

OCD – HOBBS
11/18/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		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. [329878]
2. Name of Operator [373910]		9. API Well No. 30-025-48106
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory
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 a new 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: SESE / 250 FSL / 523 FEL / TWSP: 25S / RANGE: 35E / SECTION: 36 / LAT: 32.08026 / LONG: -103.31441 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 1320 FSL / 680 FEL / TWSP: 26S / RANGE: 35E / SECTION: 12 / LAT: 32.054152 / LONG: -103.314903 (TVD: 11995 feet, MD: 21320 feet)

PPP: NENE / 0 FNL / 679 FEL / TWSP: 26S / RANGE: 35E / SECTION: 12 / LAT: 32.065043 / LONG: -103.314908 (TVD: 11946 feet, MD: 17357 feet)

PPP: NENE / 111 FNL / 679 FEL / TWSP: 26S / RANGE: 35E / SECTION: 1 / LAT: 32.07926 / LONG: -103.314914 (TVD: 11852 feet, MD: 12181 feet)

PPP: NENE / 0 FNL / 631 FEL / TWSP: 26S / RANGE: 35E / SECTION: 1 / LAT: 32.079573 / LONG: -103.314759 (TVD: 11834 feet, MD: 12060 feet)

BHL: SESE / 150 FSL / 680 FEL / TWSP: 25S / RANGE: 35E / SECTION: 12 / LAT: 32.050937 / LONG: -103.31902 (TVD: 12040 feet, MD: 22490 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: (575) 234-2224

Email: tortiz@blm.gov

CONFIDENTIAL

Review and Appeal Rights

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

CONFIDENTIAL



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.:	LHS Wildcat Fed Com 604H
SURFACE HOLE FOOTAGE:	250'/S & 523'/E
BOTTOM HOLE FOOTAGE:	150'/S & 680'/E

WELL NAME & NO.:	LHS Wildcat Fed Com 705H
SURFACE HOLE FOOTAGE:	250'/S & 488'/E
BOTTOM HOLE FOOTAGE:	150'/S & 350'/E

COA

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

A. HYDROGEN SULFIDE

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: LHS Wildcat Fed Com
 Well: LHS Wildcat Fed Com 604H
 Wellbore: OH
 Design: Plan #2



Azimuths to Grid North
 True North: -0.54°
 Magnetic North: 5.99°

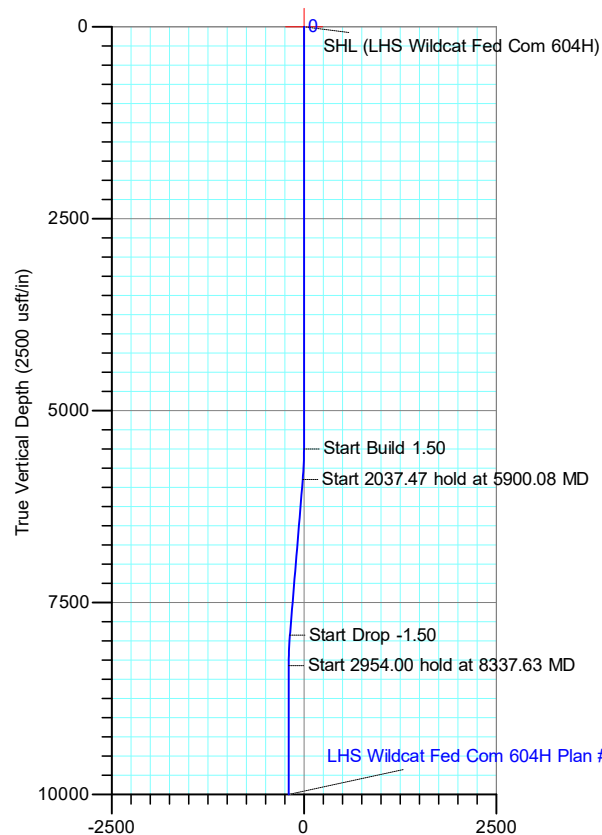
Magnetic Field
 Strength: 47605.5nT
 Dip Angle: 59.93°
 Date: 2/25/2020
 Model: IGRF2015

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



3031.5' GE + 21' KB @ 3052.50usft

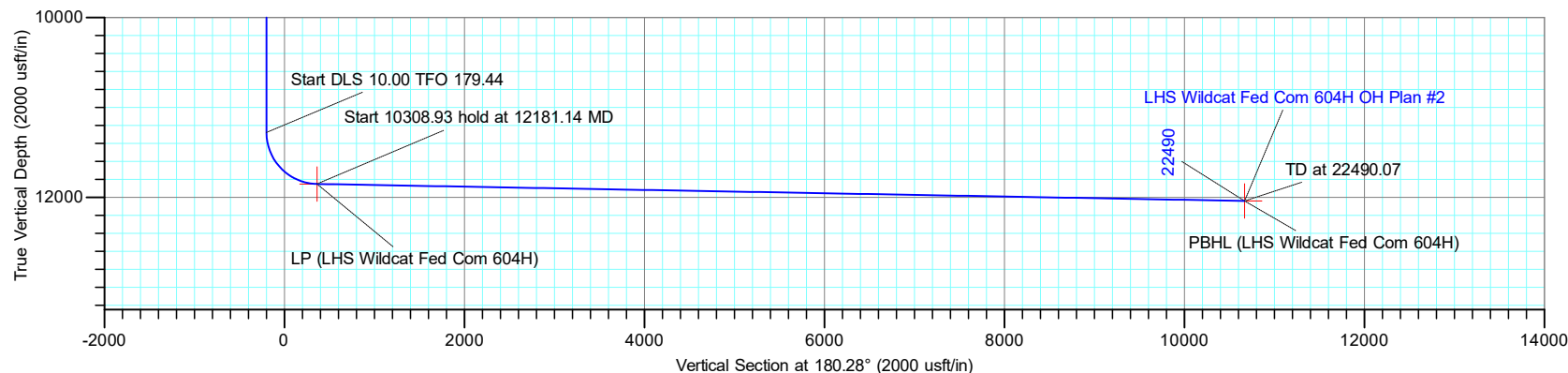
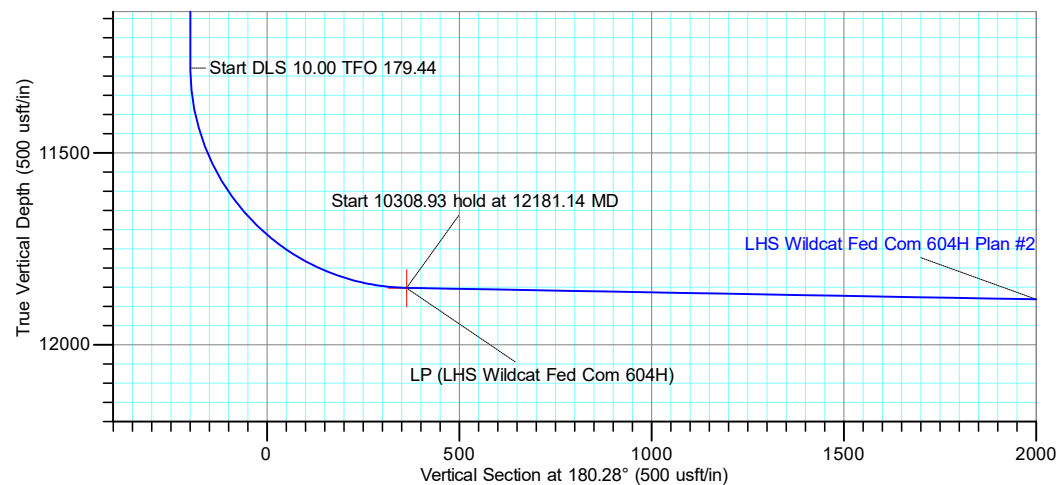


SECTION DETAILS

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	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
5900.08	6.00	321.69	5899.35	16.43	-12.98	1.50	321.69	-16.36	Start 2037.47 hold at 5900.08 MD
7937.55	6.00	321.69	7925.65	183.57	-145.02	0.00	0.00	-182.87	Start Drop -1.50
8337.63	0.00	0.00	8325.00	200.00	-158.00	1.50	180.00	-199.23	Start 2954.00 hold at 8337.63 MD
11291.63	0.00	0.00	11279.00	200.00	-158.00	0.00	0.00	-199.23	Start DLS 10.00 TFO 179.44
12181.14	88.95	179.44	11851.86	-362.44	-152.49	10.00	179.44	363.18	Start 10308.93 hold at 12181.14 MD
22490.07	88.95	179.44	12040.55	-10669.15	-51.52	0.00	0.00	10669.27	TD at 22490.07

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (LHS Wildcat Fed Com 604H)	11852.86	-362.44	-152.49	32.079268	-103.314914
PBHL (LHS Wildcat Fed Com 604H)	12040.55	-10669.15	-51.52	32.050937	-103.314902
SHL (LHS Wildcat Fed Com 604H)	0.00	0.00	0.00	32.080260	-103.314410



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

Plan: Plan #2 (LHS Wildcat Fed Com 604H/OH)
 LHS Wildcat Fed Com
 Created By: Dustin Ault
 Date: 23:19, February 25 2020
 Approved: _____ Date: _____

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: LHS Wildcat Fed Com
Well: LHS Wildcat Fed Com 604H
Wellbore: OH
Design: Plan #2



Azimuths to Grid North
True North: -0.54°
Magnetic North: 5.99°

Magnetic Field
Strength: 47605.5nT
Dip Angle: 59.93°
Date: 2/25/2020
Model: IGRF2015



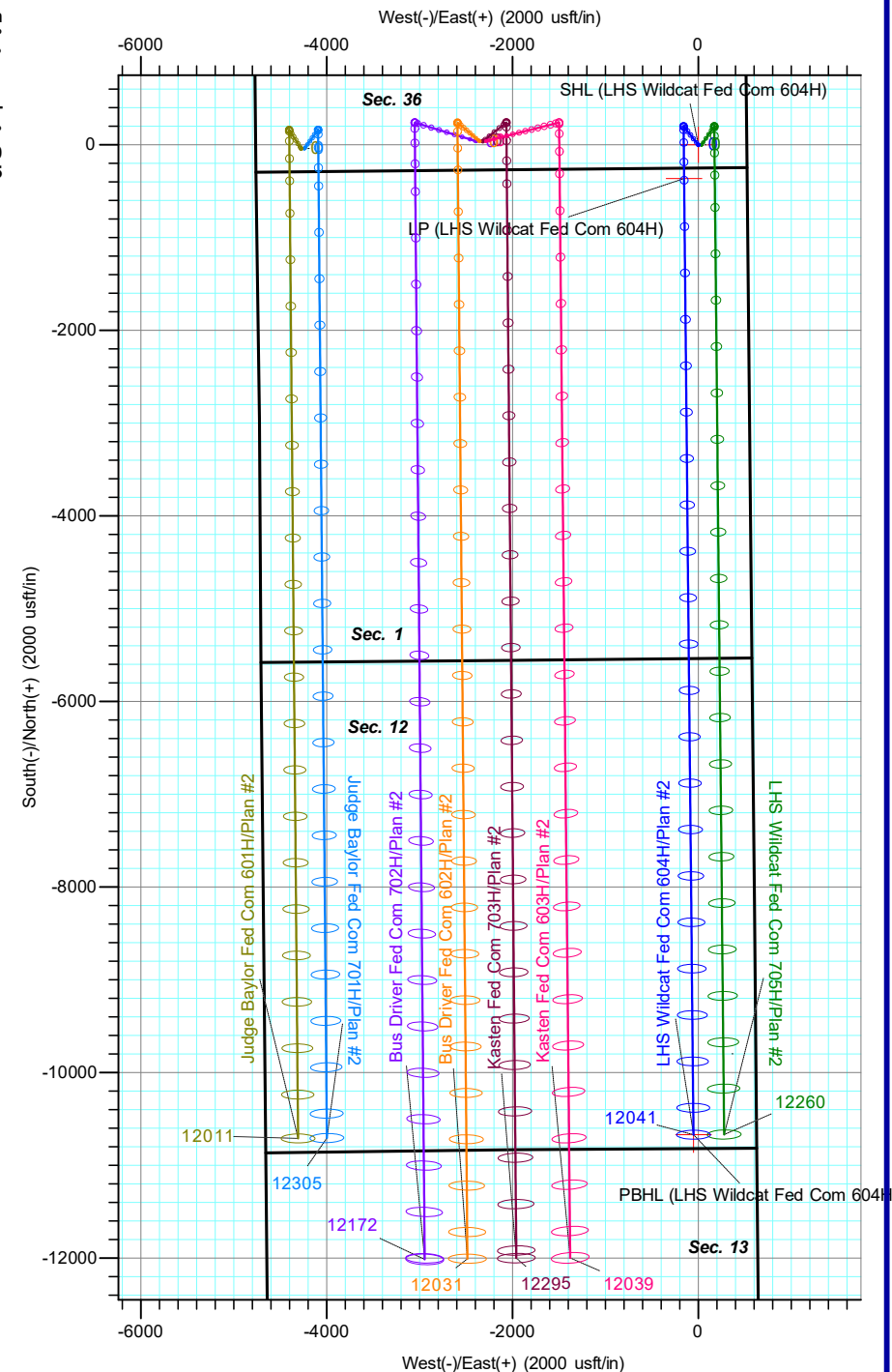
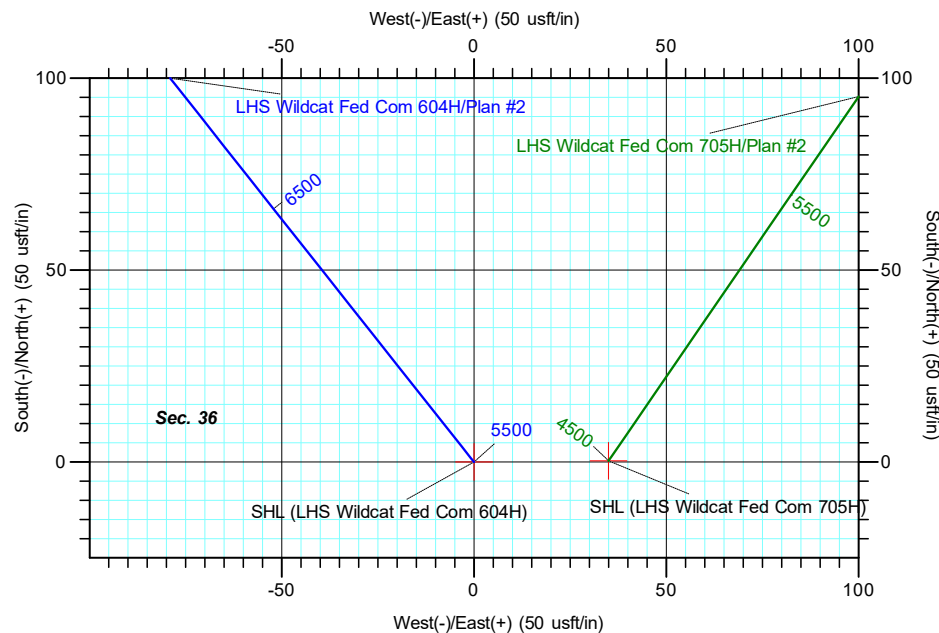
PROJECT DETAILS: Lea County, NM (NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (LHS Wildcat Fed Com 604H)	11852.86	-362.44	-152.49	394063.66	856770.79	32.079268	-103.314914
PBHL (LHS Wildcat Fed Com 604H)	12040.55	-10669.15	-51.52	383756.95	856871.76	32.050937	-103.314902
SHL (LHS Wildcat Fed Com 604H)	0.00	0.00	0.00	394426.10	856923.28	32.080260	-103.314410

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	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
5900.08	6.00	321.69	5899.35	16.43	-12.98	1.50	321.69	-16.36	Start 2037.47 hold at 5900.08 MD
7937.55	6.00	321.69	7925.65	183.57	-145.02	0.00	0.00	-182.87	Start Drop -1.50
8337.63	0.00	0.00	8325.00	200.00	-158.00	1.50	180.00	-199.23	Start 2954.00 hold at 8337.63 MD
11291.63	0.00	0.00	11279.00	200.00	-158.00	0.00	0.00	-199.23	Start DLS 10.00 TFO 179.44
12181.14	88.95	179.44	11851.86	-362.44	-152.49	10.00	179.44	363.18	Start 10308.93 hold at 12181.14 MD
22490.07	88.95	179.44	12040.55	-10669.15	-51.52	0.00	0.00	10669.27	TD at 22490.07



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

Plan: Plan #2 (LHS Wildcat Fed Com 604H/OH)
LHS Wildcat Fed Com
Created By: Dustin Ault Date: 23:20, February 25 2020
Date: _____
Approved: _____ Date: _____



Franklin Mountain Energy

Lea County, NM (NAD83)

LHS Wildcat Fed Com

LHS Wildcat Fed Com 604H

OH

Plan: Plan #2

Standard Planning Report

25 February, 2020





Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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		LHS Wildcat Fed Com			
Site Position:		Northing:	394,426.10 usft	Latitude:	32.080260
From:	Map	Easting:	856,923.28 usft	Longitude:	-103.314411
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.54 °

Well		LHS Wildcat Fed Com 604H				
Well Position	+N/-S	0.00 usft	Northing:	394,426.10 usft	Latitude:	32.080260
	+E/-W	0.00 usft	Easting:	856,923.28 usft	Longitude:	-103.314411
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,031.50 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/25/2020	6.53	59.93	47,605.52487933

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	180.28

Plan Survey Tool Program	Date	2/25/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,490.07 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	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.08	6.00	321.69	5,899.35	16.43	-12.98	1.50	1.50	0.00	321.69	
7,937.55	6.00	321.69	7,925.65	183.57	-145.02	0.00	0.00	0.00	0.00	
8,337.63	0.00	0.00	8,325.00	200.00	-158.00	1.50	-1.50	0.00	180.00	
11,291.63	0.00	0.00	11,279.00	200.00	-158.00	0.00	0.00	0.00	0.00	
12,181.14	88.95	179.44	11,851.86	-362.44	-152.49	10.00	10.00	20.17	179.44	
22,490.07	88.95	179.44	12,040.55	-10,669.15	-51.52	0.00	0.00	0.00	0.00	PBHL (LHS Wildcat F



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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 (LHS Wildcat Fed Com 604H)									
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
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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)
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
5,600.00	1.50	321.69	5,599.99	1.03	-0.81	-1.02	1.50	1.50	0.00
5,700.00	3.00	321.69	5,699.91	4.11	-3.25	-4.09	1.50	1.50	0.00
5,800.00	4.50	321.69	5,799.69	9.24	-7.30	-9.20	1.50	1.50	0.00
5,900.08	6.00	321.69	5,899.35	16.43	-12.98	-16.36	1.50	1.50	0.00
Start 2037.47 hold at 5900.08 MD									
6,000.00	6.00	321.69	5,998.72	24.62	-19.45	-24.53	0.00	0.00	0.00
6,100.00	6.00	321.69	6,098.17	32.83	-25.93	-32.70	0.00	0.00	0.00
6,200.00	6.00	321.69	6,197.63	41.03	-32.41	-40.87	0.00	0.00	0.00
6,300.00	6.00	321.69	6,297.08	49.23	-38.90	-49.05	0.00	0.00	0.00
6,400.00	6.00	321.69	6,396.53	57.44	-45.38	-57.22	0.00	0.00	0.00
6,500.00	6.00	321.69	6,495.98	65.64	-51.86	-65.39	0.00	0.00	0.00
6,600.00	6.00	321.69	6,595.43	73.85	-58.34	-73.56	0.00	0.00	0.00
6,700.00	6.00	321.69	6,694.89	82.05	-64.82	-81.74	0.00	0.00	0.00
6,800.00	6.00	321.69	6,794.34	90.25	-71.30	-89.91	0.00	0.00	0.00
6,900.00	6.00	321.69	6,893.79	98.46	-77.78	-98.08	0.00	0.00	0.00
7,000.00	6.00	321.69	6,993.24	106.66	-84.26	-106.25	0.00	0.00	0.00
7,100.00	6.00	321.69	7,092.69	114.86	-90.74	-114.42	0.00	0.00	0.00
7,200.00	6.00	321.69	7,192.15	123.07	-97.22	-122.60	0.00	0.00	0.00
7,300.00	6.00	321.69	7,291.60	131.27	-103.70	-130.77	0.00	0.00	0.00
7,400.00	6.00	321.69	7,391.05	139.48	-110.19	-138.94	0.00	0.00	0.00
7,500.00	6.00	321.69	7,490.50	147.68	-116.67	-147.11	0.00	0.00	0.00
7,600.00	6.00	321.69	7,589.95	155.88	-123.15	-155.29	0.00	0.00	0.00
7,700.00	6.00	321.69	7,689.41	164.09	-129.63	-163.46	0.00	0.00	0.00
7,800.00	6.00	321.69	7,788.86	172.29	-136.11	-171.63	0.00	0.00	0.00
7,900.00	6.00	321.69	7,888.31	180.49	-142.59	-179.80	0.00	0.00	0.00
7,937.55	6.00	321.69	7,925.65	183.57	-145.02	-182.87	0.00	0.00	0.00
Start Drop -1.50									
8,000.00	5.06	321.69	7,987.81	188.30	-148.76	-187.58	1.50	-1.50	0.00
8,100.00	3.56	321.69	8,087.53	194.20	-153.42	-193.46	1.50	-1.50	0.00
8,200.00	2.06	321.69	8,187.40	198.05	-156.46	-197.30	1.50	-1.50	0.00
8,300.00	0.56	321.69	8,287.37	199.85	-157.89	-199.09	1.50	-1.50	0.00
8,337.63	0.00	0.00	8,325.00	200.00	-158.00	-199.23	1.50	-1.50	101.81
Start 2954.00 hold at 8337.63 MD									
8,400.00	0.00	0.00	8,387.37	200.00	-158.00	-199.23	0.00	0.00	0.00
8,500.00	0.00	0.00	8,487.37	200.00	-158.00	-199.23	0.00	0.00	0.00
8,600.00	0.00	0.00	8,587.37	200.00	-158.00	-199.23	0.00	0.00	0.00
8,700.00	0.00	0.00	8,687.37	200.00	-158.00	-199.23	0.00	0.00	0.00
8,800.00	0.00	0.00	8,787.37	200.00	-158.00	-199.23	0.00	0.00	0.00
8,900.00	0.00	0.00	8,887.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,000.00	0.00	0.00	8,987.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,100.00	0.00	0.00	9,087.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,200.00	0.00	0.00	9,187.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,300.00	0.00	0.00	9,287.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,400.00	0.00	0.00	9,387.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,500.00	0.00	0.00	9,487.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,600.00	0.00	0.00	9,587.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,700.00	0.00	0.00	9,687.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,800.00	0.00	0.00	9,787.37	200.00	-158.00	-199.23	0.00	0.00	0.00
9,900.00	0.00	0.00	9,887.37	200.00	-158.00	-199.23	0.00	0.00	0.00

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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)
10,000.00	0.00	0.00	9,987.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,100.00	0.00	0.00	10,087.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,200.00	0.00	0.00	10,187.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,300.00	0.00	0.00	10,287.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,400.00	0.00	0.00	10,387.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,500.00	0.00	0.00	10,487.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,600.00	0.00	0.00	10,587.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,700.00	0.00	0.00	10,687.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,800.00	0.00	0.00	10,787.37	200.00	-158.00	-199.23	0.00	0.00	0.00
10,900.00	0.00	0.00	10,887.37	200.00	-158.00	-199.23	0.00	0.00	0.00
11,000.00	0.00	0.00	10,987.37	200.00	-158.00	-199.23	0.00	0.00	0.00
11,100.00	0.00	0.00	11,087.37	200.00	-158.00	-199.23	0.00	0.00	0.00
11,200.00	0.00	0.00	11,187.37	200.00	-158.00	-199.23	0.00	0.00	0.00
11,291.63	0.00	0.00	11,279.00	200.00	-158.00	-199.23	0.00	0.00	0.00
Start DLS 10.00 TFO 179.44									
11,300.00	0.84	179.44	11,287.37	199.94	-158.00	-199.17	10.00	10.00	0.00
11,350.00	5.84	179.44	11,337.27	197.03	-157.97	-196.26	10.00	10.00	0.00
11,400.00	10.84	179.44	11,386.73	189.78	-157.90	-189.02	10.00	10.00	0.00
11,450.00	15.84	179.44	11,435.36	178.25	-157.79	-177.49	10.00	10.00	0.00
11,500.00	20.84	179.44	11,482.81	162.53	-157.63	-161.76	10.00	10.00	0.00
11,550.00	25.84	179.44	11,528.70	142.73	-157.44	-141.97	10.00	10.00	0.00
11,600.00	30.84	179.44	11,572.70	119.00	-157.21	-118.24	10.00	10.00	0.00
11,650.00	35.84	179.44	11,614.46	91.54	-156.94	-90.78	10.00	10.00	0.00
11,700.00	40.84	179.44	11,653.66	60.53	-156.63	-59.77	10.00	10.00	0.00
11,750.00	45.84	179.44	11,690.02	26.23	-156.30	-25.47	10.00	10.00	0.00
11,800.00	50.84	179.44	11,723.25	-11.11	-155.93	11.86	10.00	10.00	0.00
11,850.00	55.84	179.44	11,753.09	-51.20	-155.54	51.95	10.00	10.00	0.00
11,900.00	60.84	179.44	11,779.33	-93.75	-155.12	94.49	10.00	10.00	0.00
11,950.00	65.84	179.44	11,801.76	-138.41	-154.68	139.16	10.00	10.00	0.00
12,000.00	70.84	179.44	11,820.21	-184.86	-154.23	185.61	10.00	10.00	0.00
12,050.00	75.84	179.44	11,834.54	-232.75	-153.76	233.49	10.00	10.00	0.00
12,100.00	80.84	179.44	11,844.65	-281.70	-153.28	282.43	10.00	10.00	0.00
12,150.00	85.84	179.44	11,850.45	-331.34	-152.79	332.07	10.00	10.00	0.00
12,181.14	88.95	179.44	11,851.86	-362.44	-152.49	363.18	10.00	10.00	0.00
Start 10308.93 hold at 12181.14 MD									
12,181.16	88.95	179.44	11,851.86	-362.46	-152.49	363.19	0.00	0.00	0.00
LP (LHS Wildcat Fed Com 604H)									
12,200.00	88.95	179.44	11,852.21	-381.30	-152.31	382.03	0.00	0.00	0.00
12,300.00	88.95	179.44	11,854.04	-481.28	-151.33	482.00	0.00	0.00	0.00
12,400.00	88.95	179.44	11,855.87	-581.26	-150.35	581.98	0.00	0.00	0.00
12,500.00	88.95	179.44	11,857.70	-681.23	-149.37	681.95	0.00	0.00	0.00
12,600.00	88.95	179.44	11,859.53	-781.21	-148.39	781.92	0.00	0.00	0.00
12,700.00	88.95	179.44	11,861.36	-881.19	-147.41	881.89	0.00	0.00	0.00
12,800.00	88.95	179.44	11,863.19	-981.17	-146.43	981.87	0.00	0.00	0.00
12,900.00	88.95	179.44	11,865.02	-1,081.15	-145.45	1,081.84	0.00	0.00	0.00
13,000.00	88.95	179.44	11,866.85	-1,181.13	-144.47	1,181.81	0.00	0.00	0.00
13,100.00	88.95	179.44	11,868.68	-1,281.11	-143.49	1,281.78	0.00	0.00	0.00
13,200.00	88.95	179.44	11,870.51	-1,381.08	-142.51	1,381.76	0.00	0.00	0.00
13,300.00	88.95	179.44	11,872.34	-1,481.06	-141.53	1,481.73	0.00	0.00	0.00
13,400.00	88.95	179.44	11,874.17	-1,581.04	-140.55	1,581.70	0.00	0.00	0.00
13,500.00	88.95	179.44	11,876.00	-1,681.02	-139.57	1,681.67	0.00	0.00	0.00
13,600.00	88.95	179.44	11,877.83	-1,781.00	-138.59	1,781.65	0.00	0.00	0.00
13,700.00	88.95	179.44	11,879.66	-1,880.98	-137.61	1,881.62	0.00	0.00	0.00



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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)	
13,800.00	88.95	179.44	11,881.49	-1,980.95	-136.63	1,981.59	0.00	0.00	0.00	
13,900.00	88.95	179.44	11,883.32	-2,080.93	-135.65	2,081.56	0.00	0.00	0.00	
14,000.00	88.95	179.44	11,885.15	-2,180.91	-134.68	2,181.54	0.00	0.00	0.00	
14,100.00	88.95	179.44	11,886.98	-2,280.89	-133.70	2,281.51	0.00	0.00	0.00	
14,200.00	88.95	179.44	11,888.81	-2,380.87	-132.72	2,381.48	0.00	0.00	0.00	
14,300.00	88.95	179.44	11,890.64	-2,480.85	-131.74	2,481.45	0.00	0.00	0.00	
14,400.00	88.95	179.44	11,892.47	-2,580.83	-130.76	2,581.43	0.00	0.00	0.00	
14,500.00	88.95	179.44	11,894.31	-2,680.80	-129.78	2,681.40	0.00	0.00	0.00	
14,600.00	88.95	179.44	11,896.14	-2,780.78	-128.80	2,781.37	0.00	0.00	0.00	
14,700.00	88.95	179.44	11,897.97	-2,880.76	-127.82	2,881.34	0.00	0.00	0.00	
14,800.00	88.95	179.44	11,899.80	-2,980.74	-126.84	2,981.32	0.00	0.00	0.00	
14,900.00	88.95	179.44	11,901.63	-3,080.72	-125.86	3,081.29	0.00	0.00	0.00	
15,000.00	88.95	179.44	11,903.46	-3,180.70	-124.88	3,181.26	0.00	0.00	0.00	
15,100.00	88.95	179.44	11,905.29	-3,280.67	-123.90	3,281.23	0.00	0.00	0.00	
15,200.00	88.95	179.44	11,907.12	-3,380.65	-122.92	3,381.21	0.00	0.00	0.00	
15,300.00	88.95	179.44	11,908.95	-3,480.63	-121.94	3,481.18	0.00	0.00	0.00	
15,400.00	88.95	179.44	11,910.78	-3,580.61	-120.96	3,581.15	0.00	0.00	0.00	
15,500.00	88.95	179.44	11,912.61	-3,680.59	-119.98	3,681.12	0.00	0.00	0.00	
15,600.00	88.95	179.44	11,914.44	-3,780.57	-119.00	3,781.10	0.00	0.00	0.00	
15,700.00	88.95	179.44	11,916.27	-3,880.55	-118.02	3,881.07	0.00	0.00	0.00	
15,800.00	88.95	179.44	11,918.10	-3,980.52	-117.05	3,981.04	0.00	0.00	0.00	
15,900.00	88.95	179.44	11,919.93	-4,080.50	-116.07	4,081.01	0.00	0.00	0.00	
16,000.00	88.95	179.44	11,921.76	-4,180.48	-115.09	4,180.99	0.00	0.00	0.00	
16,100.00	88.95	179.44	11,923.59	-4,280.46	-114.11	4,280.96	0.00	0.00	0.00	
16,200.00	88.95	179.44	11,925.42	-4,380.44	-113.13	4,380.93	0.00	0.00	0.00	
16,300.00	88.95	179.44	11,927.25	-4,480.42	-112.15	4,480.91	0.00	0.00	0.00	
16,400.00	88.95	179.44	11,929.08	-4,580.39	-111.17	4,580.88	0.00	0.00	0.00	
16,500.00	88.95	179.44	11,930.91	-4,680.37	-110.19	4,680.85	0.00	0.00	0.00	
16,600.00	88.95	179.44	11,932.74	-4,780.35	-109.21	4,780.82	0.00	0.00	0.00	
16,700.00	88.95	179.44	11,934.57	-4,880.33	-108.23	4,880.80	0.00	0.00	0.00	
16,800.00	88.95	179.44	11,936.40	-4,980.31	-107.25	4,980.77	0.00	0.00	0.00	
16,900.00	88.95	179.44	11,938.23	-5,080.29	-106.27	5,080.74	0.00	0.00	0.00	
17,000.00	88.95	179.44	11,940.06	-5,180.27	-105.29	5,180.71	0.00	0.00	0.00	
17,100.00	88.95	179.44	11,941.89	-5,280.24	-104.31	5,280.69	0.00	0.00	0.00	
17,200.00	88.95	179.44	11,943.72	-5,380.22	-103.33	5,380.66	0.00	0.00	0.00	
17,300.00	88.95	179.44	11,945.55	-5,480.20	-102.35	5,480.63	0.00	0.00	0.00	
17,400.00	88.95	179.44	11,947.38	-5,580.18	-101.37	5,580.60	0.00	0.00	0.00	
17,500.00	88.95	179.44	11,949.22	-5,680.16	-100.39	5,680.58	0.00	0.00	0.00	
17,600.00	88.95	179.44	11,951.05	-5,780.14	-99.42	5,780.55	0.00	0.00	0.00	
17,700.00	88.95	179.44	11,952.88	-5,880.11	-98.44	5,880.52	0.00	0.00	0.00	
17,800.00	88.95	179.44	11,954.71	-5,980.09	-97.46	5,980.49	0.00	0.00	0.00	
17,900.00	88.95	179.44	11,956.54	-6,080.07	-96.48	6,080.47	0.00	0.00	0.00	
18,000.00	88.95	179.44	11,958.37	-6,180.05	-95.50	6,180.44	0.00	0.00	0.00	
18,100.00	88.95	179.44	11,960.20	-6,280.03	-94.52	6,280.41	0.00	0.00	0.00	
18,200.00	88.95	179.44	11,962.03	-6,380.01	-93.54	6,380.38	0.00	0.00	0.00	
18,300.00	88.95	179.44	11,963.86	-6,479.98	-92.56	6,480.36	0.00	0.00	0.00	
18,400.00	88.95	179.44	11,965.69	-6,579.96	-91.58	6,580.33	0.00	0.00	0.00	
18,500.00	88.95	179.44	11,967.52	-6,679.94	-90.60	6,680.30	0.00	0.00	0.00	
18,600.00	88.95	179.44	11,969.35	-6,779.92	-89.62	6,780.27	0.00	0.00	0.00	
18,700.00	88.95	179.44	11,971.18	-6,879.90	-88.64	6,880.25	0.00	0.00	0.00	
18,800.00	88.95	179.44	11,973.01	-6,979.88	-87.66	6,980.22	0.00	0.00	0.00	
18,900.00	88.95	179.44	11,974.84	-7,079.86	-86.68	7,080.19	0.00	0.00	0.00	
19,000.00	88.95	179.44	11,976.67	-7,179.83	-85.70	7,180.16	0.00	0.00	0.00	
19,100.00	88.95	179.44	11,978.50	-7,279.81	-84.72	7,280.14	0.00	0.00	0.00	



Total Directional Services

Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	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)	
19,200.00	88.95	179.44	11,980.33	-7,379.79	-83.74	7,380.11	0.00	0.00	0.00	
19,300.00	88.95	179.44	11,982.16	-7,479.77	-82.76	7,480.08	0.00	0.00	0.00	
19,400.00	88.95	179.44	11,983.99	-7,579.75	-81.79	7,580.05	0.00	0.00	0.00	
19,500.00	88.95	179.44	11,985.82	-7,679.73	-80.81	7,680.03	0.00	0.00	0.00	
19,600.00	88.95	179.44	11,987.65	-7,779.70	-79.83	7,780.00	0.00	0.00	0.00	
19,700.00	88.95	179.44	11,989.48	-7,879.68	-78.85	7,879.97	0.00	0.00	0.00	
19,800.00	88.95	179.44	11,991.31	-7,979.66	-77.87	7,979.94	0.00	0.00	0.00	
19,900.00	88.95	179.44	11,993.14	-8,079.64	-76.89	8,079.92	0.00	0.00	0.00	
20,000.00	88.95	179.44	11,994.97	-8,179.62	-75.91	8,179.89	0.00	0.00	0.00	
20,100.00	88.95	179.44	11,996.80	-8,279.60	-74.93	8,279.86	0.00	0.00	0.00	
20,200.00	88.95	179.44	11,998.63	-8,379.58	-73.95	8,379.83	0.00	0.00	0.00	
20,300.00	88.95	179.44	12,000.46	-8,479.55	-72.97	8,479.81	0.00	0.00	0.00	
20,400.00	88.95	179.44	12,002.29	-8,579.53	-71.99	8,579.78	0.00	0.00	0.00	
20,500.00	88.95	179.44	12,004.13	-8,679.51	-71.01	8,679.75	0.00	0.00	0.00	
20,600.00	88.95	179.44	12,005.96	-8,779.49	-70.03	8,779.73	0.00	0.00	0.00	
20,700.00	88.95	179.44	12,007.79	-8,879.47	-69.05	8,879.70	0.00	0.00	0.00	
20,800.00	88.95	179.44	12,009.62	-8,979.45	-68.07	8,979.67	0.00	0.00	0.00	
20,900.00	88.95	179.44	12,011.45	-9,079.42	-67.09	9,079.64	0.00	0.00	0.00	
21,000.00	88.95	179.44	12,013.28	-9,179.40	-66.11	9,179.62	0.00	0.00	0.00	
21,100.00	88.95	179.44	12,015.11	-9,279.38	-65.13	9,279.59	0.00	0.00	0.00	
21,200.00	88.95	179.44	12,016.94	-9,379.36	-64.16	9,379.56	0.00	0.00	0.00	
21,300.00	88.95	179.44	12,018.77	-9,479.34	-63.18	9,479.53	0.00	0.00	0.00	
21,400.00	88.95	179.44	12,020.60	-9,579.32	-62.20	9,579.51	0.00	0.00	0.00	
21,500.00	88.95	179.44	12,022.43	-9,679.30	-61.22	9,679.48	0.00	0.00	0.00	
21,600.00	88.95	179.44	12,024.26	-9,779.27	-60.24	9,779.45	0.00	0.00	0.00	
21,700.00	88.95	179.44	12,026.09	-9,879.25	-59.26	9,879.42	0.00	0.00	0.00	
21,800.00	88.95	179.44	12,027.92	-9,979.23	-58.28	9,979.40	0.00	0.00	0.00	
21,900.00	88.95	179.44	12,029.75	-10,079.21	-57.30	10,079.37	0.00	0.00	0.00	
22,000.00	88.95	179.44	12,031.58	-10,179.19	-56.32	10,179.34	0.00	0.00	0.00	
22,100.00	88.95	179.44	12,033.41	-10,279.17	-55.34	10,279.31	0.00	0.00	0.00	
22,200.00	88.95	179.44	12,035.24	-10,379.14	-54.36	10,379.29	0.00	0.00	0.00	
22,300.00	88.95	179.44	12,037.07	-10,479.12	-53.38	10,479.26	0.00	0.00	0.00	
22,400.00	88.95	179.44	12,038.90	-10,579.10	-52.40	10,579.23	0.00	0.00	0.00	
22,490.07	88.95	179.44	12,040.55	-10,669.15	-51.52	10,669.27	0.00	0.00	0.00	
TD at 22490.07 - PBHL (LHS Wildcat Fed Com 604H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL (LHS Wildcat Fed C - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	394,426.10	856,923.28	32.080260	-103.314411	
LP (LHS Wildcat Fed Cc - plan misses target center by 1.00usft at 12181.15usft MD (11851.86 TVD, -362.46 N, -152.49 E) - Point	0.00	0.00	11,852.86	-362.44	-152.49	394,063.66	856,770.79	32.079268	-103.314914	
PBHL (LHS Wildcat Fed - plan hits target center - Point	0.00	0.00	12,040.55	-10,669.15	-51.52	383,756.95	856,871.76	32.050937	-103.314902	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Company:	Franklin Mountain Energy	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Project:	Lea County, NM (NAD83)	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site:	LHS Wildcat Fed Com	North Reference:	Grid
Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,500.00	5,500.00	0.00	0.00	Start Build 1.50	
5,900.08	5,899.35	16.43	-12.98	Start 2037.47 hold at 5900.08 MD	
7,937.55	7,925.65	183.57	-145.02	Start Drop -1.50	
8,337.63	8,325.00	200.00	-158.00	Start 2954.00 hold at 8337.63 MD	
11,291.63	11,279.00	200.00	-158.00	Start DLS 10.00 TFO 179.44	
12,181.14	11,851.86	-362.44	-152.49	Start 10308.93 hold at 12181.14 MD	
22,490.07	12,040.55	-10,669.15	-51.52	TD at 22490.07	



