

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD - HOBBS
11/18/2020
RECEIVED

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

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
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. [329875]
2. Name of Operator [373910]		9. API Well No. 30-025-48101
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [98228]
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 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.

GCP Rec 11/18/2020

SL

(Continued on page 2)

APPROVED WITH CONDITIONS
Approval Date: 10/21/2020

KZ
12/01/2020

*(Instructions on page 2)

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

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

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

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

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

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

The Paperwork Reduction Act of 1995 requires us to inform you that:

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

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

Additional Operator Remarks

Location of Well

0. SHL: SESW / 312 FSL / 2375 FWL / TWSP: 25S / RANGE: 35E / SECTION: 36 / LAT: 32.080431 / LONG: -103.322121 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 0 FNL / 1707 FWL / TWSP: 26S / RANGE: 35E / SECTION: 12 / LAT: 32.065043 / LONG: -103.324267 (TVD: 12113 feet, MD: 17662 feet)

PPP: NENW / 47 FNL / 1713 FWL / TWSP: 26S / RANGE: 35E / SECTION: 1 / LAT: 32.079443 / LONG: -103.324257 (TVD: 12046 feet, MD: 12422 feet)

PPP: NENW / 0 FNL / 1800 FWL / TWSP: 26S / RANGE: 35E / SECTION: 1 / LAT: 32.079573 / LONG: -103.323975 (TVD: 12045 feet, MD: 12400 feet)

BHL: NENE / 1170 FNL / 1700 FWL / TWSP: 26S / RANGE: 35E / SECTION: 13 / LAT: 32.04732 / LONG: -103.324279 (TVD: 12198 feet, MD: 24110 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: (575) 234-2224

Email: tortiz@blm.gov

CONFIDENTIAL

Review and Appeal Rights

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

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Hydrogen Sulfide Plan

- A. All personnel shall receive proper awareness H₂S training.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment
 - a. Well Control Equipment
 - i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.
 - ii. Choke manifold with a remotely operated hydraulic choke.
 - iii. Mud/gas separator
 - b. Protective equipment for essential personnel
 - i. Breathing Apparatus
 - 1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.
 - 2. Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
 - 3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation
 - ii. Auxiliary Rescue Equipment
 - 1. Stretcher
 - 2. Two OSHA full body harnesses
 - 3. 100 feet of 5/8 inches OSHA approved rope
 - 4. 1-20# class ABC fire extinguisher
 - c. H₂S Detection and Monitoring Equipment
 - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
 - 1. Rig Floor
 - 2. Below Rig Floor / Near BOPs
 - 3. End of flow line or where well bore fluid is being discharged (near shakers)
 - ii. If H₂S is encountered, measured values and formations will be provided to the BLM.
 - d. Visual Warning Systems
 - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - iii. Two windsocks will be placed in strategic locations, visible from all angles.
 - e. Mud Program
 - i. The Mud program will be designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.



- f. Metallurgy
 - i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service at the anticipated operating pressures to prevent sour sulfide stress cracking.
- g. Communication
 - i. Communication will be via cell phones and walkie talkies on location.

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



Emergency Contact List:

Vladimir Roudakov, Drilling Engineer	Cell 720 933 9784
Rachael Overbey, Project and Regulatory Director	Cell 303 570 4057
Franklin Mountain Energy Afterhours Emergency Call Tree:	720-640-7517

EMERGENCY NUMBERS:

<u>Agency</u>	<u>Telephone Number</u>
BLM – Carlsbad Mainline	575-234-5972
BLM – Spill Emergency	575-234-6235
BLM – Engineering Emergency	575-361-2822
NMOCD District 1 – Hobbs Mainline	575-393-6161
NMOCD Emergency Line	575-370-3186
Wild Well Control	281-784-4700
H2S Emergency response:	
Air Ambulance New Mexico – Lea Co Reginal	575-391-2934
Lea County Sheriff's Department	575-396-3611
Fire Department:	
Carlsbad	575-885-3125
Artesia	575-746-5050
Lea County Regional Medical Center	575-492-5000
Jal Community Hospital	505-395-2511
Lea County Emergency Management	575-396-8602
Poison Control Center	800-222-1222

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Franklin Mountain Energy LLC
LEASE NO.:	NMNM117126
LOCATION:	Section 36, T.25 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Bus Driver Fed Com 602H
SURFACE HOLE FOOTAGE:	312'/S & 2410'/W
BOTTOM HOLE FOOTAGE:	1170'/N & 2160'/W

WELL NAME & NO.:	Bus Driver Fed Com 702H
SURFACE HOLE FOOTAGE:	312'/S & 2375'/W
BOTTOM HOLE FOOTAGE:	1170'/N & 1700'/W

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☒ None	☐ Flex Hose	☐ Other
Wellhead	☐ Conventional	☐ Multibowl	☒ Both
Other	☒ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit

A. HYDROGEN SULFIDE

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

B. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **1150 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature

survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

- b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **5400 feet** is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not

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

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
 Site: Bus Driver/Kasten Fed Com
 Well: Bus Driver Fed Com 702H
 Wellbore: OH
 Design: Plan #2



Azimuths to Grid North
 True North: -0.54°
 Magnetic North: 6.00°

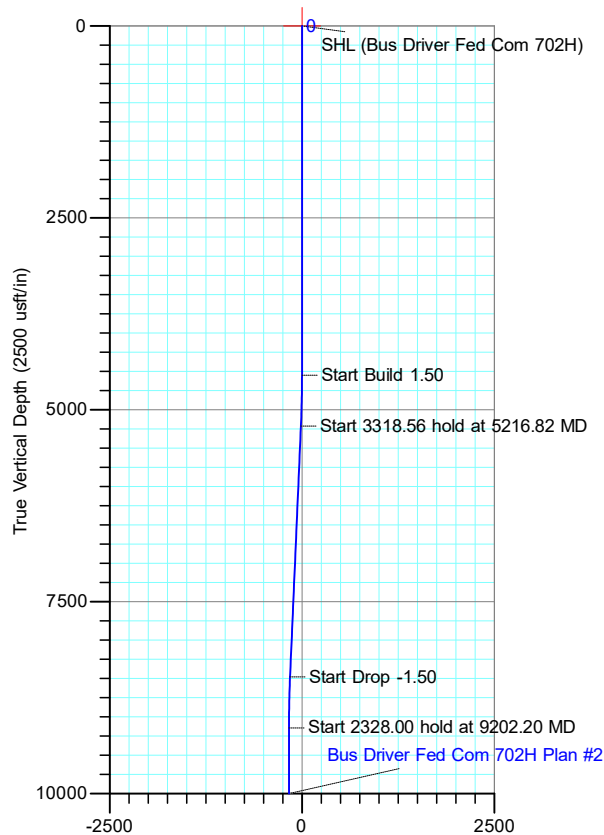
Magnetic Field
 Strength: 47604.7nT
 Dip Angle: 59.93°
 Date: 2/25/2020
 Model: IGRF2015

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



3057.7' GE + 21' KB @ 3078.70usft

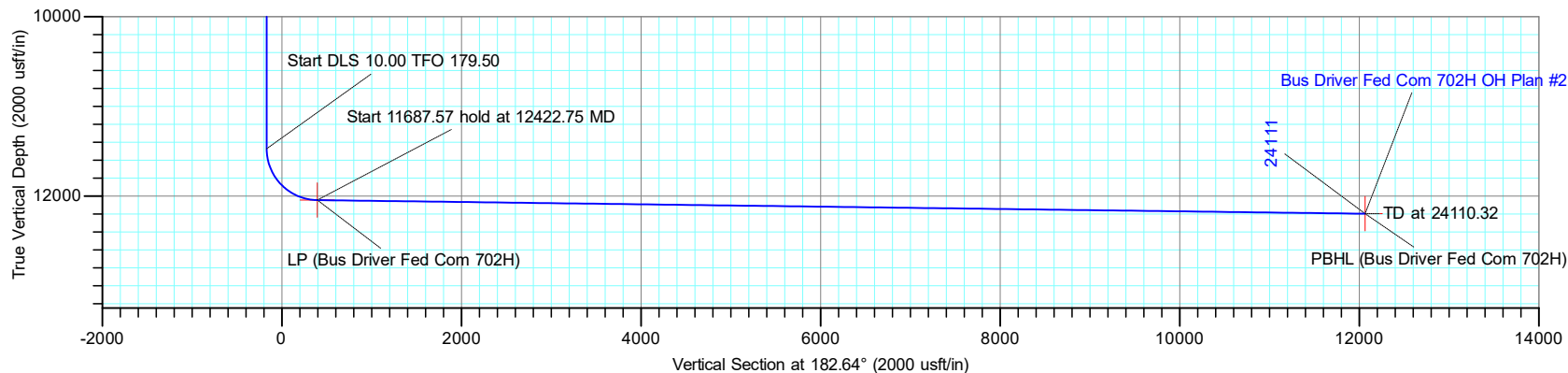
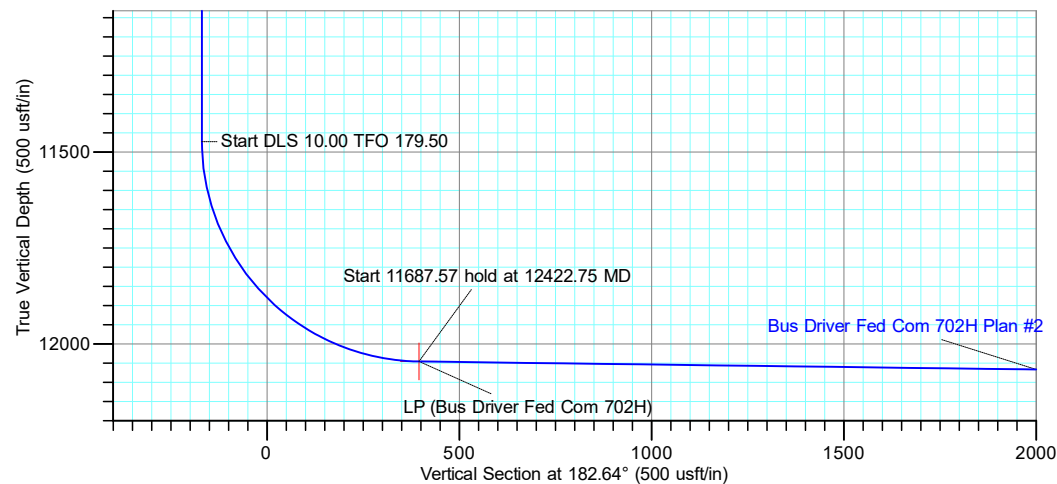


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4550.00	0.00	0.00	4550.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
5216.82	10.00	286.79	5213.44	16.77	-55.58	1.50	286.79	-14.19	Start 3318.56 hold at 5216.82 MD
8535.38	10.00	286.79	8481.56	183.23	-607.42	0.00	0.00	-155.06	Start Drop -1.50
9202.20	0.00	0.00	9145.00	200.00	-663.00	1.50	180.00	-169.25	Start 2328.00 hold at 9202.20 MD
11530.20	0.00	0.00	11473.00	200.00	-663.00	0.00	0.00	-169.25	Start DLS 10.00 TFO 179.50
12422.75	89.25	179.50	12045.91	-365.48	-658.05	10.00	179.50	395.41	Start 11687.57 hold at 12422.75 MD
24110.32	89.25	179.50	12197.93	-12051.62	-555.73	0.00	0.00	12064.43	TD at 24110.32

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (Bus Driver Fed Com 702H)	12045.91	-365.48	-658.05	32.079443	-103.324257
PBHL (Bus Driver Fed Com 702H)	12197.93	-12051.62	-555.73	32.047320	-103.324279
SHL (Bus Driver Fed Com 702H)	0.00	0.00	0.00	32.080431	-103.322121



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

Plan: Plan #2 (Bus Driver Fed Com 702H/OH)
 Bus Driver/Kasten Fed Com
 Created By: Dustin Ault Date: 22:51, February 25 2020
 Date: _____
 Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
 Site: Bus Driver/Kasten Fed Com
 Well: Bus Driver Fed Com 702H
 Wellbore: OH
 Design: Plan #2



Azimuths to Grid North
 True North: -0.54°
 Magnetic North: 6.00°

Magnetic Field
 Strength: 47604.7nT
 Dip Angle: 59.93°
 Date: 2/25/2020
 Model: IGRF2015

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

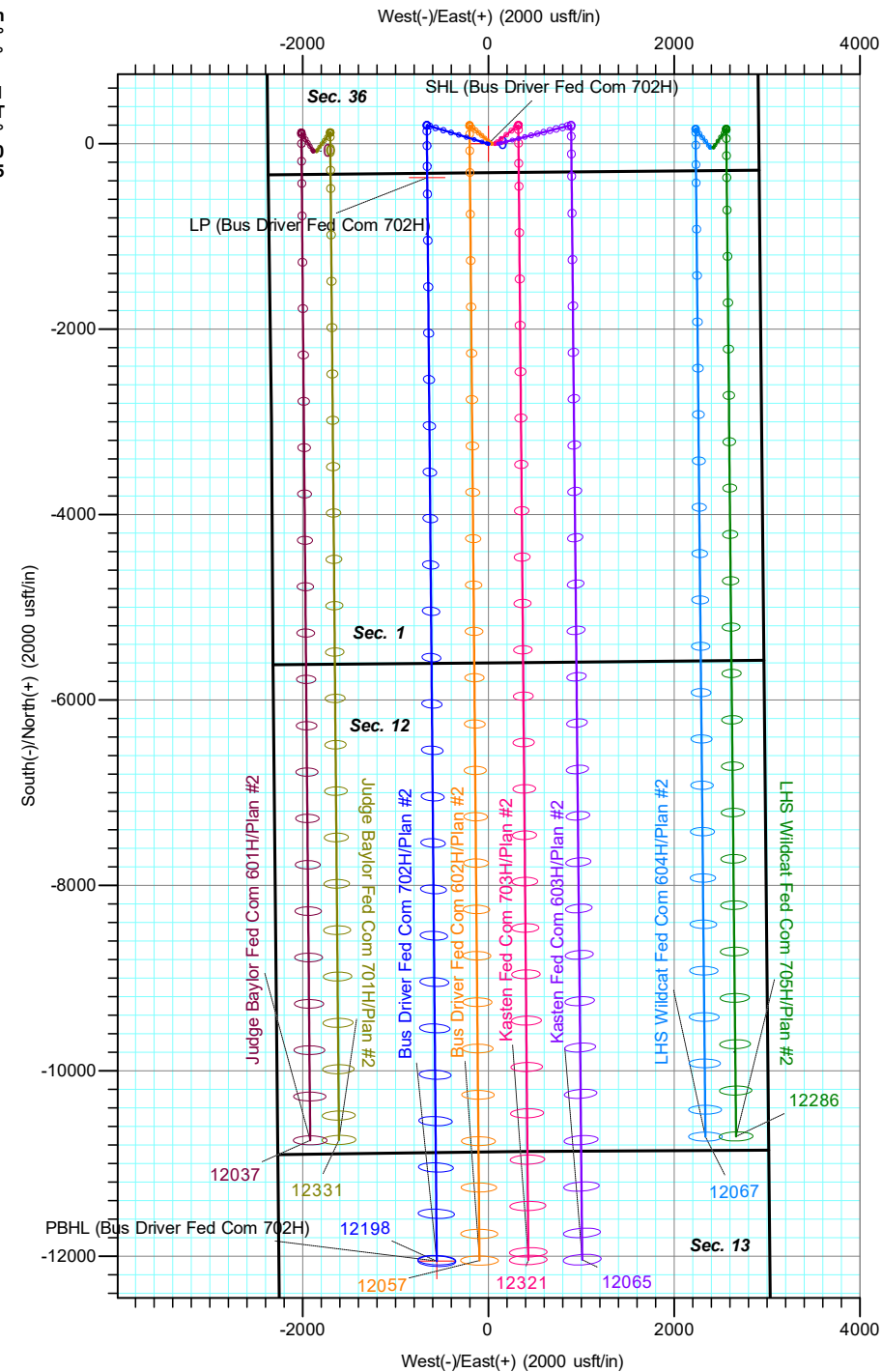
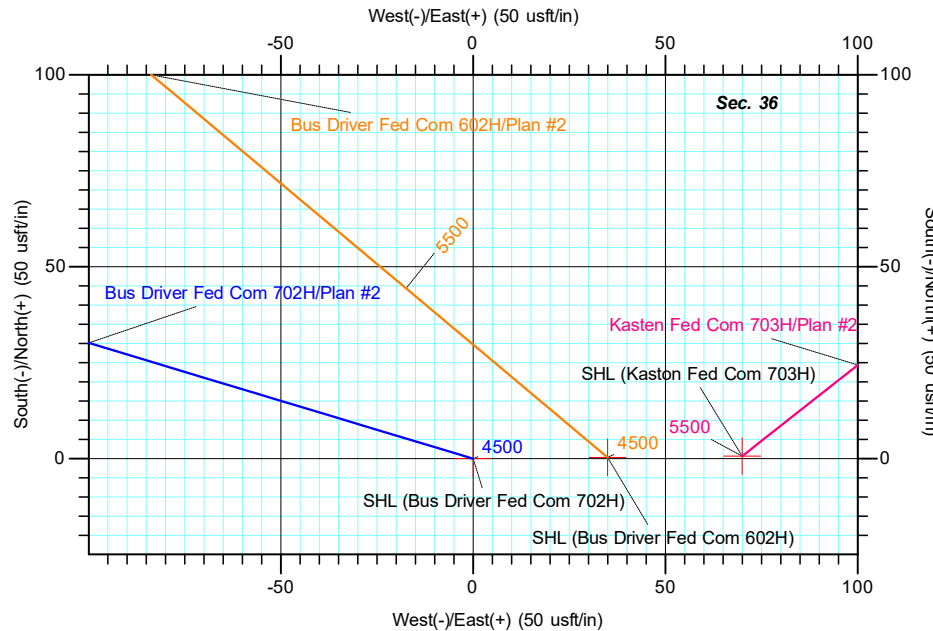


DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (Bus Driver Fed Com 702H)	12045.91	-365.48	-658.05	394100.27	853876.35	32.079443	-103.324257
PBHL (Bus Driver Fed Com 702H)	12197.93	-12051.62	-555.73	382414.13	853978.67	32.047320	-103.324279
SHL (Bus Driver Fed Com 702H)	0.00	0.00	0.00	394465.75	854534.40	32.080431	-103.322121

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4550.00	0.00	0.00	4550.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
5216.82	10.00	286.79	5213.44	16.77	-55.58	1.50	286.79	-14.19	Start 3318.56 hold at 5216.82 MD
8535.38	10.00	286.79	8481.56	183.23	-607.42	0.00	0.00	-155.06	Start Drop -1.50
9202.20	0.00	0.00	9145.00	200.00	-663.00	1.50	180.00	-169.25	Start 2328.00 hold at 9202.20 MD
11530.20	0.00	0.00	11473.00	200.00	-663.00	0.00	0.00	-169.25	Start DLS 10.00 TFO 179.50
12422.75	89.25	179.50	12045.91	-365.48	-658.05	10.00	179.50	395.41	Start 11687.57 hold at 12422.75 MD
24110.32	89.25	179.50	12197.93	-12051.62	-555.73	0.00	0.00	12064.43	TD at 24110.32



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

Plan: Plan #2 (Bus Driver Fed Com 702H/OH)
 Bus Driver/Kasten Fed Com
 Created By: Dustin Ault Date: 22:52, February 25 2020
 Approved: _____ Date: _____



Franklin Mountain Energy

**Lea County, NM (NAD83)
Bus Driver/Kasten Fed Com
Bus Driver Fed Com 702H**

OH

Plan: Plan #2

Standard Planning Report

25 February, 2020



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Lea County, NM (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Bus Driver/Kasten Fed Com				
Site Position:		Northing:	394,466.08 usft	Latitude:	32.080431
From:	Map	Easting:	854,569.39 usft	Longitude:	-103.322008
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.54 °

Well	Bus Driver Fed Com 702H					
Well Position	+N/-S	-0.33 usft	Northing:	394,465.75 usft	Latitude:	32.080431
	+E/-W	-34.99 usft	Easting:	854,534.40 usft	Longitude:	-103.322121
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,057.70 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/25/2020	6.53	59.93	47,604.65483712

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	182.64

Plan Survey Tool Program	Date	2/25/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	24,110.32 Plan #2 (OH)	OWSG (Rev2) MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,550.00	0.00	0.00	4,550.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,216.82	10.00	286.79	5,213.44	16.77	-55.58	1.50	1.50	0.00	286.79	
8,535.38	10.00	286.79	8,481.56	183.23	-607.42	0.00	0.00	0.00	0.00	
9,202.20	0.00	0.00	9,145.00	200.00	-663.00	1.50	-1.50	0.00	180.00	
11,530.20	0.00	0.00	11,473.00	200.00	-663.00	0.00	0.00	0.00	0.00	
12,422.75	89.25	179.50	12,045.91	-365.48	-658.05	10.00	10.00	20.11	179.50	
24,110.32	89.25	179.50	12,197.93	-12,051.62	-555.73	0.00	0.00	0.00	0.00	PBHL (Bus Driver Fec



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (Bus Driver Fed Com 702H)									
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
4,550.00	0.00	0.00	4,550.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
4,600.00	0.75	286.79	4,600.00	0.09	-0.31	-0.08	1.50	1.50	0.00
4,700.00	2.25	286.79	4,699.96	0.85	-2.82	-0.72	1.50	1.50	0.00
4,800.00	3.75	286.79	4,799.82	2.36	-7.83	-2.00	1.50	1.50	0.00
4,900.00	5.25	286.79	4,899.51	4.63	-15.34	-3.92	1.50	1.50	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.00	6.75	286.79	4,998.96	7.65	-25.35	-6.47	1.50	1.50	0.00
5,100.00	8.25	286.79	5,098.10	11.42	-37.84	-9.66	1.50	1.50	0.00
5,200.00	9.75	286.79	5,196.87	15.93	-52.82	-13.48	1.50	1.50	0.00
5,216.82	10.00	286.79	5,213.44	16.77	-55.58	-14.19	1.50	1.50	0.00
Start 3318.56 hold at 5216.82 MD									
5,300.00	10.00	286.79	5,295.35	20.94	-69.41	-17.72	0.00	0.00	0.00
5,400.00	10.00	286.79	5,393.83	25.96	-86.04	-21.97	0.00	0.00	0.00
5,500.00	10.00	286.79	5,492.31	30.97	-102.67	-26.21	0.00	0.00	0.00
5,600.00	10.00	286.79	5,590.79	35.99	-119.30	-30.45	0.00	0.00	0.00
5,700.00	10.00	286.79	5,689.27	41.00	-135.93	-34.70	0.00	0.00	0.00
5,800.00	10.00	286.79	5,787.75	46.02	-152.56	-38.94	0.00	0.00	0.00
5,900.00	10.00	286.79	5,886.23	51.04	-169.19	-43.19	0.00	0.00	0.00
6,000.00	10.00	286.79	5,984.71	56.05	-185.82	-47.43	0.00	0.00	0.00
6,100.00	10.00	286.79	6,083.19	61.07	-202.44	-51.68	0.00	0.00	0.00
6,200.00	10.00	286.79	6,181.67	66.09	-219.07	-55.92	0.00	0.00	0.00
6,300.00	10.00	286.79	6,280.15	71.10	-235.70	-60.17	0.00	0.00	0.00
6,400.00	10.00	286.79	6,378.63	76.12	-252.33	-64.41	0.00	0.00	0.00
6,500.00	10.00	286.79	6,477.11	81.13	-268.96	-68.66	0.00	0.00	0.00
6,600.00	10.00	286.79	6,575.59	86.15	-285.59	-72.90	0.00	0.00	0.00
6,700.00	10.00	286.79	6,674.07	91.17	-302.22	-77.15	0.00	0.00	0.00
6,800.00	10.00	286.79	6,772.56	96.18	-318.85	-81.39	0.00	0.00	0.00
6,900.00	10.00	286.79	6,871.04	101.20	-335.47	-85.64	0.00	0.00	0.00
7,000.00	10.00	286.79	6,969.52	106.21	-352.10	-89.88	0.00	0.00	0.00
7,100.00	10.00	286.79	7,068.00	111.23	-368.73	-94.13	0.00	0.00	0.00
7,200.00	10.00	286.79	7,166.48	116.25	-385.36	-98.37	0.00	0.00	0.00
7,300.00	10.00	286.79	7,264.96	121.26	-401.99	-102.62	0.00	0.00	0.00
7,400.00	10.00	286.79	7,363.44	126.28	-418.62	-106.86	0.00	0.00	0.00
7,500.00	10.00	286.79	7,461.92	131.30	-435.25	-111.11	0.00	0.00	0.00
7,600.00	10.00	286.79	7,560.40	136.31	-451.87	-115.35	0.00	0.00	0.00
7,700.00	10.00	286.79	7,658.88	141.33	-468.50	-119.60	0.00	0.00	0.00
7,800.00	10.00	286.79	7,757.36	146.34	-485.13	-123.84	0.00	0.00	0.00
7,900.00	10.00	286.79	7,855.84	151.36	-501.76	-128.09	0.00	0.00	0.00
8,000.00	10.00	286.79	7,954.32	156.38	-518.39	-132.33	0.00	0.00	0.00
8,100.00	10.00	286.79	8,052.80	161.39	-535.02	-136.58	0.00	0.00	0.00
8,200.00	10.00	286.79	8,151.28	166.41	-551.65	-140.82	0.00	0.00	0.00
8,300.00	10.00	286.79	8,249.76	171.43	-568.28	-145.07	0.00	0.00	0.00
8,400.00	10.00	286.79	8,348.24	176.44	-584.90	-149.31	0.00	0.00	0.00
8,500.00	10.00	286.79	8,446.72	181.46	-601.53	-153.56	0.00	0.00	0.00
8,535.38	10.00	286.79	8,481.56	183.23	-607.42	-155.06	0.00	0.00	0.00
Start Drop -1.50									
8,600.00	9.03	286.79	8,545.29	186.32	-617.65	-157.67	1.50	-1.50	0.00
8,700.00	7.53	286.79	8,644.24	190.48	-631.44	-161.19	1.50	-1.50	0.00
8,800.00	6.03	286.79	8,743.54	193.89	-642.75	-164.08	1.50	-1.50	0.00
8,900.00	4.53	286.79	8,843.11	196.55	-651.56	-166.33	1.50	-1.50	0.00
9,000.00	3.03	286.79	8,942.89	198.45	-657.88	-167.94	1.50	-1.50	0.00
9,100.00	1.53	286.79	9,042.81	199.61	-661.69	-168.92	1.50	-1.50	0.00
9,202.20	0.00	0.00	9,145.00	200.00	-663.00	-169.25	1.50	-1.50	0.00
Start 2328.00 hold at 9202.20 MD									
9,300.00	0.00	0.00	9,242.80	200.00	-663.00	-169.25	0.00	0.00	0.00
9,400.00	0.00	0.00	9,342.80	200.00	-663.00	-169.25	0.00	0.00	0.00
9,500.00	0.00	0.00	9,442.80	200.00	-663.00	-169.25	0.00	0.00	0.00
9,600.00	0.00	0.00	9,542.80	200.00	-663.00	-169.25	0.00	0.00	0.00
9,700.00	0.00	0.00	9,642.80	200.00	-663.00	-169.25	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,800.00	0.00	0.00	9,742.80	200.00	-663.00	-169.25	0.00	0.00	0.00
9,900.00	0.00	0.00	9,842.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,000.00	0.00	0.00	9,942.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,100.00	0.00	0.00	10,042.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,200.00	0.00	0.00	10,142.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,300.00	0.00	0.00	10,242.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,400.00	0.00	0.00	10,342.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,500.00	0.00	0.00	10,442.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,600.00	0.00	0.00	10,542.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,700.00	0.00	0.00	10,642.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,800.00	0.00	0.00	10,742.80	200.00	-663.00	-169.25	0.00	0.00	0.00
10,900.00	0.00	0.00	10,842.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,000.00	0.00	0.00	10,942.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,100.00	0.00	0.00	11,042.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,200.00	0.00	0.00	11,142.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,300.00	0.00	0.00	11,242.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,400.00	0.00	0.00	11,342.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,500.00	0.00	0.00	11,442.80	200.00	-663.00	-169.25	0.00	0.00	0.00
11,530.20	0.00	0.00	11,473.00	200.00	-663.00	-169.25	0.00	0.00	0.00
Start DLS 10.00 TFO 179.50									
11,550.00	1.98	179.50	11,492.79	199.66	-663.00	-168.91	10.00	10.00	0.00
11,600.00	6.98	179.50	11,542.62	195.75	-662.96	-165.01	10.00	10.00	0.00
11,650.00	11.98	179.50	11,591.93	187.52	-662.89	-156.79	10.00	10.00	0.00
11,700.00	16.98	179.50	11,640.32	175.02	-662.78	-144.31	10.00	10.00	0.00
11,750.00	21.98	179.50	11,687.45	158.36	-662.64	-127.67	10.00	10.00	0.00
11,800.00	26.98	179.50	11,732.94	137.65	-662.45	-106.99	10.00	10.00	0.00
11,850.00	31.98	179.50	11,776.45	113.05	-662.24	-82.43	10.00	10.00	0.00
11,900.00	36.98	179.50	11,817.65	84.75	-661.99	-54.17	10.00	10.00	0.00
11,950.00	41.98	179.50	11,856.23	52.97	-661.71	-22.44	10.00	10.00	0.00
12,000.00	46.98	179.50	11,891.90	17.95	-661.41	12.53	10.00	10.00	0.00
12,050.00	51.98	179.50	11,924.37	-20.04	-661.07	50.47	10.00	10.00	0.00
12,100.00	56.98	179.50	11,953.41	-60.72	-660.72	91.09	10.00	10.00	0.00
12,150.00	61.98	179.50	11,978.80	-103.78	-660.34	134.08	10.00	10.00	0.00
12,200.00	66.98	179.50	12,000.33	-148.88	-659.95	179.12	10.00	10.00	0.00
12,250.00	71.98	179.50	12,017.85	-195.70	-659.54	225.87	10.00	10.00	0.00
12,300.00	76.98	179.50	12,031.23	-243.85	-659.11	273.95	10.00	10.00	0.00
12,350.00	81.98	179.50	12,040.35	-293.00	-658.68	323.02	10.00	10.00	0.00
12,400.00	86.98	179.50	12,045.16	-342.75	-658.25	372.70	10.00	10.00	0.00
12,422.75	89.25	179.50	12,045.91	-365.48	-658.05	395.40	10.00	10.00	0.00
Start 11687.57 hold at 12422.75 MD - LP (Bus Driver Fed Com 702H)									
12,500.00	89.25	179.50	12,046.91	-442.72	-657.37	472.53	0.00	0.00	0.00
12,600.00	89.25	179.50	12,048.22	-542.71	-656.50	572.37	0.00	0.00	0.00
12,700.00	89.25	179.50	12,049.52	-642.70	-655.62	672.21	0.00	0.00	0.00
12,800.00	89.25	179.50	12,050.82	-742.69	-654.75	772.06	0.00	0.00	0.00
12,900.00	89.25	179.50	12,052.12	-842.67	-653.87	871.90	0.00	0.00	0.00
13,000.00	89.25	179.50	12,053.42	-942.66	-653.00	971.74	0.00	0.00	0.00
13,100.00	89.25	179.50	12,054.72	-1,042.65	-652.12	1,071.58	0.00	0.00	0.00
13,200.00	89.25	179.50	12,056.02	-1,142.64	-651.24	1,171.42	0.00	0.00	0.00
13,300.00	89.25	179.50	12,057.32	-1,242.62	-650.37	1,271.26	0.00	0.00	0.00
13,400.00	89.25	179.50	12,058.62	-1,342.61	-649.49	1,371.10	0.00	0.00	0.00
13,500.00	89.25	179.50	12,059.92	-1,442.60	-648.62	1,470.94	0.00	0.00	0.00
13,600.00	89.25	179.50	12,061.22	-1,542.59	-647.74	1,570.79	0.00	0.00	0.00
13,700.00	89.25	179.50	12,062.52	-1,642.58	-646.87	1,670.63	0.00	0.00	0.00
13,800.00	89.25	179.50	12,063.82	-1,742.56	-645.99	1,770.47	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,900.00	89.25	179.50	12,065.12	-1,842.55	-645.12	1,870.31	0.00	0.00	0.00	
14,000.00	89.25	179.50	12,066.42	-1,942.54	-644.24	1,970.15	0.00	0.00	0.00	
14,100.00	89.25	179.50	12,067.73	-2,042.53	-643.37	2,069.99	0.00	0.00	0.00	
14,200.00	89.25	179.50	12,069.03	-2,142.51	-642.49	2,169.83	0.00	0.00	0.00	
14,300.00	89.25	179.50	12,070.33	-2,242.50	-641.61	2,269.67	0.00	0.00	0.00	
14,400.00	89.25	179.50	12,071.63	-2,342.49	-640.74	2,369.52	0.00	0.00	0.00	
14,500.00	89.25	179.50	12,072.93	-2,442.48	-639.86	2,469.36	0.00	0.00	0.00	
14,600.00	89.25	179.50	12,074.23	-2,542.47	-638.99	2,569.20	0.00	0.00	0.00	
14,700.00	89.25	179.50	12,075.53	-2,642.45	-638.11	2,669.04	0.00	0.00	0.00	
14,800.00	89.25	179.50	12,076.83	-2,742.44	-637.24	2,768.88	0.00	0.00	0.00	
14,900.00	89.25	179.50	12,078.13	-2,842.43	-636.36	2,868.72	0.00	0.00	0.00	
15,000.00	89.25	179.50	12,079.43	-2,942.42	-635.49	2,968.56	0.00	0.00	0.00	
15,100.00	89.25	179.50	12,080.73	-3,042.40	-634.61	3,068.40	0.00	0.00	0.00	
15,200.00	89.25	179.50	12,082.03	-3,142.39	-633.74	3,168.25	0.00	0.00	0.00	
15,300.00	89.25	179.50	12,083.33	-3,242.38	-632.86	3,268.09	0.00	0.00	0.00	
15,400.00	89.25	179.50	12,084.63	-3,342.37	-631.98	3,367.93	0.00	0.00	0.00	
15,500.00	89.25	179.50	12,085.94	-3,442.35	-631.11	3,467.77	0.00	0.00	0.00	
15,600.00	89.25	179.50	12,087.24	-3,542.34	-630.23	3,567.61	0.00	0.00	0.00	
15,700.00	89.25	179.50	12,088.54	-3,642.33	-629.36	3,667.45	0.00	0.00	0.00	
15,800.00	89.25	179.50	12,089.84	-3,742.32	-628.48	3,767.29	0.00	0.00	0.00	
15,900.00	89.25	179.50	12,091.14	-3,842.31	-627.61	3,867.14	0.00	0.00	0.00	
16,000.00	89.25	179.50	12,092.44	-3,942.29	-626.73	3,966.98	0.00	0.00	0.00	
16,100.00	89.25	179.50	12,093.74	-4,042.28	-625.86	4,066.82	0.00	0.00	0.00	
16,200.00	89.25	179.50	12,095.04	-4,142.27	-624.98	4,166.66	0.00	0.00	0.00	
16,300.00	89.25	179.50	12,096.34	-4,242.26	-624.11	4,266.50	0.00	0.00	0.00	
16,400.00	89.25	179.50	12,097.64	-4,342.24	-623.23	4,366.34	0.00	0.00	0.00	
16,500.00	89.25	179.50	12,098.94	-4,442.23	-622.35	4,466.18	0.00	0.00	0.00	
16,600.00	89.25	179.50	12,100.24	-4,542.22	-621.48	4,566.02	0.00	0.00	0.00	
16,700.00	89.25	179.50	12,101.54	-4,642.21	-620.60	4,665.87	0.00	0.00	0.00	
16,800.00	89.25	179.50	12,102.84	-4,742.19	-619.73	4,765.71	0.00	0.00	0.00	
16,900.00	89.25	179.50	12,104.15	-4,842.18	-618.85	4,865.55	0.00	0.00	0.00	
17,000.00	89.25	179.50	12,105.45	-4,942.17	-617.98	4,965.39	0.00	0.00	0.00	
17,100.00	89.25	179.50	12,106.75	-5,042.16	-617.10	5,065.23	0.00	0.00	0.00	
17,200.00	89.25	179.50	12,108.05	-5,142.15	-616.23	5,165.07	0.00	0.00	0.00	
17,300.00	89.25	179.50	12,109.35	-5,242.13	-615.35	5,264.91	0.00	0.00	0.00	
17,400.00	89.25	179.50	12,110.65	-5,342.12	-614.48	5,364.75	0.00	0.00	0.00	
17,500.00	89.25	179.50	12,111.95	-5,442.11	-613.60	5,464.60	0.00	0.00	0.00	
17,600.00	89.25	179.50	12,113.25	-5,542.10	-612.72	5,564.44	0.00	0.00	0.00	
17,700.00	89.25	179.50	12,114.55	-5,642.08	-611.85	5,664.28	0.00	0.00	0.00	
17,800.00	89.25	179.50	12,115.85	-5,742.07	-610.97	5,764.12	0.00	0.00	0.00	
17,900.00	89.25	179.50	12,117.15	-5,842.06	-610.10	5,863.96	0.00	0.00	0.00	
18,000.00	89.25	179.50	12,118.45	-5,942.05	-609.22	5,963.80	0.00	0.00	0.00	
18,100.00	89.25	179.50	12,119.75	-6,042.04	-608.35	6,063.64	0.00	0.00	0.00	
18,200.00	89.25	179.50	12,121.05	-6,142.02	-607.47	6,163.48	0.00	0.00	0.00	
18,300.00	89.25	179.50	12,122.36	-6,242.01	-606.60	6,263.33	0.00	0.00	0.00	
18,400.00	89.25	179.50	12,123.66	-6,342.00	-605.72	6,363.17	0.00	0.00	0.00	
18,500.00	89.25	179.50	12,124.96	-6,441.99	-604.85	6,463.01	0.00	0.00	0.00	
18,600.00	89.25	179.50	12,126.26	-6,541.97	-603.97	6,562.85	0.00	0.00	0.00	
18,700.00	89.25	179.50	12,127.56	-6,641.96	-603.09	6,662.69	0.00	0.00	0.00	
18,800.00	89.25	179.50	12,128.86	-6,741.95	-602.22	6,762.53	0.00	0.00	0.00	
18,900.00	89.25	179.50	12,130.16	-6,841.94	-601.34	6,862.37	0.00	0.00	0.00	
19,000.00	89.25	179.50	12,131.46	-6,941.92	-600.47	6,962.21	0.00	0.00	0.00	
19,100.00	89.25	179.50	12,132.76	-7,041.91	-599.59	7,062.06	0.00	0.00	0.00	
19,200.00	89.25	179.50	12,134.06	-7,141.90	-598.72	7,161.90	0.00	0.00	0.00	



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,300.00	89.25	179.50	12,135.36	-7,241.89	-597.84	7,261.74	0.00	0.00	0.00
19,400.00	89.25	179.50	12,136.66	-7,341.88	-596.97	7,361.58	0.00	0.00	0.00
19,500.00	89.25	179.50	12,137.96	-7,441.86	-596.09	7,461.42	0.00	0.00	0.00
19,600.00	89.25	179.50	12,139.26	-7,541.85	-595.22	7,561.26	0.00	0.00	0.00
19,700.00	89.25	179.50	12,140.57	-7,641.84	-594.34	7,661.10	0.00	0.00	0.00
19,800.00	89.25	179.50	12,141.87	-7,741.83	-593.46	7,760.94	0.00	0.00	0.00
19,900.00	89.25	179.50	12,143.17	-7,841.81	-592.59	7,860.79	0.00	0.00	0.00
20,000.00	89.25	179.50	12,144.47	-7,941.80	-591.71	7,960.63	0.00	0.00	0.00
20,100.00	89.25	179.50	12,145.77	-8,041.79	-590.84	8,060.47	0.00	0.00	0.00
20,200.00	89.25	179.50	12,147.07	-8,141.78	-589.96	8,160.31	0.00	0.00	0.00
20,300.00	89.25	179.50	12,148.37	-8,241.76	-589.09	8,260.15	0.00	0.00	0.00
20,400.00	89.25	179.50	12,149.67	-8,341.75	-588.21	8,359.99	0.00	0.00	0.00
20,500.00	89.25	179.50	12,150.97	-8,441.74	-587.34	8,459.83	0.00	0.00	0.00
20,600.00	89.25	179.50	12,152.27	-8,541.73	-586.46	8,559.67	0.00	0.00	0.00
20,700.00	89.25	179.50	12,153.57	-8,641.72	-585.59	8,659.52	0.00	0.00	0.00
20,800.00	89.25	179.50	12,154.87	-8,741.70	-584.71	8,759.36	0.00	0.00	0.00
20,900.00	89.25	179.50	12,156.17	-8,841.69	-583.83	8,859.20	0.00	0.00	0.00
21,000.00	89.25	179.50	12,157.47	-8,941.68	-582.96	8,959.04	0.00	0.00	0.00
21,100.00	89.25	179.50	12,158.77	-9,041.67	-582.08	9,058.88	0.00	0.00	0.00
21,200.00	89.25	179.50	12,160.08	-9,141.65	-581.21	9,158.72	0.00	0.00	0.00
21,300.00	89.25	179.50	12,161.38	-9,241.64	-580.33	9,258.56	0.00	0.00	0.00
21,400.00	89.25	179.50	12,162.68	-9,341.63	-579.46	9,358.40	0.00	0.00	0.00
21,500.00	89.25	179.50	12,163.98	-9,441.62	-578.58	9,458.25	0.00	0.00	0.00
21,600.00	89.25	179.50	12,165.28	-9,541.60	-577.71	9,558.09	0.00	0.00	0.00
21,700.00	89.25	179.50	12,166.58	-9,641.59	-576.83	9,657.93	0.00	0.00	0.00
21,800.00	89.25	179.50	12,167.88	-9,741.58	-575.96	9,757.77	0.00	0.00	0.00
21,900.00	89.25	179.50	12,169.18	-9,841.57	-575.08	9,857.61	0.00	0.00	0.00
22,000.00	89.25	179.50	12,170.48	-9,941.56	-574.20	9,957.45	0.00	0.00	0.00
22,100.00	89.25	179.50	12,171.78	-10,041.54	-573.33	10,057.29	0.00	0.00	0.00
22,200.00	89.25	179.50	12,173.08	-10,141.53	-572.45	10,157.13	0.00	0.00	0.00
22,300.00	89.25	179.50	12,174.38	-10,241.52	-571.58	10,256.98	0.00	0.00	0.00
22,400.00	89.25	179.50	12,175.68	-10,341.51	-570.70	10,356.82	0.00	0.00	0.00
22,500.00	89.25	179.50	12,176.98	-10,441.49	-569.83	10,456.66	0.00	0.00	0.00
22,600.00	89.25	179.50	12,178.29	-10,541.48	-568.95	10,556.50	0.00	0.00	0.00
22,700.00	89.25	179.50	12,179.59	-10,641.47	-568.08	10,656.34	0.00	0.00	0.00
22,800.00	89.25	179.50	12,180.89	-10,741.46	-567.20	10,756.18	0.00	0.00	0.00
22,900.00	89.25	179.50	12,182.19	-10,841.45	-566.33	10,856.02	0.00	0.00	0.00
23,000.00	89.25	179.50	12,183.49	-10,941.43	-565.45	10,955.87	0.00	0.00	0.00
23,100.00	89.25	179.50	12,184.79	-11,041.42	-564.57	11,055.71	0.00	0.00	0.00
23,200.00	89.25	179.50	12,186.09	-11,141.41	-563.70	11,155.55	0.00	0.00	0.00
23,300.00	89.25	179.50	12,187.39	-11,241.40	-562.82	11,255.39	0.00	0.00	0.00
23,400.00	89.25	179.50	12,188.69	-11,341.38	-561.95	11,355.23	0.00	0.00	0.00
23,500.00	89.25	179.50	12,189.99	-11,441.37	-561.07	11,455.07	0.00	0.00	0.00
23,600.00	89.25	179.50	12,191.29	-11,541.36	-560.20	11,554.91	0.00	0.00	0.00
23,700.00	89.25	179.50	12,192.59	-11,641.35	-559.32	11,654.75	0.00	0.00	0.00
23,800.00	89.25	179.50	12,193.89	-11,741.33	-558.45	11,754.60	0.00	0.00	0.00
23,900.00	89.25	179.50	12,195.19	-11,841.32	-557.57	11,854.44	0.00	0.00	0.00
24,000.00	89.25	179.50	12,196.50	-11,941.31	-556.70	11,954.28	0.00	0.00	0.00
24,100.00	89.25	179.50	12,197.80	-12,041.30	-555.82	12,054.12	0.00	0.00	0.00
24,110.32	89.25	179.50	12,197.93	-12,051.62	-555.73	12,064.43	0.00	0.00	0.00
TD at 24110.32 - PBHL (Bus Driver Fed Com 702H)									

