

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
OMB NO. 1004-0137  
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.  
NMNM102911

6. If Indian, Allottee or Tribe Name

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

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other8. Well Name and No.  
KYLE 34 FEDERAL 3H

318232

2. Name of Operator

BC OPERATING INC

Marathon

Contact: JENNIFER E VAN CUREN

E-Mail: jvancuren@marathonoil.com

9. API Well No.

30-015-43405-00-X1

3a. Address

MIDLAND, TX 79710

3b. Phone No. (include area code)

Ph: 713-296-2500

10. Field and Pool or Exploratory Area

WILLOW LAKE-BONE SPRING, SE

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 34 T24S R28E SESW 150FSL 1650FWL  
32.166800 N Lat, 104.077993 W Lon

11. County or Parish, State

EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Change to Original A
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	PD

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

MARATHON OIL PERMIAN LLC REQUESTS TO MAKE CHANGES TO THE ORIGINAL PERMIT APPROVED IN OCTOBER 2014 FOR CIMAREX ENERGY.

MARATHON IS REQUESTING A NAME CHANGE FROM KYLE 34 FEDERAL 3H TO KYLE 34 FEDERAL COM 3H. THIS WAS NOTED ON THE PREVIOUS SUNDRY BUT THE SUNDRY FOR THE NAME CHANGE TO ADD 'COM' AS PER COA'S IN AAPD WAS NOT FOUND TO BE COMPLETED BY BC OPERATING.

Accepted for record - NMOC

**Carlsbad Field Office**  
**OCD Artesia****SEE ATTACHED FOR**  
**CONDITIONS OF APPROVAL**  
NM OIL CONSERVATION  
ARTESIA DISTRICT  
NOV 09 2017

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #393821 verified by the BLM Well Information System

For BC OPERATING INC, sent to the Carlsbad

Committed to AFMSS for processing by ZOTA STEVENS on 11/07/2017 (18ZS0015SE)

Name (Printed/Typed) JENNIFER E VAN CUREN

Title SR. REGULATORY COMPLIANCE REP

Signature (Electronic Submission)

Date 11/02/2017

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 11/07/2017

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

Office Carlsbad

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

(Instructions on page 2)

**\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\***

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  
Copy to appropriate  
District Office

NOV 09 2017 AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

RECEIVED

<sup>1</sup> API Number 30-015-43405	<sup>2</sup> Pool Code 96415	<sup>3</sup> Pool Name PURPLE SAGE; WOLFCAMP
<sup>4</sup> Property Code 26599 318232	<sup>5</sup> Property Name KYLE 34 FEDERAL COM	<sup>6</sup> Well Number 3H
<sup>7</sup> OGRID No. 155615	<sup>8</sup> Operator Name MARATHON OIL PERMIAN, LLC	<sup>9</sup> Elevation 3000

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
N	34	T24S	R28E		200	SOUTH	1670	WEST	EDDY

