

Well Name: LHS WILDCAT FED COM	Well Location: T25S / R35E / SEC 36 / SESE / 32.08026 / -103.31441	County or Parish/State: LEA / NM
Well Number: 604H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM117126	Unit or CA Name:	Unit or CA Number:
US Well Number: 300254810600X1	Well Status: Approved Application for Permit to Drill	Operator: FRANKLIN MOUNTAIN ENERGY LLC

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Drilling Operations
Date Sundry Submitted: 05/17/2021	Time Sundry Submitted: 08:24
Date proposed operation will begin: 05/20/2021	

Procedure Description: Franklin Mountain Energy, LLC (FME), Operator, respectfully requests approval to make the following changes to the proposed drilling plan for the above referenced well: - Change 1st Intermediate set depth to 5095'. - Change cement volumes based on updated Geoprog, casing and Directional plan. - Production Casing: FME would like approval to utilize 5.5 inch Eagle 606 23lb. P-110 in the drilling of this bore. Please see attached revised 14-point plan, Plan #4, geo prog and data sheet.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

FME_Federal_14_Point_Plan_LHS_604_updated_dir_23_lbs_Eagle_new_cmt_20210517082423.pdf

LHS_Wildcat_Fed_Com_604H_GEOPROG_prelim_20210511164332.pdf

Franklin_Mountain___LHS_Wildcat_Fed_Com_604H___Plan_4_20210511164325.pdf

Data_Sheet_5.500_inch_23.00___P110_USS_EAGLE_SFH___USS_20210212151937_20210225100727_20210511164308.pdf

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Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: RACHAEL OVERBEY	Signed on: MAY 17, 2021 08:24 AM
Name: FRANKLIN MOUNTAIN ENERGY LLC	
Title: Director – Operations Planning and Regulatory	
Street Address: 2401 E 2nd Avenue, Suite 300	
City: Denver	State: CO
Phone: (720) 414-7868	
Email address: roverbey@fmellc.com	

Field Representative

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: LONG VO	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752345972	BLM POC Email Address: lvo@blm.gov
Disposition: Approved	Disposition Date: 05/17/2021
Signature: Long Vo	



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'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,168'	894'			Carbonates
Salado	1,659'	1,403'			Salt, Carbonate & Clastics
Base Salt	471'	2,591'			Shaley Carbonate & Shale
Capitan Reef	-1,211'	4,273'			Carbonates
Lamar	-2,026'	5,088'			Carbonate & Clastics
Bell Canyon	-2,064'	5,126'			Sandstone - oil/gas/water
Cherry Canyon	-2,870'	5,932'			Sandstone - oil/gas/water
Brushy Canyon	-4,245'	7,307'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,233'	8,295'			Shale/Carbonates - oil/gas
Avalon	-5,585'	8,647'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-6,687'	9,749'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,826'	9,888'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,211'	10,273'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,911'	10,973'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,582'	11,644'			Sandstone - oil/gas/water
HZ Target at SHL	-8,792'	11,854'			Overpressure shale/sand- Oil/Gas
Wolfcamp	-8,824'	11,886'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,885'	11,947'			Overpressure Shale - Oil/Gas
Wolfcamp B	-9,105'	12,167'			Overpressure Shale - Oil/Gas

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware Sands	5,126'	Oil
Bone Spring	9,749'	Oil
Wolfcamp	11,886'	Oil

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

4. Casing Program:

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

Casing string	Weight	Grade	Burst	Collapse	Tension	Conn	Length	API design factor			
								Burst	Collapse	Tension	Coupling
Surface 13 3/8"	54.5	J-55	2730	1130	853	BTC 909	1300	1.18	1.67	4.99	5.32
Intermediate 9 5/8"	40	HCL-80	7430	4230	916	BTC 1042	5095	1.79	1.77	3.02	3.43
Intermediate 7 5/8"	29.7	HCP-110	8280	7150	827	Stinger 564	12186	1.09	1.25	1.79	1.22
Long string 5 1/2"	23	P-110	14520	14520	729	Eagle 606 TVD	22043 12040	1.32	1.41	1.20	1.00 1.61

Stress calculations on 5 1/2" casing performed assuming 22,043' depth. Stress calculations on 5 1/2" connections performed at 12,040' – maximum vertical depth of this well.



Cementing Program:

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

String Type	Hole Size	Casing Size	Setting Depth	Sacks	Type of cmt	Lead Yield ft ³ /sk	Water gal/sk	TOC ft	Sacks	Type of cmt	Tail Yield ft ³ /sk	Water gal/sk	TOC	Excess
Surf	17.5	13.375	1300	795	Extenda Cem, 12.8 ppg Class C, 3lb/sk Kol-Seal	1.747	9.06	0	334	HalCem TM, 14.8 ppg, Class C, 1% CaCl ₂ , 0.125pps Celo-Flake	1.349	6.51	1000	100%
Int1	12.25	9.625	5095	1486	Lead, 12.8 ppg, Class C 5% Salt, 0.125 pps Poly-E-Flake, 3lb/sk Kol-Seal	1.79	9.72	0	154	HalCem TM, 14.8 ppg, Class C, 0.1% HR 800 .125 pps Poly-E-Flake	1.33	6.37	4795	100%
Int2	8.75	7.625	12186	247	Lite Fill, 9.5 ppg, Class C 3lb/sk Bridgemaker Gel, 5% Salt, 5pps LCM, 0.25pps Cello-Flake	3.28	14.74	4095	94	NeoCem 14.8 ppg, Class C 0.25 pps Cello-Flake, 2% CaCl ₂	1.33	6.26	11186	50%
Prod	6.75	5.5	22043	810	Tail, 14.5 ppg, Gas Migration Control	1.34	6.24	11186						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' – 12,186'	Brine	8.8-10.2	28-34	N/c
12,186' – 22,043' Lateral	Oil Base	10.0-11.0	58-68	3 - 6

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

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

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

7. Auxiliary well control and monitoring equipment:

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

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

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

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

8. Logging, testing and coring program:

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

Open-hole logs are not planned for this well.

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

The estimated bottom-hole temperature at 12,057' TVD (deepest point of the well) is 195F with an estimated maximum bottom-hole pressure (BHP) at the same point of 7,512 psig (based on 12 ppg MW). Hydrogen sulfate may be present in the area. All necessary precautions will be taken before drilling operations commence. See Hydrogen Sulfide Plan below:

10. Hydrogen Sulfide Plan:

A. All personnel shall receive proper awareness H₂S training.

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

C. Required Emergency Equipment

a. Well Control Equipment

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

ii. Choke manifold with a remotely operated hydraulic choke.

iii. Mud/gas separator

b. Protective equipment for essential personnel

i. Breathing Apparatus

1. Rescue packs (SCBA) – 1 unit shall be placed at each briefing area, 2 shall be stored in a safety trailer on site.

2. Work/Escapes packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity



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

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

11. Anticipated starting date and duration of operations:

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

**12. Disposal/environmental concerns:**

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

13. Wellhead:

A multi-bowl wellhead system will be utilized.

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

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

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

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the 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.

Released to Imaging: 6/23/2021 12:00:46 PM

Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: LHS Wildcat Fed Com
Well: LHS Wildcat Fed Com 604H
Wellbore: OH
Design: Plan #4



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

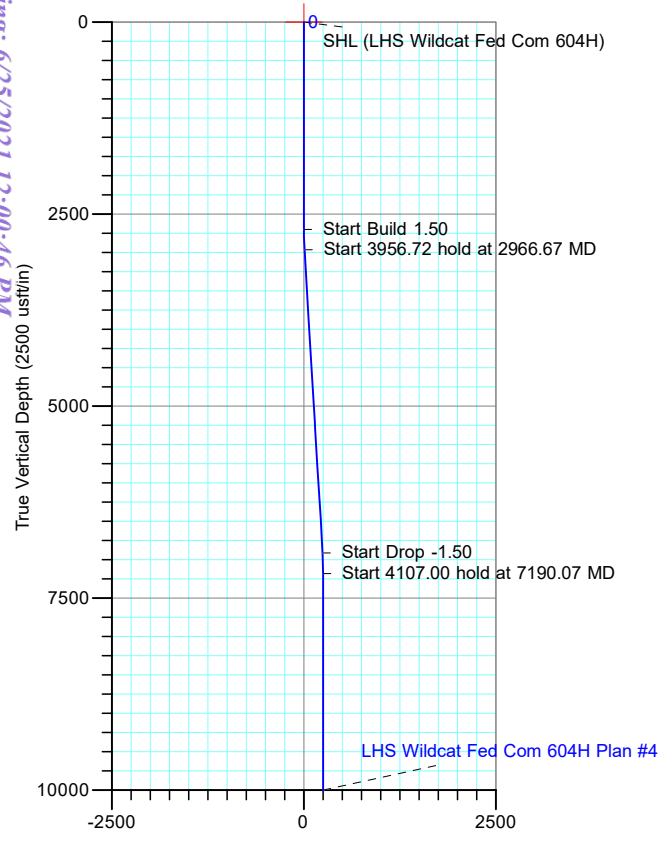
PROJECT DETAILS: Lea County, NM (NAD83)

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



Received by OCD: 5/17/2021 11:20:47 AM

3031.5' GE + 21' KB @ 3052.50usft

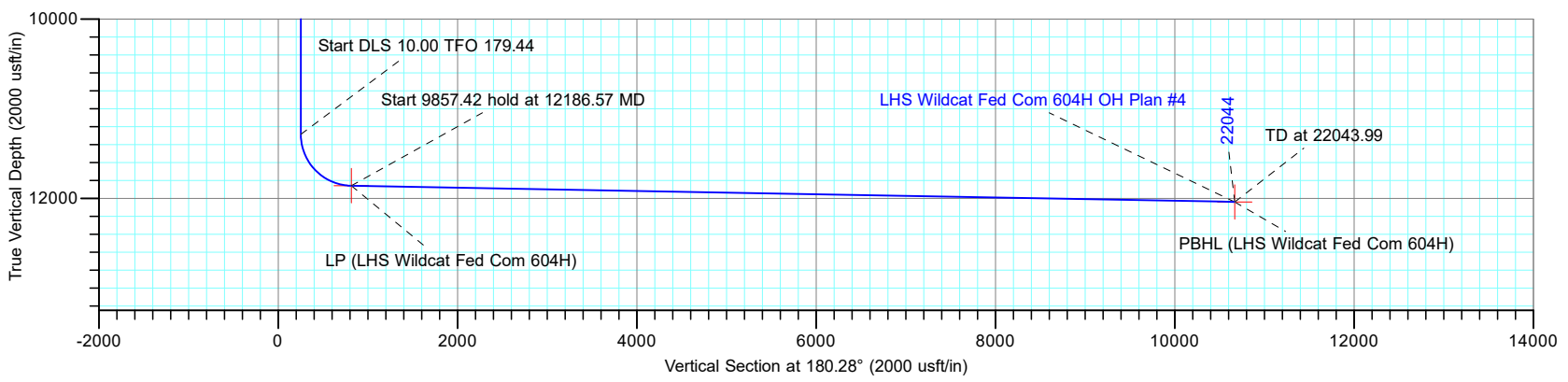
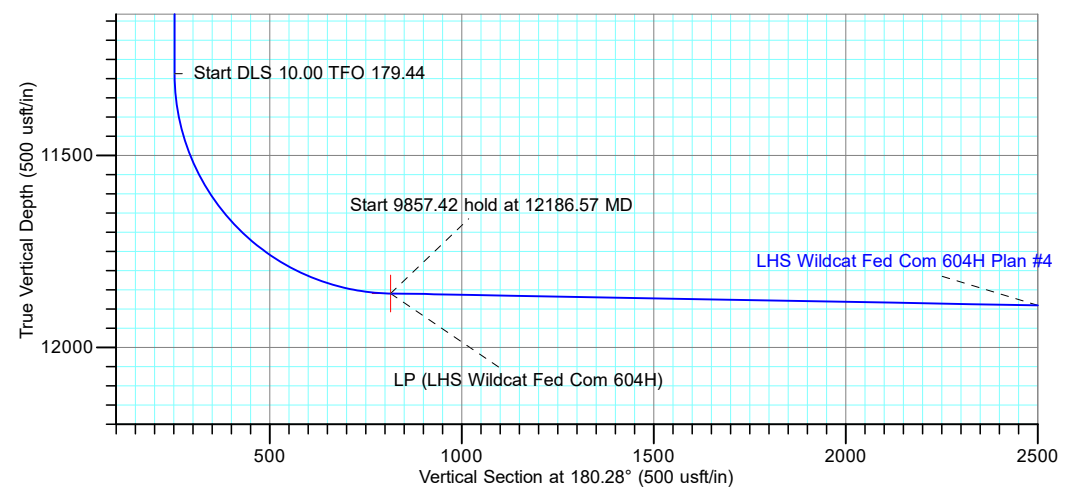


SECTION DETAILS

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	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2966.67	4.00	211.42	2966.46	-7.94	-4.85	1.50	211.42	7.96	Start 3956.72 hold at 2966.67 MD
6923.40	4.00	211.42	6913.54	-243.49	-148.73	0.00	0.00	244.20	Start Drop -1.50
7190.07	0.00	0.00	7180.00	-251.43	-153.58	1.50	180.00	252.17	Start 4107.00 hold at 7190.07 MD
11297.07	0.00	0.00	11287.00	-251.43	-153.58	0.00	0.00	252.17	Start DLS 10.00 TFO 179.44
12186.57	88.95	179.44	11859.86	-813.86	-148.07	10.00	179.44	814.56	Start 9857.42 hold at 12186.57 MD
22043.99	88.95	179.44	12040.55	-10669.15	-51.52	0.00	0.00	10669.27	TD at 22043.99

