2,046.05	2,885.05	2,698.81	186.23	15.491	
20,000.00	10,720.00	21,948.44	12,617.00	161.75	163.85	130.69	-9,575.87	-2,045.06	2,885.03	2,696.99	188.04	15.343	
20,100.00	10,720.00	22,048.44	12,617.00	163.36	165.44	130.69	-9,675.86	-2,044.07	2,885.02	2,695.18	189.84	15.197	
20,200.00	10,720.00	22,148.44	12,617.00	164.96	167.03	130.69	-9,775.86	-2,043.09	2,885.00	2,693.36	191.65	15.054	
20,300.00	10,720.00	22,248.44	12,617.00	166.57	168.62	130.69	-9,875.85	-2,042.10	2,884.99	2,691.53	193.46	14.913	
20,400.00	10,720.00	22,348.44	12,617.00	168.18	170.21	130.69	-9,975.85	-2,041.11	2,884.98	2,689.71	195.26	14.775	
20,500.00	10,720.00	22,448.44	12,617.00	169.79	171.80	130.69	-10,075.84	-2,040.12	2,884.96	2,687.89	197.07	14.639	
20,600.00	10,720.00	22,548.44	12,617.00	171.40	173.39	130.69	-10,175.84	-2,039.13	2,884.95	2,686.07	198.88	14.506	
20,700.00	10,720.00	22,648.44	12,617.00	173.01	174.99	130.69	-10,275.83	-2,038.14	2,884.93	2,684.25	200.68	14.376	
20,800.00	10,720.00	22,748.44	12,617.00	174.63	176.51	130.69	-10,375.83	-2,037.16	2,884.92	2,682.50	202.42	14.252	
20,838.60	10,720.00	22,787.04	12,617.00	175.18	177.06	130.69	-10,414.43	-2,036.77	2,884.91	2,681.92	203.00	14.212	
20,841.32	10,720.00	22,787.51	12,617.00	175.22	177.07	130.69	-10,414.89	-2,036.77	2,884.91	2,681.90	203.01	14.210	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 805H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.42	10.26	1,014.78	1,015.15				
100.00	100.00	74.70	74.70	0.13	0.09	89.42	10.26	1,014.78	1,014.83	1,014.68	0.16	6,474.222	
200.00	200.00	174.70	174.70	0.48	0.39	89.42	10.26	1,014.78	1,014.83	1,014.21	0.62	1,627.101	
300.00	300.00	274.70	274.70	0.84	0.75	89.42	10.26	1,014.78	1,014.83	1,013.70	1.13	898.740	
400.00	400.00	374.70	374.70	1.20	1.11	89.42	10.26	1,014.78	1,014.83	1,013.20	1.64	620.480	
500.00	500.00	474.70	474.70	1.56	1.47	89.42	10.26	1,014.78	1,014.83	1,012.69	2.14	473.730	
600.00	600.00	574.70	574.70	1.92	1.83	89.42	10.26	1,014.78	1,014.83	1,012.18	2.65	383.102	
700.00	700.00	674.70	674.70	2.28	2.19	89.42	10.26	1,014.78	1,014.83	1,011.68	3.16	321.575	
800.00	800.00	774.70	774.70	2.63	2.54	89.42	10.26	1,014.78	1,014.83	1,011.17	3.66	277.073	
900.00	900.00	874.70	874.70	2.99	2.90	89.42	10.26	1,014.78	1,014.83	1,010.66	4.17	243.390	
1,000.00	1,000.00	974.70	974.70	3.35	3.26	89.42	10.26	1,014.78	1,014.83	1,010.16	4.68	217.008	
1,100.00	1,100.00	1,074.70	1,074.70	3.71	3.62	89.42	10.26	1,014.78	1,014.83	1,009.65	5.18	195.786	
1,200.00	1,200.00	1,174.70	1,174.70	4.07	3.98	89.42	10.26	1,014.78	1,014.83	1,009.14	5.69	178.344	
1,300.00	1,300.00	1,274.70	1,274.70	4.43	4.34	89.42	10.26	1,014.78	1,014.83	1,008.63	6.20	163.756	
1,400.00	1,400.00	1,374.70	1,374.70	4.79	4.69	89.42	10.26	1,014.78	1,014.83	1,008.13	6.70	151.373	
1,500.00	1,500.00	1,474.70	1,474.70	5.14	5.05	89.42	10.26	1,014.78	1,014.83	1,007.62	7.21	140.732	
1,600.00	1,600.00	1,574.70	1,574.70	5.50	5.41	89.42	10.26	1,014.78	1,014.83	1,007.11	7.72	131.488	
1,700.00	1,700.00	1,674.70	1,674.70	5.86	5.77	89.42	10.26	1,014.78	1,014.83	1,006.61	8.22	123.384	
1,800.00	1,800.00	1,774.70	1,774.70	6.22	6.13	89.42	10.26	1,014.78	1,014.83	1,006.10	8.73	116.221	
1,900.00	1,900.00	1,874.70	1,874.70	6.58	6.49	89.42	10.26	1,014.78	1,014.83	1,005.59	9.24	109.844	
2,000.00	2,000.00	1,974.70	1,974.70	6.94	6.85	89.42	10.26	1,014.78	1,014.83	1,005.09	9.75	104.130	
2,100.00	2,100.00	2,074.70	2,074.70	7.30	7.20	89.42	10.26	1,014.78	1,014.83	1,004.58	10.25	98.982	
2,200.00	2,200.00	2,174.70	2,174.70	7.65	7.56	89.42	10.26	1,014.78	1,014.83	1,004.07	10.76	94.318	
2,300.00	2,300.00	2,274.70	2,274.70	8.01	7.92	89.42	10.26	1,014.78	1,014.83	1,003.57	11.27	90.074	
2,400.00	2,400.00	2,374.70	2,374.70	8.37	8.28	89.42	10.26	1,014.78	1,014.83	1,003.06	11.77	86.196	
2,500.00	2,500.00	2,474.70	2,474.70	8.73	8.64	89.42	10.26	1,014.78	1,014.83	1,002.55	12.28	82.637	
2,600.00	2,600.00	2,574.70	2,574.70	9.09	9.00	89.42	10.26	1,014.78	1,014.83	1,002.04	12.79	79.361	
2,700.00	2,700.00	2,674.70	2,674.70	9.45	9.36	89.42	10.26	1,014.78	1,014.83	1,001.54	13.29	76.335	
2,800.00	2,800.00	2,774.70	2,774.70	9.80	9.71	89.42	10.26	1,014.78	1,014.83	1,001.03	13.80	73.531	
2,900.00	2,900.00	2,874.70	2,874.70	10.16	10.07	89.42	10.26	1,014.78	1,014.83	1,000.52	14.31	70.926	
3,000.00	3,000.00	2,974.70	2,974.70	10.52	10.43	89.42	10.26	1,014.78	1,014.83	1,000.02	14.82	68.499	
3,100.00	3,100.00	3,074.70	3,074.70	10.88	10.79	89.42	10.26	1,014.78	1,014.83	999.51	15.32	66.233	
3,200.00	3,200.00	3,174.70	3,174.70	11.24	11.15	89.42	10.26	1,014.78	1,014.83	999.00	15.83	64.111	
3,300.00	3,300.00	3,274.70	3,274.70	11.60	11.51	89.42	10.26	1,014.78	1,014.83	998.50	16.34	62.122	
3,400.00	3,400.00	3,401.59	3,401.58	11.96	11.95	89.43	10.14	1,013.43	1,013.84	996.94	16.90	59.995	
3,500.00	3,500.00	3,537.35	3,537.19	12.31	12.41	89.45	9.62	1,007.44	1,009.42	991.96	17.46	57.829	
3,600.00	3,600.00	3,672.50	3,671.91	12.67	12.88	89.50	8.68	996.70	1,001.47	983.48	17.99	55.662	
3,700.00	3,700.00	3,778.32	3,777.17	13.03	13.25	89.55	7.73	985.84	991.19	972.70	18.49	53.607	
3,800.00	3,800.00	3,877.78	3,876.09	13.39	13.60	89.60	6.84	975.57	980.85	961.86	18.98	51.670	
3,900.00	3,900.00	3,977.24	3,975.02	13.75	13.95	89.65	5.94	965.29	970.51	951.03	19.48	49.828	
4,000.00	4,000.00	4,076.71	4,073.94	14.11	14.30	89.70	5.04	955.02	960.17	940.20	19.97	48.076	
4,100.00	4,100.00	4,176.17	4,172.87	14.46	14.66	89.75	4.14	944.74	949.84	929.37	20.47	46.407	
4,200.00	4,200.00	4,275.63	4,271.79	14.82	15.01	89.80	3.25	934.47	939.50	918.54	20.96	44.815	
4,300.00	4,300.00	4,375.09	4,370.72	15.18	15.37	89.85	2.35	924.19	929.17	907.71	21.46	43.296	
4,400.00	4,400.00	4,474.55	4,469.64	15.54	15.73	89.91	1.45	913.92	918.84	896.88	21.96	41.844	
4,500.00	4,500.00	4,574.01	4,568.57	15.90	16.10	89.96	0.55	903.64	908.50	886.05	22.46	40.455	
4,600.00	4,599.99	4,673.35	4,667.37	16.24	16.46	-31.07	-0.34	893.38	897.06	874.11	22.95	39.095	
4,666.98	4,666.93	4,739.73	4,733.39	16.47	16.70	-31.18	-0.94	886.52	888.15	864.88	23.27	38.173	
4,700.00	4,699.92	4,772.42	4,765.91	16.58	16.82	-31.21	-1.24	883.14	883.51	860.08	23.42	37.717	
4,800.00	4,799.82	4,871.42	4,864.37	16.91	17.19	-31.30	-2.13	872.92	869.46	845.56	23.90	36.374	
4,900.00	4,899.72	4,970.42	4,962.84	17.24	17.55	-31.40	-3.02	862.69	855.42	831.03	24.38	35.081	
5,000.00	4,999.63	5,069.42	5,061.30	17.58	17.92	-31.50	-3.92	852.46	841.38	816.51	24.87	33.837	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 805H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	5,168.42	5,159.77	17.92	18.29	-31.60	-4.81	842.23	827.34	801.99	25.35	32.639	
5,200.00	5,199.44	5,267.41	5,258.23	18.26	18.66	-31.70	-5.70	832.01	813.30	787.47	25.83	31.485	
5,300.00	5,299.34	5,366.41	5,356.70	18.60	19.02	-31.81	-6.60	821.78	799.27	772.95	26.32	30.372	
5,400.00	5,399.25	5,465.41	5,455.16	18.94	19.40	-31.92	-7.49	811.55	785.24	758.44	26.80	29.298	
5,500.00	5,499.15	5,564.41	5,553.63	19.28	19.77	-32.04	-8.38	801.32	771.21	743.92	27.29	28.262	
5,600.00	5,599.06	5,663.41	5,652.09	19.62	20.14	-32.16	-9.28	791.09	757.19	729.41	27.78	27.261	
5,700.00	5,698.96	5,762.41	5,750.56	19.96	20.51	-32.29	-10.17	780.87	743.17	714.90	28.26	26.294	
5,800.00	5,798.86	5,861.41	5,849.02	20.31	20.88	-32.42	-11.06	770.64	729.15	700.40	28.75	25.359	
5,834.24	5,833.07	5,895.31	5,882.74	20.42	21.01	-32.46	-11.37	767.14	724.35	695.43	28.92	25.046	
5,900.00	5,898.79	5,960.48	5,947.56	20.65	21.26	-32.45	-11.96	760.40	715.61	686.37	29.24	24.472	
6,001.22	6,000.00	6,061.03	6,047.57	21.00	21.64	88.60	-12.86	750.02	704.01	674.26	29.74	23.668	
6,100.00	6,098.78	6,159.27	6,145.28	21.36	22.01	88.65	-13.75	739.87	693.78	663.54	30.24	22.942	
6,200.00	6,198.78	6,258.73	6,244.21	21.71	22.39	88.71	-14.65	729.59	683.43	652.69	30.74	22.230	
6,300.00	6,298.78	6,358.19	6,343.13	22.07	22.77	88.76	-15.55	719.32	673.09	641.84	31.25	21.541	
6,400.00	6,398.78	6,457.66	6,442.06	22.43	23.15	88.82	-16.44	709.04	662.74	630.99	31.75	20.874	
6,500.00	6,498.78	6,557.12	6,540.98	22.78	23.53	88.88	-17.34	698.77	652.39	620.14	32.25	20.227	
6,600.00	6,598.78	6,656.58	6,639.91	23.14	23.91	88.94	-18.24	688.49	642.04	609.29	32.76	19.600	
6,700.00	6,698.78	6,756.04	6,738.83	23.50	24.29	89.01	-19.14	678.21	631.70	598.44	33.26	18.992	
6,800.00	6,798.78	6,855.50	6,837.75	23.85	24.67	89.08	-20.03	667.94	621.35	587.59	33.76	18.402	
6,900.00	6,898.78	6,954.96	6,936.68	24.21	25.05	89.14	-20.93	657.66	611.01	576.74	34.27	17.830	
7,000.00	6,998.78	7,054.42	7,035.60	24.57	25.43	89.22	-21.83	647.39	600.67	565.89	34.77	17.274	
7,100.00	7,098.78	7,149.77	7,130.44	24.93	25.79	89.29	-22.68	637.63	590.43	555.15	35.28	16.734	
7,200.00	7,198.78	7,236.18	7,216.54	25.28	26.12	89.34	-23.32	630.27	581.91	546.11	35.80	16.256	
7,300.00	7,298.78	7,322.88	7,303.07	25.64	26.44	89.38	-23.80	624.84	575.64	539.34	36.30	15.860	
7,400.00	7,398.78	7,409.79	7,389.91	26.00	26.75	89.41	-24.10	621.36	571.63	534.85	36.78	15.543	
7,500.00	7,498.78	7,500.00	7,480.10	26.35	27.07	89.42	-24.24	619.83	569.90	532.64	37.25	15.298	
7,539.46	7,538.23	7,532.84	7,512.93	26.50	27.18	89.42	-24.24	619.78	569.81	532.38	37.43	15.223	
7,600.00	7,598.78	7,593.38	7,573.48	26.71	27.39	89.42	-24.24	619.78	569.81	532.08	37.73	15.101	
7,700.00	7,698.78	7,693.38	7,673.48	27.07	27.73	89.42	-24.24	619.78	569.81	531.58	38.23	14.904	
7,800.00	7,798.78	7,793.38	7,773.48	27.43	28.07	89.42	-24.24	619.78	569.81	531.08	38.73	14.711	
7,900.00	7,898.78	7,893.38	7,873.48	27.78	28.42	89.42	-24.24	619.78	569.81	530.58	39.23	14.524	
8,000.00	7,998.78	7,993.38	7,973.48	28.14	28.76	89.42	-24.24	619.78	569.81	530.08	39.73	14.341	
8,100.00	8,098.78	8,093.38	8,073.48	28.50	29.11	89.42	-24.24	619.78	569.81	529.58	40.23	14.162	
8,200.00	8,198.78	8,193.38	8,173.48	28.86	29.45	89.42	-24.24	619.78	569.81	529.07	40.73	13.988	
8,300.00	8,298.78	8,293.38	8,273.48	29.21	29.80	89.42	-24.24	619.78	569.81	528.57	41.24	13.818	
8,400.00	8,398.78	8,393.38	8,373.48	29.57	30.14	89.42	-24.24	619.78	569.81	528.07	41.74	13.652	
8,500.00	8,498.78	8,493.38	8,473.48	29.93	30.49	89.42	-24.24	619.78	569.81	527.57	42.24	13.490	
8,600.00	8,598.78	8,593.38	8,573.48	30.29	30.83	89.42	-24.24	619.78	569.81	527.07	42.74	13.332	
8,700.00	8,698.78	8,693.38	8,673.48	30.64	31.18	89.42	-24.24	619.78	569.81	526.57	43.24	13.178	
8,800.00	8,798.78	8,793.38	8,773.48	31.00	31.53	89.42	-24.24	619.78	569.81	526.07	43.74	13.026	
8,900.00	8,898.78	8,893.38	8,873.48	31.36	31.87	89.42	-24.24	619.78	569.81	525.56	44.24	12.879	
9,000.00	8,998.78	8,993.38	8,973.48	31.72	32.22	89.42	-24.24	619.78	569.81	525.06	44.75	12.734	
9,100.00	9,098.78	9,093.38	9,073.48	32.07	32.57	89.42	-24.24	619.78	569.81	524.56	45.25	12.593	
9,200.00	9,198.78	9,193.38	9,173.48	32.43	32.92	89.42	-24.24	619.78	569.81	524.06	45.75	12.455	
9,300.00	9,298.78	9,293.38	9,273.48	32.79	33.26	89.42	-24.24	619.78	569.81	523.56	46.25	12.320	
9,400.00	9,398.78	9,393.38	9,373.48	33.15	33.61	89.42	-24.24	619.78	569.81	523.05	46.75	12.187	
9,500.00	9,498.78	9,493.38	9,473.48	33.51	33.96	89.42	-24.24	619.78	569.81	522.55	47.26	12.058	
9,600.00	9,598.78	9,593.38	9,573.48	33.86	34.31	89.42	-24.24	619.78	569.81	522.05	47.76	11.931	
9,700.00	9,698.78	9,693.38	9,673.48	34.22	34.66	89.42	-24.24	619.78	569.81	521.55	48.26	11.806	
9,800.00	9,798.78	9,793.38	9,773.48	34.58	35.01	89.42	-24.24	619.78	569.81	521.04	48.77	11.685	
9,900.00	9,898.78	9,893.38	9,873.48	34.94	35.36	89.42	-24.24	619.78	569.81	520.54	49.27	11.566	