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Company:	Franklin Mountain Energy	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Project:	Lea County, NM (NAD83)	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site:	Bus Driver/Kasten Fed Com	North Reference:	Grid
Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHL (Bus Driver Fed Co - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	394,465.75	854,534.40	32.080431	-103.322121
LP (Bus Driver Fed Com - plan hits target center - Point	0.00	0.00	12,045.91	-365.48	-658.05	394,100.27	853,876.35	32.079443	-103.324257
PBHL (Bus Driver Fed C - plan hits target center - Point	0.00	0.00	12,197.93	-12,051.62	-555.73	382,414.13	853,978.67	32.047320	-103.324279

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,550.00	4,550.00	0.00	0.00	Start Build 1.50
5,216.82	5,213.44	16.77	-55.58	Start 3318.56 hold at 5216.82 MD
8,535.38	8,481.56	183.23	-607.42	Start Drop -1.50
9,202.20	9,145.00	200.00	-663.00	Start 2328.00 hold at 9202.20 MD
11,530.20	11,473.00	200.00	-663.00	Start DLS 10.00 TFO 179.50
12,422.75	12,045.91	-365.48	-658.05	Start 11687.57 hold at 12422.75 MD
24,110.32	12,197.93	-12,051.62	-555.73	TD at 24110.32



Franklin Mountain Energy

Lea County, NM (NAD83)
Bus Driver/Kasten Fed Com
Bus Driver Fed Com 702H

OH
Plan #2

Anticollision Report

25 February, 2020





Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	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	2/25/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	24,110.32	Plan #2 (OH)	OWSG (Rev2) MWD	OWSG MWD - Standard	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Bus Driver/Kasten Fed Com						
Bus Driver Fed Com 602H - OH - Plan #2	4,550.00	4,549.80	34.99	12.23	1.537	CC
Bus Driver Fed Com 602H - OH - Plan #2	4,600.00	4,600.15	35.06	12.05	1.524	ES
Bus Driver Fed Com 602H - OH - Plan #2	4,700.00	4,700.84	35.57	12.09	1.515	SF
Kasten Fed Com 603H - OH - Plan #2	4,500.00	4,498.40	104.98	82.48	4.666	CC, ES
Kasten Fed Com 603H - OH - Plan #2	4,550.00	4,547.14	105.27	82.53	4.628	SF
Kasten Fed Com 703H - OH - Plan #2	4,550.00	4,548.80	69.98	47.23	3.075	CC, ES
Kasten Fed Com 703H - OH - Plan #2	4,600.00	4,598.80	70.30	47.29	3.055	SF
Judge Baylor Fed Com						
Judge Baylor Fed Com 601H - OH - Plan #2	11,400.00	11,365.03	1,353.13	1,295.90	23.644	CC
Judge Baylor Fed Com 601H - OH - Plan #2	22,800.00	22,572.67	1,358.81	1,102.01	5.291	ES
Judge Baylor Fed Com 601H - OH - Plan #2	22,900.00	22,572.67	1,362.93	1,105.22	5.289	SF
Judge Baylor Fed Com 701H - OH - Plan #2	11,843.70	11,794.50	1,040.45	981.28	17.582	CC
Judge Baylor Fed Com 701H - OH - Plan #2	22,800.00	22,863.52	1,052.08	796.83	4.122	ES, SF
LHS Wildcat Fed Com						
LHS Wildcat Fed Com 604H - OH - Plan #2	4,550.00	4,523.80	2,389.21	2,366.52	105.282	CC, ES
LHS Wildcat Fed Com 604H - OH - Plan #2	22,900.00	22,490.07	2,909.01	2,650.74	11.264	SF
LHS Wildcat Fed Com 705H - OH - Plan #2	4,502.70	4,476.90	2,424.20	2,401.74	107.960	CC
LHS Wildcat Fed Com 705H - OH - Plan #2	4,550.00	4,517.92	2,424.23	2,401.55	106.897	ES
LHS Wildcat Fed Com 705H - OH - Plan #2	23,000.00	22,695.11	3,242.89	2,983.54	12.504	SF

Offset Design												Bus Driver/Kasten Fed Com - Bus Driver Fed Com 602H - OH - Plan #2		Offset Site Error:		0.00 usft											
Survey Program:												0-OWSG (Rev2) MWD												Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis			Distance																				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning														
0.00	0.00	0.00	0.00	0.00	0.00	89.46	0.33	34.99	34.99																		
100.00	100.00	99.80	99.80	0.14	0.14	89.46	0.33	34.99	34.99	34.79	0.20	174.916															
200.00	200.00	199.80	199.80	0.50	0.50	89.46	0.33	34.99	34.99	34.28	0.71	49.514															
300.00	300.00	299.80	299.80	0.86	0.86	89.46	0.33	34.99	34.99	33.78	1.21	28.832															
400.00	400.00	399.80	399.80	1.22	1.22	89.46	0.33	34.99	34.99	33.27	1.72	20.337															
500.00	500.00	499.80	499.80	1.58	1.57	89.46	0.33	34.99	34.99	32.76	2.23	15.708															
600.00	600.00	599.80	599.80	1.93	1.93	89.46	0.33	34.99	34.99	32.26	2.73	12.796															
700.00	700.00	699.80	699.80	2.29	2.29	89.46	0.33	34.99	34.99	31.75	3.24	10.795															

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Bus Driver Fed Com 602H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
800.00	800.00	799.80	799.80	2.65	2.65	89.46	0.33	34.99	34.99	31.24	3.75	9.335					
900.00	900.00	899.80	899.80	3.01	3.01	89.46	0.33	34.99	34.99	30.74	4.26	8.223					
1,000.00	1,000.00	999.80	999.80	3.37	3.37	89.46	0.33	34.99	34.99	30.23	4.76	7.348					
1,100.00	1,100.00	1,099.80	1,099.80	3.73	3.73	89.46	0.33	34.99	34.99	29.72	5.27	6.641					
1,200.00	1,200.00	1,199.80	1,199.80	4.08	4.08	89.46	0.33	34.99	34.99	29.22	5.78	6.058					
1,300.00	1,300.00	1,299.80	1,299.80	4.44	4.44	89.46	0.33	34.99	34.99	28.71	6.28	5.569					
1,400.00	1,400.00	1,399.80	1,399.80	4.80	4.80	89.46	0.33	34.99	34.99	28.20	6.79	5.153					
1,500.00	1,500.00	1,499.80	1,499.80	5.16	5.16	89.46	0.33	34.99	34.99	27.69	7.30	4.795					
1,600.00	1,600.00	1,599.80	1,599.80	5.52	5.52	89.46	0.33	34.99	34.99	27.19	7.80	4.484					
1,700.00	1,700.00	1,699.80	1,699.80	5.88	5.88	89.46	0.33	34.99	34.99	26.68	8.31	4.210					
1,800.00	1,800.00	1,799.80	1,799.80	6.24	6.23	89.46	0.33	34.99	34.99	26.17	8.82	3.968					
1,900.00	1,900.00	1,899.80	1,899.80	6.59	6.59	89.46	0.33	34.99	34.99	25.67	9.32	3.752					
2,000.00	2,000.00	1,999.80	1,999.80	6.95	6.95	89.46	0.33	34.99	34.99	25.16	9.83	3.559					
2,100.00	2,100.00	2,099.80	2,099.80	7.31	7.31	89.46	0.33	34.99	34.99	24.65	10.34	3.384					
2,200.00	2,200.00	2,199.80	2,199.80	7.67	7.67	89.46	0.33	34.99	34.99	24.15	10.85	3.226					
2,300.00	2,300.00	2,299.80	2,299.80	8.03	8.03	89.46	0.33	34.99	34.99	23.64	11.35	3.082					
2,400.00	2,400.00	2,399.80	2,399.80	8.39	8.39	89.46	0.33	34.99	34.99	23.13	11.86	2.950					
2,500.00	2,500.00	2,499.80	2,499.80	8.74	8.74	89.46	0.33	34.99	34.99	22.62	12.37	2.830					
2,600.00	2,600.00	2,599.80	2,599.80	9.10	9.10	89.46	0.33	34.99	34.99	22.12	12.87	2.718					
2,700.00	2,700.00	2,699.80	2,699.80	9.46	9.46	89.46	0.33	34.99	34.99	21.61	13.38	2.615					
2,800.00	2,800.00	2,799.80	2,799.80	9.82	9.82	89.46	0.33	34.99	34.99	21.10	13.89	2.520					
2,900.00	2,900.00	2,899.80	2,899.80	10.18	10.18	89.46	0.33	34.99	34.99	20.60	14.39	2.431					
3,000.00	3,000.00	2,999.80	2,999.80	10.54	10.54	89.46	0.33	34.99	34.99	20.09	14.90	2.348					
3,100.00	3,100.00	3,099.80	3,099.80	10.90	10.90	89.46	0.33	34.99	34.99	19.58	15.41	2.271					
3,200.00	3,200.00	3,199.80	3,199.80	11.25	11.25	89.46	0.33	34.99	34.99	19.08	15.92	2.199					
3,300.00	3,300.00	3,299.80	3,299.80	11.61	11.61	89.46	0.33	34.99	34.99	18.57	16.42	2.131					
3,400.00	3,400.00	3,399.80	3,399.80	11.97	11.97	89.46	0.33	34.99	34.99	18.06	16.93	2.067					
3,500.00	3,500.00	3,499.80	3,499.80	12.33	12.33	89.46	0.33	34.99	34.99	17.56	17.44	2.007					
3,600.00	3,600.00	3,599.80	3,599.80	12.69	12.69	89.46	0.33	34.99	34.99	17.05	17.94	1.950					
3,700.00	3,700.00	3,699.80	3,699.80	13.05	13.05	89.46	0.33	34.99	34.99	16.54	18.45	1.897					
3,800.00	3,800.00	3,799.80	3,799.80	13.41	13.40	89.46	0.33	34.99	34.99	16.03	18.96	1.846					
3,900.00	3,900.00	3,899.80	3,899.80	13.76	13.76	89.46	0.33	34.99	34.99	15.53	19.46	1.798					
4,000.00	4,000.00	3,999.80	3,999.80	14.12	14.12	89.46	0.33	34.99	34.99	15.02	19.97	1.752					
4,100.00	4,100.00	4,099.80	4,099.80	14.48	14.48	89.46	0.33	34.99	34.99	14.51	20.48	1.709					
4,200.00	4,200.00	4,199.80	4,199.80	14.84	14.84	89.46	0.33	34.99	34.99	14.01	20.98	1.667					
4,300.00	4,300.00	4,299.80	4,299.80	15.20	15.20	89.46	0.33	34.99	34.99	13.50	21.49	1.628					
4,400.00	4,400.00	4,399.80	4,399.80	15.56	15.56	89.46	0.33	34.99	34.99	12.99	22.00	1.591					
4,500.00	4,500.00	4,499.80	4,499.80	15.91	15.91	89.46	0.33	34.99	34.99	12.49	22.51	1.555					
4,550.00	4,550.00	4,549.80	4,549.80	16.09	16.09	89.46	0.33	34.99	34.99	12.23	22.76	1.537 CC					
4,600.00	4,600.00	4,600.15	4,600.15	16.27	16.27	162.48	0.54	34.74	35.06	12.05	23.01	1.524 ES					
4,700.00	4,699.96	4,700.84	4,700.80	16.62	16.63	160.97	2.25	32.71	35.57	12.09	23.49	1.515 SF					
4,800.00	4,799.82	4,801.51	4,801.32	16.96	16.98	158.08	5.65	28.65	36.67	12.72	23.95	1.531					
4,900.00	4,899.51	4,902.00	4,901.51	17.31	17.34	154.12	10.73	22.62	38.51	14.08	24.43	1.577					
5,000.00	4,998.96	5,001.91	5,001.04	17.66	17.69	151.36	16.32	15.96	42.27	17.34	24.93	1.695					
5,100.00	5,098.10	5,101.72	5,100.47	18.02	18.05	150.62	21.91	9.30	48.37	22.94	25.43	1.902					
5,200.00	5,196.87	5,201.36	5,199.73	18.38	18.40	151.34	27.50	2.66	56.76	30.83	25.93	2.189					
5,216.82	5,213.44	5,218.10	5,216.41	18.44	18.46	151.56	28.43	1.55	58.39	32.38	26.02	2.245					
5,300.00	5,295.35	5,300.86	5,298.85	18.74	18.76	152.61	33.07	-3.97	66.66	40.23	26.43	2.522					
5,400.00	5,393.83	5,400.36	5,397.97	19.11	19.12	153.57	38.64	-10.60	76.62	49.70	26.92	2.846					
5,500.00	5,492.31	5,499.85	5,497.09	19.48	19.48	154.31	44.22	-17.24	86.60	59.18	27.42	3.158					
5,600.00	5,590.79	5,599.35	5,596.20	19.85	19.83	154.90	49.79	-23.87	96.59	68.67	27.92	3.459					
5,700.00	5,689.27	5,698.84	5,695.32	20.23	20.19	155.37	55.36	-30.50	106.59	78.16	28.42	3.750					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,800.00	5,787.75	5,798.34	5,794.44	20.61	20.55	155.77	60.94	-37.13	116.59	87.67	28.92	4.031		
5,900.00	5,886.23	5,897.83	5,893.56	20.99	20.92	156.10	66.51	-43.76	126.60	97.17	29.43	4.302		
6,000.00	5,984.71	5,997.33	5,992.67	21.38	21.28	156.38	72.08	-50.40	136.61	106.68	29.93	4.564		
6,100.00	6,083.19	6,096.82	6,091.79	21.77	21.64	156.63	77.66	-57.03	146.62	116.19	30.43	4.818		
6,200.00	6,181.67	6,196.32	6,190.91	22.16	22.00	156.84	83.23	-63.66	156.64	125.70	30.94	5.063		
6,300.00	6,280.15	6,295.81	6,290.03	22.55	22.37	157.03	88.80	-70.29	166.66	135.21	31.45	5.300		
6,400.00	6,378.63	6,395.31	6,389.15	22.95	22.73	157.19	94.38	-76.93	176.68	144.72	31.95	5.529		
6,500.00	6,477.11	6,494.81	6,488.26	23.34	23.10	157.34	99.95	-83.56	186.70	154.24	32.46	5.751		
6,600.00	6,575.59	6,594.30	6,587.38	23.75	23.46	157.48	105.52	-90.19	196.72	163.75	32.97	5.967		
6,700.00	6,674.07	6,693.80	6,686.50	24.15	23.83	157.60	111.10	-96.82	206.74	173.26	33.48	6.175		
6,800.00	6,772.56	6,793.29	6,785.62	24.55	24.19	157.71	116.67	-103.46	216.77	182.78	33.99	6.377		
6,900.00	6,871.04	6,892.79	6,884.73	24.96	24.56	157.80	122.24	-110.09	226.79	192.29	34.50	6.573		
7,000.00	6,969.52	6,992.28	6,983.85	25.36	24.93	157.90	127.82	-116.72	236.82	201.80	35.01	6.764		
7,100.00	7,068.00	7,091.78	7,082.97	25.77	25.30	157.98	133.39	-123.35	246.84	211.32	35.53	6.948		
7,200.00	7,166.48	7,191.27	7,182.09	26.18	25.66	158.06	138.97	-129.99	256.87	220.83	36.04	7.128		
7,300.00	7,264.96	7,290.77	7,281.20	26.59	26.03	158.13	144.54	-136.62	266.90	230.34	36.55	7.302		
7,400.00	7,363.44	7,390.27	7,380.32	27.01	26.40	158.20	150.11	-143.25	276.92	239.86	37.07	7.471		
7,500.00	7,461.92	7,489.76	7,479.44	27.42	26.77	158.26	155.69	-149.88	286.95	249.37	37.58	7.635		
7,600.00	7,560.40	7,589.26	7,578.56	27.84	27.14	158.31	161.26	-156.52	296.98	258.88	38.10	7.795		
7,700.00	7,658.88	7,688.75	7,677.67	28.25	27.51	158.37	166.83	-163.15	307.01	268.39	38.61	7.951		
7,800.00	7,757.36	7,788.25	7,776.79	28.67	27.88	158.42	172.41	-169.78	317.04	277.91	39.13	8.102		
7,900.00	7,855.84	7,887.74	7,875.91	29.09	28.25	158.47	177.98	-176.41	327.06	287.42	39.65	8.249		
8,000.00	7,954.32	7,987.24	7,975.03	29.51	28.62	158.51	183.55	-183.05	337.09	296.93	40.16	8.393		
8,100.00	8,052.80	8,086.73	8,074.14	29.93	28.99	158.55	189.13	-189.68	347.12	306.44	40.68	8.533		
8,200.00	8,151.28	8,182.09	8,169.18	30.36	29.34	158.65	194.15	-195.65	357.53	316.34	41.19	8.679		
8,300.00	8,249.76	8,275.01	8,261.93	30.78	29.68	158.67	197.66	-199.83	369.59	327.90	41.69	8.866		
8,400.00	8,348.24	8,367.41	8,354.28	31.20	30.02	159.50	199.71	-202.27	383.39	341.23	42.16	9.093		
8,500.00	8,446.72	8,459.65	8,446.52	31.63	30.34	160.22	200.33	-203.01	398.97	356.35	42.62	9.360		
8,535.38	8,481.56	8,494.50	8,481.36	31.78	30.47	160.52	200.33	-203.01	404.77	361.97	42.80	9.457		
8,600.00	8,545.29	8,558.23	8,545.09	32.05	30.69	161.06	200.33	-203.01	414.87	371.75	43.12	9.621		
8,700.00	8,644.24	8,657.18	8,644.04	32.46	31.04	161.75	200.33	-203.01	428.54	384.92	43.62	9.825		
8,800.00	8,743.54	8,756.48	8,743.34	32.86	31.39	162.28	200.33	-203.01	439.78	395.67	44.12	9.969		
8,900.00	8,843.11	8,856.05	8,842.91	33.24	31.74	162.68	200.33	-203.01	448.57	403.95	44.62	10.054		
9,000.00	8,942.89	8,955.83	8,942.69	33.61	32.09	162.95	200.33	-203.01	454.87	409.76	45.12	10.082		
9,100.00	9,042.81	9,055.75	9,042.61	33.96	32.45	163.12	200.33	-203.01	458.68	413.07	45.62	10.055		
9,202.20	9,145.00	9,157.94	9,144.80	34.31	32.81	89.96	200.33	-203.01	459.99	413.87	46.12	9.973		
9,300.00	9,242.80	9,255.73	9,242.60	34.64	33.15	89.96	200.33	-203.01	459.99	413.38	46.61	9.869		
9,400.00	9,342.80	9,355.73	9,342.60	34.98	33.51	89.96	200.33	-203.01	459.99	412.88	47.11	9.764		
9,500.00	9,442.80	9,455.73	9,442.60	35.32	33.86	89.96	200.33	-203.01	459.99	412.38	47.61	9.662		
9,600.00	9,542.80	9,555.73	9,542.60	35.65	34.22	89.96	200.33	-203.01	459.99	411.88	48.11	9.562		
9,700.00	9,642.80	9,655.73	9,642.60	35.99	34.57	89.96	200.33	-203.01	459.99	411.39	48.60	9.464		
9,800.00	9,742.80	9,755.73	9,742.60	36.33	34.92	89.96	200.33	-203.01	459.99	410.89	49.10	9.368		
9,900.00	9,842.80	9,855.73	9,842.60	36.67	35.28	89.96	200.33	-203.01	459.99	410.39	49.60	9.274		
10,000.00	9,942.80	9,955.73	9,942.60	37.01	35.63	89.96	200.33	-203.01	459.99	409.89	50.10	9.181		
10,100.00	10,042.80	10,055.73	10,042.60	37.35	35.99	89.96	200.33	-203.01	459.99	409.39	50.60	9.091		
10,200.00	10,142.80	10,155.73	10,142.60	37.69	36.34	89.96	200.33	-203.01	459.99	408.89	51.10	9.002		
10,300.00	10,242.80	10,255.73	10,242.60	38.03	36.69	89.96	200.33	-203.01	459.99	408.39	51.60	8.915		
10,400.00	10,342.80	10,355.73	10,342.60	38.37	37.05	89.96	200.33	-203.01	459.99	407.89	52.10	8.829		
10,500.00	10,442.80	10,455.73	10,442.60	38.71	37.40	89.96	200.33	-203.01	459.99	407.39	52.60	8.746		
10,600.00	10,542.80	10,555.73	10,542.60	39.05	37.76	89.96	200.33	-203.01	459.99	406.89	53.10	8.663		
10,700.00	10,642.80	10,655.73	10,642.60	39.39	38.11	89.96	200.33	-203.01	459.99	406.39	53.60	8.582		
10,800.00	10,742.80	10,755.73	10,742.60	39.73	38.47	89.96	200.33	-203.01	459.99	405.89	54.10	8.503		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Bus Driver/Kasten Fed Com - Bus Driver Fed Com 602H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,900.00	10,842.80	10,855.73	10,842.60	40.07	38.82	89.96	200.33	-203.01	459.99	405.39	54.60	8.425		
11,000.00	10,942.80	10,955.73	10,942.60	40.42	39.18	89.96	200.33	-203.01	459.99	404.89	55.10	8.349		
11,100.00	11,042.80	11,055.73	11,042.60	40.76	39.53	89.96	200.33	-203.01	459.99	404.39	55.60	8.273		
11,200.00	11,142.80	11,155.73	11,142.60	41.10	39.89	89.96	200.33	-203.01	459.99	403.89	56.10	8.200		
11,300.00	11,242.80	11,255.73	11,242.60	41.45	40.24	89.96	200.33	-203.01	459.99	403.39	56.60	8.127		
11,307.68	11,250.47	11,263.41	11,250.27	41.47	40.27	89.96	200.33	-203.01	459.99	403.35	56.64	8.122		
11,400.00	11,342.80	11,355.38	11,342.21	41.79	40.59	90.15	198.77	-203.00	460.01	402.92	57.09	8.058		
11,500.00	11,442.80	11,452.03	11,437.54	42.13	40.88	92.04	183.58	-202.86	460.46	402.95	57.50	8.007		
11,530.20	11,473.00	11,479.95	11,464.47	42.24	40.96	92.96	176.22	-202.80	460.89	403.28	57.61	8.000		
11,550.00	11,492.79	11,497.92	11,481.60	42.30	41.01	-85.86	170.79	-202.75	461.28	403.61	57.67	7.998		
11,600.00	11,542.62	11,542.67	11,523.44	42.45	41.13	-84.19	154.97	-202.61	462.54	404.74	57.81	8.001		
11,650.00	11,591.93	11,586.57	11,563.17	42.60	41.24	-82.57	136.32	-202.45	464.16	406.25	57.91	8.015		
11,700.00	11,640.32	11,629.69	11,600.69	42.74	41.33	-81.02	115.09	-202.26	466.07	408.09	57.98	8.039		
11,750.00	11,687.45	11,672.11	11,635.95	42.87	41.42	-79.54	91.51	-202.06	468.22	410.21	58.01	8.072		
11,800.00	11,732.94	11,713.91	11,668.89	42.99	41.50	-78.14	65.79	-201.83	470.54	412.55	58.00	8.113		
11,850.00	11,776.45	11,755.16	11,699.46	43.10	41.57	-76.83	38.12	-201.59	472.98	415.02	57.95	8.161		
11,900.00	11,817.65	11,800.00	11,730.35	43.20	41.64	-75.52	5.64	-201.31	475.48	417.54	57.93	8.207		
11,950.00	11,856.23	11,836.22	11,753.39	43.28	41.68	-74.49	-22.31	-201.06	477.91	420.15	57.77	8.273		
12,000.00	11,891.90	11,876.15	11,776.68	43.36	41.73	-73.48	-54.72	-200.78	480.30	422.66	57.64	8.332		
12,050.00	11,924.37	11,915.73	11,797.49	43.42	41.78	-72.57	-88.39	-200.48	482.56	425.05	57.51	8.391		
12,100.00	11,953.41	11,950.00	11,813.59	43.47	41.86	-71.85	-118.63	-200.22	484.67	427.37	57.31	8.457		
12,150.00	11,978.80	11,994.09	11,831.59	43.52	41.96	-71.09	-158.86	-199.87	486.50	429.24	57.26	8.497		
12,200.00	12,000.33	12,032.94	11,844.85	43.56	42.06	-70.52	-195.37	-199.55	488.10	430.94	57.16	8.540		
12,250.00	12,017.85	12,071.63	11,855.57	43.61	42.15	-70.07	-232.53	-199.22	489.40	432.32	57.09	8.573		
12,300.00	12,031.23	12,110.19	11,863.73	43.66	42.25	-69.73	-270.22	-198.89	490.39	433.33	57.06	8.595		
12,350.00	12,040.35	12,150.00	11,869.48	43.72	42.35	-69.51	-309.60	-198.55	491.05	433.97	57.08	8.602		
12,400.00	12,045.16	12,187.09	11,872.37	43.79	42.45	-69.41	-346.57	-198.22	491.35	434.21	57.14	8.599		
12,422.75	12,045.91	12,204.72	11,872.90	43.83	42.49	-69.41	-364.19	-198.07	491.37	434.18	57.19	8.592		
12,500.00	12,046.91	12,281.97	11,874.12	44.00	42.72	-69.43	-441.42	-197.39	491.30	433.84	57.46	8.551		
12,600.00	12,048.22	12,381.97	11,875.69	44.29	43.05	-69.46	-541.41	-196.52	491.20	433.32	57.87	8.487		
12,700.00	12,049.52	12,481.97	11,877.27	44.65	43.45	-69.49	-641.39	-195.64	491.10	432.73	58.37	8.414		
12,800.00	12,050.82	12,581.96	11,878.85	45.08	43.90	-69.52	-741.37	-194.77	491.00	432.06	58.95	8.330		
12,900.00	12,052.12	12,681.96	11,880.43	45.57	44.41	-69.55	-841.36	-193.89	490.91	431.31	59.60	8.237		
13,000.00	12,053.42	12,781.96	11,882.00	46.12	44.98	-69.58	-941.34	-193.02	490.81	430.49	60.32	8.136		
13,100.00	12,054.72	12,881.96	11,883.58	46.72	45.59	-69.61	-1,041.32	-192.14	490.71	429.59	61.12	8.029		
13,200.00	12,056.02	12,981.96	11,885.16	47.37	46.26	-69.64	-1,141.31	-191.27	490.62	428.63	61.99	7.915		
13,300.00	12,057.32	13,081.96	11,886.74	48.07	46.97	-69.67	-1,241.29	-190.39	490.52	427.60	62.92	7.796		
13,400.00	12,058.62	13,181.96	11,888.32	48.81	47.74	-69.70	-1,341.27	-189.52	490.42	426.51	63.91	7.673		
13,500.00	12,059.92	13,281.96	11,889.89	49.60	48.54	-69.73	-1,441.26	-188.64	490.33	425.36	64.97	7.547		
13,600.00	12,061.22	13,381.96	11,891.47	50.43	49.39	-69.76	-1,541.24	-187.77	490.23	424.15	66.08	7.419		
13,700.00	12,062.52	13,481.96	11,893.05	51.30	50.28	-69.79	-1,641.22	-186.89	490.13	422.89	67.24	7.289		
13,800.00	12,063.82	13,581.96	11,894.63	52.21	51.20	-69.82	-1,741.21	-186.02	490.04	421.58	68.46	7.158		
13,900.00	12,065.12	13,681.96	11,896.21	53.16	52.16	-69.85	-1,841.19	-185.14	489.94	420.21	69.73	7.027		
14,000.00	12,066.42	13,781.96	11,897.78	54.13	53.16	-69.88	-1,941.17	-184.27	489.85	418.81	71.04	6.895		
14,100.00	12,067.73	13,881.96	11,899.36	55.14	54.18	-69.92	-2,041.16	-183.39	489.75	417.35	72.40	6.765		
14,200.00	12,069.03	13,981.96	11,900.94	56.18	55.24	-69.95	-2,141.14	-182.52	489.65	415.86	73.79	6.635		
14,300.00	12,070.33	14,081.96	11,902.52	57.25	56.33	-69.98	-2,241.12	-181.64	489.56	414.33	75.23	6.507		
14,400.00	12,071.63	14,181.96	11,904.10	58.35	57.44	-70.01	-2,341.11	-180.77	489.46	412.76	76.70	6.381		
14,500.00	12,072.93	14,281.96	11,905.67	59.47	58.58	-70.04	-2,441.09	-179.89	489.37	411.16	78.21	6.257		
14,600.00	12,074.23	14,381.96	11,907.25	60.61	59.74	-70.07	-2,541.07	-179.02	489.27	409.52	79.75	6.135		
14,700.00	12,075.53	14,481.96	11,908.83	61.78	60.92	-70.10	-2,641.06	-178.14	489.18	407.85	81.33	6.015		
14,800.00	12,076.83	14,581.96	11,910.41	62.97	62.13	-70.13	-2,741.04	-177.27	489.08	406.16	82.93	5.898		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,900.00	12,078.13	14,681.96	11,911.99	64.18	63.36	-70.16	-2,841.02	-176.39	488.99	404.43	84.55	5.783		
15,000.00	12,079.43	14,781.96	11,913.56	65.41	64.60	-70.19	-2,941.01	-175.52	488.89	402.69	86.21	5.671		
15,100.00	12,080.73	14,881.96	11,915.14	66.66	65.86	-70.22	-3,040.99	-174.64	488.80	400.91	87.89	5.562		
15,200.00	12,082.03	14,981.96	11,916.72	67.93	67.14	-70.25	-3,140.97	-173.77	488.71	399.12	89.59	5.455		
15,300.00	12,083.33	15,081.96	11,918.30	69.21	68.44	-70.28	-3,240.96	-172.89	488.61	397.30	91.31	5.351		
15,400.00	12,084.63	15,181.95	11,919.87	70.50	69.75	-70.31	-3,340.94	-172.02	488.52	395.46	93.05	5.250		
15,500.00	12,085.94	15,281.95	11,921.45	71.82	71.08	-70.34	-3,440.92	-171.14	488.42	393.61	94.82	5.151		
15,600.00	12,087.24	15,381.95	11,923.03	73.14	72.41	-70.37	-3,540.91	-170.27	488.33	391.73	96.60	5.055		
15,700.00	12,088.54	15,481.95	11,924.61	74.48	73.77	-70.40	-3,640.89	-169.39	488.24	389.84	98.40	4.962		
15,800.00	12,089.84	15,581.95	11,926.19	75.83	75.13	-70.43	-3,740.87	-168.52	488.14	387.93	100.21	4.871		
15,900.00	12,091.14	15,681.95	11,927.76	77.19	76.50	-70.47	-3,840.86	-167.64	488.05	386.01	102.04	4.783		
16,000.00	12,092.44	15,781.95	11,929.34	78.57	77.89	-70.50	-3,940.84	-166.77	487.96	384.07	103.89	4.697		
16,100.00	12,093.74	15,881.95	11,930.92	79.95	79.29	-70.53	-4,040.82	-165.89	487.87	382.12	105.74	4.614		
16,200.00	12,095.04	15,981.95	11,932.50	81.34	80.69	-70.56	-4,140.81	-165.02	487.77	380.16	107.62	4.533		
16,300.00	12,096.34	16,081.95	11,934.08	82.75	82.11	-70.59	-4,240.79	-164.14	487.68	378.18	109.50	4.454		
16,400.00	12,097.64	16,181.95	11,935.65	84.16	83.53	-70.62	-4,340.77	-163.27	487.59	376.19	111.39	4.377		
16,500.00	12,098.94	16,281.95	11,937.23	85.58	84.96	-70.65	-4,440.76	-162.39	487.50	374.20	113.30	4.303		
16,600.00	12,100.24	16,381.95	11,938.81	87.01	86.40	-70.68	-4,540.74	-161.52	487.40	372.19	115.22	4.230		
16,700.00	12,101.54	16,481.95	11,940.39	88.45	87.85	-70.71	-4,640.72	-160.64	487.31	370.17	117.14	4.160		
16,800.00	12,102.84	16,581.95	11,941.97	89.89	89.30	-70.74	-4,740.71	-159.77	487.22	368.14	119.08	4.092		
16,900.00	12,104.15	16,681.95	11,943.54	91.34	90.76	-70.77	-4,840.69	-158.89	487.13	366.10	121.03	4.025		
17,000.00	12,105.45	16,781.95	11,945.12	92.80	92.23	-70.80	-4,940.67	-158.02	487.04	364.06	122.98	3.960		
17,100.00	12,106.75	16,881.95	11,946.70	94.26	93.70	-70.83	-5,040.66	-157.14	486.94	362.00	124.94	3.897		
17,200.00	12,108.05	16,981.95	11,948.28	95.74	95.18	-70.86	-5,140.64	-156.27	486.85	359.94	126.91	3.836		
17,300.00	12,109.35	17,081.95	11,949.85	97.21	96.67	-70.90	-5,240.62	-155.39	486.76	357.87	128.89	3.777		
17,400.00	12,110.65	17,181.95	11,951.43	98.69	98.16	-70.93	-5,340.61	-154.52	486.67	355.80	130.87	3.719		
17,500.00	12,111.95	17,281.95	11,953.01	100.18	99.66	-70.96	-5,440.59	-153.64	486.58	353.72	132.86	3.662		
17,600.00	12,113.25	17,381.95	11,954.59	101.67	101.16	-70.99	-5,540.57	-152.77	486.49	351.63	134.86	3.607		
17,700.00	12,114.55	17,481.95	11,956.17	103.17	102.66	-71.02	-5,640.56	-151.89	486.40	349.54	136.86	3.554		
17,800.00	12,115.85	17,581.95	11,957.74	104.67	104.17	-71.05	-5,740.54	-151.02	486.31	347.44	138.87	3.502		
17,900.00	12,117.15	17,681.95	11,959.32	106.18	105.68	-71.08	-5,840.52	-150.14	486.22	345.33	140.89	3.451		
18,000.00	12,118.45	17,781.94	11,960.90	107.69	107.20	-71.11	-5,940.51	-149.27	486.13	343.22	142.90	3.402		
18,100.00	12,119.75	17,881.94	11,962.48	109.20	108.72	-71.14	-6,040.49	-148.39	486.04	341.11	144.93	3.354		
18,200.00	12,121.05	17,981.94	11,964.06	110.72	110.25	-71.17	-6,140.47	-147.52	485.95	338.99	146.96	3.307		
18,300.00	12,122.36	18,081.94	11,965.63	112.25	111.78	-71.20	-6,240.46	-146.64	485.86	336.87	148.99	3.261		
18,400.00	12,123.66	18,181.94	11,967.21	113.77	113.31	-71.24	-6,340.44	-145.77	485.77	334.74	151.03	3.216		
18,500.00	12,124.96	18,281.94	11,968.79	115.30	114.85	-71.27	-6,440.42	-144.89	485.68	332.61	153.07	3.173		
18,600.00	12,126.26	18,381.94	11,970.37	116.83	116.39	-71.30	-6,540.41	-144.02	485.59	330.47	155.12	3.130		
18,700.00	12,127.56	18,481.94	11,971.95	118.37	117.93	-71.33	-6,640.39	-143.14	485.50	328.33	157.17	3.089		
18,800.00	12,128.86	18,581.94	11,973.52	119.91	119.47	-71.36	-6,740.37	-142.27	485.41	326.19	159.22	3.049		
18,900.00	12,130.16	18,681.94	11,975.10	121.45	121.02	-71.39	-6,840.36	-141.39	485.32	324.05	161.28	3.009		
19,000.00	12,131.46	18,781.94	11,976.68	123.00	122.57	-71.42	-6,940.34	-140.52	485.23	321.90	163.34	2.971		
19,100.00	12,132.76	18,881.94	11,978.26	124.54	124.13	-71.45	-7,040.32	-139.64	485.14	319.75	165.40	2.933		
19,200.00	12,134.06	18,981.94	11,979.83	126.10	125.68	-71.48	-7,140.31	-138.77	485.06	317.59	167.46	2.896		
19,300.00	12,135.36	19,081.94	11,981.41	127.65	127.24	-71.51	-7,240.29	-137.89	484.97	315.43	169.53	2.861		
19,400.00	12,136.66	19,181.94	11,982.99	129.20	128.80	-71.55	-7,340.27	-137.02	484.88	313.27	171.60	2.826		
19,500.00	12,137.96	19,281.94	11,984.57	130.76	130.36	-71.58	-7,440.26	-136.14	484.79	311.11	173.68	2.791		
19,600.00	12,139.26	19,381.94	11,986.15	132.32	131.93	-71.61	-7,540.24	-135.27	484.70	308.95	175.75	2.758		
19,700.00	12,140.57	19,481.94	11,987.72	133.88	133.50	-71.64	-7,640.22	-134.39	484.62	306.78	177.83	2.725		
19,800.00	12,141.87	19,581.94	11,989.30	135.45	135.07	-71.67	-7,740.21	-133.52	484.53	304.61	179.91	2.693		
19,900.00	12,143.17	19,681.94	11,990.88	137.02	136.64	-71.70	-7,840.19	-132.64	484.44	302.44	182.00	2.662		
20,000.00	12,144.47	19,781.94	11,992.46	138.58	138.21	-71.73	-7,940.17	-131.77	484.35	300.27	184.08	2.631		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,100.00	12,145.77	19,881.94	11,994.04	140.15	139.79	-71.76	-8,040.16	-130.89	484.27	298.10	186.17	2.601		
20,200.00	12,147.07	19,981.94	11,995.61	141.73	141.36	-71.79	-8,140.14	-130.02	484.18	295.92	188.26	2.572		
20,300.00	12,148.37	20,081.94	11,997.19	143.30	142.94	-71.83	-8,240.12	-129.14	484.09	293.74	190.35	2.543		
20,400.00	12,149.67	20,181.94	11,998.77	144.88	144.52	-71.86	-8,340.11	-128.27	484.00	291.56	192.44	2.515		
20,500.00	12,150.97	20,281.94	12,000.35	146.45	146.10	-71.89	-8,440.09	-127.39	483.92	289.38	194.54	2.488		
20,600.00	12,152.27	20,381.93	12,001.93	148.03	147.69	-71.92	-8,540.07	-126.52	483.83	287.20	196.63	2.461		
20,700.00	12,153.57	20,481.93	12,003.50	149.61	149.27	-71.95	-8,640.06	-125.64	483.75	285.02	198.73	2.434		
20,800.00	12,154.87	20,581.93	12,005.08	151.20	150.86	-71.98	-8,740.04	-124.77	483.66	282.83	200.83	2.408		
20,900.00	12,156.17	20,681.93	12,006.66	152.78	152.44	-72.01	-8,840.02	-123.89	483.57	280.65	202.93	2.383		
21,000.00	12,157.47	20,781.93	12,008.24	154.37	154.03	-72.04	-8,940.01	-123.02	483.49	278.46	205.03	2.358		
21,100.00	12,158.77	20,881.93	12,009.81	155.95	155.62	-72.07	-9,039.99	-122.14	483.40	276.27	207.13	2.334		
21,200.00	12,160.08	20,981.93	12,011.39	157.54	157.22	-72.11	-9,139.97	-121.27	483.32	274.09	209.23	2.310		
21,300.00	12,161.38	21,081.93	12,012.97	159.13	158.81	-72.14	-9,239.96	-120.39	483.23	271.90	211.33	2.287		
21,400.00	12,162.68	21,181.93	12,014.55	160.72	160.40	-72.17	-9,339.94	-119.52	483.14	269.71	213.44	2.264		
21,500.00	12,163.98	21,281.93	12,016.13	162.31	162.00	-72.20	-9,439.92	-118.64	483.06	267.52	215.54	2.241		
21,600.00	12,165.28	21,381.93	12,017.70	163.90	163.59	-72.23	-9,539.91	-117.77	482.97	265.32	217.65	2.219		
21,700.00	12,166.58	21,481.93	12,019.28	165.50	165.19	-72.26	-9,639.89	-116.89	482.89	263.13	219.76	2.197		
21,800.00	12,167.88	21,581.93	12,020.86	167.09	166.79	-72.29	-9,739.87	-116.02	482.80	260.94	221.87	2.176		
21,900.00	12,169.18	21,681.93	12,022.44	168.69	168.39	-72.33	-9,839.86	-115.14	482.72	258.75	223.97	2.155		
22,000.00	12,170.48	21,781.93	12,024.02	170.29	169.99	-72.36	-9,939.84	-114.27	482.64	256.55	226.08	2.135		
22,100.00	12,171.78	21,881.93	12,025.59	171.89	171.59	-72.39	-10,039.82	-113.39	482.55	254.36	228.19	2.115		
22,200.00	12,173.08	21,981.93	12,027.17	173.49	173.19	-72.42	-10,139.81	-112.52	482.47	252.16	230.30	2.095		
22,300.00	12,174.38	22,081.93	12,028.75	175.09	174.80	-72.45	-10,239.79	-111.64	482.38	249.97	232.41	2.076		
22,400.00	12,175.68	22,181.93	12,030.33	176.69	176.40	-72.48	-10,339.77	-110.77	482.30	247.78	234.52	2.057		
22,500.00	12,176.98	22,281.93	12,031.91	178.29	178.01	-72.51	-10,439.76	-109.89	482.22	245.58	236.63	2.038		
22,600.00	12,178.29	22,381.93	12,033.48	179.89	179.61	-72.54	-10,539.74	-109.02	482.13	243.39	238.75	2.019		
22,700.00	12,179.59	22,481.93	12,035.06	181.50	181.22	-72.58	-10,639.72	-108.14	482.05	241.19	240.86	2.001		
22,800.00	12,180.89	22,581.93	12,036.64	183.10	182.83	-72.61	-10,739.71	-107.27	481.96	239.00	242.97	1.984		
22,900.00	12,182.19	22,681.93	12,038.22	184.71	184.44	-72.64	-10,839.69	-106.39	481.88	236.80	245.08	1.966		
23,000.00	12,183.49	22,781.93	12,039.80	186.31	186.05	-72.67	-10,939.67	-105.52	481.80	234.60	247.19	1.949		
23,100.00	12,184.79	22,881.93	12,041.37	187.92	187.66	-72.70	-11,039.66	-104.64	481.72	232.41	249.31	1.932		
23,200.00	12,186.09	22,981.93	12,042.95	189.53	189.27	-72.73	-11,139.64	-103.77	481.63	230.21	251.42	1.916		
23,300.00	12,187.39	23,081.92	12,044.53	191.14	190.88	-72.77	-11,239.62	-102.89	481.55	228.02	253.53	1.899		
23,400.00	12,188.69	23,181.92	12,046.11	192.75	192.49	-72.80	-11,339.61	-102.02	481.47	225.82	255.64	1.883		
23,500.00	12,189.99	23,281.92	12,047.68	194.36	194.10	-72.83	-11,439.59	-101.14	481.39	223.63	257.76	1.868		
23,600.00	12,191.29	23,381.92	12,049.26	195.97	195.72	-72.86	-11,539.57	-100.27	481.30	221.44	259.87	1.852		
23,700.00	12,192.59	23,481.92	12,050.84	197.58	197.33	-72.89	-11,639.56	-99.39	481.22	219.24	261.98	1.837		
23,800.00	12,193.89	23,581.92	12,052.42	199.20	198.94	-72.92	-11,739.54	-98.52	481.14	217.05	264.09	1.822		
23,900.00	12,195.19	23,681.92	12,054.00	200.81	200.56	-72.95	-11,839.52	-97.64	481.06	214.86	266.20	1.807		
24,000.00	12,196.50	23,781.92	12,055.57	202.42	202.18	-72.99	-11,939.51	-96.77	480.98	212.66	268.31	1.793		
24,100.00	12,197.80	23,881.92	12,057.15	204.04	203.79	-73.02	-12,039.49	-95.89	480.89	210.47	270.42	1.778		
24,106.63	12,197.88	23,888.15	12,057.25	204.14	203.89	-73.02	-12,045.72	-95.84	480.89	210.34	270.55	1.777		
24,110.32	12,197.93	23,888.15	12,057.25	204.20	203.89	-73.02	-12,045.72	-95.84	480.90	210.42	270.49	1.778		
24,111.10	12,197.94	23,888.15	12,057.25	204.22	203.89	-73.02	-12,045.72	-95.84	480.91	210.47	270.44	1.778		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 603H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
0.00	0.00	0.00	0.00	0.00	0.00	89.46	0.99	104.98	105.00								
100.00	100.00	98.40	98.40	0.14	0.14	89.46	0.99	104.98	104.98	104.79	0.20	528.485					
200.00	200.00	198.40	198.40	0.50	0.49	89.46	0.99	104.98	104.98	104.28	0.70	149.304					
300.00	300.00	298.40	298.40	0.86	0.85	89.46	0.99	104.98	104.98	103.77	1.21	86.756					
400.00	400.00	398.40	398.40	1.22	1.21	89.46	0.99	104.98	104.98	103.27	1.72	61.142					
500.00	500.00	498.40	498.40	1.58	1.57	89.46	0.99	104.98	104.98	102.76	2.22	47.205					
600.00	600.00	598.40	598.40	1.93	1.93	89.46	0.99	104.98	104.98	102.25	2.73	38.442					
700.00	700.00	698.40	698.40	2.29	2.29	89.46	0.99	104.98	104.98	101.75	3.24	32.423					
800.00	800.00	798.40	798.40	2.65	2.65	89.46	0.99	104.98	104.98	101.24	3.74	28.034					
900.00	900.00	898.40	898.40	3.01	3.00	89.46	0.99	104.98	104.98	100.73	4.25	24.692					
1,000.00	1,000.00	998.40	998.40	3.37	3.36	89.46	0.99	104.98	104.98	100.23	4.76	22.061					
1,100.00	1,100.00	1,098.40	1,098.40	3.73	3.72	89.46	0.99	104.98	104.98	99.72	5.27	19.937					
1,200.00	1,200.00	1,198.40	1,198.40	4.08	4.08	89.46	0.99	104.98	104.98	99.21	5.77	18.186					
1,300.00	1,300.00	1,298.40	1,298.40	4.44	4.44	89.46	0.99	104.98	104.98	98.71	6.28	16.718					
1,400.00	1,400.00	1,398.40	1,398.40	4.80	4.80	89.46	0.99	104.98	104.98	98.20	6.79	15.469					
1,500.00	1,500.00	1,498.40	1,498.40	5.16	5.15	89.46	0.99	104.98	104.98	97.69	7.29	14.394					
1,600.00	1,600.00	1,598.40	1,598.40	5.52	5.51	89.46	0.99	104.98	104.98	97.18	7.80	13.459					
1,700.00	1,700.00	1,698.40	1,698.40	5.88	5.87	89.46	0.99	104.98	104.98	96.68	8.31	12.637					
1,800.00	1,800.00	1,798.40	1,798.40	6.24	6.23	89.46	0.99	104.98	104.98	96.17	8.81	11.911					
1,900.00	1,900.00	1,898.40	1,898.40	6.59	6.59	89.46	0.99	104.98	104.98	95.66	9.32	11.263					
2,000.00	2,000.00	1,998.40	1,998.40	6.95	6.95	89.46	0.99	104.98	104.98	95.16	9.83	10.682					
2,100.00	2,100.00	2,098.40	2,098.40	7.31	7.31	89.46	0.99	104.98	104.98	94.65	10.34	10.158					
2,200.00	2,200.00	2,198.40	2,198.40	7.67	7.66	89.46	0.99	104.98	104.98	94.14	10.84	9.683					
2,300.00	2,300.00	2,298.40	2,298.40	8.03	8.02	89.46	0.99	104.98	104.98	93.64	11.35	9.250					
2,400.00	2,400.00	2,398.40	2,398.40	8.39	8.38	89.46	0.99	104.98	104.98	93.13	11.86	8.855					
2,500.00	2,500.00	2,498.40	2,498.40	8.74	8.74	89.46	0.99	104.98	104.98	92.62	12.36	8.492					
2,600.00	2,600.00	2,598.40	2,598.40	9.10	9.10	89.46	0.99	104.98	104.98	92.11	12.87	8.157					
2,700.00	2,700.00	2,698.40	2,698.40	9.46	9.46	89.46	0.99	104.98	104.98	91.61	13.38	7.848					
2,800.00	2,800.00	2,798.40	2,798.40	9.82	9.81	89.46	0.99	104.98	104.98	91.10	13.88	7.562					
2,900.00	2,900.00	2,898.40	2,898.40	10.18	10.17	89.46	0.99	104.98	104.98	90.59	14.39	7.295					
3,000.00	3,000.00	2,998.40	2,998.40	10.54	10.53	89.46	0.99	104.98	104.98	90.09	14.90	7.047					
3,100.00	3,100.00	3,098.40	3,098.40	10.90	10.89	89.46	0.99	104.98	104.98	89.58	15.40	6.815					
3,200.00	3,200.00	3,198.40	3,198.40	11.25	11.25	89.46	0.99	104.98	104.98	89.07	15.91	6.598					
3,300.00	3,300.00	3,298.40	3,298.40	11.61	11.61	89.46	0.99	104.98	104.98	88.57	16.42	6.394					
3,400.00	3,400.00	3,398.40	3,398.40	11.97	11.97	89.46	0.99	104.98	104.98	88.06	16.93	6.203					
3,500.00	3,500.00	3,498.40	3,498.40	12.33	12.32	89.46	0.99	104.98	104.98	87.55	17.43	6.022					
3,600.00	3,600.00	3,598.40	3,598.40	12.69	12.68	89.46	0.99	104.98	104.98	87.05	17.94	5.852					
3,700.00	3,700.00	3,698.40	3,698.40	13.05	13.04	89.46	0.99	104.98	104.98	86.54	18.45	5.691					
3,800.00	3,800.00	3,798.40	3,798.40	13.41	13.40	89.46	0.99	104.98	104.98	86.03	18.95	5.539					
3,900.00	3,900.00	3,898.40	3,898.40	13.76	13.76	89.46	0.99	104.98	104.98	85.52	19.46	5.395					
4,000.00	4,000.00	3,998.40	3,998.40	14.12	14.12	89.46	0.99	104.98	104.98	85.02	19.97	5.258					
4,100.00	4,100.00	4,098.40	4,098.40	14.48	14.47	89.46	0.99	104.98	104.98	84.51	20.47	5.128					
4,200.00	4,200.00	4,198.40	4,198.40	14.84	14.83	89.46	0.99	104.98	104.98	84.00	20.98	5.004					
4,300.00	4,300.00	4,298.40	4,298.40	15.20	15.19	89.46	0.99	104.98	104.98	83.50	21.49	4.886					
4,400.00	4,400.00	4,398.40	4,398.40	15.56	15.55	89.46	0.99	104.98	104.98	82.99	22.00	4.773					
4,500.00	4,500.00	4,498.40	4,498.40	15.91	15.91	89.46	0.99	104.98	104.98	82.48	22.50	4.666 CC, ES					
4,550.00	4,550.00	4,547.14	4,547.14	16.09	16.08	89.42	1.06	105.26	105.27	82.53	22.75	4.628 SF					
4,600.00	4,600.00	4,595.81	4,595.80	16.27	16.25	162.57	1.29	106.14	106.50	83.51	22.99	4.633					
4,700.00	4,699.96	4,692.91	4,692.83	16.62	16.59	162.49	2.19	109.70	112.66	89.21	23.45	4.805					
4,800.00	4,799.82	4,789.39	4,789.12	16.96	16.92	162.48	3.69	115.60	123.77	99.88	23.89	5.180					
4,900.00	4,899.51	4,884.90	4,884.25	17.31	17.26	162.52	5.77	123.76	139.77	115.45	24.32	5.747					
5,000.00	4,998.96	4,979.11	4,977.86	17.66	17.59	162.59	8.39	134.06	160.60	135.87	24.73	6.494					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 603H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning				
5,100.00	5,098.10	5,073.52	5,071.40	18.02	17.92	162.67	11.54	146.43	185.97	160.81	25.16	7.391					
5,200.00	5,196.87	5,169.46	5,166.41	18.38	18.26	162.89	14.83	159.37	214.14	188.51	25.64	8.353					
5,216.82	5,213.44	5,185.53	5,182.32	18.44	18.32	162.94	15.38	161.53	219.12	193.40	25.72	8.520					
5,300.00	5,295.35	5,264.92	5,260.94	18.74	18.61	163.26	18.10	172.24	243.89	217.78	26.11	9.340					
5,400.00	5,393.83	5,360.37	5,355.46	19.11	18.95	163.56	21.38	185.12	273.68	247.09	26.59	10.294					
5,500.00	5,492.31	5,455.82	5,449.98	19.48	19.30	163.81	24.66	197.99	303.47	276.41	27.06	11.214					
5,600.00	5,590.79	5,551.28	5,544.50	19.85	19.65	164.01	27.93	210.86	333.27	305.73	27.54	12.102					
5,700.00	5,689.27	5,646.73	5,639.03	20.23	20.00	164.18	31.21	223.74	363.08	335.06	28.02	12.960					
5,800.00	5,787.75	5,742.18	5,733.55	20.61	20.35	164.32	34.48	236.61	392.88	364.38	28.49	13.788					
5,900.00	5,886.23	5,837.63	5,828.07	20.99	20.71	164.44	37.76	249.49	422.69	393.71	28.97	14.588					
6,000.00	5,984.71	5,933.08	5,922.59	21.38	21.07	164.55	41.04	262.36	452.49	423.04	29.46	15.362					
6,100.00	6,083.19	6,028.53	6,017.11	21.77	21.42	164.64	44.31	275.24	482.30	452.36	29.94	16.110					
6,200.00	6,181.67	6,123.98	6,111.64	22.16	21.78	164.73	47.59	288.11	512.11	481.69	30.42	16.834					
6,300.00	6,280.15	6,219.43	6,206.16	22.55	22.15	164.80	50.86	300.98	541.92	511.02	30.91	17.535					
6,400.00	6,378.63	6,314.88	6,300.68	22.95	22.51	164.87	54.14	313.86	571.74	540.34	31.39	18.213					
6,500.00	6,477.11	6,410.33	6,395.20	23.34	22.87	164.93	57.42	326.73	601.55	569.67	31.88	18.871					
6,600.00	6,575.59	6,505.79	6,489.72	23.75	23.24	164.98	60.69	339.61	631.36	599.00	32.36	19.508					
6,700.00	6,674.07	6,601.24	6,584.25	24.15	23.60	165.03	63.97	352.48	661.17	628.32	32.85	20.126					
6,800.00	6,772.56	6,696.69	6,678.77	24.55	23.97	165.07	67.24	365.35	690.99	657.65	33.34	20.725					
6,900.00	6,871.04	6,792.14	6,773.29	24.96	24.34	165.11	70.52	378.23	720.80	686.97	33.83	21.306					
7,000.00	6,969.52	6,887.59	6,867.81	25.36	24.71	165.15	73.79	391.10	750.62	716.30	34.32	21.870					
7,100.00	7,068.00	6,983.04	6,962.33	25.77	25.08	165.19	77.07	403.98	780.43	745.62	34.81	22.418					
7,200.00	7,166.48	7,078.49	7,056.86	26.18	25.45	165.22	80.35	416.85	810.25	774.94	35.30	22.950					
7,300.00	7,264.96	7,173.94	7,151.38	26.59	25.83	165.25	83.62	429.73	840.06	804.26	35.80	23.467					
7,400.00	7,363.44	7,269.39	7,245.90	27.01	26.20	165.28	86.90	442.60	869.88	833.59	36.29	23.969					
7,500.00	7,461.92	7,364.84	7,340.42	27.42	26.57	165.30	90.17	455.47	899.69	862.91	36.79	24.458					
7,600.00	7,560.40	7,460.29	7,434.94	27.84	26.95	165.33	93.45	468.35	929.51	892.23	37.28	24.933					
7,700.00	7,658.88	7,555.75	7,529.47	28.25	27.32	165.35	96.73	481.22	959.32	921.55	37.78	25.395					
7,800.00	7,757.36	7,651.20	7,623.99	28.67	27.70	165.37	100.00	494.10	989.14	950.87	38.27	25.845					
7,900.00	7,855.84	7,746.65	7,718.51	29.09	28.08	165.39	103.28	506.97	1,018.96	980.19	38.77	26.283					
8,000.00	7,954.32	7,842.10	7,813.03	29.51	28.46	165.41	106.55	519.84	1,048.77	1,009.51	39.27	26.709					
8,100.00	8,052.80	7,937.55	7,907.55	29.93	28.83	165.43	109.83	532.72	1,078.59	1,038.83	39.76	27.125					
8,200.00	8,151.28	8,033.00	8,002.08	30.36	29.21	165.45	113.11	545.59	1,108.41	1,068.14	40.26	27.529					
8,300.00	8,249.76	8,128.45	8,096.60	30.78	29.59	165.46	116.38	558.47	1,138.22	1,097.46	40.76	27.924					
8,400.00	8,348.24	8,223.90	8,191.12	31.20	29.97	165.48	119.66	571.34	1,168.04	1,126.78	41.26	28.308					
8,500.00	8,446.72	8,319.35	8,285.64	31.63	30.35	165.49	122.93	584.22	1,197.86	1,156.09	41.76	28.683					
8,535.38	8,481.56	8,353.13	8,319.08	31.78	30.49	165.50	124.09	588.77	1,208.41	1,166.47	41.94	28.814					
8,600.00	8,545.29	8,414.96	8,380.32	32.05	30.74	165.57	126.21	597.11	1,227.17	1,184.90	42.26	29.037					
8,700.00	8,644.24	8,511.23	8,475.65	32.46	31.12	165.66	129.52	610.10	1,254.20	1,211.43	42.76	29.328					
8,800.00	8,743.54	8,608.16	8,571.63	32.86	31.51	165.70	132.84	623.17	1,278.78	1,235.51	43.27	29.555					
8,900.00	8,843.11	8,705.66	8,668.19	33.24	31.90	165.70	136.19	636.32	1,300.89	1,257.12	43.77	29.720					
9,000.00	8,942.89	8,803.68	8,765.26	33.61	32.29	165.67	139.56	649.54	1,320.53	1,276.26	44.28	29.826					
9,100.00	9,042.81	8,902.15	8,862.77	33.96	32.69	165.61	142.93	662.82	1,337.68	1,292.90	44.78	29.873					
9,202.20	9,145.00	9,003.19	8,962.82	34.31	33.10	92.29	146.40	676.45	1,352.63	1,307.34	45.29	29.864					
9,300.00	9,242.80	9,100.03	9,058.72	34.64	33.49	92.13	149.73	689.51	1,365.69	1,319.91	45.78	29.829					
9,400.00	9,342.80	9,199.06	9,156.79	34.98	33.89	91.97	153.12	702.87	1,379.06	1,332.77	46.29	29.793					
9,500.00	9,442.80	9,298.09	9,254.85	35.32	34.29	91.81	156.52	716.23	1,392.44	1,345.64	46.79	29.759					
9,600.00	9,542.80	9,397.11	9,352.91	35.65	34.69	91.65	159.92	729.58	1,405.82	1,358.53	47.29	29.725					
9,700.00	9,642.80	9,496.14	9,450.97	35.99	35.09	91.49	163.32	742.94	1,419.22	1,371.42	47.80	29.692					
9,800.00	9,742.80	9,595.17	9,549.04	36.33	35.49	91.34	166.72	756.29	1,432.63	1,384.33	48.30	29.659					
9,900.00	9,842.80	9,694.19	9,647.10	36.67	35.89	91.19	170.12	769.65	1,446.05	1,397.24	48.81	29.628					
10,000.00	9,942.80	9,793.22	9,745.16	37.01	36.29	91.05	173.52	783.01	1,459.48	1,410.16	49.31	29.597					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 603H - OH - Plan #2		Offset Site Error:		0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft			
Reference		Offset		Semi Major Axis		Distance								Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
10,100.00	10,042.80	9,892.25	9,843.23	37.35	36.69	90.91	176.91	796.36	1,472.91	1,423.10	49.82	29.567						
10,200.00	10,142.80	9,991.27	9,941.29	37.69	37.10	90.77	180.31	809.72	1,486.36	1,436.04	50.32	29.537						
10,300.00	10,242.80	10,090.30	10,039.35	38.03	37.50	90.63	183.71	823.08	1,499.81	1,448.98	50.83	29.508						
10,400.00	10,342.80	10,189.33	10,137.42	38.37	37.90	90.49	187.11	836.43	1,513.27	1,461.94	51.33	29.480						
10,500.00	10,442.80	10,288.35	10,235.48	38.71	38.31	90.36	190.51	849.79	1,526.74	1,474.91	51.84	29.453						
10,600.00	10,542.80	10,426.29	10,372.25	39.05	38.86	90.19	194.93	867.15	1,539.45	1,486.90	52.56	29.291						
10,700.00	10,642.80	10,589.98	10,535.22	39.39	39.49	90.05	198.64	881.74	1,548.37	1,495.01	53.36	29.018						
10,800.00	10,742.80	10,754.66	10,699.70	39.73	40.08	89.98	200.63	889.57	1,553.13	1,499.04	54.09	28.714						
10,900.00	10,842.80	10,896.18	10,841.20	40.07	40.57	89.96	200.99	890.98	1,553.98	1,499.28	54.70	28.410						
11,000.00	10,942.80	10,996.18	10,941.20	40.42	40.90	89.96	200.99	890.98	1,553.98	1,498.79	55.19	28.156						
11,100.00	11,042.80	11,096.18	11,041.20	40.76	41.24	89.96	200.99	890.98	1,553.98	1,498.29	55.69	27.906						
11,200.00	11,142.80	11,196.18	11,141.20	41.10	41.57	89.96	200.99	890.98	1,553.98	1,497.80	56.18	27.660						
11,300.00	11,242.80	11,296.18	11,241.20	41.45	41.91	89.96	200.99	890.98	1,553.98	1,497.30	56.68	27.418						
11,304.04	11,246.83	11,300.21	11,245.23	41.46	41.92	89.96	200.99	890.98	1,553.98	1,497.28	56.70	27.408						
11,400.00	11,342.80	11,394.00	11,338.83	41.79	42.22	90.13	196.47	891.02	1,554.03	1,496.88	57.15	27.190						
11,500.00	11,442.80	11,487.23	11,429.97	42.13	42.49	90.84	177.33	891.21	1,554.42	1,496.82	57.60	26.987						
11,530.20	11,473.00	11,513.92	11,455.38	42.24	42.56	91.14	169.14	891.29	1,554.68	1,496.95	57.73	26.932						
11,550.00	11,492.79	11,531.08	11,471.49	42.30	42.61	-88.13	163.26	891.35	1,554.90	1,497.09	57.81	26.898						
11,600.00	11,542.62	11,573.77	11,510.76	42.45	42.71	-87.57	146.55	891.51	1,555.55	1,497.55	57.99	26.822						
11,650.00	11,591.93	11,615.62	11,547.95	42.60	42.81	-87.02	127.38	891.70	1,556.33	1,498.16	58.17	26.754						
11,700.00	11,640.32	11,656.72	11,583.02	42.74	42.90	-86.49	105.96	891.91	1,557.22	1,498.88	58.34	26.694						
11,750.00	11,687.45	11,700.00	11,618.19	42.87	42.98	-85.95	80.75	892.15	1,558.19	1,499.70	58.50	26.638						
11,800.00	11,732.94	11,737.01	11,646.68	42.99	43.04	-85.50	57.14	892.38	1,559.22	1,500.59	58.63	26.594						
11,850.00	11,776.45	11,776.34	11,675.21	43.10	43.11	-85.05	30.09	892.65	1,560.28	1,501.52	58.76	26.553						
11,900.00	11,817.65	11,815.20	11,701.53	43.20	43.16	-84.62	1.50	892.93	1,561.35	1,502.47	58.88	26.516						
11,950.00	11,856.23	11,850.00	11,723.39	43.28	43.21	-84.26	-25.56	893.19	1,562.41	1,503.42	58.99	26.485						
12,000.00	11,891.90	11,891.78	11,747.41	43.36	43.27	-83.88	-59.73	893.53	1,563.41	1,504.30	59.12	26.447						
12,050.00	11,924.37	11,929.59	11,766.96	43.42	43.31	-83.56	-92.09	893.84	1,564.36	1,505.14	59.23	26.414						
12,100.00	11,953.41	11,967.14	11,784.21	43.47	43.35	-83.28	-125.43	894.17	1,565.23	1,505.89	59.34	26.379						
12,150.00	11,978.80	12,000.00	11,797.49	43.52	43.39	-83.06	-155.48	894.46	1,566.00	1,506.57	59.44	26.347						
12,200.00	12,000.33	12,041.63	11,811.81	43.56	43.44	-82.84	-194.57	894.84	1,566.65	1,507.08	59.57	26.301						
12,250.00	12,017.85	12,078.66	11,822.13	43.61	43.49	-82.69	-230.12	895.19	1,567.17	1,507.49	59.69	26.255						
12,300.00	12,031.23	12,115.58	11,830.11	43.66	43.55	-82.58	-266.16	895.54	1,567.56	1,507.74	59.82	26.204						
12,350.00	12,040.35	12,150.00	11,835.44	43.72	43.61	-82.52	-300.15	895.87	1,567.81	1,507.85	59.96	26.149						
12,400.00	12,045.16	12,189.28	11,839.03	43.79	43.68	-82.50	-339.26	896.25	1,567.90	1,507.80	60.11	26.084						
12,422.75	12,045.91	12,206.04	11,839.74	43.83	43.72	-82.50	-356.00	896.42	1,567.90	1,507.72	60.18	26.054						
12,427.50	12,045.97	12,209.54	11,839.82	43.84	43.72	-82.50	-359.50	896.45	1,567.90	1,507.70	60.19	26.047						
12,500.00	12,046.91	12,281.52	11,841.21	44.00	43.90	-82.52	-431.46	897.15	1,567.91	1,507.43	60.48	25.925						
12,600.00	12,048.22	12,381.51	11,843.12	44.29	44.20	-82.54	-531.44	898.13	1,567.93	1,506.99	60.94	25.728						
12,700.00	12,049.52	12,481.51	11,845.04	44.65	44.56	-82.57	-631.41	899.11	1,567.95	1,506.46	61.49	25.499						
12,800.00	12,050.82	12,581.51	11,846.96	45.08	44.99	-82.59	-731.39	900.08	1,567.97	1,505.85	62.12	25.240						
12,900.00	12,052.12	12,681.51	11,848.88	45.57	45.49	-82.61	-831.36	901.06	1,567.99	1,505.16	62.83	24.955						
13,000.00	12,053.42	12,781.51	11,850.79	46.12	46.03	-82.63	-931.34	902.03	1,568.01	1,504.39	63.62	24.647						
13,100.00	12,054.72	12,881.50	11,852.71	46.72	46.64	-82.66	-1,031.31	903.01	1,568.03	1,503.55	64.48	24.318						
13,200.00	12,056.02	12,981.50	11,854.63	47.37	47.29	-82.68	-1,131.29	903.99	1,568.05	1,502.64	65.41	23.972						
13,300.00	12,057.32	13,081.50	11,856.55	48.07	47.99	-82.70	-1,231.26	904.96	1,568.07	1,501.66	66.41	23.611						
13,400.00	12,058.62	13,181.50	11,858.46	48.81	48.74	-82.73	-1,331.24	905.94	1,568.09	1,500.62	67.48	23.238						
13,500.00	12,059.92	13,281.50	11,860.38	49.60	49.53	-82.75	-1,431.21	906.91	1,568.12	1,499.51	68.61	22.857						
13,600.00	12,061.22	13,381.49	11,862.30	50.43	50.37	-82.77	-1,531.19	907.89	1,568.14	1,498.34	69.79	22.468						
13,700.00	12,062.52	13,481.49	11,864.22	51.30	51.24	-82.79	-1,631.16	908.87	1,568.16	1,497.12	71.04	22.075						
13,800.00	12,063.82	13,581.49	11,866.13	52.21	52.15	-82.82	-1,731.14	909.84	1,568.18	1,495.85	72.33	21.680						
13,900.00	12,065.12	13,681.49	11,868.05	53.16	53.10	-82.84	-1,831.11	910.82	1,568.21	1,494.52	73.68	21.284						