<sup>11</sup> Bottom Hole Location If Different From Surface

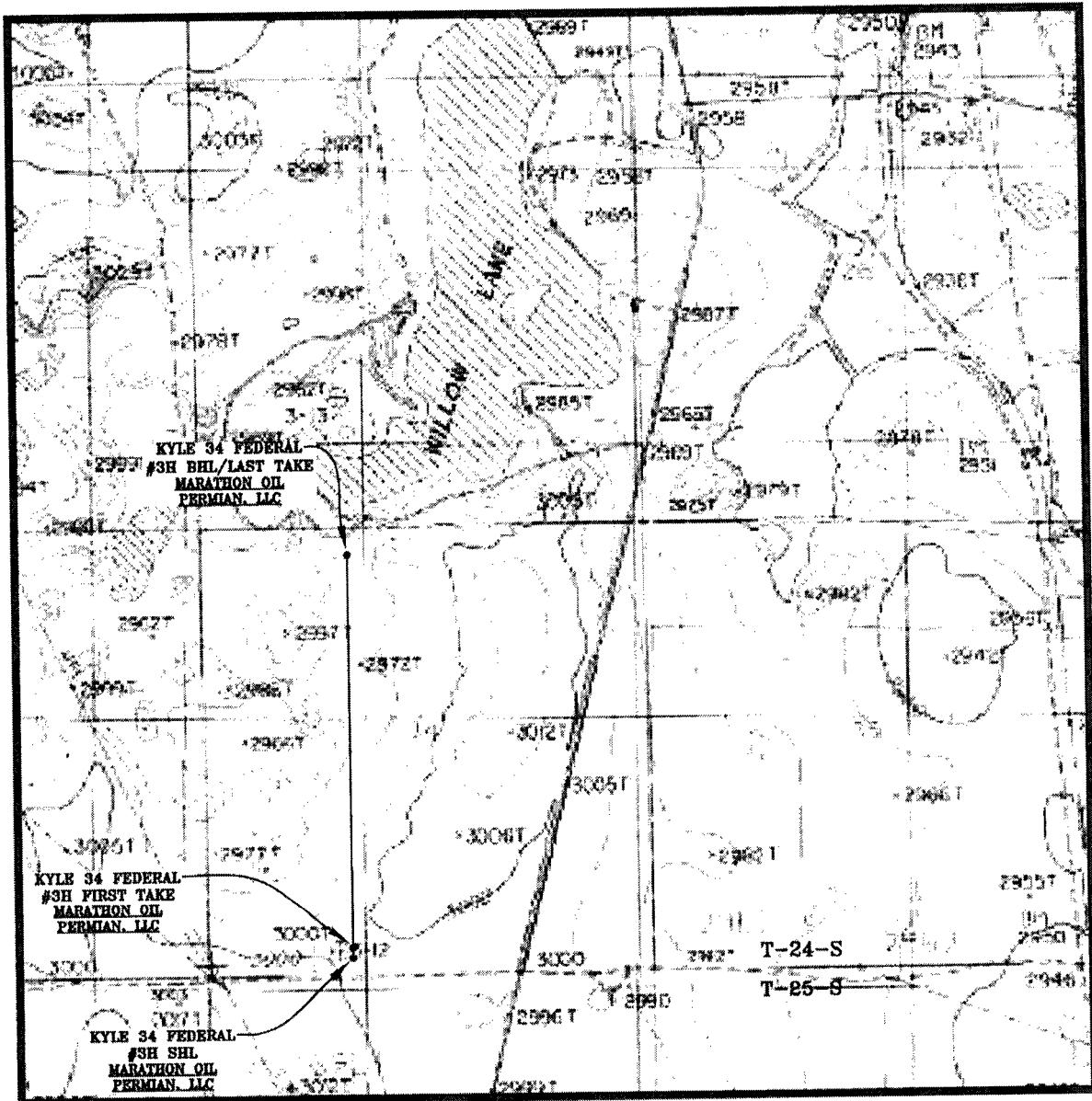
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
C	34	T24S	R28E		330	NORTH	1670	WEST	EDDY

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.

<p><sup>16</sup></p> <p>SECTION 28</p> <p>SECTION 33</p> <p>1670'</p> <p>330'</p> <p>LAST TAKE/ BHL</p> <p>330'</p> <p>PRODUCING AREA</p> <p>1670'</p> <p>SECTION 33</p> <p>SECTION 4</p> <p>200'</p> <p>330'</p> <p>FIRST TAKE</p> <p>SHL</p>		<p>CORNER COORDINATES</p> <p>NAD 83, SPCS NM EAST</p> <p>A - Y: 429767.99 / X: 618526.54</p> <p>B - Y: 429780.74 / X: 621122.61</p> <p>C - Y: 424409.95 / X: 621122.61</p> <p>D - Y: 424397.09 / X: 618546.33</p> <p>SECTION 27</p> <p>SECTION 34</p> <p>BOTTOM HOLE LOCATION</p> <p>330' FSL 1670' FWL, SECTION 34</p> <p>NAD 83, SPCS NM EAST</p> <p>Y: 429445.99 / X: 620197.74</p> <p>LAT: 32.18036793N / LON: 104.077843579W</p> <p>NAD 27, SPCS NM EAST</p> <p>Y: 429387.67 / X: 579014.00</p> <p>LAT: 32.18024586N / LON: 104.07794462W</p> <p>LAST TAKE POINT</p> <p>330' FSL 1670' FWL, SECTION 34</p> <p>NAD 83, SPCS NM EAST</p> <p>Y: 429445.99 / X: 620197.74</p> <p>LAT: 32.18036793N / LON: 104.077843579W</p> <p>NAD 27, SPCS NM EAST</p> <p>Y: 429387.67 / X: 579014.00</p> <p>LAT: 32.18024586N / LON: 104.07794462W</p> <p>FIRST TAKE POINT</p> <p>330' FSL 1670' FWL, SECTION 34</p> <p>NAD 83, SPCS NM EAST</p> <p>Y: 424733.10 / X: 620215.72</p> <p>LAT: 32.16705982N / LON: 104.07841475W</p> <p>NAD 27, SPCS NM EAST</p> <p>Y: 424676.87 / X: 579031.26</p> <p>LAT: 32.16729585N / LON: 104.07792499W</p> <p>SURFACE HOLE LOCATION</p> <p>200' FSL 1670' FWL, SECTION 34</p> <p>NAD 83, SPCS NM EAST</p> <p>Y: 424604.78 / X: 620215.72</p> <p>LAT: 32.16705982N / LON: 104.07841475W</p> <p>NAD 27, SPCS NM EAST</p> <p>Y: 424546.56 / X: 579031.26</p> <p>LAT: 32.16702465N / LON: 104.06919382W</p> <p>T-24-S</p> <p>T-25-S</p> <p>SECTION 34</p> <p>SECTION 3</p> <p>SECTION 35</p> <p>SECTION 2</p>	<p><sup>17</sup> OPERATOR CERTIFICATION</p> <p>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.</p> <p>Jennifer Van Curen 11/8/17</p> <p>Signature Date</p> <p>Jennifer Van Curen</p> <p>Printed Name</p> <p>jvancuren@marathonoil.com</p> <p>E-mail Address</p> <p><sup>18</sup> SURVEYOR CERTIFICATION</p> <p>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.</p> <p>SEPTEMBER 11, 2017</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor</p> <p>LLOYD P. SHORT</p> <p>NEW MEXICO</p> <p>21653</p> <p>PROFESSIONAL SURVEYOR</p> <p>Certificate Number</p> <p>LLOYD P. SHORT 21653</p>
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# LOCATION VERIFICATION MAP