10,000.00	9,998.78	9,993.38	9,973.48	35.29	35.71	89.42	-24.24	619.78	569.81	520.04	49.77	11.449	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 805H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,098.78	10,093.38	10,073.48	35.65	36.05	89.42	-24.24	619.78	569.81	519.54	50.27	11.334	
10,148.26	10,147.04	10,141.64	10,121.74	35.82	36.22	89.42	-24.24	619.78	569.81	519.29	50.52	11.280	CC
10,150.00	10,148.78	10,143.38	10,123.48	35.83	36.23	-90.02	-24.24	619.78	569.81	519.28	50.52	11.278	
10,150.01	10,148.79	10,143.39	10,123.49	35.83	36.23	-90.02	-24.24	619.78	569.81	519.28	50.53	11.278	
10,200.00	10,198.71	10,193.31	10,173.41	35.99	36.40	-90.26	-24.24	619.78	569.81	519.05	50.77	11.224	
10,250.00	10,248.24	10,242.85	10,222.94	36.16	36.58	-90.91	-24.24	619.78	569.88	518.88	51.00	11.173	ES
10,300.00	10,297.01	10,291.61	10,271.71	36.32	36.75	-91.96	-24.24	619.78	570.17	518.93	51.24	11.128	
10,350.00	10,344.64	10,339.24	10,319.34	36.48	36.91	-93.34	-24.24	619.78	570.91	519.44	51.47	11.092	
10,400.00	10,390.76	10,385.36	10,365.46	36.63	37.08	-94.96	-24.24	619.78	572.42	520.73	51.70	11.073	SF
10,450.00	10,435.02	10,429.62	10,409.72	36.78	37.23	-96.74	-24.24	619.78	575.11	523.18	51.92	11.077	
10,500.00	10,477.10	10,471.70	10,451.80	36.94	37.38	-98.55	-24.24	619.78	579.38	527.24	52.14	11.112	
10,550.00	10,516.66	10,511.26	10,491.36	37.09	37.52	-100.29	-24.24	619.78	585.68	533.32	52.35	11.187	
10,600.00	10,553.41	10,548.01	10,528.11	37.25	37.65	-101.83	-24.24	619.78	594.42	541.86	52.57	11.308	
10,650.00	10,587.07	10,581.67	10,561.77	37.41	37.76	-103.05	-24.24	619.78	605.98	553.21	52.77	11.484	
10,700.00	10,617.37	10,611.98	10,592.07	37.57	37.87	-103.85	-24.24	619.78	620.64	567.67	52.96	11.718	
10,750.00	10,644.10	10,638.70	10,618.80	37.74	37.96	-104.12	-24.24	619.78	638.56	585.41	53.15	12.015	
10,800.00	10,667.05	10,661.65	10,641.75	37.91	38.04	-103.77	-24.24	619.78	659.79	606.47	53.32	12.375	
10,850.00	10,686.04	10,680.64	10,660.74	38.09	38.11	-102.71	-24.24	619.78	684.27	630.80	53.47	12.798	
10,900.00	10,700.92	10,695.52	10,675.62	38.28	38.16	-100.84	-24.24	619.78	711.80	658.20	53.60	13.280	
10,950.00	10,711.59	10,706.19	10,686.29	38.47	38.20	-98.10	-24.24	619.78	742.09	688.38	53.71	13.817	
11,000.00	10,717.97	10,712.57	10,692.67	38.67	38.22	-94.43	-24.24	619.78	774.79	720.99	53.79	14.403	
11,048.26	10,720.00	10,714.60	10,694.70	38.86	38.23	-90.00	-24.24	619.78	808.23	754.37	53.86	15.007	
11,100.00	10,720.00	10,714.60	10,694.70	39.07	38.23	-90.00	-24.24	619.78	845.71	791.80	53.91	15.687	
11,200.00	10,720.00	10,714.60	10,694.70	39.54	38.23	-90.00	-24.24	619.78	922.07	868.06	54.01	17.074	
11,300.00	10,720.00	10,714.60	10,694.70	40.07	38.23	-90.00	-24.24	619.78	1,002.59	948.51	54.08	18.538	
11,400.00	10,720.00	10,714.60	10,694.70	40.66	38.23	-90.00	-24.24	619.78	1,086.36	1,032.21	54.15	20.062	
11,500.00	10,720.00	10,714.60	10,694.70	41.31	38.23	-90.00	-24.24	619.78	1,172.67	1,118.47	54.21	21.633	
11,600.00	10,720.00	10,714.60	10,694.70	42.02	38.23	-90.00	-24.24	619.78	1,261.01	1,206.76	54.26	23.242	
11,700.00	10,720.00	10,714.60	10,694.70	42.77	38.23	-90.00	-24.24	619.78	1,350.98	1,296.68	54.30	24.881	
11,800.00	10,720.00	10,714.60	10,694.70	43.58	38.23	-90.00	-24.24	619.78	1,442.26	1,387.93	54.34	26.543	
11,900.00	10,720.00	10,714.60	10,694.70	44.43	38.23	-90.00	-24.24	619.78	1,534.64	1,480.27	54.37	28.226	
12,000.00	10,720.00	10,714.60	10,694.70	45.33	38.23	-90.00	-24.24	619.78	1,627.91	1,573.51	54.40	29.924	
12,100.00	10,720.00	10,714.60	10,694.70	46.26	38.23	-90.00	-24.24	619.78	1,721.94	1,667.51	54.43	31.636	
12,200.00	10,720.00	10,714.60	10,694.70	47.24	38.23	-90.00	-24.24	619.78	1,816.61	1,762.15	54.46	33.358	
12,300.00	10,720.00	14,100.85	12,502.00	48.26	53.56	-162.50	-1,849.02	637.67	1,895.06	1,851.23	43.83	43.241	
12,400.00	10,720.00	14,200.85	12,502.00	49.30	54.50	-162.49	-1,949.02	638.65	1,895.06	1,850.57	44.49	42.598	
12,500.00	10,720.00	14,300.85	12,502.00	50.38	55.49	-162.49	-2,049.01	639.63	1,895.06	1,849.89	45.17	41.951	
12,600.00	10,720.00	14,400.85	12,502.00	51.50	56.50	-162.49	-2,149.01	640.61	1,895.07	1,849.18	45.88	41.302	
12,700.00	10,720.00	14,500.85	12,502.00	52.63	57.54	-162.49	-2,249.00	641.59	1,895.07	1,848.45	46.62	40.651	
12,800.00	10,720.00	14,600.85	12,502.00	53.80	58.61	-162.49	-2,349.00	642.57	1,895.07	1,847.70	47.37	40.003	
12,900.00	10,720.00	14,700.85	12,502.00	54.99	59.70	-162.49	-2,448.99	643.55	1,895.08	1,846.93	48.15	39.359	
13,000.00	10,720.00	14,800.85	12,502.00	56.20	60.82	-162.49	-2,548.99	644.53	1,895.08	1,846.13	48.94	38.719	
13,100.00	10,720.00	14,900.85	12,502.00	57.44	61.97	-162.49	-2,648.98	645.51	1,895.08	1,845.32	49.76	38.086	
13,200.00	10,720.00	15,000.85	12,502.00	58.70	63.13	-162.49	-2,748.98	646.49	1,895.09	1,844.49	50.59	37.459	
13,300.00	10,720.00	15,100.85	12,502.00	59.97	64.32	-162.49	-2,848.97	647.47	1,895.09	1,843.65	51.44	36.840	
13,400.00	10,720.00	15,200.85	12,502.00	61.27	65.53	-162.49	-2,948.97	648.45	1,895.09	1,842.79	52.31	36.231	
13,500.00	10,720.00	15,300.85	12,502.00	62.58	66.76	-162.49	-3,048.96	649.43	1,895.09	1,841.91	53.19	35.632	
13,600.00	10,720.00	15,400.85	12,502.00	63.90	68.00	-162.49	-3,148.96	650.41	1,895.10	1,841.02	54.08	35.042	
13,700.00	10,720.00	15,500.85	12,502.00	65.24	69.26	-162.49	-3,248.96	651.39	1,895.10	1,840.11	54.99	34.464	
13,800.00	10,720.00	15,600.85	12,502.00	66.60	70.54	-162.49	-3,348.95	652.37	1,895.10	1,839.19	55.91	33.895	
13,900.00	10,720.00	15,700.85	12,502.00	67.97	71.84	-162.49	-3,448.95	653.35	1,895.11	1,838.26	56.85	33.338	
14,000.00	10,720.00	15,800.85	12,502.00	69.35	73.14	-162.49	-3,548.94	654.33	1,895.11	1,837.32	57.79	32.793	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 805H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,100.00	10,720.00	15,900.85	12,502.00	70.74	74.47	-162.49	-3,648.94	655.31	1,895.11	1,836.37	58.75	32.259	
14,200.00	10,720.00	16,000.85	12,502.00	72.14	75.80	-162.49	-3,748.93	656.30	1,895.12	1,835.40	59.71	31.736	
14,300.00	10,720.00	16,100.85	12,502.00	73.55	77.15	-162.49	-3,848.93	657.28	1,895.12	1,834.43	60.69	31.225	
14,400.00	10,720.00	16,200.85	12,502.00	74.98	78.50	-162.49	-3,948.92	658.26	1,895.12	1,833.44	61.68	30.725	
14,500.00	10,720.00	16,300.85	12,502.00	76.41	79.87	-162.49	-4,048.92	659.24	1,895.13	1,832.45	62.68	30.236	
14,600.00	10,720.00	16,400.85	12,502.00	77.85	81.25	-162.49	-4,148.91	660.22	1,895.13	1,831.45	63.68	29.759	
14,700.00	10,720.00	16,500.85	12,502.00	79.30	82.64	-162.49	-4,248.91	661.20	1,895.13	1,830.44	64.69	29.294	
14,800.00	10,720.00	16,600.85	12,502.00	80.76	84.04	-162.49	-4,348.90	662.18	1,895.14	1,829.42	65.72	28.838	
14,900.00	10,720.00	16,700.85	12,502.00	82.22	85.45	-162.49	-4,448.90	663.16	1,895.14	1,828.39	66.75	28.394	
15,000.00	10,720.00	16,800.85	12,502.00	83.69	86.87	-162.49	-4,548.89	664.14	1,895.14	1,827.36	67.78	27.960	
15,100.00	10,720.00	16,900.85	12,502.00	85.17	88.29	-162.49	-4,648.89	665.12	1,895.15	1,826.32	68.82	27.537	
15,200.00	10,720.00	17,000.85	12,502.00	86.65	89.73	-162.49	-4,748.88	666.10	1,895.15	1,825.28	69.87	27.124	
15,300.00	10,720.00	17,100.85	12,502.00	88.14	91.17	-162.49	-4,848.88	667.08	1,895.15	1,824.23	70.93	26.720	
15,400.00	10,720.00	17,200.85	12,502.00	89.64	92.61	-162.49	-4,948.87	668.06	1,895.16	1,823.17	71.99	26.326	
15,500.00	10,720.00	17,300.85	12,502.00	91.14	94.07	-162.49	-5,048.87	669.04	1,895.16	1,822.10	73.05	25.942	
15,600.00	10,720.00	17,400.85	12,502.00	92.65	95.53	-162.49	-5,148.86	670.02	1,895.16	1,821.04	74.13	25.567	
15,700.00	10,720.00	17,500.85	12,502.00	94.16	96.99	-162.48	-5,248.86	671.00	1,895.17	1,819.96	75.20	25.201	
15,800.00	10,720.00	17,600.85	12,502.00	95.67	98.47	-162.48	-5,348.85	671.98	1,895.17	1,818.88	76.28	24.843	
15,900.00	10,720.00	17,700.85	12,502.00	97.19	99.94	-162.48	-5,448.85	672.96	1,895.17	1,817.80	77.37	24.495	
16,000.00	10,720.00	17,800.85	12,502.00	98.72	101.43	-162.48	-5,548.84	673.94	1,895.18	1,816.72	78.46	24.155	
16,100.00	10,720.00	17,900.85	12,502.00	100.25	102.91	-162.48	-5,648.84	674.92	1,895.18	1,815.62	79.55	23.822	
16,200.00	10,720.00	18,000.85	12,502.00	101.78	104.41	-162.48	-5,748.83	675.90	1,895.18	1,814.53	80.65	23.498	
16,300.00	10,720.00	18,100.85	12,502.00	103.31	105.91	-162.48	-5,848.83	676.88	1,895.19	1,813.43	81.76	23.181	
16,400.00	10,720.00	18,200.85	12,502.00	104.85	107.41	-162.48	-5,948.83	677.86	1,895.19	1,812.33	82.86	22.872	
16,500.00	10,720.00	18,300.85	12,502.00	106.40	108.92	-162.48	-6,048.82	678.84	1,895.19	1,811.22	83.97	22.569	
16,600.00	10,720.00	18,400.85	12,502.00	107.94	110.43	-162.48	-6,148.82	679.82	1,895.19	1,810.11	85.09	22.274	
16,700.00	10,720.00	18,500.85	12,502.00	109.49	111.94	-162.48	-6,248.81	680.80	1,895.20	1,808.99	86.20	21.985	
16,800.00	10,720.00	18,600.85	12,502.00	111.04	113.46	-162.48	-6,348.81	681.78	1,895.20	1,807.88	87.32	21.703	
16,900.00	10,720.00	18,700.85	12,502.00	112.60	114.98	-162.48	-6,448.80	682.76	1,895.20	1,806.76	88.45	21.428	
17,000.00	10,720.00	18,800.85	12,502.00	114.16	116.51	-162.48	-6,548.80	683.74	1,895.21	1,805.64	89.57	21.159	
17,100.00	10,720.00	18,900.85	12,502.00	115.72	118.04	-162.48	-6,648.79	684.72	1,895.21	1,804.51	90.70	20.896	
17,200.00	10,720.00	19,000.85	12,502.00	117.28	119.57	-162.48	-6,748.79	685.70	1,895.21	1,803.39	91.83	20.639	
17,300.00	10,720.00	19,100.85	12,502.00	118.84	121.11	-162.48	-6,848.78	686.68	1,895.22	1,802.26	92.96	20.388	
17,400.00	10,720.00	19,200.85	12,502.00	120.41	122.64	-162.48	-6,948.78	687.67	1,895.22	1,801.13	94.09	20.142	
17,500.00	10,720.00	19,300.85	12,502.00	121.98	124.19	-162.48	-7,048.77	688.65	1,895.22	1,799.99	95.23	19.901	
17,600.00	10,720.00	19,400.85	12,502.00	123.55	125.73	-162.48	-7,148.77	689.63	1,895.23	1,798.85	96.37	19.665	
17,700.00	10,720.00	19,500.85	12,502.00	125.13	127.28	-162.48	-7,248.76	690.61	1,895.23	1,797.71	97.52	19.435	
17,800.00	10,720.00	19,600.85	12,502.00	126.70	128.83	-162.48	-7,348.76	691.59	1,895.23	1,796.57	98.66	19.210	
17,900.00	10,720.00	19,700.85	12,502.00	128.28	130.38	-162.48	-7,448.75	692.57	1,895.24	1,795.43	99.81	18.989	
18,000.00	10,720.00	19,800.85	12,502.00	129.86	131.93	-162.48	-7,548.75	693.55	1,895.24	1,794.29	100.95	18.774	
18,100.00	10,720.00	19,900.85	12,502.00	131.44	133.49	-162.48	-7,648.74	694.53	1,895.24	1,793.14	102.10	18.562	
18,200.00	10,720.00	20,000.85	12,502.00	133.02	135.05	-162.48	-7,748.74	695.51	1,895.25	1,791.99	103.25	18.356	
18,300.00	10,720.00	20,100.85	12,502.00	134.61	136.61	-162.48	-7,848.73	696.49	1,895.25	1,790.85	104.40	18.153	
18,400.00	10,720.00	20,200.85	12,502.00	136.19	138.17	-162.48	-7,948.73	697.47	1,895.25	1,789.69	105.56	17.955	
18,500.00	10,720.00	20,300.85	12,502.00	137.78	139.74	-162.48	-8,048.72	698.45	1,895.26	1,788.54	106.71	17.760	
18,600.00	10,720.00	20,400.85	12,502.00	139.37	141.31	-162.48	-8,148.72	699.43	1,895.26	1,787.39	107.87	17.569	
18,700.00	10,720.00	20,500.85	12,502.00	140.96	142.88	-162.48	-8,248.71	700.41	1,895.26	1,786.23	109.03	17.383	
18,800.00	10,720.00	20,600.85	12,502.00	142.55	144.45	-162.48	-8,348.71	701.39	1,895.27	1,785.07	110.19	17.200	
18,900.00	10,720.00	20,700.85	12,502.00	144.15	146.02	-162.47	-8,448.71	702.37	1,895.27	1,783.91	111.35	17.020	
19,000.00	10,720.00	20,800.85	12,502.00	145.74	147.59	-162.47	-8,548.70	703.35	1,895.27	1,782.76	112.52	16.844	
19,100.00	10,720.00	20,900.85	12,502.00	147.34	149.17	-162.47	-8,648.70	704.33	1,895.28	1,781.60	113.68	16.672	
19,200.00	10,720.00	21,000.85	12,502.00	148.93	150.75	-162.47	-8,748.69	705.31	1,895.28	1,780.44	114.84	16.503	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka Fed Com 805H - OH - Plan #2

