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

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
Mack Energy Corporation P.O. Box 960 Artesia, NM 88211-0960	013837
	3. API Number: 30-015-23593

4. Property Code	5. Property Name	6. Well No.
	McMillan Fee	1

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
K	15	19S	26E		2010	South	1871	West	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
Lake McMillan; Wolfcamp, NW	97463

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
Re-entry	Oil		Private	3336.3
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	8300'	Wolfcamp		7/1/2022

Depth to Ground water	Distance from nearest fresh water well	Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
J-55	13 3/8	9 5/8	54.5#	355'		
J-55	8 5/8	7	24#	1630'		
L-80	8 5/8	5 1/2	20#	8300'	1,170	

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that I have complied with 19.15.14.9 (A) NMAC ☐ and/or 19.15.14.9 (B) NMAC ☐, if applicable.** Signature: Delilah Flores	OIL CONSERVATION DIVISION
Printed name: Delilah Flores	Approved By: [signature]
Title: Regulatory Technician I	Title: Petroleum Specialist
E-mail Address: delilah@mec.com	Approved Date: 04/04/2022 Expiration Date: 04/04/2024
Date: 3/30/2022 Phone: 575-748-1288	Conditions of Approval Attached

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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
30-015-23593	97463	Lake McMillan; Wolfcamp, NW

[4] Property Code	[5] Property Name	[6] Well Number
332726	McMILLAN FEE	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
13837	MACK ENERGY CORPORATION	3336.3

[10] Surface Location

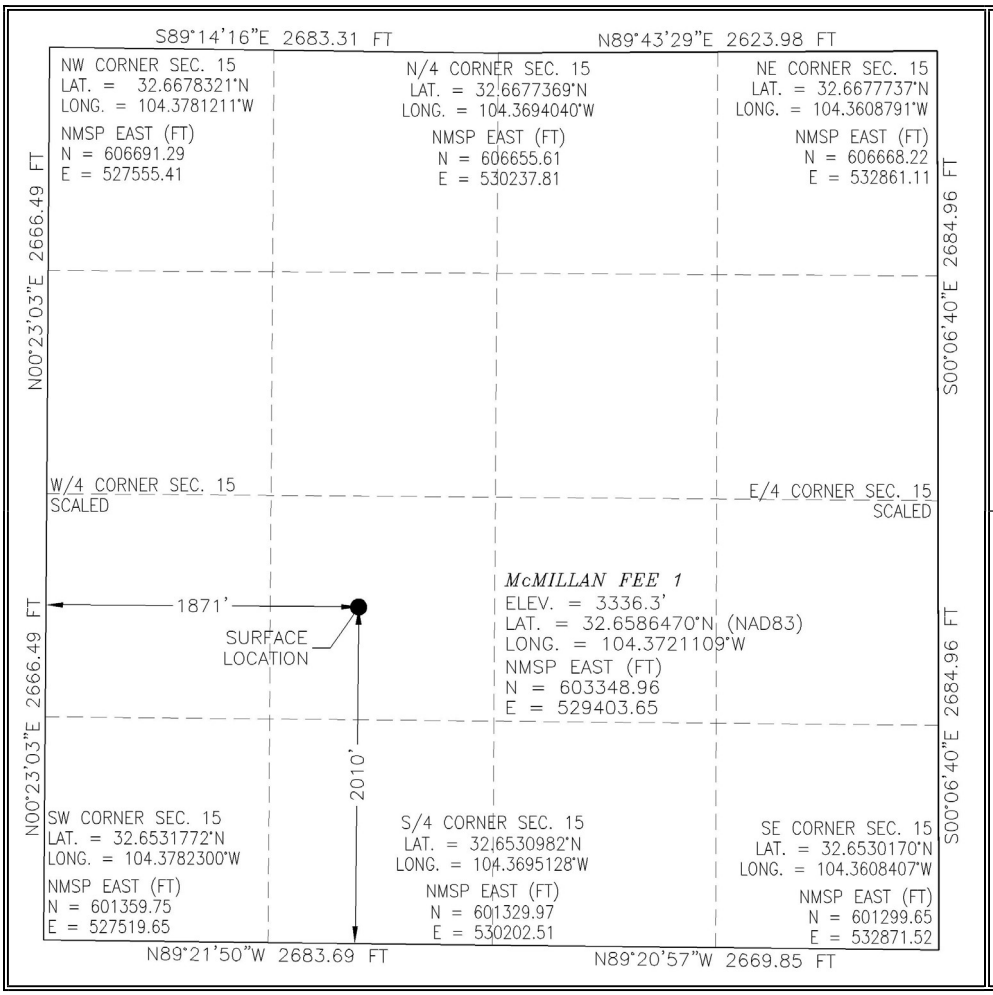
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	15	19 S	26 E		2010	SOUTH	1871	WEST	EDDY

[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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			

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.



[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.

Delilah Flores 3/30/2022
Signature Date

Delilah Flores
Printed Name

delilah@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.