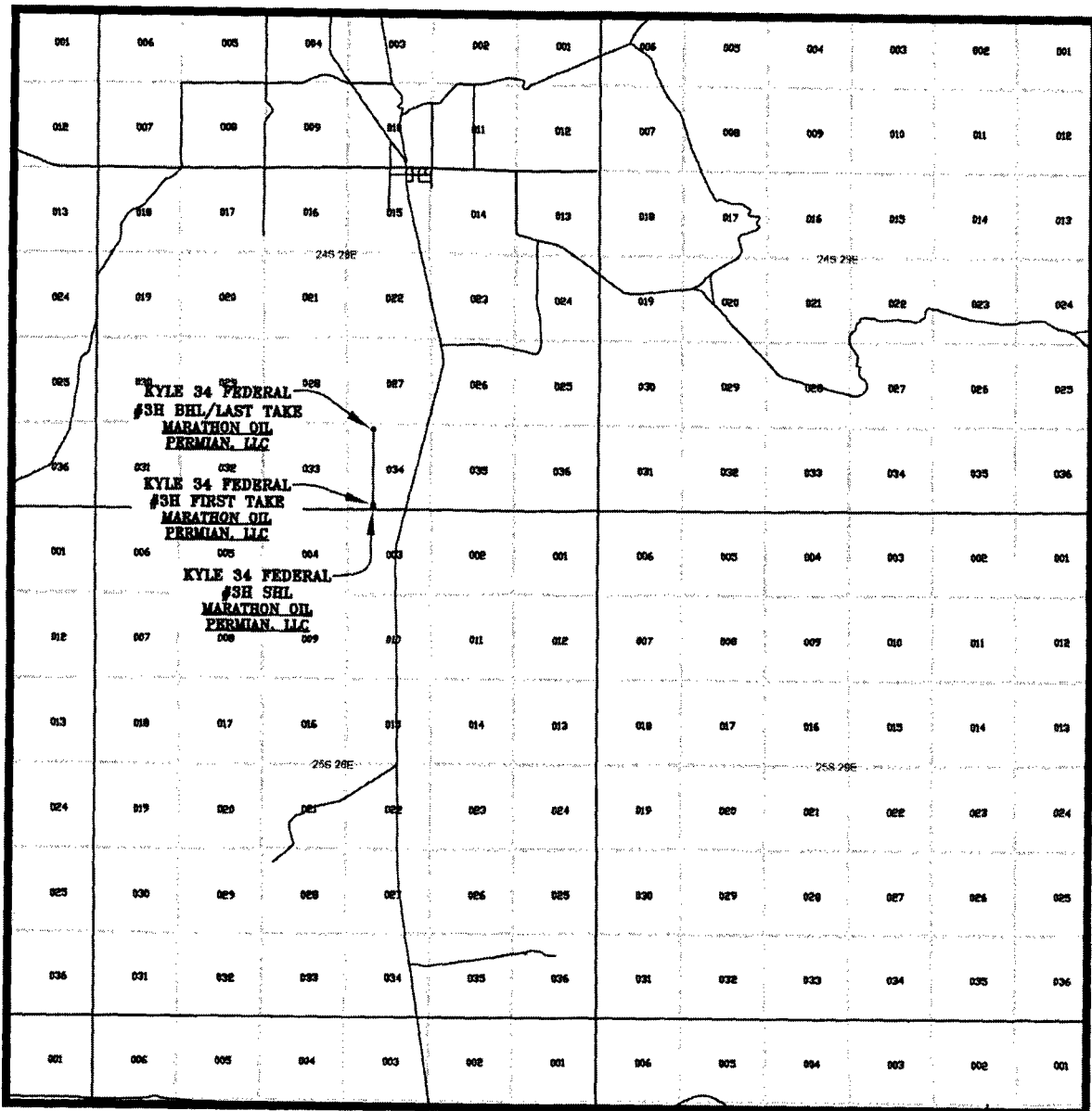


SEC. 34 TWP. 24-S RGE. 28-E  
 SURVEY: N.M.P.M.  
 COUNTY: EDDY  
 DESCRIPTION: 200' FSL & 1670' FWL  
 ELEVATION: 3000'  
 OPERATOR: MARATHON OIL PERMIAN, LLC  
 LEASE: KYLE 34 FEDERAL  
 U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.

