

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOC

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

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. ROMEO FEDERAL COM 1H
2. Name of Operator GMT EXPLORATION COMPANY, LLC - Mail: mwalters@gmtexploration.com		9. API Well No. 30-025-42999-00-X1
3a. Address 1560 BROADWAY, SUITE 2000 DENVER, CO 80202	3b. Phone No. (include area code) Ph: 303-586-9275	10. Field and Pool or Exploratory Area RED HILLS
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 22 T24S R34E NWNW 400FNL 660FWL		11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Drilling Operations
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

- GMT will be changing the Intermediate casing string to 3500' of 32# J55 LTC & 1900' of 32# HCK-55 LTC. Summation of 5400' to IC set point.

- The long string will be LTC from surface to KOP, all joints in tension round curve to TMD will be of BTC.

- Attached is an updated directional plan. The footage calls on the sundry sent on 11/10/16 with our zone change were incorrect. Our first take point will be 330' FNL & 350' FWL. The surface location and zone have not changed. The only changes to the drilling plan are listed above.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #364004 verified by the BLM Well Information System For GMT EXPLORATION COMPANY, LLC, sent to the Hobbs Committed to AFMSS for processing by PRISCILLA PEREZ on 02/06/2017 (17PP0156SE)	
Name (Printed/Typed) KEITH KRESS	Title ENGINEER
Signature (Electronic Submission)	Date 01/17/2017
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____ Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	
Office _____	

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****



GMT Exploration

Lea County, NM (NAD 83)

Romeo Federal 1H

Romeo Federal 1H

Romeo Federal 1H

Plan: Design #4

Standard Planning Report

13 January, 2017



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Romeo Federal 1H
Company:	GMT Exploration	TVD Reference:	WELL @ 3554.00ft (McVay 10)
Project:	Lea County, NM (NAD 83)	MD Reference:	WELL @ 3554.00ft (McVay 10)
Site:	Romeo Federal 1H	North Reference:	Grid
Well:	Romeo Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Romeo Federal 1H		
Design:	Design #4		

Project	Lea County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Romeo Federal 1H			
Site Position:		Northing:	440,924.73 usft	Latitude: 32° 12' 33.090 N
From:	Lat/Long	Easting:	810,139.14 usft	Longitude: 103° 27' 51.240 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16"	Grid Convergence: 0.46 °

Well	Romeo Federal 1H			
Well Position	+N-S	0.00 ft	Northing:	440,924.73 usft
	+E-W	0.00 ft	Easting:	810,139.14 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	3,534.00 ft

Wellbore	Romeo Federal 1H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/13/17	6.95	60.07	47,984

Design	Design #4			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.00	0.00	0.00	183.46

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,036.77	10.74	318.08	6,033.63	37.31	-33.50	2.00	2.00	0.00	318.08	
8,003.93	10.74	318.08	7,966.37	309.96	-278.30	0.00	0.00	0.00	0.00	
8,540.70	0.00	0.00	8,500.00	347.27	-311.80	2.00	-2.00	0.00	180.00	VP Romeo Federal 1H
10,594.78	0.00	0.00	10,554.08	347.27	-311.80	0.00	0.00	0.00	0.00	
11,487.77	89.30	179.57	11,127.00	-218.66	-307.50	10.00	10.00	20.11	179.57	
15,817.62	89.30	179.57	11,180.00	-4,548.06	-274.64	0.00	0.00	0.00	0.00	PBHL Romeo Federa

Database: EDM 5000.1 Single User Db
Company: GMT Exploration
Project: Lea County, NM (NAD 83)
Site: Romeo Federal 1H
Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4

Local Co-ordinate Reference: Well Romeo Federal 1H
TVD Reference: WELL @ 3554.00ft (McVay 10)
MD Reference: WELL @ 3554.00ft (McVay 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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
Rustler									
1,195.00	0.00	0.00	1,195.00	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
13 3/8"									
1,265.00	0.00	0.00	1,265.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Top									
1,295.00	0.00	0.00	1,295.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Salt Base									
3,015.00	0.00	0.00	3,015.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar Limestone									
3,050.00	0.00	0.00	3,050.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00