Offset Site Error: 0.00 usft

Survey Program: 0-OWSG (Rev2) MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,720.00	21,100.85	12,502.00	150.53	152.33	-162.47	-8,848.69	706.29	1,895.28	1,779.27	116.01	16.338	
19,400.00	10,720.00	21,200.85	12,502.00	152.13	153.91	-162.47	-8,948.68	707.27	1,895.28	1,778.11	117.17	16.175	
19,500.00	10,720.00	21,300.85	12,502.00	153.73	155.49	-162.47	-9,048.68	708.25	1,895.29	1,776.95	118.34	16.015	
19,600.00	10,720.00	21,400.85	12,502.00	155.33	157.08	-162.47	-9,148.67	709.23	1,895.29	1,775.78	119.51	15.859	
19,700.00	10,720.00	21,500.85	12,502.00	156.94	158.66	-162.47	-9,248.67	710.21	1,895.29	1,774.61	120.68	15.705	
19,800.00	10,720.00	21,600.85	12,502.00	158.54	160.25	-162.47	-9,348.66	711.19	1,895.30	1,773.44	121.85	15.554	
19,900.00	10,720.00	21,700.85	12,502.00	160.14	161.83	-162.47	-9,448.66	712.17	1,895.30	1,772.27	123.03	15.406	
20,000.00	10,720.00	21,800.85	12,502.00	161.75	163.42	-162.47	-9,548.65	713.15	1,895.30	1,771.10	124.20	15.260	
20,100.00	10,720.00	21,900.85	12,502.00	163.36	165.01	-162.47	-9,648.65	714.13	1,895.31	1,769.94	125.37	15.117	
20,200.00	10,720.00	22,000.85	12,502.00	164.96	166.61	-162.47	-9,748.64	715.11	1,895.31	1,768.77	126.54	14.977	
20,300.00	10,720.00	22,100.85	12,502.00	166.57	168.20	-162.47	-9,848.64	716.09	1,895.31	1,767.60	127.72	14.840	
20,400.00	10,720.00	22,200.85	12,502.00	168.18	169.79	-162.47	-9,948.63	717.07	1,895.32	1,766.42	128.89	14.705	
20,500.00	10,720.00	22,300.85	12,502.00	169.79	171.39	-162.47	-10,048.63	718.05	1,895.32	1,765.25	130.07	14.572	
20,600.00	10,720.00	22,400.85	12,502.00	171.40	172.98	-162.47	-10,148.62	719.04	1,895.32	1,764.08	131.25	14.441	
20,700.00	10,720.00	22,500.85	12,502.00	173.01	174.58	-162.47	-10,248.62	720.02	1,895.33	1,762.90	132.42	14.313	
20,800.00	10,720.00	22,600.85	12,502.00	174.63	176.18	-162.47	-10,348.61	721.00	1,895.33	1,761.73	133.60	14.186	
20,841.32	10,720.00	22,642.17	12,502.00	175.22	176.77	-162.47	-10,389.93	721.40	1,895.33	1,761.43	133.90	14.155	

