Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☐ DRILL ☐ REENTER

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

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

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No.
30-015-55367

3a. Address

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

10. Field and Pool, or Exploratory

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

At surface

At proposed prod. zone

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

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

12. County or Parish

13. State

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

16. No of acres in lease

17. Spacing Unit dedicated to this well

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

19. Proposed Depth

20. BLM/BIA Bond No. in file

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

22. Approximate date work will start*

23. Estimated duration

24. Attachments

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

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

25. Signature

Name *(Printed/Typed)*

Date

Title

Approved by *(Signature)*

Name *(Printed/Typed)*

Date

Title

Office

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 07/29/2024

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-55367	52770	Round Tank; San Andres

[4] Property Code	[5] Property Name	[6] Well Number
336229	DELTA FEDERAL	2H

[7] OGRID No.	[8] Operator Name	[9] Elevation
13837	MACK ENERGY CORPORATION	3600.2

[10] Surface Location

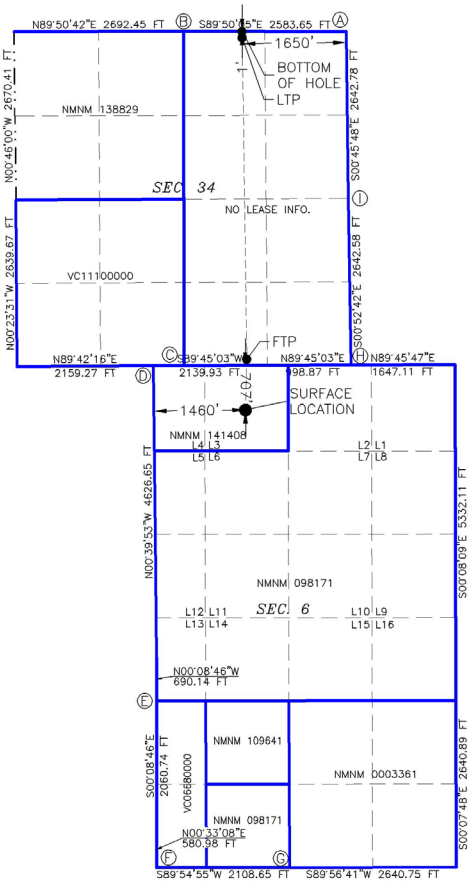
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	6	16 S	29 E		707	NORTH	1460	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	34	15 S	28 E		1	NORTH	1650	EAST	CHAVES

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			

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



DELTA FEDERAL 2H
EL. = 3600.2

GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
N.= 714296.67
E.= 607848.69
LAT. = 32.9634212°N
LONG. = 104.1164749°W

KICK OFF POINT
707' FNL, 1460' FWL
N.= 714296.67
E.= 607848.69
LAT. = 32.9634212°N
LONG. = 104.1164749°W

FIRST TAKE POINT (PPP 1)
100' FSL, 1650' FEL
N.= 715103.54
E.= 607868.44
LAT. = 32.9656388°N
LONG. = 104.1164051°W

LAST TAKE POINT
100' FNL, 1650' FEL
N.= 720198.98
E.= 607795.47
LAT. = 32.9796443°N
LONG. = 104.1166088°W

BOTTOM OF HOLE
1' FNL, 1650' FEL
N.= 720297.95
E.= 607794.15
LAT. = 32.9799164°N
LONG. = 104.1166125°W

CORNER COORDINATES TABLE
NAD 83 NMSP EAST

A	N.= 720294.20	E.= 609443.93
B	N.= 720301.65	E.= 606860.95
C	N.= 714999.23	E.= 606871.30
D	N.= 714997.10	E.= 606381.67
E	N.= 709682.00	E.= 606437.09
F	N.= 707041.00	E.= 606436.75
G	N.= 707044.11	E.= 608544.85
H	N.= 715010.75	E.= 609519.63
I	N.= 717652.34	E.= 609479.13

LEGEND
SECTION LINE
QUARTER LINE
LEASE LINE
WELL PATH

[17] OPERATOR CERTIFICATION

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

Deana Weaver 10/23/2023
Signature Date

Deana Weaver
Printed Name

dweaver@mec.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

SEPTEMBER 28, 2023
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: EDMUNDO F. JARAMILLO, LS 12797
SURVEY NO. 9877

Intent [XX] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
MACK ENERGY CORPORATION	DELTA FEDERAL	2H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	6	16 S	29 E	3	707	NORTH	1460	WEST	EDDY

Latitude	Longitude	NAD
32.9634212	104.1164749	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	34	15 S	29 E		100	SOUTH	1650	EAST	CHAVES

Latitude	Longitude	NAD
32.9656388	104.1164051	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	34	15 S	29 E		100	NORTH	1650	EAST	CHAVES

Latitude	Longitude	NAD
32.9796443	104.1166088	83

Is this well the defining well for the Horizontal Spacing Unit? [ ]

Is this well an infill well? [ ]

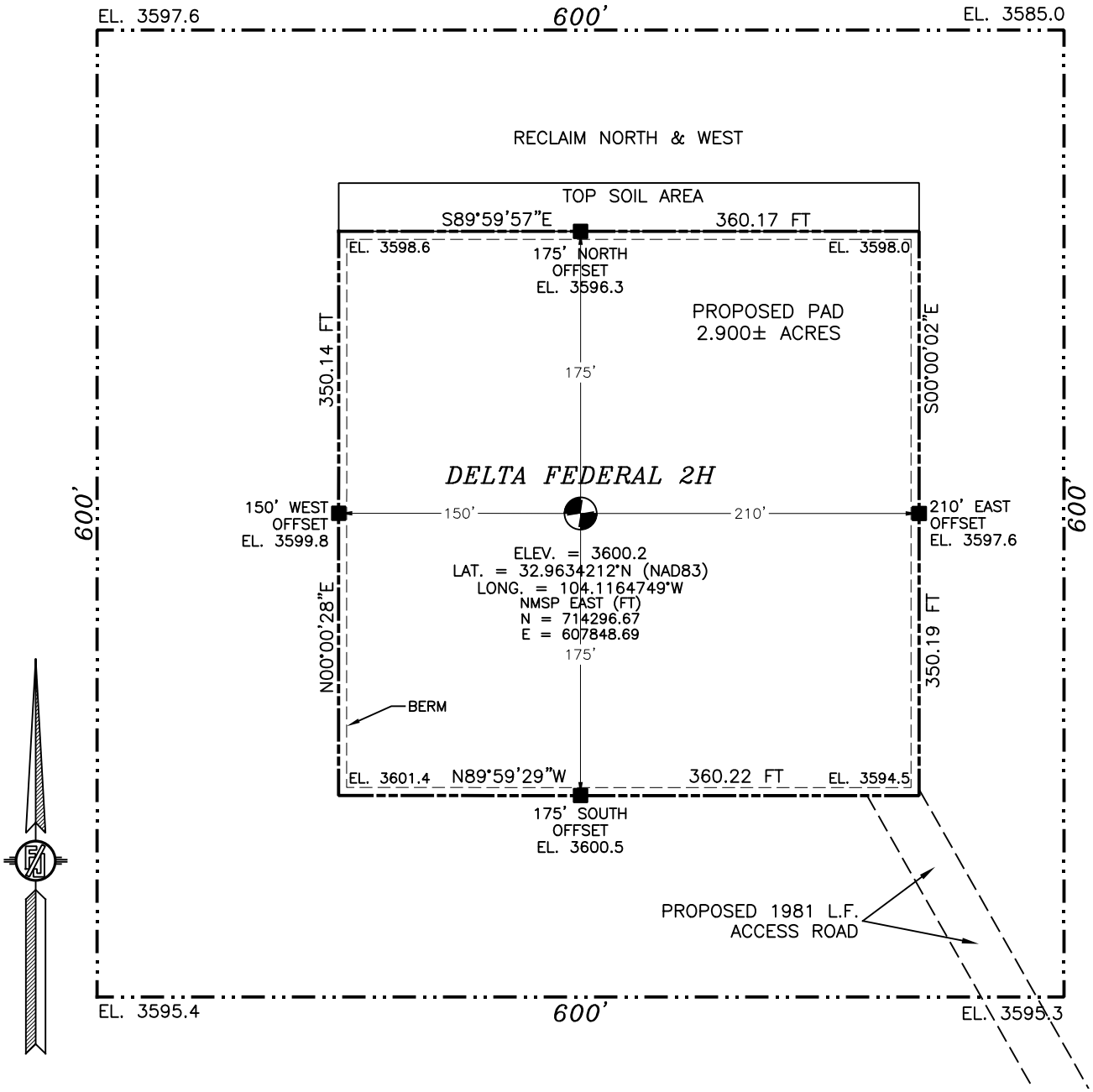
If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200
SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. 82 (LOVINGTON HWY.) & CO. RD. 209 (TURKEY TRACT RD.), GO NORTH ON CO. RD. 209 APPROX. 5 MILES TO END COUNTY MAINTENANCE, CONTINUE NORTH & NORTHEAST ON TURKEY TRACT RD. (CALICHE) APPROX. 6.0 MILES TO A ROAD SURVEY ON LEFT (NORTHWEST), FOLLOW ROAD SURVEY NORTHWEST APPROX. 1981' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY WAS MADE TO MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO PLS 17078

MACK ENERGY CORPORATION

DELTA FEDERAL 2H

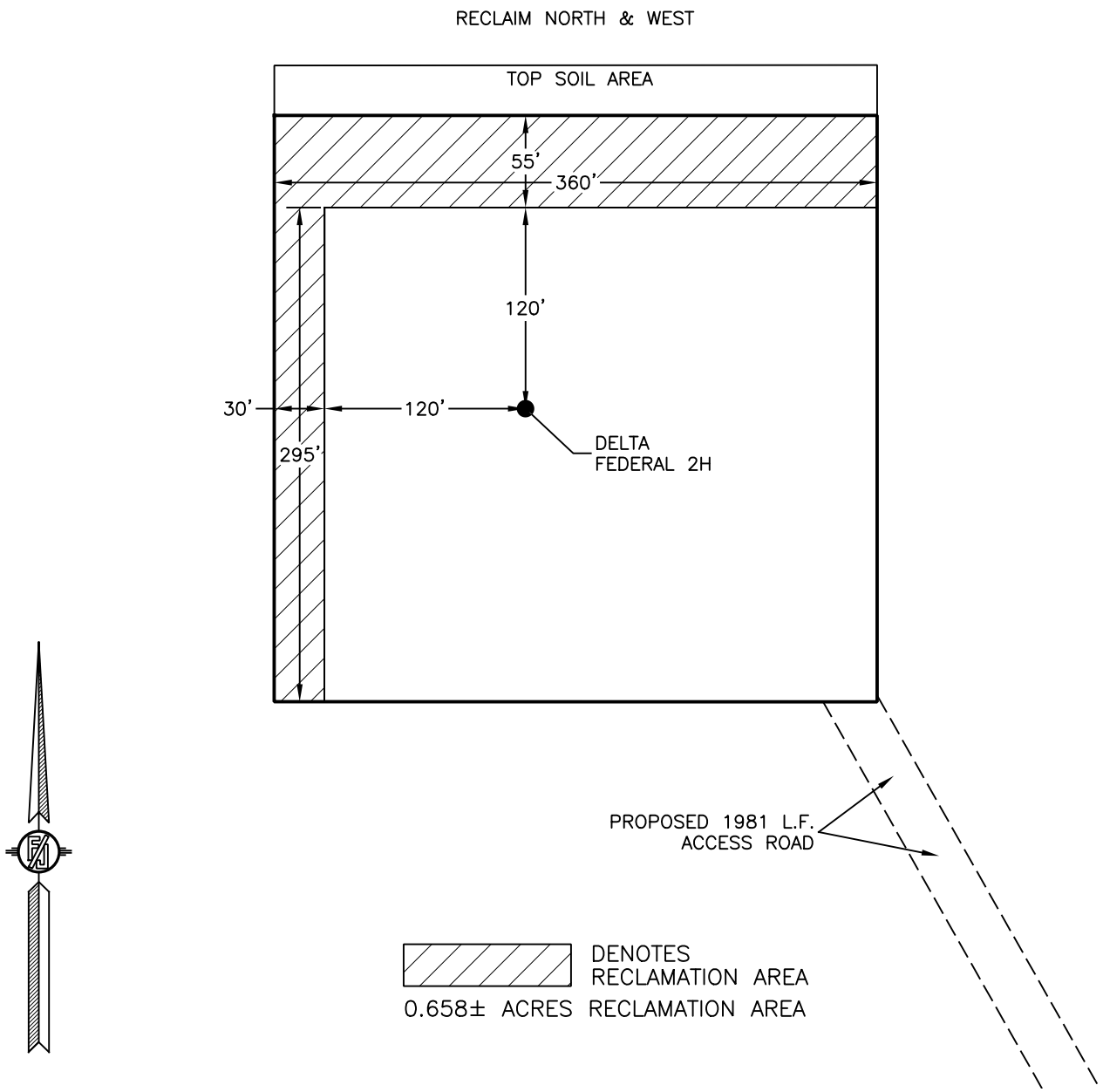
LOCATED 707 FT. FROM THE NORTH LINE AND 1460 FT. FROM THE WEST LINE OF SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 28, 2023

SURVEY NO. 9877

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 *CARLSBAD, NEW MEXICO*

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
INTERIM SITE RECLAMATION



MACK ENERGY CORPORATION

DELTA FEDERAL 2H

LOCATED 707 FT. FROM THE NORTH LINE
AND 1460 FT. FROM THE WEST LINE OF
SECTION 6, TOWNSHIP 16 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