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LP (LHS Wildcat Fed Com 604H)	11859.86	-813.86	-148.07	32.078027	-103.314913
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 #4 (LHS Wildcat Fed Com 604H/OH)
LHS Wildcat Fed Com
Created By: Dustin Ault
Date: 10:44, April 21 2021
Approved: _____
Date: _____

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Franklin Mountain Energy

Project: Lea County, NM (NAD83)
Site: LHS Wildcat Fed Com
Well: LHS Wildcat Fed Com 604H
Wellbore: OH
Design: Plan #4



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



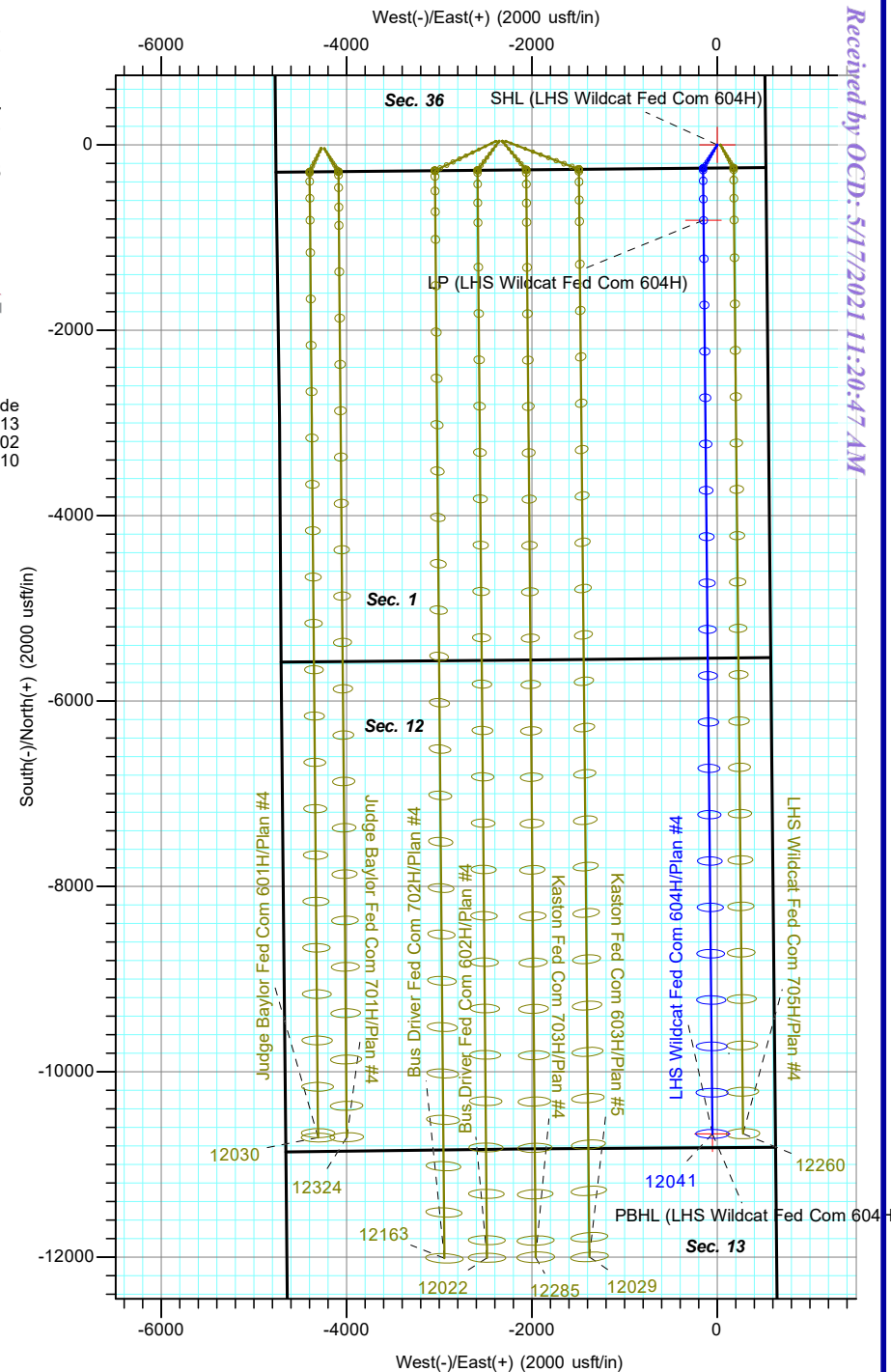
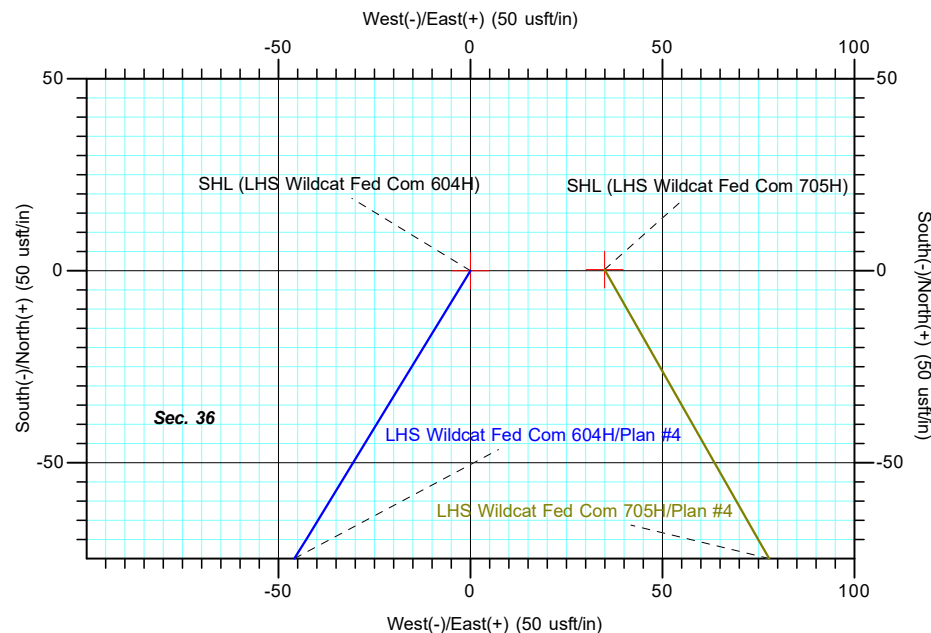
PROJECT DETAILS: Lea County, NM (NAD83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LP (LHS Wildcat Fed Com 604H)	11859.86	-813.86	-148.07	393612.24	856775.21	32.078027	-103.314913
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	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.50
2966.67	4.00	211.42	2966.46	-7.94	-4.85	1.50	211.42	7.96	Start 3956.72 hold at 2966.67 MD
6923.40	4.00	211.42	6913.54	-243.49	-148.73	0.00	0.00	244.20	Start Drop -1.50
7190.07	0.00	0.00	7180.00	-251.43	-153.58	1.50	180.00	252.17	Start 4107.00 hold at 7190.07 MD
11297.07	0.00	0.00	11287.00	-251.43	-153.58	0.00	0.00	252.17	Start DLS 10.00 TFO 179.44
12186.57	88.95	179.44	11859.86	-813.86	-148.07	10.00	179.44	814.56	Start 9857.42 hold at 12186.57 MD
22043.99	88.95	179.44	12040.55	-10669.15	-51.52	0.00	0.00	10669.27	TD at 22043.99



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

Plan: Plan #4 (LHS Wildcat Fed Com 604H/OH)
LHS Wildcat Fed Com
Created By: Dustin Ault Date: 10:45, April 21 2021
Date: _____
Approved: _____ Date: _____



Franklin Mountain Energy

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

OH

Plan: Plan #4

Standard Planning Report

21 April, 2021





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 #4		

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 #4			
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	4/21/2021		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	22,043.94 Plan #4 (OH)	OWSG (Rev2) MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,966.67	4.00	211.42	2,966.46	-7.94	-4.85	1.50	1.50	0.00	211.42	
6,923.40	4.00	211.42	6,913.54	-243.49	-148.73	0.00	0.00	0.00	0.00	
7,190.07	0.00	0.00	7,180.00	-251.43	-153.58	1.50	-1.50	0.00	180.00	
11,297.07	0.00	0.00	11,287.00	-251.43	-153.58	0.00	0.00	0.00	0.00	
12,186.57	88.95	179.44	11,859.86	-813.86	-148.07	10.00	10.00	20.17	179.44	
22,043.99	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 #4		