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.42	11.01	1,089.77	1,090.19				
100.00	100.00	71.90	71.90	0.13	0.09	89.42	11.01	1,089.77	1,089.83	1,089.67	0.15	7,045.917	
200.00	200.00	171.90	171.90	0.48	0.38	89.42	11.01	1,089.77	1,089.83	1,089.21	0.62	1,765.110	
300.00	300.00	271.90	271.90	0.84	0.74	89.42	11.01	1,089.77	1,089.83	1,088.70	1.12	970.879	
400.00	400.00	371.90	371.90	1.20	1.10	89.42	11.01	1,089.77	1,089.83	1,088.20	1.63	669.112	
500.00	500.00	471.90	471.90	1.56	1.46	89.42	11.01	1,089.77	1,089.83	1,087.69	2.14	510.374	
600.00	600.00	571.90	571.90	1.92	1.82	89.42	11.01	1,089.77	1,089.83	1,087.18	2.64	412.489	
700.00	700.00	671.90	671.90	2.28	2.18	89.42	11.01	1,089.77	1,089.83	1,086.68	3.15	346.100	
800.00	800.00	771.90	771.90	2.63	2.53	89.42	11.01	1,089.77	1,089.83	1,086.17	3.66	298.115	
900.00	900.00	871.90	871.90	2.99	2.89	89.42	11.01	1,089.77	1,089.83	1,085.66	4.16	261.814	
1,000.00	1,000.00	971.90	971.90	3.35	3.25	89.42	11.01	1,089.77	1,089.83	1,085.16	4.67	233.394	
1,100.00	1,100.00	1,071.90	1,071.90	3.71	3.61	89.42	11.01	1,089.77	1,089.83	1,084.65	5.18	210.538	
1,200.00	1,200.00	1,171.90	1,171.90	4.07	3.97	89.42	11.01	1,089.77	1,089.83	1,084.14	5.68	191.760	
1,300.00	1,300.00	1,271.90	1,271.90	4.43	4.33	89.42	11.01	1,089.77	1,089.83	1,083.64	6.19	176.056	
1,400.00	1,400.00	1,371.90	1,371.90	4.79	4.68	89.42	11.01	1,089.77	1,089.83	1,083.13	6.70	162.730	
1,500.00	1,500.00	1,471.90	1,471.90	5.14	5.04	89.42	11.01	1,089.77	1,089.83	1,082.62	7.20	151.279	
1,600.00	1,600.00	1,571.90	1,571.90	5.50	5.40	89.42	11.01	1,089.77	1,089.83	1,082.11	7.71	141.334	
1,700.00	1,700.00	1,671.90	1,671.90	5.86	5.76	89.42	11.01	1,089.77	1,089.83	1,081.61	8.22	132.616	
1,800.00	1,800.00	1,771.90	1,771.90	6.22	6.12	89.42	11.01	1,089.77	1,089.83	1,081.10	8.72	124.910	
1,900.00	1,900.00	1,871.90	1,871.90	6.58	6.48	89.42	11.01	1,089.77	1,089.83	1,080.59	9.23	118.051	
2,000.00	2,000.00	1,971.90	1,971.90	6.94	6.84	89.42	11.01	1,089.77	1,089.83	1,080.09	9.74	111.906	
2,100.00	2,100.00	2,071.90	2,071.90	7.30	7.19	89.42	11.01	1,089.77	1,089.83	1,079.58	10.25	106.369	
2,200.00	2,200.00	2,171.90	2,171.90	7.65	7.55	89.42	11.01	1,089.77	1,089.83	1,079.07	10.75	101.354	
2,300.00	2,300.00	2,271.90	2,271.90	8.01	7.91	89.42	11.01	1,089.77	1,089.83	1,078.57	11.26	96.791	
2,400.00	2,400.00	2,371.90	2,371.90	8.37	8.27	89.42	11.01	1,089.77	1,089.83	1,078.06	11.77	92.621	
2,500.00	2,500.00	2,471.90	2,471.90	8.73	8.63	89.42	11.01	1,089.77	1,089.83	1,077.55	12.27	88.795	
2,600.00	2,600.00	2,571.90	2,571.90	9.09	8.99	89.42	11.01	1,089.77	1,089.83	1,077.05	12.78	85.273	
2,700.00	2,700.00	2,671.90	2,671.90	9.45	9.34	89.42	11.01	1,089.77	1,089.83	1,076.54	13.29	82.020	
2,800.00	2,800.00	2,771.90	2,771.90	9.80	9.70	89.42	11.01	1,089.77	1,089.83	1,076.03	13.79	79.005	
2,900.00	2,900.00	2,871.90	2,871.90	10.16	10.06	89.42	11.01	1,089.77	1,089.83	1,075.52	14.30	76.205	
3,000.00	3,000.00	2,971.90	2,971.90	10.52	10.42	89.42	11.01	1,089.77	1,089.83	1,075.02	14.81	73.596	
3,100.00	3,100.00	3,071.90	3,071.90	10.88	10.78	89.42	11.01	1,089.77	1,089.83	1,074.51	15.32	71.160	
3,200.00	3,200.00	3,171.90	3,171.90	11.24	11.14	89.42	11.01	1,089.77	1,089.83	1,074.00	15.82	68.880	CC, ES
3,300.00	3,300.00	3,255.96	3,255.96	11.60	11.43	89.42	10.99	1,090.18	1,090.35	1,074.07	16.28	66.960	
3,400.00	3,400.00	3,333.75	3,333.73	11.96	11.70	89.43	10.88	1,092.11	1,092.83	1,076.11	16.72	65.360	
3,500.00	3,500.00	3,411.43	3,411.32	12.31	11.97	89.44	10.68	1,095.61	1,097.34	1,080.19	17.15	63.993	
3,600.00	3,600.00	3,500.00	3,499.69	12.67	12.27	89.46	10.34	1,101.53	1,103.94	1,086.33	17.61	62.703	
3,700.00	3,700.00	3,566.20	3,565.64	13.03	12.50	89.48	10.01	1,107.28	1,112.41	1,094.43	17.98	61.857	
3,800.00	3,800.00	3,643.17	3,642.18	13.39	12.77	89.51	9.55	1,115.41	1,122.97	1,104.58	18.39	61.061	
3,900.00	3,900.00	3,740.11	3,738.44	13.75	13.11	89.55	8.90	1,126.81	1,134.72	1,115.84	18.87	60.121	
4,000.00	4,000.00	3,839.41	3,837.05	14.11	13.46	89.59	8.23	1,138.49	1,146.48	1,127.11	19.37	59.196	
4,100.00	4,100.00	3,938.71	3,935.66	14.46	13.82	89.62	7.57	1,150.18	1,158.24	1,138.38	19.86	58.315	
4,200.00	4,200.00	4,038.02	4,034.27	14.82	14.17	89.66	6.90	1,161.86	1,170.00	1,149.65	20.36	57.474	
4,300.00	4,300.00	4,137.32	4,132.88	15.18	14.53	89.70	6.23	1,173.55	1,181.77	1,160.91	20.85	56.671	
4,400.00	4,400.00	4,236.62	4,231.49	15.54	14.89	89.73	5.57	1,185.23	1,193.53	1,172.18	21.35	55.904	
4,500.00	4,500.00	4,335.92	4,330.10	15.90	15.26	89.77	4.90	1,196.92	1,205.30	1,183.45	21.85	55.170	
4,600.00	4,599.99	4,435.35	4,428.84	16.24	15.62	-31.11	4.23	1,208.62	1,215.95	1,193.61	22.34	54.441	
4,666.98	4,666.93	4,502.07	4,495.09	16.47	15.87	-31.10	3.79	1,216.47	1,221.83	1,199.18	22.66	53.929	
4,700.00	4,699.92	4,534.98	4,527.77	16.58	15.99	-31.13	3.57	1,220.34	1,224.49	1,201.68	22.82	53.670	
4,800.00	4,799.82	4,634.64	4,626.74	16.91	16.36	-31.20	2.90	1,232.07	1,232.53	1,209.24	23.30	52.905	
4,900.00	4,899.72	4,734.31	4,725.71	17.24	16.73	-31.27	2.23	1,243.79	1,240.58	1,216.80	23.78	52.168	
5,000.00	4,999.63	4,833.97	4,824.68	17.58	17.11	-31.34	1.56	1,255.52	1,248.63	1,224.36	24.27	51.457	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,099.53	4,933.63	4,923.65	17.92	17.48	-31.41	0.89	1,267.25	1,256.68	1,231.92	24.75	50.772	
5,200.00	5,199.44	5,033.30	5,022.62	18.26	17.86	-31.48	0.22	1,278.98	1,264.73	1,239.49	25.24	50.111	
5,300.00	5,299.34	5,132.96	5,121.59	18.60	18.24	-31.54	-0.45	1,290.70	1,272.78	1,247.05	25.73	49.473	
5,400.00	5,399.25	5,232.63	5,220.56	18.94	18.61	-31.61	-1.12	1,302.43	1,280.83	1,254.62	26.22	48.857	
5,500.00	5,499.15	5,332.29	5,319.53	19.28	18.99	-31.68	-1.78	1,314.16	1,288.89	1,262.18	26.71	48.262	
5,600.00	5,599.06	5,431.96	5,418.49	19.62	19.37	-31.74	-2.45	1,325.89	1,296.95	1,269.75	27.20	47.686	
5,700.00	5,698.96	5,531.62	5,517.46	19.96	19.75	-31.80	-3.12	1,337.61	1,305.01	1,277.32	27.69	47.130	
5,800.00	5,798.86	5,631.28	5,616.43	20.31	20.14	-31.87	-3.79	1,349.34	1,313.07	1,284.89	28.18	46.591	
5,834.24	5,833.07	5,665.41	5,650.32	20.42	20.27	-31.89	-4.02	1,353.36	1,315.83	1,287.48	28.35	46.411	
5,900.00	5,898.79	5,730.91	5,715.37	20.65	20.52	-31.96	-4.46	1,361.06	1,321.61	1,292.93	28.68	46.087	
6,001.22	6,000.00	5,831.55	5,815.31	21.00	20.91	88.92	-5.13	1,372.91	1,332.37	1,303.19	29.18	45.660	
6,100.00	6,098.78	5,929.64	5,912.72	21.36	21.28	88.96	-5.79	1,384.45	1,343.98	1,314.31	29.68	45.286	
6,200.00	6,198.78	6,028.95	6,011.33	21.71	21.67	89.00	-6.46	1,396.13	1,355.74	1,325.56	30.18	44.921	
6,300.00	6,298.78	6,128.25	6,109.94	22.07	22.05	89.03	-7.12	1,407.82	1,367.49	1,336.81	30.68	44.568	
6,400.00	6,398.78	6,227.55	6,208.55	22.43	22.44	89.07	-7.79	1,419.50	1,379.25	1,348.06	31.19	44.225	
6,500.00	6,498.78	6,326.86	6,307.16	22.78	22.82	89.11	-8.46	1,431.19	1,391.00	1,359.31	31.69	43.893	
6,600.00	6,598.78	6,426.16	6,405.77	23.14	23.21	89.14	-9.12	1,442.87	1,402.76	1,370.56	32.19	43.571	
6,700.00	6,698.78	6,525.46	6,504.38	23.50	23.60	89.18	-9.79	1,454.56	1,414.51	1,381.82	32.70	43.259	
6,800.00	6,798.78	6,624.77	6,602.99	23.85	23.98	89.21	-10.46	1,466.24	1,426.27	1,393.07	33.20	42.956	
6,900.00	6,898.78	6,724.07	6,701.60	24.21	24.37	89.24	-11.12	1,477.93	1,438.03	1,404.32	33.71	42.661	
7,000.00	6,998.78	6,823.37	6,800.21	24.57	24.76	89.28	-11.79	1,489.61	1,449.79	1,415.57	34.21	42.375	
7,100.00	7,098.78	6,922.67	6,898.82	24.93	25.15	89.31	-12.45	1,501.30	1,461.54	1,426.83	34.72	42.098	
7,200.00	7,198.78	7,021.98	6,997.43	25.28	25.54	89.34	-13.12	1,512.98	1,473.30	1,438.08	35.22	41.828	
7,300.00	7,298.78	7,150.78	7,125.42	25.64	26.04	89.38	-13.94	1,527.39	1,484.60	1,448.75	35.85	41.417	
7,400.00	7,398.78	7,313.92	7,288.07	26.00	26.65	89.41	-14.66	1,539.90	1,492.26	1,455.70	36.56	40.812	
7,500.00	7,498.78	7,477.84	7,451.88	26.35	27.23	89.42	-14.97	1,545.47	1,495.66	1,458.43	37.23	40.175	
7,600.00	7,598.78	7,596.64	7,570.68	26.71	27.64	89.43	-14.99	1,545.77	1,495.85	1,458.08	37.76	39.609	
7,700.00	7,698.78	7,696.64	7,670.68	27.07	27.98	89.43	-14.99	1,545.77	1,495.85	1,457.58	38.26	39.092	
7,800.00	7,798.78	7,796.64	7,770.68	27.43	28.32	89.43	-14.99	1,545.77	1,495.85	1,457.08	38.76	38.589	
7,900.00	7,898.78	7,896.64	7,870.68	27.78	28.66	89.43	-14.99	1,545.77	1,495.85	1,456.58	39.26	38.098	
8,000.00	7,998.78	7,996.64	7,970.68	28.14	29.00	89.43	-14.99	1,545.77	1,495.85	1,456.08	39.76	37.619	
8,100.00	8,098.78	8,096.64	8,070.68	28.50	29.34	89.43	-14.99	1,545.77	1,495.85	1,455.58	40.26	37.151	
8,200.00	8,198.78	8,196.64	8,170.68	28.86	29.68	89.43	-14.99	1,545.77	1,495.85	1,455.08	40.76	36.696	
8,300.00	8,298.78	8,296.64	8,270.68	29.21	30.03	89.43	-14.99	1,545.77	1,495.85	1,454.58	41.26	36.250	
8,400.00	8,398.78	8,396.64	8,370.68	29.57	30.37	89.43	-14.99	1,545.77	1,495.85	1,454.08	41.76	35.816	
8,500.00	8,498.78	8,496.64	8,470.68	29.93	30.71	89.43	-14.99	1,545.77	1,495.85	1,453.58	42.27	35.392	
8,600.00	8,598.78	8,596.64	8,570.68	30.29	31.06	89.43	-14.99	1,545.77	1,495.85	1,453.08	42.77	34.977	
8,700.00	8,698.78	8,696.64	8,670.68	30.64	31.40	89.43	-14.99	1,545.77	1,495.85	1,452.58	43.27	34.572	
8,800.00	8,798.78	8,796.64	8,770.68	31.00	31.75	89.43	-14.99	1,545.77	1,495.85	1,452.08	43.77	34.176	
8,900.00	8,898.78	8,896.64	8,870.68	31.36	32.09	89.43	-14.99	1,545.77	1,495.85	1,451.58	44.27	33.789	
9,000.00	8,998.78	8,996.64	8,970.68	31.72	32.44	89.43	-14.99	1,545.77	1,495.85	1,451.07	44.77	33.411	
9,100.00	9,098.78	9,096.64	9,070.68	32.07	32.78	89.43	-14.99	1,545.77	1,495.85	1,450.57	45.27	33.041	
9,200.00	9,198.78	9,196.64	9,170.68	32.43	33.13	89.43	-14.99	1,545.77	1,495.85	1,450.07	45.77	32.679	
9,300.00	9,298.78	9,296.64	9,270.68	32.79	33.47	89.43	-14.99	1,545.77	1,495.85	1,449.57	46.28	32.324	
9,400.00	9,398.78	9,396.64	9,370.68	33.15	33.82	89.43	-14.99	1,545.77	1,495.85	1,449.07	46.78	31.978	
9,500.00	9,498.78	9,496.64	9,470.68	33.51	34.17	89.43	-14.99	1,545.77	1,495.85	1,448.57	47.28	31.638	
9,600.00	9,598.78	9,596.64	9,570.68	33.86	34.51	89.43	-14.99	1,545.77	1,495.85	1,448.06	47.78	31.306	
9,700.00	9,698.78	9,696.64	9,670.68	34.22	34.86	89.43	-14.99	1,545.77	1,495.85	1,447.56	48.28	30.980	
9,800.00	9,798.78	9,796.64	9,770.68	34.58	35.21	89.43	-14.99	1,545.77	1,495.85	1,447.06	48.79	30.661	
9,900.00	9,898.78	9,896.64	9,870.68	34.94	35.55	89.43	-14.99	1,545.77	1,495.85	1,446.56	49.29	30.349	
10,000.00	9,998.78	9,996.64	9,970.68	35.29	35.90	89.43	-14.99	1,545.77	1,495.85	1,446.05	49.79	30.042	
10,100.00	10,098.78	10,096.64	10,070.68	35.65	36.25	89.43	-14.99	1,545.77	1,495.85	1,445.55	50.29	29.742	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,148.26	10,147.04	10,144.90	10,118.94	35.82	36.42	89.43	-14.99	1,545.77	1,495.85	1,445.31	50.54	29.599	
10,150.00	10,148.78	10,146.64	10,120.68	35.83	36.42	-90.02	-14.99	1,545.77	1,495.85	1,445.30	50.55	29.594	
10,200.00	10,198.71	10,196.57	10,170.61	35.99	36.60	-90.11	-14.99	1,545.77	1,495.85	1,445.06	50.79	29.454	
10,250.00	10,248.24	10,246.10	10,220.14	36.16	36.77	-90.36	-14.99	1,545.77	1,495.88	1,444.85	51.03	29.316	
10,300.00	10,297.01	10,294.87	10,268.91	36.32	36.94	-90.76	-14.99	1,545.77	1,495.99	1,444.72	51.26	29.183	