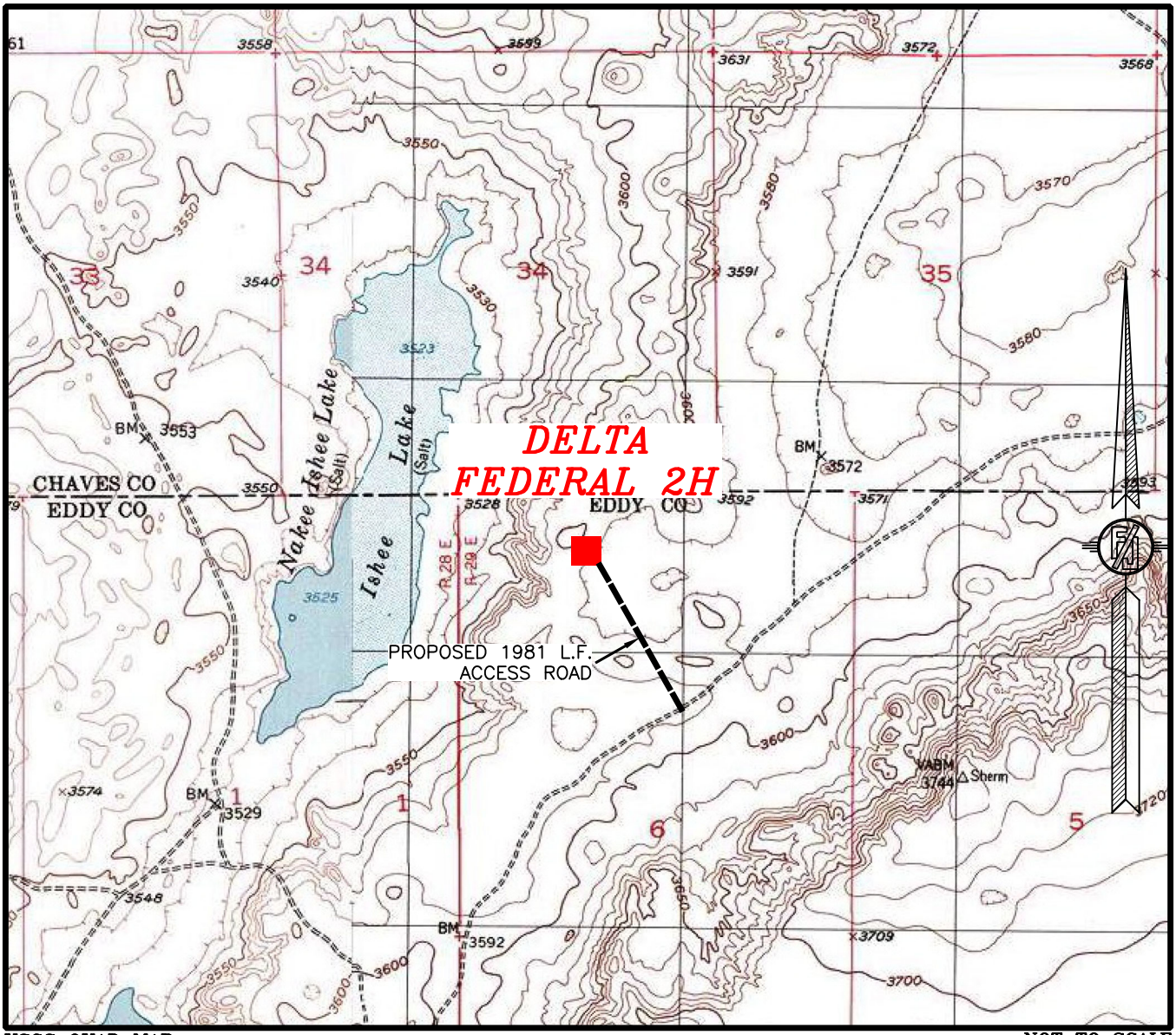
SEPTEMBER 28, 2023

SURVEY NO. 9877

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
BASIN WELL DIAMOND MOUND

NOT TO SCALE

MACK ENERGY CORPORATION
DELTA FEDERAL 2H
LOCATED 707 FT. FROM THE NORTH LINE
AND 1460 FT. FROM THE WEST LINE OF
SECTION 6, TOWNSHIP 16 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

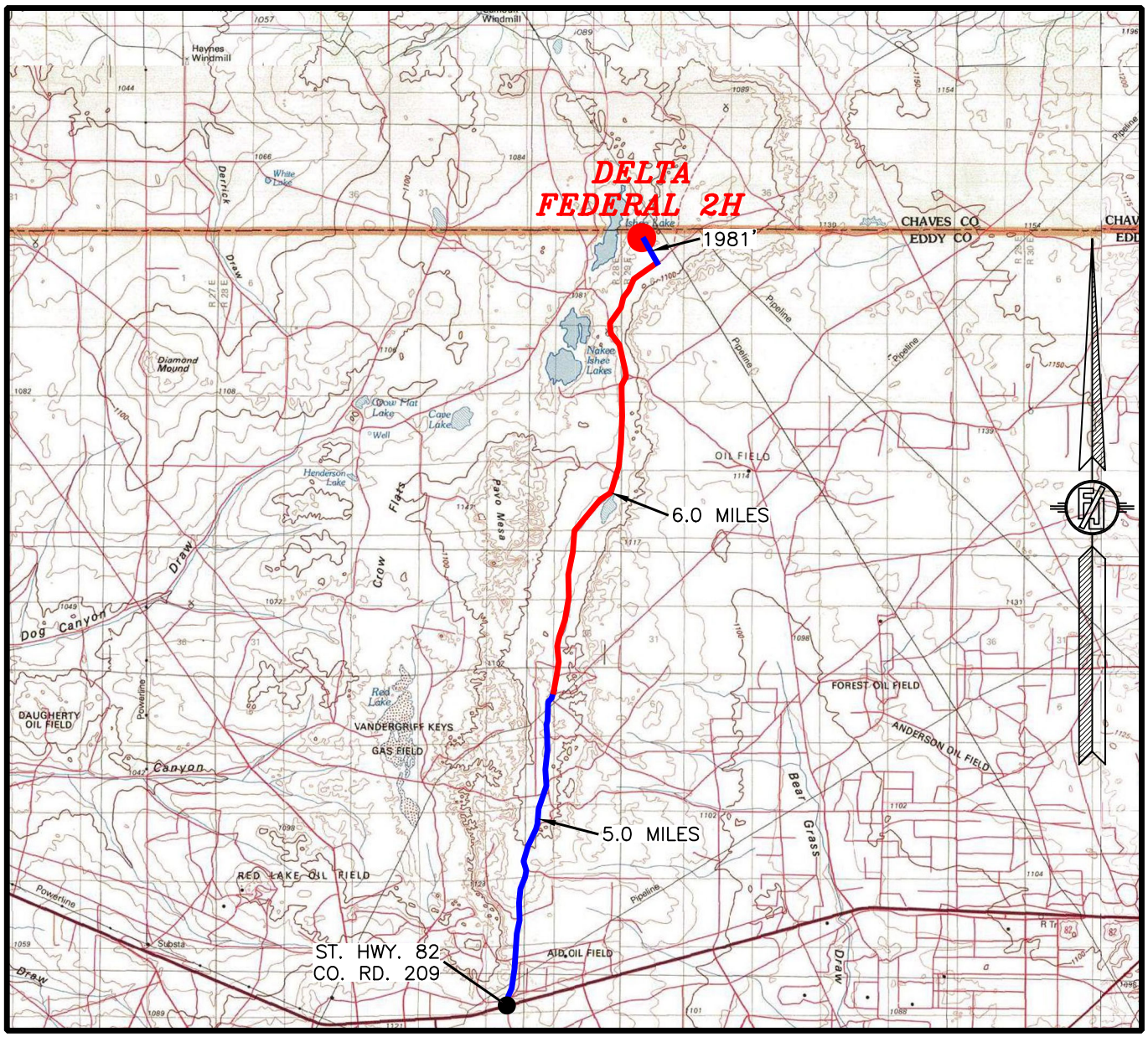
SEPTEMBER 28, 2023

SURVEY NO. 9877

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES NOT TO SCALE

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF ST. HWY. 82 (LOVINGTON HWY.) & CO. RD. 209 (TURKEY TRACT RD.), GO NORTH ON CO. RD. 209 APPROX. 5 MILES TO END COUNTY MAINTENANCE, CONTINUE NORTH & NORTHEAST ON TURKEY TRACT RD. (CALICHE) APPROX. 6.0 MILES TO A ROAD SURVEY ON LEFT (NORTHWEST), FOLLOW ROAD SURVEY NORTHWEST APPROX. 1981' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

MACK ENERGY CORPORATION
DELTA FEDERAL 2H
LOCATED 707 FT. FROM THE NORTH LINE
AND 1460 FT. FROM THE WEST LINE OF
SECTION 6, TOWNSHIP 16 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

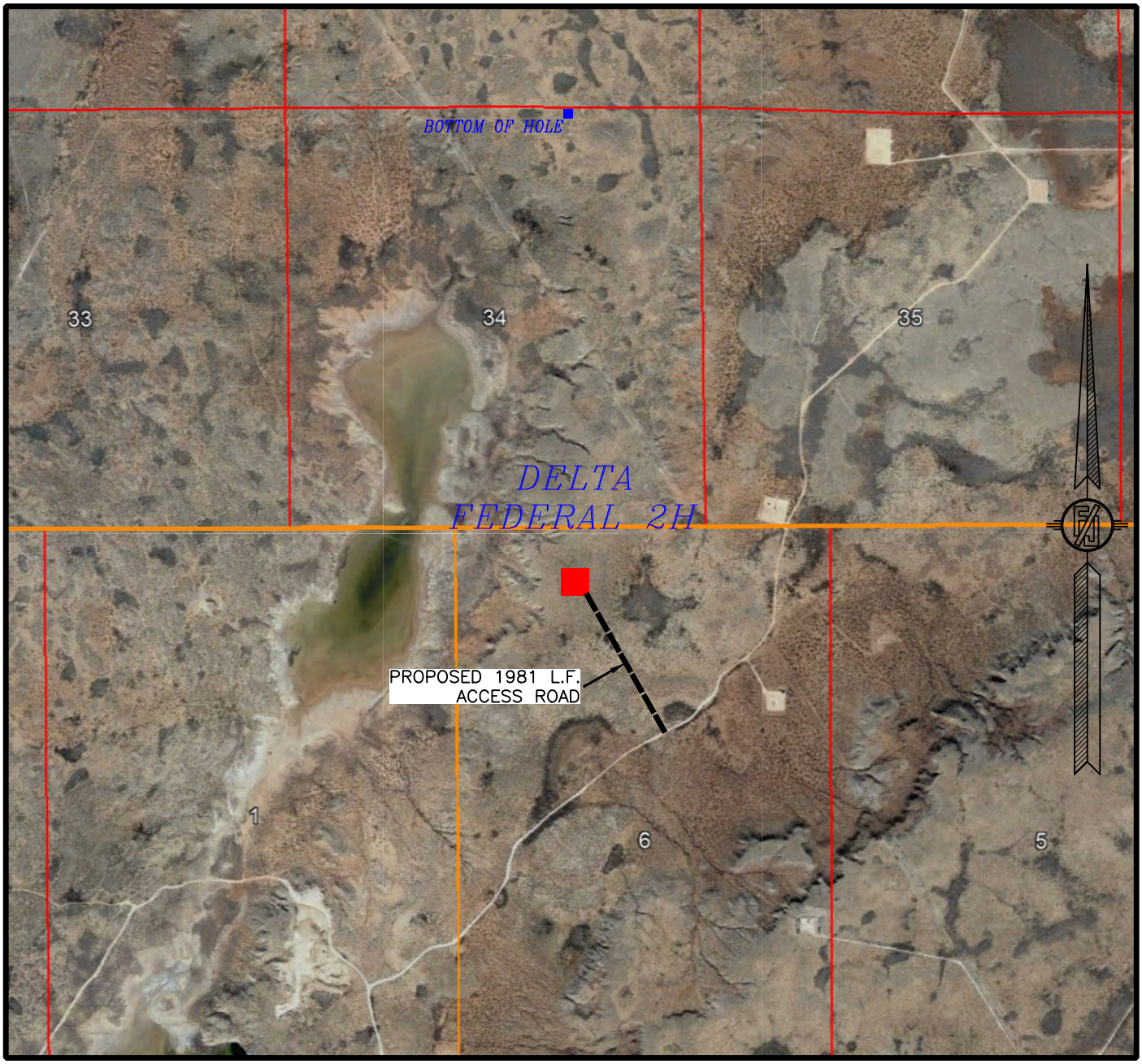
SEPTEMBER 28, 2023

SURVEY NO. 9877

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

MACK ENERGY CORPORATION
DELTA FEDERAL 2H
LOCATED 707 FT. FROM THE NORTH LINE
AND 1460 FT. FROM THE WEST LINE OF
SECTION 6, TOWNSHIP 16 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

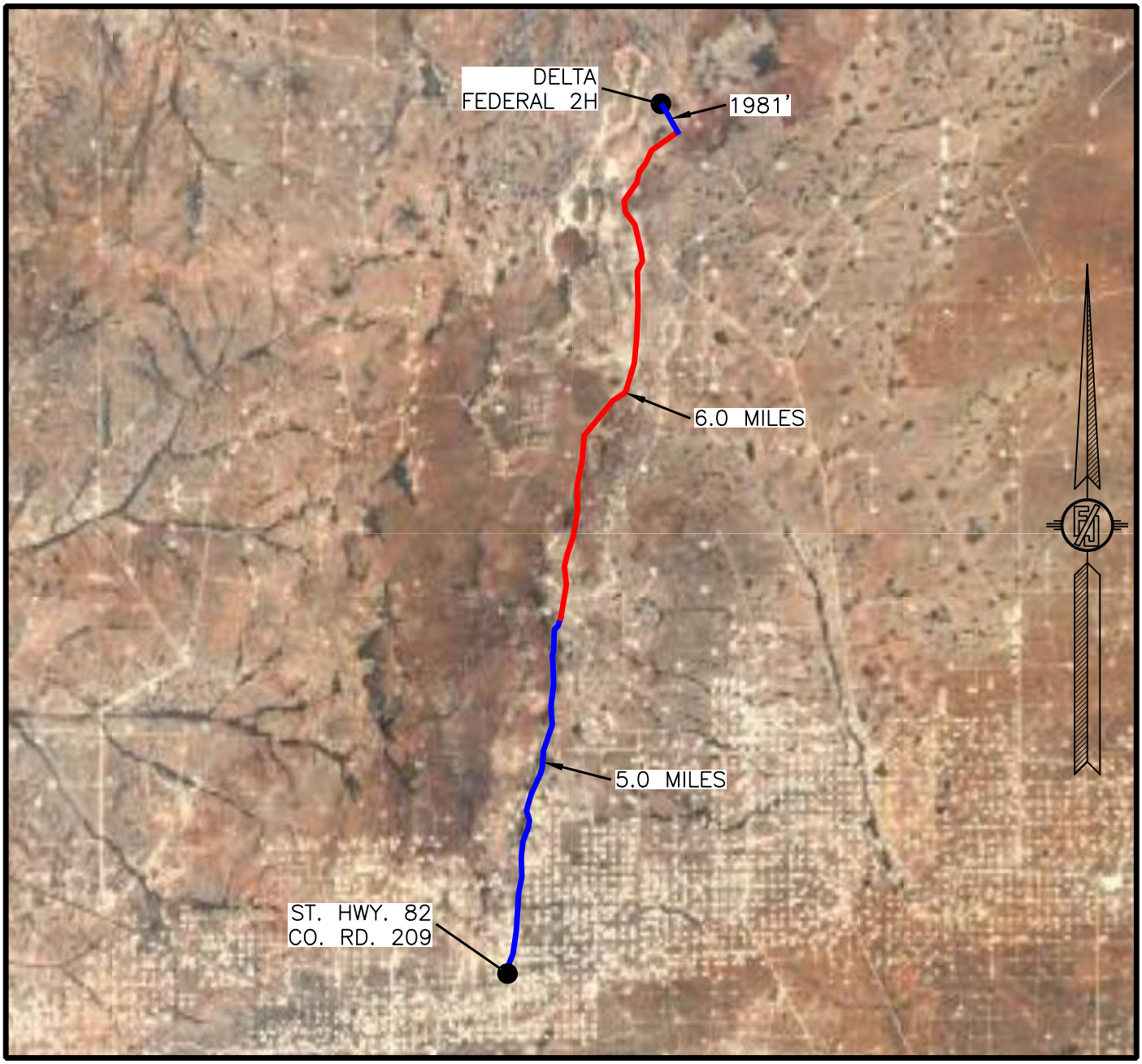
SEPTEMBER 28, 2023

SURVEY NO. 9877

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

MACK ENERGY CORPORATION
DELTA FEDERAL 2H
LOCATED 707 FT. FROM THE NORTH LINE
AND 1460 FT. FROM THE WEST LINE OF
SECTION 6, TOWNSHIP 16 SOUTH,
RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 28, 2023