Franklin Mountain Energy

Lea County, NM (NAD83)
LHS Wildcat Fed Com
LHS Wildcat Fed Com 604H

OH
Plan #2

Anticollision Report

25 February, 2020



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	22,490.07	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	4,500.00	4,526.00	2,354.23	2,331.66	104.297	CC
Bus Driver Fed Com 602H - OH - Plan #2	22,490.07	22,572.89	2,444.99	2,187.34	9.490	ES, SF
Bus Driver Fed Com 702H - OH - Plan #2	4,500.00	4,526.20	2,389.21	2,366.64	105.845	CC, ES
Bus Driver Fed Com 702H - OH - Plan #2	22,490.07	22,791.29	2,906.97	2,649.49	11.290	SF
Kasten Fed Com 603H - OH - Plan #2	11,813.58	11,908.99	1,339.45	1,280.52	22.729	CC
Kasten Fed Com 603H - OH - Plan #2	22,490.07	22,574.82	1,340.08	1,082.42	5.201	ES, SF
Kasten Fed Com 703H - OH - Plan #2	11,291.63	11,324.81	1,908.33	1,851.42	33.537	CC
Kasten Fed Com 703H - OH - Plan #2	22,490.07	22,865.37	1,933.01	1,676.89	7.547	ES, SF
Judge Baylor Fed Com						
Judge Baylor Fed Com 601H - OH - Plan #2	8,049.29	7,889.50	4,232.76	4,192.66	105.538	CC
Judge Baylor Fed Com 601H - OH - Plan #2	22,490.07	22,569.96	4,256.02	3,999.08	16.564	ES, SF
Judge Baylor Fed Com 701H - OH - Plan #2	11,325.71	11,361.71	3,933.88	3,876.75	68.854	CC
Judge Baylor Fed Com 701H - OH - Plan #2	22,490.07	22,858.50	3,954.83	3,698.24	15.413	ES, SF
LHS Wildcat Fed Com						
LHS Wildcat Fed Com 705H - OH - Plan #2	4,416.53	4,416.93	35.00	12.92	1.585	CC
LHS Wildcat Fed Com 705H - OH - Plan #2	4,500.00	4,500.40	35.00	12.49	1.555	ES
LHS Wildcat Fed Com 705H - OH - Plan #2	4,600.00	4,600.00	35.77	12.76	1.555	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		Minimum Separation		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	Warning
0.00	0.00	26.00	26.00	0.00	0.04	-89.03	39.98	-2,353.89	2,354.23				
100.00	100.00	126.00	126.00	0.14	0.23	-89.03	39.98	-2,353.89	2,354.23	2,353.96	0.27	8,586.125	
200.00	200.00	226.00	226.00	0.50	0.59	-89.03	39.98	-2,353.89	2,354.23	2,353.45	0.78	3,034.149	
300.00	300.00	326.00	326.00	0.86	0.95	-89.03	39.98	-2,353.89	2,354.23	2,352.95	1.28	1,836.719	
400.00	400.00	426.00	426.00	1.22	1.31	-89.03	39.98	-2,353.89	2,354.23	2,352.44	1.79	1,316.512	
500.00	500.00	526.00	526.00	1.58	1.67	-89.03	39.98	-2,353.89	2,354.23	2,351.93	2.29	1,025.844	
600.00	600.00	626.00	626.00	1.93	2.03	-89.03	39.98	-2,353.89	2,354.23	2,351.43	2.80	840.285	
700.00	700.00	726.00	726.00	2.29	2.39	-89.03	39.98	-2,353.89	2,354.23	2,350.92	3.31	711.561	
800.00	800.00	826.00	826.00	2.65	2.74	-89.03	39.98	-2,353.89	2,354.23	2,350.41	3.82	617.032	
900.00	900.00	926.00	926.00	3.01	3.10	-89.03	39.98	-2,353.89	2,354.23	2,349.91	4.32	544.671	

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
1,000.00	1,000.00	1,026.00	1,026.00	3.37	3.46	-89.03	39.98	-2,353.89	2,354.23	2,349.40	4.83	487.499		
1,100.00	1,100.00	1,126.00	1,126.00	3.73	3.82	-89.03	39.98	-2,353.89	2,354.23	2,348.89	5.34	441.188		
1,200.00	1,200.00	1,226.00	1,226.00	4.08	4.18	-89.03	39.98	-2,353.89	2,354.23	2,348.39	5.84	402.912		
1,300.00	1,300.00	1,326.00	1,326.00	4.44	4.54	-89.03	39.98	-2,353.89	2,354.23	2,347.88	6.35	370.747		
1,400.00	1,400.00	1,426.00	1,426.00	4.80	4.89	-89.03	39.98	-2,353.89	2,354.23	2,347.37	6.86	343.338		
1,500.00	1,500.00	1,526.00	1,526.00	5.16	5.25	-89.03	39.98	-2,353.89	2,354.23	2,346.87	7.36	319.702		
1,600.00	1,600.00	1,626.00	1,626.00	5.52	5.61	-89.03	39.98	-2,353.89	2,354.23	2,346.36	7.87	299.111		
1,700.00	1,700.00	1,726.00	1,726.00	5.88	5.97	-89.03	39.98	-2,353.89	2,354.23	2,345.85	8.38	281.012		
1,800.00	1,800.00	1,826.00	1,826.00	6.24	6.33	-89.03	39.98	-2,353.89	2,354.23	2,345.34	8.88	264.978		
1,900.00	1,900.00	1,926.00	1,926.00	6.59	6.69	-89.03	39.98	-2,353.89	2,354.23	2,344.84	9.39	250.675		
2,000.00	2,000.00	2,026.00	2,026.00	6.95	7.05	-89.03	39.98	-2,353.89	2,354.23	2,344.33	9.90	237.836		
2,100.00	2,100.00	2,126.00	2,126.00	7.31	7.40	-89.03	39.98	-2,353.89	2,354.23	2,343.82	10.41	226.249		
2,200.00	2,200.00	2,226.00	2,226.00	7.67	7.76	-89.03	39.98	-2,353.89	2,354.23	2,343.32	10.91	215.739		
2,300.00	2,300.00	2,326.00	2,326.00	8.03	8.12	-89.03	39.98	-2,353.89	2,354.23	2,342.81	11.42	206.161		
2,400.00	2,400.00	2,426.00	2,426.00	8.39	8.48	-89.03	39.98	-2,353.89	2,354.23	2,342.30	11.93	197.398		
2,500.00	2,500.00	2,526.00	2,526.00	8.74	8.84	-89.03	39.98	-2,353.89	2,354.23	2,341.80	12.43	189.349		
2,600.00	2,600.00	2,626.00	2,626.00	9.10	9.20	-89.03	39.98	-2,353.89	2,354.23	2,341.29	12.94	181.931		
2,700.00	2,700.00	2,726.00	2,726.00	9.46	9.56	-89.03	39.98	-2,353.89	2,354.23	2,340.78	13.45	175.073		
2,800.00	2,800.00	2,826.00	2,826.00	9.82	9.91	-89.03	39.98	-2,353.89	2,354.23	2,340.28	13.95	168.712		
2,900.00	2,900.00	2,926.00	2,926.00	10.18	10.27	-89.03	39.98	-2,353.89	2,354.23	2,339.77	14.46	162.798		
3,000.00	3,000.00	3,026.00	3,026.00	10.54	10.63	-89.03	39.98	-2,353.89	2,354.23	2,339.26	14.97	157.284		
3,100.00	3,100.00	3,126.00	3,126.00	10.90	10.99	-89.03	39.98	-2,353.89	2,354.23	2,338.75	15.47	152.132		
3,200.00	3,200.00	3,226.00	3,226.00	11.25	11.35	-89.03	39.98	-2,353.89	2,354.23	2,338.25	15.98	147.306		
3,300.00	3,300.00	3,326.00	3,326.00	11.61	11.71	-89.03	39.98	-2,353.89	2,354.23	2,337.74	16.49	142.777		
3,400.00	3,400.00	3,426.00	3,426.00	11.97	12.06	-89.03	39.98	-2,353.89	2,354.23	2,337.23	17.00	138.518		
3,500.00	3,500.00	3,526.00	3,526.00	12.33	12.42	-89.03	39.98	-2,353.89	2,354.23	2,336.73	17.50	134.506		
3,600.00	3,600.00	3,626.00	3,626.00	12.69	12.78	-89.03	39.98	-2,353.89	2,354.23	2,336.22	18.01	130.720		
3,700.00	3,700.00	3,726.00	3,726.00	13.05	13.14	-89.03	39.98	-2,353.89	2,354.23	2,335.71	18.52	127.141		
3,800.00	3,800.00	3,826.00	3,826.00	13.41	13.50	-89.03	39.98	-2,353.89	2,354.23	2,335.21	19.02	123.753		
3,900.00	3,900.00	3,926.00	3,926.00	13.76	13.86	-89.03	39.98	-2,353.89	2,354.23	2,334.70	19.53	120.541		
4,000.00	4,000.00	4,026.00	4,026.00	14.12	14.22	-89.03	39.98	-2,353.89	2,354.23	2,334.19	20.04	117.491		
4,100.00	4,100.00	4,126.00	4,126.00	14.48	14.57	-89.03	39.98	-2,353.89	2,354.23	2,333.69	20.54	114.592		
4,200.00	4,200.00	4,226.00	4,226.00	14.84	14.93	-89.03	39.98	-2,353.89	2,354.23	2,333.18	21.05	111.832		
4,300.00	4,300.00	4,326.00	4,326.00	15.20	15.29	-89.03	39.98	-2,353.89	2,354.23	2,332.67	21.56	109.203		
4,400.00	4,400.00	4,426.00	4,426.00	15.56	15.65	-89.03	39.98	-2,353.89	2,354.23	2,332.16	22.07	106.694		
4,500.00	4,500.00	4,526.00	4,526.00	15.91	16.01	-89.03	39.98	-2,353.89	2,354.23	2,331.66	22.57	104.297 CC		
4,600.00	4,600.00	4,600.00	4,600.00	16.27	16.27	-89.02	40.19	-2,354.14	2,354.63	2,331.62	23.01	102.327		
4,700.00	4,700.00	4,669.00	4,668.98	16.63	16.51	-89.00	41.17	-2,355.31	2,356.36	2,332.93	23.43	100.564		
4,800.00	4,800.00	4,736.53	4,736.45	16.99	16.75	-88.96	42.91	-2,357.38	2,359.47	2,335.62	23.84	98.952		
4,900.00	4,900.00	4,800.00	4,799.82	17.35	16.98	-88.90	45.24	-2,360.15	2,363.95	2,339.71	24.24	97.514		
5,000.00	5,000.00	4,883.01	4,882.59	17.71	17.27	-88.81	49.31	-2,365.00	2,369.85	2,345.16	24.69	95.970		
5,100.00	5,100.00	4,965.08	4,964.35	18.07	17.56	-88.70	53.91	-2,370.47	2,376.58	2,351.44	25.14	94.529		
5,200.00	5,200.00	5,064.70	5,063.59	18.42	17.92	-88.57	59.49	-2,377.11	2,383.39	2,357.75	25.64	92.947		
5,300.00	5,300.00	5,164.32	5,162.83	18.78	18.27	-88.44	65.07	-2,383.75	2,390.21	2,364.07	26.14	91.426		
5,400.00	5,400.00	5,263.94	5,262.08	19.14	18.63	-88.31	70.65	-2,390.39	2,397.05	2,370.40	26.65	89.960		
5,500.00	5,500.00	5,363.56	5,361.32	19.50	18.99	-88.18	76.23	-2,397.03	2,403.89	2,376.74	27.15	88.548		
5,600.00	5,599.99	5,463.28	5,460.66	19.86	19.34	-49.70	81.82	-2,403.68	2,409.90	2,382.25	27.65	87.160		
5,700.00	5,699.91	5,563.16	5,560.16	20.21	19.70	-49.59	87.41	-2,410.34	2,414.23	2,386.08	28.15	85.764		
5,800.00	5,799.69	5,663.12	5,659.74	20.57	20.06	-49.55	93.01	-2,417.00	2,416.86	2,388.21	28.65	84.356		
5,900.08	5,899.35	5,763.18	5,759.41	20.92	20.43	-49.58	98.62	-2,423.67	2,417.79	2,388.64	29.15	82.936		
6,000.00	5,998.72	5,863.07	5,858.92	21.28	20.79	-49.64	104.21	-2,430.33	2,417.88	2,388.23	29.65	81.536		
6,100.00	6,098.17	5,963.03	5,958.51	21.63	21.15	-49.70	109.81	-2,436.99	2,417.97	2,387.81	30.16	80.179		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
6,200.00	6,197.63	6,063.00	6,058.10	21.99	21.52	-49.76	115.41	-2,443.65	2,418.06	2,387.40	30.66	78.864		
6,300.00	6,297.08	6,162.96	6,157.68	22.35	21.88	-49.83	121.01	-2,450.32	2,418.15	2,386.99	31.17	77.589		
6,400.00	6,396.53	6,262.93	6,257.27	22.71	22.25	-49.89	126.61	-2,456.98	2,418.25	2,386.58	31.67	76.353		
6,500.00	6,495.98	6,362.90	6,356.85	23.08	22.61	-49.95	132.21	-2,463.65	2,418.35	2,386.17	32.18	75.154		
6,600.00	6,595.43	6,462.86	6,456.44	23.44	22.98	-50.01	137.81	-2,470.31	2,418.45	2,385.77	32.69	73.990		
6,700.00	6,694.89	6,562.83	6,556.03	23.80	23.35	-50.07	143.41	-2,476.97	2,418.56	2,385.37	33.19	72.861		
6,800.00	6,794.34	6,662.79	6,655.61	24.17	23.71	-50.14	149.01	-2,483.64	2,418.67	2,384.97	33.70	71.764		
6,900.00	6,893.79	6,762.76	6,755.20	24.53	24.08	-50.20	154.61	-2,490.30	2,418.78	2,384.57	34.21	70.698		
7,000.00	6,993.24	6,862.73	6,854.79	24.90	24.45	-50.26	160.21	-2,496.96	2,418.89	2,384.17	34.72	69.662		
7,100.00	7,092.69	6,962.69	6,954.37	25.27	24.82	-50.32	165.81	-2,503.63	2,419.01	2,383.78	35.23	68.655		
7,200.00	7,192.15	7,062.66	7,053.96	25.63	25.19	-50.38	171.41	-2,510.29	2,419.13	2,383.39	35.75	67.676		
7,300.00	7,291.60	7,162.62	7,153.54	26.00	25.56	-50.45	177.01	-2,516.96	2,419.25	2,383.00	36.26	66.723		
7,400.00	7,391.05	7,262.59	7,253.13	26.37	25.93	-50.51	182.61	-2,523.62	2,419.38	2,382.61	36.77	65.796		
7,500.00	7,490.50	7,362.55	7,352.72	26.74	26.30	-50.57	188.21	-2,530.28	2,419.51	2,382.22	37.28	64.894		
7,600.00	7,589.95	7,462.52	7,452.30	27.11	26.67	-50.63	193.81	-2,536.95	2,419.64	2,381.84	37.80	64.015		
7,700.00	7,689.41	7,562.49	7,551.89	27.48	27.04	-50.69	199.41	-2,543.61	2,419.77	2,381.46	38.31	63.159		
7,800.00	7,788.86	7,662.45	7,651.47	27.86	27.41	-50.75	205.01	-2,550.27	2,419.91	2,381.08	38.83	62.325		
7,900.00	7,888.31	7,762.42	7,751.06	28.23	27.78	-50.82	210.61	-2,556.94	2,420.05	2,380.71	39.34	61.512		
7,937.55	7,925.65	7,799.96	7,788.46	28.37	27.92	-50.84	212.71	-2,559.44	2,420.10	2,380.57	39.54	61.212		
8,000.00	7,987.81	7,862.39	7,850.65	28.60	28.15	-50.87	216.21	-2,563.60	2,420.51	2,380.66	39.86	60.728		
8,100.00	8,087.53	7,962.37	7,950.25	28.97	28.53	-50.90	221.81	-2,570.27	2,422.51	2,382.14	40.37	60.005		
8,200.00	8,187.40	8,062.28	8,049.79	29.33	28.90	-50.91	227.41	-2,576.93	2,426.17	2,385.28	40.88	59.344		
8,300.00	8,287.37	8,202.95	8,189.99	29.69	29.42	-50.85	234.71	-2,585.62	2,431.12	2,389.60	41.52	58.560		
8,337.63	8,325.00	8,277.18	8,264.11	29.82	29.69	-89.12	237.37	-2,588.79	2,432.63	2,390.82	41.81	58.185		
8,400.00	8,387.37	8,400.46	8,387.32	30.04	30.13	-89.06	239.75	-2,591.61	2,434.08	2,391.80	42.28	57.573		
8,500.00	8,487.37	8,526.51	8,513.37	30.40	30.58	-89.06	239.98	-2,591.89	2,434.22	2,391.38	42.84	56.821		
8,600.00	8,587.37	8,626.51	8,613.37	30.75	30.93	-89.06	239.98	-2,591.89	2,434.22	2,390.88	43.34	56.162		
8,700.00	8,687.37	8,726.51	8,713.37	31.11	31.28	-89.06	239.98	-2,591.89	2,434.22	2,390.37	43.84	55.519		
8,800.00	8,787.37	8,826.51	8,813.37	31.46	31.64	-89.06	239.98	-2,591.89	2,434.22	2,389.87	44.35	54.890		
8,900.00	8,887.37	8,926.51	8,913.37	31.82	31.99	-89.06	239.98	-2,591.89	2,434.22	2,389.37	44.85	54.275		
9,000.00	8,987.37	9,026.51	9,013.37	32.17	32.34	-89.06	239.98	-2,591.89	2,434.22	2,388.87	45.35	53.673		
9,100.00	9,087.37	9,126.51	9,113.37	32.53	32.70	-89.06	239.98	-2,591.89	2,434.22	2,388.36	45.86	53.085		
9,200.00	9,187.37	9,226.51	9,213.37	32.88	33.05	-89.06	239.98	-2,591.89	2,434.22	2,387.86	46.36	52.509		
9,300.00	9,287.37	9,326.51	9,313.37	33.24	33.40	-89.06	239.98	-2,591.89	2,434.22	2,387.36	46.86	51.945		
9,400.00	9,387.37	9,426.51	9,413.37	33.60	33.76	-89.06	239.98	-2,591.89	2,434.22	2,386.85	47.36	51.394		
9,500.00	9,487.37	9,526.51	9,513.37	33.95	34.11	-89.06	239.98	-2,591.89	2,434.22	2,386.35	47.87	50.853		
9,600.00	9,587.37	9,626.51	9,613.37	34.31	34.47	-89.06	239.98	-2,591.89	2,434.22	2,385.85	48.37	50.324		
9,700.00	9,687.37	9,726.51	9,713.37	34.66	34.82	-89.06	239.98	-2,591.89	2,434.22	2,385.34	48.87	49.806		
9,800.00	9,787.37	9,826.51	9,813.37	35.02	35.17	-89.06	239.98	-2,591.89	2,434.22	2,384.84	49.38	49.298		
9,900.00	9,887.37	9,926.51	9,913.37	35.37	35.53	-89.06	239.98	-2,591.89	2,434.22	2,384.34	49.88	48.801		
10,000.00	9,987.37	10,026.51	10,013.37	35.73	35.88	-89.06	239.98	-2,591.89	2,434.22	2,383.83	50.38	48.313		
10,100.00	10,087.37	10,126.51	10,113.37	36.09	36.24	-89.06	239.98	-2,591.89	2,434.22	2,383.33	50.89	47.835		
10,200.00	10,187.37	10,226.51	10,213.37	36.44	36.59	-89.06	239.98	-2,591.89	2,434.22	2,382.83	51.39	47.366		
10,300.00	10,287.37	10,326.51	10,313.37	36.80	36.95	-89.06	239.98	-2,591.89	2,434.22	2,382.32	51.89	46.907		
10,400.00	10,387.37	10,426.51	10,413.37	37.15	37.30	-89.06	239.98	-2,591.89	2,434.22	2,381.82	52.40	46.456		
10,500.00	10,487.37	10,526.51	10,513.37	37.51	37.65	-89.06	239.98	-2,591.89	2,434.22	2,381.32	52.90	46.013		
10,600.00	10,587.37	10,626.51	10,613.37	37.87	38.01	-89.06	239.98	-2,591.89	2,434.22	2,380.81	53.41	45.579		
10,700.00	10,687.37	10,726.51	10,713.37	38.22	38.36	-89.06	239.98	-2,591.89	2,434.22	2,380.31	53.91	45.153		
10,800.00	10,787.37	10,826.51	10,813.37	38.58	38.72	-89.06	239.98	-2,591.89	2,434.22	2,379.80	54.41	44.735		
10,900.00	10,887.37	10,926.51	10,913.37	38.94	39.07	-89.06	239.98	-2,591.89	2,434.22	2,379.30	54.92	44.324		
11,000.00	10,987.37	11,026.51	11,013.37	39.29	39.43	-89.06	239.98	-2,591.89	2,434.22	2,378.80	55.42	43.921		
11,100.00	11,087.37	11,126.51	11,113.37	39.65	39.78	-89.06	239.98	-2,591.89	2,434.22	2,378.29	55.93	43.525		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
11,200.00	11,187.37	11,226.51	11,213.37	40.00	40.14	-89.06	239.98	-2,591.89	2,434.22	2,377.79	56.43	43.136		
11,291.63	11,279.00	11,318.74	11,305.60	40.33	40.47	-89.06	239.95	-2,591.89	2,434.22	2,377.32	56.89	42.786		
11,300.00	11,287.37	11,328.11	11,314.97	40.36	40.50	91.50	239.78	-2,591.89	2,434.22	2,377.28	56.94	42.754		
11,350.00	11,337.27	11,384.04	11,370.72	40.52	40.68	91.48	235.60	-2,591.85	2,434.20	2,377.03	57.17	42.577		
11,400.00	11,386.73	11,439.83	11,425.66	40.67	40.84	91.45	226.03	-2,591.77	2,434.17	2,376.78	57.39	42.411		
11,450.00	11,435.36	11,495.44	11,479.24	40.81	41.00	91.40	211.22	-2,591.64	2,434.14	2,376.53	57.61	42.254		
11,500.00	11,482.81	11,550.79	11,530.90	40.95	41.15	91.34	191.40	-2,591.46	2,434.10	2,376.30	57.81	42.106		
11,550.00	11,528.70	11,605.85	11,580.15	41.08	41.28	91.28	166.82	-2,591.25	2,434.06	2,376.06	58.00	41.968		
11,600.00	11,572.70	11,660.57	11,626.53	41.20	41.40	91.20	137.83	-2,591.00	2,434.02	2,375.84	58.18	41.836		
11,650.00	11,614.46	11,714.90	11,669.64	41.31	41.50	91.11	104.80	-2,590.71	2,433.98	2,375.63	58.35	41.711		
11,700.00	11,653.66	11,768.82	11,709.14	41.40	41.59	91.01	68.13	-2,590.39	2,433.94	2,375.42	58.52	41.591		
11,750.00	11,690.02	11,822.29	11,744.74	41.49	41.67	90.91	28.26	-2,590.04	2,433.91	2,375.23	58.68	41.475		
11,800.00	11,723.25	11,875.30	11,776.21	41.58	41.73	90.80	-14.37	-2,589.66	2,433.88	2,375.04	58.85	41.360		
11,850.00	11,753.09	11,927.82	11,803.38	41.67	41.80	90.68	-59.30	-2,589.27	2,433.87	2,374.86	59.01	41.247		
11,900.00	11,779.33	11,979.86	11,826.12	41.77	41.93	90.56	-106.08	-2,588.86	2,433.86	2,374.69	59.17	41.134		
11,907.24	11,782.82	11,987.35	11,829.04	41.78	41.94	90.54	-112.97	-2,588.80	2,433.86	2,374.67	59.19	41.118		
11,950.00	11,801.76	12,031.40	11,844.38	41.88	42.05	90.43	-154.26	-2,588.44	2,433.86	2,374.53	59.33	41.020		
12,000.00	11,820.21	12,082.45	11,858.12	41.99	42.18	90.31	-203.40	-2,588.01	2,433.88	2,374.38	59.50	40.906		
12,050.00	11,834.54	12,133.00	11,867.36	42.11	42.31	90.18	-253.09	-2,587.58	2,433.91	2,374.24	59.67	40.790		
12,100.00	11,844.65	12,183.08	11,872.17	42.23	42.43	90.05	-302.92	-2,587.14	2,433.95	2,374.11	59.84	40.672		
12,150.00	11,850.45	12,232.88	11,873.34	42.36	42.57	89.93	-352.69	-2,586.70	2,434.00	2,373.98	60.02	40.550		
12,181.14	11,851.86	12,264.00	11,873.83	42.44	42.66	89.91	-383.81	-2,586.43	2,434.04	2,373.90	60.14	40.472		
12,200.00	11,852.21	12,282.86	11,874.13	42.49	42.72	89.91	-402.66	-2,586.27	2,434.06	2,373.85	60.21	40.425		
12,300.00	11,854.04	12,382.86	11,875.71	42.78	43.06	89.90	-502.65	-2,585.39	2,434.16	2,373.51	60.65	40.132		
12,400.00	11,855.87	12,482.86	11,877.29	43.14	43.45	89.89	-602.63	-2,584.52	2,434.27	2,373.09	61.18	39.788		
12,500.00	11,857.70	12,582.86	11,878.86	43.56	43.91	89.89	-702.61	-2,583.64	2,434.37	2,372.58	61.79	39.396		
12,600.00	11,859.53	12,682.86	11,880.44	44.04	44.42	89.88	-802.60	-2,582.77	2,434.48	2,371.99	62.49	38.961		
12,700.00	11,861.36	12,782.86	11,882.02	44.57	44.98	89.88	-902.58	-2,581.89	2,434.58	2,371.33	63.26	38.487		
12,800.00	11,863.19	12,882.86	11,883.60	45.15	45.60	89.87	-1,002.56	-2,581.02	2,434.69	2,370.58	64.11	37.980		
12,900.00	11,865.02	12,982.86	11,885.17	45.79	46.27	89.86	-1,102.55	-2,580.14	2,434.79	2,369.77	65.03	37.443		
13,000.00	11,866.85	13,082.86	11,886.75	46.48	46.98	89.86	-1,202.53	-2,579.27	2,434.90	2,368.88	66.02	36.883		
13,100.00	11,868.68	13,182.86	11,888.33	47.21	47.74	89.85	-1,302.51	-2,578.39	2,435.00	2,367.93	67.07	36.303		
13,200.00	11,870.51	13,282.85	11,889.91	47.99	48.55	89.85	-1,402.50	-2,577.52	2,435.11	2,366.91	68.20	35.708		
13,300.00	11,872.34	13,382.85	11,891.49	48.81	49.40	89.84	-1,502.48	-2,576.64	2,435.21	2,365.84	69.38	35.101		
13,400.00	11,874.17	13,482.85	11,893.06	49.68	50.28	89.83	-1,602.46	-2,575.77	2,435.32	2,364.70	70.62	34.487		
13,500.00	11,876.00	13,582.85	11,894.64	50.58	51.21	89.83	-1,702.45	-2,574.89	2,435.42	2,363.51	71.91	33.867		
13,600.00	11,877.83	13,682.85	11,896.22	51.52	52.17	89.82	-1,802.43	-2,574.02	2,435.53	2,362.27	73.26	33.247		
13,700.00	11,879.66	13,782.85	11,897.80	52.50	53.16	89.82	-1,902.41	-2,573.14	2,435.63	2,360.98	74.65	32.627		
13,800.00	11,881.49	13,882.85	11,899.38	53.51	54.19	89.81	-2,002.40	-2,572.27	2,435.74	2,359.65	76.09	32.010		
13,900.00	11,883.32	13,982.85	11,900.95	54.55	55.25	89.80	-2,102.38	-2,571.39	2,435.85	2,358.27	77.58	31.399		
14,000.00	11,885.15	14,082.85	11,902.53	55.62	56.33	89.80	-2,202.36	-2,570.52	2,435.95	2,356.85	79.10	30.795		
14,100.00	11,886.98	14,182.85	11,904.11	56.72	57.45	89.79	-2,302.35	-2,569.64	2,436.06	2,355.39	80.67	30.199		
14,200.00	11,888.81	14,282.85	11,905.69	57.84	58.59	89.79	-2,402.33	-2,568.77	2,436.16	2,353.89	82.27	29.612		
14,300.00	11,890.64	14,382.85	11,907.27	58.99	59.75	89.78	-2,502.31	-2,567.89	2,436.27	2,352.36	83.90	29.036		
14,400.00	11,892.47	14,482.85	11,908.84	60.17	60.93	89.77	-2,602.30	-2,567.02	2,436.37	2,350.80	85.57	28.471		
14,500.00	11,894.31	14,582.85	11,910.42	61.36	62.14	89.77	-2,702.28	-2,566.14	2,436.48	2,349.21	87.27	27.918		
14,600.00	11,896.14	14,682.85	11,912.00	62.58	63.37	89.76	-2,802.26	-2,565.27	2,436.58	2,347.58	89.00	27.377		
14,700.00	11,897.97	14,782.85	11,913.58	63.81	64.61	89.76	-2,902.25	-2,564.39	2,436.69	2,345.93	90.76	26.849		
14,800.00	11,899.80	14,882.85	11,915.15	65.07	65.88	89.75	-3,002.23	-2,563.52	2,436.79	2,344.26	92.54	26.333		
14,900.00	11,901.63	14,982.85	11,916.73	66.34	67.16	89.74	-3,102.21	-2,562.64	2,436.90	2,342.56	94.34	25.831		
15,000.00	11,903.46	15,082.85	11,918.31	67.63	68.45	89.74	-3,202.20	-2,561.77	2,437.01	2,340.84	96.17	25.341		
15,100.00	11,905.29	15,182.85	11,919.89	68.93	69.76	89.73	-3,302.18	-2,560.89	2,437.11	2,339.09	98.02	24.863		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
15,200.00	11,907.12	15,282.85	11,921.47	70.25	71.09	89.73	-3,402.16	-2,560.02	2,437.22	2,337.33	99.89	24.399					
15,300.00	11,908.95	15,382.85	11,923.04	71.58	72.43	89.72	-3,502.15	-2,559.14	2,437.32	2,335.54	101.78	23.947					
15,400.00	11,910.78	15,482.85	11,924.62	72.93	73.78	89.72	-3,602.13	-2,558.27	2,437.43	2,333.74	103.69	23.507					
15,500.00	11,912.61	15,582.85	11,926.20	74.28	75.14	89.71	-3,702.11	-2,557.39	2,437.53	2,331.92	105.61	23.080					
15,600.00	11,914.44	15,682.85	11,927.78	75.65	76.52	89.70	-3,802.10	-2,556.52	2,437.64	2,330.09	107.55	22.664					
15,700.00	11,916.27	15,782.85	11,929.36	77.03	77.90	89.70	-3,902.08	-2,555.64	2,437.75	2,328.23	109.51	22.260					
15,800.00	11,918.10	15,882.85	11,930.93	78.43	79.30	89.69	-4,002.06	-2,554.77	2,437.85	2,326.37	111.48	21.867					
15,900.00	11,919.93	15,982.84	11,932.51	79.83	80.70	89.69	-4,102.05	-2,553.89	2,437.96	2,324.49	113.47	21.486					
16,000.00	11,921.76	16,082.84	11,934.09	81.24	82.12	89.68	-4,202.03	-2,553.02	2,438.06	2,322.60	115.47	21.115					
16,100.00	11,923.59	16,182.84	11,935.67	82.66	83.54	89.67	-4,302.01	-2,552.14	2,438.17	2,320.69	117.48	20.754					
16,200.00	11,925.42	16,282.84	11,937.25	84.08	84.97	89.67	-4,402.00	-2,551.27	2,438.28	2,318.77	119.50	20.404					
16,300.00	11,927.25	16,382.84	11,938.82	85.52	86.41	89.66	-4,501.98	-2,550.39	2,438.38	2,316.85	121.54	20.063					
16,400.00	11,929.08	16,482.84	11,940.40	86.96	87.86	89.66	-4,601.96	-2,549.52	2,438.49	2,314.91	123.58	19.732					
16,500.00	11,930.91	16,582.84	11,941.98	88.41	89.32	89.65	-4,701.95	-2,548.64	2,438.59	2,312.96	125.64	19.410					
16,600.00	11,932.74	16,682.84	11,943.56	89.87	90.78	89.64	-4,801.93	-2,547.77	2,438.70	2,311.00	127.70	19.097					
16,700.00	11,934.57	16,782.84	11,945.14	91.34	92.24	89.64	-4,901.92	-2,546.89	2,438.81	2,309.03	129.77	18.793					
16,800.00	11,936.40	16,882.84	11,946.71	92.81	93.72	89.63	-5,001.90	-2,546.02	2,438.91	2,307.05	131.86	18.497					
16,900.00	11,938.23	16,982.84	11,948.29	94.29	95.20	89.63	-5,101.88	-2,545.14	2,439.02	2,305.07	133.95	18.209					
17,000.00	11,940.06	17,082.84	11,949.87	95.77	96.68	89.62	-5,201.87	-2,544.27	2,439.12	2,303.08	136.05	17.928					
17,100.00	11,941.89	17,182.84	11,951.45	97.26	98.17	89.61	-5,301.85	-2,543.39	2,439.23	2,301.08	138.15	17.656					
17,200.00	11,943.72	17,282.84	11,953.02	98.75	99.67	89.61	-5,401.83	-2,542.52	2,439.34	2,299.07	140.27	17.390					
17,300.00	11,945.55	17,382.84	11,954.60	100.25	101.17	89.60	-5,501.82	-2,541.64	2,439.44	2,297.05	142.39	17.132					
17,400.00	11,947.38	17,482.84	11,956.18	101.75	102.67	89.60	-5,601.80	-2,540.77	2,439.55	2,295.03	144.52	16.881					
17,500.00	11,949.22	17,582.84	11,957.76	103.26	104.18	89.59	-5,701.78	-2,539.89	2,439.65	2,293.00	146.65	16.636					
17,600.00	11,951.05	17,682.84	11,959.34	104.77	105.70	89.59	-5,801.77	-2,539.02	2,439.76	2,290.97	148.79	16.397					
17,700.00	11,952.88	17,782.84	11,960.91	106.29	107.22	89.58	-5,901.75	-2,538.14	2,439.87	2,288.93	150.94	16.165					
17,800.00	11,954.71	17,882.84	11,962.49	107.81	108.74	89.57	-6,001.73	-2,537.27	2,439.97	2,286.88	153.09	15.938					
17,900.00	11,956.54	17,982.84	11,964.07	109.33	110.26	89.57	-6,101.72	-2,536.39	2,440.08	2,284.83	155.25	15.717					
18,000.00	11,958.37	18,082.84	11,965.65	110.86	111.79	89.56	-6,201.70	-2,535.52	2,440.19	2,282.78	157.41	15.502					
18,100.00	11,960.20	18,182.84	11,967.23	112.39	113.33	89.56	-6,301.68	-2,534.64	2,440.29	2,280.72	159.58	15.292					
18,200.00	11,962.03	18,282.84	11,968.80	113.93	114.86	89.55	-6,401.67	-2,533.77	2,440.40	2,278.65	161.75	15.088					
18,300.00	11,963.86	18,382.84	11,970.38	115.46	116.40	89.54	-6,501.65	-2,532.89	2,440.51	2,276.58	163.92	14.888					
18,400.00	11,965.69	18,482.84	11,971.96	117.01	117.94	89.54	-6,601.63	-2,532.02	2,440.61	2,274.51	166.10	14.693					
18,500.00	11,967.52	18,582.84	11,973.54	118.55	119.49	89.53	-6,701.62	-2,531.14	2,440.72	2,272.43	168.29	14.503					
18,600.00	11,969.35	18,682.83	11,975.12	120.10	121.04	89.53	-6,801.60	-2,530.27	2,440.83	2,270.35	170.48	14.317					
18,700.00	11,971.18	18,782.83	11,976.69	121.65	122.59	89.52	-6,901.58	-2,529.39	2,440.93	2,268.26	172.67	14.136					
18,800.00	11,973.01	18,882.83	11,978.27	123.20	124.14	89.51	-7,001.57	-2,528.52	2,441.04	2,266.17	174.87	13.959					
18,900.00	11,974.84	18,982.83	11,979.85	124.75	125.70	89.51	-7,101.55	-2,527.64	2,441.15	2,264.08	177.07	13.786					
19,000.00	11,976.67	19,082.83	11,981.43	126.31	127.25	89.50	-7,201.53	-2,526.77	2,441.25	2,261.98	179.27	13.618					
19,100.00	11,978.50	19,182.83	11,983.00	127.87	128.82	89.50	-7,301.52	-2,525.89	2,441.36	2,259.88	181.48	13.453					
19,200.00	11,980.33	19,282.83	11,984.58	129.43	130.38	89.49	-7,401.50	-2,525.02	2,441.47	2,257.78	183.69	13.291					
19,300.00	11,982.16	19,382.83	11,986.16	131.00	131.94	89.48	-7,501.48	-2,524.14	2,441.57	2,255.67	185.90	13.134					
19,400.00	11,983.99	19,482.83	11,987.74	132.57	133.51	89.48	-7,601.47	-2,523.27	2,441.68	2,253.56	188.12	12.979					
19,500.00	11,985.82	19,582.83	11,989.32	134.13	135.08	89.47	-7,701.45	-2,522.39	2,441.79	2,251.45	190.34	12.829					
19,600.00	11,987.65	19,682.83	11,990.89	135.70	136.65	89.47	-7,801.43	-2,521.52	2,441.89	2,249.33	192.56	12.681					
19,700.00	11,989.48	19,782.83	11,992.47	137.28	138.22	89.46	-7,901.42	-2,520.64	2,442.00	2,247.22	194.78	12.537					
19,800.00	11,991.31	19,882.83	11,994.05	138.85	139.80	89.46	-8,001.40	-2,519.77	2,442.11	2,245.10	197.01	12.396					
19,900.00	11,993.14	19,982.83	11,995.63	140.43	141.38	89.45	-8,101.38	-2,518.89	2,442.21	2,242.97	199.24	12.258					
20,000.00	11,994.97	20,082.83	11,997.21	142.01	142.95	89.44	-8,201.37	-2,518.02	2,442.32	2,240.85	201.47	12.122					
20,100.00	11,996.80	20,182.83	11,998.78	143.59	144.54	89.44	-8,301.35	-2,517.14	2,442.43	2,238.72	203.71	11.990					
20,200.00	11,998.63	20,282.83	12,000.36	145.17	146.12	89.43	-8,401.33	-2,516.27	2,442.53	2,236.59	205.94	11.860					
20,300.00	12,000.46	20,382.83	12,001.94	146.75	147.70	89.43	-8,501.32	-2,515.39	2,442.64	2,234.46	208.18	11.733					

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)					
20,400.00	12,002.29	20,482.83	12,003.52	148.33	149.28	89.42	-8,601.30	-2,514.52	2,442.75	2,232.32	210.42	11.609				
20,500.00	12,004.13	20,582.83	12,005.10	149.92	150.87	89.41	-8,701.28	-2,513.64	2,442.86	2,230.19	212.67	11.487				
20,600.00	12,005.96	20,682.83	12,006.67	151.51	152.46	89.41	-8,801.27	-2,512.77	2,442.96	2,228.05	214.91	11.367				
20,700.00	12,007.79	20,782.83	12,008.25	153.10	154.05	89.40	-8,901.25	-2,511.89	2,443.07	2,225.91	217.16	11.250				
20,800.00	12,009.62	20,882.83	12,009.83	154.69	155.64	89.40	-9,001.23	-2,511.02	2,443.18	2,223.77	219.41	11.135				
20,900.00	12,011.45	20,982.83	12,011.41	156.28	157.23	89.39	-9,101.22	-2,510.14	2,443.28	2,221.62	221.66	11.023				
21,000.00	12,013.28	21,082.83	12,012.98	157.87	158.82	89.38	-9,201.20	-2,509.27	2,443.39	2,219.48	223.91	10.912				
21,100.00	12,015.11	21,182.83	12,014.56	159.46	160.42	89.38	-9,301.18	-2,508.39	2,443.50	2,217.33	226.17	10.804				
21,200.00	12,016.94	21,282.83	12,016.14	161.06	162.01	89.37	-9,401.17	-2,507.52	2,443.61	2,215.18	228.42	10.698				
21,300.00	12,018.77	21,382.82	12,017.72	162.65	163.61	89.37	-9,501.15	-2,506.64	2,443.71	2,213.03	230.68	10.594				
21,400.00	12,020.60	21,482.82	12,019.30	164.25	165.21	89.36	-9,601.13	-2,505.77	2,443.82	2,210.88	232.94	10.491				
21,500.00	12,022.43	21,582.82	12,020.87	165.85	166.80	89.36	-9,701.12	-2,504.89	2,443.93	2,208.73	235.20	10.391				
21,600.00	12,024.26	21,682.82	12,022.45	167.45	168.40	89.35	-9,801.10	-2,504.02	2,444.03	2,206.57	237.46	10.292				
21,700.00	12,026.09	21,782.82	12,024.03	169.05	170.00	89.34	-9,901.08	-2,503.14	2,444.14	2,204.42	239.72	10.196				
21,800.00	12,027.92	21,882.82	12,025.61	170.65	171.61	89.34	-10,001.07	-2,502.27	2,444.25	2,202.26	241.99	10.101				
21,900.00	12,029.75	21,982.82	12,027.19	172.25	173.21	89.33	-10,101.05	-2,501.39	2,444.36	2,200.10	244.25	10.007				
22,000.00	12,031.58	22,082.82	12,028.76	173.86	174.81	89.33	-10,201.03	-2,500.52	2,444.46	2,197.94	246.52	9.916				
22,100.00	12,033.41	22,182.82	12,030.34	175.46	176.42	89.32	-10,301.02	-2,499.64	2,444.57	2,195.78	248.79	9.826				
22,200.00	12,035.24	22,282.82	12,031.92	177.07	178.02	89.31	-10,401.00	-2,498.77	2,444.68	2,193.62	251.06	9.737				
22,300.00	12,037.07	22,382.82	12,033.50	178.67	179.63	89.31	-10,500.98	-2,497.89	2,444.79	2,191.45	253.33	9.651				
22,400.00	12,038.90	22,482.82	12,035.08	180.28	181.23	89.30	-10,600.97	-2,497.02	2,444.89	2,189.29	255.60	9.565				
22,490.07	12,040.55	22,572.89	12,036.50	181.73	182.68	89.30	-10,691.02	-2,496.23	2,444.99	2,187.34	257.65	9.490 ES, SF				