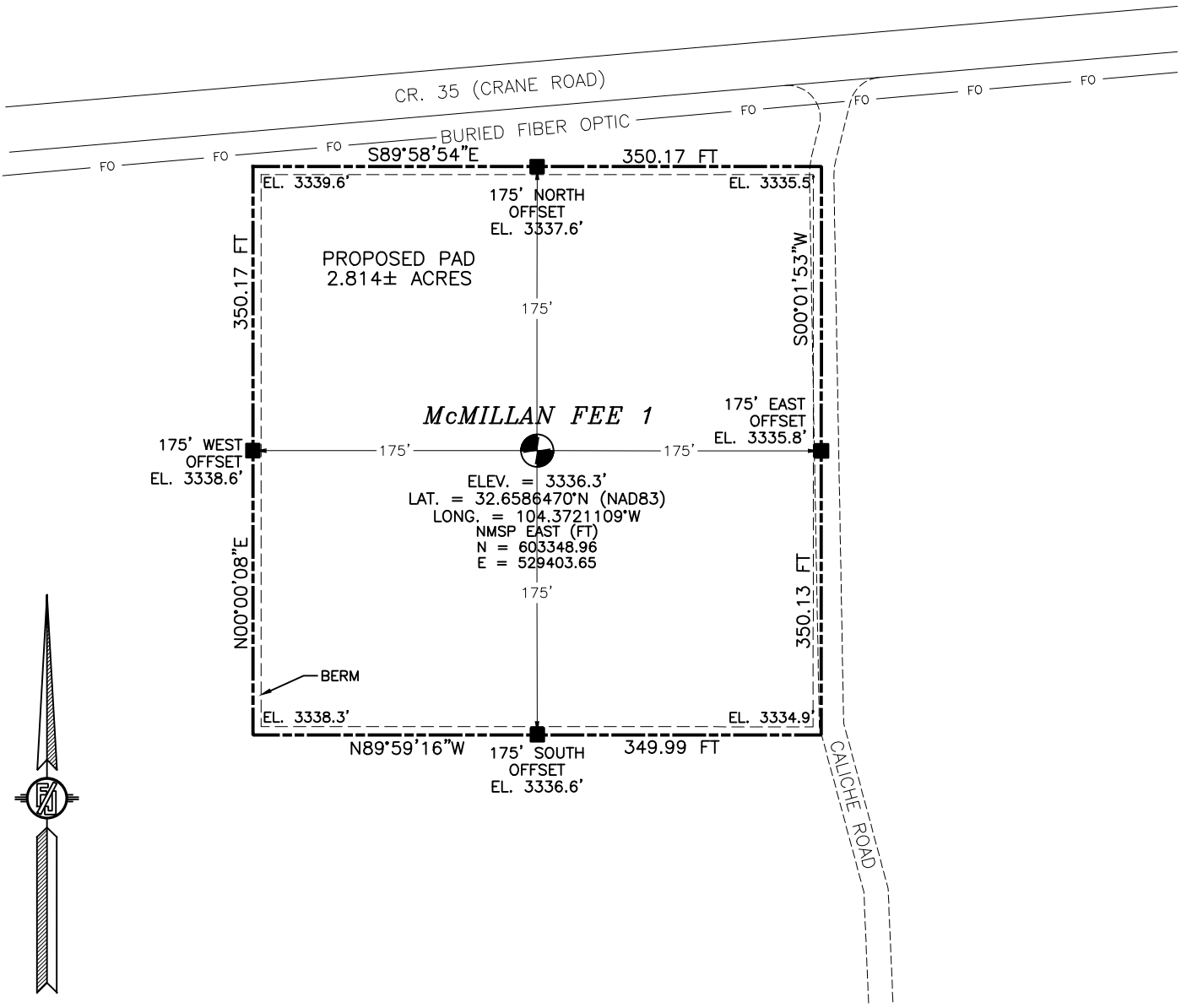
MARCH 24, 2022
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: EDMUND F. JARAMILLO, PLS 12797
SURVEY NO. 9370

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.



010 50 100 200
SCALE 1" = 100'

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF U.S. HWY 285 AND CR. 35 (CRANE RD.), GO EAST ON CR. 35 APPROX. 1.4 MILES, TURN RIGHT ON CALICHE ROAD AND GO SOUTH APPROX. 70' TO THE NORTHEAST PAD CORNER FOR THIS LOCATION.

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

FILIMON F. JARAMILLO PLS# 17078

MACK ENERGY CORPORATION
McMILLAN FEE 1
LOCATED 2010 FT. FROM THE SOUTH LINE AND 1871 FT. FROM THE WEST LINE OF SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