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
Start Build 1.50									
2,800.00	1.50	211.42	2,799.99	-1.12	-0.68	1.12	1.50	1.50	0.00
2,900.00	3.00	211.42	2,899.91	-4.47	-2.73	4.48	1.50	1.50	0.00
2,966.67	4.00	211.42	2,966.46	-7.94	-4.85	7.96	1.50	1.50	0.00
Start 3956.72 hold at 2966.67 MD									
3,000.00	4.00	211.42	2,999.70	-9.92	-6.06	9.95	0.00	0.00	0.00
3,100.00	4.00	211.42	3,099.46	-15.88	-9.70	15.92	0.00	0.00	0.00
3,200.00	4.00	211.42	3,199.22	-21.83	-13.33	21.90	0.00	0.00	0.00
3,300.00	4.00	211.42	3,298.97	-27.78	-16.97	27.87	0.00	0.00	0.00
3,400.00	4.00	211.42	3,398.73	-33.74	-20.61	33.84	0.00	0.00	0.00
3,500.00	4.00	211.42	3,498.48	-39.69	-24.24	39.81	0.00	0.00	0.00
3,600.00	4.00	211.42	3,598.24	-45.64	-27.88	45.78	0.00	0.00	0.00
3,700.00	4.00	211.42	3,698.00	-51.60	-31.52	51.75	0.00	0.00	0.00
3,800.00	4.00	211.42	3,797.75	-57.55	-35.15	57.72	0.00	0.00	0.00
3,900.00	4.00	211.42	3,897.51	-63.50	-38.79	63.69	0.00	0.00	0.00
4,000.00	4.00	211.42	3,997.27	-69.46	-42.43	69.66	0.00	0.00	0.00
4,100.00	4.00	211.42	4,097.02	-75.41	-46.06	75.63	0.00	0.00	0.00
4,200.00	4.00	211.42	4,196.78	-81.36	-49.70	81.60	0.00	0.00	0.00
4,300.00	4.00	211.42	4,296.54	-87.32	-53.33	87.57	0.00	0.00	0.00
4,400.00	4.00	211.42	4,396.29	-93.27	-56.97	93.54	0.00	0.00	0.00
4,500.00	4.00	211.42	4,496.05	-99.22	-60.61	99.51	0.00	0.00	0.00
4,600.00	4.00	211.42	4,595.80	-105.17	-64.24	105.48	0.00	0.00	0.00
4,700.00	4.00	211.42	4,695.56	-111.13	-67.88	111.45	0.00	0.00	0.00
4,800.00	4.00	211.42	4,795.32	-117.08	-71.52	117.42	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 #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	4.00	211.42	4,895.07	-123.03	-75.15	123.40	0.00	0.00	0.00
5,000.00	4.00	211.42	4,994.83	-128.99	-78.79	129.37	0.00	0.00	0.00
5,100.00	4.00	211.42	5,094.59	-134.94	-82.42	135.34	0.00	0.00	0.00
5,200.00	4.00	211.42	5,194.34	-140.89	-86.06	141.31	0.00	0.00	0.00
5,300.00	4.00	211.42	5,294.10	-146.85	-89.70	147.28	0.00	0.00	0.00
5,400.00	4.00	211.42	5,393.86	-152.80	-93.33	153.25	0.00	0.00	0.00
5,500.00	4.00	211.42	5,493.61	-158.75	-96.97	159.22	0.00	0.00	0.00
5,600.00	4.00	211.42	5,593.37	-164.71	-100.61	165.19	0.00	0.00	0.00
5,700.00	4.00	211.42	5,693.12	-170.66	-104.24	171.16	0.00	0.00	0.00
5,800.00	4.00	211.42	5,792.88	-176.61	-107.88	177.13	0.00	0.00	0.00
5,900.00	4.00	211.42	5,892.64	-182.57	-111.52	183.10	0.00	0.00	0.00
6,000.00	4.00	211.42	5,992.39	-188.52	-115.15	189.07	0.00	0.00	0.00
6,100.00	4.00	211.42	6,092.15	-194.47	-118.79	195.04	0.00	0.00	0.00
6,200.00	4.00	211.42	6,191.91	-200.42	-122.42	201.01	0.00	0.00	0.00
6,300.00	4.00	211.42	6,291.66	-206.38	-126.06	206.98	0.00	0.00	0.00
6,400.00	4.00	211.42	6,391.42	-212.33	-129.70	212.95	0.00	0.00	0.00
6,500.00	4.00	211.42	6,491.18	-218.28	-133.33	218.93	0.00	0.00	0.00
6,600.00	4.00	211.42	6,590.93	-224.24	-136.97	224.90	0.00	0.00	0.00
6,700.00	4.00	211.42	6,690.69	-230.19	-140.61	230.87	0.00	0.00	0.00
6,800.00	4.00	211.42	6,790.45	-236.14	-144.24	236.84	0.00	0.00	0.00
6,900.00	4.00	211.42	6,890.20	-242.10	-147.88	242.81	0.00	0.00	0.00
6,923.40	4.00	211.42	6,913.54	-243.49	-148.73	244.20	0.00	0.00	0.00
Start Drop -1.50									
7,000.00	2.85	211.42	6,990.01	-247.40	-151.12	248.12	1.50	-1.50	0.00
7,100.00	1.35	211.42	7,089.94	-250.52	-153.03	251.26	1.50	-1.50	0.00
7,190.07	0.00	0.00	7,180.00	-251.43	-153.58	252.17	1.50	-1.50	0.00
Start 4107.00 hold at 7190.07 MD									
7,200.00	0.00	0.00	7,189.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,300.00	0.00	0.00	7,289.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,400.00	0.00	0.00	7,389.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,500.00	0.00	0.00	7,489.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,600.00	0.00	0.00	7,589.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,700.00	0.00	0.00	7,689.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,800.00	0.00	0.00	7,789.93	-251.43	-153.58	252.17	0.00	0.00	0.00
7,900.00	0.00	0.00	7,889.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,000.00	0.00	0.00	7,989.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,100.00	0.00	0.00	8,089.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,200.00	0.00	0.00	8,189.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,300.00	0.00	0.00	8,289.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,400.00	0.00	0.00	8,389.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,500.00	0.00	0.00	8,489.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,600.00	0.00	0.00	8,589.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,700.00	0.00	0.00	8,689.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,800.00	0.00	0.00	8,789.93	-251.43	-153.58	252.17	0.00	0.00	0.00
8,900.00	0.00	0.00	8,889.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,000.00	0.00	0.00	8,989.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,100.00	0.00	0.00	9,089.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,200.00	0.00	0.00	9,189.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,300.00	0.00	0.00	9,289.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,400.00	0.00	0.00	9,389.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,500.00	0.00	0.00	9,489.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,600.00	0.00	0.00	9,589.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,700.00	0.00	0.00	9,689.93	-251.43	-153.58	252.17	0.00	0.00	0.00
9,800.00	0.00	0.00	9,789.93	-251.43	-153.58	252.17	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 #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,900.00	0.00	0.00	9,889.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,000.00	0.00	0.00	9,989.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,100.00	0.00	0.00	10,089.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,200.00	0.00	0.00	10,189.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,300.00	0.00	0.00	10,289.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,400.00	0.00	0.00	10,389.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,500.00	0.00	0.00	10,489.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,600.00	0.00	0.00	10,589.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,700.00	0.00	0.00	10,689.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,800.00	0.00	0.00	10,789.93	-251.43	-153.58	252.17	0.00	0.00	0.00
10,900.00	0.00	0.00	10,889.93	-251.43	-153.58	252.17	0.00	0.00	0.00
11,000.00	0.00	0.00	10,989.93	-251.43	-153.58	252.17	0.00	0.00	0.00
11,100.00	0.00	0.00	11,089.93	-251.43	-153.58	252.17	0.00	0.00	0.00
11,200.00	0.00	0.00	11,189.93	-251.43	-153.58	252.17	0.00	0.00	0.00
11,297.07	0.00	0.00	11,287.00	-251.43	-153.58	252.17	0.00	0.00	0.00
Start DLS 10.00 TFO 179.44									
11,300.00	0.29	179.44	11,289.93	-251.44	-153.58	252.18	10.00	10.00	0.00
11,350.00	5.29	179.44	11,339.85	-253.87	-153.56	254.61	10.00	10.00	0.00
11,400.00	10.29	179.44	11,389.38	-260.65	-153.49	261.39	10.00	10.00	0.00
11,450.00	15.29	179.44	11,438.12	-271.72	-153.38	272.45	10.00	10.00	0.00
11,500.00	20.29	179.44	11,485.71	-286.99	-153.23	287.73	10.00	10.00	0.00
11,550.00	25.29	179.44	11,531.79	-306.35	-153.04	307.09	10.00	10.00	0.00
11,600.00	30.29	179.44	11,576.01	-329.66	-152.81	330.39	10.00	10.00	0.00
11,650.00	35.29	179.44	11,618.03	-356.73	-152.55	357.46	10.00	10.00	0.00
11,700.00	40.29	179.44	11,657.53	-387.36	-152.25	388.09	10.00	10.00	0.00
11,750.00	45.29	179.44	11,694.21	-421.31	-151.92	422.04	10.00	10.00	0.00
11,800.00	50.29	179.44	11,727.79	-458.34	-151.55	459.06	10.00	10.00	0.00
11,850.00	55.29	179.44	11,758.01	-498.14	-151.16	498.87	10.00	10.00	0.00
11,900.00	60.29	179.44	11,784.65	-540.43	-150.75	541.16	10.00	10.00	0.00
11,950.00	65.29	179.44	11,807.51	-584.89	-150.31	585.61	10.00	10.00	0.00
12,000.00	70.29	179.44	11,826.40	-631.16	-149.86	631.88	10.00	10.00	0.00
12,050.00	75.29	179.44	11,841.19	-678.90	-149.39	679.62	10.00	10.00	0.00
12,100.00	80.29	179.44	11,851.75	-727.76	-148.91	728.47	10.00	10.00	0.00
12,150.00	85.29	179.44	11,858.03	-777.34	-148.43	778.05	10.00	10.00	0.00
12,186.57	88.95	179.44	11,859.86	-813.86	-148.07	814.57	10.00	10.00	0.00
Start 9857.42 hold at 12186.57 MD - LP (LHS Wildcat Fed Com 604H)									
12,200.00	88.95	179.44	11,860.11	-827.29	-147.94	827.99	0.00	0.00	0.00
12,300.00	88.95	179.44	11,861.94	-927.26	-146.96	927.96	0.00	0.00	0.00
12,400.00	88.95	179.44	11,863.77	-1,027.24	-145.98	1,027.94	0.00	0.00	0.00
12,500.00	88.95	179.44	11,865.61	-1,127.22	-145.00	1,127.91	0.00	0.00	0.00
12,600.00	88.95	179.44	11,867.44	-1,227.20	-144.02	1,227.88	0.00	0.00	0.00
12,700.00	88.95	179.44	11,869.27	-1,327.18	-143.04	1,327.85	0.00	0.00	0.00
12,800.00	88.95	179.44	11,871.11	-1,427.16	-142.06	1,427.83	0.00	0.00	0.00
12,900.00	88.95	179.44	11,872.94	-1,527.14	-141.08	1,527.80	0.00	0.00	0.00
13,000.00	88.95	179.44	11,874.77	-1,627.11	-140.10	1,627.77	0.00	0.00	0.00
13,100.00	88.95	179.44	11,876.61	-1,727.09	-139.12	1,727.74	0.00	0.00	0.00
13,200.00	88.95	179.44	11,878.44	-1,827.07	-138.14	1,827.72	0.00	0.00	0.00
13,300.00	88.95	179.44	11,880.27	-1,927.05	-137.16	1,927.69	0.00	0.00	0.00
13,400.00	88.95	179.44	11,882.10	-2,027.03	-136.18	2,027.66	0.00	0.00	0.00
13,500.00	88.95	179.44	11,883.94	-2,127.01	-135.21	2,127.63	0.00	0.00	0.00
13,600.00	88.95	179.44	11,885.77	-2,226.98	-134.23	2,227.61	0.00	0.00	0.00
13,700.00	88.95	179.44	11,887.60	-2,326.96	-133.25	2,327.58	0.00	0.00	0.00
13,800.00	88.95	179.44	11,889.44	-2,426.94	-132.27	2,427.55	0.00	0.00	0.00
13,900.00	88.95	179.44	11,891.27	-2,526.92	-131.29	2,527.52	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 #4		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,000.00	88.95	179.44	11,893.10	-2,626.90	-130.31	2,627.50	0.00	0.00	0.00	
14,100.00	88.95	179.44	11,894.94	-2,726.88	-129.33	2,727.47	0.00	0.00	0.00	
14,200.00	88.95	179.44	11,896.77	-2,826.85	-128.35	2,827.44	0.00	0.00	0.00	
14,300.00	88.95	179.44	11,898.60	-2,926.83	-127.37	2,927.41	0.00	0.00	0.00	
14,400.00	88.95	179.44	11,900.43	-3,026.81	-126.39	3,027.39	0.00	0.00	0.00	
14,500.00	88.95	179.44	11,902.27	-3,126.79	-125.41	3,127.36	0.00	0.00	0.00	
14,600.00	88.95	179.44	11,904.10	-3,226.77	-124.43	3,227.33	0.00	0.00	0.00	
14,700.00	88.95	179.44	11,905.93	-3,326.75	-123.45	3,327.30	0.00	0.00	0.00	
14,800.00	88.95	179.44	11,907.77	-3,426.72	-122.47	3,427.28	0.00	0.00	0.00	
14,900.00	88.95	179.44	11,909.60	-3,526.70	-121.49	3,527.25	0.00	0.00	0.00	
15,000.00	88.95	179.44	11,911.43	-3,626.68	-120.51	3,627.22	0.00	0.00	0.00	
15,100.00	88.95	179.44	11,913.27	-3,726.66	-119.53	3,727.19	0.00	0.00	0.00	
15,200.00	88.95	179.44	11,915.10	-3,826.64	-118.55	3,827.17	0.00	0.00	0.00	
15,300.00	88.95	179.44	11,916.93	-3,926.62	-117.58	3,927.14	0.00	0.00	0.00	
15,400.00	88.95	179.44	11,918.76	-4,026.60	-116.60	4,027.11	0.00	0.00	0.00	
15,500.00	88.95	179.44	11,920.60	-4,126.57	-115.62	4,127.08	0.00	0.00	0.00	
15,600.00	88.95	179.44	11,922.43	-4,226.55	-114.64	4,227.06	0.00	0.00	0.00	
15,700.00	88.95	179.44	11,924.26	-4,326.53	-113.66	4,327.03	0.00	0.00	0.00	
15,800.00	88.95	179.44	11,926.10	-4,426.51	-112.68	4,427.00	0.00	0.00	0.00	
15,900.00	88.95	179.44	11,927.93	-4,526.49	-111.70	4,526.97	0.00	0.00	0.00	
16,000.00	88.95	179.44	11,929.76	-4,626.47	-110.72	4,626.95	0.00	0.00	0.00	
16,100.00	88.95	179.44	11,931.60	-4,726.44	-109.74	4,726.92	0.00	0.00	0.00	
16,200.00	88.95	179.44	11,933.43	-4,826.42	-108.76	4,826.89	0.00	0.00	0.00	
16,300.00	88.95	179.44	11,935.26	-4,926.40	-107.78	4,926.86	0.00	0.00	0.00	
16,400.00	88.95	179.44	11,937.09	-5,026.38	-106.80	5,026.84	0.00	0.00	0.00	
16,500.00	88.95	179.44	11,938.93	-5,126.36	-105.82	5,126.81	0.00	0.00	0.00	
16,600.00	88.95	179.44	11,940.76	-5,226.34	-104.84	5,226.78	0.00	0.00	0.00	
16,700.00	88.95	179.44	11,942.59	-5,326.31	-103.86	5,326.75	0.00	0.00	0.00	
16,800.00	88.95	179.44	11,944.43	-5,426.29	-102.88	5,426.73	0.00	0.00	0.00	
16,900.00	88.95	179.44	11,946.26	-5,526.27	-101.90	5,526.70	0.00	0.00	0.00	
17,000.00	88.95	179.44	11,948.09	-5,626.25	-100.92	5,626.67	0.00	0.00	0.00	
17,100.00	88.95	179.44	11,949.93	-5,726.23	-99.94	5,726.64	0.00	0.00	0.00	
17,200.00	88.95	179.44	11,951.76	-5,826.21	-98.97	5,826.62	0.00	0.00	0.00	
17,300.00	88.95	179.44	11,953.59	-5,926.18	-97.99	5,926.59	0.00	0.00	0.00	
17,400.00	88.95	179.44	11,955.43	-6,026.16	-97.01	6,026.56	0.00	0.00	0.00	
17,500.00	88.95	179.44	11,957.26	-6,126.14	-96.03	6,126.53	0.00	0.00	0.00	
17,600.00	88.95	179.44	11,959.09	-6,226.12	-95.05	6,226.51	0.00	0.00	0.00	
17,700.00	88.95	179.44	11,960.92	-6,326.10	-94.07	6,326.48	0.00	0.00	0.00	
17,800.00	88.95	179.44	11,962.76	-6,426.08	-93.09	6,426.45	0.00	0.00	0.00	
17,900.00	88.95	179.44	11,964.59	-6,526.06	-92.11	6,526.42	0.00	0.00	0.00	
18,000.00	88.95	179.44	11,966.42	-6,626.03	-91.13	6,626.40	0.00	0.00	0.00	
18,100.00	88.95	179.44	11,968.26	-6,726.01	-90.15	6,726.37	0.00	0.00	0.00	
18,200.00	88.95	179.44	11,970.09	-6,825.99	-89.17	6,826.34	0.00	0.00	0.00	
18,300.00	88.95	179.44	11,971.92	-6,925.97	-88.19	6,926.31	0.00	0.00	0.00	
18,400.00	88.95	179.44	11,973.76	-7,025.95	-87.21	7,026.29	0.00	0.00	0.00	
18,500.00	88.95	179.44	11,975.59	-7,125.93	-86.23	7,126.26	0.00	0.00	0.00	
18,600.00	88.95	179.44	11,977.42	-7,225.90	-85.25	7,226.23	0.00	0.00	0.00	
18,700.00	88.95	179.44	11,979.25	-7,325.88	-84.27	7,326.20	0.00	0.00	0.00	
18,800.00	88.95	179.44	11,981.09	-7,425.86	-83.29	7,426.18	0.00	0.00	0.00	
18,900.00	88.95	179.44	11,982.92	-7,525.84	-82.31	7,526.15	0.00	0.00	0.00	
19,000.00	88.95	179.44	11,984.75	-7,625.82	-81.33	7,626.12	0.00	0.00	0.00	
19,100.00	88.95	179.44	11,986.59	-7,725.80	-80.36	7,726.09	0.00	0.00	0.00	
19,200.00	88.95	179.44	11,988.42	-7,825.77	-79.38	7,826.07	0.00	0.00	0.00	
19,300.00	88.95	179.44	11,990.25	-7,925.75	-78.40	7,926.04	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 #4		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
19,400.00	88.95	179.44	11,992.09	-8,025.73	-77.42	8,026.01	0.00	0.00	0.00	
19,500.00	88.95	179.44	11,993.92	-8,125.71	-76.44	8,125.98	0.00	0.00	0.00	
19,600.00	88.95	179.44	11,995.75	-8,225.69	-75.46	8,225.96	0.00	0.00	0.00	
19,700.00	88.95	179.44	11,997.58	-8,325.67	-74.48	8,325.93	0.00	0.00	0.00	
19,800.00	88.95	179.44	11,999.42	-8,425.65	-73.50	8,425.90	0.00	0.00	0.00	
19,900.00	88.95	179.44	12,001.25	-8,525.62	-72.52	8,525.87	0.00	0.00	0.00	
20,000.00	88.95	179.44	12,003.08	-8,625.60	-71.54	8,625.85	0.00	0.00	0.00	
20,100.00	88.95	179.44	12,004.92	-8,725.58	-70.56	8,725.82	0.00	0.00	0.00	
20,200.00	88.95	179.44	12,006.75	-8,825.56	-69.58	8,825.79	0.00	0.00	0.00	
20,300.00	88.95	179.44	12,008.58	-8,925.54	-68.60	8,925.76	0.00	0.00	0.00	
20,400.00	88.95	179.44	12,010.42	-9,025.52	-67.62	9,025.74	0.00	0.00	0.00	
20,500.00	88.95	179.44	12,012.25	-9,125.49	-66.64	9,125.71	0.00	0.00	0.00	
20,600.00	88.95	179.44	12,014.08	-9,225.47	-65.66	9,225.68	0.00	0.00	0.00	
20,700.00	88.95	179.44	12,015.91	-9,325.45	-64.68	9,325.65	0.00	0.00	0.00	
20,800.00	88.95	179.44	12,017.75	-9,425.43	-63.70	9,425.63	0.00	0.00	0.00	
20,900.00	88.95	179.44	12,019.58	-9,525.41	-62.72	9,525.60	0.00	0.00	0.00	
21,000.00	88.95	179.44	12,021.41	-9,625.39	-61.75	9,625.57	0.00	0.00	0.00	
21,100.00	88.95	179.44	12,023.25	-9,725.36	-60.77	9,725.54	0.00	0.00	0.00	
21,200.00	88.95	179.44	12,025.08	-9,825.34	-59.79	9,825.52	0.00	0.00	0.00	
21,300.00	88.95	179.44	12,026.91	-9,925.32	-58.81	9,925.49	0.00	0.00	0.00	
21,400.00	88.95	179.44	12,028.75	-10,025.30	-57.83	10,025.46	0.00	0.00	0.00	
21,500.00	88.95	179.44	12,030.58	-10,125.28	-56.85	10,125.43	0.00	0.00	0.00	
21,600.00	88.95	179.44	12,032.41	-10,225.26	-55.87	10,225.41	0.00	0.00	0.00	
21,700.00	88.95	179.44	12,034.24	-10,325.23	-54.89	10,325.38	0.00	0.00	0.00	
21,800.00	88.95	179.44	12,036.08	-10,425.21	-53.91	10,425.35	0.00	0.00	0.00	
21,900.00	88.95	179.44	12,037.91	-10,525.19	-52.93	10,525.32	0.00	0.00	0.00	
22,000.00	88.95	179.44	12,039.74	-10,625.17	-51.95	10,625.30	0.00	0.00	0.00	
22,043.99	88.95	179.44	12,040.55	-10,669.15	-51.52	10,669.27	0.00	0.00	0.00	
TD at 22043.99 - PBHL (LHS Wildcat Fed Com 604H)										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL (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 hits target center - Point	0.00	0.00	11,859.86	-813.86	-148.07	393,612.24	856,775.21	32.078027	-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	