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	26.20	26.20	0.00	0.04	-89.05	39.65	-2,388.88	2,389.21					
100.00	100.00	126.20	126.20	0.14	0.24	-89.05	39.65	-2,388.88	2,389.21	2,388.93	0.27	8,694.223		
200.00	200.00	226.20	226.20	0.50	0.59	-89.05	39.65	-2,388.88	2,389.21	2,388.43	0.78	3,077.056		
300.00	300.00	326.20	326.20	0.86	0.95	-89.05	39.65	-2,388.88	2,389.21	2,387.93	1.28	1,863.236		
400.00	400.00	426.20	426.20	1.22	1.31	-89.05	39.65	-2,388.88	2,389.21	2,387.42	1.79	1,335.680		
500.00	500.00	526.20	526.20	1.58	1.67	-89.05	39.65	-2,388.88	2,389.21	2,386.91	2.30	1,040.850		
600.00	600.00	626.20	626.20	1.93	2.03	-89.05	39.65	-2,388.88	2,389.21	2,386.41	2.80	852.612		
700.00	700.00	726.20	726.20	2.29	2.39	-89.05	39.65	-2,388.88	2,389.21	2,385.90	3.31	722.021		
800.00	800.00	826.20	826.20	2.65	2.74	-89.05	39.65	-2,388.88	2,389.21	2,385.39	3.82	626.115		
900.00	900.00	926.20	926.20	3.01	3.10	-89.05	39.65	-2,388.88	2,389.21	2,384.89	4.32	552.698		
1,000.00	1,000.00	1,026.20	1,026.20	3.37	3.46	-89.05	39.65	-2,388.88	2,389.21	2,384.38	4.83	494.690		
1,100.00	1,100.00	1,126.20	1,126.20	3.73	3.82	-89.05	39.65	-2,388.88	2,389.21	2,383.87	5.34	447.700		
1,200.00	1,200.00	1,226.20	1,226.20	4.08	4.18	-89.05	39.65	-2,388.88	2,389.21	2,383.37	5.84	408.863		
1,300.00	1,300.00	1,326.20	1,326.20	4.44	4.54	-89.05	39.65	-2,388.88	2,389.21	2,382.86	6.35	376.226		
1,400.00	1,400.00	1,426.20	1,426.20	4.80	4.90	-89.05	39.65	-2,388.88	2,389.21	2,382.35	6.86	348.413		
1,500.00	1,500.00	1,526.20	1,526.20	5.16	5.25	-89.05	39.65	-2,388.88	2,389.21	2,381.84	7.36	324.430		
1,600.00	1,600.00	1,626.20	1,626.20	5.52	5.61	-89.05	39.65	-2,388.88	2,389.21	2,381.34	7.87	303.535		
1,700.00	1,700.00	1,726.20	1,726.20	5.88	5.97	-89.05	39.65	-2,388.88	2,389.21	2,380.83	8.38	285.169		
1,800.00	1,800.00	1,826.20	1,826.20	6.24	6.33	-89.05	39.65	-2,388.88	2,389.21	2,380.32	8.89	268.899		
1,900.00	1,900.00	1,926.20	1,926.20	6.59	6.69	-89.05	39.65	-2,388.88	2,389.21	2,379.82	9.39	254.385		
2,000.00	2,000.00	2,026.20	2,026.20	6.95	7.05	-89.05	39.65	-2,388.88	2,389.21	2,379.31	9.90	241.358		
2,100.00	2,100.00	2,126.20	2,126.20	7.31	7.40	-89.05	39.65	-2,388.88	2,389.21	2,378.80	10.41	229.600		
2,200.00	2,200.00	2,226.20	2,226.20	7.67	7.76	-89.05	39.65	-2,388.88	2,389.21	2,378.30	10.91	218.934		
2,300.00	2,300.00	2,326.20	2,326.20	8.03	8.12	-89.05	39.65	-2,388.88	2,389.21	2,377.79	11.42	209.215		
2,400.00	2,400.00	2,426.20	2,426.20	8.39	8.48	-89.05	39.65	-2,388.88	2,389.21	2,377.28	11.93	200.322		
2,500.00	2,500.00	2,526.20	2,526.20	8.74	8.84	-89.05	39.65	-2,388.88	2,389.21	2,376.78	12.43	192.155		
2,600.00	2,600.00	2,626.20	2,626.20	9.10	9.20	-89.05	39.65	-2,388.88	2,389.21	2,376.27	12.94	184.627		
2,700.00	2,700.00	2,726.20	2,726.20	9.46	9.56	-89.05	39.65	-2,388.88	2,389.21	2,375.76	13.45	177.667		
2,800.00	2,800.00	2,826.20	2,826.20	9.82	9.91	-89.05	39.65	-2,388.88	2,389.21	2,375.25	13.95	171.213		
2,900.00	2,900.00	2,926.20	2,926.20	10.18	10.27	-89.05	39.65	-2,388.88	2,389.21	2,374.75	14.46	165.211		
3,000.00	3,000.00	3,026.20	3,026.20	10.54	10.63	-89.05	39.65	-2,388.88	2,389.21	2,374.24	14.97	159.616		
3,100.00	3,100.00	3,126.20	3,126.20	10.90	10.99	-89.05	39.65	-2,388.88	2,389.21	2,373.73	15.48	154.387		
3,200.00	3,200.00	3,226.20	3,226.20	11.25	11.35	-89.05	39.65	-2,388.88	2,389.21	2,373.23	15.98	149.490		
3,300.00	3,300.00	3,326.20	3,326.20	11.61	11.71	-89.05	39.65	-2,388.88	2,389.21	2,372.72	16.49	144.894		
3,400.00	3,400.00	3,426.20	3,426.20	11.97	12.07	-89.05	39.65	-2,388.88	2,389.21	2,372.21	17.00	140.572		
3,500.00	3,500.00	3,526.20	3,526.20	12.33	12.42	-89.05	39.65	-2,388.88	2,389.21	2,371.71	17.50	136.501		
3,600.00	3,600.00	3,626.20	3,626.20	12.69	12.78	-89.05	39.65	-2,388.88	2,389.21	2,371.20	18.01	132.659		
3,700.00	3,700.00	3,726.20	3,726.20	13.05	13.14	-89.05	39.65	-2,388.88	2,389.21	2,370.69	18.52	129.027		
3,800.00	3,800.00	3,826.20	3,826.20	13.41	13.50	-89.05	39.65	-2,388.88	2,389.21	2,370.18	19.02	125.588		
3,900.00	3,900.00	3,926.20	3,926.20	13.76	13.86	-89.05	39.65	-2,388.88	2,389.21	2,369.68	19.53	122.329		
4,000.00	4,000.00	4,026.20	4,026.20	14.12	14.22	-89.05	39.65	-2,388.88	2,389.21	2,369.17	20.04	119.234		
4,100.00	4,100.00	4,126.20	4,126.20	14.48	14.57	-89.05	39.65	-2,388.88	2,389.21	2,368.66	20.54	116.292		
4,200.00	4,200.00	4,226.20	4,226.20	14.84	14.93	-89.05	39.65	-2,388.88	2,389.21	2,368.16	21.05	113.491		
4,300.00	4,300.00	4,326.20	4,326.20	15.20	15.29	-89.05	39.65	-2,388.88	2,389.21	2,367.65	21.56	110.821		
4,400.00	4,400.00	4,426.20	4,426.20	15.56	15.65	-89.05	39.65	-2,388.88	2,389.21	2,367.14	22.07	108.276		
4,500.00	4,500.00	4,526.20	4,526.20	15.91	16.01	-89.05	39.65	-2,388.88	2,389.21	2,366.64	22.57	105.845 CC, ES		
4,600.00	4,600.00	4,600.00	4,600.00	16.27	16.27	-89.05	39.74	-2,389.19	2,389.67	2,366.66	23.01	103.855		
4,700.00	4,700.00	4,659.97	4,659.96	16.63	16.48	-89.04	40.11	-2,390.40	2,391.65	2,368.25	23.40	102.191		
4,800.00	4,800.00	4,722.32	4,722.26	16.99	16.69	-89.02	40.77	-2,392.60	2,395.20	2,371.41	23.80	100.644		
4,900.00	4,900.00	4,800.00	4,799.82	17.35	16.96	-89.00	42.01	-2,396.71	2,400.41	2,376.17	24.23	99.053		
5,000.00	5,000.00	4,846.70	4,846.40	17.71	17.13	-88.97	42.98	-2,399.91	2,407.02	2,382.44	24.57	97.949		
5,100.00	5,100.00	4,900.00	4,899.51	18.07	17.31	-88.94	44.28	-2,404.22	2,415.29	2,390.36	24.93	96.899		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
5,200.00	5,200.00	4,970.46	4,969.61	18.42	17.56	-88.90	46.33	-2,411.01	2,425.07	2,399.74	25.33	95.749		
5,300.00	5,300.00	5,032.02	5,030.74	18.78	17.78	-88.85	48.42	-2,417.96	2,436.42	2,410.73	25.70	94.821		
5,400.00	5,400.00	5,100.00	5,098.10	19.14	18.02	-88.79	51.07	-2,426.72	2,449.34	2,423.26	26.08	93.914		
5,500.00	5,500.00	5,154.36	5,151.84	19.50	18.21	-88.74	53.43	-2,434.56	2,463.75	2,437.34	26.41	93.280		
5,600.00	5,599.99	5,216.82	5,213.44	19.86	18.44	-50.21	56.42	-2,444.46	2,478.88	2,452.12	26.77	92.611		
5,700.00	5,699.91	5,313.13	5,308.29	20.21	18.79	-50.01	61.25	-2,460.48	2,493.16	2,465.91	27.25	91.504		
5,800.00	5,799.69	5,412.33	5,405.98	20.57	19.15	-49.87	66.22	-2,476.97	2,505.77	2,478.03	27.74	90.336		
5,900.08	5,899.35	5,511.77	5,503.91	20.92	19.52	-49.80	71.21	-2,493.51	2,516.71	2,488.48	28.23	89.143		
6,000.00	5,998.72	5,611.13	5,601.75	21.28	19.89	-49.88	76.20	-2,510.03	2,526.80	2,498.07	28.73	87.958		
6,100.00	6,098.17	5,710.56	5,699.67	21.63	20.27	-49.96	81.18	-2,526.56	2,536.90	2,507.68	29.22	86.808		
6,200.00	6,197.63	5,809.99	5,797.59	21.99	20.65	-50.03	86.17	-2,543.10	2,547.01	2,517.29	29.72	85.692		
6,300.00	6,297.08	5,909.42	5,895.51	22.35	21.03	-50.11	91.16	-2,559.63	2,557.12	2,526.90	30.22	84.609		
6,400.00	6,396.53	6,008.84	5,993.42	22.71	21.41	-50.19	96.15	-2,576.17	2,567.24	2,536.51	30.72	83.557		
6,500.00	6,495.98	6,108.27	6,091.34	23.08	21.80	-50.26	101.13	-2,592.70	2,577.36	2,546.13	31.23	82.537		
6,600.00	6,595.43	6,207.70	6,189.26	23.44	22.19	-50.34	106.12	-2,609.23	2,587.48	2,555.75	31.73	81.545		
6,700.00	6,694.89	6,307.13	6,287.18	23.80	22.58	-50.41	111.11	-2,625.77	2,597.61	2,565.37	32.24	80.582		
6,800.00	6,794.34	6,406.56	6,385.10	24.17	22.97	-50.48	116.10	-2,642.30	2,607.74	2,575.00	32.74	79.646		
6,900.00	6,893.79	6,505.99	6,483.02	24.53	23.37	-50.56	121.08	-2,658.84	2,617.88	2,584.63	33.25	78.736		
7,000.00	6,993.24	6,605.42	6,580.93	24.90	23.77	-50.63	126.07	-2,675.37	2,628.02	2,594.27	33.76	77.851		
7,100.00	7,092.69	6,704.85	6,678.85	25.27	24.17	-50.70	131.06	-2,691.90	2,638.17	2,603.90	34.27	76.990		
7,200.00	7,192.15	6,804.28	6,776.77	25.63	24.57	-50.77	136.05	-2,708.44	2,648.32	2,613.54	34.78	76.152		
7,300.00	7,291.60	6,903.71	6,874.69	26.00	24.97	-50.84	141.03	-2,724.97	2,658.47	2,623.19	35.29	75.337		
7,400.00	7,391.05	7,003.14	6,972.61	26.37	25.38	-50.91	146.02	-2,741.50	2,668.63	2,632.83	35.80	74.543		
7,500.00	7,490.50	7,102.57	7,070.53	26.74	25.78	-50.98	151.01	-2,758.04	2,678.79	2,642.48	36.31	73.771		
7,600.00	7,589.95	7,202.00	7,168.44	27.11	26.19	-51.05	156.00	-2,774.57	2,688.96	2,652.13	36.83	73.018		
7,700.00	7,689.41	7,301.43	7,266.36	27.48	26.60	-51.12	160.99	-2,791.11	2,699.13	2,661.79	37.34	72.284		
7,800.00	7,788.86	7,400.86	7,364.28	27.86	27.01	-51.19	165.97	-2,807.64	2,709.30	2,671.45	37.86	71.569		
7,900.00	7,888.31	7,500.29	7,462.20	28.23	27.42	-51.26	170.96	-2,824.17	2,719.48	2,681.11	38.37	70.872		
7,937.55	7,925.65	7,537.63	7,498.97	28.37	27.58	-51.28	172.83	-2,830.38	2,723.30	2,684.74	38.57	70.614		
8,000.00	7,987.81	7,599.70	7,560.10	28.60	27.84	-51.40	175.95	-2,840.70	2,729.98	2,691.09	38.89	70.201		
8,100.00	8,087.53	7,698.97	7,657.86	28.97	28.25	-51.56	180.93	-2,857.21	2,741.99	2,702.58	39.40	69.590		
8,200.00	8,187.40	7,798.02	7,755.41	29.33	28.66	-51.69	185.90	-2,873.68	2,755.61	2,715.69	39.91	69.040		
8,300.00	8,287.37	7,896.80	7,852.69	29.69	29.08	-51.81	190.85	-2,890.11	2,770.84	2,730.42	40.42	68.550		
8,337.63	8,325.00	7,933.88	7,889.20	29.82	29.23	-90.15	192.71	-2,896.28	2,776.99	2,736.37	40.61	68.381		
8,400.00	8,387.37	7,995.31	7,949.69	30.04	29.49	-90.09	195.79	-2,906.49	2,787.36	2,746.44	40.93	68.108		
8,500.00	8,487.37	8,093.79	8,046.68	30.40	29.91	-89.98	200.73	-2,922.87	2,804.01	2,762.58	41.43	67.680		
8,600.00	8,587.37	8,192.27	8,143.66	30.75	30.32	-89.88	205.67	-2,939.24	2,820.67	2,778.73	41.94	67.262		
8,700.00	8,687.37	8,290.75	8,240.64	31.11	30.74	-89.78	210.61	-2,955.62	2,837.33	2,794.89	42.44	66.853		
8,800.00	8,787.37	8,389.23	8,337.63	31.46	31.16	-89.68	215.55	-2,971.99	2,854.00	2,811.05	42.95	66.454		
8,900.00	8,887.37	8,487.71	8,434.61	31.82	31.58	-89.59	220.49	-2,988.37	2,870.68	2,827.23	43.45	66.064		
9,000.00	8,987.37	8,586.44	8,534.00	32.17	32.34	-89.42	225.43	-3,004.75	2,887.36	2,843.90	43.95	65.674		
9,100.00	9,087.37	8,685.55	8,633.57	32.53	33.92	-89.22	230.37	-3,021.13	2,894.05	2,849.59	44.45	65.284		
9,200.00	9,187.37	8,784.66	8,732.68	32.88	34.54	-89.22	235.31	-3,037.51	2,894.15	2,847.73	44.95	64.894		
9,300.00	9,287.37	8,883.77	8,831.79	33.24	34.88	-89.22	239.65	-3,053.89	2,894.15	2,847.23	45.45	64.504		
9,400.00	9,387.37	8,982.88	8,930.81	33.60	35.22	-89.22	239.65	-3,051.88	2,894.15	2,846.73	45.95	64.114		
9,500.00	9,487.37	9,081.99	9,029.91	33.95	35.56	-89.22	239.65	-3,051.88	2,894.15	2,846.23	46.45	63.724		
9,600.00	9,587.37	9,181.10	9,129.02	34.31	35.89	-89.22	239.65	-3,051.88	2,894.15	2,845.73	46.95	63.334		
9,700.00	9,687.37	9,280.21	9,228.13	34.66	36.23	-89.22	239.65	-3,051.88	2,894.15	2,845.23	47.45	62.944		
9,800.00	9,787.37	9,379.32	9,327.24	35.02	36.57	-89.22	239.65	-3,051.88	2,894.15	2,844.73	47.95	62.554		
9,900.00	9,887.37	9,478.43	9,426.35	35.37	36.91	-89.22	239.65	-3,051.88	2,894.15	2,844.23	48.45	62.164		
10,000.00	9,987.37	9,577.54	9,525.46	35.73	37.25	-89.22	239.65	-3,051.88	2,894.15	2,843.73	48.95	61.774		
10,100.00	10,087.37	9,676.65	9,624.57	36.09	37.59	-89.22	239.65	-3,051.88	2,894.15	2,843.23	49.45	61.384		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
10,200.00	10,187.37	10,270.78	10,213.57	36.44	37.93	-89.22	239.65	-3,051.88	2,894.15	2,842.73	51.42	56.288		
10,300.00	10,287.37	10,370.78	10,313.57	36.80	38.27	-89.22	239.65	-3,051.88	2,894.15	2,842.23	51.92	55.745		
10,400.00	10,387.37	10,470.78	10,413.57	37.15	38.61	-89.22	239.65	-3,051.88	2,894.15	2,841.73	52.42	55.213		
10,500.00	10,487.37	10,570.78	10,513.57	37.51	38.95	-89.22	239.65	-3,051.88	2,894.15	2,841.23	52.92	54.691		
10,600.00	10,587.37	10,670.78	10,613.57	37.87	39.29	-89.22	239.65	-3,051.88	2,894.15	2,840.73	53.42	54.179		
10,700.00	10,687.37	10,770.78	10,713.57	38.22	39.63	-89.22	239.65	-3,051.88	2,894.15	2,840.23	53.92	53.675		
10,800.00	10,787.37	10,870.78	10,813.57	38.58	39.97	-89.22	239.65	-3,051.88	2,894.15	2,839.73	54.42	53.181		
10,900.00	10,887.37	10,970.78	10,913.57	38.94	40.32	-89.22	239.65	-3,051.88	2,894.15	2,839.23	54.92	52.696		
11,000.00	10,987.37	11,070.78	11,013.57	39.29	40.66	-89.22	239.65	-3,051.88	2,894.15	2,838.73	55.42	52.220		
11,100.00	11,087.37	11,170.78	11,113.57	39.65	41.00	-89.22	239.65	-3,051.88	2,894.15	2,838.23	55.92	51.752		
11,200.00	11,187.37	11,270.78	11,213.57	40.00	41.35	-89.22	239.65	-3,051.88	2,894.15	2,837.73	56.42	51.292		
11,291.63	11,279.00	11,362.40	11,305.20	40.33	41.66	-89.22	239.65	-3,051.88	2,894.15	2,837.27	56.88	50.878		
11,300.00	11,287.37	11,370.78	11,313.57	40.36	41.69	91.35	239.65	-3,051.88	2,894.15	2,837.23	56.92	50.842		
11,350.00	11,337.27	11,420.67	11,363.47	40.52	41.86	91.40	239.65	-3,051.88	2,894.22	2,837.06	57.16	50.634		
11,400.00	11,386.73	11,470.13	11,412.93	40.67	42.03	91.52	239.65	-3,051.88	2,894.41	2,837.02	57.39	50.436		
11,450.00	11,435.36	11,518.77	11,461.56	40.81	42.20	91.71	239.65	-3,051.88	2,894.74	2,837.14	57.61	50.248		
11,500.00	11,482.81	11,573.97	11,516.72	40.95	42.37	91.97	237.98	-3,051.87	2,895.23	2,837.40	57.83	50.066		
11,550.00	11,528.70	11,633.20	11,575.44	41.08	42.55	92.24	230.42	-3,051.80	2,895.76	2,837.72	58.04	49.891		
11,600.00	11,572.70	11,694.49	11,635.05	41.20	42.73	92.50	216.26	-3,051.68	2,896.33	2,838.08	58.25	49.726		
11,650.00	11,614.46	11,757.87	11,694.72	41.31	42.89	92.74	195.01	-3,051.49	2,896.91	2,838.46	58.44	49.569		
11,700.00	11,653.66	11,823.29	11,753.47	41.40	43.04	92.96	166.31	-3,051.24	2,897.47	2,838.84	58.63	49.420		
11,750.00	11,690.02	11,890.67	11,810.15	41.49	43.18	93.15	129.96	-3,050.92	2,898.00	2,839.19	58.81	49.278		
11,800.00	11,723.25	11,959.82	11,863.47	41.58	43.30	93.32	86.00	-3,050.53	2,898.48	2,839.49	58.98	49.139		
11,850.00	11,753.09	12,030.48	11,912.09	41.67	43.40	93.44	34.78	-3,050.09	2,898.87	2,839.71	59.16	49.002		
11,900.00	11,779.33	12,102.31	11,954.67	41.77	43.48	93.53	-23.01	-3,049.58	2,899.16	2,839.83	59.33	48.863		
11,950.00	11,801.76	12,174.89	11,990.01	41.88	43.54	93.57	-86.35	-3,049.03	2,899.34	2,839.83	59.51	48.719		
12,000.00	11,820.21	12,247.76	12,017.16	41.99	43.60	93.57	-153.92	-3,048.43	2,899.40	2,839.70	59.70	48.569		
12,050.00	11,834.54	12,320.44	12,035.48	42.11	43.68	93.53	-224.19	-3,047.82	2,899.34	2,839.45	59.89	48.410		
12,100.00	11,844.65	12,392.45	12,044.71	42.23	43.78	93.44	-295.56	-3,047.19	2,899.16	2,839.07	60.09	48.244		
12,150.00	11,850.45	12,451.39	12,046.28	42.36	43.89	93.35	-354.47	-3,046.68	2,898.94	2,838.65	60.29	48.084		
12,173.94	11,851.69	12,475.32	12,046.59	42.42	43.94	93.34	-378.39	-3,046.47	2,898.92	2,838.54	60.38	48.014		
12,181.14	11,851.86	12,482.51	12,046.69	42.44	43.96	93.34	-385.59	-3,046.41	2,898.92	2,838.51	60.40	47.994		
12,200.00	11,852.21	12,501.37	12,046.93	42.49	44.00	93.33	-404.45	-3,046.24	2,898.93	2,838.46	60.47	47.939		
12,300.00	11,854.04	12,601.37	12,048.23	42.78	44.29	93.32	-504.43	-3,045.37	2,899.00	2,838.10	60.91	47.598		
12,400.00	11,855.87	12,701.37	12,049.53	43.14	44.66	93.31	-604.42	-3,044.49	2,899.08	2,837.65	61.43	47.197		
12,500.00	11,857.70	12,801.37	12,050.83	43.56	45.09	93.30	-704.40	-3,043.61	2,899.15	2,837.12	62.03	46.739		
12,600.00	11,859.53	12,901.37	12,052.13	44.04	45.58	93.29	-804.39	-3,042.74	2,899.22	2,836.51	62.71	46.230		
12,700.00	11,861.36	13,001.37	12,053.44	44.57	46.13	93.28	-904.38	-3,041.86	2,899.30	2,835.82	63.48	45.675		
12,800.00	11,863.19	13,101.36	12,054.74	45.15	46.73	93.27	-1,004.36	-3,040.99	2,899.37	2,835.06	64.31	45.081		
12,900.00	11,865.02	13,201.36	12,056.04	45.79	47.38	93.26	-1,104.35	-3,040.11	2,899.44	2,834.22	65.23	44.452		
13,000.00	11,866.85	13,301.36	12,057.34	46.48	48.08	93.25	-1,204.34	-3,039.24	2,899.52	2,833.31	66.21	43.794		
13,100.00	11,868.68	13,401.36	12,058.64	47.21	48.83	93.24	-1,304.32	-3,038.36	2,899.59	2,832.34	67.26	43.113		
13,200.00	11,870.51	13,501.36	12,059.94	47.99	49.61	93.23	-1,404.31	-3,037.49	2,899.67	2,831.30	68.37	42.413		
13,300.00	11,872.34	13,601.36	12,061.24	48.81	50.45	93.22	-1,504.29	-3,036.61	2,899.74	2,830.20	69.54	41.699		
13,400.00	11,874.17	13,701.35	12,062.54	49.68	51.32	93.21	-1,604.28	-3,035.74	2,899.81	2,829.05	70.77	40.976		
13,500.00	11,876.00	13,801.35	12,063.84	50.58	52.23	93.20	-1,704.27	-3,034.86	2,899.89	2,827.84	72.05	40.247		
13,600.00	11,877.83	13,901.35	12,065.14	51.52	53.17	93.19	-1,804.25	-3,033.98	2,899.96	2,826.57	73.39	39.515		
13,700.00	11,879.66	14,001.35	12,066.44	52.50	54.15	93.18	-1,904.24	-3,033.11	2,900.04	2,825.26	74.77	38.784		
13,800.00	11,881.49	14,101.35	12,067.74	53.51	55.16	93.16	-2,004.23	-3,032.23	2,900.11	2,823.91	76.21	38.056		
13,900.00	11,883.32	14,201.35	12,069.04	54.55	56.20	93.15	-2,104.21	-3,031.36	2,900.19	2,822.51	77.68	37.334		
14,000.00	11,885.15	14,301.35	12,070.34	55.62	57.27	93.14	-2,204.20	-3,030.48	2,900.26	2,821.06	79.20	36.620		
14,100.00	11,886.98	14,401.34	12,071.65	56.72	58.36	93.13	-2,304.18	-3,029.61	2,900.34	2,819.58	80.76	35.915		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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 702H - 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						
14,200.00	11,888.81	14,501.34	12,072.95	57.84	59.48	93.12	-2,404.17	-3,028.73	2,900.41	2,818.06	82.35	35.221						
14,300.00	11,890.64	14,601.34	12,074.25	58.99	60.63	93.11	-2,504.16	-3,027.86	2,900.49	2,816.51	83.98	34.539						
14,400.00	11,892.47	14,701.34	12,075.55	60.17	61.80	93.10	-2,604.14	-3,026.98	2,900.56	2,814.93	85.64	33.871						
14,500.00	11,894.31	14,801.34	12,076.85	61.36	62.99	93.09	-2,704.13	-3,026.11	2,900.64	2,813.31	87.33	33.215						
14,600.00	11,896.14	14,901.34	12,078.15	62.58	64.20	93.08	-2,804.12	-3,025.23	2,900.71	2,811.66	89.05	32.574						
14,700.00	11,897.97	15,001.34	12,079.45	63.81	65.43	93.07	-2,904.10	-3,024.35	2,900.79	2,809.99	90.80	31.948						
14,800.00	11,899.80	15,101.33	12,080.75	65.07	66.68	93.06	-3,004.09	-3,023.48	2,900.86	2,808.29	92.57	31.337						
14,900.00	11,901.63	15,201.33	12,082.05	66.34	67.94	93.05	-3,104.07	-3,022.60	2,900.94	2,806.57	94.37	30.740						
15,000.00	11,903.46	15,301.33	12,083.35	67.63	69.23	93.04	-3,204.06	-3,021.73	2,901.02	2,804.82	96.19	30.159						
15,100.00	11,905.29	15,401.33	12,084.65	68.93	70.52	93.03	-3,304.05	-3,020.85	2,901.09	2,803.06	98.03	29.593						
15,200.00	11,907.12	15,501.33	12,085.95	70.25	71.83	93.02	-3,404.03	-3,019.98	2,901.17	2,801.27	99.90	29.041						
15,300.00	11,908.95	15,601.33	12,087.25	71.58	73.16	93.01	-3,504.02	-3,019.10	2,901.24	2,799.46	101.78	28.505						
15,400.00	11,910.78	15,701.33	12,088.55	72.93	74.50	93.00	-3,604.01	-3,018.23	2,901.32	2,797.64	103.68	27.982						
15,500.00	11,912.61	15,801.32	12,089.85	74.28	75.85	92.99	-3,703.99	-3,017.35	2,901.40	2,795.79	105.60	27.475						
15,600.00	11,914.44	15,901.32	12,091.16	75.65	77.21	92.97	-3,803.98	-3,016.48	2,901.47	2,793.93	107.54	26.981						
15,700.00	11,916.27	16,001.32	12,092.46	77.03	78.58	92.96	-3,903.96	-3,015.60	2,901.55	2,792.06	109.49	26.501						
15,800.00	11,918.10	16,101.32	12,093.76	78.43	79.97	92.95	-4,003.95	-3,014.72	2,901.63	2,790.17	111.46	26.034						
15,900.00	11,919.93	16,201.32	12,095.06	79.83	81.36	92.94	-4,103.94	-3,013.85	2,901.70	2,788.27	113.44	25.580						
16,000.00	11,921.76	16,301.32	12,096.36	81.24	82.77	92.93	-4,203.92	-3,012.97	2,901.78	2,786.35	115.43	25.139						
16,100.00	11,923.59	16,401.32	12,097.66	82.66	84.18	92.92	-4,303.91	-3,012.10	2,901.86	2,784.42	117.44	24.710						
16,200.00	11,925.42	16,501.31	12,098.96	84.08	85.60	92.91	-4,403.90	-3,011.22	2,901.93	2,782.48	119.45	24.293						
16,300.00	11,927.25	16,601.31	12,100.26	85.52	87.03	92.90	-4,503.88	-3,010.35	2,902.01	2,780.53	121.48	23.888						
16,400.00	11,929.08	16,701.31	12,101.56	86.96	88.47	92.89	-4,603.87	-3,009.47	2,902.09	2,778.56	123.52	23.494						
16,500.00	11,930.91	16,801.31	12,102.86	88.41	89.91	92.88	-4,703.85	-3,008.60	2,902.16	2,776.59	125.57	23.111						
16,600.00	11,932.74	16,901.31	12,104.16	89.87	91.36	92.87	-4,803.84	-3,007.72	2,902.24	2,774.61	127.63	22.739						
16,700.00	11,934.57	17,001.31	12,105.46	91.34	92.82	92.86	-4,903.83	-3,006.85	2,902.32	2,772.62	129.70	22.376						
16,800.00	11,936.40	17,101.31	12,106.76	92.81	94.28	92.85	-5,003.81	-3,005.97	2,902.40	2,770.61	131.78	22.024						
16,900.00	11,938.23	17,201.30	12,108.06	94.29	95.75	92.84	-5,103.80	-3,005.10	2,902.47	2,768.60	133.87	21.681						
17,000.00	11,940.06	17,301.30	12,109.37	95.77	97.23	92.83	-5,203.79	-3,004.22	2,902.55	2,766.59	135.97	21.348						
17,100.00	11,941.89	17,401.30	12,110.67	97.26	98.71	92.82	-5,303.77	-3,003.34	2,902.63	2,764.56	138.07	21.023						
17,200.00	11,943.72	17,501.30	12,111.97	98.75	100.20	92.81	-5,403.76	-3,002.47	2,902.71	2,762.53	140.18	20.707						
17,300.00	11,945.55	17,601.30	12,113.27	100.25	101.69	92.80	-5,503.74	-3,001.59	2,902.79	2,760.49	142.30	20.399						
17,400.00	11,947.38	17,701.30	12,114.57	101.75	103.19	92.79	-5,603.73	-3,000.72	2,902.86	2,758.44	144.42	20.100						
17,500.00	11,949.22	17,801.30	12,115.87	103.26	104.69	92.77	-5,703.72	-2,999.84	2,902.94	2,756.39	146.55	19.808						
17,600.00	11,951.05	17,901.29	12,117.17	104.77	106.20	92.76	-5,803.70	-2,998.97	2,903.02	2,754.33	148.69	19.524						
17,700.00	11,952.88	18,001.29	12,118.47	106.29	107.71	92.75	-5,903.69	-2,998.09	2,903.10	2,752.27	150.83	19.247						
17,800.00	11,954.71	18,101.29	12,119.77	107.81	109.22	92.74	-6,003.68	-2,997.22	2,903.18	2,750.20	152.98	18.977						
17,900.00	11,956.54	18,201.29	12,121.07	109.33	110.74	92.73	-6,103.66	-2,996.34	2,903.26	2,748.12	155.14	18.714						
18,000.00	11,958.37	18,301.29	12,122.37	110.86	112.27	92.72	-6,203.65	-2,995.47	2,903.34	2,746.04	157.29	18.458						
18,100.00	11,960.20	18,401.29	12,123.67	112.39	113.79	92.71	-6,303.63	-2,994.59	2,903.41	2,743.96	159.46	18.208						
18,200.00	11,962.03	18,501.29	12,124.97	113.93	115.32	92.70	-6,403.62	-2,993.71	2,903.49	2,741.87	161.63	17.964						
18,300.00	11,963.86	18,601.28	12,126.27	115.46	116.85	92.69	-6,503.61	-2,992.84	2,903.57	2,739.77	163.80	17.726						
18,400.00	11,965.69	18,701.28	12,127.57	117.01	118.39	92.68	-6,603.59	-2,991.96	2,903.65	2,737.67	165.98	17.494						
18,500.00	11,967.52	18,801.28	12,128.88	118.55	119.93	92.67	-6,703.58	-2,991.09	2,903.73	2,735.57	168.16	17.267						
18,600.00	11,969.35	18,901.28	12,130.18	120.10	121.47	92.66	-6,803.57	-2,990.21	2,903.81	2,733.46	170.35	17.046						
18,700.00	11,971.18	19,001.28	12,131.48	121.65	123.02	92.65	-6,903.55	-2,989.34	2,903.89	2,731.35	172.54	16.830						
18,800.00	11,973.01	19,101.28	12,132.78	123.20	124.56	92.64	-7,003.54	-2,988.46	2,903.97	2,729.24	174.73	16.619						
18,900.00	11,974.84	19,201.27	12,134.08	124.75	126.12	92.63	-7,103.52	-2,987.59	2,904.05	2,727.12	176.93	16.413						
19,000.00	11,976.67	19,301.27	12,135.38	126.31	127.67	92.62	-7,203.51	-2,986.71	2,904.13	2,725.00	179.13	16.212						
19,100.00	11,978.50	19,401.27	12,136.68	127.87	129.22	92.61	-7,303.50	-2,985.84	2,904.21	2,722.87	181.34	16.015						
19,200.00	11,980.33	19,501.27	12,137.98	129.43	130.78	92.60	-7,403.48	-2,984.96	2,904.29	2,720.74	183.55	15.823						
19,300.00	11,982.16	19,601.27	12,139.28	131.00	132.34	92.58	-7,503.47	-2,984.08	2,904.37	2,718.61	185.76	15.635						