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Bus Driver/Kasten Fed Com - Kasten Fed Com 603H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,000.00	12,066.42	13,781.49	11,869.97	54.13	54.08	-82.86	-1,931.09	911.79	1,568.23	1,493.15	75.08	20.888	
14,100.00	12,067.73	13,881.48	11,871.89	55.14	55.10	-82.88	-2,031.06	912.77	1,568.25	1,491.74	76.52	20.495	
14,200.00	12,069.03	13,981.48	11,873.80	56.18	56.14	-82.91	-2,131.04	913.75	1,568.28	1,490.28	78.00	20.106	
14,300.00	12,070.33	14,081.48	11,875.72	57.25	57.21	-82.93	-2,231.01	914.72	1,568.30	1,488.78	79.52	19.721	
14,400.00	12,071.63	14,181.48	11,877.64	58.35	58.31	-82.95	-2,330.99	915.70	1,568.32	1,487.24	81.09	19.341	
14,500.00	12,072.93	14,281.48	11,879.56	59.47	59.44	-82.98	-2,430.96	916.67	1,568.35	1,485.66	82.68	18.968	
14,600.00	12,074.23	14,381.47	11,881.47	60.61	60.59	-83.00	-2,530.94	917.65	1,568.37	1,484.06	84.32	18.601	
14,700.00	12,075.53	14,481.47	11,883.39	61.78	61.76	-83.02	-2,630.91	918.63	1,568.40	1,482.42	85.98	18.241	
14,800.00	12,076.83	14,581.47	11,885.31	62.97	62.95	-83.04	-2,730.89	919.60	1,568.42	1,480.75	87.67	17.889	
14,900.00	12,078.13	14,681.47	11,887.23	64.18	64.17	-83.07	-2,830.86	920.58	1,568.45	1,479.05	89.40	17.545	
15,000.00	12,079.43	14,781.47	11,889.14	65.41	65.40	-83.09	-2,930.83	921.55	1,568.47	1,477.33	91.15	17.208	
15,100.00	12,080.73	14,881.47	11,891.06	66.66	66.65	-83.11	-3,030.81	922.53	1,568.50	1,475.58	92.92	16.880	
15,200.00	12,082.03	14,981.46	11,892.98	67.93	67.92	-83.14	-3,130.78	923.51	1,568.53	1,473.81	94.72	16.560	
15,300.00	12,083.33	15,081.46	11,894.90	69.21	69.20	-83.16	-3,230.76	924.48	1,568.55	1,472.01	96.54	16.248	
15,400.00	12,084.63	15,181.46	11,896.81	70.50	70.50	-83.18	-3,330.73	925.46	1,568.58	1,470.20	98.38	15.944	
15,500.00	12,085.94	15,281.46	11,898.73	71.82	71.82	-83.20	-3,430.71	926.43	1,568.61	1,468.36	100.25	15.647	
15,600.00	12,087.24	15,381.46	11,900.65	73.14	73.14	-83.23	-3,530.68	927.41	1,568.63	1,466.50	102.13	15.359	
15,700.00	12,088.54	15,481.45	11,902.57	74.48	74.49	-83.25	-3,630.66	928.39	1,568.66	1,464.63	104.03	15.079	
15,800.00	12,089.84	15,581.45	11,904.48	75.83	75.84	-83.27	-3,730.63	929.36	1,568.69	1,462.74	105.95	14.806	
15,900.00	12,091.14	15,681.45	11,906.40	77.19	77.20	-83.30	-3,830.61	930.34	1,568.72	1,460.84	107.88	14.541	
16,000.00	12,092.44	15,781.45	11,908.32	78.57	78.58	-83.32	-3,930.58	931.31	1,568.74	1,458.91	109.83	14.283	
16,100.00	12,093.74	15,881.45	11,910.24	79.95	79.97	-83.34	-4,030.56	932.29	1,568.77	1,456.98	111.79	14.033	
16,200.00	12,095.04	15,981.44	11,912.15	81.34	81.36	-83.36	-4,130.53	933.27	1,568.80	1,455.03	113.77	13.789	
16,300.00	12,096.34	16,081.44	11,914.07	82.75	82.77	-83.39	-4,230.51	934.24	1,568.83	1,453.07	115.76	13.553	
16,400.00	12,097.64	16,181.44	11,915.99	84.16	84.18	-83.41	-4,330.48	935.22	1,568.86	1,451.10	117.76	13.322	
16,500.00	12,098.94	16,281.44	11,917.91	85.58	85.61	-83.43	-4,430.46	936.19	1,568.89	1,449.11	119.78	13.098	
16,600.00	12,100.24	16,381.44	11,919.82	87.01	87.04	-83.46	-4,530.43	937.17	1,568.92	1,447.11	121.80	12.881	
16,700.00	12,101.54	16,481.43	11,921.74	88.45	88.48	-83.48	-4,630.41	938.14	1,568.95	1,445.11	123.84	12.669	
16,800.00	12,102.84	16,581.43	11,923.66	89.89	89.92	-83.50	-4,730.38	939.12	1,568.98	1,443.09	125.89	12.463	
16,900.00	12,104.15	16,681.43	11,925.58	91.34	91.38	-83.52	-4,830.36	940.10	1,569.01	1,441.06	127.94	12.263	
17,000.00	12,105.45	16,781.43	11,927.49	92.80	92.84	-83.55	-4,930.33	941.07	1,569.04	1,439.03	130.01	12.069	
17,100.00	12,106.75	16,881.43	11,929.41	94.26	94.30	-83.57	-5,030.31	942.05	1,569.07	1,436.98	132.08	11.879	
17,200.00	12,108.05	16,981.42	11,931.33	95.74	95.77	-83.59	-5,130.28	943.02	1,569.10	1,434.93	134.17	11.695	
17,300.00	12,109.35	17,081.42	11,933.25	97.21	97.25	-83.61	-5,230.26	944.00	1,569.13	1,432.87	136.26	11.516	
17,400.00	12,110.65	17,181.42	11,935.16	98.69	98.74	-83.64	-5,330.23	944.98	1,569.16	1,430.80	138.36	11.341	
17,500.00	12,111.95	17,281.42	11,937.08	100.18	100.23	-83.66	-5,430.21	945.95	1,569.19	1,428.73	140.46	11.171	
17,600.00	12,113.25	17,381.42	11,939.00	101.67	101.72	-83.68	-5,530.18	946.93	1,569.23	1,426.65	142.58	11.006	
17,700.00	12,114.55	17,481.41	11,940.92	103.17	103.22	-83.71	-5,630.16	947.90	1,569.26	1,424.56	144.70	10.845	
17,800.00	12,115.85	17,581.41	11,942.83	104.67	104.72	-83.73	-5,730.13	948.88	1,569.29	1,422.47	146.82	10.688	
17,900.00	12,117.15	17,681.41	11,944.75	106.18	106.23	-83.75	-5,830.11	949.86	1,569.32	1,420.37	148.96	10.535	
18,000.00	12,118.45	17,781.41	11,946.67	107.69	107.74	-83.77	-5,930.08	950.83	1,569.36	1,418.26	151.10	10.386	
18,100.00	12,119.75	17,881.41	11,948.59	109.20	109.26	-83.80	-6,030.06	951.81	1,569.39	1,416.15	153.24	10.241	
18,200.00	12,121.05	17,981.40	11,950.50	110.72	110.78	-83.82	-6,130.03	952.78	1,569.42	1,414.03	155.39	10.100	
18,300.00	12,122.36	18,081.40	11,952.42	112.25	112.30	-83.84	-6,230.01	953.76	1,569.46	1,411.91	157.55	9.962	
18,400.00	12,123.66	18,181.40	11,954.34	113.77	113.83	-83.87	-6,329.98	954.74	1,569.49	1,409.79	159.71	9.827	
18,500.00	12,124.96	18,281.40	11,956.26	115.30	115.36	-83.89	-6,429.96	955.71	1,569.53	1,407.66	161.87	9.696	
18,600.00	12,126.26	18,381.40	11,958.17	116.83	116.89	-83.91	-6,529.93	956.69	1,569.56	1,405.52	164.04	9.568	
18,700.00	12,127.56	18,481.39	11,960.09	118.37	118.43	-83.93	-6,629.91	957.66	1,569.59	1,403.38	166.21	9.443	
18,800.00	12,128.86	18,581.39	11,962.01	119.91	119.97	-83.96	-6,729.88	958.64	1,569.63	1,401.24	168.39	9.321	
18,900.00	12,130.16	18,681.39	11,963.93	121.45	121.52	-83.98	-6,829.86	959.62	1,569.66	1,399.09	170.57	9.202	
19,000.00	12,131.46	18,781.39	11,965.84	123.00	123.06	-84.00	-6,929.83	960.59	1,569.70	1,396.94	172.76	9.086	
19,100.00	12,132.76	18,881.39	11,967.76	124.54	124.61	-84.02	-7,029.81	961.57	1,569.74	1,394.78	174.95	8.972	

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 603H - OH - Plan #2		Offset Site Error:		0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft			
Reference		Offset		Semi Major Axis		Distance								Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
19,200.00	12,134.06	18,981.39	11,969.68	126.10	126.16	-84.05	-7,129.78	962.54	1,569.77	1,392.63	177.15	8.861						
19,300.00	12,135.36	19,081.38	11,971.60	127.65	127.72	-84.07	-7,229.76	963.52	1,569.81	1,390.46	179.34	8.753						
19,400.00	12,136.66	19,181.38	11,973.51	129.20	129.27	-84.09	-7,329.73	964.50	1,569.84	1,388.30	181.55	8.647						
19,500.00	12,137.96	19,281.38	11,975.43	130.76	130.83	-84.12	-7,429.71	965.47	1,569.88	1,386.13	183.75	8.544						
19,600.00	12,139.26	19,381.38	11,977.35	132.32	132.39	-84.14	-7,529.68	966.45	1,569.92	1,383.96	185.96	8.442						
19,700.00	12,140.57	19,481.38	11,979.27	133.88	133.96	-84.16	-7,629.66	967.42	1,569.96	1,381.79	188.17	8.343						
19,800.00	12,141.87	19,581.37	11,981.18	135.45	135.52	-84.18	-7,729.63	968.40	1,569.99	1,379.61	190.38	8.247						
19,900.00	12,143.17	19,681.37	11,983.10	137.02	137.09	-84.21	-7,829.60	969.38	1,570.03	1,377.43	192.60	8.152						
20,000.00	12,144.47	19,781.37	11,985.02	138.58	138.66	-84.23	-7,929.58	970.35	1,570.07	1,375.25	194.82	8.059						
20,100.00	12,145.77	19,881.37	11,986.94	140.15	140.23	-84.25	-8,029.55	971.33	1,570.11	1,373.07	197.04	7.968						
20,200.00	12,147.07	19,981.37	11,988.85	141.73	141.80	-84.28	-8,129.53	972.30	1,570.15	1,370.88	199.26	7.880						
20,300.00	12,148.37	20,081.36	11,990.77	143.30	143.38	-84.30	-8,229.50	973.28	1,570.18	1,368.69	201.49	7.793						
20,400.00	12,149.67	20,181.36	11,992.69	144.88	144.96	-84.32	-8,329.48	974.26	1,570.22	1,366.50	203.72	7.708						
20,500.00	12,150.97	20,281.36	11,994.61	146.45	146.53	-84.34	-8,429.45	975.23	1,570.26	1,364.31	205.95	7.624						
20,600.00	12,152.27	20,381.36	11,996.52	148.03	148.11	-84.37	-8,529.43	976.21	1,570.30	1,362.11	208.19	7.543						
20,700.00	12,153.57	20,481.36	11,998.44	149.61	149.70	-84.39	-8,629.40	977.18	1,570.34	1,359.92	210.43	7.463						
20,800.00	12,154.87	20,581.35	12,000.36	151.20	151.28	-84.41	-8,729.38	978.16	1,570.38	1,357.72	212.66	7.384						
20,900.00	12,156.17	20,681.35	12,002.28	152.78	152.86	-84.43	-8,829.35	979.14	1,570.42	1,355.52	214.91	7.307						
21,000.00	12,157.47	20,781.35	12,004.19	154.37	154.45	-84.46	-8,929.33	980.11	1,570.46	1,353.31	217.15	7.232						
21,100.00	12,158.77	20,881.35	12,006.11	155.95	156.04	-84.48	-9,029.30	981.09	1,570.50	1,351.11	219.39	7.158						
21,200.00	12,160.08	20,981.35	12,008.03	157.54	157.63	-84.50	-9,129.28	982.06	1,570.54	1,348.90	221.64	7.086						
21,300.00	12,161.38	21,081.34	12,009.95	159.13	159.22	-84.53	-9,229.25	983.04	1,570.58	1,346.69	223.89	7.015						
21,400.00	12,162.68	21,181.34	12,011.86	160.72	160.81	-84.55	-9,329.23	984.02	1,570.63	1,344.49	226.14	6.945						
21,500.00	12,163.98	21,281.34	12,013.78	162.31	162.40	-84.57	-9,429.20	984.99	1,570.67	1,342.27	228.39	6.877						
21,600.00	12,165.28	21,381.34	12,015.70	163.90	163.99	-84.59	-9,529.18	985.97	1,570.71	1,340.06	230.65	6.810						
21,700.00	12,166.58	21,481.34	12,017.62	165.50	165.59	-84.62	-9,629.15	986.94	1,570.75	1,337.85	232.90	6.744						
21,800.00	12,167.88	21,581.33	12,019.53	167.09	167.18	-84.64	-9,729.13	987.92	1,570.79	1,335.63	235.16	6.680						
21,900.00	12,169.18	21,681.33	12,021.45	168.69	168.78	-84.66	-9,829.10	988.90	1,570.84	1,333.42	237.42	6.616						
22,000.00	12,170.48	21,781.33	12,023.37	170.29	170.38	-84.68	-9,929.08	989.87	1,570.88	1,331.20	239.68	6.554						
22,100.00	12,171.78	21,881.33	12,025.29	171.89	171.98	-84.71	-10,029.05	990.85	1,570.92	1,328.98	241.94	6.493						
22,200.00	12,173.08	21,981.33	12,027.20	173.49	173.58	-84.73	-10,129.03	991.82	1,570.97	1,326.76	244.21	6.433						
22,300.00	12,174.38	22,081.32	12,029.12	175.09	175.18	-84.75	-10,229.00	992.80	1,571.01	1,324.54	246.47	6.374						
22,400.00	12,175.68	22,181.32	12,031.04	176.69	176.78	-84.78	-10,328.98	993.78	1,571.05	1,322.31	248.74	6.316						
22,500.00	12,176.98	22,281.32	12,032.96	178.29	178.39	-84.80	-10,428.95	994.75	1,571.10	1,320.09	251.01	6.259						
22,600.00	12,178.29	22,381.32	12,034.87	179.89	179.99	-84.82	-10,528.93	995.73	1,571.14	1,317.87	253.28	6.203						
22,700.00	12,179.59	22,481.32	12,036.79	181.50	181.59	-84.84	-10,628.90	996.70	1,571.19	1,315.64	255.55	6.148						
22,800.00	12,180.89	22,581.31	12,038.71	183.10	183.20	-84.87	-10,728.88	997.68	1,571.23	1,313.41	257.82	6.094						
22,900.00	12,182.19	22,681.31	12,040.63	184.71	184.81	-84.89	-10,828.85	998.66	1,571.28	1,311.19	260.09	6.041						
23,000.00	12,183.49	22,781.31	12,042.54	186.31	186.41	-84.91	-10,928.83	999.63	1,571.32	1,308.96	262.37	5.989						
23,100.00	12,184.79	22,881.31	12,044.46	187.92	188.02	-84.93	-11,028.80	1,000.61	1,571.37	1,306.73	264.64	5.938						
23,200.00	12,186.09	22,981.31	12,046.38	189.53	189.63	-84.96	-11,128.78	1,001.58	1,571.41	1,304.50	266.92	5.887						
23,300.00	12,187.39	23,081.31	12,048.30	191.14	191.24	-84.98	-11,228.75	1,002.56	1,571.46	1,302.27	269.20	5.838						
23,400.00	12,188.69	23,181.30	12,050.21	192.75	192.85	-85.00	-11,328.73	1,003.54	1,571.51	1,300.03	271.47	5.789						
23,500.00	12,189.99	23,281.30	12,052.13	194.36	194.46	-85.03	-11,428.70	1,004.51	1,571.55	1,297.80	273.75	5.741						
23,600.00	12,191.29	23,381.30	12,054.05	195.97	196.07	-85.05	-11,528.68	1,005.49	1,571.60	1,295.57	276.03	5.693						
23,700.00	12,192.59	23,481.30	12,055.97	197.58	197.69	-85.07	-11,628.65	1,006.46	1,571.65	1,293.33	278.32	5.647						
23,800.00	12,193.89	23,581.30	12,057.88	199.20	199.30	-85.09	-11,728.63	1,007.44	1,571.70	1,291.10	280.60	5.601						
23,900.00	12,195.19	23,681.29	12,059.80	200.81	200.91	-85.12	-11,828.60	1,008.41	1,571.74	1,288.86	282.88	5.556						
24,000.00	12,196.50	23,781.29	12,061.72	202.42	202.53	-85.14	-11,928.58	1,009.39	1,571.79	1,286.62	285.17	5.512						
24,100.00	12,197.80	23,881.29	12,063.64	204.04	204.00	-85.16	-12,028.55	1,010.37	1,571.84	1,284.49	287.35	5.470						
24,110.32	12,197.93	23,888.78	12,063.78	204.20	204.11	-85.16	-12,036.04	1,010.44	1,571.85	1,284.30	287.54	5.466						
24,111.10	12,197.94	23,888.78	12,063.78	204.22	204.11	-85.16	-12,036.04	1,010.44	1,571.85	1,284.30	287.55	5.466						