SURVEY NO. 9877

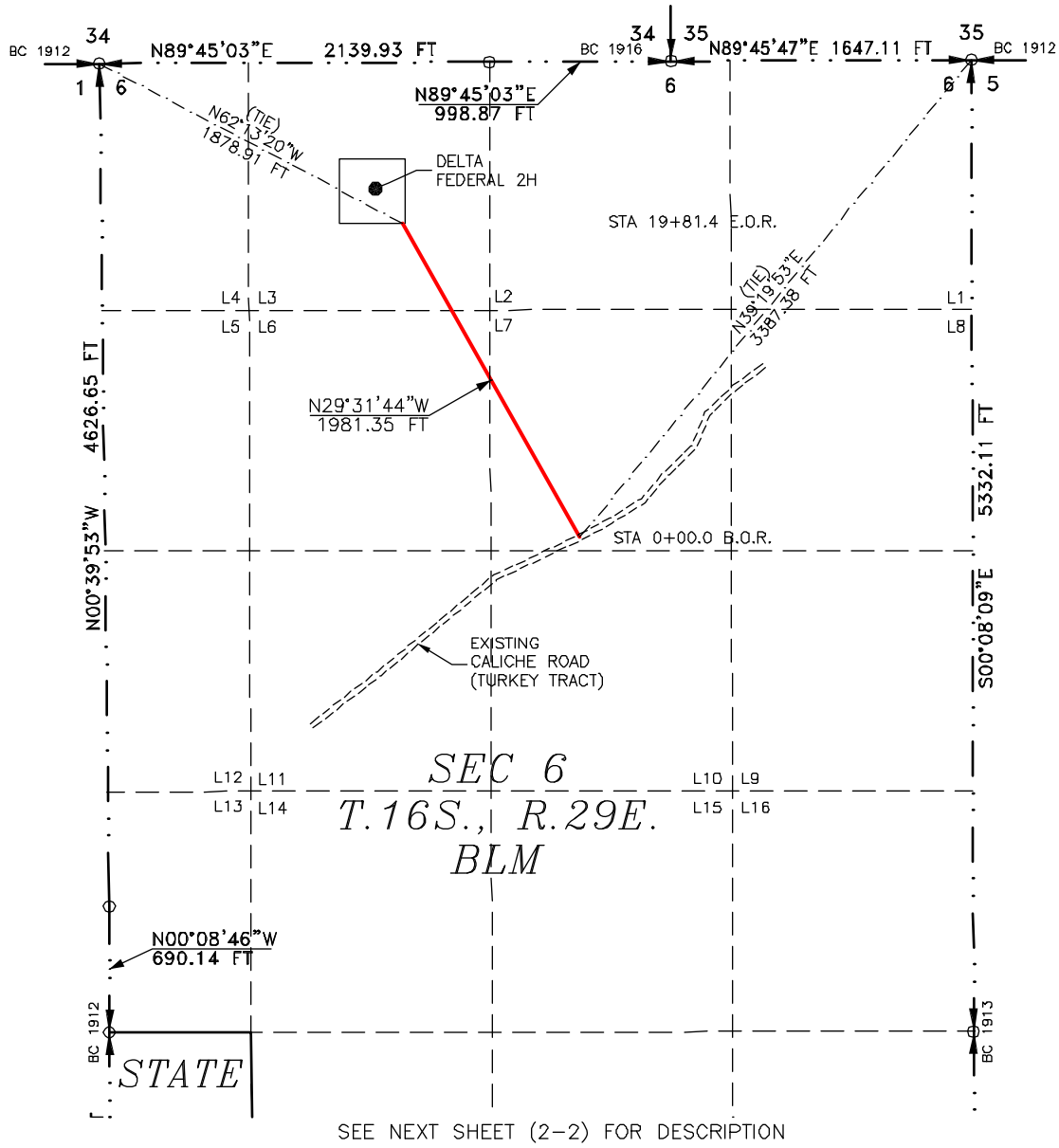
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR DELTA FEDERAL 2H

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 28, 2023



SEE NEXT SHEET (2-2) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS [illegible] DAY OF OCTOBER 2023.

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3327

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3327

SHEET: 1-2

SURVEY NO. 9877

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR DELTA FEDERAL 2H

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SEPTEMBER 28, 2023

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 7 OF SAID SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS N39°19'53"E, A DISTANCE OF 3387.38 FEET;
THENCE N29°31'44"W A DISTANCE OF 1981.35 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 6, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS N62°13'20"W, A DISTANCE OF 1878.91 FEET;

SAID STRIP OF LAND BEING 1981.35 FEET OR 120.08 RODS IN LENGTH, CONTAINING 1.365 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 7	1001.92 L.F.	60.72 RODS	0.690 ACRES
LOT 6	431.74 L.F.	26.17 RODS	0.297 ACRES
LOT 3	547.69 L.F.	33.19 RODS	0.377 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 31ST DAY OF OCTOBER 2023.

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3327

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3327

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description
Effective May 25, 2021

I. Operator: Mack Energy Corporation **OGRID:** 013837 **Date:** 10 / 25 / 2023

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Delta Federal 2H		Lot 3 Sec 6 T16S R29E	707 FNL 1460 FWL	100	100	1,000

IV. Central Delivery Point Name: DCP Midstream Linam Ranch Proscessing Plant / Durango Midstream [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Delta Federal 2H		3/1/2024	3/20/2024	6/31/2024	6/31/2024	7/1/2024

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

Section 4 - Notices

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

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

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

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

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

Signature:	Deana Weaver
Printed Name:	Deana Weaver
Title:	Regulatory Technician II
E-mail Address:	dweaver@mec.com
Date:	10/25/2024
Phone:	575-748-1288

OIL CONSERVATION DIVISION

(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

VI. Separation Equipment:

Mack Energy Corporation(MEC) production facilities include separation equipment designed to efficiently separate gas from liquid phases to optimize gas capture based on projected and estimated volumes from the targeted pool of our completion project. MEC will utilize flowback separation equipment and production separation equipment designed and built to industry specifications after the completion to optimize gas capture and send gas to sales or flare based on analytical composition. MEC operates facilities that are typically multi-well facilities. Production separation equipment is upgraded prior to new wells being completed, if determined to be undersized or inadequate. This equipment is already on-site and tied into our sales gas lines prior to the new drill operations.

VII. Operational Practices:

1. Subsection (A) Venting and Flaring of Natural Gas. MEC understands the requirements of NMAC 19.15.27.8 which outlines that the venting and flaring of natural gas during drilling, completion or production operations that constitutes waste as defined in 19.15.2 are prohibited.
2. Subsection (B) Venting and Flaring during drilling operations. This gas capture plan isn't for a well being drilled.
3. Subsection (C) Venting and flaring during completion or recompletion. Flowlines will be routed for flowback fluids into a completion or storage tank and if feasible under well conditions, flare rather than vent and commence operation of a separator as soon as it is technically feasible for a separator to function.
    - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
4. Subsection (D) Venting and flaring during production operations ○ At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.
    - Monitor manual liquid unloading for wells on-site or in close proximity (<30 minutes' drive time), take reasonable actions to achieve a stabilized rate and pressure at the earliest practical time, and take reasonable actions to minimize venting to the maximum extent practicable.
    - MEC will not vent or flare except during the approved activities listed in NMAC 19.15.27.8 (D) 14.
5. Subsection (E) Performance standards ○ All tanks and separation equipment are designed for maximum throughput and pressure to minimize waste.
    - If a flare is utilized during production operations it will have a continuous pilot and is located more than 100 feet from any known well or storage tanks.
    - At any point in the well life (completion, production, inactive) an audio, visual and olfactory inspection be performed at prescribed intervals (weekly or monthly) pursuant to Subsection D of 19.15.27.8 NMAC, to confirm that all production equipment is operating properly and there are no leaks or releases.

6. Subsection (F) Measurement or estimation of vented and flared natural gas ○ Measurement equipment is installed to measure the volume of natural gas flared from process piping.
    - When measurement isn't practicable, estimation of vented and flared natural gas will be completed as noted in 19.15.27.8 (F) 5-6.

VIII. Best Management Practices:

1. MEC has adequate storage and takeaway capacity for wells it chooses to complete as the flowlines at the sites are already in place and tied into a gathering system.
2. MEC will flare rather than vent vessel blowdown gas when technically feasible during active and/or planned maintenance to equipment on-site.
3. MEC combusts natural gas that would otherwise be vented or flared, when technically feasible.
4. MEC will shut in wells in the event of a takeaway disruption, emergency situation, or other operations where venting or flaring may occur due to equipment failures.
5. MEC has a gas gathering system in place(CTB-887)a with multiple purchaser's to limit venting or flaring, due to purchaser shut downs.

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
08/01/2024

APD ID: 10400095501
Submission Date: 01/30/2024
Operator Name: MACK ENERGY CORPORATION
Well Name: DELTA FEDERAL
Well Number: 2H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13851042	QUATERNARY	3600	0	0	ALLUVIUM, SALT	NONE	N
13851043	TOP OF SALT	3376	224	224	SALT	NONE	N
13851044	BASE OF SALT	3104	496	496	SALT	NONE	N
13851045	YATES	3088	512	512	SILTSTONE	NATURAL GAS, OIL	N
13851046	SEVEN RIVERS	2857	743	743	SILTSTONE	NATURAL GAS, OIL	N
13851047	QUEEN	2364	1236	1236	SILTSTONE	NATURAL GAS, OIL	N
13851048	GRAYBURG	1965	1635	1635	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
13851049	SAN ANDRES	1630	1970	1970	DOLOMITE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M
Rating Depth: 8625

Equipment: Rotating Head, Mud-Gas Separator

Requesting Variance? NO

Variance request:

Testing Procedure: The BOP/BOPE test shall include a low pressure test from 250 to 2,000psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 1434psig (0.052*2997'TVD*9.2ppg) less than 2900 bottom hole pressure.

Choke Diagram Attachment:

NEW_Choke_Manifold_3M_20231026085213.pdf

BOP Diagram Attachment:

NEW_BOP_3M_20231026085242.pdf

Operator Name: MACK ENERGY CORPORATION

Well Name: DELTA FEDERAL **Well Number:** 2H

NEW_Choke_Manifold_3M_20231026085213.pdf

NEW_BOP_3M_20231026085242.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	220	0	220	3600	3380	220	J-55	48	ST&C	6.738	4.697	BUOY	48.063	BUOY	4.74
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	1200	0	1200	3600	2400	1200	J-55	36	LT&C	3.237	7.04	BUOY	10.768	BUOY	7.04
3	PRODUCTION	8.75	7.0	NEW	API	N	0	2100	0	2100	3600	1500	2100	HCP-110	26	LT&C	6.864	3.317	BUOY	6.797	BUOY	3.317
4	PRODUCTION	8.75	7.0	NEW	API	N	2100	3150	2100	2940	1500	660	1050	HCP-110	26	BUTT	4.624	3.317	BUOY	8.366	BUOY	3.317
5	PRODUCTION	8.75	5.5	NEW	API	N	3150	8625	2940	2997	660	603	5475	HCP-110	17	BUTT	5.506	3.547	BUOY	7.205	BUOY	3.547

Casing Attachments

Casing ID: 1 **String** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Surface_Csg_20231026085749.pdf

Operator Name: MACK ENERGY CORPORATION

Well Name: DELTA FEDERAL **Well Number:** 2H

Casing Attachments

Casing ID: 2 **String** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Inter_Csg_20231026090347.pdf

Casing ID: 3 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Production_Csg_20231026090530.pdf

Casing ID: 4 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Production_Csg_20231026090711.pdf

Operator Name: MACK ENERGY CORPORATION

Well Name: DELTA FEDERAL **Well Number:** 2H

Casing Attachments

Casing ID: 5 **String** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Production_Csg_20231026090857.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		0	0	0	0	0	0		0	0
PRODUCTION	Lead		0	0	0	0	0	0		0	0
SURFACE	Lead		0	220	100	1.61	14.4	170		RFC+12%PF53+ 2%PF1+5pppsPF 42+.125ppsPF29	20bbls Gelled Water 50sx of 11# Scavenger Cement
SURFACE	Tail		0	220	250	1.34	14.8	170	100	Class C+1%PF1	20bbls Gelled Water 50sx of 11# Scavenger Cement
INTERMEDIATE	Lead		0	1200	220	1.72	13.5	417	100	Class C+ 45 PF20+.4pps PF45+.125 PF29	20bbls Gelled Water 50sx of 11# Scavenger Cement
INTERMEDIATE	Tail		0	1200	200	1.34	14.8	417	100	Class C + 1% PF1	20bbls Gelled Water 50sx of 11# Scavenger Cement
PRODUCTION	Lead		0	8625	240	2.82	13.5	2179	35	Class C 4% PF20+4pps PF45+125pps PF29	20bbls Gelled Water 50sx of 11# Scavenger Cement

Operator Name: MACK ENERGY CORPORATION

Well Name: DELTA FEDERAL **Well Number:** 2H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		0	8625	1720	1.34	14.2	2179	35	50/50 POZ C + 5% (BWOW) PF44+2%PF204+ .2%PF606+.1%P F153+.4pps PF44	20bbls Gelled Water 50sx of 11# Scavenger Cement

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: BOPE Brine Water

Describe the mud monitoring system utilized: Parson PVT with Pit Volume Recorder

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	220	SPUD MUD	8.5	10	74.8	0.1	11		160000		
220	1200	LSND/GEL	8.3	10	74.8	0.1	11		160000		
1200	8625	LSND/GEL	8.3	9.2	74.8	0.1	11		160000		The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 1434psig (0.052*2997'TVD*9.2ppg) less than 2900 bottom hole pressure

Operator Name: MACK ENERGY CORPORATION

Well Name: DELTA FEDERAL **Well Number:** 2H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None

List of open and cased hole logs run in the well:

GAMMA RAY LOG,FORMATION DENSITY COMPENSATED LOG,

Coring operation description for the well:

Will evaluate after logging to determine the necessity for sidewall coring.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 1434 **Anticipated Surface Pressure:** 770