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
19,400.00	11,983.99	19,701.27	12,140.58	132.57	133.90	92.57	-7,603.46	-2,983.21	2,904.45	2,716.48	187.97	15.451		
19,500.00	11,985.82	19,801.27	12,141.88	134.13	135.47	92.56	-7,703.44	-2,982.33	2,904.53	2,714.34	190.19	15.272		
19,600.00	11,987.65	19,901.26	12,143.18	135.70	137.03	92.55	-7,803.43	-2,981.46	2,904.61	2,712.20	192.41	15.096		
19,700.00	11,989.48	20,001.26	12,144.48	137.28	138.60	92.54	-7,903.41	-2,980.58	2,904.69	2,710.06	194.63	14.924		
19,800.00	11,991.31	20,101.26	12,145.78	138.85	140.17	92.53	-8,003.40	-2,979.71	2,904.77	2,707.91	196.86	14.756		
19,900.00	11,993.14	20,201.26	12,147.08	140.43	141.75	92.52	-8,103.39	-2,978.83	2,904.85	2,705.76	199.09	14.591		
20,000.00	11,994.97	20,301.26	12,148.39	142.01	143.32	92.51	-8,203.37	-2,977.96	2,904.93	2,703.61	201.32	14.430		
20,100.00	11,996.80	20,401.26	12,149.69	143.59	144.90	92.50	-8,303.36	-2,977.08	2,905.01	2,701.46	203.55	14.272		
20,200.00	11,998.63	20,501.26	12,150.99	145.17	146.47	92.49	-8,403.35	-2,976.21	2,905.09	2,699.31	205.79	14.117		
20,300.00	12,000.46	20,601.25	12,152.29	146.75	148.05	92.48	-8,503.33	-2,975.33	2,905.17	2,697.15	208.02	13.966		
20,400.00	12,002.29	20,701.25	12,153.59	148.33	149.63	92.47	-8,603.32	-2,974.45	2,905.26	2,694.99	210.26	13.817		
20,500.00	12,004.13	20,801.25	12,154.89	149.92	151.22	92.46	-8,703.30	-2,973.58	2,905.34	2,692.83	212.51	13.672		
20,600.00	12,005.96	20,901.25	12,156.19	151.51	152.80	92.45	-8,803.29	-2,972.70	2,905.42	2,690.67	214.75	13.529		
20,700.00	12,007.79	21,001.25	12,157.49	153.10	154.39	92.44	-8,903.28	-2,971.83	2,905.50	2,688.50	217.00	13.390		
20,800.00	12,009.62	21,101.25	12,158.79	154.69	155.97	92.43	-9,003.26	-2,970.95	2,905.58	2,686.34	219.24	13.253		
20,900.00	12,011.45	21,201.25	12,160.09	156.28	157.56	92.42	-9,103.25	-2,970.08	2,905.66	2,684.17	221.49	13.118		
21,000.00	12,013.28	21,301.24	12,161.39	157.87	159.15	92.41	-9,203.24	-2,969.20	2,905.74	2,682.00	223.75	12.987		
21,100.00	12,015.11	21,401.24	12,162.69	159.46	160.74	92.40	-9,303.22	-2,968.33	2,905.83	2,679.83	226.00	12.858		
21,200.00	12,016.94	21,501.24	12,163.99	161.06	162.33	92.38	-9,403.21	-2,967.45	2,905.91	2,677.65	228.25	12.731		
21,300.00	12,018.77	21,601.24	12,165.29	162.65	163.92	92.37	-9,503.19	-2,966.58	2,905.99	2,675.48	230.51	12.607		
21,400.00	12,020.60	21,701.24	12,166.60	164.25	165.52	92.36	-9,603.18	-2,965.70	2,906.07	2,673.30	232.77	12.485		
21,500.00	12,022.43	21,801.24	12,167.90	165.85	167.11	92.35	-9,703.17	-2,964.82	2,906.15	2,671.12	235.03	12.365		
21,600.00	12,024.26	21,901.24	12,169.20	167.45	168.71	92.34	-9,803.15	-2,963.95	2,906.24	2,668.95	237.29	12.248		
21,700.00	12,026.09	22,001.23	12,170.50	169.05	170.31	92.33	-9,903.14	-2,963.07	2,906.32	2,666.77	239.55	12.132		
21,800.00	12,027.92	22,101.23	12,171.80	170.65	171.91	92.32	-10,003.13	-2,962.20	2,906.40	2,664.58	241.82	12.019		
21,900.00	12,029.75	22,201.23	12,173.10	172.25	173.51	92.31	-10,103.11	-2,961.32	2,906.48	2,662.40	244.08	11.908		
22,000.00	12,031.58	22,301.23	12,174.40	173.86	175.11	92.30	-10,203.10	-2,960.45	2,906.57	2,660.22	246.35	11.798		
22,100.00	12,033.41	22,401.23	12,175.70	175.46	176.71	92.29	-10,303.08	-2,959.57	2,906.65	2,658.03	248.62	11.691		
22,200.00	12,035.24	22,501.23	12,177.00	177.07	178.31	92.28	-10,403.07	-2,958.70	2,906.73	2,655.84	250.89	11.586		
22,300.00	12,037.07	22,601.23	12,178.30	178.67	179.91	92.27	-10,503.06	-2,957.82	2,906.82	2,653.66	253.16	11.482		
22,400.00	12,038.90	22,701.22	12,179.60	180.28	181.52	92.26	-10,603.04	-2,956.95	2,906.90	2,651.47	255.43	11.380		
22,490.07	12,040.55	22,791.29	12,180.77	181.73	182.96	92.25	-10,693.10	-2,956.16	2,906.97	2,649.49	257.48	11.290 SF		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	24.60	24.60	0.00	0.03	-88.98	40.64	-2,283.90	2,284.26					
100.00	100.00	124.60	124.60	0.14	0.23	-88.98	40.64	-2,283.90	2,284.26	2,283.99	0.27	8,463.211		
200.00	200.00	224.60	224.60	0.50	0.59	-88.98	40.64	-2,283.90	2,284.26	2,283.49	0.77	2,958.579		
300.00	300.00	324.60	324.60	0.86	0.95	-88.98	40.64	-2,283.90	2,284.26	2,282.98	1.28	1,787.322		
400.00	400.00	424.60	424.60	1.22	1.31	-88.98	40.64	-2,283.90	2,284.26	2,282.48	1.78	1,280.015		
500.00	500.00	524.60	524.60	1.58	1.66	-88.98	40.64	-2,283.90	2,284.26	2,281.97	2.29	996.940		
600.00	600.00	624.60	624.60	1.93	2.02	-88.98	40.64	-2,283.90	2,284.26	2,281.46	2.80	816.369		
700.00	700.00	724.60	724.60	2.29	2.38	-88.98	40.64	-2,283.90	2,284.26	2,280.96	3.30	691.169		
800.00	800.00	824.60	824.60	2.65	2.74	-88.98	40.64	-2,283.90	2,284.26	2,280.45	3.81	599.261		
900.00	900.00	924.60	924.60	3.01	3.10	-88.98	40.64	-2,283.90	2,284.26	2,279.94	4.32	528.924		
1,000.00	1,000.00	1,024.60	1,024.60	3.37	3.46	-88.98	40.64	-2,283.90	2,284.26	2,279.44	4.83	473.363		
1,100.00	1,100.00	1,124.60	1,124.60	3.73	3.81	-88.98	40.64	-2,283.90	2,284.26	2,278.93	5.33	428.364		
1,200.00	1,200.00	1,224.60	1,224.60	4.08	4.17	-88.98	40.64	-2,283.90	2,284.26	2,278.42	5.84	391.178		
1,300.00	1,300.00	1,324.60	1,324.60	4.44	4.53	-88.98	40.64	-2,283.90	2,284.26	2,277.92	6.35	359.932		
1,400.00	1,400.00	1,424.60	1,424.60	4.80	4.89	-88.98	40.64	-2,283.90	2,284.26	2,277.41	6.85	333.308		
1,500.00	1,500.00	1,524.60	1,524.60	5.16	5.25	-88.98	40.64	-2,283.90	2,284.26	2,276.90	7.36	310.351		
1,600.00	1,600.00	1,624.60	1,624.60	5.52	5.61	-88.98	40.64	-2,283.90	2,284.26	2,276.39	7.87	290.353		
1,700.00	1,700.00	1,724.60	1,724.60	5.88	5.97	-88.98	40.64	-2,283.90	2,284.26	2,275.89	8.37	272.776		
1,800.00	1,800.00	1,824.60	1,824.60	6.24	6.32	-88.98	40.64	-2,283.90	2,284.26	2,275.38	8.88	257.206		
1,900.00	1,900.00	1,924.60	1,924.60	6.59	6.68	-88.98	40.64	-2,283.90	2,284.26	2,274.87	9.39	243.317		
2,000.00	2,000.00	2,024.60	2,024.60	6.95	7.04	-88.98	40.64	-2,283.90	2,284.26	2,274.37	9.89	230.851		
2,100.00	2,100.00	2,124.60	2,124.60	7.31	7.40	-88.98	40.64	-2,283.90	2,284.26	2,273.86	10.40	219.601		
2,200.00	2,200.00	2,224.60	2,224.60	7.67	7.76	-88.98	40.64	-2,283.90	2,284.26	2,273.35	10.91	209.395		
2,300.00	2,300.00	2,324.60	2,324.60	8.03	8.12	-88.98	40.64	-2,283.90	2,284.26	2,272.85	11.42	200.097		
2,400.00	2,400.00	2,424.60	2,424.60	8.39	8.47	-88.98	40.64	-2,283.90	2,284.26	2,272.34	11.92	191.589		
2,500.00	2,500.00	2,524.60	2,524.60	8.74	8.83	-88.98	40.64	-2,283.90	2,284.26	2,271.83	12.43	183.775		
2,600.00	2,600.00	2,624.60	2,624.60	9.10	9.19	-88.98	40.64	-2,283.90	2,284.26	2,271.32	12.94	176.573		
2,700.00	2,700.00	2,724.60	2,724.60	9.46	9.55	-88.98	40.64	-2,283.90	2,284.26	2,270.82	13.44	169.915		
2,800.00	2,800.00	2,824.60	2,824.60	9.82	9.91	-88.98	40.64	-2,283.90	2,284.26	2,270.31	13.95	163.740		
2,900.00	2,900.00	2,924.60	2,924.60	10.18	10.27	-88.98	40.64	-2,283.90	2,284.26	2,269.80	14.46	157.999		
3,000.00	3,000.00	3,024.60	3,024.60	10.54	10.63	-88.98	40.64	-2,283.90	2,284.26	2,269.30	14.96	152.646		
3,100.00	3,100.00	3,124.60	3,124.60	10.90	10.98	-88.98	40.64	-2,283.90	2,284.26	2,268.79	15.47	147.644		
3,200.00	3,200.00	3,224.60	3,224.60	11.25	11.34	-88.98	40.64	-2,283.90	2,284.26	2,268.28	15.98	142.960		
3,300.00	3,300.00	3,324.60	3,324.60	11.61	11.70	-88.98	40.64	-2,283.90	2,284.26	2,267.78	16.49	138.564		
3,400.00	3,400.00	3,424.60	3,424.60	11.97	12.06	-88.98	40.64	-2,283.90	2,284.26	2,267.27	16.99	134.430		
3,500.00	3,500.00	3,524.60	3,524.60	12.33	12.42	-88.98	40.64	-2,283.90	2,284.26	2,266.76	17.50	130.535		
3,600.00	3,600.00	3,624.60	3,624.60	12.69	12.78	-88.98	40.64	-2,283.90	2,284.26	2,266.26	18.01	126.860		
3,700.00	3,700.00	3,724.60	3,724.60	13.05	13.13	-88.98	40.64	-2,283.90	2,284.26	2,265.75	18.51	123.386		
3,800.00	3,800.00	3,824.60	3,824.60	13.41	13.49	-88.98	40.64	-2,283.90	2,284.26	2,265.24	19.02	120.098		
3,900.00	3,900.00	3,924.60	3,924.60	13.76	13.85	-88.98	40.64	-2,283.90	2,284.26	2,264.73	19.53	116.980		
4,000.00	4,000.00	4,024.60	4,024.60	14.12	14.21	-88.98	40.64	-2,283.90	2,284.26	2,264.23	20.03	114.019		
4,100.00	4,100.00	4,124.60	4,124.60	14.48	14.57	-88.98	40.64	-2,283.90	2,284.26	2,263.72	20.54	111.205		
4,200.00	4,200.00	4,224.60	4,224.60	14.84	14.93	-88.98	40.64	-2,283.90	2,284.26	2,263.21	21.05	108.527		
4,300.00	4,300.00	4,324.60	4,324.60	15.20	15.29	-88.98	40.64	-2,283.90	2,284.26	2,262.71	21.55	105.975		
4,400.00	4,400.00	4,424.60	4,424.60	15.56	15.64	-88.98	40.64	-2,283.90	2,284.26	2,262.20	22.06	103.539		
4,500.00	4,500.00	4,524.60	4,524.60	15.91	16.00	-88.98	40.75	-2,283.47	2,284.08	2,261.69	22.56	101.121		
4,600.00	4,600.00	4,793.87	4,793.58	16.27	16.94	-88.91	43.43	-2,272.95	2,279.64	2,256.20	23.43	97.288		
4,700.00	4,700.00	5,027.39	5,025.71	16.63	17.76	-88.74	49.60	-2,248.67	2,269.29	2,245.14	24.14	94.002		
4,800.00	4,800.00	5,129.82	5,127.15	16.99	18.12	-88.64	53.12	-2,234.86	2,255.87	2,231.23	24.64	91.558		
4,900.00	4,900.00	5,228.85	5,225.22	17.35	18.48	-88.54	56.52	-2,221.50	2,242.46	2,217.33	25.13	89.225		
5,000.00	5,000.00	5,327.88	5,323.28	17.71	18.83	-88.45	59.92	-2,208.15	2,229.06	2,203.43	25.63	86.979		
5,100.00	5,100.00	5,426.90	5,421.34	18.07	19.19	-88.35	63.31	-2,194.79	2,215.67	2,189.54	26.12	84.816		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
5,200.00	5,200.00	5,525.93	5,519.41	18.42	19.56	-88.25	66.71	-2,181.43	2,202.28	2,175.66	26.62	82.732		
5,300.00	5,300.00	5,624.96	5,617.47	18.78	19.92	-88.15	70.11	-2,168.08	2,188.89	2,161.78	27.12	80.721		
5,400.00	5,400.00	5,723.99	5,715.53	19.14	20.29	-88.05	73.51	-2,154.72	2,175.52	2,147.90	27.61	78.782		
5,500.00	5,500.00	5,823.01	5,813.60	19.50	20.66	-87.94	76.91	-2,141.36	2,162.15	2,134.03	28.11	76.910		
5,600.00	5,599.99	5,921.95	5,911.57	19.86	21.02	-49.72	80.30	-2,128.02	2,147.94	2,119.33	28.61	75.077		
5,700.00	5,699.91	6,020.68	6,009.34	20.21	21.40	-49.88	83.69	-2,114.70	2,132.07	2,102.96	29.11	73.254		
5,800.00	5,799.69	6,119.12	6,106.82	20.57	21.77	-50.12	87.07	-2,101.43	2,114.53	2,084.93	29.60	71.439		
5,900.08	5,899.35	6,217.28	6,204.03	20.92	22.14	-50.43	90.44	-2,088.19	2,095.33	2,065.24	30.09	69.631		
6,000.00	5,998.72	6,315.10	6,300.90	21.28	22.51	-50.54	93.80	-2,074.99	2,075.35	2,044.77	30.58	67.858		
6,100.00	6,098.17	6,412.99	6,397.83	21.63	22.88	-50.66	97.16	-2,061.79	2,055.36	2,024.28	31.08	66.138		
6,200.00	6,197.63	6,510.88	6,494.77	21.99	23.26	-50.78	100.52	-2,048.59	2,035.38	2,003.81	31.57	64.470		
6,300.00	6,297.08	6,608.78	6,591.71	22.35	23.63	-50.91	103.88	-2,035.38	2,015.41	1,983.34	32.07	62.852		
6,400.00	6,396.53	6,706.67	6,688.65	22.71	24.01	-51.03	107.24	-2,022.18	1,995.44	1,962.88	32.56	61.282		
6,500.00	6,495.98	6,804.56	6,785.59	23.08	24.39	-51.16	110.60	-2,008.98	1,975.49	1,942.43	33.06	59.757		
6,600.00	6,495.43	6,902.45	6,882.53	23.44	24.77	-51.29	113.95	-1,995.77	1,955.55	1,921.99	33.56	58.277		
6,700.00	6,494.89	7,000.34	6,979.47	23.80	25.15	-51.43	117.31	-1,982.57	1,935.61	1,901.56	34.05	56.838		
6,800.00	6,794.34	7,098.23	7,076.41	24.17	25.53	-51.57	120.67	-1,969.37	1,915.69	1,881.14	34.55	55.440		
6,900.00	6,893.79	7,196.12	7,173.34	24.53	25.91	-51.70	124.03	-1,956.16	1,895.78	1,860.72	35.05	54.082		
7,000.00	6,893.24	7,294.02	7,270.28	24.90	26.30	-51.85	127.39	-1,942.96	1,875.88	1,840.32	35.55	52.760		
7,100.00	7,092.69	7,391.91	7,367.22	25.27	26.68	-51.99	130.75	-1,929.76	1,855.99	1,819.93	36.06	51.474		
7,200.00	7,192.15	7,489.80	7,464.16	25.63	27.06	-52.14	134.11	-1,916.55	1,836.11	1,799.55	36.56	50.224		
7,300.00	7,291.60	7,587.69	7,561.10	26.00	27.45	-52.29	137.47	-1,903.35	1,816.24	1,779.18	37.06	49.006		
7,400.00	7,391.05	7,685.58	7,658.04	26.37	27.84	-52.45	140.83	-1,890.15	1,796.39	1,758.82	37.57	47.821		
7,500.00	7,490.50	7,783.47	7,754.98	26.74	28.22	-52.61	144.19	-1,876.94	1,776.55	1,738.48	38.07	46.666		
7,600.00	7,589.95	7,881.37	7,851.92	27.11	28.61	-52.77	147.55	-1,863.74	1,756.72	1,718.15	38.57	45.542		
7,700.00	7,689.41	7,979.26	7,948.85	27.48	29.00	-52.94	150.91	-1,850.54	1,736.91	1,697.83	39.08	44.446		
7,800.00	7,788.86	8,077.15	8,045.79	27.86	29.39	-53.11	154.27	-1,837.33	1,717.11	1,677.52	39.59	43.377		
7,900.00	7,888.31	8,175.04	8,142.73	28.23	29.78	-53.28	157.63	-1,824.13	1,697.33	1,657.23	40.09	42.336		
7,937.55	7,925.65	8,211.80	8,179.13	28.37	29.93	-53.35	158.89	-1,819.17	1,689.90	1,649.62	40.28	41.952		
8,000.00	7,987.81	8,273.01	8,239.75	28.60	30.17	-53.30	160.99	-1,810.91	1,677.86	1,637.26	40.60	41.328		
8,100.00	8,087.53	8,371.33	8,337.11	28.97	30.56	-53.17	164.37	-1,797.65	1,659.82	1,618.72	41.10	40.380		
8,200.00	8,187.40	8,469.95	8,434.78	29.33	30.96	-53.00	167.75	-1,784.35	1,643.34	1,601.73	41.61	39.493		
8,300.00	8,287.37	8,568.82	8,532.68	29.69	31.35	-52.77	171.14	-1,771.02	1,628.41	1,586.30	42.12	38.665		
8,337.63	8,325.00	8,606.07	8,569.57	29.82	31.50	-90.98	172.42	-1,765.99	1,623.20	1,580.90	42.31	38.368		
8,400.00	8,387.37	8,667.84	8,630.73	30.04	31.75	-90.91	174.54	-1,757.66	1,614.75	1,572.13	42.62	37.886		
8,500.00	8,487.37	8,766.86	8,728.80	30.40	32.15	-90.80	177.94	-1,744.31	1,601.21	1,558.08	43.13	37.128		
8,600.00	8,587.37	8,865.89	8,826.86	30.75	32.54	-90.68	181.34	-1,730.95	1,587.67	1,544.04	43.63	36.387		
8,700.00	8,687.37	8,964.92	8,924.92	31.11	32.94	-90.56	184.74	-1,717.59	1,574.14	1,530.00	44.14	35.663		
8,800.00	8,787.37	9,063.94	9,022.99	31.46	33.34	-90.44	188.14	-1,704.24	1,560.61	1,515.97	44.65	34.955		
8,900.00	8,887.37	9,162.97	9,121.05	31.82	33.74	-90.32	191.54	-1,690.88	1,547.09	1,501.94	45.15	34.264		
9,000.00	8,987.37	9,262.00	9,219.11	32.17	34.14	-90.19	194.93	-1,677.52	1,533.58	1,487.92	45.66	33.587		
9,100.00	9,087.37	9,361.02	9,317.17	32.53	34.54	-90.06	198.33	-1,664.17	1,520.08	1,473.91	46.17	32.925		
9,200.00	9,187.37	9,460.05	9,415.24	32.88	34.94	-89.93	201.73	-1,650.81	1,506.59	1,459.91	46.68	32.278		
9,300.00	9,287.37	9,559.08	9,513.30	33.24	35.34	-89.80	205.13	-1,637.45	1,493.10	1,445.91	47.18	31.645		
9,400.00	9,387.37	9,658.10	9,611.36	33.60	35.74	-89.67	208.53	-1,624.10	1,479.62	1,431.93	47.69	31.025		
9,500.00	9,487.37	9,757.13	9,709.43	33.95	36.15	-89.53	211.93	-1,610.74	1,466.15	1,417.95	48.20	30.418		
9,600.00	9,587.37	9,856.16	9,807.49	34.31	36.55	-89.39	215.33	-1,597.38	1,452.68	1,403.97	48.71	29.824		
9,700.00	9,687.37	9,955.18	9,905.55	34.66	36.95	-89.25	218.72	-1,584.03	1,439.23	1,390.01	49.22	29.242		
9,800.00	9,787.37	10,054.21	10,003.62	35.02	37.35	-89.10	222.12	-1,570.67	1,425.78	1,376.06	49.73	28.672		
9,900.00	9,887.37	10,153.24	10,101.68	35.37	37.76	-88.96	225.52	-1,557.31	1,412.35	1,362.11	50.24	28.114		
10,000.00	9,987.37	10,252.27	10,199.74	35.73	38.16	-88.80	228.92	-1,543.96	1,398.92	1,348.17	50.75	27.567		
10,100.00	10,087.37	10,344.91	10,291.49	36.09	38.54	-88.66	232.09	-1,531.50	1,385.56	1,334.30	51.26	27.031		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
10,200.00	10,187.37	10,418.51	10,364.52	36.44	38.83	-88.56	234.36	-1,522.60	1,373.53	1,321.76	51.77	26.533		
10,300.00	10,287.37	10,500.00	10,445.55	36.80	39.15	-88.46	236.46	-1,514.33	1,363.38	1,311.11	52.27	26.085		
10,400.00	10,387.37	10,566.67	10,511.98	37.15	39.40	-88.39	237.86	-1,508.81	1,355.03	1,302.29	52.74	25.692		
10,500.00	10,487.37	10,641.10	10,586.25	37.51	39.68	-88.34	239.09	-1,503.98	1,348.59	1,295.38	53.21	25.345		
10,600.00	10,587.37	10,715.71	10,660.76	37.87	39.95	-88.29	239.97	-1,500.54	1,344.02	1,290.36	53.66	25.046		
10,700.00	10,687.37	10,800.00	10,745.02	38.22	40.24	-88.27	240.52	-1,498.36	1,341.38	1,287.25	54.13	24.782		
10,800.00	10,787.37	10,866.95	10,811.97	38.58	40.47	-88.26	240.64	-1,497.90	1,340.52	1,285.98	54.53	24.582		
10,900.00	10,887.37	10,966.95	10,911.97	38.94	40.80	-88.26	240.64	-1,497.90	1,340.52	1,285.49	55.03	24.359		
11,000.00	10,987.37	11,066.95	11,011.97	39.29	41.14	-88.26	240.64	-1,497.90	1,340.52	1,284.99	55.53	24.141		
11,100.00	11,087.37	11,166.95	11,111.97	39.65	41.48	-88.26	240.64	-1,497.90	1,340.52	1,284.49	56.03	23.926		
11,200.00	11,187.37	11,266.95	11,211.97	40.00	41.81	-88.26	240.64	-1,497.90	1,340.52	1,283.99	56.53	23.715		
11,291.63	11,279.00	11,362.30	11,307.29	40.33	42.13	-88.32	239.22	-1,497.89	1,340.47	1,283.48	56.99	23.522		
11,300.00	11,287.37	11,371.49	11,316.45	40.36	42.15	92.21	238.50	-1,497.88	1,340.44	1,283.41	57.03	23.505		
11,350.00	11,337.27	11,426.11	11,370.55	40.52	42.32	92.05	231.20	-1,497.81	1,340.30	1,283.04	57.26	23.407		
11,400.00	11,386.73	11,480.28	11,423.29	40.67	42.47	91.87	218.91	-1,497.69	1,340.16	1,282.68	57.48	23.316		
11,450.00	11,435.36	11,533.98	11,474.19	40.81	42.61	91.68	201.87	-1,497.52	1,340.02	1,282.33	57.69	23.229		
11,500.00	11,482.81	11,587.18	11,522.83	40.95	42.74	91.47	180.36	-1,497.31	1,339.89	1,282.00	57.88	23.149		
11,550.00	11,528.70	11,639.87	11,568.83	41.08	42.86	91.26	154.70	-1,497.06	1,339.77	1,281.70	58.07	23.073		
11,600.00	11,572.70	11,692.03	11,611.86	41.20	42.96	91.03	125.24	-1,496.77	1,339.66	1,281.42	58.24	23.001		
11,650.00	11,614.46	11,743.67	11,651.64	41.31	43.06	90.80	92.35	-1,496.45	1,339.57	1,281.16	58.41	22.933		
11,700.00	11,653.66	11,794.78	11,687.94	41.40	43.14	90.56	56.39	-1,496.10	1,339.51	1,280.93	58.57	22.868		
11,750.00	11,690.02	11,845.38	11,720.58	41.49	43.21	90.32	17.76	-1,495.72	1,339.47	1,280.73	58.73	22.806		
11,800.00	11,723.25	11,895.47	11,749.41	41.58	43.27	90.08	-23.18	-1,495.32	1,339.45	1,280.56	58.89	22.745		
11,813.58	11,731.70	11,908.99	11,756.57	41.60	43.29	90.01	-34.65	-1,495.21	1,339.45	1,280.52	58.93	22.729 CC		
11,850.00	11,753.09	11,945.06	11,774.33	41.67	43.33	89.84	-66.04	-1,494.91	1,339.45	1,280.41	59.04	22.686		
11,900.00	11,779.33	11,994.18	11,795.27	41.77	43.39	89.60	-110.46	-1,494.47	1,339.48	1,280.28	59.20	22.627		
11,950.00	11,801.76	12,042.85	11,812.18	41.88	43.45	89.37	-156.07	-1,494.03	1,339.53	1,280.18	59.35	22.569		
12,000.00	11,820.21	12,091.08	11,825.07	41.99	43.51	89.14	-202.53	-1,493.57	1,339.61	1,280.10	59.51	22.510		
12,050.00	11,834.54	12,138.90	11,833.94	42.11	43.59	88.92	-249.50	-1,493.12	1,339.70	1,280.03	59.67	22.452		
12,100.00	11,844.65	12,186.33	11,838.85	42.23	43.68	88.70	-296.67	-1,492.65	1,339.80	1,279.97	59.83	22.394		
12,150.00	11,850.45	12,234.78	11,840.31	42.36	43.78	88.52	-345.08	-1,492.18	1,339.91	1,279.91	60.00	22.332		
12,181.14	11,851.86	12,265.90	11,840.91	42.44	43.86	88.48	-376.20	-1,491.88	1,339.93	1,279.82	60.12	22.289		
12,200.00	11,852.21	12,284.76	11,841.27	42.49	43.90	88.48	-395.06	-1,491.69	1,339.93	1,279.74	60.19	22.263		
12,300.00	11,854.04	12,384.76	11,843.18	42.78	44.21	88.48	-495.03	-1,490.72	1,339.93	1,279.30	60.63	22.100		
12,400.00	11,855.87	12,484.76	11,845.10	43.14	44.58	88.49	-595.01	-1,489.74	1,339.93	1,278.78	61.16	21.909		
12,500.00	11,857.70	12,584.76	11,847.02	43.56	45.01	88.49	-694.99	-1,488.77	1,339.93	1,278.16	61.77	21.692		
12,600.00	11,859.53	12,684.76	11,848.94	44.04	45.50	88.49	-794.96	-1,487.79	1,339.94	1,277.47	62.46	21.451		
12,700.00	11,861.36	12,784.76	11,850.86	44.57	46.05	88.50	-894.94	-1,486.81	1,339.94	1,276.70	63.24	21.189		
12,800.00	11,863.19	12,884.76	11,852.77	45.15	46.66	88.50	-994.92	-1,485.84	1,339.94	1,275.85	64.09	20.908		
12,900.00	11,865.02	12,984.76	11,854.69	45.79	47.31	88.51	-1,094.89	-1,484.86	1,339.94	1,274.93	65.01	20.611		
13,000.00	11,866.85	13,084.76	11,856.61	46.48	48.02	88.51	-1,194.87	-1,483.89	1,339.94	1,273.94	66.00	20.302		
13,100.00	11,868.68	13,184.76	11,858.53	47.21	48.77	88.51	-1,294.85	-1,482.91	1,339.94	1,272.88	67.06	19.981		
13,200.00	11,870.51	13,284.76	11,860.44	47.99	49.56	88.52	-1,394.82	-1,481.93	1,339.94	1,271.76	68.18	19.653		
13,300.00	11,872.34	13,384.76	11,862.36	48.81	50.40	88.52	-1,494.80	-1,480.96	1,339.94	1,270.58	69.36	19.318		
13,400.00	11,874.17	13,484.76	11,864.28	49.68	51.27	88.52	-1,594.78	-1,479.98	1,339.94	1,269.34	70.60	18.978		
13,500.00	11,876.00	13,584.76	11,866.20	50.58	52.18	88.53	-1,694.75	-1,479.01	1,339.95	1,268.05	71.90	18.637		
13,600.00	11,877.83	13,684.76	11,868.11	51.52	53.13	88.53	-1,794.73	-1,478.03	1,339.95	1,266.70	73.24	18.294		
13,700.00	11,879.66	13,784.76	11,870.03	52.50	54.12	88.54	-1,894.71	-1,477.05	1,339.95	1,265.31	74.64	17.952		
13,800.00	11,881.49	13,884.76	11,871.95	53.51	55.13	88.54	-1,994.69	-1,476.08	1,339.95	1,263.87	76.08	17.612		
13,900.00	11,883.32	13,984.76	11,873.87	54.55	56.17	88.54	-2,094.66	-1,475.10	1,339.95	1,262.38	77.57	17.275		
14,000.00	11,885.15	14,084.76	11,875.78	55.62	57.25	88.55	-2,194.64	-1,474.13	1,339.95	1,260.86	79.09	16.942		
14,100.00	11,886.98	14,184.76	11,877.70	56.72	58.35	88.55	-2,294.62	-1,473.15	1,339.95	1,259.30	80.66	16.613		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	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)							
14,200.00	11,888.81	14,284.76	11,879.62	57.84	59.47	88.55	-2,394.59	-1,472.17	1,339.95	1,257.70	82.26	16.289						
14,300.00	11,890.64	14,384.76	11,881.54	58.99	60.62	88.56	-2,494.57	-1,471.20	1,339.96	1,256.06	83.90	15.972						
14,400.00	11,892.47	14,484.76	11,883.45	60.17	61.80	88.56	-2,594.55	-1,470.22	1,339.96	1,254.39	85.56	15.660						
14,500.00	11,894.31	14,584.76	11,885.37	61.36	62.99	88.57	-2,694.52	-1,469.25	1,339.96	1,252.69	87.26	15.355						
14,600.00	11,896.14	14,684.76	11,887.29	62.58	64.21	88.57	-2,794.50	-1,468.27	1,339.96	1,250.97	88.99	15.057						
14,700.00	11,897.97	14,784.76	11,889.21	63.81	65.44	88.57	-2,894.48	-1,467.29	1,339.96	1,249.21	90.75	14.766						
14,800.00	11,899.80	14,884.76	11,891.12	65.07	66.69	88.58	-2,994.45	-1,466.32	1,339.96	1,247.43	92.53	14.482						
14,900.00	11,901.63	14,984.76	11,893.04	66.34	67.96	88.58	-3,094.43	-1,465.34	1,339.96	1,245.63	94.33	14.204						
15,000.00	11,903.46	15,084.76	11,894.96	67.63	69.25	88.58	-3,194.41	-1,464.37	1,339.96	1,243.80	96.16	13.934						
15,100.00	11,905.29	15,184.76	11,896.88	68.93	70.55	88.59	-3,294.38	-1,463.39	1,339.97	1,241.95	98.01	13.671						
15,200.00	11,907.12	15,284.76	11,898.79	70.25	71.86	88.59	-3,394.36	-1,462.41	1,339.97	1,240.08	99.88	13.415						
15,300.00	11,908.95	15,384.76	11,900.71	71.58	73.19	88.60	-3,494.34	-1,461.44	1,339.97	1,238.20	101.77	13.166						
15,400.00	11,910.78	15,484.76	11,902.63	72.93	74.53	88.60	-3,594.31	-1,460.46	1,339.97	1,236.29	103.68	12.924						
15,500.00	11,912.61	15,584.76	11,904.55	74.28	75.88	88.60	-3,694.29	-1,459.49	1,339.97	1,234.36	105.61	12.688						
15,600.00	11,914.44	15,684.76	11,906.46	75.65	77.25	88.61	-3,794.27	-1,458.51	1,339.97	1,232.42	107.55	12.459						
15,700.00	11,916.27	15,784.76	11,908.38	77.03	78.63	88.61	-3,894.24	-1,457.53	1,339.97	1,230.47	109.51	12.237						
15,800.00	11,918.10	15,884.76	11,910.30	78.43	80.01	88.61	-3,994.22	-1,456.56	1,339.98	1,228.50	111.48	12.020						
15,900.00	11,919.93	15,984.76	11,912.22	79.83	81.41	88.62	-4,094.20	-1,455.58	1,339.98	1,226.51	113.46	11.810						
16,000.00	11,921.76	16,084.76	11,914.13	81.24	82.81	88.62	-4,194.18	-1,454.61	1,339.98	1,224.52	115.46	11.605						
16,100.00	11,923.59	16,184.76	11,916.05	82.66	84.23	88.63	-4,294.15	-1,453.63	1,339.98	1,222.51	117.47	11.407						
16,200.00	11,925.42	16,284.76	11,917.97	84.08	85.65	88.63	-4,394.13	-1,452.65	1,339.98	1,220.48	119.50	11.214						
16,300.00	11,927.25	16,384.76	11,919.89	85.52	87.08	88.63	-4,494.11	-1,451.68	1,339.98	1,218.45	121.53	11.026						
16,400.00	11,929.08	16,484.76	11,921.80	86.96	88.52	88.64	-4,594.08	-1,450.70	1,339.98	1,216.41	123.57	10.843						
16,500.00	11,930.91	16,584.76	11,923.72	88.41	89.97	88.64	-4,694.06	-1,449.73	1,339.98	1,214.35	125.63	10.666						
16,600.00	11,932.74	16,684.76	11,925.64	89.87	91.42	88.64	-4,794.04	-1,448.75	1,339.99	1,212.29	127.70	10.494						
16,700.00	11,934.57	16,784.76	11,927.56	91.34	92.88	88.65	-4,894.01	-1,447.77	1,339.99	1,210.22	129.77	10.326						
16,800.00	11,936.40	16,884.76	11,929.47	92.81	94.35	88.65	-4,993.99	-1,446.80	1,339.99	1,208.14	131.85	10.163						
16,900.00	11,938.23	16,984.76	11,931.39	94.29	95.82	88.66	-5,093.97	-1,445.82	1,339.99	1,206.05	133.94	10.004						
17,000.00	11,940.06	17,084.76	11,933.31	95.77	97.30	88.66	-5,193.94	-1,444.85	1,339.99	1,203.95	136.04	9.850						
17,100.00	11,941.89	17,184.76	11,935.23	97.26	98.79	88.66	-5,293.92	-1,443.87	1,339.99	1,201.84	138.15	9.700						
17,200.00	11,943.72	17,284.76	11,937.14	98.75	100.27	88.67	-5,393.90	-1,442.89	1,339.99	1,199.73	140.26	9.553						
17,300.00	11,945.55	17,384.76	11,939.06	100.25	101.77	88.67	-5,493.87	-1,441.92	1,340.00	1,197.61	142.39	9.411						
17,400.00	11,947.38	17,484.76	11,940.98	101.75	103.27	88.67	-5,593.85	-1,440.94	1,340.00	1,195.48	144.51	9.272						
17,500.00	11,949.22	17,584.76	11,942.90	103.26	104.77	88.68	-5,693.83	-1,439.97	1,340.00	1,193.35	146.65	9.138						
17,600.00	11,951.05	17,684.76	11,944.81	104.77	106.28	88.68	-5,793.80	-1,438.99	1,340.00	1,191.21	148.79	9.006						
17,700.00	11,952.88	17,784.76	11,946.73	106.29	107.79	88.69	-5,893.78	-1,438.01	1,340.00	1,189.07	150.93	8.878						
17,800.00	11,954.71	17,884.76	11,948.65	107.81	109.31	88.69	-5,993.76	-1,437.04	1,340.00	1,186.92	153.09	8.753						
17,900.00	11,956.54	17,984.76	11,950.57	109.33	110.83	88.69	-6,093.73	-1,436.06	1,340.00	1,184.76	155.24	8.632						
18,000.00	11,958.37	18,084.76	11,952.49	110.86	112.35	88.70	-6,193.71	-1,435.09	1,340.01	1,182.60	157.41	8.513						
18,100.00	11,960.20	18,184.76	11,954.40	112.39	113.88	88.70	-6,293.69	-1,434.11	1,340.01	1,180.43	159.57	8.397						
18,200.00	11,962.03	18,284.76	11,956.32	113.93	115.41	88.70	-6,393.67	-1,433.13	1,340.01	1,178.26	161.74	8.285						
18,300.00	11,963.86	18,384.76	11,958.24	115.46	116.95	88.71	-6,493.64	-1,432.16	1,340.01	1,176.09	163.92	8.175						
18,400.00	11,965.69	18,484.76	11,960.16	117.01	118.48	88.71	-6,593.62	-1,431.18	1,340.01	1,173.91	166.10	8.067						
18,500.00	11,967.52	18,584.76	11,962.07	118.55	120.02	88.72	-6,693.60	-1,430.21	1,340.01	1,171.73	168.29	7.963						
18,600.00	11,969.35	18,684.76	11,963.99	120.10	121.57	88.72	-6,793.57	-1,429.23	1,340.01	1,169.54	170.48	7.860						
18,700.00	11,971.18	18,784.76	11,965.91	121.65	123.11	88.72	-6,893.55	-1,428.25	1,340.02	1,167.35	172.67	7.761						
18,800.00	11,973.01	18,884.76	11,967.83	123.20	124.66	88.73	-6,993.53	-1,427.28	1,340.02	1,165.15	174.86	7.663						
18,900.00	11,974.84	18,984.76	11,969.74	124.75	126.21	88.73	-7,093.50	-1,426.30	1,340.02	1,162.95	177.07	7.568						
19,000.00	11,976.67	19,084.76	11,971.66	126.31	127.77	88.73	-7,193.48	-1,425.33	1,340.02	1,160.75	179.27	7.475						
19,100.00	11,978.50	19,184.76	11,973.58	127.87	129.33	88.74	-7,293.46	-1,424.35	1,340.02	1,158.55	181.48	7.384						
19,200.00	11,980.33	19,284.76	11,975.50	129.43	130.88	88.74	-7,393.43	-1,423.37	1,340.02	1,156.34	183.69	7.295						
19,300.00	11,982.16	19,384.76	11,977.41	131.00	132.45	88.74	-7,493.41	-1,422.40	1,340.02	1,154.13	185.90	7.208						