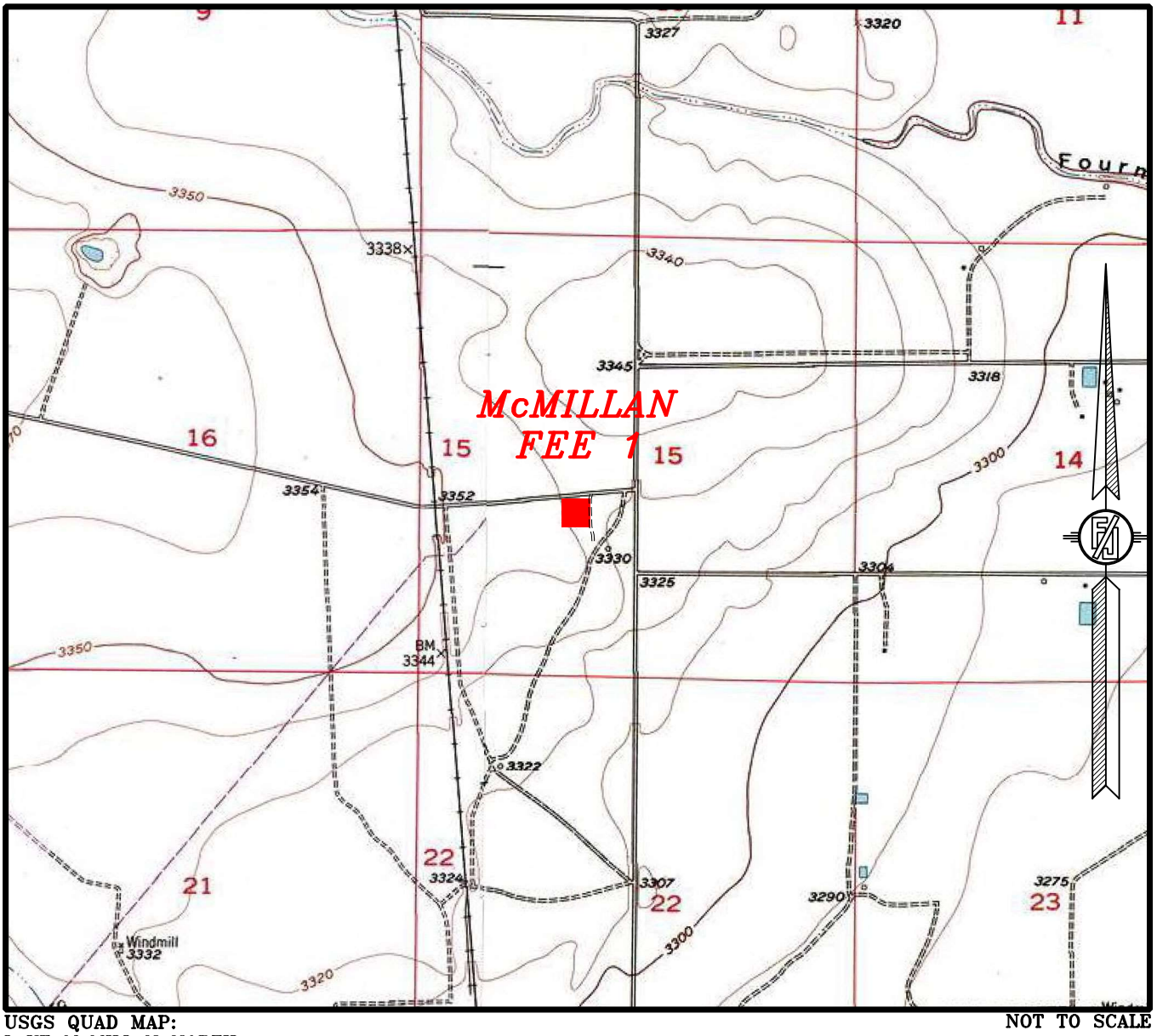
MARCH 24, 2022

SURVEY NO. 9370

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
LAKE McMILLAN NORTH
DAYTON

NOT TO SCALE

MACK ENERGY CORPORATION
McMILLAN FEE 1
LOCATED 2010 FT. FROM THE SOUTH LINE
AND 1871 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 19 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

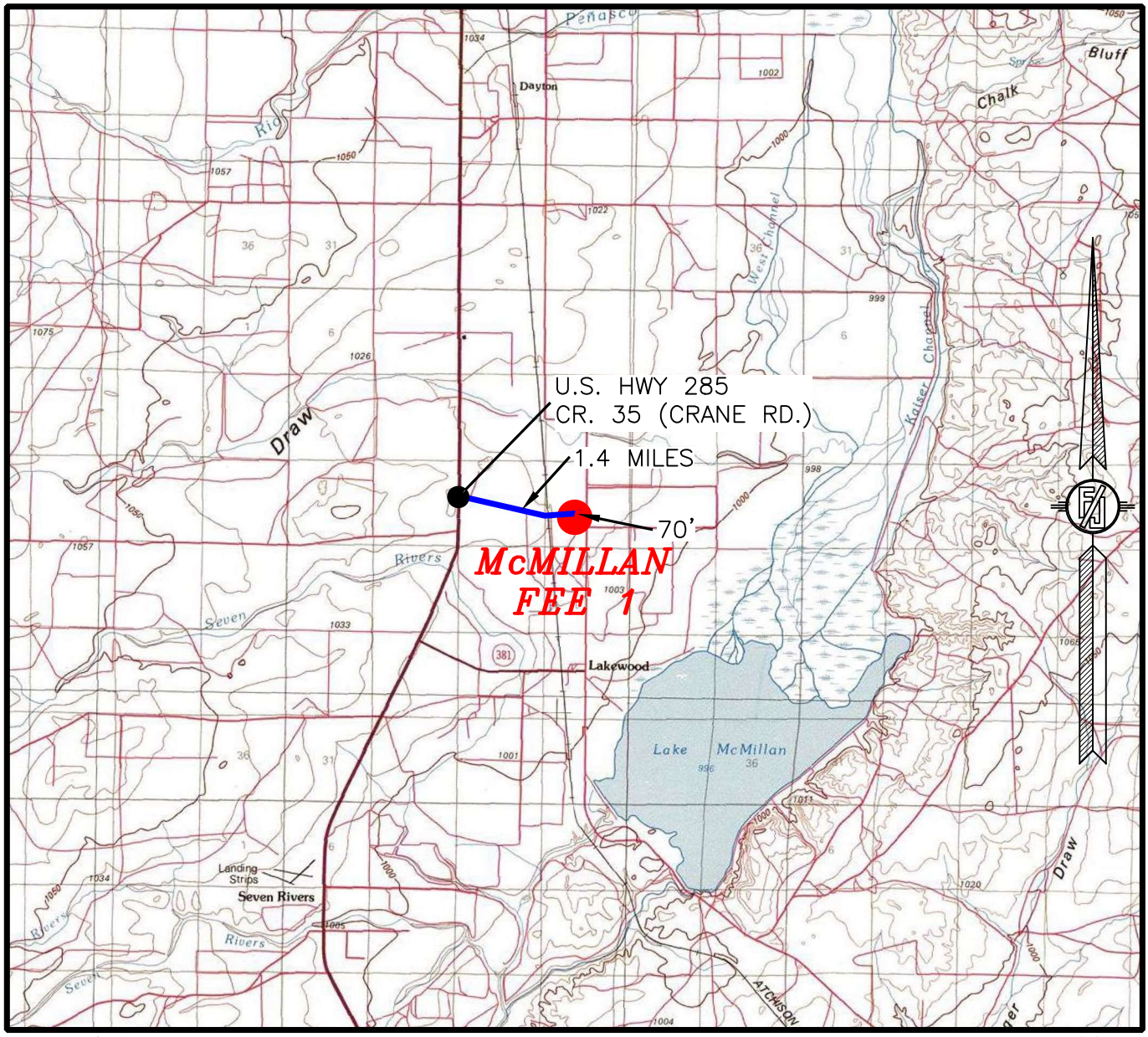
MARCH 24, 2022

SURVEY NO. 9370

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 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 U.S. HWY 285 AND CR. 35 (CRANE RD.), GO EAST ON CR. 35 APPROX. 1.4 MILES, TURN RIGHT ON CALICHE ROAD AND GO SOUTH APPROX. 70' TO THE NORTHEAST PAD CORNER FOR THIS LOCATION.