SCALE: 1" = 2000'  
 CONTOUR INTERVAL = 20'

PREPARED BY:  
 R-SQUARED GLOBAL, LLC  
 1309 LOUISVILLE AVENUE, MONROE, LA 71201  
 318-323-6900 OFFICE  
 JOB No. R3752\_001

# VICINITY MAP



SEC. 34 TWP. 24-S RGE. 28-E

SURVEY: N.M.P.M.

COUNTY: EDDY

DESCRIPTION: 200' FSL & 1670' FWL

ELEVATION: 3000'

OPERATOR: MARATHON OIL PERMIAN, LLC

LEASE: KYLE 34 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.

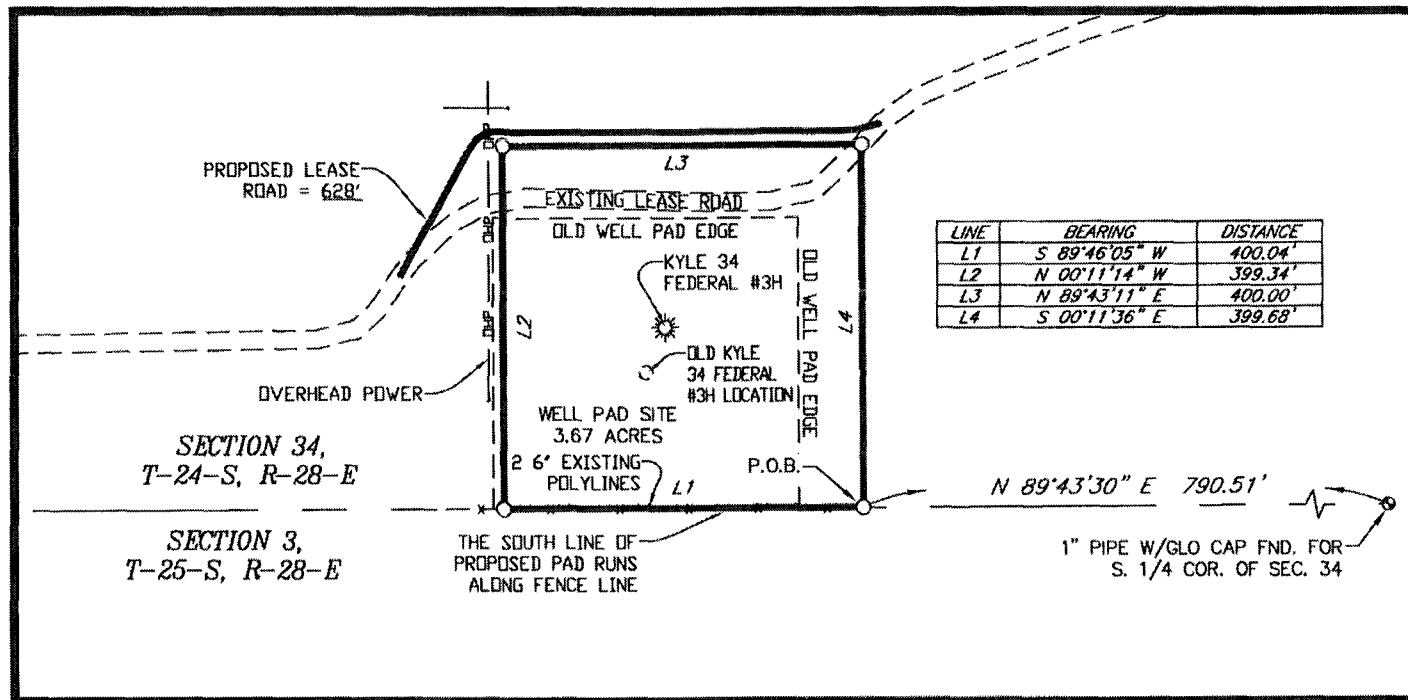
SCALE: 1" = 2 MILES

PREPARED BY:  
R-SQUARED GLOBAL, LLC  
1309 LOUISVILLE AVENUE, MONROE, LA 71201  
318-323-6900 OFFICE  
JOB No. R3752\_001

# WELL PAD SURFACE

100' 0' 100' 200'  
SCALE: 1" = 200'

SEC. 34 TWP. 24-S RGE. 28-E  
SURVEY: N.M.P.M.  
COUNTY: EDDY  
U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.