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
19,400.00	11,983.99	19,484.76	11,979.33	132.57	134.01	88.75	-7,593.39	-1,421.42	1,340.03	1,151.91	188.12	7.123		
19,500.00	11,985.82	19,584.76	11,981.25	134.13	135.57	88.75	-7,693.36	-1,420.45	1,340.03	1,149.69	190.33	7.040		
19,600.00	11,987.65	19,684.76	11,983.17	135.70	137.14	88.76	-7,793.34	-1,419.47	1,340.03	1,147.47	192.56	6.959		
19,700.00	11,989.48	19,784.76	11,985.08	137.28	138.71	88.76	-7,893.32	-1,418.49	1,340.03	1,145.25	194.78	6.880		
19,800.00	11,991.31	19,884.76	11,987.00	138.85	140.28	88.76	-7,993.29	-1,417.52	1,340.03	1,143.02	197.01	6.802		
19,900.00	11,993.14	19,984.76	11,988.92	140.43	141.86	88.77	-8,093.27	-1,416.54	1,340.03	1,140.80	199.24	6.726		
20,000.00	11,994.97	20,084.76	11,990.84	142.01	143.43	88.77	-8,193.25	-1,415.57	1,340.04	1,138.57	201.47	6.651		
20,100.00	11,996.80	20,184.76	11,992.75	143.59	145.01	88.77	-8,293.22	-1,414.59	1,340.04	1,136.33	203.71	6.578		
20,200.00	11,998.63	20,284.76	11,994.67	145.17	146.59	88.78	-8,393.20	-1,413.61	1,340.04	1,134.10	205.94	6.507		
20,300.00	12,000.46	20,384.76	11,996.59	146.75	148.17	88.78	-8,493.18	-1,412.64	1,340.04	1,131.86	208.18	6.437		
20,400.00	12,002.29	20,484.76	11,998.51	148.33	149.75	88.79	-8,593.16	-1,411.66	1,340.04	1,129.62	210.42	6.368		
20,500.00	12,004.13	20,584.76	12,000.42	149.92	151.33	88.79	-8,693.13	-1,410.69	1,340.04	1,127.38	212.67	6.301		
20,600.00	12,005.96	20,684.76	12,002.34	151.51	152.92	88.79	-8,793.11	-1,409.71	1,340.05	1,125.13	214.91	6.235		
20,700.00	12,007.79	20,784.76	12,004.26	153.10	154.50	88.80	-8,893.09	-1,408.74	1,340.05	1,122.89	217.16	6.171		
20,800.00	12,009.62	20,884.76	12,006.18	154.69	156.09	88.80	-8,993.06	-1,407.76	1,340.05	1,120.64	219.41	6.108		
20,900.00	12,011.45	20,984.76	12,008.09	156.28	157.68	88.80	-9,093.04	-1,406.78	1,340.05	1,118.39	221.66	6.046		
21,000.00	12,013.28	21,084.76	12,010.01	157.87	159.27	88.81	-9,193.02	-1,405.81	1,340.05	1,116.14	223.91	5.985		
21,100.00	12,015.11	21,184.76	12,011.93	159.46	160.86	88.81	-9,292.99	-1,404.83	1,340.05	1,113.89	226.17	5.925		
21,200.00	12,016.94	21,284.76	12,013.85	161.06	162.45	88.82	-9,392.97	-1,403.86	1,340.05	1,111.63	228.42	5.867		
21,300.00	12,018.77	21,384.76	12,015.76	162.65	164.05	88.82	-9,492.95	-1,402.88	1,340.06	1,109.38	230.68	5.809		
21,400.00	12,020.60	21,484.76	12,017.68	164.25	165.64	88.82	-9,592.92	-1,401.90	1,340.06	1,107.12	232.94	5.753		
21,500.00	12,022.43	21,584.76	12,019.60	165.85	167.24	88.83	-9,692.90	-1,400.93	1,340.06	1,104.86	235.20	5.698		
21,600.00	12,024.26	21,684.76	12,021.52	167.45	168.84	88.83	-9,792.88	-1,399.95	1,340.06	1,102.60	237.46	5.643		
21,700.00	12,026.09	21,784.76	12,023.43	169.05	170.43	88.83	-9,892.85	-1,398.98	1,340.06	1,100.34	239.73	5.590		
21,800.00	12,027.92	21,884.76	12,025.35	170.65	172.03	88.84	-9,992.83	-1,398.00	1,340.06	1,098.07	241.99	5.538		
21,900.00	12,029.75	21,984.76	12,027.27	172.25	173.63	88.84	-10,092.81	-1,397.02	1,340.07	1,095.81	244.26	5.486		
22,000.00	12,031.58	22,084.76	12,029.19	173.86	175.23	88.85	-10,192.78	-1,396.05	1,340.07	1,093.54	246.53	5.436		
22,100.00	12,033.41	22,184.76	12,031.10	175.46	176.84	88.85	-10,292.76	-1,395.07	1,340.07	1,091.28	248.79	5.386		
22,200.00	12,035.24	22,284.76	12,033.02	177.07	178.44	88.85	-10,392.74	-1,394.10	1,340.07	1,089.01	251.06	5.338		
22,300.00	12,037.07	22,384.76	12,034.94	178.67	180.04	88.86	-10,492.71	-1,393.12	1,340.07	1,086.74	253.34	5.290		
22,400.00	12,038.90	22,484.76	12,036.86	180.28	181.65	88.86	-10,592.69	-1,392.14	1,340.07	1,084.47	255.61	5.243		
22,490.07	12,040.55	22,574.82	12,038.58	181.73	183.10	88.86	-10,682.74	-1,391.26	1,340.08	1,082.42	257.66	5.201 ES, SF		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	25.00	25.00	0.00	0.04	-89.00	40.31	-2,318.90	2,319.25					
100.00	100.00	125.00	125.00	0.14	0.23	-89.00	40.31	-2,318.90	2,319.25	2,318.98	0.27	8,554.123		
200.00	200.00	225.00	225.00	0.50	0.59	-89.00	40.31	-2,318.90	2,319.25	2,318.48	0.77	2,999.650		
300.00	300.00	325.00	325.00	0.86	0.95	-89.00	40.31	-2,318.90	2,319.25	2,317.97	1.28	1,813.192		
400.00	400.00	425.00	425.00	1.22	1.31	-89.00	40.31	-2,318.90	2,319.25	2,317.46	1.79	1,298.858		
500.00	500.00	525.00	525.00	1.58	1.67	-89.00	40.31	-2,318.90	2,319.25	2,316.96	2.29	1,011.751		
600.00	600.00	625.00	625.00	1.93	2.02	-89.00	40.31	-2,318.90	2,319.25	2,316.45	2.80	828.567		
700.00	700.00	725.00	725.00	2.29	2.38	-89.00	40.31	-2,318.90	2,319.25	2,315.94	3.31	701.537		
800.00	800.00	825.00	825.00	2.65	2.74	-89.00	40.31	-2,318.90	2,319.25	2,315.44	3.81	608.275		
900.00	900.00	925.00	925.00	3.01	3.10	-89.00	40.31	-2,318.90	2,319.25	2,314.93	4.32	536.898		
1,000.00	1,000.00	1,025.00	1,025.00	3.37	3.46	-89.00	40.31	-2,318.90	2,319.25	2,314.42	4.83	480.511		
1,100.00	1,100.00	1,125.00	1,125.00	3.73	3.82	-89.00	40.31	-2,318.90	2,319.25	2,313.92	5.33	434.842		
1,200.00	1,200.00	1,225.00	1,225.00	4.08	4.17	-89.00	40.31	-2,318.90	2,319.25	2,313.41	5.84	397.100		
1,300.00	1,300.00	1,325.00	1,325.00	4.44	4.53	-89.00	40.31	-2,318.90	2,319.25	2,312.90	6.35	365.386		
1,400.00	1,400.00	1,425.00	1,425.00	4.80	4.89	-89.00	40.31	-2,318.90	2,319.25	2,312.40	6.85	338.363		
1,500.00	1,500.00	1,525.00	1,525.00	5.16	5.25	-89.00	40.31	-2,318.90	2,319.25	2,311.89	7.36	315.061		
1,600.00	1,600.00	1,625.00	1,625.00	5.52	5.61	-89.00	40.31	-2,318.90	2,319.25	2,311.38	7.87	294.762		
1,700.00	1,700.00	1,725.00	1,725.00	5.88	5.97	-89.00	40.31	-2,318.90	2,319.25	2,310.88	8.38	276.921		
1,800.00	1,800.00	1,825.00	1,825.00	6.24	6.33	-89.00	40.31	-2,318.90	2,319.25	2,310.37	8.88	261.116		
1,900.00	1,900.00	1,925.00	1,925.00	6.59	6.68	-89.00	40.31	-2,318.90	2,319.25	2,309.86	9.39	247.017		
2,000.00	2,000.00	2,025.00	2,025.00	6.95	7.04	-89.00	40.31	-2,318.90	2,319.25	2,309.35	9.90	234.363		
2,100.00	2,100.00	2,125.00	2,125.00	7.31	7.40	-89.00	40.31	-2,318.90	2,319.25	2,308.85	10.40	222.942		
2,200.00	2,200.00	2,225.00	2,225.00	7.67	7.76	-89.00	40.31	-2,318.90	2,319.25	2,308.34	10.91	212.583		
2,300.00	2,300.00	2,325.00	2,325.00	8.03	8.12	-89.00	40.31	-2,318.90	2,319.25	2,307.83	11.42	203.143		
2,400.00	2,400.00	2,425.00	2,425.00	8.39	8.48	-89.00	40.31	-2,318.90	2,319.25	2,307.33	11.92	194.507		
2,500.00	2,500.00	2,525.00	2,525.00	8.74	8.83	-89.00	40.31	-2,318.90	2,319.25	2,306.82	12.43	186.574		
2,600.00	2,600.00	2,625.00	2,625.00	9.10	9.19	-89.00	40.31	-2,318.90	2,319.25	2,306.31	12.94	179.264		
2,700.00	2,700.00	2,725.00	2,725.00	9.46	9.55	-89.00	40.31	-2,318.90	2,319.25	2,305.81	13.44	172.504		
2,800.00	2,800.00	2,825.00	2,825.00	9.82	9.91	-89.00	40.31	-2,318.90	2,319.25	2,305.30	13.95	166.236		
2,900.00	2,900.00	2,925.00	2,925.00	10.18	10.27	-89.00	40.31	-2,318.90	2,319.25	2,304.79	14.46	160.407		
3,000.00	3,000.00	3,025.00	3,025.00	10.54	10.63	-89.00	40.31	-2,318.90	2,319.25	2,304.28	14.97	154.974		
3,100.00	3,100.00	3,125.00	3,125.00	10.90	10.99	-89.00	40.31	-2,318.90	2,319.25	2,303.78	15.47	149.896		
3,200.00	3,200.00	3,225.00	3,225.00	11.25	11.34	-89.00	40.31	-2,318.90	2,319.25	2,303.27	15.98	145.140		
3,300.00	3,300.00	3,325.00	3,325.00	11.61	11.70	-89.00	40.31	-2,318.90	2,319.25	2,302.76	16.49	140.677		
3,400.00	3,400.00	3,425.00	3,425.00	11.97	12.06	-89.00	40.31	-2,318.90	2,319.25	2,302.26	16.99	136.481		
3,500.00	3,500.00	3,525.00	3,525.00	12.33	12.42	-89.00	40.31	-2,318.90	2,319.25	2,301.75	17.50	132.527		
3,600.00	3,600.00	3,625.00	3,625.00	12.69	12.78	-89.00	40.31	-2,318.90	2,319.25	2,301.24	18.01	128.796		
3,700.00	3,700.00	3,725.00	3,725.00	13.05	13.14	-89.00	40.31	-2,318.90	2,319.25	2,300.74	18.51	125.269		
3,800.00	3,800.00	3,825.00	3,825.00	13.41	13.49	-89.00	40.31	-2,318.90	2,319.25	2,300.23	19.02	121.931		
3,900.00	3,900.00	3,925.00	3,925.00	13.76	13.85	-89.00	40.31	-2,318.90	2,319.25	2,299.72	19.53	118.765		
4,000.00	4,000.00	4,025.00	4,025.00	14.12	14.21	-89.00	40.31	-2,318.90	2,319.25	2,299.22	20.03	115.760		
4,100.00	4,100.00	4,125.00	4,125.00	14.48	14.57	-89.00	40.31	-2,318.90	2,319.25	2,298.71	20.54	112.903		
4,200.00	4,200.00	4,225.00	4,225.00	14.84	14.93	-89.00	40.31	-2,318.90	2,319.25	2,298.20	21.05	110.184		
4,300.00	4,300.00	4,325.00	4,325.00	15.20	15.29	-89.00	40.31	-2,318.90	2,319.25	2,297.69	21.56	107.593		
4,400.00	4,400.00	4,425.00	4,425.00	15.56	15.65	-89.00	40.31	-2,318.90	2,319.25	2,297.19	22.06	105.120		
4,500.00	4,500.00	4,525.00	4,525.00	15.91	16.00	-89.00	40.31	-2,318.90	2,319.25	2,296.68	22.57	102.759		
4,600.00	4,600.00	4,625.00	4,625.00	16.27	16.36	-89.00	40.31	-2,318.90	2,319.25	2,296.17	23.08	100.502		
4,700.00	4,700.00	4,725.00	4,725.00	16.63	16.72	-89.00	40.31	-2,318.90	2,319.25	2,295.67	23.58	98.341		
4,800.00	4,800.00	4,825.00	4,825.00	16.99	17.08	-89.00	40.31	-2,318.90	2,319.25	2,295.16	24.09	96.272		
4,900.00	4,900.00	4,925.00	4,925.00	17.35	17.44	-89.00	40.31	-2,318.90	2,319.25	2,294.65	24.60	94.288		
5,000.00	5,000.00	5,025.00	5,025.00	17.71	17.80	-89.00	40.31	-2,318.90	2,319.25	2,294.15	25.10	92.384		
5,100.00	5,100.00	5,125.00	5,125.00	18.07	18.15	-89.00	40.31	-2,318.90	2,319.25	2,293.64	25.61	90.555		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
5,200.00	5,200.00	5,225.00	5,225.00	18.42	18.51	-89.00	40.31	-2,318.90	2,319.25	2,293.13	26.12	88.798		
5,300.00	5,300.00	5,325.00	5,325.00	18.78	18.87	-89.00	40.31	-2,318.90	2,319.25	2,292.63	26.63	87.107		
5,400.00	5,400.00	5,425.00	5,425.00	19.14	19.23	-89.00	40.31	-2,318.90	2,319.25	2,292.12	27.13	85.479		
5,500.00	5,500.00	5,547.14	5,547.14	19.50	19.67	-89.00	40.49	-2,318.67	2,319.13	2,291.44	27.69	83.743		
5,600.00	5,599.99	5,735.40	5,735.25	19.86	20.33	-50.67	44.81	-2,313.21	2,315.44	2,287.05	28.39	81.559		
5,700.00	5,699.91	5,922.39	5,921.53	20.21	20.99	-50.66	54.78	-2,300.60	2,306.31	2,277.26	29.05	79.401		
5,800.00	5,799.69	6,072.81	6,070.70	20.57	21.53	-50.71	66.77	-2,285.43	2,292.10	2,262.48	29.62	77.387		
5,900.08	5,899.35	6,171.50	6,168.43	20.92	21.88	-50.86	75.28	-2,274.66	2,275.58	2,245.47	30.11	75.572		
6,000.00	5,998.72	6,269.91	6,265.88	21.28	22.23	-50.84	83.77	-2,263.92	2,258.27	2,227.67	30.60	73.791		
6,100.00	6,098.17	6,368.40	6,363.41	21.63	22.59	-50.82	92.26	-2,253.18	2,240.95	2,209.85	31.10	72.061		
6,200.00	6,197.63	6,466.88	6,460.94	21.99	22.95	-50.80	100.76	-2,242.43	2,223.63	2,192.04	31.59	70.383		
6,300.00	6,297.08	6,565.37	6,558.46	22.35	23.31	-50.78	109.25	-2,231.69	2,206.31	2,174.22	32.09	68.753		
6,400.00	6,396.53	6,663.85	6,655.99	22.71	23.67	-50.76	117.75	-2,220.94	2,188.99	2,156.40	32.59	67.170		
6,500.00	6,495.98	6,762.34	6,753.52	23.08	24.03	-50.74	126.24	-2,210.19	2,171.67	2,138.58	33.09	65.633		
6,600.00	6,595.43	6,860.82	6,851.05	23.44	24.40	-50.72	134.74	-2,199.45	2,154.35	2,120.76	33.59	64.139		
6,700.00	6,694.89	6,959.31	6,948.58	23.80	24.76	-50.70	143.23	-2,188.70	2,137.03	2,102.94	34.09	62.686		
6,800.00	6,794.34	7,057.80	7,046.11	24.17	25.13	-50.67	151.73	-2,177.95	2,119.72	2,085.12	34.59	61.274		
6,900.00	6,893.79	7,156.28	7,143.63	24.53	25.50	-50.65	160.22	-2,167.21	2,102.40	2,067.30	35.10	59.901		
7,000.00	6,893.24	7,254.77	7,241.16	24.90	25.87	-50.63	168.72	-2,156.46	2,085.08	2,049.48	35.60	58.564		
7,100.00	7,092.69	7,353.25	7,338.69	25.27	26.24	-50.61	177.22	-2,145.72	2,067.76	2,031.65	36.11	57.264		
7,200.00	7,192.15	7,451.74	7,436.22	25.63	26.62	-50.58	185.71	-2,134.97	2,050.44	2,013.83	36.62	55.998		
7,300.00	7,291.60	7,550.22	7,533.75	26.00	26.99	-50.56	194.21	-2,124.22	2,033.13	1,996.00	37.12	54.765		
7,400.00	7,391.05	7,648.71	7,631.28	26.37	27.37	-50.54	202.70	-2,113.48	2,015.81	1,978.18	37.63	53.564		
7,500.00	7,490.50	7,747.20	7,728.81	26.74	27.74	-50.51	211.20	-2,102.73	1,998.49	1,960.35	38.14	52.394		
7,600.00	7,589.95	7,837.74	7,818.48	27.11	28.09	-50.49	218.97	-2,092.89	1,981.23	1,942.59	38.65	51.267		
7,700.00	7,689.41	7,900.00	7,880.24	27.48	28.32	-50.49	223.83	-2,086.74	1,965.04	1,925.93	39.11	50.244		
7,800.00	7,788.86	7,979.39	7,959.17	27.86	28.62	-50.52	229.12	-2,080.05	1,950.20	1,910.60	39.59	49.256		
7,900.00	7,888.31	8,050.63	8,030.13	28.23	28.89	-50.57	233.00	-2,075.15	1,936.80	1,896.74	40.06	48.349		
7,937.55	7,925.65	8,077.44	8,056.86	28.37	28.99	-50.60	234.25	-2,073.57	1,932.13	1,891.90	40.23	48.024		
8,000.00	7,987.81	8,122.11	8,101.44	28.60	29.15	-50.56	236.07	-2,071.27	1,925.15	1,884.63	40.52	47.512		
8,100.00	8,087.53	8,200.00	8,179.23	28.97	29.43	-50.52	238.46	-2,068.24	1,916.49	1,875.50	40.99	46.761		
8,200.00	8,187.40	8,265.93	8,245.13	29.33	29.67	-50.49	239.73	-2,066.64	1,910.91	1,869.49	41.42	46.139		
8,300.00	8,287.37	8,338.08	8,317.28	29.69	29.92	-50.48	240.30	-2,065.92	1,908.47	1,866.61	41.85	45.600		
8,337.63	8,325.00	8,370.81	8,350.00	29.82	30.04	-88.79	240.31	-2,065.90	1,908.33	1,866.30	42.03	45.405		
8,400.00	8,387.37	8,433.18	8,412.37	30.04	30.26	-88.79	240.31	-2,065.90	1,908.33	1,865.98	42.34	45.070		
8,500.00	8,487.37	8,533.18	8,512.37	30.40	30.61	-88.79	240.31	-2,065.90	1,908.33	1,865.48	42.84	44.541		
8,600.00	8,587.37	8,633.18	8,612.37	30.75	30.97	-88.79	240.31	-2,065.90	1,908.33	1,864.98	43.35	44.025		
8,700.00	8,687.37	8,733.18	8,712.37	31.11	31.32	-88.79	240.31	-2,065.90	1,908.33	1,864.48	43.85	43.520		
8,800.00	8,787.37	8,833.18	8,812.37	31.46	31.67	-88.79	240.31	-2,065.90	1,908.33	1,863.97	44.35	43.027		
8,900.00	8,887.37	8,933.18	8,912.37	31.82	32.02	-88.79	240.31	-2,065.90	1,908.33	1,863.47	44.85	42.545		
9,000.00	8,987.37	9,033.18	9,012.37	32.17	32.38	-88.79	240.31	-2,065.90	1,908.33	1,862.97	45.36	42.073		
9,100.00	9,087.37	9,133.18	9,112.37	32.53	32.73	-88.79	240.31	-2,065.90	1,908.33	1,862.47	45.86	41.611		
9,200.00	9,187.37	9,233.18	9,212.37	32.88	33.09	-88.79	240.31	-2,065.90	1,908.33	1,861.96	46.36	41.160		
9,300.00	9,287.37	9,333.18	9,312.37	33.24	33.44	-88.79	240.31	-2,065.90	1,908.33	1,861.46	46.87	40.718		
9,400.00	9,387.37	9,433.18	9,412.37	33.60	33.79	-88.79	240.31	-2,065.90	1,908.33	1,860.96	47.37	40.286		
9,500.00	9,487.37	9,533.18	9,512.37	33.95	34.15	-88.79	240.31	-2,065.90	1,908.33	1,860.45	47.87	39.862		
9,600.00	9,587.37	9,633.18	9,612.37	34.31	34.50	-88.79	240.31	-2,065.90	1,908.33	1,859.95	48.38	39.447		
9,700.00	9,687.37	9,733.18	9,712.37	34.66	34.85	-88.79	240.31	-2,065.90	1,908.33	1,859.45	48.88	39.041		
9,800.00	9,787.37	9,833.18	9,812.37	35.02	35.21	-88.79	240.31	-2,065.90	1,908.33	1,858.94	49.38	38.643		
9,900.00	9,887.37	9,933.18	9,912.37	35.37	35.56	-88.79	240.31	-2,065.90	1,908.33	1,858.44	49.89	38.253		
10,000.00	9,987.37	10,033.18	10,012.37	35.73	35.92	-88.79	240.31	-2,065.90	1,908.33	1,857.93	50.39	37.870		
10,100.00	10,087.37	10,133.18	10,112.37	36.09	36.27	-88.79	240.31	-2,065.90	1,908.33	1,857.43	50.89	37.496		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
10,200.00	10,187.37	10,233.18	10,212.37	36.44	36.63	-88.79	240.31	-2,065.90	1,908.33	1,856.93	51.40	37.128		
10,300.00	10,287.37	10,333.18	10,312.37	36.80	36.98	-88.79	240.31	-2,065.90	1,908.33	1,856.42	51.90	36.768		
10,400.00	10,387.37	10,433.18	10,412.37	37.15	37.34	-88.79	240.31	-2,065.90	1,908.33	1,855.92	52.41	36.414		
10,500.00	10,487.37	10,533.18	10,512.37	37.51	37.69	-88.79	240.31	-2,065.90	1,908.33	1,855.42	52.91	36.067		
10,600.00	10,587.37	10,633.18	10,612.37	37.87	38.04	-88.79	240.31	-2,065.90	1,908.33	1,854.91	53.41	35.727		
10,700.00	10,687.37	10,733.18	10,712.37	38.22	38.40	-88.79	240.31	-2,065.90	1,908.33	1,854.41	53.92	35.393		
10,800.00	10,787.37	10,833.18	10,812.37	38.58	38.75	-88.79	240.31	-2,065.90	1,908.33	1,853.90	54.42	35.065		
10,900.00	10,887.37	10,933.18	10,912.37	38.94	39.11	-88.79	240.31	-2,065.90	1,908.33	1,853.40	54.93	34.743		
11,000.00	10,987.37	11,033.18	11,012.37	39.29	39.46	-88.79	240.31	-2,065.90	1,908.33	1,852.90	55.43	34.427		
11,100.00	11,087.37	11,133.18	11,112.37	39.65	39.82	-88.79	240.31	-2,065.90	1,908.33	1,852.39	55.94	34.117		
11,200.00	11,187.37	11,233.18	11,212.37	40.00	40.17	-88.79	240.31	-2,065.90	1,908.33	1,851.89	56.44	33.812		
11,291.63	11,279.00	11,324.81	11,304.00	40.33	40.50	-88.79	240.31	-2,065.90	1,908.33	1,851.42	56.90	33.537 CC		
11,300.00	11,287.37	11,333.18	11,312.37	40.36	40.53	91.77	240.31	-2,065.90	1,908.33	1,851.38	56.94	33.513		
11,350.00	11,337.27	11,383.08	11,362.27	40.52	40.71	91.85	240.31	-2,065.90	1,908.42	1,851.24	57.18	33.376		
11,400.00	11,386.73	11,432.53	11,411.73	40.67	40.88	92.04	240.31	-2,065.90	1,908.67	1,851.26	57.41	33.245		
11,450.00	11,435.36	11,481.17	11,460.36	40.81	41.06	92.33	240.31	-2,065.90	1,909.12	1,851.49	57.64	33.123		
11,500.00	11,482.81	11,528.61	11,507.81	40.95	41.22	92.71	240.31	-2,065.90	1,909.85	1,852.00	57.85	33.012		
11,550.00	11,528.70	11,574.51	11,553.70	41.08	41.39	93.14	240.31	-2,065.90	1,910.95	1,852.89	58.06	32.912		
11,600.00	11,572.70	11,620.00	11,599.19	41.20	41.55	93.63	240.28	-2,065.90	1,912.54	1,854.28	58.27	32.824		
11,650.00	11,614.46	11,678.86	11,657.91	41.31	41.74	94.30	236.62	-2,065.87	1,914.52	1,856.04	58.49	32.734		
11,700.00	11,653.66	11,742.02	11,720.14	41.40	41.93	94.99	226.03	-2,065.77	1,916.75	1,858.05	58.70	32.655		
11,750.00	11,690.02	11,810.10	11,785.48	41.49	42.12	95.67	207.01	-2,065.61	1,919.14	1,860.25	58.90	32.585		
11,800.00	11,723.25	11,883.75	11,853.06	41.58	42.31	96.35	177.89	-2,065.35	1,921.61	1,862.53	59.08	32.524		
11,850.00	11,753.09	11,963.47	11,921.36	41.67	42.48	97.01	136.89	-2,064.99	1,924.04	1,864.79	59.25	32.474		
11,900.00	11,779.33	12,049.54	11,987.93	41.77	42.64	97.62	82.46	-2,064.51	1,926.27	1,866.88	59.40	32.430		
11,950.00	11,801.76	12,141.77	12,049.36	41.88	42.77	98.15	13.80	-2,063.91	1,928.17	1,868.64	59.54	32.385		
12,000.00	11,820.21	12,239.32	12,101.46	41.99	42.88	98.54	-68.53	-2,063.19	1,929.59	1,869.90	59.69	32.329		
12,050.00	11,834.54	12,340.61	12,139.98	42.11	43.12	98.75	-162.06	-2,062.36	1,930.39	1,870.53	59.86	32.247		
12,100.00	11,844.65	12,443.40	12,161.64	42.23	43.37	98.77	-262.40	-2,061.48	1,930.51	1,870.42	60.09	32.128		
12,150.00	11,850.45	12,525.46	12,166.16	42.36	43.59	98.65	-344.28	-2,060.76	1,930.03	1,869.71	60.33	31.994		
12,180.27	11,851.85	12,555.71	12,166.56	42.43	43.67	98.64	-374.53	-2,060.50	1,929.91	1,869.47	60.44	31.932		
12,181.14	11,851.86	12,556.58	12,166.57	42.44	43.68	98.64	-375.39	-2,060.49	1,929.91	1,869.47	60.44	31.930		
12,200.00	11,852.21	12,575.44	12,166.82	42.49	43.73	98.63	-394.25	-2,060.32	1,929.92	1,869.40	60.51	31.893		
12,300.00	11,854.04	12,675.44	12,168.14	42.78	44.06	98.62	-494.24	-2,059.45	1,929.94	1,869.00	60.94	31.668		
12,400.00	11,855.87	12,775.44	12,169.45	43.14	44.44	98.60	-594.22	-2,058.57	1,929.96	1,868.51	61.46	31.403		
12,500.00	11,857.70	12,875.43	12,170.77	43.56	44.88	98.59	-694.21	-2,057.69	1,929.99	1,867.93	62.05	31.102		
12,600.00	11,859.53	12,975.43	12,172.09	44.04	45.37	98.57	-794.19	-2,056.81	1,930.01	1,867.28	62.73	30.766		
12,700.00	11,861.36	13,075.43	12,173.40	44.57	45.92	98.55	-894.18	-2,055.93	1,930.03	1,866.55	63.49	30.401		
12,800.00	11,863.19	13,175.43	12,174.72	45.15	46.52	98.54	-994.17	-2,055.05	1,930.06	1,865.74	64.31	30.010		
12,900.00	11,865.02	13,275.43	12,176.04	45.79	47.17	98.52	-1,094.15	-2,054.17	1,930.08	1,864.86	65.22	29.596		
13,000.00	11,866.85	13,375.43	12,177.36	46.48	47.86	98.51	-1,194.14	-2,053.30	1,930.10	1,863.92	66.19	29.162		
13,100.00	11,868.68	13,475.43	12,178.67	47.21	48.60	98.49	-1,294.13	-2,052.42	1,930.13	1,862.91	67.22	28.713		
13,200.00	11,870.51	13,575.42	12,179.99	47.99	49.39	98.48	-1,394.11	-2,051.54	1,930.15	1,861.83	68.32	28.252		
13,300.00	11,872.34	13,675.42	12,181.31	48.81	50.22	98.46	-1,494.10	-2,050.66	1,930.18	1,860.70	69.48	27.781		
13,400.00	11,874.17	13,775.42	12,182.62	49.68	51.09	98.45	-1,594.08	-2,049.78	1,930.20	1,859.51	70.69	27.303		
13,500.00	11,876.00	13,875.42	12,183.94	50.58	51.99	98.43	-1,694.07	-2,048.90	1,930.22	1,858.26	71.96	26.822		
13,600.00	11,877.83	13,975.42	12,185.26	51.52	52.93	98.42	-1,794.06	-2,048.02	1,930.25	1,856.96	73.29	26.339		
13,700.00	11,879.66	14,075.42	12,186.57	52.50	53.91	98.40	-1,894.04	-2,047.15	1,930.27	1,855.62	74.66	25.856		
13,800.00	11,881.49	14,175.42	12,187.89	53.51	54.92	98.38	-1,994.03	-2,046.27	1,930.30	1,854.23	76.07	25.375		
13,900.00	11,883.32	14,275.41	12,189.21	54.55	55.96	98.37	-2,094.01	-2,045.39	1,930.32	1,852.79	77.53	24.897		
14,000.00	11,885.15	14,375.41	12,190.52	55.62	57.02	98.35	-2,194.00	-2,044.51	1,930.35	1,851.32	79.03	24.425		
14,100.00	11,886.98	14,475.41	12,191.84	56.72	58.12	98.34	-2,293.99	-2,043.63	1,930.37	1,849.80	80.57	23.958		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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									
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore	Centre	Between	Between	Minimum	Separation	Warning			
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor				
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)					
14,200.00	11,888.81	14,575.41	12,193.16	57.84	59.24	98.32	-2,393.97	-2,042.75	1,930.40	1,848.25	82.15	23.499				
14,300.00	11,890.64	14,675.41	12,194.48	58.99	60.39	98.31	-2,493.96	-2,041.87	1,930.43	1,846.67	83.76	23.047				
14,400.00	11,892.47	14,775.41	12,195.79	60.17	61.55	98.29	-2,593.94	-2,041.00	1,930.45	1,845.05	85.40	22.604				
14,500.00	11,894.31	14,875.41	12,197.11	61.36	62.74	98.28	-2,693.93	-2,040.12	1,930.48	1,843.40	87.08	22.169				
14,600.00	11,896.14	14,975.41	12,198.43	62.58	63.96	98.26	-2,793.92	-2,039.24	1,930.50	1,841.72	88.78	21.744				
14,700.00	11,897.97	15,075.40	12,199.74	63.81	65.19	98.24	-2,893.90	-2,038.36	1,930.53	1,840.02	90.51	21.329				
14,800.00	11,899.80	15,175.40	12,201.06	65.07	66.43	98.23	-2,993.89	-2,037.48	1,930.56	1,838.29	92.27	20.923				
14,900.00	11,901.63	15,275.40	12,202.38	66.34	67.70	98.21	-3,093.87	-2,036.60	1,930.58	1,836.53	94.05	20.527				
15,000.00	11,903.46	15,375.40	12,203.69	67.63	68.98	98.20	-3,193.86	-2,035.72	1,930.61	1,834.75	95.86	20.141				
15,100.00	11,905.29	15,475.40	12,205.01	68.93	70.28	98.18	-3,293.85	-2,034.85	1,930.64	1,832.95	97.68	19.764				
15,200.00	11,907.12	15,575.40	12,206.33	70.25	71.59	98.17	-3,393.83	-2,033.97	1,930.66	1,831.13	99.53	19.398				
15,300.00	11,908.95	15,675.40	12,207.65	71.58	72.92	98.15	-3,493.82	-2,033.09	1,930.69	1,829.29	101.40	19.041				
15,400.00	11,910.78	15,775.39	12,208.96	72.93	74.26	98.14	-3,593.81	-2,032.21	1,930.72	1,827.43	103.28	18.693				
15,500.00	11,912.61	15,875.39	12,210.28	74.28	75.61	98.12	-3,693.79	-2,031.33	1,930.74	1,825.56	105.19	18.356				
15,600.00	11,914.44	15,975.39	12,211.60	75.65	76.97	98.10	-3,793.78	-2,030.45	1,930.77	1,823.67	107.11	18.027				
15,700.00	11,916.27	16,075.39	12,212.91	77.03	78.34	98.09	-3,893.76	-2,029.57	1,930.80	1,821.76	109.04	17.707				
15,800.00	11,918.10	16,175.39	12,214.23	78.43	79.73	98.07	-3,993.75	-2,028.70	1,930.83	1,819.84	110.99	17.396				
15,900.00	11,919.93	16,275.39	12,215.55	79.83	81.12	98.06	-4,093.74	-2,027.82	1,930.86	1,817.90	112.95	17.094				
16,000.00	11,921.76	16,375.39	12,216.86	81.24	82.53	98.04	-4,193.72	-2,026.94	1,930.88	1,815.95	114.93	16.800				
16,100.00	11,923.59	16,475.38	12,218.18	82.66	83.94	98.03	-4,293.71	-2,026.06	1,930.91	1,813.99	116.92	16.515				
16,200.00	11,925.42	16,575.38	12,219.50	84.08	85.36	98.01	-4,393.69	-2,025.18	1,930.94	1,812.02	118.92	16.237				
16,300.00	11,927.25	16,675.38	12,220.82	85.52	86.79	98.00	-4,493.68	-2,024.30	1,930.97	1,810.03	120.94	15.967				
16,400.00	11,929.08	16,775.38	12,222.13	86.96	88.23	97.98	-4,593.67	-2,023.42	1,931.00	1,808.04	122.96	15.704				
16,500.00	11,930.91	16,875.38	12,223.45	88.41	89.68	97.97	-4,693.65	-2,022.55	1,931.03	1,806.03	125.00	15.449				
16,600.00	11,932.74	16,975.38	12,224.77	89.87	91.13	97.95	-4,793.64	-2,021.67	1,931.06	1,804.02	127.04	15.200				
16,700.00	11,934.57	17,075.38	12,226.08	91.34	92.59	97.93	-4,893.62	-2,020.79	1,931.08	1,801.99	129.09	14.959				
16,800.00	11,936.40	17,175.38	12,227.40	92.81	94.05	97.92	-4,993.61	-2,019.91	1,931.11	1,799.96	131.16	14.724				
16,900.00	11,938.23	17,275.37	12,228.72	94.29	95.52	97.90	-5,093.60	-2,019.03	1,931.14	1,797.91	133.23	14.495				
17,000.00	11,940.06	17,375.37	12,230.03	95.77	97.00	97.89	-5,193.58	-2,018.15	1,931.17	1,795.86	135.31	14.272				
17,100.00	11,941.89	17,475.37	12,231.35	97.26	98.48	97.87	-5,293.57	-2,017.27	1,931.20	1,793.80	137.40	14.056				
17,200.00	11,943.72	17,575.37	12,232.67	98.75	99.97	97.86	-5,393.56	-2,016.40	1,931.23	1,791.74	139.49	13.845				
17,300.00	11,945.55	17,675.37	12,233.99	100.25	101.47	97.84	-5,493.54	-2,015.52	1,931.26	1,789.67	141.60	13.639				
17,400.00	11,947.38	17,775.37	12,235.30	101.75	102.96	97.83	-5,593.53	-2,014.64	1,931.29	1,787.59	143.70	13.439				
17,500.00	11,949.22	17,875.37	12,236.62	103.26	104.47	97.81	-5,693.51	-2,013.76	1,931.32	1,785.50	145.82	13.244				
17,600.00	11,951.05	17,975.36	12,237.94	104.77	105.97	97.79	-5,793.50	-2,012.88	1,931.35	1,783.41	147.94	13.055				
17,700.00	11,952.88	18,075.36	12,239.25	106.29	107.49	97.78	-5,893.49	-2,012.00	1,931.38	1,781.31	150.07	12.870				
17,800.00	11,954.71	18,175.36	12,240.57	107.81	109.00	97.76	-5,993.47	-2,011.13	1,931.41	1,779.21	152.21	12.689				
17,900.00	11,956.54	18,275.36	12,241.89	109.33	110.52	97.75	-6,093.46	-2,010.25	1,931.44	1,777.10	154.35	12.514				
18,000.00	11,958.37	18,375.36	12,243.20	110.86	112.04	97.73	-6,193.44	-2,009.37	1,931.47	1,774.98	156.49	12.342				
18,100.00	11,960.20	18,475.36	12,244.52	112.39	113.57	97.72	-6,293.43	-2,008.49	1,931.51	1,772.87	158.64	12.175				
18,200.00	11,962.03	18,575.36	12,245.84	113.93	115.10	97.70	-6,393.42	-2,007.61	1,931.54	1,770.74	160.79	12.012				
18,300.00	11,963.86	18,675.35	12,247.15	115.46	116.64	97.69	-6,493.40	-2,006.73	1,931.57	1,768.61	162.95	11.853				
18,400.00	11,965.69	18,775.35	12,248.47	117.01	118.17	97.67	-6,593.39	-2,005.85	1,931.60	1,766.48	165.12	11.698				
18,500.00	11,967.52	18,875.35	12,249.79	118.55	119.71	97.66	-6,693.37	-2,004.98	1,931.63	1,764.34	167.29	11.547				
18,600.00	11,969.35	18,975.35	12,251.11	120.10	121.26	97.64	-6,793.36	-2,004.10	1,931.66	1,762.20	169.46	11.399				
18,700.00	11,971.18	19,075.35	12,252.42	121.65	122.80	97.62	-6,893.35	-2,003.22	1,931.69	1,760.06	171.64	11.254				
18,800.00	11,973.01	19,175.35	12,253.74	123.20	124.35	97.61	-6,993.33	-2,002.34	1,931.73	1,757.91	173.82	11.113				
18,900.00	11,974.84	19,275.35	12,255.06	124.75	125.90	97.59	-7,093.32	-2,001.46	1,931.76	1,755.76	176.00	10.976				
19,000.00	11,976.67	19,375.35	12,256.37	126.31	127.45	97.58	-7,193.30	-2,000.58	1,931.79	1,753.60	178.19	10.841				
19,100.00	11,978.50	19,475.34	12,257.69	127.87	129.01	97.56	-7,293.29	-1,999.70	1,931.82	1,751.44	180.38	10.710				
19,200.00	11,980.33	19,575.34	12,259.01	129.43	130.57	97.55	-7,393.28	-1,998.83	1,931.86	1,749.28	182.58	10.581				
19,300.00	11,982.16	19,675.34	12,260.32	131.00	132.13	97.53	-7,493.26	-1,997.95	1,931.89	1,747.11	184.77	10.455				