MACK ENERGY CORPORATION
McMILLAN FEE 1
LOCATED 2010 FT. FROM THE SOUTH LINE AND 1871 FT. FROM THE WEST LINE OF SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

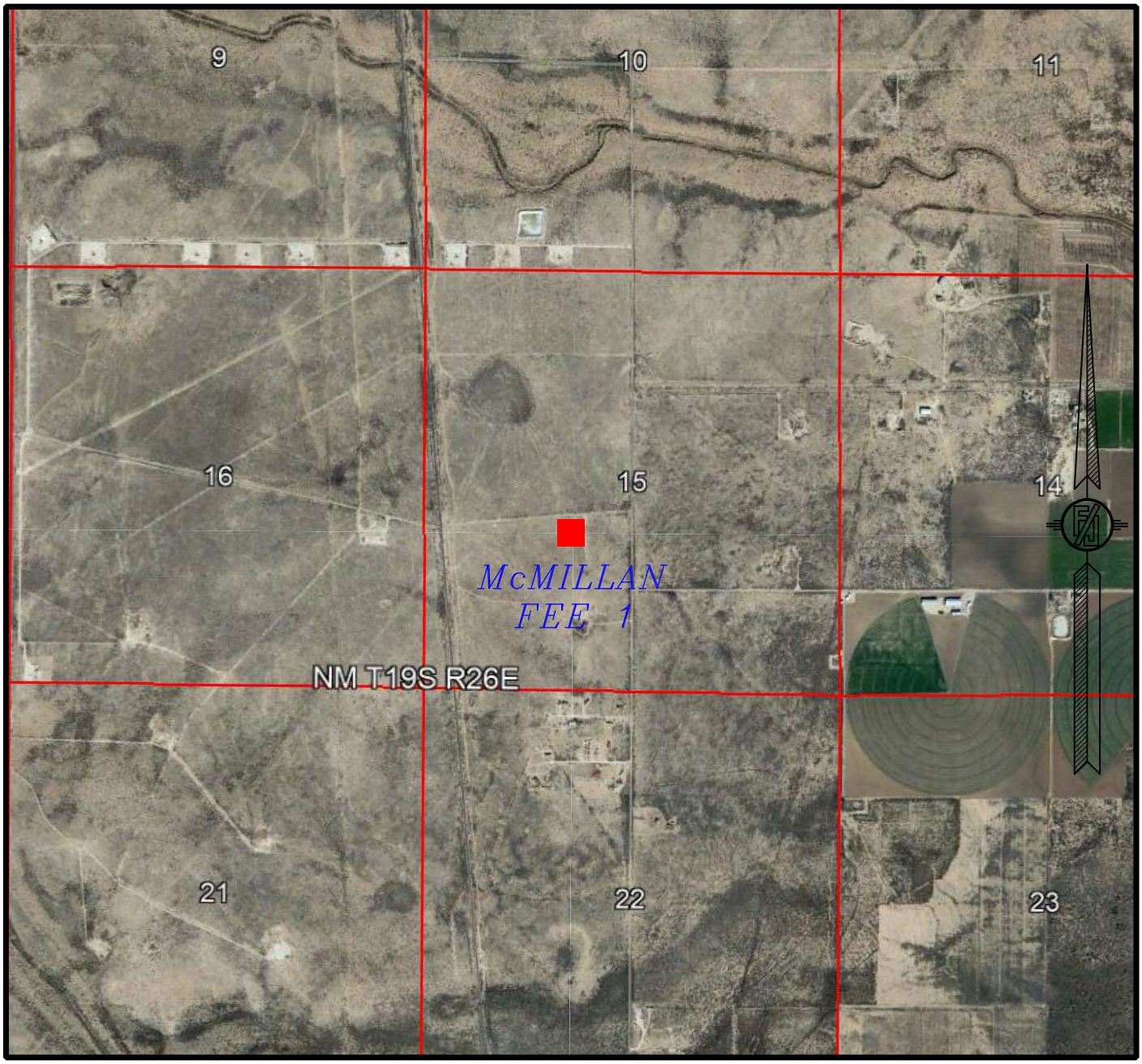
MARCH 24, 2022

SURVEY NO. 9370

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2021

MACK ENERGY CORPORATION
McMILLAN FEE 1
LOCATED 2010 FT. FROM THE SOUTH LINE
AND 1871 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 19 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