10,350.00	10,344.64	10,342.50	10,316.54	36.48	37.10	-91.28	-14.99	1,545.77	1,496.27	1,444.78	51.50	29.057	
10,400.00	10,390.76	10,388.62	10,362.66	36.63	37.27	-91.90	-14.99	1,545.77	1,496.85	1,445.13	51.72	28.939	
10,450.00	10,435.02	10,432.88	10,406.92	36.78	37.42	-92.59	-14.99	1,545.77	1,497.88	1,445.94	51.95	28.834	
10,500.00	10,477.10	10,474.96	10,449.00	36.94	37.57	-93.29	-14.99	1,545.77	1,499.53	1,447.37	52.17	28.744	
10,550.00	10,516.66	10,514.52	10,488.56	37.09	37.70	-93.96	-14.99	1,545.77	1,501.99	1,449.60	52.38	28.674	
10,600.00	10,553.41	10,551.27	10,525.31	37.25	37.83	-94.57	-14.99	1,545.77	1,505.42	1,452.83	52.59	28.625	
10,650.00	10,587.07	10,584.93	10,558.97	37.41	37.95	-95.05	-14.99	1,545.77	1,510.03	1,457.24	52.80	28.601	
10,700.00	10,617.37	10,615.23	10,589.27	37.57	38.06	-95.37	-14.99	1,545.77	1,515.98	1,462.99	52.99	28.606	
10,750.00	10,644.10	10,641.96	10,616.00	37.74	38.15	-95.48	-14.99	1,545.77	1,523.41	1,470.22	53.19	28.642	
10,800.00	10,667.05	10,664.91	10,638.95	37.91	38.23	-95.34	-14.99	1,545.77	1,532.44	1,479.07	53.37	28.712	
10,850.00	10,686.04	10,683.90	10,657.94	38.09	38.30	-94.91	-14.99	1,545.77	1,543.15	1,489.59	53.55	28.816	
10,900.00	10,700.92	10,698.78	10,672.82	38.28	38.35	-94.18	-14.99	1,545.77	1,555.56	1,501.84	53.72	28.956	
10,950.00	10,711.59	10,709.45	10,683.49	38.47	38.38	-93.11	-14.99	1,545.77	1,569.66	1,515.78	53.88	29.133	
11,000.00	10,717.97	10,715.83	10,689.87	38.67	38.41	-91.69	-14.99	1,545.77	1,585.39	1,531.36	54.03	29.345	
11,048.26	10,720.00	10,717.86	10,691.90	38.86	38.41	-90.00	-14.99	1,545.77	1,602.00	1,547.85	54.15	29.582	
11,100.00	10,720.00	10,717.86	10,691.90	39.07	38.41	-90.00	-14.99	1,545.77	1,621.24	1,566.96	54.29	29.864	
11,200.00	10,720.00	10,717.86	10,691.90	39.54	38.41	-90.00	-14.99	1,545.77	1,662.37	1,607.81	54.56	30.471	
11,300.00	10,720.00	10,717.86	10,691.90	40.07	38.41	-90.00	-14.99	1,545.77	1,708.37	1,653.53	54.83	31.156	
11,400.00	10,720.00	10,717.86	10,691.90	40.66	38.41	-90.00	-14.99	1,545.77	1,758.85	1,703.74	55.11	31.915	
11,500.00	10,720.00	10,717.86	10,691.90	41.31	38.41	-90.00	-14.99	1,545.77	1,813.45	1,758.06	55.38	32.743	
11,600.00	10,720.00	10,717.86	10,691.90	42.02	38.41	-90.00	-14.99	1,545.77	1,871.80	1,816.15	55.65	33.635	
11,700.00	10,720.00	10,717.86	10,691.90	42.77	38.41	-90.00	-14.99	1,545.77	1,933.57	1,877.66	55.90	34.587	
11,800.00	10,720.00	10,717.86	10,691.90	43.58	38.41	-90.00	-14.99	1,545.77	1,998.43	1,942.28	56.15	35.593	
11,900.00	10,720.00	10,717.86	10,691.90	44.43	38.41	-90.00	-14.99	1,545.77	2,066.10	2,009.72	56.37	36.650	
12,000.00	10,720.00	10,717.86	10,691.90	45.33	38.41	-90.00	-14.99	1,545.77	2,136.30	2,079.72	56.59	37.752	
12,100.00	10,720.00	10,717.86	10,691.90	46.26	38.41	-90.00	-14.99	1,545.77	2,208.81	2,152.02	56.79	38.896	
12,200.00	10,720.00	13,880.11	12,375.00	47.24	52.41	-138.37	-1,739.97	1,562.65	2,251.85	2,198.05	53.80	41.855	
12,300.00	10,720.00	13,980.11	12,375.00	48.26	53.33	-138.37	-1,839.97	1,563.63	2,251.86	2,197.10	54.76	41.124	
12,400.00	10,720.00	14,080.11	12,375.00	49.30	54.28	-138.37	-1,939.96	1,564.61	2,251.87	2,196.11	55.75	40.391	
12,500.00	10,720.00	14,180.11	12,375.00	50.38	55.27	-138.37	-2,039.96	1,565.59	2,251.87	2,195.09	56.78	39.658	
12,600.00	10,720.00	14,280.11	12,375.00	51.50	56.28	-138.37	-2,139.95	1,566.57	2,251.88	2,194.03	57.84	38.930	
12,700.00	10,720.00	14,380.11	12,375.00	52.63	57.33	-138.37	-2,239.95	1,567.55	2,251.88	2,192.94	58.94	38.206	
12,800.00	10,720.00	14,480.11	12,375.00	53.80	58.40	-138.37	-2,339.94	1,568.53	2,251.89	2,191.82	60.07	37.490	
12,900.00	10,720.00	14,580.11	12,375.00	54.99	59.50	-138.37	-2,439.94	1,569.50	2,251.90	2,190.68	61.22	36.784	
13,000.00	10,720.00	14,680.11	12,375.00	56.20	60.62	-138.37	-2,539.94	1,570.48	2,251.90	2,189.50	62.40	36.089	
13,100.00	10,720.00	14,780.11	12,375.00	57.44	61.77	-138.37	-2,639.93	1,571.46	2,251.91	2,188.30	63.61	35.405	
13,200.00	10,720.00	14,880.11	12,375.00	58.70	62.94	-138.37	-2,739.93	1,572.44	2,251.91	2,187.08	64.84	34.733	
13,300.00	10,720.00	14,980.11	12,375.00	59.97	64.14	-138.37	-2,839.92	1,573.42	2,251.92	2,185.83	66.09	34.074	
13,400.00	10,720.00	15,080.11	12,375.00	61.27	65.35	-138.37	-2,939.92	1,574.40	2,251.93	2,184.56	67.36	33.429	
13,500.00	10,720.00	15,180.11	12,375.00	62.58	66.58	-138.37	-3,039.91	1,575.38	2,251.93	2,183.27	68.66	32.799	
13,600.00	10,720.00	15,280.11	12,375.00	63.90	67.83	-138.37	-3,139.91	1,576.36	2,251.94	2,181.97	69.97	32.184	
13,700.00	10,720.00	15,380.11	12,375.00	65.24	69.09	-138.37	-3,239.90	1,577.33	2,251.94	2,180.64	71.30	31.583	
13,800.00	10,720.00	15,480.11	12,375.00	66.60	70.37	-138.37	-3,339.90	1,578.31	2,251.95	2,179.30	72.65	30.999	
13,900.00	10,720.00	15,580.11	12,375.00	67.97	71.67	-138.37	-3,439.89	1,579.29	2,251.96	2,177.95	74.01	30.428	
14,000.00	10,720.00	15,680.11	12,375.00	69.35	72.98	-138.37	-3,539.89	1,580.27	2,251.96	2,176.58	75.39	29.873	
14,100.00	10,720.00	15,780.11	12,375.00	70.74	74.31	-138.36	-3,639.88	1,581.25	2,251.97	2,175.19	76.78	29.331	
14,200.00	10,720.00	15,880.11	12,375.00	72.14	75.64	-138.36	-3,739.88	1,582.23	2,251.98	2,173.79	78.18	28.804	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,300.00	10,720.00	15,980.11	12,375.00	73.55	76.99	-138.36	-3,839.87	1,583.21	2,251.98	2,172.38	79.60	28.291	
14,400.00	10,720.00	16,080.11	12,375.00	74.98	78.35	-138.36	-3,939.87	1,584.18	2,251.99	2,170.96	81.03	27.792	
14,500.00	10,720.00	16,180.11	12,375.00	76.41	79.73	-138.36	-4,039.86	1,585.16	2,251.99	2,169.52	82.47	27.307	
14,600.00	10,720.00	16,280.11	12,375.00	77.85	81.11	-138.36	-4,139.86	1,586.14	2,252.00	2,168.08	83.92	26.835	
14,700.00	10,720.00	16,380.11	12,375.00	79.30	82.50	-138.36	-4,239.85	1,587.12	2,252.01	2,166.62	85.38	26.376	
14,800.00	10,720.00	16,480.11	12,375.00	80.76	83.90	-138.36	-4,339.85	1,588.10	2,252.01	2,165.16	86.85	25.929	
14,900.00	10,720.00	16,580.11	12,375.00	82.22	85.31	-138.36	-4,439.84	1,589.08	2,252.02	2,163.69	88.33	25.495	
15,000.00	10,720.00	16,680.11	12,375.00	83.69	86.73	-138.36	-4,539.84	1,590.06	2,252.02	2,162.21	89.82	25.073	
15,100.00	10,720.00	16,780.11	12,375.00	85.17	88.16	-138.36	-4,639.83	1,591.04	2,252.03	2,160.72	91.31	24.663	
15,200.00	10,720.00	16,880.11	12,375.00	86.65	89.60	-138.36	-4,739.83	1,592.01	2,252.04	2,159.22	92.82	24.264	
15,300.00	10,720.00	16,980.11	12,375.00	88.14	91.04	-138.36	-4,839.82	1,592.99	2,252.04	2,157.72	94.32	23.875	
15,400.00	10,720.00	17,080.11	12,375.00	89.64	92.49	-138.36	-4,939.82	1,593.97	2,252.05	2,156.21	95.84	23.497	
15,500.00	10,720.00	17,180.11	12,375.00	91.14	93.94	-138.36	-5,039.82	1,594.95	2,252.05	2,154.69	97.37	23.130	
15,600.00	10,720.00	17,280.11	12,375.00	92.65	95.41	-138.36	-5,139.81	1,595.93	2,252.06	2,153.16	98.89	22.772	
15,700.00	10,720.00	17,380.11	12,375.00	94.16	96.88	-138.36	-5,239.81	1,596.91	2,252.07	2,151.64	100.43	22.424	
15,800.00	10,720.00	17,480.11	12,375.00	95.67	98.35	-138.36	-5,339.80	1,597.89	2,252.07	2,150.10	101.97	22.086	
15,900.00	10,720.00	17,580.11	12,375.00	97.19	99.83	-138.36	-5,439.80	1,598.87	2,252.08	2,148.56	103.52	21.756	
16,000.00	10,720.00	17,680.11	12,375.00	98.72	101.31	-138.36	-5,539.79	1,599.84	2,252.08	2,147.02	105.07	21.435	
16,100.00	10,720.00	17,780.11	12,375.00	100.25	102.81	-138.36	-5,639.79	1,600.82	2,252.09	2,145.47	106.62	21.122	
16,200.00	10,720.00	17,880.11	12,375.00	101.78	104.30	-138.36	-5,739.78	1,601.80	2,252.10	2,143.91	108.18	20.817	
16,300.00	10,720.00	17,980.11	12,375.00	103.31	105.80	-138.36	-5,839.78	1,602.78	2,252.10	2,142.36	109.75	20.521	
16,400.00	10,720.00	18,080.11	12,375.00	104.85	107.30	-138.36	-5,939.77	1,603.76	2,252.11	2,140.79	111.31	20.232	
16,500.00	10,720.00	18,180.11	12,375.00	106.40	108.81	-138.36	-6,039.77	1,604.74	2,252.11	2,139.23	112.89	19.950	
16,600.00	10,720.00	18,280.11	12,375.00	107.94	110.33	-138.36	-6,139.76	1,605.72	2,252.12	2,137.66	114.46	19.675	
16,700.00	10,720.00	18,380.11	12,375.00	109.49	111.84	-138.36	-6,239.76	1,606.69	2,252.13	2,136.08	116.04	19.408	
16,800.00	10,720.00	18,480.11	12,375.00	111.04	113.36	-138.36	-6,339.75	1,607.67	2,252.13	2,134.51	117.63	19.147	
16,900.00	10,720.00	18,580.11	12,375.00	112.60	114.89	-138.36	-6,439.75	1,608.65	2,252.14	2,132.93	119.21	18.892	
17,000.00	10,720.00	18,680.11	12,375.00	114.16	116.41	-138.36	-6,539.74	1,609.63	2,252.14	2,131.35	120.80	18.644	
17,100.00	10,720.00	18,780.11	12,375.00	115.72	117.94	-138.36	-6,639.74	1,610.61	2,252.15	2,129.76	122.39	18.401	
17,200.00	10,720.00	18,880.11	12,375.00	117.28	119.48	-138.36	-6,739.73	1,611.59	2,252.16	2,128.17	123.99	18.165	
17,300.00	10,720.00	18,980.11	12,375.00	118.84	121.01	-138.36	-6,839.73	1,612.57	2,252.16	2,126.58	125.58	17.934	
17,400.00	10,720.00	19,080.11	12,375.00	120.41	122.55	-138.36	-6,939.72	1,613.55	2,252.17	2,124.99	127.18	17.709	
17,500.00	10,720.00	19,180.11	12,375.00	121.98	124.10	-138.36	-7,039.72	1,614.52	2,252.17	2,123.39	128.78	17.488	
17,600.00	10,720.00	19,280.11	12,375.00	123.55	125.64	-138.36	-7,139.71	1,615.50	2,252.18	2,121.80	130.38	17.273	
17,700.00	10,720.00	19,380.11	12,375.00	125.13	127.19	-138.36	-7,239.71	1,616.48	2,252.19	2,120.19	131.99	17.063	
17,800.00	10,720.00	19,480.11	12,375.00	126.70	128.74	-138.36	-7,339.71	1,617.46	2,252.19	2,118.59	133.60	16.858	
17,900.00	10,720.00	19,580.11	12,375.00	128.28	130.30	-138.36	-7,439.70	1,618.44	2,252.20	2,116.99	135.21	16.657	
18,000.00	10,720.00	19,680.11	12,375.00	129.86	131.85	-138.36	-7,539.70	1,619.42	2,252.20	2,115.38	136.82	16.461	
18,100.00	10,720.00	19,780.11	12,375.00	131.44	133.41	-138.36	-7,639.69	1,620.40	2,252.21	2,113.78	138.43	16.269	
18,200.00	10,720.00	19,880.11	12,375.00	133.02	134.97	-138.36	-7,739.69	1,621.38	2,252.22	2,112.17	140.05	16.081	
18,300.00	10,720.00	19,980.11	12,375.00	134.61	136.53	-138.36	-7,839.68	1,622.35	2,252.22	2,110.55	141.67	15.898	
18,400.00	10,720.00	20,080.11	12,375.00	136.19	138.10	-138.36	-7,939.68	1,623.33	2,252.23	2,108.94	143.29	15.718	
18,500.00	10,720.00	20,180.11	12,375.00	137.78	139.66	-138.36	-8,039.67	1,624.31	2,252.23	2,107.33	144.91	15.543	
18,600.00	10,720.00	20,280.11	12,375.00	139.37	141.23	-138.36	-8,139.67	1,625.29	2,252.24	2,105.72	146.53	15.371	
18,700.00	10,720.00	20,380.11	12,375.00	140.96	142.80	-138.36	-8,239.66	1,626.27	2,252.25	2,104.10	148.15	15.203	
18,800.00	10,720.00	20,480.11	12,375.00	142.55	144.37	-138.36	-8,339.66	1,627.25	2,252.25	2,102.48	149.77	15.038	
18,900.00	10,720.00	20,580.11	12,375.00	144.15	145.95	-138.36	-8,439.65	1,628.23	2,252.26	2,100.86	151.40	14.876	
19,000.00	10,720.00	20,680.11	12,375.00	145.74	147.52	-138.36	-8,539.65	1,629.20	2,252.27	2,099.24	153.02	14.719	
19,100.00	10,720.00	20,780.11	12,375.00	147.34	149.10	-138.36	-8,639.64	1,630.18	2,252.27	2,097.62	154.65	14.564	
19,200.00	10,720.00	20,880.11	12,375.00	148.93	150.68	-138.36	-8,739.64	1,631.16	2,252.28	2,096.00	156.28	14.412	
19,300.00	10,720.00	20,980.11	12,375.00	150.53	152.26	-138.36	-8,839.63	1,632.14	2,252.28	2,094.38	157.91	14.263	
19,400.00	10,720.00	21,080.11	12,375.00	152.13	153.84	-138.36	-8,939.63	1,633.12	2,252.29	2,092.75	159.54	14.118	