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 703H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
0.00	0.00	0.00	0.00	0.00	0.00	89.46	0.66	69.98	69.99								
100.00	100.00	98.80	98.80	0.14	0.14	89.46	0.66	69.98	69.98	69.78	0.20	351.586					
200.00	200.00	198.80	198.80	0.50	0.50	89.46	0.66	69.98	69.98	69.28	0.70	99.384					
300.00	300.00	298.80	298.80	0.86	0.85	89.46	0.66	69.98	69.98	68.77	1.21	57.784					
400.00	400.00	398.80	398.80	1.22	1.21	89.46	0.66	69.98	69.98	68.27	1.72	40.733					
500.00	500.00	498.80	498.80	1.58	1.57	89.46	0.66	69.98	69.98	67.76	2.23	31.453					
600.00	600.00	598.80	598.80	1.93	1.93	89.46	0.66	69.98	69.98	67.25	2.73	25.616					
700.00	700.00	698.80	698.80	2.29	2.29	89.46	0.66	69.98	69.98	66.74	3.24	21.607					
800.00	800.00	798.80	798.80	2.65	2.65	89.46	0.66	69.98	69.98	66.24	3.75	18.683					
900.00	900.00	898.80	898.80	3.01	3.01	89.46	0.66	69.98	69.98	65.73	4.25	16.456					
1,000.00	1,000.00	998.80	998.80	3.37	3.36	89.46	0.66	69.98	69.98	65.22	4.76	14.703					
1,100.00	1,100.00	1,098.80	1,098.80	3.73	3.72	89.46	0.66	69.98	69.98	64.72	5.27	13.288					
1,200.00	1,200.00	1,198.80	1,198.80	4.08	4.08	89.46	0.66	69.98	69.98	64.21	5.77	12.121					
1,300.00	1,300.00	1,298.80	1,298.80	4.44	4.44	89.46	0.66	69.98	69.98	63.70	6.28	11.143					
1,400.00	1,400.00	1,398.80	1,398.80	4.80	4.80	89.46	0.66	69.98	69.98	63.20	6.79	10.310					
1,500.00	1,500.00	1,498.80	1,498.80	5.16	5.16	89.46	0.66	69.98	69.98	62.69	7.29	9.594					
1,600.00	1,600.00	1,598.80	1,598.80	5.52	5.51	89.46	0.66	69.98	69.98	62.18	7.80	8.970					
1,700.00	1,700.00	1,698.80	1,698.80	5.88	5.87	89.46	0.66	69.98	69.98	61.67	8.31	8.423					
1,800.00	1,800.00	1,798.80	1,798.80	6.24	6.23	89.46	0.66	69.98	69.98	61.17	8.82	7.939					
1,900.00	1,900.00	1,898.80	1,898.80	6.59	6.59	89.46	0.66	69.98	69.98	60.66	9.32	7.507					
2,000.00	2,000.00	1,998.80	1,998.80	6.95	6.95	89.46	0.66	69.98	69.98	60.15	9.83	7.120					
2,100.00	2,100.00	2,098.80	2,098.80	7.31	7.31	89.46	0.66	69.98	69.98	59.65	10.34	6.771					
2,200.00	2,200.00	2,198.80	2,198.80	7.67	7.67	89.46	0.66	69.98	69.98	59.14	10.84	6.454					
2,300.00	2,300.00	2,298.80	2,298.80	8.03	8.02	89.46	0.66	69.98	69.98	58.63	11.35	6.166					
2,400.00	2,400.00	2,398.80	2,398.80	8.39	8.38	89.46	0.66	69.98	69.98	58.13	11.86	5.902					
2,500.00	2,500.00	2,498.80	2,498.80	8.74	8.74	89.46	0.66	69.98	69.98	57.62	12.36	5.660					
2,600.00	2,600.00	2,598.80	2,598.80	9.10	9.10	89.46	0.66	69.98	69.98	57.11	12.87	5.437					
2,700.00	2,700.00	2,698.80	2,698.80	9.46	9.46	89.46	0.66	69.98	69.98	56.61	13.38	5.231					
2,800.00	2,800.00	2,798.80	2,798.80	9.82	9.82	89.46	0.66	69.98	69.98	56.10	13.88	5.040					
2,900.00	2,900.00	2,898.80	2,898.80	10.18	10.17	89.46	0.66	69.98	69.98	55.59	14.39	4.863					
3,000.00	3,000.00	2,998.80	2,998.80	10.54	10.53	89.46	0.66	69.98	69.98	55.08	14.90	4.697					
3,100.00	3,100.00	3,098.80	3,098.80	10.90	10.89	89.46	0.66	69.98	69.98	54.58	15.41	4.543					
3,200.00	3,200.00	3,198.80	3,198.80	11.25	11.25	89.46	0.66	69.98	69.98	54.07	15.91	4.398					
3,300.00	3,300.00	3,298.80	3,298.80	11.61	11.61	89.46	0.66	69.98	69.98	53.56	16.42	4.262					
3,400.00	3,400.00	3,398.80	3,398.80	11.97	11.97	89.46	0.66	69.98	69.98	53.06	16.93	4.134					
3,500.00	3,500.00	3,498.80	3,498.80	12.33	12.33	89.46	0.66	69.98	69.98	52.55	17.43	4.014					
3,600.00	3,600.00	3,598.80	3,598.80	12.69	12.68	89.46	0.66	69.98	69.98	52.04	17.94	3.901					
3,700.00	3,700.00	3,698.80	3,698.80	13.05	13.04	89.46	0.66	69.98	69.98	51.54	18.45	3.794					
3,800.00	3,800.00	3,798.80	3,798.80	13.41	13.40	89.46	0.66	69.98	69.98	51.03	18.95	3.692					
3,900.00	3,900.00	3,898.80	3,898.80	13.76	13.76	89.46	0.66	69.98	69.98	50.52	19.46	3.596					
4,000.00	4,000.00	3,998.80	3,998.80	14.12	14.12	89.46	0.66	69.98	69.98	50.01	19.97	3.505					
4,100.00	4,100.00	4,098.80	4,098.80	14.48	14.48	89.46	0.66	69.98	69.98	49.51	20.48	3.418					
4,200.00	4,200.00	4,198.80	4,198.80	14.84	14.83	89.46	0.66	69.98	69.98	49.00	20.98	3.335					
4,300.00	4,300.00	4,298.80	4,298.80	15.20	15.19	89.46	0.66	69.98	69.98	48.49	21.49	3.257					
4,400.00	4,400.00	4,398.80	4,398.80	15.56	15.55	89.46	0.66	69.98	69.98	47.99	22.00	3.182					
4,500.00	4,500.00	4,498.80	4,498.80	15.91	15.91	89.46	0.66	69.98	69.98	47.48	22.50	3.110					
4,550.00	4,550.00	4,548.80	4,548.80	16.09	16.09	89.46	0.66	69.98	69.98	47.23	22.76	3.075 CC, ES					
4,600.00	4,600.00	4,598.80	4,598.80	16.27	16.27	162.75	0.66	69.98	70.30	47.29	23.01	3.055 SF					
4,700.00	4,699.96	4,698.76	4,698.76	16.62	16.63	163.35	0.66	69.98	72.80	49.29	23.51	3.097					
4,800.00	4,799.82	4,798.62	4,798.62	16.96	16.98	164.43	0.66	69.98	77.83	53.83	24.00	3.242					
4,900.00	4,899.51	4,898.31	4,898.31	17.31	17.34	165.82	0.66	69.98	85.41	60.91	24.50	3.486					
5,000.00	4,998.96	4,997.76	4,997.76	17.66	17.70	167.32	0.66	69.98	95.58	70.59	25.00	3.824					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,098.10	5,096.90	5,096.90	18.02	18.05	168.80	0.66	69.98	108.36	82.87	25.49	4.251		
5,200.00	5,196.87	5,195.67	5,195.67	18.38	18.41	170.16	0.66	69.98	123.75	97.76	25.98	4.763		
5,216.82	5,213.44	5,212.24	5,212.24	18.44	18.47	170.38	0.66	69.98	126.59	100.53	26.07	4.856		
5,300.00	5,295.35	5,294.15	5,294.15	18.74	18.76	171.36	0.66	69.98	140.86	114.39	26.48	5.320		
5,400.00	5,393.83	5,392.63	5,392.63	19.11	19.11	172.31	0.66	69.98	158.06	131.09	26.97	5.861		
5,500.00	5,492.31	5,491.11	5,491.11	19.48	19.47	173.07	0.66	69.98	175.29	147.83	27.46	6.383		
5,600.00	5,590.79	5,586.71	5,586.70	19.85	19.81	173.45	1.27	70.75	193.22	165.28	27.94	6.916		
5,700.00	5,689.27	5,681.45	5,681.38	20.23	20.14	173.28	3.33	73.36	212.76	184.36	28.40	7.491		
5,800.00	5,787.75	5,775.49	5,775.26	20.61	20.47	172.70	6.82	77.77	233.91	205.06	28.86	8.106		
5,900.00	5,886.23	5,868.74	5,868.17	20.99	20.80	171.83	11.69	83.93	256.71	227.41	29.30	8.761		
6,000.00	5,984.71	5,961.09	5,959.97	21.38	21.13	170.77	17.90	91.79	281.20	251.46	29.73	9.457		
6,100.00	6,083.19	6,053.55	6,051.62	21.77	21.46	169.57	25.46	101.35	307.38	277.21	30.17	10.189		
6,200.00	6,181.67	6,149.69	6,146.83	22.16	21.80	168.42	33.75	111.84	334.19	303.54	30.65	10.905		
6,300.00	6,280.15	6,245.83	6,242.04	22.55	22.15	167.45	42.04	122.33	361.10	329.97	31.13	11.600		
6,400.00	6,378.63	6,341.97	6,337.24	22.95	22.49	166.61	50.34	132.82	388.10	356.49	31.61	12.277		
6,500.00	6,477.11	6,438.11	6,432.45	23.34	22.84	165.88	58.63	143.31	415.16	383.07	32.10	12.934		
6,600.00	6,575.59	6,534.26	6,527.66	23.75	23.19	165.23	66.92	153.80	442.29	409.70	32.59	13.573		
6,700.00	6,674.07	6,630.40	6,622.86	24.15	23.55	164.67	75.21	164.29	469.45	436.38	33.08	14.193		
6,800.00	6,772.56	6,726.54	6,718.07	24.55	23.90	164.16	83.51	174.78	496.66	463.09	33.57	14.796		
6,900.00	6,871.04	6,822.68	6,813.27	24.96	24.26	163.71	91.80	185.27	523.89	489.83	34.06	15.382		
7,000.00	6,969.52	6,918.82	6,908.48	25.36	24.61	163.30	100.09	195.76	551.16	516.60	34.55	15.951		
7,100.00	7,068.00	7,014.96	7,003.69	25.77	24.97	162.93	108.39	206.25	578.44	543.40	35.05	16.505		
7,200.00	7,166.48	7,111.10	7,098.89	26.18	25.33	162.60	116.68	216.74	605.75	570.21	35.54	17.043		
7,300.00	7,264.96	7,207.24	7,194.10	26.59	25.69	162.29	124.97	227.23	633.08	597.04	36.04	17.566		
7,400.00	7,363.44	7,303.38	7,289.31	27.01	26.05	162.01	133.26	237.72	660.42	623.88	36.54	18.075		
7,500.00	7,461.92	7,399.53	7,384.51	27.42	26.42	161.75	141.56	248.21	687.77	650.73	37.04	18.570		
7,600.00	7,560.40	7,495.67	7,479.72	27.84	26.78	161.51	149.85	258.70	715.14	677.60	37.54	19.051		
7,700.00	7,658.88	7,591.81	7,574.93	28.25	27.15	161.28	158.14	269.19	742.52	704.48	38.04	19.520		
7,800.00	7,757.36	7,687.95	7,670.13	28.67	27.51	161.08	166.43	279.69	769.90	731.36	38.54	19.976		
7,900.00	7,855.84	7,784.09	7,765.34	29.09	27.88	160.89	174.73	290.18	797.30	758.25	39.04	20.421		
8,000.00	7,954.32	7,893.40	7,873.68	29.51	28.30	160.71	183.70	301.52	824.20	784.56	39.64	20.791		
8,100.00	8,052.80	8,011.11	7,990.75	29.93	28.74	160.68	191.30	311.14	848.87	808.58	40.28	21.072		
8,200.00	8,151.28	8,130.23	8,109.55	30.36	29.18	160.79	196.71	317.99	871.10	830.19	40.91	21.294		
8,300.00	8,249.76	8,250.55	8,229.76	30.78	29.61	161.05	199.84	321.95	890.88	849.36	41.51	21.460		
8,400.00	8,348.24	8,367.84	8,347.04	31.20	30.03	161.42	200.66	322.98	908.21	866.12	42.08	21.581		
8,500.00	8,446.72	8,466.32	8,445.52	31.63	30.38	161.76	200.66	322.98	924.71	882.12	42.59	21.712		
8,535.38	8,481.56	8,501.16	8,480.36	31.78	30.50	161.88	200.66	322.98	930.56	887.79	42.77	21.758		
8,600.00	8,545.29	8,564.89	8,544.09	32.05	30.72	162.13	200.66	322.98	940.74	897.64	43.10	21.829		
8,700.00	8,644.24	8,663.85	8,643.04	32.46	31.07	162.46	200.66	322.98	954.47	910.87	43.60	21.891		
8,800.00	8,743.54	8,763.14	8,742.34	32.86	31.42	162.72	200.66	322.98	965.75	921.64	44.11	21.896		
8,900.00	8,843.11	8,862.72	8,841.91	33.24	31.78	162.92	200.66	322.98	974.55	929.94	44.61	21.846		
9,000.00	8,942.89	8,962.50	8,941.69	33.61	32.13	163.06	200.66	322.98	980.86	935.75	45.11	21.742		
9,100.00	9,042.81	9,062.41	9,041.61	33.96	32.48	163.15	200.66	322.98	984.67	939.06	45.61	21.587		
9,202.20	9,145.00	9,164.61	9,143.80	34.31	32.84	89.96	200.66	322.98	985.98	939.86	46.12	21.377		
9,300.00	9,242.80	9,262.40	9,241.60	34.64	33.19	89.96	200.66	322.98	985.98	939.37	46.61	21.153		
9,400.00	9,342.80	9,362.40	9,341.60	34.98	33.54	89.96	200.66	322.98	985.98	938.87	47.11	20.930		
9,500.00	9,442.80	9,462.40	9,441.60	35.32	33.90	89.96	200.66	322.98	985.98	938.37	47.61	20.711		
9,600.00	9,542.80	9,562.40	9,541.60	35.65	34.25	89.96	200.66	322.98	985.98	937.87	48.11	20.496		
9,700.00	9,642.80	9,662.40	9,641.60	35.99	34.60	89.96	200.66	322.98	985.98	937.38	48.60	20.286		
9,800.00	9,742.80	9,762.40	9,741.60	36.33	34.96	89.96	200.66	322.98	985.98	936.88	49.10	20.080		
9,900.00	9,842.80	9,862.40	9,841.60	36.67	35.31	89.96	200.66	322.98	985.98	936.38	49.60	19.878		
10,000.00	9,942.80	9,962.40	9,941.60	37.01	35.67	89.96	200.66	322.98	985.98	935.88	50.10	19.680		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design		Bus Driver/Kasten Fed Com - Kasten Fed Com 703H - OH - Plan #2											Offset Site Error: 0.00 usft	
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,042.80	10,062.40	10,041.60	37.35	36.02	89.96	200.66	322.98	985.98	935.38	50.60	19.485		
10,200.00	10,142.80	10,162.40	10,141.60	37.69	36.38	89.96	200.66	322.98	985.98	934.88	51.10	19.295		
10,300.00	10,242.80	10,262.40	10,241.60	38.03	36.73	89.96	200.66	322.98	985.98	934.38	51.60	19.108		
10,400.00	10,342.80	10,362.40	10,341.60	38.37	37.08	89.96	200.66	322.98	985.98	933.88	52.10	18.925		
10,500.00	10,442.80	10,462.40	10,441.60	38.71	37.44	89.96	200.66	322.98	985.98	933.38	52.60	18.745		
10,600.00	10,542.80	10,562.40	10,541.60	39.05	37.79	89.96	200.66	322.98	985.98	932.88	53.10	18.568		
10,700.00	10,642.80	10,662.40	10,641.60	39.39	38.15	89.96	200.66	322.98	985.98	932.38	53.60	18.395		
10,800.00	10,742.80	10,762.40	10,741.60	39.73	38.50	89.96	200.66	322.98	985.98	931.88	54.10	18.225		
10,900.00	10,842.80	10,862.40	10,841.60	40.07	38.86	89.96	200.66	322.98	985.98	931.38	54.60	18.058		
11,000.00	10,942.80	10,962.40	10,941.60	40.42	39.21	89.96	200.66	322.98	985.98	930.88	55.10	17.894		
11,100.00	11,042.80	11,062.40	11,041.60	40.76	39.57	89.96	200.66	322.98	985.98	930.38	55.60	17.733		
11,200.00	11,142.80	11,162.40	11,141.60	41.10	39.92	89.96	200.66	322.98	985.98	929.88	56.10	17.575		
11,300.00	11,242.80	11,262.40	11,241.60	41.45	40.28	89.96	200.66	322.98	985.98	929.38	56.60	17.419		
11,400.00	11,342.80	11,362.40	11,341.60	41.79	40.63	89.96	200.66	322.98	985.98	928.88	57.10	17.266		
11,500.00	11,442.80	11,462.40	11,441.60	42.13	40.99	89.96	200.66	322.98	985.98	928.37	57.61	17.116		
11,530.20	11,473.00	11,492.61	11,471.80	42.24	41.10	89.96	200.66	322.98	985.98	928.22	57.76	17.071		
11,550.00	11,492.79	11,512.40	11,491.59	42.30	41.17	-89.56	200.66	322.98	985.98	928.12	57.85	17.042		
11,600.00	11,542.62	11,562.23	11,541.42	42.45	41.34	-89.79	200.66	322.98	985.96	927.86	58.09	16.972		
11,625.92	11,568.27	11,587.87	11,567.07	42.53	41.43	-90.00	200.66	322.98	985.95	927.73	58.21	16.937		
11,650.00	11,591.93	11,611.53	11,590.73	42.60	41.52	-90.26	200.66	322.98	985.96	927.63	58.33	16.904		
11,700.00	11,640.32	11,661.23	11,640.37	42.74	41.68	-90.86	198.70	323.00	986.06	927.52	58.55	16.842		
11,750.00	11,687.45	11,711.90	11,690.61	42.87	41.84	-91.46	192.28	323.05	986.28	927.52	58.76	16.786		
11,800.00	11,732.94	11,763.57	11,741.07	42.99	41.99	-92.05	181.20	323.15	986.61	927.65	58.96	16.734		
11,850.00	11,776.45	11,816.31	11,791.31	43.10	42.14	-92.64	165.25	323.29	987.04	927.89	59.15	16.686		
11,900.00	11,817.65	11,870.13	11,840.86	43.20	42.27	-93.21	144.28	323.48	987.56	928.23	59.34	16.643		
11,950.00	11,856.23	11,925.07	11,889.17	43.28	42.40	-93.77	118.18	323.70	988.16	928.65	59.51	16.605		
12,000.00	11,891.90	11,981.14	11,935.68	43.36	42.52	-94.29	86.89	323.98	988.82	929.15	59.67	16.571		
12,050.00	11,924.37	12,038.34	11,979.74	43.42	42.62	-94.79	50.45	324.30	989.51	929.68	59.83	16.540		
12,100.00	11,953.41	12,096.64	12,020.68	43.47	42.71	-95.26	8.98	324.66	990.21	930.24	59.97	16.511		
12,150.00	11,978.80	12,156.01	12,057.83	43.52	42.78	-95.68	-37.30	325.07	990.90	930.79	60.11	16.484		
12,200.00	12,000.33	12,216.37	12,090.47	43.56	42.84	-96.05	-88.03	325.52	991.56	931.30	60.25	16.456		
12,250.00	12,017.85	12,277.62	12,117.96	43.61	42.97	-96.37	-142.73	326.00	992.14	931.74	60.40	16.427		
12,300.00	12,031.23	12,339.65	12,139.69	43.66	43.12	-96.63	-200.79	326.51	992.64	932.09	60.55	16.394		
12,350.00	12,040.35	12,402.29	12,155.14	43.72	43.27	-96.83	-261.47	327.04	993.03	932.31	60.72	16.355		
12,400.00	12,045.16	12,465.40	12,163.91	43.79	43.43	-96.96	-323.93	327.59	993.29	932.39	60.90	16.311		
12,422.75	12,045.91	12,494.21	12,165.62	43.83	43.50	-96.99	-352.68	327.84	993.36	932.38	60.98	16.289		
12,500.00	12,046.91	12,574.00	12,166.80	44.00	43.73	-97.00	-432.47	328.54	993.38	932.09	61.28	16.210		
12,600.00	12,048.22	12,674.00	12,168.12	44.29	44.05	-97.00	-532.45	329.42	993.38	931.65	61.74	16.091		
12,700.00	12,049.52	12,774.00	12,169.43	44.65	44.43	-97.00	-632.44	330.30	993.39	931.11	62.27	15.952		
12,800.00	12,050.82	12,874.00	12,170.75	45.08	44.87	-97.00	-732.43	331.18	993.39	930.50	62.89	15.796		
12,900.00	12,052.12	12,974.00	12,172.07	45.57	45.37	-97.01	-832.42	332.06	993.40	929.81	63.59	15.623		
13,000.00	12,053.42	13,074.00	12,173.39	46.12	45.91	-97.01	-932.40	332.94	993.40	929.04	64.36	15.435		
13,100.00	12,054.72	13,174.00	12,174.70	46.72	46.51	-97.01	-1,032.39	333.81	993.41	928.20	65.21	15.235		
13,200.00	12,056.02	13,274.00	12,176.02	47.37	47.16	-97.01	-1,132.38	334.69	993.41	927.29	66.12	15.024		
13,300.00	12,057.32	13,374.00	12,177.34	48.07	47.85	-97.01	-1,232.37	335.57	993.42	926.31	67.11	14.803		
13,400.00	12,058.62	13,474.00	12,178.65	48.81	48.59	-97.01	-1,332.35	336.45	993.42	925.26	68.16	14.575		
13,500.00	12,059.92	13,574.00	12,179.97	49.60	49.38	-97.01	-1,432.34	337.33	993.43	924.16	69.27	14.341		
13,600.00	12,061.22	13,674.00	12,181.29	50.43	50.21	-97.01	-1,532.33	338.21	993.43	922.99	70.44	14.103		
13,700.00	12,062.52	13,774.00	12,182.60	51.30	51.07	-97.01	-1,632.31	339.09	993.44	921.77	71.67	13.862		
13,800.00	12,063.82	13,874.00	12,183.92	52.21	51.98	-97.01	-1,732.30	339.96	993.44	920.49	72.95	13.618		
13,900.00	12,065.12	13,974.00	12,185.24	53.16	52.92	-97.01	-1,832.29	340.84	993.45	919.17	74.28	13.374		
14,000.00	12,066.42	14,074.00	12,186.56	54.13	53.90	-97.02	-1,932.28	341.72	993.45	917.79	75.66	13.131		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	12,067.73	14,174.00	12,187.87	55.14	54.90	-97.02	-2,032.26	342.60	993.46	916.38	77.08	12.888		
14,200.00	12,069.03	14,274.00	12,189.19	56.18	55.94	-97.02	-2,132.25	343.48	993.46	914.91	78.55	12.648		
14,300.00	12,070.33	14,374.00	12,190.51	57.25	57.01	-97.02	-2,232.24	344.36	993.47	913.41	80.06	12.410		
14,400.00	12,071.63	14,474.00	12,191.82	58.35	58.10	-97.02	-2,332.23	345.24	993.47	911.87	81.60	12.175		
14,500.00	12,072.93	14,574.00	12,193.14	59.47	59.23	-97.02	-2,432.21	346.11	993.48	910.30	83.18	11.943		
14,600.00	12,074.23	14,674.00	12,194.46	60.61	60.37	-97.02	-2,532.20	346.99	993.48	908.69	84.80	11.716		
14,700.00	12,075.53	14,774.00	12,195.77	61.78	61.54	-97.02	-2,632.19	347.87	993.49	907.04	86.44	11.493		
14,800.00	12,076.83	14,874.00	12,197.09	62.97	62.73	-97.02	-2,732.18	348.75	993.49	905.37	88.12	11.274		
14,900.00	12,078.13	14,974.00	12,198.41	64.18	63.94	-97.02	-2,832.16	349.63	993.50	903.67	89.83	11.060		
15,000.00	12,079.43	15,074.00	12,199.73	65.41	65.17	-97.02	-2,932.15	350.51	993.50	901.94	91.56	10.851		
15,100.00	12,080.73	15,174.00	12,201.04	66.66	66.42	-97.03	-3,032.14	351.39	993.51	900.19	93.32	10.646		
15,200.00	12,082.03	15,274.00	12,202.36	67.93	67.68	-97.03	-3,132.13	352.26	993.51	898.41	95.11	10.446		
15,300.00	12,083.33	15,374.00	12,203.68	69.21	68.96	-97.03	-3,232.11	353.14	993.52	896.61	96.91	10.252		
15,400.00	12,084.63	15,474.00	12,204.99	70.50	70.26	-97.03	-3,332.10	354.02	993.52	894.78	98.74	10.062		
15,500.00	12,085.94	15,574.00	12,206.31	71.82	71.57	-97.03	-3,432.09	354.90	993.53	892.94	100.59	9.877		
15,600.00	12,087.24	15,674.00	12,207.63	73.14	72.90	-97.03	-3,532.08	355.78	993.53	891.08	102.45	9.697		
15,700.00	12,088.54	15,774.00	12,208.94	74.48	74.24	-97.03	-3,632.06	356.66	993.54	889.20	104.34	9.522		
15,800.00	12,089.84	15,874.00	12,210.26	75.83	75.59	-97.03	-3,732.05	357.54	993.54	887.30	106.24	9.352		
15,900.00	12,091.14	15,974.00	12,211.58	77.19	76.95	-97.03	-3,832.04	358.41	993.55	885.39	108.16	9.186		
16,000.00	12,092.44	16,074.00	12,212.90	78.57	78.32	-97.03	-3,932.03	359.29	993.55	883.46	110.09	9.025		
16,100.00	12,093.74	16,174.00	12,214.21	79.95	79.71	-97.03	-4,032.01	360.17	993.56	881.52	112.04	8.868		
16,200.00	12,095.04	16,274.00	12,215.53	81.34	81.10	-97.04	-4,132.00	361.05	993.56	879.56	114.01	8.715		
16,300.00	12,096.34	16,374.00	12,216.85	82.75	82.51	-97.04	-4,231.99	361.93	993.57	877.59	115.98	8.567		
16,400.00	12,097.64	16,474.00	12,218.16	84.16	83.92	-97.04	-4,331.98	362.81	993.58	875.61	117.97	8.422		
16,500.00	12,098.94	16,574.00	12,219.48	85.58	85.34	-97.04	-4,431.96	363.69	993.58	873.61	119.97	8.282		
16,600.00	12,100.24	16,674.00	12,220.80	87.01	86.77	-97.04	-4,531.95	364.56	993.59	871.60	121.98	8.145		
16,700.00	12,101.54	16,774.00	12,222.11	88.45	88.21	-97.04	-4,631.94	365.44	993.59	869.59	124.00	8.013		
16,800.00	12,102.84	16,874.00	12,223.43	89.89	89.66	-97.04	-4,731.93	366.32	993.60	867.56	126.04	7.883		
16,900.00	12,104.15	16,974.00	12,224.75	91.34	91.11	-97.04	-4,831.91	367.20	993.60	865.52	128.08	7.758		
17,000.00	12,105.45	17,074.00	12,226.07	92.80	92.57	-97.04	-4,931.90	368.08	993.61	863.48	130.13	7.636		
17,100.00	12,106.75	17,174.00	12,227.38	94.26	94.03	-97.04	-5,031.89	368.96	993.61	861.42	132.19	7.517		
17,200.00	12,108.05	17,274.00	12,228.70	95.74	95.50	-97.04	-5,131.88	369.84	993.62	859.36	134.26	7.401		
17,300.00	12,109.35	17,374.00	12,230.02	97.21	96.98	-97.05	-5,231.86	370.71	993.62	857.28	136.34	7.288		
17,400.00	12,110.65	17,474.00	12,231.33	98.69	98.46	-97.05	-5,331.85	371.59	993.63	855.21	138.42	7.178		
17,500.00	12,111.95	17,574.00	12,232.65	100.18	99.95	-97.05	-5,431.84	372.47	993.63	853.12	140.51	7.071		
17,600.00	12,113.25	17,674.00	12,233.97	101.67	101.45	-97.05	-5,531.83	373.35	993.64	851.03	142.61	6.967		
17,700.00	12,114.55	17,774.00	12,235.28	103.17	102.94	-97.05	-5,631.81	374.23	993.64	848.92	144.72	6.866		
17,800.00	12,115.85	17,874.00	12,236.60	104.67	104.45	-97.05	-5,731.80	375.11	993.65	846.82	146.83	6.767		
17,900.00	12,117.15	17,974.00	12,237.92	106.18	105.95	-97.05	-5,831.79	375.99	993.65	844.71	148.95	6.671		
18,000.00	12,118.45	18,074.00	12,239.23	107.69	107.47	-97.05	-5,931.78	376.86	993.66	842.59	151.07	6.577		
18,100.00	12,119.75	18,174.00	12,240.55	109.20	108.98	-97.05	-6,031.76	377.74	993.66	840.46	153.20	6.486		
18,200.00	12,121.05	18,274.00	12,241.87	110.72	110.50	-97.05	-6,131.75	378.62	993.67	838.33	155.33	6.397		
18,300.00	12,122.36	18,374.00	12,243.19	112.25	112.02	-97.05	-6,231.74	379.50	993.67	836.20	157.47	6.310		
18,400.00	12,123.66	18,474.00	12,244.50	113.77	113.55	-97.06	-6,331.73	380.38	993.68	834.06	159.62	6.225		
18,500.00	12,124.96	18,574.00	12,245.82	115.30	115.08	-97.06	-6,431.71	381.26	993.68	831.91	161.77	6.143		
18,600.00	12,126.26	18,674.00	12,247.14	116.83	116.61	-97.06	-6,531.70	382.14	993.69	829.77	163.92	6.062		
18,700.00	12,127.56	18,774.00	12,248.45	118.37	118.15	-97.06	-6,631.69	383.01	993.69	827.61	166.08	5.983		
18,800.00	12,128.86	18,874.00	12,249.77	119.91	119.69	-97.06	-6,731.68	383.89	993.70	825.45	168.24	5.906		
18,900.00	12,130.16	18,974.00	12,251.09	121.45	121.23	-97.06	-6,831.66	384.77	993.70	823.29	170.41	5.831		
19,000.00	12,131.46	19,074.00	12,252.40	123.00	122.78	-97.06	-6,931.65	385.65	993.71	821.13	172.58	5.758		
19,100.00	12,132.76	19,174.00	12,253.72	124.54	124.33	-97.06	-7,031.64	386.53	993.71	818.96	174.75	5.686		
19,200.00	12,134.06	19,274.00	12,255.04	126.10	125.88	-97.06	-7,131.63	387.41	993.72	816.78	176.93	5.616		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kasten Fed Com - Kasten Fed Com 703H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
19,300.00	12,135.36	19,374.00	12,256.36	127.65	127.43	-97.06	-7,231.61	388.29	993.72	814.61	179.11	5.548					
19,400.00	12,136.66	19,474.00	12,257.67	129.20	128.99	-97.06	-7,331.60	389.16	993.73	812.43	181.30	5.481					
19,500.00	12,137.96	19,574.00	12,258.99	130.76	130.55	-97.07	-7,431.59	390.04	993.73	810.25	183.49	5.416					
19,600.00	12,139.26	19,674.00	12,260.31	132.32	132.11	-97.07	-7,531.58	390.92	993.74	808.06	185.68	5.352					
19,700.00	12,140.57	19,774.00	12,261.62	133.88	133.67	-97.07	-7,631.56	391.80	993.74	805.87	187.87	5.289					
19,800.00	12,141.87	19,874.00	12,262.94	135.45	135.24	-97.07	-7,731.55	392.68	993.75	803.68	190.07	5.228					
19,900.00	12,143.17	19,974.00	12,264.26	137.02	136.80	-97.07	-7,831.54	393.56	993.75	801.49	192.27	5.169					
20,000.00	12,144.47	20,074.00	12,265.57	138.58	138.37	-97.07	-7,931.53	394.44	993.76	799.29	194.47	5.110					
20,100.00	12,145.77	20,174.00	12,266.89	140.15	139.94	-97.07	-8,031.51	395.31	993.76	797.09	196.68	5.053					
20,200.00	12,147.07	20,274.00	12,268.21	141.73	141.52	-97.07	-8,131.50	396.19	993.77	794.89	198.88	4.997					
20,300.00	12,148.37	20,374.00	12,269.53	143.30	143.09	-97.07	-8,231.49	397.07	993.77	792.68	201.09	4.942					
20,400.00	12,149.67	20,474.00	12,270.84	144.88	144.67	-97.07	-8,331.48	397.95	993.78	790.47	203.30	4.888					
20,500.00	12,150.97	20,574.00	12,272.16	146.45	146.25	-97.07	-8,431.46	398.83	993.78	788.27	205.52	4.835					
20,600.00	12,152.27	20,674.00	12,273.48	148.03	147.83	-97.08	-8,531.45	399.71	993.79	786.05	207.73	4.784					
20,700.00	12,153.57	20,774.00	12,274.79	149.61	149.41	-97.08	-8,631.44	400.59	993.79	783.84	209.95	4.733					
20,800.00	12,154.87	20,874.00	12,276.11	151.20	150.99	-97.08	-8,731.43	401.46	993.80	781.62	212.17	4.684					
20,900.00	12,156.17	20,974.00	12,277.43	152.78	152.58	-97.08	-8,831.41	402.34	993.80	779.41	214.40	4.635					
21,000.00	12,157.47	21,074.00	12,278.74	154.37	154.16	-97.08	-8,931.40	403.22	993.81	777.19	216.62	4.588					
21,100.00	12,158.77	21,174.00	12,280.06	155.95	155.75	-97.08	-9,031.39	404.10	993.81	774.97	218.85	4.541					
21,200.00	12,160.08	21,274.00	12,281.38	157.54	157.34	-97.08	-9,131.38	404.98	993.82	772.74	221.08	4.495					
21,300.00	12,161.38	21,374.00	12,282.70	159.13	158.93	-97.08	-9,231.36	405.86	993.82	770.52	223.31	4.451					
21,400.00	12,162.68	21,474.00	12,284.01	160.72	160.52	-97.08	-9,331.35	406.74	993.83	768.29	225.54	4.407					
21,500.00	12,163.98	21,574.00	12,285.33	162.31	162.11	-97.08	-9,431.34	407.61	993.84	766.06	227.77	4.363					
21,600.00	12,165.28	21,674.00	12,286.65	163.90	163.70	-97.08	-9,531.32	408.49	993.84	763.84	230.01	4.321					
21,700.00	12,166.58	21,774.00	12,287.96	165.50	165.30	-97.09	-9,631.31	409.37	993.85	761.60	232.24	4.279					
21,800.00	12,167.88	21,874.00	12,289.28	167.09	166.89	-97.09	-9,731.30	410.25	993.85	759.37	234.48	4.239					
21,900.00	12,169.18	21,974.00	12,290.60	168.69	168.49	-97.09	-9,831.29	411.13	993.86	757.14	236.72	4.198					
22,000.00	12,170.48	22,074.00	12,291.91	170.29	170.09	-97.09	-9,931.27	412.01	993.86	754.90	238.96	4.159					
22,100.00	12,171.78	22,174.00	12,293.23	171.89	171.69	-97.09	-10,031.26	412.89	993.87	752.67	241.20	4.121					
22,200.00	12,173.08	22,274.00	12,294.55	173.49	173.29	-97.09	-10,131.25	413.76	993.87	750.43	243.44	4.083					
22,300.00	12,174.38	22,374.00	12,295.87	175.09	174.89	-97.09	-10,231.24	414.64	993.88	748.19	245.69	4.045					
22,400.00	12,175.68	22,474.00	12,297.18	176.69	176.49	-97.09	-10,331.22	415.52	993.88	745.95	247.93	4.009					
22,500.00	12,176.98	22,574.00	12,298.50	178.29	178.09	-97.09	-10,431.21	416.40	993.89	743.71	250.18	3.973					
22,600.00	12,178.29	22,674.00	12,299.82	179.89	179.70	-97.09	-10,531.20	417.28	993.89	741.47	252.43	3.937					
22,700.00	12,179.59	22,774.00	12,301.13	181.50	181.30	-97.09	-10,631.19	418.16	993.90	739.22	254.68	3.903					
22,800.00	12,180.89	22,874.00	12,302.45	183.10	182.91	-97.10	-10,731.17	419.04	993.90	736.98	256.93	3.868					
22,900.00	12,182.19	22,974.00	12,303.77	184.71	184.51	-97.10	-10,831.16	419.91	993.91	734.73	259.18	3.835					
23,000.00	12,183.49	23,074.00	12,305.08	186.31	186.12	-97.10	-10,931.15	420.79	993.91	732.48	261.43	3.802					
23,100.00	12,184.79	23,174.00	12,306.40	187.92	187.73	-97.10	-11,031.14	421.67	993.92	730.24	263.68	3.769					
23,200.00	12,186.09	23,274.00	12,307.72	189.53	189.34	-97.10	-11,131.12	422.55	993.92	727.99	265.93	3.737					
23,300.00	12,187.39	23,374.00	12,309.04	191.14	190.95	-97.10	-11,231.11	423.43	993.93	725.74	268.19	3.706					
23,400.00	12,188.69	23,474.00	12,310.35	192.75	192.56	-97.10	-11,331.10	424.31	993.93	723.49	270.45	3.675					
23,500.00	12,189.99	23,574.00	12,311.67	194.36	194.17	-97.10	-11,431.09	425.19	993.94	721.23	272.70	3.645					
23,600.00	12,191.29	23,674.00	12,312.99	195.97	195.78	-97.10	-11,531.07	426.06	993.94	718.98	274.96	3.615					
23,700.00	12,192.59	23,774.00	12,314.30	197.58	197.39	-97.10	-11,631.06	426.94	993.95	716.73	277.22	3.585					
23,800.00	12,193.89	23,874.00	12,315.62	199.20	199.00	-97.10	-11,731.05	427.82	993.95	714.48	279.48	3.556					
23,900.00	12,195.19	23,974.00	12,316.94	200.81	200.62	-97.11	-11,831.04	428.70	993.96	712.22	281.74	3.528					
24,000.00	12,196.50	24,074.00	12,318.25	202.42	202.23	-97.11	-11,931.02	429.58	993.96	709.96	284.00	3.500					
24,100.00	12,197.80	24,174.00	12,319.57	204.04	203.85	-97.11	-12,031.01	430.46	993.97	707.71	286.26	3.472					
24,100.11	12,197.80	24,174.11	12,319.57	204.04	203.85	-97.11	-12,031.12	430.46	993.97	707.71	286.26	3.472					
24,110.32	12,197.93	24,182.27	12,319.68	204.20	203.98	-97.11	-12,039.28	430.53	993.97	707.51	286.46	3.470					
24,111.10	12,197.94	24,182.27	12,319.68	204.22	203.98	-97.11	-12,039.28	430.53	993.97	707.51	286.46	3.470					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	12.30	12.30	0.00	0.02	-92.41	-79.52	-1,885.79	1,887.47					
100.00	100.00	112.30	112.30	0.14	0.19	-92.41	-79.52	-1,885.79	1,887.47	1,887.23	0.23	8,082.809		
200.00	200.00	212.30	212.30	0.50	0.54	-92.41	-79.52	-1,885.79	1,887.47	1,886.73	0.74	2,553.948		
300.00	300.00	312.30	312.30	0.86	0.90	-92.41	-79.52	-1,885.79	1,887.47	1,886.22	1.25	1,515.153		
400.00	400.00	412.30	412.30	1.22	1.26	-92.41	-79.52	-1,885.79	1,887.47	1,885.71	1.75	1,076.971		
500.00	500.00	512.30	512.30	1.58	1.62	-92.41	-79.52	-1,885.79	1,887.47	1,885.21	2.26	835.361		
600.00	600.00	612.30	612.30	1.93	1.98	-92.41	-79.52	-1,885.79	1,887.47	1,884.70	2.77	682.288		
700.00	700.00	712.30	712.30	2.29	2.34	-92.41	-79.52	-1,885.79	1,887.47	1,884.19	3.27	576.624		
800.00	800.00	812.30	812.30	2.65	2.69	-92.41	-79.52	-1,885.79	1,887.47	1,883.69	3.78	499.298		
900.00	900.00	912.30	912.30	3.01	3.05	-92.41	-79.52	-1,885.79	1,887.47	1,883.18	4.29	440.258		
1,000.00	1,000.00	1,012.30	1,012.30	3.37	3.41	-92.41	-79.52	-1,885.79	1,887.47	1,882.67	4.79	393.704		
1,100.00	1,100.00	1,112.30	1,112.30	3.73	3.77	-92.41	-79.52	-1,885.79	1,887.47	1,882.16	5.30	356.054		
1,200.00	1,200.00	1,212.30	1,212.30	4.08	4.13	-92.41	-79.52	-1,885.79	1,887.47	1,881.66	5.81	324.976		
1,300.00	1,300.00	1,312.30	1,312.30	4.44	4.49	-92.41	-79.52	-1,885.79	1,887.47	1,881.15	6.31	298.888		
1,400.00	1,400.00	1,412.30	1,412.30	4.80	4.85	-92.41	-79.52	-1,885.79	1,887.47	1,880.64	6.82	276.677		
1,500.00	1,500.00	1,512.30	1,512.30	5.16	5.20	-92.41	-79.52	-1,885.79	1,887.47	1,880.14	7.33	257.539		
1,600.00	1,600.00	1,612.30	1,612.30	5.52	5.56	-92.41	-79.52	-1,885.79	1,887.47	1,879.63	7.84	240.877		
1,700.00	1,700.00	1,712.30	1,712.30	5.88	5.92	-92.41	-79.52	-1,885.79	1,887.47	1,879.12	8.34	226.240		
1,800.00	1,800.00	1,812.30	1,812.30	6.24	6.28	-92.41	-79.52	-1,885.79	1,887.47	1,878.62	8.85	213.280		
1,900.00	1,900.00	1,912.30	1,912.30	6.59	6.64	-92.41	-79.52	-1,885.79	1,887.47	1,878.11	9.36	201.724		
2,000.00	2,000.00	2,012.30	2,012.30	6.95	7.00	-92.41	-79.52	-1,885.79	1,887.47	1,877.60	9.86	191.356		
2,100.00	2,100.00	2,112.30	2,112.30	7.31	7.36	-92.41	-79.52	-1,885.79	1,887.47	1,877.10	10.37	182.002		
2,200.00	2,200.00	2,212.30	2,212.30	7.67	7.71	-92.41	-79.52	-1,885.79	1,887.47	1,876.59	10.88	173.520		
2,300.00	2,300.00	2,312.30	2,312.30	8.03	8.07	-92.41	-79.52	-1,885.79	1,887.47	1,876.08	11.38	165.793		
2,400.00	2,400.00	2,412.30	2,412.30	8.39	8.43	-92.41	-79.52	-1,885.79	1,887.47	1,875.57	11.89	158.725		
2,500.00	2,500.00	2,512.30	2,512.30	8.74	8.79	-92.41	-79.52	-1,885.79	1,887.47	1,875.07	12.40	152.235		
2,600.00	2,600.00	2,612.30	2,612.30	9.10	9.15	-92.41	-79.52	-1,885.79	1,887.47	1,874.56	12.91	146.255		
2,700.00	2,700.00	2,712.30	2,712.30	9.46	9.51	-92.41	-79.52	-1,885.79	1,887.47	1,874.05	13.41	140.726		
2,800.00	2,800.00	2,812.30	2,812.30	9.82	9.86	-92.41	-79.52	-1,885.79	1,887.47	1,873.55	13.92	135.601		
2,900.00	2,900.00	2,912.30	2,912.30	10.18	10.22	-92.41	-79.52	-1,885.79	1,887.47	1,873.04	14.43	130.836		
3,000.00	3,000.00	3,012.30	3,012.30	10.54	10.58	-92.41	-79.52	-1,885.79	1,887.47	1,872.53	14.93	126.394		
3,100.00	3,100.00	3,112.30	3,112.30	10.90	10.94	-92.41	-79.52	-1,885.79	1,887.47	1,872.03	15.44	122.244		
3,200.00	3,200.00	3,212.30	3,212.30	11.25	11.30	-92.41	-79.52	-1,885.79	1,887.47	1,871.52	15.95	118.358		
3,300.00	3,300.00	3,312.30	3,312.30	11.61	11.66	-92.41	-79.52	-1,885.79	1,887.47	1,871.01	16.45	114.712		
3,400.00	3,400.00	3,412.30	3,412.30	11.97	12.02	-92.41	-79.52	-1,885.79	1,887.47	1,870.50	16.96	111.283		
3,500.00	3,500.00	3,512.30	3,512.30	12.33	12.37	-92.41	-79.52	-1,885.79	1,887.47	1,870.00	17.47	108.053		
3,600.00	3,600.00	3,612.30	3,612.30	12.69	12.73	-92.41	-79.52	-1,885.79	1,887.47	1,869.49	17.97	105.006		
3,700.00	3,700.00	3,712.30	3,712.30	13.05	13.09	-92.41	-79.52	-1,885.79	1,887.47	1,868.98	18.48	102.125		
3,800.00	3,800.00	3,812.30	3,812.30	13.41	13.45	-92.41	-79.52	-1,885.79	1,887.47	1,868.48	18.99	99.399		
3,900.00	3,900.00	3,912.30	3,912.30	13.76	13.81	-92.41	-79.52	-1,885.79	1,887.47	1,867.97	19.50	96.814		
4,000.00	4,000.00	4,012.30	4,012.30	14.12	14.17	-92.41	-79.52	-1,885.79	1,887.47	1,867.46	20.00	94.361		
4,100.00	4,100.00	4,112.30	4,112.30	14.48	14.52	-92.41	-79.52	-1,885.79	1,887.47	1,866.96	20.51	92.028		
4,200.00	4,200.00	4,212.30	4,212.30	14.84	14.88	-92.41	-79.52	-1,885.79	1,887.47	1,866.45	21.02	89.808		
4,300.00	4,300.00	4,312.30	4,312.30	15.20	15.24	-92.41	-79.52	-1,885.79	1,887.47	1,865.94	21.52	87.693		
4,400.00	4,400.00	4,412.30	4,412.30	15.56	15.60	-92.41	-79.52	-1,885.79	1,887.47	1,865.44	22.03	85.675		
4,500.00	4,500.00	4,512.30	4,512.30	15.91	15.96	-92.41	-79.52	-1,885.79	1,887.47	1,864.93	22.54	83.748		
4,550.00	4,550.00	4,562.30	4,562.30	16.09	16.14	-92.41	-79.52	-1,885.79	1,887.47	1,864.67	22.79	82.816		
4,600.00	4,600.00	4,612.30	4,612.30	16.27	16.32	-19.21	-79.52	-1,885.79	1,887.16	1,864.11	23.04	81.900		
4,700.00	4,699.96	4,712.26	4,712.26	16.62	16.68	-19.24	-79.52	-1,885.79	1,884.69	1,861.15	23.54	80.064		
4,800.00	4,799.82	4,812.12	4,812.12	16.96	17.03	-19.32	-79.52	-1,885.79	1,879.74	1,855.71	24.04	78.201		
4,900.00	4,899.51	4,911.81	4,911.81	17.31	17.39	-19.44	-79.52	-1,885.79	1,872.34	1,847.81	24.53	76.315		
5,000.00	4,998.96	5,011.26	5,011.26	17.66	17.75	-19.59	-79.52	-1,885.79	1,862.48	1,837.45	25.03	74.408		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,098.10	5,110.40	5,110.40	18.02	18.10	-19.79	-79.52	-1,885.79	1,850.18	1,824.66	25.53	72.483		
5,200.00	5,196.87	5,209.17	5,209.17	18.38	18.46	-20.03	-79.52	-1,885.79	1,835.45	1,809.43	26.02	70.542		
5,216.82	5,213.44	5,225.74	5,225.74	18.44	18.52	-20.08	-79.52	-1,885.79	1,832.74	1,806.64	26.10	70.213		
5,300.00	5,295.35	5,307.65	5,307.65	18.74	18.81	-20.24	-79.52	-1,885.79	1,819.15	1,792.64	26.51	68.616		
5,400.00	5,393.83	5,406.13	5,406.13	19.11	19.16	-20.43	-79.52	-1,885.79	1,802.83	1,775.83	27.01	66.758		
5,500.00	5,492.31	5,500.00	5,500.00	19.48	19.50	-20.61	-79.52	-1,885.79	1,786.54	1,759.06	27.49	64.992		
5,600.00	5,590.79	5,584.23	5,584.22	19.85	19.80	-20.75	-78.74	-1,886.29	1,770.81	1,742.86	27.95	63.362		
5,700.00	5,689.27	5,665.07	5,665.02	20.23	20.09	-20.84	-76.52	-1,887.71	1,756.10	1,727.71	28.40	61.843		
5,800.00	5,787.75	5,746.23	5,746.06	20.61	20.38	-20.88	-72.84	-1,890.07	1,742.41	1,713.56	28.84	60.408		
5,900.00	5,886.23	5,827.62	5,827.22	20.99	20.67	-20.87	-67.69	-1,893.36	1,729.73	1,700.43	29.29	59.052		
6,000.00	5,984.71	5,925.70	5,924.93	21.38	21.02	-20.82	-60.50	-1,897.96	1,717.62	1,687.83	29.79	57.663		
6,100.00	6,083.19	6,024.96	6,023.81	21.77	21.37	-20.77	-53.22	-1,902.62	1,705.52	1,675.23	30.29	56.311		
6,200.00	6,181.67	6,124.21	6,122.68	22.16	21.72	-20.72	-45.95	-1,907.28	1,693.42	1,662.63	30.79	55.001		
6,300.00	6,280.15	6,223.46	6,221.56	22.55	22.08	-20.67	-38.67	-1,911.94	1,681.32	1,650.03	31.29	53.730		
6,400.00	6,378.63	6,322.72	6,320.44	22.95	22.44	-20.62	-31.39	-1,916.59	1,669.22	1,637.43	31.80	52.499		
6,500.00	6,477.11	6,421.97	6,419.32	23.34	22.79	-20.57	-24.11	-1,921.25	1,657.13	1,624.83	32.30	51.304		
6,600.00	6,575.59	6,521.23	6,518.19	23.75	23.15	-20.52	-16.83	-1,925.91	1,645.03	1,612.22	32.81	50.144		
6,700.00	6,674.07	6,620.48	6,617.07	24.15	23.51	-20.46	-9.55	-1,930.57	1,632.94	1,599.62	33.31	49.018		
6,800.00	6,772.56	6,719.74	6,715.95	24.55	23.87	-20.41	-2.27	-1,935.23	1,620.84	1,587.02	33.82	47.925		
6,900.00	6,871.04	6,818.99	6,814.83	24.96	24.23	-20.35	5.01	-1,939.89	1,608.75	1,574.43	34.33	46.863		
7,000.00	6,969.52	6,918.25	6,913.70	25.36	24.59	-20.30	12.29	-1,944.55	1,596.66	1,561.83	34.84	45.831		
7,100.00	7,068.00	7,017.50	7,012.58	25.77	24.95	-20.24	19.57	-1,949.20	1,584.58	1,549.23	35.35	44.827		
7,200.00	7,166.48	7,116.75	7,111.46	26.18	25.31	-20.18	26.84	-1,953.86	1,572.49	1,536.63	35.86	43.852		
7,300.00	7,264.96	7,216.01	7,210.33	26.59	25.67	-20.13	34.12	-1,958.52	1,560.41	1,524.04	36.37	42.903		
7,400.00	7,363.44	7,315.26	7,309.21	27.01	26.04	-20.07	41.40	-1,963.18	1,548.32	1,511.44	36.88	41.980		
7,500.00	7,461.92	7,414.52	7,408.09	27.42	26.40	-20.01	48.68	-1,967.84	1,536.24	1,498.85	37.40	41.081		
7,600.00	7,560.40	7,513.77	7,506.97	27.84	26.76	-19.94	55.96	-1,972.50	1,524.16	1,486.25	37.91	40.206		
7,700.00	7,658.88	7,613.03	7,605.84	28.25	27.13	-19.88	63.24	-1,977.16	1,512.08	1,473.66	38.42	39.354		
7,800.00	7,757.36	7,712.28	7,704.72	28.67	27.49	-19.82	70.52	-1,981.81	1,500.01	1,461.07	38.94	38.524		
7,900.00	7,855.84	7,811.54	7,803.60	29.09	27.85	-19.75	77.80	-1,986.47	1,487.93	1,448.48	39.45	37.715		
8,000.00	7,954.32	7,910.79	7,902.48	29.51	28.22	-19.69	85.08	-1,991.13	1,475.86	1,435.89	39.97	36.926		
8,100.00	8,052.80	8,010.04	8,001.35	29.93	28.58	-19.62	92.36	-1,995.79	1,463.79	1,423.31	40.48	36.157		
8,200.00	8,151.28	8,109.30	8,100.23	30.36	28.95	-19.55	99.63	-2,000.45	1,451.72	1,410.72	41.00	35.408		
8,300.00	8,249.76	8,208.55	8,199.11	30.78	29.32	-19.49	106.91	-2,005.11	1,439.66	1,398.14	41.52	34.676		
8,400.00	8,348.24	8,326.52	8,316.73	31.20	29.75	-19.45	114.47	-2,009.95	1,427.06	1,384.98	42.08	33.912		
8,500.00	8,446.72	8,448.21	8,438.29	31.63	30.19	-19.54	119.10	-2,012.91	1,412.90	1,370.26	42.65	33.131		
8,535.38	8,481.56	8,491.09	8,481.16	31.78	30.34	-19.61	119.96	-2,013.46	1,407.52	1,364.68	42.84	32.853		
8,600.00	8,545.29	8,567.52	8,557.59	32.05	30.62	-19.71	120.48	-2,013.79	1,397.70	1,354.50	43.20	32.358		
8,700.00	8,644.24	8,666.48	8,656.54	32.46	30.97	-19.84	120.48	-2,013.79	1,384.12	1,340.42	43.71	31.669		
8,800.00	8,743.54	8,765.77	8,755.84	32.86	31.32	-19.95	120.48	-2,013.79	1,373.01	1,328.79	44.22	31.052		
8,900.00	8,843.11	8,865.35	8,855.41	33.24	31.67	-20.04	120.48	-2,013.79	1,364.35	1,319.63	44.72	30.506		
9,000.00	8,942.89	8,965.13	8,955.19	33.61	32.03	-20.10	120.48	-2,013.79	1,358.15	1,312.92	45.23	30.027		
9,100.00	9,042.81	9,065.04	9,055.11	33.96	32.39	-20.14	120.48	-2,013.79	1,354.41	1,308.68	45.73	29.616		
9,202.20	9,145.00	9,167.24	9,157.30	34.31	32.75	-93.37	120.48	-2,013.79	1,353.13	1,306.88	46.24	29.261		
9,300.00	9,242.80	9,265.03	9,255.10	34.64	33.10	-93.37	120.48	-2,013.79	1,353.13	1,306.40	46.73	28.956		
9,400.00	9,342.80	9,365.03	9,355.10	34.98	33.45	-93.37	120.48	-2,013.79	1,353.13	1,305.90	47.23	28.650		
9,500.00	9,442.80	9,465.03	9,455.10	35.32	33.81	-93.37	120.48	-2,013.79	1,353.13	1,305.40	47.73	28.351		
9,600.00	9,542.80	9,565.03	9,555.10	35.65	34.16	-93.37	120.48	-2,013.79	1,353.13	1,304.90	48.23	28.058		
9,700.00	9,642.80	9,665.03	9,655.10	35.99	34.52	-93.37	120.48	-2,013.79	1,353.13	1,304.40	48.73	27.770		
9,800.00	9,742.80	9,765.03	9,755.10	36.33	34.88	-93.37	120.48	-2,013.79	1,353.13	1,303.90	49.22	27.489		
9,900.00	9,842.80	9,865.03	9,855.10	36.67	35.23	-93.37	120.48	-2,013.79	1,353.13	1,303.40	49.72	27.213		
10,000.00	9,942.80	9,965.03	9,955.10	37.01	35.59	-93.37	120.48	-2,013.79	1,353.13	1,302.91	50.22	26.942		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,042.80	10,065.03	10,055.10	37.35	35.95	-93.37	120.48	-2,013.79	1,353.13	1,302.41	50.72	26.677		
10,200.00	10,142.80	10,165.03	10,155.10	37.69	36.30	-93.37	120.48	-2,013.79	1,353.13	1,301.91	51.22	26.417		
10,300.00	10,242.80	10,265.03	10,255.10	38.03	36.66	-93.37	120.48	-2,013.79	1,353.13	1,301.41	51.72	26.161		
10,400.00	10,342.80	10,365.03	10,355.10	38.37	37.02	-93.37	120.48	-2,013.79	1,353.13	1,300.91	52.22	25.911		
10,500.00	10,442.80	10,465.03	10,455.10	38.71	37.37	-93.37	120.48	-2,013.79	1,353.13	1,300.41	52.72	25.665		
10,600.00	10,542.80	10,565.03	10,555.10	39.05	37.73	-93.37	120.48	-2,013.79	1,353.13	1,299.91	53.22	25.424		
10,700.00	10,642.80	10,665.03	10,655.10	39.39	38.08	-93.37	120.48	-2,013.79	1,353.13	1,299.41	53.72	25.187		
10,800.00	10,742.80	10,765.03	10,755.10	39.73	38.44	-93.37	120.48	-2,013.79	1,353.13	1,298.91	54.22	24.955		
10,900.00	10,842.80	10,865.03	10,855.10	40.07	38.80	-93.37	120.48	-2,013.79	1,353.13	1,298.40	54.72	24.727		
11,000.00	10,942.80	10,965.03	10,955.10	40.42	39.15	-93.37	120.48	-2,013.79	1,353.13	1,297.90	55.22	24.502		
11,100.00	11,042.80	11,065.03	11,055.10	40.76	39.51	-93.37	120.48	-2,013.79	1,353.13	1,297.40	55.73	24.282		
11,200.00	11,142.80	11,165.03	11,155.10	41.10	39.87	-93.37	120.48	-2,013.79	1,353.13	1,296.90	56.23	24.066		
11,300.00	11,242.80	11,265.03	11,255.10	41.45	40.22	-93.37	120.48	-2,013.79	1,353.13	1,296.40	56.73	23.853		
11,400.00	11,342.80	11,365.03	11,355.10	41.79	40.58	-93.37	120.48	-2,013.79	1,353.13	1,295.90	57.23	23.644 CC		
11,500.00	11,442.80	11,464.99	11,444.80	42.13	40.87	-93.61	114.90	-2,013.74	1,353.46	1,295.77	57.69	23.460		
11,530.20	11,473.00	11,481.29	11,470.75	42.24	40.95	-93.79	110.64	-2,013.70	1,353.73	1,295.91	57.83	23.410		
11,550.00	11,492.79	11,500.00	11,489.07	42.30	41.01	86.55	106.89	-2,013.67	1,353.95	1,296.03	57.92	23.378		
11,600.00	11,542.62	11,541.11	11,528.86	42.45	41.12	86.19	96.55	-2,013.58	1,354.51	1,296.39	58.12	23.306		
11,650.00	11,591.93	11,583.43	11,568.92	42.60	41.24	85.85	82.96	-2,013.46	1,355.07	1,296.76	58.31	23.240		
11,700.00	11,640.32	11,625.35	11,607.52	42.74	41.35	85.53	66.62	-2,013.32	1,355.63	1,297.14	58.49	23.178		
11,750.00	11,687.45	11,666.93	11,644.52	42.87	41.45	85.25	47.68	-2,013.15	1,356.17	1,297.51	58.66	23.121		
11,800.00	11,732.94	11,708.20	11,679.79	42.99	41.54	84.99	26.26	-2,012.96	1,356.67	1,297.86	58.81	23.068		
11,850.00	11,776.45	11,750.00	11,713.85	43.10	41.63	84.77	2.05	-2,012.75	1,357.13	1,298.17	58.96	23.018		
11,900.00	11,817.65	11,790.03	11,744.72	43.20	41.71	84.58	-23.41	-2,012.53	1,357.54	1,298.44	59.10	22.971		
11,950.00	11,856.23	11,830.65	11,774.16	43.28	41.79	84.43	-51.39	-2,012.28	1,357.88	1,298.65	59.23	22.926		
12,000.00	11,891.90	11,871.14	11,801.46	43.36	41.86	84.31	-81.28	-2,012.02	1,358.14	1,298.79	59.36	22.881		
12,050.00	11,924.37	11,911.52	11,826.52	43.42	41.94	84.22	-112.94	-2,011.74	1,358.33	1,298.85	59.48	22.836		
12,100.00	11,953.41	11,950.00	11,848.26	43.47	42.02	84.18	-144.67	-2,011.46	1,358.44	1,298.83	59.61	22.790		
12,150.00	11,978.80	11,992.14	11,869.57	43.52	42.11	84.17	-181.02	-2,011.14	1,358.46	1,298.72	59.74	22.739		
12,200.00	12,000.33	12,032.45	11,887.41	43.56	42.20	84.20	-217.15	-2,010.83	1,358.39	1,298.51	59.88	22.687		
12,250.00	12,017.85	12,072.80	11,902.67	43.61	42.29	84.26	-254.50	-2,010.50	1,358.24	1,298.22	60.02	22.631		
12,300.00	12,031.23	12,113.24	11,915.29	43.66	42.39	84.37	-292.90	-2,010.16	1,358.01	1,297.84	60.16	22.571		
12,350.00	12,040.35	12,150.00	11,924.39	43.72	42.47	84.49	-328.51	-2,009.85	1,357.70	1,297.39	60.31	22.511		
12,400.00	12,045.16	12,194.51	11,932.32	43.79	42.58	84.68	-372.29	-2,009.46	1,357.32	1,296.84	60.48	22.441		
12,422.75	12,045.91	12,213.09	11,934.62	43.83	42.63	84.77	-390.74	-2,009.30	1,357.13	1,296.57	60.56	22.410		
12,488.36	12,046.76	12,267.08	11,937.90	43.97	42.76	84.88	-444.61	-2,008.83	1,356.84	1,296.05	60.79	22.320		
12,500.00	12,046.91	12,278.38	11,938.03	44.00	42.79	84.88	-455.90	-2,008.73	1,356.84	1,296.01	60.83	22.304		
12,600.00	12,048.22	12,378.38	11,939.11	44.29	43.08	84.87	-555.89	-2,007.85	1,356.86	1,295.59	61.27	22.145		
12,700.00	12,049.52	12,478.38	11,940.19	44.65	43.43	84.86	-655.88	-2,006.97	1,356.88	1,295.09	61.79	21.959		
12,800.00	12,050.82	12,578.38	11,941.28	45.08	43.84	84.85	-755.87	-2,006.10	1,356.90	1,294.50	62.39	21.747		
12,900.00	12,052.12	12,678.38	11,942.36	45.57	44.31	84.84	-855.86	-2,005.22	1,356.91	1,293.84	63.08	21.512		
13,000.00	12,053.42	12,778.38	11,943.44	46.12	44.83	84.83	-955.85	-2,004.34	1,356.93	1,293.09	63.84	21.256		
13,100.00	12,054.72	12,878.38	11,944.52	46.72	45.40	84.82	-1,055.84	-2,003.46	1,356.95	1,292.27	64.67	20.981		
13,200.00	12,056.02	12,978.38	11,945.61	47.37	46.03	84.81	-1,155.83	-2,002.59	1,356.97	1,291.38	65.58	20.691		
13,300.00	12,057.32	13,078.38	11,946.69	48.07	46.71	84.80	-1,255.82	-2,001.71	1,356.98	1,290.43	66.56	20.388		
13,400.00	12,058.62	13,178.38	11,947.77	48.81	47.43	84.79	-1,355.81	-2,000.83	1,357.00	1,289.40	67.60	20.074		
13,500.00	12,059.92	13,278.38	11,948.85	49.60	48.20	84.78	-1,455.80	-1,999.95	1,357.02	1,288.31	68.71	19.751		
13,600.00	12,061.22	13,378.38	11,949.94	50.43	49.02	84.77	-1,555.79	-1,999.07	1,357.04	1,287.16	69.87	19.422		
13,700.00	12,062.52	13,478.38	11,951.02	51.30	49.87	84.77	-1,655.78	-1,998.20	1,357.05	1,285.96	71.09	19.088		
13,800.00	12,063.82	13,578.38	11,952.10	52.21	50.77	84.76	-1,755.77	-1,997.32	1,357.07	1,284.70	72.37	18.752		
13,900.00	12,065.12	13,678.38	11,953.18	53.16	51.70	84.75	-1,855.76	-1,996.44	1,357.09	1,283.39	73.70	18.414		
14,000.00	12,066.42	13,778.37	11,954.27	54.13	52.67	84.74	-1,955.75	-1,995.56	1,357.11	1,282.03	75.08	18.076		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Judge Baylor Fed Com - Judge Baylor 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		Offset		Semi Major Axis			Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
14,100.00	12,067.73	13,878.37	11,955.35	55.14	53.67	84.73	-2,055.74	-1,994.69	1,357.12	1,280.62	76.50	17.740						
14,200.00	12,069.03	13,978.37	11,956.43	56.18	54.70	84.72	-2,155.73	-1,993.81	1,357.14	1,279.18	77.97	17.407						
14,300.00	12,070.33	14,078.37	11,957.51	57.25	55.77	84.71	-2,255.72	-1,992.93	1,357.16	1,277.68	79.48	17.077						
14,400.00	12,071.63	14,178.37	11,958.60	58.35	56.86	84.70	-2,355.71	-1,992.05	1,357.18	1,276.16	81.02	16.751						
14,500.00	12,072.93	14,278.37	11,959.68	59.47	57.98	84.69	-2,455.70	-1,991.17	1,357.20	1,274.59	82.61	16.430						
14,600.00	12,074.23	14,378.37	11,960.76	60.61	59.12	84.68	-2,555.69	-1,990.30	1,357.21	1,272.99	84.22	16.114						
14,700.00	12,075.53	14,478.37	11,961.84	61.78	60.28	84.67	-2,655.68	-1,989.42	1,357.23	1,271.36	85.87	15.805						
14,800.00	12,076.83	14,578.37	11,962.93	62.97	61.47	84.66	-2,755.67	-1,988.54	1,357.25	1,269.69	87.56	15.502						
14,900.00	12,078.13	14,678.37	11,964.01	64.18	62.68	84.66	-2,855.66	-1,987.66	1,357.27	1,268.00	89.27	15.205						
15,000.00	12,079.43	14,778.37	11,965.09	65.41	63.91	84.65	-2,955.65	-1,986.79	1,357.29	1,266.28	91.00	14.915						
15,100.00	12,080.73	14,878.37	11,966.17	66.66	65.16	84.64	-3,055.64	-1,985.91	1,357.30	1,264.54	92.77	14.631						
15,200.00	12,082.03	14,978.37	11,967.26	67.93	66.43	84.63	-3,155.63	-1,985.03	1,357.32	1,262.77	94.56	14.355						
15,300.00	12,083.33	15,078.37	11,968.34	69.21	67.71	84.62	-3,255.62	-1,984.15	1,357.34	1,260.97	96.37	14.085						
15,400.00	12,084.63	15,178.37	11,969.42	70.50	69.01	84.61	-3,355.61	-1,983.27	1,357.36	1,259.16	98.20	13.822						
15,500.00	12,085.94	15,278.37	11,970.50	71.82	70.32	84.60	-3,455.60	-1,982.40	1,357.38	1,257.32	100.05	13.567						
15,600.00	12,087.24	15,378.37	11,971.59	73.14	71.65	84.59	-3,555.59	-1,981.52	1,357.39	1,255.47	101.93	13.318						
15,700.00	12,088.54	15,478.37	11,972.67	74.48	72.99	84.58	-3,655.58	-1,980.64	1,357.41	1,253.60	103.82	13.075						
15,800.00	12,089.84	15,578.37	11,973.75	75.83	74.34	84.57	-3,755.57	-1,979.76	1,357.43	1,251.71	105.72	12.839						
15,900.00	12,091.14	15,678.37	11,974.83	77.19	75.70	84.56	-3,855.56	-1,978.89	1,357.45	1,249.80	107.65	12.610						
16,000.00	12,092.44	15,778.37	11,975.91	78.57	77.08	84.55	-3,955.55	-1,978.01	1,357.47	1,247.88	109.59	12.387						
16,100.00	12,093.74	15,878.37	11,977.00	79.95	78.47	84.54	-4,055.54	-1,977.13	1,357.49	1,245.94	111.54	12.170						
16,200.00	12,095.04	15,978.37	11,978.08	81.34	79.86	84.54	-4,155.53	-1,976.25	1,357.51	1,243.99	113.51	11.959						
16,300.00	12,096.34	16,078.37	11,979.16	82.75	81.27	84.53	-4,255.52	-1,975.38	1,357.52	1,242.03	115.49	11.754						
16,400.00	12,097.64	16,178.37	11,980.24	84.16	82.68	84.52	-4,355.51	-1,974.50	1,357.54	1,240.05	117.49	11.555						
16,500.00	12,098.94	16,278.37	11,981.33	85.58	84.11	84.51	-4,455.50	-1,973.62	1,357.56	1,238.06	119.50	11.361						
16,600.00	12,100.24	16,378.37	11,982.41	87.01	85.54	84.50	-4,555.49	-1,972.74	1,357.58	1,236.06	121.51	11.172						
16,700.00	12,101.54	16,478.37	11,983.49	88.45	86.98	84.49	-4,655.48	-1,971.86	1,357.60	1,234.05	123.54	10.989						
16,800.00	12,102.84	16,578.37	11,984.57	89.89	88.43	84.48	-4,755.47	-1,970.99	1,357.62	1,232.03	125.58	10.811						
16,900.00	12,104.15	16,678.37	11,985.66	91.34	89.88	84.47	-4,855.46	-1,970.11	1,357.64	1,230.00	127.63	10.637						
17,000.00	12,105.45	16,778.37	11,986.74	92.80	91.34	84.46	-4,955.45	-1,969.23	1,357.65	1,227.97	129.69	10.469						
17,100.00	12,106.75	16,878.37	11,987.82	94.26	92.81	84.45	-5,055.44	-1,968.35	1,357.67	1,225.92	131.76	10.304						
17,200.00	12,108.05	16,978.37	11,988.90	95.74	94.29	84.44	-5,155.43	-1,967.48	1,357.69	1,223.86	133.83	10.145						
17,300.00	12,109.35	17,078.37	11,989.99	97.21	95.77	84.43	-5,255.42	-1,966.60	1,357.71	1,221.80	135.91	9.989						
17,400.00	12,110.65	17,178.37	11,991.07	98.69	97.25	84.43	-5,355.41	-1,965.72	1,357.73	1,219.72	138.01	9.838						
17,500.00	12,111.95	17,278.37	11,992.15	100.18	98.74	84.42	-5,455.40	-1,964.84	1,357.75	1,217.65	140.10	9.691						
17,600.00	12,113.25	17,378.37	11,993.23	101.67	100.24	84.41	-5,555.39	-1,963.96	1,357.77	1,215.56	142.21	9.548						
17,700.00	12,114.55	17,478.37	11,994.32	103.17	101.74	84.40	-5,655.38	-1,963.09	1,357.79	1,213.47	144.32	9.408						
17,800.00	12,115.85	17,578.37	11,995.40	104.67	103.24	84.39	-5,755.37	-1,962.21	1,357.81	1,211.37	146.44	9.272						
17,900.00	12,117.15	17,678.37	11,996.48	106.18	104.75	84.38	-5,855.36	-1,961.33	1,357.82	1,209.26	148.56	9.140						
18,000.00	12,118.45	17,778.37	11,997.56	107.69	106.27	84.37	-5,955.35	-1,960.45	1,357.84	1,207.15	150.69	9.011						
18,100.00	12,119.75	17,878.37	11,998.65	109.20	107.78	84.36	-6,055.34	-1,959.58	1,357.86	1,205.03	152.83	8.885						
18,200.00	12,121.05	17,978.37	11,999.73	110.72	109.31	84.35	-6,155.33	-1,958.70	1,357.88	1,202.91	154.97	8.762						
18,300.00	12,122.36	18,078.37	12,000.81	112.25	110.83	84.34	-6,255.32	-1,957.82	1,357.90	1,200.78	157.12	8.643						
18,400.00	12,123.66	18,178.37	12,001.89	113.77	112.36	84.33	-6,355.31	-1,956.94	1,357.92	1,198.65	159.27	8.526						
18,500.00	12,124.96	18,278.37	12,002.98	115.30	113.89	84.32	-6,455.30	-1,956.06	1,357.94	1,196.51	161.43	8.412						
18,600.00	12,126.26	18,378.37	12,004.06	116.83	115.43	84.32	-6,555.29	-1,955.19	1,357.96	1,194.37	163.59	8.301						
18,700.00	12,127.56	18,478.37	12,005.14	118.37	116.97	84.31	-6,655.28	-1,954.31	1,357.98	1,192.23	165.75	8.193						
18,800.00	12,128.86	18,578.37	12,006.22	119.91	118.51	84.30	-6,755.27	-1,953.43	1,358.00	1,190.08	167.92	8.087						
18,900.00	12,130.16	18,678.37	12,007.31	121.45	120.06	84.29	-6,855.26	-1,952.55	1,358.02	1,187.92	170.09	7.984						
19,000.00	12,131.46	18,778.37	12,008.39	123.00	121.60	84.28	-6,955.25	-1,951.68	1,358.04	1,185.77	172.27	7.883						
19,100.00	12,132.76	18,878.37	12,009.47	124.54	123.15	84.27	-7,055.24	-1,950.80	1,358.06	1,183.61	174.45	7.785						
19,200.00	12,134.06	18,978.37	12,010.55	126.10	124.71	84.26	-7,155.23	-1,949.92	1,358.08	1,181.44	176.63	7.689						