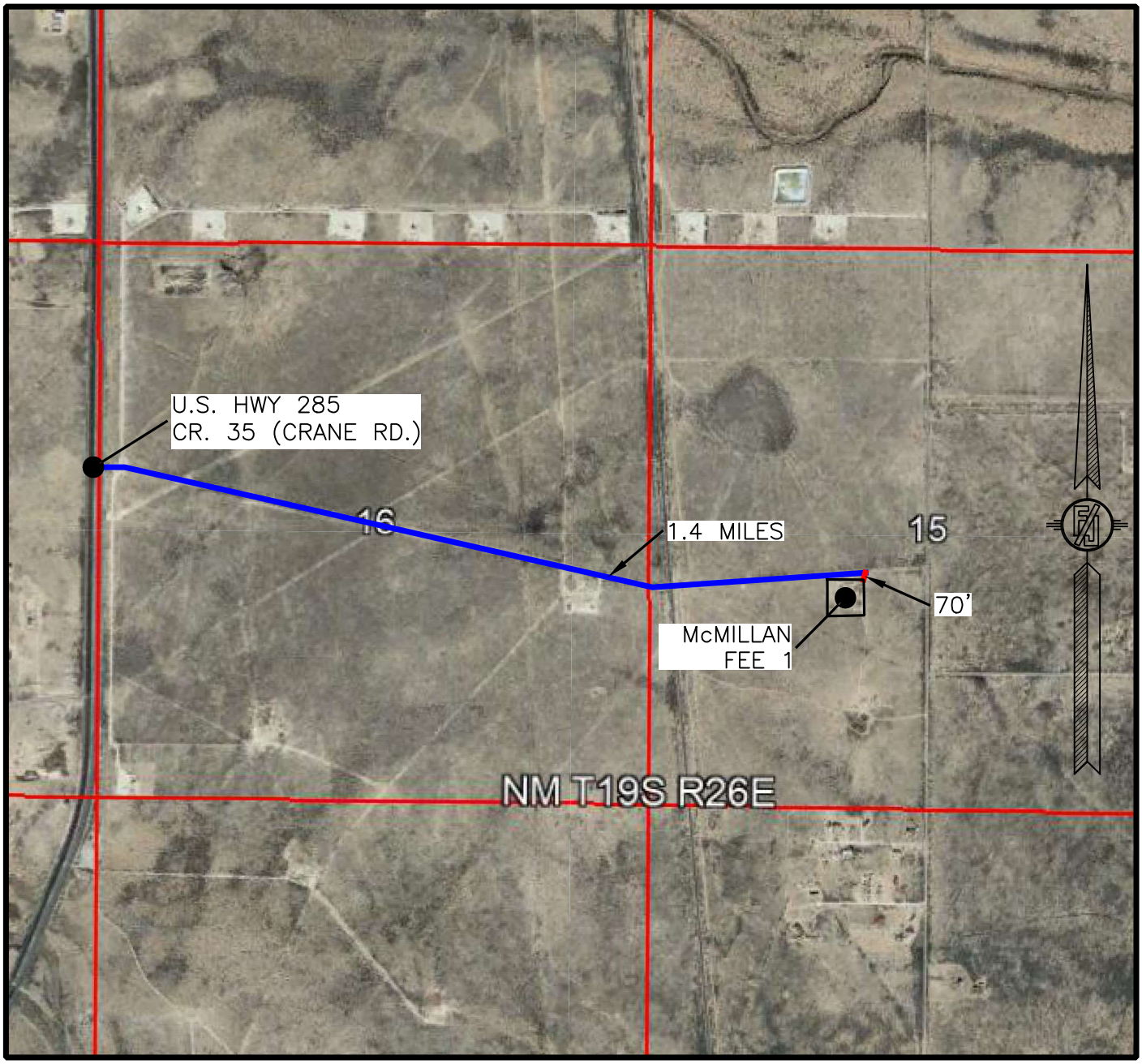
MARCH 24, 2022

SURVEY NO. 9370

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2021

MACK ENERGY CORPORATION

McMILLAN FEE 1

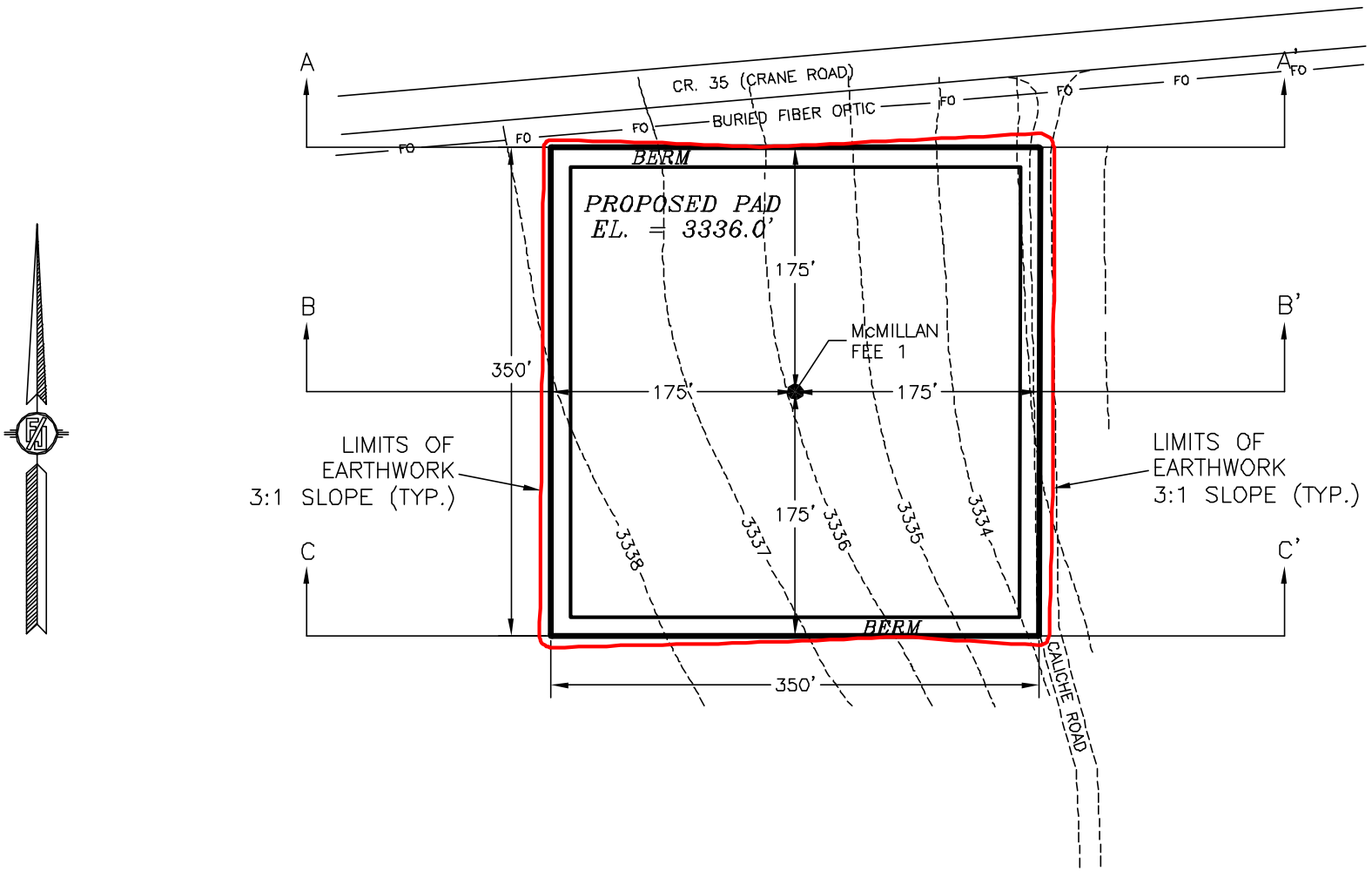
LOCATED 2010 FT. FROM THE SOUTH LINE
AND 1871 FT. FROM THE WEST LINE OF
SECTION 15, TOWNSHIP 19 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 24, 2022