Anticipated Bottom Hole Temperature(F): 95

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? NO

Hydrogen sulfide drilling operations

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Escape_Route_20231026092718.pdf
Natural_Gas_Management_Plan_20231026092729.pdf
Preliminary_Horizontal_Well_Plan_20231026092735.pdf
KOP_20231026092743.pdf
H2S_Plan_20240130073648.pdf
Drilling_Plan_20240209074536.pdf

Other proposed operations facets description:

Anticipated Completion Intervals-
First take point- 3450' MD 3015' TVD
Last take point- 8500' MD 2998' TVD

Other proposed operations facets attachment:

Other Variance attachment:

Variance_request_20231026092625.pdf
Choke_Hose_Cert_20231026092637.pdf

Operator Name: MACK ENERGY CORPORATION

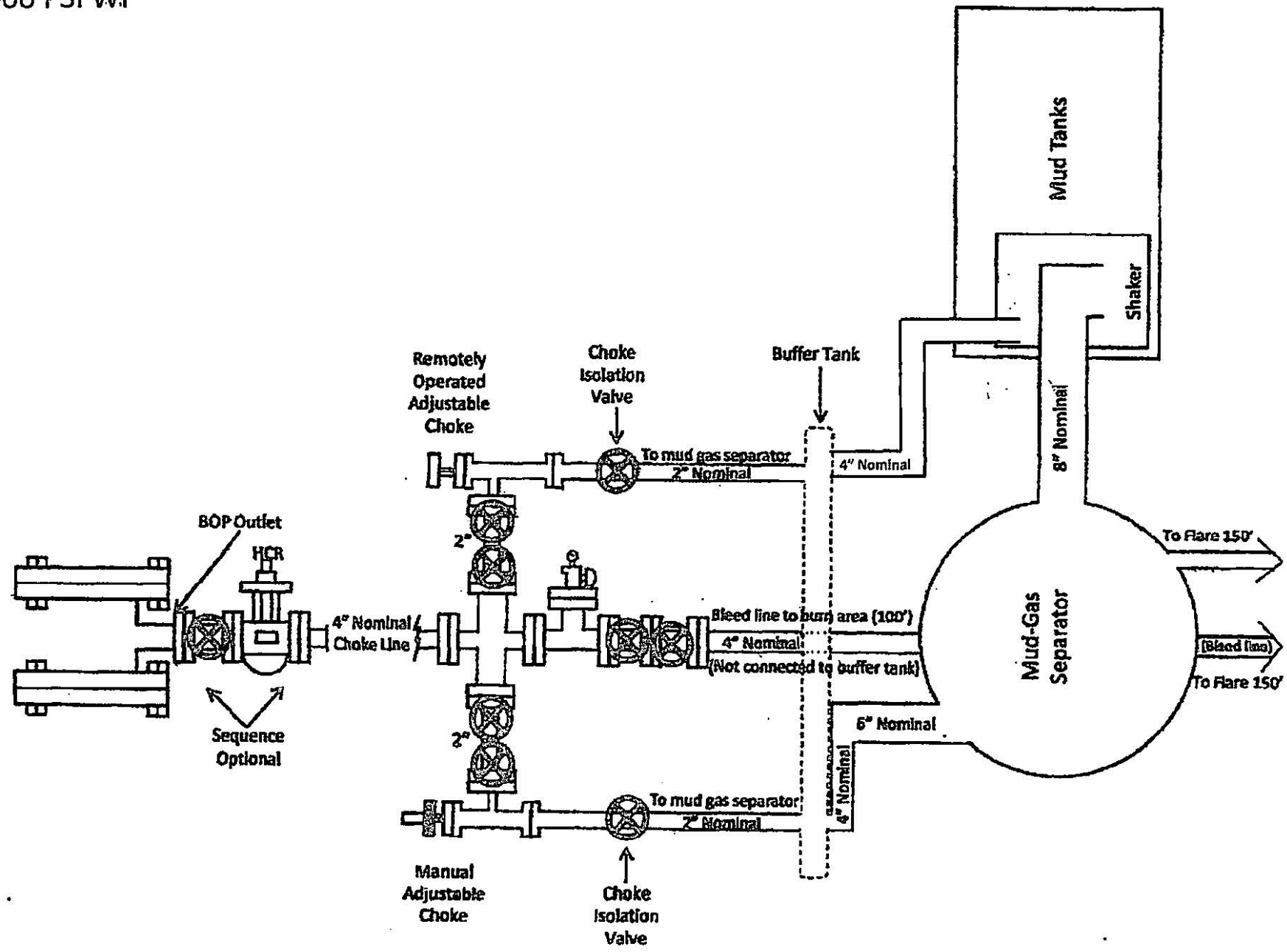
Well Name: DELTA FEDERAL **Well Number:** 2H

Cactus_Wellhead_installation_Procedure_20231026092646.pdf

CCC__Rig_6_20231026092657.pdf

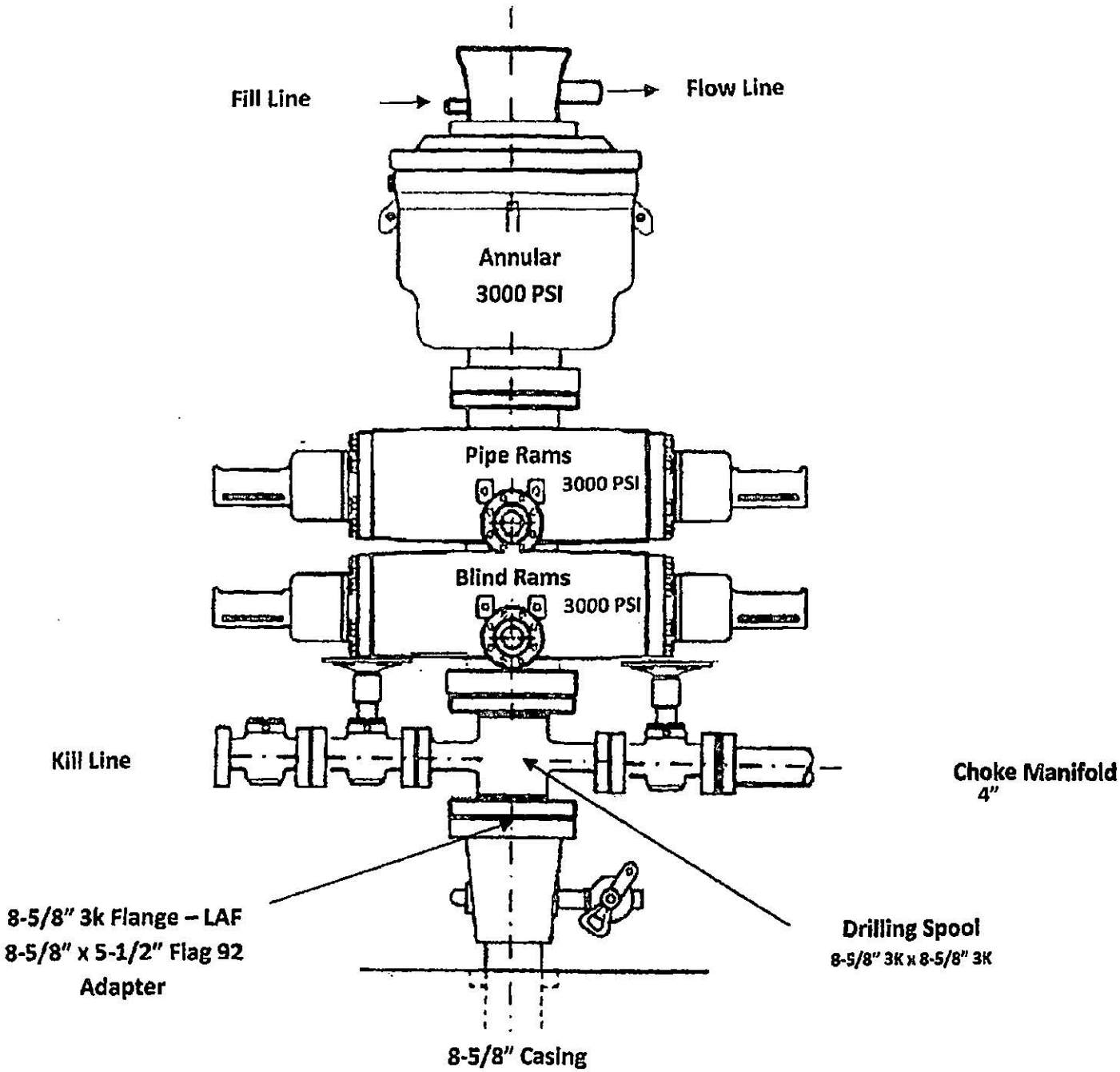
Choke Manifold

3000 PSI WP



BOP Diagram

Dual Ram BOP
3000 PSI WP



Attached to Form 3160-3
Mack Energy Corporation
Delta Federal #2H NMNM-105821026
SHL : 707 FNL & 1460 FWL, Lot 3, Sec. 6 T16S R29E
BHL : 1 FNL & 1650 FEL, NWNE, Sec. 34 T15S R28E
Chaves County, NM

DRILLING PROGRAM

1. Geologic Name of Surface Formation

Quaternary

2. Estimated Tops of Important Geologic Markers:

Top Salt	224’
Base Salt	496’
Yates	512’
Seven Rivers	743’
Queen	1236’
Grayburg	1635’
San Andres	1970’

3. Estimated Depths of Anticipated Fresh Water, Oil and Gas:

Water Sand	150’	Fresh Water
Yates	512’	Oil/Gas
Seven Rivers	743’	Oil/Gas
Queen	1236’	Oil/Gas
Grayburg	1635’	Oil/Gas
San Andres	1970’	Oil/Gas

No other formations are expected to give up oil, gas or fresh water in measurable quantities. Setting 13 3/8” casing to 220’ and circulating cement back to surface will protect the surface fresh water sand. Salt section and shallower zones above TD, which contain commercial quantities of oil and/or gas, will have cement circulated across them by cementing 5 ½” production casing, sufficient cement will be pumped to circulate back to surface.

4. Casing Program:

Hole Size	Interval	OD Casing	Wt, Grade, Jt, cond, collapse/burst/tension
17 1/2”	0-220’	13 3/8”	48#, J-55, ST&C, New, 6.738054/4.697013/4.74
12 1/4”	0-1,200’	9 5/8”	36#, J-55, LT&C, New, 3.237179/7.04/7.04
8 ¾”	0-2,100’	7”	26#, HCP-110, LT&C, New, 6.864298/3.316667/3.316667
8 ¾”	2,100-3,150’	7”	26#, HCP-110, Buttress, New, 4.624239/3.316667/3.316667
8 ¾”	3,150-8,625’	5 ½”	17#, HCP-110, Butt, New, 5.505506/3.546667/3.546667

Variance request: A variance is requested to use a Multi Bowl System and Flex Hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer’s certification and pressure test will be kept on the rig.

5. Cement Program:

13 3/8" Surface Casing: Lead 100sx, RFC+12%PF53+2%PF1+5ppsPF42+.125ppsPF29, yld 1.61, wt 14.4 ppg, 7.357gals/sx Tail 250sx, Class C+1% PF1, yld 1.34, wt 14.8 ppg, 6.323 gals/sx, excess 100%

9 5/8" Intermediate Casing: Lead 220sx, Class C+45 F20+.4pps PF45+.125 PF29, yld 1.72, wt 13.5ppg, 9.102gals/sx Tail 200sx, Class C + 1% PF1, yld 1.34, wt 14.8 ppg, 6.323 gals/sx, excess 100%

7" & 5 ½" Production Casing: Lead 240sx Class C 4% PF20+4pps PF45+125pps PF29, yld 2.82, wt 13.5 ppg, 16.421gals/sx, excess 35%, Slurry Top-Surface Tail 1720sx, 50/50 Poz/C + 5% PF44 + 2% PF204 + .2% PF606 + .1% PF153 + .4 pps PF44, yield 1.34, wt 14.2, 6.091gals/sx, 35% excess, Slurry Top- 1,900'

Anticipated Completion Intervals-
First take point- 3450'MD 3015' TVD
Last take point- 8500' MD 2998' TVD

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #10 will consist of a double ram-type (3000 psi WP) minimum preventer. This unit will be hydraulically operated and the ram type preventer will be equipped with blind rams on top of 4 1/2" drill pipe rams on bottom. The 11" BOP will be nipped up on the 8 5/8" surface casing and tested by a 3rd party to 2000 psi used continuously until TD is reached. All BOP's and accessory equipment will be tested to 2000 psi before drilling out of intermediate casing. 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. Other accessories to the BOP equipment (Exhibit #10) will include a Kelly cock and floor safety valve and choke lines and choke manifold (Exhibit #11) with a minimum 3000 psi WP rating

7. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of fresh and cut brine mud system. The applicable depths and properties of this system are as follows:

DEPTH	TYPE	WEIGHT	VISCOSITY	WATERLOSS
0-220'	Fresh Water	8.5	28	N.C.
220'-1,200'	Cut Brine	9.1	29	N.C.
1,200-TD	Cut Brine	9.1	29	N.C.

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

8. Auxiliary Well Control and Monitoring Equipment:

A. Kelly cock will be kept in the drill string at all times.

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

9. Logging, Testing and Coring Program:

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log from T.D. to 8 5/8 casing shoe.
B. Drill Stem test is not anticipated.
C. No conventional coring is anticipated.
D. Further testing procedures will be determined at TD.

10. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 1434 psig (0.052*2,997'TVD*9.2). Low levels of Hydrogen sulfide have been monitors in producing wells in the area, so H2S may be present while drilling of the well; a plan is attached to the Drilling program. No major loss of circulation zones has been reported in offsetting wells.

11. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is March 1, 2024. Once commenced, the drilling operation should be finished in approximately 20 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

Attachment to Exhibit #10
NOTES REGARDING THE BLOWOUT PREVENTERS
Delta Federal #2H
Chaves County, New Mexico

1. Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum I.D. equal to preventer bore.

2. Wear ring to be properly installed in head.

3. Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum.

4. All fittings to be flanged.

5. Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum.

6. All choke and fill lines to be securely anchored especially ends of choke lines.

Attached to Form 3160-3
Mack Energy Corporation
Delta Federal #2H NMNM-105821026
SHL : 707 FNL & 1460 FWL, Lot 3, Sec. 6 T16S R29E
BHL : 1 FNL & 1650 FEL, NWNE, Sec. 34 T15S R28E
Chaves County, NM

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7. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.

8. Kelly cock on Kelly.

9. Extension wrenches and hands wheels to be properly installed.

10. Blow out preventer control to be located as close to driller's position as feasible.

11. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation all API specifications.