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
19,400.00	11,983.99	19,775.34	12,261.64	132.57	133.69	97.52	-7,593.25	-1,997.07	1,931.92	1,744.95	186.98	10.332		
19,500.00	11,985.82	19,875.34	12,262.96	134.13	135.26	97.50	-7,693.24	-1,996.19	1,931.95	1,742.77	189.18	10.212		
19,600.00	11,987.65	19,975.34	12,264.28	135.70	136.83	97.49	-7,793.22	-1,995.31	1,931.99	1,740.60	191.39	10.095		
19,700.00	11,989.48	20,075.34	12,265.59	137.28	138.39	97.47	-7,893.21	-1,994.43	1,932.02	1,738.42	193.60	9.980		
19,800.00	11,991.31	20,175.33	12,266.91	138.85	139.97	97.45	-7,993.19	-1,993.55	1,932.05	1,736.24	195.81	9.867		
19,900.00	11,993.14	20,275.33	12,268.23	140.43	141.54	97.44	-8,093.18	-1,992.68	1,932.09	1,734.06	198.03	9.757		
20,000.00	11,994.97	20,375.33	12,269.54	142.01	143.11	97.42	-8,193.17	-1,991.80	1,932.12	1,731.88	200.24	9.649		
20,100.00	11,996.80	20,475.33	12,270.86	143.59	144.69	97.41	-8,293.15	-1,990.92	1,932.16	1,729.69	202.47	9.543		
20,200.00	11,998.63	20,575.33	12,272.18	145.17	146.27	97.39	-8,393.14	-1,990.04	1,932.19	1,727.50	204.69	9.440		
20,300.00	12,000.46	20,675.33	12,273.49	146.75	147.85	97.38	-8,493.12	-1,989.16	1,932.22	1,725.31	206.91	9.338		
20,400.00	12,002.29	20,775.33	12,274.81	148.33	149.43	97.36	-8,593.11	-1,988.28	1,932.26	1,723.12	209.14	9.239		
20,500.00	12,004.13	20,875.32	12,276.13	149.92	151.01	97.35	-8,693.10	-1,987.40	1,932.29	1,720.92	211.37	9.142		
20,600.00	12,005.96	20,975.32	12,277.45	151.51	152.60	97.33	-8,793.08	-1,986.53	1,932.33	1,718.72	213.60	9.046		
20,700.00	12,007.79	21,075.32	12,278.76	153.10	154.18	97.31	-8,893.07	-1,985.65	1,932.36	1,716.52	215.84	8.953		
20,800.00	12,009.62	21,175.32	12,280.08	154.69	155.77	97.30	-8,993.05	-1,984.77	1,932.40	1,714.32	218.07	8.861		
20,900.00	12,011.45	21,275.32	12,281.40	156.28	157.36	97.28	-9,093.04	-1,983.89	1,932.43	1,712.12	220.31	8.771		
21,000.00	12,013.28	21,375.32	12,282.71	157.87	158.95	97.27	-9,193.03	-1,983.01	1,932.47	1,709.92	222.55	8.683		
21,100.00	12,015.11	21,475.32	12,284.03	159.46	160.54	97.25	-9,293.01	-1,982.13	1,932.50	1,707.71	224.79	8.597		
21,200.00	12,016.94	21,575.31	12,285.35	161.06	162.13	97.24	-9,393.00	-1,981.25	1,932.54	1,705.50	227.04	8.512		
21,300.00	12,018.77	21,675.31	12,286.66	162.65	163.72	97.22	-9,492.99	-1,980.38	1,932.57	1,703.29	229.28	8.429		
21,400.00	12,020.60	21,775.31	12,287.98	164.25	165.32	97.21	-9,592.97	-1,979.50	1,932.61	1,701.08	231.53	8.347		
21,500.00	12,022.43	21,875.31	12,289.30	165.85	166.91	97.19	-9,692.96	-1,978.62	1,932.64	1,698.87	233.78	8.267		
21,600.00	12,024.26	21,975.31	12,290.61	167.45	168.51	97.18	-9,792.94	-1,977.74	1,932.68	1,696.65	236.03	8.188		
21,700.00	12,026.09	22,075.31	12,291.93	169.05	170.11	97.16	-9,892.93	-1,976.86	1,932.72	1,694.44	238.28	8.111		
21,800.00	12,027.92	22,175.31	12,293.25	170.65	171.71	97.14	-9,992.92	-1,975.98	1,932.75	1,692.22	240.53	8.035		
21,900.00	12,029.75	22,275.31	12,294.57	172.25	173.31	97.13	-10,092.90	-1,975.10	1,932.79	1,690.00	242.79	7.961		
22,000.00	12,031.58	22,375.30	12,295.88	173.86	174.91	97.11	-10,192.89	-1,974.23	1,932.83	1,687.78	245.04	7.888		
22,100.00	12,033.41	22,475.30	12,297.20	175.46	176.51	97.10	-10,292.87	-1,973.35	1,932.86	1,685.56	247.30	7.816		
22,200.00	12,035.24	22,575.30	12,298.52	177.07	178.11	97.08	-10,392.86	-1,972.47	1,932.90	1,683.34	249.56	7.745		
22,300.00	12,037.07	22,675.30	12,299.83	178.67	179.72	97.07	-10,492.85	-1,971.59	1,932.94	1,681.12	251.82	7.676		
22,400.00	12,038.90	22,775.30	12,301.15	180.28	181.32	97.05	-10,592.83	-1,970.71	1,932.97	1,678.89	254.08	7.608		
22,490.07	12,040.55	22,865.37	12,302.34	181.73	182.77	97.04	-10,682.89	-1,969.92	1,933.01	1,676.89	256.12	7.547 ES, SF		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	38.50	38.50	0.00	0.05	-90.53	-39.87	-4,274.67	4,274.86					
100.00	100.00	138.50	138.50	0.14	0.28	-90.53	-39.87	-4,274.67	4,274.86	4,274.54	0.31	N/A		
200.00	200.00	238.50	238.50	0.50	0.64	-90.53	-39.87	-4,274.67	4,274.86	4,274.05	0.81	5,273.127		
300.00	300.00	338.50	338.50	0.86	1.00	-90.53	-39.87	-4,274.67	4,274.86	4,273.54	1.32	3,249.921		
400.00	400.00	438.50	438.50	1.22	1.36	-90.53	-39.87	-4,274.67	4,274.86	4,273.03	1.82	2,347.121		
500.00	500.00	538.50	538.50	1.58	1.71	-90.53	-39.87	-4,274.67	4,274.86	4,272.53	2.33	1,836.512		
600.00	600.00	638.50	638.50	1.93	2.07	-90.53	-39.87	-4,274.67	4,274.86	4,272.02	2.83	1,508.262		
700.00	700.00	738.50	738.50	2.29	2.43	-90.53	-39.87	-4,274.67	4,274.86	4,271.52	3.34	1,279.516		
800.00	800.00	838.50	838.50	2.65	2.79	-90.53	-39.87	-4,274.67	4,274.86	4,271.01	3.85	1,110.998		
900.00	900.00	938.50	938.50	3.01	3.15	-90.53	-39.87	-4,274.67	4,274.86	4,270.50	4.35	981.694		
1,000.00	1,000.00	1,038.50	1,038.50	3.37	3.51	-90.53	-39.87	-4,274.67	4,274.86	4,269.99	4.86	879.344		
1,100.00	1,100.00	1,138.50	1,138.50	3.73	3.86	-90.53	-39.87	-4,274.67	4,274.86	4,269.49	5.37	796.318		
1,200.00	1,200.00	1,238.50	1,238.50	4.08	4.22	-90.53	-39.87	-4,274.67	4,274.86	4,268.98	5.88	727.616		
1,300.00	1,300.00	1,338.50	1,338.50	4.44	4.58	-90.53	-39.87	-4,274.67	4,274.86	4,268.47	6.38	669.825		
1,400.00	1,400.00	1,438.50	1,438.50	4.80	4.94	-90.53	-39.87	-4,274.67	4,274.86	4,267.97	6.89	620.538		
1,500.00	1,500.00	1,538.50	1,538.50	5.16	5.30	-90.53	-39.87	-4,274.67	4,274.86	4,267.46	7.40	578.007		
1,600.00	1,600.00	1,638.50	1,638.50	5.52	5.66	-90.53	-39.87	-4,274.67	4,274.86	4,266.95	7.90	540.931		
1,700.00	1,700.00	1,738.50	1,738.50	5.88	6.02	-90.53	-39.87	-4,274.67	4,274.86	4,266.45	8.41	508.325		
1,800.00	1,800.00	1,838.50	1,838.50	6.24	6.37	-90.53	-39.87	-4,274.67	4,274.86	4,265.94	8.92	479.426		
1,900.00	1,900.00	1,938.50	1,938.50	6.59	6.73	-90.53	-39.87	-4,274.67	4,274.86	4,265.43	9.42	453.636		
2,000.00	2,000.00	2,038.50	2,038.50	6.95	7.09	-90.53	-39.87	-4,274.67	4,274.86	4,264.93	9.93	430.479		
2,100.00	2,100.00	2,138.50	2,138.50	7.31	7.45	-90.53	-39.87	-4,274.67	4,274.86	4,264.42	10.44	409.571		
2,200.00	2,200.00	2,238.50	2,238.50	7.67	7.81	-90.53	-39.87	-4,274.67	4,274.86	4,263.91	10.94	390.600		
2,300.00	2,300.00	2,338.50	2,338.50	8.03	8.17	-90.53	-39.87	-4,274.67	4,274.86	4,263.40	11.45	373.308		
2,400.00	2,400.00	2,438.50	2,438.50	8.39	8.52	-90.53	-39.87	-4,274.67	4,274.86	4,262.90	11.96	357.483		
2,500.00	2,500.00	2,538.50	2,538.50	8.74	8.88	-90.53	-39.87	-4,274.67	4,274.86	4,262.39	12.47	342.945		
2,600.00	2,600.00	2,638.50	2,638.50	9.10	9.24	-90.53	-39.87	-4,274.67	4,274.86	4,261.88	12.97	329.543		
2,700.00	2,700.00	2,738.50	2,738.50	9.46	9.60	-90.53	-39.87	-4,274.67	4,274.86	4,261.38	13.48	317.149		
2,800.00	2,800.00	2,838.50	2,838.50	9.82	9.96	-90.53	-39.87	-4,274.67	4,274.86	4,260.87	13.99	305.653		
2,900.00	2,900.00	2,938.50	2,938.50	10.18	10.32	-90.53	-39.87	-4,274.67	4,274.86	4,260.36	14.49	294.962		
3,000.00	3,000.00	3,038.50	3,038.50	10.54	10.68	-90.53	-39.87	-4,274.67	4,274.86	4,259.86	15.00	284.993		
3,100.00	3,100.00	3,138.50	3,138.50	10.90	11.03	-90.53	-39.87	-4,274.67	4,274.86	4,259.35	15.51	275.676		
3,200.00	3,200.00	3,238.50	3,238.50	11.25	11.39	-90.53	-39.87	-4,274.67	4,274.86	4,258.84	16.01	266.949		
3,300.00	3,300.00	3,338.50	3,338.50	11.61	11.75	-90.53	-39.87	-4,274.67	4,274.86	4,258.34	16.52	258.758		
3,400.00	3,400.00	3,438.50	3,438.50	11.97	12.11	-90.53	-39.87	-4,274.67	4,274.86	4,257.83	17.03	251.054		
3,500.00	3,500.00	3,538.50	3,538.50	12.33	12.47	-90.53	-39.87	-4,274.67	4,274.86	4,257.32	17.53	243.796		
3,600.00	3,600.00	3,638.50	3,638.50	12.69	12.83	-90.53	-39.87	-4,274.67	4,274.86	4,256.81	18.04	236.945		
3,700.00	3,700.00	3,738.50	3,738.50	13.05	13.18	-90.53	-39.87	-4,274.67	4,274.86	4,256.31	18.55	230.469		
3,800.00	3,800.00	3,838.50	3,838.50	13.41	13.54	-90.53	-39.87	-4,274.67	4,274.86	4,255.80	19.06	224.338		
3,900.00	3,900.00	3,938.50	3,938.50	13.76	13.90	-90.53	-39.87	-4,274.67	4,274.86	4,255.29	19.56	218.524		
4,000.00	4,000.00	4,038.50	4,038.50	14.12	14.26	-90.53	-39.87	-4,274.67	4,274.86	4,254.79	20.07	213.004		
4,100.00	4,100.00	4,138.50	4,138.50	14.48	14.62	-90.53	-39.87	-4,274.67	4,274.86	4,254.28	20.58	207.757		
4,200.00	4,200.00	4,238.50	4,238.50	14.84	14.98	-90.53	-39.87	-4,274.67	4,274.86	4,253.77	21.08	202.761		
4,300.00	4,300.00	4,338.50	4,338.50	15.20	15.34	-90.53	-39.87	-4,274.67	4,274.86	4,253.27	21.59	198.000		
4,400.00	4,400.00	4,438.50	4,438.50	15.56	15.69	-90.53	-39.87	-4,274.67	4,274.86	4,252.76	22.10	193.458		
4,500.00	4,500.00	4,538.50	4,538.50	15.91	16.05	-90.53	-39.87	-4,274.67	4,274.86	4,252.25	22.60	189.119		
4,600.00	4,600.00	4,638.50	4,638.50	16.27	16.41	-90.53	-39.87	-4,274.67	4,274.86	4,251.74	23.11	184.970		
4,700.00	4,700.00	4,738.50	4,738.50	16.63	16.77	-90.53	-39.87	-4,274.67	4,274.86	4,251.24	23.62	181.000		
4,800.00	4,800.00	4,838.50	4,838.50	16.99	17.13	-90.53	-39.87	-4,274.67	4,274.86	4,250.73	24.12	177.197		
4,900.00	4,900.00	4,938.50	4,938.50	17.35	17.49	-90.53	-39.87	-4,274.67	4,274.86	4,250.22	24.63	173.550		
5,000.00	5,000.00	5,038.50	5,038.50	17.71	17.84	-90.53	-39.87	-4,274.67	4,274.86	4,249.72	25.14	170.050		
5,100.00	5,100.00	5,138.50	5,138.50	18.07	18.20	-90.53	-39.87	-4,274.67	4,274.86	4,249.21	25.65	166.688		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
5,200.00	5,200.00	5,238.50	5,238.50	18.42	18.56	-90.53	-39.87	-4,274.67	4,274.86	4,248.70	26.15	163.457				
5,300.00	5,300.00	5,338.50	5,338.50	18.78	18.92	-90.53	-39.87	-4,274.67	4,274.86	4,248.20	26.66	160.349				
5,400.00	5,400.00	5,438.50	5,438.50	19.14	19.28	-90.53	-39.87	-4,274.67	4,274.86	4,247.69	27.17	157.357				
5,405.80	5,405.80	5,444.30	5,444.30	19.16	19.30	-90.53	-39.87	-4,274.67	4,274.86	4,247.66	27.20	157.187				
5,500.00	5,500.00	5,524.15	5,524.15	19.50	19.59	-90.53	-39.81	-4,274.71	4,274.92	4,247.28	27.64	154.683				
5,600.00	5,599.99	5,600.00	5,599.99	19.86	19.86	-52.22	-38.77	-4,275.38	4,274.92	4,246.84	28.08	152.246				
5,700.00	5,699.91	5,649.57	5,649.54	20.21	20.03	-52.24	-37.40	-4,276.25	4,274.13	4,245.68	28.45	150.235				
5,800.00	5,799.69	5,700.00	5,699.91	20.57	20.21	-52.26	-35.46	-4,277.49	4,272.66	4,243.85	28.82	148.257				
5,900.08	5,899.35	5,775.07	5,774.83	20.92	20.48	-52.31	-31.53	-4,280.01	4,270.41	4,241.16	29.25	145.983				
6,000.00	5,998.72	5,840.61	5,840.16	21.28	20.71	-52.32	-27.09	-4,282.85	4,268.26	4,238.60	29.66	143.909				
6,100.00	6,098.17	5,940.59	5,939.76	21.63	21.07	-52.33	-19.76	-4,287.54	4,266.48	4,236.32	30.16	141.459				
6,200.00	6,197.63	6,040.57	6,039.36	21.99	21.43	-52.34	-12.43	-4,292.23	4,264.70	4,234.03	30.66	139.084				
6,300.00	6,297.08	6,140.55	6,138.96	22.35	21.78	-52.35	-5.10	-4,296.92	4,262.91	4,231.75	31.17	136.781				
6,400.00	6,396.53	6,240.53	6,238.56	22.71	22.14	-52.37	2.24	-4,301.62	4,261.13	4,229.46	31.67	134.547				
6,500.00	6,495.98	6,340.51	6,338.16	23.08	22.50	-52.38	9.57	-4,306.31	4,259.35	4,227.17	32.18	132.378				
6,600.00	6,595.43	6,440.49	6,437.76	23.44	22.86	-52.39	16.90	-4,311.00	4,257.57	4,224.89	32.68	130.272				
6,700.00	6,694.89	6,540.47	6,537.36	23.80	23.22	-52.40	24.23	-4,315.70	4,255.79	4,222.60	33.19	128.227				
6,800.00	6,794.34	6,640.45	6,636.96	24.17	23.58	-52.42	31.56	-4,320.39	4,254.01	4,220.31	33.70	126.241				
6,900.00	6,893.79	6,740.43	6,736.56	24.53	23.94	-52.43	38.90	-4,325.08	4,252.22	4,218.02	34.21	124.310				
7,000.00	6,993.24	6,840.41	6,836.16	24.90	24.31	-52.44	46.23	-4,329.77	4,250.44	4,215.73	34.72	122.433				
7,100.00	7,092.69	6,940.39	6,935.77	25.27	24.67	-52.45	53.56	-4,334.47	4,248.66	4,213.44	35.23	120.607				
7,200.00	7,192.15	7,040.37	7,035.37	25.63	25.03	-52.46	60.89	-4,339.16	4,246.88	4,211.14	35.74	118.832				
7,300.00	7,291.60	7,140.35	7,134.97	26.00	25.40	-52.48	68.23	-4,343.85	4,245.10	4,208.85	36.25	117.104				
7,400.00	7,391.05	7,240.33	7,234.57	26.37	25.76	-52.49	75.56	-4,348.54	4,243.32	4,206.56	36.76	115.422				
7,500.00	7,490.50	7,340.31	7,334.17	26.74	26.13	-52.50	82.89	-4,353.24	4,241.54	4,204.27	37.28	113.784				
7,600.00	7,589.95	7,440.29	7,433.77	27.11	26.49	-52.51	90.22	-4,357.93	4,239.76	4,201.97	37.79	112.189				
7,700.00	7,689.41	7,540.27	7,533.37	27.48	26.86	-52.52	97.55	-4,362.62	4,237.98	4,199.68	38.31	110.635				
7,800.00	7,788.86	7,640.25	7,632.97	27.86	27.23	-52.54	104.89	-4,367.31	4,236.20	4,197.38	38.82	109.121				
7,900.00	7,888.31	7,740.23	7,732.57	28.23	27.59	-52.55	112.22	-4,372.01	4,234.43	4,195.09	39.34	107.644				
7,937.55	7,925.65	7,777.78	7,769.97	28.37	27.73	-52.55	114.97	-4,373.77	4,233.76	4,194.23	39.53	107.100				
8,000.00	7,987.81	7,840.22	7,832.17	28.60	27.96	-52.55	119.55	-4,376.70	4,232.96	4,193.10	39.85	106.214				
8,049.29	8,036.93	7,889.50	7,881.27	28.78	28.14	-52.54	123.17	-4,379.01	4,232.76	4,192.66	40.11	105.538 CC				
8,100.00	8,087.53	7,940.21	7,931.78	28.97	28.33	-52.53	126.88	-4,381.39	4,232.97	4,192.60	40.37	104.861				
8,200.00	8,187.40	8,040.13	8,031.33	29.33	28.69	-52.50	134.21	-4,386.08	4,234.57	4,193.69	40.88	103.586				
8,300.00	8,287.37	8,139.92	8,130.74	29.69	29.06	-52.46	141.53	-4,390.77	4,237.78	4,196.39	41.39	102.388				
8,337.63	8,325.00	8,177.42	8,168.09	29.82	29.20	-90.75	144.28	-4,392.53	4,239.40	4,197.82	41.58	101.957				
8,400.00	8,387.37	8,257.64	8,248.02	30.04	29.50	-90.68	150.06	-4,396.23	4,242.25	4,200.30	41.95	101.133				
8,500.00	8,487.37	8,501.06	8,491.12	30.40	30.38	-90.54	159.75	-4,402.43	4,244.76	4,201.93	42.83	99.108				
8,600.00	8,587.37	8,635.81	8,625.87	30.75	30.86	-90.54	160.13	-4,402.67	4,244.86	4,201.44	43.42	97.768				
8,700.00	8,687.37	8,735.81	8,725.87	31.11	31.21	-90.54	160.13	-4,402.67	4,244.86	4,200.94	43.92	96.647				
8,800.00	8,787.37	8,835.81	8,825.87	31.46	31.57	-90.54	160.13	-4,402.67	4,244.86	4,200.43	44.42	95.552				
8,900.00	8,887.37	8,935.81	8,925.87	31.82	31.93	-90.54	160.13	-4,402.67	4,244.86	4,199.93	44.93	94.482				
9,000.00	8,987.37	9,035.81	9,025.87	32.17	32.28	-90.54	160.13	-4,402.67	4,244.86	4,199.43	45.43	93.434				
9,100.00	9,087.37	9,135.81	9,125.87	32.53	32.64	-90.54	160.13	-4,402.67	4,244.86	4,198.92	45.93	92.410				
9,200.00	9,187.37	9,235.81	9,225.87	32.88	32.99	-90.54	160.13	-4,402.67	4,244.86	4,198.42	46.44	91.408				
9,300.00	9,287.37	9,335.81	9,325.87	33.24	33.35	-90.54	160.13	-4,402.67	4,244.86	4,197.91	46.94	90.427				
9,400.00	9,387.37	9,435.81	9,425.87	33.60	33.70	-90.54	160.13	-4,402.67	4,244.86	4,197.41	47.45	89.467				
9,500.00	9,487.37	9,535.81	9,525.87	33.95	34.06	-90.54	160.13	-4,402.67	4,244.86	4,196.91	47.95	88.527				
9,600.00	9,587.37	9,635.81	9,625.87	34.31	34.42	-90.54	160.13	-4,402.67	4,244.86	4,196.40	48.45	87.606				
9,700.00	9,687.37	9,735.81	9,725.87	34.66	34.77	-90.54	160.13	-4,402.67	4,244.86	4,195.90	48.96	86.704				
9,800.00	9,787.37	9,835.81	9,825.87	35.02	35.13	-90.54	160.13	-4,402.67	4,244.86	4,195.40	49.46	85.820				
9,900.00	9,887.37	9,935.81	9,925.87	35.37	35.49	-90.54	160.13	-4,402.67	4,244.86	4,194.89	49.97	84.955				

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
10,000.00	9,987.37	10,035.81	10,025.87	35.73	35.84	-90.54	160.13	-4,402.67	4,244.86	4,194.39	50.47	84.106		
10,100.00	10,087.37	10,135.81	10,125.87	36.09	36.20	-90.54	160.13	-4,402.67	4,244.86	4,193.88	50.97	83.274		
10,200.00	10,187.37	10,235.81	10,225.87	36.44	36.55	-90.54	160.13	-4,402.67	4,244.86	4,193.38	51.48	82.458		
10,300.00	10,287.37	10,335.81	10,325.87	36.80	36.91	-90.54	160.13	-4,402.67	4,244.86	4,192.87	51.98	81.658		
10,400.00	10,387.37	10,435.81	10,425.87	37.15	37.27	-90.54	160.13	-4,402.67	4,244.86	4,192.37	52.49	80.873		
10,500.00	10,487.37	10,535.81	10,525.87	37.51	37.62	-90.54	160.13	-4,402.67	4,244.86	4,191.87	52.99	80.104		
10,600.00	10,587.37	10,635.81	10,625.87	37.87	37.98	-90.54	160.13	-4,402.67	4,244.86	4,191.36	53.50	79.348		
10,700.00	10,687.37	10,735.81	10,725.87	38.22	38.34	-90.54	160.13	-4,402.67	4,244.86	4,190.86	54.00	78.607		
10,800.00	10,787.37	10,835.81	10,825.87	38.58	38.69	-90.54	160.13	-4,402.67	4,244.86	4,190.35	54.51	77.879		
10,900.00	10,887.37	10,935.81	10,925.87	38.94	39.05	-90.54	160.13	-4,402.67	4,244.86	4,189.85	55.01	77.165		
11,000.00	10,987.37	11,035.81	11,025.87	39.29	39.41	-90.54	160.13	-4,402.67	4,244.86	4,189.34	55.52	76.463		
11,100.00	11,087.37	11,135.81	11,125.87	39.65	39.76	-90.54	160.13	-4,402.67	4,244.86	4,188.84	56.02	75.774		
11,200.00	11,187.37	11,235.81	11,225.87	40.00	40.12	-90.54	160.13	-4,402.67	4,244.86	4,188.33	56.52	75.098		
11,291.63	11,279.00	11,327.44	11,317.50	40.33	40.45	-90.54	160.13	-4,402.67	4,244.86	4,187.87	56.99	74.488		
11,300.00	11,287.37	11,335.81	11,325.87	40.36	40.48	90.02	160.13	-4,402.67	4,244.86	4,187.83	57.03	74.434		
11,350.00	11,337.27	11,385.71	11,375.78	40.52	40.65	90.06	160.03	-4,402.67	4,244.86	4,187.60	57.26	74.128		
11,400.00	11,386.73	11,435.74	11,425.69	40.67	40.81	90.12	156.91	-4,402.64	4,244.87	4,187.39	57.48	73.846		
11,450.00	11,435.36	11,486.14	11,475.51	40.81	40.97	90.17	149.37	-4,402.58	4,244.89	4,187.20	57.69	73.580		
11,500.00	11,482.81	11,536.91	11,524.83	40.95	41.11	90.22	137.39	-4,402.47	4,244.91	4,187.02	57.89	73.327		
11,550.00	11,528.70	11,588.06	11,573.24	41.08	41.25	90.28	120.95	-4,402.33	4,244.95	4,186.87	58.08	73.087		
11,600.00	11,572.70	11,639.58	11,626.33	41.20	41.38	90.33	100.09	-4,402.14	4,244.99	4,186.73	58.26	72.859		
11,650.00	11,614.46	11,691.47	11,665.68	41.31	41.51	90.37	74.90	-4,401.92	4,245.04	4,186.60	58.44	72.643		
11,700.00	11,653.66	11,743.71	11,708.84	41.40	41.62	90.42	45.49	-4,401.66	4,245.09	4,186.48	58.60	72.436		
11,750.00	11,690.02	11,796.31	11,749.40	41.49	41.72	90.46	12.05	-4,401.37	4,245.15	4,186.38	58.77	72.235		
11,800.00	11,723.25	11,849.23	11,786.95	41.58	41.82	90.50	-25.22	-4,401.04	4,245.21	4,186.28	58.93	72.040		
11,850.00	11,753.09	11,902.47	11,821.10	41.67	41.92	90.53	-66.04	-4,400.68	4,245.27	4,186.19	59.09	71.847		
11,900.00	11,779.33	11,955.99	11,851.45	41.77	42.03	90.56	-110.09	-4,400.30	4,245.34	4,186.09	59.25	71.654		
11,950.00	11,801.76	12,009.76	11,877.68	41.88	42.15	90.59	-157.01	-4,399.89	4,245.41	4,186.00	59.41	71.459		
12,000.00	11,820.21	12,063.76	11,899.48	41.99	42.27	90.61	-206.38	-4,399.45	4,245.47	4,185.90	59.58	71.261		
12,050.00	11,834.54	12,117.94	11,916.58	42.11	42.40	90.62	-257.78	-4,399.00	4,245.54	4,185.79	59.75	71.059		
12,100.00	11,844.65	12,172.27	11,928.79	42.23	42.53	90.64	-310.70	-4,398.54	4,245.60	4,185.68	59.92	70.853		
12,150.00	11,850.45	12,226.72	11,935.93	42.36	42.66	90.64	-364.64	-4,398.06	4,245.66	4,185.56	60.10	70.643		
12,181.14	11,851.86	12,260.66	11,937.78	42.44	42.74	90.64	-398.53	-4,397.77	4,245.69	4,185.48	60.21	70.511		
12,200.00	11,852.21	12,280.18	11,938.05	42.49	42.79	90.64	-418.05	-4,397.59	4,245.71	4,185.43	60.28	70.431		
12,300.00	11,854.04	12,380.18	11,939.13	42.78	43.09	90.63	-518.04	-4,396.72	4,245.81	4,185.11	60.69	69.953		
12,400.00	11,855.87	12,480.18	11,940.21	43.14	43.44	90.62	-618.03	-4,395.84	4,245.90	4,184.71	61.19	69.386		
12,500.00	11,857.70	12,580.18	11,941.30	43.56	43.85	90.61	-718.02	-4,394.96	4,245.99	4,184.22	61.77	68.735		
12,600.00	11,859.53	12,680.17	11,942.38	44.04	44.31	90.60	-818.00	-4,394.08	4,246.09	4,183.65	62.44	68.006		
12,700.00	11,861.36	12,780.17	11,943.46	44.57	44.84	90.59	-917.99	-4,393.21	4,246.18	4,183.00	63.18	67.207		
12,800.00	11,863.19	12,880.17	11,944.54	45.15	45.41	90.58	-1,017.98	-4,392.33	4,246.28	4,182.27	64.00	66.347		
12,900.00	11,865.02	12,980.16	11,945.63	45.79	46.04	90.57	-1,117.97	-4,391.45	4,246.37	4,181.47	64.89	65.435		
13,000.00	11,866.85	13,080.16	11,946.71	46.48	46.72	90.56	-1,217.95	-4,390.57	4,246.46	4,180.60	65.86	64.478		
13,100.00	11,868.68	13,180.16	11,947.79	47.21	47.45	90.55	-1,317.94	-4,389.69	4,246.56	4,179.67	66.89	63.484		
13,200.00	11,870.51	13,280.16	11,948.87	47.99	48.22	90.54	-1,417.93	-4,388.82	4,246.65	4,178.66	67.99	62.461		
13,300.00	11,872.34	13,380.15	11,949.96	48.81	49.03	90.53	-1,517.92	-4,387.94	4,246.75	4,177.60	69.15	61.416		
13,400.00	11,874.17	13,480.15	11,951.04	49.68	49.89	90.52	-1,617.90	-4,387.06	4,246.84	4,176.48	70.36	60.355		
13,500.00	11,876.00	13,580.15	11,952.12	50.58	50.79	90.51	-1,717.89	-4,386.18	4,246.94	4,175.30	71.64	59.283		
13,600.00	11,877.83	13,680.14	11,953.20	51.52	51.72	90.50	-1,817.88	-4,385.31	4,247.03	4,174.07	72.96	58.208		
13,700.00	11,879.66	13,780.14	11,954.28	52.50	52.69	90.49	-1,917.87	-4,384.43	4,247.13	4,172.79	74.34	57.132		
13,800.00	11,881.49	13,880.14	11,955.37	53.51	53.69	90.48	-2,017.85	-4,383.55	4,247.22	4,171.46	75.76	56.060		
13,900.00	11,883.32	13,980.14	11,956.45	54.55	54.72	90.47	-2,117.84	-4,382.67	4,247.32	4,170.09	77.23	54.997		
14,000.00	11,885.15	14,080.13	11,957.53	55.62	55.79	90.46	-2,217.83	-4,381.80	4,247.42	4,168.68	78.74	53.944		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	11,886.98	14,180.13	11,958.61	56.72	56.88	90.45	-2,317.82	-4,380.92	4,247.51	4,167.22	80.29	52.904		
14,200.00	11,888.81	14,280.13	11,959.70	57.84	58.00	90.44	-2,417.80	-4,380.04	4,247.61	4,165.73	81.87	51.880		
14,300.00	11,890.64	14,380.12	11,960.78	58.99	59.14	90.43	-2,517.79	-4,379.16	4,247.70	4,164.21	83.49	50.874		
14,400.00	11,892.47	14,480.12	11,961.86	60.17	60.30	90.42	-2,617.78	-4,378.28	4,247.80	4,162.65	85.15	49.886		
14,500.00	11,894.31	14,580.12	11,962.94	61.36	61.49	90.41	-2,717.77	-4,377.41	4,247.90	4,161.06	86.84	48.919		
14,600.00	11,896.14	14,680.12	11,964.03	62.58	62.70	90.40	-2,817.75	-4,376.53	4,247.99	4,159.44	88.55	47.972		
14,700.00	11,897.97	14,780.11	11,965.11	63.81	63.93	90.39	-2,917.74	-4,375.65	4,248.09	4,157.79	90.30	47.047		
14,800.00	11,899.80	14,880.11	11,966.19	65.07	65.18	90.38	-3,017.73	-4,374.77	4,248.19	4,156.12	92.07	46.143		
14,900.00	11,901.63	14,980.11	11,967.27	66.34	66.45	90.37	-3,117.72	-4,373.90	4,248.28	4,154.42	93.86	45.262		
15,000.00	11,903.46	15,080.11	11,968.36	67.63	67.73	90.36	-3,217.70	-4,373.02	4,248.38	4,152.70	95.68	44.403		
15,100.00	11,905.29	15,180.10	11,969.44	68.93	69.03	90.35	-3,317.69	-4,372.14	4,248.48	4,150.96	97.52	43.566		
15,200.00	11,907.12	15,280.10	11,970.52	70.25	70.34	90.34	-3,417.68	-4,371.26	4,248.57	4,149.19	99.38	42.751		
15,300.00	11,908.95	15,380.10	11,971.60	71.58	71.67	90.33	-3,517.67	-4,370.38	4,248.67	4,147.41	101.26	41.958		
15,400.00	11,910.78	15,480.09	11,972.69	72.93	73.01	90.32	-3,617.65	-4,369.51	4,248.77	4,145.61	103.16	41.186		
15,500.00	11,912.61	15,580.09	11,973.77	74.28	74.36	90.31	-3,717.64	-4,368.63	4,248.87	4,143.79	105.08	40.435		
15,600.00	11,914.44	15,680.09	11,974.85	75.65	75.73	90.30	-3,817.63	-4,367.75	4,248.97	4,141.95	107.01	39.705		
15,700.00	11,916.27	15,780.09	11,975.93	77.03	77.10	90.29	-3,917.61	-4,366.87	4,249.06	4,140.10	108.96	38.996		
15,800.00	11,918.10	15,880.08	11,977.02	78.43	78.49	90.28	-4,017.60	-4,366.00	4,249.16	4,138.23	110.93	38.306		
15,900.00	11,919.93	15,980.08	11,978.10	79.83	79.89	90.27	-4,117.59	-4,365.12	4,249.26	4,136.35	112.91	37.635		
16,000.00	11,921.76	16,080.08	11,979.18	81.24	81.29	90.26	-4,217.58	-4,364.24	4,249.36	4,134.46	114.90	36.984		
16,100.00	11,923.59	16,180.07	11,980.26	82.66	82.71	90.25	-4,317.56	-4,363.36	4,249.46	4,132.55	116.90	36.350		
16,200.00	11,925.42	16,280.07	11,981.35	84.08	84.13	90.24	-4,417.55	-4,362.48	4,249.55	4,130.63	118.92	35.734		
16,300.00	11,927.25	16,380.07	11,982.43	85.52	85.57	90.23	-4,517.54	-4,361.61	4,249.65	4,128.70	120.95	35.136		
16,400.00	11,929.08	16,480.07	11,983.51	86.96	87.01	90.22	-4,617.53	-4,360.73	4,249.75	4,126.76	122.99	34.554		
16,500.00	11,930.91	16,580.06	11,984.59	88.41	88.45	90.21	-4,717.51	-4,359.85	4,249.85	4,124.81	125.04	33.988		
16,600.00	11,932.74	16,680.06	11,985.68	89.87	89.91	90.20	-4,817.50	-4,358.97	4,249.95	4,122.85	127.10	33.438		
16,700.00	11,934.57	16,780.06	11,986.76	91.34	91.37	90.19	-4,917.49	-4,358.10	4,250.05	4,120.88	129.17	32.903		
16,800.00	11,936.40	16,880.05	11,987.84	92.81	92.84	90.18	-5,017.48	-4,357.22	4,250.15	4,118.90	131.25	32.383		
16,900.00	11,938.23	16,980.05	11,988.92	94.29	94.31	90.17	-5,117.46	-4,356.34	4,250.25	4,116.91	133.34	31.876		
17,000.00	11,940.06	17,080.05	11,990.00	95.77	95.79	90.16	-5,217.45	-4,355.46	4,250.35	4,114.92	135.43	31.384		
17,100.00	11,941.89	17,180.05	11,991.09	97.26	97.28	90.15	-5,317.44	-4,354.58	4,250.45	4,112.92	137.53	30.905		
17,200.00	11,943.72	17,280.04	11,992.17	98.75	98.77	90.14	-5,417.43	-4,353.71	4,250.55	4,110.90	139.64	30.438		
17,300.00	11,945.55	17,380.04	11,993.25	100.25	100.26	90.13	-5,517.41	-4,352.83	4,250.65	4,108.89	141.76	29.984		
17,400.00	11,947.38	17,480.04	11,994.33	101.75	101.76	90.11	-5,617.40	-4,351.95	4,250.75	4,106.86	143.89	29.542		
17,500.00	11,949.22	17,580.03	11,995.42	103.26	103.27	90.10	-5,717.39	-4,351.07	4,250.85	4,104.83	146.02	29.112		
17,600.00	11,951.05	17,680.03	11,996.50	104.77	104.78	90.09	-5,817.38	-4,350.20	4,250.95	4,102.80	148.15	28.693		
17,700.00	11,952.88	17,780.03	11,997.58	106.29	106.29	90.08	-5,917.36	-4,349.32	4,251.05	4,100.75	150.30	28.284		
17,800.00	11,954.71	17,880.03	11,998.66	107.81	107.81	90.07	-6,017.35	-4,348.44	4,251.15	4,098.70	152.45	27.886		
17,900.00	11,956.54	17,980.02	11,999.75	109.33	109.33	90.06	-6,117.34	-4,347.56	4,251.25	4,096.65	154.60	27.498		
18,000.00	11,958.37	18,080.02	12,000.83	110.86	110.86	90.05	-6,217.33	-4,346.69	4,251.35	4,094.59	156.76	27.120		
18,100.00	11,960.20	18,180.02	12,001.91	112.39	112.39	90.04	-6,317.31	-4,345.81	4,251.45	4,092.53	158.92	26.751		
18,200.00	11,962.03	18,280.01	12,002.99	113.93	113.92	90.03	-6,417.30	-4,344.93	4,251.56	4,090.46	161.09	26.392		
18,300.00	11,963.86	18,380.01	12,004.08	115.46	115.45	90.02	-6,517.29	-4,344.05	4,251.66	4,088.39	163.27	26.041		
18,400.00	11,965.69	18,480.01	12,005.16	117.01	116.99	90.01	-6,617.28	-4,343.17	4,251.76	4,086.31	165.45	25.699		
18,500.00	11,967.52	18,580.01	12,006.24	118.55	118.54	90.00	-6,717.26	-4,342.30	4,251.86	4,084.23	167.63	25.365		
18,600.00	11,969.35	18,680.00	12,007.32	120.10	120.08	89.99	-6,817.25	-4,341.42	4,251.96	4,082.15	169.82	25.039		
18,700.00	11,971.18	18,780.00	12,008.41	121.65	121.63	89.98	-6,917.24	-4,340.54	4,252.06	4,080.06	172.01	24.720		
18,800.00	11,973.01	18,880.00	12,009.49	123.20	123.18	89.97	-7,017.23	-4,339.66	4,252.17	4,077.96	174.20	24.410		
18,900.00	11,974.84	18,979.99	12,010.57	124.75	124.73	89.96	-7,117.21	-4,338.79	4,252.27	4,075.87	176.40	24.106		
19,000.00	11,976.67	19,079.99	12,011.65	126.31	126.29	89.95	-7,217.20	-4,337.91	4,252.37	4,073.77	178.60	23.809		
19,100.00	11,978.50	19,179.99	12,012.74	127.87	127.85	89.94	-7,317.19	-4,337.03	4,252.47	4,071.67	180.81	23.520		
19,200.00	11,980.33	19,279.99	12,013.82	129.43	129.41	89.93	-7,417.18	-4,336.15	4,252.58	4,069.56	183.01	23.236		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
19,300.00	11,982.16	19,379.98	12,014.90	131.00	130.97	89.92	-7,517.16	-4,335.27	4,252.68	4,067.45	185.23	22.959		
19,400.00	11,983.99	19,479.98	12,015.98	132.57	132.53	89.91	-7,617.15	-4,334.40	4,252.78	4,065.34	187.44	22.689		
19,500.00	11,985.82	19,579.98	12,017.07	134.13	134.10	89.90	-7,717.14	-4,333.52	4,252.88	4,063.23	189.66	22.424		
19,600.00	11,987.65	19,679.97	12,018.15	135.70	135.67	89.89	-7,817.13	-4,332.64	4,252.99	4,061.11	191.88	22.165		
19,700.00	11,989.48	19,779.97	12,019.23	137.28	137.24	89.88	-7,917.11	-4,331.76	4,253.09	4,058.99	194.10	21.912		
19,800.00	11,991.31	19,879.97	12,020.31	138.85	138.81	89.87	-8,017.10	-4,330.89	4,253.19	4,056.87	196.33	21.664		
19,900.00	11,993.14	19,979.97	12,021.40	140.43	140.39	89.86	-8,117.09	-4,330.01	4,253.30	4,054.74	198.56	21.421		
20,000.00	11,994.97	20,079.96	12,022.48	142.01	141.97	89.85	-8,217.07	-4,329.13	4,253.40	4,052.61	200.79	21.184		
20,100.00	11,996.80	20,179.96	12,023.56	143.59	143.54	89.84	-8,317.06	-4,328.25	4,253.50	4,050.49	203.02	20.951		
20,200.00	11,998.63	20,279.96	12,024.64	145.17	145.12	89.83	-8,417.05	-4,327.37	4,253.61	4,048.35	205.25	20.724		
20,300.00	12,000.46	20,379.95	12,025.73	146.75	146.70	89.82	-8,517.04	-4,326.50	4,253.71	4,046.22	207.49	20.501		
20,400.00	12,002.29	20,479.95	12,026.81	148.33	148.29	89.81	-8,617.02	-4,325.62	4,253.82	4,044.08	209.73	20.282		
20,500.00	12,004.13	20,579.95	12,027.89	149.92	149.87	89.80	-8,717.01	-4,324.74	4,253.92	4,041.95	211.97	20.068		
20,600.00	12,005.96	20,679.95	12,028.97	151.51	151.46	89.79	-8,817.00	-4,323.86	4,254.03	4,039.81	214.22	19.858		
20,700.00	12,007.79	20,779.94	12,030.05	153.10	153.05	89.78	-8,916.99	-4,322.99	4,254.13	4,037.67	216.46	19.653		
20,800.00	12,009.62	20,879.94	12,031.14	154.69	154.63	89.77	-9,016.97	-4,322.11	4,254.23	4,035.52	218.71	19.451		
20,900.00	12,011.45	20,979.94	12,032.22	156.28	156.22	89.76	-9,116.96	-4,321.23	4,254.34	4,033.38	220.96	19.254		
21,000.00	12,013.28	21,079.93	12,033.30	157.87	157.82	89.75	-9,216.95	-4,320.35	4,254.44	4,031.23	223.21	19.060		
21,100.00	12,015.11	21,179.93	12,034.38	159.46	159.41	89.74	-9,316.94	-4,319.48	4,254.55	4,029.08	225.47	18.870		
21,200.00	12,016.94	21,279.93	12,035.47	161.06	161.00	89.73	-9,416.92	-4,318.60	4,254.65	4,026.93	227.72	18.684		
21,300.00	12,018.77	21,379.93	12,036.55	162.65	162.60	89.72	-9,516.91	-4,317.72	4,254.76	4,024.78	229.98	18.501		
21,400.00	12,020.60	21,479.92	12,037.63	164.25	164.19	89.71	-9,616.90	-4,316.84	4,254.87	4,022.63	232.24	18.321		
21,500.00	12,022.43	21,579.92	12,038.71	165.85	165.79	89.70	-9,716.89	-4,315.96	4,254.97	4,020.48	234.50	18.145		
21,600.00	12,024.26	21,679.92	12,039.80	167.45	167.39	89.69	-9,816.87	-4,315.09	4,255.08	4,018.32	236.76	17.972		
21,700.00	12,026.09	21,779.91	12,040.88	169.05	168.99	89.68	-9,916.86	-4,314.21	4,255.18	4,016.16	239.02	17.803		
21,800.00	12,027.92	21,879.91	12,041.96	170.65	170.59	89.67	-10,016.85	-4,313.33	4,255.29	4,014.01	241.28	17.636		
21,900.00	12,029.75	21,979.91	12,043.04	172.25	172.19	89.66	-10,116.84	-4,312.45	4,255.39	4,011.85	243.55	17.472		
22,000.00	12,031.58	22,079.91	12,044.13	173.86	173.79	89.65	-10,216.82	-4,311.58	4,255.50	4,009.69	245.81	17.312		
22,100.00	12,033.41	22,179.90	12,045.21	175.46	175.39	89.64	-10,316.81	-4,310.70	4,255.61	4,007.52	248.08	17.154		
22,200.00	12,035.24	22,279.90	12,046.29	177.07	177.00	89.63	-10,416.80	-4,309.82	4,255.71	4,005.36	250.35	16.999		
22,300.00	12,037.07	22,379.90	12,047.37	178.67	178.60	89.62	-10,516.79	-4,308.94	4,255.82	4,003.20	252.62	16.847		
22,400.00	12,038.90	22,479.89	12,048.46	180.28	180.21	89.61	-10,616.77	-4,308.06	4,255.93	4,001.03	254.89	16.697		
22,490.07	12,040.55	22,569.96	12,049.43	181.73	181.66	89.60	-10,706.83	-4,307.27	4,256.02	3,999.08	256.94	16.564 ES, SF		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
0.00	0.00	38.20	38.20	0.00	0.05	-90.53	-39.55	-4,239.68	4,239.86								
100.00	100.00	138.20	138.20	0.14	0.28	-90.53	-39.55	-4,239.68	4,239.86	4,239.55	0.31	N/A					
200.00	200.00	238.20	238.20	0.50	0.64	-90.53	-39.55	-4,239.68	4,239.86	4,239.05	0.81	5,235.429					
300.00	300.00	338.20	338.20	0.86	1.00	-90.53	-39.55	-4,239.68	4,239.86	4,238.55	1.31	3,225.316					
400.00	400.00	438.20	438.20	1.22	1.35	-90.53	-39.55	-4,239.68	4,239.86	4,238.04	1.82	2,328.932					
500.00	500.00	538.20	538.20	1.58	1.71	-90.53	-39.55	-4,239.68	4,239.86	4,237.54	2.33	1,822.099					
600.00	600.00	638.20	638.20	1.93	2.07	-90.53	-39.55	-4,239.68	4,239.86	4,237.03	2.83	1,496.331					
700.00	700.00	738.20	738.20	2.29	2.43	-90.53	-39.55	-4,239.68	4,239.86	4,236.52	3.34	1,269.340					
800.00	800.00	838.20	838.20	2.65	2.79	-90.53	-39.55	-4,239.68	4,239.86	4,236.02	3.85	1,102.127					
900.00	900.00	938.20	938.20	3.01	3.15	-90.53	-39.55	-4,239.68	4,239.86	4,235.51	4.35	973.832					
1,000.00	1,000.00	1,038.20	1,038.20	3.37	3.50	-90.53	-39.55	-4,239.68	4,239.86	4,235.00	4.86	872.286					
1,100.00	1,100.00	1,138.20	1,138.20	3.73	3.86	-90.53	-39.55	-4,239.68	4,239.86	4,234.50	5.37	789.914					
1,200.00	1,200.00	1,238.20	1,238.20	4.08	4.22	-90.53	-39.55	-4,239.68	4,239.86	4,233.99	5.87	721.755					
1,300.00	1,300.00	1,338.20	1,338.20	4.44	4.58	-90.53	-39.55	-4,239.68	4,239.86	4,233.48	6.38	664.423					
1,400.00	1,400.00	1,438.20	1,438.20	4.80	4.94	-90.53	-39.55	-4,239.68	4,239.86	4,232.98	6.89	615.528					
1,500.00	1,500.00	1,538.20	1,538.20	5.16	5.30	-90.53	-39.55	-4,239.68	4,239.86	4,232.47	7.40	573.336					
1,600.00	1,600.00	1,638.20	1,638.20	5.52	5.66	-90.53	-39.55	-4,239.68	4,239.86	4,231.96	7.90	536.556					
1,700.00	1,700.00	1,738.20	1,738.20	5.88	6.01	-90.53	-39.55	-4,239.68	4,239.86	4,231.46	8.41	504.210					
1,800.00	1,800.00	1,838.20	1,838.20	6.24	6.37	-90.53	-39.55	-4,239.68	4,239.86	4,230.95	8.92	475.543					
1,900.00	1,900.00	1,938.20	1,938.20	6.59	6.73	-90.53	-39.55	-4,239.68	4,239.86	4,230.44	9.42	449.960					
2,000.00	2,000.00	2,038.20	2,038.20	6.95	7.09	-90.53	-39.55	-4,239.68	4,239.86	4,229.93	9.93	426.988					
2,100.00	2,100.00	2,138.20	2,138.20	7.31	7.45	-90.53	-39.55	-4,239.68	4,239.86	4,229.43	10.44	406.248					
2,200.00	2,200.00	2,238.20	2,238.20	7.67	7.81	-90.53	-39.55	-4,239.68	4,239.86	4,228.92	10.94	387.430					
2,300.00	2,300.00	2,338.20	2,338.20	8.03	8.16	-90.53	-39.55	-4,239.68	4,239.86	4,228.41	11.45	370.278					
2,400.00	2,400.00	2,438.20	2,438.20	8.39	8.52	-90.53	-39.55	-4,239.68	4,239.86	4,227.91	11.96	354.580					
2,500.00	2,500.00	2,538.20	2,538.20	8.74	8.88	-90.53	-39.55	-4,239.68	4,239.86	4,227.40	12.46	340.158					
2,600.00	2,600.00	2,638.20	2,638.20	9.10	9.24	-90.53	-39.55	-4,239.68	4,239.86	4,226.89	12.97	326.865					
2,700.00	2,700.00	2,738.20	2,738.20	9.46	9.60	-90.53	-39.55	-4,239.68	4,239.86	4,226.39	13.48	314.571					
2,800.00	2,800.00	2,838.20	2,838.20	9.82	9.96	-90.53	-39.55	-4,239.68	4,239.86	4,225.88	13.99	303.168					
2,900.00	2,900.00	2,938.20	2,938.20	10.18	10.32	-90.53	-39.55	-4,239.68	4,239.86	4,225.37	14.49	292.563					
3,000.00	3,000.00	3,038.20	3,038.20	10.54	10.67	-90.53	-39.55	-4,239.68	4,239.86	4,224.87	15.00	282.675					
3,100.00	3,100.00	3,138.20	3,138.20	10.90	11.03	-90.53	-39.55	-4,239.68	4,239.86	4,224.36	15.51	273.433					
3,200.00	3,200.00	3,238.20	3,238.20	11.25	11.39	-90.53	-39.55	-4,239.68	4,239.86	4,223.85	16.01	264.777					
3,300.00	3,300.00	3,338.20	3,338.20	11.61	11.75	-90.53	-39.55	-4,239.68	4,239.86	4,223.34	16.52	256.651					
3,400.00	3,400.00	3,438.20	3,438.20	11.97	12.11	-90.53	-39.55	-4,239.68	4,239.86	4,222.84	17.03	249.010					
3,500.00	3,500.00	3,538.20	3,538.20	12.33	12.47	-90.53	-39.55	-4,239.68	4,239.86	4,222.33	17.53	241.811					
3,600.00	3,600.00	3,638.20	3,638.20	12.69	12.83	-90.53	-39.55	-4,239.68	4,239.86	4,221.82	18.04	235.016					
3,700.00	3,700.00	3,738.20	3,738.20	13.05	13.18	-90.53	-39.55	-4,239.68	4,239.86	4,221.32	18.55	228.592					
3,800.00	3,800.00	3,838.20	3,838.20	13.41	13.54	-90.53	-39.55	-4,239.68	4,239.86	4,220.81	19.05	222.511					
3,900.00	3,900.00	3,938.20	3,938.20	13.76	13.90	-90.53	-39.55	-4,239.68	4,239.86	4,220.30	19.56	216.744					
4,000.00	4,000.00	4,038.20	4,038.20	14.12	14.26	-90.53	-39.55	-4,239.68	4,239.86	4,219.80	20.07	211.269					
4,100.00	4,100.00	4,138.20	4,138.20	14.48	14.62	-90.53	-39.55	-4,239.68	4,239.86	4,219.29	20.58	206.064					
4,200.00	4,200.00	4,238.20	4,238.20	14.84	14.98	-90.53	-39.55	-4,239.68	4,239.86	4,218.78	21.08	201.109					
4,300.00	4,300.00	4,338.20	4,338.20	15.20	15.33	-90.53	-39.55	-4,239.68	4,239.86	4,218.28	21.59	196.386					
4,400.00	4,400.00	4,438.20	4,438.20	15.56	15.69	-90.53	-39.55	-4,239.68	4,239.86	4,217.77	22.10	191.881					
4,500.00	4,500.00	4,538.20	4,538.20	15.91	16.05	-90.53	-39.55	-4,239.68	4,239.86	4,217.26	22.60	187.577					
4,600.00	4,600.00	4,715.22	4,715.20	16.27	16.68	-90.52	-38.15	-4,238.65	4,239.52	4,216.22	23.30	181.939					
4,700.00	4,700.00	4,960.88	4,960.35	16.63	17.56	-90.35	-25.93	-4,229.60	4,235.51	4,211.36	24.15	175.367					
4,800.00	4,800.00	5,060.50	5,059.59	16.99	17.91	-90.26	-18.95	-4,224.43	4,230.27	4,205.62	24.65	171.581					
4,900.00	4,900.00	5,160.12	5,158.83	17.35	18.27	-90.16	-11.96	-4,219.27	4,225.05	4,199.89	25.16	167.943					
5,000.00	5,000.00	5,259.74	5,258.07	17.71	18.62	-90.07	-4.98	-4,214.10	4,219.83	4,194.17	25.66	164.444					
5,100.00	5,100.00	5,359.36	5,357.31	18.07	18.98	-89.97	2.01	-4,208.93	4,214.63	4,188.46	26.17	161.077					