SURVEY NO. 9370

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

PLAN VIEW



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 AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, P.S. 12797

MACK ENERGY CORPORATION
PAD GRADING AND CROSS SECTIONS
FOR McMILLAN FEE 1
SECTION 15, TOWNSHIP 19 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 24, 2022

0 12 60 120 240
SCALE 1" = 120'

CUT	FILL	NET
2549 CU. YD	3941 CU. YD	1392 CU. YD (FILL)

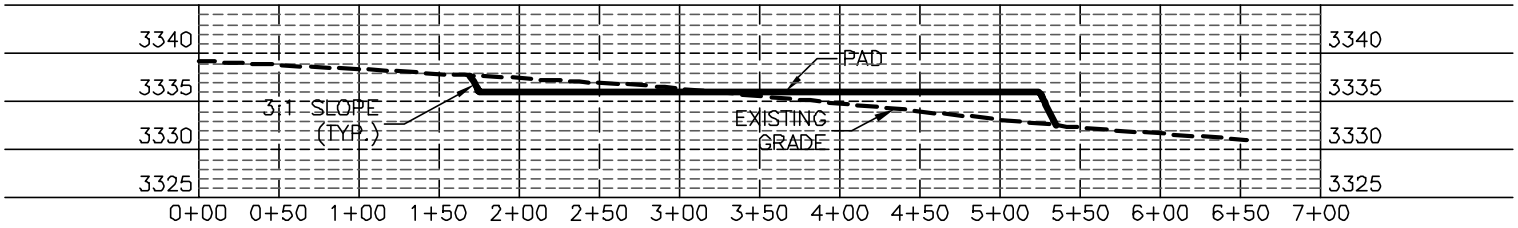
EARTHWORK QUANTITIES ARE ESTIMATED

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

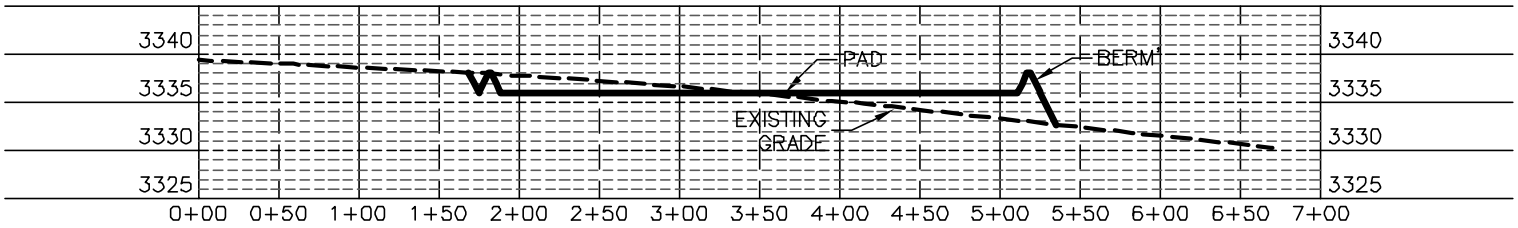
SHEET 1-2
SURVEY NO. 9370

CROSS-SECTIONS

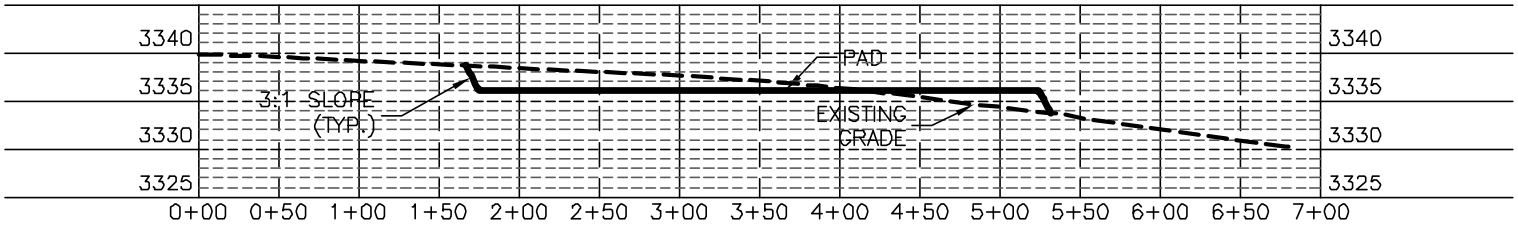
SECTION A-A'



SECTION B-B'



SECTION C-C'



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 AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, P.S. 12797