Mack Energy Corporation

Minimum Blowout Preventer Requirements

3000 psi Working Pressure

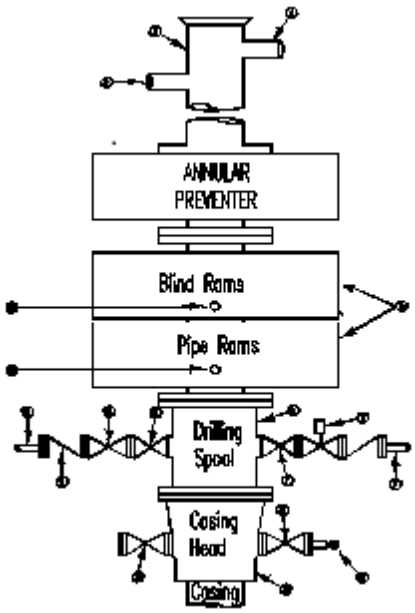
13 3/8 inch- 3 MWP

11 Inch - 3 MWP

EXHIBIT #10

Stack Requirements

NO.	Items	Min. I.D.	Min. Nominal
1	Flowline		2"
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		2" Choke
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above)		
7	Valve Gate Plug	3 1/8	
8	Gate valve-power operated	3 1/8	
9	Line to choke manifold		3"
10	Valve Gate Plug	2 1/16	
11	Check valve	2 1/16	
12	Casing head		
13	Valve Gate Plug	1 13/16	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"



OPTIONAL

16	Flanged Valve	1 13/16	

CONTRACTOR'S OPTION TO

CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 2000 psi minimum.
2. Automatic accumulator (80 gallons, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers' position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

MEC TO FURNISH:

1. Bradenhead or casing head and side valves.
2. Wear bushing. If required.

10.

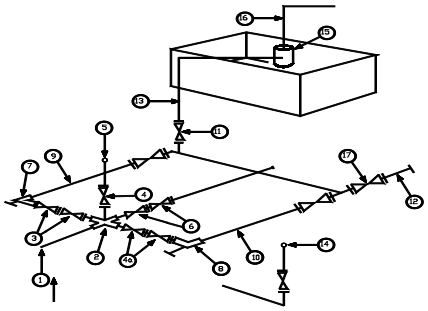
ME

GENERAL NOTES:

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through choke valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position
4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable choke, or bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with hand-wheels or handles ready for immediate use.
6. Choke lines must be suitably anchored.
7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (2000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Does not use kill line for routine fill up operations.

Mack Energy Corporation

Exhibit #11
MIMIMUM CHOKE MANIFOLD
3,000, 5,000, and 10,000 PSI Working Pressure
3M will be used
3 MWP - 5 MWP - 10 MWP



Mud Pit

Reserve Pit

*** Location of separator optional**

Below Substructure

Mimimum requirements

No.		3,000 MWP I.D.	Nominal	Rating	5,000 MWP I.D.	Nominal	Rating	10,000 MWP I.D.	Nominal	Rating
1	Line from drilling Spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3" x 3" x 3" x 2"			3,000			5,000			
2	Cross 3" x 3" x 3" x 2"									10,000
3	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
4	Valve Gate Plug	1 13/16		3,000	1 13/16		5,000	1 13/16		10,000
4a	Valves (1)	2 1/16		3,000	2 1/16		5,000	2 1/16		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
7	Adjustable Choke (3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		2"	10,000
11	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000
12	Line		3"	1,000		3"	1,000		3"	2,000
13	Line		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound Standpipe pressure quage			3,000			5,000			10,000
15	Gas Separator		2' x5'			2' x5'			2' x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valve Gate Plug	3 1/8		3,000	3 1/8		5,000	3 1/8		10,000

(1) Only one required in Class 3M
(2) Gate valves only shall be used for Class 10 M
(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTION

1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
3. All lines shall be securely anchored.
4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
5. alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
6. Line from drilling spool to choke manifold should bee as straight as possible. Lines downstream from chokes shall make turns by large bends or 90 degree bends using bull plugged tees

Variance request: A variance is requested to use a Multi Bowl System and Flex Hose as the choke line from the BOP to the Choke Manifold. If this hose is used, a copy of the manufacturer's certification and pressure test will be kept on the rig.

Delta Federal #2H, Plan 1

Operator	Mack Energy Corp	**Units**	feet, °/100ft	15:55 Wednesday, October 18, 2023	Page 1 of 4
Field	Round Tank	**County**	Eddy/Chaves	**Vertical Section Azimuth**	359.18
Well Name	Delta Federal #2H	**State**	New Mexico	**Survey Calculation Method**	Minimum Curvature
Plan	1	**Country**	USA	**Database**	Access

Location	SL: 707 FNL & 1460 FWL Section 6-T16S-R29E BHL: 1 FNL & 1650 FEL Section 34-T15S-R28E	**Map Zone**	UTM	**Lat Long Ref**	
Site		**Surface X**	1911483.7	**Surface Long**	
Slot Name		**UWI**		**Surface Y**	11966423.2	**Surface Lat**	
Well Number	2H	**API**		**Surface Z**	3617.7	**Global Z Ref**	KB
Project		**MD/TVD Ref**	KB	**Ground Level**	3600.2	**Local North Ref**	Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
*** TIE (at MD = 2110.00)										
2110.00	0.00	0.0	2110.00	0.00	0.00		0.00	1911483.70	11966423.20	1507.70
2150.00	0.00	0.0	2150.00	0.00	0.00	0.00	0.00	1911483.70	11966423.20	1467.70
2200.00	0.00	0.0	2200.00	0.00	0.00	0.00	0.00	1911483.70	11966423.20	1417.70
*** KOP 8 DEGREE (at MD = 2210.00)										
2210.00	0.00	0.0	2210.00	0.00	0.00	0.00	0.00	1911483.70	11966423.20	1407.70
2250.00	3.20	359.2	2249.98	1.12	-0.02	8.00	1.12	1911483.68	11966424.32	1367.72
2300.00	7.20	359.2	2299.76	5.65	-0.08	8.00	5.65	1911483.62	11966428.85	1317.94
2350.00	11.20	359.2	2349.11	13.64	-0.20	8.00	13.64	1911483.50	11966436.84	1268.59
2400.00	15.20	359.2	2397.78	25.05	-0.36	8.00	25.06	1911483.34	11966448.25	1219.92
2450.00	19.20	359.2	2445.53	39.83	-0.57	8.00	39.84	1911483.13	11966463.03	1172.17
2500.00	23.20	359.2	2492.14	57.91	-0.83	8.00	57.92	1911482.87	11966481.11	1125.56
2550.00	27.20	359.2	2537.37	79.19	-1.13	8.00	79.20	1911482.57	11966502.39	1080.33
2600.00	31.20	359.2	2581.01	103.58	-1.48	8.00	103.59	1911482.22	11966526.78	1036.69
2650.00	35.20	359.2	2622.84	130.95	-1.87	8.00	130.96	1911481.83	11966554.15	994.86
2700.00	39.20	359.2	2662.66	161.17	-2.31	8.00	161.18	1911481.39	11966584.37	955.04
2750.00	43.20	359.2	2700.27	194.09	-2.78	8.00	194.11	1911480.92	11966617.29	917.43
2800.00	47.20	359.2	2735.50	229.56	-3.29	8.00	229.58	1911480.41	11966652.76	882.20
2850.00	51.20	359.2	2768.16	267.40	-3.83	8.00	267.43	1911479.87	11966690.60	849.54
*** 55 DEGREE TANGENT (at MD = 2897.50)										
2897.50	55.00	359.2	2796.67	305.37	-4.37	8.00	305.40	1911479.33	11966728.57	821.03
2900.00	55.00	359.2	2798.11	307.42	-4.40	0.00	307.45	1911479.30	11966730.62	819.59
2950.00	55.00	359.2	2826.79	348.37	-4.99	0.00	348.41	1911478.71	11966771.57	790.91
3000.00	55.00	359.2	2855.47	389.33	-5.57	0.00	389.37	1911478.13	11966812.53	762.23
3050.00	55.00	359.2	2884.14	430.28	-6.16	0.00	430.32	1911477.54	11966853.48	733.56
*** 10 DEGREE BUILD (at MD = 3097.50)										
3097.50	55.00	359.2	2911.39	469.19	-6.72	0.00	469.23	1911476.98	11966892.39	706.31
3100.00	55.25	359.2	2912.82	471.24	-6.74	10.00	471.28	1911476.96	11966894.44	704.88
3150.00	60.25	359.2	2939.49	513.51	-7.35	10.00	513.56	1911476.35	11966936.71	678.21
3200.00	65.25	359.2	2962.38	557.94	-7.99	10.00	557.99	1911475.71	11966981.14	655.32
3250.00	70.25	359.2	2981.30	604.20	-8.65	10.00	604.26	1911475.05	11967027.40	636.40
3300.00	75.25	359.2	2996.13	651.93	-9.33	10.00	651.99	1911474.37	11967075.13	621.57
3350.00	80.25	359.2	3006.73	700.77	-10.03	10.00	700.84	1911473.67	11967123.97	610.97
3400.00	85.25	359.2	3013.04	750.35	-10.74	10.00	750.42	1911472.96	11967173.55	604.66
*** LANDING POINT (at MD = 3449.50)										
3449.50	90.20	359.2	3015.00	799.79	-11.45	10.00	799.87	1911472.25	11967222.99	602.70
3450.00	90.20	359.2	3015.00	800.29	-11.45	0.00	800.37	1911472.25	11967223.49	602.70
3500.00	90.20	359.2	3014.83	850.28	-12.17	0.00	850.37	1911471.53	11967273.48	602.87
3550.00	90.20	359.2	3014.65	900.28	-12.89	0.00	900.37	1911470.81	11967323.48	603.05

Delta Federal #2H, Plan 1

Operator	Mack Energy Corp	**Units**	feet, °/100ft	15:55 Wednesday, October 18, 2023	Page 2 of 4
Field	Round Tank	**County**	Eddy/Chaves	**Vertical Section Azimuth**	359.18
Well Name	Delta Federal #2H	**State**	New Mexico	**Survey Calculation Method**	Minimum Curvature
Plan	1	**Country**	USA	**Database**	Access

Location	SL: 707 FNL & 1460 FWL Section 6-T16S-R29E BHL: 1 FNL & 1650 FEL Section 34-T15S-R28E	**Map Zone**	UTM	**Lat Long Ref**	
Site		**Surface X**	1911483.7	**Surface Long**	
Slot Name		**UWI**		**Surface Y**	11966423.2	**Surface Lat**	
Well Number	2H	**API**		**Surface Z**	3617.7	**Global Z Ref**	KB
Project		**MD/TVD Ref**	KB	**Ground Level**	3600.2	**Local North Ref**	Grid

DIRECTIONAL WELL PLAN

MD* ft	INC* deg	AZI* deg	TVD* ft	N* ft	E* ft	DLS* °/100ft	V. S.* ft	MapE* ft	MapN* ft	SysTVD* ft
3600.00	90.20	359.2	3014.48	950.27	-13.60	0.00	950.37	1911470.10	11967373.47	603.22
3650.00	90.20	359.2	3014.30	1000.27	-14.32	0.00	1000.37	1911469.38	11967423.47	603.40
3700.00	90.20	359.2	3014.13	1050.26	-15.03	0.00	1050.37	1911468.67	11967473.46	603.57
3750.00	90.20	359.2	3013.96	1100.25	-15.75	0.00	1100.37	1911467.95	11967523.45	603.74
3800.00	90.20	359.2	3013.78	1150.25	-16.46	0.00	1150.37	1911467.24	11967573.45	603.92
3850.00	90.20	359.2	3013.61	1200.24	-17.18	0.00	1200.37	1911466.52	11967623.44	604.09
3900.00	90.20	359.2	3013.43	1250.24	-17.89	0.00	1250.37	1911465.81	11967673.44	604.27
3950.00	90.20	359.2	3013.26	1300.23	-18.61	0.00	1300.37	1911465.09	11967723.43	604.44
4000.00	90.20	359.2	3013.08	1350.23	-19.33	0.00	1350.37	1911464.37	11967773.43	604.62
4050.00	90.20	359.2	3012.91	1400.22	-20.04	0.00	1400.37	1911463.66	11967823.42	604.79
4100.00	90.20	359.2	3012.73	1450.22	-20.76	0.00	1450.36	1911462.94	11967873.42	604.97
4150.00	90.20	359.2	3012.56	1500.21	-21.47	0.00	1500.36	1911462.23	11967923.41	605.14
4200.00	90.20	359.2	3012.38	1550.21	-22.19	0.00	1550.36	1911461.51	11967973.41	605.32
4250.00	90.20	359.2	3012.21	1600.20	-22.90	0.00	1600.36	1911460.80	11968023.40	605.49
4300.00	90.20	359.2	3012.04	1650.19	-23.62	0.00	1650.36	1911460.08	11968073.39	605.66
4350.00	90.20	359.2	3011.86	1700.19	-24.33	0.00	1700.36	1911459.37	11968123.39	605.84
4400.00	90.20	359.2	3011.69	1750.18	-25.05	0.00	1750.36	1911458.65	11968173.38	606.01
4450.00	90.20	359.2	3011.51	1800.18	-25.77	0.00	1800.36	1911457.93	11968223.38	606.19
4500.00	90.20	359.2	3011.34	1850.17	-26.48	0.00	1850.36	1911457.22	11968273.37	606.36
4550.00	90.20	359.2	3011.16	1900.17	-27.20	0.00	1900.36	1911456.50	11968323.37	606.54
4600.00	90.20	359.2	3010.99	1950.16	-27.91	0.00	1950.36	1911455.79	11968373.36	606.71
4650.00	90.20	359.2	3010.81	2000.16	-28.63	0.00	2000.36	1911455.07	11968423.36	606.89
4700.00	90.20	359.2	3010.64	2050.15	-29.34	0.00	2050.36	1911454.36	11968473.35	607.06
4750.00	90.20	359.2	3010.46	2100.15	-30.06	0.00	2100.36	1911453.64	11968523.35	607.24
4800.00	90.20	359.2	3010.29	2150.14	-30.77	0.00	2150.36	1911452.93	11968573.34	607.41
4850.00	90.20	359.2	3010.12	2200.14	-31.49	0.00	2200.36	1911452.21	11968623.34	607.58
4900.00	90.20	359.2	3009.94	2250.13	-32.21	0.00	2250.36	1911451.49	11968673.33	607.76
4950.00	90.20	359.2	3009.77	2300.12	-32.92	0.00	2300.36	1911450.78	11968723.32	607.93
5000.00	90.20	359.2	3009.59	2350.12	-33.64	0.00	2350.36	1911450.06	11968773.32	608.11
5050.00	90.20	359.2	3009.42	2400.11	-34.35	0.00	2400.36	1911449.35	11968823.31	608.28
5100.00	90.20	359.2	3009.24	2450.11	-35.07	0.00	2450.36	1911448.63	11968873.31	608.46
5150.00	90.20	359.2	3009.07	2500.10	-35.78	0.00	2500.36	1911447.92	11968923.30	608.63
5200.00	90.20	359.2	3008.89	2550.10	-36.50	0.00	2550.36	1911447.20	11968973.30	608.81
5250.00	90.20	359.2	3008.72	2600.09	-37.21	0.00	2600.36	1911446.49	11969023.29	608.98
5300.00	90.20	359.2	3008.55	2650.09	-37.93	0.00	2650.36	1911445.77	11969073.29	609.16
5350.00	90.20	359.2	3008.37	2700.08	-38.65	0.00	2700.36	1911445.05	11969123.28	609.33
5400.00	90.20	359.2	3008.20	2750.08	-39.36	0.00	2750.36	1911444.34	11969173.28	609.50