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Judge Baylor Fed Com - Judge Baylor 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		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
19,300.00	12,135.36	19,078.36	12,011.64	127.65	126.26	84.25	-7,255.22	-1,949.04	1,358.10	1,179.27	178.82	7.595					
19,400.00	12,136.66	19,178.36	12,012.72	129.20	127.82	84.24	-7,355.21	-1,948.16	1,358.11	1,177.10	181.01	7.503					
19,500.00	12,137.96	19,278.36	12,013.80	130.76	129.38	84.23	-7,455.20	-1,947.29	1,358.13	1,174.93	183.21	7.413					
19,600.00	12,139.26	19,378.36	12,014.88	132.32	130.94	84.22	-7,555.19	-1,946.41	1,358.15	1,172.75	185.40	7.325					
19,700.00	12,140.57	19,478.36	12,015.97	133.88	132.51	84.21	-7,655.18	-1,945.53	1,358.17	1,170.57	187.60	7.240					
19,800.00	12,141.87	19,578.36	12,017.05	135.45	134.08	84.21	-7,755.17	-1,944.65	1,358.19	1,168.39	189.81	7.156					
19,900.00	12,143.17	19,678.36	12,018.13	137.02	135.65	84.20	-7,855.16	-1,943.78	1,358.21	1,166.20	192.01	7.074					
20,000.00	12,144.47	19,778.36	12,019.21	138.58	137.22	84.19	-7,955.15	-1,942.90	1,358.23	1,164.01	194.22	6.993					
20,100.00	12,145.77	19,878.36	12,020.30	140.15	138.79	84.18	-8,055.14	-1,942.02	1,358.25	1,161.82	196.43	6.915					
20,200.00	12,147.07	19,978.36	12,021.38	141.73	140.36	84.17	-8,155.13	-1,941.14	1,358.27	1,159.63	198.64	6.838					
20,300.00	12,148.37	20,078.36	12,022.46	143.30	141.94	84.16	-8,255.12	-1,940.26	1,358.29	1,157.43	200.86	6.762					
20,400.00	12,149.67	20,178.36	12,023.54	144.88	143.52	84.15	-8,355.11	-1,939.39	1,358.31	1,155.23	203.08	6.689					
20,500.00	12,150.97	20,278.36	12,024.63	146.45	145.10	84.14	-8,455.10	-1,938.51	1,358.33	1,153.03	205.30	6.616					
20,600.00	12,152.27	20,378.36	12,025.71	148.03	146.68	84.13	-8,555.09	-1,937.63	1,358.35	1,150.83	207.52	6.546					
20,700.00	12,153.57	20,478.36	12,026.79	149.61	148.26	84.12	-8,655.08	-1,936.75	1,358.37	1,148.63	209.75	6.476					
20,800.00	12,154.87	20,578.36	12,027.87	151.20	149.85	84.11	-8,755.07	-1,935.88	1,358.39	1,146.42	211.97	6.408					
20,900.00	12,156.17	20,678.36	12,028.96	152.78	151.43	84.10	-8,855.06	-1,935.00	1,358.41	1,144.21	214.20	6.342					
21,000.00	12,157.47	20,778.36	12,030.04	154.37	153.02	84.10	-8,955.05	-1,934.12	1,358.43	1,142.00	216.43	6.277					
21,100.00	12,158.77	20,878.36	12,031.12	155.95	154.61	84.09	-9,055.04	-1,933.24	1,358.45	1,139.79	218.66	6.213					
21,200.00	12,160.08	20,978.36	12,032.20	157.54	156.20	84.08	-9,155.03	-1,932.36	1,358.47	1,137.58	220.90	6.150					
21,300.00	12,161.38	21,078.36	12,033.28	159.13	157.79	84.07	-9,255.02	-1,931.49	1,358.49	1,135.36	223.13	6.088					
21,400.00	12,162.68	21,178.36	12,034.37	160.72	159.38	84.06	-9,355.01	-1,930.61	1,358.51	1,133.15	225.37	6.028					
21,500.00	12,163.98	21,278.36	12,035.45	162.31	160.98	84.05	-9,455.00	-1,929.73	1,358.53	1,130.93	227.61	5.969					
21,600.00	12,165.28	21,378.36	12,036.53	163.90	162.57	84.04	-9,554.99	-1,928.85	1,358.55	1,128.71	229.85	5.911					
21,700.00	12,166.58	21,478.36	12,037.61	165.50	164.17	84.03	-9,654.98	-1,927.98	1,358.58	1,126.49	232.09	5.854					
21,800.00	12,167.88	21,578.36	12,038.70	167.09	165.77	84.02	-9,754.97	-1,927.10	1,358.60	1,124.26	234.33	5.798					
21,900.00	12,169.18	21,678.36	12,039.78	168.69	167.36	84.01	-9,854.96	-1,926.22	1,358.62	1,122.04	236.58	5.743					
22,000.00	12,170.48	21,778.36	12,040.86	170.29	168.96	84.00	-9,954.95	-1,925.34	1,358.64	1,119.81	238.82	5.689					
22,100.00	12,171.78	21,878.36	12,041.94	171.89	170.56	83.99	-10,054.94	-1,924.46	1,358.66	1,117.59	241.07	5.636					
22,200.00	12,173.08	21,978.36	12,043.03	173.49	172.16	83.99	-10,154.93	-1,923.59	1,358.68	1,115.36	243.32	5.584					
22,300.00	12,174.38	22,078.36	12,044.11	175.09	173.77	83.98	-10,254.92	-1,922.71	1,358.70	1,113.13	245.57	5.533					
22,400.00	12,175.68	22,178.36	12,045.19	176.69	175.37	83.97	-10,354.91	-1,921.83	1,358.72	1,110.90	247.82	5.483					
22,500.00	12,176.98	22,278.36	12,046.27	178.29	176.97	83.96	-10,454.90	-1,920.95	1,358.74	1,108.67	250.07	5.433					
22,600.00	12,178.29	22,378.36	12,047.36	179.89	178.58	83.95	-10,554.89	-1,920.08	1,358.76	1,106.44	252.32	5.385					
22,700.00	12,179.59	22,478.36	12,048.44	181.50	180.18	83.94	-10,654.88	-1,919.20	1,358.78	1,104.20	254.58	5.337					
22,706.27	12,179.67	22,484.62	12,048.51	181.60	180.29	83.94	-10,661.15	-1,919.14	1,358.78	1,104.06	254.72	5.334					
22,800.00	12,180.89	22,572.67	12,049.46	183.10	181.70	83.93	-10,749.19	-1,918.37	1,358.81	1,102.01	256.80	5.291 ES					
22,900.00	12,182.19	22,572.67	12,049.46	184.71	181.70	83.93	-10,749.19	-1,918.37	1,362.93	1,105.22	257.71	5.289 SF					
23,000.00	12,183.49	22,572.67	12,049.46	186.31	181.70	83.93	-10,749.19	-1,918.37	1,374.32	1,117.25	257.07	5.346					
23,100.00	12,184.79	22,572.67	12,049.46	187.92	181.70	83.93	-10,749.19	-1,918.37	1,392.82	1,137.82	255.00	5.462					
23,200.00	12,186.09	22,572.67	12,049.46	189.53	181.70	83.93	-10,749.19	-1,918.37	1,418.15	1,166.49	251.66	5.635					
23,300.00	12,187.39	22,572.67	12,049.46	191.14	181.70	83.93	-10,749.19	-1,918.37	1,449.95	1,202.67	247.27	5.864					
23,400.00	12,188.69	22,572.67	12,049.46	192.75	181.70	83.93	-10,749.19	-1,918.37	1,487.79	1,245.72	242.07	6.146					
23,500.00	12,189.99	22,572.67	12,049.46	194.36	181.70	83.93	-10,749.19	-1,918.37	1,531.25	1,294.96	236.29	6.480					
23,600.00	12,191.29	22,572.67	12,049.46	195.97	181.70	83.93	-10,749.19	-1,918.37	1,579.85	1,349.70	230.15	6.864					
23,700.00	12,192.59	22,572.67	12,049.46	197.58	181.70	83.93	-10,749.19	-1,918.37	1,633.13	1,409.31	223.82	7.297					
23,800.00	12,193.89	22,572.67	12,049.46	199.20	181.70	83.93	-10,749.19	-1,918.37	1,690.65	1,473.21	217.45	7.775					
23,900.00	12,195.19	22,572.67	12,049.46	200.81	181.70	83.93	-10,749.19	-1,918.37	1,752.00	1,540.85	211.15	8.298					
24,000.00	12,196.50	22,572.67	12,049.46	202.42	181.70	83.93	-10,749.19	-1,918.37	1,816.78	1,611.78	205.00	8.862					
24,100.00	12,197.80	22,572.67	12,049.46	204.04	181.70	83.93	-10,749.19	-1,918.37	1,884.65	1,685.58	199.07	9.467					
24,110.32	12,197.93	22,572.67	12,049.46	204.20	181.70	83.93	-10,749.19	-1,918.37	1,891.81	1,693.34	198.47	9.532					
24,111.10	12,197.94	22,572.67	12,049.46	204.22	181.70	83.93	-10,749.19	-1,918.37	1,892.35	1,692.89	199.46	9.487					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	12.00	12.00	0.00	0.02	-92.45	-79.20	-1,850.80	1,852.49					
100.00	100.00	112.00	112.00	0.14	0.18	-92.45	-79.20	-1,850.80	1,852.49	1,852.26	0.23	7,962.173		
200.00	200.00	212.00	212.00	0.50	0.54	-92.45	-79.20	-1,850.80	1,852.49	1,851.76	0.74	2,509.314		
300.00	300.00	312.00	312.00	0.86	0.90	-92.45	-79.20	-1,850.80	1,852.49	1,851.25	1.24	1,488.010		
400.00	400.00	412.00	412.00	1.22	1.26	-92.45	-79.20	-1,850.80	1,852.49	1,850.74	1.75	1,057.483		
500.00	500.00	512.00	512.00	1.58	1.62	-92.45	-79.20	-1,850.80	1,852.49	1,850.24	2.26	820.163		
600.00	600.00	612.00	612.00	1.93	1.98	-92.45	-79.20	-1,850.80	1,852.49	1,849.73	2.77	669.832		
700.00	700.00	712.00	712.00	2.29	2.34	-92.45	-79.20	-1,850.80	1,852.49	1,849.22	3.27	566.072		
800.00	800.00	812.00	812.00	2.65	2.69	-92.45	-79.20	-1,850.80	1,852.49	1,848.71	3.78	490.146		
900.00	900.00	912.00	912.00	3.01	3.05	-92.45	-79.20	-1,850.80	1,852.49	1,848.21	4.29	432.178		
1,000.00	1,000.00	1,012.00	1,012.00	3.37	3.41	-92.45	-79.20	-1,850.80	1,852.49	1,847.70	4.79	386.471		
1,100.00	1,100.00	1,112.00	1,112.00	3.73	3.77	-92.45	-79.20	-1,850.80	1,852.49	1,847.19	5.30	349.507		
1,200.00	1,200.00	1,212.00	1,212.00	4.08	4.13	-92.45	-79.20	-1,850.80	1,852.49	1,846.69	5.81	318.997		
1,300.00	1,300.00	1,312.00	1,312.00	4.44	4.49	-92.45	-79.20	-1,850.80	1,852.49	1,846.18	6.31	293.385		
1,400.00	1,400.00	1,412.00	1,412.00	4.80	4.84	-92.45	-79.20	-1,850.80	1,852.49	1,845.67	6.82	271.581		
1,500.00	1,500.00	1,512.00	1,512.00	5.16	5.20	-92.45	-79.20	-1,850.80	1,852.49	1,845.17	7.33	252.793		
1,600.00	1,600.00	1,612.00	1,612.00	5.52	5.56	-92.45	-79.20	-1,850.80	1,852.49	1,844.66	7.84	236.437		
1,700.00	1,700.00	1,712.00	1,712.00	5.88	5.92	-92.45	-79.20	-1,850.80	1,852.49	1,844.15	8.34	222.068		
1,800.00	1,800.00	1,812.00	1,812.00	6.24	6.28	-92.45	-79.20	-1,850.80	1,852.49	1,843.64	8.85	209.346		
1,900.00	1,900.00	1,912.00	1,912.00	6.59	6.64	-92.45	-79.20	-1,850.80	1,852.49	1,843.14	9.36	198.003		
2,000.00	2,000.00	2,012.00	2,012.00	6.95	7.00	-92.45	-79.20	-1,850.80	1,852.49	1,842.63	9.86	187.825		
2,100.00	2,100.00	2,112.00	2,112.00	7.31	7.35	-92.45	-79.20	-1,850.80	1,852.49	1,842.12	10.37	178.643		
2,200.00	2,200.00	2,212.00	2,212.00	7.67	7.71	-92.45	-79.20	-1,850.80	1,852.49	1,841.62	10.88	170.317		
2,300.00	2,300.00	2,312.00	2,312.00	8.03	8.07	-92.45	-79.20	-1,850.80	1,852.49	1,841.11	11.38	162.732		
2,400.00	2,400.00	2,412.00	2,412.00	8.39	8.43	-92.45	-79.20	-1,850.80	1,852.49	1,840.60	11.89	155.794		
2,500.00	2,500.00	2,512.00	2,512.00	8.74	8.79	-92.45	-79.20	-1,850.80	1,852.49	1,840.10	12.40	149.423		
2,600.00	2,600.00	2,612.00	2,612.00	9.10	9.15	-92.45	-79.20	-1,850.80	1,852.49	1,839.59	12.90	143.553		
2,700.00	2,700.00	2,712.00	2,712.00	9.46	9.50	-92.45	-79.20	-1,850.80	1,852.49	1,839.08	13.41	138.127		
2,800.00	2,800.00	2,812.00	2,812.00	9.82	9.86	-92.45	-79.20	-1,850.80	1,852.49	1,838.58	13.92	133.096		
2,900.00	2,900.00	2,912.00	2,912.00	10.18	10.22	-92.45	-79.20	-1,850.80	1,852.49	1,838.07	14.43	128.418		
3,000.00	3,000.00	3,012.00	3,012.00	10.54	10.58	-92.45	-79.20	-1,850.80	1,852.49	1,837.56	14.93	124.059		
3,100.00	3,100.00	3,112.00	3,112.00	10.90	10.94	-92.45	-79.20	-1,850.80	1,852.49	1,837.05	15.44	119.985		
3,200.00	3,200.00	3,212.00	3,212.00	11.25	11.30	-92.45	-79.20	-1,850.80	1,852.49	1,836.55	15.95	116.171		
3,300.00	3,300.00	3,312.00	3,312.00	11.61	11.66	-92.45	-79.20	-1,850.80	1,852.49	1,836.04	16.45	112.591		
3,400.00	3,400.00	3,412.00	3,412.00	11.97	12.01	-92.45	-79.20	-1,850.80	1,852.49	1,835.53	16.96	109.226		
3,500.00	3,500.00	3,512.00	3,512.00	12.33	12.37	-92.45	-79.20	-1,850.80	1,852.49	1,835.03	17.47	106.056		
3,600.00	3,600.00	3,612.00	3,612.00	12.69	12.73	-92.45	-79.20	-1,850.80	1,852.49	1,834.52	17.97	103.064		
3,700.00	3,700.00	3,712.00	3,712.00	13.05	13.09	-92.45	-79.20	-1,850.80	1,852.49	1,834.01	18.48	100.237		
3,800.00	3,800.00	3,812.00	3,812.00	13.41	13.45	-92.45	-79.20	-1,850.80	1,852.49	1,833.51	18.99	97.561		
3,900.00	3,900.00	3,912.00	3,912.00	13.76	13.81	-92.45	-79.20	-1,850.80	1,852.49	1,833.00	19.49	95.024		
4,000.00	4,000.00	4,012.00	4,012.00	14.12	14.17	-92.45	-79.20	-1,850.80	1,852.49	1,832.49	20.00	92.616		
4,100.00	4,100.00	4,112.00	4,112.00	14.48	14.52	-92.45	-79.20	-1,850.80	1,852.49	1,831.98	20.51	90.326		
4,200.00	4,200.00	4,212.00	4,212.00	14.84	14.88	-92.45	-79.20	-1,850.80	1,852.49	1,831.48	21.02	88.147		
4,300.00	4,300.00	4,312.00	4,312.00	15.20	15.24	-92.45	-79.20	-1,850.80	1,852.49	1,830.97	21.52	86.071		
4,400.00	4,400.00	4,412.00	4,412.00	15.56	15.60	-92.45	-79.20	-1,850.80	1,852.49	1,830.46	22.03	84.090		
4,500.00	4,500.00	4,512.00	4,512.00	15.91	15.96	-92.45	-79.20	-1,850.80	1,852.49	1,829.96	22.54	82.199		
4,550.00	4,550.00	4,562.00	4,562.00	16.09	16.14	-92.45	-79.20	-1,850.80	1,852.49	1,829.70	22.79	81.285		
4,600.00	4,600.00	4,617.26	4,617.26	16.27	16.33	-19.24	-79.17	-1,850.78	1,852.17	1,829.11	23.05	80.339		
4,700.00	4,699.96	4,760.92	4,760.87	16.62	16.85	-19.22	-76.48	-1,848.78	1,848.23	1,824.58	23.65	78.138		
4,800.00	4,799.82	4,903.77	4,903.45	16.96	17.35	-19.13	-69.50	-1,843.62	1,839.48	1,815.24	24.24	75.893		
4,900.00	4,899.51	5,011.87	5,011.15	17.31	17.74	-19.05	-62.01	-1,838.08	1,826.67	1,801.93	24.75	73.815		
5,000.00	4,998.96	5,110.64	5,109.54	17.66	18.09	-19.02	-55.08	-1,832.95	1,811.38	1,786.14	25.24	71.774		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,098.10	5,209.02	5,207.54	18.02	18.44	-19.02	-48.18	-1,827.85	1,793.64	1,767.92	25.73	69.720		
5,200.00	5,196.87	5,306.94	5,305.10	18.38	18.79	-19.07	-41.32	-1,822.77	1,773.48	1,747.27	26.21	67.652		
5,216.82	5,213.44	5,323.37	5,321.46	18.44	18.85	-19.08	-40.16	-1,821.91	1,769.85	1,743.56	26.30	67.302		
5,300.00	5,295.35	5,404.55	5,402.33	18.74	19.14	-19.05	-34.47	-1,817.70	1,751.74	1,725.04	26.70	65.604		
5,400.00	5,393.83	5,502.14	5,499.55	19.11	19.49	-19.01	-27.63	-1,812.64	1,729.96	1,702.77	27.19	63.625		
5,500.00	5,492.31	5,599.73	5,596.77	19.48	19.85	-18.97	-20.78	-1,807.57	1,708.19	1,680.51	27.68	61.713		
5,600.00	5,590.79	5,697.33	5,693.99	19.85	20.20	-18.93	-13.94	-1,802.51	1,686.42	1,658.24	28.17	59.865		
5,700.00	5,689.27	5,794.92	5,791.21	20.23	20.55	-18.89	-7.10	-1,797.44	1,664.64	1,635.98	28.66	58.078		
5,800.00	5,787.75	5,892.51	5,888.43	20.61	20.91	-18.84	-0.25	-1,792.38	1,642.87	1,613.71	29.16	56.348		
5,900.00	5,886.23	5,990.11	5,985.65	20.99	21.26	-18.80	6.59	-1,787.31	1,621.10	1,591.45	29.65	54.674		
6,000.00	5,984.71	6,087.70	6,082.88	21.38	21.62	-18.75	13.44	-1,782.25	1,599.33	1,569.18	30.15	53.053		
6,100.00	6,083.19	6,185.29	6,180.10	21.77	21.97	-18.71	20.28	-1,777.19	1,577.56	1,546.91	30.64	51.483		
6,200.00	6,181.67	6,282.89	6,277.32	22.16	22.33	-18.66	27.12	-1,772.12	1,555.79	1,524.65	31.14	49.961		
6,300.00	6,280.15	6,380.48	6,374.54	22.55	22.68	-18.61	33.97	-1,767.06	1,534.02	1,502.38	31.64	48.486		
6,400.00	6,378.63	6,478.07	6,471.76	22.95	23.04	-18.56	40.81	-1,761.99	1,512.25	1,480.11	32.14	47.055		
6,500.00	6,477.11	6,575.67	6,568.98	23.34	23.40	-18.51	47.65	-1,756.93	1,490.49	1,457.85	32.64	45.667		
6,600.00	6,575.59	6,673.26	6,666.20	23.75	23.76	-18.45	54.50	-1,751.86	1,468.72	1,435.58	33.14	44.320		
6,700.00	6,674.07	6,770.85	6,763.43	24.15	24.12	-18.40	61.34	-1,746.80	1,446.96	1,413.32	33.64	43.012		
6,800.00	6,772.56	6,868.45	6,860.65	24.55	24.48	-18.34	68.19	-1,741.73	1,425.20	1,391.05	34.14	41.741		
6,900.00	6,871.04	6,966.04	6,957.87	24.96	24.84	-18.28	75.03	-1,736.67	1,403.44	1,368.79	34.65	40.506		
7,000.00	6,969.52	7,063.63	7,055.09	25.36	25.20	-18.22	81.87	-1,731.61	1,381.68	1,346.53	35.15	39.306		
7,100.00	7,068.00	7,161.23	7,152.31	25.77	25.56	-18.16	88.72	-1,726.54	1,359.92	1,324.26	35.66	38.140		
7,200.00	7,166.48	7,258.82	7,249.53	26.18	25.92	-18.10	95.56	-1,721.48	1,338.16	1,302.00	36.16	37.005		
7,300.00	7,264.96	7,356.41	7,346.75	26.59	26.28	-18.03	102.40	-1,716.41	1,316.41	1,279.74	36.67	35.901		
7,400.00	7,363.44	7,451.80	7,441.77	27.01	26.63	-17.96	109.09	-1,711.46	1,294.66	1,257.49	37.17	34.829		
7,500.00	7,461.92	7,534.82	7,524.55	27.42	26.94	-17.93	114.19	-1,707.69	1,273.57	1,235.90	37.66	33.816		
7,600.00	7,560.40	7,616.45	7,606.06	27.84	27.23	-17.97	117.80	-1,705.02	1,253.74	1,215.59	38.15	32.866		
7,700.00	7,658.88	7,700.00	7,689.56	28.25	27.54	-18.08	120.03	-1,703.37	1,235.19	1,196.56	38.63	31.975		
7,800.00	7,757.36	7,785.45	7,775.00	28.67	27.84	-18.26	120.80	-1,702.80	1,217.95	1,178.84	39.11	31.139		
7,900.00	7,855.84	7,878.28	7,867.84	29.09	28.17	-18.51	120.80	-1,702.80	1,201.43	1,161.82	39.61	30.332		
8,000.00	7,954.32	7,976.76	7,966.32	29.51	28.52	-18.77	120.80	-1,702.80	1,184.94	1,144.83	40.12	29.537		
8,100.00	8,052.80	8,075.24	8,064.80	29.93	28.87	-19.05	120.80	-1,702.80	1,168.49	1,127.86	40.63	28.763		
8,200.00	8,151.28	8,173.72	8,163.28	30.36	29.22	-19.33	120.80	-1,702.80	1,152.06	1,110.92	41.13	28.007		
8,300.00	8,249.76	8,272.20	8,261.76	30.78	29.57	-19.62	120.80	-1,702.80	1,135.65	1,094.01	41.64	27.270		
8,400.00	8,348.24	8,370.69	8,360.24	31.20	29.92	-19.92	120.80	-1,702.80	1,119.28	1,077.12	42.15	26.552		
8,500.00	8,446.72	8,469.17	8,458.72	31.63	30.26	-20.22	120.80	-1,702.80	1,102.94	1,060.27	42.67	25.851		
8,535.38	8,481.56	8,504.01	8,493.56	31.78	30.39	-20.33	120.80	-1,702.80	1,097.16	1,054.31	42.85	25.606		
8,600.00	8,545.29	8,567.74	8,557.29	32.05	30.61	-20.47	120.80	-1,702.80	1,087.13	1,043.95	43.18	25.178		
8,700.00	8,644.24	8,666.69	8,656.24	32.46	30.97	-20.67	120.80	-1,702.80	1,073.63	1,029.94	43.69	24.574		
8,800.00	8,743.54	8,765.99	8,755.54	32.86	31.32	-20.84	120.80	-1,702.80	1,062.57	1,018.37	44.20	24.041		
8,900.00	8,843.11	8,865.56	8,855.11	33.24	31.67	-20.97	120.80	-1,702.80	1,053.96	1,009.26	44.71	23.575		
9,000.00	8,942.89	8,965.34	8,954.89	33.61	32.03	-21.06	120.80	-1,702.80	1,047.80	1,002.59	45.21	23.175		
9,100.00	9,042.81	9,065.26	9,054.81	33.96	32.38	-21.12	120.80	-1,702.80	1,044.09	998.37	45.72	22.839		
9,202.20	9,145.00	9,167.45	9,157.00	34.31	32.75	-94.36	120.80	-1,702.80	1,042.81	996.59	46.23	22.559		
9,300.00	9,242.80	9,265.25	9,254.80	34.64	33.09	-94.36	120.80	-1,702.80	1,042.81	996.10	46.71	22.323		
9,400.00	9,342.80	9,365.25	9,354.80	34.98	33.45	-94.36	120.80	-1,702.80	1,042.81	995.60	47.21	22.088		
9,500.00	9,442.80	9,465.25	9,454.80	35.32	33.80	-94.36	120.80	-1,702.80	1,042.81	995.10	47.71	21.857		
9,600.00	9,542.80	9,565.25	9,554.80	35.65	34.16	-94.36	120.80	-1,702.80	1,042.81	994.60	48.21	21.631		
9,700.00	9,642.80	9,665.25	9,654.80	35.99	34.52	-94.36	120.80	-1,702.80	1,042.81	994.10	48.71	21.410		
9,800.00	9,742.80	9,765.25	9,754.80	36.33	34.87	-94.36	120.80	-1,702.80	1,042.81	993.61	49.21	21.192		
9,900.00	9,842.80	9,865.25	9,854.80	36.67	35.23	-94.36	120.80	-1,702.80	1,042.81	993.11	49.71	20.980		
10,000.00	9,942.80	9,965.25	9,954.80	37.01	35.58	-94.36	120.80	-1,702.80	1,042.81	992.61	50.21	20.771		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,100.00	10,042.80	10,065.25	10,054.80	37.35	35.94	-94.36	120.80	-1,702.80	1,042.81	992.11	50.70	20.566		
10,200.00	10,142.80	10,165.25	10,154.80	37.69	36.30	-94.36	120.80	-1,702.80	1,042.81	991.61	51.20	20.366		
10,300.00	10,242.80	10,265.25	10,254.80	38.03	36.65	-94.36	120.80	-1,702.80	1,042.81	991.11	51.70	20.169		
10,400.00	10,342.80	10,365.25	10,354.80	38.37	37.01	-94.36	120.80	-1,702.80	1,042.81	990.61	52.20	19.976		
10,500.00	10,442.80	10,465.25	10,454.80	38.71	37.36	-94.36	120.80	-1,702.80	1,042.81	990.11	52.70	19.786		
10,600.00	10,542.80	10,565.25	10,554.80	39.05	37.72	-94.36	120.80	-1,702.80	1,042.81	989.61	53.20	19.600		
10,700.00	10,642.80	10,665.25	10,654.80	39.39	38.08	-94.36	120.80	-1,702.80	1,042.81	989.11	53.70	19.418		
10,800.00	10,742.80	10,765.25	10,754.80	39.73	38.43	-94.36	120.80	-1,702.80	1,042.81	988.61	54.20	19.238		
10,900.00	10,842.80	10,865.25	10,854.80	40.07	38.79	-94.36	120.80	-1,702.80	1,042.81	988.11	54.71	19.062		
11,000.00	10,942.80	10,965.25	10,954.80	40.42	39.15	-94.36	120.80	-1,702.80	1,042.81	987.61	55.21	18.889		
11,100.00	11,042.80	11,065.25	11,054.80	40.76	39.50	-94.36	120.80	-1,702.80	1,042.81	987.11	55.71	18.720		
11,200.00	11,142.80	11,165.25	11,154.80	41.10	39.86	-94.36	120.80	-1,702.80	1,042.81	986.60	56.21	18.553		
11,300.00	11,242.80	11,265.25	11,254.80	41.45	40.22	-94.36	120.80	-1,702.80	1,042.81	986.10	56.71	18.389		
11,400.00	11,342.80	11,365.25	11,354.80	41.79	40.57	-94.36	120.80	-1,702.80	1,042.81	985.60	57.21	18.228		
11,500.00	11,442.80	11,465.25	11,454.80	42.13	40.93	-94.36	120.80	-1,702.80	1,042.81	985.10	57.71	18.070		
11,530.20	11,473.00	11,495.45	11,485.00	42.24	41.04	-94.36	120.80	-1,702.80	1,042.81	984.95	57.86	18.022		
11,550.00	11,492.79	11,515.24	11,504.79	42.30	41.11	86.17	120.80	-1,702.80	1,042.79	984.83	57.96	17.992		
11,600.00	11,542.62	11,565.07	11,554.62	42.45	41.28	86.41	120.80	-1,702.80	1,042.54	984.34	58.19	17.915		
11,650.00	11,591.93	11,614.37	11,603.93	42.60	41.46	86.90	120.80	-1,702.80	1,042.05	983.63	58.42	17.837		
11,700.00	11,640.32	11,662.77	11,652.32	42.74	41.63	87.63	120.80	-1,702.80	1,041.43	982.79	58.64	17.761		
11,750.00	11,687.45	11,707.92	11,697.44	42.87	41.78	88.44	119.51	-1,702.79	1,040.88	982.05	58.83	17.692		
11,800.00	11,732.94	11,753.62	11,742.87	42.99	41.93	89.27	114.63	-1,702.75	1,040.55	981.53	59.02	17.630		
11,843.70	11,771.08	11,794.50	11,783.06	43.09	42.05	90.00	107.21	-1,702.68	1,040.45	981.28	59.18	17.582 CC		
11,850.00	11,776.45	11,800.47	11,788.88	43.10	42.07	90.10	105.88	-1,702.67	1,040.46	981.26	59.20	17.575		
11,900.00	11,817.65	11,848.60	11,835.25	43.20	42.20	90.95	93.02	-1,702.56	1,040.62	981.24	59.37	17.527		
11,950.00	11,856.23	11,898.13	11,881.66	43.28	42.34	91.80	75.77	-1,702.41	1,041.03	981.49	59.54	17.485		
12,000.00	11,891.90	11,949.20	11,927.76	43.36	42.46	92.65	53.86	-1,702.22	1,041.71	982.01	59.69	17.451		
12,050.00	11,924.37	12,001.94	11,973.14	43.42	42.58	93.50	27.01	-1,701.99	1,042.62	982.78	59.84	17.423		
12,100.00	11,953.41	12,056.50	12,017.28	43.47	42.69	94.33	-5.03	-1,701.71	1,043.77	983.79	59.97	17.404		
12,150.00	11,978.80	12,113.01	12,059.57	43.52	42.80	95.15	-42.48	-1,701.38	1,045.11	985.02	60.09	17.392		
12,200.00	12,000.33	12,171.60	12,099.29	43.56	42.90	95.95	-85.51	-1,701.01	1,046.61	986.41	60.20	17.386		
12,250.00	12,017.85	12,232.36	12,135.62	43.61	43.02	96.71	-134.17	-1,700.59	1,048.22	987.93	60.29	17.386		
12,300.00	12,031.23	12,295.34	12,167.63	43.66	43.16	97.43	-188.38	-1,700.12	1,049.88	989.50	60.38	17.389		
12,350.00	12,040.35	12,360.57	12,194.30	43.72	43.31	98.10	-247.86	-1,699.60	1,051.52	991.06	60.46	17.392		
12,400.00	12,045.16	12,427.98	12,214.58	43.79	43.47	98.70	-312.11	-1,699.04	1,053.08	992.53	60.55	17.392		
12,422.75	12,045.91	12,459.34	12,221.41	43.83	43.54	98.95	-342.71	-1,698.77	1,053.74	993.14	60.60	17.390		
12,500.00	12,046.91	12,567.20	12,231.97	44.00	43.80	99.44	-449.88	-1,697.84	1,054.79	993.95	60.84	17.338		
12,600.00	12,048.22	12,667.20	12,233.05	44.29	44.09	99.43	-549.87	-1,696.98	1,054.76	993.50	61.26	17.219		
12,700.00	12,049.52	12,767.20	12,234.13	44.65	44.43	99.42	-649.86	-1,696.11	1,054.73	992.98	61.75	17.080		
12,800.00	12,050.82	12,867.20	12,235.22	45.08	44.83	99.41	-749.85	-1,695.24	1,054.70	992.37	62.33	16.921		
12,900.00	12,052.12	12,967.20	12,236.30	45.57	45.28	99.40	-849.85	-1,694.37	1,054.67	991.68	62.99	16.743		
13,000.00	12,053.42	13,067.20	12,237.38	46.12	45.79	99.38	-949.84	-1,693.50	1,054.65	990.92	63.73	16.549		
13,100.00	12,054.72	13,167.20	12,238.46	46.72	46.35	99.37	-1,049.83	-1,692.63	1,054.62	990.08	64.54	16.341		
13,200.00	12,056.02	13,267.20	12,239.55	47.37	46.96	99.36	-1,149.82	-1,691.77	1,054.59	989.17	65.42	16.120		
13,300.00	12,057.32	13,367.20	12,240.63	48.07	47.62	99.35	-1,249.81	-1,690.90	1,054.56	988.19	66.37	15.889		
13,400.00	12,058.62	13,467.20	12,241.71	48.81	48.33	99.34	-1,349.80	-1,690.03	1,054.53	987.14	67.39	15.649		
13,500.00	12,059.92	13,567.20	12,242.80	49.60	49.08	99.33	-1,449.79	-1,689.16	1,054.50	986.04	68.47	15.402		
13,600.00	12,061.22	13,667.19	12,243.88	50.43	49.88	99.31	-1,549.78	-1,688.29	1,054.48	984.87	69.61	15.149		
13,700.00	12,062.52	13,767.19	12,244.96	51.30	50.72	99.30	-1,649.77	-1,687.42	1,054.45	983.64	70.80	14.892		
13,800.00	12,063.82	13,867.19	12,246.04	52.21	51.60	99.29	-1,749.76	-1,686.56	1,054.42	982.36	72.06	14.633		
13,900.00	12,065.12	13,967.19	12,247.13	53.16	52.51	99.28	-1,849.75	-1,685.69	1,054.39	981.03	73.36	14.373		
14,000.00	12,066.42	14,067.19	12,248.21	54.13	53.46	99.27	-1,949.74	-1,684.82	1,054.36	979.65	74.71	14.112		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Judge Baylor Fed Com - Judge Baylor Fed Com 701H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
14,100.00	12,067.73	14,167.19	12,249.29	55.14	54.45	99.26	-2,049.73	-1,683.95	1,054.34	978.22	76.11	13.853					
14,200.00	12,069.03	14,267.19	12,250.38	56.18	55.46	99.24	-2,149.72	-1,683.08	1,054.31	976.75	77.55	13.595					
14,300.00	12,070.33	14,367.19	12,251.46	57.25	56.51	99.23	-2,249.71	-1,682.21	1,054.28	975.24	79.04	13.339					
14,400.00	12,071.63	14,467.19	12,252.54	58.35	57.58	99.22	-2,349.70	-1,681.35	1,054.25	973.69	80.56	13.087					
14,500.00	12,072.93	14,567.19	12,253.62	59.47	58.68	99.21	-2,449.69	-1,680.48	1,054.22	972.11	82.12	12.838					
14,600.00	12,074.23	14,667.19	12,254.71	60.61	59.81	99.20	-2,549.68	-1,679.61	1,054.20	970.48	83.71	12.593					
14,700.00	12,075.53	14,767.19	12,255.79	61.78	60.96	99.19	-2,649.67	-1,678.74	1,054.17	968.83	85.34	12.353					
14,800.00	12,076.83	14,867.19	12,256.87	62.97	62.13	99.17	-2,749.66	-1,677.87	1,054.14	967.14	87.00	12.117					
14,900.00	12,078.13	14,967.19	12,257.96	64.18	63.33	99.16	-2,849.65	-1,677.00	1,054.11	965.43	88.69	11.886					
15,000.00	12,079.43	15,067.19	12,259.04	65.41	64.54	99.15	-2,949.64	-1,676.14	1,054.09	963.68	90.40	11.660					
15,100.00	12,080.73	15,167.19	12,260.12	66.66	65.78	99.14	-3,049.63	-1,675.27	1,054.06	961.91	92.14	11.439					
15,200.00	12,082.03	15,267.19	12,261.20	67.93	67.03	99.13	-3,149.62	-1,674.40	1,054.03	960.12	93.91	11.224					
15,300.00	12,083.33	15,367.19	12,262.29	69.21	68.30	99.11	-3,249.61	-1,673.53	1,054.00	958.30	95.70	11.014					
15,400.00	12,084.63	15,467.19	12,263.37	70.50	69.58	99.10	-3,349.60	-1,672.66	1,053.98	956.46	97.51	10.809					
15,500.00	12,085.94	15,567.19	12,264.45	71.82	70.88	99.09	-3,449.59	-1,671.79	1,053.95	954.60	99.34	10.609					
15,600.00	12,087.24	15,667.19	12,265.54	73.14	72.20	99.08	-3,549.58	-1,670.93	1,053.92	952.72	101.20	10.415					
15,700.00	12,088.54	15,767.19	12,266.62	74.48	73.52	99.07	-3,649.57	-1,670.06	1,053.89	950.83	103.07	10.225					
15,800.00	12,089.84	15,867.19	12,267.70	75.83	74.87	99.06	-3,749.56	-1,669.19	1,053.87	948.91	104.96	10.041					
15,900.00	12,091.14	15,967.19	12,268.78	77.19	76.22	99.04	-3,849.55	-1,668.32	1,053.84	946.98	106.86	9.862					
16,000.00	12,092.44	16,067.19	12,269.87	78.57	77.58	99.03	-3,949.54	-1,667.45	1,053.81	945.03	108.78	9.687					
16,100.00	12,093.74	16,167.19	12,270.95	79.95	78.96	99.02	-4,049.53	-1,666.59	1,053.79	943.07	110.72	9.518					
16,200.00	12,095.04	16,267.19	12,272.03	81.34	80.35	99.01	-4,149.52	-1,665.72	1,053.76	941.09	112.67	9.353					
16,300.00	12,096.34	16,367.19	12,273.12	82.75	81.74	99.00	-4,249.51	-1,664.85	1,053.73	939.10	114.63	9.192					
16,400.00	12,097.64	16,467.19	12,274.20	84.16	83.15	98.99	-4,349.50	-1,663.98	1,053.70	937.09	116.61	9.036					
16,500.00	12,098.94	16,567.19	12,275.28	85.58	84.56	98.97	-4,449.49	-1,663.11	1,053.68	935.08	118.60	8.884					
16,600.00	12,100.24	16,667.19	12,276.36	87.01	85.99	98.96	-4,549.48	-1,662.24	1,053.65	933.05	120.60	8.737					
16,700.00	12,101.54	16,767.19	12,277.45	88.45	87.42	98.95	-4,649.47	-1,661.38	1,053.62	931.01	122.61	8.593					
16,800.00	12,102.84	16,867.19	12,278.53	89.89	88.86	98.94	-4,749.46	-1,660.51	1,053.60	928.96	124.64	8.453					
16,900.00	12,104.15	16,967.19	12,279.61	91.34	90.30	98.93	-4,849.45	-1,659.64	1,053.57	926.90	126.67	8.318					
17,000.00	12,105.45	17,067.19	12,280.70	92.80	91.75	98.91	-4,949.44	-1,658.77	1,053.54	924.83	128.71	8.185					
17,100.00	12,106.75	17,167.19	12,281.78	94.26	93.21	98.90	-5,049.43	-1,657.90	1,053.52	922.75	130.76	8.057					
17,200.00	12,108.05	17,267.19	12,282.86	95.74	94.68	98.89	-5,149.42	-1,657.03	1,053.49	920.67	132.82	7.932					
17,300.00	12,109.35	17,367.19	12,283.94	97.21	96.15	98.88	-5,249.41	-1,656.17	1,053.46	918.57	134.89	7.810					
17,400.00	12,110.65	17,467.19	12,285.03	98.69	97.63	98.87	-5,349.40	-1,655.30	1,053.44	916.47	136.96	7.691					
17,500.00	12,111.95	17,567.19	12,286.11	100.18	99.11	98.86	-5,449.39	-1,654.43	1,053.41	914.36	139.05	7.576					
17,600.00	12,113.25	17,667.19	12,287.19	101.67	100.60	98.84	-5,549.38	-1,653.56	1,053.38	912.25	141.14	7.463					
17,700.00	12,114.55	17,767.19	12,288.28	103.17	102.10	98.83	-5,649.37	-1,652.69	1,053.36	910.12	143.24	7.354					
17,800.00	12,115.85	17,867.19	12,289.36	104.67	103.59	98.82	-5,749.36	-1,651.82	1,053.33	907.99	145.34	7.247					
17,900.00	12,117.15	17,967.18	12,290.44	106.18	105.10	98.81	-5,849.35	-1,650.96	1,053.30	905.85	147.45	7.143					
18,000.00	12,118.45	18,067.18	12,291.52	107.69	106.60	98.80	-5,949.34	-1,650.09	1,053.28	903.71	149.57	7.042					
18,100.00	12,119.75	18,167.18	12,292.61	109.20	108.12	98.79	-6,049.33	-1,649.22	1,053.25	901.56	151.69	6.943					
18,200.00	12,121.05	18,267.18	12,293.69	110.72	109.63	98.77	-6,149.32	-1,648.35	1,053.23	899.41	153.82	6.847					
18,300.00	12,122.36	18,367.18	12,294.77	112.25	111.15	98.76	-6,249.31	-1,647.48	1,053.20	897.25	155.95	6.753					
18,400.00	12,123.66	18,467.18	12,295.85	113.77	112.68	98.75	-6,349.30	-1,646.61	1,053.17	895.08	158.09	6.662					
18,500.00	12,124.96	18,567.18	12,296.94	115.30	114.20	98.74	-6,449.29	-1,645.75	1,053.15	892.91	160.23	6.573					
18,600.00	12,126.26	18,667.18	12,298.02	116.83	115.73	98.73	-6,549.28	-1,644.88	1,053.12	890.74	162.38	6.485					
18,700.00	12,127.56	18,767.18	12,299.10	118.37	117.27	98.71	-6,649.27	-1,644.01	1,053.10	888.56	164.53	6.400					
18,800.00	12,128.86	18,867.18	12,300.19	119.91	118.80	98.70	-6,749.26	-1,643.14	1,053.07	886.38	166.69	6.317					
18,900.00	12,130.16	18,967.18	12,301.27	121.45	120.34	98.69	-6,849.25	-1,642.27	1,053.04	884.19	168.85	6.236					
19,000.00	12,131.46	19,067.18	12,302.35	123.00	121.89	98.68	-6,949.24	-1,641.40	1,053.02	882.00	171.02	6.157					
19,100.00	12,132.76	19,167.18	12,303.43	124.54	123.43	98.67	-7,049.23	-1,640.54	1,052.99	879.81	173.19	6.080					
19,200.00	12,134.06	19,267.18	12,304.52	126.10	124.98	98.66	-7,149.22	-1,639.67	1,052.97	877.61	175.36	6.005					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Judge Baylor Fed Com - Judge Baylor Fed Com 701H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
19,300.00	12,135.36	19,367.18	12,305.60	127.65	126.53	98.64	-7,249.21	-1,638.80	1,052.94	875.41	177.54	5.931					
19,400.00	12,136.66	19,467.18	12,306.68	129.20	128.09	98.63	-7,349.20	-1,637.93	1,052.92	873.20	179.71	5.859					
19,500.00	12,137.96	19,567.18	12,307.77	130.76	129.64	98.62	-7,449.19	-1,637.06	1,052.89	870.99	181.90	5.788					
19,600.00	12,139.26	19,667.18	12,308.85	132.32	131.20	98.61	-7,549.18	-1,636.19	1,052.86	868.78	184.09	5.719					
19,700.00	12,140.57	19,767.18	12,309.93	133.88	132.76	98.60	-7,649.17	-1,635.33	1,052.84	866.56	186.27	5.652					
19,800.00	12,141.87	19,867.18	12,311.01	135.45	134.32	98.58	-7,749.16	-1,634.46	1,052.81	864.35	188.47	5.586					
19,900.00	12,143.17	19,967.18	12,312.10	137.02	135.89	98.57	-7,849.15	-1,633.59	1,052.79	862.12	190.66	5.522					
20,000.00	12,144.47	20,067.18	12,313.18	138.58	137.46	98.56	-7,949.14	-1,632.72	1,052.76	859.90	192.86	5.459					
20,100.00	12,145.77	20,167.18	12,314.26	140.15	139.03	98.55	-8,049.13	-1,631.85	1,052.74	857.67	195.06	5.397					
20,200.00	12,147.07	20,267.18	12,315.35	141.73	140.60	98.54	-8,149.12	-1,630.98	1,052.71	855.44	197.27	5.336					
20,300.00	12,148.37	20,367.18	12,316.43	143.30	142.17	98.53	-8,249.11	-1,630.12	1,052.69	853.21	199.48	5.277					
20,400.00	12,149.67	20,467.18	12,317.51	144.88	143.74	98.51	-8,349.10	-1,629.25	1,052.66	850.98	201.68	5.219					
20,500.00	12,150.97	20,567.18	12,318.59	146.45	145.32	98.50	-8,449.10	-1,628.38	1,052.64	848.74	203.89	5.163					
20,600.00	12,152.27	20,667.18	12,319.68	148.03	146.90	98.49	-8,549.09	-1,627.51	1,052.61	846.50	206.11	5.107					
20,700.00	12,153.57	20,767.18	12,320.76	149.61	148.48	98.48	-8,649.08	-1,626.64	1,052.59	844.26	208.32	5.053					
20,800.00	12,154.87	20,867.18	12,321.84	151.20	150.06	98.47	-8,749.07	-1,625.77	1,052.56	842.02	210.54	4.999					
20,900.00	12,156.17	20,967.18	12,322.93	152.78	151.64	98.46	-8,849.06	-1,624.91	1,052.54	839.77	212.76	4.947					
21,000.00	12,157.47	21,067.18	12,324.01	154.37	153.23	98.44	-8,949.05	-1,624.04	1,052.51	837.53	214.98	4.896					
21,100.00	12,158.77	21,167.18	12,325.09	155.95	154.81	98.43	-9,049.04	-1,623.17	1,052.49	835.28	217.21	4.846					
21,200.00	12,160.08	21,267.18	12,326.17	157.54	156.40	98.42	-9,149.03	-1,622.30	1,052.46	833.03	219.43	4.796					
21,300.00	12,161.38	21,367.18	12,327.26	159.13	157.99	98.41	-9,249.02	-1,621.43	1,052.44	830.77	221.66	4.748					
21,400.00	12,162.68	21,467.18	12,328.34	160.72	159.58	98.40	-9,349.01	-1,620.56	1,052.41	828.52	223.89	4.701					
21,500.00	12,163.98	21,567.18	12,329.42	162.31	161.17	98.38	-9,449.00	-1,619.70	1,052.39	826.26	226.12	4.654					
21,600.00	12,165.28	21,667.18	12,330.51	163.90	162.76	98.37	-9,548.99	-1,618.83	1,052.36	824.00	228.36	4.608					
21,700.00	12,166.58	21,767.18	12,331.59	165.50	164.35	98.36	-9,648.98	-1,617.96	1,052.34	821.74	230.59	4.564					
21,800.00	12,167.88	21,867.18	12,332.67	167.09	165.95	98.35	-9,748.97	-1,617.09	1,052.31	819.48	232.83	4.520					
21,900.00	12,169.18	21,967.18	12,333.75	168.69	167.54	98.34	-9,848.96	-1,616.22	1,052.29	817.22	235.07	4.477					
22,000.00	12,170.48	22,067.18	12,334.84	170.29	169.14	98.33	-9,948.95	-1,615.35	1,052.26	814.96	237.31	4.434					
22,100.00	12,171.78	22,167.17	12,335.92	171.89	170.74	98.31	-10,048.94	-1,614.49	1,052.24	812.69	239.55	4.393					
22,200.00	12,173.08	22,267.17	12,337.00	173.49	172.34	98.30	-10,148.93	-1,613.62	1,052.22	810.43	241.79	4.352					
22,300.00	12,174.38	22,367.17	12,338.09	175.09	173.94	98.29	-10,248.92	-1,612.75	1,052.19	808.16	244.03	4.312					
22,400.00	12,175.68	22,467.17	12,339.17	176.69	175.54	98.28	-10,348.91	-1,611.88	1,052.17	805.89	246.28	4.272					
22,500.00	12,176.98	22,567.17	12,340.25	178.29	177.14	98.27	-10,448.90	-1,611.01	1,052.14	803.62	248.52	4.234					
22,600.00	12,178.29	22,667.17	12,341.33	179.89	178.74	98.25	-10,548.89	-1,610.14	1,052.12	801.35	250.77	4.195					
22,700.00	12,179.59	22,767.17	12,342.42	181.50	180.34	98.24	-10,648.88	-1,609.28	1,052.09	799.07	253.02	4.158					
22,792.89	12,180.79	22,860.06	12,343.42	182.99	181.83	98.23	-10,741.75	-1,608.47	1,052.07	796.96	255.11	4.124					
22,800.00	12,180.89	22,863.52	12,343.46	183.10	181.89	98.23	-10,745.21	-1,608.44	1,052.08	796.83	255.25	4.122 ES, SF					
22,900.00	12,182.19	22,863.52	12,343.46	184.71	181.89	98.23	-10,745.21	-1,608.44	1,057.14	801.78	255.36	4.140					
23,000.00	12,183.49	22,863.52	12,343.46	186.31	181.89	98.23	-10,745.21	-1,608.44	1,071.55	818.70	252.85	4.238					
23,100.00	12,184.79	22,863.52	12,343.46	187.92	181.89	98.23	-10,745.21	-1,608.44	1,094.95	846.88	248.06	4.414					
23,200.00	12,186.09	22,863.52	12,343.46	189.53	181.89	98.23	-10,745.21	-1,608.44	1,126.76	885.26	241.50	4.666					
23,300.00	12,187.39	22,863.52	12,343.46	191.14	181.89	98.23	-10,745.21	-1,608.44	1,166.31	932.57	233.73	4.990					
23,400.00	12,188.69	22,863.52	12,343.46	192.75	181.89	98.23	-10,745.21	-1,608.44	1,212.83	987.55	225.28	5.384					
23,500.00	12,189.99	22,863.52	12,343.46	194.36	181.89	98.23	-10,745.21	-1,608.44	1,265.56	1,048.99	216.57	5.844					
23,600.00	12,191.29	22,863.52	12,343.46	195.97	181.89	98.23	-10,745.21	-1,608.44	1,323.75	1,115.83	207.92	6.367					
23,700.00	12,192.59	22,863.52	12,343.46	197.58	181.89	98.23	-10,745.21	-1,608.44	1,386.72	1,187.16	199.56	6.949					
23,800.00	12,193.89	22,863.52	12,343.46	199.20	181.89	98.23	-10,745.21	-1,608.44	1,453.85	1,262.24	191.61	7.588					
23,900.00	12,195.19	22,863.52	12,343.46	200.81	181.89	98.23	-10,745.21	-1,608.44	1,524.58	1,340.44	184.15	8.279					
24,000.00	12,196.50	22,863.52	12,343.46	202.42	181.89	98.23	-10,745.21	-1,608.44	1,598.45	1,421.24	177.21	9.020					
24,100.00	12,197.80	22,863.52	12,343.46	204.04	181.89	98.23	-10,745.21	-1,608.44	1,675.03	1,504.23	170.80	9.807					
24,110.32	12,197.93	22,863.52	12,343.46	204.20	181.89	98.23	-10,745.21	-1,608.44	1,683.07	1,512.91	170.17	9.891					
24,111.10	12,197.94	22,863.52	12,343.46	204.22	181.89	98.23	-10,745.21	-1,608.44	1,683.68	1,511.70	171.98	9.790					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													LHS Wildcat Fed Com - LHS Wildcat 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		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor						
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)						
0.00	0.00	0.00	0.00	0.00	0.00	90.95	-39.65	2,388.88	2,389.35								
100.00	100.00	73.80	73.80	0.14	0.10	90.95	-39.65	2,388.88	2,389.21	2,389.03	0.18	N/A					
200.00	200.00	173.80	173.80	0.50	0.41	90.95	-39.65	2,388.88	2,389.21	2,388.56	0.64	3,708.662					
300.00	300.00	273.80	273.80	0.86	0.76	90.95	-39.65	2,388.88	2,389.21	2,388.06	1.15	2,078.175					
400.00	400.00	373.80	373.80	1.22	1.12	90.95	-39.65	2,388.88	2,389.21	2,387.55	1.66	1,442.729					
500.00	500.00	473.80	473.80	1.58	1.48	90.95	-39.65	2,388.88	2,389.21	2,387.05	2.16	1,104.746					
600.00	600.00	573.80	573.80	1.93	1.84	90.95	-39.65	2,388.88	2,389.21	2,386.54	2.67	895.023					
700.00	700.00	673.80	673.80	2.29	2.20	90.95	-39.65	2,388.88	2,389.21	2,386.03	3.18	752.208					
800.00	800.00	773.80	773.80	2.65	2.56	90.95	-39.65	2,388.88	2,389.21	2,385.53	3.68	648.691					
900.00	900.00	873.80	873.80	3.01	2.92	90.95	-39.65	2,388.88	2,389.21	2,385.02	4.19	570.216					
1,000.00	1,000.00	973.80	973.80	3.37	3.27	90.95	-39.65	2,388.88	2,389.21	2,384.51	4.70	508.677					
1,100.00	1,100.00	1,073.80	1,073.80	3.73	3.63	90.95	-39.65	2,388.88	2,389.21	2,384.01	5.20	459.127					
1,200.00	1,200.00	1,173.80	1,173.80	4.08	3.99	90.95	-39.65	2,388.88	2,389.21	2,383.50	5.71	418.372					
1,300.00	1,300.00	1,273.80	1,273.80	4.44	4.35	90.95	-39.65	2,388.88	2,389.21	2,382.99	6.22	384.262					
1,400.00	1,400.00	1,373.80	1,373.80	4.80	4.71	90.95	-39.65	2,388.88	2,389.21	2,382.48	6.72	355.295					
1,500.00	1,500.00	1,473.80	1,473.80	5.16	5.07	90.95	-39.65	2,388.88	2,389.21	2,381.98	7.23	330.388					
1,600.00	1,600.00	1,573.80	1,573.80	5.52	5.42	90.95	-39.65	2,388.88	2,389.21	2,381.47	7.74	308.745					
1,700.00	1,700.00	1,673.80	1,673.80	5.88	5.78	90.95	-39.65	2,388.88	2,389.21	2,380.96	8.25	289.763					
1,800.00	1,800.00	1,773.80	1,773.80	6.24	6.14	90.95	-39.65	2,388.88	2,389.21	2,380.46	8.75	272.980					
1,900.00	1,900.00	1,873.80	1,873.80	6.59	6.50	90.95	-39.65	2,388.88	2,389.21	2,379.95	9.26	258.034					
2,000.00	2,000.00	1,973.80	1,973.80	6.95	6.86	90.95	-39.65	2,388.88	2,389.21	2,379.44	9.77	244.640					
2,100.00	2,100.00	2,073.80	2,073.80	7.31	7.22	90.95	-39.65	2,388.88	2,389.21	2,378.94	10.27	232.568					
2,200.00	2,200.00	2,173.80	2,173.80	7.67	7.58	90.95	-39.65	2,388.88	2,389.21	2,378.43	10.78	221.631					
2,300.00	2,300.00	2,273.80	2,273.80	8.03	7.93	90.95	-39.65	2,388.88	2,389.21	2,377.92	11.29	211.677					
2,400.00	2,400.00	2,373.80	2,373.80	8.39	8.29	90.95	-39.65	2,388.88	2,389.21	2,377.42	11.79	202.578					
2,500.00	2,500.00	2,473.80	2,473.80	8.74	8.65	90.95	-39.65	2,388.88	2,389.21	2,376.91	12.30	194.230					
2,600.00	2,600.00	2,573.80	2,573.80	9.10	9.01	90.95	-39.65	2,388.88	2,389.21	2,376.40	12.81	186.542					
2,700.00	2,700.00	2,673.80	2,673.80	9.46	9.37	90.95	-39.65	2,388.88	2,389.21	2,375.89	13.31	179.440					
2,800.00	2,800.00	2,773.80	2,773.80	9.82	9.73	90.95	-39.65	2,388.88	2,389.21	2,375.39	13.82	172.858					
2,900.00	2,900.00	2,873.80	2,873.80	10.18	10.08	90.95	-39.65	2,388.88	2,389.21	2,374.88	14.33	166.742					
3,000.00	3,000.00	2,973.80	2,973.80	10.54	10.44	90.95	-39.65	2,388.88	2,389.21	2,374.37	14.84	161.045					
3,100.00	3,100.00	3,073.80	3,073.80	10.90	10.80	90.95	-39.65	2,388.88	2,389.21	2,373.87	15.34	155.723					
3,200.00	3,200.00	3,173.80	3,173.80	11.25	11.16	90.95	-39.65	2,388.88	2,389.21	2,373.36	15.85	150.743					
3,300.00	3,300.00	3,273.80	3,273.80	11.61	11.52	90.95	-39.65	2,388.88	2,389.21	2,372.85	16.36	146.071					
3,400.00	3,400.00	3,373.80	3,373.80	11.97	11.88	90.95	-39.65	2,388.88	2,389.21	2,372.35	16.86	141.679					
3,500.00	3,500.00	3,473.80	3,473.80	12.33	12.24	90.95	-39.65	2,388.88	2,389.21	2,371.84	17.37	137.545					
3,600.00	3,600.00	3,573.80	3,573.80	12.69	12.59	90.95	-39.65	2,388.88	2,389.21	2,371.33	17.88	133.644					
3,700.00	3,700.00	3,673.80	3,673.80	13.05	12.95	90.95	-39.65	2,388.88	2,389.21	2,370.82	18.38	129.959					
3,800.00	3,800.00	3,773.80	3,773.80	13.41	13.31	90.95	-39.65	2,388.88	2,389.21	2,370.32	18.89	126.471					
3,900.00	3,900.00	3,873.80	3,873.80	13.76	13.67	90.95	-39.65	2,388.88	2,389.21	2,369.81	19.40	123.166					
4,000.00	4,000.00	3,973.80	3,973.80	14.12	14.03	90.95	-39.65	2,388.88	2,389.21	2,369.30	19.91	120.029					
4,100.00	4,100.00	4,073.80	4,073.80	14.48	14.39	90.95	-39.65	2,388.88	2,389.21	2,368.80	20.41	117.048					
4,200.00	4,200.00	4,173.80	4,173.80	14.84	14.75	90.95	-39.65	2,388.88	2,389.21	2,368.29	20.92	114.212					
4,300.00	4,300.00	4,273.80	4,273.80	15.20	15.10	90.95	-39.65	2,388.88	2,389.21	2,367.78	21.43	111.509					
4,400.00	4,400.00	4,373.80	4,373.80	15.56	15.46	90.95	-39.65	2,388.88	2,389.21	2,367.28	21.93	108.932					
4,500.00	4,500.00	4,473.80	4,473.80	15.91	15.82	90.95	-39.65	2,388.88	2,389.21	2,366.77	22.44	106.471					
4,550.00	4,550.00	4,523.80	4,523.80	16.09	16.00	90.95	-39.65	2,388.88	2,389.21	2,366.52	22.69	105.282 CC, ES					
4,600.00	4,600.00	4,573.80	4,573.80	16.27	16.18	164.17	-39.65	2,388.88	2,389.52	2,366.58	22.94	104.143					
4,700.00	4,699.96	4,673.76	4,673.76	16.62	16.54	164.17	-39.65	2,388.88	2,392.04	2,368.60	23.44	102.040					
4,800.00	4,799.82	4,773.62	4,773.62	16.96	16.90	164.19	-39.65	2,388.88	2,397.08	2,373.14	23.94	100.129					
4,900.00	4,899.51	4,873.31	4,873.31	17.31	17.25	164.21	-39.65	2,388.88	2,404.63	2,380.19	24.44	98.402					
5,000.00	4,998.96	4,972.76	4,972.76	17.66	17.61	164.23	-39.65	2,388.88	2,414.69	2,389.76	24.93	96.848					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design LHS Wildcat Fed Com - LHS Wildcat 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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,098.10	5,071.90	5,071.90	18.02	17.96	164.26	-39.65	2,388.88	2,427.26	2,401.83	25.43	95.458		
5,200.00	5,196.87	5,170.67	5,170.67	18.38	18.32	164.30	-39.65	2,388.88	2,442.33	2,416.41	25.92	94.223		
5,216.82	5,213.44	5,187.24	5,187.24	18.44	18.38	164.31	-39.65	2,388.88	2,445.11	2,419.11	26.00	94.029		
5,300.00	5,295.35	5,269.15	5,269.15	18.74	18.67	164.40	-39.65	2,388.88	2,459.04	2,432.63	26.41	93.100		
5,400.00	5,393.83	5,367.63	5,367.63	19.11	19.02	164.51	-39.65	2,388.88	2,475.79	2,448.89	26.91	92.017		
5,500.00	5,492.31	5,466.11	5,466.11	19.48	19.38	164.61	-39.65	2,388.88	2,492.55	2,465.15	27.40	90.972		
5,600.00	5,590.79	5,611.84	5,611.82	19.85	19.90	164.74	-38.37	2,387.87	2,508.71	2,480.70	28.01	89.560		
5,700.00	5,689.27	5,783.74	5,783.47	20.23	20.51	164.76	-31.38	2,382.35	2,522.20	2,493.52	28.67	87.965		
5,800.00	5,787.75	5,932.59	5,931.68	20.61	21.04	164.68	-20.56	2,373.80	2,532.95	2,503.68	29.27	86.531		
5,900.00	5,886.23	6,032.02	6,030.56	20.99	21.39	164.60	-12.40	2,367.35	2,543.06	2,513.29	29.77	85.423		
6,000.00	5,984.71	6,131.45	6,129.45	21.38	21.75	164.52	-4.24	2,360.91	2,553.17	2,522.90	30.27	84.348		
6,100.00	6,083.19	6,230.88	6,228.33	21.77	22.10	164.45	3.91	2,354.46	2,563.28	2,532.51	30.77	83.304		
6,200.00	6,181.67	6,330.31	6,327.22	22.16	22.46	164.37	12.07	2,348.02	2,573.40	2,542.13	31.27	82.290		
6,300.00	6,280.15	6,429.74	6,426.10	22.55	22.82	164.30	20.23	2,341.58	2,583.52	2,551.75	31.78	81.306		
6,400.00	6,378.63	6,529.17	6,524.99	22.95	23.18	164.22	28.38	2,335.13	2,593.65	2,561.37	32.28	80.349		
6,500.00	6,477.11	6,628.60	6,623.87	23.34	23.54	164.15	36.54	2,328.69	2,603.78	2,571.00	32.79	79.420		
6,600.00	6,575.59	6,728.03	6,722.76	23.75	23.90	164.08	44.70	2,322.24	2,613.92	2,580.63	33.29	78.516		
6,700.00	6,674.07	6,827.46	6,821.64	24.15	24.27	164.00	52.86	2,315.80	2,624.06	2,590.26	33.80	77.636		
6,800.00	6,772.56	6,926.89	6,920.53	24.55	24.63	163.93	61.01	2,309.36	2,634.20	2,599.89	34.31	76.781		
6,900.00	6,871.04	7,026.31	7,019.41	24.96	25.00	163.86	69.17	2,302.91	2,644.35	2,609.53	34.82	75.949		
7,000.00	6,969.52	7,125.74	7,118.30	25.36	25.36	163.79	77.33	2,296.47	2,654.50	2,619.17	35.33	75.139		
7,100.00	7,068.00	7,225.17	7,217.18	25.77	25.73	163.72	85.48	2,290.03	2,664.66	2,628.82	35.84	74.350		
7,200.00	7,166.48	7,324.60	7,316.07	26.18	26.09	163.65	93.64	2,283.58	2,674.82	2,638.47	36.35	73.582		
7,300.00	7,264.96	7,424.03	7,414.95	26.59	26.46	163.58	101.80	2,277.14	2,684.98	2,648.12	36.86	72.833		
7,400.00	7,363.44	7,523.46	7,513.84	27.01	26.83	163.51	109.95	2,270.69	2,695.15	2,657.77	37.38	72.104		
7,500.00	7,461.92	7,622.89	7,612.72	27.42	27.20	163.44	118.11	2,264.25	2,705.32	2,667.43	37.89	71.393		
7,600.00	7,560.40	7,722.32	7,711.60	27.84	27.57	163.37	126.27	2,257.81	2,715.50	2,677.09	38.41	70.700		