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
5,200.00	5,200.00	5,458.98	5,456.55	18.42	19.34	-89.88	9.00	-4,203.76	4,209.43	4,182.76	26.67	157.834		
5,300.00	5,300.00	5,558.59	5,555.79	18.78	19.70	-89.78	15.98	-4,198.59	4,204.25	4,177.08	27.18	154.710		
5,400.00	5,400.00	5,658.21	5,655.03	19.14	20.06	-89.69	22.97	-4,193.42	4,199.08	4,171.40	27.68	151.697		
5,500.00	5,500.00	5,757.83	5,754.27	19.50	20.42	-89.59	29.95	-4,188.25	4,193.92	4,165.74	28.19	148.791		
5,600.00	5,599.99	5,857.47	5,853.52	19.86	20.78	-51.27	36.94	-4,183.08	4,187.96	4,159.27	28.69	145.964		
5,700.00	5,699.91	5,957.10	5,952.77	20.21	21.14	-51.30	43.93	-4,177.91	4,180.37	4,151.17	29.20	143.187		
5,800.00	5,799.69	6,056.65	6,051.94	20.57	21.50	-51.39	50.91	-4,172.74	4,171.15	4,141.45	29.70	140.451		
5,900.08	5,899.35	6,156.13	6,151.05	20.92	21.86	-51.51	57.88	-4,167.58	4,160.29	4,130.09	30.20	137.753		
6,000.00	5,998.72	6,255.37	6,249.91	21.28	22.23	-51.53	64.84	-4,162.43	4,148.64	4,117.94	30.70	135.120		
6,100.00	6,098.17	6,354.68	6,348.84	21.63	22.59	-51.55	71.81	-4,157.28	4,136.99	4,105.78	31.21	132.567		
6,200.00	6,197.63	6,453.99	6,447.77	21.99	22.95	-51.56	78.77	-4,152.12	4,125.33	4,093.62	31.71	130.091		
6,300.00	6,297.08	6,553.30	6,546.70	22.35	23.32	-51.58	85.74	-4,146.97	4,113.67	4,081.46	32.22	127.689		
6,400.00	6,396.53	6,652.62	6,645.64	22.71	23.68	-51.59	92.70	-4,141.81	4,102.02	4,069.29	32.72	125.358		
6,500.00	6,495.98	6,751.93	6,744.57	23.08	24.05	-51.61	99.66	-4,136.66	4,090.36	4,057.13	33.23	123.096		
6,600.00	6,595.43	6,851.24	6,843.50	23.44	24.41	-51.63	106.63	-4,131.51	4,078.70	4,044.97	33.74	120.898		
6,700.00	6,694.89	6,950.55	6,942.44	23.80	24.78	-51.64	113.59	-4,126.35	4,067.05	4,032.80	34.25	118.763		
6,800.00	6,794.34	7,049.86	7,041.37	24.17	25.14	-51.66	120.56	-4,121.20	4,055.39	4,020.64	34.75	116.688		
6,900.00	6,893.79	7,149.17	7,140.30	24.53	25.51	-51.68	127.52	-4,116.05	4,043.74	4,008.48	35.26	114.670		
7,000.00	6,893.24	7,248.49	7,239.24	24.90	25.88	-51.69	134.49	-4,110.89	4,032.09	3,996.31	35.77	112.708		
7,100.00	7,092.69	7,347.80	7,338.17	25.27	26.25	-51.71	141.45	-4,105.74	4,020.43	3,984.15	36.29	110.800		
7,200.00	7,192.15	7,447.11	7,437.10	25.63	26.61	-51.73	148.42	-4,100.59	4,008.78	3,971.98	36.80	108.942		
7,300.00	7,291.60	7,500.00	7,489.82	26.00	26.81	-51.74	151.88	-4,098.02	3,997.57	3,960.37	37.20	107.457		
7,400.00	7,391.05	7,571.67	7,561.33	26.37	27.07	-51.77	155.64	-4,095.24	3,987.27	3,949.63	37.65	105.911		
7,500.00	7,490.50	7,633.15	7,622.74	26.74	27.29	-51.81	158.01	-4,093.49	3,977.94	3,939.88	38.07	104.498		
7,600.00	7,589.95	7,700.00	7,689.56	27.11	27.54	-51.86	159.68	-4,092.25	3,969.58	3,931.08	38.50	103.112		
7,700.00	7,689.41	7,756.15	7,745.70	27.48	27.74	-51.92	160.36	-4,091.75	3,962.16	3,923.26	38.90	101.859		
7,800.00	7,788.86	7,837.51	7,827.06	27.86	28.02	-52.02	160.45	-4,091.68	3,955.59	3,916.23	39.36	100.495		
7,900.00	7,888.31	7,936.96	7,926.51	28.23	28.38	-52.13	160.45	-4,091.68	3,949.14	3,909.27	39.87	99.053		
7,937.55	7,925.65	7,974.30	7,963.85	28.37	28.51	-52.18	160.45	-4,091.68	3,946.72	3,906.66	40.06	98.520		
8,000.00	7,987.81	8,036.46	8,026.01	28.60	28.73	-52.20	160.45	-4,091.68	3,943.02	3,902.64	40.38	97.654		
8,100.00	8,087.53	8,136.17	8,125.73	28.97	29.08	-52.24	160.45	-4,091.68	3,938.41	3,897.52	40.88	96.329		
8,200.00	8,187.40	8,236.05	8,225.60	29.33	29.44	-52.26	160.45	-4,091.68	3,935.40	3,894.01	41.39	95.080		
8,300.00	8,287.37	8,336.02	8,325.57	29.69	29.79	-52.27	160.45	-4,091.68	3,933.99	3,892.10	41.89	93.903		
8,337.63	8,325.00	8,373.65	8,363.20	29.82	29.93	-90.58	160.45	-4,091.68	3,933.88	3,891.80	42.08	93.478		
8,400.00	8,387.37	8,436.02	8,425.57	30.04	30.15	-90.58	160.45	-4,091.68	3,933.88	3,891.48	42.40	92.786		
8,500.00	8,487.37	8,536.02	8,525.57	30.40	30.50	-90.58	160.45	-4,091.68	3,933.88	3,890.98	42.90	91.698		
8,600.00	8,587.37	8,636.02	8,625.57	30.75	30.86	-90.58	160.45	-4,091.68	3,933.88	3,890.48	43.40	90.636		
8,700.00	8,687.37	8,736.02	8,725.57	31.11	31.21	-90.58	160.45	-4,091.68	3,933.88	3,889.97	43.91	89.597		
8,800.00	8,787.37	8,836.02	8,825.57	31.46	31.57	-90.58	160.45	-4,091.68	3,933.88	3,889.47	44.41	88.582		
8,900.00	8,887.37	8,936.02	8,925.57	31.82	31.92	-90.58	160.45	-4,091.68	3,933.88	3,888.97	44.91	87.589		
9,000.00	8,987.37	9,036.02	9,025.57	32.17	32.28	-90.58	160.45	-4,091.68	3,933.88	3,888.46	45.42	86.618		
9,100.00	9,087.37	9,136.02	9,125.57	32.53	32.63	-90.58	160.45	-4,091.68	3,933.88	3,887.96	45.92	85.668		
9,200.00	9,187.37	9,236.02	9,225.57	32.88	32.99	-90.58	160.45	-4,091.68	3,933.88	3,887.46	46.42	84.739		
9,300.00	9,287.37	9,336.02	9,325.57	33.24	33.34	-90.58	160.45	-4,091.68	3,933.88	3,886.95	46.93	83.829		
9,400.00	9,387.37	9,436.02	9,425.57	33.60	33.70	-90.58	160.45	-4,091.68	3,933.88	3,886.45	47.43	82.939		
9,500.00	9,487.37	9,536.02	9,525.57	33.95	34.06	-90.58	160.45	-4,091.68	3,933.88	3,885.94	47.93	82.068		
9,600.00	9,587.37	9,636.02	9,625.57	34.31	34.41	-90.58	160.45	-4,091.68	3,933.88	3,885.44	48.44	81.214		
9,700.00	9,687.37	9,736.02	9,725.57	34.66	34.77	-90.58	160.45	-4,091.68	3,933.88	3,884.94	48.94	80.378		
9,800.00	9,787.37	9,836.02	9,825.57	35.02	35.12	-90.58	160.45	-4,091.68	3,933.88	3,884.43	49.45	79.559		
9,900.00	9,887.37	9,936.02	9,925.57	35.37	35.48	-90.58	160.45	-4,091.68	3,933.88	3,883.93	49.95	78.756		
10,000.00	9,987.37	10,036.02	10,025.57	35.73	35.84	-90.58	160.45	-4,091.68	3,933.88	3,883.42	50.45	77.969		
10,100.00	10,087.37	10,136.02	10,125.57	36.09	36.19	-90.58	160.45	-4,091.68	3,933.88	3,882.92	50.96	77.197		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
10,200.00	10,187.37	10,236.02	10,225.57	36.44	36.55	-90.58	160.45	-4,091.68	3,933.88	3,882.42	51.46	76.441		
10,300.00	10,287.37	10,336.02	10,325.57	36.80	36.90	-90.58	160.45	-4,091.68	3,933.88	3,881.91	51.97	75.699		
10,400.00	10,387.37	10,436.02	10,425.57	37.15	37.26	-90.58	160.45	-4,091.68	3,933.88	3,881.41	52.47	74.972		
10,500.00	10,487.37	10,536.02	10,525.57	37.51	37.62	-90.58	160.45	-4,091.68	3,933.88	3,880.90	52.98	74.258		
10,600.00	10,587.37	10,636.02	10,625.57	37.87	37.97	-90.58	160.45	-4,091.68	3,933.88	3,880.40	53.48	73.558		
10,700.00	10,687.37	10,736.02	10,725.57	38.22	38.33	-90.58	160.45	-4,091.68	3,933.88	3,879.89	53.98	72.870		
10,800.00	10,787.37	10,836.02	10,825.57	38.58	38.69	-90.58	160.45	-4,091.68	3,933.88	3,879.39	54.49	72.196		
10,900.00	10,887.37	10,936.02	10,925.57	38.94	39.04	-90.58	160.45	-4,091.68	3,933.88	3,878.89	54.99	71.533		
11,000.00	10,987.37	11,036.02	11,025.57	39.29	39.40	-90.58	160.45	-4,091.68	3,933.88	3,878.38	55.50	70.883		
11,100.00	11,087.37	11,136.02	11,125.57	39.65	39.75	-90.58	160.45	-4,091.68	3,933.88	3,877.88	56.00	70.244		
11,200.00	11,187.37	11,236.02	11,225.57	40.00	40.11	-90.58	160.45	-4,091.68	3,933.88	3,877.37	56.51	69.617		
11,291.63	11,279.00	11,327.65	11,317.20	40.33	40.44	-90.58	160.45	-4,091.68	3,933.88	3,876.91	56.97	69.052		
11,300.00	11,287.37	11,336.02	11,325.57	40.36	40.47	89.99	160.45	-4,091.68	3,933.88	3,876.87	57.01	69.002		
11,325.71	11,313.06	11,361.71	11,351.26	40.44	40.56	90.00	160.45	-4,091.68	3,933.88	3,876.75	57.13	68.854 CC		
11,350.00	11,337.27	11,385.92	11,375.47	40.52	40.65	90.03	160.45	-4,091.68	3,933.88	3,876.63	57.25	68.716		
11,400.00	11,386.73	11,435.38	11,424.93	40.67	40.82	90.13	160.45	-4,091.68	3,933.89	3,876.41	57.48	68.440		
11,450.00	11,435.36	11,484.01	11,473.56	40.81	41.00	90.29	160.45	-4,091.68	3,933.93	3,876.23	57.70	68.174		
11,500.00	11,482.81	11,531.46	11,521.01	40.95	41.16	90.50	160.45	-4,091.68	3,934.05	3,876.13	57.92	67.921		
11,550.00	11,528.70	11,577.35	11,566.90	41.08	41.33	90.74	160.45	-4,091.68	3,934.28	3,876.15	58.13	67.682		
11,600.00	11,572.70	11,621.35	11,610.90	41.20	41.49	91.00	160.45	-4,091.68	3,934.69	3,876.36	58.33	67.458		
11,650.00	11,614.46	11,663.11	11,652.66	41.31	41.63	91.27	160.45	-4,091.68	3,935.35	3,876.83	58.52	67.250		
11,700.00	11,653.66	11,712.27	11,701.79	41.40	41.80	91.60	158.85	-4,091.67	3,936.27	3,877.56	58.72	67.040		
11,750.00	11,690.02	11,766.54	11,755.63	41.49	41.96	91.96	152.24	-4,091.61	3,937.42	3,878.51	58.91	66.837		
11,800.00	11,723.25	11,825.32	11,812.96	41.58	42.14	92.32	139.38	-4,091.50	3,938.78	3,879.67	59.11	66.637		
11,850.00	11,753.09	11,889.63	11,873.80	41.67	42.31	92.70	118.66	-4,091.32	3,940.31	3,881.00	59.31	66.441		
11,900.00	11,779.33	11,960.65	11,937.82	41.77	42.49	93.09	88.03	-4,091.05	3,941.96	3,882.46	59.50	66.248		
11,950.00	11,801.76	12,039.70	12,004.02	41.88	42.66	93.50	44.93	-4,090.68	3,943.67	3,883.97	59.70	66.058		
12,000.00	11,820.21	12,128.12	12,070.23	41.99	42.82	93.91	-13.53	-4,090.17	3,945.36	3,885.46	59.90	65.866		
12,050.00	11,834.54	12,226.86	12,132.55	42.11	43.01	94.31	-89.96	-4,089.51	3,946.89	3,886.79	60.11	65.664		
12,100.00	11,844.65	12,335.96	12,185.04	42.23	43.25	94.65	-185.42	-4,088.68	3,948.15	3,887.82	60.33	65.440		
12,150.00	11,850.45	12,453.83	12,220.33	42.36	43.53	94.88	-297.65	-4,087.70	3,949.01	3,888.42	60.59	65.179		
12,181.14	11,851.86	12,530.14	12,230.61	42.44	43.71	94.95	-373.21	-4,087.05	3,949.28	3,888.52	60.76	64.994		
12,200.00	11,852.21	12,568.73	12,231.98	42.49	43.81	94.96	-411.77	-4,086.71	3,949.32	3,888.46	60.86	64.888		
12,300.00	11,854.04	12,668.73	12,233.07	42.78	44.09	94.95	-511.75	-4,085.84	3,949.37	3,888.10	61.27	64.459		
12,400.00	11,855.87	12,768.72	12,234.15	43.14	44.43	94.94	-611.74	-4,084.97	3,949.42	3,887.66	61.76	63.950		
12,500.00	11,857.70	12,868.72	12,235.23	43.56	44.83	94.93	-711.73	-4,084.11	3,949.46	3,887.13	62.33	63.364		
12,600.00	11,859.53	12,968.72	12,236.32	44.04	45.29	94.92	-811.72	-4,083.24	3,949.51	3,886.53	62.98	62.708		
12,700.00	11,861.36	13,068.72	12,237.40	44.57	45.79	94.91	-911.70	-4,082.37	3,949.56	3,885.84	63.71	61.989		
12,800.00	11,863.19	13,168.71	12,238.48	45.15	46.36	94.90	-1,011.69	-4,081.50	3,949.60	3,885.08	64.52	61.215		
12,900.00	11,865.02	13,268.71	12,239.56	45.79	46.97	94.89	-1,111.68	-4,080.63	3,949.65	3,884.25	65.40	60.391		
13,000.00	11,866.85	13,368.71	12,240.65	46.48	47.63	94.88	-1,211.67	-4,079.76	3,949.70	3,883.35	66.35	59.527		
13,100.00	11,868.68	13,468.70	12,241.73	47.21	48.34	94.86	-1,311.65	-4,078.90	3,949.74	3,882.37	67.37	58.628		
13,200.00	11,870.51	13,568.70	12,242.81	47.99	49.09	94.85	-1,411.64	-4,078.03	3,949.79	3,881.34	68.45	57.702		
13,300.00	11,872.34	13,668.70	12,243.89	48.81	49.89	94.84	-1,511.63	-4,077.16	3,949.84	3,880.24	69.60	56.755		
13,400.00	11,874.17	13,768.70	12,244.98	49.68	50.73	94.83	-1,611.62	-4,076.29	3,949.89	3,879.09	70.80	55.792		
13,500.00	11,876.00	13,868.69	12,246.06	50.58	51.61	94.82	-1,711.60	-4,075.42	3,949.94	3,877.88	72.05	54.819		
13,600.00	11,877.83	13,968.69	12,247.14	51.52	52.53	94.81	-1,811.59	-4,074.55	3,949.98	3,876.62	73.36	53.841		
13,700.00	11,879.66	14,068.69	12,248.23	52.50	53.48	94.80	-1,911.58	-4,073.69	3,950.03	3,875.31	74.72	52.862		
13,800.00	11,881.49	14,168.68	12,249.31	53.51	54.46	94.79	-2,011.57	-4,072.82	3,950.08	3,873.95	76.13	51.886		
13,900.00	11,883.32	14,268.68	12,250.39	54.55	55.48	94.78	-2,111.55	-4,071.95	3,950.13	3,872.55	77.58	50.916		
14,000.00	11,885.15	14,368.68	12,251.47	55.62	56.52	94.77	-2,211.54	-4,071.08	3,950.18	3,871.10	79.08	49.955		
14,100.00	11,886.98	14,468.68	12,252.56	56.72	57.60	94.76	-2,311.53	-4,070.21	3,950.23	3,869.62	80.61	49.005		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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				
14,200.00	11,888.81	14,568.67	12,253.64	57.84	58.70	94.74	-2,411.52	-4,069.35	3,950.27	3,868.10	82.18	48.069				
14,300.00	11,890.64	14,668.67	12,254.72	58.99	59.83	94.73	-2,511.50	-4,068.48	3,950.32	3,866.54	83.79	47.148				
14,400.00	11,892.47	14,768.67	12,255.81	60.17	60.98	94.72	-2,611.49	-4,067.61	3,950.37	3,864.95	85.43	46.243				
14,500.00	11,894.31	14,868.66	12,256.89	61.36	62.15	94.71	-2,711.48	-4,066.74	3,950.42	3,863.33	87.10	45.356				
14,600.00	11,896.14	14,968.66	12,257.97	62.58	63.35	94.70	-2,811.47	-4,065.87	3,950.47	3,861.67	88.80	44.488				
14,700.00	11,897.97	15,068.66	12,259.05	63.81	64.56	94.69	-2,911.45	-4,065.00	3,950.52	3,859.99	90.53	43.639				
14,800.00	11,899.80	15,168.66	12,260.14	65.07	65.79	94.68	-3,011.44	-4,064.14	3,950.57	3,858.29	92.28	42.809				
14,900.00	11,901.63	15,268.65	12,261.22	66.34	67.05	94.67	-3,111.43	-4,063.27	3,950.62	3,856.56	94.07	41.999				
15,000.00	11,903.46	15,368.65	12,262.30	67.63	68.32	94.66	-3,211.42	-4,062.40	3,950.67	3,854.80	95.87	41.209				
15,100.00	11,905.29	15,468.65	12,263.39	68.93	69.60	94.65	-3,311.40	-4,061.53	3,950.72	3,853.02	97.70	40.439				
15,200.00	11,907.12	15,568.64	12,264.47	70.25	70.90	94.63	-3,411.39	-4,060.66	3,950.77	3,851.23	99.55	39.688				
15,300.00	11,908.95	15,668.64	12,265.55	71.58	72.22	94.62	-3,511.38	-4,059.79	3,950.82	3,849.41	101.41	38.958				
15,400.00	11,910.78	15,768.64	12,266.63	72.93	73.54	94.61	-3,611.37	-4,058.93	3,950.87	3,847.57	103.30	38.246				
15,500.00	11,912.61	15,868.64	12,267.72	74.28	74.88	94.60	-3,711.35	-4,058.06	3,950.92	3,845.72	105.21	37.554				
15,600.00	11,914.44	15,968.63	12,268.80	75.65	76.24	94.59	-3,811.34	-4,057.19	3,950.98	3,843.85	107.13	36.881				
15,700.00	11,916.27	16,068.63	12,269.88	77.03	77.60	94.58	-3,911.33	-4,056.32	3,951.03	3,841.96	109.07	36.226				
15,800.00	11,918.10	16,168.63	12,270.97	78.43	78.98	94.57	-4,011.32	-4,055.45	3,951.08	3,840.06	111.02	35.589				
15,900.00	11,919.93	16,268.62	12,272.05	79.83	80.37	94.56	-4,111.30	-4,054.58	3,951.13	3,838.14	112.99	34.970				
16,000.00	11,921.76	16,368.62	12,273.13	81.24	81.76	94.55	-4,211.29	-4,053.72	3,951.18	3,836.21	114.97	34.368				
16,100.00	11,923.59	16,468.62	12,274.21	82.66	83.17	94.54	-4,311.28	-4,052.85	3,951.23	3,834.27	116.96	33.782				
16,200.00	11,925.42	16,568.62	12,275.30	84.08	84.58	94.53	-4,411.27	-4,051.98	3,951.28	3,832.32	118.97	33.213				
16,300.00	11,927.25	16,668.61	12,276.38	85.52	86.01	94.51	-4,511.25	-4,051.11	3,951.34	3,830.35	120.99	32.659				
16,400.00	11,929.08	16,768.61	12,277.46	86.96	87.44	94.50	-4,611.24	-4,050.24	3,951.39	3,828.37	123.02	32.121				
16,500.00	11,930.91	16,868.61	12,278.54	88.41	88.88	94.49	-4,711.23	-4,049.37	3,951.44	3,826.38	125.06	31.597				
16,600.00	11,932.74	16,968.60	12,279.63	89.87	90.32	94.48	-4,811.22	-4,048.51	3,951.49	3,824.39	127.11	31.088				
16,700.00	11,934.57	17,068.60	12,280.71	91.34	91.77	94.47	-4,911.20	-4,047.64	3,951.55	3,822.38	129.17	30.592				
16,800.00	11,936.40	17,168.60	12,281.79	92.81	93.23	94.46	-5,011.19	-4,046.77	3,951.60	3,820.36	131.24	30.110				
16,900.00	11,938.23	17,268.60	12,282.88	94.29	94.70	94.45	-5,111.18	-4,045.90	3,951.65	3,818.34	133.31	29.642				
17,000.00	11,940.06	17,368.59	12,283.96	95.77	96.17	94.44	-5,211.17	-4,045.03	3,951.70	3,816.30	135.40	29.185				
17,100.00	11,941.89	17,468.59	12,285.04	97.26	97.65	94.43	-5,311.15	-4,044.16	3,951.76	3,814.26	137.50	28.741				
17,200.00	11,943.72	17,568.59	12,286.12	98.75	99.13	94.42	-5,411.14	-4,043.30	3,951.81	3,812.21	139.60	28.309				
17,300.00	11,945.55	17,668.58	12,287.21	100.25	100.62	94.41	-5,511.13	-4,042.43	3,951.86	3,810.16	141.71	27.888				
17,400.00	11,947.38	17,768.58	12,288.29	101.75	102.12	94.39	-5,611.12	-4,041.56	3,951.92	3,808.10	143.82	27.478				
17,500.00	11,949.22	17,868.58	12,289.37	103.26	103.61	94.38	-5,711.10	-4,040.69	3,951.97	3,806.03	145.94	27.079				
17,600.00	11,951.05	17,968.58	12,290.46	104.77	105.12	94.37	-5,811.09	-4,039.82	3,952.02	3,803.95	148.07	26.690				
17,700.00	11,952.88	18,068.57	12,291.54	106.29	106.63	94.36	-5,911.08	-4,038.96	3,952.08	3,801.87	150.21	26.311				
17,800.00	11,954.71	18,168.57	12,292.62	107.81	108.14	94.35	-6,011.07	-4,038.09	3,952.13	3,799.78	152.35	25.941				
17,900.00	11,956.54	18,268.57	12,293.70	109.33	109.65	94.34	-6,111.05	-4,037.22	3,952.19	3,797.69	154.50	25.581				
18,000.00	11,958.37	18,368.56	12,294.79	110.86	111.17	94.33	-6,211.04	-4,036.35	3,952.24	3,795.59	156.65	25.230				
18,100.00	11,960.20	18,468.56	12,295.87	112.39	112.70	94.32	-6,311.03	-4,035.48	3,952.30	3,793.49	158.80	24.888				
18,200.00	11,962.03	18,568.56	12,296.95	113.93	114.22	94.31	-6,411.02	-4,034.61	3,952.35	3,791.39	160.97	24.554				
18,300.00	11,963.86	18,668.56	12,298.04	115.46	115.75	94.30	-6,511.00	-4,033.75	3,952.41	3,789.27	163.13	24.228				
18,400.00	11,965.69	18,768.55	12,299.12	117.01	117.29	94.29	-6,610.99	-4,032.88	3,952.46	3,787.16	165.30	23.910				
18,500.00	11,967.52	18,868.55	12,300.20	118.55	118.82	94.27	-6,710.98	-4,032.01	3,952.52	3,785.04	167.48	23.600				
18,600.00	11,969.35	18,968.55	12,301.28	120.10	120.36	94.26	-6,810.97	-4,031.14	3,952.57	3,782.91	169.66	23.297				
18,700.00	11,971.18	19,068.54	12,302.37	121.65	121.91	94.25	-6,910.95	-4,030.27	3,952.63	3,780.78	171.84	23.001				
18,800.00	11,973.01	19,168.54	12,303.45	123.20	123.45	94.24	-7,010.94	-4,029.40	3,952.68	3,778.65	174.03	22.713				
18,900.00	11,974.84	19,268.54	12,304.53	124.75	125.00	94.23	-7,110.93	-4,028.54	3,952.74	3,776.52	176.22	22.430				
19,000.00	11,976.67	19,368.54	12,305.62	126.31	126.55	94.22	-7,210.92	-4,027.67	3,952.79	3,774.38	178.42	22.155				
19,100.00	11,978.50	19,468.53	12,306.70	127.87	128.11	94.21	-7,310.90	-4,026.80	3,952.85	3,772.23	180.62	21.885				
19,200.00	11,980.33	19,568.53	12,307.78	129.43	129.66	94.20	-7,410.89	-4,025.93	3,952.91	3,770.09	182.82	21.622				
19,300.00	11,982.16	19,668.53	12,308.86	131.00	131.22	94.19	-7,510.88	-4,025.06	3,952.96	3,767.94	185.02	21.365				

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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		
19,400.00	11,983.99	19,768.52	12,309.95	132.57	132.78	94.18	-7,610.87	-4,024.19	3,953.02	3,765.79	187.23	21.113		
19,500.00	11,985.82	19,868.52	12,311.03	134.13	134.34	94.16	-7,710.85	-4,023.33	3,953.08	3,763.63	189.44	20.867		
19,600.00	11,987.65	19,968.52	12,312.11	135.70	135.91	94.15	-7,810.84	-4,022.46	3,953.13	3,761.47	191.66	20.626		
19,700.00	11,989.48	20,068.52	12,313.19	137.28	137.48	94.14	-7,910.83	-4,021.59	3,953.19	3,759.31	193.88	20.390		
19,800.00	11,991.31	20,168.51	12,314.28	138.85	139.05	94.13	-8,010.82	-4,020.72	3,953.25	3,757.15	196.10	20.160		
19,900.00	11,993.14	20,268.51	12,315.36	140.43	140.62	94.12	-8,110.80	-4,019.85	3,953.30	3,754.98	198.32	19.934		
20,000.00	11,994.97	20,368.51	12,316.44	142.01	142.19	94.11	-8,210.79	-4,018.98	3,953.36	3,752.82	200.54	19.713		
20,100.00	11,996.80	20,468.50	12,317.53	143.59	143.76	94.10	-8,310.78	-4,018.12	3,953.42	3,750.65	202.77	19.497		
20,200.00	11,998.63	20,568.50	12,318.61	145.17	145.34	94.09	-8,410.77	-4,017.25	3,953.48	3,748.47	205.00	19.285		
20,300.00	12,000.46	20,668.50	12,319.69	146.75	146.92	94.08	-8,510.76	-4,016.38	3,953.53	3,746.30	207.23	19.078		
20,400.00	12,002.29	20,768.50	12,320.77	148.33	148.50	94.07	-8,610.74	-4,015.51	3,953.59	3,744.12	209.47	18.874		
20,500.00	12,004.13	20,868.49	12,321.86	149.92	150.08	94.06	-8,710.73	-4,014.64	3,953.65	3,741.94	211.71	18.675		
20,600.00	12,005.96	20,968.49	12,322.94	151.51	151.66	94.04	-8,810.72	-4,013.77	3,953.71	3,739.76	213.95	18.480		
20,700.00	12,007.79	21,068.49	12,324.02	153.10	153.25	94.03	-8,910.71	-4,012.91	3,953.77	3,737.58	216.19	18.289		
20,800.00	12,009.62	21,168.48	12,325.11	154.69	154.83	94.02	-9,010.69	-4,012.04	3,953.82	3,735.39	218.43	18.101		
20,900.00	12,011.45	21,268.48	12,326.19	156.28	156.42	94.01	-9,110.68	-4,011.17	3,953.88	3,733.21	220.67	17.917		
21,000.00	12,013.28	21,368.48	12,327.27	157.87	158.01	94.00	-9,210.67	-4,010.30	3,953.94	3,731.02	222.92	17.737		
21,100.00	12,015.11	21,468.48	12,328.35	159.46	159.60	93.99	-9,310.66	-4,009.43	3,954.00	3,728.83	225.17	17.560		
21,200.00	12,016.94	21,568.47	12,329.44	161.06	161.19	93.98	-9,410.64	-4,008.57	3,954.06	3,726.64	227.42	17.387		
21,300.00	12,018.77	21,668.47	12,330.52	162.65	162.78	93.97	-9,510.63	-4,007.70	3,954.12	3,724.45	229.67	17.216		
21,400.00	12,020.60	21,768.47	12,331.60	164.25	164.37	93.96	-9,610.62	-4,006.83	3,954.18	3,722.25	231.93	17.049		
21,500.00	12,022.43	21,868.46	12,332.69	165.85	165.97	93.95	-9,710.61	-4,005.96	3,954.24	3,720.05	234.18	16.885		
21,600.00	12,024.26	21,968.46	12,333.77	167.45	167.56	93.94	-9,810.59	-4,005.09	3,954.30	3,717.86	236.44	16.724		
21,700.00	12,026.09	22,068.46	12,334.85	169.05	169.16	93.92	-9,910.58	-4,004.22	3,954.36	3,715.66	238.70	16.566		
21,800.00	12,027.92	22,168.46	12,335.93	170.65	170.76	93.91	-10,010.57	-4,003.36	3,954.42	3,713.46	240.96	16.411		
21,900.00	12,029.75	22,268.45	12,337.02	172.25	172.36	93.90	-10,110.56	-4,002.49	3,954.48	3,711.26	243.22	16.259		
22,000.00	12,031.58	22,368.45	12,338.10	173.86	173.96	93.89	-10,210.54	-4,001.62	3,954.54	3,709.05	245.48	16.109		
22,100.00	12,033.41	22,468.45	12,339.18	175.46	175.56	93.88	-10,310.53	-4,000.75	3,954.60	3,706.85	247.75	15.962		
22,200.00	12,035.24	22,568.44	12,340.27	177.07	177.16	93.87	-10,410.52	-3,999.88	3,954.66	3,704.64	250.01	15.818		
22,300.00	12,037.07	22,668.44	12,341.35	178.67	178.76	93.86	-10,510.51	-3,999.01	3,954.72	3,702.44	252.28	15.676		
22,400.00	12,038.90	22,768.44	12,342.43	180.28	180.36	93.85	-10,610.49	-3,998.15	3,954.78	3,700.23	254.55	15.536		
22,490.07	12,040.55	22,858.50	12,343.41	181.73	181.81	93.84	-10,700.55	-3,997.36	3,954.83	3,698.24	256.59	15.413 ES, SF		



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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	0.40	0.40	0.00	0.00	89.49	0.31	35.00	35.00					
100.00	100.00	100.40	100.40	0.14	0.14	89.49	0.31	35.00	35.00	34.80	0.20	173.908		
200.00	200.00	200.40	200.40	0.50	0.50	89.49	0.31	35.00	35.00	34.29	0.71	49.422		
300.00	300.00	300.40	300.40	0.86	0.86	89.49	0.31	35.00	35.00	33.79	1.22	28.804		
400.00	400.00	400.40	400.40	1.22	1.22	89.49	0.31	35.00	35.00	33.28	1.72	20.324		
500.00	500.00	500.40	500.40	1.58	1.58	89.49	0.31	35.00	35.00	32.77	2.23	15.702		
600.00	600.00	600.40	600.40	1.93	1.94	89.49	0.31	35.00	35.00	32.27	2.74	12.793		
700.00	700.00	700.40	700.40	2.29	2.29	89.49	0.31	35.00	35.00	31.76	3.24	10.793		
800.00	800.00	800.40	800.40	2.65	2.65	89.49	0.31	35.00	35.00	31.25	3.75	9.334		
900.00	900.00	900.40	900.40	3.01	3.01	89.49	0.31	35.00	35.00	30.74	4.26	8.222		
1,000.00	1,000.00	1,000.40	1,000.40	3.37	3.37	89.49	0.31	35.00	35.00	30.24	4.76	7.347		
1,100.00	1,100.00	1,100.40	1,100.40	3.73	3.73	89.49	0.31	35.00	35.00	29.73	5.27	6.641		
1,200.00	1,200.00	1,200.40	1,200.40	4.08	4.09	89.49	0.31	35.00	35.00	29.22	5.78	6.058		
1,300.00	1,300.00	1,300.40	1,300.40	4.44	4.44	89.49	0.31	35.00	35.00	28.72	6.28	5.569		
1,400.00	1,400.00	1,400.40	1,400.40	4.80	4.80	89.49	0.31	35.00	35.00	28.21	6.79	5.154		
1,500.00	1,500.00	1,500.40	1,500.40	5.16	5.16	89.49	0.31	35.00	35.00	27.70	7.30	4.796		
1,600.00	1,600.00	1,600.40	1,600.40	5.52	5.52	89.49	0.31	35.00	35.00	27.20	7.81	4.484		
1,700.00	1,700.00	1,700.40	1,700.40	5.88	5.88	89.49	0.31	35.00	35.00	26.69	8.31	4.211		
1,800.00	1,800.00	1,800.40	1,800.40	6.24	6.24	89.49	0.31	35.00	35.00	26.18	8.82	3.969		
1,900.00	1,900.00	1,900.40	1,900.40	6.59	6.60	89.49	0.31	35.00	35.00	25.67	9.33	3.753		
2,000.00	2,000.00	2,000.40	2,000.40	6.95	6.95	89.49	0.31	35.00	35.00	25.17	9.83	3.559		
2,100.00	2,100.00	2,100.40	2,100.40	7.31	7.31	89.49	0.31	35.00	35.00	24.66	10.34	3.385		
2,200.00	2,200.00	2,200.40	2,200.40	7.67	7.67	89.49	0.31	35.00	35.00	24.15	10.85	3.227		
2,300.00	2,300.00	2,300.40	2,300.40	8.03	8.03	89.49	0.31	35.00	35.00	23.65	11.35	3.083		
2,400.00	2,400.00	2,400.40	2,400.40	8.39	8.39	89.49	0.31	35.00	35.00	23.14	11.86	2.951		
2,500.00	2,500.00	2,500.40	2,500.40	8.74	8.75	89.49	0.31	35.00	35.00	22.63	12.37	2.830		
2,600.00	2,600.00	2,600.40	2,600.40	9.10	9.10	89.49	0.31	35.00	35.00	22.13	12.88	2.719		
2,700.00	2,700.00	2,700.40	2,700.40	9.46	9.46	89.49	0.31	35.00	35.00	21.62	13.38	2.616		
2,800.00	2,800.00	2,800.40	2,800.40	9.82	9.82	89.49	0.31	35.00	35.00	21.11	13.89	2.520		
2,900.00	2,900.00	2,900.40	2,900.40	10.18	10.18	89.49	0.31	35.00	35.00	20.61	14.40	2.431		
3,000.00	3,000.00	3,000.40	3,000.40	10.54	10.54	89.49	0.31	35.00	35.00	20.10	14.90	2.349		
3,100.00	3,100.00	3,100.40	3,100.40	10.90	10.90	89.49	0.31	35.00	35.00	19.59	15.41	2.271		
3,200.00	3,200.00	3,200.40	3,200.40	11.25	11.26	89.49	0.31	35.00	35.00	19.08	15.92	2.199		
3,300.00	3,300.00	3,300.40	3,300.40	11.61	11.61	89.49	0.31	35.00	35.00	18.58	16.42	2.131		
3,400.00	3,400.00	3,400.40	3,400.40	11.97	11.97	89.49	0.31	35.00	35.00	18.07	16.93	2.067		
3,500.00	3,500.00	3,500.40	3,500.40	12.33	12.33	89.49	0.31	35.00	35.00	17.56	17.44	2.007		
3,600.00	3,600.00	3,600.40	3,600.40	12.69	12.69	89.49	0.31	35.00	35.00	17.06	17.94	1.951		
3,700.00	3,700.00	3,700.40	3,700.40	13.05	13.05	89.49	0.31	35.00	35.00	16.55	18.45	1.897		
3,800.00	3,800.00	3,800.40	3,800.40	13.41	13.41	89.49	0.31	35.00	35.00	16.04	18.96	1.846		
3,900.00	3,900.00	3,900.40	3,900.40	13.76	13.76	89.49	0.31	35.00	35.00	15.54	19.47	1.798		
4,000.00	4,000.00	4,000.40	4,000.40	14.12	14.12	89.49	0.31	35.00	35.00	15.03	19.97	1.752		
4,100.00	4,100.00	4,100.40	4,100.40	14.48	14.48	89.49	0.31	35.00	35.00	14.52	20.48	1.709		
4,200.00	4,200.00	4,200.40	4,200.40	14.84	14.84	89.49	0.31	35.00	35.00	14.01	20.99	1.668		
4,300.00	4,300.00	4,300.40	4,300.40	15.20	15.20	89.49	0.31	35.00	35.00	13.51	21.49	1.628		
4,400.00	4,400.00	4,400.40	4,400.40	15.56	15.56	89.49	0.31	35.00	35.00	13.00	22.00	1.591		
4,416.53	4,416.53	4,416.93	4,416.93	15.62	15.62	89.49	0.31	35.00	35.00	12.92	22.08	1.585 CC		
4,500.00	4,500.00	4,500.40	4,500.40	15.91	15.92	89.49	0.31	35.00	35.00	12.49	22.51	1.555 ES		
4,600.00	4,600.00	4,600.00	4,599.99	16.27	16.27	87.77	1.39	35.74	35.77	12.76	23.01	1.555 SF		
4,700.00	4,700.00	4,699.17	4,699.08	16.63	16.62	83.10	4.59	37.93	38.23	14.74	23.49	1.628		
4,800.00	4,800.00	4,798.23	4,797.92	16.99	16.98	76.59	9.91	41.58	42.81	18.86	23.95	1.787		
4,900.00	4,900.00	4,896.88	4,896.16	17.35	17.33	69.64	17.30	46.64	49.93	25.54	24.39	2.047		
5,000.00	5,000.00	4,996.30	4,995.04	17.71	17.68	63.77	25.87	52.51	58.78	33.90	24.89	2.362		