Delta Federal #2H, Plan 1

Operator	Mack Energy Corp	**Units**	feet, °/100ft	15:55 Wednesday, October 18, 2023	Page 3 of 4
Field	Round Tank	**County**	Eddy/Chaves	**Vertical Section Azimuth**	359.18
Well Name	Delta Federal #2H	**State**	New Mexico	**Survey Calculation Method**	Minimum Curvature
Plan	1	**Country**	USA	**Database**	Access

Location	SL: 707 FNL & 1460 FWL Section 6-T16S-R29E BHL: 1 FNL & 1650 FEL Section 34-T15S-R28E	**Map Zone**	UTM	**Lat Long Ref**	
Site		**Surface X**	1911483.7	**Surface Long**	
Slot Name		**UWI**		**Surface Y**	11966423.2	**Surface Lat**	
Well Number	2H	**API**		**Surface Z**	3617.7	**Global Z Ref**	KB
Project		**MD/TVD Ref**	KB	**Ground Level**	3600.2	**Local North Ref**	Grid

DIRECTIONAL WELL PLAN

MD*	INC*	AZI*	TVD*	N*	E*	DLS*	V. S.*	MapE*	MapN*	SysTVD*
ft	deg	deg	ft	ft	ft	°/100ft	ft	ft	ft	ft
5450.00	90.20	359.2	3008.02	2800.07	-40.08	0.00	2800.36	1911443.62	11969223.27	609.68
5500.00	90.20	359.2	3007.85	2850.06	-40.79	0.00	2850.36	1911442.91	11969273.26	609.85
5550.00	90.20	359.2	3007.67	2900.06	-41.51	0.00	2900.36	1911442.19	11969323.26	610.03
5600.00	90.20	359.2	3007.50	2950.05	-42.22	0.00	2950.36	1911441.48	11969373.25	610.20
5650.00	90.20	359.2	3007.32	3000.05	-42.94	0.00	3000.36	1911440.76	11969423.25	610.38
5700.00	90.20	359.2	3007.15	3050.04	-43.65	0.00	3050.36	1911440.05	11969473.24	610.55
5750.00	90.20	359.2	3006.97	3100.04	-44.37	0.00	3100.35	1911439.33	11969523.24	610.73
5800.00	90.20	359.2	3006.80	3150.03	-45.09	0.00	3150.35	1911438.61	11969573.23	610.90
5850.00	90.20	359.2	3006.63	3200.03	-45.80	0.00	3200.35	1911437.90	11969623.23	611.07
5900.00	90.20	359.2	3006.45	3250.02	-46.52	0.00	3250.35	1911437.18	11969673.22	611.25
5950.00	90.20	359.2	3006.28	3300.02	-47.23	0.00	3300.35	1911436.47	11969723.22	611.42
6000.00	90.20	359.2	3006.10	3350.01	-47.95	0.00	3350.35	1911435.75	11969773.21	611.60
6050.00	90.20	359.2	3005.93	3400.00	-48.66	0.00	3400.35	1911435.04	11969823.20	611.77
6100.00	90.20	359.2	3005.75	3450.00	-49.38	0.00	3450.35	1911434.32	11969873.20	611.95
6150.00	90.20	359.2	3005.58	3499.99	-50.09	0.00	3500.35	1911433.61	11969923.19	612.12
6200.00	90.20	359.2	3005.40	3549.99	-50.81	0.00	3550.35	1911432.89	11969973.19	612.30
6250.00	90.20	359.2	3005.23	3599.98	-51.53	0.00	3600.35	1911432.17	11970023.18	612.47
6300.00	90.20	359.2	3005.05	3649.98	-52.24	0.00	3650.35	1911431.46	11970073.18	612.65
6350.00	90.20	359.2	3004.88	3699.97	-52.96	0.00	3700.35	1911430.74	11970123.17	612.82
6400.00	90.20	359.2	3004.71	3749.97	-53.67	0.00	3750.35	1911430.03	11970173.17	612.99
6450.00	90.20	359.2	3004.53	3799.96	-54.39	0.00	3800.35	1911429.31	11970223.16	613.17
6500.00	90.20	359.2	3004.36	3849.96	-55.10	0.00	3850.35	1911428.60	11970273.16	613.34
6550.00	90.20	359.2	3004.18	3899.95	-55.82	0.00	3900.35	1911427.88	11970323.15	613.52
6600.00	90.20	359.2	3004.01	3949.95	-56.53	0.00	3950.35	1911427.17	11970373.15	613.69
6650.00	90.20	359.2	3003.83	3999.94	-57.25	0.00	4000.35	1911426.45	11970423.14	613.87
6700.00	90.20	359.2	3003.66	4049.93	-57.97	0.00	4050.35	1911425.73	11970473.13	614.04
6750.00	90.20	359.2	3003.48	4099.93	-58.68	0.00	4100.35	1911425.02	11970523.13	614.22
6800.00	90.20	359.2	3003.31	4149.92	-59.40	0.00	4150.35	1911424.30	11970573.12	614.39
6850.00	90.20	359.2	3003.13	4199.92	-60.11	0.00	4200.35	1911423.59	11970623.12	614.57
6900.00	90.20	359.2	3002.96	4249.91	-60.83	0.00	4250.35	1911422.87	11970673.11	614.74
6950.00	90.20	359.2	3002.79	4299.91	-61.54	0.00	4300.35	1911422.16	11970723.11	614.91
7000.00	90.20	359.2	3002.61	4349.90	-62.26	0.00	4350.35	1911421.44	11970773.10	615.09
7050.00	90.20	359.2	3002.44	4399.90	-62.97	0.00	4400.35	1911420.73	11970823.10	615.26
7100.00	90.20	359.2	3002.26	4449.89	-63.69	0.00	4450.35	1911420.01	11970873.09	615.44
7150.00	90.20	359.2	3002.09	4499.89	-64.41	0.00	4500.35	1911419.29	11970923.09	615.61
7200.00	90.20	359.2	3001.91	4549.88	-65.12	0.00	4550.35	1911418.58	11970973.08	615.79
7250.00	90.20	359.2	3001.74	4599.87	-65.84	0.00	4600.35	1911417.86	11971023.07	615.96

Delta Federal #2H, Plan 1

Operator	Mack Energy Corp	**Units**	feet, °/100ft	15:55 Wednesday, October 18, 2023	Page 4 of 4
Field	Round Tank	**County**	Eddy/Chaves	**Vertical Section Azimuth**	359.18
Well Name	Delta Federal #2H	**State**	New Mexico	**Survey Calculation Method**	Minimum Curvature
Plan	1	**Country**	USA	**Database**	Access

Location	SL: 707 FNL & 1460 FWL Section 6-T16S-R29E BHL: 1 FNL & 1650 FEL Section 34-T15S-R28E	**Map Zone**	UTM	**Lat Long Ref**	
Site		**Surface X**	1911483.7	**Surface Long**	
Slot Name		**UWI**		**Surface Y**	11966423.2	**Surface Lat**	
Well Number	2H	**API**		**Surface Z**	3617.7	**Global Z Ref**	KB
Project		**MD/TVD Ref**	KB	**Ground Level**	3600.2	**Local North Ref**	Grid

DIRECTIONAL WELL PLAN

MD* ft	INC* deg	AZI* deg	TVD* ft	N* ft	E* ft	DLS* °/100ft	V. S.* ft	MapE* ft	MapN* ft	SysTVD* ft
7300.00	90.20	359.2	3001.56	4649.87	-66.55	0.00	4650.35	1911417.15	11971073.07	616.14
7350.00	90.20	359.2	3001.39	4699.86	-67.27	0.00	4700.35	1911416.43	11971123.06	616.31
7400.00	90.20	359.2	3001.21	4749.86	-67.98	0.00	4750.34	1911415.72	11971173.06	616.49
7450.00	90.20	359.2	3001.04	4799.85	-68.70	0.00	4800.34	1911415.00	11971223.05	616.66
7500.00	90.20	359.2	3000.87	4849.85	-69.41	0.00	4850.34	1911414.29	11971273.05	616.83
7550.00	90.20	359.2	3000.69	4899.84	-70.13	0.00	4900.34	1911413.57	11971323.04	617.01
7600.00	90.20	359.2	3000.52	4949.84	-70.85	0.00	4950.34	1911412.85	11971373.04	617.18
7650.00	90.20	359.2	3000.34	4999.83	-71.56	0.00	5000.34	1911412.14	11971423.03	617.36
7700.00	90.20	359.2	3000.17	5049.83	-72.28	0.00	5050.34	1911411.42	11971473.03	617.53
7750.00	90.20	359.2	2999.99	5099.82	-72.99	0.00	5100.34	1911410.71	11971523.02	617.71
7800.00	90.20	359.2	2999.82	5149.81	-73.71	0.00	5150.34	1911409.99	11971573.01	617.88
7850.00	90.20	359.2	2999.64	5199.81	-74.42	0.00	5200.34	1911409.28	11971623.01	618.06
7900.00	90.20	359.2	2999.47	5249.80	-75.14	0.00	5250.34	1911408.56	11971673.00	618.23
7950.00	90.20	359.2	2999.29	5299.80	-75.85	0.00	5300.34	1911407.85	11971723.00	618.41
8000.00	90.20	359.2	2999.12	5349.79	-76.57	0.00	5350.34	1911407.13	11971772.99	618.58
8050.00	90.20	359.2	2998.95	5399.79	-77.29	0.00	5400.34	1911406.41	11971822.99	618.75
8100.00	90.20	359.2	2998.77	5449.78	-78.00	0.00	5450.34	1911405.70	11971872.98	618.93
8150.00	90.20	359.2	2998.60	5499.78	-78.72	0.00	5500.34	1911404.98	11971922.98	619.10
8200.00	90.20	359.2	2998.42	5549.77	-79.43	0.00	5550.34	1911404.27	11971972.97	619.28
8250.00	90.20	359.2	2998.25	5599.77	-80.15	0.00	5600.34	1911403.55	11972022.97	619.45
8300.00	90.20	359.2	2998.07	5649.76	-80.86	0.00	5650.34	1911402.84	11972072.96	619.63
8350.00	90.20	359.2	2997.90	5699.76	-81.58	0.00	5700.34	1911402.12	11972122.96	619.80
8400.00	90.20	359.2	2997.72	5749.75	-82.29	0.00	5750.34	1911401.41	11972172.95	619.98
8450.00	90.20	359.2	2997.55	5799.74	-83.01	0.00	5800.34	1911400.69	11972222.94	620.15
8500.00	90.20	359.2	2997.37	5849.74	-83.73	0.00	5850.34	1911399.97	11972272.94	620.33
8550.00	90.20	359.2	2997.20	5899.73	-84.44	0.00	5900.34	1911399.26	11972322.93	620.50
8600.00	90.20	359.2	2997.03	5949.73	-85.16	0.00	5950.34	1911398.54	11972372.93	620.67
*** TD (at MD = 8624.50)										
8624.50	90.20	359.2	2996.94	5974.23	-85.51	0.00	5974.84	1911398.19	11972397.43	620.76

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MACK ENERGY CORPORATION
LEASE NO.:	NMNM-105821026
WELL NAME & NO.:	DELTA FEDERAL #2H
SURFACE HOLE FOOTAGE:	[707] ' F [N] L [1460] ' F [W] L
LOCATION:	Section 6, T 16. S., R 29 E., NMPM
COUNTY:	Eddy County, New Mexico

1. GENERAL PROVISIONS

Approval of the APD does not warrant that any party holds equitable or legal title. Any request for a variance shall be submitted to the Authorized Officer on Sundry Notice (Form 3160-5).

For BLM's surface operating standards and guidelines, refer to: The Gold Book , Fourth Edition – Revised 2007. To obtain a copy free of charge contact the Roswell Field Office (575) 627-0272 or visit BLM on the web at:
http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices/gold_book.html
All construction, operations, and reclamation shall follow the Onshore Oil and Gas Operations as described in the 43 CFR part 3160.

The Operator shall submit a Sundry Notice (Form 3160-5) to the Bureau of Land Management, Roswell Field Office (address above) for approval prior to beginning any new surface-disturbing activities or operations that are not specifically addressed and approved by this APD.

A site facility diagram and a site security plan shall be filed no later than 60 calendar days following first production (Onshore Order 3, Section III, I. and 43 CFR 3162.7-5).

2. PERMIT EXPIRATION

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

3. JURISDICTIONAL WATERS of the U.S.

The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers prior to discharge or dredge and fill material into waters of the United States in accordance with Section 404 of the Clean Water Act. Contact The U.S. Army Corps of Engineers regulatory New

Mexico Branch Office, 4101 Jefferson Plaza NE, Albuquerque, NM 87109-3435 at (505) 342-3678 or Email: CESPA-RD-NM@usace.army.mil if you have questions.

4. ARCHAEOLOGICAL, PALEONTOLOGICAL & HISTORICAL SITES

Any cultural and/or paleontological resource discovered inadvertently by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

5. HUMAN REMAINS AND OBJECTS OF CULTURAL PATRIMONY

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

6. NOXIOUS WEEDS

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

7. CAVE AND KARST

Any Cave or Karst feature discovered by the operator or by any person working on the operator's behalf shall immediately report the feature to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. During drilling, previously unknown cave and karst features could be encountered. If a void is encountered while drilling and a loss of circulation occurs, lost drilling fluids can directly contaminate groundwater recharge areas, aquifers, and

groundwater quality. Drilling operations can also lead to sudden collapse of underground voids.

To mitigate or lessen the probability of impacts associated with the drilling and production of oil and gas wells in karst areas, the guidelines listed in Appendix 3, Practices for Oil and Gas Drilling and Production in Cave and Karst Areas, as approved in the Roswell Resource Management Plan Amendment of 1997, page AP3-4 through AP 3-7 shall be followed.

A more complete discussion of the impacts of oil and gas drilling can be found in the *Dark Canyon Environmental Impact Statement of 1993*, published by the U.S. Department of the Interior, Bureau of Land Management.

8. CONSTRUCTION

NOTIFICATION: The BLM shall administer compliance and monitor construction of the access road and well pad. Notify Natural Resources Specialist, Ricky Flores at (575) 627-0339 or the Roswell Field Office at (575) 627-0272 **at least three (3) working days prior to commencing construction of the access road and/or well pad.**

A complete copy of the *approved* APD and the attached Conditions of Approval (COAs) **shall be kept on the well's location** for reference upon inspections.

Construction over and/or immediately adjacent to existing pipelines shall be coordinated, and in accordance with, the relevant pipeline companies' policy.