## FIELD NOTES DESCRIBING

A tract of land being 3.67 acres. Said tract being located in Section 34, Township 24 South, Range 28 East, New Mexico Principal Meridian, Eddy County, New Mexico.

Being more particularly described by metes and bounds as follows:

**BEGINNING** at a point from which a 1" pipe with a (GLO) cap found for the South quarter corner of said Section 34 bears, N 89°43'30" E a distance of 790.51 feet.

### THENCE

S 89°46'05" W a distance of 400.04 feet to the Southwest corner of this tract, and N 00°11'14" W a distance of 399.34 feet to the Northwest corner of this tract, and N 89°43'11" E a distance of 400.00 feet to the Northeast corner of this tract, and S 00°11'36" E a distance of 399.68 feet to the **POINT OF BEGINNING**.

The total area of the herein described tract contains 3.67 acres of land.

All bearings and coordinates refer to NAD 83, New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet. (All bearings and distances are grid measurements.)

Title information furnished by Marathon Oil Permian, LLC

Reference accompanying Certificate of Survey prepared in conjunction with this legal description for easement.

STATE OF NEW MEXICO  
COUNTY OF EDDY

I, Lloyd P. Short, New Mexico Professional Surveyor No. 21653, do hereby certify that this easement survey plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey; that this survey meets the minimum standards for surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this survey is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is an easement survey plat crossing an existing tract or tracts.



LLOYD P. SHORT, PS No. 21653 DATE: SEPTEMBER 11, 2017

*Lloyd P. Short*

**Marathon Oil**  
Permian LLC

PLAT FOR A SURFACE SITE ON THE PROPERTY OF  
**SCOTT AND VALERIE BRANSON**  
EDDY COUNTY, NEW MEXICO

**BASIS OF BEARING**  
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS AND DISTANCES ARE GRID MEASUREMENTS.)

**LEGEND** P.O.B. POINT OF BEGINNING

R3752\_001

EXISTING ROAD — x — x — ARCH LIMITS  
PROPOSED ROAD — x — x — FENCE  
SURFACE SITE EDGE — — — SECTION LINE  
EXIST. PIPELINE — — — OVERHEAD POWER  
MONUMENT — POWER POLE — QUARTER SPLIT

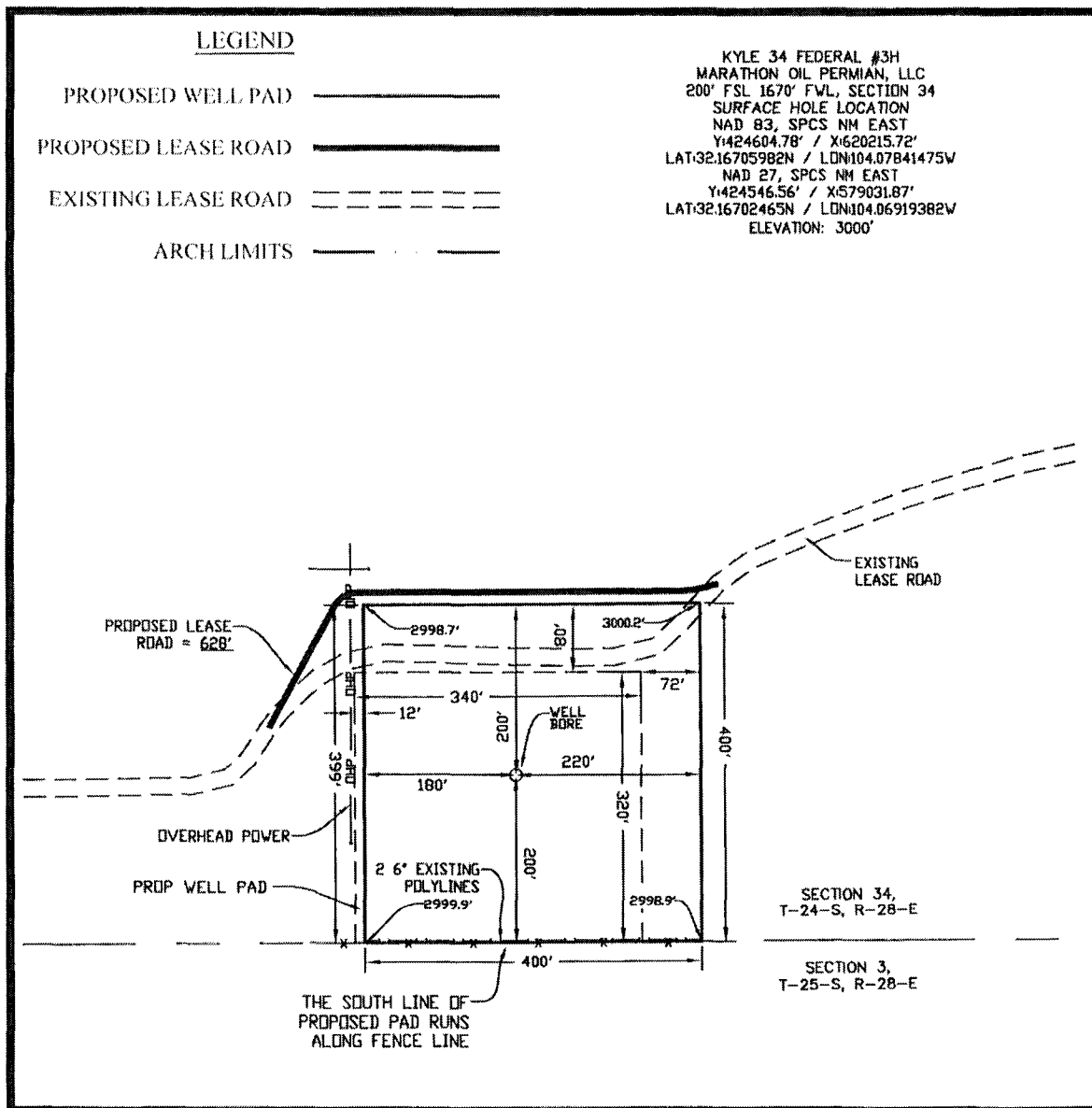
REV.	DATE	DESCRIPTION	BY	CHKD
1	8/17/2017	ADDED OLD WELL INFORMATION	DEF	LPS
SHEET 4 OF 7				
DRAWN BY: DEF				
DATE: 06/20/2017				
CHECKED BY: LPS				