7,700.00	7,658.88	7,821.75	7,810.49	28.25	27.94	163.31	134.42	2,251.36	2,725.68	2,686.75	38.92	70.024		
7,800.00	7,757.36	7,921.18	7,909.37	28.67	28.31	163.24	142.58	2,244.92	2,735.86	2,696.42	39.44	69.365		
7,900.00	7,855.84	8,000.00	7,987.81	29.09	28.60	163.20	148.65	2,240.12	2,746.45	2,706.53	39.91	68.815		
8,000.00	7,954.32	8,063.51	8,051.12	29.51	28.83	163.18	152.64	2,236.97	2,758.11	2,717.77	40.34	68.376		
8,100.00	8,052.80	8,131.90	8,119.37	29.93	29.08	163.18	156.00	2,234.31	2,770.89	2,730.12	40.77	67.961		
8,200.00	8,151.28	8,200.00	8,187.40	30.36	29.33	163.20	158.40	2,232.42	2,784.77	2,743.57	41.20	67.591		
8,300.00	8,249.76	8,267.99	8,255.36	30.78	29.57	163.24	159.85	2,231.27	2,799.75	2,758.13	41.62	67.265		
8,400.00	8,348.24	8,337.63	8,325.00	31.20	29.82	163.30	160.35	2,230.88	2,815.83	2,773.79	42.05	66.972		
8,500.00	8,446.72	8,433.14	8,420.52	31.63	30.16	163.40	160.35	2,230.88	2,832.49	2,789.95	42.54	66.581		
8,535.38	8,481.56	8,467.99	8,455.36	31.78	30.28	163.44	160.35	2,230.88	2,838.39	2,795.67	42.72	66.439		
8,600.00	8,545.29	8,531.72	8,519.09	32.05	30.51	163.54	160.35	2,230.88	2,848.64	2,805.60	43.05	66.173		
8,700.00	8,644.24	8,630.67	8,618.04	32.46	30.86	163.68	160.35	2,230.88	2,862.48	2,818.92	43.55	65.721		
8,800.00	8,743.54	8,729.97	8,717.34	32.86	31.21	163.80	160.35	2,230.88	2,873.82	2,829.76	44.06	65.224		
8,900.00	8,843.11	8,829.54	8,816.91	33.24	31.57	163.89	160.35	2,230.88	2,882.67	2,838.10	44.57	64.684		
9,000.00	8,942.89	8,929.32	8,916.69	33.61	31.92	163.95	160.35	2,230.88	2,889.01	2,843.94	45.07	64.102		
9,100.00	9,042.81	9,029.24	9,016.61	33.96	32.28	163.99	160.35	2,230.88	2,892.84	2,847.27	45.57	63.480		
9,202.20	9,145.00	9,131.43	9,118.80	34.31	32.64	90.78	160.35	2,230.88	2,894.15	2,848.07	46.08	62.805		
9,300.00	9,242.80	9,229.22	9,216.60	34.64	32.99	90.78	160.35	2,230.88	2,894.15	2,847.58	46.57	62.148		
9,400.00	9,342.80	9,329.22	9,316.60	34.98	33.34	90.78	160.35	2,230.88	2,894.15	2,847.08	47.07	61.489		
9,500.00	9,442.80	9,429.22	9,416.60	35.32	33.70	90.78	160.35	2,230.88	2,894.15	2,846.59	47.57	60.844		
9,600.00	9,542.80	9,529.22	9,516.60	35.65	34.05	90.78	160.35	2,230.88	2,894.15	2,846.09	48.07	60.213		
9,700.00	9,642.80	9,629.22	9,616.60	35.99	34.41	90.78	160.35	2,230.88	2,894.15	2,845.59	48.56	59.594		
9,800.00	9,742.80	9,729.22	9,716.60	36.33	34.77	90.78	160.35	2,230.88	2,894.15	2,845.09	49.06	58.987		
9,900.00	9,842.80	9,829.22	9,816.60	36.67	35.12	90.78	160.35	2,230.88	2,894.15	2,844.59	49.56	58.393		
10,000.00	9,942.80	9,929.22	9,916.60	37.01	35.48	90.78	160.35	2,230.88	2,894.15	2,844.09	50.06	57.810		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													LHS Wildcat Fed Com - LHS Wildcat 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		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
10,100.00	10,042.80	10,029.22	10,016.60	37.35	35.83	90.78	160.35	2,230.88	2,894.15	2,843.59	50.56	57.238					
10,200.00	10,142.80	10,129.22	10,116.60	37.69	36.19	90.78	160.35	2,230.88	2,894.15	2,843.09	51.06	56.678					
10,300.00	10,242.80	10,229.22	10,216.60	38.03	36.55	90.78	160.35	2,230.88	2,894.15	2,842.59	51.56	56.128					
10,400.00	10,342.80	10,329.22	10,316.60	38.37	36.90	90.78	160.35	2,230.88	2,894.15	2,842.09	52.06	55.589					
10,500.00	10,442.80	10,429.22	10,416.60	38.71	37.26	90.78	160.35	2,230.88	2,894.15	2,841.59	52.56	55.060					
10,600.00	10,542.80	10,529.22	10,516.60	39.05	37.61	90.78	160.35	2,230.88	2,894.15	2,841.09	53.06	54.540					
10,700.00	10,642.80	10,629.22	10,616.60	39.39	37.97	90.78	160.35	2,230.88	2,894.15	2,840.59	53.57	54.031					
10,800.00	10,742.80	10,729.22	10,716.60	39.73	38.33	90.78	160.35	2,230.88	2,894.15	2,840.09	54.07	53.530					
10,900.00	10,842.80	10,829.22	10,816.60	40.07	38.68	90.78	160.35	2,230.88	2,894.15	2,839.58	54.57	53.039					
11,000.00	10,942.80	10,929.22	10,916.60	40.42	39.04	90.78	160.35	2,230.88	2,894.15	2,839.08	55.07	52.556					
11,100.00	11,042.80	11,029.22	11,016.60	40.76	39.40	90.78	160.35	2,230.88	2,894.15	2,838.58	55.57	52.082					
11,200.00	11,142.80	11,129.22	11,116.60	41.10	39.75	90.78	160.35	2,230.88	2,894.15	2,838.08	56.07	51.617					
11,300.00	11,242.80	11,229.22	11,216.60	41.45	40.11	90.78	160.35	2,230.88	2,894.15	2,837.58	56.57	51.159					
11,306.81	11,249.61	11,236.04	11,223.41	41.47	40.13	90.78	160.35	2,230.88	2,894.15	2,837.55	56.61	51.129					
11,400.00	11,342.80	11,325.20	11,312.55	41.79	40.44	90.80	159.37	2,230.89	2,894.18	2,837.13	57.05	50.729					
11,500.00	11,442.80	11,412.79	11,399.26	42.13	40.71	91.04	147.59	2,231.01	2,894.53	2,837.05	57.48	50.357					
11,530.20	11,473.00	11,438.33	11,424.11	42.24	40.78	91.15	141.67	2,231.06	2,894.74	2,837.14	57.60	50.253					
11,550.00	11,492.79	11,454.85	11,440.02	42.30	40.83	-88.25	137.26	2,231.11	2,894.90	2,837.22	57.68	50.189					
11,600.00	11,542.62	11,500.00	11,482.81	42.45	40.95	-87.99	122.88	2,231.25	2,895.32	2,837.45	57.87	50.029					
11,650.00	11,591.93	11,536.86	11,516.82	42.60	41.05	-87.78	108.67	2,231.39	2,895.76	2,837.73	58.04	49.894					
11,700.00	11,640.32	11,577.11	11,552.82	42.74	41.14	-87.57	90.69	2,231.56	2,896.22	2,838.02	58.20	49.761					
11,750.00	11,687.45	11,616.93	11,587.10	42.87	41.24	-87.37	70.46	2,231.76	2,896.68	2,838.32	58.36	49.635					
11,800.00	11,732.94	11,656.37	11,619.60	42.99	41.32	-87.19	48.13	2,231.98	2,897.13	2,838.62	58.51	49.517					
11,850.00	11,776.45	11,700.00	11,653.66	43.10	41.40	-87.02	20.88	2,232.25	2,897.56	2,838.90	58.66	49.396					
11,900.00	11,817.65	11,734.32	11,678.94	43.20	41.47	-86.88	-2.32	2,232.47	2,897.96	2,839.17	58.79	49.297					
11,950.00	11,856.23	11,772.91	11,705.65	43.28	41.53	-86.76	-30.17	2,232.75	2,898.32	2,839.41	58.92	49.193					
12,000.00	11,891.90	11,811.31	11,730.30	43.36	41.59	-86.65	-59.60	2,233.03	2,898.64	2,839.60	59.05	49.090					
12,050.00	11,924.37	11,850.00	11,753.09	43.42	41.67	-86.57	-90.85	2,233.34	2,898.91	2,839.74	59.18	48.988					
12,100.00	11,953.41	11,887.68	11,773.21	43.47	41.74	-86.51	-122.70	2,233.65	2,899.13	2,839.82	59.30	48.886					
12,150.00	11,978.80	11,925.73	11,791.36	43.52	41.82	-86.46	-156.14	2,233.98	2,899.28	2,839.85	59.43	48.781					
12,200.00	12,000.33	11,963.73	11,807.23	43.56	41.91	-86.44	-190.66	2,234.32	2,899.37	2,839.81	59.57	48.674					
12,250.00	12,017.85	12,000.00	11,820.21	43.61	41.99	-86.44	-224.51	2,234.65	2,899.40	2,839.70	59.70	48.567					
12,300.00	12,031.23	12,039.76	11,831.95	43.66	42.09	-86.47	-262.49	2,235.02	2,899.37	2,839.52	59.84	48.449					
12,350.00	12,040.35	12,077.85	11,840.70	43.72	42.18	-86.52	-299.55	2,235.39	2,899.27	2,839.28	59.99	48.330					
12,400.00	12,045.16	12,116.04	11,846.98	43.79	42.27	-86.58	-337.22	2,235.75	2,899.11	2,838.97	60.14	48.207					
12,422.75	12,045.91	12,133.47	11,849.01	43.83	42.32	-86.62	-354.52	2,235.92	2,899.02	2,838.82	60.21	48.150					
12,475.37	12,046.59	12,173.99	11,851.69	43.94	42.42	-86.66	-394.94	2,236.32	2,898.91	2,838.54	60.38	48.014					
12,500.00	12,046.91	12,196.51	11,852.14	44.00	42.48	-86.67	-417.46	2,236.54	2,898.93	2,838.47	60.46	47.946					
12,600.00	12,048.22	12,296.51	11,853.97	44.29	42.77	-86.68	-517.44	2,237.52	2,899.00	2,838.11	60.89	47.607					
12,700.00	12,049.52	12,396.51	11,855.80	44.65	43.13	-86.69	-617.41	2,238.50	2,899.08	2,837.66	61.41	47.207					
12,800.00	12,050.82	12,496.50	11,857.63	45.08	43.55	-86.70	-717.39	2,239.48	2,899.15	2,837.14	62.01	46.751					
12,900.00	12,052.12	12,596.50	11,859.46	45.57	44.02	-86.71	-817.37	2,240.46	2,899.22	2,836.53	62.69	46.243					
13,000.00	12,053.42	12,696.50	11,861.29	46.12	44.55	-86.72	-917.34	2,241.44	2,899.30	2,835.84	63.46	45.690					
13,100.00	12,054.72	12,796.50	11,863.13	46.72	45.13	-86.73	-1,017.32	2,242.42	2,899.37	2,835.08	64.29	45.097					
13,200.00	12,056.02	12,896.50	11,864.96	47.37	45.77	-86.74	-1,117.30	2,243.40	2,899.44	2,834.24	65.20	44.468					
13,300.00	12,057.32	12,996.50	11,866.79	48.07	46.45	-86.75	-1,217.27	2,244.38	2,899.52	2,833.33	66.18	43.811					
13,400.00	12,058.62	13,096.50	11,868.62	48.81	47.18	-86.76	-1,317.25	2,245.36	2,899.59	2,832.36	67.23	43.131					
13,500.00	12,059.92	13,196.49	11,870.45	49.60	47.96	-86.77	-1,417.23	2,246.33	2,899.66	2,831.33	68.34	42.431					
13,600.00	12,061.22	13,296.49	11,872.28	50.43	48.79	-86.78	-1,517.21	2,247.31	2,899.74	2,830.23	69.51	41.718					
13,700.00	12,062.52	13,396.49	11,874.11	51.30	49.65	-86.79	-1,617.18	2,248.29	2,899.81	2,829.08	70.74	40.995					
13,800.00	12,063.82	13,496.49	11,875.94	52.21	50.55	-86.80	-1,717.16	2,249.27	2,899.89	2,827.87	72.02	40.266					
13,900.00	12,065.12	13,596.49	11,877.77	53.16	51.49	-86.81	-1,817.14	2,250.25	2,899.96	2,826.61	73.35	39.534					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,000.00	12,066.42	13,696.49	11,879.60	54.13	52.47	-86.83	-1,917.11	2,251.23	2,900.04	2,825.30	74.74	38.803		
14,100.00	12,067.73	13,796.49	11,881.43	55.14	53.47	-86.84	-2,017.09	2,252.21	2,900.11	2,823.94	76.17	38.075		
14,200.00	12,069.03	13,896.48	11,883.26	56.18	54.51	-86.85	-2,117.07	2,253.19	2,900.19	2,822.54	77.64	37.353		
14,300.00	12,070.33	13,996.48	11,885.09	57.25	55.58	-86.86	-2,217.04	2,254.17	2,900.26	2,821.10	79.16	36.639		
14,400.00	12,071.63	14,096.48	11,886.92	58.35	56.68	-86.87	-2,317.02	2,255.15	2,900.34	2,819.62	80.71	35.933		
14,500.00	12,072.93	14,196.48	11,888.75	59.47	57.80	-86.88	-2,417.00	2,256.13	2,900.41	2,818.10	82.31	35.239		
14,600.00	12,074.23	14,296.48	11,890.58	60.61	58.95	-86.89	-2,516.98	2,257.11	2,900.49	2,816.55	83.93	34.557		
14,700.00	12,075.53	14,396.48	11,892.41	61.78	60.13	-86.90	-2,616.95	2,258.09	2,900.56	2,814.97	85.59	33.888		
14,800.00	12,076.83	14,496.48	11,894.24	62.97	61.32	-86.91	-2,716.93	2,259.07	2,900.64	2,813.35	87.28	33.232		
14,900.00	12,078.13	14,596.47	11,896.07	64.18	62.54	-86.92	-2,816.91	2,260.05	2,900.71	2,811.71	89.00	32.591		
15,000.00	12,079.43	14,696.47	11,897.90	65.41	63.77	-86.93	-2,916.88	2,261.03	2,900.79	2,810.04	90.75	31.964		
15,100.00	12,080.73	14,796.47	11,899.73	66.66	65.02	-86.94	-3,016.86	2,262.01	2,900.86	2,808.34	92.52	31.353		
15,200.00	12,082.03	14,896.47	11,901.56	67.93	66.29	-86.95	-3,116.84	2,262.99	2,900.94	2,806.62	94.32	30.756		
15,300.00	12,083.33	14,996.47	11,903.39	69.21	67.58	-86.96	-3,216.81	2,263.96	2,901.01	2,804.87	96.14	30.174		
15,400.00	12,084.63	15,096.47	11,905.22	70.50	68.88	-86.97	-3,316.79	2,264.94	2,901.09	2,803.10	97.99	29.607		
15,500.00	12,085.94	15,196.47	11,907.05	71.82	70.20	-86.98	-3,416.77	2,265.92	2,901.17	2,801.32	99.85	29.056		
15,600.00	12,087.24	15,296.46	11,908.88	73.14	71.53	-86.99	-3,516.75	2,266.90	2,901.24	2,799.51	101.73	28.519		
15,700.00	12,088.54	15,396.46	11,910.71	74.48	72.88	-87.00	-3,616.72	2,267.88	2,901.32	2,797.69	103.63	27.996		
15,800.00	12,089.84	15,496.46	11,912.54	75.83	74.24	-87.02	-3,716.70	2,268.86	2,901.39	2,795.84	105.55	27.488		
15,900.00	12,091.14	15,596.46	11,914.37	77.19	75.61	-87.03	-3,816.68	2,269.84	2,901.47	2,793.98	107.49	26.994		
16,000.00	12,092.44	15,696.46	11,916.20	78.57	76.99	-87.04	-3,916.65	2,270.82	2,901.55	2,792.11	109.44	26.513		
16,100.00	12,093.74	15,796.46	11,918.03	79.95	78.38	-87.05	-4,016.63	2,271.80	2,901.62	2,790.22	111.40	26.046		
16,200.00	12,095.04	15,896.46	11,919.86	81.34	79.78	-87.06	-4,116.61	2,272.78	2,901.70	2,788.32	113.38	25.592		
16,300.00	12,096.34	15,996.45	11,921.70	82.75	81.19	-87.07	-4,216.58	2,273.76	2,901.78	2,786.40	115.38	25.151		
16,400.00	12,097.64	16,096.45	11,923.53	84.16	82.61	-87.08	-4,316.56	2,274.74	2,901.85	2,784.47	117.38	24.722		
16,500.00	12,098.94	16,196.45	11,925.36	85.58	84.03	-87.09	-4,416.54	2,275.72	2,901.93	2,782.53	119.40	24.304		
16,600.00	12,100.24	16,296.45	11,927.19	87.01	85.47	-87.10	-4,516.52	2,276.70	2,902.01	2,780.58	121.43	23.899		
16,700.00	12,101.54	16,396.45	11,929.02	88.45	86.91	-87.11	-4,616.49	2,277.68	2,902.09	2,778.62	123.47	23.505		
16,800.00	12,102.84	16,496.45	11,930.85	89.89	88.36	-87.12	-4,716.47	2,278.66	2,902.16	2,776.64	125.52	23.121		
16,900.00	12,104.15	16,596.45	11,932.68	91.34	89.82	-87.13	-4,816.45	2,279.64	2,902.24	2,774.66	127.58	22.749		
17,000.00	12,105.45	16,696.44	11,934.51	92.80	91.29	-87.14	-4,916.42	2,280.61	2,902.32	2,772.67	129.65	22.386		
17,100.00	12,106.75	16,796.44	11,936.34	94.26	92.76	-87.15	-5,016.40	2,281.59	2,902.40	2,770.67	131.73	22.033		
17,200.00	12,108.05	16,896.44	11,938.17	95.74	94.23	-87.16	-5,116.38	2,282.57	2,902.47	2,768.66	133.81	21.690		
17,300.00	12,109.35	16,996.44	11,940.00	97.21	95.72	-87.17	-5,216.35	2,283.55	2,902.55	2,766.64	135.91	21.356		
17,400.00	12,110.65	17,096.44	11,941.83	98.69	97.20	-87.18	-5,316.33	2,284.53	2,902.63	2,764.62	138.01	21.032		
17,500.00	12,111.95	17,196.44	11,943.66	100.18	98.70	-87.19	-5,416.31	2,285.51	2,902.71	2,762.58	140.12	20.715		
17,600.00	12,113.25	17,296.43	11,945.49	101.67	100.19	-87.21	-5,516.29	2,286.49	2,902.78	2,760.54	142.24	20.408		
17,700.00	12,114.55	17,396.43	11,947.32	103.17	101.70	-87.22	-5,616.26	2,287.47	2,902.86	2,758.50	144.36	20.108		
17,800.00	12,115.85	17,496.43	11,949.15	104.67	103.21	-87.23	-5,716.24	2,288.45	2,902.94	2,756.45	146.50	19.816		
17,900.00	12,117.15	17,596.43	11,950.98	106.18	104.72	-87.24	-5,816.22	2,289.43	2,903.02	2,754.39	148.63	19.532		
18,000.00	12,118.45	17,696.43	11,952.81	107.69	106.23	-87.25	-5,916.19	2,290.41	2,903.10	2,752.32	150.77	19.255		
18,100.00	12,119.75	17,796.43	11,954.64	109.20	107.75	-87.26	-6,016.17	2,291.39	2,903.18	2,750.25	152.92	18.985		
18,200.00	12,121.05	17,896.43	11,956.47	110.72	109.28	-87.27	-6,116.15	2,292.37	2,903.26	2,748.18	155.08	18.721		
18,300.00	12,122.36	17,996.42	11,958.30	112.25	110.81	-87.28	-6,216.12	2,293.35	2,903.33	2,746.10	157.24	18.465		
18,400.00	12,123.66	18,096.42	11,960.13	113.77	112.34	-87.29	-6,316.10	2,294.33	2,903.41	2,744.01	159.40	18.215		
18,500.00	12,124.96	18,196.42	11,961.96	115.30	113.87	-87.30	-6,416.08	2,295.31	2,903.49	2,741.92	161.57	17.971		
18,600.00	12,126.26	18,296.42	11,963.79	116.83	115.41	-87.31	-6,516.06	2,296.29	2,903.57	2,739.83	163.74	17.732		
18,700.00	12,127.56	18,396.42	11,965.62	118.37	116.95	-87.32	-6,616.03	2,297.27	2,903.65	2,737.73	165.92	17.500		
18,800.00	12,128.86	18,496.42	11,967.45	119.91	118.49	-87.33	-6,716.01	2,298.24	2,903.73	2,735.63	168.10	17.273		
18,900.00	12,130.16	18,596.42	11,969.28	121.45	120.04	-87.34	-6,815.99	2,299.22	2,903.81	2,733.52	170.29	17.052		
19,000.00	12,131.46	18,696.41	11,971.11	123.00	121.59	-87.35	-6,915.96	2,300.20	2,903.89	2,731.41	172.48	16.836		
19,100.00	12,132.76	18,796.41	11,972.94	124.54	123.14	-87.36	-7,015.94	2,301.18	2,903.97	2,729.29	174.68	16.625		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,200.00	12,134.06	18,896.41	11,974.77	126.10	124.70	-87.37	-7,115.92	2,302.16	2,904.05	2,727.17	176.87	16.419		
19,300.00	12,135.36	18,996.41	11,976.60	127.65	126.26	-87.38	-7,215.89	2,303.14	2,904.13	2,725.05	179.07	16.217		
19,400.00	12,136.66	19,096.41	11,978.43	129.20	127.82	-87.39	-7,315.87	2,304.12	2,904.21	2,722.93	181.28	16.021		
19,500.00	12,137.96	19,196.41	11,980.27	130.76	129.38	-87.41	-7,415.85	2,305.10	2,904.29	2,720.80	183.49	15.828		
19,600.00	12,139.26	19,296.41	11,982.10	132.32	130.94	-87.42	-7,515.83	2,306.08	2,904.37	2,718.67	185.70	15.640		
19,700.00	12,140.57	19,396.40	11,983.93	133.88	132.51	-87.43	-7,615.80	2,307.06	2,904.45	2,716.53	187.91	15.456		
19,800.00	12,141.87	19,496.40	11,985.76	135.45	134.08	-87.44	-7,715.78	2,308.04	2,904.53	2,714.40	190.13	15.276		
19,900.00	12,143.17	19,596.40	11,987.59	137.02	135.65	-87.45	-7,815.76	2,309.02	2,904.61	2,712.26	192.35	15.101		
20,000.00	12,144.47	19,696.40	11,989.42	138.58	137.22	-87.46	-7,915.73	2,310.00	2,904.69	2,710.11	194.57	14.928		
20,100.00	12,145.77	19,796.40	11,991.25	140.15	138.79	-87.47	-8,015.71	2,310.98	2,904.77	2,707.97	196.80	14.760		
20,200.00	12,147.07	19,896.40	11,993.08	141.73	140.37	-87.48	-8,115.69	2,311.96	2,904.85	2,705.82	199.03	14.595		
20,300.00	12,148.37	19,996.40	11,994.91	143.30	141.95	-87.49	-8,215.66	2,312.94	2,904.93	2,703.67	201.26	14.434		
20,400.00	12,149.67	20,096.39	11,996.74	144.88	143.53	-87.50	-8,315.64	2,313.92	2,905.01	2,701.52	203.49	14.276		
20,500.00	12,150.97	20,196.39	11,998.57	146.45	145.11	-87.51	-8,415.62	2,314.89	2,905.09	2,699.36	205.73	14.121		
20,600.00	12,152.27	20,296.39	12,000.40	148.03	146.69	-87.52	-8,515.60	2,315.87	2,905.17	2,697.21	207.96	13.970		
20,700.00	12,153.57	20,396.39	12,002.23	149.61	148.28	-87.53	-8,615.57	2,316.85	2,905.25	2,695.05	210.20	13.821		
20,800.00	12,154.87	20,496.39	12,004.06	151.20	149.86	-87.54	-8,715.55	2,317.83	2,905.33	2,692.89	212.45	13.676		
20,900.00	12,156.17	20,596.39	12,005.89	152.78	151.45	-87.55	-8,815.53	2,318.81	2,905.42	2,690.73	214.69	13.533		
21,000.00	12,157.47	20,696.39	12,007.72	154.37	153.04	-87.56	-8,915.50	2,319.79	2,905.50	2,688.56	216.94	13.393		
21,100.00	12,158.77	20,796.38	12,009.55	155.95	154.63	-87.57	-9,015.48	2,320.77	2,905.58	2,686.40	219.18	13.256		
21,200.00	12,160.08	20,896.38	12,011.38	157.54	156.22	-87.58	-9,115.46	2,321.75	2,905.66	2,684.23	221.43	13.122		
21,300.00	12,161.38	20,996.38	12,013.21	159.13	157.81	-87.59	-9,215.43	2,322.73	2,905.74	2,682.06	223.69	12.990		
21,400.00	12,162.68	21,096.38	12,015.04	160.72	159.41	-87.61	-9,315.41	2,323.71	2,905.82	2,679.89	225.94	12.861		
21,500.00	12,163.98	21,196.38	12,016.87	162.31	161.00	-87.62	-9,415.39	2,324.69	2,905.91	2,677.71	228.19	12.734		
21,600.00	12,165.28	21,296.38	12,018.70	163.90	162.60	-87.63	-9,515.37	2,325.67	2,905.99	2,675.54	230.45	12.610		
21,700.00	12,166.58	21,396.38	12,020.53	165.50	164.19	-87.64	-9,615.34	2,326.65	2,906.07	2,673.36	232.71	12.488		
21,800.00	12,167.88	21,496.37	12,022.36	167.09	165.79	-87.65	-9,715.32	2,327.63	2,906.15	2,671.18	234.97	12.368		
21,900.00	12,169.18	21,596.37	12,024.19	168.69	167.39	-87.66	-9,815.30	2,328.61	2,906.23	2,669.00	237.23	12.251		
22,000.00	12,170.48	21,696.37	12,026.02	170.29	168.99	-87.67	-9,915.27	2,329.59	2,906.32	2,666.82	239.49	12.135		
22,100.00	12,171.78	21,796.37	12,027.85	171.89	170.59	-87.68	-10,015.25	2,330.57	2,906.40	2,664.64	241.76	12.022		
22,200.00	12,173.08	21,896.37	12,029.68	173.49	172.20	-87.69	-10,115.23	2,331.55	2,906.48	2,662.46	244.02	11.911		
22,300.00	12,174.38	21,996.37	12,031.51	175.09	173.80	-87.70	-10,215.20	2,332.52	2,906.56	2,660.28	246.29	11.801		
22,400.00	12,175.68	22,096.37	12,033.34	176.69	175.40	-87.71	-10,315.18	2,333.50	2,906.65	2,658.09	248.56	11.694		
22,500.00	12,176.98	22,196.36	12,035.17	178.29	177.01	-87.72	-10,415.16	2,334.48	2,906.73	2,655.90	250.83	11.589		
22,600.00	12,178.29	22,296.36	12,037.00	179.89	178.61	-87.73	-10,515.14	2,335.46	2,906.81	2,653.71	253.10	11.485		
22,700.00	12,179.59	22,396.36	12,038.84	181.50	180.22	-87.74	-10,615.11	2,336.44	2,906.90	2,651.53	255.37	11.383		
22,800.00	12,180.89	22,490.07	12,040.55	183.10	181.73	-87.75	-10,708.80	2,337.36	2,906.99	2,649.33	257.56	11.287		
22,900.00	12,182.19	22,490.07	12,040.55	184.71	181.73	-87.75	-10,708.80	2,337.36	2,909.01	2,650.74	258.26	11.264 SF		
23,000.00	12,183.49	22,490.07	12,040.55	186.31	181.73	-87.75	-10,708.80	2,337.36	2,914.46	2,655.79	258.67	11.267		
23,100.00	12,184.79	22,490.07	12,040.55	187.92	181.73	-87.75	-10,708.80	2,337.36	2,923.32	2,664.56	258.76	11.297		
23,200.00	12,186.09	22,490.07	12,040.55	189.53	181.73	-87.75	-10,708.80	2,337.36	2,935.56	2,677.01	258.56	11.354		
23,300.00	12,187.39	22,490.07	12,040.55	191.14	181.73	-87.75	-10,708.80	2,337.36	2,951.15	2,693.08	258.07	11.435		
23,400.00	12,188.69	22,490.07	12,040.55	192.75	181.73	-87.75	-10,708.80	2,337.36	2,970.02	2,712.72	257.30	11.543		
23,500.00	12,189.99	22,490.07	12,040.55	194.36	181.73	-87.75	-10,708.80	2,337.36	2,992.12	2,735.85	256.27	11.676		
23,600.00	12,191.29	22,490.07	12,040.55	195.97	181.73	-87.75	-10,708.80	2,337.36	3,017.37	2,762.38	254.99	11.833		
23,700.00	12,192.59	22,490.07	12,040.55	197.58	181.73	-87.75	-10,708.80	2,337.36	3,045.69	2,792.21	253.48	12.015		
23,800.00	12,193.89	22,490.07	12,040.55	199.20	181.73	-87.75	-10,708.80	2,337.36	3,077.01	2,825.25	251.76	12.222		
23,900.00	12,195.19	22,490.07	12,040.55	200.81	181.73	-87.75	-10,708.80	2,337.36	3,111.23	2,861.37	249.85	12.452		
24,000.00	12,196.50	22,490.07	12,040.55	202.42	181.73	-87.75	-10,708.80	2,337.36	3,148.25	2,900.47	247.78	12.706		
24,100.00	12,197.80	22,490.07	12,040.55	204.04	181.73	-87.75	-10,708.80	2,337.36	3,187.98	2,942.42	245.56	12.983		
24,110.32	12,197.93	22,490.07	12,040.55	204.20	181.73	-87.75	-10,708.80	2,337.36	3,192.23	2,946.91	245.32	13.013		
24,111.10	12,197.94	22,490.07	12,040.55	204.22	181.73	-87.75	-10,708.80	2,337.36	3,192.55	2,947.01	245.54	13.002		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													LHS Wildcat Fed Com - LHS Wildcat 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		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
0.00	0.00	0.00	0.00	0.00	0.00	90.93	-39.34	2,423.88	2,424.34								
100.00	100.00	74.20	74.20	0.14	0.11	90.93	-39.34	2,423.88	2,424.20	2,424.02	0.18	N/A					
200.00	200.00	174.20	174.20	0.50	0.41	90.93	-39.34	2,423.88	2,424.20	2,423.55	0.65	3,757.697					
300.00	300.00	274.20	274.20	0.86	0.77	90.93	-39.34	2,423.88	2,424.20	2,423.05	1.15	2,106.862					
400.00	400.00	374.20	374.20	1.22	1.12	90.93	-39.34	2,423.88	2,424.20	2,422.54	1.66	1,462.999					
500.00	500.00	474.20	474.20	1.58	1.48	90.93	-39.34	2,423.88	2,424.20	2,422.04	2.16	1,120.416					
600.00	600.00	574.20	574.20	1.93	1.84	90.93	-39.34	2,423.88	2,424.20	2,421.53	2.67	907.794					
700.00	700.00	674.20	674.20	2.29	2.20	90.93	-39.34	2,423.88	2,424.20	2,421.02	3.18	762.985					
800.00	800.00	774.20	774.20	2.65	2.56	90.93	-39.34	2,423.88	2,424.20	2,420.52	3.68	658.013					
900.00	900.00	874.20	874.20	3.01	2.92	90.93	-39.34	2,423.88	2,424.20	2,420.01	4.19	578.429					
1,000.00	1,000.00	974.20	974.20	3.37	3.28	90.93	-39.34	2,423.88	2,424.20	2,419.50	4.70	516.017					
1,100.00	1,100.00	1,074.20	1,074.20	3.73	3.63	90.93	-39.34	2,423.88	2,424.20	2,418.99	5.20	465.761					
1,200.00	1,200.00	1,174.20	1,174.20	4.08	3.99	90.93	-39.34	2,423.88	2,424.20	2,418.49	5.71	424.424					
1,300.00	1,300.00	1,274.20	1,274.20	4.44	4.35	90.93	-39.34	2,423.88	2,424.20	2,417.98	6.22	389.827					
1,400.00	1,400.00	1,374.20	1,374.20	4.80	4.71	90.93	-39.34	2,423.88	2,424.20	2,417.47	6.73	360.444					
1,500.00	1,500.00	1,474.20	1,474.20	5.16	5.07	90.93	-39.34	2,423.88	2,424.20	2,416.97	7.23	335.180					
1,600.00	1,600.00	1,574.20	1,574.20	5.52	5.43	90.93	-39.34	2,423.88	2,424.20	2,416.46	7.74	313.226					
1,700.00	1,700.00	1,674.20	1,674.20	5.88	5.78	90.93	-39.34	2,423.88	2,424.20	2,415.95	8.25	293.971					
1,800.00	1,800.00	1,774.20	1,774.20	6.24	6.14	90.93	-39.34	2,423.88	2,424.20	2,415.45	8.75	276.946					
1,900.00	1,900.00	1,874.20	1,874.20	6.59	6.50	90.93	-39.34	2,423.88	2,424.20	2,414.94	9.26	261.785					
2,000.00	2,000.00	1,974.20	1,974.20	6.95	6.86	90.93	-39.34	2,423.88	2,424.20	2,414.43	9.77	248.197					
2,100.00	2,100.00	2,074.20	2,074.20	7.31	7.22	90.93	-39.34	2,423.88	2,424.20	2,413.93	10.27	235.951					
2,200.00	2,200.00	2,174.20	2,174.20	7.67	7.58	90.93	-39.34	2,423.88	2,424.20	2,413.42	10.78	224.856					
2,300.00	2,300.00	2,274.20	2,274.20	8.03	7.94	90.93	-39.34	2,423.88	2,424.20	2,412.91	11.29	214.758					
2,400.00	2,400.00	2,374.20	2,374.20	8.39	8.29	90.93	-39.34	2,423.88	2,424.20	2,412.40	11.80	205.528					
2,500.00	2,500.00	2,474.20	2,474.20	8.74	8.65	90.93	-39.34	2,423.88	2,424.20	2,411.90	12.30	197.058					
2,600.00	2,600.00	2,574.20	2,574.20	9.10	9.01	90.93	-39.34	2,423.88	2,424.20	2,411.39	12.81	189.259					
2,700.00	2,700.00	2,674.20	2,674.20	9.46	9.37	90.93	-39.34	2,423.88	2,424.20	2,410.88	13.32	182.054					
2,800.00	2,800.00	2,774.20	2,774.20	9.82	9.73	90.93	-39.34	2,423.88	2,424.20	2,410.38	13.82	175.377					
2,900.00	2,900.00	2,874.20	2,874.20	10.18	10.09	90.93	-39.34	2,423.88	2,424.20	2,409.87	14.33	169.172					
3,000.00	3,000.00	2,974.20	2,974.20	10.54	10.44	90.93	-39.34	2,423.88	2,424.20	2,409.36	14.84	163.392					
3,100.00	3,100.00	3,074.20	3,074.20	10.90	10.80	90.93	-39.34	2,423.88	2,424.20	2,408.86	15.34	157.994					
3,200.00	3,200.00	3,174.20	3,174.20	11.25	11.16	90.93	-39.34	2,423.88	2,424.20	2,408.35	15.85	152.941					
3,300.00	3,300.00	3,274.20	3,274.20	11.61	11.52	90.93	-39.34	2,423.88	2,424.20	2,407.84	16.36	148.201					
3,400.00	3,400.00	3,374.20	3,374.20	11.97	11.88	90.93	-39.34	2,423.88	2,424.20	2,407.33	16.86	143.746					
3,500.00	3,500.00	3,474.20	3,474.20	12.33	12.24	90.93	-39.34	2,423.88	2,424.20	2,406.83	17.37	139.551					
3,600.00	3,600.00	3,574.20	3,574.20	12.69	12.60	90.93	-39.34	2,423.88	2,424.20	2,406.32	17.88	135.594					
3,700.00	3,700.00	3,674.20	3,674.20	13.05	12.95	90.93	-39.34	2,423.88	2,424.20	2,405.81	18.39	131.855					
3,800.00	3,800.00	3,774.20	3,774.20	13.41	13.31	90.93	-39.34	2,423.88	2,424.20	2,405.31	18.89	128.317					
3,900.00	3,900.00	3,874.20	3,874.20	13.76	13.67	90.93	-39.34	2,423.88	2,424.20	2,404.80	19.40	124.963					
4,000.00	4,000.00	3,974.20	3,974.20	14.12	14.03	90.93	-39.34	2,423.88	2,424.20	2,404.29	19.91	121.781					
4,100.00	4,100.00	4,074.20	4,074.20	14.48	14.39	90.93	-39.34	2,423.88	2,424.20	2,403.79	20.41	118.757					
4,200.00	4,200.00	4,174.20	4,174.20	14.84	14.75	90.93	-39.34	2,423.88	2,424.20	2,403.28	20.92	115.879					
4,300.00	4,300.00	4,274.20	4,274.20	15.20	15.10	90.93	-39.34	2,423.88	2,424.20	2,402.77	21.43	113.137					
4,400.00	4,400.00	4,374.20	4,374.20	15.56	15.46	90.93	-39.34	2,423.88	2,424.20	2,402.27	21.93	110.522					
4,500.00	4,500.00	4,474.20	4,474.20	15.91	15.82	90.93	-39.34	2,423.88	2,424.20	2,401.76	22.44	108.026					
4,502.70	4,502.70	4,476.90	4,476.90	15.92	15.83	90.93	-39.34	2,423.88	2,424.20	2,401.74	22.45	107.960 CC					
4,550.00	4,550.00	4,517.92	4,517.92	16.09	15.98	90.93	-39.31	2,423.90	2,424.23	2,401.55	22.68	106.897 ES					
4,600.00	4,600.00	4,554.95	4,554.95	16.27	16.11	164.13	-39.01	2,424.10	2,424.81	2,401.91	22.90	105.907					
4,700.00	4,699.96	4,628.93	4,628.90	16.62	16.37	164.10	-37.55	2,425.11	2,428.65	2,405.33	23.32	104.129					
4,800.00	4,799.82	4,700.00	4,699.91	16.96	16.63	164.03	-35.02	2,426.84	2,436.08	2,412.34	23.74	102.612					
4,900.00	4,899.51	4,776.06	4,775.82	17.31	16.90	163.93	-31.11	2,429.52	2,447.08	2,422.91	24.17	101.251					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,998.96	4,848.94	4,848.46	17.66	17.16	163.80	-26.20	2,432.88	2,461.62	2,437.04	24.58	100.129		
5,100.00	5,098.10	4,928.94	4,928.05	18.02	17.44	163.64	-19.58	2,437.41	2,479.65	2,454.63	25.02	99.112		
5,200.00	5,196.87	5,026.67	5,025.25	18.38	17.79	163.45	-11.16	2,443.18	2,500.41	2,474.90	25.50	98.037		
5,216.82	5,213.44	5,043.06	5,041.55	18.44	17.85	163.42	-9.75	2,444.15	2,504.14	2,478.55	25.59	97.868		
5,300.00	5,295.35	5,124.07	5,122.11	18.74	18.14	163.35	-2.77	2,448.93	2,522.77	2,496.78	25.99	97.066		
5,400.00	5,393.83	5,221.46	5,218.97	19.11	18.49	163.26	5.63	2,454.68	2,545.18	2,518.70	26.48	96.129		
5,500.00	5,492.31	5,318.85	5,315.83	19.48	18.84	163.18	14.02	2,460.43	2,567.59	2,540.62	26.96	95.220		
5,600.00	5,590.79	5,416.25	5,412.69	19.85	19.19	163.10	22.42	2,466.18	2,590.00	2,562.55	27.45	94.338		
5,700.00	5,689.27	5,513.64	5,509.55	20.23	19.55	163.02	30.81	2,471.93	2,612.42	2,584.47	27.95	93.482		
5,800.00	5,787.75	5,611.03	5,606.41	20.61	19.90	162.94	39.20	2,477.68	2,634.84	2,606.41	28.44	92.651		
5,900.00	5,886.23	5,708.42	5,703.27	20.99	20.26	162.87	47.60	2,483.43	2,657.27	2,628.34	28.93	91.844		
6,000.00	5,984.71	5,805.81	5,800.13	21.38	20.61	162.79	55.99	2,489.18	2,679.71	2,650.28	29.43	91.060		
6,100.00	6,083.19	5,903.21	5,896.99	21.77	20.97	162.72	64.39	2,494.93	2,702.14	2,672.22	29.92	90.299		
6,200.00	6,181.67	6,000.60	5,993.84	22.16	21.33	162.65	72.78	2,500.68	2,724.58	2,694.16	30.42	89.559		
6,300.00	6,280.15	6,097.99	6,090.70	22.55	21.69	162.58	81.17	2,506.43	2,747.03	2,716.11	30.92	88.839		
6,400.00	6,378.63	6,195.38	6,187.56	22.95	22.05	162.51	89.57	2,512.18	2,769.48	2,738.06	31.42	88.140		
6,500.00	6,477.11	6,292.77	6,284.42	23.34	22.41	162.44	97.96	2,517.93	2,791.93	2,760.01	31.92	87.460		
6,600.00	6,575.59	6,390.16	6,381.28	23.75	22.77	162.37	106.35	2,523.68	2,814.39	2,781.97	32.42	86.798		
6,700.00	6,674.07	6,487.56	6,478.14	24.15	23.13	162.30	114.75	2,529.43	2,836.85	2,803.92	32.93	86.154		
6,800.00	6,772.56	6,584.95	6,575.00	24.55	23.49	162.24	123.14	2,535.18	2,859.32	2,825.88	33.43	85.528		
6,900.00	6,871.04	6,682.34	6,671.86	24.96	23.86	162.17	131.54	2,540.93	2,881.78	2,847.85	33.94	84.917		
7,000.00	6,969.52	6,779.73	6,768.72	25.36	24.22	162.11	139.93	2,546.68	2,904.26	2,869.81	34.44	84.323		
7,100.00	7,068.00	6,922.30	6,910.64	25.77	24.75	162.04	151.10	2,554.33	2,926.29	2,891.20	35.09	83.385		
7,200.00	7,166.48	7,098.59	7,086.65	26.18	25.39	162.07	159.07	2,559.79	2,945.96	2,910.12	35.83	82.210		
7,300.00	7,264.96	7,251.12	7,239.16	26.59	25.94	162.20	160.66	2,560.88	2,963.13	2,926.64	36.49	81.210		
7,400.00	7,363.44	7,349.60	7,337.64	27.01	26.28	162.30	160.66	2,560.88	2,979.70	2,942.71	36.99	80.553		
7,500.00	7,461.92	7,448.08	7,436.12	27.42	26.63	162.40	160.66	2,560.88	2,996.27	2,958.78	37.49	79.913		
7,600.00	7,560.40	7,546.56	7,534.60	27.84	26.98	162.50	160.66	2,560.88	3,012.85	2,974.86	38.00	79.289		
7,700.00	7,658.88	7,645.04	7,633.08	28.25	27.33	162.60	160.66	2,560.88	3,029.45	2,990.94	38.50	78.682		
7,800.00	7,757.36	7,743.52	7,731.56	28.67	27.68	162.70	160.66	2,560.88	3,046.05	3,007.04	39.01	78.089		
7,900.00	7,855.84	7,842.00	7,830.04	29.09	28.03	162.79	160.66	2,560.88	3,062.66	3,023.14	39.51	77.512		
8,000.00	7,954.32	7,940.48	7,928.52	29.51	28.38	162.89	160.66	2,560.88	3,079.27	3,039.26	40.02	76.948		
8,100.00	8,052.80	8,038.96	8,027.00	29.93	28.73	162.98	160.66	2,560.88	3,095.90	3,055.38	40.52	76.398		
8,200.00	8,151.28	8,137.44	8,125.48	30.36	29.08	163.08	160.66	2,560.88	3,112.53	3,071.50	41.03	75.862		
8,300.00	8,249.76	8,235.92	8,223.96	30.78	29.43	163.17	160.66	2,560.88	3,129.17	3,087.64	41.54	75.338		
8,400.00	8,348.24	8,334.40	8,322.44	31.20	29.78	163.26	160.66	2,560.88	3,145.82	3,103.78	42.04	74.826		
8,500.00	8,446.72	8,432.88	8,420.92	31.63	30.13	163.35	160.66	2,560.88	3,162.48	3,119.93	42.55	74.326		
8,535.38	8,481.56	8,467.73	8,455.76	31.78	30.25	163.38	160.66	2,560.88	3,168.38	3,125.65	42.73	74.152		
8,600.00	8,545.29	8,531.45	8,519.49	32.05	30.48	163.48	160.66	2,560.88	3,178.63	3,135.57	43.06	73.827		
8,700.00	8,644.24	8,630.41	8,618.44	32.46	30.83	163.61	160.66	2,560.88	3,192.46	3,148.90	43.56	73.285		
8,800.00	8,743.54	8,729.71	8,717.74	32.86	31.18	163.72	160.66	2,560.88	3,203.80	3,159.73	44.07	72.701		
8,900.00	8,843.11	8,829.28	8,817.31	33.24	31.54	163.81	160.66	2,560.88	3,212.64	3,168.07	44.57	72.075		
9,000.00	8,942.89	8,929.06	8,917.09	33.61	31.89	163.86	160.66	2,560.88	3,218.98	3,173.90	45.08	71.410		
9,100.00	9,042.81	9,028.98	9,017.01	33.96	32.25	163.90	160.66	2,560.88	3,222.81	3,177.23	45.58	70.707		
9,202.20	9,145.00	9,131.17	9,119.20	34.31	32.61	90.70	160.66	2,560.88	3,224.12	3,178.03	46.09	69.952		
9,300.00	9,242.80	9,228.96	9,217.00	34.64	32.96	90.70	160.66	2,560.88	3,224.12	3,177.54	46.58	69.220		
9,400.00	9,342.80	9,328.96	9,317.00	34.98	33.31	90.70	160.66	2,560.88	3,224.12	3,177.04	47.08	68.487		
9,500.00	9,442.80	9,428.96	9,417.00	35.32	33.67	90.70	160.66	2,560.88	3,224.12	3,176.54	47.58	67.768		
9,600.00	9,542.80	9,528.96	9,517.00	35.65	34.03	90.70	160.66	2,560.88	3,224.12	3,176.05	48.07	67.065		
9,700.00	9,642.80	9,628.96	9,617.00	35.99	34.38	90.70	160.66	2,560.88	3,224.12	3,175.55	48.57	66.376		
9,800.00	9,742.80	9,728.96	9,717.00	36.33	34.74	90.70	160.66	2,560.88	3,224.12	3,175.05	49.07	65.700		
9,900.00	9,842.80	9,828.96	9,817.00	36.67	35.09	90.70	160.66	2,560.88	3,224.12	3,174.55	49.57	65.038		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													LHS Wildcat Fed Com - LHS Wildcat 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		Offset		Semi Major Axis		Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
10,000.00	9,942.80	9,928.96	9,917.00	37.01	35.45	90.70	160.66	2,560.88	3,224.12	3,174.05	50.07	64.389					
10,100.00	10,042.80	10,028.96	10,017.00	37.35	35.81	90.70	160.66	2,560.88	3,224.12	3,173.55	50.57	63.752					
10,200.00	10,142.80	10,128.96	10,117.00	37.69	36.16	90.70	160.66	2,560.88	3,224.12	3,173.05	51.07	63.128					
10,300.00	10,242.80	10,228.96	10,217.00	38.03	36.52	90.70	160.66	2,560.88	3,224.12	3,172.55	51.57	62.516					
10,400.00	10,342.80	10,328.96	10,317.00	38.37	36.88	90.70	160.66	2,560.88	3,224.12	3,172.05	52.07	61.915					
10,500.00	10,442.80	10,428.96	10,417.00	38.71	37.23	90.70	160.66	2,560.88	3,224.12	3,171.55	52.57	61.326					
10,600.00	10,542.80	10,528.96	10,517.00	39.05	37.59	90.70	160.66	2,560.88	3,224.12	3,171.05	53.07	60.748					
10,700.00	10,642.80	10,628.96	10,617.00	39.39	37.94	90.70	160.66	2,560.88	3,224.12	3,170.55	53.57	60.180					
10,800.00	10,742.80	10,728.96	10,717.00	39.73	38.30	90.70	160.66	2,560.88	3,224.12	3,170.04	54.08	59.623					
10,900.00	10,842.80	10,828.96	10,817.00	40.07	38.66	90.70	160.66	2,560.88	3,224.12	3,169.54	54.58	59.075					
11,000.00	10,942.80	10,928.96	10,917.00	40.42	39.01	90.70	160.66	2,560.88	3,224.12	3,169.04	55.08	58.538					
11,100.00	11,042.80	11,028.96	11,017.00	40.76	39.37	90.70	160.66	2,560.88	3,224.12	3,168.54	55.58	58.010					
11,200.00	11,142.80	11,128.96	11,117.00	41.10	39.73	90.70	160.66	2,560.88	3,224.12	3,168.04	56.08	57.492					
11,300.00	11,242.80	11,228.96	11,217.00	41.45	40.08	90.70	160.66	2,560.88	3,224.12	3,167.54	56.58	56.982					
11,400.00	11,342.80	11,328.96	11,317.00	41.79	40.44	90.70	160.66	2,560.88	3,224.12	3,167.04	57.08	56.482					
11,500.00	11,442.80	11,428.96	11,417.00	42.13	40.80	90.70	160.66	2,560.88	3,224.12	3,166.54	57.58	55.990					
11,530.20	11,473.00	11,459.17	11,447.20	42.24	40.91	90.70	160.66	2,560.88	3,224.12	3,166.38	57.74	55.843					
11,550.00	11,492.79	11,478.96	11,466.99	42.30	40.98	-88.81	160.66	2,560.88	3,224.11	3,166.28	57.83	55.749					
11,600.00	11,542.62	11,525.56	11,513.58	42.45	41.13	-88.86	160.00	2,560.89	3,224.05	3,166.00	58.05	55.536					
11,650.00	11,591.93	11,570.29	11,558.13	42.60	41.27	-88.93	156.10	2,560.92	3,223.98	3,165.72	58.26	55.340					
11,700.00	11,640.32	11,615.28	11,602.50	42.74	41.41	-89.01	148.69	2,561.00	3,223.91	3,165.45	58.45	55.153					
11,750.00	11,687.45	11,660.57	11,646.43	42.87	41.54	-89.09	137.74	2,561.10	3,223.84	3,165.20	58.64	54.974					
11,800.00	11,732.94	11,706.17	11,689.66	42.99	41.66	-89.18	123.25	2,561.25	3,223.78	3,164.96	58.82	54.804					
11,850.00	11,776.45	11,752.14	11,731.92	43.10	41.78	-89.28	105.20	2,561.42	3,223.73	3,164.73	59.00	54.642					
11,900.00	11,817.65	11,800.00	11,774.24	43.20	41.90	-89.38	82.88	2,561.64	3,223.68	3,164.51	59.17	54.485					
11,950.00	11,856.23	11,845.28	11,812.43	43.28	42.00	-89.49	58.58	2,561.88	3,223.65	3,164.32	59.33	54.339					
12,000.00	11,891.90	11,892.53	11,850.11	43.36	42.09	-89.60	30.10	2,562.16	3,223.63	3,164.14	59.48	54.194					
12,043.21	11,920.16	11,933.75	11,880.96	43.41	42.17	-89.70	2.78	2,562.43	3,223.62	3,164.00	59.62	54.072					
12,050.00	11,924.37	11,940.26	11,885.66	43.42	42.18	-89.71	-1.74	2,562.47	3,223.62	3,163.98	59.64	54.053					
12,100.00	11,953.41	11,988.52	11,918.78	43.47	42.26	-89.83	-36.81	2,562.81	3,223.63	3,163.84	59.79	53.913					
12,150.00	11,978.80	12,037.34	11,949.16	43.52	42.36	-89.94	-75.00	2,563.19	3,223.66	3,163.71	59.95	53.775					
12,200.00	12,000.33	12,086.74	11,976.49	43.56	42.47	-90.06	-116.14	2,563.59	3,223.70	3,163.60	60.10	53.635					
12,250.00	12,017.85	12,136.74	12,000.43	43.61	42.58	-90.18	-160.02	2,564.02	3,223.76	3,163.50	60.26	53.494					
12,300.00	12,031.23	12,187.38	12,020.69	43.66	42.69	-90.30	-206.41	2,564.47	3,223.84	3,163.41	60.43	53.350					
12,350.00	12,040.35	12,238.68	12,036.96	43.72	42.81	-90.42	-255.03	2,564.95	3,223.94	3,163.34	60.60	53.203					
12,400.00	12,045.16	12,290.64	12,048.93	43.79	42.94	-90.53	-305.57	2,565.45	3,224.04	3,163.27	60.77	53.053					
12,422.75	12,045.91	12,314.50	12,052.89	43.83	43.00	-90.58	-329.10	2,565.68	3,224.10	3,163.25	60.85	52.984					
12,500.00	12,046.91	12,396.11	12,059.03	44.00	43.20	-90.67	-410.41	2,566.47	3,224.23	3,163.09	61.14	52.736					
12,600.00	12,048.22	12,496.10	12,060.99	44.29	43.49	-90.69	-510.38	2,567.45	3,224.34	3,162.77	61.57	52.369					
12,700.00	12,049.52	12,596.10	12,062.95	44.65	43.83	-90.70	-610.36	2,568.43	3,224.45	3,162.37	62.08	51.937					
12,800.00	12,050.82	12,696.10	12,064.90	45.08	44.24	-90.71	-710.33	2,569.41	3,224.57	3,161.88	62.68	51.443					
12,900.00	12,052.12	12,796.10	12,066.86	45.57	44.70	-90.72	-810.30	2,570.39	3,224.68	3,161.32	63.36	50.894					
13,000.00	12,053.42	12,896.10	12,068.82	46.12	45.22	-90.73	-910.28	2,571.37	3,224.79	3,160.67	64.12	50.295					
13,100.00	12,054.72	12,996.09	12,070.77	46.72	45.79	-90.74	-1,010.25	2,572.35	3,224.90	3,159.95	64.95	49.653					
13,200.00	12,056.02	13,096.09	12,072.73	47.37	46.41	-90.76	-1,110.23	2,573.33	3,225.01	3,159.16	65.85	48.972					
13,300.00	12,057.32	13,196.09	12,074.69	48.07	47.08	-90.77	-1,210.20	2,574.31	3,225.13	3,158.30	66.83	48.260					
13,400.00	12,058.62	13,296.09	12,076.65	48.81	47.80	-90.78	-1,310.17	2,575.28	3,225.24	3,157.37	67.87	47.522					
13,500.00	12,059.92	13,396.08	12,078.60	49.60	48.57	-90.79	-1,410.15	2,576.26	3,225.35	3,156.38	68.97	46.763					
13,600.00	12,061.22	13,496.08	12,080.56	50.43	49.38	-90.80	-1,510.12	2,577.24	3,225.46	3,155.33	70.14	45.988					
13,700.00	12,062.52	13,596.08	12,082.52	51.30	50.23	-90.81	-1,610.09	2,578.22	3,225.58	3,154.22	71.36	45.202					
13,800.00	12,063.82	13,696.08	12,084.48	52.21	51.12	-90.83	-1,710.07	2,579.20	3,225.69	3,153.06	72.64	44.410					
13,900.00	12,065.12	13,796.08	12,086.43	53.16	52.04	-90.84	-1,810.04	2,580.18	3,225.80	3,151.84	73.96	43.613					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,000.00	12,066.42	13,896.07	12,088.39	54.13	53.01	-90.85	-1,910.02	2,581.16	3,225.92	3,150.58	75.34	42.817		
14,100.00	12,067.73	13,996.07	12,090.35	55.14	54.00	-90.86	-2,009.99	2,582.14	3,226.03	3,149.27	76.77	42.025		
14,200.00	12,069.03	14,096.07	12,092.30	56.18	55.03	-90.87	-2,109.96	2,583.12	3,226.14	3,147.91	78.23	41.238		
14,300.00	12,070.33	14,196.07	12,094.26	57.25	56.08	-90.88	-2,209.94	2,584.10	3,226.26	3,146.52	79.74	40.459		
14,400.00	12,071.63	14,296.06	12,096.22	58.35	57.17	-90.90	-2,309.91	2,585.08	3,226.37	3,145.08	81.29	39.689		
14,500.00	12,072.93	14,396.06	12,098.18	59.47	58.28	-90.91	-2,409.89	2,586.05	3,226.49	3,143.61	82.88	38.931		
14,600.00	12,074.23	14,496.06	12,100.13	60.61	59.42	-90.92	-2,509.86	2,587.03	3,226.60	3,142.10	84.50	38.186		
14,700.00	12,075.53	14,596.06	12,102.09	61.78	60.58	-90.93	-2,609.83	2,588.01	3,226.71	3,140.56	86.15	37.455		
14,800.00	12,076.83	14,696.06	12,104.05	62.97	61.76	-90.94	-2,709.81	2,588.99	3,226.83	3,139.00	87.83	36.738		
14,900.00	12,078.13	14,796.05	12,106.00	64.18	62.97	-90.95	-2,809.78	2,589.97	3,226.94	3,137.40	89.55	36.036		
15,000.00	12,079.43	14,896.05	12,107.96	65.41	64.19	-90.97	-2,909.75	2,590.95	3,227.06	3,135.77	91.29	35.350		
15,100.00	12,080.73	14,996.05	12,109.92	66.66	65.43	-90.98	-3,009.73	2,591.93	3,227.17	3,134.12	93.06	34.680		
15,200.00	12,082.03	15,096.05	12,111.88	67.93	66.69	-90.99	-3,109.70	2,592.91	3,227.29	3,132.44	94.85	34.026		
15,300.00	12,083.33	15,196.04	12,113.83	69.21	67.97	-91.00	-3,209.68	2,593.89	3,227.40	3,130.74	96.66	33.388		
15,400.00	12,084.63	15,296.04	12,115.79	70.50	69.27	-91.01	-3,309.65	2,594.87	3,227.52	3,129.02	98.50	32.766		
15,500.00	12,085.94	15,396.04	12,117.75	71.82	70.57	-91.02	-3,409.62	2,595.84	3,227.63	3,127.28	100.36	32.161		
15,600.00	12,087.24	15,496.04	12,119.71	73.14	71.90	-91.04	-3,509.60	2,596.82	3,227.75	3,125.51	102.24	31.571		
15,700.00	12,088.54	15,596.04	12,121.66	74.48	73.23	-91.05	-3,609.57	2,597.80	3,227.87	3,123.73	104.13	30.998		
15,800.00	12,089.84	15,696.03	12,123.62	75.83	74.58	-91.06	-3,709.55	2,598.78	3,227.98	3,121.93	106.05	30.439		
15,900.00	12,091.14	15,796.03	12,125.58	77.19	75.94	-91.07	-3,809.52	2,599.76	3,228.10	3,120.12	107.98	29.896		
16,000.00	12,092.44	15,896.03	12,127.53	78.57	77.32	-91.08	-3,909.49	2,600.74	3,228.21	3,118.29	109.92	29.368		
16,100.00	12,093.74	15,996.03	12,129.49	79.95	78.70	-91.09	-4,009.47	2,601.72	3,228.33	3,116.45	111.88	28.854		
16,200.00	12,095.04	16,096.02	12,131.45	81.34	80.09	-91.11	-4,109.44	2,602.70	3,228.45	3,114.59	113.86	28.355		
16,300.00	12,096.34	16,196.02	12,133.41	82.75	81.49	-91.12	-4,209.41	2,603.68	3,228.56	3,112.71	115.85	27.869		
16,400.00	12,097.64	16,296.02	12,135.36	84.16	82.91	-91.13	-4,309.39	2,604.66	3,228.68	3,110.83	117.85	27.397		
16,500.00	12,098.94	16,396.02	12,137.32	85.58	84.33	-91.14	-4,409.36	2,605.64	3,228.80	3,108.93	119.86	26.937		
16,600.00	12,100.24	16,496.02	12,139.28	87.01	85.76	-91.15	-4,509.34	2,606.61	3,228.91	3,107.02	121.89	26.491		
16,700.00	12,101.54	16,596.01	12,141.23	88.45	87.19	-91.16	-4,609.31	2,607.59	3,229.03	3,105.11	123.92	26.057		
16,800.00	12,102.84	16,696.01	12,143.19	89.89	88.64	-91.17	-4,709.28	2,608.57	3,229.15	3,103.18	125.97	25.634		
16,900.00	12,104.15	16,796.01	12,145.15	91.34	90.09	-91.19	-4,809.26	2,609.55	3,229.26	3,101.24	128.03	25.223		
17,000.00	12,105.45	16,896.01	12,147.11	92.80	91.55	-91.20	-4,909.23	2,610.53	3,229.38	3,099.29	130.09	24.824		
17,100.00	12,106.75	16,996.00	12,149.06	94.26	93.01	-91.21	-5,009.21	2,611.51	3,229.50	3,097.33	132.17	24.435		
17,200.00	12,108.05	17,096.00	12,151.02	95.74	94.48	-91.22	-5,109.18	2,612.49	3,229.62	3,095.37	134.25	24.057		
17,300.00	12,109.35	17,196.00	12,152.98	97.21	95.96	-91.23	-5,209.15	2,613.47	3,229.73	3,093.39	136.34	23.688		
17,400.00	12,110.65	17,296.00	12,154.94	98.69	97.44	-91.24	-5,309.13	2,614.45	3,229.85	3,091.41	138.44	23.330		
17,500.00	12,111.95	17,396.00	12,156.89	100.18	98.93	-91.26	-5,409.10	2,615.43	3,229.97	3,089.42	140.55	22.981		
17,600.00	12,113.25	17,495.99	12,158.85	101.67	100.42	-91.27	-5,509.07	2,616.41	3,230.09	3,087.43	142.66	22.641		
17,700.00	12,114.55	17,595.99	12,160.81	103.17	101.92	-91.28	-5,609.05	2,617.38	3,230.21	3,085.42	144.78	22.311		
17,800.00	12,115.85	17,695.99	12,162.76	104.67	103.43	-91.29	-5,709.02	2,618.36	3,230.33	3,083.41	146.91	21.988		
17,900.00	12,117.15	17,795.99	12,164.72	106.18	104.93	-91.30	-5,809.00	2,619.34	3,230.44	3,081.40	149.04	21.674		
18,000.00	12,118.45	17,895.99	12,166.68	107.69	106.45	-91.31	-5,908.97	2,620.32	3,230.56	3,079.38	151.18	21.368		
18,100.00	12,119.75	17,995.98	12,168.64	109.20	107.96	-91.33	-6,008.94	2,621.30	3,230.68	3,077.35	153.33	21.070		
18,200.00	12,121.05	18,095.98	12,170.59	110.72	109.48	-91.34	-6,108.92	2,622.28	3,230.80	3,075.32	155.48	20.780		
18,300.00	12,122.36	18,195.98	12,172.55	112.25	111.00	-91.35	-6,208.89	2,623.26	3,230.92	3,073.28	157.64	20.496		
18,400.00	12,123.66	18,295.98	12,174.51	113.77	112.53	-91.36	-6,308.87	2,624.24	3,231.04	3,071.24	159.80	20.220		
18,500.00	12,124.96	18,395.97	12,176.46	115.30	114.06	-91.37	-6,408.84	2,625.22	3,231.16	3,069.20	161.96	19.950		
18,600.00	12,126.26	18,495.97	12,178.42	116.83	115.60	-91.38	-6,508.81	2,626.20	3,231.28	3,067.14	164.13	19.687		
18,700.00	12,127.56	18,595.97	12,180.38	118.37	117.13	-91.40	-6,608.79	2,627.18	3,231.40	3,065.09	166.31	19.430		
18,800.00	12,128.86	18,695.97	12,182.34	119.91	118.67	-91.41	-6,708.76	2,628.15	3,231.52	3,063.03	168.49	19.180		
18,900.00	12,130.16	18,795.97	12,184.29	121.45	120.22	-91.42	-6,808.73	2,629.13	3,231.64	3,060.97	170.67	18.935		
19,000.00	12,131.46	18,895.96	12,186.25	123.00	121.76	-91.43	-6,908.71	2,630.11	3,231.76	3,058.90	172.86	18.696		
19,100.00	12,132.76	18,995.96	12,188.21	124.54	123.31	-91.44	-7,008.68	2,631.09	3,231.88	3,056.83	175.05	18.463		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