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Site:	Romeo Federal 1H	North Reference:	Grid
Well:	Romeo Federal 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Romeo Federal 1H		
Design:	Design #4		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware Mountain Group									
5,350.00	0.00	0.00	5,350.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware Bell Canyon									
5,375.00	0.00	0.00	5,375.00	0.00	0.00	0.00	0.00	0.00	0.00
8 5/8									
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	2.00	318.08	5,599.98	1.30	-1.17	-1.23	2.00	2.00	0.00
5,700.00	4.00	318.08	5,699.84	5.19	-4.66	-4.90	2.00	2.00	0.00
5,800.00	6.00	318.08	5,799.45	11.68	-10.48	-11.02	2.00	2.00	0.00
5,900.00	8.00	318.08	5,898.70	20.75	-18.63	-19.58	2.00	2.00	0.00
6,000.00	10.00	318.08	5,997.47	32.38	-29.08	-30.57	2.00	2.00	0.00
Start 1967.17 hold at 6036.77 MD									
6,036.77	10.74	318.08	6,033.63	37.31	-33.50	-35.22	2.00	2.00	0.00
6,100.00	10.74	318.08	6,095.76	46.07	-41.37	-43.50	0.00	0.00	0.00
6,200.00	10.74	318.08	6,194.01	59.93	-53.81	-56.58	0.00	0.00	0.00
6,300.00	10.74	318.08	6,292.26	73.79	-66.26	-69.66	0.00	0.00	0.00
6,400.00	10.74	318.08	6,390.51	87.65	-78.70	-82.75	0.00	0.00	0.00
6,500.00	10.74	318.08	6,488.76	101.51	-91.14	-95.83	0.00	0.00	0.00
Cherry Canyon									
6,591.44	10.74	318.08	6,578.60	114.19	-102.52	-107.80	0.00	0.00	0.00
6,600.00	10.74	318.08	6,587.01	115.37	-103.59	-108.92	0.00	0.00	0.00
6,700.00	10.74	318.08	6,685.26	129.23	-116.03	-122.00	0.00	0.00	0.00
6,800.00	10.74	318.08	6,783.51	143.09	-128.48	-135.09	0.00	0.00	0.00
6,900.00	10.74	318.08	6,881.76	156.95	-140.92	-148.17	0.00	0.00	0.00
7,000.00	10.74	318.08	6,980.01	170.81	-153.37	-161.26	0.00	0.00	0.00
7,100.00	10.74	318.08	7,078.26	184.67	-165.81	-174.34	0.00	0.00	0.00
7,200.00	10.74	318.08	7,176.51	198.54	-178.26	-187.43	0.00	0.00	0.00
7,300.00	10.74	318.08	7,274.76	212.40	-190.70	-200.51	0.00	0.00	0.00
7,400.00	10.74	318.08	7,373.01	226.26	-203.14	-213.60	0.00	0.00	0.00
7,500.00	10.74	318.08	7,471.26	240.12	-215.59	-226.68	0.00	0.00	0.00
7,600.00	10.74	318.08	7,569.51	253.98	-228.03	-239.77	0.00	0.00	0.00
7,700.00	10.74	318.08	7,667.76	267.84	-240.48	-252.85	0.00	0.00	0.00
Brushy Canyon									
7,780.22	10.74	318.08	7,746.57	278.95	-250.46	-263.35	0.00	0.00	0.00
7,800.00	10.74	318.08	7,766.01	281.70	-252.92	-265.94	0.00	0.00	0.00
7,900.00	10.74	318.08	7,864.26	295.56	-265.37	-279.02	0.00	0.00	0.00
8,000.00	10.74	318.08	7,962.50	309.42	-277.81	-292.11	0.00	0.00	0.00
Start Drop -2.00									
8,003.93	10.74	318.08	7,966.37	309.96	-278.30	-292.62	0.00	0.00	0.00
8,100.00	8.81	318.08	8,061.04	322.10	-289.20	-304.08	2.00	-2.00	0.00
8,200.00	6.81	318.08	8,160.10	332.21	-298.28	-313.63	2.00	-2.00	0.00

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Project: Lea County, NM (NAD 83)
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Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4