1309 LOUISVILLE AVE.  
MONROE, LA 71201  
(318) 323-6900  
FAX (318) 362-0064

# WELL PAD TOPO

SEC. 34 TWP. 24-S RGE. 28-E  
 SURVEY: N.M.P.M.  
 COUNTY: EDDY  
 U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.



## DIRECTIONS TO LOCATION:

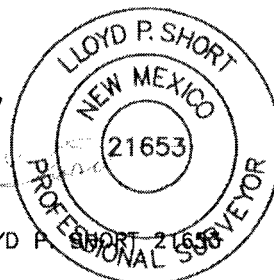
FROM THE INTERSECTION OF U.S. HIGHWAY 62/WEST GREENE STREET AND U.S. 180 W./U.S. 62 W./S. CANAL STREET IN CARLESBAD, NEW MEXICO, TRAVEL SOUTH ON U.S. 180 W./U.S. 62 W./S. CANAL STREET TOWARD W. TANSILL ST. FOR 2.0 MILES TO A SLIGHT LEFT TURN ONTO U.S. 285 S. FOR 18.8 MILES TO A LEASE ROAD ON THE RIGHT. TRAVEL WEST ON LEASE ROAD FOR 0.3 MILES TO A LEASE ROAD ON THE LEFT. TRAVEL SOUTH ON LEASE ROAD FOR 0.4 MILES TO PROPOSED WELL 150 FEET TO THE LEFT.

## NOTE:

THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

100' 0' 100' 200'  
 SCALE: 1" = 200'