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 #4		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,700.00	2,700.00	0.00	0.00	Start Build 1.50
2,966.67	2,966.46	-7.94	-4.85	Start 3956.72 hold at 2966.67 MD
6,923.40	6,913.54	-243.49	-148.73	Start Drop -1.50
7,190.07	7,180.00	-251.43	-153.58	Start 4107.00 hold at 7190.07 MD
11,297.07	11,287.00	-251.43	-153.58	Start DLS 10.00 TFO 179.44
12,186.57	11,859.86	-813.86	-148.07	Start 9857.42 hold at 12186.57 MD
22,043.99	12,040.55	-10,669.15	-51.52	TD at 22043.99



Franklin Mountain Energy

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

OH
Plan #4

Anticollision Report

21 April, 2021





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 #4	Offset TVD Reference:	Offset Datum

Reference	Plan #4		
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	4/21/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	22,043.94	Plan #4 (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/Kaston Fed Com						
Bus Driver Fed Com 602H - OH - Plan #4	3,477.97	3,430.89	2,337.14	2,320.13	137.401	CC
Bus Driver Fed Com 602H - OH - Plan #4	22,043.99	22,074.46	2,445.12	2,188.69	9.535	ES, SF
Bus Driver Fed Com 702H - OH - Plan #4	2,607.11	2,642.11	2,389.21	2,376.22	183.959	CC
Bus Driver Fed Com 702H - OH - Plan #4	2,700.00	2,718.15	2,389.37	2,375.96	178.165	ES
Bus Driver Fed Com 702H - OH - Plan #4	22,043.99	22,275.63	2,906.63	2,650.57	11.351	SF
Kaston Fed Com 603H - OH - Plan #5	11,278.00	11,375.76	1,339.46	1,283.11	23.770	CC
Kaston Fed Com 603H - OH - Plan #5	22,043.99	22,098.19	1,340.32	1,084.15	5.232	ES, SF
Kaston Fed Com 703H - OH - Plan #4	11,297.07	11,342.37	1,907.92	1,851.82	34.005	CC
Kaston Fed Com 703H - OH - Plan #4	22,043.99	22,362.47	1,931.81	1,676.78	7.575	ES, SF
Judge Baylor Fed Com						
Judge Baylor Fed Com 601H - OH - Plan #4	4,151.42	4,034.50	4,235.31	4,215.13	209.941	CC
Judge Baylor Fed Com 601H - OH - Plan #4	22,043.99	22,145.43	4,255.93	4,000.15	16.639	ES, SF
Judge Baylor Fed Com 701H - OH - Plan #4	11,297.07	11,335.16	3,934.37	3,878.38	70.269	CC
Judge Baylor Fed Com 701H - OH - Plan #4	22,043.99	22,433.22	3,956.12	3,700.73	15.490	ES, SF
LHS Wildcat Fed Com						
LHS Wildcat Fed Com 705H - OH - Plan #4	2,616.53	2,616.93	35.00	22.04	2.701	CC
LHS Wildcat Fed Com 705H - OH - Plan #4	2,700.00	2,700.40	35.00	21.62	2.616	ES
LHS Wildcat Fed Com 705H - OH - Plan #4	22,043.99	22,247.46	396.34	192.63	1.946	SF

Offset Design	Bus Driver/Kaston Fed Com - Bus Driver Fed Com 602H - OH - Plan #4												Offset Site Error:	0.00 usft
Survey Program:	0-OWSG (Rev2) MWD												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis			Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	35.00	35.00	0.00	0.04	-89.03	39.98	-2,353.89	2,354.23					
100.00	100.00	135.00	135.00	0.14	0.25	-89.03	39.98	-2,353.89	2,354.23	2,353.94	0.29	8,170.884		
200.00	200.00	235.00	235.00	0.50	0.61	-89.03	39.98	-2,353.89	2,354.23	2,353.44	0.79	2,986.412		
300.00	300.00	335.00	335.00	0.86	0.97	-89.03	39.98	-2,353.89	2,354.23	2,352.94	1.29	1,819.651		
400.00	400.00	435.00	435.00	1.22	1.33	-89.03	39.98	-2,353.89	2,354.23	2,352.43	1.80	1,307.843		
500.00	500.00	535.00	535.00	1.58	1.68	-89.03	39.98	-2,353.89	2,354.23	2,351.92	2.31	1,020.616		
600.00	600.00	635.00	635.00	1.93	2.04	-89.03	39.98	-2,353.89	2,354.23	2,351.42	2.81	836.792		
700.00	700.00	735.00	735.00	2.29	2.40	-89.03	39.98	-2,353.89	2,354.23	2,350.91	3.32	709.065		
800.00	800.00	835.00	835.00	2.65	2.76	-89.03	39.98	-2,353.89	2,354.23	2,350.40	3.83	615.159		

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 #4	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,100.00	12,004.92	20,130.48	12,006.08	149.85	150.67	89.21	-8,747.49	-2,513.24	2,443.01	2,230.56	212.45	11.499		
20,200.00	12,006.75	20,230.48	12,007.65	151.44	152.26	89.20	-8,847.47	-2,512.36	2,443.12	2,228.42	214.70	11.379		
20,300.00	12,008.58	20,330.47	12,009.22	153.03	153.85	89.20	-8,947.46	-2,511.49	2,443.23	2,226.28	216.95	11.262		
20,400.00	12,010.42	20,430.47	12,010.79	154.62	155.45	89.19	-9,047.44	-2,510.61	2,443.33	2,224.13	219.20	11.147		
20,500.00	12,012.25	20,530.47	12,012.36	156.21	157.04	89.18	-9,147.42	-2,509.74	2,443.44	2,221.99	221.45	11.034		
20,600.00	12,014.08	20,630.47	12,013.93	157.81	158.63	89.18	-9,247.41	-2,508.86	2,443.55	2,219.84	223.71	10.923		
20,700.00	12,015.91	20,730.47	12,015.50	159.40	160.23	89.17	-9,347.39	-2,507.99	2,443.66	2,217.69	225.97	10.814		
20,800.00	12,017.75	20,830.47	12,017.07	161.00	161.82	89.16	-9,447.37	-2,507.11	2,443.77	2,215.54	228.22	10.708		
20,900.00	12,019.58	20,930.47	12,018.64	162.60	163.42	89.16	-9,547.36	-2,506.24	2,443.87	2,213.39	230.48	10.603		
21,000.00	12,021.41	21,030.47	12,020.21	164.20	165.02	89.15	-9,647.34	-2,505.36	2,443.98	2,211.24	232.74	10.501		
21,100.00	12,023.25	21,130.47	12,021.78	165.80	166.62	89.15	-9,747.32	-2,504.49	2,444.09	2,209.09	235.01	10.400		
21,200.00	12,025.08	21,230.47	12,023.35	167.40	168.22	89.14	-9,847.31	-2,503.61	2,444.20	2,206.93	237.27	10.301		
21,300.00	12,026.91	21,330.47	12,024.92	169.00	169.82	89.13	-9,947.29	-2,502.74	2,444.31	2,204.77	239.54	10.204		
21,400.00	12,028.75	21,430.47	12,026.49	170.60	171.43	89.13	-10,047.27	-2,501.86	2,444.42	2,202.61	241.80	10.109		
21,500.00	12,030.58	21,530.47	12,028.06	172.21	173.03	89.12	-10,147.26	-2,500.99	2,444.53	2,200.46	244.07	10.016		
21,600.00	12,032.41	21,630.47	12,029.63	173.81	174.63	89.12	-10,247.24	-2,500.11	2,444.63	2,198.29	246.34	9.924		
21,700.00	12,034.24	21,730.47	12,031.20	175.42	176.24	89.11	-10,347.22	-2,499.24	2,444.74	2,196.13	248.61	9.834		
21,800.00	12,036.08	21,830.47	12,032.77	177.02	177.85	89.10	-10,447.21	-2,498.36	2,444.85	2,193.97	250.88	9.745		
21,900.00	12,037.91	21,930.47	12,034.34	178.63	179.45	89.10	-10,547.19	-2,497.49	2,444.96	2,191.81	253.16	9.658		
22,000.00	12,039.74	22,030.47	12,035.91	180.24	181.06	89.09	-10,647.17	-2,496.61	2,445.07	2,189.64	255.43	9.572		
22,043.99	12,040.55	22,074.46	12,036.60	180.95	181.77	89.09	-10,691.16	-2,496.23	2,445.12	2,188.69	256.43	9.535 ES, SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	Offset TVD Reference:	Offset Datum