Local Co-ordinate Reference: Well Romeo Federal 1H
TVD Reference: WELL @ 3554.00ft (McVay 10)
MD Reference: WELL @ 3554.00ft (McVay 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,300.00	4.81	318.08	8,259.58	339.75	-305.05	-320.75	2.00	-2.00	0.00
8,400.00	2.81	318.08	8,359.36	344.70	-309.49	-325.42	2.00	-2.00	0.00
8,500.00	0.81	318.08	8,459.30	347.05	-311.60	-327.64	2.00	-2.00	0.00
Start 2054.08 hold at 8540.70 MD									
8,540.70	0.00	0.00	8,500.00	347.27	-311.80	-327.84	2.00	-2.00	0.00
8,600.00	0.00	0.00	8,559.30	347.27	-311.80	-327.84	0.00	0.00	0.00
8,700.00	0.00	0.00	8,659.30	347.27	-311.80	-327.84	0.00	0.00	0.00
8,800.00	0.00	0.00	8,759.30	347.27	-311.80	-327.84	0.00	0.00	0.00
8,900.00	0.00	0.00	8,859.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,000.00	0.00	0.00	8,959.30	347.27	-311.80	-327.84	0.00	0.00	0.00
Lower Brushy Canyon Marker									
9,081.43	0.00	0.00	9,040.73	347.27	-311.80	-327.84	0.00	0.00	0.00
9,100.00	0.00	0.00	9,059.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,200.00	0.00	0.00	9,159.30	347.27	-311.80	-327.84	0.00	0.00	0.00
Bone Spring									
9,221.43	0.00	0.00	9,180.73	347.27	-311.80	-327.84	0.00	0.00	0.00
Avalon Shale Top									
9,271.43	0.00	0.00	9,230.73	347.27	-311.80	-327.84	0.00	0.00	0.00
9,300.00	0.00	0.00	9,259.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,400.00	0.00	0.00	9,359.30	347.27	-311.80	-327.84	0.00	0.00	0.00
Carbonate									
9,456.43	0.00	0.00	9,415.73	347.27	-311.80	-327.84	0.00	0.00	0.00
9,500.00	0.00	0.00	9,459.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,600.00	0.00	0.00	9,559.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,700.00	0.00	0.00	9,659.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,800.00	0.00	0.00	9,759.30	347.27	-311.80	-327.84	0.00	0.00	0.00
9,900.00	0.00	0.00	9,859.30	347.27	-311.80	-327.84	0.00	0.00	0.00
10,000.00	0.00	0.00	9,959.30	347.27	-311.80	-327.84	0.00	0.00	0.00
10,100.00	0.00	0.00	10,059.30	347.27	-311.80	-327.84	0.00	0.00	0.00
10,200.00	0.00	0.00	10,159.30	347.27	-311.80	-327.84	0.00	0.00	0.00
1st Bone Spring Sand									
10,271.43	0.00	0.00	10,230.73	347.27	-311.80	-327.84	0.00	0.00	0.00
10,300.00	0.00	0.00	10,259.30	347.27	-311.80	-327.84	0.00	0.00	0.00
10,400.00	0.00	0.00	10,359.30	347.27	-311.80	-327.84	0.00	0.00	0.00
Carbonate									
10,496.43	0.00	0.00	10,455.73	347.27	-311.80	-327.84	0.00	0.00	0.00
10,500.00	0.00	0.00	10,459.30	347.27	-311.80	-327.84	0.00	0.00	0.00
Start DLS 10.00 TFO 179.57									
10,594.78	0.00	0.00	10,554.08	347.27	-311.80	-327.84	0.00	0.00	0.00
10,600.00	0.52	179.57	10,559.30	347.25	-311.80	-327.82	10.00	10.00	0.00
10,700.00	10.52	179.57	10,658.71	337.64	-311.72	-318.23	10.00	10.00	0.00
10,800.00	20.52	179.57	10,754.94	310.91	-311.52	-291.57	10.00	10.00	0.00
2nd Bone Spring Sand									
10,884.49	28.97	179.57	10,831.60	275.57	-311.25	-256.31	10.00	10.00	0.00
10,900.00	30.52	179.57	10,845.07	267.88	-311.19	-248.64	10.00	10.00	0.00
11,000.00	40.52	179.57	10,926.35	209.85	-310.75	-190.74	10.00	10.00	0.00
11,100.00	50.52	179.57	10,996.33	138.59	-310.21	-119.64	10.00	10.00	0.00
11,200.00	60.52	179.57	11,052.87	56.27	-309.59	-37.50	10.00	10.00	0.00
Horizontal Interval Top									
11,248.24	65.35	179.57	11,074.81	13.33	-309.26	5.34	10.00	10.00	0.00
11,300.00	70.52	179.57	11,094.25	-34.63	-308.90	53.18	10.00	10.00	0.00
11,400.00	80.52	179.57	11,119.22	-131.33	-308.16	149.66	10.00	10.00	0.00