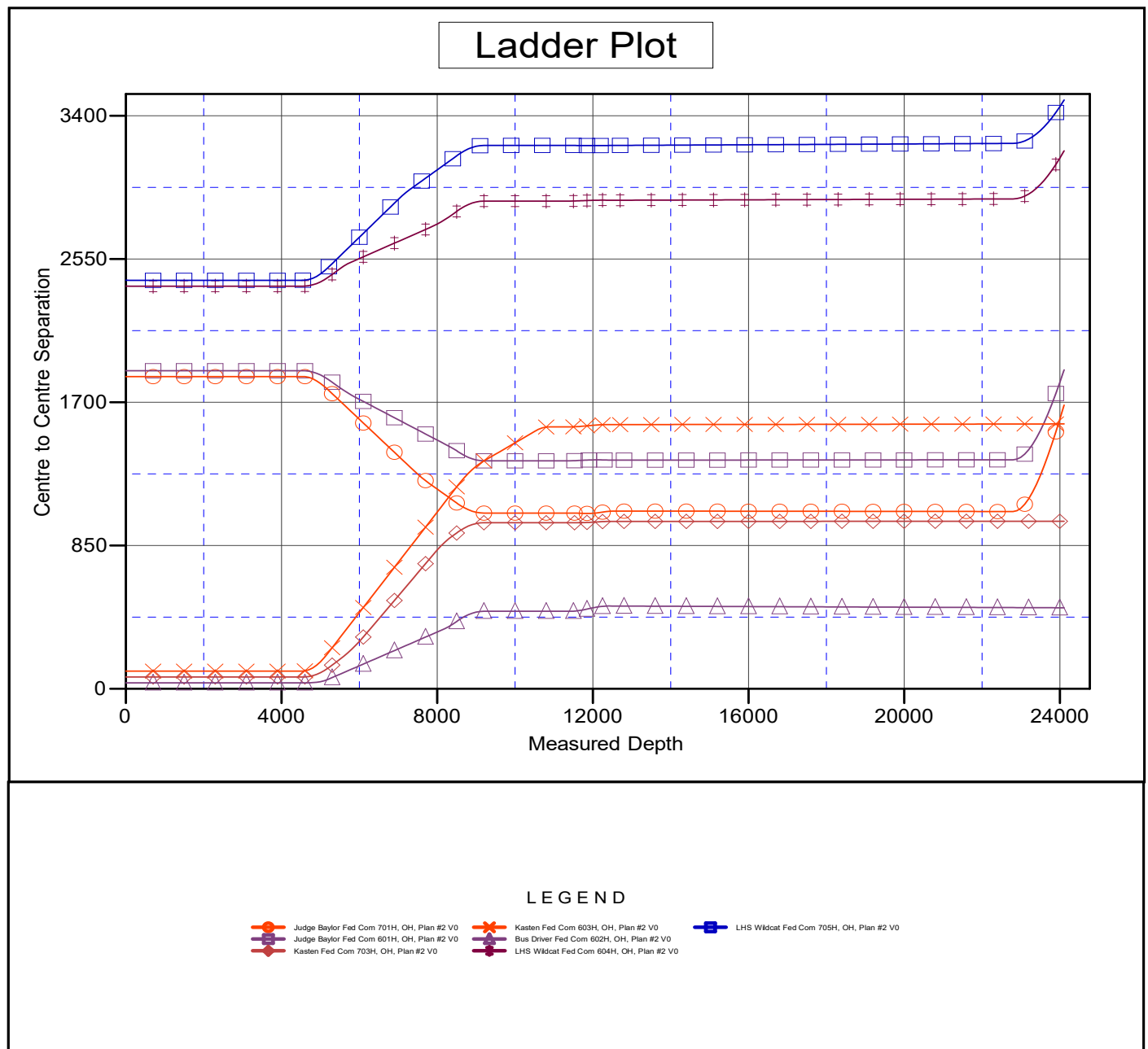
Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,200.00	12,134.06	19,095.96	12,190.17	126.10	124.86	-91.45	-7,108.66	2,632.07	3,232.00	3,054.75	177.24	18.235		
19,300.00	12,135.36	19,195.96	12,192.12	127.65	126.42	-91.46	-7,208.63	2,633.05	3,232.12	3,052.67	179.44	18.012		
19,400.00	12,136.66	19,295.95	12,194.08	129.20	127.98	-91.48	-7,308.60	2,634.03	3,232.24	3,050.59	181.64	17.794		
19,500.00	12,137.96	19,395.95	12,196.04	130.76	129.53	-91.49	-7,408.58	2,635.01	3,232.36	3,048.51	183.85	17.582		
19,600.00	12,139.26	19,495.95	12,197.99	132.32	131.10	-91.50	-7,508.55	2,635.99	3,232.48	3,046.42	186.06	17.373		
19,700.00	12,140.57	19,595.95	12,199.95	133.88	132.66	-91.51	-7,608.53	2,636.97	3,232.60	3,044.33	188.27	17.170		
19,800.00	12,141.87	19,695.95	12,201.91	135.45	134.23	-91.52	-7,708.50	2,637.95	3,232.72	3,042.24	190.48	16.971		
19,900.00	12,143.17	19,795.94	12,203.87	137.02	135.79	-91.53	-7,808.47	2,638.92	3,232.84	3,040.14	192.70	16.776		
20,000.00	12,144.47	19,895.94	12,205.82	138.58	137.36	-91.55	-7,908.45	2,639.90	3,232.96	3,038.04	194.92	16.586		
20,100.00	12,145.77	19,995.94	12,207.78	140.15	138.93	-91.56	-8,008.42	2,640.88	3,233.09	3,035.94	197.14	16.400		
20,200.00	12,147.07	20,095.94	12,209.74	141.73	140.51	-91.57	-8,108.39	2,641.86	3,233.21	3,033.84	199.37	16.217		
20,300.00	12,148.37	20,195.93	12,211.69	143.30	142.08	-91.58	-8,208.37	2,642.84	3,233.33	3,031.73	201.60	16.039		
20,400.00	12,149.67	20,295.93	12,213.65	144.88	143.66	-91.59	-8,308.34	2,643.82	3,233.45	3,029.63	203.83	15.864		
20,500.00	12,150.97	20,395.93	12,215.61	146.45	145.24	-91.60	-8,408.32	2,644.80	3,233.57	3,027.51	206.06	15.693		
20,600.00	12,152.27	20,495.93	12,217.57	148.03	146.82	-91.62	-8,508.29	2,645.78	3,233.70	3,025.40	208.29	15.525		
20,700.00	12,153.57	20,595.93	12,219.52	149.61	148.40	-91.63	-8,608.26	2,646.76	3,233.82	3,023.29	210.53	15.360		
20,800.00	12,154.87	20,695.92	12,221.48	151.20	149.99	-91.64	-8,708.24	2,647.74	3,233.94	3,021.17	212.77	15.199		
20,900.00	12,156.17	20,795.92	12,223.44	152.78	151.57	-91.65	-8,808.21	2,648.72	3,234.06	3,019.05	215.01	15.041		
21,000.00	12,157.47	20,895.92	12,225.40	154.37	153.16	-91.66	-8,908.19	2,649.69	3,234.19	3,016.93	217.25	14.887		
21,100.00	12,158.77	20,995.92	12,227.35	155.95	154.74	-91.67	-9,008.16	2,650.67	3,234.31	3,014.81	219.50	14.735		
21,200.00	12,160.08	21,095.91	12,229.31	157.54	156.33	-91.68	-9,108.13	2,651.65	3,234.43	3,012.69	221.74	14.586		
21,300.00	12,161.38	21,195.91	12,231.27	159.13	157.92	-91.70	-9,208.11	2,652.63	3,234.55	3,010.56	223.99	14.440		
21,400.00	12,162.68	21,295.91	12,233.22	160.72	159.52	-91.71	-9,308.08	2,653.61	3,234.68	3,008.44	226.24	14.297		
21,500.00	12,163.98	21,395.91	12,235.18	162.31	161.11	-91.72	-9,408.05	2,654.59	3,234.80	3,006.31	228.49	14.157		
21,600.00	12,165.28	21,495.91	12,237.14	163.90	162.70	-91.73	-9,508.03	2,655.57	3,234.92	3,004.18	230.75	14.019		
21,700.00	12,166.58	21,595.90	12,239.10	165.50	164.30	-91.74	-9,608.00	2,656.55	3,235.05	3,002.05	233.00	13.884		
21,800.00	12,167.88	21,695.90	12,241.05	167.09	165.89	-91.75	-9,707.98	2,657.53	3,235.17	2,999.91	235.26	13.752		
21,900.00	12,169.18	21,795.90	12,243.01	168.69	167.49	-91.77	-9,807.95	2,658.51	3,235.30	2,997.78	237.52	13.621		
22,000.00	12,170.48	21,895.90	12,244.97	170.29	169.09	-91.78	-9,907.92	2,659.48	3,235.42	2,995.64	239.78	13.494		
22,100.00	12,171.78	21,995.89	12,246.92	171.89	170.69	-91.79	-10,007.90	2,660.46	3,235.54	2,993.51	242.04	13.368		
22,200.00	12,173.08	22,095.89	12,248.88	173.49	172.29	-91.80	-10,107.87	2,661.44	3,235.67	2,991.37	244.30	13.245		
22,300.00	12,174.38	22,195.89	12,250.84	175.09	173.89	-91.81	-10,207.85	2,662.42	3,235.79	2,989.23	246.56	13.124		
22,400.00	12,175.68	22,295.89	12,252.80	176.69	175.49	-91.82	-10,307.82	2,663.40	3,235.92	2,987.09	248.83	13.005		
22,500.00	12,176.98	22,395.89	12,254.75	178.29	177.10	-91.84	-10,407.79	2,664.38	3,236.04	2,984.95	251.09	12.888		
22,600.00	12,178.29	22,495.88	12,256.71	179.89	178.70	-91.85	-10,507.77	2,665.36	3,236.17	2,982.81	253.36	12.773		
22,700.00	12,179.59	22,595.88	12,258.67	181.50	180.31	-91.86	-10,607.74	2,666.34	3,236.29	2,980.66	255.63	12.660		
22,800.00	12,180.89	22,695.11	12,260.61	183.10	181.90	-91.87	-10,706.95	2,667.31	3,236.42	2,978.53	257.89	12.550		
22,900.00	12,182.19	22,695.11	12,260.61	184.71	181.90	-91.87	-10,706.95	2,667.31	3,238.11	2,979.37	258.74	12.515		
23,000.00	12,183.49	22,695.11	12,260.61	186.31	181.90	-91.87	-10,706.95	2,667.31	3,242.89	2,983.54	259.35	12.504 SF		
23,100.00	12,184.79	22,695.11	12,260.61	187.92	181.90	-91.87	-10,706.95	2,667.31	3,250.73	2,991.02	259.71	12.517		
23,200.00	12,186.09	22,695.11	12,260.61	189.53	181.90	-91.87	-10,706.95	2,667.31	3,261.63	3,001.80	259.83	12.553		
23,300.00	12,187.39	22,695.11	12,260.61	191.14	181.90	-91.87	-10,706.95	2,667.31	3,275.55	3,015.83	259.71	12.612		
23,400.00	12,188.69	22,695.11	12,260.61	192.75	181.90	-91.87	-10,706.95	2,667.31	3,292.44	3,033.07	259.37	12.694		
23,500.00	12,189.99	22,695.11	12,260.61	194.36	181.90	-91.87	-10,706.95	2,667.31	3,312.27	3,053.48	258.79	12.799		
23,600.00	12,191.29	22,695.11	12,260.61	195.97	181.90	-91.87	-10,706.95	2,667.31	3,334.98	3,076.96	258.02	12.926		
23,700.00	12,192.59	22,695.11	12,260.61	197.58	181.90	-91.87	-10,706.95	2,667.31	3,360.51	3,103.48	257.03	13.074		
23,800.00	12,193.89	22,695.11	12,260.61	199.20	181.90	-91.87	-10,706.95	2,667.31	3,388.81	3,132.95	255.86	13.245		
23,900.00	12,195.19	22,695.11	12,260.61	200.81	181.90	-91.87	-10,706.95	2,667.31	3,419.79	3,165.28	254.51	13.437		
24,000.00	12,196.50	22,695.11	12,260.61	202.42	181.90	-91.87	-10,706.95	2,667.31	3,453.40	3,200.38	253.01	13.649		
24,100.00	12,197.80	22,695.11	12,260.61	204.04	181.90	-91.87	-10,706.95	2,667.31	3,489.54	3,238.18	251.36	13.883		
24,110.32	12,197.93	22,695.11	12,260.61	204.20	181.90	-91.87	-10,706.95	2,667.31	3,493.42	3,242.23	251.18	13.908		
24,111.10	12,197.94	22,695.11	12,260.61	204.22	181.90	-91.87	-10,706.95	2,667.31	3,493.71	3,242.31	251.39	13.897		