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

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Tatanka Fed Com - Tatanka 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 Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,500.00	10,720.00	21,180.11	12,375.00	153.73	155.42	-138.36	-9,039.62	1,634.10	2,252.30	2,091.13	161.17	13.975	
19,600.00	10,720.00	21,280.11	12,375.00	155.33	157.01	-138.36	-9,139.62	1,635.08	2,252.30	2,089.50	162.80	13.835	
19,700.00	10,720.00	21,380.11	12,375.00	156.94	158.60	-138.36	-9,239.61	1,636.06	2,252.31	2,087.88	164.43	13.698	
19,800.00	10,720.00	21,480.11	12,375.00	158.54	160.18	-138.35	-9,339.61	1,637.03	2,252.31	2,086.25	166.06	13.563	
19,900.00	10,720.00	21,580.11	12,375.00	160.14	161.77	-138.35	-9,439.60	1,638.01	2,252.32	2,084.62	167.70	13.431	
20,000.00	10,720.00	21,680.11	12,375.00	161.75	163.36	-138.35	-9,539.60	1,638.99	2,252.33	2,083.00	169.33	13.301	
20,100.00	10,720.00	21,780.11	12,375.00	163.36	164.95	-138.35	-9,639.60	1,639.97	2,252.33	2,081.37	170.96	13.174	
20,200.00	10,720.00	21,880.11	12,375.00	164.96	166.54	-138.35	-9,739.59	1,640.95	2,252.34	2,079.74	172.60	13.049	
20,300.00	10,720.00	21,980.11	12,375.00	166.57	168.14	-138.35	-9,839.59	1,641.93	2,252.34	2,078.11	174.24	12.927	
20,400.00	10,720.00	22,080.11	12,375.00	168.18	169.73	-138.35	-9,939.58	1,642.91	2,252.35	2,076.48	175.87	12.807	
20,500.00	10,720.00	22,180.11	12,375.00	169.79	171.33	-138.35	-10,039.58	1,643.89	2,252.36	2,074.84	177.51	12.689	
20,600.00	10,720.00	22,280.11	12,375.00	171.40	172.92	-138.35	-10,139.57	1,644.86	2,252.36	2,073.22	179.15	12.573	
20,700.00	10,720.00	22,380.11	12,375.00	173.01	174.52	-138.35	-10,239.57	1,645.84	2,252.37	2,071.58	180.78	12.459	
20,800.00	10,720.00	22,480.11	12,375.00	174.63	176.12	-138.35	-10,339.56	1,646.82	2,252.37	2,069.95	182.42	12.347	
20,841.32	10,720.00	22,521.43	12,375.00	175.22	176.75	-138.35	-10,380.88	1,647.23	2,252.38	2,069.39	182.99	12.309	SF