Offset Design													Bus Driver/Kaston Fed Com - Bus Driver Fed Com 702H - OH - Plan #4		Offset Site Error:	0.00 usft
Survey Program: 0-OWSG (Rev2) MWD															Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning		
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore	Centre	Between	Between	Minimum	Separation				
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor				
19,300.00	11,990.25	19,531.68	12,144.45	137.19	138.19	92.35	-7,949.59	-2,980.18	2,904.33	2,710.11	194.22	14.954				
19,400.00	11,992.09	19,631.67	12,145.77	138.76	139.75	92.34	-8,049.58	-2,979.31	2,904.41	2,707.96	196.45	14.784				
19,500.00	11,993.92	19,731.67	12,147.08	140.34	141.33	92.33	-8,149.56	-2,978.43	2,904.49	2,705.81	198.68	14.619				
19,600.00	11,995.75	19,831.67	12,148.40	141.92	142.90	92.32	-8,249.55	-2,977.55	2,904.58	2,703.66	200.91	14.457				
19,700.00	11,997.58	19,931.67	12,149.72	143.50	144.47	92.31	-8,349.54	-2,976.68	2,904.66	2,701.51	203.15	14.298				
19,800.00	11,999.42	20,031.67	12,151.03	145.09	146.05	92.30	-8,449.52	-2,975.80	2,904.74	2,699.36	205.39	14.143				
19,900.00	12,001.25	20,131.67	12,152.35	146.67	147.63	92.29	-8,549.51	-2,974.93	2,904.83	2,697.20	207.63	13.991				
20,000.00	12,003.08	20,231.67	12,153.67	148.26	149.21	92.28	-8,649.49	-2,974.05	2,904.91	2,695.04	209.87	13.842				
20,100.00	12,004.92	20,331.67	12,154.98	149.85	150.79	92.27	-8,749.48	-2,973.18	2,904.99	2,692.88	212.11	13.696				
20,200.00	12,006.75	20,431.66	12,156.30	151.44	152.38	92.26	-8,849.47	-2,972.30	2,905.08	2,690.72	214.36	13.552				
20,300.00	12,008.58	20,531.66	12,157.61	153.03	153.96	92.25	-8,949.45	-2,971.43	2,905.16	2,688.56	216.61	13.412				
20,400.00	12,010.42	20,631.66	12,158.93	154.62	155.55	92.24	-9,049.44	-2,970.55	2,905.24	2,686.39	218.86	13.275				
20,500.00	12,012.25	20,731.66	12,160.25	156.21	157.13	92.23	-9,149.43	-2,969.67	2,905.33	2,684.22	221.11	13.140				
20,600.00	12,014.08	20,831.66	12,161.56	157.81	158.72	92.22	-9,249.41	-2,968.80	2,905.41	2,682.05	223.36	13.008				
20,700.00	12,015.91	20,931.66	12,162.88	159.40	160.31	92.21	-9,349.40	-2,967.92	2,905.50	2,679.88	225.62	12.878				
20,800.00	12,017.75	21,031.66	12,164.20	161.00	161.90	92.20	-9,449.38	-2,967.05	2,905.58	2,677.71	227.87	12.751				
20,900.00	12,019.58	21,131.65	12,165.51	162.60	163.50	92.19	-9,549.37	-2,966.17	2,905.66	2,675.53	230.13	12.626				
21,000.00	12,021.41	21,231.65	12,166.83	164.20	165.09	92.18	-9,649.36	-2,965.30	2,905.75	2,673.36	232.39	12.504				
21,100.00	12,023.25	21,331.65	12,168.14	165.80	166.68	92.17	-9,749.34	-2,964.42	2,905.83	2,671.18	234.65	12.384				
21,200.00	12,025.08	21,431.65	12,169.46	167.40	168.28	92.16	-9,849.33	-2,963.55	2,905.92	2,669.00	236.91	12.266				
21,300.00	12,026.91	21,531.65	12,170.78	169.00	169.88	92.15	-9,949.31	-2,962.67	2,906.00	2,666.82	239.18	12.150				
21,400.00	12,028.75	21,631.65	12,172.09	170.60	171.47	92.14	-10,049.30	-2,961.80	2,906.09	2,664.64	241.44	12.036				
21,500.00	12,030.58	21,731.65	12,173.41	172.21	173.07	92.13	-10,149.29	-2,960.92	2,906.17	2,662.46	243.71	11.925				
21,600.00	12,032.41	21,831.64	12,174.73	173.81	174.67	92.12	-10,249.27	-2,960.04	2,906.26	2,660.28	245.98	11.815				
21,700.00	12,034.24	21,931.64	12,176.04	175.42	176.27	92.11	-10,349.26	-2,959.17	2,906.34	2,658.09	248.25	11.707				
21,800.00	12,036.08	22,031.64	12,177.36	177.02	177.88	92.10	-10,449.25	-2,958.29	2,906.43	2,655.91	250.52	11.602				
21,900.00	12,037.91	22,131.64	12,178.67	178.63	179.48	92.09	-10,549.23	-2,957.42	2,906.51	2,653.72	252.79	11.498				
22,000.00	12,039.74	22,231.64	12,179.99	180.24	181.08	92.08	-10,649.22	-2,956.54	2,906.60	2,651.53	255.07	11.395				
22,043.99	12,040.55	22,275.63	12,180.57	180.95	181.79	92.07	-10,693.20	-2,956.16	2,906.63	2,650.57	256.07	11.351 SF				

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	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	35.00	35.00	0.00	0.04	-88.98	40.64	-2,283.90	2,284.26					
100.00	100.00	135.00	135.00	0.14	0.25	-88.98	40.64	-2,283.90	2,284.26	2,283.97	0.29	7,928.044		
200.00	200.00	235.00	235.00	0.50	0.61	-88.98	40.64	-2,283.90	2,284.26	2,283.47	0.79	2,897.655		
300.00	300.00	335.00	335.00	0.86	0.97	-88.98	40.64	-2,283.90	2,284.26	2,282.97	1.29	1,765.571		
400.00	400.00	435.00	435.00	1.22	1.33	-88.98	40.64	-2,283.90	2,284.26	2,282.46	1.80	1,268.974		
500.00	500.00	535.00	535.00	1.58	1.68	-88.98	40.64	-2,283.90	2,284.26	2,281.95	2.31	990.283		
600.00	600.00	635.00	635.00	1.93	2.04	-88.98	40.64	-2,283.90	2,284.26	2,281.45	2.81	811.923		
700.00	700.00	735.00	735.00	2.29	2.40	-88.98	40.64	-2,283.90	2,284.26	2,280.94	3.32	687.991		
800.00	800.00	835.00	835.00	2.65	2.76	-88.98	40.64	-2,283.90	2,284.26	2,280.43	3.83	596.876		
900.00	900.00	935.00	935.00	3.01	3.12	-88.98	40.64	-2,283.90	2,284.26	2,279.93	4.33	527.070		
1,000.00	1,000.00	1,035.00	1,035.00	3.37	3.48	-88.98	40.64	-2,283.90	2,284.26	2,279.42	4.84	471.879		
1,100.00	1,100.00	1,135.00	1,135.00	3.73	3.84	-88.98	40.64	-2,283.90	2,284.26	2,278.91	5.35	427.151		
1,200.00	1,200.00	1,235.00	1,235.00	4.08	4.19	-88.98	40.64	-2,283.90	2,284.26	2,278.41	5.85	390.167		
1,300.00	1,300.00	1,335.00	1,335.00	4.44	4.55	-88.98	40.64	-2,283.90	2,284.26	2,277.90	6.36	359.076		
1,400.00	1,400.00	1,435.00	1,435.00	4.80	4.91	-88.98	40.64	-2,283.90	2,284.26	2,277.39	6.87	332.575		
1,500.00	1,500.00	1,535.00	1,535.00	5.16	5.27	-88.98	40.64	-2,283.90	2,284.26	2,276.89	7.38	309.716		
1,600.00	1,600.00	1,635.00	1,635.00	5.52	5.63	-88.98	40.64	-2,283.90	2,284.26	2,276.38	7.88	289.798		
1,700.00	1,700.00	1,735.00	1,735.00	5.88	5.99	-88.98	40.64	-2,283.90	2,284.26	2,275.87	8.39	272.286		
1,800.00	1,800.00	1,835.00	1,835.00	6.24	6.34	-88.98	40.64	-2,283.90	2,284.26	2,275.37	8.90	256.770		
1,900.00	1,900.00	1,935.00	1,935.00	6.59	6.70	-88.98	40.64	-2,283.90	2,284.26	2,274.86	9.40	242.927		
2,000.00	2,000.00	2,035.00	2,035.00	6.95	7.06	-88.98	40.64	-2,283.90	2,284.26	2,274.35	9.91	230.500		
2,100.00	2,100.00	2,135.00	2,135.00	7.31	7.42	-88.98	40.64	-2,283.90	2,284.26	2,273.84	10.42	219.283		
2,200.00	2,200.00	2,235.00	2,235.00	7.67	7.78	-88.98	40.64	-2,283.90	2,284.26	2,273.34	10.92	209.107		
2,300.00	2,300.00	2,335.00	2,335.00	8.03	8.14	-88.98	40.64	-2,283.90	2,284.26	2,272.83	11.43	199.833		
2,400.00	2,400.00	2,435.00	2,435.00	8.39	8.50	-88.98	40.64	-2,283.90	2,284.26	2,272.32	11.94	191.347		
2,500.00	2,500.00	2,535.00	2,535.00	8.74	8.85	-88.98	40.64	-2,283.90	2,284.26	2,271.82	12.44	183.553		
2,600.00	2,600.00	2,635.00	2,635.00	9.10	9.21	-88.98	40.64	-2,283.90	2,284.26	2,271.31	12.95	176.368		
2,700.00	2,700.00	2,735.00	2,735.00	9.46	9.57	-88.98	40.12	-2,282.55	2,283.67	2,270.80	13.59	168.059		
2,800.00	2,799.99	2,981.35	2,981.05	9.80	10.39	59.62	36.55	-2,273.28	2,277.60	2,263.34	14.26	159.726		
2,900.00	2,899.91	3,245.89	3,243.92	10.13	11.31	59.75	26.08	-2,246.08	2,264.74	2,249.69	15.05	150.466		
2,966.67	2,966.46	3,362.99	3,359.48	10.35	11.73	59.90	19.29	-2,228.44	2,252.40	2,236.94	15.45	145.756		
3,000.00	2,999.70	3,417.01	3,412.65	10.46	11.93	59.90	15.86	-2,219.54	2,245.66	2,230.02	15.64	143.539		
3,100.00	3,099.46	3,514.92	3,508.98	10.79	12.29	59.90	9.55	-2,203.17	2,225.36	2,209.24	16.11	138.097		
3,200.00	3,199.22	3,612.84	3,605.31	11.12	12.66	59.90	3.25	-2,186.79	2,205.05	2,188.47	16.59	132.933		
3,300.00	3,298.97	3,710.76	3,701.64	11.46	13.03	59.89	-3.06	-2,170.42	2,184.75	2,167.69	17.06	128.030		
3,400.00	3,398.73	3,808.68	3,797.97	11.80	13.41	59.89	-9.36	-2,154.04	2,164.44	2,146.90	17.54	123.370		
3,500.00	3,498.48	3,906.59	3,894.30	12.14	13.80	59.89	-15.67	-2,137.67	2,144.14	2,126.11	18.03	118.940		
3,600.00	3,598.24	4,004.51	3,990.64	12.49	14.18	59.88	-21.97	-2,121.29	2,123.84	2,105.32	18.51	114.724		
3,700.00	3,698.00	4,102.43	4,086.97	12.83	14.58	59.88	-28.28	-2,104.92	2,103.53	2,084.53	19.00	110.709		
3,800.00	3,797.75	4,200.34	4,183.30	13.18	14.97	59.87	-34.59	-2,088.55	2,083.23	2,063.73	19.49	106.882		
3,900.00	3,897.51	4,298.26	4,279.63	13.53	15.37	59.87	-40.89	-2,072.17	2,062.92	2,042.94	19.98	103.232		
4,000.00	3,997.27	4,396.18	4,375.96	13.88	15.77	59.87	-47.20	-2,055.80	2,042.62	2,022.14	20.48	99.748		
4,100.00	4,097.02	4,494.09	4,472.30	14.23	16.17	59.86	-53.50	-2,039.42	2,022.31	2,001.34	20.97	96.420		
4,200.00	4,196.78	4,592.01	4,568.63	14.58	16.58	59.86	-59.81	-2,023.05	2,002.01	1,980.53	21.47	93.238		
4,300.00	4,296.54	4,689.93	4,664.96	14.94	16.99	59.86	-66.11	-2,006.67	1,981.70	1,959.73	21.97	90.193		
4,400.00	4,396.29	4,787.84	4,761.29	15.29	17.40	59.85	-72.42	-1,990.30	1,961.40	1,938.92	22.47	87.279		
4,500.00	4,496.05	4,885.76	4,857.62	15.65	17.81	59.85	-78.72	-1,973.92	1,941.09	1,918.12	22.98	84.486		
4,600.00	4,495.80	4,983.68	4,953.95	16.01	18.23	59.84	-85.03	-1,957.55	1,920.79	1,897.31	23.48	81.808		
4,700.00	4,495.56	5,081.59	5,050.29	16.36	18.64	59.84	-91.33	-1,941.17	1,900.48	1,876.50	23.98	79.238		
4,800.00	4,495.32	5,179.51	5,146.62	16.72	19.06	59.83	-97.64	-1,924.80	1,880.18	1,855.69	24.49	76.771		
4,900.00	4,495.07	5,277.43	5,242.95	17.08	19.48	59.83	-103.95	-1,908.42	1,859.87	1,834.88	25.00	74.401		
5,000.00	4,994.83	5,375.34	5,339.28	17.44	19.90	59.83	-110.25	-1,892.05	1,839.57	1,814.06	25.51	72.122		

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 #4	Offset TVD Reference:	Offset Datum