Database: EDM 5000.1 Single User Db
Company: GMT Exploration
Project: Lea County, NM (NAD 83)
Site: Romeo Federal 1H
Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4

Local Co-ordinate Reference: Well Romeo Federal 1H
TVD Reference: WELL @ 3554.00ft (McVay 10)
MD Reference: WELL @ 3554.00ft (McVay 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start 4329.85 hold at 11487.77 MD									
11,487.77	89.30	179.57	11,127.00	-218.66	-307.50	236.80	10.00	10.00	0.00
11,500.00	89.30	179.57	11,127.15	-230.89	-307.41	249.00	0.00	0.00	0.00
11,600.00	89.30	179.57	11,128.37	-330.88	-306.65	348.76	0.00	0.00	0.00
11,700.00	89.30	179.57	11,129.59	-430.87	-305.89	448.52	0.00	0.00	0.00
11,800.00	89.30	179.57	11,130.82	-530.86	-305.13	548.29	0.00	0.00	0.00
11,900.00	89.30	179.57	11,132.04	-630.85	-304.37	648.05	0.00	0.00	0.00
12,000.00	89.30	179.57	11,133.27	-730.84	-303.61	747.81	0.00	0.00	0.00
12,100.00	89.30	179.57	11,134.49	-830.83	-302.85	847.57	0.00	0.00	0.00
12,200.00	89.30	179.57	11,135.72	-930.82	-302.10	947.33	0.00	0.00	0.00
12,300.00	89.30	179.57	11,136.94	-1,030.81	-301.34	1,047.10	0.00	0.00	0.00
12,400.00	89.30	179.57	11,138.16	-1,130.80	-300.58	1,146.86	0.00	0.00	0.00
12,500.00	89.30	179.57	11,139.39	-1,230.79	-299.82	1,246.62	0.00	0.00	0.00
12,600.00	89.30	179.57	11,140.61	-1,330.78	-299.06	1,346.38	0.00	0.00	0.00
12,700.00	89.30	179.57	11,141.84	-1,430.77	-298.30	1,446.14	0.00	0.00	0.00
12,800.00	89.30	179.57	11,143.06	-1,530.76	-297.54	1,545.91	0.00	0.00	0.00
12,900.00	89.30	179.57	11,144.28	-1,630.74	-296.78	1,645.67	0.00	0.00	0.00
13,000.00	89.30	179.57	11,145.51	-1,730.73	-296.02	1,745.43	0.00	0.00	0.00
13,100.00	89.30	179.57	11,146.73	-1,830.72	-295.26	1,845.19	0.00	0.00	0.00
13,200.00	89.30	179.57	11,147.96	-1,930.71	-294.51	1,944.95	0.00	0.00	0.00
13,300.00	89.30	179.57	11,149.18	-2,030.70	-293.75	2,044.72	0.00	0.00	0.00
13,400.00	89.30	179.57	11,150.40	-2,130.69	-292.99	2,144.48	0.00	0.00	0.00
13,500.00	89.30	179.57	11,151.63	-2,230.68	-292.23	2,244.24	0.00	0.00	0.00
13,600.00	89.30	179.57	11,152.85	-2,330.67	-291.47	2,344.00	0.00	0.00	0.00
13,700.00	89.30	179.57	11,154.08	-2,430.66	-290.71	2,443.77	0.00	0.00	0.00
13,800.00	89.30	179.57	11,155.30	-2,530.65	-289.95	2,543.53	0.00	0.00	0.00
13,900.00	89.30	179.57	11,156.53	-2,630.64	-289.19	2,643.29	0.00	0.00	0.00
14,000.00	89.30	179.57	11,157.75	-2,730.63	-288.43	2,743.05	0.00	0.00	0.00
14,100.00	89.30	179.57	11,158.97	-2,830.62	-287.67	2,842.81	0.00	0.00	0.00
14,200.00	89.30	179.57	11,160.20	-2,930.61	-286.91	2,942.58	0.00	0.00	0.00
14,300.00	89.30	179.57	11,161.42	-3,030.60	-286.16	3,042.34	0.00	0.00	0.00
14,400.00	89.30	179.57	11,162.65	-3,130.59	-285.40	3,142.10	0.00	0.00	0.00
14,500.00	89.30	179.57	11,163.87	-3,230.58	-284.64	3,241.86	0.00	0.00	0.00
14,600.00	89.30	179.57	11,165.09	-3,330.57	-283.88	3,341.62	0.00	0.00	0.00
14,700.00	89.30	179.57	11,166.32	-3,430.56	-283.12	3,441.39	0.00	0.00	0.00
14,800.00	89.30	179.57	11,167.54	-3,530.55	-282.36	3,541.15	0.00	0.00	0.00
14,900.00	89.30	179.57	11,168.77	-3,630.54	-281.60	3,640.91	0.00	0.00	0.00
15,000.00	89.30	179.57	11,169.99	-3,730.53	-280.84	3,740.67	0.00	0.00	0.00
15,100.00	89.30	179.57	11,171.22	-3,830.52	-280.08	3,840.43	0.00	0.00	0.00
15,200.00	89.30	179.57	11,172.44	-3,930.51	-279.32	3,940.20	0.00	0.00	0.00
15,300.00	89.30	179.57	11,173.66	-4,030.50	-278.57	4,039.96	0.00	0.00	0.00
15,400.00	89.30	179.57	11,174.89	-4,130.49	-277.81	4,139.72	0.00	0.00	0.00
15,500.00	89.30	179.57	11,176.11	-4,230.48	-277.05	4,239.48	0.00	0.00	0.00
15,600.00	89.30	179.57	11,177.34	-4,330.46	-276.29	4,339.24	0.00	0.00	0.00
15,700.00	89.30	179.57	11,178.56	-4,430.45	-275.53	4,439.01	0.00	0.00	0.00
15,800.00	89.30	179.57	11,179.78	-4,530.44	-274.77	4,538.77	0.00	0.00	0.00
TD at 15817.62									
15,817.62	89.30	179.57	11,180.00	-4,548.06	-274.64	4,556.34	0.00	0.00	0.00