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
5,100.00	5,100.00	5,095.75	5,093.95	18.07	18.04	59.46	34.44	58.38	68.09	42.70	25.39	2.682					
5,200.00	5,200.00	5,195.20	5,192.86	18.42	18.39	56.20	43.02	64.25	77.69	51.80	25.89	3.001					
5,300.00	5,300.00	5,294.66	5,291.77	18.78	18.75	53.66	51.59	70.12	87.48	61.09	26.39	3.315					
5,400.00	5,400.00	5,394.11	5,390.68	19.14	19.11	51.63	60.16	76.00	97.41	70.52	26.90	3.622					
5,500.00	5,500.00	5,493.56	5,489.58	19.50	19.47	49.99	68.73	81.87	107.44	80.04	27.40	3.921					
5,600.00	5,599.99	5,593.04	5,588.52	19.86	19.83	87.42	77.30	87.74	117.48	89.57	27.90	4.210					
5,700.00	5,699.91	5,692.54	5,687.47	20.21	20.20	87.84	85.88	93.61	127.41	99.00	28.41	4.485					
5,800.00	5,799.69	5,791.98	5,786.37	20.57	20.56	89.27	94.45	99.49	137.30	108.39	28.91	4.749					
5,900.08	5,899.35	5,891.37	5,885.22	20.92	20.93	91.51	103.02	105.35	147.35	117.93	29.42	5.009					
6,000.00	5,998.72	5,990.53	5,983.83	21.28	21.29	94.06	111.56	111.21	157.68	127.76	29.93	5.269					
6,100.00	6,098.17	6,089.76	6,082.52	21.63	21.66	96.30	120.11	117.07	168.30	137.87	30.43	5.530					
6,200.00	6,197.63	6,188.99	6,181.21	21.99	22.02	98.27	128.67	122.92	179.14	148.20	30.94	5.790					
6,300.00	6,297.08	6,288.23	6,279.90	22.35	22.39	100.02	137.22	128.78	190.17	158.72	31.45	6.046					
6,400.00	6,396.53	6,387.46	6,378.59	22.71	22.76	101.57	145.77	134.64	201.36	169.40	31.96	6.300					
6,500.00	6,495.98	6,486.69	6,477.28	23.08	23.13	102.96	154.32	140.50	212.67	180.20	32.47	6.549					
6,600.00	6,595.43	6,585.92	6,575.97	23.44	23.50	104.21	162.88	146.36	224.10	191.11	32.99	6.794					
6,700.00	6,694.89	6,685.15	6,674.66	23.80	23.87	105.34	171.43	152.22	235.62	202.12	33.50	7.034					
6,800.00	6,794.34	6,784.39	6,773.35	24.17	24.24	106.36	179.98	158.07	247.23	213.21	34.01	7.269					
6,900.00	6,893.79	6,887.34	6,875.79	24.53	24.62	107.40	188.37	163.82	258.45	223.88	34.57	7.477					
7,000.00	6,993.24	6,992.64	6,980.81	24.90	25.01	108.71	194.73	168.18	267.67	232.54	35.13	7.619					
7,100.00	7,092.69	7,098.11	7,086.17	25.27	25.39	110.30	198.71	170.90	274.84	239.16	35.68	7.703					
7,200.00	7,192.15	7,203.59	7,191.62	25.63	25.77	112.18	200.28	171.98	280.06	243.85	36.21	7.735					
7,300.00	7,291.60	7,303.96	7,292.00	26.00	26.12	114.13	200.31	172.00	284.22	247.50	36.72	7.740					
7,400.00	7,391.05	7,403.42	7,391.45	26.37	26.48	116.02	200.31	172.00	288.67	251.44	37.23	7.754					
7,500.00	7,490.50	7,502.87	7,490.90	26.74	26.83	117.85	200.31	172.00	293.43	255.68	37.74	7.775					
7,600.00	7,589.95	7,602.32	7,590.35	27.11	27.18	119.61	200.31	172.00	298.47	260.22	38.25	7.803					
7,700.00	7,689.41	7,701.77	7,689.81	27.48	27.53	121.32	200.31	172.00	303.80	265.04	38.76	7.838					
7,800.00	7,788.86	7,801.22	7,789.26	27.86	27.89	122.97	200.31	172.00	309.38	270.11	39.27	7.878					
7,900.00	7,888.31	7,900.68	7,888.71	28.23	28.24	124.56	200.31	172.00	315.21	275.43	39.78	7.924					
7,937.55	7,925.65	7,938.02	7,926.05	28.37	28.37	125.14	200.31	172.00	317.47	277.50	39.97	7.943					
8,000.00	7,987.81	8,000.18	7,988.21	28.60	28.59	126.06	200.31	172.00	320.98	280.69	40.29	7.967					
8,100.00	8,087.53	8,099.89	8,087.93	28.97	28.95	127.18	200.31	172.00	325.48	284.68	40.79	7.978					
8,200.00	8,187.40	8,199.77	8,187.80	29.33	29.30	127.90	200.31	172.00	328.47	287.17	41.30	7.953					
8,300.00	8,287.37	8,299.74	8,287.77	29.69	29.65	128.23	200.31	172.00	329.89	288.08	41.80	7.891					
8,337.63	8,325.00	8,337.37	8,325.40	29.82	29.79	89.95	200.31	172.00	330.00	288.01	41.99	7.858					
8,400.00	8,387.37	8,399.74	8,387.77	30.04	30.01	89.95	200.31	172.00	330.00	287.69	42.31	7.800					
8,500.00	8,487.37	8,499.74	8,487.77	30.40	30.37	89.95	200.31	172.00	330.00	287.19	42.81	7.708					
8,600.00	8,587.37	8,599.74	8,587.77	30.75	30.72	89.95	200.31	172.00	330.00	286.69	43.31	7.619					
8,700.00	8,687.37	8,699.74	8,687.77	31.11	31.08	89.95	200.31	172.00	330.00	286.18	43.82	7.531					
8,800.00	8,787.37	8,799.74	8,787.77	31.46	31.43	89.95	200.31	172.00	330.00	285.68	44.32	7.446					
8,900.00	8,887.37	8,899.74	8,887.77	31.82	31.79	89.95	200.31	172.00	330.00	285.18	44.82	7.362					
9,000.00	8,987.37	8,999.74	8,987.77	32.17	32.14	89.95	200.31	172.00	330.00	284.67	45.33	7.280					
9,100.00	9,087.37	9,099.74	9,087.77	32.53	32.50	89.95	200.31	172.00	330.00	284.17	45.83	7.200					
9,200.00	9,187.37	9,199.74	9,187.77	32.88	32.85	89.95	200.31	172.00	330.00	283.67	46.33	7.122					
9,300.00	9,287.37	9,299.74	9,287.77	33.24	33.21	89.95	200.31	172.00	330.00	283.16	46.84	7.046					
9,400.00	9,387.37	9,399.74	9,387.77	33.60	33.57	89.95	200.31	172.00	330.00	282.66	47.34	6.971					
9,500.00	9,487.37	9,499.74	9,487.77	33.95	33.92	89.95	200.31	172.00	330.00	282.15	47.85	6.897					
9,600.00	9,587.37	9,599.74	9,587.77	34.31	34.28	89.95	200.31	172.00	330.00	281.65	48.35	6.825					
9,700.00	9,687.37	9,699.74	9,687.77	34.66	34.63	89.95	200.31	172.00	330.00	281.15	48.85	6.755					
9,800.00	9,787.37	9,799.74	9,787.77	35.02	34.99	89.95	200.31	172.00	330.00	280.64	49.36	6.686					
9,900.00	9,887.37	9,899.74	9,887.77	35.37	35.35	89.95	200.31	172.00	330.00	280.14	49.86	6.618					
10,000.00	9,987.37	9,999.74	9,987.77	35.73	35.70	89.95	200.31	172.00	330.00	279.63	50.37	6.552					

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
10,100.00	10,087.37	10,099.74	10,087.77	36.09	36.06	89.95	200.31	172.00	330.00	279.13	50.87	6.487					
10,200.00	10,187.37	10,199.74	10,187.77	36.44	36.41	89.95	200.31	172.00	330.00	278.63	51.37	6.423					
10,300.00	10,287.37	10,299.74	10,287.77	36.80	36.77	89.95	200.31	172.00	330.00	278.12	51.88	6.361					
10,400.00	10,387.37	10,399.74	10,387.77	37.15	37.13	89.95	200.31	172.00	330.00	277.62	52.38	6.300					
10,500.00	10,487.37	10,499.74	10,487.77	37.51	37.48	89.95	200.31	172.00	330.00	277.11	52.89	6.240					
10,600.00	10,587.37	10,599.74	10,587.77	37.87	37.84	89.95	200.31	172.00	330.00	276.61	53.39	6.181					
10,700.00	10,687.37	10,699.74	10,687.77	38.22	38.20	89.95	200.31	172.00	330.00	276.10	53.90	6.123					
10,800.00	10,787.37	10,799.74	10,787.77	38.58	38.55	89.95	200.31	172.00	330.00	275.60	54.40	6.066					
10,900.00	10,887.37	10,899.74	10,887.77	38.94	38.91	89.95	200.31	172.00	330.00	275.09	54.91	6.010					
11,000.00	10,987.37	10,999.74	10,987.77	39.29	39.27	89.95	200.31	172.00	330.00	274.59	55.41	5.956					
11,100.00	11,087.37	11,099.74	11,087.77	39.65	39.62	89.95	200.31	172.00	330.00	274.08	55.92	5.902					
11,200.00	11,187.37	11,199.74	11,187.77	40.00	39.98	89.95	200.31	172.00	330.00	273.58	56.42	5.849					
11,291.63	11,279.00	11,291.37	11,279.40	40.33	40.31	89.95	200.31	172.00	330.00	273.12	56.88	5.801					
11,300.00	11,287.37	11,299.74	11,287.77	40.36	40.34	-89.50	200.31	172.00	330.00	273.08	56.92	5.797					
11,349.52	11,336.79	11,349.16	11,337.19	40.52	40.51	-90.00	200.31	172.00	329.99	272.83	57.16	5.773					
11,350.00	11,337.27	11,349.64	11,337.67	40.52	40.51	-90.01	200.31	172.00	329.99	272.83	57.16	5.773					
11,400.00	11,386.73	11,399.09	11,387.13	40.67	40.69	-91.24	200.31	172.00	330.07	272.67	57.39	5.751					
11,450.00	11,435.36	11,447.73	11,435.76	40.81	40.86	-93.14	200.31	172.00	330.52	272.91	57.62	5.736					
11,500.00	11,482.81	11,495.18	11,483.21	40.95	41.03	-95.59	200.31	172.00	331.79	273.96	57.84	5.737					
11,550.00	11,528.70	11,545.48	11,533.46	41.08	41.19	-98.45	198.34	172.02	334.15	276.11	58.04	5.757					
11,600.00	11,572.70	11,597.79	11,585.31	41.20	41.35	-101.29	191.64	172.08	337.43	279.22	58.21	5.797					
11,650.00	11,614.46	11,652.09	11,638.28	41.31	41.51	-104.05	179.71	172.20	341.55	283.22	58.33	5.856					
11,700.00	11,653.66	11,708.59	11,691.91	41.40	41.67	-106.72	162.03	172.37	346.38	288.03	58.35	5.936					
11,750.00	11,690.02	11,767.44	11,745.65	41.49	41.82	-109.26	138.10	172.61	351.77	293.52	58.26	6.038					
11,800.00	11,723.25	11,828.81	11,798.77	41.58	41.96	-111.66	107.42	172.91	357.53	299.52	58.01	6.163					
11,850.00	11,753.09	11,892.82	11,850.33	41.67	42.09	-113.89	69.56	173.28	363.43	305.83	57.61	6.309					
11,900.00	11,779.33	11,959.52	11,899.23	41.77	42.21	-115.91	24.25	173.72	369.25	312.19	57.05	6.472					
11,950.00	11,801.76	12,028.88	11,944.14	41.88	42.34	-117.69	-28.55	174.24	374.72	318.34	56.39	6.645					
12,000.00	11,820.21	12,100.79	11,983.60	41.99	42.50	-119.21	-88.60	174.83	379.62	323.94	55.68	6.818					
12,050.00	11,834.54	12,174.97	12,016.11	42.11	42.67	-120.43	-155.22	175.48	383.71	328.68	55.03	6.973					
12,100.00	11,844.65	12,251.02	12,040.22	42.23	42.84	-121.32	-227.28	176.19	386.78	332.26	54.53	7.093					
12,150.00	11,850.45	12,328.41	12,054.74	42.36	43.03	-121.87	-303.23	176.93	388.69	334.41	54.28	7.161					
12,181.14	11,851.86	12,377.00	12,058.57	42.44	43.15	-122.03	-351.66	177.41	389.25	334.96	54.29	7.170					
12,200.00	11,852.21	12,399.37	12,059.10	42.49	43.21	-122.04	-374.03	177.62	389.29	334.94	54.34	7.164					
12,300.00	11,854.04	12,499.37	12,061.05	42.78	43.49	-122.06	-474.00	178.60	389.35	334.67	54.69	7.120					
12,400.00	11,855.87	12,599.37	12,063.01	43.14	43.84	-122.07	-573.98	179.58	389.42	334.32	55.10	7.067					
12,500.00	11,857.70	12,699.37	12,064.97	43.56	44.25	-122.09	-673.95	180.56	389.49	333.90	55.59	7.007					
12,600.00	11,859.53	12,799.37	12,066.92	44.04	44.71	-122.10	-773.93	181.54	389.56	333.41	56.14	6.939					
12,700.00	11,861.36	12,899.37	12,068.88	44.57	45.23	-122.12	-873.91	182.52	389.62	332.86	56.76	6.864					
12,800.00	11,863.19	12,999.37	12,070.84	45.15	45.81	-122.14	-973.88	183.50	389.69	332.24	57.45	6.783					
12,900.00	11,865.02	13,099.37	12,072.80	45.79	46.43	-122.15	-1,073.86	184.48	389.76	331.56	58.19	6.698					
13,000.00	11,866.85	13,199.37	12,074.75	46.48	47.10	-122.17	-1,173.83	185.46	389.82	330.83	59.00	6.608					
13,100.00	11,868.68	13,299.37	12,076.71	47.21	47.83	-122.18	-1,273.81	186.44	389.89	330.04	59.86	6.514					
13,200.00	11,870.51	13,399.37	12,078.67	47.99	48.59	-122.20	-1,373.79	187.42	389.96	329.19	60.77	6.417					
13,300.00	11,872.34	13,499.37	12,080.63	48.81	49.40	-122.22	-1,473.76	188.39	390.03	328.29	61.73	6.318					
13,400.00	11,874.17	13,599.37	12,082.58	49.68	50.26	-122.23	-1,573.74	189.37	390.09	327.35	62.75	6.217					
13,500.00	11,876.00	13,699.37	12,084.54	50.58	51.15	-122.25	-1,673.71	190.35	390.16	326.36	63.80	6.115					
13,600.00	11,877.83	13,799.37	12,086.50	51.52	52.07	-122.26	-1,773.69	191.33	390.23	325.32	64.91	6.012					
13,700.00	11,879.66	13,899.37	12,088.45	52.50	53.04	-122.28	-1,873.67	192.31	390.30	324.25	66.05	5.909					
13,800.00	11,881.49	13,999.37	12,090.41	53.51	54.03	-122.29	-1,973.64	193.29	390.36	323.14	67.23	5.807					
13,900.00	11,883.32	14,099.37	12,092.37	54.55	55.06	-122.31	-2,073.62	194.27	390.43	321.99	68.45	5.704					
14,000.00	11,885.15	14,199.37	12,094.33	55.62	56.12	-122.33	-2,173.59	195.25	390.50	320.80	69.70	5.603					

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 LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
14,100.00	11,886.98	14,299.37	12,096.28	56.72	57.21	-122.34	-2,273.57	196.23	390.57	319.59	70.98	5.503					
14,200.00	11,888.81	14,399.37	12,098.24	57.84	58.32	-122.36	-2,373.55	197.21	390.63	318.34	72.29	5.404					
14,300.00	11,890.64	14,499.37	12,100.20	58.99	59.46	-122.37	-2,473.52	198.19	390.70	317.07	73.63	5.306					
14,400.00	11,892.47	14,599.37	12,102.16	60.17	60.62	-122.39	-2,573.50	199.16	390.77	315.77	75.00	5.210					
14,500.00	11,894.31	14,699.37	12,104.11	61.36	61.80	-122.40	-2,673.47	200.14	390.84	314.45	76.39	5.116					
14,600.00	11,896.14	14,799.37	12,106.07	62.58	63.01	-122.42	-2,773.45	201.12	390.90	313.10	77.80	5.024					
14,700.00	11,897.97	14,899.37	12,108.03	63.81	64.23	-122.44	-2,873.43	202.10	390.97	311.73	79.24	4.934					
14,800.00	11,899.80	14,999.37	12,109.98	65.07	65.48	-122.45	-2,973.40	203.08	391.04	310.34	80.70	4.846					
14,900.00	11,901.63	15,099.37	12,111.94	66.34	66.74	-122.47	-3,073.38	204.06	391.11	308.94	82.17	4.760					
15,000.00	11,903.46	15,199.37	12,113.90	67.63	68.02	-122.48	-3,173.35	205.04	391.18	307.51	83.66	4.676					
15,100.00	11,905.29	15,299.37	12,115.86	68.93	69.31	-122.50	-3,273.33	206.02	391.24	306.07	85.17	4.594					
15,200.00	11,907.12	15,399.37	12,117.81	70.25	70.62	-122.51	-3,373.30	207.00	391.31	304.61	86.70	4.514					
15,300.00	11,908.95	15,499.37	12,119.77	71.58	71.94	-122.53	-3,473.28	207.98	391.38	303.14	88.24	4.436					
15,400.00	11,910.78	15,599.37	12,121.73	72.93	73.28	-122.55	-3,573.26	208.96	391.45	301.66	89.79	4.360					
15,500.00	11,912.61	15,699.37	12,123.69	74.28	74.63	-122.56	-3,673.23	209.93	391.52	300.16	91.35	4.286					
15,600.00	11,914.44	15,799.37	12,125.64	75.65	75.99	-122.58	-3,773.21	210.91	391.58	298.66	92.93	4.214					
15,700.00	11,916.27	15,899.37	12,127.60	77.03	77.36	-122.59	-3,873.18	211.89	391.65	297.14	94.51	4.144					
15,800.00	11,918.10	15,999.37	12,129.56	78.43	78.74	-122.61	-3,973.16	212.87	391.72	295.61	96.11	4.076					
15,900.00	11,919.93	16,099.37	12,131.51	79.83	80.14	-122.62	-4,073.14	213.85	391.79	294.08	97.71	4.010					
16,000.00	11,921.76	16,199.37	12,133.47	81.24	81.54	-122.64	-4,173.11	214.83	391.86	292.53	99.33	3.945					
16,100.00	11,923.59	16,299.37	12,135.43	82.66	82.95	-122.66	-4,273.09	215.81	391.93	290.98	100.95	3.883					
16,200.00	11,925.42	16,399.37	12,137.39	84.08	84.37	-122.67	-4,373.06	216.79	391.99	289.42	102.57	3.822					
16,300.00	11,927.25	16,499.37	12,139.34	85.52	85.80	-122.69	-4,473.04	217.77	392.06	287.85	104.21	3.762					
16,400.00	11,929.08	16,599.37	12,141.30	86.96	87.24	-122.70	-4,573.02	218.75	392.13	286.28	105.85	3.705					
16,500.00	11,930.91	16,699.37	12,143.26	88.41	88.69	-122.72	-4,672.99	219.73	392.20	284.70	107.49	3.649					
16,600.00	11,932.74	16,799.37	12,145.21	89.87	90.14	-122.73	-4,772.97	220.70	392.27	283.12	109.15	3.594					
16,700.00	11,934.57	16,899.37	12,147.17	91.34	91.60	-122.75	-4,872.94	221.68	392.34	281.53	110.80	3.541					
16,800.00	11,936.40	16,999.37	12,149.13	92.81	93.06	-122.77	-4,972.92	222.66	392.40	279.94	112.46	3.489					
16,900.00	11,938.23	17,099.37	12,151.09	94.29	94.53	-122.78	-5,072.90	223.64	392.47	278.35	114.12	3.439					
17,000.00	11,940.06	17,199.37	12,153.04	95.77	96.01	-122.80	-5,172.87	224.62	392.54	276.75	115.79	3.390					
17,100.00	11,941.89	17,299.37	12,155.00	97.26	97.49	-122.81	-5,272.85	225.60	392.61	275.15	117.46	3.342					
17,200.00	11,943.72	17,399.37	12,156.96	98.75	98.98	-122.83	-5,372.82	226.58	392.68	273.54	119.13	3.296					
17,300.00	11,945.55	17,499.37	12,158.92	100.25	100.48	-122.84	-5,472.80	227.56	392.75	271.94	120.81	3.251					
17,400.00	11,947.38	17,599.37	12,160.87	101.75	101.97	-122.86	-5,572.78	228.54	392.81	270.33	122.49	3.207					
17,500.00	11,949.22	17,699.37	12,162.83	103.26	103.48	-122.87	-5,672.75	229.52	392.88	268.72	124.16	3.164					
17,600.00	11,951.05	17,799.37	12,164.79	104.77	104.98	-122.89	-5,772.73	230.50	392.95	267.11	125.84	3.123					
17,700.00	11,952.88	17,899.37	12,166.74	106.29	106.50	-122.91	-5,872.70	231.47	393.02	265.50	127.53	3.082					
17,800.00	11,954.71	17,999.37	12,168.70	107.81	108.01	-122.92	-5,972.68	232.45	393.09	263.88	129.21	3.042					
17,900.00	11,956.54	18,099.37	12,170.66	109.33	109.53	-122.94	-6,072.66	233.43	393.16	262.27	130.89	3.004					
18,000.00	11,958.37	18,199.37	12,172.62	110.86	111.06	-122.95	-6,172.63	234.41	393.23	260.65	132.57	2.966					
18,100.00	11,960.20	18,299.37	12,174.57	112.39	112.58	-122.97	-6,272.61	235.39	393.30	259.04	134.26	2.929					
18,200.00	11,962.03	18,399.37	12,176.53	113.93	114.11	-122.98	-6,372.58	236.37	393.36	257.42	135.94	2.894					
18,300.00	11,963.86	18,499.37	12,178.49	115.46	115.65	-123.00	-6,472.56	237.35	393.43	255.81	137.62	2.859					
18,400.00	11,965.69	18,599.37	12,180.45	117.01	117.19	-123.01	-6,572.54	238.33	393.50	254.20	139.31	2.825					
18,500.00	11,967.52	18,699.37	12,182.40	118.55	118.73	-123.03	-6,672.51	239.31	393.57	252.58	140.99	2.792					
18,600.00	11,969.35	18,799.37	12,184.36	120.10	120.27	-123.05	-6,772.49	240.29	393.64	250.97	142.67	2.759					
18,700.00	11,971.18	18,899.37	12,186.32	121.65	121.82	-123.06	-6,872.46	241.27	393.71	249.36	144.35	2.727					
18,800.00	11,973.01	18,999.37	12,188.27	123.20	123.37	-123.08	-6,972.44	242.25	393.78	247.75	146.03	2.697					
18,900.00	11,974.84	19,099.37	12,190.23	124.75	124.92	-123.09	-7,072.42	243.22	393.85	246.14	147.71	2.666					
19,000.00	11,976.67	19,199.37	12,192.19	126.31	126.47	-123.11	-7,172.39	244.20	393.92	244.53	149.38	2.637					
19,100.00	11,978.50	19,299.37	12,194.15	127.87	128.03	-123.12	-7,272.37	245.18	393.99	242.93	151.06	2.608					
19,200.00	11,980.33	19,399.37	12,196.10	129.43	129.59	-123.14	-7,372.34	246.16	394.05	241.32	152.73	2.580					

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



Total Directional Services

Anticollision Report



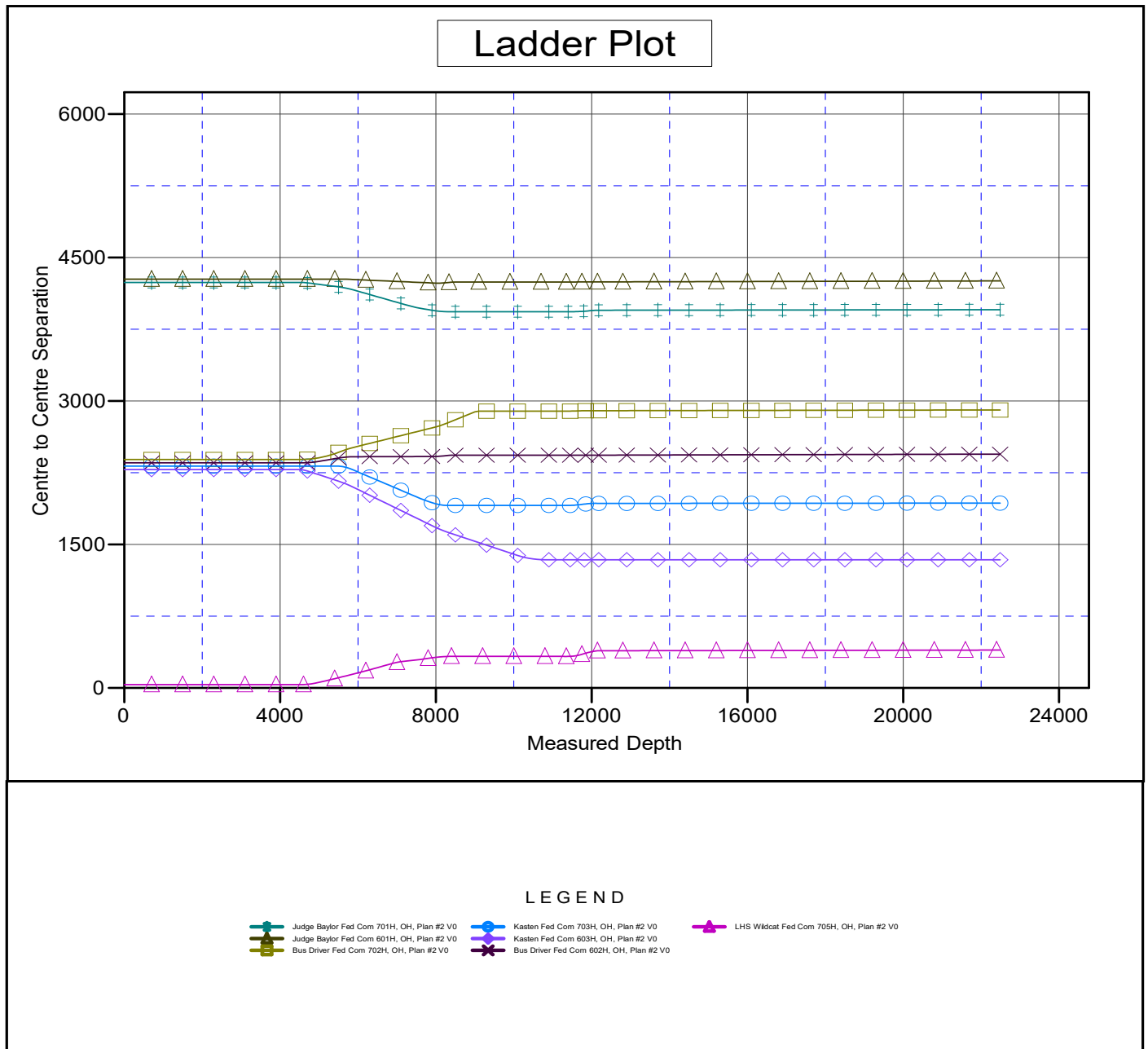
Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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					
19,300.00	11,982.16	19,499.37	12,198.06	131.00	131.15	-123.15	-7,472.32	247.14	394.12	239.72	154.41	2.553					
19,400.00	11,983.99	19,599.37	12,200.02	132.57	132.71	-123.17	-7,572.30	248.12	394.19	238.12	156.08	2.526					
19,500.00	11,985.82	19,699.37	12,201.98	134.13	134.28	-123.18	-7,672.27	249.10	394.26	236.52	157.74	2.499					
19,600.00	11,987.65	19,799.37	12,203.93	135.70	135.85	-123.20	-7,772.25	250.08	394.33	234.92	159.41	2.474					
19,700.00	11,989.48	19,899.37	12,205.89	137.28	137.42	-123.22	-7,872.22	251.06	394.40	233.33	161.08	2.449					
19,800.00	11,991.31	19,999.37	12,207.85	138.85	138.99	-123.23	-7,972.20	252.04	394.47	231.73	162.74	2.424					
19,900.00	11,993.14	20,099.37	12,209.80	140.43	140.56	-123.25	-8,072.18	253.02	394.54	230.14	164.40	2.400					
20,000.00	11,994.97	20,199.37	12,211.76	142.01	142.14	-123.26	-8,172.15	253.99	394.61	228.55	166.05	2.376					
20,100.00	11,996.80	20,299.37	12,213.72	143.59	143.71	-123.28	-8,272.13	254.97	394.68	226.97	167.71	2.353					
20,200.00	11,998.63	20,399.37	12,215.68	145.17	145.29	-123.29	-8,372.10	255.95	394.75	225.39	169.36	2.331					
20,300.00	12,000.46	20,499.37	12,217.63	146.75	146.87	-123.31	-8,472.08	256.93	394.82	223.81	171.01	2.309					
20,400.00	12,002.29	20,599.37	12,219.59	148.33	148.46	-123.32	-8,572.06	257.91	394.89	222.23	172.66	2.287					
20,500.00	12,004.13	20,699.37	12,221.55	149.92	150.04	-123.34	-8,672.03	258.89	394.96	220.66	174.30	2.266					
20,600.00	12,005.96	20,799.37	12,223.51	151.51	151.62	-123.35	-8,772.01	259.87	395.02	219.09	175.94	2.245					
20,700.00	12,007.79	20,899.37	12,225.46	153.10	153.21	-123.37	-8,871.98	260.85	395.09	217.52	177.58	2.225					
20,800.00	12,009.62	20,999.37	12,227.42	154.69	154.80	-123.39	-8,971.96	261.83	395.16	215.95	179.21	2.205					
20,900.00	12,011.45	21,099.37	12,229.38	156.28	156.39	-123.40	-9,071.94	262.81	395.23	214.39	180.84	2.186					
21,000.00	12,013.28	21,199.37	12,231.33	157.87	157.98	-123.42	-9,171.91	263.79	395.30	212.83	182.47	2.166					
21,100.00	12,015.11	21,299.37	12,233.29	159.46	159.57	-123.43	-9,271.89	264.76	395.37	211.28	184.10	2.148					
21,200.00	12,016.94	21,399.37	12,235.25	161.06	161.16	-123.45	-9,371.86	265.74	395.44	209.72	185.72	2.129					
21,300.00	12,018.77	21,499.37	12,237.21	162.65	162.76	-123.46	-9,471.84	266.72	395.51	208.18	187.34	2.111					
21,400.00	12,020.60	21,599.37	12,239.16	164.25	164.35	-123.48	-9,571.82	267.70	395.58	206.63	188.95	2.094					
21,500.00	12,022.43	21,699.37	12,241.12	165.85	165.95	-123.49	-9,671.79	268.68	395.65	205.09	190.56	2.076					
21,600.00	12,024.26	21,799.37	12,243.08	167.45	167.55	-123.51	-9,771.77	269.66	395.72	203.55	192.17	2.059					
21,700.00	12,026.09	21,899.37	12,245.04	169.05	169.15	-123.52	-9,871.74	270.64	395.79	202.01	193.78	2.043					
21,800.00	12,027.92	21,999.37	12,246.99	170.65	170.75	-123.54	-9,971.72	271.62	395.86	200.48	195.38	2.026					
21,900.00	12,029.75	22,099.37	12,248.95	172.25	172.35	-123.55	-10,071.69	272.60	395.93	198.95	196.98	2.010					
22,000.00	12,031.58	22,199.37	12,250.91	173.86	173.95	-123.57	-10,171.67	273.58	396.00	197.43	198.57	1.994					
22,100.00	12,033.41	22,299.37	12,252.86	175.46	175.55	-123.58	-10,271.65	274.56	396.07	195.91	200.16	1.979					
22,200.00	12,035.24	22,399.37	12,254.82	177.07	177.15	-123.60	-10,371.62	275.53	396.14	194.39	201.75	1.964					
22,300.00	12,037.07	22,499.37	12,256.78	178.67	178.76	-123.62	-10,471.60	276.51	396.21	192.88	203.33	1.949					
22,400.00	12,038.90	22,599.37	12,258.74	180.28	180.36	-123.63	-10,571.57	277.49	396.28	191.37	204.91	1.934					
22,490.07	12,040.55	22,689.43	12,260.50	181.73	181.81	-123.64	-10,661.62	278.37	396.34	190.01	206.33	1.921					

Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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 3031.5' GE + 21' KB @ 3052.50usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: LHS Wildcat Fed Com 604H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.54°

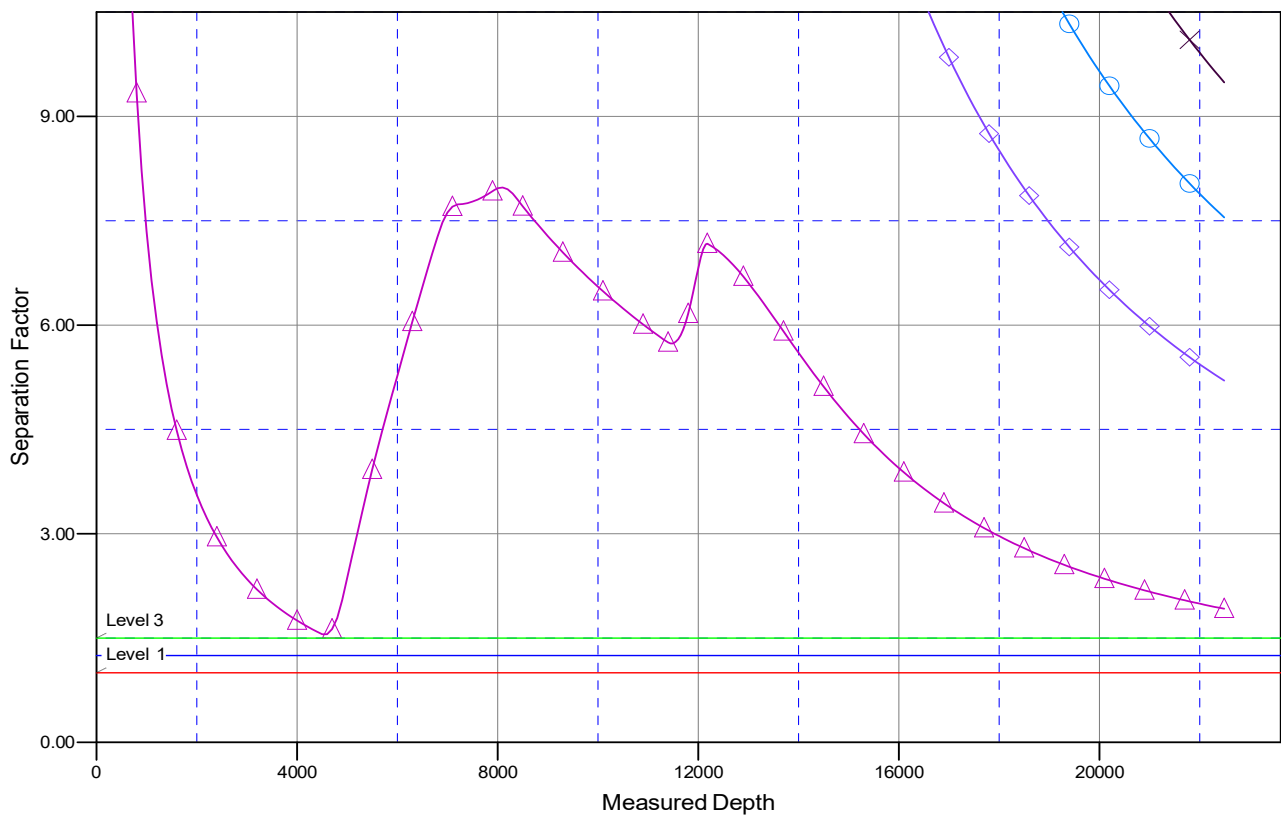


Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well LHS Wildcat Fed Com 604H
Project:	Lea County, NM (NAD83)	TVD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Reference Site:	LHS Wildcat Fed Com	MD Reference:	3031.5' GE + 21' KB @ 3052.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	LHS Wildcat Fed Com 604H	Survey Calculation Method:	Minimum Curvature
Well 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 3031.5' GE + 21' KB @ 3052.50usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: LHS Wildcat Fed Com 604H
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
- Bus Driver Fed Com 702H, 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 705H, OH, Plan #2 V0



LHS Wildcat Fed Com 604H

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)	3,032'	21'	21'	0	Sand/Gravels/unconsolidated
Rustler	2,530'	523'			Carbonates
Salado	2,145'	908'			Salt, Carbonate & Clastics
Base Salt	-1,372'	4,425'			Shaley Carbonate & Shale
Lamar	-1,807'	4,860'			Carbonate & Clastics
Bell Canyon	-1,841'	4,894'			Sandstone - oil/gas/water
Cherry Canyon	-2,708'	5,761'			Sandstone - oil/gas/water
Brushy Canyon	-4,200'	7,253'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,561'	8,614'			Shale/Carbonates - oil/gas
Avalon	-5,585'	8,638'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-6,687'	9,740'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,826'	9,879'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,211'	10,264'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,911'	10,964'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,582'	11,635'			Sandstone - oil/gas/water
HZ Target at SHL	-8,792'	11,845'			Overpressure shale/sand- Oil/Gas
Wolfcamp	-8,824'	11,877'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,885'	11,938'			Overpressure Shale - Oil/Gas
Wolfcamp B	-9,105'	12,158'			Overpressure Shale - Oil/Gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	4,894'	Oil
Bone Spring	9,740'	Oil
Wolfcamp	11,877	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	12181	1.09	1.25	1.79	1.22
Long string 5 1/2"	23	P-110	14520	14520	729	Anaconda 656	22490	1.32	1.38	1.18	1.06



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	Tail Type of cmt	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 Cello-Flake	1.364	6.51	1000	100%
Int1	12.25	9.625	5400	1256	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%
Int2	8.75	7.625	12181	353	Gel, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal									
					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	11181	50%
					Salt, 5pps LCM, 0.25pps Cello-Flake					0.25 pps Cello-Flake, 2% CaCl2				
Prod	6.75	5.5	22490	522	NeoCem, 14.5 ppg, Gas Migration Control	2.166	9.38	11181						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' – 12,181'	Brine	8.8-10.2	28-34	N/c
12,181' – 22,490'	Oil Base	10.0-11.0	58-68	3 - 6
Lateral				

The highest mud weight needed to balance formation is expected to be 10-11 ppg. In order to maintain hole stability, mud weights up to 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 12,040' TVD (deepest point of the well) is 195F with an estimated maximum bottom-hole pressure (BHP) at the same point of 7,513 psig (based on 12 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

- A. All personnel shall receive proper awareness H₂S training.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment
 - a. Well Control Equipment
 - i. Flare line 150' from wellhead to be ignited by auto ignition sparking system.
 - ii. Choke manifold with a remotely operated hydraulic choke.
 - iii. Mud/gas separator
 - b. Protective equipment for essential personnel
 - i. Breathing Apparatus



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

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



11. Anticipated starting date and duration of operations:

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

12. Disposal/environmental concerns:

- (A) Drilled cuttings will be hauled to and disposed of in a state-certified disposal site.
- (B) Non-hazardous waste mud/cement from the drilling process will 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.