Offset Design		Bus Driver/Kaston Fed Com - Kaston Fed Com 603H - OH - Plan #5											Offset Site Error:		0.00 usft
Survey Program:		0-OWSG (Rev2) MWD											Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
19,200.00	11,988.42	19,254.20	11,984.17	135.61	136.75	88.32	-7,839.60	-1,419.02	1,340.29	1,148.21	192.09	6.978			
19,300.00	11,990.25	19,354.20	11,986.09	137.19	138.32	88.33	-7,939.58	-1,418.05	1,340.29	1,145.98	194.31	6.898			
19,400.00	11,992.09	19,454.20	11,988.00	138.76	139.89	88.33	-8,039.56	-1,417.07	1,340.29	1,143.75	196.54	6.819			
19,500.00	11,993.92	19,554.20	11,989.92	140.34	141.46	88.33	-8,139.54	-1,416.09	1,340.29	1,141.52	198.77	6.743			
19,600.00	11,995.75	19,654.20	11,991.83	141.92	143.04	88.34	-8,239.51	-1,415.12	1,340.30	1,139.29	201.01	6.668			
19,700.00	11,997.58	19,754.20	11,993.75	143.50	144.61	88.34	-8,339.49	-1,414.14	1,340.30	1,137.05	203.24	6.595			
19,800.00	11,999.42	19,854.20	11,995.66	145.09	146.19	88.34	-8,439.47	-1,413.17	1,340.30	1,134.82	205.48	6.523			
19,900.00	12,001.25	19,954.20	11,997.58	146.67	147.77	88.35	-8,539.44	-1,412.19	1,340.30	1,132.58	207.72	6.452			
20,000.00	12,003.08	20,054.20	11,999.49	148.26	149.35	88.35	-8,639.42	-1,411.21	1,340.30	1,130.34	209.96	6.384			
20,100.00	12,004.92	20,154.20	12,001.41	149.85	150.93	88.35	-8,739.40	-1,410.24	1,340.30	1,128.09	212.21	6.316			
20,200.00	12,006.75	20,254.20	12,003.32	151.44	152.52	88.36	-8,839.37	-1,409.26	1,340.30	1,125.85	214.45	6.250			
20,300.00	12,008.58	20,354.20	12,005.23	153.03	154.10	88.36	-8,939.35	-1,408.28	1,340.30	1,123.60	216.70	6.185			
20,400.00	12,010.42	20,454.20	12,007.15	154.62	155.69	88.36	-9,039.33	-1,407.31	1,340.30	1,121.35	218.95	6.121			
20,500.00	12,012.25	20,554.20	12,009.06	156.21	157.28	88.37	-9,139.30	-1,406.33	1,340.31	1,119.10	221.20	6.059			
20,600.00	12,014.08	20,654.20	12,010.98	157.81	158.87	88.37	-9,239.28	-1,405.36	1,340.31	1,116.85	223.46	5.998			
20,700.00	12,015.91	20,754.20	12,012.89	159.40	160.46	88.37	-9,339.26	-1,404.38	1,340.31	1,114.59	225.71	5.938			
20,800.00	12,017.75	20,854.20	12,014.81	161.00	162.05	88.38	-9,439.23	-1,403.40	1,340.31	1,112.34	227.97	5.879			
20,900.00	12,019.58	20,954.20	12,016.72	162.60	163.64	88.38	-9,539.21	-1,402.43	1,340.31	1,110.08	230.23	5.822			
21,000.00	12,021.41	21,054.20	12,018.64	164.20	165.24	88.38	-9,639.19	-1,401.45	1,340.31	1,107.82	232.49	5.765			
21,100.00	12,023.25	21,154.20	12,020.55	165.80	166.83	88.39	-9,739.17	-1,400.48	1,340.31	1,105.56	234.75	5.709			
21,200.00	12,025.08	21,254.20	12,022.47	167.40	168.43	88.39	-9,839.14	-1,399.50	1,340.31	1,103.30	237.02	5.655			
21,300.00	12,026.91	21,354.20	12,024.38	169.00	170.03	88.40	-9,939.12	-1,398.52	1,340.31	1,101.03	239.28	5.601			
21,400.00	12,028.75	21,454.20	12,026.30	170.60	171.63	88.40	-10,039.10	-1,397.55	1,340.32	1,098.77	241.55	5.549			
21,500.00	12,030.58	21,554.20	12,028.21	172.21	173.23	88.40	-10,139.07	-1,396.57	1,340.32	1,096.50	243.81	5.497			
21,600.00	12,032.41	21,654.20	12,030.13	173.81	174.83	88.41	-10,239.05	-1,395.60	1,340.32	1,094.24	246.08	5.447			
21,700.00	12,034.24	21,754.20	12,032.04	175.42	176.43	88.41	-10,339.03	-1,394.62	1,340.32	1,091.97	248.35	5.397			
21,800.00	12,036.08	21,854.20	12,033.95	177.02	178.03	88.41	-10,439.00	-1,393.64	1,340.32	1,089.70	250.62	5.348			
21,900.00	12,037.91	21,954.20	12,035.87	178.63	179.63	88.42	-10,538.98	-1,392.67	1,340.32	1,087.43	252.90	5.300			
22,000.00	12,039.74	22,054.20	12,037.78	180.24	181.24	88.42	-10,638.96	-1,391.69	1,340.32	1,085.15	255.17	5.253			
22,043.99	12,040.55	22,098.19	12,038.63	180.95	181.94	88.42	-10,682.94	-1,391.26	1,340.32	1,084.15	256.17	5.232 ES, SF			

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	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	11,992.09	19,718.52	12,267.62	138.76	139.79	97.16	-8,039.40	-1,993.15	1,930.82	1,735.15	195.67	9.868		
19,500.00	11,993.92	19,818.52	12,268.93	140.34	141.37	97.14	-8,139.39	-1,992.27	1,930.86	1,732.97	197.89	9.757		
19,600.00	11,995.75	19,918.52	12,270.25	141.92	142.94	97.13	-8,239.37	-1,991.39	1,930.89	1,730.78	200.11	9.649		
19,700.00	11,997.58	20,018.52	12,271.56	143.50	144.52	97.11	-8,339.36	-1,990.51	1,930.93	1,728.59	202.33	9.543		
19,800.00	11,999.42	20,118.52	12,272.88	145.09	146.10	97.10	-8,439.35	-1,989.63	1,930.96	1,726.40	204.56	9.440		
19,900.00	12,001.25	20,218.51	12,274.19	146.67	147.68	97.08	-8,539.33	-1,988.75	1,931.00	1,724.21	206.79	9.338		
20,000.00	12,003.08	20,318.51	12,275.51	148.26	149.26	97.06	-8,639.32	-1,987.88	1,931.04	1,722.01	209.02	9.238		
20,100.00	12,004.92	20,418.51	12,276.82	149.85	150.85	97.05	-8,739.30	-1,987.00	1,931.07	1,719.82	211.26	9.141		
20,200.00	12,006.75	20,518.51	12,278.14	151.44	152.43	97.03	-8,839.29	-1,986.12	1,931.11	1,717.62	213.49	9.045		
20,300.00	12,008.58	20,618.51	12,279.45	153.03	154.02	97.02	-8,939.28	-1,985.24	1,931.15	1,715.42	215.73	8.952		
20,400.00	12,010.42	20,718.51	12,280.76	154.62	155.61	97.00	-9,039.26	-1,984.36	1,931.18	1,713.21	217.97	8.860		
20,500.00	12,012.25	20,818.51	12,282.08	156.21	157.20	96.99	-9,139.25	-1,983.48	1,931.22	1,711.01	220.21	8.770		
20,600.00	12,014.08	20,918.50	12,283.39	157.81	158.79	96.97	-9,239.24	-1,982.60	1,931.26	1,708.80	222.46	8.682		
20,700.00	12,015.91	21,018.50	12,284.71	159.40	160.38	96.95	-9,339.22	-1,981.73	1,931.29	1,706.59	224.70	8.595		
20,800.00	12,017.75	21,118.50	12,286.02	161.00	161.98	96.94	-9,439.21	-1,980.85	1,931.33	1,704.38	226.95	8.510		
20,900.00	12,019.58	21,218.50	12,287.34	162.60	163.57	96.92	-9,539.19	-1,979.97	1,931.37	1,702.17	229.20	8.427		
21,000.00	12,021.41	21,318.50	12,288.65	164.20	165.17	96.91	-9,639.18	-1,979.09	1,931.41	1,699.96	231.45	8.345		
21,100.00	12,023.25	21,418.50	12,289.96	165.80	166.76	96.89	-9,739.17	-1,978.21	1,931.45	1,697.75	233.70	8.265		
21,200.00	12,025.08	21,518.50	12,291.28	167.40	168.36	96.88	-9,839.15	-1,977.33	1,931.48	1,695.53	235.95	8.186		
21,300.00	12,026.91	21,618.49	12,292.59	169.00	169.96	96.86	-9,939.14	-1,976.45	1,931.52	1,693.32	238.21	8.109		
21,400.00	12,028.75	21,718.49	12,293.91	170.60	171.56	96.85	-10,039.12	-1,975.58	1,931.56	1,691.10	240.46	8.033		
21,500.00	12,030.58	21,818.49	12,295.22	172.21	173.16	96.83	-10,139.11	-1,974.70	1,931.60	1,688.88	242.72	7.958		
21,600.00	12,032.41	21,918.49	12,296.54	173.81	174.76	96.81	-10,239.10	-1,973.82	1,931.64	1,686.66	244.98	7.885		
21,700.00	12,034.24	22,018.49	12,297.85	175.42	176.37	96.80	-10,339.08	-1,972.94	1,931.68	1,684.44	247.24	7.813		
21,800.00	12,036.08	22,118.49	12,299.17	177.02	177.97	96.78	-10,439.07	-1,972.06	1,931.72	1,682.21	249.50	7.742		
21,900.00	12,037.91	22,218.49	12,300.48	178.63	179.58	96.77	-10,539.05	-1,971.18	1,931.75	1,679.99	251.77	7.673		
22,000.00	12,039.74	22,318.49	12,301.79	180.24	181.18	96.75	-10,639.04	-1,970.30	1,931.79	1,677.76	254.03	7.605		
22,043.99	12,040.55	22,362.47	12,302.37	180.95	181.89	96.74	-10,683.02	-1,969.92	1,931.81	1,676.78	255.03	7.575 ES, SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	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	11,990.25	19,401.52	12,039.33	137.19	137.10	90.14	-7,962.97	-4,331.36	4,253.14	4,059.22	193.92	21.932		
19,400.00	11,992.09	19,501.52	12,040.41	138.76	138.67	90.13	-8,062.96	-4,330.48	4,253.24	4,057.09	196.15	21.684		
19,500.00	11,993.92	19,601.51	12,041.48	140.34	140.25	90.12	-8,162.95	-4,329.61	4,253.34	4,054.96	198.38	21.440		
19,600.00	11,995.75	19,701.51	12,042.56	141.92	141.83	90.11	-8,262.94	-4,328.73	4,253.44	4,052.83	200.61	21.202		
19,700.00	11,997.58	19,801.51	12,043.63	143.50	143.41	90.10	-8,362.92	-4,327.85	4,253.54	4,050.69	202.85	20.969		
19,800.00	11,999.42	19,901.51	12,044.71	145.09	144.99	90.09	-8,462.91	-4,326.97	4,253.64	4,048.55	205.09	20.740		
19,900.00	12,001.25	20,001.50	12,045.79	146.67	146.57	90.08	-8,562.90	-4,326.09	4,253.74	4,046.41	207.33	20.517		
20,000.00	12,003.08	20,101.50	12,046.86	148.26	148.16	90.07	-8,662.89	-4,325.22	4,253.84	4,044.27	209.57	20.298		
20,100.00	12,004.92	20,201.50	12,047.94	149.85	149.74	90.06	-8,762.87	-4,324.34	4,253.94	4,042.13	211.82	20.083		
20,200.00	12,006.75	20,301.49	12,049.01	151.44	151.33	90.05	-8,862.86	-4,323.46	4,254.05	4,039.98	214.06	19.873		
20,300.00	12,008.58	20,401.49	12,050.09	153.03	152.92	90.04	-8,962.85	-4,322.58	4,254.15	4,037.83	216.31	19.667		
20,400.00	12,010.42	20,501.49	12,051.16	154.62	154.51	90.03	-9,062.84	-4,321.71	4,254.25	4,035.68	218.56	19.465		
20,500.00	12,012.25	20,601.48	12,052.24	156.21	156.10	90.02	-9,162.82	-4,320.83	4,254.35	4,033.53	220.82	19.266		
20,600.00	12,014.08	20,701.48	12,053.31	157.81	157.70	90.01	-9,262.81	-4,319.95	4,254.45	4,031.38	223.07	19.072		
20,700.00	12,015.91	20,801.48	12,054.39	159.40	159.29	90.00	-9,362.80	-4,319.07	4,254.55	4,029.23	225.33	18.882		
20,800.00	12,017.75	20,901.48	12,055.46	161.00	160.88	89.99	-9,462.79	-4,318.19	4,254.65	4,027.07	227.58	18.695		
20,900.00	12,019.58	21,001.47	12,056.54	162.60	162.48	89.98	-9,562.77	-4,317.32	4,254.76	4,024.91	229.84	18.512		
21,000.00	12,021.41	21,101.47	12,057.61	164.20	164.08	89.97	-9,662.76	-4,316.44	4,254.86	4,022.75	232.10	18.332		
21,100.00	12,023.25	21,201.47	12,058.69	165.80	165.68	89.96	-9,762.75	-4,315.56	4,254.96	4,020.60	234.37	18.155		
21,200.00	12,025.08	21,301.46	12,059.76	167.40	167.28	89.95	-9,862.74	-4,314.68	4,255.06	4,018.43	236.63	17.982		
21,300.00	12,026.91	21,401.46	12,060.84	169.00	168.88	89.94	-9,962.72	-4,313.81	4,255.17	4,016.27	238.89	17.812		
21,400.00	12,028.75	21,501.46	12,061.91	170.60	170.48	89.93	-10,062.71	-4,312.93	4,255.27	4,014.11	241.16	17.645		
21,500.00	12,030.58	21,601.46	12,062.99	172.21	172.08	89.92	-10,162.70	-4,312.05	4,255.37	4,011.94	243.43	17.481		
21,600.00	12,032.41	21,701.45	12,064.06	173.81	173.69	89.91	-10,262.69	-4,311.17	4,255.47	4,009.78	245.70	17.320		
21,700.00	12,034.24	21,801.45	12,065.14	175.42	175.29	89.90	-10,362.67	-4,310.30	4,255.58	4,007.61	247.97	17.162		
21,800.00	12,036.08	21,901.45	12,066.22	177.02	176.90	89.89	-10,462.66	-4,309.42	4,255.68	4,005.44	250.24	17.006		
21,900.00	12,037.91	22,001.44	12,067.29	178.63	178.50	89.88	-10,562.65	-4,308.54	4,255.78	4,003.27	252.51	16.854		
22,000.00	12,039.74	22,101.44	12,068.37	180.24	180.11	89.87	-10,662.64	-4,307.66	4,255.89	4,001.10	254.79	16.704		
22,043.99	12,040.55	22,145.43	12,068.84	180.95	180.82	89.86	-10,706.62	-4,307.28	4,255.93	4,000.15	255.79	16.639 ES, SF		