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

Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Reference Site:	Bus Driver/Kasten Fed Com	MD Reference:	3057.7' GE + 21' KB @ 3078.70usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Bus Driver Fed Com 702H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3057.7' GE + 21' KB @ 3078.70usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Bus Driver Fed Com 702H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°

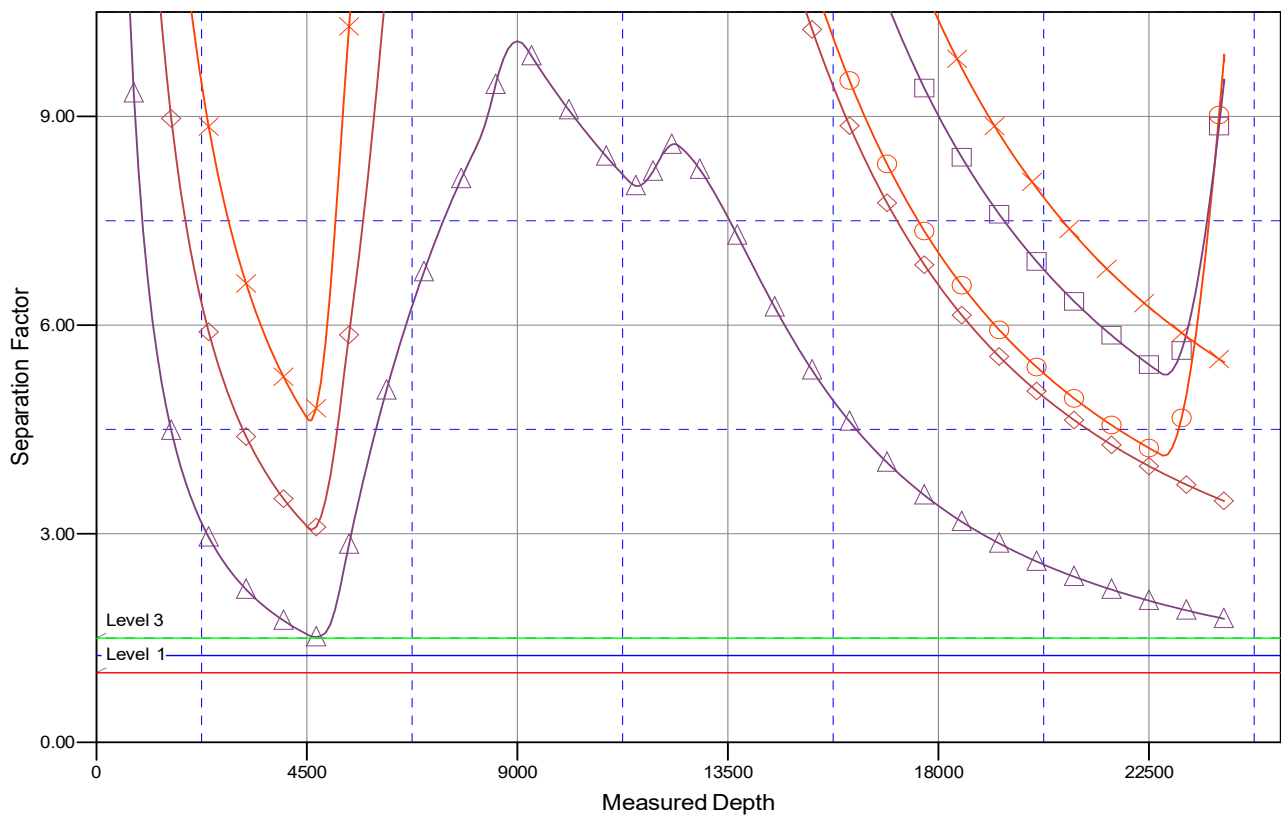


Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well Bus Driver Fed Com 702H
Project:	Lea County, NM (NAD83)	TVD Reference:	3057.7' GE + 21' KB @ 3078.70usft
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Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

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Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: Bus Driver Fed Com 702H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°

Separation Factor Plot



LEGEND

- Judge Baylor Fed Com 701H, OH, Plan #2 V0
- Judge Baylor Fed Com 601H, OH, Plan #2 V0
- Kasten Fed Com 703H, OH, Plan #2 V0
- Kasten Fed Com 603H, OH, Plan #2 V0
- Bus Driver Fed Com 602H, OH, Plan #2 V0
- LHS Wildcat Fed Com 604H, OH, Plan #2 V0
- LHS Wildcat Fed Com 705H, OH, Plan #2 V0



Bus Driver Fed Com 702H

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)	3,058'	21'	21'	0	Sand/Gravels/unconsolidated
Rustler	2,437'	642'			Carbonates
Salado	2,052'	1,027'			Salt, Carbonate & Clastics
Base Salt	-1,465'	4,544'			Shaley Carbonate & Shale
Lamar	-1,900'	4,979'			Carbonate & Clastics
Bell Canyon	-1,934'	5,013'			Sandstone - oil/gas/water
Cherry Canyon	-2,801'	5,880'			Sandstone - oil/gas/water
Brushy Canyon	-4,293'	7,372'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,654'	8,733'			Shale/Carbonates - oil/gas
Avalon	-5,678'	8,757'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-6,780'	9,859'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,919'	9,998'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,304'	10,383'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-8,004'	11,083'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,675'	11,754'			Sandstone - oil/gas/water
Wolfcamp	-8,917'	11,996'			Overpressure shale/sand- Oil/Gas
HZ Target	-8,960'	12,039'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,978'	12,057'			Overpressure Shale - Oil/Gas
Wolfcamp B	-9,198'	12,277'			Overpressure Shale - Oil/Gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	5,013'	Oil
Bone Spring	9,859'	Oil
Wolfcamp	11,996	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 casings strings will be run new. Safety factors calculated assuming the well is vertical.

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1300	1.18	1.67	4.99	5.32
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	5400	1.72	1.67	2.90	3.30
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	12150	1.09	1.26	1.79	1.22
Long string 5 1/2"	23	P-110	14520	14520	729	Anaconda 656	24110	1.32	1.29	1.11	1.00



Preliminary plan is to set 7 5/8" string before entering Wolfcamp formation at 11,978'TVD/12,150'MD at 62° Inc due too potential overpressure.

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	Yield ft3/sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Tail Yield ft3/sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1300	804	Extenda Cem, 13.5 ppg Class C, 3lb/sk Kol-Seal	1.728	9.19	0	331	HalCem TM, 14.8 ppg, Class C, 2% CaCl2, 0.25pps Celo-Flake	1.364	6.51	1000	100%
Int1	12.25	9.625	5400	1256	Bentonite, 2%CaCl2,0.25pps Cello-Flake									
					Neocem TM, 11.5 ppg, Class C 50:50 Poz	2.271	13.24	0	152	HalCem TM, 14.8 ppg, Class C, 0.25 pps Cello-Flake, 2% CaCl2	1.349	6.25	5100	100%
					Gel, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal									
Int2	8.75	7.625	12150	351	NeoCem, 11 ppg, Class C 2lb/sk Bridgemaker Gel, 5%	2.777	14.21	4400	112	NeoCem 13.2 ppg, Class C	1.44	4.31	11150	50%
					Salt, 5pps LCM, 0.25pps Cello-Flake					0.25 pps Cello-Flake, 2% CaCl2				
Prod	6.75	5.5	24110	598	NeoCem, 14.5 ppg, Gas Migration Control	2.166	9.38	11150						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.

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' – 12,150'	Brine	8.8-10.2	28-34	N/c
12,150' – 24,110' Lateral	Oil Base	10.0-12.0	58-68	3 - 6

The highest mud weight needed to balance formation is expected to be 11-12 ppg. In order to maintain hole stability, mud weights up to 13.0 ppg may be utilized.

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

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

7. Auxiliary well control and monitoring equipment:

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

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

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

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

8. Logging, testing and coring program:

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

Open-hole logs are not planned for this well.

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

The estimated bottom-hole temperature at 12,197' TVD (deepest point of the well) is 195F with an estimated maximum bottom-hole pressure (BHP) at the same point of 8,245 psig (based on 13 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

A. All personnel shall receive proper awareness H2S training.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment

a. Well Control Equipment

i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.

ii. Choke manifold with a remotely operated hydraulic choke.



- iii. Mud/gas separator
- b. Protective equipment for essential personnel
 - i. Breathing Apparatus
 - 1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.
 - 2. Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity
 - 3. Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation
 - ii. Auxiliary Rescue Equipment
 - 1. Stretcher
 - 2. Two OSHA full body harnesses
 - 3. 100 feet of 5/8 inches OSHA approved rope
 - 4. 1-20# class ABC fire extinguisher
- c. H2S Detection and Monitoring Equipment
 - i. A stationary detector with three sensors will be placed in the doghouse if equipped, set to visually alarm at 10 ppm and audible at 14 ppm. The detector will be calibrated a minimum of every 30 days or as needed. The sensors will be placed in the following places:
 - 1. Rig Floor
 - 2. Below Rig Floor / Near BOPs
 - 3. End of flow line or where well bore fluid is being discharged (near shakers)
 - ii. If H2S is encountered, measured values and formations will be provided to the BLM.
- d. Visual Warning Systems
 - i. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - ii. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - iii. Two windsocks will be placed in strategic locations, visible from all angles.
- e. Mud Program
 - i. The Mud program will be designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.
- f. Metallurgy
 - i. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service at the anticipated operating pressures to prevent sour sulfide stress cracking.
- g. Communication
 - i. Communication will be via cell phones and walkie talkies on location.

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



11. Anticipated starting date and duration of operations:

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

12. Disposal/environmental concerns:

- (A) Drilled cuttings will be hauled to and disposed of in a state-certified disposal site.
- (B) Non-hazardous waste mud/cement from the drilling process will be 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 Cameron Multi-Bowl WH system has been sent to the BLM office in Carlsbad.

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

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

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

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



14. Additional variance requests

A. Casing.

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

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