Any trench left open for (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency approved monitor shall walk the entire length of the open trench and remove all trapped fauna. The bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried fauna. All fauna will be released a minimum of 100 yards from the trench.

For trenches left open for (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench. Structures will also be authorized within the trench. Metal structures will not be authorized. Structures used as escape ramps will be placed at no more than a 30 degree slope and spaced no more than 500 feet apart.

9. TOPSOIL:

When saturated soil conditions exist on access roads or location, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils, roads, and locations.

Topsoil shall be stripped following removal of vegetation during construction of well pads, pipelines, roads, or other surface facilities. This shall include all growth medium - at a minimum, the upper 2-6 inches of soil - but shall also include stripping of any additional topsoil present at a site, such as indicated by color or texture. Stripping depth may be specified during the onsite inspection. Stripped topsoil shall be stored separately from subsoil or other excavated material

and replaced prior to interim seedbed preparation. No topsoil shall be stripped when soils are moisture-saturated or frozen below the stripping depth.

The topsoil will not be used to construct the containment structures or earthen dikes that are on the outside boundaries of the constructed well pad, tanks, and storage facilities.

Each construction area is site specific as to topsoil depth. It is the operator's responsibility to ensure that topsoil, caliche, or spoils are not mixed together.

(**Pads**): topsoil will be stripped and stored in separate piles from the spoils pile. They can be stored on opposite or adjacent sides. If topsoil and spoils must be stored on the same pad side together they shall be no closer than toe to toe, not overlapping. Each pile shall be kept within 30 feet of the pad's side. 100% of the topsoil will be used for both interim and final reclamation. 100% of topsoil will be respread over the disturbed areas during reclamation.

(**Roads**): topsoil shall be stripped in such a way to follow the road's edge outside of the surfacing or drivable area. During final reclamation, after removal of surface material and re-contouring, 100% of topsoil will be respread over the disturbed areas during reclamation. Vegetation in the topsoil will help hold re-seeding, moisture content, and reduce erosion.

10. WELL PAD SURFACING:

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need. Surfacing of the well pad is not required. If the operator elects to surface the well pad, the surfacing material will be required to be removed at the time of reclamation.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattle guard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guard(s) that are in place and are utilized during lease operations. Gates or cattle guards on public lands will not be locked or closed to public use unless closure is specifically determined to be necessary and is authorized in writing by the Authorized Officer. A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

The operator shall notify the private surface landowner or the grazing allotment operator prior to crossing any fence(s). Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

11. PRODUCTION:

Storage

Fiberglass storage tanks are ***not*** permitted for the storage of production.

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim reclamation and re-vegetation of the well location.

Containment Structures

All production facilities shall have a lined containment structure large enough to contain **110% of the largest Tank (PLUS) 24 hours of production** (43 CFR 3162.5-1) ***Environmental Obligations,*** unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **OIL GREEN** (Standard Environmental Color Chart June 2008).

Completion Report

In accordance with 43 CFR 3160, Form 3160-4 (Well Completion or Re-completion Report and Log) must be submitted to the Bureau of Land Management, Roswell Field Office within 30 days after completion of the well or producer. Copies of all open hole and cased hole logs, core descriptions, core analyses, well test data, geologic summaries, sample descriptions, formation test reports, stimulation reports, directional survey (if applicable), and all other surveys or data obtained and compiled during the drilling, completion, and/or work over operations, shall be included with Form 3160-4.

12. INTERIM RECLAMATION:

Reclamation earthwork for interim and/or final reclamation shall be completed within 6 months of well completion or well plugging (weather permitting), and shall consist of: 1) backfilling pits, 2) re-contouring and stabilizing the well site, access road, cut/fill slopes, drainage channels, utility and pipeline corridors, and all other disturbed areas, to approximately the original contour, shape, function, and configuration that existed before construction (any compacted backfilling activities shall ensure proper spoils placement, settling, and stabilization, 3) surface ripping, prior to topsoil placement, to a depth of 18-24 inches deep on 18-24 inch centers to reduce compaction, 4) final grading and replacement of all topsoil so that no topsoil remains in the stockpile, 5) seeding in accordance with reclamation portions of the APD and these COA's.

Any subsequent re-disturbance of interim reclamation shall be reclaimed within six (6) months by the same means described above.

Prior to conducting interim reclamation, the operator is required to:

- Submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

- Contact BLM at least three (3) working days prior to conducting any interim reclamation activities, and prior to seeding.

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

Use a certified noxious weed-free seed mixture. Use mixtures seed tested for viability and purity in accordance with State law(s) within nine months prior to purchase. Use a commercial seed mixture certified or registered and tagged in accordance with State law(s). Make the seed mixture labels available for BLM inspection.

13. SEED MIX:

SEE ATTACHED SEED MIX.

WELL NAME	ECOSITE (ACCESS ROAD)	ECOSITE (PAD)
DELTA FEDERAL #2H	SHALLOW SD-3	SHALLOW SD-3

14. FINAL ABANDONMENT:

A. Upon abandonment of the well, submit a Notice of Intent for Plug and Abandonment describing plugging procedures. Followed within 30 days you shall file with this office a Subsequent Report of Abandonment (Form 3160-5). To be included with this report is where the plugs were placed, volumes of cement used, and well bore schematic as plugged.

B. On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements and a copy of the release is to be submitted upon abandonment.

C. **The Operator shall promptly plug and abandon each newly completed, re-completed or producing well which is not capable of producing in paying quantities.** No well may be temporarily abandoned for more than 30 days without prior approval from this office. When justified by the Operator, BLM may authorize additional delays, no one of which may exceed an additional 12 months. Upon removal of drilling or producing equipment from the site of a well which is to be permanently abandoned, the surface of the lands disturbed shall be reclaimed in accordance with an approved Notice of Intent for final reclamation.

D. **Final reclamation shall include:** the removal of all solid waste, trash, surfacing materials, storage facilities and all other related equipment, flow lines, meter housing, power poles, guy wires, and all other related power materials. All disturbed areas, i.e. cuts and fills, shall be re-contoured to their original surroundings. 100% of topsoil shall be used to resurface all disturbed

areas including access roads. A label of the seed mix used shall be submitted with the Final Abandonment Notice (FAN) for review once reclamation is complete.

15. PIPELINE PROTECTION REQUIREMENT:

Precautionary measures shall be taken by the operator during construction of the access road to protect existing pipelines that the access road will cross over. An earthen berm: 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over existing pipelines. The operator shall be held responsible for any damage to existing pipelines. If the pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline. The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.

16. WILDLIFE PROTECTION MEASURES – Best Management Practices (BMPs)

COA/Stipulation for above ground pipelines

- All pipelines laid on the surface will have sloped dirt berms built over them every 100 yards to allow reptiles, amphibians, small mammals, ground-dwelling birds and their broods access over them. Dirt berms should be no less than 12 inches in width and extend over all surface pipelines within the Right of Way. Berms should be maintained for the life of the project.

Wildlife Mortality - General
The operator will notify the Bureau of Land Management (BLM) Authorized Officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

1. **Closed top tanks are required for any containment system.**

All tanks are required to have a closed top.

2. **Chemical and Fuel Secondary Containment Systems**

Chemical and Fuel Secondary Containment and Exclosure Screening – The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that

do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground.
The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. Closed-top tanks are required for any secondary containment systems.

3. **Open-Vent Exhaust Stacks**

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

17. WASTE, HAZARDOUS AND SOLID:

Waste materials produced during all phases of operation will be disposed of promptly in an approved manner so it will not impact the air, soil, water, vegetation, or animals. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment. All liquid waste, completion fluids, and drilling products associated with oil and gas operations will be contained and then removed and deposited in an approved disposal site. Portable toilets will remain on site throughout well pad construction, drilling, and reclamation.

The operator and contractors shall ensure that all use, production, storage, transportation, and disposal of hazardous materials, solid wastes, and hazardous wastes associated with the drilling, completion, and production of this well will be in accordance with all applicable existing or hereafter promulgated federal, state, and local government rules, regulations, and guidelines. All project related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. A file will be maintained onsite containing current Safety Data Sheets (SDS) for all chemicals, compounds, and/or substances which are used in the course of construction, drilling, completion, and production operations.

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Mack Energy Corporation**
LEASE NO.:	**NMNM-105821026**
WELL NAME & NO.:	**Delta Federal 2H**
SURFACE HOLE FOOTAGE:	**0707' FNL & 1460' FWL**
BOTTOM HOLE FOOTAGE	**0001' FNL & 1650' FEL Sec. 34, T. 15 S., R 28 E.**
LOCATION:	**Section 06, T. 16 S., R 29 E., NMPM**
COUNTY:	**Chaves County, New Mexico**

The Gamma Ray and Neutron well logs must be run from total depth to surface and e-mailed to Aleksandr Knapowski at cknapowski@blm.gov or hard copy mailed to 2909 West Second Street Roswell, NM 88201 to his attention.

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

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

☒ **Chaves and Roosevelt Counties**
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After hours cll (575) 627-0205.

A. Hydrogen Sulfide

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

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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

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

B. CASING

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

Wait on cement (WOC) for Water Basin:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.
Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

Possibility of water flows in the Rustler, Queen, Salado, and Artesia Group.
Possibility of lost circulation in the Rustler, Artesia Group, and San Andres.

1. The **13-3/8** inch surface casing shall be set at approximately **220** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the **7 X 5-1/2** inch production casing is:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

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2. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi (testing to 2,000 psi).**
    a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
    b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
    c. **Manufacturer representative shall install the test plug for the initial BOP test.**
    d. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
    e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

    d. The results of the test shall be reported to the appropriate BLM office.

    e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

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

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

JAM 03262024

Approval Date: 07/29/2024

Attached to Form 3160-3
Mack Energy Corporation
Delta Federal #2H NMNM-105821026
SHL : 707 FNL & 1460 FWL, Lot 3, Sec. 6 T16S R29E
BHL : 1 FNL & 1650 FEL, NWNE, Sec. 34 T15S R28E
Chaves County, NM

Mack Energy Corporation
Onshore Order #6
Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards an characteristics of hydrogen sulfide (H2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H2S detectors alarms warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H2S on metal components. If high tensile tubular are to be used, personnel well be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. **The concentrations of H2S of wells in this area from surface to TD are low enough that a contingency plan is not required.**

II. H2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonable expected to contain H2S.

1. Well Control Equipment:

A. Flare line.
B. Choke manifold.
C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
D. Auxiliary equipment may include if applicable: annular preventer & rotating head.

Attached to Form 3160-3
Mack Energy Corporation
Delta Federal #2H NMNM-105821026
SHL : 707 FNL & 1460 FWL, Lot 3, Sec. 6 T16S R29E
BHL : 1 FNL & 1650 FEL, NWNE, Sec. 34 T15S R28E
Chaves County, NM

2. **Protective equipment for essential personnel:**

   A. Mark II Survive air 30-minute units located in the doghouse and at briefing areas, as indicated on well site diagram.

3. **H2S detection and monitoring equipment:**

   A. 1 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 PPM are reached.

4. **Visual warning systems:**

   A. Wind direction indicators as shown on well site diagram (Exhibit #8).
   B. Caution/Danger signs (Exhibit #7) shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

5. **Mud program:**

   A. The mud program has been designed to minimize the volume of H2S circulated to surface. Proper mud weight, safe drilling practices and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.

6. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
   B. All elastomers used for packing and seals shall be H2S trim.

7. **Communication:**

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.
   B. Land line (telephone) communication at Office.

8. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H2S environment will use the closed chamber method of testing.

Attached to Form 3160-3
Mack Energy Corporation
Delta Federal #2H NMNM-105821026
SHL : 707 FNL & 1460 FWL, Lot 3, Sec. 6 T16S R29E
BHL : 1 FNL & 1650 FEL, NWNE, Sec. 34 T15S R28E
Chaves County, NM

B. There will be no drill stem testing.

EXHIBIT #7

WARNING

YOU ARE ENTERING AN H2S

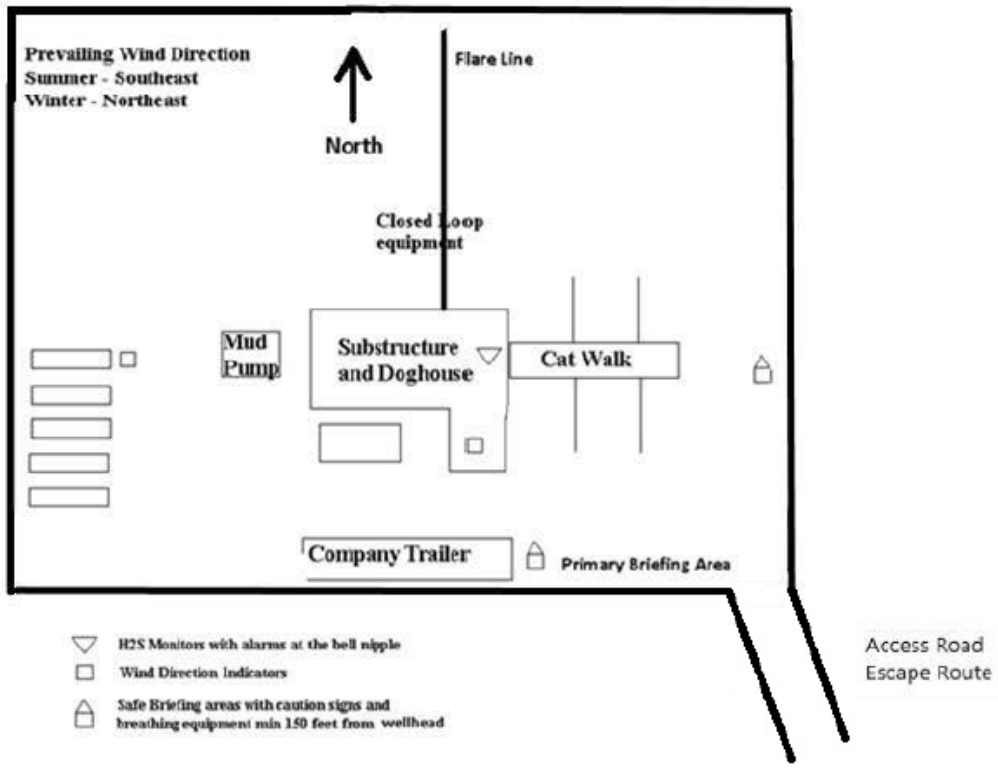
AUTHORIZED PERSONNEL ONLY

1. BEARDS OR CONTACT LENSES NOT ALLOWED
2. HARD HATS REQUIRED
3. SMOKING IN DESIGNATED AREAS ONLY
4. BE WIND CONSCIOUS AT ALL TIMES
5. CHECK WITH MACK ENERGY FOREMAN AT OFFICE