FRANKLIN MOUNTAIN ENERGY

Total Directional Services

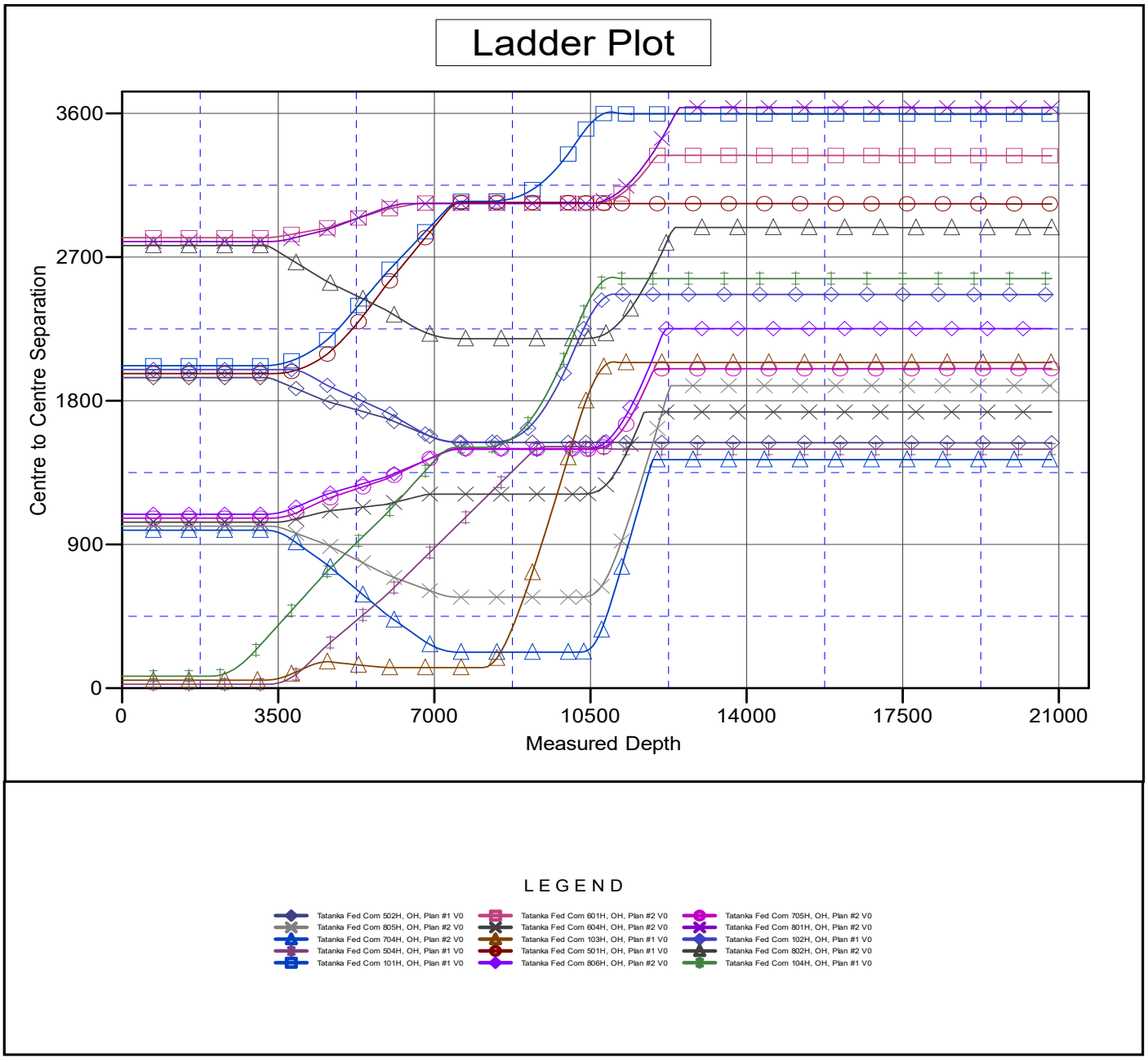
Anticollision Report

total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3118.4' GE + 30' KB @ 3148.30usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Tatanka Fed Com 503H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.53°



FRANKLIN MOUNTAIN ENERGY

Total Directional Services

Anticollision Report

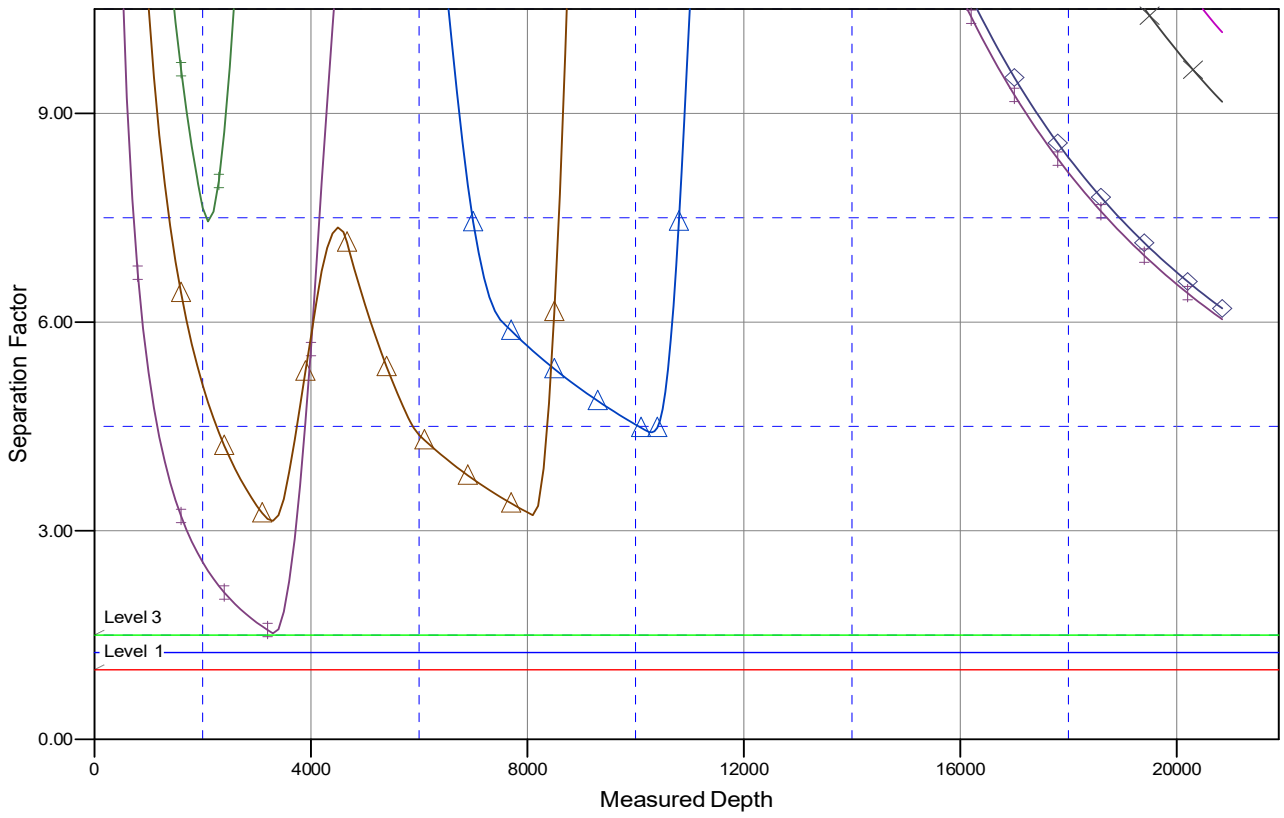
total

Company:	Franklin Mountain Energy	**Local Co-ordinate Reference:**	Well Tatanka Fed Com 503H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Reference Site:	Tatanka Fed Com	**MD Reference:**	3118.4' GE + 30' KB @ 3148.30usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Tatanka Fed Com 503H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	EDM 5000.15 Single User Db
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to 3118.4' GE + 30' KB @ 3148.30usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Tatanka Fed Com 503H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.53°

Separation Factor Plot



LEGEND

Tatanka Fed Com 502H, OH, Plan #1 V0
Tatanka Fed Com 805H, OH, Plan #2 V0
Tatanka Fed Com 704H, OH, Plan #2 V0
Tatanka Fed Com 504H, OH, Plan #1 V0
Tatanka Fed Com 101H, OH, Plan #1 V0
Tatanka Fed Com 601H, OH, Plan #2 V0
Tatanka Fed Com 604H, OH, Plan #2 V0
Tatanka Fed Com 103H, OH, Plan #1 V0
Tatanka Fed Com 501H, OH, Plan #1 V0
Tatanka Fed Com 806H, OH, Plan #2 V0
Tatanka Fed Com 705H, OH, Plan #2 V0
Tatanka Fed Com 801H, OH, Plan #2 V0
Tatanka Fed Com 102H, OH, Plan #1 V0
Tatanka Fed Com 802H, OH, Plan #2 V0
Tatanka Fed Com 104H, OH, Plan #1 V0

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Franklin Mountain Energy LLC
LEASE NO.:	NMNM12280
COUNTY:	Lea County

Wells:

Tatanka Fed Com 601H
Tatanka Fed Com 801H
Tatanka Fed Com 802H
Tatanka Fed Com 502H
Tatanka Fed Com 501H
Tatanka Fed Com 102H
Tatanka Fed Com 101H
Tatanka Fed Com 603H
Tatanka Fed Com 804H
Tatanka Fed Com 703H
Tatanka Fed Com 803H
Tatanka Fed Com 602H
Tatanka Fed Com 702H
Tatanka Fed Com 104H
Tatanka Fed Com 103H
Tatanka Fed Com 504H
Tatanka Fed Com 503H
Tatanka Fed Com 806H
Tatanka Fed Com 705H
Tatanka Fed Com 604H
Tatanka Fed Com 805H
Tatanka Fed Com 704H

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be

responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Watershed:
The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

TANK BATTERY:
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

BURIED/SURFACE LINE(S):
When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

ELECTRIC LINE(S):
Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or

floodplains and must span across the features at a distance away that would not promote further erosion.