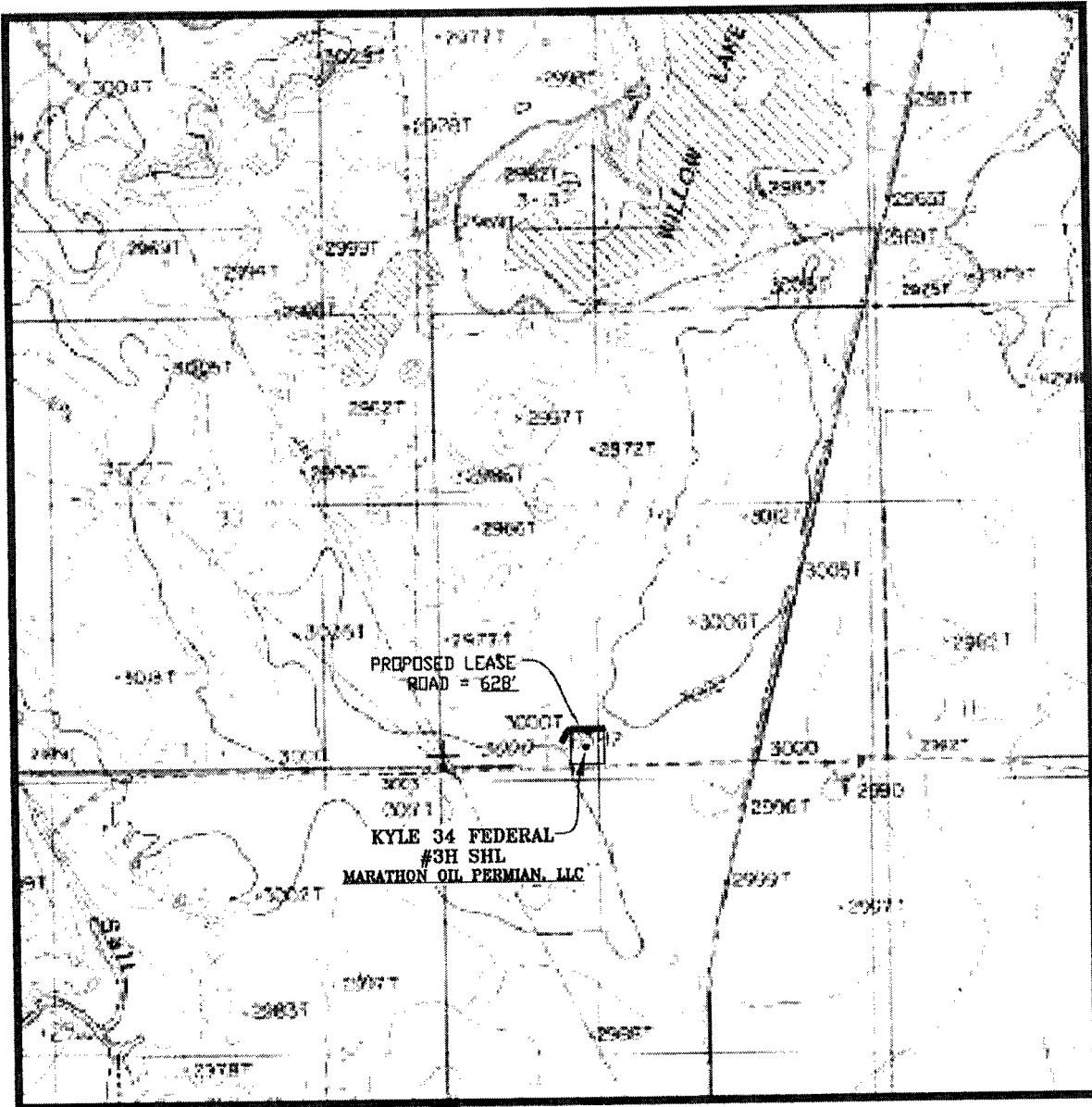
SEPTEMBER 11, 2017



LLOYD P. SHORT 21653

PREPARED BY:  
 R-SQUARED GLOBAL, LLC  
 1309 LOUISVILLE AVENUE, MONROE, LA 71201  
 318-323-8900 OFFICE  
 JOB No. R3752\_001

# WELL PAD LOCATION VERIFICATION MAP



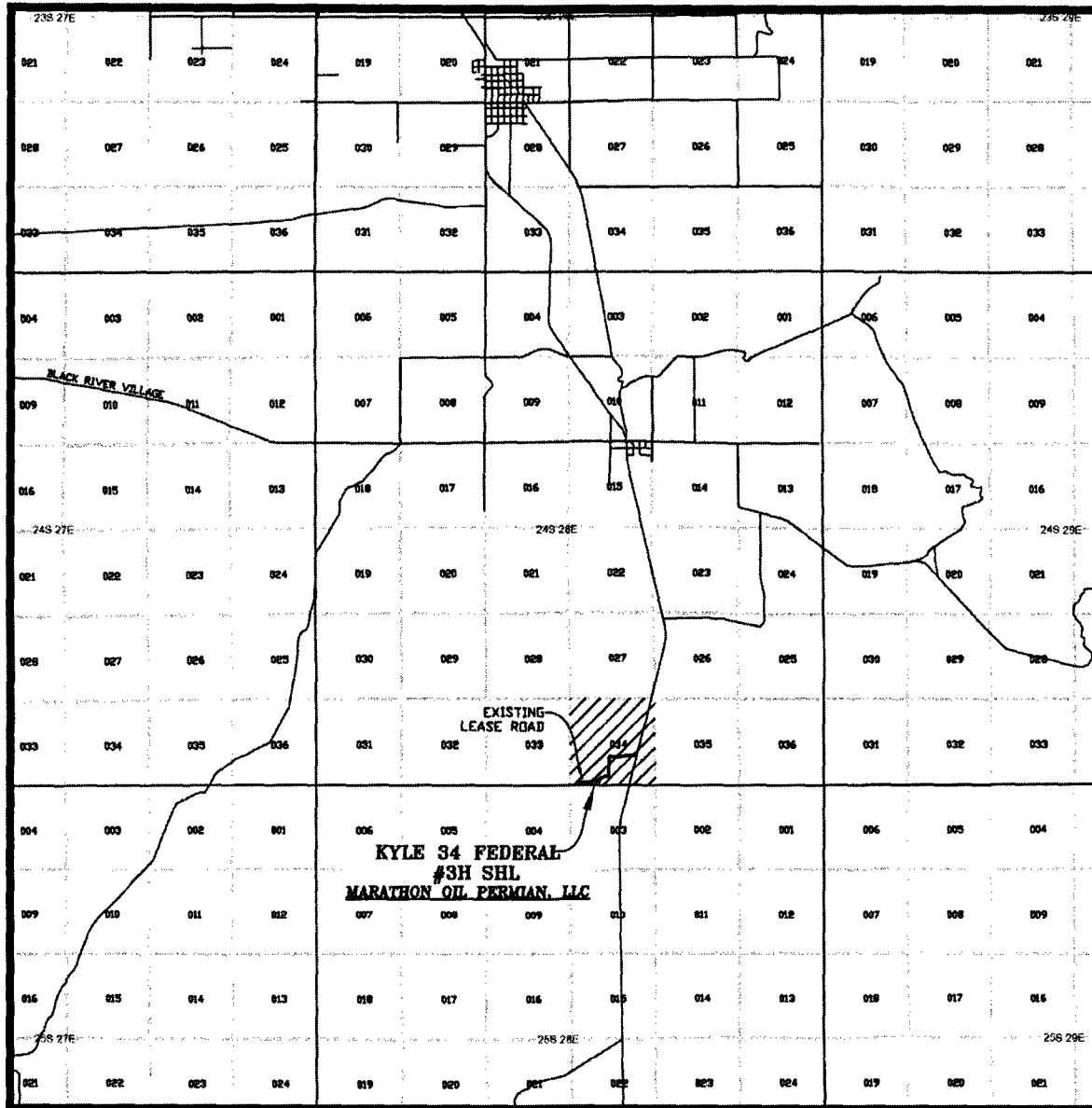
SEC. 34 TWP. 24-S RGE. 28-E  
SURVEY: N.M.P.M.  
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DESCRIPTION: 200' FSL & 1670' FWL  
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LEASE: KYLE 34 FEDERAL  
U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.