Database: EDM 5000.1 Single User Db
Company: GMT Exploration
Project: Lea County, NM (NAD 83)
Site: Romeo Federal 1H
Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4

Local Co-ordinate Reference: Well Romeo Federal 1H
TVD Reference: WELL @ 3554.00ft (McVay 10)
MD Reference: WELL @ 3554.00ft (McVay 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
VP Romeo Federal 1H F - plan hits target center - Point	0.00	0.00	8,500.00	347.27	-311.80	441,272.00	809,827.34	32° 12' 36.551 N	103° 27' 54.836 W
LP Romeo Federal 1H P - plan hits target center - Point	0.00	0.00	11,127.00	-218.66	-307.50	440,706.07	809,831.64	32° 12' 30.951 N	103° 27' 54.839 W
PBHL Romeo Federal 1H - plan hits target center - Point	0.00	0.00	11,180.00	-4,548.06	-274.64	436,376.68	809,864.50	32° 11' 48.109 N	103° 27' 54.864 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
5,400.00	5,400.00	8 5/8	8-5/8	11
15,817.62	11,180.00	5 1/2"	5-1/2	7-7/8
1,265.00	1,265.00	13 3/8"	13-3/8	17-1/2

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,195.00	1,195.00	Rustler		0.70	179.57
1,295.00	1,295.00	Salt Top		0.70	179.57
3,015.00	3,015.00	Salt Base		0.70	179.57
3,050.00	3,050.00	Lamar Limestone		0.70	179.57
5,350.00	5,350.00	Delaware Mountain Group		0.70	179.57
5,375.00	5,375.00	Delaware Bell Canyon		0.70	179.57
6,591.44	6,580.00	Cherry Canyon		0.70	179.57
7,780.22	7,750.00	Brushy Canyon		0.70	179.57
9,081.43	9,045.00	Lower Brushy Canyon Marker		0.70	179.57
9,221.43	9,185.00	Bone Spring		0.70	179.57
9,271.43	9,235.00	Avalon Shale Top		0.70	179.57
9,456.43	9,420.00	Carbonate		0.70	179.57
10,271.43	10,235.00	1st Bone Spring Sand		0.70	179.57
10,496.43	10,460.00	Carbonate		0.70	179.57
10,884.49	10,835.00	2nd Bone Spring Sand		0.70	179.57
11,248.24	11,075.00	Horizontal Interval Top		0.70	179.57