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	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	11,990.25	19,689.31	12,332.45	137.19	137.38	94.41	-7,956.71	-4,021.19	3,954.62	3,760.95	193.66	20.420			
19,400.00	11,992.09	19,789.31	12,333.53	138.76	138.96	94.40	-8,056.70	-4,020.32	3,954.67	3,758.78	195.89	20.188			
19,500.00	11,993.92	19,889.30	12,334.61	140.34	140.53	94.39	-8,156.69	-4,019.45	3,954.72	3,756.61	198.11	19.962			
19,600.00	11,995.75	19,989.30	12,335.68	141.92	142.10	94.38	-8,256.68	-4,018.58	3,954.78	3,754.43	200.34	19.740			
19,700.00	11,997.58	20,089.30	12,336.76	143.50	143.68	94.37	-8,356.66	-4,017.72	3,954.83	3,752.26	202.57	19.523			
19,800.00	11,999.42	20,189.30	12,337.84	145.09	145.26	94.35	-8,456.65	-4,016.85	3,954.88	3,750.08	204.80	19.310			
19,900.00	12,001.25	20,289.29	12,338.91	146.67	146.84	94.34	-8,556.64	-4,015.98	3,954.94	3,747.90	207.04	19.102			
20,000.00	12,003.08	20,389.29	12,339.99	148.26	148.42	94.33	-8,656.63	-4,015.11	3,954.99	3,745.71	209.28	18.898			
20,100.00	12,004.92	20,489.29	12,341.07	149.85	150.00	94.32	-8,756.61	-4,014.24	3,955.04	3,743.53	211.52	18.698			
20,200.00	12,006.75	20,589.28	12,342.15	151.44	151.59	94.31	-8,856.60	-4,013.38	3,955.10	3,741.34	213.76	18.503			
20,300.00	12,008.58	20,689.28	12,343.22	153.03	153.17	94.30	-8,956.59	-4,012.51	3,955.15	3,739.15	216.00	18.311			
20,400.00	12,010.42	20,789.28	12,344.30	154.62	154.76	94.29	-9,056.58	-4,011.64	3,955.21	3,736.96	218.25	18.123			
20,500.00	12,012.25	20,889.28	12,345.38	156.21	156.35	94.28	-9,156.56	-4,010.77	3,955.26	3,734.77	220.50	17.938			
20,600.00	12,014.08	20,989.27	12,346.46	157.81	157.94	94.27	-9,256.55	-4,009.90	3,955.32	3,732.57	222.74	17.757			
20,700.00	12,015.91	21,089.27	12,347.53	159.40	159.53	94.26	-9,356.54	-4,009.03	3,955.37	3,730.38	225.00	17.580			
20,800.00	12,017.75	21,189.27	12,348.61	161.00	161.12	94.24	-9,456.53	-4,008.17	3,955.43	3,728.18	227.25	17.406			
20,900.00	12,019.58	21,289.26	12,349.69	162.60	162.72	94.23	-9,556.51	-4,007.30	3,955.48	3,725.98	229.50	17.235			
21,000.00	12,021.41	21,389.26	12,350.77	164.20	164.31	94.22	-9,656.50	-4,006.43	3,955.54	3,723.78	231.76	17.067			
21,100.00	12,023.25	21,489.26	12,351.84	165.80	165.91	94.21	-9,756.49	-4,005.56	3,955.59	3,721.58	234.02	16.903			
21,200.00	12,025.08	21,589.25	12,352.92	167.40	167.51	94.20	-9,856.48	-4,004.69	3,955.65	3,719.37	236.28	16.742			
21,300.00	12,026.91	21,689.25	12,354.00	169.00	169.10	94.19	-9,956.46	-4,003.82	3,955.70	3,717.17	238.54	16.583			
21,400.00	12,028.75	21,789.25	12,355.08	170.60	170.70	94.18	-10,056.45	-4,002.96	3,955.76	3,714.96	240.80	16.428			
21,500.00	12,030.58	21,889.25	12,356.15	172.21	172.30	94.17	-10,156.44	-4,002.09	3,955.82	3,712.75	243.06	16.275			
21,600.00	12,032.41	21,989.24	12,357.23	173.81	173.90	94.16	-10,256.43	-4,001.22	3,955.87	3,710.55	245.33	16.125			
21,700.00	12,034.24	22,089.24	12,358.31	175.42	175.51	94.15	-10,356.41	-4,000.35	3,955.93	3,708.34	247.59	15.978			
21,800.00	12,036.08	22,189.24	12,359.39	177.02	177.11	94.13	-10,456.40	-3,999.48	3,955.98	3,706.12	249.86	15.833			
21,900.00	12,037.91	22,289.23	12,360.46	178.63	178.71	94.12	-10,556.39	-3,998.62	3,956.04	3,703.91	252.13	15.691			
22,000.00	12,039.74	22,389.23	12,361.54	180.24	180.32	94.11	-10,656.38	-3,997.75	3,956.10	3,701.70	254.40	15.551			
22,043.99	12,040.55	22,433.22	12,362.01	180.95	181.02	94.11	-10,700.36	-3,997.37	3,956.12	3,700.73	255.40	15.490 ES, SF			

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	Offset TVD Reference:	Offset Datum

Offset Design LHS Wildcat Fed Com - LHS Wildcat Fed Com 705H - OH - Plan #4													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		
2,616.53	2,616.53	2,616.93	2,616.93	9.16	9.16	89.49	0.31	35.00	35.00	22.04	12.96	2.701 CC		
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 ES		
2,800.00	2,799.99	2,800.00	2,799.99	9.80	9.80	-121.85	-0.83	35.65	36.33	22.47	13.86	2.621		
2,900.00	2,899.91	2,899.37	2,899.28	10.13	10.13	-121.68	-4.21	37.57	40.31	26.00	14.32	2.816		
2,966.67	2,966.46	2,965.56	2,965.34	10.35	10.35	-121.54	-7.71	39.56	44.44	29.82	14.62	3.039		
3,000.00	2,999.70	2,998.79	2,998.50	10.46	10.45	-121.48	-9.73	40.71	46.80	32.02	14.77	3.167		
3,100.00	3,099.46	3,098.54	3,098.01	10.79	10.79	-121.35	-15.77	44.14	53.87	38.63	15.24	3.535		
3,200.00	3,199.22	3,198.29	3,197.51	11.12	11.12	-121.25	-21.82	47.58	60.95	45.24	15.71	3.879		
3,300.00	3,298.97	3,298.04	3,297.02	11.46	11.45	-121.17	-27.86	51.02	68.03	51.84	16.18	4.203		
3,400.00	3,398.73	3,397.79	3,396.52	11.80	11.79	-121.11	-33.91	54.45	75.11	58.45	16.66	4.508		
3,500.00	3,498.48	3,497.54	3,496.03	12.14	12.13	-121.06	-39.95	57.89	82.19	65.04	17.14	4.795		
3,600.00	3,598.24	3,597.29	3,595.54	12.49	12.48	-121.01	-46.00	61.33	89.26	71.64	17.62	5.065		
3,700.00	3,698.00	3,697.04	3,695.04	12.83	12.82	-120.97	-52.04	64.77	96.34	78.23	18.11	5.320		
3,800.00	3,797.75	3,796.79	3,794.55	13.18	13.17	-120.94	-58.08	68.20	103.42	84.82	18.60	5.561		
3,900.00	3,897.51	3,896.54	3,894.06	13.53	13.51	-120.91	-64.13	71.64	110.50	91.41	19.09	5.790		
4,000.00	3,997.27	3,996.29	3,993.56	13.88	13.86	-120.89	-70.17	75.08	117.58	98.00	19.58	6.006		
4,100.00	4,097.02	4,096.03	4,093.07	14.23	14.21	-120.86	-76.22	78.51	124.65	104.58	20.07	6.211		
4,200.00	4,196.78	4,195.78	4,192.58	14.58	14.57	-120.84	-82.26	81.95	131.73	111.17	20.56	6.406		
4,300.00	4,296.54	4,295.53	4,292.08	14.94	14.92	-120.83	-88.31	85.39	138.81	117.75	21.06	6.591		
4,400.00	4,396.29	4,395.28	4,391.59	15.29	15.27	-120.81	-94.35	88.82	145.89	124.33	21.56	6.767		
4,500.00	4,496.05	4,495.03	4,491.10	15.65	15.63	-120.79	-100.40	92.26	152.97	130.91	22.06	6.935		
4,600.00	4,595.80	4,594.78	4,590.60	16.01	15.98	-120.78	-106.44	95.70	160.05	137.49	22.56	7.095		
4,700.00	4,695.56	4,694.53	4,690.11	16.36	16.34	-120.77	-112.49	99.14	167.12	144.06	23.06	7.247		
4,800.00	4,795.32	4,794.28	4,789.62	16.72	16.70	-120.76	-118.53	102.57	174.20	150.64	23.56	7.393		
4,900.00	4,895.07	4,894.03	4,889.12	17.08	17.06	-120.75	-124.58	106.01	181.28	157.21	24.07	7.532		

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 #4	Offset TVD Reference:	Offset Datum

Offset Design													LHS Wildcat Fed Com - LHS Wildcat Fed Com 705H - OH - Plan #4		Offset Site Error:		0.00 usft
Survey Program: 0-OWSG (Rev2) MWD													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance								Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
19,200.00	11,988.42	19,403.47	12,204.90	135.61	135.74	-123.22	-7,818.32	250.53	394.44	236.49	157.95	2.497					
19,300.00	11,990.25	19,503.47	12,206.85	137.19	137.32	-123.24	-7,918.29	251.51	394.51	234.90	159.61	2.472					
19,400.00	11,992.09	19,603.47	12,208.81	138.76	138.89	-123.25	-8,018.27	252.49	394.57	233.32	161.26	2.447					
19,500.00	11,993.92	19,703.47	12,210.76	140.34	140.47	-123.27	-8,118.25	253.47	394.64	231.74	162.90	2.423					
19,600.00	11,995.75	19,803.47	12,212.72	141.92	142.05	-123.28	-8,218.22	254.44	394.71	230.16	164.55	2.399					
19,700.00	11,997.58	19,903.47	12,214.67	143.50	143.62	-123.30	-8,318.20	255.42	394.77	228.58	166.19	2.375					
19,800.00	11,999.42	20,003.47	12,216.63	145.09	145.21	-123.31	-8,418.17	256.40	394.84	227.01	167.83	2.353					
19,900.00	12,001.25	20,103.47	12,218.58	146.67	146.79	-123.33	-8,518.15	257.38	394.91	225.44	169.47	2.330					
20,000.00	12,003.08	20,203.47	12,220.54	148.26	148.37	-123.34	-8,618.13	258.36	394.97	223.87	171.10	2.308					
20,100.00	12,004.92	20,303.47	12,222.49	149.85	149.96	-123.36	-8,718.10	259.34	395.04	222.31	172.73	2.287					
20,200.00	12,006.75	20,403.47	12,224.45	151.44	151.55	-123.37	-8,818.08	260.32	395.11	220.74	174.36	2.266					
20,300.00	12,008.58	20,503.47	12,226.40	153.03	153.13	-123.39	-8,918.05	261.30	395.17	219.18	175.99	2.245					
20,400.00	12,010.42	20,603.47	12,228.36	154.62	154.72	-123.40	-9,018.03	262.28	395.24	217.63	177.61	2.225					
20,500.00	12,012.25	20,703.47	12,230.31	156.21	156.32	-123.42	-9,118.01	263.26	395.31	216.08	179.23	2.206					
20,600.00	12,014.08	20,803.47	12,232.27	157.81	157.91	-123.43	-9,217.98	264.24	395.37	214.53	180.85	2.186					
20,700.00	12,015.91	20,903.47	12,234.22	159.40	159.50	-123.45	-9,317.96	265.21	395.44	212.98	182.46	2.167					
20,800.00	12,017.75	21,003.47	12,236.18	161.00	161.10	-123.46	-9,417.93	266.19	395.51	211.44	184.07	2.149					
20,900.00	12,019.58	21,103.47	12,238.13	162.60	162.69	-123.48	-9,517.91	267.17	395.58	209.90	185.67	2.130					
21,000.00	12,021.41	21,203.47	12,240.09	164.20	164.29	-123.49	-9,617.89	268.15	395.64	208.36	187.28	2.113					
21,100.00	12,023.25	21,303.47	12,242.04	165.80	165.89	-123.51	-9,717.86	269.13	395.71	206.83	188.88	2.095					
21,200.00	12,025.08	21,403.47	12,244.00	167.40	167.49	-123.52	-9,817.84	270.11	395.78	205.30	190.47	2.078					
21,300.00	12,026.91	21,503.47	12,245.95	169.00	169.09	-123.54	-9,917.81	271.09	395.84	203.78	192.07	2.061					
21,400.00	12,028.75	21,603.47	12,247.91	170.60	170.69	-123.55	-10,017.79	272.07	395.91	202.26	193.65	2.044					
21,500.00	12,030.58	21,703.47	12,249.86	172.21	172.29	-123.56	-10,117.77	273.05	395.98	200.74	195.24	2.028					
21,600.00	12,032.41	21,803.47	12,251.82	173.81	173.89	-123.58	-10,217.74	274.03	396.05	199.22	196.82	2.012					
21,700.00	12,034.24	21,903.47	12,253.77	175.42	175.50	-123.59	-10,317.72	275.01	396.11	197.71	198.40	1.997					
21,800.00	12,036.08	22,003.47	12,255.73	177.02	177.10	-123.61	-10,417.69	275.99	396.18	196.21	199.97	1.981					
21,900.00	12,037.91	22,103.47	12,257.68	178.63	178.71	-123.62	-10,517.67	276.96	396.25	194.70	201.54	1.966					
22,000.00	12,039.74	22,203.47	12,259.64	180.24	180.31	-123.64	-10,617.65	277.94	396.31	193.21	203.11	1.951					
22,043.99	12,040.55	22,247.46	12,260.50	180.95	180.94	-123.64	-10,661.63	278.37	396.34	192.63	203.72	1.946 SF					