SCALE: 1" = 2000'  
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PREPARED BY:  
R-SQUARED GLOBAL, LLC  
1309 LOUISVILLE AVENUE, MONROE, LA 71201  
318-323-6900 OFFICE  
JOB No. R3752\_001

# EXISTING ACCESS ROAD VICINITY MAP

KYLE 34 FEDERAL #3H  
200' FSL & 1670' FWL  
SEC. 34 TWP. 24-S RGE. 28-E  
SURVEY: N.M.P.M.  
COUNTY: EDDY  
U.S.G.S. TOPOGRAPHIC MAP: MALAGA, N.M.



SCALE: 1" = 2 MILES

PREPARED BY:  
R-SQUARED GLOBAL, LLC  
1309 LOUISVILLE AVENUE, MONROE, LA 71201  
318-323-8900 OFFICE  
JOB No. R3752\_001



**PECOS DISTRICT  
CONDITIONS OF APPROVAL**

**NM OIL CONSERVATION**  
ARTESIA DISTRICT  
NOV 09 2017

OPERATOR'S NAME:	MARATHON OIL PERMAIN,LLC	<b>RECEIVED</b>
LEASE NO.:	NM130	
WELL NAME & NO.:	3H-Kyle 34 Federal COM	
SURFACE HOLE FOOTAGE:	150'/S & 1650'/W	
BOTTOM HOLE FOOTAGE	330'/N & 1650'/W	
LOCATION:	Section 34, T. 24 S., R. 28 E., NMPM	
COUNTY:	Eddy County, New Mexico	

**All previous COAs still apply expect the following:**

**TABLE OF CONTENTS**

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

**I. DRILLING**

**A. DRILLING OPERATIONS REQUIREMENTS**

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

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

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. **Although Hydrogen Sulfide has not been reported in the area, it is always a potential hazard. If Hydrogen Sulfide is encountered, report measured amounts and formations to the BLM. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe.**
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.

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.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

### **Wait on cement (WOC) for Potash Areas:**

**After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.**

### **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.**

**A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH.**

**HIGH Cave/Karst**

**Possibility of water flows in the top of salt and the Castile.**

**Possibility of lost circulation in the Rustler, Red Beds and Delaware.**

1. The **13-3/8** inch surface casing shall be set at approximately **400** 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, which shall be set at approximately **2500** feet, is:
  - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

**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 inch production casing is:
  - ☒ Cement should tie-back to the 200 ft from pervious casing shoe. If cement does not circulate see B.1.a, c-d above. Operator shall provide method of verification.
4. The minimum required fill of cement behind the 4-1/2 inch production liner is:
  - ☒ Cement should tie-back to the 100 ft from pervious casing shoe. Operator shall provide method of verification.
5. 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. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

**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 5000 (5M) psi.**

- a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
  - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
  - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
  - d. **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.**
2. 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. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- 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.

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