Database: EDM 5000.1 Single User Db
Company: GMT Exploration
Project: Lea County, NM (NAD 83)
Site: Romeo Federal 1H
Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4

Local Co-ordinate Reference: Well Romeo Federal 1H
TVD Reference: WELL @ 3554.00ft (McVay 10)
MD Reference: WELL @ 3554.00ft (McVay 10)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5,500.00	5,500.00	0.00	0.00	Start Build 2.00
6,036.77	6,033.63	37.31	-33.50	Start 1967.17 hold at 6036.77 MD
8,003.93	7,966.37	309.96	-278.30	Start Drop -2.00
8,540.70	8,500.00	347.27	-311.80	Start 2054.08 hold at 8540.70 MD
10,594.78	10,554.08	347.27	-311.80	Start DLS 10.00 TFO 179.57
11,487.77	11,127.00	-218.66	-307.50	Start 4329.85 hold at 11487.77 MD
15,817.62	11,180.00	-4,548.06	-274.64	TD at 15817.62

Project: Lea County, NM (NAD 83)
Site: Romeo Federal 1H
Well: Romeo Federal 1H
Wellbore: Romeo Federal 1H
Design: Design #4
Latitude: 32° 12' 33.090 N
Longitude: 103° 27' 51.240 W
GL: 3534.00
KB: WELL @ 3554.00ft (McVay 10)

WELLBORE TARGET DETAILS (LAT/LONG)

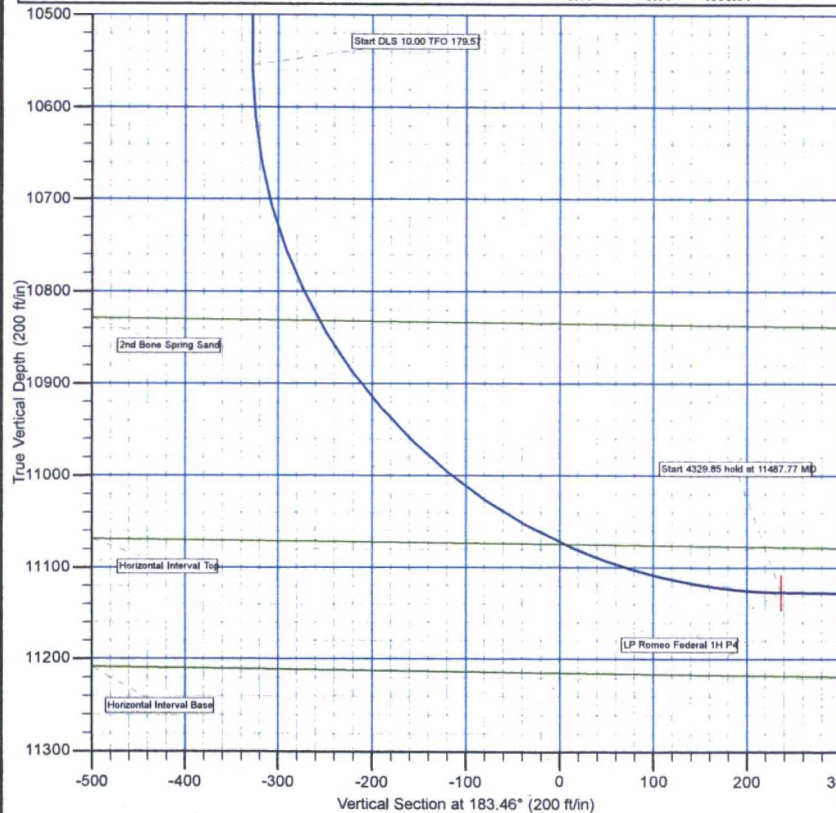
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
VP Romeo Federal 1H P4	8500.00	347.27	-311.80	441272.00	809827.34	32° 12' 36.551 N	103° 27' 54.836 W
LP Romeo Federal 1H P4	11127.00	-218.66	-307.50	440706.07	809831.64	32° 12' 30.951 N	103° 27' 54.839 W
PBHL Romeo Federal 1H P4	11180.00	-4548.06	-274.64	436376.68	809864.50	32° 11' 48.109 N	103° 27' 54.864 W