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



Total Directional Services

Anticollision Report



Company:	Franklin Mountain Energy	Local Co-ordinate Reference:	Well 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 #4	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3031.5' GE + 21' KB @ 3052.50usft

Offset Depths are relative to Offset Datum

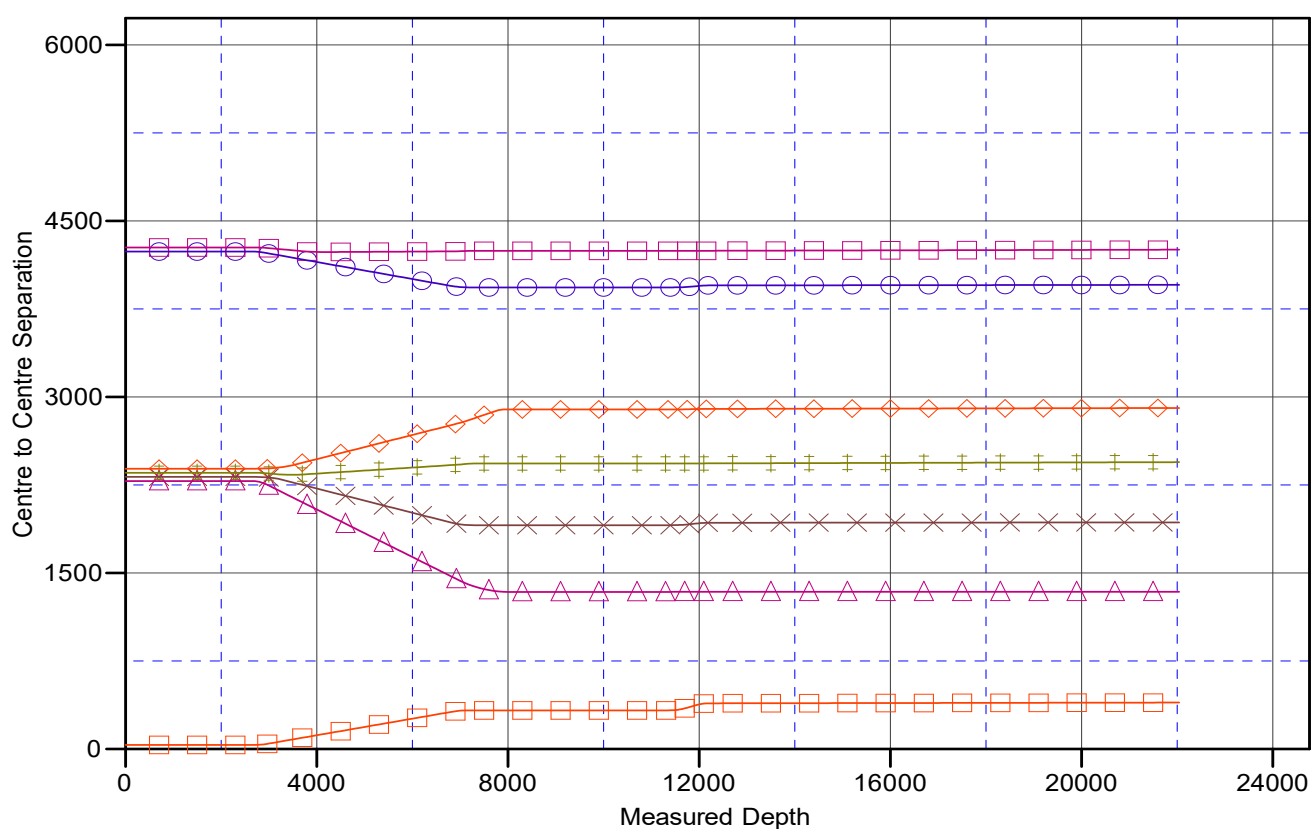
Central Meridian is -104.333334

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°

Ladder Plot



LEGEND



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 #4	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3031.5' GE + 21' KB @ 3052.50usft

Offset Depths are relative to Offset Datum

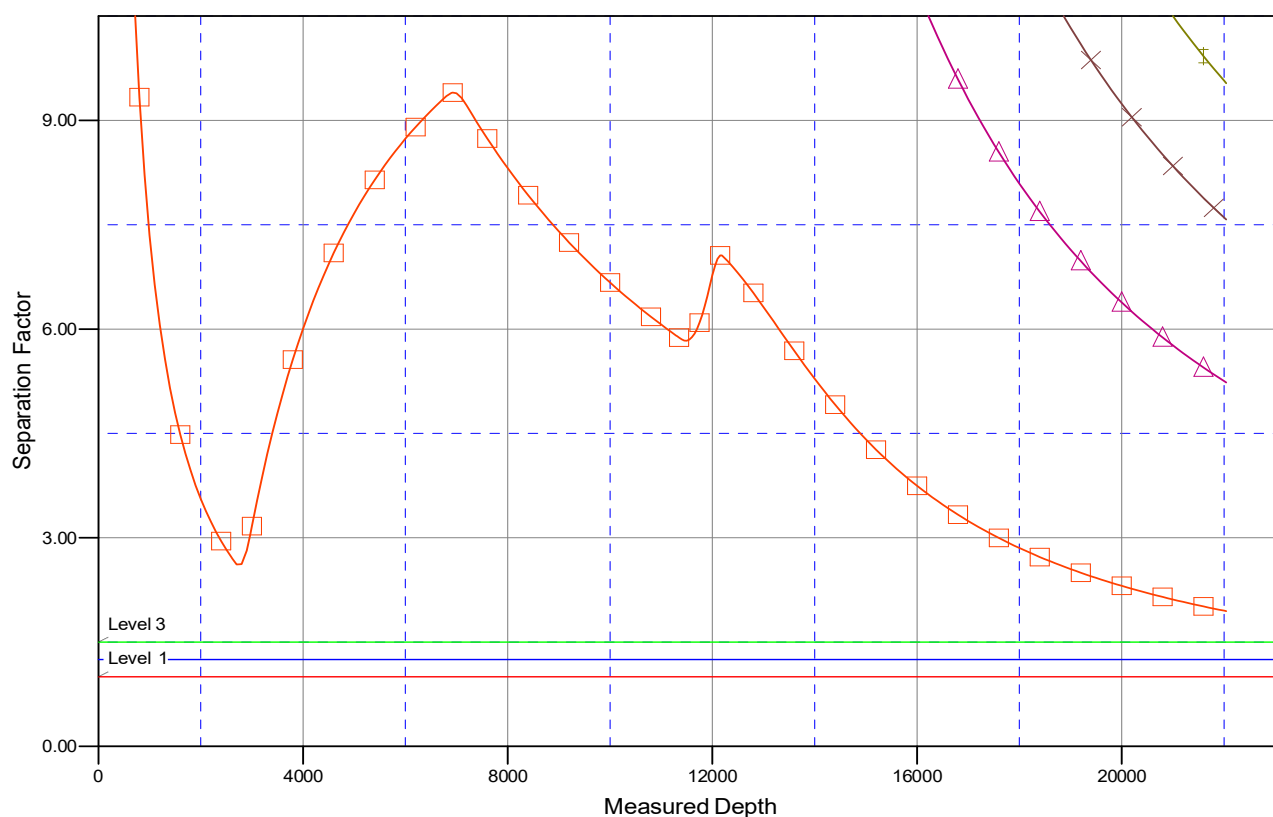
Central Meridian is -104.333334

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 #4 V0	Kaston Fed Com 703H, OH, Plan #4 V0	LHS Wildcat Fed Com 705H, OH, Plan #4 V0
Judge Baylor Fed Com 601H, OH, Plan #4 V0	Kaston Fed Com 603H, OH, Plan #5 V0	
Bus Driver Fed Com 702H, OH, Plan #4 V0	Bus Driver Fed Com 602H, OH, Plan #4 V0	

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

FRANKLIN MOUNTAIN ENERGY



Geologic Prognosis

Well Name	LHS Wildcat Fed Com 604H
Operator	Franklin Mountain Energy, LLC
Project Area	PF Unit
Well Type	10,000' Third Bone Spring Lateral
API	
Permit Number	
Rig	

State	NM	County	Lea						
SHL	Township	25S/35E	Section	36	523'	FEL	250'	FSL	
BHL	Township	26S/35E	Section	12	680'	FEL	150'	FSL	
Surface Latitude	NAD 83	32.08026							
Surface Longitude	NAD 83	103.31441							
Bottom Hole Latitude	NAD 83	32.050937							
Bottom Hole Longitude	NAD 83	103.314902							
Ground Level	3,032'	Rig KB	30'	KB	3,062'				

Formations	PROG SS	PROG TVD	Picked TVD	delta	Potential/Issues
Cenozoic Alluvium (surface)	3,032'	30'	30'	0	Sand/Gravels/unconsolidated
Rustler	2,168'	894'			Carbonates
Salado	1,659'	1,403'			Salt, Carbonate & Clastics
Base Salt	471'	2,591'			Shaley Carbonate & Shale
Capitan Reef	-1,211'	4,273'			Carbonates
Lamar	-2,026'	5,088'			Carbonate & Clastics
Bell Canyon	-2,064'	5,126'			Sandstone - oil/gas/water
Cherry Canyon	-2,870'	5,932'			Sandstone - oil/gas/water
Brushy Canyon	-4,245'	7,307'			Sand/carb/shales - oil/gas/water
Bone Spring Lime	-5,233'	8,295'			Shale/Carbonates - oil/gas
Avalon	-5,585'	8,647'			Shale/Carbonates - oil/gas
First Bone Spring Sand	-6,687'	9,749'			Sandstone - oil/gas/water
Second Bone Spring Carbonates	-6,826'	9,888'			Shale/Carbonates - oil/gas
Second Bone Spring Sand	-7,211'	10,273'			Sandstone - oil/gas/water
Third Bone Spring Carbonates	-7,911'	10,973'			Shale/Carbonates - oil/gas
Third Bone Spring Sand	-8,582'	11,644'			Sandstone - oil/gas/water
HZ Target at SHL	-8,792'	11,854'			Overpressure shale/sand- Oil/Gas
Wolfcamp	-8,824'	11,886'			Overpressure shale/sand- Oil/Gas
Wolfcamp A	-8,885'	11,947'			Overpressure Shale - Oil/Gas
Wolfcamp B	-9,105'	12,167'			Overpressure Shale - Oil/Gas

Target interval is expected to have an average apparent dip of ~1.0 degrees down along the lateral based on the Wolfcamp A structure

Target window tolerance is set at +/- 10'

Target Line: 11845' KBTVD @ 0' VS w/ 88.95° inc.

Offset Log: Talco Unit 001 (30025267470000)

Updated 4/19/21

FME Geologist	Ben Kessel		bkessel@fmellc.com	
	Office	720.414.7868	Cell	303.868.9946
FME Engineer				
Electric Logs	From		To	
Open-Hole	n/a			
MWD/LWD	MWD GR		Int. 1 Csg. Point	TD
Mud Log:				
drill out of surface casing				
Sampling:	10' samples in vertical and through curve, 30' samples in lateral			
Samples:	1 set dry samples at footage frequency noted above			
Mud Gas:	Continuous			
Daily Contact:	Email distribution of mud log/daily report at 7:30am and 4:30 pm CST			
Daily Mud Log Email Distribution List				
Final Mud Log Distribution				
	Ben Kessel (bkessel@fmellc.com)		email	
Cuttings/Samples Shipment Information				



U. S. Steel Tubular Products

7/14/2020 11:41:19 AM

5.500" 23.00lbs/ft (0.415" Wall) P110 USS-EAGLE SFH®



MECHANICAL PROPERTIES	Pipe	USS-EAGLE SFH™	
Minimum Yield Strength	110,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	125,000	--	psi
DIMENSIONS	Pipe	USS-EAGLE SFH™	
Outside Diameter	5.500	5.830	in.
Wall Thickness	0.415	--	in.
Inside Diameter	4.670	4.585	in.
Standard Drift	4.545	4.545	in.
Alternate Drift	--	4.545	in.
Nominal Linear Weight, T&C	23.00	--	lbs/ft
Plain End Weight	22.56	--	lbs/ft
SECTION AREA	Pipe	USS-EAGLE SFH™	
Critical Area	6.630	5.507	sq. in.
Joint Efficiency	--	83.1	%
PERFORMANCE	Pipe	USS-EAGLE SFH™	
Minimum Collapse Pressure	14,540	14,540	psi
External Pressure Leak Resistance	--	9,130	psi
Minimum Internal Yield Pressure	14,520	14,520	psi
Minimum Pipe Body Yield Strength	729,000	--	lbs
Joint Strength	--	606,000	lbs
Compression Rating	--	606,000	lbs
Reference Length	--	17,900	ft
Maximum Uniaxial Bend Rating	--	76.2	deg/100 ft
MAKE-UP DATA	Pipe	USS-EAGLE SFH™	
Make-Up Loss	--	6.65	in.
Minimum Make-Up Torque	--	16,600	ft-lbs
Maximum Make-Up Torque	--	19,800	ft-lbs
Maximum Operating Torque	--	28,000	ft-lbs

Legal Notice

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Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 28435

COMMENTS

Operator: Franklin Mountain Energy LLC 44 Cook Street Denver, CO 80206	OGRID: 373910
	Action Number: 28435
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
jagarcia	Accepted for record	6/25/2021

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CONDITIONS

Created By	Condition	Condition Date
jagarcia	Adhere to previous COA.	6/25/2021