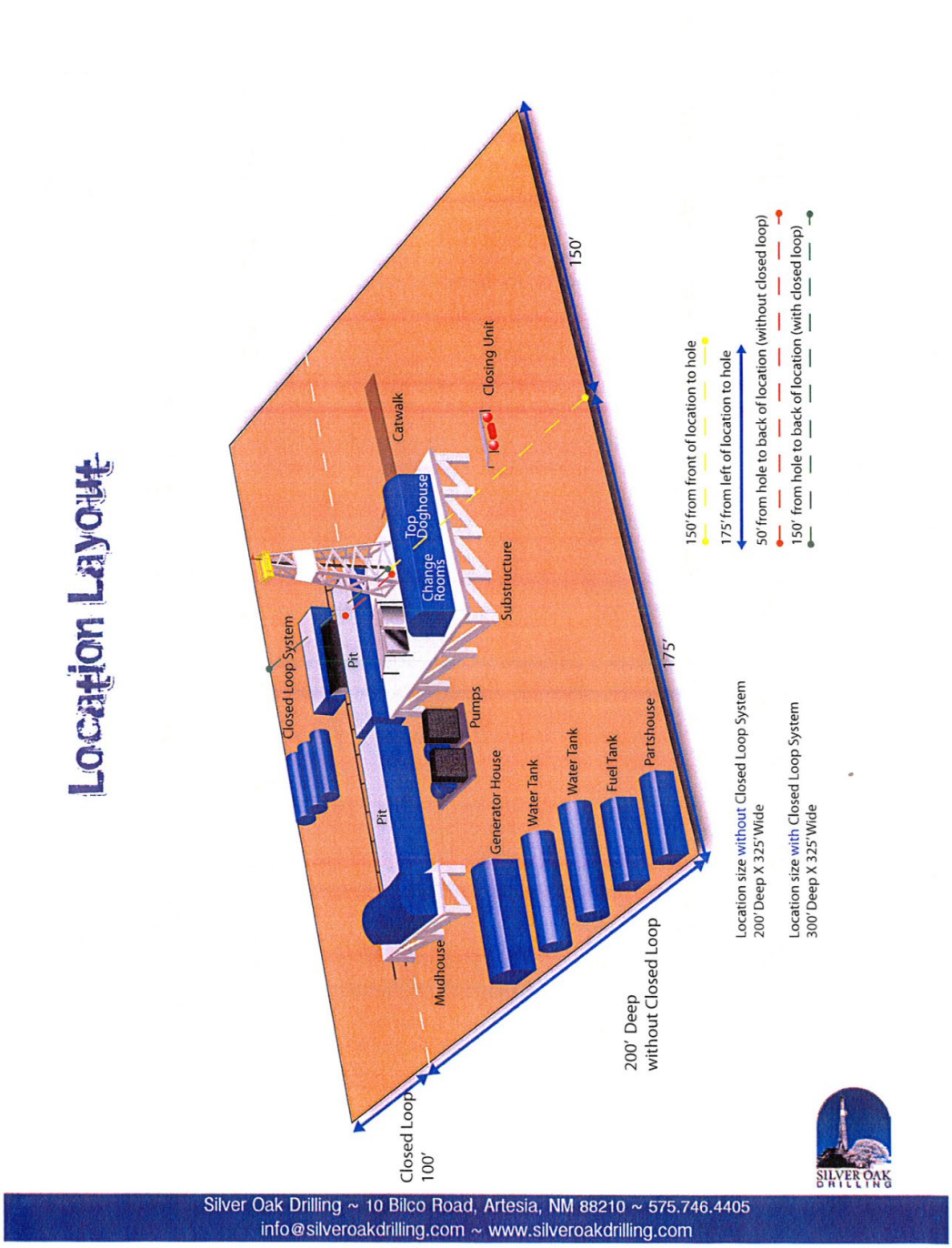
MACK ENERGY CORPORATION

1-575-748-1288

Warning sign @ access road entrance



DRILLING LOCATION H2S SAFTY EQUIPMENT
Exhibit # 8



Mack Energy Corporation Call List, Chaves County

Artesia (575)	Cellular	Office
Jim Krogman	432-934-1596	748-1288
Emilio Martinez	432-934-7586	748-1288

Agency Call List (575)

Roswell

State Police……..622-7200
City Police……...624-6770
Sheriff's Office……624-7590
Ambulance……...911/ 624-7590
Fire Department……...624-7590
LEPC (Local Emergency Planning Committee……...624-6770
NMOCD……...748-1283
Bureau of Land Management……...627-0272

Emergency Services

Boots & Coots IWC……..…1-800-256-9688 or (281)931-8884
Cudd pressure Control…….(915)699-0139 or (915)563-3356
Halliburton……..746-2757
Par Five……..748-9539

Flight For Life-Lubbock, TX……..……(806)743-9911
Aerocare-Lubbock, TX……...(806)747-8923
Med Flight Air Amb-Albuquerque, NM…….(505)842-4433
Lifeguard Air Med Svc. Albuquerque, NM……(505)272-3115

Intent [XX] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
MACK ENERGY CORPORATION	DELTA FEDERAL	2H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	6	16 S	29 E	3	707	NORTH	1460	WEST	EDDY

Latitude	Longitude	NAD
32.9634212	104.1164749	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	34	15 S	29 E		100	SOUTH	1650	EAST	CHAVES

Latitude	Longitude	NAD
32.9656388	104.1164051	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	34	15 S	29 E		100	NORTH	1650	EAST	CHAVES

Latitude	Longitude	NAD
32.9796443	104.1166088	83

Is this well the defining well for the Horizontal Spacing Unit? [ ]

Is this well an infill well? [ ]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

AFMSS
U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Drilling Plan Data Report
08/01/2024

APD ID: 10400095501
Submission Date: 01/30/2024
Operator Name: MACK ENERGY CORPORATION
Well Name: DELTA FEDERAL
Well Number: 2H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
13851042	QUATERNARY	3600	0	0	ALLUVIUM, SALT	NONE	N
13851043	TOP OF SALT	3376	224	224	SALT	NONE	N
13851044	BASE OF SALT	3104	496	496	SALT	NONE	N
13851045	YATES	3088	512	512	SILTSTONE	NATURAL GAS, OIL	N
13851046	SEVEN RIVERS	2857	743	743	SILTSTONE	NATURAL GAS, OIL	N
13851047	QUEEN	2364	1236	1236	SILTSTONE	NATURAL GAS, OIL	N
13851048	GRAYBURG	1965	1635	1635	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
13851049	SAN ANDRES	1630	1970	1970	DOLOMITE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M
Rating Depth: 8625

Equipment: Rotating Head, Mud-Gas Separator

Requesting Variance? NO

Variance request:

Testing Procedure: The BOP/BOPE test shall include a low pressure test from 250 to 2,000psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 1434psig (0.052*2997'TVD*9.2ppg) less than 2900 bottom hole pressure.

Choke Diagram Attachment:

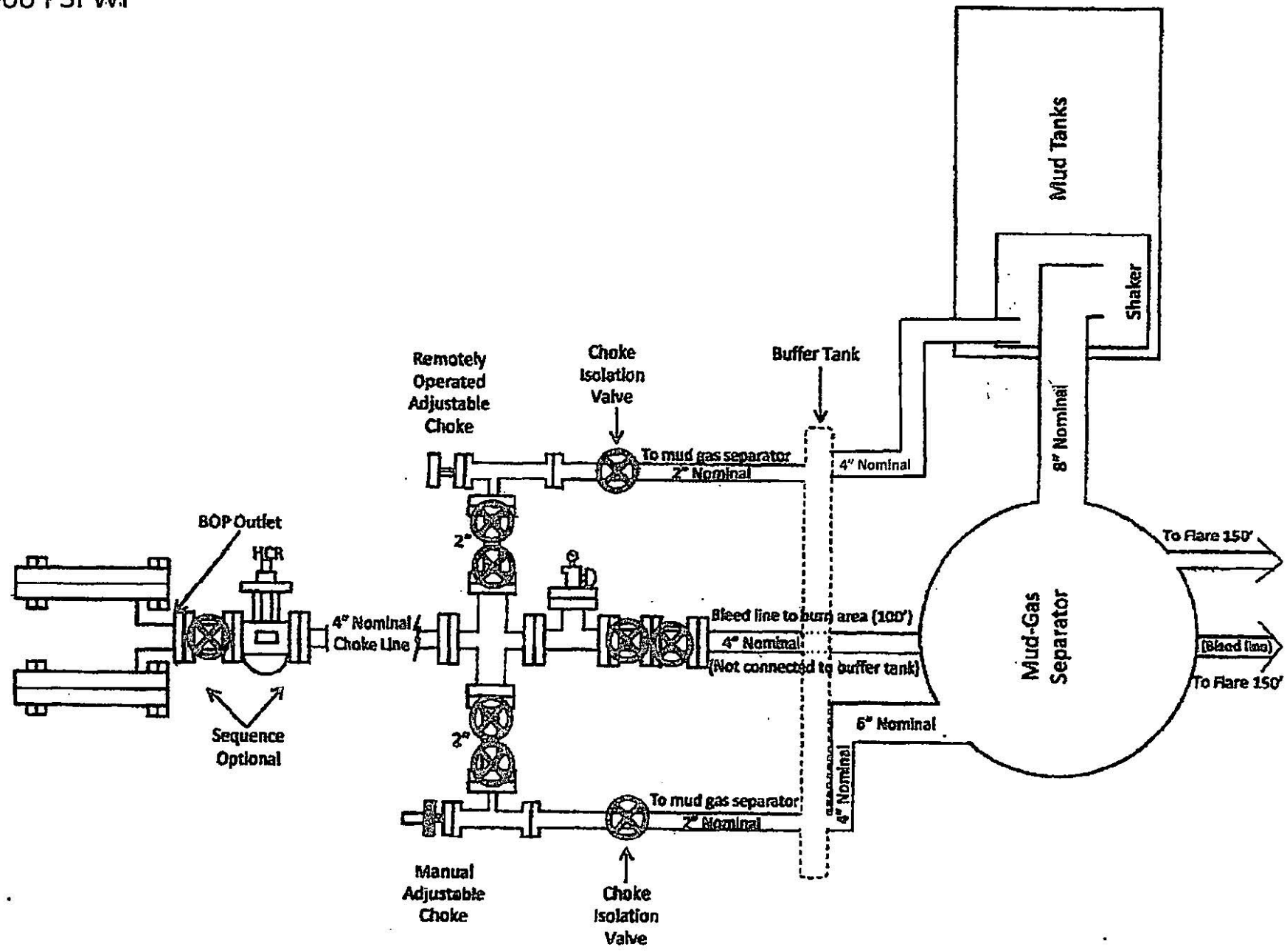
NEW_Choke_Manifold_3M_20231026085213.pdf

BOP Diagram Attachment:

NEW_BOP_3M_20231026085242.pdf

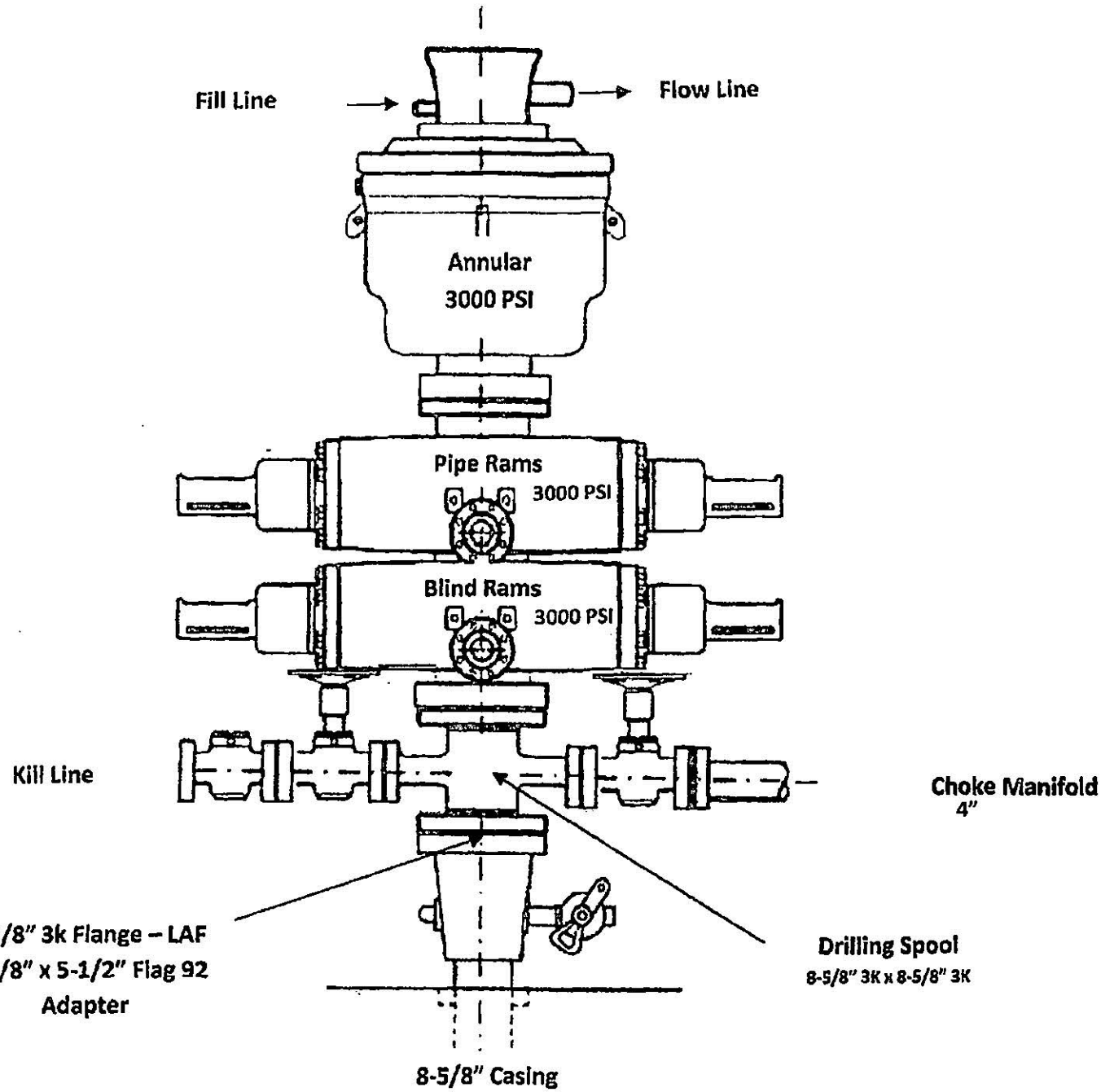
Choke Manifold

3000 PSI WP



BOP Diagram

Dual Ram BOP
3000 PSI WP



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 370554

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 370554
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Notify OCD 24 hours prior to casing & cement	8/28/2024
ward.rikala	Will require a File As Drilled C-102 and a Directional Survey with the C-104	8/28/2024
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	8/28/2024
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing	8/28/2024
ward.rikala	If cement does not circulate on any string, a CBL is required for that string of casing	8/28/2024
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	8/28/2024