WELL DETAILS: Romeo Federal 1H

+N/-S	+E/-W	Northing	Ground Level:	3534.00	Longitude	Slot
0.00	0.00	440924.73	Easting	810139.14	32° 12' 33.090 N	103° 27' 51.240 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	
6036.77	10.74	318.08	6033.63	37.31	-33.50	2.00	318.08	-35.22	Start Build 2.00
8003.93	10.74	318.08	7966.37	309.96	-278.30	0.00	0.00	-292.62	Start 1967.17 hold at 6036.77 MD
8540.70	0.00	0.00	8500.00	347.27	-311.80	2.00	180.00	-327.84	Start Drop -2.00
10594.78	0.00	0.00	10554.08	347.27	-311.80	0.00	0.00	-327.84	Start 2054.08 hold at 8540.70 MD
11487.77	89.30	179.57	11127.00	-218.66	-307.50	10.00	179.57	236.80	Start DLS 10.00 TFO 179.57
15817.62	89.30	179.57	11180.00	-4548.06	-274.64	0.00	0.00	4556.34	Start 4329.85 hold at 11487.77 MD



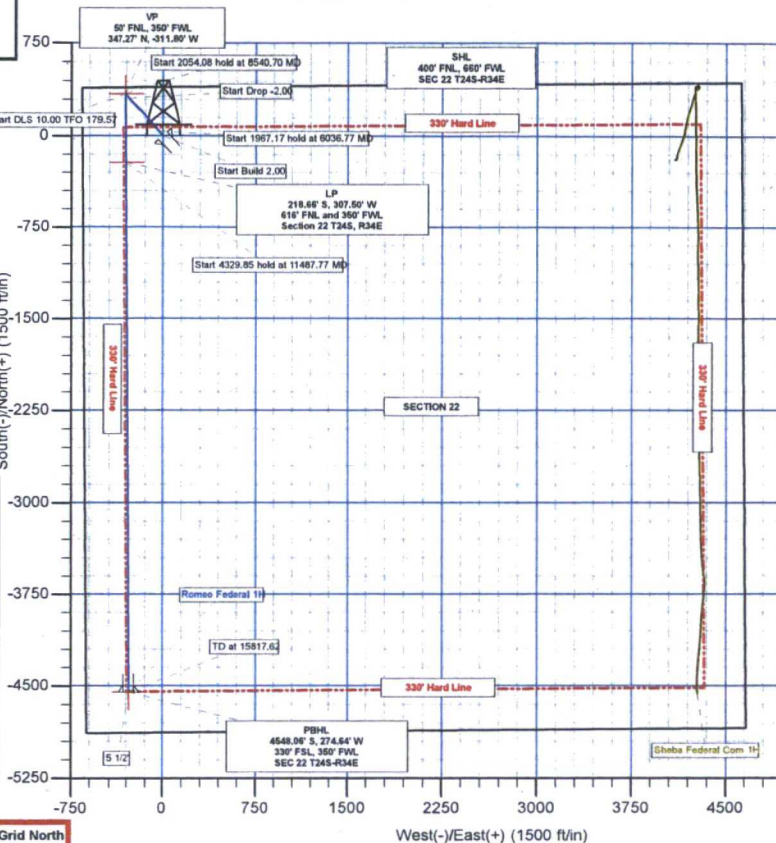
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1195.00	1195.00	Rustler
1295.00	1295.00	Salt Top
3015.00	3015.00	Salt Base
3050.00	3050.00	Lamar Limestone
5350.00	5350.00	Delaware Mountain Group
5375.00	5375.00	Delaware Bell Canyon
6578.60	6591.44	Cherry Canyon
7746.57	7780.22	Brushy Canyon
9040.73	9081.43	Lower Brushy Canyon Marker
9180.73	9221.43	Bone Spring
9230.73	9271.43	Avalon Shale Top
9415.73	9456.43	Carbonate
10230.73	10271.43	1st Bone Spring Sand
10455.73	10496.43	Carbonate
10831.60	10884.49	2nd Bone Spring Sand
11074.81	11248.24	Horizontal Interval Top



Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.49°

Magnetic Field
Strength: 47983.6nT
Dip Angle: 60.07°
Date: 01/13/2017
Model: IGRF2015



Plan: Design #4 (Romeo Federal 1H/Romeo Federal 1H)
Created By: TRACY WILLIAMS Date: 16:39, January 16 2017

PROJECT DETAILS: Lea County, NM (NAD 83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
1265.00	1265.00	13 3/8"	13-3/8
5400.00	5400.00	8 5/8"	8-5/8
11180.00	15817.62	5 1/2"	5-1/2