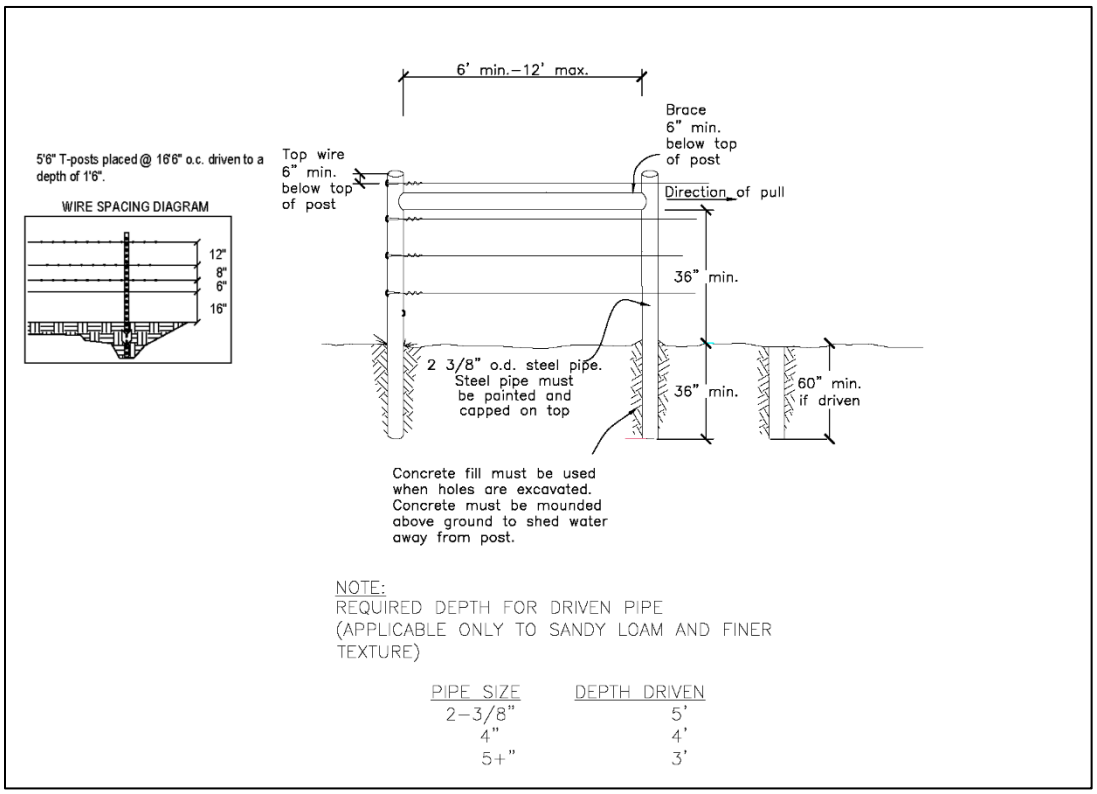
Range:

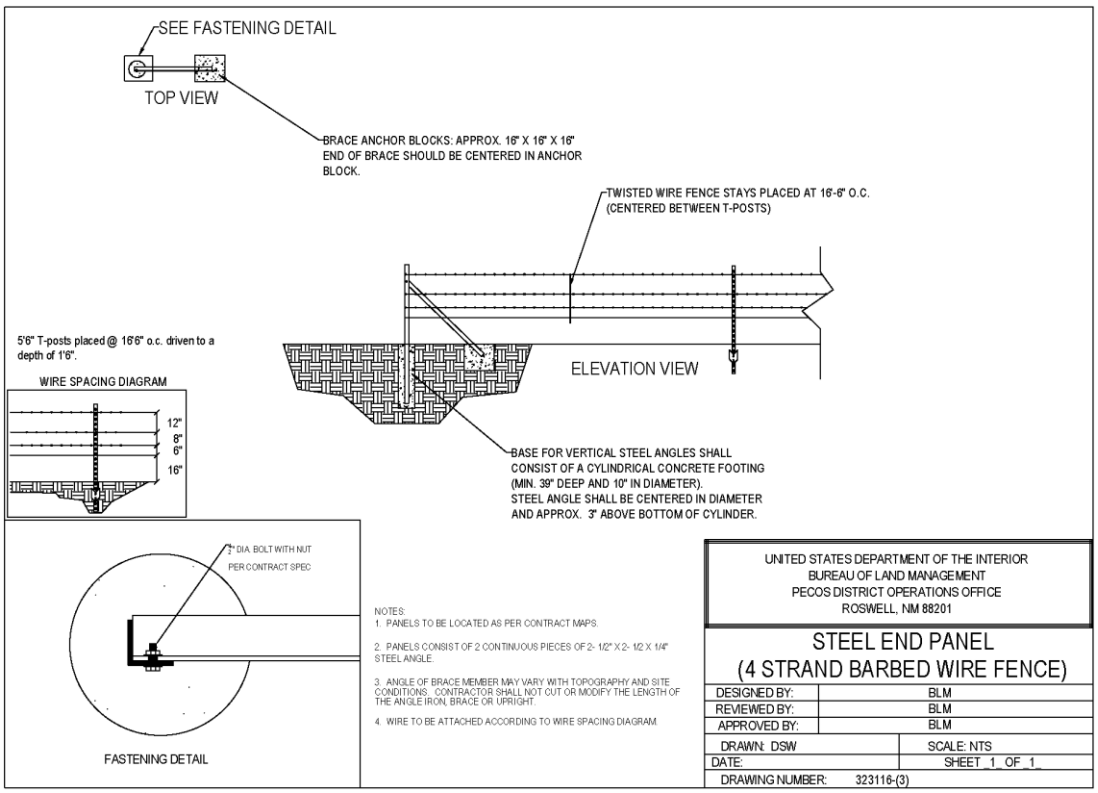
Cattleguards

Where a permanent cattleguard is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement

Where entry granted across a fence line, the fence must be H-braced or angle iron braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall consult the private surface landowner or the grazing allotment holder prior to cutting any fence(s).





Livestock Watering Requirement

Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary

Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

VRM IV:

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Carlsbad Canyon from the BLM Standard Environmental Color Chart (CC-001: June 2008).

Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Carlsbad Canyon, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

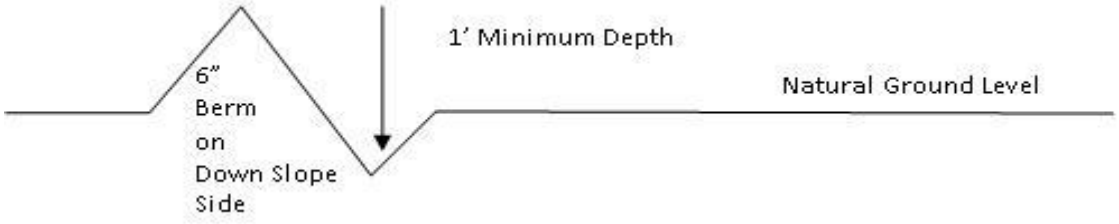
Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards
An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement
Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

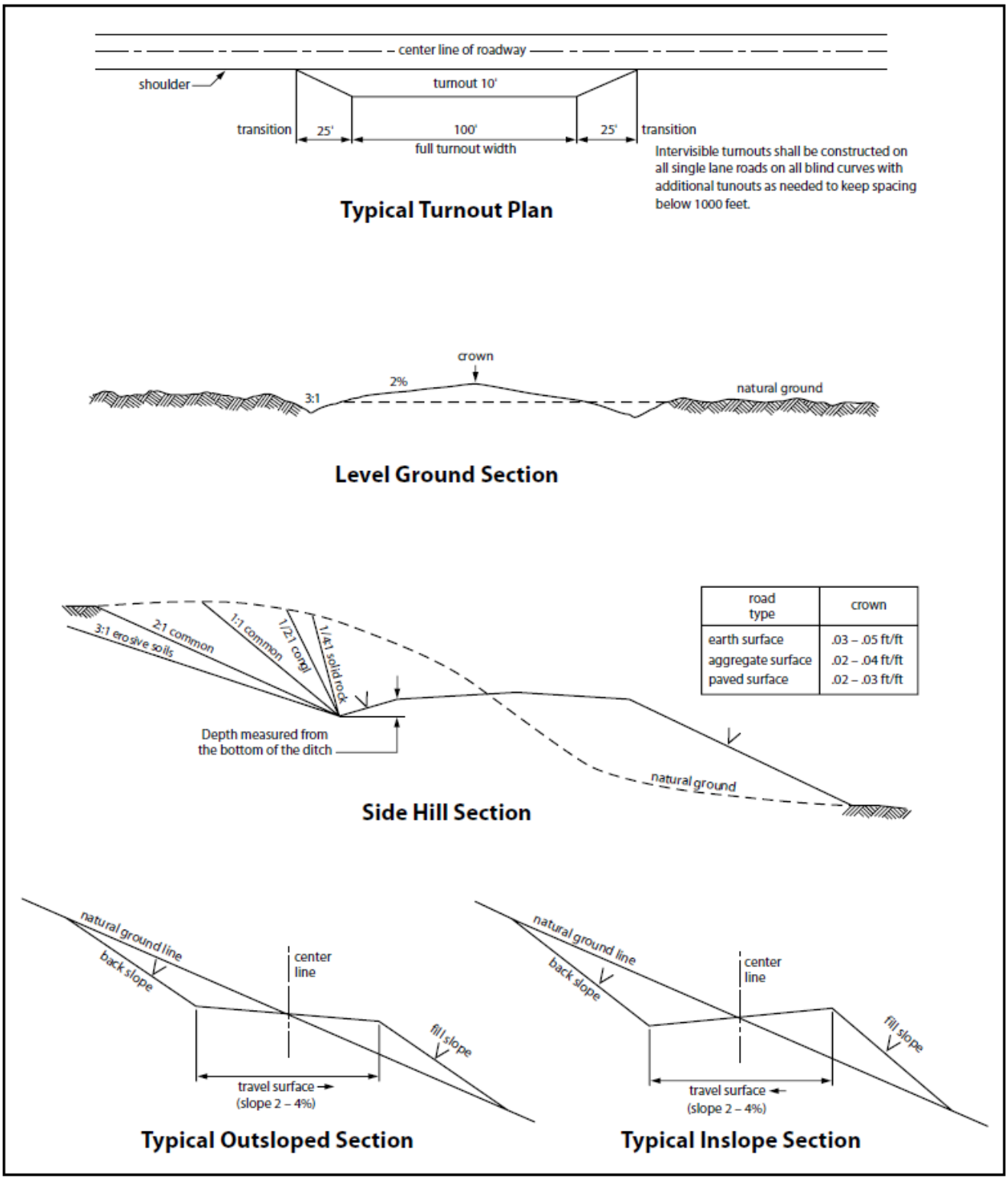


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.
- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Special restoration stipulations or realignment may be required at such intersections, if any.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating values and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C.

9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

☐**Seed Mixture 1**
☒**Seed Mixture 2**
☐**Seed Mixture 2/LPC**
☐**Seed Mixture 3**
☐**Seed Mixture 4**
☐**Seed Mixture Aplomado Falcon Mixture**

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 17 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

17. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

18. Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

19. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

20. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter

enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq*. (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq*. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq*.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:
   (1) Land clearing
   (2) Earth-disturbing and earth-moving work
   (3) Blasting
   (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **30** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the

surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 6 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 16 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

16. The holder is hereby obligated to comply with procedures established in the Native American

Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

17. Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

18. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, powerline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

19. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

C. ELECTRIC LINES

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
- No further construction will be done until clearance has been issued by the Authorized Officer.
- Special restoration stipulations or realignment may be required.

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-

way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 11 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

11. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

12. Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

13. Special Stipulations:
For reclamation remove poles, lines, transformer, etc. and dispose of properly.
Fill in any holes from the poles removed.

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Franklin Mountain Energy LLC**
LEASE NO.:	**NMNM12280**
LOCATION:	Section 2, T.26 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Tatanka Fed Com 103H
SURFACE HOLE FOOTAGE:	20'/N & 1875'/E
BOTTOM HOLE FOOTAGE	150'/S & 1877'/E

WELL NAME & NO.:	Tatanka Fed Com 104H
SURFACE HOLE FOOTAGE:	20'/N & 1850'/E
BOTTOM HOLE FOOTAGE	150'/S & 380'/E

WELL NAME & NO.:	Tatanka Fed Com 503H
SURFACE HOLE FOOTAGE:	20'/N & 1925'/E
BOTTOM HOLE FOOTAGE	150'/S & 1877'/E

WELL NAME & NO.:	Tatanka Fed Com 504H
SURFACE HOLE FOOTAGE:	20'/N & 1900'/E
BOTTOM HOLE FOOTAGE	150'/S & 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
Other	☑ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☑ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Strawn** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

 Approval Date: 03/07/2022

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1110 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.

    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.

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 **200 feet** into previous casing string. Operator shall provide method of verification.

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

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

C. PRESSURE CONTROL

1.

Option 1:

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

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **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:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 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.**

    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. 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.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

GENERAL REQUIREMENTS

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

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

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

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

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

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

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

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

 Approval Date: 03/07/2022

A. CASING

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

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

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

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

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

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

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

B. PRESSURE CONTROL

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 88346

CONDITIONS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 88346
	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	3/16/2022
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	3/16/2022
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	3/16/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/16/2022