MACK ENERGY CORPORATION
PAD GRADING AND CROSS SECTIONS
FOR McMILLAN FEE 1
SECTION 15, TOWNSHIP 19 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

MARCH 24, 2022

0 12 60 120 240
SCALE 1" = 120' - 1" = 20' VER

CUT	FILL	NET
2549 CU. YD	3941 CU. YD	1392 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

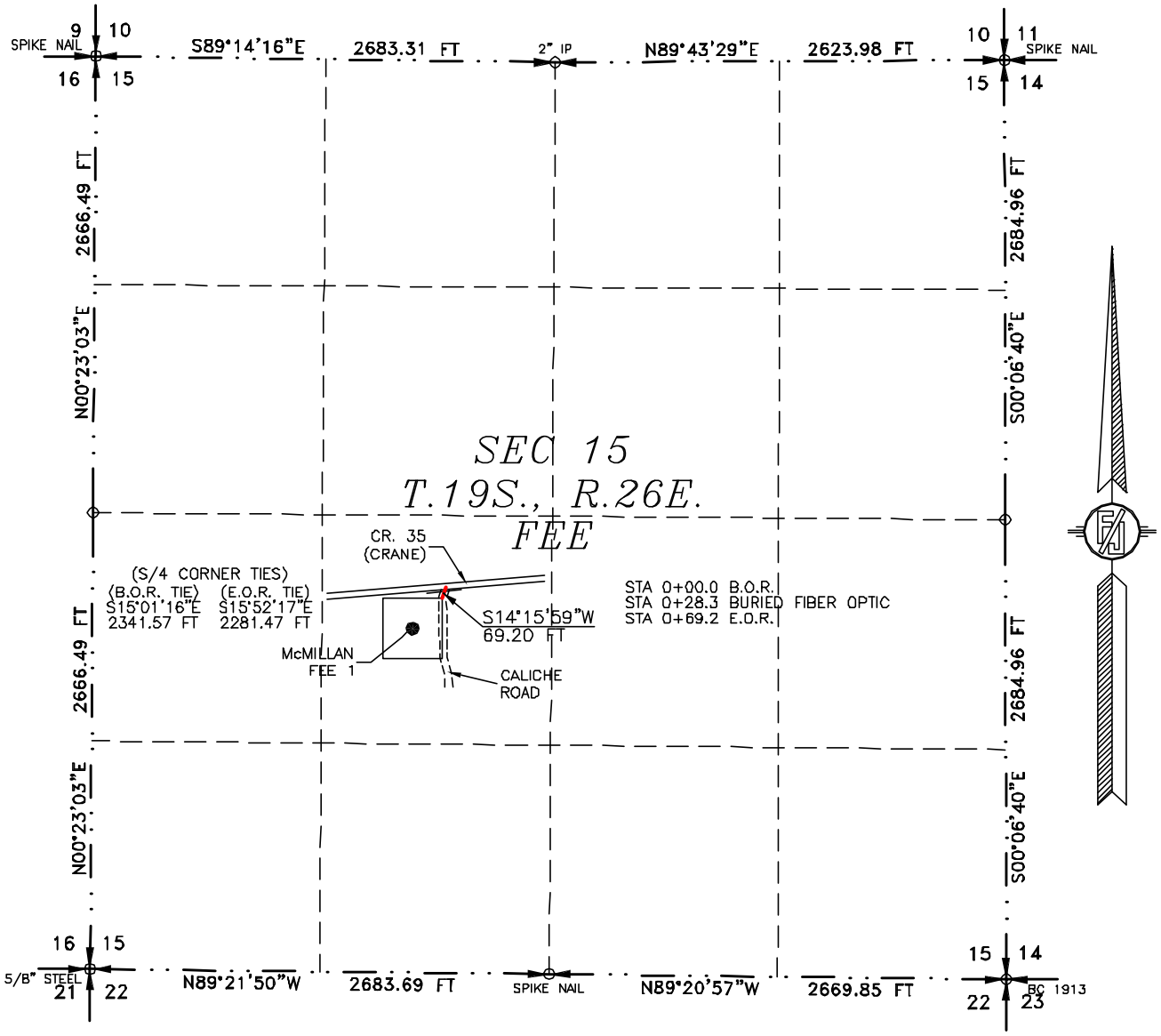
SHEET 2-2
SURVEY NO. 9370

ACCESS ROAD PLAT

EXISTING ROAD FOR ACCESS TO McMILLAN FEE 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
MARCH 24, 2022



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 28TH DAY OF MARCH 2024.

FILIMON F. JARAMILLO PLS 12797

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-2

SURVEY NO. 9370

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING ROAD FOR ACCESS TO McMILLAN FEE 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
MARCH 24, 2022

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING FEE LAND IN SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 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 THE NE/4 SW/4 OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M. BEARS S15°01'16"E, A DISTANCE OF 2341.57 FEET;
THENCE S14°15'59"W A DISTANCE OF 69.20 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 26 EAST, N.M.P.M. BEARS S15°52'17"E, A DISTANCE OF 2281.47 FEET;

SAID STRIP OF LAND BEING 69.20 FEET OR 4.19 RODS IN LENGTH, CONTAINING 0.048 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 SW/4	69.20 L.F.	4.19 RODS	0.048 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 28TH DAY OF MARCH 2024.

FILIMON F. JARAMILLO PLS 12797

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

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:** 03 / 29 / 2022

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
McMillan Fee 1		Sec. 15 T19S R26E	2010 FSL 1871 FWL	100	100	1,000

IV. Central Delivery Point Name: _____ [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
McMillian Fee 1		7/1/2022	8/1/2022	8/15/2022	8/15/2022	8/15/2022

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:	Delilah Flores
Printed Name:	Delilah Flores
Title:	Regulatory Technician I
E-mail Address:	delilah@mec.com
Date:	3/29/2022
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.

Casing Design **Well:** McMillan Fee #1 (Re-Entry)

String Size & Function: 5 1/2 in Production x

Total Depth: 8300 ft **TVD:** 8300 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 9.3 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.3 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.3 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 4013.88 psi Burst: 4013.88 psi, joint strength: 4013.88 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 3000 psi

1st segment	8300 ft to 0 ft			Make up Torque ft-lbs			Total ft = 8300
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
5.5 inches	**20** #/ft	**L-80**	**LT&C**	**4200**	**3150**	**5250**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
8,830 psi	**9,190** psi	**416** ,000 #		**466** ,000 #		**4.653**	

2nd segment	ft to 0 ft			Make up Torque ft-lbs			Total ft =
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom	8300	**S.F.**	Actual		Desire
		collapse	2.199866	>=	1.125
8300 ft to 0 ft		burst-b	2.783061	>=	1.25
5.5 0 L-80 LT&C		burst-t	3.063333		
Top of segment 1 (ft)	0	**S.F.**	Actual		Desire
Select 2nd segment from bottom		collapse	#DIV/0!	>=	1.125
		burst-b	0	>=	1.25
0 ft to 0 ft		burst-t	0		
0 0 0 0		jnt strngth	2.921762	>=	1.8

Casing Design **Well:** McMillan Fee #1 (re-Entry) In Place

String Size & Function: 8 5/8 in surface intermediate x

Total Depth: 1630 ft **TVD:** 1630 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 813.696 psi Burst: 813.696 psi, joint strength: 813.696 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	1630 ft to 0 ft		Make up Torque ft-lbs			Total ft = 1630
O.D.	Weight	Grade	Threads	opt.	min.	mx.
8.625 inches	**24** #/ft	**J-55**	**ST&C**	**2440**	**1830**	**3050**
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
1,370 psi	**2,950** psi	**244** ,000 #		**381** ,000 #		**7.972**

2nd segment	ft to ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

3rd segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

4th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

5th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

6th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

Select 1st segment bottom		1630	**S.F.**	Actual		Desire
			collapse	1.683675	>=	1.125
1630 ft to 0 ft			burst-b	5.525338	>=	1.25
8.625	0 J-55 ST&C		burst-t	5.9		
Top of segment 1 (ft)		0	**S.F.**	Actual		Desire
Select 2nd segment from bottom			collapse	#DIV/0!	>=	1.125
			burst-b	0	>=	1.25
0 ft to 0 ft			burst-t	0		
0	0 0 0		jnt strngth	7.311069	>=	1.8

Casing Design **Well:** McMillan Fee #1 (Re-Entry) In Place

String Size & Function: 13 3/8 in surface x intermediate

Total Depth: 355 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 177.216 psi Burst: 177.216 psi, joint strength: 177.216 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	355 ft to 0 ft		Make up Torque ft-lbs			Total ft = 355
O.D.	Weight	Grade	Threads	opt.	min.	mx.
13.375 inches	**54.5** #/ft	**K-55**	**ST&C**	**6,890**	**5,170**	**8,610**
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
1,400	**2,730** psi	**689** ,000 #		**853** ,000 #		**12.459**

2nd segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

3rd segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

4th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

5th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

6th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

Select 1st segment bottom 355

355 ft to 0 ft
13.375 0 K-55 ST&C

S.F.	Actual		Desire
collapse	7.899964	>=	1.125
burst-b	5.38054	>=	1.25
burst-t	5.46		

Top of segment 1 (ft) 0

Select 2nd segment from bottom

0 ft to 0 ft
0 0 0 0

S.F.	Actual		Desire
collapse	#DIV/0!	>=	1.125
burst-b	0	>=	1.25
burst-t	0		
jnt strngth	41.74306	>=	1.8

MEC re-entry plans

Target Formations: Wolfcamp (7015') & Upper Penn (7846')

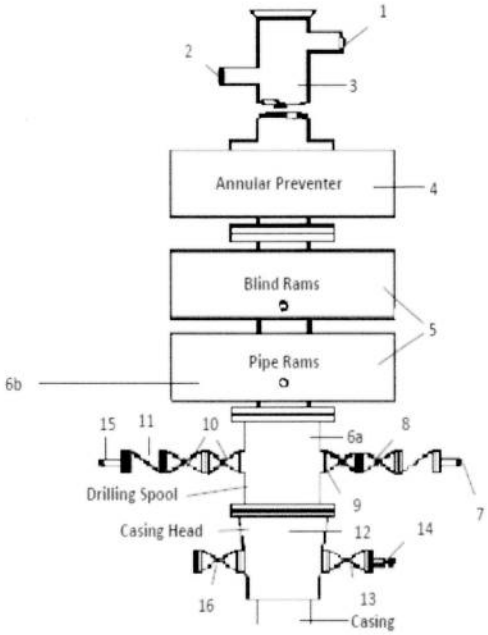
PTD: 8300'

San Andres	1315'
Yeso	2928'
Bone Spring	4630'
Bone Spring Sd	6571'
Wolfcamp	7015'
Cisco	7846'
Canyon	8260'

Mack Energy Corporation
Minimum Blowout Preventer Requirements
5000 psi Working Pressure
13 5/8 inch- 5 MWP
11 Inch - 5 MWP

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 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.
10.

ME

CONTRACTOR'S OPTION TO FURNISH:

MEC TO FURNISH:

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

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.

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

COMMENTS

Action 94420

COMMENTS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 94420
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

COMMENTS

Created By	Comment	Comment Date
kpickford	This is a re-entry of a P&Ad well. Name change and operator to be changed once re-entry is commenced.	4/1/2022

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

CONDITIONS

Action 94420

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 94420
	Action Type: [C-101] Drilling Non-Federal/Indian (APD)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Notify NMOCD 24 Hours Prior to beginning operations	4/1/2022